SECTION TM
TRANSAXLE & TRANSMISSION

CONTENTS

TRANSMISSION: GR6Z30A

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow (GT-R certified NISSAN dealer)

INFOID:0000000011487635

1.OBTAIN INFORMATION ABOUT SYMPTOM

1. Refer to TM-10, "Diagnostic Work Sheet (GT-R certified NISSAN dealer)" and interview the customer to obtain as much malfunction information (conditions and environment when the malfunction occurred) as possible when the customer brings the vehicle in.
2. Check the following:

- Service history
- Refer to TM-357, "Precautions Before Performing Diagnosis".
- Harnesses and connectors malfunction. Refer to GI-39, "Intermittent Incident".

>> GO TO 2.

2.CHECK DTC

1. Before checking the malfunction, check whether any DTC exists.
2. If DTC exists, perform the following operations.

- Record the DTC and freeze frame data. (Print out using CONSULT)
- Erase DTCs.
- Check that the root cause clarified with DTC and malfunction information described by the customer.

3. Check the information of related “Technical Bulletin” and others also.

Do malfunction information and/or DTC exist?

Malfunction information and DTC exist.>>GO TO 3.
Malfunction information exists but no DTC.>>GO TO 4.
No malfunction information, but DTC exists.>>GO TO 5.

3.REPRODUCE MALFUNCTION SYMPTOM

Check any malfunctions described by the customer, except the transmission warning lamp illuminated or blinking, on the vehicle.
Also inspect whether the symptom is a fail safe or normal operation. Refer to TM-338, "Fail Safe (GT-R certified NISSAN dealer)".
When a malfunction symptom is reproduced, the “Diagnostic Work Sheet” is effective. Refer to TM-10, "Diagnostic Work Sheet (GT-R certified NISSAN dealer)".
Check the causal relationship between the symptom and the conditions in which the malfunction described by the customer occurs.

>> GO TO 5.

4.REPRODUCE MALFUNCTION SYMPTOM

Check the malfunction described by the customer on the vehicle.
Also whether the symptom is a fail safe or normal operation. Refer to TM-338, "Fail Safe (GT-R certified NISSAN dealer)".
When a malfunction symptom is reproduced, the “Diagnostic Work Sheet” is effective. Refer to TM-10, "Diagnostic Work Sheet (GT-R certified NISSAN dealer)".
Check the causal relationship between the symptom and the conditions in which the malfunction described by the customer occurs.

>> GO TO 6.

5.PERFORM “DTC CONFIRMATION PROCEDURE”

Perform “DTC CONFIRMATION PROCEDURE” for the applicable DTC to check if DTC is detected again.
Refer to TM-340, "DTC Inspection Priority Chart (GT-R certified NISSAN dealer)" if multiple DTCs are detected, and then judge the order for performing the diagnosis.
NOTE:
If no DTC is detected, refer to the freeze frame data.

Is any DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-39, "Intermittent Incident".

6. IDENTIFY MALFUNCTIONING SYSTEM

Identify the location where trouble diagnosis starts based on the possible causes and symptoms from the symptom inspection result in step 4.

>> GO TO 8.

7. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the detected malfunctioning parts.
Reconnect parts or connector after repairing or replacing, and then erase DTC if necessary.

>> GO TO 8.

8. FINAL CHECK

Perform “DTC CONFIRMATION PROCEDURE” again to check that the repair is correctly performed.
Check that malfunctions obtained from the customer are not reproduced, referring to the symptom inspection result in step 3 or 4.

Is DTC or malfunction symptom reproduced?

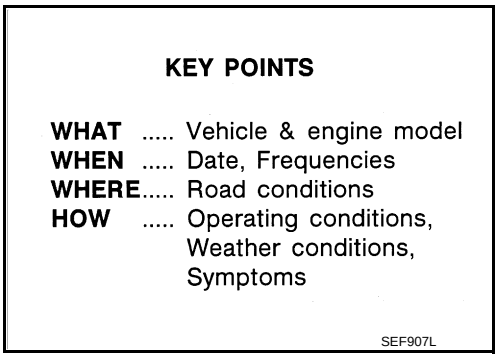
YES-1 >> DTC is reproduced: GO TO 5.
YES-2 >> Malfunction symptom is reproduced: GO TO 6.
NO >> Before delivering the vehicle to the customer, check that DTC is erased.

Diagnostic Work Sheet (GT-R certified NISSAN dealer)

INFOID:0000000011487636

Description

There are many operating conditions that may cause a malfunction of the transmission parts. By understanding those conditions properly, a quick and exact diagnosis can be performed.
In general, customers have their own criteria for a problem. Therefore, it is important to understand the symptom and status well enough by interviewing the customer about the concerns carefully. In order to systemize all the information for the diagnosis, prepare the interview sheet referring to the interview points.
In some cases, multiple conditions that appear simultaneously make the transmission warning light blink, which causes a DTC to be detected.



INSPECTION AND ADJUSTMENT
TCM REPLACEMENT

TCM REPLACEMENT : Description (GT-R certified NISSAN dealer)

INFOID:0000000011487637

When TCM is replaced, learning must be performed.

CAUTION:

- **Before TCM is replaced, it is necessary to acquire the IP characteristic data based on the information read out from the malfunctioning TCM. For acquiring the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be acquired, it is necessary to replace TCM and the transmission assembly as a set.**

TCM REPLACEMENT : Special Repair Requirement (GT-R certified NISSAN dealer)

INFOID:0000000011487638

CAUTION:

- **Before TCM is replaced, it is necessary to acquire the IP characteristic data based on the information read out from the malfunctioning TCM. For acquiring the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be acquired, it is necessary to replace TCM and the transmission assembly as a set.**

1. ACQUIRE "IP CHARACTERISTICS DATA"

Acquire the IP characteristics data. Refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".

>> GO TO 2.

2. PERFORM "WRITE IP CHARACTERISTICS"

Perform "Write IP Chara - Replace TCM" in "Work Support". Refer to TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".

>> GO TO 3.

3. SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select "RANGE", "ACCEL POSI SEN 1", and "FLUID TEMP" in "Data Monitor".
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 4.
NO >> Go to 4 after the learning condition is fulfilled.

4. PERFORM "CLUTCH GEAR LEARNING"

With CONSULT
1. Perform "CLUTCH GEAR LEARNING" in "Work support".
2. Select "Start".

CAUTION:

The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.

NOTE:

It is recommended to perform "CLUTCH GEAR LEARNING" when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> GO TO 5.
NO >> GO TO 6.

5. ADJUSTMENT OF CLUTCH CAPACITY AND CLUTCH TOUCH POINT

With CONSULT
Perform driving verification. On the occurrence of the following symptoms, “ADJUST CLUTCH A CAPACITY”, “ADJUST CLUTCH B CAPACITY”, “CLUTCH A TOUCH POINT” or “CLUTCH A TOUCH POINT” described in “Work Support”:
- A strong impact or large slippage during gear shift or at startup. (Clutch capacity adjustment)
- High creep strength or poor responsivity/strong impact at startup. (Clutch touch point adjustment)

>> End of learning

6. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.
2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 7.
NO >> Go to 4 after the learning condition is fulfilled.

7. PERFORM “ACTIVE TEST” (CLUTCH A SOLENOID)

With CONSULT
1. Select “C/L A PRESS S/V” in “Active Test”.
2. Select “CLUTCH A PRESS”, and “TGT CLUTCH A PRS”.
3. Raise “CLUTCH A PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value.

Do “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value?

YES >> GO TO 8.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

8. PERFORM “ACTIVE TEST” (CLUTCH B SOLENOID)

With CONSULT
1. Select “C/L B PRESS S/V” in “Active Test”.
2. Select “CLUTCH B PRESS”, and “TGT CLUTCH B PRS”.
3. Raise “CLUTCH B PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value.

Do “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value?

YES >> GO TO 3.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

TRANSMISSION ASSEMBLY REPLACEMENT

TRANSMISSION ASSEMBLY REPLACEMENT : Description (GT-R certified NISSAN

dealer)

INFOID:0000000011487639

When the transmission assembly is replaced, the break in the clutch and learning must be performed.

TRANSMISSION ASSEMBLY REPLACEMENT : Special Repair Requirement (GT-R certified NISSAN dealer)

INFOID:0000000011487640

CAUTION:
In any case, follow road traffic low and pay attention to safety in public roads.

1.ACQUIRE “IP CHARACTERISTICS DATA”

Acquire the IP characteristics data. Refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.

>> GO TO 2.

2.PERFORM “WRITE IP CHARACTERISTICS”

Perform “Write IP Chara - Replace TM” in “Work Support”. Refer to TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".

>> GO TO 3.

3.PREPARE BEFORE LEARNING

With CONSULT
1. Turn the ignition switch ON.
2. Check the set values of “ADJUST CLUTCH A CAPACITY”, “ADJUST CLUTCH B CAPACITY”, “CLUTCH A TOUCH POINT”, and “CLUTCH B TOUCH POINT” in "Work support".

Are the set values of all items 0?

YES >> GO TO 4.
NO >> GO TO 4 after the set values become 0.

4.PERFORM “DELETE GEAR POSITION LEARNING VALUE”

With CONSULT
1. Select “DELETE GEAR POSITION LEARNING VALUE” in “Work support”.
2. Select “Start”.

Can the gear position learning value be erased?

YES >> GO TO 5.
NO >> Perform again, and if it cannot be erased, check the harnesses and connectors.

5.PERFORM “DELETE CLUTCH A LEARNING VALUE”

With CONSULT
1. Select “DELETE CLUTCH A LEARNING VALUE” in “Work support”.
2. Select “Start”.

Can the clutch A learning value be erased?

YES >> GO TO 6.
NO >> Perform again, and if it cannot be erased, check the harnesses and connectors.

6.PERFORM “DELETE CLUTCH B LEARNING VALUE”

With CONSULT
1. Select “DELETE CLUTCH B LEARNING VALUE” in “Work support”.
2. Select “Start”.

Can the clutch B learning value be erased?

YES >> GO TO 7.
NO >> Perform again, and if it cannot be erased, check the harnesses and connectors.

7.PERFORM “ERASE CLUTCH ENGAGEMENT PRESSURE CORRECTION VALUE”

With CONSULT
1. Select “ERASE CLTCH ENGGMNT PRSSR CRRCTN” in “Work support”.

2. Select “Start”.

Can the clutch engagement pressure correction value be erased?

YES >> GO TO 8.
NO >> Perform again, and if it cannot be erased, check the harnesses and connectors.

8. SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select “RANGE”, “ACCEL POSI SEN 1”, and “FLUID TEMP” in “Data Monitor”.
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 9.
NO >> GO TO 9 after the learning condition is fulfilled.

9. PERFORM “CLUTCH GEAR LEARNING” (PART 1)

With CONSULT
1. Perform “CLUTCH GEAR LEARNING” in “Work support”.
2. Select “Start”.

CAUTION:
The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.
NOTE:
It is recommended to perform “CLUTCH GEAR LEARNING” when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> GO TO 10
NO >> GO TO 14.

10. BREAK IN THE CLUTCH

To make the surface of clutch plate in good condition.
- Repeat following running approximately 10 times.
- Perform full throttle acceleration 0 to 40 km/h (24 MPH) at M1. (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)
- Change to 2nd manually if the vehicle speed reaches approximately 40 km/h (24 MPH). (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)
- Then decelerate until approximately 10 km/h (6 MPH), perform the previous running keeping the gear in 2nd. (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)

CAUTION:
- **In any case, follow road traffic low and pay attention to safety in public roads.**
- **VDC-R must be in R mode.**
- **For safety reason, it is prohibited to perform above running in backward direction.**

>> GO TO 11.

11. SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select “RANGE”, “ACCEL POSI SEN 1”, and “FLUID TEMP” in “Data Monitor”.
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 12.
NO >> GO TO 12 after the learning condition is fulfilled.

12. PERFORM “CLUTCH GEAR LEARNING” (PART 2)

With CONSULT
1. Perform “CLUTCH GEAR LEARNING” in “Work support”.
2. Select “Start”.

CAUTION:
The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.
NOTE:
It is recommended to perform “CLUTCH GEAR LEARNING” when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> GO TO 13.
NO >> GO TO 17.

13. ADJUSTMENT OF CLUTCH CAPACITY AND CLUTCH TOUCH POINT

With CONSULT
Perform driving verification. On the occurrence of the following symptoms, “ADJUST CLUTCH A CAPACITY”, “ADJUST CLUTCH B CAPACITY”, “CLUTCH A TOUCH POINT” or “CLUTCH A TOUCH POINT” described in “Work Support”:
- A strong impact or large slippage during gear shift or at startup. (Clutch capacity adjustment)
- High creep strength or poor responsivity/strong impact at startup. (Clutch touch point adjustment)

>> End of learning

14. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.
2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 15.
NO >> GO TO 9 after the learning condition is fulfilled.

15. PERFORM “ACTIVE TEST” (CLUTCH A SOLENOID) (PART 1)

With CONSULT
1. Select “C/L A PRESS S/V” in “Active Test”.
2. Select “CLUTCH A PRESS”, and “TGT CLUTCH A PRS”.
3. Raise “CLUTCH A PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value.

Do “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value?

YES >> GO TO 16.

NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

16. PERFORM “ACTIVE TEST” (CLUTCH B SOLENOID) (PART 1)

With CONSULT
1. Select “C/L B PRESS S/V” in “Active Test”.
2. Select “CLUTCH B PRESS”, and “TGT CLUTCH B PRS”.
3. Raise “CLUTCH B PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value.

Do “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value?

YES >> GO TO 8.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

17. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.
2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 18.
NO >> GO TO 12 after the learning condition is fulfilled.

18. PERFORM “ACTIVE TEST” (CLUTCH A SOLENOID) (PART 2)

With CONSULT
1. Select “C/L A PRESS S/V” in “Active Test”.
2. Select “CLUTCH A PRESS”, and “TGT CLUTCH A PRS”.
3. Raise “CLUTCH A PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value.

Do “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value?

YES >> GO TO 19.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

19. PERFORM “ACTIVE TEST” (CLUTCH B SOLENOID) (PART 2)

With CONSULT
1. Select “C/L B PRESS S/V” in “Active Test”.
2. Select “CLUTCH B PRESS”, and “TGT CLUTCH B PRS”.
3. Raise “CLUTCH B PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value.

Do “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value?

YES >> GO TO 11.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

REPLACEMENT OF TCM AND TRANSMISSION ASSEMBLY

REPLACEMENT OF TCM AND TRANSMISSION ASSEMBLY : Description (GT-R cer-

tified NISSAN dealer)

INFOID:0000000011487641

When the TCM and the transmission assembly are replaced, the break in the clutch and learning must be performed.

REPLACEMENT OF TCM AND TRANSMISSION ASSEMBLY : Special Repair Requirement (GT-R certified NISSAN dealer)

INFOID:0000000011487642

CAUTION:
In any case, follow road traffic low and pay attention to safety in public roads.

1.ACQUIRE “IP CHARACTERISTICS DATA”

Acquire the IP characteristics data. Refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.

>> GO TO 2.

2.PERFORM “WRITE IP CHARACTERISTICS”

Perform “Write IP Chara - Replace TM” in “Work Support”. Refer to TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".

>> GO TO 3.

3.PREPARE BEFORE LEARNING

With CONSULT
1. Turn the ignition switch ON.
2. Check the set values of “ADJUST CLUTCH A CAPACITY”, “ADJUST CLUTCH B CAPACITY”, “CLUTCH A TOUCH POINT”, and “CLUTCH B TOUCH POINT” in "Work support".

Are the set values of all items 0?

YES >> GO TO 4.
NO >> GO TO 4 after the set values become 0.

4.SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select “RANGE”, “ACCEL POSI SEN 1”, and “FLUID TEMP” in “Data Monitor”.
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 5.
NO >> GO TO 5 after the learning condition is fulfilled.

5.PERFORM “CLUTCH GEAR LEARNING” (PART 1)

With CONSULT
1. Perform “CLUTCH GEAR LEARNING” in “Work support”.
2. Select “Start”.

CAUTION:
The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.
NOTE:
It is recommended to perform “CLUTCH GEAR LEARNING” when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> GO TO 6
NO >> GO TO 10.

6. BREAK IN THE CLUTCH

To make the surface of clutch plate in good condition.
- Repeat following running approximately 10 times.
- Perform full throttle acceleration 0 to 40 km/h (24 MPH) at M1. (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)
- Change to 2nd manually if the vehicle speed reaches approximately 40 km/h (24 MPH). (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)
- Then decelerate until approximately 10 km/h (6 MPH), perform the previous running keeping the gear in 2nd. (if possible, acceleration up to 60 km/h (37 MPH) can substitute it.)

CAUTION:
- **In any case, follow road traffic low and pay attention to safety in public roads.**
- **VDC-R must be in Normal or R mode.**
- **For safety reason, it is prohibited to perform above running in backward direction.**

>> GO TO 7.

7. SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select “RANGE”, “ACCEL POSI SEN 1”, and “FLUID TEMP” in “Data Monitor”.
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 8.
NO >> GO TO 8 after the learning condition is fulfilled.

8. PERFORM “CLUTCH GEAR LEARNING” (PART 2)

With CONSULT
1. Perform “CLUTCH GEAR LEARNING” in “Work support”.
2. Select “Start”.

CAUTION:
The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.
NOTE:
It is recommended to perform “CLUTCH GEAR LEARNING” when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> GO TO 9.
NO >> GO TO 13.

9. ADJUSTMENT OF CLUTCH CAPACITY AND CLUTCH TOUCH POINT

With CONSULT
Perform driving verification. On the occurrence of the following symptoms, “ADJUST CLUTCH A CAPACITY”, “ADJUST CLUTCH B CAPACITY”, “CLUTCH A TOUCH POINT” or “CLUTCH A TOUCH POINT” described in “Work Support”:
- A strong impact or large slippage during gear shift or at startup. (Clutch capacity adjustment)
- High creep strength or poor responsivity/strong impact at startup. (Clutch touch point adjustment)

>> End of learning

10. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.

2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 11.
NO >> GO TO 5 after the learning condition is fulfilled.

11. PERFORM “ACTIVE TEST” (CLUTCH A SOLENOID) (PART 1)

With CONSULT
1. Select “C/L A PRESS S/V” in “Active Test”.
2. Select “CLUTCH A PRESS”, and “TGT CLUTCH A PRS”.
3. Raise “CLUTCH A PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value.

Do “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value?

YES >> GO TO 12.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

12. PERFORM “ACTIVE TEST” (CLUTCH B SOLENOID) (PART 1)

With CONSULT
1. Select “C/L B PRESS S/V” in “Active Test”.
2. Select “CLUTCH B PRESS”, and “TGT CLUTCH B PRS”.
3. Raise “CLUTCH B PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value.

Do “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value?

YES >> GO TO 4.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

13. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.
2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 14.

NO >> GO TO 8 after the learning condition is fulfilled.

14. PERFORM "ACTIVE TEST" (CLUTCH A SOLENOID) (PART 2)

With CONSULT
1. Select "C/L A PRESS S/V" in "Active Test".
2. Select "CLUTCH A PRESS", and "TGT CLUTCH A PRS".
3. Raise "CLUTCH A PRESS" to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that "CLUTCH A PRESS" and "TGT CLUTCH A PRS" follow with an equal value.

Do "CLUTCH A PRESS" and "TGT CLUTCH A PRS" follow with an equal value?

YES >> GO TO 15.
NO >> Check "Self Diagnostic Result" of "TRANSMISSION".

15. PERFORM "ACTIVE TEST" (CLUTCH B SOLENOID) (PART 2)

With CONSULT
1. Select "C/L B PRESS S/V" in "Active Test".
2. Select "CLUTCH B PRESS", and "TGT CLUTCH B PRS".
3. Raise "CLUTCH B PRESS" to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that "CLUTCH B PRESS" and "TGT CLUTCH B PRS" follow with an equal value.

Do "CLUTCH B PRESS" and "TGT CLUTCH B PRS" follow with an equal value?

YES >> GO TO 7.
NO >> Check "Self Diagnostic Result" of "TRANSMISSION".

MAINTENANCE

MAINTENANCE : Description (GT-R certified NISSAN dealer)

INFOID:0000000011487643

Maintenance that is performed for the periodical maintenance and shock occurrence (transmission malfunction).

MAINTENANCE : Special Repair Requirement (GT-R certified NISSAN dealer)

INFOID:0000000011487644

1. PREPARE BEFORE LEARNING

With CONSULT
1. Turn the ignition switch ON.
2. Check the set values of "ADJUST CLUTCH A CAPACITY", "ADJUST CLUTCH B CAPACITY", "CLUTCH A TOUCH POINT", and "CLUTCH B TOUCH POINT" in "Work support".
   CAUTION:
   Never erase each learning value and the clutch engagement pressure correction value.

Are the set values of all items 0?

YES >> GO TO 2.
NO >> Go to 2 after the set values become 0.

2. SET LEARNING CONDITION

With CONSULT
1. Start the engine.
2. Select "RANGE", "ACCEL POSI SEN 1", and "FLUID TEMP" in "Data Monitor".
3. Set the condition as per the following.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)

Is the learning condition fulfilled?

YES >> GO TO 3.
NO >> Go to 3 after the learning condition is fulfilled.

3. PERFORM “CLUTCH GEAR LEARNING”

With CONSULT
1. Perform “CLUTCH GEAR LEARNING” in “Work support”.
2. Select “Start”.

CAUTION:
The "CLUTCH GEAR LEARNING" must be performed at temperature within 50 – 110°C (122 – 230°F). The learning is not yet completed if the temperature condition is outside the specified value during learning.
NOTE:
It is recommended to perform “CLUTCH GEAR LEARNING” when CVT fluid temperature is above 90°C (194°F).

Is "completed" displayed?

YES >> End of learning
NO >> GO TO 4.

4. CHECK THE LEARNING CONDITION

With CONSULT
1. Turn the ignition switch OFF, and wait for 15 seconds or more.
2. Start the engine.
3. Select “RANGE”, “ACCEL POSI SEN 1”, “FLUID TEMP”, “BATTERY VOLTAGE”, “ENGINE SPEED”, “VEHICLE SPEED”, and “LINE PRESSURE” in “Data Monitor”.
4. Check that the following learning condition is fulfilled.

RANGE	: P
ACCEL POSI SEN 1	: 0.0/8
FLUID TEMP	: 50 – 110°C (122 – 230°F)
BATTERY VOLTAGE	: 11 V or more
ENGINE SPEED	: 650 – 2,000 rpm
VEHICLE SPEED	: 3.5 km/h (2 MPH) or less
LINE PRESSURE	: 0.35 MPa (3.57 kg/cm^2, 50.75 psi) or more

Is the learning condition fulfilled?

YES >> GO TO 5.
NO >> Go to 3 after the learning condition is fulfilled.

5. PERFORM “ACTIVE TEST” (CLUTCH A SOLENOID)

With CONSULT
1. Select “C/L A PRESS S/V” in “Active Test”.
2. Select “CLUTCH A PRESS”, and “TGT CLUTCH A PRS”.
3. Raise “CLUTCH A PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value.

Do “CLUTCH A PRESS” and “TGT CLUTCH A PRS” follow with an equal value?

YES >> GO TO 6.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

6. PERFORM “ACTIVE TEST” (CLUTCH B SOLENOID)

With CONSULT
1. Select “C/L B PRESS S/V” in the “Active Test”.
2. Select “CLUTCH B PRESS”, and “TGT CLUTCH B PRS”.
3. Raise “CLUTCH B PRESS” to 1.0 MPa (10.2 kg/cm^2, 145 psi), and then lower it to 0 MPa (0 kg/cm^2, 0 psi).
4. Check that “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value.

Do “CLUTCH B PRESS” and “TGT CLUTCH B PRS” follow with an equal value?

YES >> GO TO 3.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

HOW TO ERASE PERMANENT DTC

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487645

Permanent DTC can be erased by driving each driving pattern.
ECM recognizes each driving pattern; it transmits signals to each control module when the driving is complete.
Each control module erases permanent DTC based on those signals.

PERMANENT DTC GROUP A

Procedure For Erasing Permanent DTC

1. Satisfy all of following conditions.
   - The state of driving at 40 km/h (25 MPH) reaches 300 seconds or more in total.
   - Idle speed lasts 30 seconds or more.
   - A lapse of 600 seconds or more after engine start.
2. Perform “DTC CONFIRMATION PROCEDURE” for corresponding DTC.
3. Turn ignition switch OFF and wait at least 10 seconds.
4. Check the permanent DTC is erased.

PERMANENT DTC GROUP B

For detailed procedure to erase the permanent DTC, refer to EC-33, "Description (GT-R certified NISSAN dealer)".

SYSTEM DESCRIPTION

TRANSMISSION SYSTEM

Operation Status and Control (GT-R certified NISSAN dealer)

INFOID:0000000011487646

○: Engagement or ON ●: Release or OFF R: Reverse N: Neutral

Range	Mode	Current gear position	Operational condition										
			Clutch		Pre-shift gear	Synchronizer				Parking	Adoptive shift control	Blipping control	Predictive pre-shift control
			B	A		Sleeve B1	Sleeve A2	Sleeve B2	Sleeve A1				
P	–	–	●	●	–	N	N	N	N	○	●	●	●
R	–	R	○	●	–	R	N	N	N	●	●	●	●
N	–	–	●	●	–	N	N	N	N	●	●	●	●
A	Normal R SNOW	1st	○	●	2nd	1st	(2nd) *	N	N	●	○	○	●
		2nd	●	○	3rd	N	2nd	(3rd) *					
		3rd	○	●	4th		(4th) *	3rd					
		4th	●	○	5th		4th	(5th) *					
		5th	○	●	6th		N	5th	(6th) *				
		6th	●	○	5th			(5th) *	6th				
M	Normal	1st	○	●	2nd	1st	(2nd) *	N	N	●	●	○	●
		2nd	●	○	3rd	N	2nd	(3rd) *					
		3rd	○	●	4th		(4th) *	3rd					
		4th	●	○	5th		4th	(5th) *					
		5th	○	●	6th		N	5th	(6th) *				
		6th	●	○	5th			(5th) *	6th				
	R	1st	○	●	2nd	1st	(2nd) *	N	N	●	●	○	○
		2nd	●	○	3rd/1st	(1st) *	2nd	(3rd) *					
		3rd	○	●	4th/2nd	N	(2nd/4th) *	3rd					
		4th	●	○	5th/3rd		4th	(3rd/5th) *					
		5th	○	●	6th/4th		(4th) *	5th	(6th) *				
		6th	●	○	5th		N	(5th) *	6th				

JSDIA2686GB

*: Pre-shift (pre-shift means that the gear on the clutch release side shifts to the next speed before a gear shift occurs.)

Main Device (GT-R certified NISSAN dealer)

INFOID:0000000011487647

DUAL CLUTCH

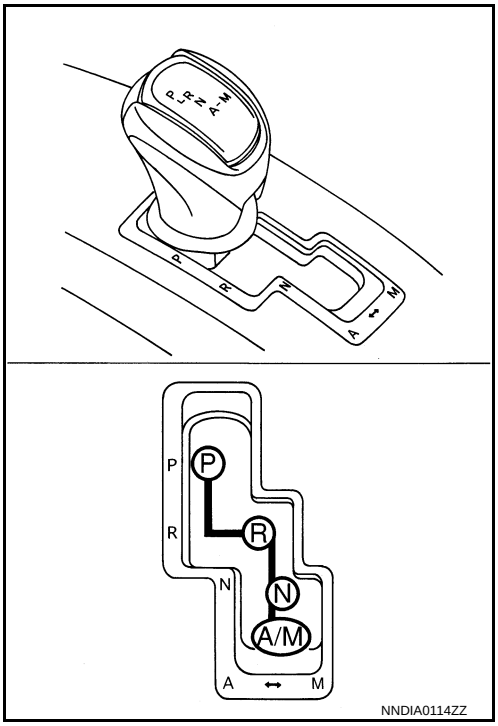
- It is equipped with 2 wet clutches, clutch A and clutch B, and each clutch is engaged or released by the hydraulic piston.
- If there is no oil pressure, the return spring forces the piston to return, releasing the clutch.

SHIFT DEVICE

- Each synchronizer is activated by its own shift actuator (hydraulic cylinder).
- Borg Warner type triple cone synchronizer is used for all the gear speeds.
- A friction material is affixed to the cone surface of the synchronizer to allow higher capacity than a normal cone made of copper alloy.
- The actuator control module is a unit integrated with the shift actuator and hydraulic control valve.

SHIFT LEVER

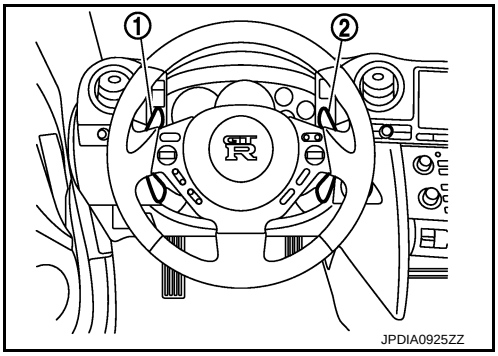
- It inputs the range position (P, R, N, A ⇔ M) and Auto/Manual range change switch signal to the TCM.
- It is connected to the parking device of the transmission with the control cable, and it locks the parking device only when the shift lever is shifted into the P position.



PADDLE SHIFTER

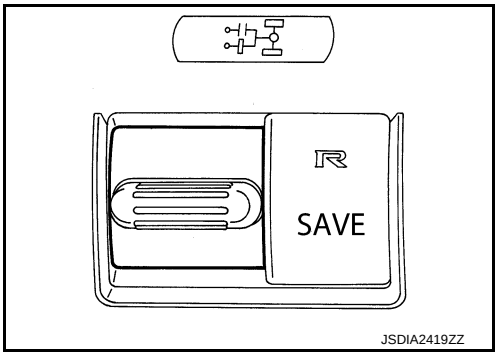
It inputs the switch signal of upshift or downshift to TCM.

1 : Paddle shifter (shift-down switch)
2 : Paddle shifter (shift-up switch)



SET-UP SWITCH (TRANSMISSION)

- It inputs the switch signal of R mode or SAVE mode to TCM.
- When set-up switch (transmission) is pressed down for 4 seconds while engine running, it enters to tight-corner phenomenon relieve mode and gives temporarily rear-wheel drive condition. Normal 4-wheel drive condition is recovered if the switch is pressed down for 4 seconds again.



- Refer to the following table for driving mode shifts during range shifting (A Range to/from M Range).

Range	A Range	A range to/from M range	M Range
Driving Mode	R mode	⇔	R mode
	Normal mode	⇔	Normal mode
	SAVE mode	⇔	Normal mode

DISPLAY DEVICE

Information display

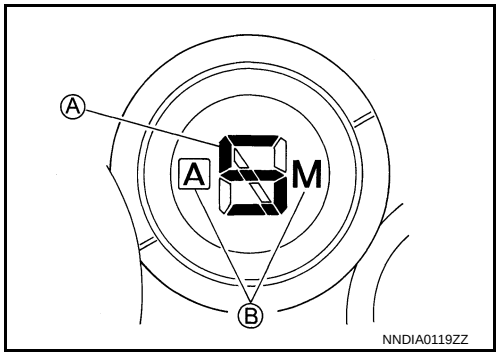
Message content	Display timing	Erasure procedure	Remarks
T/M SYSTEM MALFUNCTION VISIT DEALER	When a DTC is detected by self-diagnosis and an inspection is necessary at GT-R certified NISSAN dealer	• Turn the ignition switch ON again after turning OFF • Erase the DTC using CONSULT	Always blink the transmission warning light when this message is displayed
SHIFT TO THE P RANGE	• When the engine start operation is performed in any range other than P or N • When the engine starts while the shift lever is in N range and the gear is engaged	Shift the shift lever to the P range	—
CHECK POSITION OF SHIFT LEVER	When the shift lever position cannot be detected	Shift the shift lever into either range of P, R, N, A ⇔ M	—
T/M SYSTEM CHECK IN PROCESS	When the diagnosis is performed just after the engine starts while the shift lever is in the P range	Wait for a short period of time until the diagnosis is completed	While this message is displayed, the shift lock solenoid prevents the shift lever from moving out of the P range
T/M OIL TEMP HIGH DECREASE SPEED	When the high oil temperature control is active because of high transmission fluid temperature	When the high oil temperature control is deactivated	• Always illuminate the transmission warning light when this message is displayed • To see if there is a history of this message, check history of phenomena in “High oil temperature protection history” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".
T/M CLUTCH TEMP HIGH STOP VEHICLE UNTIL WARNING TURNS OFF	When the clutch protection control is active because of high transmission clutch temperature or stall driving	When the clutch protection control is deactivated	• Always illuminate the transmission warning light when this message is displayed • To see if there is a history of this message, check history of phenomena in “Clutch overheat protection history” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".

Shift position indicator

Upon receiving the CAN output signal from TCM, the drive gear position appears and blinks, and the range is displayed.

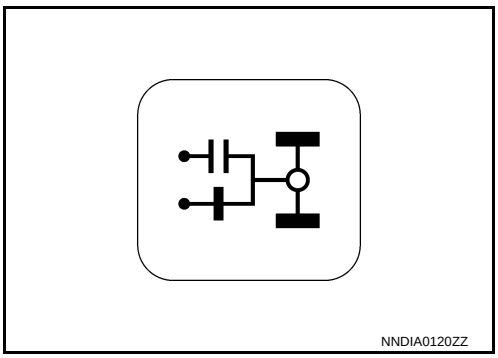
A : Range position and drive gear position (A/M range)

B : A range or M range



Transmission warning light

It illuminates and blinks with the CAN output signal from TCM.

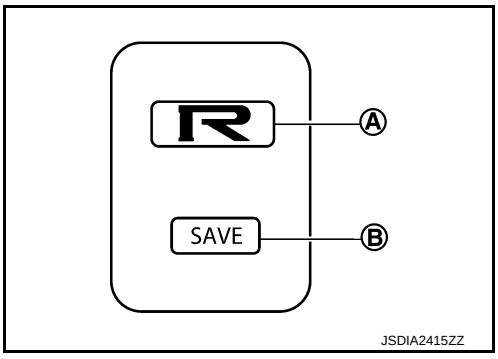

NNDIA0120ZZ

ON	It shows an intermittent malfunction such as high transmission fluid temperature • When the transmission warning lamp turns ON, the following possibilities may be included: - Transmission oil temperature is high (History of phenomena can be checked in “High oil temperature protection history” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".) - Transmission clutch temperature is high (History of phenomena can be checked in “Clutch overheat protection history” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".) - Line pressure is low (History of phenomena can be checked in “Line pressure loss history” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".) - When clutch gear learning value is not recorded in TCM (“WORK SUPPORT” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".) - If R mode starting is performed four times consecutively, it restricts engine torque for protection which makes R mode starting unable. [It can be recovered by performing cool down running (approx. 2 km at 60-80 km/h (37-50 MPH), gear in 5th or 6th) until transmission warning lamp turns off. Confirm the warning lamp content.]
Blinking	It shows that a malfunction requiring a check occurs • When the transmission warning lamp blinks, the following possibilities may be included: - When DTC of transmission is detected be self-diagnosis (Check “Self Diagnostic Result” of “TRANSMISSION”.) - When IP characteristics value is not recorded in TCM (“WORK SUPPORT” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".) - When learning is not completed without recording clutch gear learning value in TCM (“WORK SUPPORT” on TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".)

Mode indicator

- R mode lamp and SAVE mode lamp illuminate by the analog output signal from TCM.
- When the mode is being switched, SAVE mode lamp of transmission blinks once.

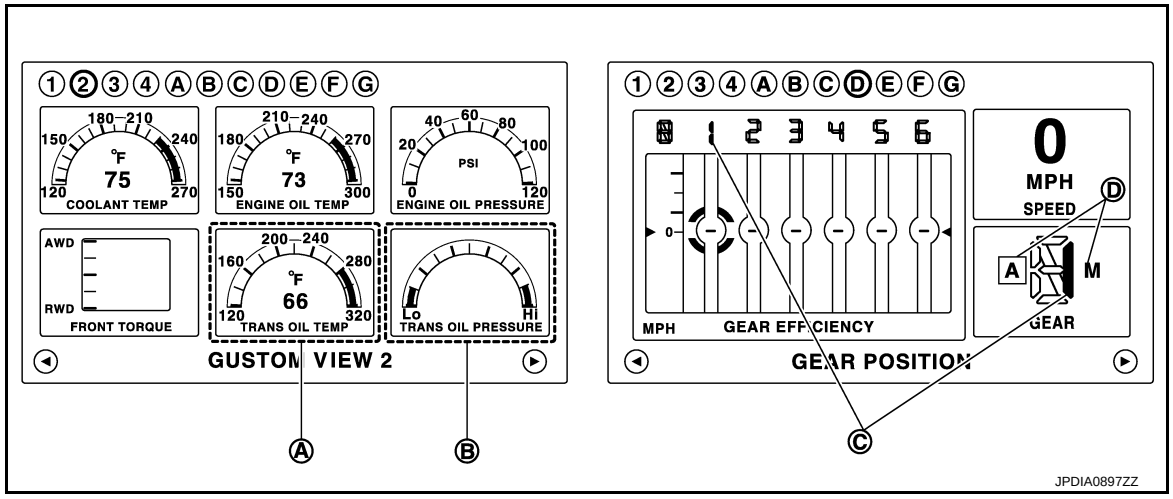
A : R mode lamp
B : SAVE mode lamp



JSDIA2415ZZ

Multi-function display

The drive gear position, range position, transmission oil pressure and transmission oil temperature are displayed by the CAN output signal from TCM.



A. Transmission oil temperature
B. Transmission oil pressure
C. Range position and drive gear position (A/M range)
D. A range or M range

Oil Pressure System (GT-R certified NISSAN dealer)

INFOID:0000000011487648

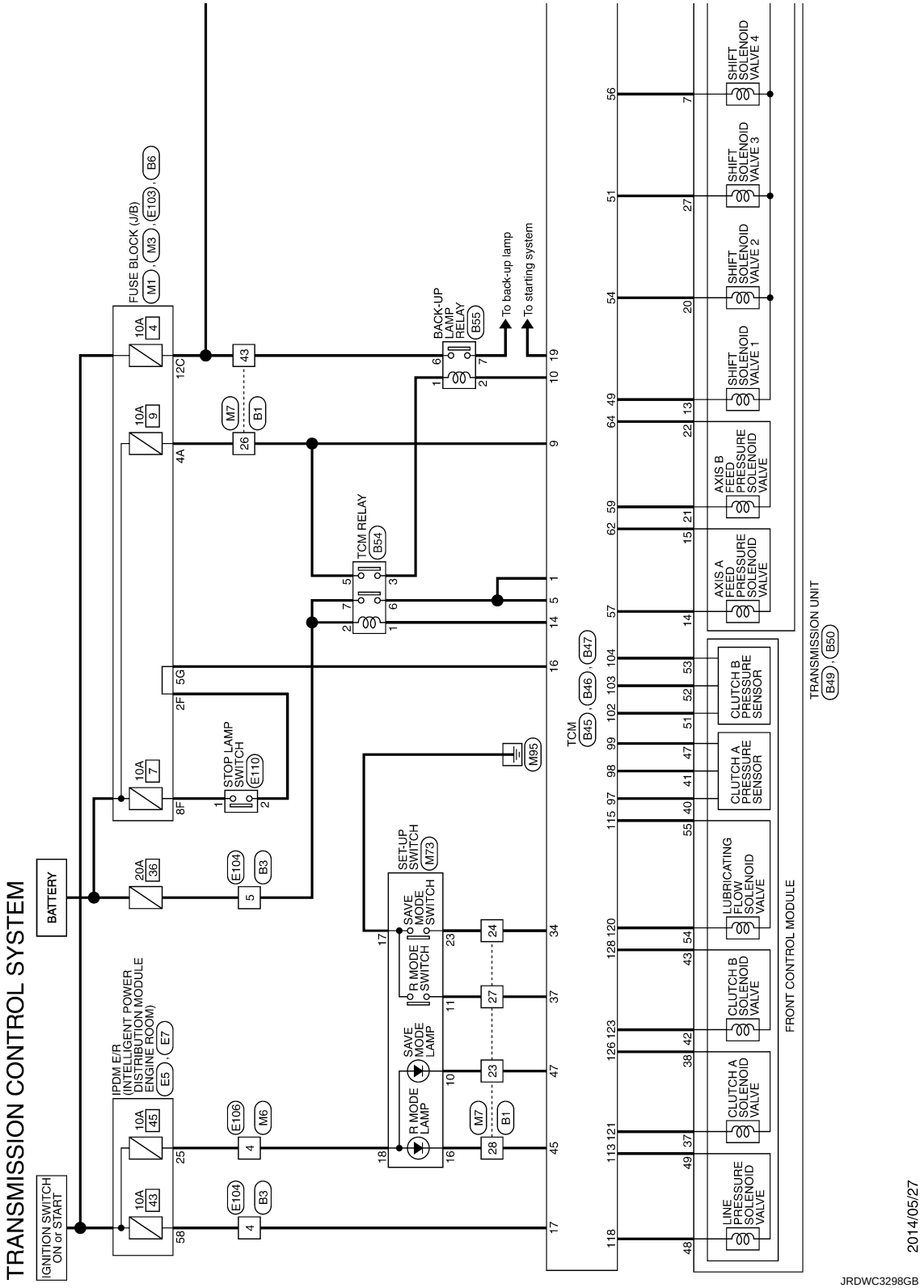
COMPONENT DESCRIPTION

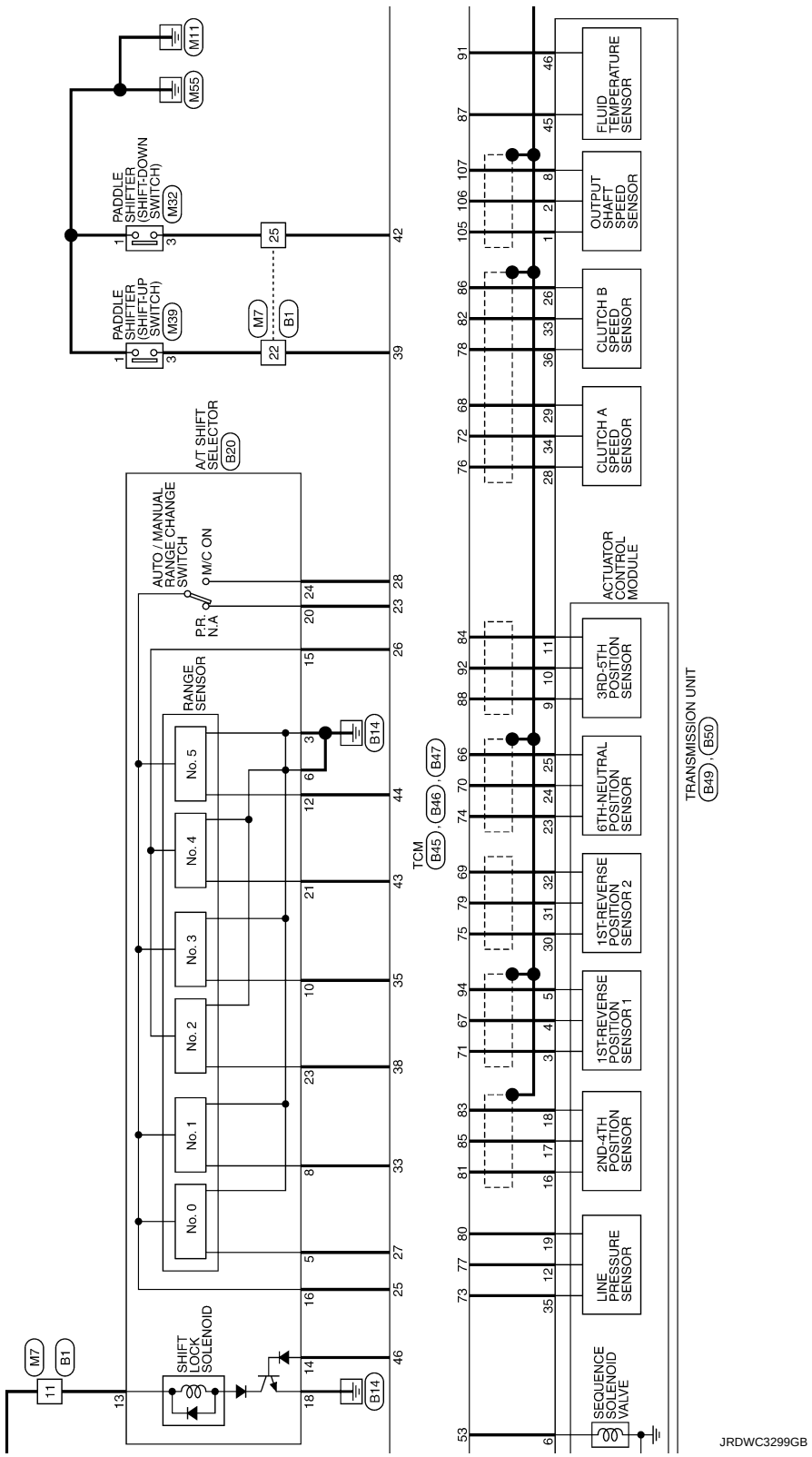
Component			Function
Suction filter			Removes foreign matter contained in fluid and prevents them from entering the hydraulic circuit
Inline filter			
Heat exchanger			• Cools down fluid with the water-cooled cooler • When the engine starts at low temperature, warms fluid quickly with heated coolant
Front control module	Oil pump		Sucks fluid accumulated in the oil pan to build up oil pressure in the circuit
	Valve	Line pressure valve	• Controls the line pressure • The line pressure is adjusted by the line pressure solenoid
		Clutch A solenoid valve	Controls the clutch pressure of clutch A/B
		Clutch B solenoid valve	
		Lubricating flow valve	• Controls the lubricating flow • The lubricating flow is adjusted by the lubricating flow solenoid
		Clutch lubricating switching valve	Switches the lubricating distribution of the clutch.
	Pressure sensor	Clutch A pressure sensor	Detects the clutch pressure of clutch A/B
		Clutch B pressure sensor	
Actuator control module	Valve	Axis A feed pressure valve	• Controls the feed pressure of axis A/B • Each feed pressure is adjusted by the axis A/B feed pressure solenoid
		Axis B feed pressure valve	
		Shift solenoid valve 1	Controls 4 shift actuator pistons by combining ON and OFF of each shift solenoid valve and switching the sequence valve circuit
		Shift solenoid valve 2	
		Shift solenoid valve 3	
		Shift solenoid valve 4	
		Sequence valve	
	Pressure sensor	Line pressure sensor	Detects the line pressure

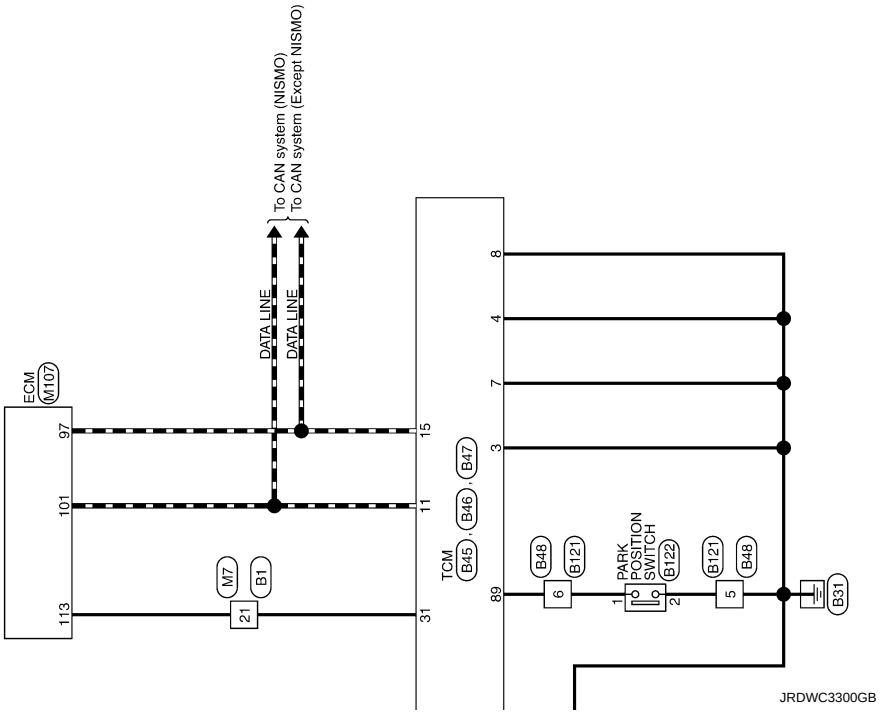
TCM System (GT-R certified NISSAN dealer)

INFOID:0000000011487649

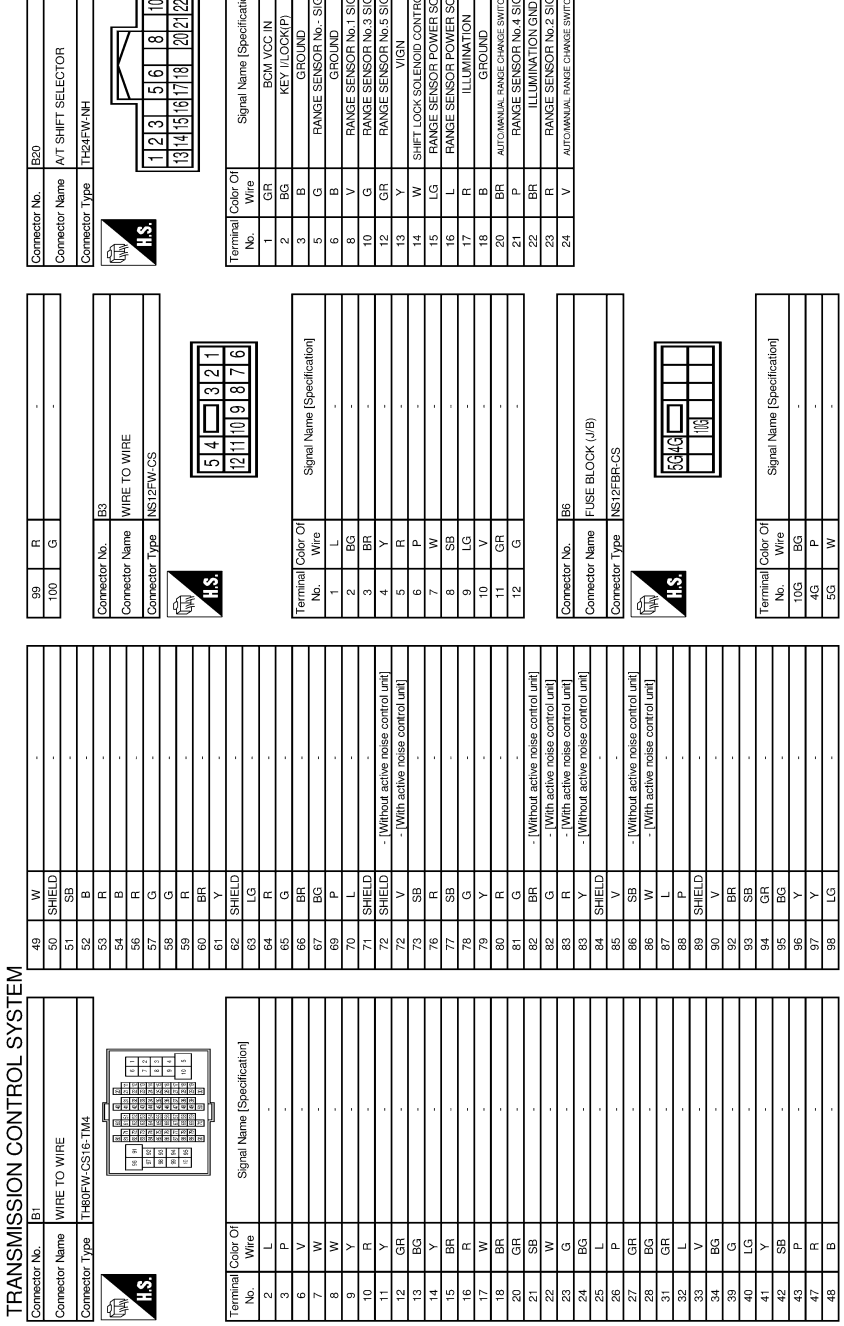
WIRING DIAGRAM




PADDLE SHIFTER (SHIFT-DOWN SWITCH) M32
PADDLE SHIFTER (SHIFT-UP SWITCH) M39
M11
M55
M7
B1
A/T SHIFT SELECTOR B20
AUTO / MANUAL RANGE CHANGE SWITCH
M/C ON
P,R,N,A
RANGE SENSOR
No. 5
No. 4
No. 3
No. 2
No. 1
No. 0
B14
SHIFT LOCK SOLENOID
TCM (B45), (B46), (B47)
ACTUATOR CONTROL MODULE
3RD-5TH POSITION SENSOR
6TH-NEUTRAL POSITION SENSOR
1ST-REVERSE POSITION SENSOR 2
1ST-REVERSE POSITION SENSOR 1
2ND-4TH POSITION SENSOR
LINE PRESSURE SENSOR
SEQUENCE SOLENOID VALVE
TRANSMISSION UNIT (B49), (B50)
FLUID TEMPERATURE SENSOR
OUTPUT SHAFT SPEED SENSOR
CLUTCH B SPEED SENSOR
CLUTCH A SPEED SENSOR
JRDWC3299GB


To CAN system (NISMO)
To CAN system (Except NISMO)
DATA LINE
DATA LINE
ECM
M107
97
101
113
M7
B1
21
15
11
31
TCM
B45
B46
B47
8
4
7
3
89
B48
B121
6
PARK POSITION SWITCH
B122
1
2
B121
B48
5
B31
JRDWC3300GB

TRANSMISSION CONTROL SYSTEM



JRDWC4625GB

TRANSMISSION CONTROL SYSTEM

Connector No.	B45
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH-Z

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	POWER SUPPLY (MEMORY BACK-UP)-2
3	B	GROUND
4	B	GROUND
5	W	POWER SUPPLY (MEMORY BACK-UP)-3
7	B	GROUND
8	B	GROUND
9	P	POWER SUPPLY (MEMORY BACK-UP)-1
10	LG	BACK-UP LAMP SIGNAL
11	L	CAN-H
14	V	POWER OFF
15	P	CAN-L
16	W	STOP LAMP SWITCH SIGNAL
17	Y	IGNITION SWITCH SIGNAL
19	GR	STARTER RELAY SIGNAL
23	BR	AUT/MANUAL RANGE CHANGE SWITCH 1 SIGNAL
25	L	RANGE SENSOR POWER SOURCE 1
26	LG	RANGE SENSOR POWER SOURCE 2
27	G	RANGE SENSOR NO.- SIGNAL
28	V	AUT/MANUAL RANGE CHANGE SWITCH 2 SIGNAL
31	SB	ENGINE SPEED SIGNAL
33	V	RANGE SENSOR NO.1 SIGNAL
34	BG	SAVE MODE SWITCH SIGNAL
35	G	RANGE SENSOR NO.3 SIGNAL
37	GR	R MODE SWITCH SIGNAL
38	R	RANGE SENSOR NO.2 SIGNAL
39	W	PADDLE SHIFTER (SHIFT-UP SWITCH) SIGNAL
42	L	PADDLE SHIFTER (SHIFT-DOWN SWITCH) SIGNAL
43	P	RANGE SENSOR NO.4 SIGNAL
44	GR	RANGE SENSOR NO.5 SIGNAL
45	BG	R MODE LAMP SIGNAL
46	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
47	G	SAVE MODE LAMP SIGNAL

Connector No.	B46
Connector Name	TCM
Connector Type	RH40FBR-RZ8-L-LH-Z

Terminal No.	Color Of Wire	Signal Name [Specification]
49	L	SHIFT SOLENOID VALVE 1 (+)
51	P	SHIFT SOLENOID VALVE 3 (+)
53	GR	SEQUENCE SOLENOID VALVE (+)
54	W	SHIFT SOLENOID VALVE 2 (+)
56	LG	SHIFT SOLENOID VALVE 4 (+)
57	BR	AXIS A FEED PRESSURE SOLENOID VALVE (+)
59	G	AXIS B FEED PRESSURE SOLENOID VALVE (+)
62	R	AXIS A FEED PRESSURE SOLENOID VALVE (-)
64	BG	AXIS B FEED PRESSURE SOLENOID VALVE (-)
66	R	6TH-NEUTRAL POSITION SENSOR (-)
67	L	1ST-REVERSE POSITION SENSOR 1 SIGNAL
68	BR	CLUTCH A SPEED SENSOR (-)
69	Y	1ST-REVERSE POSITION SENSOR 2 (-)
70	W	6TH-NEUTRAL POSITION SENSOR SIGNAL
71	Y	1ST-REVERSE POSITION SENSOR 1 (+)
72	G	CLUTCH A SPEED SENSOR SIGNAL
73	Y	LINE PRESSURE SENSOR (+)
74	BR	6TH-NEUTRAL POSITION SENSOR (+)
75	L	1ST-REVERSE POSITION SENSOR 2 (+)
76	Y	CLUTCH A SPEED SENSOR (+)
77	GR	LINE PRESSURE SENSOR SIGNAL
78	R	CLUTCH B SPEED SENSOR (+)
79	G	1ST-REVERSE POSITION SENSOR 2 SIGNAL
80	BR	LINE PRESSURE SENSOR (-)
81	G	2ND-4TH POSITION SENSOR (+)
82	W	CLUTCH B SPEED SENSOR SIGNAL
83	L	2ND-4TH POSITION SENSOR (-)
84	BR	3RD-5TH POSITION SENSOR SIGNAL
85	Y	2ND-4TH POSITION SENSOR SIGNAL
86	L	CLUTCH B SPEED SENSOR (-)
87	L	FLUID TEMPERATURE SENSOR (+)
88	W	3RD-5TH POSITION SENSOR (+)
89	BG	PARK POSITION SWITCH SIGNAL
91	SB	FLUID TEMPERATURE SENSOR (-)
92	R	3RD-5TH POSITION SENSOR SIGNAL
94	G	1ST-REVERSE POSITION SENSOR 1 (-)

Connector No.	B47
Connector Name	TCM
Connector Type	RH24FGY-RZ8-R-LH-Z

Terminal No.	Color Of Wire	Signal Name [Specification]
97	BR	CLUTCH A PRESSURE SENSOR (+)
98	R	CLUTCH A PRESSURE SENSOR SIGNAL
99	W	CLUTCH A PRESSURE SENSOR (-)
102	Y	CLUTCH B PRESSURE SENSOR (+)
103	L	CLUTCH B PRESSURE SENSOR SIGNAL
104	G	CLUTCH B PRESSURE SENSOR (-)
105	L	OUTPUT SHAFT SPEED SENSOR (+)
106	G	OUTPUT SHAFT SPEED SENSOR SIGNAL
107	Y	OUTPUT SHAFT SPEED SENSOR (-)
113	BG	LINE PRESSURE SOLENOID VALVE (-)
115	W	LUBRICATING FLOW SOLENOID VALVE (-)
118	V	LINE PRESSURE SOLENOID VALVE (+)
120	BR	LUBRICATING FLOW SOLENOID VALVE (+)
121	R	CLUTCH A SOLENOID VALVE (+)
123	G	CLUTCH B SOLENOID VALVE (+)
126	LG	CLUTCH A SOLENOID VALVE (-)
128	Y	CLUTCH B SOLENOID VALVE (-)

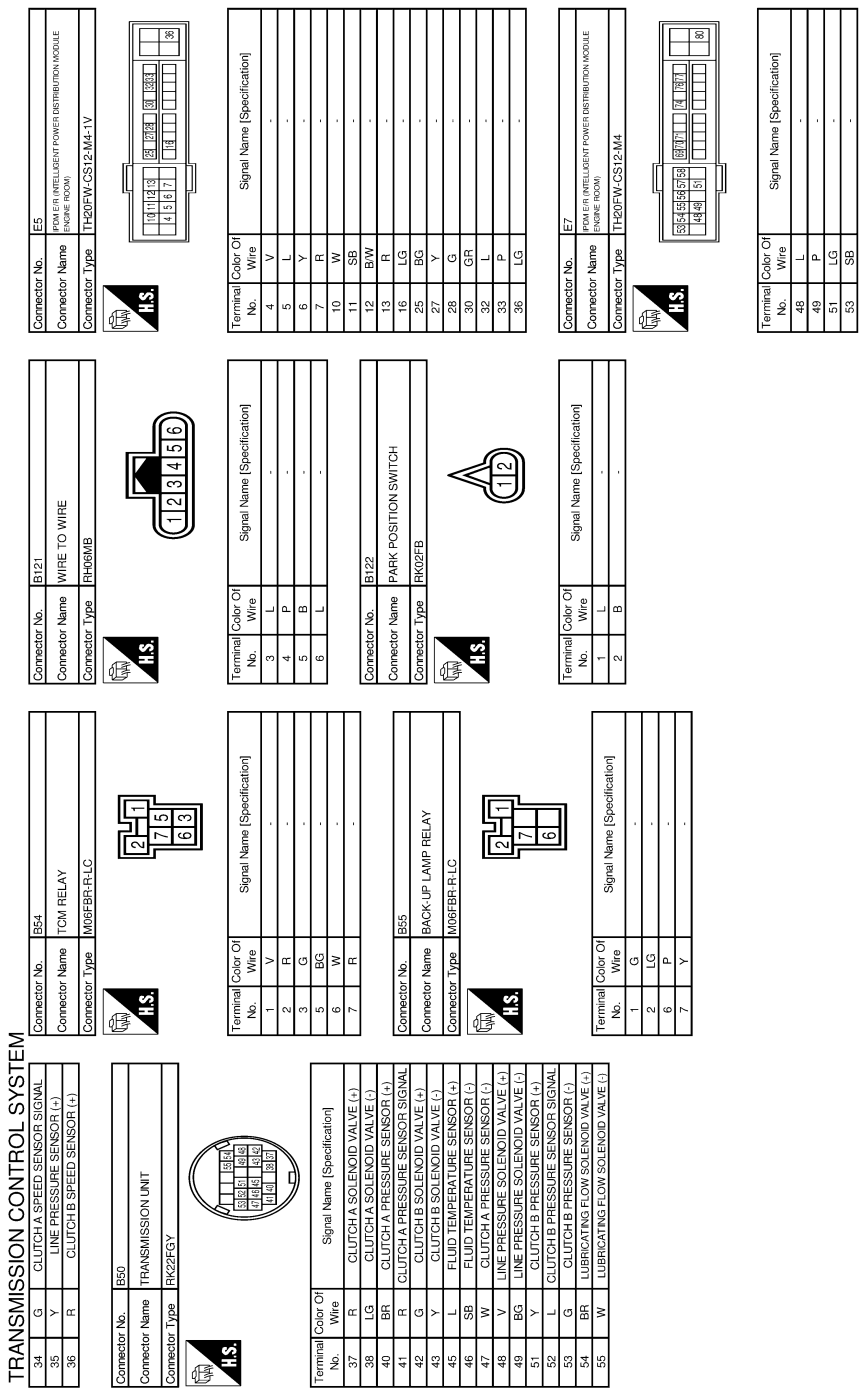
Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Type	RH06FB

Terminal No.	Color Of Wire	Signal Name [Specification]
3	L	-
4	V	-
5	B	-
6	BG	-

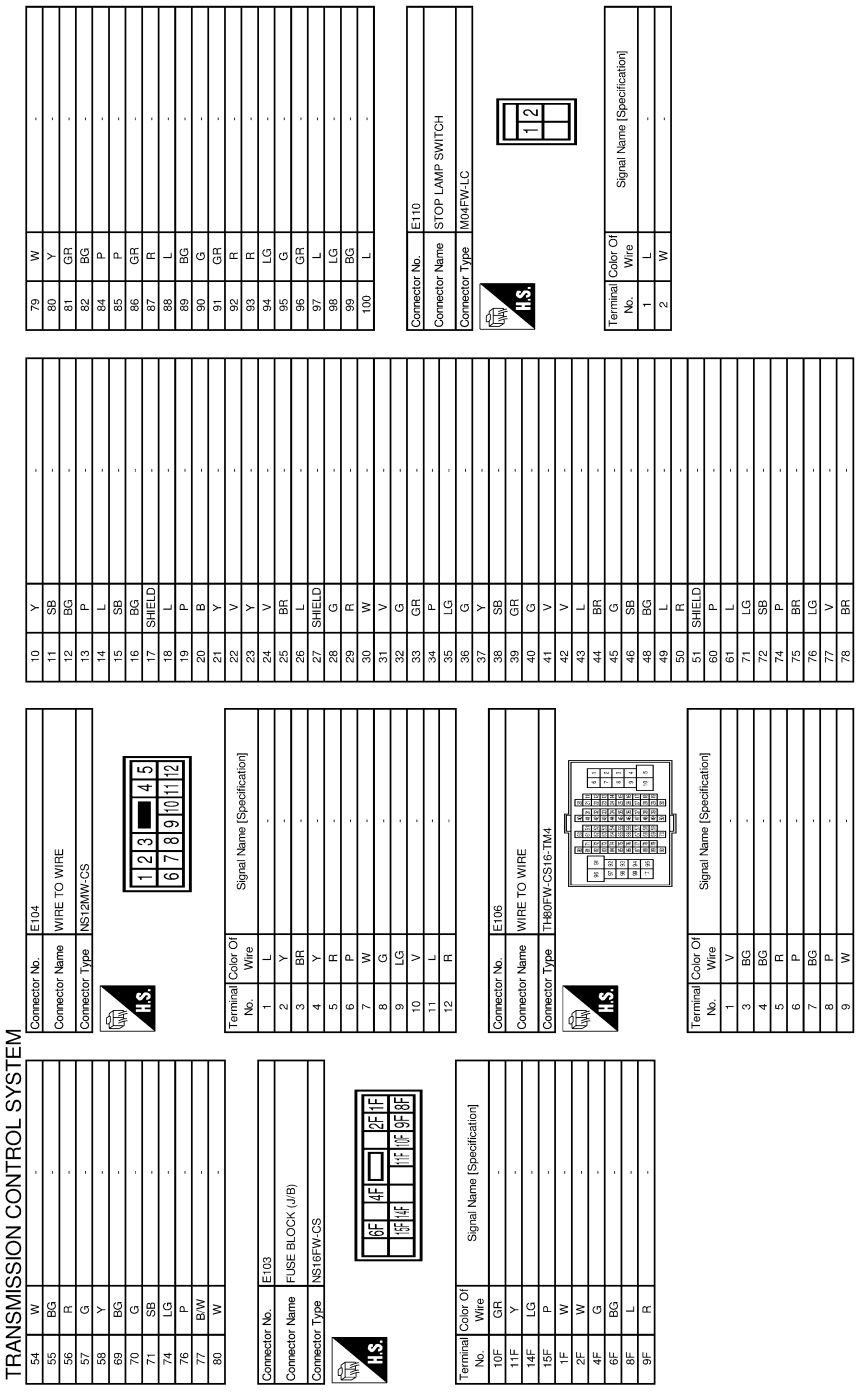
Connector No.	B49
Connector Name	TRANSMISSION UNIT
Connector Type	RH36FG

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	OUTPUT SHAFT SPEED SENSOR (+)
2	G	OUTPUT SHAFT SPEED SENSOR SIGNAL
3	Y	1ST-REVERSE POSITION SENSOR 1 (+)
4	L	1ST-REVERSE POSITION SENSOR 1 SIGNAL
5	G	1ST-REVERSE POSITION SENSOR 1 (-)
6	GR	SEQUENCE SOLENOID VALVE (+)
7	LG	SHIFT SOLENOID VALVE 4 (+)
8	Y	OUTPUT SHAFT SPEED SENSOR (-)
9	W	3RD-5TH POSITION SENSOR (+)
10	R	3RD-5TH POSITION SENSOR SIGNAL
11	BR	3RD-5TH POSITION SENSOR (-)
12	GR	LINE PRESSURE SENSOR SIGNAL
13	L	SHIFT SOLENOID VALVE 1 (+)
14	BR	AXIS A FEED PRESSURE SOLENOID VALVE (+)
15	R	AXIS A FEED PRESSURE SOLENOID VALVE (-)
16	G	2ND-4TH POSITION SENSOR (+)
17	Y	2ND-4TH POSITION SENSOR SIGNAL
18	L	2ND-4TH POSITION SENSOR (-)
19	BR	LINE PRESSURE SENSOR (-)
20	W	SHIFT SOLENOID VALVE 2 (+)
21	G	AXIS B FEED PRESSURE SOLENOID VALVE (+)
22	BG	AXIS B FEED PRESSURE SOLENOID VALVE (-)
23	BR	6TH-NEUTRAL POSITION SENSOR (+)
24	W	6TH-NEUTRAL POSITION SENSOR SIGNAL
25	R	6TH-NEUTRAL POSITION SENSOR (-)
26	L	CLUTCH B SPEED SENSOR (-)
27	P	SHIFT SOLENOID VALVE 3 (+)
28	Y	CLUTCH A SPEED SENSOR (+)
29	BR	CLUTCH A SPEED SENSOR (-)
30	L	1ST-REVERSE POSITION SENSOR 2 (+)
31	G	1ST-REVERSE POSITION SENSOR 2 SIGNAL
32	Y	1ST-REVERSE POSITION SENSOR 2 (-)
33	W	CLUTCH B SPEED SENSOR SIGNAL

JRDWC4626GB

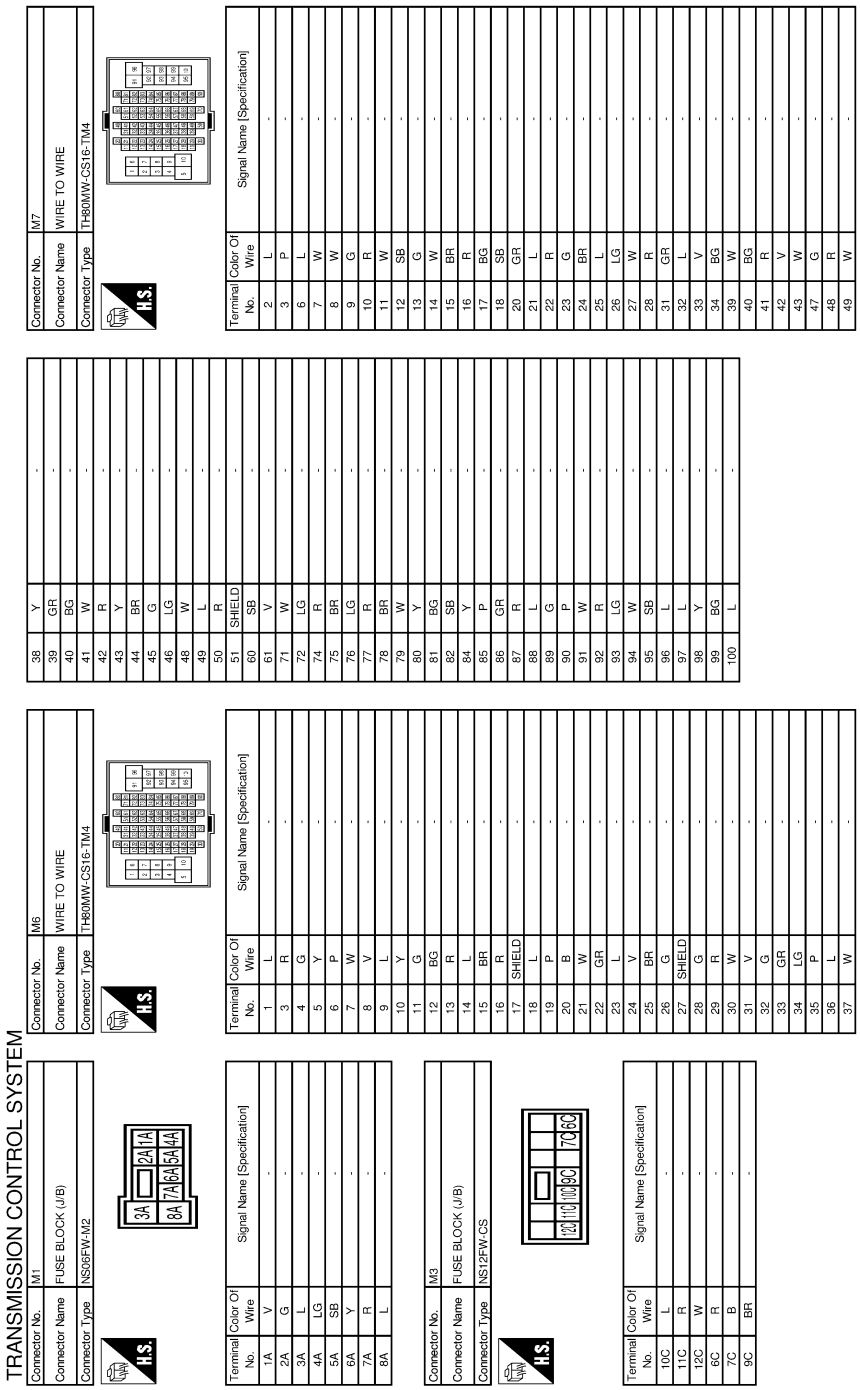


JRDWC4627GB

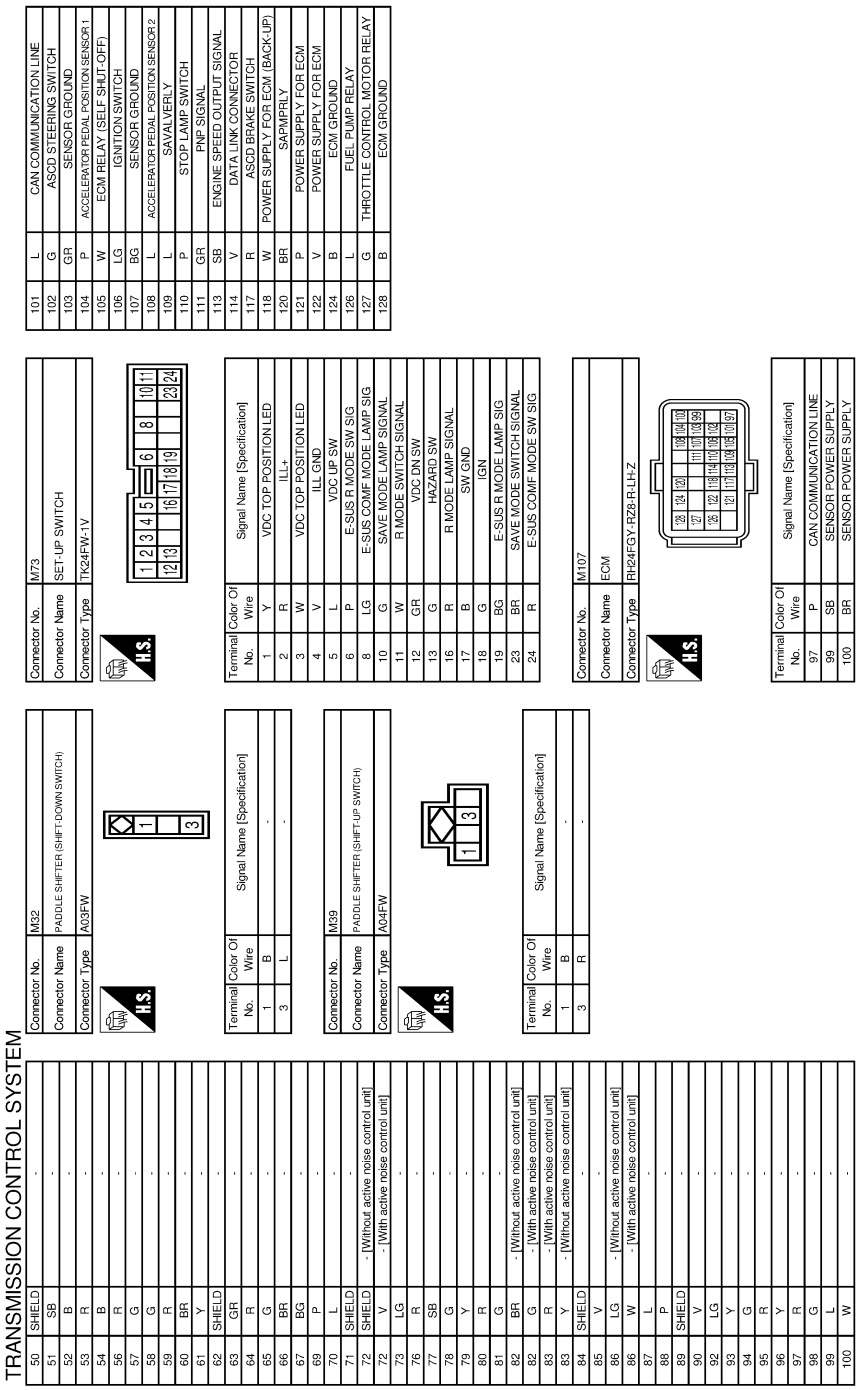


JRDWC4628GB

TRANSMISSION CONTROL SYSTEM

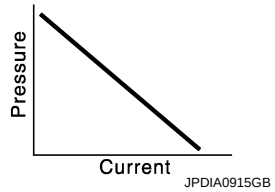
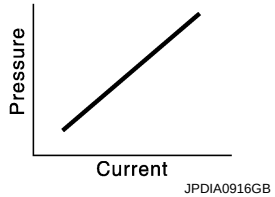
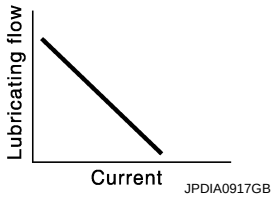
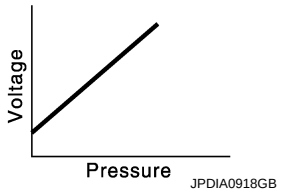


JRDWC4629GB

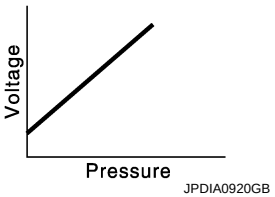


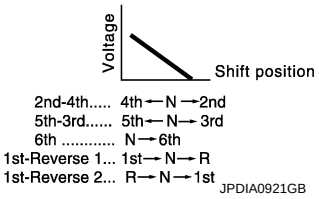
JRDWC4630GB

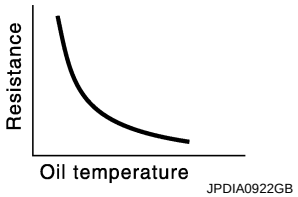
COMPONENT DESCRIPTION

Component			Function
Front control module	Valve	Line pressure solenoid valve	Controls the line pressure by the line pressure solenoid current  JPDIA0915GB
		Clutch A solenoid valve	Controls the clutch pressure of clutches A/B by the clutch A/B solenoid current  JPDIA0916GB
		Clutch B solenoid valve	
		Lubricating flow solenoid valve	Controls the lubricating flow by the lubricating flow solenoid current  JPDIA0917GB
	Pressure sensor	Clutch A pressure sensor	Converts the clutch pressure of clutches A/B into voltage  JPDIA0918GB
		Clutch B pressure sensor	

<table>
<tr><th colspan="3">Component</th><th>Function</th></tr>
<tr><td rowspan="12">Actuator control module</td><td rowspan="6">Valve</td><td>Axis A feed pressure solenoid valve</td><td rowspan="2">Controls the feed pressure of axes A/B by the axes A/B feed pressure solenoid
 

JPDIA0919GB</td></tr>
<tr><td>Axis B feed pressure solenoid valve</td></tr>
<tr><td>Shift solenoid valve 1</td><td rowspan="5">Controls 4 shift actuator pistons by combining ON and OFF of each shift solenoid valve*1</td></tr>
<tr><td>Shift solenoid valve 2</td></tr>
<tr><td>Shift solenoid valve 3</td></tr>
<tr><td>Shift solenoid valve 4</td></tr>
<tr><td>Sequence solenoid valve</td></tr>
<tr><td>Pressure sensor</td><td>Line pressure sensor</td><td>Converts the line pressure into voltage
 

JPDIA0920GB</td></tr>
<tr><td rowspan="5">Position sensor</td><td>1st-Reverse position sensor 1</td><td rowspan="5">• Converts each shift actuator position into voltage
• Two 1st-reverse position sensors with the same output (but the output characteristics are inverse) are installed for fail-safe
 

JPDIA0921GB</td></tr>
<tr><td>1st-Reverse position sensor 1</td></tr>
<tr><td>2nd-4th position sensor</td></tr>
<tr><td>6th-Neutral position sensor</td></tr>
<tr><td>3rd-5th position sensor</td></tr>
<tr><td rowspan="2">Wheel sensor</td><td colspan="2">Clutch A speed sensor</td><td rowspan="2">Converts the clutches A/B speed into pulse</td></tr>
<tr><td colspan="2">Clutch B speed sensor</td></tr>
<tr><td colspan="3">Output shaft speed sensor</td><td>Converts the output shaft speed into pulse</td></tr>
<tr><td colspan="3">Park position switch</td><td>When the parking position is locked, it is energized, and when unlocked, it is not energized</td></tr>
<tr><td colspan="3">Fluid temperature sensor</td><td>Converts the oil pan oil temperature into electrical resistance
 

JPDIA0922GB</td></tr>
<tr><td colspan="3">TCM</td><td>Controls the transmission system</td></tr>
<tr><td rowspan="8">Shift device</td><td rowspan="6">Range sensor</td><td>Range sensor No. 0</td><td rowspan="6">With 6 range sensors, the shift lever position is recognized*2</td></tr>
<tr><td>Range sensor No. 1</td></tr>
<tr><td>Range sensor No. 2</td></tr>
<tr><td>Range sensor No. 3</td></tr>
<tr><td>Range sensor No. 4</td></tr>
<tr><td>Range sensor No. 5</td></tr>
<tr><td colspan="2">Auto/Manual range change switch</td><td>Inputs the Auto/Manual range change switch signal to TCM</td></tr>
<tr><td colspan="2">Shift lock solenoid</td><td>Lock or unlock is attained with 3 systems, the ignition switch signal, stop lamp switch signal and lock or unlock signal (TCM)</td></tr>
</table>

Component		Function
Set-up switch	R mode switch	Normally not energized, and energized by turning the set-up switch to R
	SAVE mode switch	Normally not energized, and energized by turning the set-up switch to SAVE
TCM relay		Perform the power supply to TCM

*1: For the combination of the solenoids, refer to the “Shift actuator operation list”.

*2: For the combination of the range sensors, refer to the “Shift lever position and range sensor output”.

Shift actuator operation list

–: No effect on operation

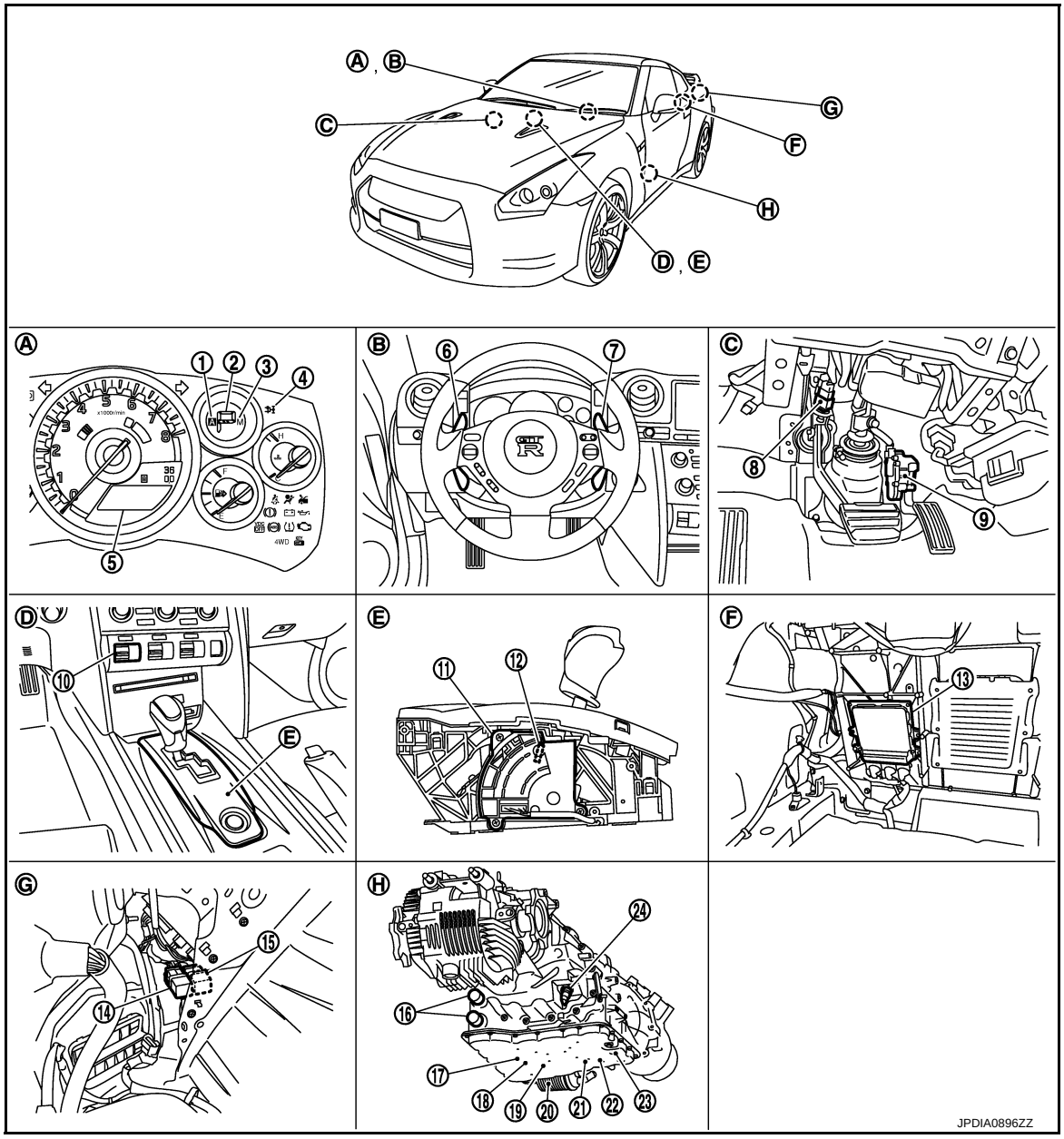
Shift actuator	Operation	Solenoid valve				
		Sequence	Shift 1	Shift 2	Shift 3	Shift 4
6th-Neutral shift actuator	6GR → N	ON	ON	OFF	–	–
	6GR ← N		OFF	ON	–	–
2nd-4th shift actuator	2GR → N → 4GR	OFF	ON	OFF	–	–
	2GR ← N ← 4GR		OFF	ON	–	–
3rd-5th shift actuator	5GR → N → 3GR	ON	–	–	OFF	ON
	5GR ← N ← 3GR		–	–	ON	OFF
1st-Reverse shift actuator	1GR → N → Reverse	OFF	–	–	ON	OFF
	1GR ← N ← Reverse		–	–	OFF	ON

Shift lever position and range sensor output

Shift lever position	Range sensor					
	No. 0	No. 1	No. 2	No. 3	No. 4	No. 5
P	ON	OFF	OFF	OFF	OFF	OFF
R	OFF	ON	ON	OFF	OFF	OFF
N	OFF	OFF	ON	ON	ON	OFF
A⇔M	OFF	OFF	OFF	OFF	ON	ON

Component Parts Location (GT-R certified NISSAN dealer)

INFOID:0000000011487650



1. A range indicator
2. Shift position indicator
3. M range indicator
4. Transmission warning light
5. Information display
6. Paddle shifter (shift-down switch)
7. Paddle shifter (shift-up switch)
8. Stop lamp switch
9. Accelerator pedal position sensor
10. Set-up switch
11. Range sensor
12. Auto/Manual range change switch
13. TCM
14. TCM relay
15. Back-up lamp relay
16. Transmission connector
17. Output shaft speed sensor
18. Clutch A speed sensor
19. Clutch B speed sensor
20. Heat exchanger
21. Actuator control module
22. Fluid temperature sensor
23. Front control module
24. Park position switch

A. Combination meter
B. Steering assembly
C. Rear of LH instrument lower panel
D. Center console
E. Control device assembly
F. Trunk room
G. Left side of trunk room
H. Transmission assembly

The following parts are integrated into the actuator control module (21).

- Axis A feed pressure solenoid valve
- Axis B feed pressure solenoid valve
- Shift solenoid valve 1
- Shift solenoid valve 2
- Shift solenoid valve 3
- Shift solenoid valve 4

Sequence solenoid valve	Line pressure sensor	1st-Reverse position sensor 1
1st-Reverse position sensor 1	2nd-4th position sensor	6th-Neutral position sensor
3rd-5th position sensor		

The following parts are integrated into the front control module (23).

Line pressure solenoid valve	Clutch A solenoid valve	Clutch B solenoid valve
Lubricating flow solenoid valve	Clutch A pressure sensor	Clutch B pressure sensor

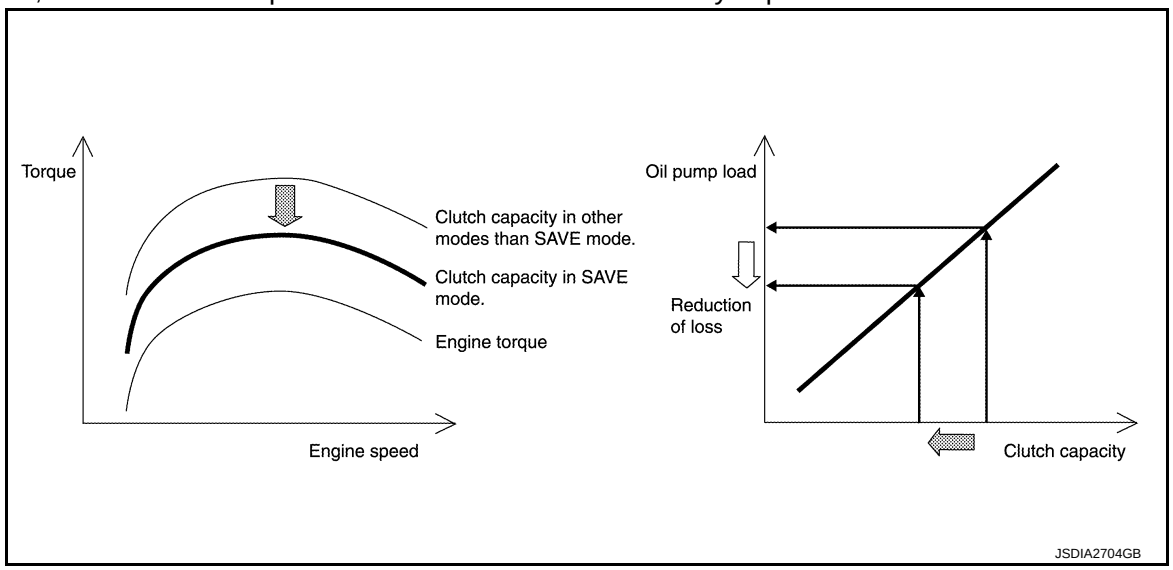
SAVE MODE

SAVE MODE : System Description (GT-R certified NISSAN dealer)

INFOID:0000000011487651

SPECIAL CLUTCH OIL PRESSURE CONTORL FOR SAVE MODE

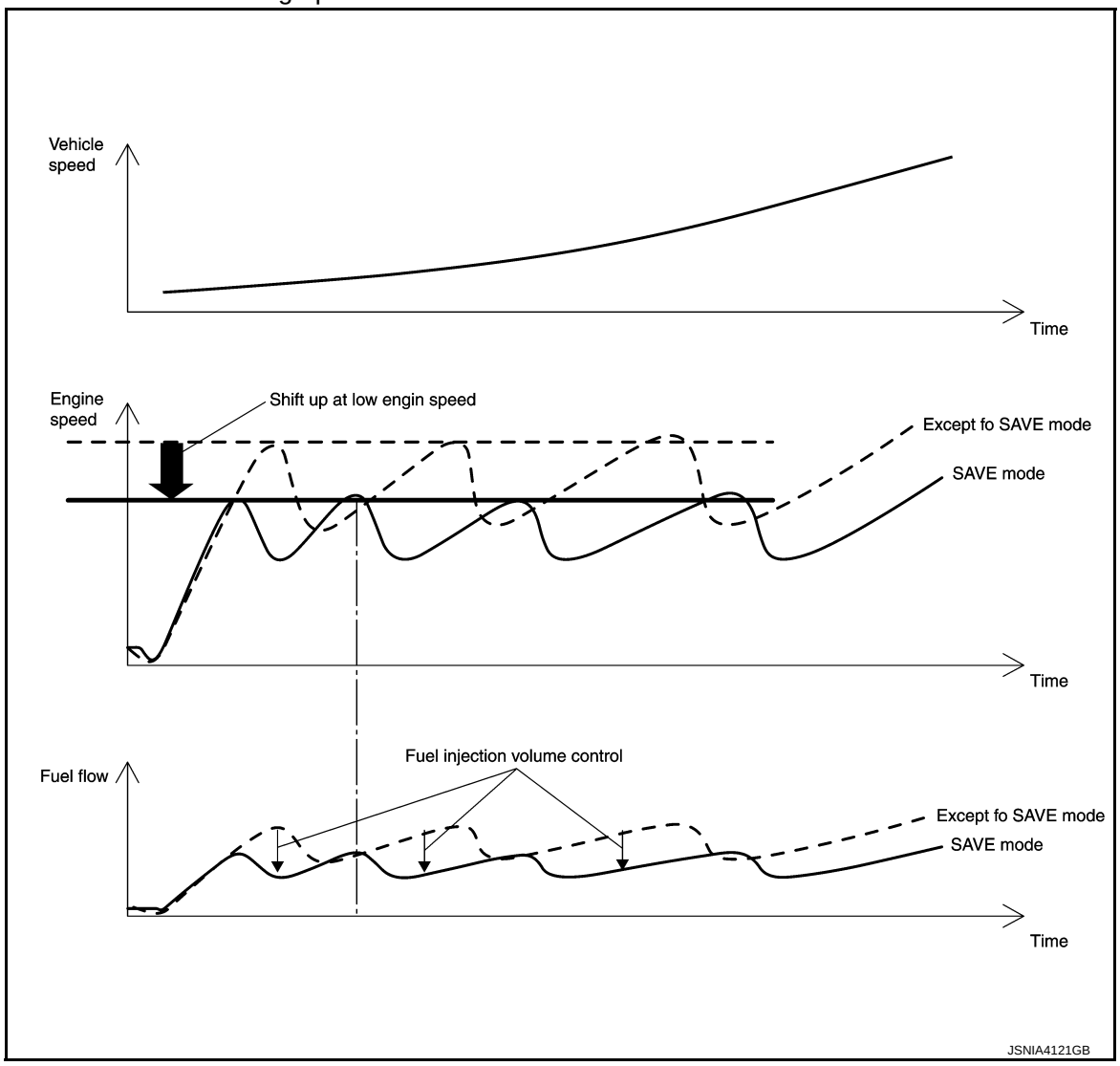
- Contributes to fuel economy improvement especially at high speed drive.
- In SAVE mode, clutch meets at lower oil pressure than in other modes. It reduces oil pump load, which realized an improvement of fuel economy.
- In this control, engine torque output is set lower against accelerator angle. Necessary clutch capacity can be reduced, which realizes oil pressure decrease and fuel economy improvement.



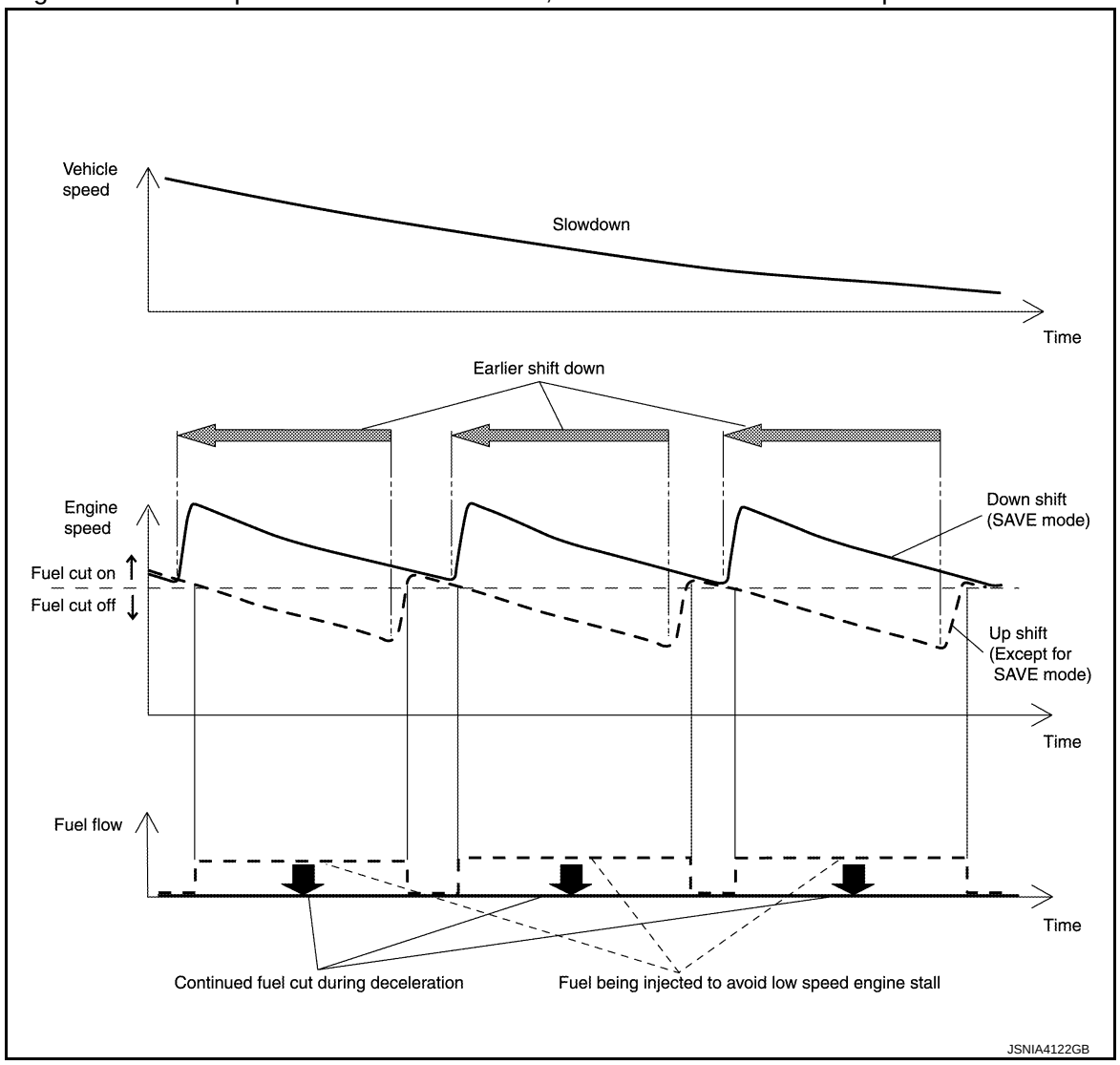
SHIFT DIAGRAM UNIQUE TO SAVE MODE

- It contributes to fuel economy improvement especially at city road drive.
- Below change is applied to shift diagram in other modes than SAVE mode.

- Gives lower rotation at shifting up.



- Gives higher shift down speed with accelerator OFF, which reduces fuel consumption scenes.



SAVE MODE : Operation Condition (GT-R certified NISSAN dealer)

INFOID:0000000011487652

If any of the following conditions are met, TCM does not enter to SAVE mode.
- When transmission is in fail-safe
- When engine is in fail-safe
- When malfunction is seen in set-up switch (transmission)
- When SAVE mode lamp is burned out

NOTE:
When transmission oil temperature is below -10°C (50°F), a certain vehicle behavior is seen such as shift-up vehicle speed is high. It is a normal control to raise the oil temperature, and it gives SAVE mode shift curve when the oil temperature rises.

ON BOARD DIAGNOSTIC (OBD) SYSTEM

Diagnosis Description (GT-R certified NISSAN dealer)

INFOID:0000000011487653

This system is an on board diagnostic system that records exhaust emission-related diagnostic information and detects a sensors/actuator-related malfunction. A malfunction is indicated by the malfunction indicator lamp (MIL) and stored in control module memory as a DTC. The diagnostic information can be obtained with the diagnostic tool (GST: Generic Scan Tool).

GST (Generic Scan Tool) (GT-R certified NISSAN dealer)

INFOID:0000000011487654

When GST is connected with a data link connector equipped on the vehicle side, it will communicate with the control module equipped in the vehicle and then enable various kinds of diagnostic tests. Refer to GI-47, "Description".

DIAGNOSIS SYSTEM (TCM)

DIAGNOSIS DESCRIPTION

DIAGNOSIS DESCRIPTION : One Trip Detection Logic and Two Trip Detection Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487655

NOTE:
The series of the following operations is defined as One Trip: “Engine start, the completion of warm-up, and ignition switch OFF.”

ONE TRIP DETECTION LOGIC

TCM stores DTC and Freeze frame data when detecting errors for the first time. MIL turns ON depending on the diagnosis. Refer to TM-342, "DTC Index".

TWO TRIP DETECTION LOGIC

TCM stores the 1st trip DTC and its freeze frame data when detecting malfunction for the first time. MIL does not turn ON at this step. <1st trip>
When detecting the same malfunction during the next travel, TCM stores DTC and the freeze frame data of the 1st trip DTC. The instant when DTC is stored, MIL turns ON. <2nd trip>
“Trip” in the above “Two Trip Detection Logic” means a driving mode that allows self-diagnosis while driving.

×: Applicable —: Not applicable

Items	MIL		DTC		1st trip DTC	
	1st trip Blinking	2nd trip Blinking	1st trip displaying	2nd trip displaying	1st trip displaying	2nd trip displaying
One trip detection logic (Refer to TM-342, "DTC Index".)	×	—	×	—	—	—
Two trip detection logic (Refer to TM-342, "DTC Index".)	—	×	—	×	×*	—

*: DTC can not be distinguished from the 1st trip DTC.

DIAGNOSIS DESCRIPTION : DTC and Freeze Frame Data (GT-R certified NISSAN dealer)

INFOID:0000000011487656

DTC AND 1ST TRIP DTC (FOR TWO TRIP DETECTION LOGIC THAT MIL TURNS ON)

- The 1st trip DTC number is the same as DTC number.
- When detecting malfunction at the 1st trip, TCM stores the 1st trip DTC. MIL does not turns ON at this step. When not detecting the same malfunction at the 2nd trip (required driving conditions met), the 1st trip DTC is erased from TCM memory. When detecting the same malfunction at the 2nd trip, TCM stores DTC and MIL turns ON simultaneously.
- The 1st trip DTC is defined in Service $07 of JIS D 5405-2 (Service $07 of ISO 15031-5). MIL is not turned ON by the 1st trip DTC detection.
- For the procedure to erase DTC and the 1st trip DTC from TCM memory, refer to “How to Erase DTC and 1st Trip DTC” of TM-47, "CONSULT Function (GT-R certified NISSAN dealer)".

FREEZE FRAME DATA AND 1ST TRIP FREEZE FRAME DATA (FOR TWO TRIP DETECTION LOGIC)

- TCM stores driving conditions at the moment malfunction is detected, such as engine speed, vehicle speed, range, and accelerator pedal opening.
- Data stored with DTC are called freeze frame data. Both DTC and freeze frame data are indicated on the CONSULT screen.
- After the Freeze frame data of the 1st trip DTC are stored, they are not updated even when the same DTC is detected at the 2nd trip. In this case, the data stored at the malfunction occurrence of the 1st trip.
- TCM can store four freeze frame data or freeze frame data of the 1st trip DTC. When the fifth DTC or the 1st trip DTC is detected, the oldest freeze frame data or the freeze frame data of the 1st trip DTC is updated.
- When TCM memory is erased, freeze frame data or that of the 1st trip DTC is erased (together with DTC).

DIAGNOSIS DESCRIPTION : Malfunction Indicator Lamp (MIL) (GT-R certified NIS-

SAN dealer)

INFOID:0000000011487657

Refer to EC-168, "DIAGNOSIS DESCRIPTION : Malfunction Indicator Lamp (MIL) (GT-R certified NISSAN dealer)".

DIAGNOSIS DESCRIPTION : Permanent Diagnostic Trouble Code (Permanent DTC) (GT-R certified NISSAN dealer)

INFOID:0000000011487658

Permanent DTC is defined in SAE J1979/ISO 15031-5 Service $0A.
Control module stores a DTC issuing a command of turning on MIL as a permanent DTC and keeps storing the DTC as a permanent DTC until control module judges that there is no presence of malfunction.
Permanent DTCs cannot be erased by using the erase function of CONSULT or Generic Scan Tool (GST) and by disconnecting the battery to shut off power to control module. This prevents a vehicle from passing the in-use inspection without repairing a malfunctioning part.
When not passing the in-use inspection due to more than one permanent DTC, permanent DTCs should be erased, referring to this manual.

NOTE:
- The important items in in-use inspection are that MIL is not ON, SRT test items are set, and permanent DTCs are not included.
- Permanent DTCs do not apply for regions that permanent DTCs are not regulated by law.

PERMANENT DTC SET TIMING

The setting timing of permanent DTC is stored in ECM with the lighting of MIL when a DTC is confirmed.

DIAGNOSIS DESCRIPTION : Counter System (GT-R certified NISSAN dealer)

INFOID:0000000011487659

RELATIONSHIP BETWEEN MIL, 1ST TRIP DTC, DTC, AND DETECTABLE ITEMS (FOR TWO TRIP DETECTION LOGIC THAT MIL TURNS ON)

- TCM stores 1st trip DTC and 1st trip freeze frame data when detecting errors for the first time.
- When detecting the same malfunction during the next travel, TCM stores DTC and the freeze frame data of the 1st trip DTC. The instant when DTC is stored, MIL turns ON.
- MIL turns OFF after driving by 3 trips with no malfunctions. If the same malfunction occurs during counting, the counter is reset.
- DTC and freeze frame data are displayed until after driving by 40 trips with no reoccurrence of the same malfunction.
- If a 2nd trip self-diagnosis result is “OK” (required driving conditions met), the 1st trip DTC is erased.

COUNTER SYSTEM CHART

Items	Driving pattern	Trip
MIL (turns off)	B	3
DTC, Freeze Frame Data (no display)	A	40
1st Trip DTC, 1st Trip Freeze Frame Data (clear)	B	1

DRIVING PATTERN

Driving Pattern A
Driving pattern A means a condition that allows warm-up.
When the following conditions are all satisfied, the counter increases the count.
- Engine speed reaches 400 rpm or more.
- Engine coolant temperature rises by 20°C (36°F) or more after starting the engine.
- Engine coolant temperature reaches 70°C (158°F) or more.
- Ignition switch is turned from ON to OFF.

NOTE:
- Counter A is reset when detecting the same malfunction regardless of driving conditions.
- Counter A increases the count when all the above conditions are satisfied without detecting the same malfunction.
- DTC is erased if the count of Counter A reaches 40 and MIL due to applicable malfunction is OFF.

Driving Pattern B

Driving pattern B means a condition that allows all diagnoses at least once.
When the following conditions are all satisfied, the counter increases the count.
- Engine speed reaches 400 rpm or more.
- Engine coolant temperature reaches 70°C (158°F) or more.
- Vehicle speed of 70 – 120 km/h (44 – 75 MPH) is maintained for 60 seconds or more under the control of closed loop.
- Vehicle speed of 30 – 60 km/h (19 – 37 MPH) is maintained for 10 seconds or more under the control of closed loop.
- Under the closed loop control condition, the following state reaches 12 seconds or more in total: Vehiclespeed of 4 km/h (2 MPH) or less with idling condition.
- The state of driving at 10 km/h (7 MPH) or more reaches 10 minutes or more in total.
- A lapse of 22 minutes or more after engine start.
- Ignition switch is turned from ON to OFF.

NOTE:
- Counter B is reset when detecting malfunctions regardless of driving conditions.
- Counter B increases the count when all the above conditions are satisfied without detecting the same malfunction.
- MIL turns ON when the count of Counter B reaches 3 with no malfunction detection.
- The 1st trip DTC is erased when Counter B has one count with no malfunction detection after the 1st trip DTC is stored in TCM.

CONSULT Function (GT-R certified NISSAN dealer)

INFOID:0000000011487660

FUNCTION

Items	Function
Work Support	This mode enables a technician to adjust some devices faster and more accurately.
Self Diagnostic Results	Retrieve DTC from ECU and display diagnostic items.
Data Monitor	Monitor the input/output signal of the control unit in real time.
CAN Diagnosis Support Monitor	It monitors the status of CAN communication.
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.
ECU Identification	Display the ECU identification number (part number etc.) of the selected system.

SELF DIAGNOSTIC RESULT

Display Item List
Refer to TM-342, "DTC Index".

How to Read DTC and 1st trip DTC
- DTC (P0705, P283E, P0986, etc.) are defined in JIS D 5405-3 (ISO 15031-6).
- DTC can not be distinguished from the 1st trip DTC.
- Malfunction-related DTC and the 1st trip DTC are displayed in “Self Diagnostic Results” of CONSULT. “TIME” shows a current or past malfunction.
  When a DTC is currently detected, “TIME” turns to “CRNT”. If “TIME” is “PAST”, this means a past malfunction. The number of travels (Trip) with no malfunctions indicated by a DTC can be checked with “IGN COUNTER” in Freeze Frame Data (FFD).

How to Erase DTC and 1st trip DTC
NOTE:
- TCM memory is erased even when the battery terminal is disconnected. (Disconnection time varies widely: from a few seconds to several hours.)
- If the ignition switch stays ON after repair work, be sure to turn ignition switch OFF once. Wait at least 10 seconds and then turn it ON (engine stopped) again.

1. Select “TRANSMISSION” in CONSULT.
2. Select “SELF-DIAG RESULTS”.
3. Touch “ERASE”. (DTC in TCM will be erased.)

Freeze Frame Data and 1st Trip Freeze Frame Data

Item name	(Unit)	Remarks
VEHICLE SPEED	(km/h or mph)	Displays the vehicle speed signal (meter) received via CAN communication from the combination meter.
ENGINE SPEED	(rpm)	Displays the engine speed signal received from ECM via CAN communication.
CLUTCH B SPEED	(rpm)	Displays the clutch B speed calculated from the pulse signal of the clutch B speed sensor.
CLUTCH A SPEED	(rpm)	Displays the clutch A speed calculated from the pulse signal of the clutch A speed sensor.
OUTPUT SHAFT SPD	(rpm)	Displays the output shaft speed calculated from the pulse signal of the output shaft speed sensor.
BATTERY VOLTAGE	(V)	Displays the power supply voltage of TCM.
6-N POSITION SEN	(mV)	Displays the signal voltage of the 6th-Neutral position sensor.
2-4 POSITION SEN	(mV)	Displays the signal voltage of the 2nd-4th position sensor.
1-R POSITION SEN 1	(mV)	Displays the signal voltage of the 1st-Reverse position sensor 1.
1-R POSITION SEN 2	(mV)	Displays the signal voltage of the 1st-Reverse position sensor 2.
3-5 POSITION SEN	(mV)	Displays the signal voltage of the 3rd-5th position sensor.
ACCEL POSI SEN 2	(0.0/8)	Displays the accelerator pedal position signal received from ECM via CAN communication.
FLUID TEMP SEN	(mV)	Displays the signal voltage of the oil temperature sensor.
CLUTCH B TEMP	(°C)	Displays the estimated clutch B temperature calculated by TCM.
CLUTCH A TEMP	(°C)	Displays the estimated clutch A temperature calculated by TCM.
LINE PRESS SENSOR	(mV)	Displays the signal voltage of the line pressure sensor.
CLUTCH B PRS SEN	(mV)	Displays the signal voltage of the clutch B pressure sensor.
CLUTCH A PRS SEN	(mV)	Displays the clutch A pressure calculated from the signal voltage of the clutch A pressure sensor.
LINE PRESSURE	(MPa)	Displays the line pressure value calculated from the signal voltage of the line pressure sensor.
CLUTCH B PRESS	(MPa)	Displays the clutch B pressure calculated from the signal voltage of the clutch B pressure sensor.
CLUTCH A PRESS	(MPa)	Displays the clutch A pressure calculated from the signal voltage of the clutch A pressure sensor.
MON LUBE S/V	(A)	Monitors the command current from TCM to the lubricating flow solenoid valve, and displays the monitor value. (It does not always correspond to the lubricating flow solenoid valve value)
MON AXIS A S/V	(A)	Monitors the command current from TCM to the axis A feed pressure solenoid valve, and displays the monitor value. (It does not always correspond to the axis A feed pressure solenoid valve value)
MON AXIS B S/V	(A)	Monitors the command current from TCM to the axis B feed pressure solenoid valve, and displays the monitor value. (It does not always correspond to the axis B feed pressure solenoid valve value)
TRGT ENGINE TRQ	(Nm)	Displays target engine torque received from ECM by CAN signal.
ESTMT ENGINE TRQ	(Nm)	Displays estimated engine torque received from ECM by CAN signal.
IDLE SPD CONT REQ	(rpm)	Displays target idle speed received from ECM by CAN signal.
TM TORQUE	(Nm)	Displays torque for ECM idle speed control transmitted from TCM by CAN signal.
ESTMT ACCELE	(m/s2)	Displays vehicle acceleration or deceleration estimated from speed variations that the vehicle speed is accelerated or decelerated.
LATERAL G SIGNAL	(m/s2)	Displays a measured value of lateral G received from the ABS actuator and electric unit (control unit) by CAN signal.
COMM SEQ S/V		Displays the command value from TCM to the sequence solenoid valve.
COMM SHIFT S/V 1		Displays the command value from TCM to the shift solenoid valve 1.

Item name (Unit)	Remarks
COMM SHIFT S/V 2	Displays the command value from TCM to the shift solenoid valve 2.
COMM SHIFT S/V 3	Displays the command value from TCM to the shift solenoid valve 3.
COMM SHIFT S/V 4	Displays the command value from TCM to the shift solenoid valve 4.
GR POSITION	Displays the transmission gear positions recognized by TCM.
RANGE	Displays the shift lever positions recognized by TCM.
MODE	Displays the set-up switch (transmission) and driving range statuses.
TR SENSOR No.0	Displays the operation status of the range sensor No.0 in the A/T shift selector.
TR SENSOR No.1	Displays the operation status of the range sensor No.1 in the A/T shift selector.
TR SENSOR No.2	Displays the operation status of the range sensor No.2 in the A/T shift selector.
TR SENSOR No.3	Displays the operation status of the range sensor No.3 in the A/T shift selector.
TR SENSOR No.4	Displays the operation status of the range sensor No.4 in the A/T shift selector.
TR SENSOR No.5	Displays the operation status of the range sensor No.5 in the A/T shift selector.
AM RANGE CHG SW 1	Displays the operation status of the Auto/Manual range change switch 1.
AM RANGE CHG SW 2	Displays the operation status of the Auto/Manual range change switch 2.
R MODE SW	Displays the operation status of the R mode switch on the set-up switch (transmission).
SAVE MODE SW	Displays the operation status of the SAVE mode switch on the set-up switch (transmission).
PADDLE SFT (UP)	Displays the operation status of the paddle shifter (shift-up switch).
PADDLE SFT (DOWN)	Displays the operation status of the paddle shifter (shift-down switch).
PARK POSITION SW	Displays the operation status of the park position switch.
IGN SW	Displays the operation status of the ignition switch.
COM BACK LMP RLY	Displays the command value from TCM to the back-up lamp relay.
MON BACK LMP RLY	Monitors the command value from TCM to the back-up lamp relay, and displays the monitor value.
COM STARTER RLY	Displays the command value from TCM to the starter relay.
MON STARTER RLY	Monitors the command value from TCM to the starter relay, and displays the monitor value.
COM NEUTRAL SIG	Displays the neutral status judged by TCM from the range sensor and park position switch in the A/T shift selector.
LOCK-UP REQ	Displays a lock-up request state received from ECM by CAN signal.
TRQ DOWN REQ	Displays an ECM permission state of a torque down request received from ECM by CAN signal.
KICK DWN OPRT	Displays an ECM kick-down operational state received from ECM by CAN signal.
FUEL CUT STATE	Displays an ECM fuel cut state received from ECM by CAN signal.
IDLE SW	Displays an ECM idle state received from ECM by CAN signal.
HIGH GR INHT REQ	Displays a high gear inhibit request state received from ECM by CAN signal.
SFT SCHDL REQ	Displays an ECM shift schedule switching request state received from ECM by CAN signal.
GR POSI HOLD REQ	Displays an ECM gear position hold request state received from the ABS actuator and electric unit (control unit) by CAN signal.
STOP LAMP SW	Displays the operation status of the stop lamp switch.
STRT RLY DIAG INHB	Displays a starter relay diagnosis inhibit request state transmitted from TCM by CAN signal.
4WD RCPT ERROR	Displays the presence or absence of a CAN signal reception error transmitted from AWD control unit.
BCM RCPT ERROR	Displays the presence or absence of a CAN signal reception error transmitted from BCM.

Item name (Unit)	Remarks
ECM RCPT ERROR	Displays the presence or absence of a CAN signal reception error transmitted from ECM.
VDC ERRORL SIG	Displays the presence or absence of a CAN signal reception error transmitted from ABS actuator and electric unit (control unit).
VDC OPERATION SIG	Displays a VDC operation signal received from the ABS actuator and electric unit (control unit) by CAN communication.
ABS OPERATION SIG	Displays a ABS operation signal received from the ABS actuator and electric unit (control unit) by CAN communication.
AXIS B FEED S/V Hi	Displays the presence or absence of the error “High” in axis B feed pressure solenoid valve current diagnosis.
AXIS B FEED S/V Low	Displays the presence or absence of the error “Low” in axis B feed pressure solenoid valve current diagnosis.
AXIS A FEED S/V Hi	Displays the presence or absence of the error “High” in axis A feed pressure solenoid valve current diagnosis.
AXIS A FEED S/V Low	Displays the presence or absence of the error “Low” in axis A feed pressure solenoid valve current diagnosis.
CLUTCH B S/V Hi	Displays the presence or absence of the error “High” in clutch B solenoid valve current diagnosis.
CLUTCH B S/V Low	Displays the presence or absence of the error “Low” in clutch B solenoid valve current diagnosis.
CLUTCH A S/V Hi	Displays the presence or absence of the error “High” in clutch A solenoid valve current diagnosis.
CLUTCH A S/V Low	Displays the presence or absence of the error “Low” in clutch A solenoid valve current diagnosis.
SHIFT S/V 2 Hi	Displays the presence or absence of error “High” in shift solenoid valve 2 output diagnosis.
SHIFT S/V 2 Low	Displays the presence or absence of error “Low” in shift solenoid valve 2 output diagnosis.
SHIFT S/V 1 Hi	Displays the presence or absence of error “High” in shift solenoid valve 1 output diagnosis.
SHIFT S/V 1 Low	Displays the presence or absence of error “Low” in shift solenoid valve 1 output diagnosis.
LUBE S/V Hi	Displays the presence or absence of the error “High” in lubricating flow solenoid valve current diagnosis.
LUBE S/V Low	Displays the presence or absence of the error “Low” in lubricating flow solenoid valve current diagnosis.
LINE PRESS S/V Hi	Displays the presence or absence of the error “High” in line pressure solenoid valve system current diagnosis.
LINE PRESS S/V Low	Displays the presence or absence of the error “Low” in line pressure solenoid valve system current diagnosis.
SEQ S/V Hi	Displays the presence or absence of error “High” in sequence solenoid valve output diagnosis.
SEQ S/V Low	Displays the presence or absence of error “Low” in sequence solenoid valve output diagnosis.
SHIFT S/V 4 Hi	Displays the presence or absence of error “High” in shift solenoid valve 4 output diagnosis.
SHIFT S/V 4 Low	Displays the presence or absence of error “Low” in shift solenoid valve 4 output diagnosis.
SHIFT S/V 3 Hi	Displays the presence or absence of error “High” in shift solenoid valve 3 output diagnosis.
SHIFT S/V 3 Low	Displays the presence or absence of error “Low” in shift solenoid valve 3 output diagnosis.

Item name	(Unit)	Remarks
1-R POSI SEN 2 Hi		Displays the presence or absence of error “High” in 1st-Reverse position sensor 2 voltage diagnosis.
1-R POSI SEN 2 Low		Displays the presence or absence of error “Low” in 1st-Reverse position sensor 2 voltage diagnosis.
1-R POSI SEN 1 Hi		Displays the presence or absence of error “High” in 1st-Reverse position sensor 1 voltage diagnosis.
1-R POSI SEN 1 Low		Displays the presence or absence of error “Low” in 1st-Reverse position sensor 1 voltage diagnosis.
2-4 POSI SEN Hi		Displays the presence or absence of error “High” in 2nd-4th position sensor voltage diagnosis.
2-4 POSI SEN Low		Displays the presence or absence of error “Low” in 2nd-4th position sensor voltage diagnosis.
6-N POSI SEN Hi		Displays the presence or absence of error “High” in 6th-Neutral position sensor voltage diagnosis.
6-N POSI SEN Low		Displays the presence or absence of error “Low” in 6th-Neutral position sensor voltage diagnosis.
CL B PRES SEN Hi		Displays the presence or absence of error “High” in clutch B pressure sensor voltage diagnosis.
CL B PRES SEN Low		Displays the presence or absence of error “Low” in clutch B pressure sensor voltage diagnosis.
CL A PRES SEN Hi		Displays the presence or absence of error “High” in clutch A pressure sensor voltage diagnosis.
CL A PRES SEN Low		Displays the presence or absence of error “Low” in clutch A pressure sensor voltage diagnosis.
TFT SENSOR Hi		Displays the presence or absence of error “High” in oil temperature sensor voltage diagnosis.
TFT SENSOR Low		Displays the presence or absence of error “Low” in oil temperature sensor voltage diagnosis.
3-5 POSI SEN Hi		Displays the presence or absence of error “High” in 3rd-5th position sensor voltage diagnosis.
3-5 POSI SEN Low		Displays the presence or absence of error “Low” in 3rd-5th position sensor voltage diagnosis.
TR SENSOR ERROR		Displays an error in A/T shift selector.
IGN COUNTER		Displays the number of warm-up cycles.
TIME AFT ENG ON	sec	Displays elapsed time of a malfunction occurrence after the start of the engine.
TRGT LINE PRESS	(MPa)	Displays a target line pressure of TCM.
COM LINE PRES S/V	(A)	Displays an indicated current sent from TCM to the line pressure solenoid valve.
MON LINE PRES S/V	(A)	Monitors the command current from TCM to the line pressure solenoid valve, and displays the monitor value. (It does not always correspond to the line pressure solenoid valve value)
TRGT LUBE PRESS	(MPa)	Displays a target lubricating oil flow rate of TCM.
COMM LUBE S/V	(A)	Displays an indicated current sent from TCM to the lubricating flow solenoid valve.
TRGT AXIS A PRESS	(MPa)	Displays a target axis A feed pressure of TCM.
COMM AXIS A S/V	(A)	Displays an indicated current sent from TCM to the axis A feed pressure solenoid valve.
TRGT AXIS B PRESS	(MPa)	Displays a target axis B feed pressure of TCM.
COMM AXIS B S/V	(A)	Displays an indicated current sent from TCM to the axis B feed pressure solenoid valve.
TGT CLTCH A PRES	(MPa)	Displays a target clutch A pressure of TCM.
COM CLUTCH A S/V	(A)	Displays an indicated current sent from TCM to the clutch A pressure sensor.

Item name	(Unit)	Remarks
MON CLUTCH A S/V	(A)	Monitors the command current from TCM to the clutch A pressure sensor, and displays the monitor value. (It does not always correspond to the clutch A pressure sensor value)
TGT CLTCH B PRES	(MPa)	Displays a target clutch B pressure of TCM.
COM CLUTCH B S/V	(A)	Displays an indicated current sent from TCM to the clutch B pressure sensor.
MON CLUTCH B S/V	(A)	Monitors the command current from TCM to the clutch B pressure sensor, and displays the monitor value. (It does not always correspond to the clutch B pressure sensor value)
CLUTCH A STATE		Displays an engagement state of the clutch A.
CLUTCH B STATE		Displays an engagement state of the clutch B.
MON SHIFT SOL 1		Monitors an indicated value sent from TCM to the shift solenoid valve 1 and displays the monitored value.
MON SHIFT SOL 2		Monitors an indicated value sent from TCM to the shift solenoid valve 2 and displays the monitored value.
MON SHIFT SOL 3		Monitors an indicated value sent from TCM to the shift solenoid valve 3 and displays the monitored value.
MON SHIFT SOL 4		Monitors an indicated value sent from TCM to the shift solenoid valve 4 and displays the monitored value.
MON SEQ S/V		Monitors an indicated value sent from TCM to the sequence solenoid valve and displays the monitored value.
ODO	(Km/Miles)	Displays running distance of a malfunction occurrence.
TIME AFT IGN ON	(Sec)	Displays elapsed time of a malfunction occurrence after the ignition switch ON.
NEXT GEAR POSITION		Displays the transmission next gear positions recognized by TCM.
CURRENT GEAR POSITION		Displays the transmission current gear positions recognized by TCM.
SLEEVE A1 POSITION	(mm or in.)	Displays the sleeve A1 position calculated from the signal voltage of the 6th-Neutral position sensor.
SLEEVE A2 POSITION	(mm or in.)	Displays the sleeve A2 position calculated from the signal voltage of the 2nd-4th position sensor.
SLEEVE B1 POSITION 1	(mm or in.)	Displays the sleeve B1 position calculated from the signal voltage of the 1st-Reverse position sensor 1.
SLEEVE B1 POSITION 2	(mm or in.)	Displays the sleeve B1 position calculated from the signal voltage of the 1st-Reverse position sensor 2.
SLEEVE B2 POSITION	(mm or in.)	Displays the sleeve B2 position calculated from the signal voltage of the 3rd-5th position sensor.
SLEEVE A1 CONTROL STATUS		Displays the operation state of the sleeve A1.
SLEEVE A2 CONTROL STATUS		Displays the operation state of the sleeve A2.
SLEEVE B1 CONTROL STATUS		Displays the operation state of the sleeve B1.
SLEEVE B2 CONTROL STATUS		Displays the operation state of the sleeve B2.
CONTROL MODE		Displays the control state of transmission.
FLUID TEMP	(°C/°F)	Displays the transmission oil temperature.

DATA MONITOR

Display Item List

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

X: Standard, –: Not applicable, ▼: Option

Item name	(Unit)	Monitor menu			Remarks
		ECU INPUT SIGNALS	MAIN SIGNALS	SELECTION FROM ITEM	
SLEEVE B1 POSI 1	(mm or in.)	–	X	▼	Displays the sleeve B1 position calculated from the signal voltage of the 1st-Reverse position sensor 1.
SLEEVE B1 POSI 2	(mm or in.)	–	X	▼	Displays the sleeve B1 position calculated from the signal voltage of the 1st-Reverse position sensor 2.
1-R POSITION SEN 1	(mV)	X	–	▼	Displays the signal voltage of the 1st-Reverse position sensor 1.
1-R POSITION SEN 2	(mV)	X	–	▼	Displays the signal voltage of the 1st-Reverse position sensor 2.
SLEEVE A2 POSI	(mm or in.)	–	X	▼	Displays the sleeve A2 position calculated from the signal voltage of the 2nd-4th position sensor.
2-4 POSITION SEN	(mV)	X	–	▼	Displays the signal voltage of the 2nd-4th position sensor.
SLEEVE B2 POSI	(mm or in.)	–	X	▼	Displays the sleeve B2 position calculated from the signal voltage of the 3rd-5th position sensor.
3-5 POSITION SEN	(mV)	X	–	▼	Displays the signal voltage of the 3rd-5th position sensor.
SLEEVE A1 POSI	(mm or in.)	–	X	▼	Displays the sleeve A1 position calculated from the signal voltage of the 6th-Neutral position sensor.
6-N POSITION SEN	(mV)	X	–	▼	Displays the signal voltage of the 6th-Neutral position sensor.
ABS OPERATION SIG	(On/Off)	X	–	▼	Displays the ABS operation signal received from ABS actuator and electric unit (control unit) via CAN communication.
ACCEL POSI SEN 1	(0.0/8)	X	–	▼	Displays the accelerator pedal position signal received from ECM via CAN communication.
MON SHIFT SOL 1	(On/Off)	X	–	▼	Monitors the command value from TCM to the shift solenoid valve 1, and displays the monitor value.
COMM SHIFT S/V 1	(On/Off)	–	–	▼	Displays the command value from TCM to the shift solenoid valve 1.
MON SHIFT SOL 2	(On/Off)	X	–	▼	Monitors the command value from TCM to the shift solenoid valve 2, and displays the monitor value.
COMM SHIFT S/V 2	(On/Off)	–	–	▼	Displays the command value from TCM to the shift solenoid valve 2.
MON SHIFT SOL 3	(On/Off)	X	–	▼	Monitors the command value from TCM to the shift solenoid valve 3, and displays the monitor value.
COMM SHIFT S/V 3	(On/Off)	–	–	▼	Displays the command value from TCM to the shift solenoid valve 3.
MON SHIFT SOL 4	(On/Off)	X	–	▼	Monitors the command value from TCM to the shift solenoid valve 4, and displays the monitor value.
COMM SHIFT S/V 4	(On/Off)	–	–	▼	Displays the command value from TCM to the shift solenoid valve 4.
FLUID TEMP	(°C)	–	–	▼	Displays the transmission fluid temperature calculated from the signal voltage of the oil temperature sensor.
FLUID TEMP SEN	(mV)	X	–	▼	Displays the signal voltage of the oil temperature sensor.
TRGT AXIS A PRESS	(MPa)	–	–	▼	Displays the axis A feed pressure target value of TCM.

Item name	(Unit)	Monitor menu			Remarks
		ECU INPUT SIGNALS	MAIN SIGNALS	SELECTION FROM ITEM	
MON AXIS A S/V	(A)	X	–	▼	Monitors the command current from TCM to the axis A feed pressure solenoid valve, and displays the monitor value. (It does not always correspond to the axis A feed pressure solenoid valve value)
COMM AXIS A S/V	(A)	–	–	▼	Displays the command current from TCM to the axis A feed pressure solenoid valve.
TRGT AXIS B PRESS	(MPa)	–	–	▼	Displays the axis B feed pressure target value of TCM.
MON AXIS B S/V	(A)	X	–	▼	Monitors the command current from TCM to the axis B feed pressure solenoid valve, and displays the monitor value. (It does not always correspond to the axis B feed pressure solenoid valve value)
COMM AXIS B S/V	(A)	–	–	▼	Displays the command current from TCM to the axis B feed pressure solenoid valve.
STOP LAMP SW	(On/Off)	X	–	▼	Displays the operation status of the stop lamp switch.
CLUTCH A PRESS	(MPa)	–	–	▼	Displays the clutch A pressure calculated from the signal voltage of the clutch A pressure sensor.
CLUTCH A PRS SEN	(mV)	X	–	▼	Displays the signal voltage of the clutch A pressure sensor.
TGT CLUTCH A PRS	(MPa)	–	–	▼	Displays the clutch A pressure target value of TCM.
CLUTCH A SPEED	(rpm)	–	–	▼	Displays the clutch A speed calculated from the pulse signal of the clutch A speed sensor.
MON CLUTCH A S/V	(A)	X	–	▼	Monitors the command current from TCM to the clutch A solenoid valve, and displays the monitor value. (It does not always correspond to the clutch A solenoid valve value)
COM CLUTCH A S/V	(A)	–	–	▼	Displays the command current from TCM to the clutch A solenoid valve.
CLUTCH A TEMP	(°C)	–	–	▼	Displays the estimated clutch A temperature calculated by TCM.
CLUTCH B PRESS	(MPa)	–	–	▼	Displays the clutch B pressure calculated from the signal voltage of the clutch B pressure sensor.
CLUTCH B PRS SEN	(mV)	X	–	▼	Displays the signal voltage of the clutch B pressure sensor.
TGT CUTCH B PRES	(MPa)	–	–	▼	Displays the clutch B pressure target value of TCM.
CLUTCH B SPEED	(rpm)	–	–	▼	Displays the clutch B speed calculated from the pulse signal of the clutch B speed sensor.
MON CLUTCH B S/V	(A)	X	–	▼	Monitors the command current from TCM to the clutch B solenoid valve, and displays the monitor value. (It does not always correspond to the clutch B solenoid valve value)
COM CLUTCH B S/V	(A)	–	–	▼	Displays the command current from TCM to the clutch B solenoid valve.
CLUTCH B TEMP	(°C)	–	–	▼	Displays the estimated clutch B temperature calculated by TCM.
GR POSITION		–	–	▼	Displays the transmission gear positions recognized by TCM.
ENGINE SPEED	(rpm)	X	X	▼	Displays the engine speed signal received from ECM via CAN communication.

Item name	(Unit)	Monitor menu			Remarks
		ECU INPUT SIGNALS	MAIN SIGNALS	SELECTION FROM ITEM	
GR POSI INDICATION		–	X	▼	Displays the transmission gear positions recognized by TCM.
IGN SW	(On/Off)	X	–	▼	Displays the operation status of the ignition switch.
LINE PRESSURE	(MPa)	–	–	▼	Displays the line pressure value calculated from the signal voltage of the line pressure sensor.
LINE PRESS SENSOR	(mV)	X	–	▼	Displays the signal voltage of the line pressure sensor.
TRGT LINE PRESS	(MPa)	–	–	▼	Displays the line pressure target value of TCM.
MON LINE PRES S/V	(A)	X	–	▼	Monitors the command current from TCM to the line pressure solenoid valve, and displays the monitor value. (It does not always correspond to the line pressure solenoid valve value)
COM LINE PRES S/V	(A)	–	–	▼	Displays the command current from TCM to the line pressure solenoid valve.
TRGT LUBE PRESS	(MPa)	–	–	▼	Displays the lubricating flow target value of TCM.
MON LUBE S/V	(A)	X	–	▼	Monitors the command current from TCM to the lubricating flow solenoid valve, and displays the monitor value. (It does not always correspond to the lubricating flow solenoid valve value)
COMM LUBE S/V	(A)	–	–	▼	Displays the command current from TCM to the lubricating flow solenoid valve.
VDC off stall start	(Times)	–	–	▼	Displays the stall start frequency with VDC off.
AM RANGE CHG SW 1	(On/Off)	X	–	▼	Displays the operation status of the Auto/Manual range change switch 1.
AM RANGE CHG SW 2	(On/Off)	X	–	▼	Displays the operation status of the Auto/Manual range change switch 2.
MODE		–	X	▼	Displays the set-up switch (transmission) and driving range statuses.
COM R MODE LAMP	(On/Off)	–	–	▼	Displays the operation status of the R mode lamp on the set-up switch (transmission).
COM S MODE LMP	(On/Off)	–	–	▼	Displays the operation status of the SAVE mode lamp on the set-up switch (transmission).
COM NEUTRAL SIG	(On/Off)	–	–	▼	Displays the neutral status judged by TCM from the range sensor and park position switch in the A/T shift selector.
OUTPUT SHAFT SPD	(rpm)	–	–	▼	Displays the output shaft speed calculated from the pulse signal of the output shaft speed sensor.
PARK POSITION SW	(On/Off)	X	–	▼	Displays the operation status of the park position switch.
RANGE		–	X	▼	Displays the shift lever positions recognized by TCM.
COM BACK LMP RLY	(On/Off)	–	–	▼	Displays the command value from TCM to the back-up lamp relay.
MON BACK LMP RLY	(On/Off)	X	–	▼	Monitors the command value from TCM to the back-up lamp relay, and displays the monitor value.
MON SEQ S/V	(On/Off)	X	–	▼	Monitors the command value from TCM to the sequence solenoid valve, and displays the monitor value.

Item name	(Unit)	Monitor menu			Remarks
		ECU INPUT SIGNALS	MAIN SIGNALS	SELECTION FROM ITEM	
COMM SEQ S/V	(On/Off)	–	–	▼	Displays the command value from TCM to the sequence solenoid valve.
R MODE SW	(On/Off)	X	–	▼	Displays the operation status of the R mode switch on the set-up switch (transmission).
SAVE MODE SW	(On/Off)	X	–	▼	Displays the operation status of the SAVE mode switch on the set-up switch (transmission).
TR SENSOR No.0	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.0 in the A/T shift selector.
TR SENSOR No.1	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.1 in the A/T shift selector.
TR SENSOR No.2	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.2 in the A/T shift selector.
TR SENSOR No.3	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.3 in the A/T shift selector.
TR SENSOR No.4	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.4 in the A/T shift selector.
TR SENSOR No.5	(On/Off)	X	–	▼	Displays the operation status of the range sensor No.5 in the A/T shift selector.
VEHICLE SPEED	(km/h or mph)	X	X	▼	Displays the vehicle speed signal (meter) received via CAN communication from the combination meter.
COM STARTER RLY	(On/Off)	–	–	▼	Displays the command value from TCM to the starter relay.
MON STARTER RLY	(On/Off)	X	–	▼	Monitors the command value from TCM to the starter relay, and displays the monitor value.
PADDLE SFT (DOWN)	(On/Off)	X	–	▼	Displays the operation status of the paddle shifter (shift-down switch).
PADDLE SFT (UP)	(On/Off)	X	–	▼	Displays the operation status of the paddle shifter (shift-up switch).
ACCEL POSI SEN 2	(0.0/8)	X	–	▼	Displays the accelerator pedal position signal received from ECM via CAN communication.
BATTERY VOLTAGE	(V)	X	X	▼	Displays the power supply voltage of TCM.
VDC OPERATION SIG	(On/Off)	X	–	▼	Displays the VDC operation signal received from ABS actuator and electric unit (control unit) via CAN communication.
TCM RELAY	(On/Off)	–	–	▼	Displays the operation status of the TCM relay.
SHIFT LOCK SOL	(On/Off)	–	–	▼	Displays the operation status of the shift lock solenoid.

ACTIVE TEST

Procedure

1. Apply parking brake.
2. Shift the shift lever to the P position.
   CAUTION:
   Check that the park lock operates.
3. Start the engine.
4. Select the operation item.
   NOTE:
   - Operable only in the P position, and inoperable in other positions.
   - Only one item is operable, and multiple items cannot be operated at the same time.

Test item list

Items	Function check
SHIFT S/V 1 SHIFT S/V 2 SHIFT S/V 3 SHIFT S/V 4 SEQUENCE S/V	In response to the ON/OFF command from CONSULT, TCM supplies the current to the solenoid valve to enable an operation check of the solenoid valve. **CAUTION:** **If the solenoid valve has a malfunction such as sticking, it does not operate. Check for operation noise or vibrations.**
LINE PRESS S/V C/L B PRESS S/V C/L A PRESS S/V LUBRICATION FLOW-RATE S/V A-AXIS SUPPLY PRESSURE S/V B-AXIS SUPPLY PRESSURE S/V	In response to the pressure indication value from CONSULT, TCM supplies the current to the solenoid valve to enable an operation check of the solenoid valve. **CAUTION:** **If the solenoid valve has a malfunction such as sticking, it does not operate. Check using Data Monitor.** **NOTE:** Controls so that the oil pressure is built up in each solenoid valve.
STARTER RELAY REVERSE LAMP RELAY TCM RELAY	In response to the ON/OFF command from CONSULT, TCM supplies the current to the relay to enable an operation check of the relay. **CAUTION:** **If the relay has a malfunction such as sticking, it does not operate. Check for an operation noise or vibrations.**
SHIFT LOCK SOLENOID	In response to the ON/OFF command from CONSULT, TCM supplies the current to the shift lock solenoid to enable an operation check of the shift lock solenoid. **CAUTION:** **If the solenoid has a malfunction such as sticking, it does not operate. Check for an operation noise or vibrations.** **NOTE:** With the engine running and the brake pedal depressed, check that the shift lever can be moved from the P position in accordance with the ON/OFF operation.

WORK SUPPORT

Procedure (Except For Write IP Chara and Read IP Chara Written Data)

1. Apply parking brake.
2. Shift the shift lever to the P position.
   CAUTION:
   Check that the park lock operates.
3. Start the engine.
   NOTE:
   The operation is available only after the ignition switch is turned ON, except for the “CLUTCH GEAR LEARNING”, “GEAR POSITION TEST”, and “DISENGAGING THE GEAR”.
4. Select the operation item.
   NOTE:
   - Operable only in the P position, and inoperable in other positions.
   - Only one item is operable, and multiple items cannot be operated at the same time.

Display Item List (Except For Write IP Chara and Read IP Chara Written Data)

Items	Function or item		Application
CLUTCH GEAR LEARNING	Perform the learning of the clutch touch point and the engaged gear position and neutral position for each gear. **CAUTION:** • **Clutch gear learning can only be performed once in one driving cycle (the ignition switch OFF→ON→OFF).** • **If no clutch gear learning can be performed, it is necessary to turn the ignition switch OFF→ON, and perform the clutch gear learning again.**		Always perform this procedure during maintenance and when TCM or transmission is replaced.
READ CLUTCH GEAR LEARNING DATA	Check the clutch gear learning status. **CAUTION:** **Except for learning experience check, after the learning, when the ignition switch is turned OFF, no more checks can be performed.**		After the clutch gear learning, a check that the learning is completed normally can be performed.
GEAR POSITION TEST	Allows engagement of each gear individually.		The operation of each gear can be checked.
DISENGAGING THE GEAR	Allows making all the gears neutral.		Use when returning the gear to neutral.
ADJUST CLUTCH B CAPACITY ADJUST CLUTCH A CAPACITY	Allows adjustment of the clutch capacity in 15 stages.	• 0: Initial • 1 – 7: Clutch capacity up • –1 – –7: Clutch capacity down	If a shock or slip is large during gear shift and start-up, adjust the clutch capacity.
CLUTCH A TOUCH POINT CLUTCH B TOUCH POINT	Allows adjustment of the clutch touch point in 15 stages.	• 0: Initial • 1 – 7: Move the clutch touch point closer. • –1 – –7: Moves the clutch touch point farther.	In the event of a strong creep power, poor start-up response, or excess start-up shock, adjusts the clutch touch point.
WRITE PREVIOUS CLUTCH LEARNING VALUE	The clutch touch point learning value can be returned to the previous learning value.		Used when the clutch learning value is returned to the previous learning value upon the request from a customer (when the customer prefers the previous setting than the current learned driving feeling, for example).
DELETE GEAR POSITION LEARNING VALUE	The gear position learning value can be erased and returned to the initial value.		Always erase the previous transmission learning value, when the transmission is replaced.*1
DELETE CLUTCH A LEARNING VALUE	The clutch A learning value can be erased and returned to the initial value. **CAUTION:** **If the clutch learning values is erased at a time other than a transmission replacement, the previous learning values can no longer be resumed.**		
DELETE CLUTCH B LEARNING VALUE	The clutch B learning value can be erased and returned to the initial value. **CAUTION:** **If the clutch learning values is erased at a time other than a transmission replacement, the previous learning values can no longer be resumed.**		
ERASE CLTCH ENGGMNT PRSSR CRRCTN	The clutch engagement pressure correction value can be erased and returned to the initial value. **CAUTION:** **If only TCM is replaced, since a new TCM has no memory of the clutch engagement pressure correction value, it may require the clutch A/B capacity adjustment.**		
SHOW OIL TEMP HISTORY	The transmission fluid temperature frequency can be confirmed in 5 stages, providing the information of the temperature range used.		Oil change timing can be judge by checking history of each oil temperature range.

Items	Function or item	Application
OIL TEMP HISTORY RESET	Oil temperature history of transmission can be reset.	Oil change timing of transmission.
HIGH OIL TEMP WARNING HISTORY	• Clutch A Protection 1, 2, 3, 4*2 • Clutch B Protection 1, 2, 3, 4*2 • Clutch Overheat Protection History 1*3 • Line Pressure Loss History*4 • High Oil Temp Protection History 1, 2, 3*5	

- *1: If the learning value is erased, the transmission warning light blinks.
- *2: Refer to the “Clutch protection history”.
- *3: Refer to the “Clutch overheat protection history”.
- *4: Refer to the "Line pressure loss history".
- *5: Refer to the "High oil temperature protection History".

Clutch protection history
- If the clutch temperature increases abnormally, the activation of protection control can be checked. In addition, because the protection control consists of a few stages, the history is displayed in each stage.

Items		Clutch protection 1	Clutch protection 2	Clutch protection 3	Clutch protection 4
Description		The transmission warning lamp is illuminated and the message “T/M CLUTCH TEMP HIGH STOP VEHICLE UNTIL WARNING TURNS OFF” appears in the information display.	Performs the engine torque restriction.	Lowers the upper limit of the engine torque restriction.	Release the clutch.
Operation conditions (if either of them is met)	Clutch temperature conditions	Depending on the clutch temperature increase, the clutch protection control shifts from clutch protection 1 to 4.			
	Stall driving conditions*1	Depending on the time from the start of stall driving, the clutch protection control shifts from clutch protection 1 to 4.			
Cancel conditions		When the clutch temperature is lowered and the wide open throttle status continues for a certain period.			
Warning light on		Exists			
Engine torque restriction		Does not exist	Exists		

*1: It is judged as the “stall driving conditions”, if the following conditions are met. Acceleration pedal position: Approx. 0.6/8 or more, vehicle speed: Approx. 3 km/h (1 MPH) or less

Clutch overheat protection history
- Shows the operation history of the clutch overheating protection control due to stall driving. Refer to the “Clutch protection”.

Line pressure loss history
- Shows the history of abnormal drop of the line pressure. [The line pressure sensor value is 0.2 MPa (2.04 kg/cm^2, 29 psi) or less]

  NOTE:

  The possible causes for line pressure drop are as follows.
  - Fluid level drop due to oil leakage
  - Poor fluid suction due to deformation of the oil pan or others

High oil temperature protection history
- If the transmission fluid temperature increases abnormally, the activation of protection control can be checked. In addition, because the protection control consists of a few stages, the history is displayed in each stage.

Items	High oil temperature protection history 1	High oil temperature protection history 2	High oil temperature protection history 3
Description	The transmission warning lamp is on and the message “T/M OIL TEMP HIGH DECREASE SPEED” appears in the information display.	Performs the engine torque restriction and engine speed restriction.	Lowers the upper limit of the engine torque restriction and engine speed restriction.
Operation contents	As the oil temperature increases, the high oil protection control shifts from the high oil temperature protection history 1 to 3.		
Cancel conditions	When the oil temperature is lowered and the wide open throttle status continues for a certain period of time.		
Warning light on	Exists		
Engine torque restriction, engine speed restriction	Does not exist	Exists	

CAUTION:

- **During one driving cycle (ignition switch OFF → ON → OFF), if the “High Oil Temp Protection History 2” status is reached 3 times, after that the high oil temperature protection remains active.**
- **When the ignition switch is turned OFF, the high oil temperature protection is deactivated.**

Procedure (For Write IP Chara and Read IP Chara Written Data)

1. Apply parking brake.
2. Shift the shift lever to the P position.
   CAUTION:
   Check that the park lock operates.
3. Turn the ignition switch ON.
4. Select the operation item.

Display Item List (For Write IP Chara and Read IP Chara Written Data)

Items	Function	Application
Write IP Chara	Writes the acquired IP characteristics data to TCM. • If the transmission is replaced: Write the IP characteristics of replaced transmission to TCM that is not replaced. • If TCM is replaced: Write the IP characteristics of transmission that is not replaced to replaced TCM. • If both of them are replaced: Write the IP characteristics of replaced transmission to replaced TCM. **CAUTION:** • **The “write IP characteristics” can only be performed once in one driving cycle (the ignition switch OFF→ON→OFF).** • **If the write IP characteristics cannot be performed, turn the ignition switch OFF→ON and perform the write IP characteristics again.**	The individual variations of the transmission hydraulic parts are read into TCM to stabilize the control.
Read IP Chara Written Data	Check the write IP characteristics status. **CAUTION:** **Except for the write experience, nothing can be checked after the IP writing, if the ignition switch is turned OFF.**	The write IP characteristics status can be checked when the write IP characteristics is completed or the writing is not successful.

DTC/CIRCUIT DIAGNOSIS

U0100 LOST COMMUNICATION (ECM A)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487661

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487662

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
U0100	Lost communication with ECM/PCM "A"	A DTC is set if TCM cannot receive the CAN communication signals from ECM for 2 seconds or more.	• ECM • Harness or connector (CAN communication line is open or shorted)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine, and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine, and wait for 2 seconds or more.
2. Check self-diagnosis.

Is DTC U0100 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487663

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U0102 LOST COMMUNICATION (TRANSFER)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487664

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487665

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U0102	Lost communication with transfer case control module	A DTC is set if TCM cannot receive the CAN communication signals from AWD control unit for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT
1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U0102 detected?

YES >> Go to TM-62, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487666

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U0121 LOST COMMUNICATION (ABS)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487667

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487668

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U0121	Lost communication with anti-lock brake system (ABS) control module	A DTC is set if TCM cannot receive the CAN communication signals from ABS actuator and electric unit (control unit) for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT

1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U0121 detected?

YES >> Go to TM-63, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487669

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U0140 LOST COMMUNICATION (BCM)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487670

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487671

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U0140	Lost communication with body control module	A DTC is set if TCM cannot receive the CAN communication signals from BCM for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT
1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U0140 detected?

YES >> Go to TM-64, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487672

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U0141 LOST COMMUNICATION (BCM A)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487673

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487674

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U0141	Lost communication with body control module "A"	A DTC is set if TCM cannot receive the CAN communication signals from IPDM E/R for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT
1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U0141 detected?

YES >> Go to TM-65, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487675

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U0155 LOST COMMUNICATION (IPC)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487676

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487677

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U0155	Lost communication with instrument panel cluster (IPC) control module	A DTC is set if TCM cannot receive the CAN communication signals from combination meter for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT
1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U0155 detected?

YES >> Go to TM-66, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487678

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

U1000 CAN COMM CIRCUIT

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487679

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent malfunction detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control unit is connected with 2 communication lines (CAN-H and CAN-L) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487680

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detecting condition	Possible cause
U1000	CAN communication line	When TCM is not transmitting CAN communication signal for 2 seconds or more.	Harness or connectors (CAN communication line is open or shorted.)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.CHECK DTC DETECTION

With CONSULT

1. Start the engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC U1000 detected?

YES >> Go to TM-67, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487681

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace damaged parts.

P0601 MEMORY CHECK SUM

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487682

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487683

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0601	Internal control module memory check sum error	DTC is set if the results of redundant calculation within TCM are different between shift range judgment and synchro B1 (1-R) position judgment.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0601 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever as per the following: P→R→N→A→M positions (Keep the shift lever for 5 seconds or more at each position).
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Shift the shift lever as per the following: P→R→N→A→M positions (Keep the shift lever for 5 seconds or more at each position).
2. Check self-diagnosis.

Is DTC P0601 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487684

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0604 CONTROL MODULE RAM

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487685

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487686

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0604	Internal control module random access memory (RAM) error	DTC is set if TCM RAM read-write check detects RAM malfunction.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0604 detected?

YES >> Go to TM-70, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487687

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0605 CONTROL MODULE ROM

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487688

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487689

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0605	Internal control module read only memory (ROM) error	DTC is set if TCM ROM area sum parity check detects malfunction in ROM.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0605 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487690

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0607 CONTROL MODULE PERFORMANCE

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487691

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487692

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0607	Control module performance	DTC is set if TCM performance malfunction is detected due to malfunction of analogue/digital conversion and self shut-down system, or reset failure at CPU malfunction detection.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Turn ignition switch OFF, and wait for 5 seconds or more.
2. Turn the ignition switch ON and wait for 5 seconds or more, then turn it OFF again.
3. Repeat the procedure shown in 1 and 2 above 2 times.
4. Turn the ignition switch ON.
5. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT

1. Turn ignition switch OFF, and wait for 5 seconds or more.
2. Turn the ignition switch ON and wait for 5 seconds or more, then turn it OFF again.
3. Repeat the procedure shown in 1 and 2 above 2 times.
4. Turn the ignition switch ON.
5. Check self-diagnosis.

Is DTC P0607 detected?

YES >> Go to TM-72, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident"

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487693

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0613 TCM PROCESSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487694

TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487695

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0613	TCM processor	DTC is set if TCM main processor calculation malfunction is detected by sub microcomputer monitoring.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0613 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487696

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P06B0 SENSOR POWER SUPPLY A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487697

TCM uses 3 different power supply routes to distribute power supply to each sensor.

Sensor power supply 1	Sensor power supply 2	Sensor power supply 3
• Output shaft speed sensor • Line pressure sensor	• Clutch A pressure sensor • Clutch A speed sensor • 6th-Neutral position sensor • 2nd-4th position sensor • Range sensor power supply 1 (Range sensor No. 0, 1, 3, 5)	• Clutch B pressure sensor • Clutch B speed sensor • 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • 3rd-5th position sensor • Range sensor power supply 2 (Range sensor No. 2, 4)

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487698

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P06B0	Sensor power supply A circuit/ open	DTC is set if malfunction is detected in power supply to sensor from TCM.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT

1. Start the engine.
2. Select “RANGE”, “GEAR” and “ENGINE SPEED” in “Data Monitor”.
3. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 4
ENGINE SPEED	: 1,500 rpm or more

4. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 4
Engine speed	: 1,500 rpm or more

3. Check self-diagnosis.

Is DTC P06B0 detected?

YES >> Go to TM-75, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487699

1.CHECK OUTPUT SHAFT SPEED SENSOR CIRCUIT

Refer to TM-101, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK LINE PRESSURE SENSOR CIRCUIT

Refer to TM-148, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-151, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK CLUTCH A PRESSURE SENSOR CIRCUIT

Refer to TM-135, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK CLUTCH B PRESSURE SENSOR CIRCUIT

Refer to TM-141, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK SLEEVE A1 POSITION SENSOR CIRCUIT

Refer to TM-231, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-234, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK SLEEVE A2 POSITION SENSOR CIRCUIT

Refer to TM-243, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-246, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK SLEEVE B11 POSITION SENSOR CIRCUIT

Refer to TM-256, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-260, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK SLEEVE B12 POSITION SENSOR CIRCUIT

Refer to TM-192, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-196, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

9. CHECK SLEEVE B2 POSITION SENSOR CIRCUIT

Refer to TM-270, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-273, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AND GROUND

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors.
3. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	3	Ground	Existed
	4		
	7		
	8		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0705 TRANSMISSION RANGE SWITCH A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487700

- There are 2 different power supply systems for the range sensors; the range sensor power supply 1 system distributes power supply to 4 range sensors (No. 0, No. 1, No. 3, and No. 5) used for the range position recognition, and the auto/manual range change switch changing between M range and A range. The range sensor power supply 2 system distributes power supply to 2 range sensors (No. 2 and No. 4) used for the range position recognition.
- TCM recognizes the shift lever position by combining signals from 6 range sensors used for the range position recognition and park position switch.

TCM recognized position	Shift lever position	Park position switch	Range sensor					
			No. 0	No. 1	No. 2	No. 3	No. 4	No. 5
P	P	ON	ON	OFF	OFF	OFF	OFF	OFF
R	R	OFF	OFF	ON	ON	OFF	OFF	OFF
N	N	OFF	OFF	OFF	ON	ON	ON	OFF
A/M	A/M	OFF	OFF	OFF	OFF	OFF	ON	ON

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487701

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0705	Transmission range sensor "A" circuit malfunction (PRNDL input)	A DTC is set if either of the following statuses is detected consecutively. 1. Any of the range sensors No. 0, No. 1, No. 3, or No. 5 is stuck to OFF. 2. Any of the range sensors other than those detected in 1 above is stuck to OFF.	• Range sensor • Harness or connector (Open or shorted in the range sensor circuit)
		A DTC is set if either of the following statuses is detected consecutively. 1. Either of the range sensors No. 2 or No. 4 is stuck to OFF. 2. Any of the range sensors other than those detected in 1 above is/are stuck to OFF.	
		A DTC is set if 2 or more of the following sensors and switch are stuck to ON or OFF consecutively: Range sensors No. 0, No. 1, No. 2, No. 3, No. 4 or No. 5, and park position switch.	• Range sensor • Park position switch • Harness or connector (Open or shorted in the range sensor circuit) (Open or shorted in the park position switch circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Shift the shift lever as per the following: P→R→N→A positions (Keep the shift lever for 5 seconds or more at each position).

3. Shift the shift lever as per the following: A→N→R→P positions (Keep the shift lever for 5 seconds or more at each position).
4. Repeat the procedure shown in 2 and 3 above 2 times.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

⊗Without CONSULT
1. Start the engine.
2. Shift the shift lever as per the following: P→R→N→A positions (Keep the shift lever for 5 seconds or more at each position).
3. Shift the shift lever as per the following: A→N→R→P positions (Keep the shift lever for 5 seconds or more at each position).
4. Repeat the procedure shown in 2 and 3 above 2 times.
5. Check self-diagnosis.

Is DTC P0705 detected?

YES >> Go to TM-78, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487702

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B14 and B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT (PART 1)

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	25	4	Ignition switch ON	5 V
			Ignition switch OFF	0 V
	26		Ignition switch ON	5 V
			Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	27	4	Shift lever: P position	0 V
			Other than the above	5 V
	33		Shift lever: R position	0 V
			Other than the above	5 V
	35		Shift lever: N position	0 V
			Other than the above	5 V
	38		Shift lever: R, N position	0 V
			Other than the above	5 V
	43		Shift lever: N, A, M position	0 V
			Other than the above	5 V
	44		Shift lever: A, M position	0 V
			Other than the above	5 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (RANGE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and A/T shift selector harness connector.
3. Check continuity between TCM vehicle side harness connector terminals and A/T shift selector vehicle side harness connector terminals.

TCM vehicle side harness connector		A/T shift selector vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	25	B20	16	Existed
	26		15	
	27		5	
	33		8	
	35		10	
	38		23	
	43		21	
	44		12	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (RANGE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	25	Ground	Not existed
	26		
	27		
	33		
	35		
	38		
	43		
	44		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (RANGE SENSOR) AND GROUND

Check continuity between A/T shift selector vehicle side harness connector terminals and ground.

A/T shift selector vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B20	3	Ground	Existed
	6		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace A/T shift selector assembly. Refer to TM-375, "Exploded View".
NO >> Repair or replace damaged parts.

9. CHECK TCM OUTPUT SIGNAL CIRCUIT (PART 2)

1. Connect TCM harness connectors.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	89	B45	4	Ignition switch ON	Shift lever: P position	0 V
					Other than the above	5 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

10. CHECK PARK POSITION SWITCH CIRCUIT

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Continuity
Connector	Terminal			
B46	89	Ground	Shift lever: P position	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> GO TO 16.
NO >> GO TO 11.

11. CHECK PARK POSITION SWITCH

1. Disconnect park position switch harness connector.
2. Check park position switch. Refer to TM-82, "Component Inspection (Park Position Switch) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND PARK POSITION SWITCH (PART 1)

Check continuity between TCM vehicle side harness connector terminal and park position switch vehicle side harness connector terminal.

TCM vehicle side harness connector		Park position switch vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	89	B122	1	Existed

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK HARNESS BETWEEN TCM AND PARK POSITION SWITCH (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	89	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 14.
NO >> Repair or replace damaged parts.

14. CHECK HARNESS BETWEEN PARK POSITION SWITCH AND GROUND

Check continuity between park position switch vehicle side harness connector terminal and ground.

Park position switch vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B122	2	Ground	Existed

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15. CHECK SHIFT POSITION

Check shift position. Refer to “INSPECTION” in TM-370, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 16.
NO >> Adjust shift position. Refer to “ADJUSTMENT” in TM-370, "Inspection and Adjustment".

16. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Park Position Switch) (GT-R certified NISSAN dealer)

INFOID:0000000011487703

1. CHECK PARK POSITION SWITCH (PART 1)

Check continuity between park position switch connector terminals.

Park position switch connector			Condition	Continuity
Connector	Terminal			
B122	1	2	Parking lever: P position.	Existed
			Other than the above positions.	Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK PARK POSITION SWITCH (PART 2)

Check continuity between park position switch connector terminal and ground.

Park position switch connector		Ground	Continuity
Connector	Terminal		
B122	1	Ground	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0706 TRANSMISSION RANGE SENSOR A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487704

- The range sensors are installed on the A/T shift selector and the park position switch on the transmission, detecting the shift lever position.
- TCM recognizes the shift lever position by combining signals from 6 range sensors used for the range position recognition and park position switch.

TCM recognized position	Shift lever position	Park position switch	Range sensor					
			No. 0	No. 1	No. 2	No. 3	No. 4	No. 5
P	P	ON	ON	OFF	OFF	OFF	OFF	OFF
R	R	OFF	OFF	ON	ON	OFF	OFF	OFF
N	N	OFF	OFF	OFF	ON	ON	ON	OFF
A/M	A/M	OFF	OFF	OFF	OFF	OFF	ON	ON

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487705

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0706	Transmission range sensor "A" circuit range/performance	A DTC is set if any of the following sensors and switch is/are stuck to ON or OFF consecutively: Range sensors No. 0, No. 1, No. 2, No. 3, No. 4 or No. 5, and park position switch.	• Range sensor • Park position switch • Harness or connector (Open or shorted in the range sensor circuit) (Open or shorted in the park position switch circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Shift the shift lever as per the following: P→R→N→A positions (Keep the shift lever for 5 seconds or more at each position).
3. Shift the shift lever as per the following: A→N→R→P positions (Keep the shift lever for 5 seconds or more at each position).
4. Repeat the procedure shown in 2 and 3 above 2 times.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0706 detected?

YES >> Go to TM-83, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487706

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B14 and B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT (PART 1)

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	25	4	Ignition switch ON	5 V
			Ignition switch OFF	0 V
	26		Ignition switch ON	5 V
			Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	27	4	Shift lever: P position	0 V
			Other than the above	5 V
	33		Shift lever: R position	0 V
			Other than the above	5 V
	35		Shift lever: N position	0 V
			Other than the above	5 V
	38		Shift lever: R, N position	0 V
			Other than the above	5 V
	43		Shift lever: N, A, M position	0 V
			Other than the above	5 V
	44		Shift lever: A, M position	0 V
			Other than the above	5 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (RANGE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and A/T shift selector harness connector.
3. Check continuity between TCM vehicle side harness connector terminals and A/T shift selector vehicle side harness connector terminals.

TCM vehicle side harness connector		A/T shift selector vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	25	B20	16	Existed
	26		15	
	27		5	
	33		8	
	35		10	
	38		23	
	43		21	
	44		12	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (RANGE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	25	Ground	Not existed
	26		
	27		
	33		
	35		
	38		
	43		
	44		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (RANGE SENSOR) AND GROUND

Check continuity between A/T shift selector vehicle side harness connector terminals and ground.

A/T shift selector vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B20	3	Ground	Existed
	6		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace A/T shift selector assembly. Refer to TM-375, "Exploded View".
NO >> Repair or replace damaged parts.

9. CHECK TCM OUTPUT SIGNAL CIRCUIT (PART 2)

1. Connect TCM harness connectors.

2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	89	B45	4	Ignition switch ON	Shift lever: P position	0 V
					Other than the above	5 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

10. CHECK PARK POSITION SWITCH CIRCUIT

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Continuity
Connector	Terminal			
B46	89	Ground	Shift lever: P position	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> GO TO 16.
NO >> GO TO 11.

11. CHECK PARK POSITION SWITCH

1. Disconnect park position switch harness connector.
2. Check park position switch. Refer toTM-87, "Component Inspection (Park Position Switch) (GT-R certified NISSAN dealer)" .

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND PARK POSITION SWITCH (PART 1)

Check continuity between TCM vehicle side harness connector terminal and park position switch vehicle side harness connector terminal.

TCM vehicle side harness connector		Park position switch vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	89	B122	1	Existed

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK HARNESS BETWEEN TCM AND PARK POSITION SWITCH (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	89	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 14.
NO >> Repair or replace damaged parts.

14. CHECK HARNESS BETWEEN PARK POSITION SWITCH AND GROUND

Check continuity between park position switch vehicle side harness connector terminal and ground.

Park position switch vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B122	2	Ground	Existed

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15.CHECK SHIFT POSITION

Check shift position. Refer to “INSPECTION” in TM-370, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 16.
NO >> Adjust shift position. Refer to “ADJUSTMENT” in TM-370, "Inspection and Adjustment".

16.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Park Position Switch) (GT-R certified NISSAN dealer)

INFOID:0000000011487707

1.CHECK PARK POSITION SWITCH (PART 1)

Check continuity between park position switch connector terminals.

Park position switch connector			Condition	Continuity
Connector	Terminal			
B122	1	2	Parking lever: P position.	Existed
			Other than the above positions.	Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK PARK POSITION SWITCH (PART 2)

Check continuity between park position switch connector terminal and ground.

Park position switch connector		Ground	Continuity
Connector	Terminal		
B122	1	Ground	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0711 TRANSMISSION FLUID TEMPERATURE SENSOR A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487708

- The fluid temperature sensor detects the transmission oil temperature in the oil pan.
- The fluid temperature sensor converts the transmission oil temperature into output voltage and transmits the signal to TCM.
- The fluid temperature sensor uses a thermistor and its electrical resistance varies as the temperature varies. The electrical resistance decreases as the temperature increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487709

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0711	Transmission fluid temperature sensor "A" circuit range/ performance	• A DTC is set if TCM detects the fluid temperature sensor value of 160°C (320°F) or more for a certain period of time. • A DTC is set if TCM detects the fluid temperature sensor value of 0°C (32°F) or more and less than 20°C (68°F) for a certain period of time. • A DTC is set if TCM detects the fluid temperature sensor value of –20°C (–4°F) or more, or less than 0°C (32°F) for a certain period of time. • A DTC is set if TCM detects the fluid temperature sensor value of less than –20°C (–4°F) for a certain period of time.	• Fluid temperature sensor • Harness or connector (Open or shorted in the fluid temperature sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and run at idle for 8 minutes or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine and run at idle for 8 minutes or more.
2. Check self-diagnosis.

Is DTC P0711 detected?

YES >> Go to TM-88, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487710

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B46	87	91	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3. CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4. CHECK FLUID TEMPERATURE SENSOR

1. Disconnect transmission unit harness connectors.
2. Check fluid temperature sensor. Refer to TM-90, "Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	87	B50	45	Existed
	91		46	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)

INFOID:0000000011487711

1.CHECK FLUID TEMPERATURE SENSOR (PART 1)

Check resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	45	46	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK FLUID TEMPERATURE SENSOR (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	45	Ground	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0712 TRANSMISSION FLUID TEMPERATURE SENSOR A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487712

- The fluid temperature sensor detects the transmission oil temperature in the oil pan.
- The fluid temperature sensor converts the transmission oil temperature into output voltage and transmits the signal to TCM.
- The fluid temperature sensor uses a thermistor and its electrical resistance varies as the temperature varies. The electrical resistance decreases as the temperature increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487713

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0712	Transmission fluid temperature sensor "A" circuit low	A DTC is set if the fluid temperature sensor voltage value received by TCM is less than 39 mV.	• Fluid temperature sensor • Harness or connector (Open or shorted in the fluid temperature sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0712 detected?

YES >> Go to TM-94, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487714

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B46	87	91	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK FLUID TEMPERATURE SENSOR

1. Disconnect transmission unit harness connectors.
2. Check fluid temperature sensor. Refer to TM-93, "Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	87	B50	45	Existed
	91		46	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)

INFOID:0000000011487715

1. CHECK FLUID TEMPERATURE SENSOR (PART 1)

Check resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	45	46	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK FLUID TEMPERATURE SENSOR (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	45	Ground	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0713 TRANSMISSION FLUID TEMPERATURE SENSOR A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487716

- The fluid temperature sensor detects the transmission oil temperature in the oil pan.
- The fluid temperature sensor converts the transmission oil temperature into output voltage and transmits the signal to TCM.
- The fluid temperature sensor uses a thermistor and its electrical resistance varies as the temperature varies. The electrical resistance decreases as the temperature increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487717

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0713	Transmission fluid temperature sensor "A" circuit high	A DTC is set if the fluid temperature sensor voltage value received by TCM is more than 2,654 mV.	• Fluid temperature sensor • Harness or connector (Open or shorted in the fluid temperature sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0713 detected?

YES >> Go to TM-94, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487718

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B46	87	91	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK FLUID TEMPERATURE SENSOR CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK FLUID TEMPERATURE SENSOR

1. Disconnect transmission unit harness connectors.
2. Check fluid temperature sensor. Refer to TM-96, "Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	87	B50	45	Existed
	91		46	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (FLUID TEMPERATURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	87	Ground	Not existed
	91		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Fluid Temperature Sensor) (GT-R certified NISSAN dealer)

INFOID:0000000011487719

1.CHECK FLUID TEMPERATURE SENSOR (PART 1)

Check resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	45	46	Transmission oil temperature: 20°C (68°F)	6.36 – 6.68 kΩ
			Transmission oil temperature: 50°C (122°F)	2.17 – 2.23 kΩ
			Transmission oil temperature: 80°C (176°F)	0.86 – 0.89 kΩ

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK FLUID TEMPERATURE SENSOR (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	45	Ground	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0715 INPUT SPEED SENSOR A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487720

- The clutch A speed sensor detects the 2nd counter gear speed. The clutch A speed sensor converts the 2nd counter gear speed into pulse signal and transmits the signal to TCM.
- TCM calculates the revolution speed or the clutch A (even gear) based on the signal from the clutch A speed sensor.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487721

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0715	Input/turbine speed sensor "A" circuit	A DTC is set if the status 1 or 2 below is detected with sleeve A1 or A2 engaged in an even gear. 1. The difference between the actual output shaft speed and the output shaft speed converted from the clutch A speed is 1,000 rpm or more. 2. The difference between the vehicle speed signal (meter) (CAN signal) and the output shaft speed converted from the clutch A speed is 1,000 rpm or more.	• Clutch A speed sensor • Sleeve A1 related part • Sleeve A2 related part • Harness or connector (Open or short in the clutch A speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT

1. Start the engine.
2. Select “RANGE”, “GEAR” and “ENGINE SPEED” in “Data Monitor”.
3. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 4
ENGINE SPEED	: 1,500 rpm or more

4. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 4
Engine speed	: 1,500 rpm or more

3. Check self-diagnosis.

Is DTC P0715 detected?

YES >> Go to TM-98, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (PART 2)

With CONSULT
1. Select “RANGE”, “GEAR” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 6
VEHICLE SPEED	: 36 – 44 km/h (23 – 27 MPH)

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 6
Vehicle speed	: 36 – 44 km/h (23 – 27 MPH)

3. Check self-diagnosis.

Is DTC P0715 detected?

YES >> Go to TM-98, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487722

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

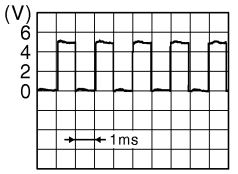
TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	76	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	72	B45	4	• M range, 2nd gear • Engine speed: 2,000 rpm	 NNDIA0061ZZ

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A SPEED SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	68	B49	29	Existed
	72		34	
	76		28	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A SPEED SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	68	Ground	Not existed
	72		
	76		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0720 OUTPUT SPEED SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487723

- The output shaft speed sensor detects the front reduction gear speed. The output shaft speed sensor converts the front reduction gear speed into pulse signal and transmits the signal to TCM.
- The vehicle speed signal (meter) is transmitted via the CAN communication from the ABS actuator and electric unit (control unit) through the combination meter to TCM. TCM calculates the output shaft speed based on the vehicle speed signal (meter) and uses it for the diagnosis of each speed sensor and as a backup signal.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487724

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0720	Output speed sensor circuit	A DTC is set if the status 1 or 2 below is detected with an even gear engaged. 1. The difference between the output shaft speed sensor value and the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) is 1,000 rpm or more. 2. The difference between the output shaft speed sensor value and the output shaft speed converted from the clutch A speed is 1,000 rpm or more.	• Output shaft speed sensor • Harness or connector (Open or shorted in the output shaft speed sensor circuit)
		A DTC is set if the status 1 or 2 below is detected with an odd gear engaged. 1. The difference between the output shaft speed sensor value and the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) is 1,000 rpm or more. 2. The difference between the output shaft speed sensor value and the output shaft speed converted from the clutch B speed is 1,000 rpm or more.	

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Select “RANGE”, “GEAR” or “ENGINE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following status for 5 seconds or more.

RANGE	: M
GEAR	: 4
ENGINE SPEED	: 1,500 rpm or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Run the vehicle and maintain the following status for 5 seconds or more.

Shift lever	: M range
Gear	: 4
Engine speed	: 1,500 rpm or more

2. Check self-diagnosis.

Is DTC P0720 detected?

YES >> Go to TM-187, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487725

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

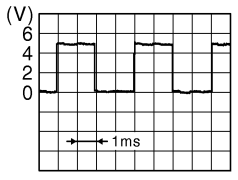
TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	105	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	106	B45	4	• M range, 1st gear • Engine speed: 2,000 rpm	 NNDIA0055ZZ

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (OUTPUT SHAFT SPEED SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	105	B49	1	Existed
	106		2	
	107		8	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (OUTPUT SHAFT SPEED SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	105	Ground	Not existed
	106		
	107		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0725 ENGINE SPEED

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487726

- The engine speed signal (CAN signal) is transmitted from ECM to TCM via CAN communication.
- The engine speed signal (pulse signal) is transmitted from ECM to TCM via the hard wire. TCM uses the engine speed signal (pulse signal) for the diagnosis of each speed signal and as a backup signal.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487727

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0725	Engine speed input circuit	A DTC is set if the engine speed (CAN signal) is less than 200 rpm when the engine speed (pulse signal) is 700 rpm or more.	Harness or connector (CAN communication line is open or shorted)
		A DTC is set if the difference between the engine speed (CAN signal) and clutch A speed sensor value is 1,000 rpm or more with clutch A engaged.	• Clutch A speed sensor • Harness or connector (Open or short in the clutch A speed sensor circuit) (CAN communication line is open or shorted)
		A DTC is set if the difference between the engine speed (CAN signal) and clutch B speed sensor value is 1,000 rpm or more with clutch B engaged.	• Clutch B speed sensor • Harness or connector (Open or short in the clutch B speed sensor circuit) (CAN communication line is open or shorted)
		A DTC is set if the engine speed (pulse signal) is less than 500 rpm when the engine speed (CAN signal) is 1,000 rpm or more.	Harness or connector (Open or short in the circuit between ECM and TCM)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0725 detected?

YES >> Go to TM-104, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Select “RANGE” and “ENGINE SPEED” in “Data Monitor”.
2. Maintain the following conditions for 5 seconds or more.

RANGE	: P
ENGINE SPEED	: 1,000 rpm or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0725 detected?

YES >> Go to TM-104, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 4.

4. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ACCEL POSI SEN 1” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 1
ACCEL POSI SEN 1	: 0.0/8
VEHICLE SPEED	: 20 km/h (13 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0725 detected?

YES >> Go to TM-104, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 5.

5. DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ACCEL POSI SEN 1” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 2
ACCEL POSI SEN 1	: 0.0/8
VEHICLE SPEED	: 35 km/h (22 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0725 detected?

YES >> Go to TM-104, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487728

1. CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK CLUTCH A SPEED SENSOR CIRCUIT

Refer to TM-98, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK CLUTCH B SPEED SENSOR CIRCUIT

Refer to TM-220, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.

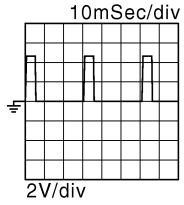
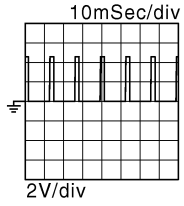
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition		Voltage (Approx.)
Connector	Terminal				
B45	31	4	After engine warming up	At idle **NOTE:** The pulse period changes depending on the idle speed.	1 V*  JMBIA0076GB
				Engine speed: 2,000 rpm	1 V*  JMBIA0077GB

*: Average voltage value of pulse waveform (The correct waveform is measured with an oscilloscope)

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 6.

6. CHECK HARNESS BETWEEN TCM AND ECM (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and ECM harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		ECM vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	31	M107	113	Existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN TCM AND ECM (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	31	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

P0746 PRESSURE CONTROL SOLENOID A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487729

The current signal from TCM controls the oil pressure to be applied to the clutch A (a clutch for even number gears) engaging or releasing of the clutch A.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487730

DTC DETECTION LOGIC

DTC	Self-diagnosis item	DTC detection condition	Possible cause
P0746	Pressure control solenoid "A" performance or stuck off	A DTC is set if the difference between the engine speed (CAN signal) and clutch A speed sensor value is 1,000 rpm or more with clutch A.	• Clutch A solenoid valve • Clutch A pressure sensor • Axis A feed pressure solenoid valve • Line pressure solenoid valve • Oil passage between line pressure and clutch A pressure • Harness or connector (Open or short in the clutch A solenoid valve circuit) (Open or short in the clutch A pressure sensor circuit) (Open or short in the axis A feed pressure solenoid valve circuit) (Open or short in the line pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ACCEL POSI SEN 1” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and keep the following conditions for at least 5 seconds.

RANGE	: M
GEAR	: 2
ACCEL POSI SEN 1	: 0.0/8
VEHICLE SPEED	: 35 km/h (22 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and keep the following conditions for at least 5 seconds.

Shift lever	: M range
Gear	: 2
Accelerator opening	: 0.0/8
Vehicle speed	: 35 km/h (22 MPH) or more

2. Check self-diagnosis.

Is DTC P0746 detected?

YES >> Go to TM-109, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487731

1. CHECK CLUTCH A SOLENOID VALVE CIRCUIT

Refer to TM-111, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK CLUTCH A PRESSURE SENSOR CIRCUIT

Refer to TM-135, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-217, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0747 PRESSURE CONTROL SOLENOID A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487732

The current signal from TCM controls the oil pressure to be applied to the clutch A (a clutch for even number gears) engaging or releasing of the clutch A.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487733

DTC DETECTION LOGIC

DTC	Self-diagnosis item	DTC detection condition	Possible cause
P0747	Pressure sontrol solenoid "A" stuck on	A DTC is set if the clutch A pressure sensor value is higher than the clutch A pressure target value by 0.2 MPa (2.04 kg/cm^2, 29 psi) or more.	• Clutch A solenoid valve • Clutch A pressure sensor • Clutch A oil passage • Harness or connector (Open or short in the clutch A solenoid valve circuit) (Open or short in the clutch A pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. Select “RANGE” and “GEAR” in “Data Monitor”.
5. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 2

6. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 2

5. Check self-diagnosis.

Is DTC P0747 detected?

YES >> Go to TM-109, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487734

1.CHECK CLUTCH A SOLENOID VALVE CIRCUIT

Refer to TM-111, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH A PRESSURE SENSOR CIRCUIT

Refer to TM-135, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-217, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0748 PRESSURE CONTROL SOLENOID A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487735

- The clutch A solenoid valve is installed on the front control module and controls the clutch A (a clutch for even number gears) with the current signal from TCM.
- The clutch A solenoid valve is a N/L type (normal low) in which no control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487736

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P0748	Pressure control solenoid "A" electrical	A DTC is set if the clutch A solenoid valve monitor current value is less than 0.05 A when the clutch A solenoid valve target current value is more than 0.2 A.	• Clutch A solenoid valve • Harness or connector (Open or short in the clutch A solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. Select “RANGE” and “GEAR” in “Data Monitor”.
5. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 2

6. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 2

5. Check self-diagnosis.

Is DTC P0748 detected?

YES >> Go to TM-111, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487737

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH A SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B47	121	126	Transmission oil temperature: 20°C (68°F)	4.6 – 5.0 Ω
			Transmission oil temperature: 50°C (122°F)	5.1 – 5.6 Ω
			Transmission oil temperature: 80°C (176°F)	5.6 – 6.2 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK CLUTCH A SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	121	Ground	Not existed
	126		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK CLUTCH A SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check clutch A solenoid valve. Refer to TM-113, "Component Inspection (Clutch A Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	121	B50	37	Existed
	126		38	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	121	Ground	Not existed
	126		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Clutch A Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487738

1.CHECK CLUTCH A SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	37	38	Transmission oil temperature: 20°C (68°F)	4.6 – 5.0 Ω
			Transmission oil temperature: 50°C (122°F)	5.1 – 5.6 Ω
			Transmission oil temperature: 80°C (176°F)	5.6 – 6.2 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH A SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	37	Ground	Not existed
	38		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0776 PRESSURE CONTROL SOLENOID B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487739

The current signal from TCM controls the oil pressure to be applied to the clutch B (a clutch for odd number gears and reverse) engaging or releasing of the clutch B.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487740

DTC DETECTION LOGIC

DTC	Self-diagnosis item	DTC detection condition	Possible cause
P0776	Pressure control solenoid "B" performance or stuck off	A DTC is set if the difference between the engine speed (CAN signal) and clutch B speed sensor value is 1,000 rpm or more with clutch B.	• Clutch B solenoid valve • Clutch B pressure sensor • Axis B feed pressure solenoid valve • Line pressure solenoid valve • Oil passage between line pressure and clutch B pressure • Harness or connector (Open or short in the clutch B solenoid valve circuit) (Open or short in the clutch B pressure sensor circuit) (Open or short in the axis B feed pressure solenoid valve circuit) (Open or short in the line pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ACCEL POSI SEN 1” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and keep the following conditions for at least 5 seconds.

RANGE	: M
GEAR	: 1
ACCEL POSI SEN 1	: 0.0/8
VEHICLE SPEED	: 20 km/h (13 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and keep the following conditions for at least 5 seconds.

Shift lever	: M range
Gear	: 1
Accelerator opening	: 0.0/8
Vehicle speed	: 20 km/h (13 MPH) or more

2. Check self-diagnosis.

Is DTC P0776 detected?

YES >> Go to TM-116, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487741

1. CHECK CLUTCH B SOLENOID VALVE CIRCUIT

Refer to TM-118, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK CLUTCH B PRESSURE SENSOR CIRCUIT

Refer to TM-141, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-217, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0777 PRESSURE CONTROL SOLENOID B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487742

The current signal from TCM controls the oil pressure to be applied to the clutch B (a clutch for odd number gears and reverse) engaging or releasing of the clutch B.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487743

DTC DETECTION LOGIC

DTC	Self-diagnosis item	DTC detection condition	Possible cause
P0777	Pressure control solenoid "B" stuck on	A DTC is set if the clutch B pressure sensor value is higher than the clutch B pressure target value by 0.2 MPa (2.04 kg/cm^2, 29 psi) or more.	• Clutch B solenoid valve • Clutch B pressure sensor • Clutch B oil passage • Harness or connector (Open or short in the clutch B solenoid valve circuit) (Open or short in the clutch B pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to N the position.
3. Start the engine.
4. Select “RANGE” and “GEAR” in “Data Monitor”.
5. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 1

6. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to N the position.
3. Start the engine.
4. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 1

5. Check self-diagnosis.

Is DTC P0777 detected?

YES >> Go to TM-116, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487744

1.CHECK CLUTCH B SOLENOID VALVE CIRCUIT

Refer to TM-118, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK CLUTCH B PRESSURE SENSOR CIRCUIT

Refer to TM-141, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-217, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0778 PRESSURE CONTROL SOLENOID B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487745

- The clutch B solenoid valve is installed on the front control module and controls the clutch B (a clutch for odd number gears and reverse) with the current signal from TCM.
- The clutch B solenoid valve is an N/L type (normal low) in which no control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487746

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0778	Pressure control solenoid "B" electrical	A DTC is set if the clutch B solenoid valve current value is less than 0.05 A when the clutch B solenoid valve target current value is more than 0.2 A.	• Clutch B solenoid valve • Harness or connector (Open or short in the clutch B solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. Select “RANGE” and “GEAR” in “Data Monitor”.
5. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 1

6. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
3. Start the engine.
4. With the vehicle stationary, maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 1

5. Check self-diagnosis.

Is DTC P0778 detected?

YES >> Go to TM-118, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident"

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487747

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH B SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B47	123	128	Transmission oil temperature: 20°C (68°F)	4.6 – 5.0 Ω
			Transmission oil temperature: 50°C (122°F)	5.1 – 5.6 Ω
			Transmission oil temperature: 80°C (176°F)	5.6 – 6.2 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK CLUTCH B SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	123	Ground	Not existed
	128		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK CLUTCH B SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check clutch B solenoid valve. Refer to TM-120, "Component Inspection (Clutch B Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	123	B50	42	Existed
	128		43	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	123	Ground	Not existed
	128		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Clutch B Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487748

1.CHECK CLUTCH B SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	42	43	Transmission oil temperature: 20°C (68°F)	4.6 – 5.0 Ω
			Transmission oil temperature: 50°C (122°F)	5.1 – 5.6 Ω
			Transmission oil temperature: 80°C (176°F)	5.6 – 6.2 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH B SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	42	Ground	Not existed
	43		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0790 PERFORMANCE SWITCH

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487749

The set-up switch (transmission) is installed on the cluster lid C and commands the driving mode transition to TCM according to a driver's request.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487750

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0790	Normal/performance switch circuit	A DTC is set if TCM detects the set-up switch (transmission) ON signal for a certain period of time.	• Set-up switch (transmission) • Harness or connector [Short in the set-up switch (transmission) circuit]

DTC CONFIRMATION PROCEDURE

1.CHECK BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and wait for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0790 detected?

YES >> Go to TM-104, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487751

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and M95. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SET-UP SWITCH (TRANSMISSION)

1. Disconnect set-up switch (transmission) harness connector.
2. Check set-up switch (transmission). Refer to TM-122, "Component Inspection [Set-up Switch (Transmission)] (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK HARNESS BETWEEN TCM AND SET-UP SWITCH (TRANSMISSION)

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	34	Ground	Not existed
	37		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN SET-UP SWITCH (TRANSMISSION) AND GROUND

Check continuity between set-up switch (transmission) vehicle side harness connector terminal and ground.

Set-up switch (transmission) vehicle side harness connector		Ground	Continuity
Connector	Terminal		
M73	17	Ground	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection [Set-up Switch (Transmission)] (GT-R certified NISSAN dealer)

INFOID:0000000011487752

1.CHECK SET-UP SWITCH (TRANSMISSION)

Check continuity between set-up switch (transmission) connector terminals.

Set-up switch (transmission) connector			Condition	Continuity
Connector	Terminal			
M73	11	17	With the knob of the set-up switch (transmission) pressed onto the R side	Existed
			Other than the above	Not existed
	23		With the knob of the set-up switch (transmission) pressed onto the SAVE side	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace set-up switch.

P0797 PRESSURE CONTROL SOLENOID C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487753

This solenoid valve builds up the source pressure for the gear operation actuators for even number gears and for the clutch A solenoid valve based on the signals from TCM. The solenoid valves adjust the source pressure to drive the gears and clutches.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487754

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0797	Pressure control solenoid "C" stuck on	• A DTC is set if the clutch A pressure sensor value is less than 0.4 MPa (4.08 kg/cm^2, 58 psi) when the axis A feed pressure target value is 0.4 MPa (4.08 kg/cm^2, 58 psi) or more. • A DTC is set if the clutch A pressure sensor value is more than 0.2 MPa (2.04 kg/cm^2, 29 psi) when the axis A feed pressure target value is 0.1 MPa (1.02 kg/cm^2, 14.5 psi) or less.	• Axis A feed pressure solenoid valve • Clutch A solenoid valve • Clutch A pressure sensor • Clutch A oil passage • Harness or connector (Open or short in the axis A feed pressure solenoid valve circuit) (Open or short in the clutch A solenoid valve circuit) (Open or short in the clutch A pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the P position.
3. Start the engine.
4. Move the shift lever in the P position, run at idle for 1 minute or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the P position.
3. Start the engine.
4. Move the shift lever in the P position, run at idle for 1 minute or more.
5. Check self-diagnosis.

Is DTC P0797 detected?

YES >> Go to TM-123, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487755

1.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH A SOLENOID VALVE CIRCUIT

Refer to TM-111, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK CLUTCH A PRESSURE SENSOR CIRCUIT

Refer to TM-135, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0798 PRESSURE CONTROL SOLENOID C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487756

- The axis A feed pressure solenoid valve is installed on the actuator control module and builds up the source pressure for the gear operation actuators for even number gears and for the clutch A pressure solenoid valve based on the signals from TCM. The solenoid valves adjust the source pressure to drive the gears and clutches.
- The axis A feed pressure solenoid valve is an N/L type (normal low) in which no control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487757

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0798	Pressure control solenoid "C" electrical	A DTC is set if the axis A feed pressure solenoid valve monitor current value is less than 0.2 A when the axis A feed pressure solenoid valve target current value is more than 0.38 A.	• Axis A feed pressure solenoid valve • Harness or connector (Open or short in the axis A feed pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. Move the shift lever to the N position and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. Move the shift lever to the N position and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P0798 detected?

YES >> Go to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487758

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace damaged parts.

2.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B46	57	62	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	57	Ground	Not existed
	62		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK AXIS A FEED PRESSURE SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check axis A feed pressure solenoid valve. Refer to TM-127, "Component Inspection (Axis A Feed Pressure Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (AXIS A FEED PRESSURE SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	57	B49	14	Existed
	62		15	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (AXIS A FEED PRESSURE SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	57	Ground	Not existed
	62		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Axis A Feed Pressure Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487759

1. CHECK AXIS A FEED PRESSURE SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B49	14	15	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK AXIS A FEED PRESSURE SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B49	14	Ground	Not existed
	15		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0827 UP AND DOWN SHIFT SW

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487760

The auto/manual range change switch 1 and Auto/Manual range change switch 2 are installed on the A/T shift selector and commands a transition to M range or A range according to the driver's request.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487761

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0827	Up and down shift switch circuit low	A DTC is set if TCM simultaneously detects the OFF signal from the auto/manual range change switch 1 and OFF signal from the auto/manual range change switch 2.	• Auto/manual range change switch 1 • Auto/manual range change switch 2 • Range sensor power supply 1 system • Harness or connector (Open in the auto/manual range change switch 1) (Open in the auto/manual range change switch 2)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT
1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 1 minute or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0827 detected?

YES >> Go to TM-131, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (PART 2)

With CONSULT
1. Start the engine.
2. With the shift lever pressed to the M position side, run at idle for 1 minute or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0827 detected?

YES >> Go to TM-131, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487762

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK AUTO/MANUAL RANGE CHANGE SWITCH CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Continuity
Connector	Terminal			
B45	25	23	The shift lever is pressed onto the M position side	Not existed
			Other than the above	Existed
	25	28	The shift lever is pressed onto the M position side	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3. CHECK AUTO/MANUAL RANGE CHANGE SWITCH CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	23	Ground	Not existed
	25		
	28		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 5.

4. CHECK AUTO/MANUAL RANGE CHANGE SWITCH

1. Disconnect A/T shift selector harness connector.
2. Check auto/manual range change switch. Refer to TM-130, "Component Inspection (Auto/Manual Range Change Switch) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (AUTO/MANUAL RANGE CHANGE SWITCH) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and A/T shift selector vehicle side harness connector terminals.

TCM vehicle side harness connector		A/T shift selector vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	23	B20	20	Existed
	25		16	
	28		24	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (AUTO/MANUAL RANGE CHANGE SWITCH) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	23	Ground	Not existed
	25		
	28		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Auto/Manual Range Change Switch) (GT-R certified NISSAN dealer)

INFOID:0000000011487763

1. CHECK AUTO/MANUAL RANGE CHANGE SWITCH

Check continuity between A/T shift selector harness connector terminals.

TCM vehicle side harness connector			Condition	Continuity
Connector	Terminal			
B20	16	20	The shift lever is pressed onto the M position side	Not existed
			Other than the above	Existed
	16	24	The shift lever is pressed onto the M position side	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0828 UP AND DOWN SHIFT SW

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487764

The auto/manual range change switch 1 and Auto/Manual range change switch 2 are installed on the A/T shift selector and commands a transition to M range or A range according to the driver's request.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487765

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0828	Up and down shift switch circuit high	A DTC is set if TCM simultaneously detects the ON signal from the auto/manual range change switch 1 and ON signal from the auto/manual range change switch 2.	• Auto/manual range change switch 1 • Auto/manual range change switch 2 • Range sensor power supply 1 system • Harness or connector (Short in the auto/manual range change switch 1) (Short in the auto/manual range change switch 2)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT
1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 1 minute or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0828 detected?

YES >> Go to TM-131, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE (PART 2)

With CONSULT
1. Start the engine.
2. With the shift lever pressed to the M position side, run at idle for 1 minute or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0828 detected?

YES >> Go to TM-131, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487766

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK AUTO/MANUAL RANGE CHANGE SWITCH CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Continuity
Connector	Terminal			
B45	25	23	The shift lever is pressed onto the M position side	Not existed
			Other than the above	Existed
	25	28	The shift lever is pressed onto the M position side	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK AUTO/MANUAL RANGE CHANGE SWITCH CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	23	Ground	Not existed
	25		
	28		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 5.

4.CHECK AUTO/MANUAL RANGE CHANGE SWITCH

1. Disconnect A/T shift selector harness connector.
2. Check auto/manual range change switch. Refer to TM-133, "Component Inspection (Auto/Manual Range Change Switch) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (AUTO/MANUAL RANGE CHANGE SWITCH) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and A/T shift selector vehicle side harness connector terminals.

TCM vehicle side harness connector		A/T shift selector vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	23	B20	20	Existed
	25		16	
	28		24	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND A/T SHIFT SELECTOR (AUTO/MANUAL RANGE CHANGE SWITCH) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	23	Ground	Not existed
	25		
	28		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Auto/Manual Range Change Switch) (GT-R certified NISSAN dealer)

INFOID:0000000011487767

1. CHECK AUTO/MANUAL RANGE CHANGE SWITCH

Check continuity between A/T shift selector harness connector terminals.

TCM vehicle side harness connector			Condition	Continuity
Connector	Terminal			
B20	16	20	The shift lever is pressed onto the M position side	Not existed
			Other than the above	Existed
	16	24	The shift lever is pressed onto the M position side	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0842 TRANSMISSION FLUID PRESSURE SEN/SW A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487768

- The clutch A pressure sensor is installed on the front control module and detects the pressure applied to the clutch A.
- The clutch A pressure sensor converts the pressure applied to the clutch A into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The clutch A pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487769

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0842	Transmission fluid pressure sensor/switch "A" circuit low	A DTC is set if the clutch A pressure sensor voltage value received by TCM is less than 90 mV.	• Clutch A pressure sensor • TCM • Harness or connector (Open or short in the clutch A pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1. PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Without CONSULT
1. Turn the ignition switch ON.
2. Check “TRANS OIL TEMP” on multi-function display.

Is the oil temperature –10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P0842 detected?

YES >> Go to TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487770

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	97	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B47	98	B45	4	Engine running	Shift lever: P, R, or N position	0.38 – 0.64 V
				While driving	1st gear, 3rd gear, 5th gear	

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	97	B50	40	Existed
	98		41	
	99		47	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	97	Ground	Not existed
	98		
	99		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0843 TRANSMISSION FLUID PRESSURE SEN/SW A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487771

- The clutch A pressure sensor is installed on the front control module and detects the pressure applied to the clutch A.
- The clutch A pressure sensor converts the pressure applied to the clutch A into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The clutch A pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487772

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0843	Transmission fluid pressure sensor/switch "A" circuit high	A DTC is set if the clutch A pressure sensor voltage value received by TCM is more than 4,700 mV.	• Clutch A pressure sensor • TCM • Harness or connector (Open or short in the clutch A pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Without CONSULT
1. Turn the ignition switch ON.
2. Check “TRANS OIL TEMP” on multi-function display.

Is the oil temperature −10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P0843 detected?

YES >> Go to TM-138, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487773

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	97	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B47	98	B45	4	Engine running	Shift lever: P, R, or N position	0.38 – 0.64 V
				While driving	1st gear, 3rd gear, 5th gear	

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	97	B50	40	Existed
	98		41	
	99		47	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH A PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	97	Ground	Not existed
	98		
	99		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0847 TRANSMISSION FLUID PRESSURE SEN/SW B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487774

- The clutch B pressure sensor is installed on the front control module and detects the pressure applied to the clutch B.
- The clutch B pressure sensor converts the pressure applied to the clutch B into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The clutch B pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487775

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0847	Transmission fluid pressure sensor/switch "B" circuit low	A DTC is set if the clutch B pressure sensor voltage value received by TCM is less than 90 mV.	• Clutch B pressure sensor • TCM • Harness or connector (Open or short in the clutch B pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1. PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Without CONSULT
1. Turn the ignition switch ON.
2. Check “TRANS OIL TEMP” on multi-function display.

Is the oil temperature –10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P0847 detected?

YES >> Go to TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487776

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	102	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B47	103	B45	4	Engine running	Shift lever: P, R, or N position	0.38 – 0.64 V
				While driving	2nd gear, 4th gear, 6th gear	

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	102	B50	51	Existed
	103		52	
	104		53	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	102	Ground	Not existed
	103		
	104		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0848 TRANSMISSION FLUID PRESSURE SEN/SW B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487777

- The clutch B pressure sensor is installed on the front control module and detects the pressure applied to the clutch B.
- The clutch B pressure sensor converts the pressure applied to the clutch B into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The clutch B pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487778

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0848	Transmission fluid pressure sensor/switch "B" circuit high	A DTC is set if the clutch B pressure sensor voltage value received by TCM is more than 4,700 mV.	• Clutch B pressure sensor • TCM • Harness or connector (Open or short in the clutch B pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1. PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Without CONSULT
1. Turn the ignition switch ON.
2. Check “TRANS OIL TEMP” on multi-function display.

Is the oil temperature −10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P0848 detected?

YES >> Go to TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487779

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	102	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B47	103	B45	4	Engine running	Shift lever: P, R, or N position	0.38 – 0.64 V
				While driving	2nd gear, 4th gear, 6th gear	

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	102	B50	51	Existed
	103		52	
	104		53	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	102	Ground	Not existed
	103		
	104		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0863 TCM COMMUNICATION

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487780

- TCM consists of the microcomputer and input/output connectors for signal and power supply.
- TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.
- TCM uses 3 different power supply routes to distribute power supply to each sensor.

Sensor power supply 1	Sensor power supply 2	Sensor power supply 3
• Output shaft speed sensor • Line pressure sensor	• Clutch A pressure sensor • Clutch A speed sensor • 6th-Neutral position sensor • 2nd-4th position sensor • Range sensor power supply 1 (Range sensor No. 0, 1, 3, 5)	• Clutch B pressure sensor • Clutch B speed sensor • 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • 3rd-5th position sensor • Range sensor power supply 2 (Range sensor No. 2, 4)

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487781

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0863	TCM communication circuit	A DTC is set if TCM function unit does not operate normally.	TCM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0863 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487782

1.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P0872 TRANSMISSION FLUID PRESSURE SEN/SW C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487783

- The line pressure sensor is installed on the actuator control module and detects the line pressure.
- The line pressure sensor converts the line pressure into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The line pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487784

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0872	Transmission fluid pressure sensor/switch "C" circuit low	A DTC is set if the line pressure sensor voltage value received by TCM is less than 90 mV.	• Line pressure sensor • Harness or connector (Open in the line pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Is the oil temperature −10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. With the shift lever in the P position, and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of TRANSMISSION.

Is DTC P0872 detected?

YES >> Go to TM-151, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487785

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	73	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	77	B45	4	Engine running	• Shift lever: P, N position • At idle	0.84 – 1.97 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	73	B49	35	Existed
	77		12	
	80		19	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	73	Ground	Not existed
	77		
	80		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".

NO >> Repair or replace damaged parts.

P0873 TRANSMISSION FLUID PRESSURE SEN/SW C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487786

- The line pressure sensor is installed on the actuator control module and detects the line pressure.
- The line pressure sensor converts the line pressure into output voltage and transmits the signal to TCM. TCM uses this signal in calculations for control switching or other functions.
- The line pressure sensor output voltage varies depending on the pressure variations. The voltage increases as the pressure increases.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487787

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0873	Transmission fluid pressure sensor/switch "C" circuit high	A DTC is set if the line pressure sensor voltage value received by TCM is more than 4,700 mV.	• Line pressure sensor • Harness or connector (Short in the line pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Is the oil temperature −10°C (14°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. With the shift lever in the P position, and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of TRANSMISSION.

Is DTC P0873 detected?

YES >> Go to TM-151, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487788

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	73	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	77	B45	4	Engine running	• Shift lever: P, N position • At idle	0.84 – 1.97 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	73	B49	35	Existed
	77		12	
	80		19	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	73	Ground	Not existed
	77		
	80		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".

NO >> Repair or replace damaged parts.

P0882 TCM POWER SUPPLY

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487789

The power supply distributes the power to the neutral signal transmitted to each solenoid, starter relay and ECM.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487790

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0882	TCM power input signal low	A DTC is set if the power voltage input to TCM is less than 10.5 V.	• Battery voltage drop • TCM relay • Harness or connector (Open in the power supply circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0882 detected?

YES >> Go to TM-154, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487791

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM INPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	1	4	Ignition switch ON	Battery voltage (11 – 14 V)
			Ignition switch OFF	0 V
	5	4	Ignition switch ON	Battery voltage (11 – 14 V)
			Ignition switch OFF	0 V
	14	4	Ignition switch ON	0 V
			Ignition switch OFF	Battery voltage (11 – 14 V)

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 3.

3. CHECK HARNESS BETWEEN TCM AND TCM RELAY (PART 1)

1. Disconnect TCM harness connectors and TCM relay harness connector.
2. Check continuity between TCM vehicle side harness connector terminals and TCM relay vehicle side harness connector terminals.

TCM vehicle side harness connector		TCM relay vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	1	B54	6	Existed
	5			
	14		1	

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN TCM AND TCM RELAY (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	1	Ground	Not existed
	5		
	14		

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM RELAY

Check TCM relay. Refer to TM-156, "Component Inspection (TCM Relay) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. DETECT MALFUNCTIONING ITEM

Check the following. Refer to PG-6, "Wiring Diagram - BATTERY POWER SUPPLY -".

- 20A fuse (No. 36, located in the fuse and fusible link block)
- Fuse and fusible link block
- Harness for open or short TCM relay and battery

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (TCM Relay) (GT-R certified NISSAN dealer)

INFOID:0000000011487792

1.CHECK TCM RELAY

Check continuity between TCM relay connector terminals.

CAUTION:

- **When applying voltage, use a fuse.**
- **Never cause a short circuit.**

TCM relay connector			Condition	Continuity
Connector	Terminal			
B54	3	5	Apply battery voltage between terminals 1 and 2	Existed
			Other than the above	Not existed
	6	7	Apply battery voltage between terminals 1 and 2	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace TCM relay.

P0973 SHIFT SOLENOID A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487793

- The shift solenoid valve 1 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 6th-Neutral shift actuator operating the sleeve A1 and the 2nd-4th shift actuator operating the sleeve A2.
- The shift solenoid valve 1 is an ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487794

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0973	Shift solenoid "A" control circuit low	A DTC is set if the shift solenoid valve 1 monitor value is OFF when the shift solenoid valve 1 command value is ON.	• Shift solenoid valve 1 • Harness or connector (Open or short in the shift solenoid valve 1 circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1. PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 3rd gear of M range for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 3rd gear of M range for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0973 detected?

YES >> Go to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487795

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	49	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 1

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 1. Refer to TM-158, "Component Inspection (Shift Solenoid Valve 1) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 1) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	49	B49	13	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	49	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 1) (GT-R certified NISSAN dealer)

INFOID:0000000011487796

1.CHECK SHIFT SOLENOID VALVE 1

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	13	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0974 SHIFT SOLENOID A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487797

- The shift solenoid valve 1 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 6th-Neutral shift actuator operating the sleeve A1 and the 2nd-4th shift actuator operating the sleeve A2.
- The shift solenoid valve 1 is an ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487798

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0974	Shift solenoid "A" control circuit high	A DTC is set if the shift solenoid valve 1 monitor value is ON when the shift solenoid valve 1 command value is OFF.	• Shift solenoid valve 1 • Harness or connector (Open or short in the shift solenoid valve 1 circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P0974 detected?

YES >> Go to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487799

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	49	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 1

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 1. Refer to TM-158, "Component Inspection (Shift Solenoid Valve 1) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 1) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	49	B49	13	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	49	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 1) (GT-R certified NISSAN dealer)

INFOID:0000000011487800

1.CHECK SHIFT SOLENOID VALVE 1

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	13	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0976 SHIFT SOLENOID B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487801

- The shift solenoid valve 2 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 6th-Neutral shift actuator operating the sleeve A1 and the 2nd-4th shift actuator operating the sleeve A2.
- The shift solenoid valve 2 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487802

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0976	Shift solenoid "B" control circuit low	A DTC is set if the shift solenoid valve 2 monitor value is OFF when the shift solenoid valve 2 command value is ON.	• Shift solenoid valve 2 • Harness or connector (Open or short in the shift solenoid valve 2 circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1. PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 3rd gear of M range for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 3rd gear of M range for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0976 detected?

YES >> Go to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487803

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	54	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 2

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 2. Refer to TM-164, "Component Inspection (Shift Solenoid Valve 2) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 2) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	54	B49	20	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	54	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 2) (GT-R certified NISSAN dealer)

INFOID:0000000011487804

1.CHECK SHIFT SOLENOID VALVE 2

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	20	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0977 SHIFT SOLENOID B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487805

- The shift solenoid valve 2 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 6th-Neutral shift actuator operating the sleeve A1 and the 2nd-4th shift actuator operating the sleeve A2.
- The shift solenoid valve 2 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487806

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0977	Shift solenoid "B" control circuit high	A DTC is set if the shift solenoid valve 2 monitor value is ON when the shift solenoid valve 2 command value is OFF.	• Shift solenoid valve 2 • Harness or connector (Open or short in the shift solenoid valve 2 circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P0977 detected?

YES >> Go to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487807

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	54	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 2

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 2. Refer to TM-164, "Component Inspection (Shift Solenoid Valve 2) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 2) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	54	B49	20	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	54	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 2) (GT-R certified NISSAN dealer)

INFOID:0000000011487808

1.CHECK SHIFT SOLENOID VALVE 2

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	20	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0979 SHIFT SOLENOID C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487809

- The shift solenoid valve 3 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 1st-Reverse shift actuator operating the sleeve B1 and the 3rd-5th shift actuator operating the sleeve B2.
- The shift solenoid valve 3 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487810

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0979	Shift solenoid "C" control circuit low	A DTC is set if the shift solenoid valve 3 monitor value is OFF when the shift solenoid valve 3 command value is ON.	• Shift solenoid valve 3 • Harness or connector (Open or short in the shift solenoid valve 3 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Shift the shift lever to the R position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Shift the shift lever to the R position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P0979 detected?

YES >> Go to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487811

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	51	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 3

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 3. Refer to TM-170, "Component Inspection (Shift Solenoid Valve 3) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 3) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	51	B49	27	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 3) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	51	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 3) (GT-R certified NISSAN dealer)

INFOID:0000000011487812

1.CHECK SHIFT SOLENOID VALVE 3

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	27	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0980 SHIFT SOLENOID C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487813

- The shift solenoid valve 3 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 1st-Reverse shift actuator operating the sleeve B1 and the 3rd-5th shift actuator operating the sleeve B2.
- The shift solenoid valve 3 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487814

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0980	Shift solenoid "C" control circuit high	A DTC is set if the shift solenoid valve 3 monitor value is ON when the shift solenoid valve 3 command value is OFF.	• Shift solenoid valve 3 • Harness or connector (Open or short in the shift solenoid valve 3 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the A position and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the A position and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0980 detected?

YES >> Go to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487815

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	51	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3. CHECK SHIFT SOLENOID VALVE 3

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 3. Refer to TM-170, "Component Inspection (Shift Solenoid Valve 3) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 3) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	51	B49	27	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 3) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	51	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 3) (GT-R certified NISSAN dealer)

INFOID:0000000011487816

1. CHECK SHIFT SOLENOID VALVE 3

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	27	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0982 SHIFT SOLENOID D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487817

- The shift solenoid valve 4 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 1st-Reverse shift actuator operating the sleeve B1 and the 3rd-5th shift actuator operating the sleeve B2.
- The shift solenoid valve 4 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487818

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0982	Shift solenoid "D" control circuit low	A DTC is set if the shift solenoid valve 4 monitor value is OFF when the shift solenoid valve 4 command value is ON.	• Shift solenoid valve 4 • Harness or connector (Open or short in the shift solenoid valve 4 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the A position and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the A position and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0982 detected?

YES >> Go to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487819

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	56	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3. CHECK SHIFT SOLENOID VALVE 4

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 4. Refer to TM-175, "Component Inspection (Shift Solenoid Valve 4) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 4) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	56	B49	7	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 4) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	56	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 4) (GT-R certified NISSAN dealer)

INFOID:0000000011487820

1. CHECK SHIFT SOLENOID VALVE 4

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	7	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0983 SHIFT SOLENOID D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487821

- The shift solenoid valve 4 is installed on the actuator control module and switches the oil passages for the oil pressure that activates the 1st-Reverse shift actuator operating the sleeve B1 and the 3rd-5th shift actuator operating the sleeve B2.
- The shift solenoid valve 4 is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487822

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0983	Shift solenoid "D" control circuit high	A DTC is set if the shift solenoid valve 4 monitor value is ON when the shift solenoid valve 4 command value is OFF.	• Shift solenoid valve 4 • Harness or connector (Open or short in the shift solenoid valve 4 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT
1. Start the engine.
2. Shift the shift lever to the R position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Shift the shift lever to the R position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P0983 detected?

YES >> Go to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487823

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	56	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SHIFT SOLENOID VALVE 4

1. Disconnect transmission unit harness connectors.
2. Check shift solenoid valve 4. Refer to TM-177, "Component Inspection (Shift Solenoid Valve 4) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 4) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	56	B49	7	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SHIFT SOLENOID VALVE 4) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	56	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Shift Solenoid Valve 4) (GT-R certified NISSAN dealer)

INFOID:0000000011487824

1.CHECK SHIFT SOLENOID VALVE 4

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	7	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0985 SHIFT SOLENOID E

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487825

- The sequence solenoid valve is installed on the actuator control module and switches the oil passages for operating the low speed gear sleeve (sleeve A2 and sleeve B1) and for operating the high speed gear sleeve (sleeve A1 and sleeve B2).
- The sequence solenoid valve is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487826

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0985	Shift solenoid "E" control circuit low	A DTC is set if the sequence solenoid valve monitor value is OFF when the sequence solenoid valve command value is ON.	• Sequence solenoid valve • Harness or connector (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1. PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 2nd gear of M range for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 2nd gear of M range for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P0985 detected?

YES >> Go to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487827

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	53	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK SEQUENCE SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check sequence solenoid valve. Refer to TM-180, "Component Inspection (Sequence Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SEQUENCE SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	53	B49	6	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SEQUENCE SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	53	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Sequence Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487828

1.CHECK SEQUENCE SOLENOID VALVE

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	6	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P0986 SHIFT SOLENOID E

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487829

- The sequence solenoid valve is installed on the actuator control module and switches the oil passages for operating the low speed gear sleeve (sleeve A2 and sleeve B1) and for operating the high speed gear sleeve (sleeve A1 and sleeve B2).
- The sequence solenoid valve is a ON/OFF type solenoid valve.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487830

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P0986	Shift solenoid "E" control circuit high	A DTC is set if the sequence solenoid valve monitor value is ON when the sequence solenoid valve command value is OFF.	• Sequence solenoid valve • Harness or connector (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Shift the shift lever to the A position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P0986 detected?

YES >> Go to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487831

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B46	53	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3. CHECK SEQUENCE SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check sequence solenoid valve. Refer to TM-180, "Component Inspection (Sequence Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SEQUENCE SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminal and transmission unit vehicle side harness connector terminal.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	53	B49	6	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (SEQUENCE SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	53	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Sequence Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487832

1. CHECK SEQUENCE SOLENOID VALVE

Check the resistance between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Condition	Resistance (Approx.)
Connector	Terminal			
B49	6	Ground	Transmission oil temperature: 20°C (68°F)	6.6 – 7.4 Ω
			Transmission oil temperature: 50°C (122°F)	7.3 – 8.3 Ω
			Transmission oil temperature: 80°C (176°F)	8.1 – 9.2 Ω

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P1705 TP SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487833

- The accelerator pedal position sensor is installed on the upper section of the accelerator pedal assembly and detects the depressing amount of the accelerator pedal. The accelerator pedal position sensor converts the depressing amount of the accelerator pedal into voltage signal and transmits it to ECM. ECM transmits the signal to TCM via the CAN communication.
- TCM selects the driving gear using the gear shift line and corrects the operation of the clutches and clutch actuators based on the signal.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487834

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P1705	Throttle position CAN signal compatibility	A DTC is set if TCM detects a difference between 2 signals of the throttle position (CAN signal).	• Accelerator pedal position sensor • ECM • Harness or connector (Open or short in the accelerator pedal position sensor signal circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine and run at idle for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P1705 detected?

YES >> Go to TM-185, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487835

1.CHECK DTC WITH ECM

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “ENGINE”.

Without CONSULT
1. Turn ignition switch ON.
2. Check self-diagnosis.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to EC-592, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

P1722 VEHICLE SPEED

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487836

- The output shaft speed sensor detects the front reduction gear speed. The output shaft speed sensor converts the front reduction gear speed into pulse signal and transmits the signal to TCM.
- The vehicle speed signal (meter) is transmitted via the CAN communication from the ABS actuator and electric unit (control unit) through the combination meter to TCM. TCM calculates the output shaft speed based on the vehicle speed signal (meter) and uses it for the diagnosis of each speed sensor and as a backup signal.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487837

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P1722	Output shaft speed CAN signal compatibility *1	A DTC is set if the status 1 or 2 below is detected with an even gear engaged. 1. The difference between the output shaft speed sensor value and the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) is 1,000 rpm or more. 2. The difference between the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) and the output shaft speed converted from the clutch A speed is 1,000 rpm or more.	• Combination meter • ABS actuator and electric unit (control unit) • Wheel sensor • Harness or connector (CAN communication line is open or shorted) (Open or short in the wheel speed sensor circuit)
		A DTC is set if the status 1 or 2 below is detected with an odd gear engaged. 1. The difference between the output shaft speed sensor value and the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) is 1,000 rpm or more. 2. The difference between the output shaft speed converted from the vehicle speed signal (meter) (CAN signal) and the output shaft speed converted from the clutch B speed is 1,000 rpm or more.	

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Select “RANGE”, “GEAR” or “ENGINE SPEED” in “Data Monitor”.
3. Run the vehicle and maintain the following status for 5 seconds or more.

RANGE : M

GEAR	: 3
ENGINE SPEED	: 2,000 rpm or more

4. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Run the vehicle and maintain the following status for 5 seconds or more.

Shift lever	: M range
Gear	: 3
Engine speed	: 2,000 rpm or more

3. Check self-diagnosis.

Is DTC P1722 detected?

YES >> Go to TM-187, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487838

1. CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK DTC WITH COMBINATION METER

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “METER/M&A”.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to MWI-100, "DTC Index".
NO >> GO TO 3.

3. CHECK DTC WITH ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “ABS”.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to BRC-133, "DTC No. Index (GT-R certified NISSAN dealer)".
NO >> GO TO 4.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

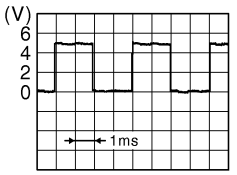
TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	105	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 6.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B47	106	B45	4	• M range, 1st gear • Engine speed: 2,000 rpm	 NNDIA0055ZZ

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 8.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

8. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (OUTPUT SHAFT SPEED SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	105	B49	1	Existed
	106		2	
	107		8	

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

9. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (OUTPUT SHAFT SPEED SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	105	Ground	Not existed
	106		
	107		

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".

NO >> Repair or replace damaged parts.

P1725 ENGINE SPEED SIGNAL

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487839

- TCM consists of the microcomputer and input/output connectors for signal and power supply.
- TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.
- TCM uses 3 different power supply routes to distribute power supply to each sensor.

Sensor power supply 1	Sensor power supply 2	Sensor power supply 3
• Output shaft speed sensor • Line pressure sensor	• Clutch A pressure sensor • Clutch A speed sensor • 6th-Neutral position sensor • 2nd-4th position sensor • Range sensor power supply 1 (Range sensor No. 0, 1, 3, 5)	• Clutch B pressure sensor • Clutch B speed sensor • 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • 3rd-5th position sensor • Range sensor power supply 2 (Range sensor No. 2, 4)

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487840

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P1725	Receiving of malfunctioning engine speed signal	A DTC is set if abnormal engine speed signal is received from ECM.	ECM

*: A DTC is displayed when E, F, G or H in the DTC detection conditions is detected.

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Select “ENGINE SPEED” in “Data Monitor”.

Is the engine speed value 8191?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Check self-diagnosis.

Is DTC P1725 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487841

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK DTC WITH ECM

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “ENGINE”.

Without CONSULT
1. Turn ignition switch ON.
2. Check self-diagnosis.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to EC-592, "DTC Index".
NO >> GO TO 3.

3.CHECK ENGINE SPEED

With CONSULT
1. Start the engine.
2. Select “ENGINE SPEED” in “Data Monitor”.

Is the engine speed value 8191?

YES >> Replace ECM.
NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P17C0 SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011790235

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487843

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P17C0	1st-Reverse position sensor voltage	A DTC is set if the 1st-Reverse position sensor 2 voltage value received by TCM is less than 300 mV.	• 1st-Reverse position sensor 2 • TCM • Harness or connector (Open or short to ground in the 1st-Reverse position sensor 2 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P17C0 detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487844

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 9.

9.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P17C1 SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011790236

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487846

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P17C1	1st-Reverse position sensor voltage	A DTC is set if the 1st-Reverse position sensor 2 voltage value received by TCM is more than 4,700 mV.	• 1st-Reverse position sensor 2 • TCM • Harness or connector (Open or short to power in the 1st-Reverse position sensor 2 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P17C1 detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487847

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 9.

9.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P17C5 SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487848

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487849

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P17C5	1st-Reverse position sensor compatibility	A DTC is set if the difference between the sleeve B1 position calculated from the 1st-Reverse position sensor 1 value and the sleeve B1 position calculated from the 1st-Reverse position sensor 2 is 6 mm or more.	• 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • Harness or connector (Open or short in the 1st-Reverse position sensor 1 circuit) (Open or short in the 1st-Reverse position sensor 2 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P17C5 detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487850

1.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK CLUTCH B SPEED SENSOR CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

9. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 11.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 14.

14. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 16.
NO >> Repair or replace damaged parts.

16. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2637 TORQUE FEED BACK SIGNAL A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487851

- TCM consists of the microcomputer and input/output connectors for signal and power supply.
- TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.
- TCM uses 3 different power supply routes to distribute power supply to each sensor.

Sensor power supply 1	Sensor power supply 2	Sensor power supply 3
• Output shaft speed sensor • Line pressure sensor	• Clutch A pressure sensor • Clutch A speed sensor • 6th-Neutral position sensor • 2nd-4th position sensor • Range sensor power supply 1 (Range sensor No. 0, 1, 3, 5)	• Clutch B pressure sensor • Clutch B speed sensor • 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • 3rd-5th position sensor • Range sensor power supply 2 (Range sensor No. 2, 4)

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487852

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2637	Torque management feedback signal "A"	A DTC is set if abnormal engine torque signal is received from ECM.	ECM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

Perform “DTC CONFIRMATION PROCEDURE” for the engine DTCs P0605, P0102, P0103, P010C, and P010D.

Without CONSULT

Perform “DTC CONFIRMATION PROCEDURE” for the engine DTCs P0605, P0102, P0103, P010C, and P010D.

Is the DTC detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.

2. Check self-diagnosis.

Is DTC P2637 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487853

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK DTC WITH ECM

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “ENGINE”.

Without CONSULT
1. Turn ignition switch ON.
2. Check self-diagnosis.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to EC-592, "DTC Index"
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2641 TORQUE FEED BACK SIGNAL B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487854

- TCM consists of the microcomputer and input/output connectors for signal and power supply.
- TCM controls the transmission by performing the following functions: power supply to the devices connected to the transmission, operation control for each solenoid valve and actuator, data receiving from each sensor, receiving of signals from the range sensors, paddle shifter, auto/manual range change switch and communication (CAN or hard wire) to C/U controlling other devices.
- TCM uses 3 different power supply routes to distribute power supply to each sensor.

Sensor power supply 1	Sensor power supply 2	Sensor power supply 3
• Output shaft speed sensor • Line pressure sensor	• Clutch A pressure sensor • Clutch A speed sensor • 6th-Neutral position sensor • 2nd-4th position sensor • Range sensor power supply 1 (Range sensor No. 0, 1, 3, 5)	• Clutch B pressure sensor • Clutch B speed sensor • 1st-Reverse position sensor 1 • 1st-Reverse position sensor 2 • 3rd-5th position sensor • Range sensor power supply 2 (Range sensor No. 2, 4)

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487855

DTC DETECTION LOGIC

CAUTION:

- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For reading out the IP characteristic data, refer to “CONSULT GT-R TCM CONFIGURATION MANUAL”.**
- **If no IP characteristic data can be extracted TCM and the transmission assembly must be replaced as a set.**

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2641	Torque management feedback signal "B"	A DTC is set if abnormal engine torque signal is received from ECM.	ECM

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

Perform “DTC CONFIRMATION PROCEDURE” for the engine DTCs P0605, P0102, P0103, P010C, and P010D.

Without CONSULT

Perform “DTC CONFIRMATION PROCEDURE” for the engine DTCs P0605, P0102, P0103, P010C, and P010D.

Is the DTC detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.

2. Check self-diagnosis.

Is DTC P2641 detected?

YES >> Go to TM-207, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487856

1.CHECK CAN COMMUNICATION CIRCUIT

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK DTC WITH ECM

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “ENGINE”.

Without CONSULT
1. Turn ignition switch ON.
2. Check self-diagnosis.

Is DTC detected?

YES >> Check DTC Detected Item. Refer to EC-592, "DTC Index".
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2715 PRESSURE CONTROL SOLENOID D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487857

This solenoid valve builds up the source pressure for the gear operation actuators for odd number gears and reverse gear and for the clutch B solenoid valve based on the signals from TCM. The solenoid valves adjust the source pressure to drive the gears and clutches.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487858

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2715	Pressure control solenoid "D" stuck on	• A DTC is set if the clutch B pressure sensor value is less than 0.4 MPa (4.08 kg/cm^2, 58 psi) when the axis B feed pressure target value is 0.4 MPa (4.08 kg/cm^2, 58 psi) or more. • A DTC is set if the clutch B pressure sensor value is more than 0.2 MPa (2.04 kg/cm^2, 29 psi) when the axis B feed pressure target value is 0.1 MPa (1.02 kg/cm^2, 14.5 psi) or less.	• Axis B feed pressure solenoid valve • Clutch B solenoid valve • Clutch B pressure sensor • Clutch B oil passage • Harness or connector (Open or short in the axis B feed pressure solenoid valve circuit) (Open or short in the clutch B solenoid valve circuit) (Open or short in the clutch B pressure sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the P position.
3. Start the engine.
4. With the shift lever in the P position, and run at idle for 1 minute or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the P position.
3. Start the engine.
4. With the shift lever in the P position, and run at idle for 1 minute or more.
5. Check self-diagnosis.

Is DTC P2715 detected?

YES >> Go to TM-208, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487859

1.CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK CLUTCH B SOLENOID VALVE CIRCUIT

Refer to TM-118, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK CLUTCH B PRESSURE SENSOR CIRCUIT

Refer to TM-141, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-144, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2716 PRESSURE CONTROL SOLENOID D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487860

- The axis B feed pressure solenoid valve is installed on the actuator control module and builds up the source pressure for the gear operation actuators for odd number gears and reverse gear and for the clutch B pressure solenoid valve based on the signals from TCM. The solenoid valves adjust the source pressure to drive the gears and clutches.
- The axis B feed pressure solenoid valve is a N/L type (normal low) in which no control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487861

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2716	Pressure control solenoid "D" electrical	A DTC is set if the axis B feed pressure solenoid valve monitor current value is less than 0.2 A when the axis B feed pressure solenoid valve target current value is more than 0.38 A.	• Axis B feed pressure solenoid valve • Harness or connector (Open or short in the axis B feed pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position, and run at idle for 5 seconds or more.
5. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn the ignition switch ON.
2. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
3. Start the engine.
4. With the shift lever in the N position, and run at idle for 5 seconds or more.
5. Check self-diagnosis.

Is DTC P2716 detected?

YES >> Go to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487862

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace damaged parts.

2.CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B46	59	64	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	59	Ground	Not existed
	64		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK AXIS B FEED PRESSURE SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check axis B feed pressure solenoid valve. Refer to TM-212, "Component Inspection (Axis B Feed Pressure Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (AXIS B FEED PRESSURE SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	59	B49	21	Existed
	64		22	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (AXIS B FEED PRESSURE SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	59	Ground	Not existed
	64		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Axis B Feed Pressure Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487863

1.CHECK AXIS B FEED PRESSURE SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B49	21	22	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK AXIS B FEED PRESSURE SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B49	21	Ground	Not existed
	22		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P2725 PRESSURE CONTROL SOLENOID E

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487864

- The lubricating flow solenoid valve is installed on the front control module and controls the lubricating flow of the clutches A and B with the signals from TCM. This subsequently controls the lubricating flow of the gear train.
- The lubricating flow solenoid valve is a N/H type (normal high) in which control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487865

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2725	Pressure control solenoid "E" electrical	A DTC is set if the lubricating flow solenoid valve monitor current value is less than 0.2 A when the lubricating flow solenoid valve target current value is more than 0.38 A.	• Lubricating flow solenoid valve • Harness or connector (Open or short in the lubricating flow solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine.
2. Shift the shift lever to the P position and run at idle for 5 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Start the engine.
2. Shift the shift lever to the P position and run at idle for 5 seconds or more.
3. Check self-diagnosis.

Is DTC P2725 detected?

YES >> Go to TM-213, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487866

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK LUBRICATING FLOW SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B47	115	120	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK LUBRICATING FLOW SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	115	Ground	Not existed
	120		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK LUBRICATING FLOW SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check lubricating flow solenoid valve. Refer to TM-215, "Component Inspection (Lubricating Flow Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LUBRICATING FLOW SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	115	B50	55	Existed
	120		54	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LUBRICATING FLOW SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	115	Ground	Not existed
	120		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Lubricating Flow Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487867

1.CHECK LUBRICATING FLOW SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	54	55	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK LUBRICATING FLOW SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	54	Ground	Not existed
	55		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P2734 PRESSURE CONTROL SOLENOID F

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487868

- The line pressure solenoid valve is installed on the front control module and controls the line pressure based on the signal from TCM. This subsequently controls the lubricating flow.
- The line pressure solenoid valve is a N/H type (normal high) in which control oil pressure is built up when no current flows through the coil.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487869

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible causes
P2734	Pressure control solenoid "F" electrical	A DTC is set if the line pressure solenoid valve monitor current value is less than 0.2 A when the line pressure solenoid valve target current value is more than 0.38 A.	• Line pressure solenoid valve • Harness or connector (Open or short in the line pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1. PREPARATION BEFORE OPERATION (PART 1)

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Without CONSULT
1. Turn the ignition switch ON.
2. Check “TRANS OIL TEMP” on multi-function display.

Is the oil temperature 30°C (86°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
2. Start the engine.
3. With the shift lever in the N position, and run at idle for 5 seconds or more.
4. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the N position.
   CAUTION:
   No shift position indicator in the combination meter blinks.
2. Start the engine.
3. With the shift lever in the N position, and run at idle for 5 seconds or more.
4. Check self-diagnosis.

Is DTC P2734 detected?

YES >> Go to TM-217, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487870

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT (PART 1)

1. Disconnect TCM harness connectors.
2. Check resistance between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B47	113	118	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3. CHECK LINE PRESSURE SOLENOID VALVE CIRCUIT (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	113	Ground	Not existed
	118		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4. CHECK LINE PRESSURE SOLENOID VALVE

1. Disconnect transmission unit harness connectors.
2. Check line pressure solenoid valve. Refer to TM-218, "Component Inspection (Line Pressure Solenoid Valve) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SOLENOID VALVE) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B47	113	B50	49	Existed
	118		48	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (LINE PRESSURE SOLENOID VALVE) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B47	113	Ground	Not existed
	118		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Line Pressure Solenoid Valve) (GT-R certified NISSAN dealer)

INFOID:0000000011487871

1. CHECK LINE PRESSURE SOLENOID VALVE (PART 1)

Check the resistance between transmission unit harness connector terminals.

Transmission unit harness connector			Condition	Resistance (Approx.)
Connector	Terminal			
B50	48	49	Transmission oil temperature: 20°C (68°F)	3.8 – 4.4 Ω
			Transmission oil temperature: 50°C (122°F)	4.3 – 5.0 Ω
			Transmission oil temperature: 80°C (176°F)	4.7 – 5.4 Ω

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK LINE PRESSURE SOLENOID VALVE (PART 2)

Check continuity between transmission unit harness connector terminal and ground.

Transmission unit harness connector		Ground	Continuity
Connector	Terminal		
B50	48	Ground	Not existed
	49		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P2765 INPUT SPEED SENSOR B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487872

- The clutch B speed sensor detects the 1st counter gear speed. The clutch B speed sensor converts the 1st counter gear speed into pulse signal and transmits the signal to TCM.
- TCM calculates the clutch B (a clutch for odd number gears and reverse) speed based on the signal from the clutch B speed sensor.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487873

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2765	Input/turbine speed sensor "B" circuit	A DTC is set if the status 1 or 2 below is detected with the sleeve B1 or B2 engaged in an odd number gear. 1. The difference between the actual output shaft speed and the output shaft speed converted from the clutch B speed is 1,000 rpm or more. 2. The difference between the vehicle speed signal (meter) (CAN signal) and the output shaft speed converted from the clutch B speed is 1,000 rpm or more.	• Clutch B speed sensor • Harness or connector (Open or short in the clutch B speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

Be careful of the driving speed.

1. PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT

1. Start the engine.
2. Select “RANGE”, “GEAR” and “ENGINE SPEED” in “Data Monitor”.
3. Run the vehicle and maintain the following conditions for 5 seconds or more.

RANGE	: M
GEAR	: 3
ENGINE SPEED	: 2,000 rpm or more

4. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT

1. Start the engine.
2. Run the vehicle and maintain the following conditions for 5 seconds or more.

Shift lever	: M range
Gear	: 3
Engine speed	: 2,000 rpm or more

3. Check self-diagnosis.

Is DTC P2765 detected?

YES >> Go to TM-220, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487874

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

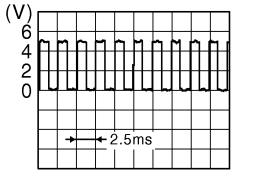
TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	78	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Go to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

3.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	82	B45	4	• M range, 1st gear • Engine speed: 2,000 rpm	 NNDIA0062ZZ

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

5.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B SPEED SENSOR) (PART 1)

Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	78	B49	36	Existed
	82		33	
	86		26	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (CLUTCH B SPEED SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	78	Ground	Not existed
	82		
	86		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2776 UPSHIFT SWITCH

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487875

The paddle shifter (shift-up switch) is installed on the steering column and commands TCM the transition to M range and upshift according to a driver's request.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487876

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2776	Upshift switch circuit low	A DTC is set if TCM detects the paddle shifter (shift-up switch) ON signal for a certain period of time.	• Paddle shifter (shift-up switch) • Harness or connector [Short in the paddle shifter (shift-up switch) circuit]

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and wait for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P2776 detected?

YES >> Go to TM-222, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487877

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31, M11 and M55. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK PADDLE SHIFTER (SHIFT-UP SWITCH)

1. Disconnect paddle shifter (shift-up switch) harness connector.
2. Check paddle shifter (shift-up switch). Refer to TM-223, "Component Inspection [Paddle Shifter (Shift-up Switch)] (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK HARNESS BETWEEN TCM AND PADDLE SHIFTER (SHIFT-UP SWITCH)

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	39	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN PADDLE SHIFTER (SHIFT-UP SWITCH) AND GROUND

Check continuity between paddle shifter (shift-up switch) vehicle side harness connector terminal and ground.

Paddle shifter (shift-up switch) vehicle side harness connector		Ground	Continuity
Connector	Terminal		
M39	1	Ground	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection [Paddle Shifter (Shift-up Switch)] (GT-R certified NISSAN dealer)

INFOID:0000000011487878

1. CHECK PADDLE SHIFTER (SHIFT-UP SWITCH)

Check continuity between paddle shifter (shift-up switch) connector terminals.

Paddle shifter (shift-up switch) connector			Condition	Continuity
Connector	Terminal			
M39	1	3	The paddle shifter (shift-up switch) is pulled	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P2780 DOWNSHIFT SWITCH

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487879

The paddle shifter (shift-down switch) is installed on the steering column and commands TCM the transition to M range and downshift according to a driver's request.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487880

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2780	Downshift switch circuit low	A DTC is set if TCM detects the paddle shifter (shift-down switch) ON signal for a certain period.	• Paddle shifter (shift-down switch) • Harness or connector [Short in the paddle shifter (shift-down switch) circuit]

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Start the engine and wait for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P2780 detected?

YES >> Go to TM-224, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487881

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31, M11 and M55. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK PADDLE SHIFTER (SHIFT-DOWN SWITCH)

1. Disconnect paddle shifter (shift-down switch) harness connector.
2. Check paddle shifter (shift-down switch). Refer to TM-225, "Component Inspection [Paddle Shifter (Shift-down Switch)] (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK HARNESS BETWEEN TCM AND PADDLE SHIFTER (SHIFT-DOWN SWITCH)

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	42	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK HARNESS BETWEEN PADDLE SHIFTER (SHIFT-DOWN SWITCH) AND GROUND

Check continuity between paddle shifter (shift-down switch) vehicle side harness connector terminal and ground.

Paddle shifter (shift-down switch) vehicle side harness connector		Ground	Continuity
Connector	Terminal		
M32	1	Ground	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection [Paddle Shifter (Shift-down Switch)] (GT-R certified NISSAN dealer)

INFOID:0000000011487882

1. CHECK PADDLE SHIFTER (SHIFT-DOWN SWITCH)

Check continuity between paddle shifter (shift-down switch) connector terminals.

Paddle shifter (shift-down switch) connector			Condition	Continuity
Connector	Terminal			
M32	1	3	The paddle shifter (shift-down switch) is pulled	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace damaged parts.

P2832 SHIFT FORK A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487883

- The 6th-Neutral position sensor is installed on the actuator control valve and detects the sleeve A1 position.
- The 6th-Neutral position sensor converts the sleeve A1 position into output voltage and transmits the signal to TCM.
- The sleeve A1 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis A feed pressure solenoid valve. The 6th gear is selected or deselected depending on the operation of the sleeve A1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487884

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P2832	Shiftfork "A" position circuit range/performance	A DTC is set if the status of the sleeve A1 position of less than 1.8mm (0.071in) is detected for a certain period of time when the sleeve A1 position target is on the 6th gear side.	• 6th-Neutral position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Axis A feed pressure solenoid valve • Harness or connector (Open or short in the 6th-Neutral position sensor circuit) (Open or short in the shift solenoid valve 1circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis A feed pressure solenoid valve circuit)
		A DTC is set if the sleeve A1 and A2 positions are not in 6th gear during driving in the 6th gear.	• Shift solenoid valve 1 • Sleeve A1 related part • Harness or connector (Open or short in the shift solenoid valve 1 circuit)
		A DTC is set if the sleeve A1 position is 7.1 mm (0.28 in) or less and 1.7 mm (0.067 in) or more when the sleeve A1 position target is on the 6th gear side.	• Shift solenoid valve 1 • Shift solenoid valve 2 • Axis A feed pressure solenoid valve • Sleeve A1 related part • Harness or connector (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the axis A feed pressure solenoid valve circuit)
		A DTC is set if the status 1 or 2 below is detected with the sleeve A1 engaged in the 6th gear. 1. The difference between the clutch A speed calculated from the output shaft speed sensor value and clutch A speed sensor value is 1,000 rpm or more. 2. The difference between the clutch A speed calculated from the vehicle speed signal (meter) (CAN signal) and clutch A speed sensor value is 1,000 rpm or more.	• Clutch A speed sensor • Sleeve A1 related part • Harness or connector (Open or short in the clutch A speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:
- **If CONSULT is not available, "TM-228, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Without CONSULT
1. Turn the ignition switch ON.
2. Check "TRANS OIL TEMP" on multi-function display.

Is the oil temperature −20°C (−4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "6-N learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select "SLEEVE A1 POSI" in "Data Monitor".

Is the numeral value of the "SLEEVE A1 POSI" in the range between −1.7 and 1.8 mm (−0.067 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 6.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to N position.
2. Start the engine.
3. Select "GEAR POSITION TEST" in "Work support".
4. Select "GEAR6".

CAUTION:
Never select "GEAR2", "GEAR4" or "GEAR N".

Does the sleeve A1 operate?

YES >> GO TO 6.
NO >> Go to TM-228, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. PERFORM DTC CONFIRMATION PROCEDURE (PART 1)

With CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check self-diagnosis.

Is DTC P0797 or DTC P0798 detected?

YES-1 (DTC P0797 is detected).>>Go to TM-123, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P0798 is detected).>>Go to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 7.

7.PERFORM DTC CONFIRMATION PROCEDURE (PART 2)

With CONSULT
1. Select “RANGE”, “GEAR” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 5
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 5
VEHICLE SPEED	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2832 detected?

YES >> Go to TM-228, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 8.

8.PERFORM DTC CONFIRMATION PROCEDURE (PART 3)

With CONSULT
1. Select “RANGE”, “GEAR”, “ENGINE SPEED” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 6
ENGINE SPEED	: 1,000 rpm or more
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 6
Engine speed	: 1,000 rpm or more
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2832 detected?

YES >> Go to TM-228, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487885

1.CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK CLUTCH A SPEED SENSOR CIRCUIT

Refer to TM-98, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	74	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

9.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	70	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 11.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	66	B49	25	Existed
	70		24	
	74		23	

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	66	Ground	Not existed
	70		
	74		

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2833 SHIFT FORK A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487886

- The 6th-Neutral position sensor is installed on the actuator control valve and detects the sleeve A1 position.
- The 6th-Neutral position sensor converts the sleeve A1 position into output voltage and transmits the signal to TCM.
- The sleeve A1 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis A feed pressure solenoid valve. The 6th gear is selected or deselected depending on the operation of the sleeve A1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487887

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P2833	Shift fork "A" position circuit low	A DTC is set if the 6th-Neutral position sensor voltage value received by TCM is less than 300 mV.	• 6th-Neutral position sensor • TCM • Harness or connector (Open or short to ground in the 6th-Neutral position sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2833 detected?

YES >> Go to TM-231, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487888

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	74	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	70	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	66	B49	25	Existed
	70		24	
	74		23	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	66	Ground	Not existed
	70		
	74		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2834 SHIFT FORK A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487889

- The 6th-Neutral position sensor is installed on the actuator control valve and detects the sleeve A1 position.
- The 6th-Neutral position sensor converts the sleeve A1 position into output voltage and transmits the signal to TCM.
- The sleeve A1 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis A feed pressure solenoid valve. The 6th gear is selected or deselected depending on the operation of the sleeve A1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487890

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P2834	Shift fork "A" position circuit high	A DTC is set if the 6th-Neutral position sensor voltage value received by TCM is more than 4,700 mV.	• 6th-Neutral position sensor • TCM • Harness or connector (Open or short to power in the 6th-Neutral position sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2834 detected?

YES >> Go to TM-234, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487891

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	74	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	70	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	66	B49	25	Existed
	70		24	
	74		23	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	66	Ground	Not existed
	70		
	74		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2837 SHIFT FORK B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487892

- The 2nd-4th position sensor is installed on the actuator control valve and detects the sleeve A2 position.
- The 2nd-4th position sensor converts the sleeve A2 position into output voltage and transmits the signal to TCM.
- The sleeve A2 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis A feed pressure solenoid valve. The 2nd gear and 4th gear are selected or deselected depending on the operation of the sleeve A2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487893

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2837	Shift fork "B" position circuit range/performance	A DTC is set if the status of the sleeve A2 position of less than 1.8 mm (0.071in) is detected for a certain period of time when the sleeve A2 position target is on the 2nd gear side.	• 2nd-4th position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Harness or connector (Open or short in the 2nd-4th position sensor circuit) (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit)
		A DTC is set if the status of the sleeve A2 position of more than –1.8 mm (–0.071 in) is detected for a certain period of time when the sleeve A2 position target is on the 4th gear side.	
		A DTC is set if the sleeve A1 and A2 positions are not in 2nd gear during driving in the 2nd gear.	• Shift solenoid valve 1 • Shift solenoid valve 2 • Sleeve A2 related part • Harness or connector (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit)
		A DTC is set if the sleeve A1 and A2 positions are not in 4th gear during driving in the 4th gear.	
		A DTC is set if the sleeve A2 position is 7.0 mm (0.276 in) or less and 1.7 mm (0.067 in) or more when the sleeve A2 position target is on the 2nd gear side.	• Shift solenoid valve 1 • Shift solenoid valve 2 • Axis A feed pressure solenoid valve • Sleeve A2 related part • Harness or connector (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the axis A feed pressure solenoid valve circuit)
		A DTC is set if the sleeve A2 position is –1.7 mm (–0.067 in) or less and –7.1 mm (–0.28 in) or more when the sleeve A2 position target is on the 4th gear side.	
		A DTC is set if the following statuses 1 and 2 are detected. 1. The difference between the clutch A speed calculated from the output shaft speed sensor value and clutch A speed sensor value is 1,000 rpm or more. 2. The difference between the clutch A speed calculated from the vehicle speed signal (meter) (CAN signal) and clutch A speed sensor value is 1,000 rpm or more.	• Clutch A speed sensor • Sleeve A2 related part • Harness or connector (Open or short in the clutch A speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature −20°C (−4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "2-4 learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select "SLEEVE A2 POSI" in "Data Monitor".

Is the numeral value of the "SLEEVE A2 POSI" in the range between −1.8 and 1.8 mm (−0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select "GEAR POSITION TEST" in "Work support".
4. Select "GEAR2".

CAUTION:
Never select "GEAR6" or "GEAR N".

Does the sleeve A2 operate?

YES >> GO TO 6.
NO >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select "GEAR POSITION TEST" in "Work support".
2. Select "GEAR4".

CAUTION:
Never select "GEAR6" or "GEAR N".

Does the sleeve A2 operate?

YES >> GO TO 8.
NO >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check self-diagnosis.

Is DTC P0797 or DTC P0798 detected?

YES-1 (DTC P0797 is detected)>>Go to TM-123, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P0798 is detected)>>Go to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 8.

8. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 second.

RANGE	: M
GEAR	: 1
ENGINE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 second.

Shift lever	: M range
Gear	: 1
Engine speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2837 detected?

YES >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 9.

9. PERFORM DTC CONFIRMATION PROCEDURE — DTC DETECTION CONDITION H AND I

With CONSULT
1. Select “RANGE”, “GEAR”, “ENGINE SPEED” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 2
ENGINE SPEED	: 3,000 rpm or more
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 2
Engine speed	: 3,000 rpm or more
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2837 detected?

YES >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 10.

10. PERFORM DTC CONFIRMATION PROCEDURE — DTC DETECTION CONDITION D AND G

With CONSULT

1. Select “RANGE”, “GEAR”, and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 3
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 3
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2837 detected?

YES >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 11.

11. PERFORM DTC CONFIRMATION PROCEDURE — DTC DETECTION CONDITION J

With CONSULT
1. Select “RANGE”, “GEAR” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 4
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 4
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2837 detected?

YES >> Go to TM-240, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487894

1. CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK CLUTCH A SPEED SENSOR CIRCUIT

Refer to TM-98, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	81	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

9. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	85	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 11.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	81	B49	16	Existed
	83		18	
	85		17	

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	81	Ground	Not existed
	83		
	85		

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2838 SHIFT FORK B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487895

- The 2nd-4th position sensor is installed on the actuator control valve and detects the sleeve A2 position.
- The 2nd-4th position sensor converts the sleeve A2 position into output voltage and transmits the signal to TCM.
- The sleeve A2 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis A feed pressure solenoid valve. The 2nd gear and 4th gear are selected or deselected depending on the operation of the sleeve A2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487896

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2838	Shift fork "B" position circuit low	A DTC is set if the 2nd-4th position sensor voltage value received by TCM is less than 300 mV.	• 2nd-4th position sensor • TCM • Harness or connector (Open or short to ground in the 2nd-4th position sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-243, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1.PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2838 detected?

YES >> Go to TM-243, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487897

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to "Ground Inspection" in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	81	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	85	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	81	B49	16	Existed
	83		18	
	85		17	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	81	Ground	Not existed
	83		
	85		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2839 SHIFT FORK B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487898

- The 2nd-4th position sensor is installed on the actuator control valve and detects the sleeve A2 position.
- The 2nd-4th position sensor converts the sleeve A2 position into output voltage and transmits the signal to TCM.
- The sleeve A2 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis A feed pressure solenoid valve. The 2nd gear and 4th gear are selected or deselected depending on the operation of the sleeve A2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487899

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2839	Shift fork "B" position circuit high	A DTC is set if the 2nd-4th position sensor voltage value received by TCM is more than 4,700 mV.	• 2nd-4th position sensor • TCM • Harness or connector (Open or short to power in the 2nd-4th position sensor circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2839 detected?

YES >> Go to TM-246, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487900

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	81	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	85	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	81	B49	16	Existed
	83		18	
	85		17	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	81	Ground	Not existed
	83		
	85		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P283C SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487901

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487902

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P283C	Shift fork "C" position circuit range/performance	A DTC is set if the status of the sleeve B1 position of less than 1.8 mm (0.071in) is detected for a certain period of time when the sleeve B1 position target is on the 1st gear side.	• 1st-Reverse position sensor 1 • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Axis B feed pressure solenoid valve • Harness or connector (Open or short in the 1st-Reverse position sensor 1 circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis B feed pressure solenoid valve circuit)
		A DTC is set if the status of the sleeve B1 position of more than –1.8 mm (–0.071in) is detected for a certain period of time when the sleeve B1 position target is on the reverse gear side.	
		A DTC is set if the sleeve B1 and B2 positions are not in 1st gear during driving in the 1st gear.	• Shift solenoid valve 3 • Shift solenoid valve 4 • Sleeve B1 related part • Harness or connector (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit)
		A DTC is set if the sleeve B1 and B2 positions are not in reverse during driving in the reverse gear.	
		A DTC is set if the sleeve B1 position is 7.1 mm (0.28 in) or less and 1.7 mm (0.067 in) or more when the sleeve B1 position target is on the 1st gear side.	• Shift solenoid valve 3 • Shift solenoid valve 4 • Axis B feed pressure solenoid valve • Sleeve B1 related part • Harness or connector (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit)
		A DTC is set if the sleeve B1 position is –1.7 mm (–0.067 in) or less and –7.1 mm (–0.28 in) or more when the sleeve B1 position target is on the reverse gear side.	
		A DTC is set if the following statuses 1 and 2 are detected. 1. The difference between the clutch B speed calculated from the output shaft speed sensor value and clutch B speed sensor value is 1,000 rpm or more. 2. The difference between the clutch B speed calculated from the vehicle speed signal (meter) (CAN signal) and clutch B speed sensor value is 1,000 rpm or more.	• Clutch B speed sensor • Sleeve B1 related part • Harness or connector (Open or short in the clutch B speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select “FLUID TEMP” in “Data Monitor”.

Is the oil temperature −20°C (−4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select “READ CLUTCH GEAR LEARNING DATA” in “Work support”.

Is the “1-R learning experienced” YES?

YES >> GO TO 4.
NO >> Perform “CLUTCH GEAR LEARNING”.

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in “Data Monitor”.

Is the numeral value of the “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in the range between −1.8 and 1.8 mm (−0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR R”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 6.
NO >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR1”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 8.
NO >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check self-diagnosis.

Is DTC P2715 or DTC P2716 detected?

YES-1 (DTC P2715 is detected)>>Go to TM-208, "Diagnosis Procedure (GT-R certified NISSAN dealer)" .
YES-2 (DTC P2716 is detected)>>Go to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 10.

8.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the R position and wait for 10 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the R position and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P283C detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 9.

9.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the A position and wait for 10 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the A position and wait for 10 seconds or more.
2. Check self-diagnosis.

Is DTC P0731 detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 10.

10.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ENGINE SPEED” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 1
ENGINE SPEED	: 4,500 rpm or more
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 1
Engine speed	: 4,500 rpm or more
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P283C detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487903

1.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK CLUTCH B SPEED SENSOR CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

9. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 11.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 14.

14. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 16.
NO >> Repair or replace damaged parts.

16. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P283D SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487904

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487905

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P283D	Shift fork "C" position circuit low	A DTC is set if the 1st-Reverse position sensor 1 voltage value received by TCM is less than 300 mV.	• 1st-Reverse position sensor 1 • TCM • Harness or connector (Open or short to ground in the 1st-Reverse position sensor 1 circuit)

DTC CONFIRMATION PROCEDURE

1.PREPARATION BEFORE OPERATION

If another “DTC CONFIRMATION PROCEDURE” is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P283D detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487906

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 9.

9.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P283E SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487907

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487908

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P283E	Shift fork "C" position circuit high	A DTC is set if the 1st-Reverse position sensor 1 voltage value received by TCM is more than 4,700 mV.	• 1st-Reverse position sensor 1 • TCM • Harness or connector (Open or short to power in the 1st-Reverse position sensor 1 circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn the ignition switch ON.
2. Check "TRANS OIL TEMP" on multi-function display.

Is DTC P283E detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487909

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to "Ground Inspection" in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-154, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 9.

9.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2841 SHIFT FORK D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487910

- The 3rd-5th position sensor is installed on the actuator control valve and detects the sleeve B2 position.
- The 3rd-5th position sensor converts the sleeve B2 position into output voltage and transmits the signal to TCM.
- The sleeve B2 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis B feed pressure solenoid valve. The 3rd gear and 5th gear are selected or deselected depending on the operation of the sleeve B2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487911

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2841	Shift fork "D" position circuit range/performance	A DTC is set if the status of the sleeve B2 position of less than 2.0 mm (0.079in) is detected for a certain period of time when the sleeve B2 position target is on the 3rd gear side.	• 3rd-5th position sensor • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Axis B feed pressure solenoid valve • Harness or connector (Open or short in the 3rd-5th position sensor circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis B feed pressure solenoid valve circuit)
		A DTC is set if the status of the sleeve B2 position of more than –2.0 mm (–0.079 in) is detected for a certain period of time when the sleeve B2 position target is on the 5th gear side.	
		A DTC is set if the sleeve B2 position is not in 3rd gear during driving in the 3rd gear.	• Shift solenoid valve 3 • Shift solenoid valve 4 • Sleeve B2 related part • Harness or connector (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit)
		A DTC is set if the sleeve B2 position is not in 5th gear during driving in the 5th gear.	
		A DTC is set if the sleeve B2 position is 7.2 mm (0.283 in) or less and 1.9 mm (0.075 in) or more when the sleeve B2 position target is on the 3rd gear side.	• Shift solenoid valve 3 • Shift solenoid valve 4 • Axis B feed pressure solenoid valve • Sleeve B2 related part • Harness or connector (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the axis B feed pressure solenoid valve circuit)
		A DTC is set if the sleeve B2 position is –1.9 mm (–0.075 in) or less and –7.5 mm (–0.295 in) or more when the sleeve B2 position target is on the 5th gear side.	
		A DTC is set if the following statuses 1 and 2 are detected. 1. The difference between the clutch B speed calculated from the output shaft speed sensor value and clutch B speed sensor value is 1,000 rpm or more. 2. The difference between the clutch B speed calculated from the vehicle speed signal (meter) (CAN signal) and clutch B speed sensor value is 1,000 rpm or more.	• Clutch B speed sensor • Sleeve B2 related part • Harness or connector (Open or short in the clutch B speed sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Without CONSULT
1. Turn the ignition switch ON.
2. Check "TRANS OIL TEMP" on multi-function display.

Is the oil temperature −20°C (−4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "3-5 learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select "SLEEVE B2 POSI" in "Data Monitor".

Is the numerical value of the "SLEEVE B2 POSI" in the range between −2.0 and 2.0 mm (−0.079 and 0.079 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select "GEAR POSITION TEST" in "Work support".
4. Select "GEAR3".

CAUTION:
Never select "GEAR1", "GEAR R" or "GEAR N".

Does the sleeve B2 operate?

YES >> GO TO 6.
NO >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select "GEAR POSITION TEST" in "Work support".
2. Select "GEAR5".

CAUTION:
Never select "GEAR1", "GEAR R" or "GEAR N".

Does the sleeve B2 operate?

YES >> GO TO 9.
NO >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the P position and run at idle for 1 minute or more.
2. Check self-diagnosis.

Is DTC P2715 or DTC P2716 detected?

YES-1 (DTC P2715 is detected)>>Go to TM-208, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P2716 is detected)>>Go to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 8.

8. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, or “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 2
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 2
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2841 detected?

YES >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 9.

9. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR”, “ENGINE SPEED” and “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 3
ENGINE SPEED	: 2,000 rpm or more
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 3
Engine speed	: 2,000 rpm or more
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2841 detected?

YES >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 10.

10. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR” or “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 4
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 4
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2841 detected?

YES >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 11.

11. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE”, “GEAR” or “VEHICLE SPEED” in “Data Monitor”.
2. Run the vehicle and maintain the following conditions for 10 seconds or more.

RANGE	: M
GEAR	: 5
VEHICLE SPEED	: 40 km/h (25 MPH) or more

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle and maintain the following conditions for 10 seconds or more.

Shift lever	: M range
Gear	: 5
Vehicle speed	: 40 km/h (25 MPH) or more

2. Check self-diagnosis.

Is DTC P2841 detected?

YES >> Go to TM-267, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487912

1. CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK CLUTCH B SPEED SENSOR CIRCUIT

Refer to TM-220, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	88	B46	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

9. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	92	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 11.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	84	B49	11	Existed
	88		9	
	92		10	

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	84	Ground	Not existed
	88		
	92		

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2842 SHIFT FORK D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487913

- The 3rd-5th position sensor is installed on the actuator control valve and detects the sleeve B2 position.
- The 3rd-5th position sensor converts the sleeve B2 position into output voltage and transmits the signal to TCM.
- The sleeve B2 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis B feed pressure solenoid valve. The 3rd gear and 5th gear are selected or deselected depending on the operation of the sleeve B2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487914

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2842	Shift fork "D" posiion circuit low	A DTC is set if the 3rd-5th position sensor voltage value received by TCM is less than 300 mV.	• 3rd-5th position sensor • TCM • Harness or connector (Open or short to ground in the 3rd-5th position sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-270, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2842 detected?

YES >> Go to TM-270, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487915

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to "Ground Inspection" in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	88	B46	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	92	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	84	B49	11	Existed
	88		9	
	92		10	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	84	Ground	Not existed
	88		
	92		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2843 SHIFT FORK D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487916

- The 3rd-5th position sensor is installed on the actuator control valve and detects the sleeve B2 position.
- The 3rd-5th position sensor converts the sleeve B2 position into output voltage and transmits the signal to TCM.
- The sleeve B2 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis B feed pressure solenoid valve. The 3rd gear and 5th gear are selected or deselected depending on the operation of the sleeve B2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487917

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2843	Shift fork "D" position circuit high	A DTC is set if the 3rd-5th position sensor voltage value received by TCM is more than 4,700 mV.	• 3rd-5th position sensor • TCM • Harness or connector (Open or short to power in the 3rd-5th position sensor circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-273, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check "Self Diagnostic Result" of "TRANSMISSION".

Without CONSULT
1. Turn ignition switch ON, and wait for 5 seconds or more.
2. Check self-diagnosis.

Is DTC P2843 detected?

YES >> Go to TM-273, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487918

1. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to "Ground Inspection" in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	88	B46	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

4.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	92	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

6.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	84	B49	11	Existed
	88		9	
	92		10	

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	84	Ground	Not existed
	88		
	92		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2845 SHIFT FORK A POSITION SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487919

- The 6th-Neutral position sensor is installed on the actuator control valve and detects the sleeve A1 position.
- The 6th-Neutral position sensor converts the sleeve A1 position into output voltage and transmits the signal to TCM.
- The sleeve A1 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis A feed pressure solenoid valve. The 6th gear is selected or deselected depending on the operation of the sleeve A1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487920

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P2845	Shift fork "A" position sensor incorrect neutral position indicated	A DTC is set if the status of the sleeve A1 position of more than 1.7 mm (0.067 in) or less than –1.6 mm (–0.063 in) is detected for a certain period of time when the sleeve A1 position target is neutral with the sleeve A2 engaged in the 2nd or 4th gear.	• 6th-Neutral position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Harness or connector (Open or short in the 6th-Neutral position sensor circuit) (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-277, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Without CONSULT
1. Turn the ignition switch ON.
2. Check "TRANS OIL TEMP" on multi-function display.

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "6-N learning experienced" YES?

YES >> GO TO 4.

NO >> Perform “CLUTCH GEAR LEARNING”.

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE A1 POSI” in “Data Monitor”.
Is the numeral value of the “SLEEVE A1 POSI” in the range between –1.7 and 1.8 mm (–0.067 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 6.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR6”.

CAUTION:
Never select “GEAR2”, “GEAR4” or “GEAR N”.

Does the sleeve A1 operate?

YES >> GO TO 6.
NO >> Go to TM-277, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Select “RANGE” and “GEAR” in “Data Monitor”.
2. With the vehicle stationary, maintain the following conditions for 2 seconds or more.

RANGE	: M
GEAR	: 1

3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. With the vehicle stationary, maintain the following conditions for 2 seconds or more.

Shift lever	: M range
Gear	: 1

2. Check self-diagnosis.

Is DTC P2845 detected?

YES >> Go to TM-277, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487921

1. CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	74	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

6. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

7. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	70	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 9.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

9. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.

3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	66	B49	25	Existed
	70		24	
	74		23	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	66	Ground	Not existed
	70		
	74		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2846 SHIFT FORK B POSITION SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487922

- The 2nd-4th position sensor is installed on the actuator control valve and detects the sleeve A2 position.
- The 2nd-4th position sensor converts the sleeve A2 position into output voltage and transmits the signal to TCM.
- The sleeve A2 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis A feed pressure solenoid valve. The 2nd gear and 4th gear are selected or deselected depending on the operation of the sleeve A2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487923

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2846	Shift fork "B" position sensor incorrect neutral position indicated	A DTC is set if the status of the sleeve A2 position of more than 1.7 mm (0.067 in) or less than –1.7 mm (–0.067 in) is detected for a certain period of time when the sleeve A2 position target is neutral with the sleeve A1 engaged in the 6th gear.	• 2nd-4th position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Harness or connector (Open or short in the 2nd-4th position sensor circuit) (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-281, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "2-4 learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE A2 POSI” in “Data Monitor”.

Is the numeral value of the “SLEEVE A2 POSI” in the range between –1.8 and 1.8 mm (–0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR2”.

CAUTION:
Never select “GEAR6” or “GEAR N”.

Does the sleeve A2 operate?

YES >> GO TO 6.
NO >> Go to TM-281, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR4”.

CAUTION:
Never select “GEAR6” or “GEAR N”.

Does the sleeve A2 operate?

YES >> GO TO 7.
NO >> Go to TM-281, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 5th gear of M range for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 5th gear of M range for 2 seconds or more.
2. Check self-diagnosis.

Is DTC P2846 detected?

YES >> Go to TM-281, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487924

1. CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	81	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

6. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

7. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	85	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 9.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

9. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.

2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	81	B49	16	Existed
	83		18	
	85		17	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	81	Ground	Not existed
	83		
	85		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2847 SHIFT FORK C POSITION SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487925

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487926

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2847	Shift fork "C" position sensor incorrect neutral position indicated	A DTC is set if the status of the sleeve B1 position of more than 1.7 mm (0.067 in) or less than –1.7 mm (–0.067 in) is detected for a certain period of time when the sleeve B1 position target is neutral with sleeve B2 engaged in the 3rd or 5th gear.	• 1st-Reverse position sensor 1 • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Harness or connector (Open or short in the 1st-Reverse position sensor 1 circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "1-R learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in “Data Monitor”.

Is the numeral value of the “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in the range between –1.8 and 1.8 mm (–0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR R”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 6.
NO >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR1”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 7.
NO >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 2nd gear of M range for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 2nd gear of M range for 2 seconds or more.
2. Check self-diagnosis.

Is DTC P2847 detected?

YES >> Go to TM-252, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487927

1. CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

6.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

7.CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 9.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

9. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 14.
NO >> GO TO 12.

12. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace damaged parts.

13. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 14.
NO >> Repair or replace damaged parts.

14. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2848 SHIFT FORK D POSITION SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487928

- The 3rd-5th position sensor is installed on the actuator control valve and detects the sleeve B2 position.
- The 3rd-5th position sensor converts the sleeve B2 position into output voltage and transmits the signal to TCM.
- The sleeve B2 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis B feed pressure solenoid valve. The 3rd gear and 5th gear are selected or deselected depending on the operation of the sleeve B2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487929

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P2848	Shift fork "D" position sensor incorrect neutral position indicated	A DTC is set if the status of the sleeve B2 position of more than 1.9 mm (0.075 in) or less than –1.9 mm (–0.075 in) is detected for a certain period of time when the sleeve B2 position target is neutral with the sleeve B1 engaged in the 1st or reverse gear.	• 3rd-5th position sensor • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Harness or connector (Open or short in the 3rd-5th position sensor circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-290, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "3-5 learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE B2 POSI” in “Data Monitor”.

Is the numerical value of the “SLEEVE B2 POSI” in the range between –2.0 and 2.0 mm (–0.079 and 0.079 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5.CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR3”.

CAUTION:
Never select “GEAR1”, “GEAR R” or “GEAR N”.

Does the sleeve B2 operate?

YES >> GO TO 6.
NO >> Go to TM-290, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6.CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR5”.

CAUTION:
Never select “GEAR1”, “GEAR R” or “GEAR N”.

Does the sleeve B2 operate?

YES >> GO TO 7.
NO >> Go to TM-290, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Run the vehicle in 1st gear of M range for 2 seconds or more.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Run the vehicle in 1st gear of M range for 2 seconds or more.
2. Check self-diagnosis.

Is DTC P2848 detected?

YES >> Go to TM-290, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487930

1.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	88	B46	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

6. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

7. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	92	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 9.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

9. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.

2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	84	B49	11	Existed
	88		9	
	92		10	

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	84	Ground	Not existed
	88		
	92		

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P2849 SHIFT FORK A

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487931

- The 6th-Neutral position sensor is installed on the actuator control valve and detects the sleeve A1 position.
- The 6th-Neutral position sensor converts the sleeve A1 position into output voltage and transmits the signal to TCM.
- The sleeve A1 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis A feed pressure solenoid valve. The 6th gear is selected or deselected depending on the operation of the sleeve A1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487932

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
P2849	Shift fork "A" stuck	A DTC is set if the status of the sleeve A1 position of more than 1.3 mm (0.051 in) is detected for a certain period when the sleeve A1 position target is neutral.	• 6th-Neutral position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Axis A feed pressure solenoid valve • Harness or connector (Open or short in the 6th-Neutral position sensor circuit) (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis A feed pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-294, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature −20°C (−4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "6-N learning experienced" YES?

YES >> GO TO 4.

NO >> Perform “CLUTCH GEAR LEARNING”.

4.CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE A1 POSI” in “Data Monitor”.

Is the numeral value of the “SLEEVE A1 POSI” in the range between –1.7 and 1.8 mm (–0.067 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 6.

5.CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR6”.
   CAUTION:
   Never select “GEAR2”, “GEAR4” or “GEAR N”.

Does the sleeve A1 operate?

YES >> GO TO 6.
NO >> Go to TM-294, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is DTC P0798 or DTC P2849 detected?

YES-1 (DTC P0789 is detected).>>Go to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P2849 is detected).>>Go to TM-294, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487933

1.CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	74	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	70	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

9.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

10.CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	66	B49	25	Existed
	70		24	
	74		23	

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (6TH-NEUTRAL POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	66	Ground	Not existed
	70		
	74		

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P284A SHIFT FORK B

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487934

- The 2nd-4th position sensor is installed on the actuator control valve and detects the sleeve A2 position.
- The 2nd-4th position sensor converts the sleeve A2 position into output voltage and transmits the signal to TCM.
- The sleeve A2 has its oil passage secured by the shift solenoid valve 1 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis A feed pressure solenoid valve. The 2nd gear and 4th gear are selected or deselected depending on the operation of the sleeve A2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487935

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P284A	Shift fork "A" stuck	• A DTC is set if the status of the sleeve A2 position of more than 1.3 mm (0.051 in) is detected for a certain period of time when the sleeve A2 position target is neutral. • A DTC is set if the status of the sleeve A2 position of less than –1.3 mm (–0.051 in) is detected for a certain period of time when the sleeve A2 position target is neutral.	• 2nd-4th position sensor • Shift solenoid valve 1 • Shift solenoid valve 2 • Sequence solenoid valve • Harness or connector (Open or short in the 2nd-4th position sensor circuit) (Open or short in the shift solenoid valve 1 circuit) (Open or short in the shift solenoid valve 2 circuit) (Open or short in the sequence solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-298, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "2-4 learning experienced" YES?

YES >> GO TO 4.
NO >> Perform "CLUTCH GEAR LEARNING".

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE A2 POSI” in “Data Monitor”.

Is the numeral value of the “SLEEVE A2 POSI” in the range between –1.8 and 1.8 mm (–0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR2”.

CAUTION:
Never select “GEAR6” or “GEAR N”.

Does the sleeve A2 operate?

YES >> GO TO 6.
NO >> Go to TM-298, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR4”.

CAUTION:
Never select “GEAR6” or “GEAR N”.

Does the sleeve A2 operate?

YES >> GO TO 7.
NO >> Go to TM-298, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check self-diagnosis.

Is DTC P0798 or DTC P284A detected?

YES-1 (DTC P0798 is detected)>>Go to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P284A is detected)>>Go to TM-298, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487936

1. CHECK SHIFT SOLENOID VALVE 1 CIRCUIT

Refer to TM-157, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-160, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 2 CIRCUIT

Refer to TM-163, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-166, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS A FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-125, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	81	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

8. CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	85	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

9. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	81	B49	16	Existed
	83		18	
	85		17	

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (2ND-4TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	81	Ground	Not existed
	83		
	85		

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P284B SHIFT FORK C

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487937

- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 are installed on the actuator control valve and detect the sleeve B1 position.
- The 1st-Reverse position sensor 1 and 1st-Reverse position sensor 2 convert the sleeve B1 position into output voltage and transmit the signal to TCM.
- The sleeve B1 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is OFF and is driven by the axis B feed pressure solenoid valve. The 1st gear and reverse gear are selected or deselected depending on the operation of the sleeve B1.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487938

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P284B	Shift fork "C" stuck	• A DTC is set if the status of the sleeve B1 position of more than 1.3 mm (0.051 in) is detected for a certain period of time when the sleeve B1 position target is neutral. • A DTC is set if the status of the sleeve B1 position of less than –1.3 mm (–0.051 in) is detected for a certain period of time when the sleeve B1 position target is neutral.	• 1st-Reverse position sensor 1 • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Axis B feed pressure solenoid valve • Harness or connector (Open or short in the 1st-Reverse position sensor 1 circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis B feed pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-302, "Diagnosis Procedure (GT-R certified NISSAN dealer)"" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "1-R learning experienced" YES?

YES >> GO TO 4.
NO >> Perform “CLUTCH GEAR LEARNING”.

4.CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in “Data Monitor”.

Is the numeral value of the “SLEEVE B1 POSI 1” and “SLEEVE B1 POSI 2” in the range between –1.8 and 1.8 mm (–0.071 and 0.071 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5.CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR R”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 6.
NO >> Go to TM-302, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6.CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR1”.

CAUTION:
Never select “GEAR3”, “GEAR5” or “GEAR N”.

Does the sleeve B1 operate?

YES >> GO TO 7.
NO >> Go to TM-302, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check self-diagnosis.

Is DTC P2716 or DTC P284B detected?

YES-1 (DTC P2716 is detected)>>Go to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P284B is detected)>>Go to TM-302, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487939

1.CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5. CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	71	B45	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V
	75			Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

8. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 1)

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	67	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

9. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	67	B49	4	Existed
	71		3	
	94		5	

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 1) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	67	Ground	Not existed
	71		
	94		

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK TCM INPUT SIGNAL CIRCUIT (1ST-REVERSE POSITION SENSOR 2)

1. Connect TCM harness connectors and transmission unit harness connectors.
2. Start engine.
3. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	79	B45	4	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V

Is the inspection result normal?

YES >> GO TO 15.
NO >> GO TO 13.

13. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	69	B49	32	Existed
	75		30	
	79		31	

Is the inspection result normal?

YES >> GO TO 14.
NO >> Repair or replace damaged parts.

14. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (1ST-REVERSE POSITION SENSOR 2) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	69	Ground	Not existed
	75		
	79		

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

P284C SHIFT FORK D

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487940

- The 3rd-5th position sensor is installed on the actuator control valve and detects the sleeve B2 position.
- The 3rd-5th position sensor converts the sleeve B2 position into output voltage and transmits the signal to TCM.
- The sleeve B2 has its oil passage secured by the shift solenoid valve 3 and shift solenoid valve 2 when the sequence solenoid valve is ON and is driven by the axis B feed pressure solenoid valve. The 3rd gear and 5th gear are selected or deselected depending on the operation of the sleeve B2.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:0000000011487941

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC detection condition	Possible cause
P284C	Shift fork "A" stuck	• A DTC is set if the status of the sleeve B2 position of more than 1.3 mm (0.051 in) is detected for a certain period of time when the sleeve B2 position target is neutral. • A DTC is set if the status of the sleeve B2 position of less than –1.3 mm (–0.051 in) is detected for a certain period of time when the sleeve B2 position target is neutral.	• 3rd-5th position sensor • Shift solenoid valve 3 • Shift solenoid valve 4 • Sequence solenoid valve • Axis B feed pressure solenoid valve • Harness or connector (Open or short in the 3rd-5th position sensor circuit) (Open or short in the shift solenoid valve 3 circuit) (Open or short in the shift solenoid valve 4 circuit) (Open or short in the sequence solenoid valve circuit) (Open or short in the axis B feed pressure solenoid valve circuit)

DTC CONFIRMATION PROCEDURE

CAUTION:

- **If CONSULT is not available, "TM-307, "Diagnosis Procedure (GT-R certified NISSAN dealer)" must be performed before starting "DTC CONFIRMATION PROCEDURE".**
- **If CONSULT is not available, never perform "DTC CONFIRMATION PROCEDURE" before completing the repair, which may cause secondary malfunction.**
- **Be careful of the driving speed.**

1. PREPARATION BEFORE OPERATION (PART 1)

If another "DTC CONFIRMATION PROCEDURE" is performed just before the next test, turn the ignition switch OFF and wait for 10 seconds or more, then perform the next test.

>> GO TO 2.

2. PREPARATION BEFORE OPERATION (PART 2)

With CONSULT
1. Turn the ignition switch ON.
2. Select "FLUID TEMP" in "Data Monitor".

Is the oil temperature –20°C (–4°F) or more?

YES >> GO TO 3.
NO >> Warm up the transmission.

3. PREPARATION BEFORE OPERATION (PART 3)

With CONSULT
Select "READ CLUTCH GEAR LEARNING DATA" in "Work support".

Is the "3-5 learning experienced" YES?

YES >> GO TO 4.

NO >> Perform “CLUTCH GEAR LEARNING”.

4. CONFIRMATION BEFORE OPERATION (PART 1)

With CONSULT
Select “SLEEVE B2 POSI” in “Data Monitor”.

Is the numerical value of the “SLEEVE B2 POSI” in the range between –2.0 and 2.0 mm (–0.079 and 0.079 in)?

YES >> GO TO 5.
NO >> GO TO 7.

5. CONFIRMATION BEFORE OPERATION (PART 2)

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine.
3. Select “GEAR POSITION TEST” in “Work support”.
4. Select “GEAR3”.

CAUTION:
Never select “GEAR1”, “GEAR R” or “GEAR N”.

Does the sleeve B2 operate?

YES >> GO TO 6.
NO >> Go to TM-307, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

6. CONFIRMATION BEFORE OPERATION (PART 3)

With CONSULT
1. Select “GEAR POSITION TEST” in “Work support”.
2. Select “GEAR5”.

CAUTION:
Never select “GEAR1”, “GEAR R” or “GEAR N”.

Does the sleeve B2 operate?

YES >> GO TO 7.
NO >> Go to TM-307, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

7. PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check “Self Diagnostic Result” of “TRANSMISSION”.

Without CONSULT
1. Shift the shift lever to the N position.
2. Start the engine and run at idle for 10 seconds or more.
3. Check self-diagnosis.

Is DTC P2716 or DTC P284C detected?

YES-1 (DTC P2716 is detected)>>Go to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
YES-2 (DTC P284C is detected)>>Go to TM-307, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> Go to GI-39, "Intermittent Incident".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487942

1. CHECK SHIFT SOLENOID VALVE 3 CIRCUIT

Refer to TM-169, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-172, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2. CHECK SHIFT SOLENOID VALVE 4 CIRCUIT

Refer to TM-174, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-176, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK SEQUENCE SOLENOID VALVE CIRCUIT

Refer to TM-179, "Diagnosis Procedure (GT-R certified NISSAN dealer)" and TM-182, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK AXIS B FEED PRESSURE SOLENOID VALVE CIRCUIT

Refer to TM-210, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and ground cable connections. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.CHECK TCM OUTPUT SIGNAL CIRCUIT

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition	Voltage (Approx.)
Connector	Terminal	Connector	Terminal		
B46	88	B46	4	Ignition switch ON	5 V
				Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.CHECK TCM POWER SUPPLY

Refer to TM-310, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> Replace TCM. Refer to TM-373, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

8.CHECK TCM INPUT SIGNAL CIRCUIT

1. Start engine.
2. Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector				Condition		Voltage (Approx.)
Connector	Terminal	Connector	Terminal			
B46	92	B45	4	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

9. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

10. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connectors and transmission unit harness connectors.
3. Check continuity between TCM vehicle side harness connector terminals and transmission unit vehicle side harness connector terminals.

TCM vehicle side harness connector		Transmission unit vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B46	84	B49	11	Existed
	88		9	
	92		10	

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK HARNESS BETWEEN TCM AND TRANSMISSION (3RD-5TH POSITION SENSOR) (PART 2)

Check continuity between TCM vehicle side harness connector terminals and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B46	84	Ground	Not existed
	88		
	92		

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace transmission assembly. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
NO >> Repair or replace damaged parts.

MAIN POWER SUPPLY

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487943

Supply power to TCM.

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487944

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK HARNESS BETWEEN TCM AND GROUND

1. Disconnect TCM harness connectors.
2. Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	3	Ground	Existed
	4		
	7		
	8		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK TCM INPUT SIGNAL CIRCUIT (PART 1)

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	9	4	Always	Battery voltage (11 – 14 V)

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 4.

4.CHECK HARNESS BETWEEN TCM AND FUSE BLOCK (J/B) (PART 1)

1. Disconnect fuse block (J/B) harness connector.
2. Check continuity between TCM vehicle side harness connector terminal and fuse block (J/B) vehicle side harness connector terminal.

TCM vehicle side harness connector		Fuse block (J/B) vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	9	M1	4A	Existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace damaged parts.

5.CHECK HARNESS BETWEEN TCM AND FUSE BLOCK (J/B) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	9	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6.DETECT MALFUNCTIONING ITEM (PART 1)

Check the following. Refer to PG-6, "Wiring Diagram - BATTERY POWER SUPPLY -".
- 10A fuse [No. 9, located in the fuse block (J/B)]
- Fuse block (J/B)
- Harness for open or short between battery and fuse block

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7.CHECK TCM INPUT SIGNAL CIRCUIT (PART 2)

Check voltage between TCM vehicle side harness connector terminals.

TCM vehicle side harness connector			Condition	Voltage (Approx.)
Connector	Terminal			
B45	17	4	Ignition switch ON	Battery voltage (11 – 14 V)
			Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 8.

8.CHECK HARNESS BETWEEN TCM AND IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (PART 1)

1. Disconnect IPDM E/R harness connector.
2. Check continuity between TCM vehicle side harness connector terminal and IPDM E/R (intelligent power distribution module engine room) vehicle side harness connector terminal.

TCM vehicle side harness connector		IPDM E/R (intelligent power distribution module engine room) vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	17	E7	58	Existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

9.CHECK HARNESS BETWEEN TCM AND IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	17	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace damaged parts.

10.DETECT MALFUNCTIONING ITEM (PART 2)

Check the following. Refer to PG-37, "Wiring Diagram - IGNITION POWER SUPPLY -"
- 10A fuse [No. 43, located in the IPDM E/R (intelligent power distribution module engine room)]
- IPDM E/R
- Harness for open or short between push-button ignition switch and IPDM E/R (intelligent power distribution module engine room)
- Push-button ignition switch

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

SET-UP SWITCH (TRANSMISSION)

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487945

If R or SAVE on the set-up switch (transmission) is selected, TCM energizes the circuit for each mode and illuminates the lamp.

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487946

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection B31. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace damaged parts.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect set-up switch harness connector.
2. Turn ignition switch ON.
3. Check voltage between set-up switch vehicle side harness connector and ground.

Set-up switch vehicle side harness connector		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
M73	18	Ground	Ignition switch ON	Battery voltage (11 – 14 V)
			Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 5.

3.CHECK HARNESS BETWEEN TCM AND SET-UP SWITCH (PART 1)

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector.
3. Check continuity between TCM vehicle side harness connector terminals and set-up switch vehicle side harness connector terminals.

TCM vehicle side harness connector		Set-up switch vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	45	M73	16	Existed
	47		10	

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4.CHECK HARNESS BETWEEN TCM AND SET-UP SWITCH (PART 2)

Check continuity between TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	45	Ground	Not existed
	47		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

5. CHECK HARNESS BETWEEN SET-UP SWITCH AND IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (PART 1)

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector.
3. Check continuity between set-up switch vehicle side harness connector terminal and IPDM E/R (intelligent power distribution module engine room) vehicle side harness connector terminal.

Set-up switch vehicle side harness connector		IPDM E/R (intelligent power distribution module engine room) vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
M73	18	E5	25	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the malfunctioning parts.

6. CHECK HARNESS BETWEEN SET-UP SWITCH AND IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (PART 2)

Check continuity between set-up switch vehicle side harness connector terminal and ground.

Set-up switch vehicle side harness connector		Ground	Continuity
Connector	Terminal		
M73	18	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace damaged parts.

7. DETECT MALFUNCTIONING ITEM

Check the following. Refer to PG-37, "Wiring Diagram - IGNITION POWER SUPPLY -".

- 10A fuse [No.45, located in the IPDM E/R (intelligent power distribution module engine room)]
- IPDM E/R (intelligent power distribution module engine room)
- Harness for open or short between push-button ignition switch and IPDM E/R (intelligent power distribution module engine room)
- Push-button ignition switch

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

SHIFT POSITION INDICATOR CIRCUIT

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487947

- TCM transmits the position indicator signals to the combination meter via CAN communication.
- The A range indicator and M range indicator are included in the shift position indicator.

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487948

1.CHECK DTC WITH TRANSMISSION

With CONSULT
1. Turn ignition switch ON.
2. Check “Self Diagnostic Result” of “TRANSMISSION”.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check DTC detected item. Refer to TM-342, "DTC Index".

2.DETECT MALFUNCTIONING ITEM

Check the following harness connector pin terminals for any malfunctions on the connections, harness sheath or other areas. Refer to GI-39, "Intermittent Incident"

- Control device harness connector
- Paddle shifter (shift-up switch) harness connector
- Paddle shifter (shift-down switch) harness connector
- TCM harness connector
- Transmission harness connector
- Park position switch harness connector
- Combination meter harness connector

Is the inspection result normal?

YES >> Replace the combination meter. Refer to MWI-113, "Exploded View".
NO >> Repair or replace damaged parts.

SHIFT LOCK SYSTEM

Description (GT-R certified NISSAN dealer)

INFOID:0000000011487949

The shift lock system mainly consists of the following components.

Component	Function
Shift lock solenoid	Activated by the ignition switch and stop lamp switch signals.
Stop lamp switch	When the brake pedal is depressed, the stop lamp switch turns ON and the transistor is energized via TCM.

Component Function Check (GT-R certified NISSAN dealer)

INFOID:0000000011487950

1.CHECK INFORMATION DISPLAY INDICATIONS

1. Turn the ignition switch ON.
2. Check the information display indications in the combination meter.

Does the “T/M SYSTEM CHECK IN PROCESS” indication disappear?

YES >> GO TO 2.
NO >> Check “Self Diagnostic Result” of “TRANSMISSION”.

2.CHECK SHIFT LOCK OPERATION (PART 1)

1. Shift the shift lever to the P position.
2. Shift the shift lever to any other position with the brake pedal released.

Can the shift lever be shifted to other positions?

YES >> Go to TM-316, "Diagnosis Procedure (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.CHECK SHIFT LOCK OPERATION (PART 2)

Shift the shift lever to any other position with the brake pedal depressed.

Can the shift lever be shifted to other positions?

YES >> INSPECTION END
NO >> Go to TM-316, "Diagnosis Procedure (GT-R certified NISSAN dealer)".

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:0000000011487951

1.CHECK SHIFT POSITION

Check the shift positions. Refer to “Inspection” in TM-370, "Inspection and Adjustment".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Adjust the shift positions. Refer to “Adjustment” in TM-370, "Inspection and Adjustment".

2.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connections B31 and B14. Refer to “Ground Inspection” in GI-42, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK POWER SUPPLY CIRCUIT (PART 1)

1. Disconnect the A/T shift selector harness connector.
2. Turn the ignition switch ON.
3. Check voltage between the A/T shift selector vehicle side harness connector and ground.

A/T shift selector vehicle side harness connector		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B20	13	Ground	Ignition switch ON	Battery voltage (11 – 14 V)
			Ignition switch OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 7.

4. CHECK TCM OUTPUT SIGNAL CIRCUIT

Check the voltage between the A/T shift selector vehicle side harness connector and ground.

A/T shift selector vehicle side harness connector		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
B20	14	Ground	• Shift lever: P position • Brake pedal depressed	Battery voltage (11 – 14 V)
			Other than the above	0 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 10.

5. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) AND GROUND

Check continuity between the A/T shift selector vehicle side harness connector terminal and ground.

A/T shift selector vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B20	18	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace damaged parts.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace the A/T shift selector. Refer to TM-375, "Exploded View".
NO >> Repair or replace damaged parts.

7. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) AND FUSE BLOCK (J/B) (PART 1)

1. Turn the ignition switch OFF.
2. Disconnect the fuse block (J/B) harness connector.
3. Check the continuity between the A/T shift selector vehicle side harness connector terminal and the fuse block (J/B) vehicle side harness connector terminal.

A/T shift selector vehicle side harness connector		Fuse block (J/B) vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
E20	13	M3	12C	Existed

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace damaged parts.

8. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) AND FUSE BLOCK (J/

B) (PART 2)

Check continuity between the A/T shift selector vehicle side harness connector terminal and ground.

A/T shift selector vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B20	13	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace damaged parts.

9. DETECT MALFUNCTIONING ITEM

Check the following. Refer to PG-37, "Wiring Diagram - IGNITION POWER SUPPLY -".

- 10A fuse [No.4, fuse block (J/B)]
- Fuse block (J/B)
- Harness for open or short between fuse block (J/B) and push-button ignition switch
- Push-button ignition switch

Is the inspection result normal?

YES >> GO TO 19.
NO >> Repair or replace damaged parts.

10. CHECK HARNESS BETWEEN TCM AMD A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) (PART 1)

1. Turn the ignition switch OFF.
2. Disconnect the TCM harness connector.
3. Check the continuity between the TCM vehicle side harness connector terminal and the A/T shift selector vehicle side harness connector terminal.

TCM vehicle side harness connector		A/T shift selector vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	46	B20	14	Existed

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace damaged parts.

11. CHECK HARNESS BETWEEN TCM AMD A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) (PART 2)

Check the continuity between the TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	46	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace damaged parts.

12. CHECK POWER SUPPLY CIRCUIT (PART 2)

1. Disconnect the stop lamp switch harness connector.
2. Check voltage between the stop lamp switch vehicle side harness connector and ground.

Stop lamp switch vehicle side harness connector		Ground	Condition	Voltage (Approx.)
Connector	Terminal			
E110	1	Ground	Always	Battery voltage (11 – 14 V)

Is the inspection result normal?

YES >> GO TO 13.
NO >> GO TO 16.

13. CHECK STOP LAMP SWITCH

Check the stop lamp switch. Refer to TM-320, "Component Inspection (Stop Lamp Switch) (GT-R certified NISSAN dealer)".

Is the inspection result normal?

YES >> GO TO 14.
NO >> Replace the stop lamp switch. Refer to BR-21, "Exploded View".

14. CHECK HARNESS BETWEEN TCM AMD STOP LAMP SWITCH (PART 1)

Check the continuity between the TCM vehicle side harness connector terminal and the stop lamp switch vehicle side harness connector terminal.

TCM vehicle side harness connector		Stop lamp switch vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
B45	16	E110	2	Existed

Is the inspection result normal?

YES >> GO TO 15.
NO >> Repair or replace damaged parts.

15. CHECK HARNESS BETWEEN TCM AMD STOP LAMP SWITCH (PART 2)

Check the continuity between the TCM vehicle side harness connector terminal and ground.

TCM vehicle side harness connector		Ground	Continuity
Connector	Terminal		
B45	16	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 19.
NO >> Repair or replace damaged parts.

16. CHECK HARNESS BETWEEN STOP LAMP SWITCH AND FUSE BLOCK (J/B) (PART 1)

1. Disconnect the fuse block (J/B) harness connector.
2. Check the continuity between the stop lamp switch vehicle side harness connector terminal and the fuse block (J/B) vehicle side harness connector terminal.

Stop lamp switch vehicle side harness connector		Fuse block (J/B) vehicle side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
E110	1	E103	8F	Existed

Is the inspection result normal?

YES >> GO TO 17.
NO >> Repair or replace damaged parts.

17. CHECK HARNESS BETWEEN A/T SHIFT SELECTOR (SHIFT LOCK SOLENOID) AND FUSE BLOCK (J/B) (PART 2)

Check continuity between the stop lamp switch vehicle side harness connector terminal and ground.

Stop lamp switch vehicle side harness connector		Ground	Continuity
Connector	Terminal		
E110	1	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 18.
NO >> Repair or replace damaged parts.

18. DETECT MALFUNCTIONING ITEM

Check the following. Refer to PG-6, "Wiring Diagram - BATTERY POWER SUPPLY -".

- 10A fuse [No.7, fuse block (J/B)]

- Fuse block (J/B)
- Harness for open or short between fuse block (J/B) and battery

Is the inspection result normal?

YES >> GO TO 19.
NO >> Repair or replace damaged parts.

19. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Stop Lamp Switch) (GT-R certified NISSAN dealer)

INFOID:0000000011487952

1. CHECK STOP LAMP SWITCH

Check the continuity between stop lamp switch connector terminals.

Stop lamp switch connector			Condition	Continuity
Connector	Terminal			
E110	1	2	Brake pedal depressed	Existed
			Brake pedal not depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace the stop lamp switch. Refer to BR-21, "Exploded View".

ECU DIAGNOSIS INFORMATION

TCM

Reference Value (GT-R certified NISSAN dealer)

INFOID:0000000011487953

VALUES ON THE DIAGNOSIS TOOL

- In CONSULT, the electrical shift timing, which is the operation timing of each solenoid, is displayed. Therefore, if there is an obvious difference between the shift timing estimated from a shift shock (or engine speed variations) and that shown on the CONSULT, the mechanical parts (including the hydraulic circuit) excluding the solenoids and sensors may be malfunctioning. In this case, check the mechanical parts following the appropriate diagnosis procedure.
- Shift point (gear position) displayed on CONSULT slightly differs from shift pattern described in Service Manual. This is due to the following reasons.
- Actual shift pattern may vary slightly within specified tolerances.
- While the shift pattern described in Service Manual indicates start of each shift, CONSULT shows gear position at the end of shift.
- CONSULT display of each solenoid (ON–OFF) changes at the start of shifting. Display of gear position changes at the end of shifting that is calculated by the control unit.

CAUTION:

Each measurement must be performed at the transmission oil temperature of 50°C (122°F) or more.

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Item name	Condition	Value / Status (Approx.)
SLEEVE B1 POSI 1	Shift lever: P, N position	–1.7 – 1.7 mm (–0.067 – 0.067 in)
	Shift lever: R position	–9.2 – –1.3 mm (–0.36 – 0.051 in)
	Running with 1st gear	1.3 – 9.0 mm (0.051 – 0.354 in)
	Running with 2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	–1.7 – 1.7 mm (–0.067 – 0.067 in)
SLEEVE B1 POSI 2	Shift lever: P, N position	–1.7 – 1.7 mm (–0.067 – 0.067 in)
	Shift lever: R position	–9.2 – –1.3 mm (–0.36 – 0.051 in)
	Running with 1st gear	1.3 – 9.0 mm (0.051 – 0.354 in)
	Running with 2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	–1.7 – 1.7 mm (–0.067 – 0.067 in)
SLEEVE A2 POSI	Shift lever: P, R, N position	–1.7 – 1.7 mm (–0.067 – 0.067 in)
	Running with 1st gear, 2nd gear	9.0 – 1.3 mm (0.354 – 0.051 in)
	Running with 3rd gear, 4th gear (Other than M range, R mode)	–9.2 – –1.3 mm (–0.36 – –0.051 in)
	Running with 5th gear, 6th gear (Other than M range, R mode)	–1.7 – 1.7 mm (–0.067 – 0.067 in)
SLEEVE B2 POSI	Shift lever: P, R, or N position	1.9 – –1.9 mm (0.075 – –0.075 in)
	Running with 1st gear	1.9 – –1.9 mm (0.075 – –0.075 in)
	Running with 2nd gear, 3rd gear (Other than M range, R mode)	1.3 – 9.0 mm (0.051 – 0.354 in)
	Running with 4th gear, 5th gear, 6th gear (Other than M range, R mode)	–1.3 – –9.4 mm (–0.051 – –0.37 in)
SLEEVE A1 POSI	Shift lever: P, R, or N position	–1.6 – 1.7 mm (–0.063 – 0.067 in)
	Running with 1st gear, 2nd gear, 3rd gear, 4th gear	–1.6 – 1.7 mm (–0.063 – 0.067 in)
	Running with 5th gear, 6th gear (Other than M range, R mode)	1.3 – 9.0 mm (0.051 – 0.354 in)
ABS OPERATION SIG	ABS activated	On
	Other than the above	Off

Item name	Condition	Value / Status (Approx.)
ACCEL POSI SEN 1	Closed throttle to wide-open throttle	0.0/8 – 8.0/8
MON SHIFT SOL 1	Shift lever: P, R, N position	Off
	When 2nd gear is released by selecting the shift lever from the A position to the N position (Release 2nd gear after selecting the shift lever from the A position to the N position)	On
	Upshift • When 2nd gear is released at 3rd gear normal driving (Release 2nd gear after shifting from 2nd gear to 3rd gear) • When 4th gear is engaged at 3rd gear normal driving (Engage 4th gear after shifting from 2nd gear to 3rd gear)	
	Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 4th gear is engaged during shifting from 5th gear to 4th gear (Engage 4th gear just before shifting from 5th gear to 4th gear)	
COMM SHIFT S/V 1	Shift lever: P, R, N position	Off
	When 2nd gear is released by selecting the shift lever from the A position to the N position (Release 2nd gear after selecting the shift lever from the A position to the N position)	On
	Upshift • When 2nd gear is released at 3rd gear normal driving (Release 2nd gear after shifting from 2nd gear to 3rd gear) • When 4th gear is engaged at 3rd gear normal driving (Engage 4th gear after shifting from 2nd gear to 3rd gear)	
	Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 4th gear is engaged during shifting from 5th gear to 4th gear (Engage 4th gear just before shifting from 5th gear to 4th gear)	
MON SHIFT SOL 2	Shift lever: P, R, N position	Off
	When 2nd gear is engaged by selecting the shift lever from the N position to the A position (Engage 2nd gear after selecting the shift lever from N position to A position)	On
	Upshift • When 4th gear is released at 5th gear normal driving (Release 4th gear after shifting from 4th gear to 5th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	
	Downshift • When 4th gear is released during shifting from 3rd gear to 2nd gear (Release 4th gear just before shifting from 3rd gear to 2nd gear) • When 2nd gear is engaged during shifting from 3rd gear to 2nd gear (Engage 2nd gear just before shifting from 3rd gear to 2nd gear)	

Item name	Condition	Value / Status (Approx.)
COMM SHIFT S/V 2	Shift lever: P, R, N position	Off
	When 2nd gear is engaged by selecting the shift lever from the N position to the A position (Engage 2nd gear after selecting the shift lever from N position to A position)	On
	Upshift • When 4th gear is released at 5th gear normal driving (Release 4th gear after shifting from 4th gear to 5th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	
	Downshift • When 4th gear is released during shifting from 3rd gear to 2nd gear (Release 4th gear just before shifting from 3rd gear to 2nd gear) • When 2nd gear is engaged during shifting from 3rd gear to 2nd gear (Engage 2nd gear just before shifting from 3rd gear to 2nd gear)	
MON SHIFT SOL 3	Shift lever: P, N position	Off
	• When reverse gear is engaged by selecting the shift lever from the P or N position to the R position (Engage reverse gear after selecting the shift lever from the P or N position to the R position) • When 1st gear is released by selecting the shift lever from the A position to the N position (Release 1st gear after selecting the shift lever from the A position to the N position)	On
	Upshift • When 1st gear is released at 2nd gear normal driving (Release 1st gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear)	
	Downshift • When 3rd gear is released during shifting from 2nd gear to 1st gear (Release 3rd gear just before shifting from 2nd gear to 1st gear)	
COMM SHIFT S/V 3	Shift lever: P, N position	Off
	• When reverse gear is engaged by selecting the shift lever from the P or N position to the R position (Engage reverse gear after selecting the shift lever from the P or N position to the R position) • When 1st gear is released by selecting the shift lever from the A position to the N position (Release 1st gear after selecting the shift lever from the A position to the N position)	On
	Upshift • When 1st gear is released at 2nd gear normal driving (Release 1st gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear)	
	Downshift • When 3rd gear is released during shifting from 2nd gear to 1st gear (Release 3rd gear just before shifting from 2nd gear to 1st gear)	

Item name	Condition	Value / Status (Approx.)
MON SHIFT SOL 4	Shift lever: P, N position	Off
	• When reverse gear is released by selecting the shift lever from the R position to the P or N position (Release reverse gear after selecting the shift lever from the R position to the P or N position) • When 1st gear is engaged by selecting the selector gear from the N position to the A position (Engage 1st gear after selecting the shift lever from the N position to the A position)	On
	Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear)	
	Downshift • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear)	
COMM SHIFT S/V 4	Shift lever: P, N position	Off
	• When reverse gear is released by selecting the shift lever from the R position to the P or N position (Release reverse gear after selecting the shift lever from the R position to the P or N position) • When 1st gear is engaged by selecting the selector gear from the N position to the A position (Engage 1st gear after selecting the shift lever from the N position to the A position)	On
	Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear)	
	Downshift • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear)	
FLUID TEMP	Ignition switch ON (5 seconds or more after turning the ignition switch ON)	The transmission oil temperature in the oil pan is displayed
FLUID TEMP SEN	Transmission fluid temperature: 20°C (68°F)	1,793 – 1,867 mV
	Transmission fluid temperature: 50°C (122°F)	1,096 – 1,150 mV
	Transmission fluid temperature: 80°C (176°F)	573 – 617 mV
COMM AXIS A S/V	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.52 – 0.67 A
COMM AXIS B S/V	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.52 – 0.67 A
STOP LAMP SW	Brake pedal depressed	On
	Other than the above	Off

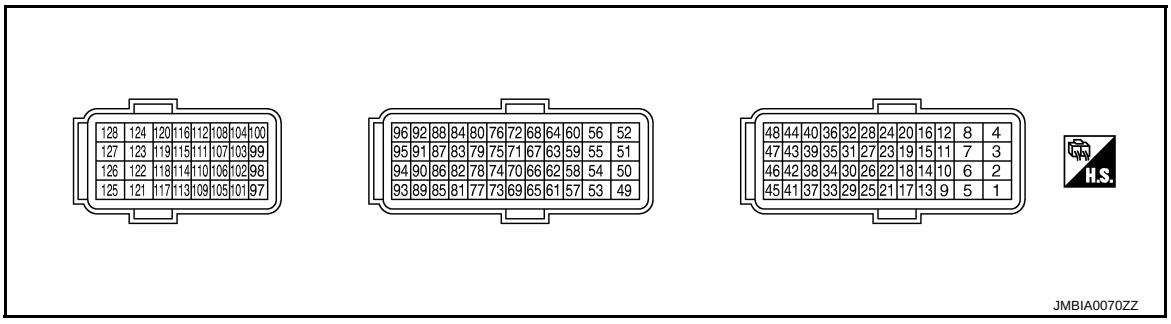
Item name	Condition	Value / Status (Approx.)
CLUTCH A PRESS	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.00 MPa
	Running with reverse gear, 1st gear, 3rd gear, 5th gear	
CLUTCH A SPEED	• Running with 2nd gear • Engine speed: 2,500 rpm or more Compare the value indicated on CONSULT with the value indicated on the tachometer	It is almost the same engine speed as the value indicated on the tachometer
COM CLUTCH A S/V	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.00 A
	Running with reverse gear, 1st gear, 3rd gear, 5th gear	
CLUTCH A TEMP	Ignition switch ON	The estimate temperature of clutch A is displayed
CLUTCH B PRESS	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.00 MPa
	Running with 2nd gear, 4th gear, 6th gear	
CLUTCH B SPEED	• Running with 1st gear • Engine speed: 2,500 rpm or more Compare the value indicated on CONSULT with the value indicated on the tachometer	It is almost the same engine speed as the value indicated on the tachometer
COM CLUTCH B S/V	Shift lever: P, N position (5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display)	0.00 A
	Running with 2nd gear, 4th gear, 6th gear	
CLUTCH B TEMP	Ignition switch ON	The estimate temperature of clutch B is displayed
GR POSITION	Shift lever: P, N position	N/P
	Shift lever: R position	R
	While driving	1, 2, 3, 4, 5, 6
ENGINE SPEED	Run the engine and compare the value indicated on CONSULT with the value indicated on the tachometer	It is almost the same engine speed as the value indicated on the tachometer
GR POSI INDICATION	Shift lever: P, N position	N/P
	While driving	1, 2, 3, 4, 5, 6
IGN SW	Ignition switch ON	On
	Ignition switch OFF	Off
LINE PRESSURE	• Shift lever: P, N position • At idle • Engine coolant temperature: 60°C (140°F) or more • Transmission oil temperature: 120°C (248°F) or less • Blower motor: OFF • Rear window defogger switch: OFF	0.7 – 1.15 MPa
	• Shift lever: P, N position • Transmission oil temperature: 120°C (248°F) or less • Engine speed: 2,000 rpm	0.85 – 1.15 MPa

Item name	Condition	Value / Status (Approx.)
COM LINE PRES S/V	• Shift lever: P, N position • At idle • Engine coolant temperature: 60°C (140°F) or more • Transmission oil temperature: 120°C (248°F) or less • Blower motor: OFF • Rear window defogger switch: OFF	0.61 – 0.83 A
	• Shift lever: P, N position • Transmission oil temperature: 120°C (248°F) or less • Engine speed: 2,000 rpm	0.61 – 0.78 A
COMM LUBE S/V	• Shift lever: P, N position • At idle • Clutch A temperature: 150°C (302°F) or less • Clutch B temperature: 150°C (302°F) or less	1.20 A
	When driving with the throttle opening 2.0/8	0 A
AM RANGE CHG SW 1	The shift lever is pressed to the M position side	Off
	Other than the above	On
AM RANGE CHG SW 2	The shift lever is pressed to the M position side	On
	Other than the above	Off
MODE	Select the A range	A/N
	SAVE of set-up switch (transmission) is selected at the A range (SAVE lamp ON)	A/SAVE
	R of set-up switch (transmission) is selected at the A range (R lamp ON)	A/R
	Select the M range	M/N
	SAVE of set-up switch (transmission) is selected at the M range (SAVE lamp ON)	M/SAVE
	R of set-up switch (transmission) is selected at the M range (R lamp ON)	M/R
COM R MODE LAMP	R of set-up switch (transmission) is selected (R lamp ON)	On
	Other than the above	Off
COM S MODE LMP	SAVE of set-up switch (transmission) is selected (SAVE lamp ON)	On
	Other than the above	Off
COM NEUTRAL SIG	Shift lever: P, N position	On
	Other than the above	Off
OUTPUT SHAFT SPD	While driving	It is almost the same speed as the value of the clutch A speed or clutch B speed divided by the gear ratio of the driving gear
PARK POSITION SW	Shift lever: P position	On
	Other than the above	Off
RANGE	Shift lever: P position	P
	Shift lever: R position	R
	Shift lever: N position	N
	Shift lever: A position	A
	Shift lever: M position	M
COM BACK LMP RLY	Shift lever: R position	On
	Other than the above	Off
MON BACK LMP RLY	Shift lever: R position	On
	Other than the above	Off

Item name	Condition	Value / Status (Approx.)
MON SEQ S/V	Shift lever: P, R, N position	Off
	Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	On
	Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is released during shifting from 2nd gear to 1st gear (Release 3rd gear just before shifting from 2nd gear to 1st gear)	
COMM SEQ S/V	Shift lever: P, R, N position	Off
	Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	On
	Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear)	
R MODE SW	With the knob of the set-up switch (transmission) pressed to the R side	On
	Other than the above	Off
SAVE MODE SW	With the knob of the set-up switch (transmission) pressed to the SAVE side	On
	Other than the above	Off
TR SENSOR No.0	Shift lever: P position	On
	Other than the above	Off
TR SENSOR No.1	Shift lever: R position	On
	Other than the above	Off
TR SENSOR No.2	Shift lever: R, N position	On
	Other than the above	Off
TR SENSOR No.3	Shift lever: N position	On
	Other than the above	Off

Item name	Condition	Value / Status (Approx.)
TR SENSOR No.4	Shift lever; N, A, M position	On
	Other than the above	Off
TR SENSOR No.5	Shift lever: A, M position	On
	Other than the above	Off
VEHICLE SPEED	Turn the drive wheel and compare the value indicated on CONSULT with the value indicated on the speedometer	It is almost the same speed as the value indicated on the speedometer
COM STARTER RLY	Shift lever: P, N position	On
	Other than the above	Off
MON STARTER RLY	Shift lever: P, N position	On
	Other than the above	Off
PADDLE SFT (DOWN)	The paddle shifter (shift-down switch) continues being pulled forward	On
	Other than the above	Off
PADDLE SFT (UP)	The paddle shifter (shift-up switch) continues being pulled forward	On
	Other than the above	Off
ACCEL POSI SEN 2	Closed throttle to wide-open throttle	0.0/8 – 8.0/8
BATTERY VOLTAGE	Ignition switch ON (engine stopped)	Battery voltage (11 – 14 V)
VDC OPERATION SIG	VDC activated	On
	Other than the above	Off
TCM RELAY	Ignition switch ON	On
SHIFT LOCK SOL	“T/M SYSTEM CHECK IN PROCESS” is displayed on the information display in the combination meter when the shift lever is in P position	On
	Shift lever in any position other than P	Off

TERMINAL LAYOUT



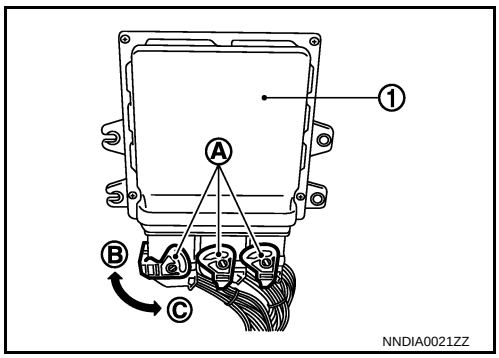
PHYSICAL VALUES

NOTE:

- TCM is installed to the back of the rear seatback. Remove the trim of the trunk room to check the input/output signal. Refer to INT-27, "Exploded View".

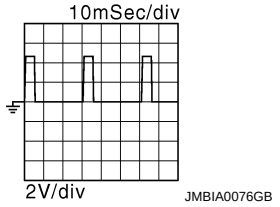
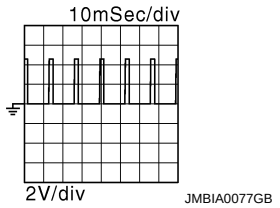
- Disconnect the TCM harness connector. Push the protrusion for fixing and fully open the lever (A) as shown in the figure when disconnecting the harness connector.

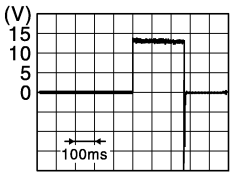
1 : TCM
Direction B : Disconnect
Direction C : Connect

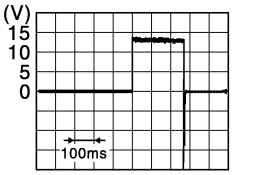


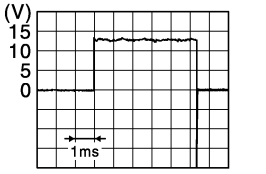
- The values in the table are the reference value measured between each terminal and ground.

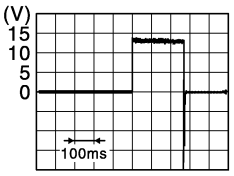
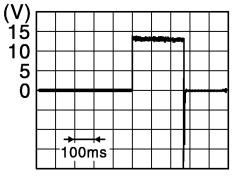
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (W)	4	BATT-2	Input	Ignition switch ON		Battery voltage (11 – 14 V)
				Ignition switch OFF		0 V
3 (B)	Ground	GND	Output	Always		0 V
4 (B)	Ground	GND	Output	Always		0 V
5 (W)	4	BATT-3	Input	Ignition switch ON		Battery voltage (11 – 14 V)
				Ignition switch OFF		0 V
7 (B)	Ground	GND	Output	Always		0 V
8 (B)	Ground	GND	Output	Always		0 V
9 (P)	4	BATT-1	Input	Always		Battery voltage (11 – 14 V)
10 (LG)	4	Back-up lamp signal	Output	Ignition switch ON	Shift lever: R position	0 V
				Other than the above		Battery voltage (11 – 14 V)
11 (L)	—	CAN-H	Input/ Output	—		—
14 (V)	4	Power OFF	Output	Ignition switch ON		0 V
				Ignition switch OFF		Battery voltage (11 – 14 V)
15 (P)	—	CAN-L	Input/ Output	—		—
16 (W)	4	Stop lamp switch signal	Input	Ignition switch ON	Brake pedal depressed	Battery voltage (11 – 14 V)
					Other than the above	0 V
17 (Y)	4	Ignition switch signal	Input	Ignition switch ON		Battery voltage (11 – 14 V)
				Ignition switch OFF		0 V
19 (GR)	4	Starter relay signal	Output	Ignition switch ON	Shift lever: P, N position	Battery voltage (11 – 14 V)
					Other than the above	0 V
23 (BR)	4	Auto/manual range change switch 1 signal	Input	Ignition switch ON	The shift lever is pressed to the M position side	0 V
					Other than the above	5 V
25 (L)	4	Range sensor power source 1	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V

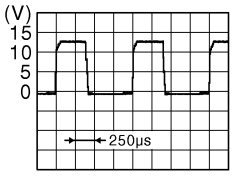
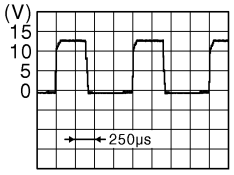
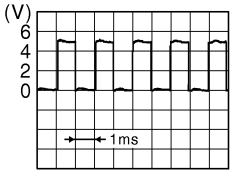
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
26 (LG)	4	Range sensor power source 2	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
27 (G)	4	Range sensor No.0 signal	Input	Ignition switch ON	Shift lever: P position	0 V
					Other than the above	5 V
28 (V)	4	Auto/manual range change switch 2 signal	Input	Ignition switch ON	The shift lever is pressed to the M position side	5 V
					Other than the above	0 V
31 (SB)	4	Engine speed signal	Input	After engine warming up	At idle **NOTE:** The pulse period changes depending on the idle speed	1 V* 
					Engine speed: 2000 rpm	1 V* 
33 (V)	4	Range sensor No.1 signal	Input	Ignition switch ON	Shift lever: R position	0 V
					Other than the above	5 V
34 (BG)	4	SAVE mode switch signal	Input	Ignition switch ON	With the knob of the set-up switch (transmission) pressed to the SAVE side	0 V
					Other than the above	5 V
35 (G)	4	Range sensor No.3 signal	Input	Ignition switch ON	Shift lever: N position	0 V
					Other than the above	5 V
37 (GR)	4	R mode switch signal	Input	Ignition switch ON	With the knob of the set-up switch (transmission) pressed onto the R side	0 V
					Other than the above	5 V
38 (R)	4	Range sensor No.2 signal	Input	Ignition switch ON	Shift lever: R, N position	0 V
					Other than the above	5 V
39 (W)	4	Paddle shifter (shift-up switch) signal	Input	Ignition switch ON	The paddle shifter (shift-up switch) continues being pulled forward	0 V
					Other than the above	Battery voltage (11 – 14 V)
42 (L)	4	Paddle shifter (shift-down switch) signal	Input	Ignition switch ON	The paddle shifter (shift-down switch) continues being pulled forward	0 V
					Other than the above	Battery voltage (11 – 14 V)
43 (P)	4	Range sensor No.4 signal	Input	Ignition switch ON	Shift lever; N, A, M position	0 V
					Other than the above	5 V
44 (GR)	4	Range sensor No.5 signal	Input	Ignition switch ON	Shift lever: A, M position	0 V
					Other than the above	5 V

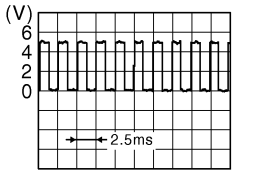
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
45 (BG)	4	R mode lamp signal	Input	Ignition switch ON	R of set-up switch (transmission) is selected (R lamp ON)	0 V
					Other than the above	Battery voltage (11 – 14 V)
46 (W)	4	Shift lock solenoid control signal	Output	Ignition switch ON	• Shift lever: P position • Brake pedal depressed	Battery voltage (11 – 14 V)
					Other than the above	0 V
47 (G)	4	SAVE mode lamp signal	Input	Ignition switch ON	SAVE of set-up switch (transmission) is selected (SAVE lamp ON)	0 V
					Other than the above	Battery voltage (11 – 14 V)
49 (L)	4	Shift solenoid valve 1 (+)	Output	Engine running	Shift lever: P, R, or N position	0 V
				While driving (Other than M range, R mode)	When 2nd gear is released by selecting the shift lever from the A position to the N position (Release 2nd gear after selecting the shift lever from the A position to the N position)	 NNDIA0131ZZ
					Upshift • When 2nd gear is released at 3rd gear normal driving (Release 2nd gear after shifting from 2nd gear to 3rd gear) • When 4th gear is engaged at 3rd gear normal driving (Engage 4th gear after shifting from 2nd gear to 3rd gear)	
					Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 4th gear is engaged during shifting from 5th gear to 4th gear (Engage 4th gear just before shifting from 5th gear to 4th gear)	

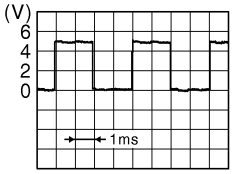
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
51 (P)	4	Shift solenoid valve 3 (+)	Output	Engine running	Shift lever: P, N position	0 V
				While driving (Other than M range, R mode)	• When reverse gear is engaged by selecting the shift lever from the P or N position to the R position (Engage reverse gear after selecting the shift lever from the P or N position to the R position) • When 1st gear is released by selecting the shift lever from the A position to the N position (Release 1st gear after selecting the shift lever from the A position to the N position)	 NNDIA0131ZZ
					Upshift • When 1st gear is released at 2nd gear normal driving (Release 1st gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear)	
					Downshift • When 3rd gear is released during shifting from 2nd gear to 1st gear (Release 3rd gear just before shifting from 2nd gear to 1st gear)	

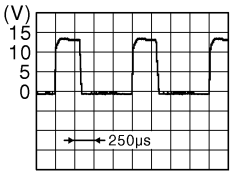
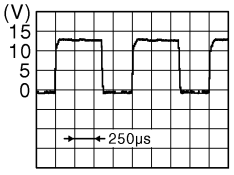
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
53 (GR)	4	Sequence solenoid valve (+)	Output	Engine running	Shift lever: P, R, N position	0 V
				While driving (Other than the M range, R mode)	Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear) • When 3rd gear is released at 4th gear normal driving (Release 3rd gear after shifting from 3rd gear to 4th gear) • When 5th gear is engaged at 4th gear normal driving (Engage 5th gear after shifting from 3rd gear to 4th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	 NNDIA0133ZZ
					Downshift • When 6th gear is released during shifting from 5th gear to 4th gear (Release 6th gear just before shifting from 5th gear to 4th gear) • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is released during shifting from 2nd gear to 1st gear (Release 3rd gear just before shifting from 2nd gear to 1st gear)	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
54 (W)	4	Shift solenoid valve 2 (+)	Output	Engine running	Shift lever: P, R, N position	0 V
				While driving (Other than the M range, R mode)	When 2nd gear is engaged by selecting the selector gear from the N position to the A position (Engage 2nd gear after selecting the shift lever from the N position to the A position)	 NNDIA0131ZZ
					Upshift • When 4th gear is released at 5th gear normal driving (Release 4th gear after shifting from 4th gear to 5th gear) • When 6th gear is engaged at 5th gear normal driving (Engage 6th gear after shifting from 4th gear to 5th gear)	
					Downshift • When 4th gear is released during shifting from 3rd gear to 2nd gear (Release 4th gear just before shifting from 3rd gear to 2nd gear) • When 2nd gear is engaged during shifting from 3rd gear to 2nd gear (Engage 2nd gear just before shifting from 3rd gear to 2nd gear)	
56 (LG)	4	Shift solenoid valve 4 (+)	Output	Engine running	Shift lever: P, N position	0 V
				While driving (Other than M range, R mode)	• When reverse gear is released by selecting the shift lever from the R position to the P or N position (Release reverse gear after selecting the shift lever from the R position to the P or N position) • When 1st gear is engaged by selecting the selector gear from the N position to the A position (Engage 1st gear after selecting the shift lever from the N position to the A position)	 NNDIA0131ZZ
					Upshift • When 3rd gear is engaged at 2nd gear normal driving (Engage 3rd gear after shifting from 1st gear to 2nd gear)	
					Downshift • When 5th gear is released during shifting from 4th gear to 3rd gear (Release 5th gear just before shifting from 4th gear to 3rd gear) • When 3rd gear is engaged during shifting from 4th gear to 3rd gear (Engage 3rd gear just before shifting from 4th gear to 3rd gear)	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
57 (BR)	4	Axis A feed pressure solenoid valve (+)	Output	Engine running	5 seconds or more after the engine is started with the shift lever in the P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display	 NNDIA0054ZZ
59 (G)	4	Axis B feed pressure solenoid valve (+)	Output	Engine running	5 seconds or more after the engine is started with the shift lever in P position and the message “T/M SYSTEM CHECK IN PROCESS” is not displayed on the information display	 NNDIA0054ZZ
62 (R)	4	Axis A feed pressure solenoid valve (–)	Input	Always		0 V
64 (BG)	4	Axis B feed pressure solenoid valve (–)	Input	Always		0 V
66 (R)	4	6th-Neutral position sensor (–)	Input	Always		0 V
67 (L)	4	1st-Reverse position sensor 1 signal	Input	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	0.68 – 1.76 V
				While driving	1st gear	3.34 – 4.41 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V
68 (BR)	4	Clutch A speed sensor (–)	Input	Always		0 V
69 (Y)	4	1st-Reverse position sensor 2 (–)	Input	Always		0 V
70 (W)	4	6th-Neutral position sensor signal	Input	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear, 3rd gear, 4th gear	
					5th gear, 6th gear (Other than M range, R mode)	0.68 – 1.76 V
71 (Y)	4	1st-Reverse position sensor 1 (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
72 (G)	4	Clutch A speed sensor signal	Input	• M range, 2nd gear • Engine speed: 2,000 rpm		 NNDIA0061ZZ

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
73 (Y)	4	Line pressure sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
74 (BR)	4	6th-Neutral position sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
75 (L)	4	1st-Reverse position sensor 2 (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
76 (Y)	4	Clutch A speed sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
77 (GR)	4	Line pressure sensor signal	Input	Engine running	• Shift lever: P, N position • At idle	0.84 – 1.97 V
78 (R)	4	Clutch B speed sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
79 (G)	4	1st-Reverse position sensor 2 signal	Input	Engine running	Shift lever: P, N position	2.19 – 2.88 V
					Shift lever: R position	3.34 – 4.41 V
				While driving	1st gear	0.68 – 1.76 V
					2nd gear, 3rd gear, 4th gear, 5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V
80 (BR)	4	Line pressure sensor (–)	Input	Always		2.19 – 2.88 V
81 (G)	4	2nd-4th position sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
82 (W)	4	Clutch B speed sensor signal	Input	• M range, 1st gear • Engine speed: 2,000 rpm		 NNDIA0062ZZ
83 (L)	4	2nd-4th position sensor (–)	Input	Always		0 V
84 (BR)	4	3rd-5th position sensor (–)	Input	Always		0 V
85 (Y)	4	2nd-4th position sensor signal	Input	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear, 2nd gear	0.68 – 1.76 V
					3rd gear, 4th gear (Other than M range, R mode)	3.34 – 4.41 V
					5th gear, 6th gear (Other than M range, R mode)	2.19 – 2.88 V
86 (L)	4	Clutch B speed sensor (–)	Input	Always		0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
87 (L)	4	Fluid temperature sensor (+)	Output	Ignition switch ON	Transmission fluid temperature: 20°C (68°F)	1.80 – 1.86 V
					Transmission fluid temperature: 50°C (122°F)	1.10 – 1.15 V
					Transmission fluid temperature: 80°C (176°F)	0.58 – 0.61 V
88 (W)	4	3rd-5th position sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
89 (BG)	4	Park position switch signal	Input	Ignition switch ON	Shift lever: P position	0 V
					Other than the above	5 V
91 (SB)	4	Fluid temperature sensor (–)	Input	Always		0 V
92 (R)	4	3rd-5th position sensor signal	Input	Engine running	Shift lever: P, R, N position	2.19 – 2.88 V
				While driving	1st gear	
					2nd gear, 3rd gear (Other than M range, R mode)	0.68 – 1.76 V
					4th gear, 5th gear, 6th gear (Other than M range, R mode)	3.34 – 4.41 V
94 (G)	4	1st-Reverse position sensor 1 (–)	Input	Always		0 V
97 (BR)	4	Clutch A pressure sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
98 (R)	4	Clutch A pressure sensor signal	Input	Engine running	Shift lever: P, R, N position	0.38 – 0.64 V
				While driving	1st gear, 3rd gear, 5th gear	
99 (W)	4	Clutch A pressure sensor (–)	Input	Always		0 V
102 (Y)	4	Clutch B pressure sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
103 (L)	4	Clutch B pressure sensor signal	Input	Engine running	Shift lever: P, R, N position	0.38 – 0.64 V
				While driving	2nd gear, 4th gear, 6th gear	
104 (G)	4	Clutch B pressure sensor (–)	Input	Always		0 V
105 (L)	4	Output shaft speed sensor (+)	Output	Ignition switch ON		5 V
				Ignition switch OFF		0 V
106 (G)	4	Output shaft speed sensor signal	Input	• M range, 1st gear • Engine speed: 2,000 rpm		 NNDIA0055ZZ

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
107 (Y)	4	Output shaft speed sensor (–)	Input	Always		0 V
113 (BG)	4	Line pressure solenoid valve (–)	Input	Always		0 V
115 (W)	4	Lubricating flow solenoid valve (–)	Input	Always		0 V
118 (V)	4	Line pressure solenoid valve (+)	Output	Engine running	• Shift lever: P, N position • At idle	 NNDIA0056ZZ
120 (BR)	4	Lubricating flow solenoid valve (+)	Output	Engine running	• Shift lever: P, N position • At idle	 NNDIA0057ZZ
121 (R)	4	Clutch A solenoid valve (+)	Output	Other than running with 2nd gear, 4th gear, 6th gear (Clutch A is not engaged)		0 V
123 (G)	4	Clutch B solenoid valve (+)	Output	Other than running with reverse gear, 1st gear, 3rd gear, 5th gear (Clutch B is not engaged)		0 V
126 (LG)	4	Clutch A solenoid valve (–)	Input	Always		0 V
128 (Y)	4	Clutch B solenoid valve (–)	Input	Always		0 V

*: Average voltage value of pulse waveform (The correct waveform is measured with an oscilloscope)

Fail Safe (GT-R certified NISSAN dealer)

INFOID:0000000011487954

PRECAUTION REGARDING FAIL SAFE FUNCTIONS

TCM has the electrical fail safe mode. The mode functions so that the operation can be continued even if the signal circuit of the main electronically controlled input/output parts is damaged.
Even if the electronic circuit is normal, the fail safe mode may start under special conditions (such as when the brake pedal is depressed suddenly from a hard wheel spin status to stop rotation of wheels). In this case, turn the ignition switch OFF and back to ON after 5 seconds to resume the normal shift pattern.
Consequently, the customer's vehicle may already returns to normal condition. Refer to TM-9, "Work Flow (GT-R certified NISSAN dealer)". Following are results of self-diagnosis.

FAIL SAFE FUNCTION

If a malfunction occurs in either of the sensors or solenoids, this function controls the normal operation without downgrading the drivability.

<table>
<tr><th>DTC No.</th><th colspan="3">The transmission operates under the fail safe mode</th></tr>
<tr><td>P0601
P0604
P0605
P0607
P0613
P0705</td><td colspan="3">Release the clutches A and B if an error is detected. The driving force is not transmitted caused by this. The vehicle cannot be driven.</td></tr>
<tr><td rowspan="5"></td><td rowspan="5">Driving gear</td><td colspan="2">Fixed into the driving gear to get the vehicle driven, if an error occurs.
• When the vehicle starts again after it is stopped, it becomes the following conditions.</td></tr>
<tr><td>Driving gear when the error occurs</td><td>Restart</td></tr>
<tr><td>1GR</td><td>Possible to drive forward only
(fixed into 1GR)</td></tr>
<tr><td>2GR</td><td>Only moving forward is possible
(fixed into 2GR)</td></tr>
<tr><td>3GR, 4GR, 5GR, 6GR, Neutral, Not identified</td><td>Impossible</td></tr>
<tr><td rowspan="2">P0882
P0985
P0986</td><td rowspan="2">Driving mode</td><td colspan="2">Reverse</td><td>Only moving rearward is possible
(fixed into Reverse gear)</td></tr>
<tr><td colspan="3">• The M range driving is prohibited. (During M range driving, the vehicle is forcibly shifted to the A range driving)
• Selecting the set-up switch is prohibited. (If SAVE or R is selected, the vehicle is forcibly set to Normal)</td></tr>
<tr><td rowspan="9"></td><td rowspan="9">Vehicle speed</td><td colspan="3">The engine torque is restricted by the driving gear when the error occurs, and then the vehicle speed (maximum speed) is restricted.</td></tr>
<tr><td colspan="2">Driving gear when the error occurs</td><td>Vehicle speed km/h (MPH)</td></tr>
<tr><td colspan="2">1GR, 2GR</td><td>46 (29)</td></tr>
<tr><td colspan="2">3GR, 4GR</td><td>85 (53)</td></tr>
<tr><td colspan="2">5GR, 6GR</td><td>134 (84)</td></tr>
<tr><td colspan="2">Reverse</td><td>46 (29)</td></tr>
<tr><td colspan="2">Neutral</td><td>134 (84)</td></tr>
<tr><td colspan="2">Not identified</td><td>46 (46)</td></tr>
<tr><td rowspan="2">P0607
P06B0
P0715
P0746</td><td rowspan="2">Driving gear</td><td colspan="3">• Release the clutch A and prohibit the using of even gears (2GR, 4GR, and 6GR).
• During driving, shift up or down to the next gear (odd gear) according to the driving conditions, and then shift the gear and drive the vehicle using the odd gears (1GR, 3GR, 5GR, and Reverse gear).
- Shift to 5GR after decelerating the vehicle speed to prevent over rev during driving at 6GR.</td></tr>
<tr><td rowspan="2">P0747
P0748
P0797
P0798
P0842</td><td rowspan="2">Driving mode</td><td colspan="3">• The M range driving is prohibited. (During M range driving, the vehicle is forcibly shifted to the A range driving).
• Selecting the set-up switch is prohibited. (If SAVE or R is selected, the vehicle is forcibly set to Normal).</td></tr>
<tr><td rowspan="9">P0843
P0973
P0974
P0976
P0977
P2832
P2833
P2834
P2837
P2838
P2839
P2845
P2846
P2849
P284A</td><td rowspan="9">Vehicle speed</td><td colspan="3">The engine torque is restricted by the driving gear when the error occurs, and then the vehicle speed (maximum speed) is restricted.</td></tr>
<tr><td colspan="2">Driving gear when the error occurs</td><td>Vehicle speed km/h (MPH)</td></tr>
<tr><td colspan="2">2GR</td><td>46 (29)</td></tr>
<tr><td colspan="2">4GR</td><td>85 (53)</td></tr>
<tr><td colspan="2">6GR</td><td>134 (84)</td></tr>
<tr><td colspan="2">Neutral</td><td>134 (84)</td></tr>
<tr><td colspan="2">Not identified</td><td>46 (29)</td></tr>
</table>

<table>
<tr><th>DTC No.</th><th colspan="4">The transmission operates under the fail safe mode</th></tr>
<tr><td rowspan="8">P0607
P06B0
P0776
P0777
P0778
P0847
P0848
P0979
P0980
P0982
P0983
P17C0
P17C1
P17C5
P2715
P2716
P2765
P283C
P283D
P283E
P2841
P2842
P2843
P2847
P2848
P284B
P284C</td><td>Driving gear</td><td colspan="3">• Release the clutch B and prohibit the using of odd gears (1GR, 3GR, 5GR) and reverse gear.
• During driving, shift up or down to the next gear (even gear) according to the driving conditions, and then shift the gear and drive the vehicle using the even gears (2GR, 4GR, 6GR).
- Shift to the neutral conditions when the error is detected during driving at reverse gear.
- Shift to 2GR when the error is detected during driving at 1GR.</td></tr>
<tr><td>Driving mode</td><td colspan="3">• The M range driving is prohibited. (During M range driving, the vehicle is forcibly shifted to the A range driving.)
• Selecting the set-up switch is prohibited. (If SAVE or R is selected, the vehicle is forcibly set to Normal.)</td></tr>
<tr><td rowspan="8">Vehicle speed</td><td colspan="3">The engine torque is restricted by the driving gear when the error occurs, and then the vehicle speed (maximum speed) is restricted.</td></tr>
<tr><td>Driving gear when the error occurs</td><td colspan="2">Vehicle speed km/h (MPH)</td></tr>
<tr><td>1GR</td><td colspan="2">46 (29)</td></tr>
<tr><td>3GR</td><td colspan="2">85 (53)</td></tr>
<tr><td>5GR</td><td colspan="2">134 (84)</td></tr>
<tr><td>Reverse</td><td colspan="2">46 (29)</td></tr>
<tr><td>Neutral</td><td colspan="2">134 (84)</td></tr>
<tr><td>Unknown</td><td colspan="2">46 (29)</td></tr>
<tr><td rowspan="12">U0100
P0607
P06B0
P0705
P1705
P1725
P2637
P2641</td><td>Driving gear</td><td colspan="3">The use of all gears becomes possible.</td></tr>
<tr><td>Driving mode</td><td colspan="3">• The M range driving is prohibited. (During M range driving, the vehicle is forcibly shifted to the A range driving.)
• Selecting the set-up switch is prohibited. (If SAVE or R is selected, the vehicle is forcibly set to Normal.)</td></tr>
<tr><td rowspan="10">Vehicle speed</td><td colspan="3">Restrict or fix the engine torque and fix the throttle position according to the detected DTC.</td></tr>
<tr><td>DTC</td><td>Engine torque</td><td>Throttle position</td></tr>
<tr><td>U0100</td><td>Fixed</td><td>Approximately 1/8 fixed</td></tr>
<tr><td>P0607</td><td>Restricted</td><td>As per usual</td></tr>
<tr><td>P06B0</td><td>Restricted</td><td>As per usual</td></tr>
<tr><td>P0705</td><td>Restricted</td><td>As per usual</td></tr>
<tr><td>P1705</td><td>Restricted</td><td>Approximately 1/8 fixed</td></tr>
<tr><td>P1725</td><td>Restricted</td><td>As per usual</td></tr>
<tr><td>P2637</td><td>Fixed</td><td>As per usual</td></tr>
<tr><td>P2641</td><td>Fixed</td><td>As per usual</td></tr>
</table>

DTC Inspection Priority Chart (GT-R certified NISSAN dealer)

INFOID:0000000011487955

When multiple DTCs are detected simultaneously, check one by one as per the following priority list.

Priority	Detected items (DTC)
1	• U0102 LOST COMMUNICATION (TRANSFER) • U0121 LOST COMMUNICATION (ABS) • U0121 LOST COMMUNICATION (ABS) • U0140 LOST COMMUNICATION (BCM) • U0141 LOST COMMUNICATION (BCM A) • U0155 LOST COMMUNICATION (IPC) • U1000 CAN COMM CIRCUIT
2	• U0100 LOST COMMUNICATION (ECM A) • P0601 MEMORY CHECK SUM • P0604 CONTROL MODULE RAM • P0605 CONTROL MODULE ROM • P0607 CONTROL MODULE PERFORMANCE • P0613 TCM PROCESSOR • P06B0 SENSOR POWER SUPPLY A • P0705 TRANSMISSION RANGE SWITCH A • P0706 TRANSMISSION RANGE SENSOR A • P0715 INPUT SPEED SENSOR A • P0720 OUTPUT SPEED SENSOR • P0790 PERFORMANCE SWITCH • P0827 UP AND DOWN SHIFT SW • P0828 UP AND DOWN SHIFT SW • P0863 TCM COMMUNICATION • P0973 SHIFT SOLENOID A • P0974 SHIFT SOLENOID A • P0976 SHIFT SOLENOID B • P0977 SHIFT SOLENOID B • P0979 SHIFT SOLENOID C • P0980 SHIFT SOLENOID C • P0982 SHIFT SOLENOID D • P0983 SHIFT SOLENOID D • P0985 SHIFT SOLENOID E • P0986 SHIFT SOLENOID E • P1705 TP SENSOR • P1722 VEHICLE SPEED • P1725 ENGINE SPEED SIGNAL • P2637 TORQUE FEED BACK SIGNAL A • P2641 TORQUE FEED BACK SIGNAL B • P2716 PRESSURE CONTROL SOLENOID D • P2765 INPUT SPEED SENSOR B

Priority	Detected items (DTC)
3	• P0712 TRANSMISSION FLUID TEMPERATURE SENSOR A • P0713 TRANSMISSION FLUID TEMPERATURE SENSOR A • P0725 ENGINE SPEED • P0748 PRESSURE CONTROL SOLENOID A • P0778 PRESSURE CONTROL SOLENOID B • P0798 PRESSURE CONTROL SOLENOID C • P0842 TRANSMISSION FLUID PRESSURE SEN/SW A • P0843 TRANSMISSION FLUID PRESSURE SEN/SW A • P0847 TRANSMISSION FLUID PRESSURE SEN/SW B • P0848 TRANSMISSION FLUID PRESSURE SEN/SW B • P0872 TRANSMISSION FLUID PRESSURE SEN/SW C • P0873 TRANSMISSION FLUID PRESSURE SEN/SW C • P0882 TCM POWER SUPPLY • P17C0 SHIFT FORK C • P17C1 SHIFT FORK C • P17C5 SHIFT FORK C • P2725 PRESSURE CONTROL SOLENOID E • P2734 PRESSURE CONTROL SOLENOID F • P2776 UPSHIFT SWITCH • P2780 DOWNSHIFT SWITCH • P2832 SHIFT FORK A • P2833 SHIFT FORK A • P2834 SHIFT FORK A • P2837 SHIFT FORK B • P2838 SHIFT FORK B • P2839 SHIFT FORK B • P283C SHIFT FORK C • P283D SHIFT FORK C • P283E SHIFT FORK C • P2841 SHIFT FORK D • P2842 SHIFT FORK D • P2843 SHIFT FORK D • P2845 SHIFT FORK A POSITION SENSOR • P2846 SHIFT FORK B POSITION SENSOR • P2847 SHIFT FORK C POSITION SENSOR • P2848 SHIFT FORK D POSITION SENSOR • P2849 SHIFT FORK A • P284A SHIFT FORK B • P284B SHIFT FORK C • P284C SHIFT FORK D
4	• P0711 TRANSMISSION FLUID TEMPERATURE SENSOR A • P0746 PRESSURE CONTROL SOLENOID A • P0747 PRESSURE CONTROL SOLENOID A • P0776 PRESSURE CONTROL SOLENOID B • P0777 PRESSURE CONTROL SOLENOID B • P0797 PRESSURE CONTROL SOLENOID C • P2715 PRESSURE CONTROL SOLENOID D

DTC Index

INFOID:0000000011487956

DTC[*1]		Item (CONSULT screen terms)	Trip	MIL	Permanent DTC group[*2]	Transmission warning light	Reference
GST	CONSULT						
P0601	P0601	MEMORY CHECK SUM	1	Lighting	B	Blinking	TM-68
P0604	P0604	CONTROL MODULE RAM	1	Lighting	B	Blinking	TM-70
P0605	P0605	CONTROL MODULE ROM	1	Lighting	B	Blinking	TM-71
P0607	P0607	CONT MODU PEFORMNCE	1	Lighting	B	Blinking	TM-72
P0613	P0613	TCM PROCESSOR	1	Lighting	B	Blinking	TM-73
P06B0	P06B0	SEN POWER SUPPLY A	1	Lighting	B	Blinking	TM-74
P0705	P0705	T/M RANGE SENSOR A	1	Lighting	A	Blinking	TM-77

DTC[*1]		Item (CONSULT screen terms)	Trip	MIL	Permanent DTC group[*2]	Transmission warning light	Reference
GST	CONSULT						
—	P0706	T/M RANGE SENSOR A	1	—	—	Blinking	TM-83
P0711	P0711	FLUID TEMP SENSOR A	2	Lighting	B	—	TM-88
P0712	P0712	TFT SENSOR A CIRCUIT	2	Lighting	B	—	TM-91
P0713	P0713	TFT SENSOR A CIRCUIT	2	Lighting	B	—	TM-94
P0715	P0715	INPUT SPEED SENSOR A	2	Lighting	B	Blinking	TM-97
P0720	P0720	OUTPUT SPEED SENSOR	2	Lighting	B	—	TM-100
—	P0725	ENGINE SPEED	1	—	—	Blinking	TM-103
P0746	P0746	PC SOLENOID A	2	Lighting	B	Blinking	TM-107
P0747	P0747	PRESS CONTROL SOL A	2	Lighting	B	Blinking	TM-109
P0748	P0748	PC SOLENOID A	2	Lighting	B	Blinking	TM-111
P0776	P0776	PC SOLENOID B	2	Lighting	B	Blinking	TM-114
P0777	P0777	PRESS CONTROL SOL B	2	Lighting	B	Blinking	TM-116
P0778	P0778	PC SOLENOID B	2	Lighting	B	Blinking	TM-118
—	P0790	NRML/PERFORM SW	1	—	—	—	TM-121
P0797	P0797	PC SOLENOID C	2	Lighting	A	Blinking	TM-123
P0798	P0798	PC SOLENOID C	2	Lighting	B	Blinking	TM-125
—	P0827	UP/DOWN SHIFT SWITCH	1	—	—	—	TM-128
—	P0828	UP/DOWN SHIFT SWITCH	1	—	—	—	TM-131
P0842	P0842	TFP SENSOR/SW A CIRC	2	Lighting	B	Blinking	TM-134
P0843	P0843	TFP SENSOR/SW A CIRC	2	Lighting	B	Blinking	TM-137
P0847	P0847	TFP SENSOR/SW B CIRC	2	Lighting	B	Blinking	TM-140
P0848	P0848	TFP SENSOR/SW B CIRC	2	Lighting	B	Blinking	TM-143
P0863	P0863	CONTROL UNIT (CAN)	1	Lighting	B	Blinking	TM-146
—	P0872	FLUID PRESS SEN/SW C	1	—	—	—	TM-148
—	P0873	FLUID PRESS SEN/SW C	1	—	—	—	TM-151
P0882	P0882	TCM POWER INPUT SIG	2	Lighting	B	Blinking	TM-154
P0973	P0973	SHIFT SOL A CONT CIRC	2	Lighting	B	Blinking	TM-157
P0974	P0974	SHIFT SOL A CONT CIRC	2	Lighting	B	Blinking	TM-160
P0976	P0976	SHIFT SOL B CONT CIRC	2	Lighting	B	Blinking	TM-163
P0977	P0977	SHIFT SOL B CONT CIRC	2	Lighting	B	Blinking	TM-166
P0979	P0979	SHIFT SOL C CONT CIRC	2	Lighting	B	Blinking	TM-169
P0980	P0980	SHIFT SOL C CONT CIRC	2	Lighting	B	Blinking	TM-172
P0982	P0982	SHIFT SOL D CONT CIRC	2	Lighting	B	Blinking	TM-174
P0983	P0983	SHIFT SOL D CONT CIRC	2	Lighting	B	Blinking	TM-176
P0985	P0985	SHIFT SOL E CONT CIRC	2	Lighting	B	Blinking	TM-179
P0986	P0986	SHIFT SOL E CONT CIRC	2	Lighting	B	Blinking	TM-182
P1705	P1705	TP SENSOR	2	Lighting	B	Blinking	TM-185
—	P1722	VEHICLE SPEED	1	—	—	Blinking	TM-186
P1725	P1725	ENGINE SPEED SIGNAL	1	Lighting	B	Blinking	TM-190
P17C0	P17C0	SHIFT FORK C	2	Lighting	B	Blinking	TM-192
P17C1	P17C1	SHIFT FORK C	2	Lighting	B	Blinking	TM-196
P17C5	P17C5	SHIFT FORK C	2	Lighting	B	Blinking	TM-200
P2637	P2637	TORQUE F/B SIGNAL A	1	Lighting	B	Blinking	TM-204

DTC*1		Item (CONSULT screen terms)	Trip	MIL	Permanent DTC group*2	Transmission warning light	Reference
GST	CONSULT						
P2641	P2641	TORQUE F/B SIGNAL B	1	Lighting	B	Blinking	TM-206
P2715	P2715	PC SOLENOID D	2	Lighting	A	Blinking	TM-208
P2716	P2716	PC SOLENOID D	2	Lighting	B	Blinking	TM-210
P2725	P2725	PC SOLENOID E	2	Lighting	B	Blinking	TM-213
P2734	P2734	PC SOLENOID F	2	Lighting	B	Blinking	TM-216
P2765	P2765	INPUT SPEED SENSOR B	2	Lighting	B	Blinking	TM-219
—	P2776	UPSHIFT SWITCH	1	—	—	—	TM-222
—	P2780	DOWNSHIFT SWITCH	1	—	—	—	TM-224
P2832	P2832	SHIFT FORK A	1	Lighting	B	Blinking	TM-226
P2833	P2833	SHIFT FORK A	1	Lighting	B	Blinking	TM-231
P2834	P2834	SHIFT FORK A	1	Lighting	B	Blinking	TM-234
P2837	P2837	SHIFT FORK B	1	Lighting	B	Blinking	TM-237
P2838	P2838	SHIFT FORK B	1	Lighting	B	Blinking	TM-243
P2839	P2839	SHIFT FORK B	1	Lighting	B	Blinking	TM-246
P283C	P283C	SHIFT FORK C	2	Lighting	B	Blinking	TM-249
P283D	P283D	SHIFT FORK C	2	Lighting	B	Blinking	TM-256
P283E	P283E	SHIFT FORK C	2	Lighting	B	Blinking	TM-260
P2841	P2841	SHIFT FORK D	1	Lighting	B	Blinking	TM-264
P2842	P2842	SHIFT FORK D	1	Lighting	B	Blinking	TM-270
P2843	P2843	SHIFT FORK D	1	Lighting	B	Blinking	TM-273
P2845	P2845	SHIFT FORK A POSI SEN	1	Lighting	B	Blinking	TM-276
P2846	P2846	SHIFT FORK B POSI SEN	1	Lighting	B	Blinking	TM-280
P2847	P2847	SHIFT FORK C POSI SEN	2	Lighting	B	Blinking	TM-284
P2848	P2848	SHIFT FORK D POSI SEN	1	Lighting	B	Blinking	TM-289
P2849	P2849	SHIFT FORK A	1	Lighting	B	Blinking	TM-293
P284A	P284A	SHIFT FORK B	1	Lighting	B	Blinking	TM-297
P284B	P284B	SHIFT FORK C	2	Lighting	B	Blinking	TM-301
P284C	P284C	SHIFT FORK D	1	Lighting	B	Blinking	TM-306
U0100	U0100	LOST COMM (ECM) A	1	Lighting	B	Blinking	TM-61
—	U0102	LOST COMM (TRASFER)	1	—	—	—	TM-62
—	U0121	LOST COMM (ABS)	1	—	—	—	TM-63
—	U0140	LOST COMM (BCM)	1	—	—	—	TM-64
—	U0141	LOST COMM BCM A	1	—	—	—	TM-65
—	U0155	LOST COMM (IPC)	1	—	—	—	TM-66
—	U1000	CAN COMM CIRCUIT	1	—	—	—	TM-67

*1: These numbers are prescribed by SAE J2012/ISO 15031-6.

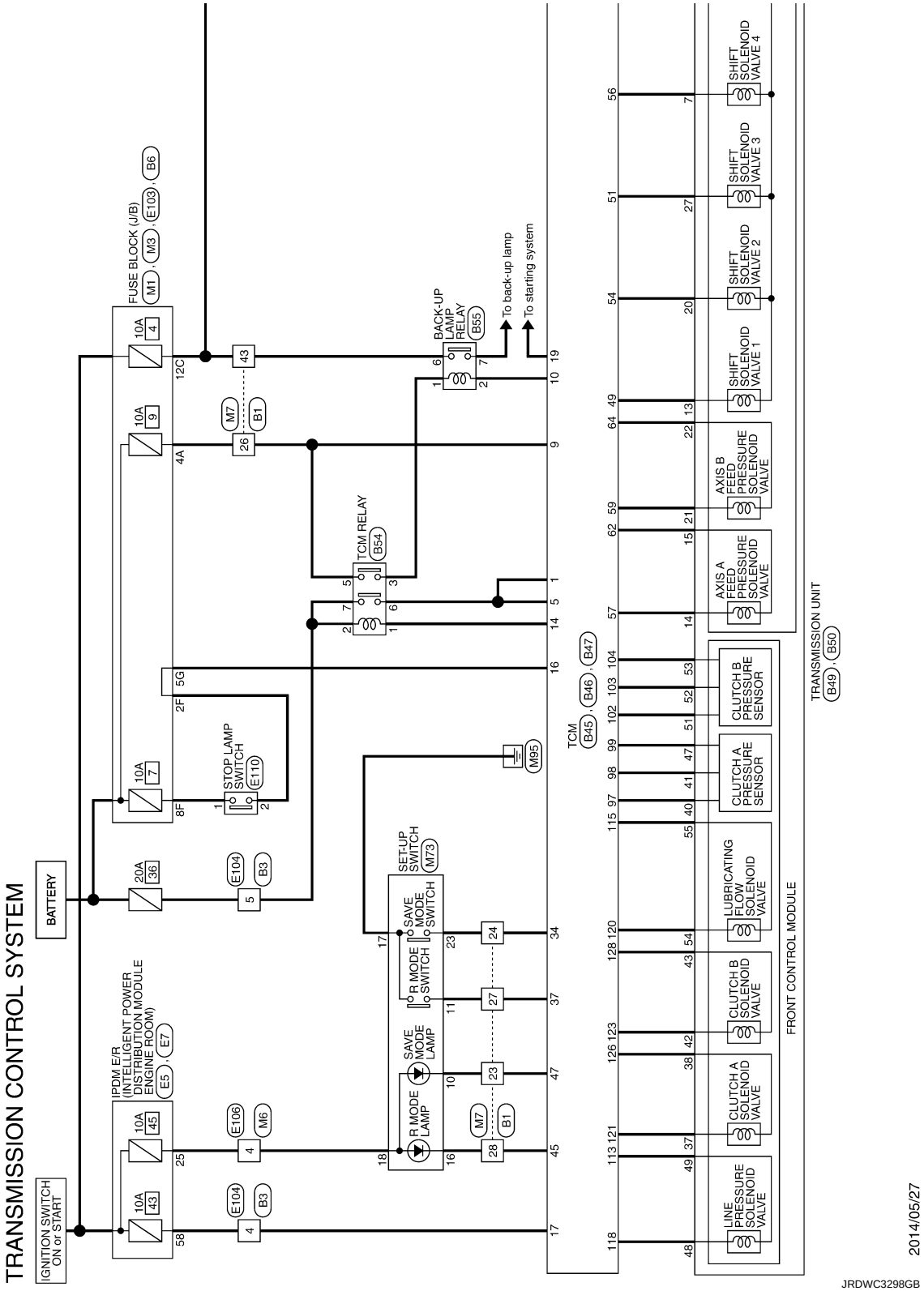
*2: Refer to TM-22, "Description (GT-R certified NISSAN dealer)".

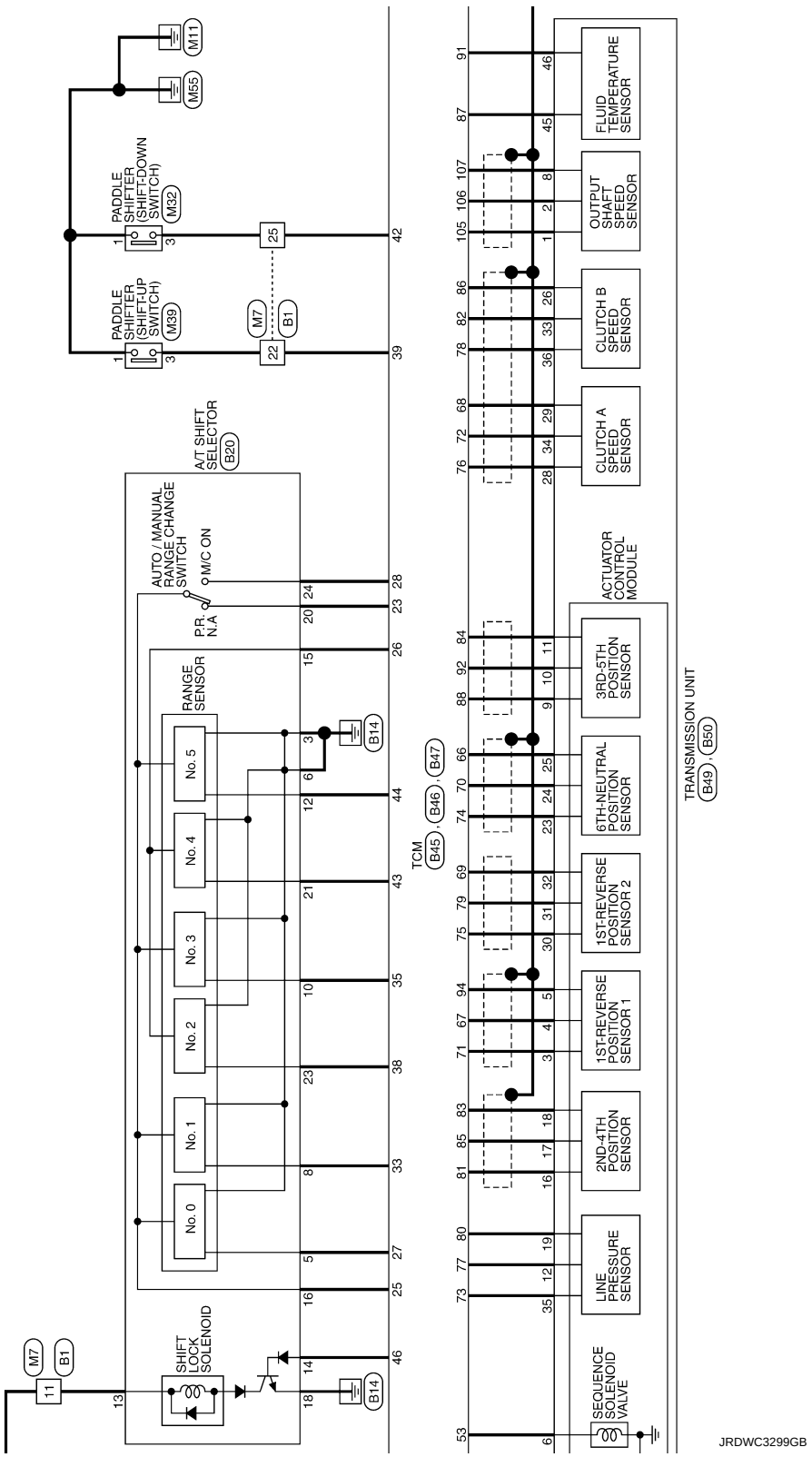
WIRING DIAGRAM

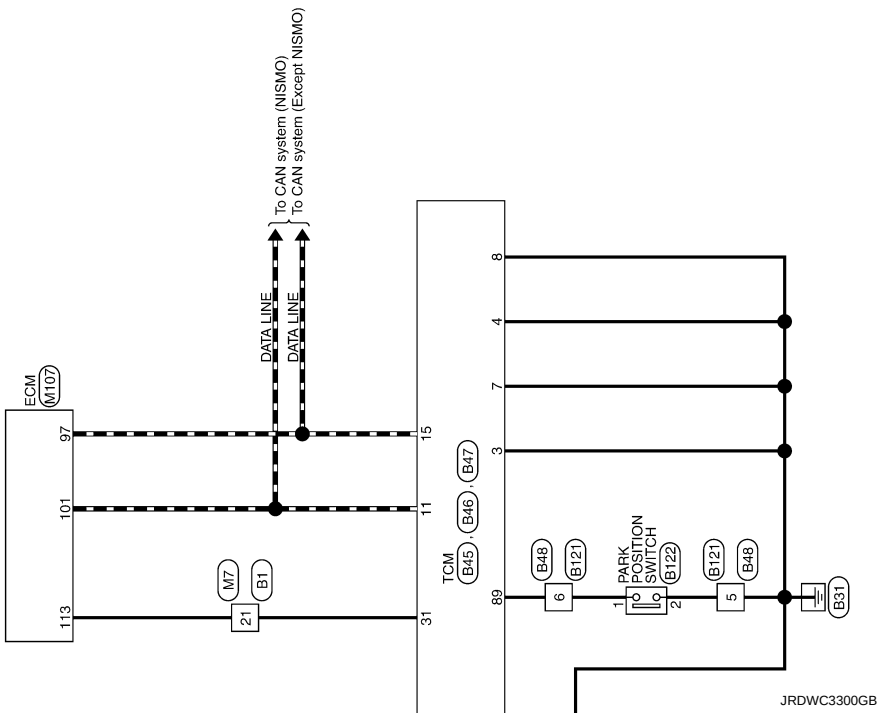
TRANSMISSION CONTROL SYSTEM

Wiring Diagram (GT-R certified NISSAN dealer)

INFOID:0000000011487957




PADDLE SHIFTER (SHIFT-DOWN SWITCH) M32
PADDLE SHIFTER (SHIFT-UP SWITCH) M39
M11
M55
M7
B1
A/T SHIFT SELECTOR B20
AUTO / MANUAL RANGE CHANGE SWITCH
M/C ON
P,R,N,A
RANGE SENSOR
No. 5
No. 4
No. 3
No. 2
No. 1
No. 0
B14
SHIFT LOCK SOLENOID
TCM (B45), (B46), (B47)
ACTUATOR CONTROL MODULE
3RD-5TH POSITION SENSOR
6TH-NEUTRAL POSITION SENSOR
1ST-REVERSE POSITION SENSOR 2
1ST-REVERSE POSITION SENSOR 1
2ND-4TH POSITION SENSOR
LINE PRESSURE SENSOR
SEQUENCE SOLENOID VALVE
CLUTCH A SPEED SENSOR
CLUTCH B SPEED SENSOR
OUTPUT SHAFT SPEED SENSOR
FLUID TEMPERATURE SENSOR
TRANSMISSION UNIT (B49), (B50)
JRDWC3299GB


To CAN system (NISMO)
To CAN system (Except NISMO)
DATA LINE
DATA LINE
ECM
(M107)
97
101
113
M7
B1
21
15
11
31
TCM
(B45), (B46), (B47)
8
4
7
3
89
B48
6
B121
PARK
POSITION
SWITCH
B122
1
2
B121
5
B48
B31
JRDWC3300GB

TRANSMISSION CONTROL SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	V	-
7	W	-
8	W	-
9	Y	-
10	R	-
11	Y	-
12	GR	-
13	BG	-
14	Y	-
15	BR	-
16	R	-
17	W	-
18	BR	-
20	GR	-
21	SB	-
22	W	-
23	G	-
24	BG	-
25	L	-
26	P	-
27	GR	-
28	BG	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	G	-
40	LG	-
41	Y	-
42	SB	-
43	P	-
47	R	-
48	B	-
49	W	-
50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	LG	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	SB	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	SB	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	BR	-
93	SB	-
94	GR	-
95	BG	-
96	Y	-
97	Y	-
98	LG	-
99	R	-
100	G	-

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	BG	-
3	BR	-
4	Y	-
5	R	-
6	P	-
7	W	-
8	SB	-
9	LG	-
10	V	-
11	GR	-
12	G	-

Connector No.	B6
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FBR-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10G	BG	-
4G	P	-
5G	W	-

Connector No.	B20
Connector Name	A/T SHIFT SELECTOR
Connector Type	TH24FW-NH

H.S.

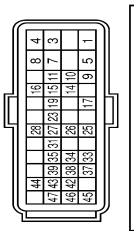
Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	BCM VCC IN
2	BG	KEY I/LOCK(P)
3	B	GROUND
5	G	RANGE SENSOR No. - SIGNAL
6	B	GROUND
8	V	RANGE SENSOR No.1 SIGNAL
10	G	RANGE SENSOR No.3 SIGNAL
12	GR	RANGE SENSOR No.5 SIGNAL
13	Y	VIGN
14	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
15	LG	RANGE SENSOR POWER SOURCE 2
16	L	RANGE SENSOR POWER SOURCE 1
17	R	ILLUMINATION
18	B	GROUND
20	BR	AUTO/MANUAL RANGE CHANGE SWITCH 1 SIGNAL
21	P	RANGE SENSOR No.4 SIGNAL
22	BR	ILLUMINATION GND
23	R	RANGE SENSOR No.2 SIGNAL
24	V	AUTO/MANUAL RANGE CHANGE SWITCH 2 SIGNAL

JRDWC4625GB

TRANSMISSION CONTROL SYSTEM

Connector No.	B45
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-LH-Z

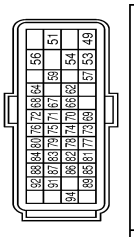
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	POWER SUPPLY (MEMORY BACK-UP)-2
3	B	GROUND
4	B	GROUND
5	W	POWER SUPPLY (MEMORY BACK-UP)-3
7	B	GROUND
8	B	GROUND
9	P	POWER SUPPLY (MEMORY BACK-UP)-1
10	LG	BACK-UP LAMP SIGNAL
11	L	CAN-H
14	V	POWER OFF
15	P	CAN-L
16	W	STOP LAMP SWITCH SIGNAL
17	Y	IGNITION SWITCH SIGNAL
19	GR	STARTER RELAY SIGNAL
23	BR	AUTO/MANUAL RANGE CHANGE SWITCH-1 SIGNAL
25	L	RANGE SENSOR POWER SOURCE 1
26	LG	RANGE SENSOR POWER SOURCE 2
27	G	RANGE SENSOR NO.- SIGNAL
28	V	AUTO/MANUAL RANGE CHANGE SWITCH-2 SIGNAL
31	SB	ENGINE SPEED SIGNAL
33	V	RANGE SENSOR NO.1 SIGNAL
34	BG	SAVE MODE SWITCH SIGNAL
35	G	RANGE SENSOR NO.3 SIGNAL
37	GR	R MODE SWITCH SIGNAL
38	R	RANGE SENSOR NO.2 SIGNAL
39	W	PADDLE SHIFTER (SHIFT-UP SWITCH) SIGNAL
42	L	PADDLE SHIFTER (SHIFT-DOWN SWITCH) SIGNAL
43	P	RANGE SENSOR NO.4 SIGNAL
44	GR	RANGE SENSOR NO.5 SIGNAL
45	BG	R MODE LAMP SIGNAL
46	W	SHIFT LOCK SOLENOID CONTROL SIGNAL
47	G	SAVE MODE LAMP SIGNAL

Connector No.	B46
Connector Name	TCM
Connector Type	RH40FBR-RZ8-L-LH-Z

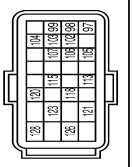
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
49	L	SHIFT SOLENOID VALVE 1 (+)
51	P	SHIFT SOLENOID VALVE 3 (+)
53	GR	SEQUENCE SOLENOID VALVE (+)
54	W	SHIFT SOLENOID VALVE 2 (+)
56	LG	SHIFT SOLENOID VALVE 4 (+)
57	BR	AXIS A FEED PRESSURE SOLENOID VALVE (+)
59	G	AXIS B FEED PRESSURE SOLENOID VALVE (+)
62	R	AXIS A FEED PRESSURE SOLENOID VALVE (-)
64	BG	AXIS B FEED PRESSURE SOLENOID VALVE (-)
66	R	6TH-NEUTRAL POSITION SENSOR (-)
67	L	1ST-REVERSE POSITION SENSOR 1 SIGNAL
68	BR	CLUTCH A SPEED SENSOR (-)
69	Y	1ST-REVERSE POSITION SENSOR 2 (-)
70	W	6TH-NEUTRAL POSITION SENSOR SIGNAL
71	Y	1ST-REVERSE POSITION SENSOR 1 (+)
72	G	CLUTCH A SPEED SENSOR SIGNAL
73	Y	LINE PRESSURE SENSOR (+)
74	BR	6TH-NEUTRAL POSITION SENSOR (+)
75	L	1ST-REVERSE POSITION SENSOR 2 (+)
76	Y	CLUTCH A SPEED SENSOR (+)
77	GR	LINE PRESSURE SENSOR SIGNAL
78	R	CLUTCH B SPEED SENSOR (+)
79	G	1ST-REVERSE POSITION SENSOR 2 SIGNAL
80	BR	LINE PRESSURE SENSOR (-)
81	G	2ND-4TH POSITION SENSOR (+)
82	W	CLUTCH B SPEED SENSOR SIGNAL
83	L	2ND-4TH POSITION SENSOR (-)
84	BR	3RD-5TH POSITION SENSOR (-)
85	Y	2ND-4TH POSITION SENSOR SIGNAL
86	L	CLUTCH B SPEED SENSOR (-)
87	L	FLUID TEMPERATURE SENSOR (+)
88	W	3RD-5TH POSITION SENSOR (+)
89	BG	PARK POSITION SWITCH SIGNAL
91	SB	FLUID TEMPERATURE SENSOR (-)
92	R	3RD-5TH POSITION SENSOR SIGNAL
94	G	1ST-REVERSE POSITION SENSOR 1 (-)

Connector No.	B47
Connector Name	TCM
Connector Type	RH24FGY-RZ8-R-LH-Z

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
97	BR	CLUTCH A PRESSURE SENSOR (+)
98	R	CLUTCH A PRESSURE SENSOR SIGNAL
99	W	CLUTCH A PRESSURE SENSOR (-)
102	Y	CLUTCH B PRESSURE SENSOR (+)
103	L	CLUTCH B PRESSURE SENSOR SIGNAL
104	G	CLUTCH B PRESSURE SENSOR (-)
105	L	OUTPUT SHAFT SPEED SENSOR (+)
106	G	OUTPUT SHAFT SPEED SENSOR SIGNAL
107	Y	OUTPUT SHAFT SPEED SENSOR (-)
113	BG	LINE PRESSURE SOLENOID VALVE (-)
115	W	LUBRICATING FLOW SOLENOID VALVE (-)
118	V	LINE PRESSURE SOLENOID VALVE (+)
120	BR	LUBRICATING FLOW SOLENOID VALVE (+)
121	R	CLUTCH A SOLENOID VALVE (+)
123	G	CLUTCH B SOLENOID VALVE (+)
126	LG	CLUTCH A SOLENOID VALVE (-)
128	Y	CLUTCH B SOLENOID VALVE (-)

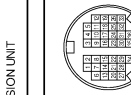
Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Type	RH06FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
3	L	-
4	V	-
5	B	-
6	BG	-

Connector No.	B49
Connector Name	TRANSMISSION UNIT
Connector Type	RH36FG

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	OUTPUT SHAFT SPEED SENSOR (+)
2	G	OUTPUT SHAFT SPEED SENSOR SIGNAL
3	Y	1ST-REVERSE POSITION SENSOR 1 (+)
4	L	1ST-REVERSE POSITION SENSOR 1 SIGNAL
5	G	1ST-REVERSE POSITION SENSOR 1 (-)
6	GR	SEQUENCE SOLENOID VALVE (+)
7	LG	SHIFT SOLENOID VALVE 4 (+)
8	Y	OUTPUT SHAFT SPEED SENSOR (-)
9	W	3RD-5TH POSITION SENSOR (+)
10	R	3RD-5TH POSITION SENSOR SIGNAL
11	BR	3RD-5TH POSITION SENSOR (-)
12	GR	LINE PRESSURE SENSOR SIGNAL
13	L	SHIFT SOLENOID VALVE 1 (+)
14	BR	AXIS A FEED PRESSURE SOLENOID VALVE (+)
15	R	AXIS A FEED PRESSURE SOLENOID VALVE (-)
16	G	2ND-4TH POSITION SENSOR (+)
17	Y	2ND-4TH POSITION SENSOR SIGNAL
18	L	2ND-4TH POSITION SENSOR (-)
19	BR	LINE PRESSURE SENSOR (-)
20	W	SHIFT SOLENOID VALVE 2 (+)
21	G	AXIS B FEED PRESSURE SOLENOID VALVE (+)
22	BG	AXIS B FEED PRESSURE SOLENOID VALVE (-)
23	BR	6TH-NEUTRAL POSITION SENSOR (+)
24	W	6TH-NEUTRAL POSITION SENSOR SIGNAL
25	R	6TH-NEUTRAL POSITION SENSOR (-)
26	L	CLUTCH B SPEED SENSOR (-)
27	P	SHIFT SOLENOID VALVE 3 (+)
28	Y	CLUTCH A SPEED SENSOR (+)
29	BR	CLUTCH A SPEED SENSOR (-)
30	L	1ST-REVERSE POSITION SENSOR 2 (+)
31	G	1ST-REVERSE POSITION SENSOR 2 SIGNAL
32	Y	1ST-REVERSE POSITION SENSOR 2 (-)
33	W	CLUTCH B SPEED SENSOR SIGNAL

JRDWC4626GB

TRANSMISSION CONTROL SYSTEM

34	G	CLUTCH A SPEED SENSOR SIGNAL
35	Y	LINE PRESSURE SENSOR (+)
36	R	CLUTCH B SPEED SENSOR (+)

Connector No.	B50
Connector Name	TRANSMISSION UNIT
Connector Type	RK22FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
37	R	CLUTCH A SOLENOID VALVE (+)
38	LG	CLUTCH A SOLENOID VALVE (-)
40	BR	CLUTCH A PRESSURE SENSOR (+)
41	R	CLUTCH A PRESSURE SENSOR SIGNAL
42	G	CLUTCH B SOLENOID VALVE (+)
43	Y	CLUTCH B SOLENOID VALVE (-)
45	L	FLUID TEMPERATURE SENSOR (+)
46	SB	FLUID TEMPERATURE SENSOR (-)
47	W	CLUTCH A PRESSURE SENSOR (-)
48	V	LINE PRESSURE SOLENOID VALVE (+)
49	BG	LINE PRESSURE SOLENOID VALVE (-)
51	Y	CLUTCH B PRESSURE SENSOR (+)
52	L	CLUTCH B PRESSURE SENSOR SIGNAL
53	G	CLUTCH B PRESSURE SENSOR (-)
54	BR	LUBRICATING FLOW SOLENOID VALVE (+)
55	W	LUBRICATING FLOW SOLENOID VALVE (-)

Connector No.	B54
Connector Name	TCM RELAY
Connector Type	M06FBR-R-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
3	G	-
5	BG	-
6	W	-
7	R	-

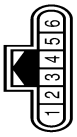
Connector No.	B55
Connector Name	BACK-UP LAMP RELAY
Connector Type	M06FBR-R-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LG	-
6	P	-
7	Y	-

Connector No.	B121
Connector Name	WIRE TO WIRE
Connector Type	RH06MB

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	L	-
4	P	-
5	B	-
6	L	-

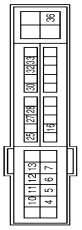
Connector No.	B122
Connector Name	PARK POSITION SWITCH
Connector Type	RK02FB

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	B	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

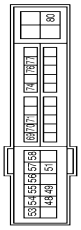
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
4	V	-
5	L	-
6	Y	-
7	R	-
10	W	-
11	SB	-
12	B/W	-
13	R	-
16	LG	-
25	BG	-
27	Y	-
28	G	-
30	GR	-
32	L	-
33	P	-
36	LG	-

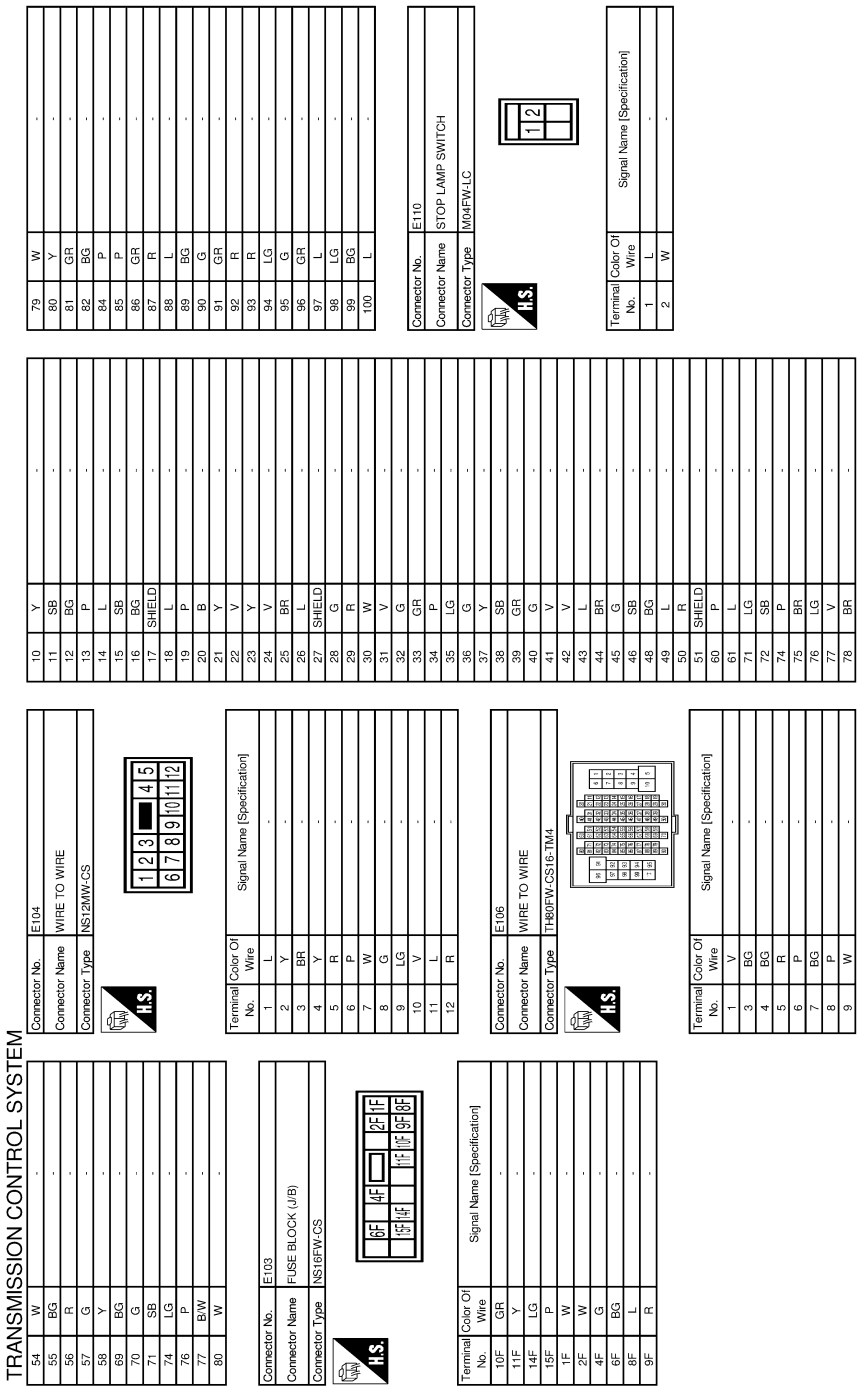
Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
48	L	-
49	P	-
51	LG	-
53	SB	-

JRDWC4627GB


TRANSMISSION CONTROL SYSTEM
Connector No. E104
Connector Name WIRE TO WIRE
Connector Type NS12MW-CS
Connector No. E103
Connector Name FUSE BLOCK (J/B)
Connector Type NS16FW-CS
Connector No. E106
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4
Connector No. E110
Connector Name STOP LAMP SWITCH
Connector Type M04FW-LC
H.S.
JRDWC4628GB

TRANSMISSION CONTROL SYSTEM

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1A	V	-
2A	G	-
3A	L	-
4A	LG	-
5A	SB	-
6A	Y	-
7A	R	-
8A	L	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	L	-
11C	R	-
12C	W	-
6C	R	-
7C	B	-
9C	BR	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
3	R	-
4	G	-
5	Y	-
6	P	-
7	W	-
8	V	-
9	L	-
10	Y	-
11	G	-
12	BG	-
13	R	-
14	L	-
15	BR	-
16	R	-
17	SHIELD	-
18	L	-
19	P	-
20	B	-
21	W	-
22	GR	-
23	L	-
24	V	-
25	BR	-
26	G	-
27	SHIELD	-
28	G	-
29	R	-
30	W	-
31	V	-
32	G	-
33	GR	-
34	LG	-
35	P	-
36	L	-
37	W	-
38	Y	-
39	GR	-
40	BG	-
41	W	-
42	R	-
43	Y	-
44	BR	-
45	G	-
46	LG	-
48	W	-
49	L	-
50	R	-
51	SHIELD	-
60	SB	-
61	V	-
71	W	-
72	LG	-
74	R	-
75	BR	-
76	LG	-
77	R	-
78	BR	-
79	W	-
80	Y	-
81	BG	-
82	SB	-
84	Y	-
85	P	-
86	GR	-
87	R	-
88	L	-
89	G	-
90	P	-
91	W	-
92	R	-
93	LG	-
94	W	-
95	SB	-
96	L	-
97	L	-
98	Y	-
99	BG	-
100	L	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	P	-
6	L	-
7	W	-
8	W	-
9	G	-
10	R	-
11	W	-
12	SB	-
13	G	-
14	W	-
15	BR	-
16	R	-
17	BG	-
18	SB	-
20	GR	-
21	L	-
22	R	-
23	G	-
24	BR	-
25	L	-
26	LG	-
27	W	-
28	R	-
31	GR	-
32	L	-
33	V	-
34	BG	-
39	W	-
40	BG	-
41	R	-
42	V	-
43	W	-
47	G	-
48	R	-
49	W	-

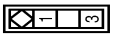
JRDWC4629GB

TRANSMISSION CONTROL SYSTEM

50	SHIELD	-
51	SB	-
52	B	-
53	R	-
54	B	-
56	R	-
57	G	-
58	G	-
59	R	-
60	BR	-
61	Y	-
62	SHIELD	-
63	GR	-
64	R	-
65	G	-
66	BR	-
67	BG	-
69	P	-
70	L	-
71	SHIELD	-
72	SHIELD	- [Without active noise control unit]
72	V	- [With active noise control unit]
73	LG	-
76	R	-
77	SB	-
78	G	-
79	Y	-
80	R	-
81	G	-
82	BR	- [Without active noise control unit]
82	G	- [With active noise control unit]
83	R	- [With active noise control unit]
83	Y	- [Without active noise control unit]
84	SHIELD	-
85	V	-
86	LG	- [Without active noise control unit]
86	W	- [With active noise control unit]
87	L	-
88	P	-
89	SHIELD	-
90	V	-
92	LG	-
93	Y	-
94	G	-
95	R	-
96	Y	-
97	R	-
98	G	-
99	L	-
100	W	-

Connector No.	M32
Connector Name	PADDLE SHIFTER (SHIFT-DOWN SWITCH)
Connector Type	A03FW

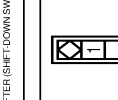
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	L	-

Connector No.	M39
Connector Name	PADDLE SHIFTER (SHIFT-UP SWITCH)
Connector Type	A04FW

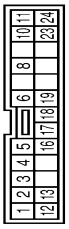
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	R	-

Connector No.	M73
Connector Name	SET-UP SWITCH
Connector Type	TK24FW-1V

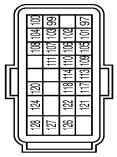
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	VDC TOP POSITION LED
2	R	ILL+
3	W	VDC TOP POSITION LED
4	V	ILL GND
5	L	VDC UP SW
6	P	E-SUS R MODE SW SIG
8	LG	E-SUS COMF MODE LAMP SIG
10	G	SAVE MODE LAMP SIGNAL
11	W	R MODE SWITCH SIGNAL
12	GR	VDC DN SW
13	G	HAZARD SW
16	R	R MODE LAMP SIGNAL
17	B	SW GND
18	G	IGN
19	BG	E-SUS R MODE LAMP SIG
23	BR	SAVE MODE SWITCH SIGNAL
24	R	E-SUS COMF MODE SW SIG

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
97	P	CAN COMMUNICATION LINE
99	SB	SENSOR POWER SUPPLY
100	BR	SENSOR POWER SUPPLY

101	L	CAN COMMUNICATION LINE
102	G	ASCD STEERING SWITCH
103	GR	SENSOR GROUND
104	P	ACCELERATOR PEDAL POSITION SENSOR 1
105	W	ECM RELAY (SELF SHUT-OFF)
106	LG	IGNITION SWITCH
107	BG	SENSOR GROUND
108	L	ACCELERATOR PEDAL POSITION SENSOR 2
109	L	SAVALVERLY
110	P	STOP LAMP SWITCH
111	GR	PNP SIGNAL
113	SB	ENGINE SPEED OUTPUT SIGNAL
114	V	DATA LINK CONNECTOR
117	R	ASCD BRAKE SWITCH
118	W	POWER SUPPLY FOR ECM (BACK-UP)
120	BR	SAPMPRLY
121	P	POWER SUPPLY FOR ECM
122	V	POWER SUPPLY FOR ECM
124	B	ECM GROUND
126	L	FUEL PUMP RELAY
127	G	THROTTLE CONTROL MOTOR RELAY
128	B	ECM GROUND

JRDWC4630GB

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000011487958

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

INFOID:0000000011487959

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- **Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.**
- **After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.**
- **Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.**

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.

4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT.

Precaution for Battery Service

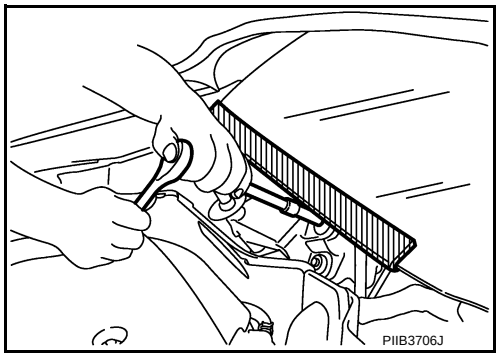
INFOID:0000000011487960

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000011487961

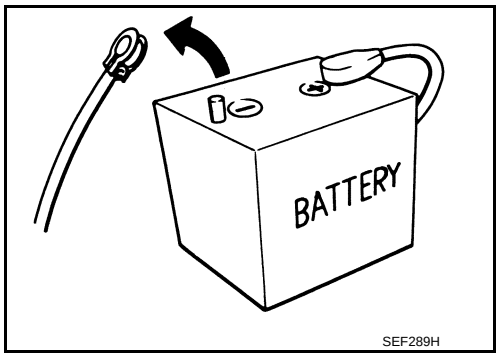
When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



Precautions for Removing Battery Terminal

INFOID:0000000011487962

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

Aluminum Die-Casting Parts Handling

INFOID:0000000011487963

PROHIBITION OF WELDING OR BEATING REPAIR

- Material made of aluminum die-casting parts is heat-treated and looses strength when being exposed to welding heat. Do not perform welding repair for cracks, damage or others.
- For aluminum die-casting parts deformation, do not perform repair by beating. Always repair by replacement as an assembly.

CRACK CHECK

When the vehicle is damaged, always perform a visual deformation check and a crack check.

Crack Check Procedures

For a crack check, use dye penetrant inspection fluid (pre-cleaning fluid, penetrant fluid and developer fluid).

CAUTION:

Always perform a crack check in accordance with the procedures specified by the manufacturer of the dye penetrant inspection fluid.

1. Spray pre-cleaning fluid on the checking surface for cleaning.
2. Spray penetrant fluid on the checking surface and wait until the penetrant fluid soaks into any cracks.
3. Wipe off excessive penetrant fluid, and then also lightly wipe off penetrant fluid using a wet cloth.
4. Spray developer fluid on the checking surface.
5. Cracks, if any, are dyed red in color.

STRAY CURRENT CORROSION

- Corrosion occurs to aluminum die-casting parts by the stray current corrosion phenomenon, when directly contacting other parts made of steel. Always apply anti-stray current corrosion paint (primer) on the mounting surface.
- Clean mounting surface to prevent any foreign matter, steel powder or others from being mixed in. Always apply the specified adhesive when installing.
- Corrosion by stray current corrosion may occur when installing with any other bolts than the specified bolt. Always use the specified bolt that is surface treated.
- When loosening the specified bolt that is tightened, the treated surface may peel. Never reuse the specified bolt that is tightened once.

TIGHTENING TORQUE CONTROL

Material made of aluminum die-casting parts is soft in term of hardness. Tightening torque must be controlled exactly as specified. Always use a torque wrench to install any part to the specified tightening torque.

WARNING:

Never use a power tool to remove or tighten bolts for aluminum die-casting part to prevent damage to aluminum die-casting parts.

Titanium Muffler Handling

INFOID:0000000011487964

CAUTION:

- **Never touch the titanium muffler directly with bare hands or allow oils to adhere to it during inspection, removal, and installation.**
- **Always wear new thick cotton gloves or working gloves. (Never use oil-adhered gloves.)**
- **After oil adhesion, wait until the titanium muffler cools and immediately remove oil with parts cleaner.**
- **Always use genuine parts cleaner (dry type) or the equivalent.**
- **When cleaning oil in on-board condition, apply parts cleaner to a waste to wipe out oil. By doing so, peripheral parts can be protected from parts cleaner adhesion.**
- **Be careful not to cut fingers with the insulator edge or the main muffler cooling fin.**

General Precautions

INFOID:0000000011487965

- Use “Genuine NISSAN Transmission oil R35 special”.
- Work in a clean workplace.
- Avoid using cotton gloves or a waste cloth to prevent the entry of lint. Use paper towel.
- Check for the correct status prior to removal and installation, disassembly and assembly.
- Use genuine NISSAN parts for replacement.
- Do not drop foreign matter into the transmission assembly inside.
- Check for damage, breakage and twist when replacing the O-ring and gaskets, etc.
- Check that no dirt is present on the mounting area when installing the parts.
- Check that tools and shop waste cloths are not left after finishing service work.
- Check and replace the oil level with the vehicle in a horizontal position.
- Do not reuse drained transmission oil.
- Treat the replaced transmission oil and cleaning oil as waste oil.

Precautions for Replacement of TCM and Transmission Assembly (GT-R certified NISSAN dealer)

INFOID:0000000011487966

Perform the following itmes after replacing TCM or transmission assembly.

×: Required —: Not required

Work sequence	Item	Transmission assembly replacement (Refer to TM-13, "TRANSMISSION ASSEMBLY REPLACEMENT : Special Repair Requirement (GT-R certified NISSAN dealer)".)	TCM replacement (Refer to TM-11, "TCM REPLACEMENT : Special Repair Requirement (GT-R certified NISSAN dealer)".)	Replacement of a set of transmission assembly and TCM (Refer to TM-17, "REPLACEMENT OF TCM AND TRANSMISSION ASSEMBLY : Special Repair Requirement (GT-R certified NISSAN dealer)".)
1	IP characteristics acquisition and writing	×	×	×
2	Learning value erasing (gear position, clutch A and clutch B)	×	—	—
3	Clutch gear learning	×	×	×
4	Clutch break-in	×	—	×
5	Clutch gear learning	×	—	×
6	Clutch touch point and clutch capacity adjustment	×	×	×

Precautions Before Performing Diagnosis

INFOID:0000000011487967

Check the following items before performing the diagnosis. Be careful that the applicable item may not always be malfunctioning.

PRECAUTION FOR MECHANISM

Mechanism	Symptom	Use conditions and constraint conditions
Manual transmission base	1. Similar to manual transmission vehicle, it adopts parallel axis gear, which generates collision sound. The sound is louder than general torque converter type automatic transmission due to reasons below. - Secures fairly large backlash in order to maintain lubrication capacity on gear surface in sport driving. - Adopts drysump lubrication method which enables a stable oil supply even in sport driving. - Adopts light weight flywheel in order to improve acceleration response. It could rattle, clang, or make pouring noise especially after sport driving. 2. Clicking sound can be observed at shift operation. 3. If shift lever is changed from R to A, M or A, M to R before vehicle stops, gear change could delay or could not be operated.	1. The sound becomes small if the transmission oil temperature falls. 2. — 3. Always operate it after footing on foot brake and confirming that the vehicle is absolutely stopped.
Wet-type multi-plate clutch	With the vehicle stationary and the shift lever in the A ⇔ M, or R range, when the brake pedal is released, the vehicle enters the status just like partial engagement of clutch in vehicles with manual transmission to prepare for start-up, and starts moving slowly (or in some circumstances, it may not start at all).	Securely depress the brake pedal while the vehicle is stopped.
	If the brake pedal and the accelerator pedal are depressed simultaneously, the clutch becomes overheated to accelerate its wear and deterioration.	Restrict the simultaneous depression of the brake pedal and the accelerator pedal.
	If the vehicle is stopped by controlling the acceleration pedal on uphill road, the clutch will be overheated like manual transmission vehicle, which results in transmission damage or engine stall.	When stopping on a slope, depress the brake pedal and do not perform a stopping operation by depressing adjustment of the accelerator pedal.

Mechanism	Symptom	Use conditions and constraint conditions
Electronically controlled hydraulic control	The following symptoms may occur by oil viscosity restriction variations due to temperature change. 1. Extremely high temperature after sport driving etc or extremely low ambient temperature can change the oil pressure response characteristics which can generate slip feeling or shock. 2. At very low temperatures in winter, the system check time may be prolonged by oil pressure response characteristic variations.	1. After the normal temperature is resumed, the slippage feeling and shock is reduced. 2. During the system check, the shift lever cannot be moved out from the P position. Therefore, operate the shift lever only after the system check indicator turns off. In addition, operation noise like a clank may be heard or the engine speed may drop during the system check, but they are not malfunction.
Mode change	Since quick gear change is performed in M range, jerky movement can be observed at start or at gear change.	—
	In M range R mode, the gear change speed becomes maximum at sport driving. Therefore, the gear change becomes slower at normal driving.	—
Rear final drive (mechanical LSD)	If the vehicle accelerates from a stop with the steering wheel widely turned in cold temperatures, the inner wheel tire may slip and some noise or vibration may be heard. This phenomenon occurs because the viscosity of the differential oil becomes thicker and the Limited Slip Differential (LSD) operates with increasing strength.	When the steering wheel is returned to the straight a head position or the differential oil warms up, the noise and vibration decrease.
Transfer (E-TS)	If the vehicle accelerates from a stop with the steering wheel widely turned in cold temperatures, it may be hard to move the vehicle when the accelerator pedal is depressed. This phenomenon is unique to AWD vehicles and is caused by the speed difference between the front and rear wheel. This is not a malfunction.	This phenomenon can be avoided by returning the steering wheel to the straight ahead position. The phenomenon can be reduced if the transmission setup switch is operated to switch to the 2WD mode only when turning the steering wheel widely at low speed.
Lightweight flywheel	The application of light fry wheels enables engine responses to accelerator operation. Therefore, engine speed varies widely, compared with conventional vehicles and this may generate a rattling sound or chattering sound.	—
	At the engine start or stop, a rattle may be heard.	—

PRECAUTIONS FOR SYMPTOM

Symptom		Cause	Action
When or after the engine starts	The shift lever is not released from the P range.	The system performs the system check of transmission after the engine starts. Therefore, the shift lever is not released from the P range by shift lock even if the driver depresses the brake during the check. This is normal. The system check time may be prolonged at low oil temperature.	Wait until the system check finishes.
	The vehicle cannot be driven after starting the engine at the N range.	When the engine starts at the N range after the engine stops at the driving range (A/M or R range), the vehicle may not start for safety. This is normal. • Conditions that the vehicle cannot be driven - The engine starts at the N range after stopping at the A/M range, and the R range is selected - The engine starts at the N range after stopping at the R range, and the A/M range is selected	If the engine starts at the N range, the vehicle can be driven by selecting the desired driving range after selecting the P range once. Perform the engine stop or start at the P range for safety reasons.
	The gear shift takes time at low oil temperature.	The oil viscosity is high and the oil flow restriction is large at low oil temperature, and the oil pressure response takes time.	Smooth gear shift is resumed, when the oil temperature increases.
	The engine speed fluctuates when the shift lever shifts from the N range or P range to the driving range (A/M, R range) without the brake pedal depressed.	If the shift lever shifts to the driving range (A/M or R range) without the brake pedal depressed, the clutch becomes the partial clutch engagement status simultaneously with the gear engagement. Therefore, the engine load changes. As a result, the engine speed may vary or decrease.	Securely depress the brake before shifting the shift lever to the driving range (A/M, R range) for safety reasons.
	The vehicle cannot start at any gears higher than 2GR.	The gear position that the vehicle can start is only 1GR and reverse gears. The vehicle cannot start at any gears higher than 2GR because the load for the clutch is too great.	Start the vehicle in 1GR or reverse gear. On a slippery road, use SAVE mode of the A range.
The gear shift is not performed or slow.	No manual upshift is accepted during start-up.	The manual shift change is inhibited in order to reduce the load to the clutch during start-up (until the clutch is engaged).	Shift the gear only after the start-up is finished (after the clutch is engaged).
	Shift-down to 1GR is denied during the drive in 2GR.	Speed reduction during the drive in 2GR causes partial clutch engagement to prevent engine stall. Therefore, shift-down to 1GR is denied.	To shift down to 1GR, depress the brake pedal and stop the vehicle or accelerate to escape from 2GR partial clutch engagement.
	The gear shift takes time at low oil temperature.	The oil viscosity is high and the oil flow restriction is large at low oil temperature, and the oil pressure response takes time.	Smooth gear shift is resumed when the oil temperature increases.
	The gear shift is not performed even if the paddle shifter operation is performed.	• The paddle shifter operation can be performed only in the M range. • If the engine over revving occurs or the specified engine speed is not reached after a gear shift, the gear shift is inhibited, and the shift position indicator on the combination meter blinks to warn the driver.	Use the M range and perform gear shift at the proper engine speed.

Symptom		Cause	Action
The gear shift is not performed or slow.	The continuous manual shift is not accepted.	The excessively fast continuous gear shift is prohibited for safety reasons. The gear shift that can be accepted during the gear shift is only the next gear shift.	Take interval time to continuously operate the paddle shifter.
	Shift lever operation is denied when parking the vehicle on a hill with the accelerator pedal depressed.	Shift lever operation is denied when parking the vehicle on a hill with the accelerator pedal depressed to protect transmission from being damaged.	When parking the vehicle on a hill, fully depress the brake pedal to operate the shift lever.
	The gear shift in R mode of the M range is slow.	The predictive pre-shift control provides a waiting gear selection focusing on the full sport driving. Therefore in normal driving, it takes time for changing the waiting gear and the gear shift time may be prolonged.	R mode of the M range is basically used in sport driving.
	No automatic upshift occurs in R mode of the M range.	In order to provide the operation feeling of manual transmission, no automatic upshift occurs like manual transmission.	Upshift manually or use in Normal mode of the M range.
	In Normal mode of M range, 2 speed gear shift is performed for one manual upshift.	Normal mode of M range performs the automatic upshift when the specified engine speed is reached. During the automatic upshift, if a manual upshift intervenes by the paddle shifter, a total of a 2-speed gear shift (1-speed automatic gear shift + 1-speed manual gear shift) is performed.	If the automatic upshift is used or a manual gear shift is done a little earlier, 1-speed gear shift can be attained. Or, R mode of the M range without automatic upshift is used.
	While driving in the A range, after the vehicle is accelerated for merging onto a freeway, for example, the automatic upshift does not occur soon after the accelerator pedal is released.	When the vehicle is accelerated rather hard for merging onto a freeway, or runs on a ramp curve with side G applied, the adaptive shift control works to activate the gear hold status in which no gear shift occurs for a certain period of time. This symptom stays longer in R mode than Normal mode.	Waiting for a certain period of time deactivates the gear hold status. Or upshift manually.
	During a sudden deceleration, no automatic downshift occurs.	During a sudden deceleration, if a tire lock occurs, the actual vehicle speed cannot be judged (the vehicle body moves, but the wheels stop), therefore the appropriate gear can no longer be selected. For safety reasons, a gear shift is inhibited.	With a certain period of time after the tire lock disappears, an automatic gear shift to the appropriate gear is resumed.
	An upshift near the engine rev limit causes a drop of the drive power.	A manual upshift near the engine rev limit may activate the engine over-rev protection depending on the timing and lower the engine torque. Therefore, an upshift at this timing drops the drive power.	This symptom can be eliminated by upshifting a little earlier.
	Shock generated by gearshift is great.	Shift shock varies depending on how the accelerator pedal depressed during a gear shift. Because the tuning allows an increase of the shift speed as the accelerator pedal travel increases, the shift shock also increases. For example, start the vehicle with the accelerator pedal fully depressed, as the vehicle speed increases, shift up to 2GR, after that release the accelerator pedal and shift up to 3GR. In this case, compared to 2GR to 3GR shift shock, 1GR to 2GR shift shock feels larger.	To prevent shift shock, drive with gentle accelerator operation.

Symptom		Cause	Action
The drive power is not generated or weak, or the engine races.	The drive power is weak when the temperature becomes extremely cold. The engine does not race.	The engine torque and engine speed are restricted to protect the transmission and engine at low temperature (the transmission oil temperature is approximately –20°C (–4°F) or less, or the engine oil temperature is approximately 0°C (32°F) or less). The drive power becomes weak or the engine speed does not increase over the specified speed.	If the oil temperature rises, the restriction of engine torque and engine speed is cancelled.
	The drive power is not generated at high oil temperature. The engine does not race.	The engine torque and engine speed are restricted to protect the transmission and engine at high temperature (the transmission oil temperature is approximately 150°C (302°F) or more, or the engine oil temperature is approximately 135°C (275°F) or more). The drive power becomes weak or the engine speed does not increase over the specified speed.	Reduce the speed or stop the vehicle in a safe place until the engine oil temperature decreases or the transmission warning lamp turns off.
	The drive power is not generated at high clutch temperature.	The engine torque and engine speed are restricted to protect the clutch at high clutch temperature. The drive power is not transmitted when the temperature is further increased. At this time, the vehicle may move if the brake pedal is not depressed on a slope.	Reduce the speed or stop the vehicle with the brake pedal depressed until the transmission warning lamp turns off.
	At very low temperature, hard acceleration causes engine racing.	At low oil temperature, because of a high oil viscosity, oil pressure response takes time. Therefore, before the clutch is engaged, the engine speed increases, which may cause an engine racing.	Do not perform hard acceleration at low outside temperature with cold transmission.
	After the vehicle stops with a sudden deceleration, depressing the accelerator pedal causes engine racing.	Under a sudden deceleration, tire lock easily occurs. To prevent an engine stall when a lock occurs, the clutch is released. Under that status, depressing the accelerator pedal may cause racing.	With a certain period of time after releasing the accelerator pedal, the clutch is engaged and the racing stops.
	Driving force is weak when using R mode start.	If R mode starting is performed four times consecutively, it restricts engine torque for protection which makes R mode starting unable. R mode starting cannot be used when a warning lamp is illuminated.	It can be recovered by performing cool down running [approx. 2 km (1.2 mile) at 60-80 km/h (38-49 MPH), gear in 5th or 6th] until transmission warning lamp turns off. Confirm the warning lamp content.
The engine stalls.	If the accelerator pedal and brake pedal are depressed together to stop, the engine stalls.	Because the clutch engagement pattern is adjusted for start-up or acceleration depending on the accelerator pedal operation, if the brake pedal is depressed together, a force to stop the engine is generated by braking force and the engine may stall.	Refrain from simultaneous footing on accelerator pedal and brake pedal as much as possible.

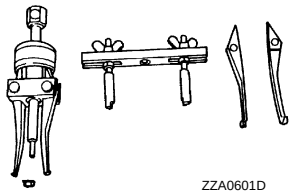
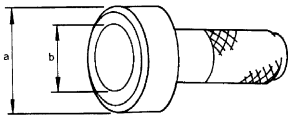
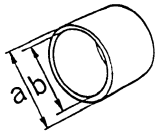
Symptom		Cause	Action
The set-up switch cannot be changed.	It cannot be changed from SAVE mode to R mode.	The mode changes by 1 step per 1 mode switch operation.	When changing from SAVE mode to R mode, set to Normal mode once, and then press and hold the switch for 1 second to select R mode.
	It cannot be changed from R mode to SAVE mode.		When changing from R mode to SAVE mode, set to Normal mode once, and then press the switch for SAVE mode.
The combination meter display is malfunctioning.	The oil change history is reset without operation.	The oil change history is reset if the power supply is cut off when the battery is removed at the battery replacement.	Note the history before removing the battery. Perform manual setting of history after reconnecting.

PREPARATION

PREPARATION

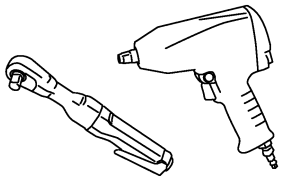
Special Service Tools (GT-R certified NISSAN dealer)

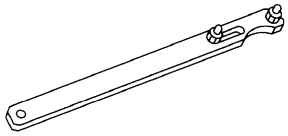
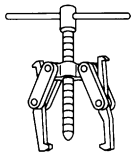
INFOID:0000000011487968

Tool number (TechMate number) Tool name	Description
KV381054S0 (J-34286) Puller  ZZA0601D	Removing the front oil seal
ST30720000 (J-25405) Drift a: 77 mm (3.03 in) dia. b: 55.5 mm (2.185 in) dia.  ZZA0811D	Installing front oil seal
KV40104830 (—) Drift a: 70 mm (2.76 in) dia. b: 63.5 mm (2.500) dia.  ZZA1003D	Installing front oil seal

Commercial Service Tools (GT-R certified NISSAN dealer)

INFOID:0000000011487969

Tool name	Description
Power tool  PBIC0190E	Loosening bolts and nuts

Tool name	Description
Flange wrench  NT035	Removing and installing mounting nut of companion flange
Puller  NT077	Removing companion flange

PERIODIC MAINTENANCE

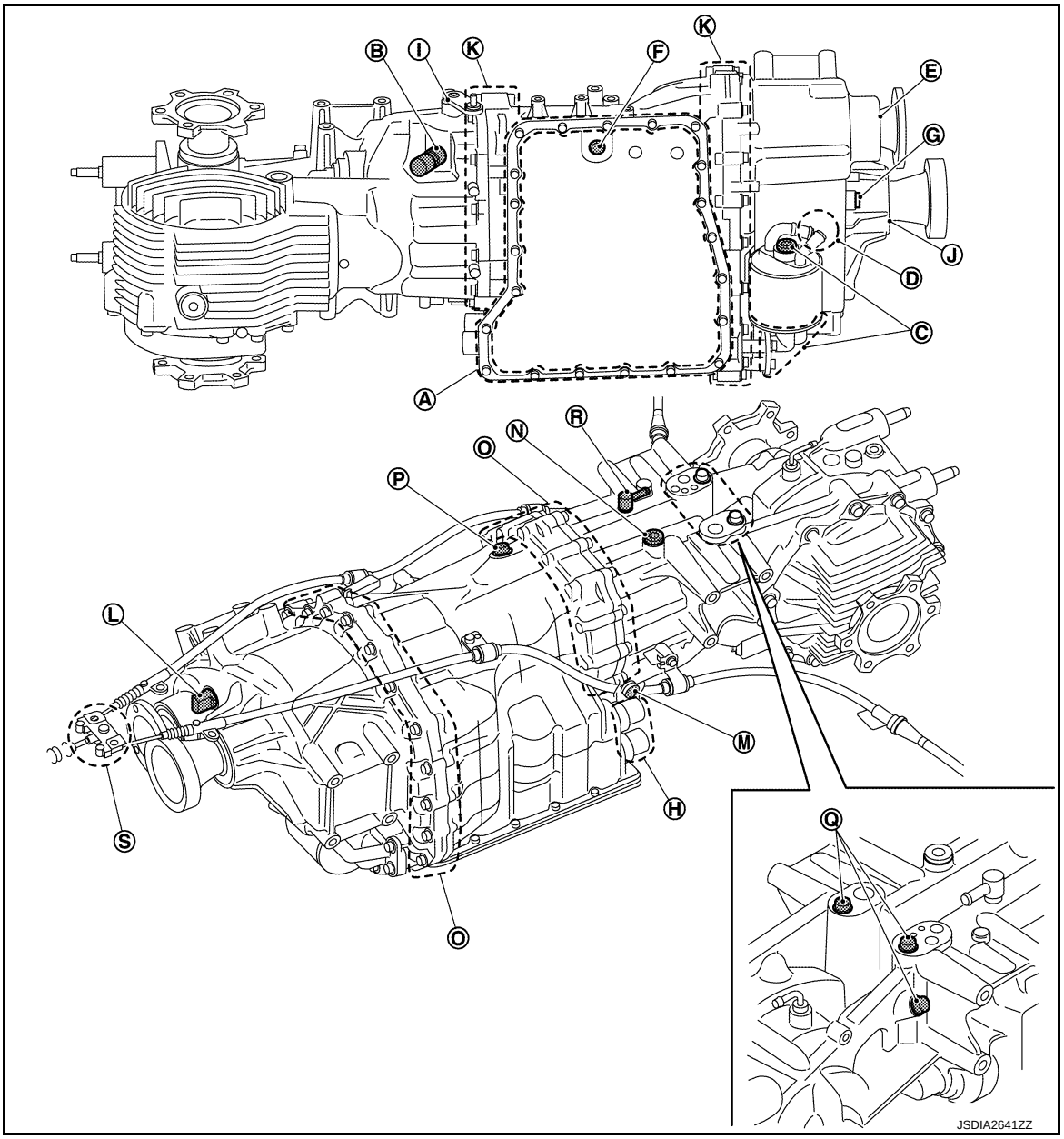
TRANSMISSION OIL

Inspection

INFOID:0000000011487970

LEAKAGE CHECK

- Visually check transmission assembly surrounding area (oil seal, drain plug, filler plug, transmission case, etc.) for smears and leakage of transmission oil.
- Check also the leakage or bleeding around rear final drive. For rear final drive check, refer to DLN-112, "Inspection".



Status	Parts		Required operation	Reference
Oil leakage*1, *2	Transmission assembly (on-board/ single unit)	A: Mating surface between oil pan and case	Check the seal surface condition. Replace the oil pan gasket only if there is a non-standard condition. Check for oil leakage.	TM-382
		B: Park position switch	Check the mounting surface condition. Replace the plain washer only if there is not any other malfunctioning condition. Check for oil leakage.	TM-384
		• C: Heat exchanger & bracket mounting surface and heat exchanger mounting bolt • D: Water hose connection (Engine coolant)	• C: Check the seal surface condition. If it is normal, replace the O-ring of the part where oil leakage arises and the single-use parts removed during procedure. Check for oil leakage. • D: Check the seal surface condition. If it is normal, replace the clamp of the part where engine coolant leakage arises. Check for engine coolant leakage.	TM-388, TM-386
		E: Front oil seal	Check the oil seal mounting surface and sliding surface condition. Replace the front oil seal only if there is not any other malfunctioning condition. Check for oil leakage.	TM-391
		F: Drain plug	Replace the drain plug. Check for oil leakage.	TM-382
		G: Filler plug	Replace the filler plug gasket. Check for oil leakage.	TM-405
		• H: Transmission harness connector • I: Oil seal of parking lever • J: Oil seal of companion flange (transmission side) of main propeller shaft assembly • K: Transmission case joining portion • L: AWD solenoid	Replace the transmission assembly.	TM-403
		M: 3rd-5th check pin	Replace the plain washer. Check for oil leakage.	TM-405
	Transmission assembly (single unit)	N: Filler plug	Replace the filler plug gasket. Check for oil leakage.	TM-405
		O: Transmission case joining portion	Replace the transmission assembly.	TM-403
		• P: Idler bolt • Q: Plug	Replace the plain washer or O-ring. Check for oil leakage.	TM-405
		R: Breather	Clean and wipe spouted oil with a part cleaner. Fill with oil to the specified oil level, if necessary.	—
Oil smears*3	Each part of the transmission assembly, including the parts requiring oil leakage check.		Use part cleaner or the equivalent to wipe out smeared oil. Then, check for oil leakage.	—
Grease drop*4	S: Parking cable		Wipe excess grease off.	—

- *1: When the oil drops
- *2: If oil leakage is detected, perform necessary procedures, check for oil leakage, and adjust oil level to the proper level.
- *3: When the oil does not drop
- *4: The grease applied to parking cable part can melt to generate a drop due to heat. Be careful not to confuse it with transmission oil leakage.

CONDITION CHECK

Remove the filler plug, insert a finger into the filler hole, and judge the oil conditions from the transmission oil applied to the inside of the transmission case.

CAUTION:

Be careful not to cut the finger with edges.

Transmission oil status	Possible cause	Required operation
Varnish-like condition (It is as thick as varnish).	Clutch is burned.	Change the transmission oil. Check the transmission assembly or any other parts on the vehicle.
Milky or cloudy	Water is mixed in the fluid. Example: • Inflow of engine coolant by internal explosion of heat exchanger • Inflow of water from breather by flood, etc.	Change the transmission oil. Check for flooded area.
A large amount of metal particles are contained in the fluid.	Sliding portions in the transmission assembly are excessively worn.	Change the transmission oil. Check the transmission assembly operation for any malfunctioning condition.

OIL CHANGE TIMING

Judging When to Change Transmission Oil by Oil Temperature

Transmission oil temperature while driving	Interval of transmission oil change
Not exceeding 120°C (248°F)	Change both transmission oil and differential oil every 60,000 km (36,000 miles)
From 120°C (248°F) – 140°C (284°F)	Change both transmission oil and differential oil every 5,000 km (3,000 miles)
Higher than 140°C (284°F)	Change both transmission oil and differential oil immediately.

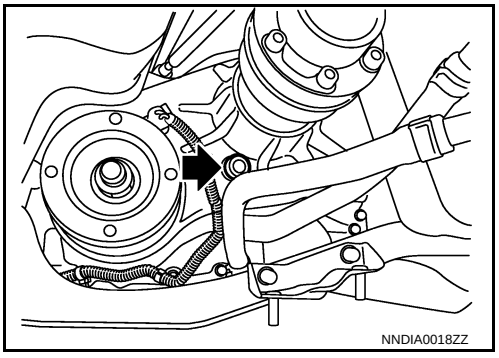
How to Check Transmission Oil Temperature History With CONSULT
1. Turn ignition switch ON.
2. Select “SHOW OIL TEMP HISTORY” in “Work support” in “TRANSMISSION”.
3. Check transmission oil temperature frequency history to judge the timing of oil change.

Transmission oil temperature frequency history	Timing of oil chang
At least one count in “Oil Temperature Frequency 5”	Change both transmission oil and differential oil immediately.
At least one count in “Oil Temperature Frequency 4”	Change both transmission oil and differential oil ever 5,000 km (3,000 miles).
No count in both “Oil Temperature Frequency 4” and “Oil Temperature Frequency 5”	Change both transmission oil and differential oil ever 60,000 km (36,000 miles).

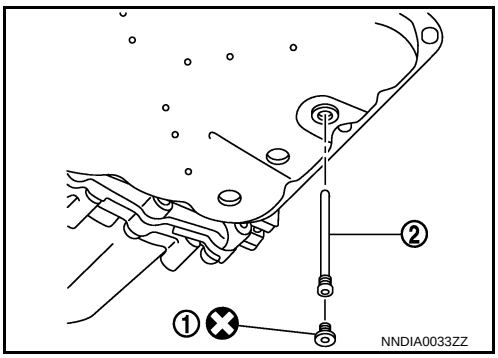
Draining

INFOID:0000000011487971

1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
2. Remove the heat insulator.
3. Remove the filler plug (⬅).



4. Remove the drain plug (1) and drain tube (2) from the oil pan, and then drain the transmission oil.
5. Install the drain tube to the oil pan. Refer to TM-382, "Exploded View".



Filling

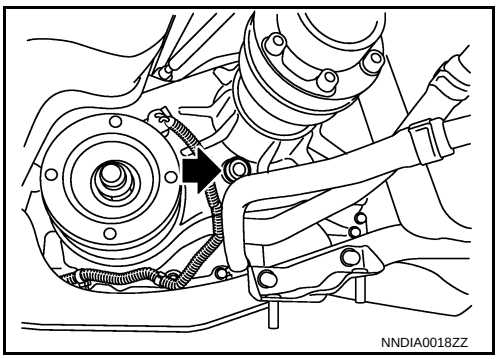
INFOID:0000000011487972

REPLACEMENT/ADJUSTMENT PROCEDURE

NOTE:

Replace the filler plug gasket and drain plug with new ones after oil level adjustment.

1. Remove the filler plug (⬅) and drain plug, and then fill with the transmission oil until it leaks from the drain hole.



Transmission oil : Refer to TM-407, "General Specification".

CAUTION:

- **Always use the specified transmission oil. In addition, always use the filler after cleaning. If use/mixed use/misuse of the transmission oil other than the specified brand occurs, the original performance cannot be obtained or it may cause serious malfunctions.**
- **Check that dust does not mix.**
- **Always use paper towels. Never use waste cloth.**

2. Install the filler plug and drain plug. Refer to TM-405, "Exploded View" (filler plug), TM-382, "Exploded View" (drain plug).
3. Start engine with shift position in P range and keep it until transmission system check is complete.

CAUTION:

- **If the oil does not fully circulate in transmission oil line after engine start, it could cause an oil flowing sound (such as hissing sound). Keep it at idle for several minutes in that case.**
- **Because of incomplete oil circuit in transmission oil line, a transmission warning light could illuminate at transmission system check. In this case, keep it at idle for several minutes, and then restart the engine.**

4. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds) → N range (wait for 5 seconds) → R range (wait for 5 seconds) → P range.
5. Stop the engine.
6. Remove the filler plug and drain plug, and then fill with the transmission oil until it leaks from the drain hole.
7. Install the filler plug and drain plug. Refer to TM-405, "Exploded View" (filler plug), TM-382, "Exploded View" (drain plug).
8. Install the heat insulator.
9. Start the engine and run it at idle. Run the engine until the oil temperature reaches 50°C (122°F) while checking FLUID TEMP in “DATA MONITOR” of CONSULT.
10. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds) → N range (wait for 5 seconds) → R range (wait for 5 seconds) → P range.
11. Stop the engine and wait for 5 minutes.
12. Remove the drain plug. Install the drain plug when the transmission oil begins to drip (1 drop/1 second). Refer to TM-382, "Exploded View".

CAUTION:

- **Perform from step 11 to step 12 within 25 minutes.**
- **Repeat the procedure from step 6 if the transmission oil does not leak from the drain hole.**

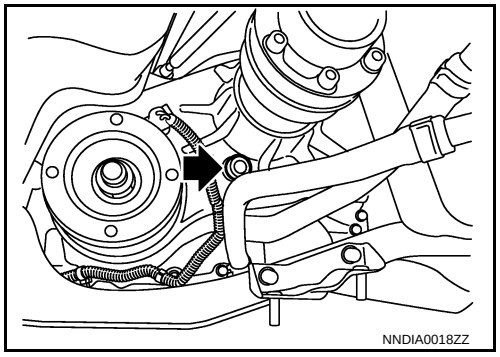
- **Never reuse drain plug.**

13. Replace the filler plug gasket with new ones.
CAUTION:
Never reuse filler plug gasket.
14. Install the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
15. Select “OIL TEMP HISTORY RESET” in “WORK SUPPORT” of CONSULT.
16. Touch “START” to reset oil temperature history.

REFILL ADJUSTMENT PROCEDURE

NOTE:
Replace the filler plug gasket and drain plug with new ones after oil level adjustment.

1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
2. Remove the heat insulator.
3. Start engine with shift position in P range and keep it until transmission system check is complete.
4. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds) → N range (wait for 5 seconds) → R range (wait for 5 seconds) → P range.
5. Stop the engine.
6. Remove the filler plug (⬅) and drain plug, and then fill with the transmission oil until it leaks from the drain hole.



Transmission oil **: Refer to TM-407, "General Specification".**

CAUTION:
- **Always use the specified transmission oil. In addition, always use the filler after cleaning. If use/mixed use/mis-use of non-specified transmission oil other than the specified brand occurs, the original performance cannot be obtained or it may cause serious malfunctions.**
- **Check that dust does not mix.**
- **Always use paper towels. Never use waste cloth.**

7. Install the filler plug and drain plug. Refer to TM-405, "Exploded View" (filler plug), TM-382, "Exploded View" (drain plug).
8. Install the heat insulator.
9. Start the engine and run it at idle. Run the engine until the oil temperature reaches 50°C (122°F) while checking FLUID TEMP in “DATA MONITOR” of CONSULT.
10. With depressing the brake pedal, shift the selectro lever to A range (wait for 5 seconds) → N range (wait for 5 seconds) → R range (wait for 5 seconds) → P range.
11. Stop the engine and wait for 5 minutes.
12. Remove the drain plug. Install the drain plug when the transmission oil begins to drip the drop status (1 drop/1 second). Refer to TM-382, "Exploded View".
CAUTION:
- **Perform from step 11 to step 12 within 25 minutes.**
- **Repeat the procedure from step 6 if the transmission oil does not leak from the drain hole.**
- **Never reuse drain plug.**

13. Replace the filler plug gasket with new ones.
CAUTION:
Never reuse filler plug gasket.
14. Install the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".

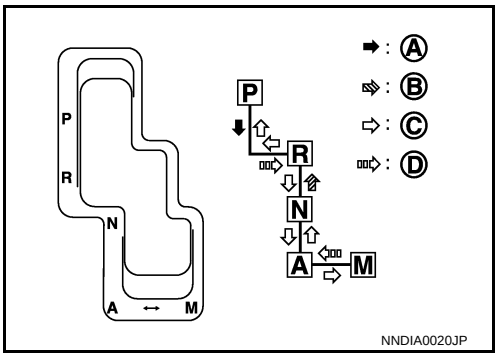
SHIFT POSITION

Inspection and Adjustment

INFOID:0000000011487973

INSPECTION

1. Turn the ignition switch to ON at the shift lever P position.
2. The shift lever can shift from the P position to the R position when the brake pedal is depressed. Alternatively, the shift lever cannot shift from the P position to the R position without the brake pedal depressed.
3. Operate the shift lever and check for excessive effort, sticking, noise or rattle.
4. When the shift lever is operated, a click is felt, and the fixed position is correct and corresponds to the shift position indicator in the combination meter
5. Check that the shift lever is shifted through all the shift positions in the manner shown in the figure.

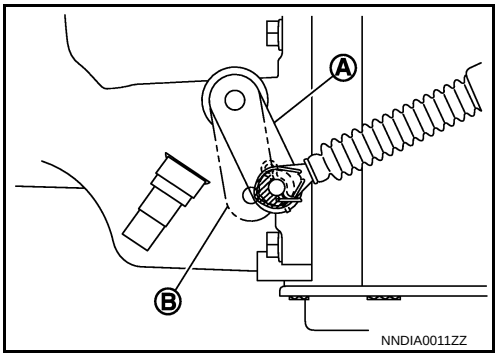


   A : Depress the brake pedal. Press and operate the knob button.
   B : Press and operate the knob button.
   C : Operate without condition.
   D : Automatic return.

6. Check in the P and N positions that the knob button can be operated without sticking when the button is pressed without the shift lever pressed forward and backward.
7. Check that in the R position the shift lever can be operated without sticking when the shift lever is operated left and right.
8. The back-up lamp can turn on and the reverse warning buzzer can sound with the shift lever in the R position only.
9. Check that the engine can be started with the shift lever in the P and N positions only.
10. The transmission is completely locked with the shift lever in the P position.
11. The shift position indicator of combination meter should change to the A range display or M range display when the shift lever is operated to the M position.
12. The shift position indicator in the combination meter should not change when each load of 30 N (3.1 kg) is applied (pressed) to front and rear side at the shift lever in the P position, front side at the shift lever in the R position, front side at the shift lever in the N position and rear side at the shift lever in the A position.

ADJUSTMENT

1. Disconnect the control cable from the A/T shift selector assembly. Refer to TM-378, "Exploded View (GT-R certified NISSAN dealer)".
2. Shift the parking lever of transmission assembly to the P range (A).



   B : Other than P position

3. Rotate the wheels at least a quarter turn and the Park position mechanism is fully engaged.
4. Shift the shift lever to the P position.
5. Install the socket of the control cable to the A/T shift selector assembly, and fix them with lock plate.
6. Insert the I-end bolt into the cable lever of the A/T shift selector assembly, and apply the load of 9.8 N (1 kg) in the cable lever P direction (toward vehicle front) to the control cable.
7. Release the control cable and temporarily tighten the lock nut. Then, tighten the lock nut to the specified torque. Refer to TM-378, "Exploded View (GT-R certified NISSAN dealer)".

FLYWHEEL HOUSING ASSEMBLY

Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487974

DESCRIPTION

Check the flywheel housing assembly if the following symptom occurs on the vehicle. Replace the flywheel housing assembly if any malfunctioning condition is detected.

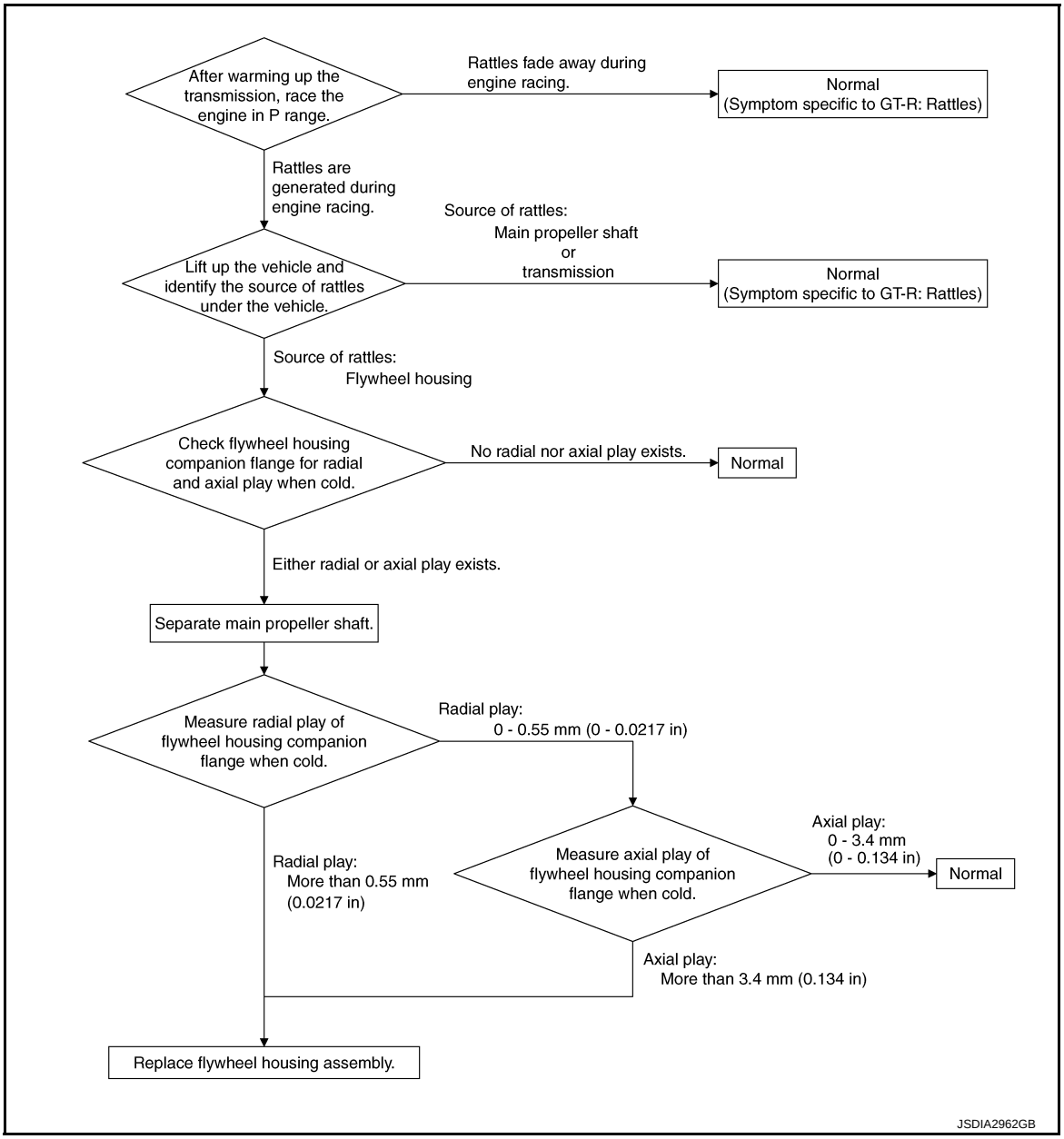
- Noise from floor lower side
- Vibration from floor lower side or whole vehicle

INSPECTION PROCEDURE

CAUTION:

Perform inspection in accordance with the work flow.

Work Flow



Inspection Procedure

1. Identify the location where noise occurs. Check play of the flywheel housing companion flange if noise occurs from the flywheel housing.

a. Check whether or not rattles remains during engine racing in P range after warming up transmission [transmission fluid temperature is 70°C (158°F) or more].

- If rattles does not remain during the engine racing, rattles is from the transmission. The flywheel housing is normal.
- If rattles remains during the engine racing, rattles may be caused by increased loosening of the flywheel housing bearing.

b. After warming up transmission, lift up the vehicle while the engine is running at idling speed. Check for noise under the vehicle using a stethoscope.

CAUTION:
Never touch any rotating object like the propeller shaft.
NOTE:
Noise is reflected by the ground surface and noise location identification becomes difficult when trying to check the noise without lifting up the vehicle.

- If the noise is heard from the transmission or main propeller shaft, it is a rattling noise generated by the transmission or main propeller shaft. This is not a malfunction in the flywheel housing.
- If the noise is heard from the flywheel housing, there is a possibility of increase in the play of flywheel housing bearing.

2. Move the flywheel housing companion flange in vertical direction (radial) and longitudinal direction (axial). Check that radial and axial play is not detected. If any radial or axial play is detected, measure the radial and axial play of the flywheel housing companion flange.

CAUTION:
Check the play when the transmission is cold.

3. Separate the main propeller shaft assembly. Refer to DLN-60, "Exploded View".
4. Measure the radial and axial play of the flywheel housing companion flange.

CAUTION:
Measure the play when the transmission is cold.

Radial Play

- Fix a dial indicator to the flywheel housing companion flange. Move the companion flange vertically. Check the reading of dial indicator.

A : Measuring point

Radial play

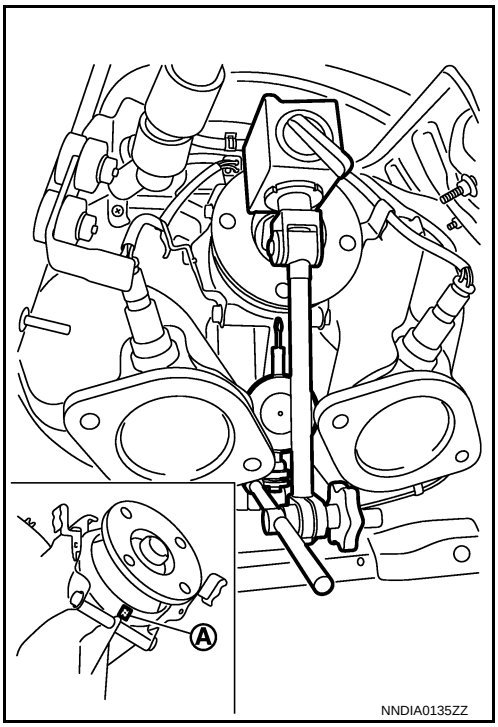
Standard **: Refer to TM-410, "Flywheel Housing Assembly (GT-R certified NISSAN dealer)".**

Axial Play

- Fix a dial indicator to the body panel. Contact the end of dial indicator to the propeller shaft mounting surface of flywheel housing companion flange. Move the companion flange longitudinally. Check the reading of dial indicator.

Axial play

Standard **: Refer to TM-410, "Flywheel Housing Assembly (GT-R certified NISSAN dealer)".**



5. If any reading of play of the flywheel housing companion flange is out of the radial play standard or axial play standard, the bearing is not fixed normally. Replace the flywheel housing assembly. Refer to TM-394, "Exploded View (GT-R certified NISSAN dealer)".

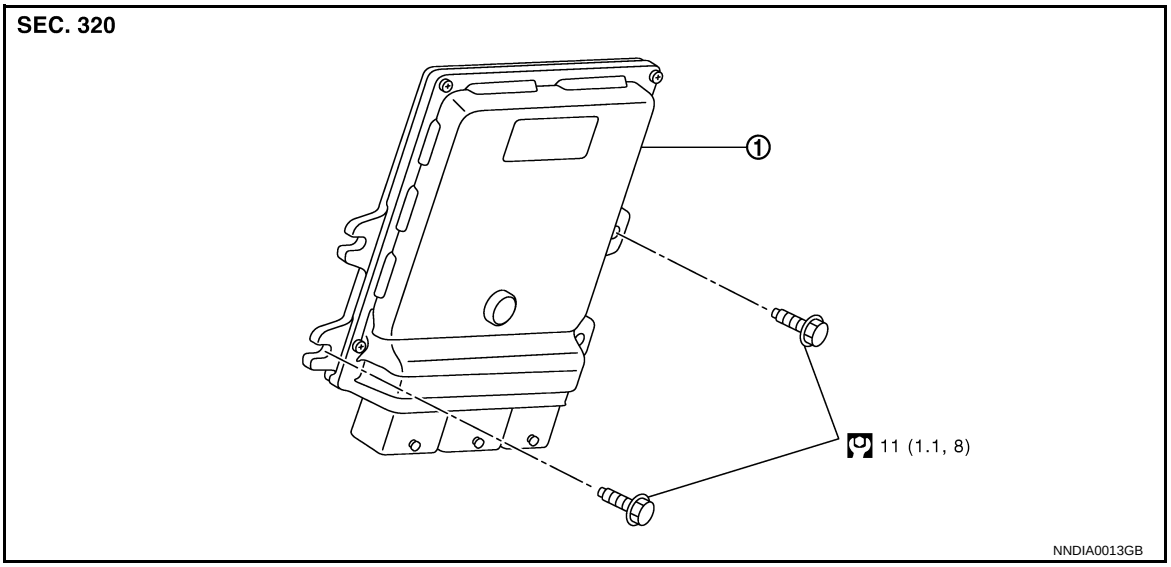
REMOVAL AND INSTALLATION

TCM

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487975

CAUTION:
- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For acquiring the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be extracted, TCM and the transmission assembly must be replaced as a set.**



1. TCM

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

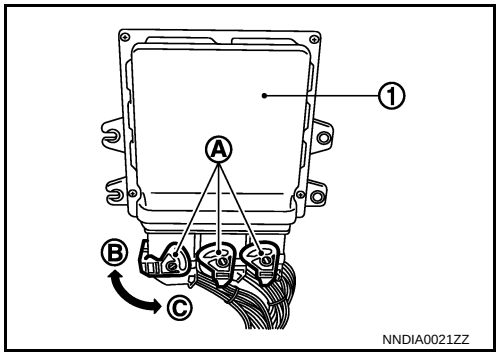
Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487976

REMOVAL

CAUTION:
- **Before TCM is replaced, the IP characteristics must be extracted, based on the information read out from the malfunctioning TCM. For acquiring the IP characteristic data, refer to "CONSULT GT-R TCM CONFIGURATION MANUAL".**
- **If no IP characteristic data can be extracted, TCM and the transmission assembly must be replaced as a set.**

1. Disconnect battery cable from negative terminal.
2. Remove the trunk front finisher. Refer to INT-27, "Exploded View".
3. Disconnect the TCM harness connector with the following procedure.
   - Push the protrusion for fixing and fully open the levers (A) as shown in the figure when disconnecting and connecting the TCM harness connector.



1	: TCM
Direction B	: Disconnect
Direction C	: Connect

4. Remove the TCM mounting bolt.
5. Remove the TCM from the vehicle.

INSTALLATION

Note the following, and install in the reverse order of removal.

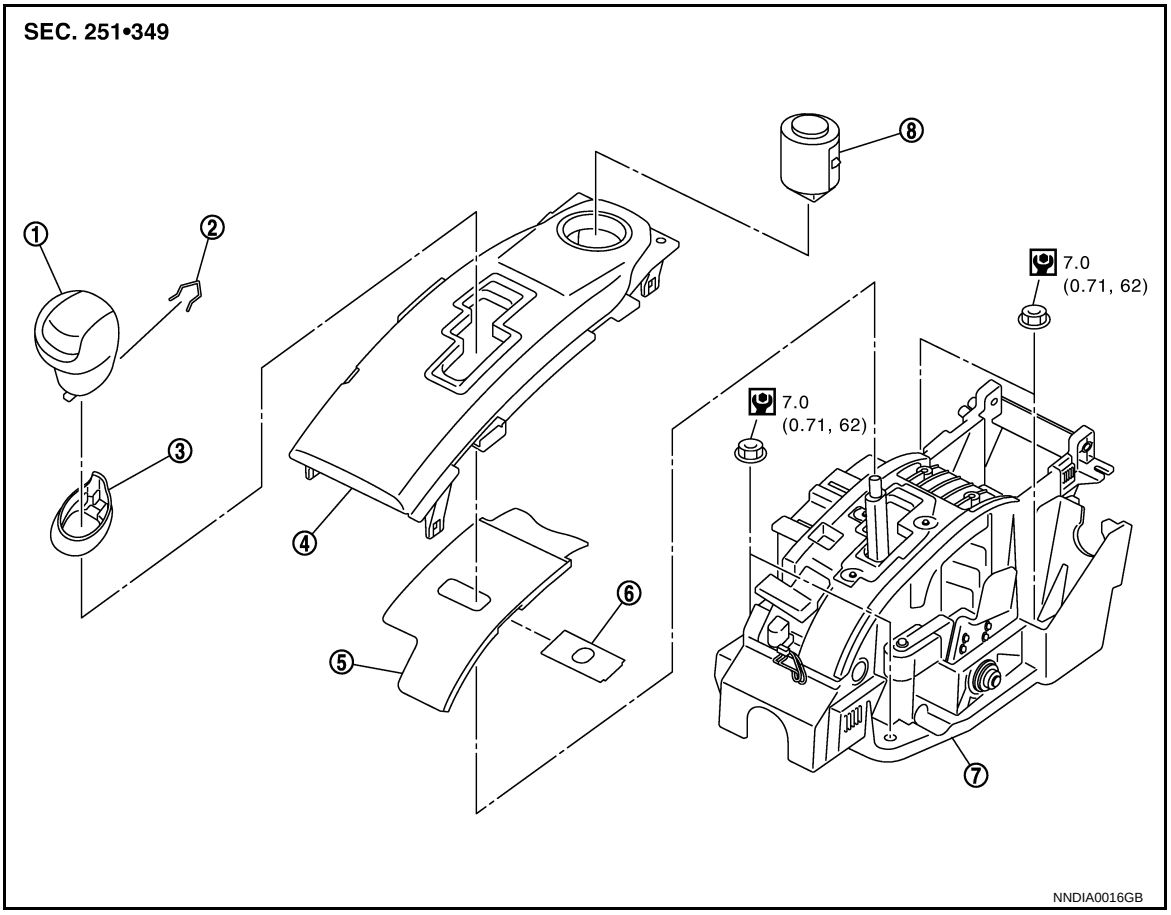
CAUTION:

Refer to TM-356, "Precautions for Replacement of TCM and Transmission Assembly (GT-R certified NISSAN dealer)" when the TCM is replaced.

A/T SHIFT SELECTOR

Exploded View

INFOID:0000000011487977



1. Shift lever knob
2. Lock pin
3. Knob cover
4. Position indicator lamp
5. Slide cover
6. Slide plate
7. A/T shift selector assembly
8. Push-button ignition switch

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

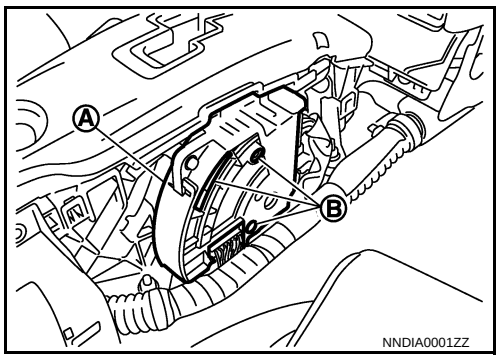
Removal and Installation

INFOID:0000000011487978

CAUTION:

Be careful of the following items because the range sensor is an important device to detect the shift lever position.

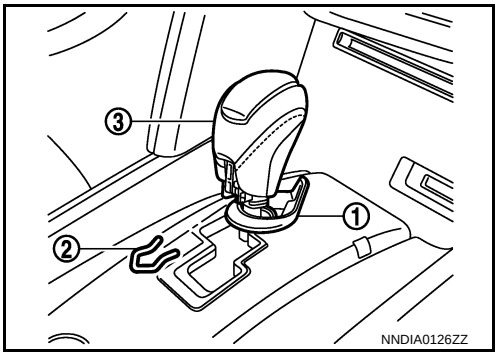
- **Keep range sensor (A) away from magnetic cards and magnetic objects during work.**
- **For a person with an electro-medical apparatus, keep the range sensor away from the device.**
- **Keep foreign objects away from the opening (B) of range sensor during work.**
- **Never touch the range sensor and sensor mounting screw.**
- **Always shift the shift lever to the P position during work.**



REMOVAL

1. Shift the shift lever to the P position.

2. Lower the rear side of the knob cover (1) downward.
3. Pull out the lock pin (2) from the shift lever knob (3).
4. Remove the shift lever knob and the knob cover.
5. Remove the console finisher assembly, instrument side panel LH/RH, and center console assembly. Refer to IP-23, "Exploded View".
6. Disconnect the control cable from the A/T shift selector assembly. Refer to TM-378, "Exploded View (GT-R certified NISSAN dealer)".
7. Disconnect the push-button ignition switch connector and the range sensor connector, and remove the harness clip.
8. Remove the A/T shift selector assembly mounting bolt.
9. Remove the A/T shift selector assembly from the vehicle.



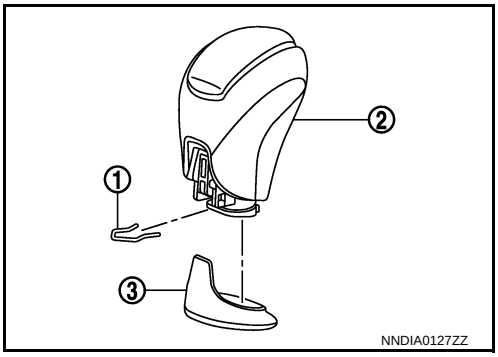
CAUTION:
Never place the A/T shift selector assembly upside-down after removal. In addition, never place the range sensor side down.

INSTALLATION

Note the following, and install in the reverse order of removal.

- Refer to “ADJUSTMENT” in TM-370, "Inspection and Adjustment" when installing the control cable to the A/T shift selector assembly.
- Note the following items when installing the shift lever knob.

1. Install the lock pin (1) to the shift lever knob (2).
2. Install the knob cover (3) to the shift lever knob.
3. Insert the shift lever knob into the shift lever until it clicks.



Disassembly and Assembly

INFOID:0000000011487979

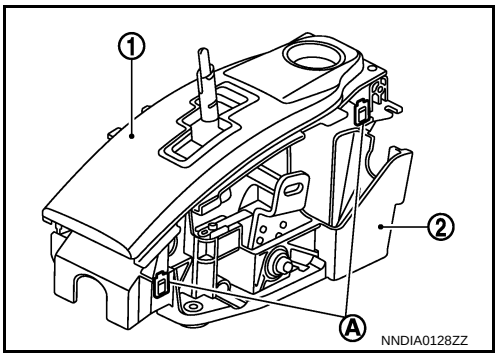
DISASSEMBLY

CAUTION:
Always shift the shift lever in the N position when performing disassembly and assembly of A/T shift selector assembly.

1. Press the shift lock release button, and then shift the shift lever in the N position.
2. Insert a flat-bladed screwdriver into tabs (A: 4 locations), and remove the position indicator plate (1) from the A/T shift selector assembly (2) while lifting it up.

CAUTION:
The tabs crack easily. Be careful when removing.

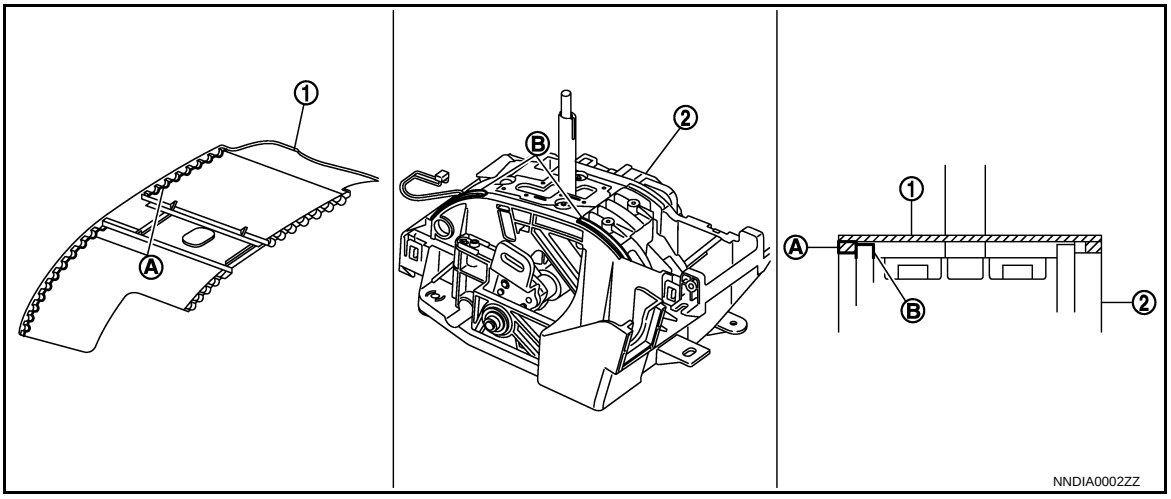
3. Remove the starter switch from the position indicator plate.
4. Remove the slide cover from the A/T shift selector assembly.



Assembly

Note the following, and assemble in the reverse order of disassembly.

- Align the convex area (A) of slide cover (1) with the convex area (B) of A/T shift selector assembly (2) as shown in the figure, and then install the position indicator plate. Check the shift lever movement after installation. Assemble again if any malfunctioning condition is detected.



Inspection

INFOID:0000000011487980

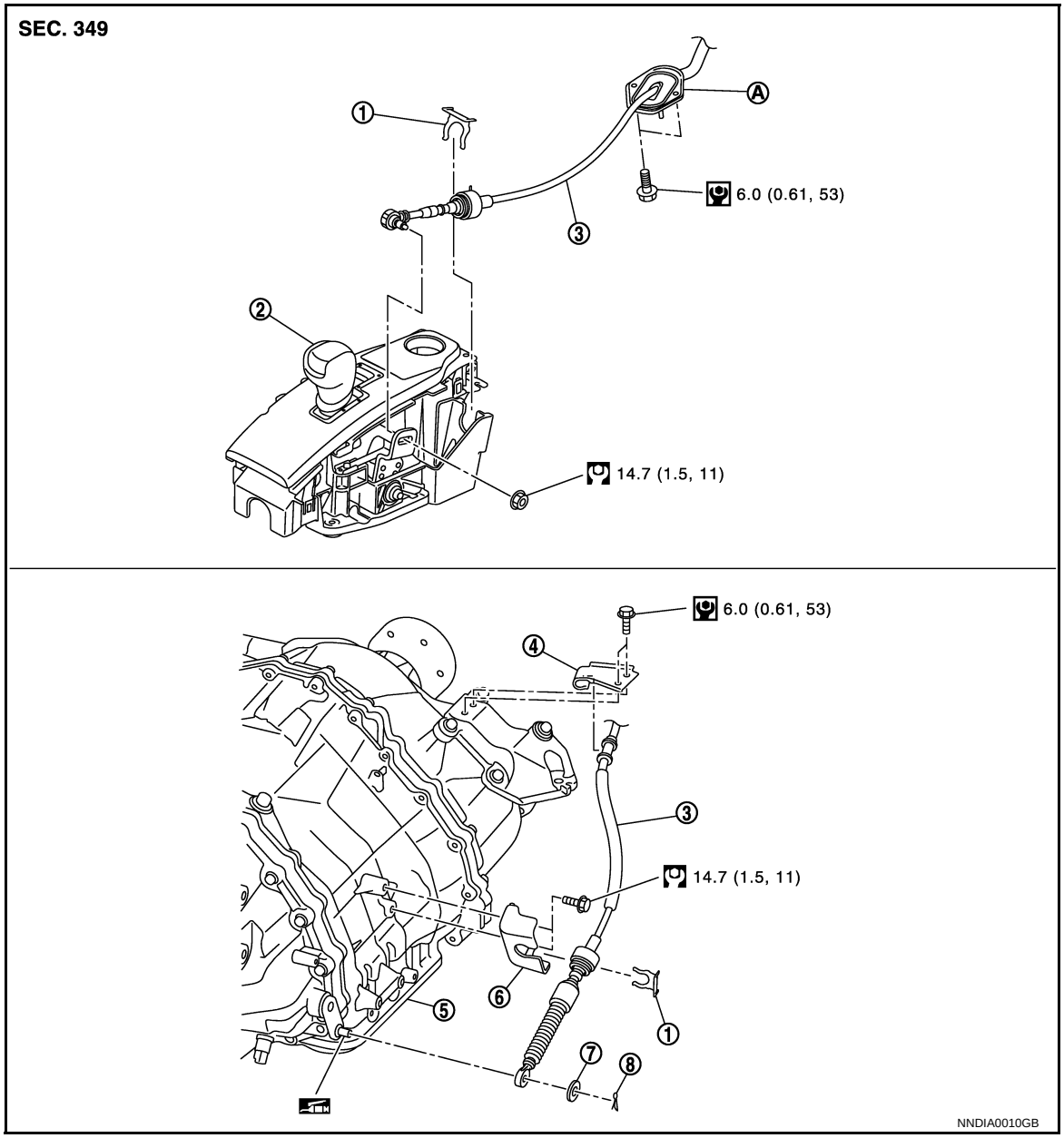
INSPECTION AFTER INSTALLATION

Check the shift position after installation. Adjust the shift position if any malfunctioning condition is detected. Refer to TM-370, "Inspection and Adjustment".

CONTROL CABLE

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487981



1. Lock plate
2. A/T shift selector assembly
3. Control cable
4. Bracket A
5. Transmission assembly
6. Bracket B
7. Plain washer
8. Lock pin
A. Retainer

: Apply multi-purpose grease or equivalent

Refer to GI-4, "Components" in GI section for the symbols other than above.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487982

CAUTION:

- **Never twist the control cable.**
- **Never bend the control cable excessively. (Maintain a winding radius of 200 mm (7.87 in) dia. or more.)**

- **Never damage the boot and insulation of control cable.**
- **Always shift the shift lever to the P position during work.**

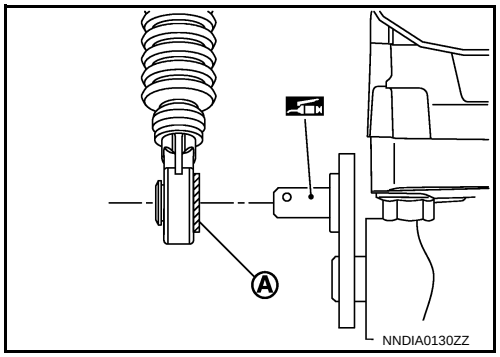
REMOVAL

1. Shift the shift lever to the P position.
2. Remove the console finisher assembly, instrument side panel LH/RH, and center console assembly. Refer to IP-23, "Exploded View".
3. Disconnect the control cable from the A/T shift selector assembly.
4. Separate the main propeller shaft assembly. Refer to DLN-60, "Exploded View".
5. Remove the retainer mounting bolt.
6. Lower down the transmission assembly from the vehicle. Refer to TM-403, "Exploded View (GT-R certified NISSAN dealer)".
7. Disconnect the control cable from the parking lever of transmission assembly.
8. Disconnect the control cable from bracket A.
9. Disconnect the lock plate from bracket B.
10. Disconnect the control cable from the vehicle.
11. Remove bracket A and bracket B from the transmission assembly.

INSTALLATION

Note the following, and install in the reverse order of removal.

- Connect the control cable to the parking lever of transmission assembly with the bushing flange (A) of control cable I-end facing to the transmission side.
  CAUTION:
  Apply multi-purpose grease or equivalent to the pin of parking lever at installation.
- Refer to “ADJUSTMENT” TM-370, "Inspection and Adjustment" when installing the control cable to the A/T shift selector assembly.



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487983

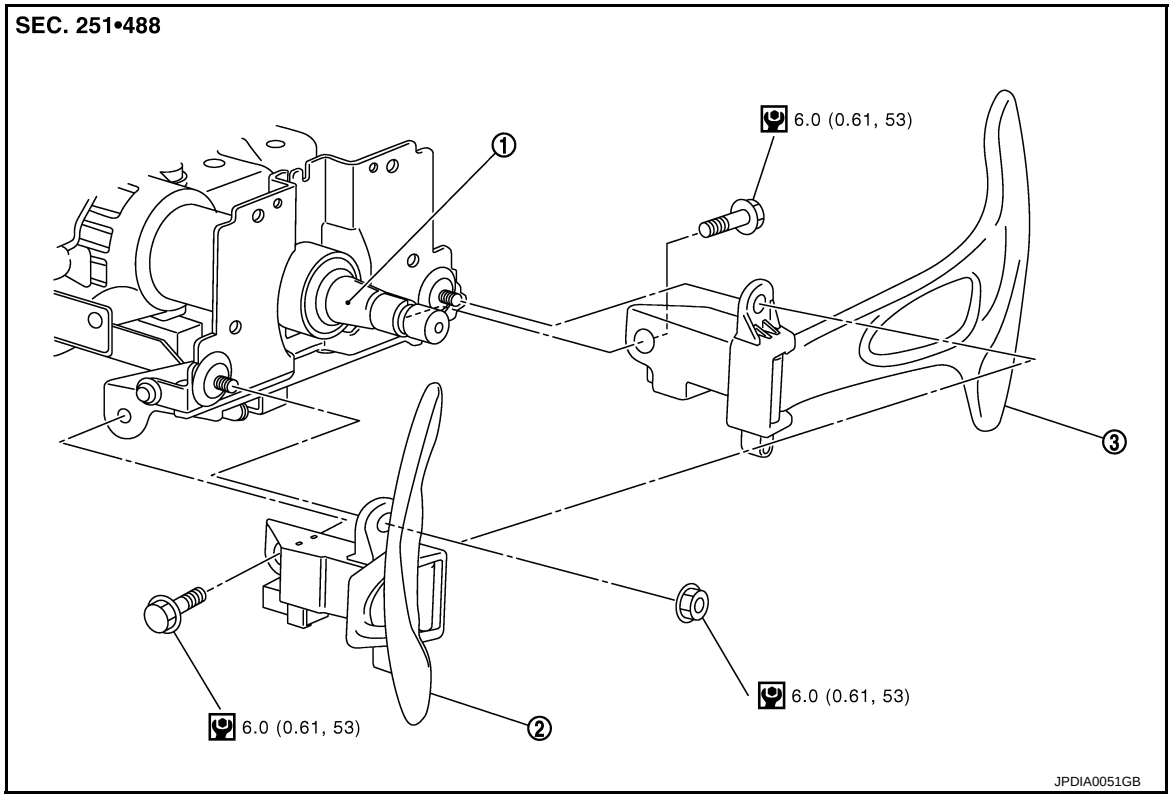
INSPECTION AFTER INSTALLATION

Check the shift position after installation. Adjust the shift position if any malfunctioning condition is detected. Refer to TM-370, "Inspection and Adjustment".

PADDLE SHIFTER

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487984



1. Steering column assembly
2. Paddle shifter (shift-down switch)
3. Paddle shifter (shift-up switch)

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487985

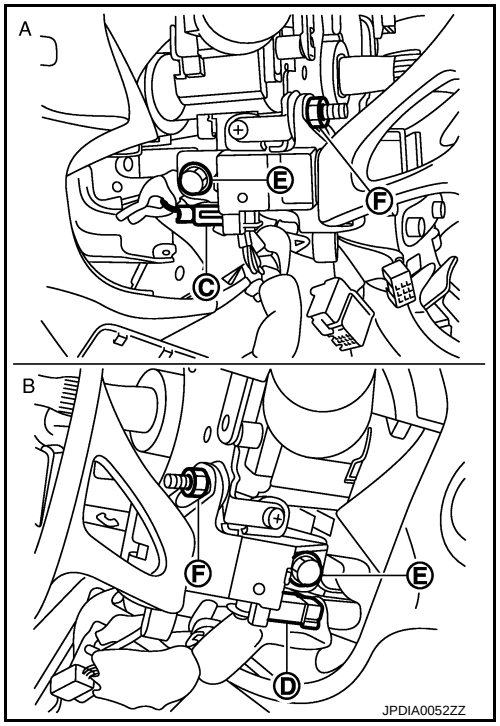
REMOVAL

1. Park the vehicle on a level surface.
2. Remove the steering column cover. Refer to IP-12, "Exploded View".
   NOTE:
   Rotate the steering wheel until the mounting screw can be seen, and then remove the mounting screw.

3. Disconnect the harness connectors (C) and (D) from the paddle shifter.

A : Paddle shifter (shift-down switch)
B : Paddle shifter (shift-up switch)

4. Remove the bolt (E) and nut (F) from the paddle shifter.
NOTE:
Rotate the steering wheel until the mounting nut can be seen, and then remove the mounting nut.
5. Remove the paddle shifter from the steering column assembly.

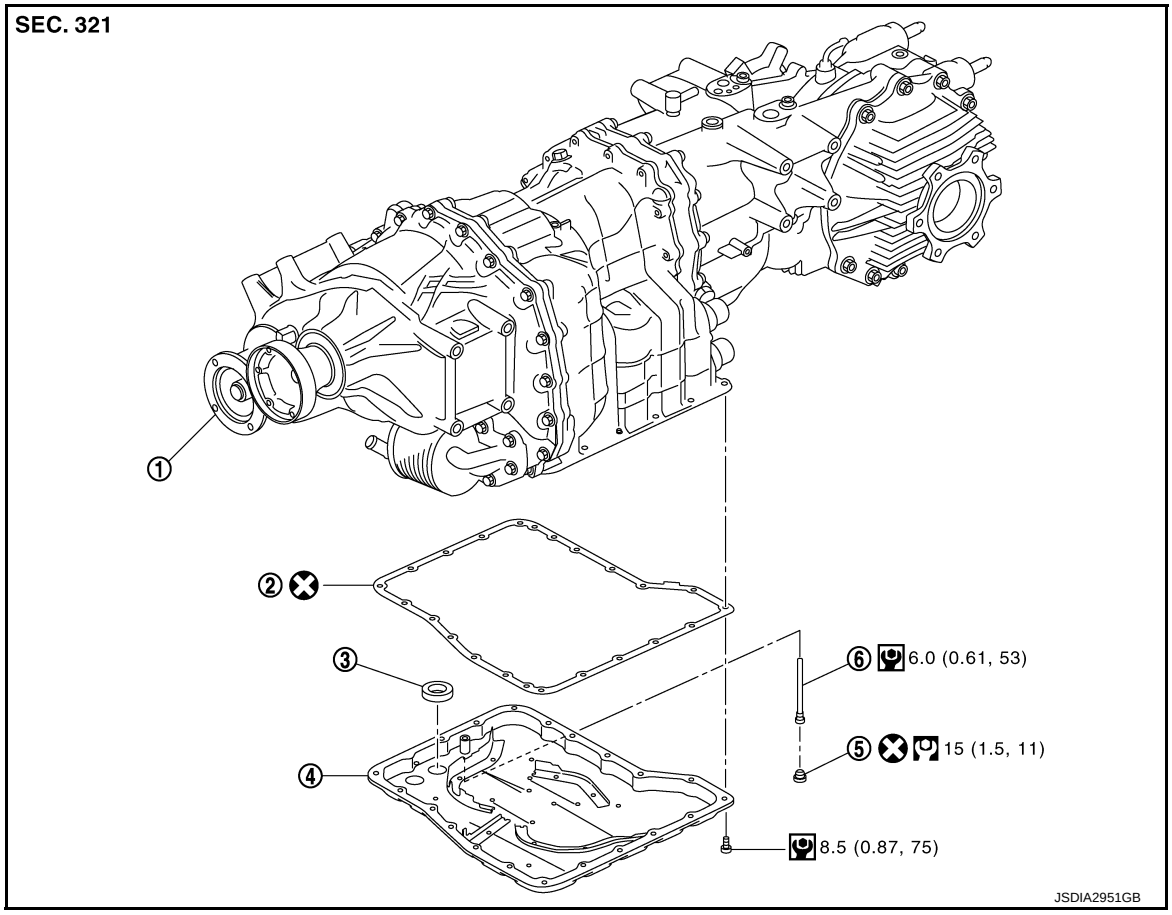


INSTALLATION
Install in the reverse order of removal.

OIL PAN

Exploded View

INFOID:0000000011487986



1. Transmission assembly
2. Oil pan gasket
3. Magnet
4. Oil pan
5. Drain plug
6. Drain tube

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

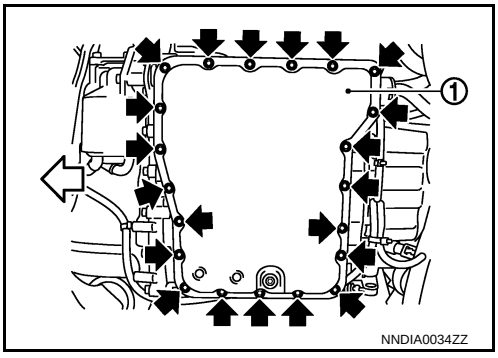
Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487987

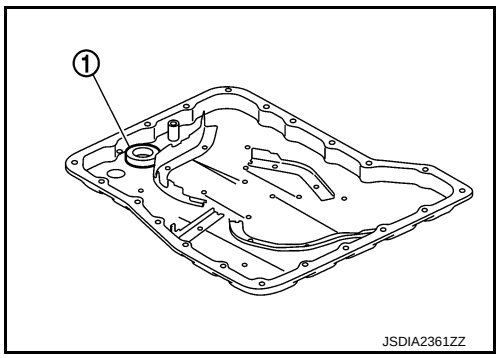
REMOVAL

1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
2. Drain the transmission oil from the transmission assembly. Refer to TM-367, "Draining".
3. Remove the oil pan mounting bolt (⇦), and then remove the oil pan (1) and oil pan gasket.

⇦ : Front of vehicle



4. Remove the magnet (1) from the oil pan.

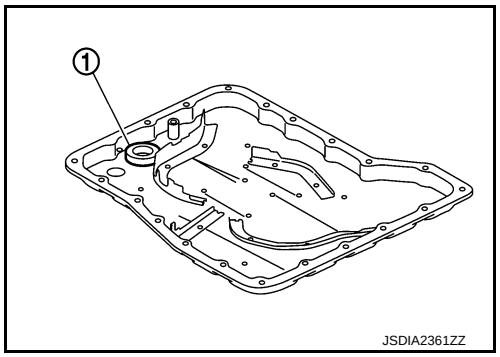


INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

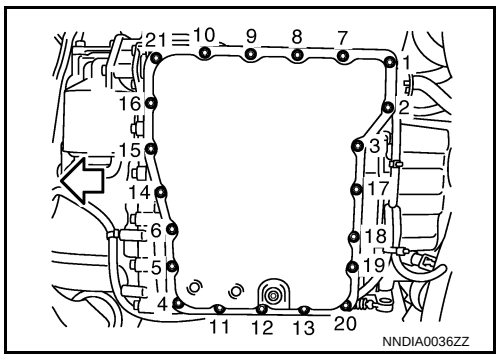
- **Clean foreign matter (gear wear particles) that are adhered on the inside of the oil pan and on the magnet, and then assemble.**
- **Completely wipe out any moisture, oil and old gasket from the gasket mounting surface.**
- **Never reuse oil pan gaskets.**
- **Never forget assembly of drain tube.**
- **Never reuse drain plug. In addition, install new drain plug after adjustment of transmission oil filling.**
- Install the magnet (1) as shown in the figure.



- When the oil pan is installed, tighten bolts in the order shown in the figure after temporarily tightening the oil pan mounting bolt.

⇦ : Front of vehicle

- Fill with the transmission oil to the transmission assembly after installation. Refer to TM-368, "Filling".



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487988

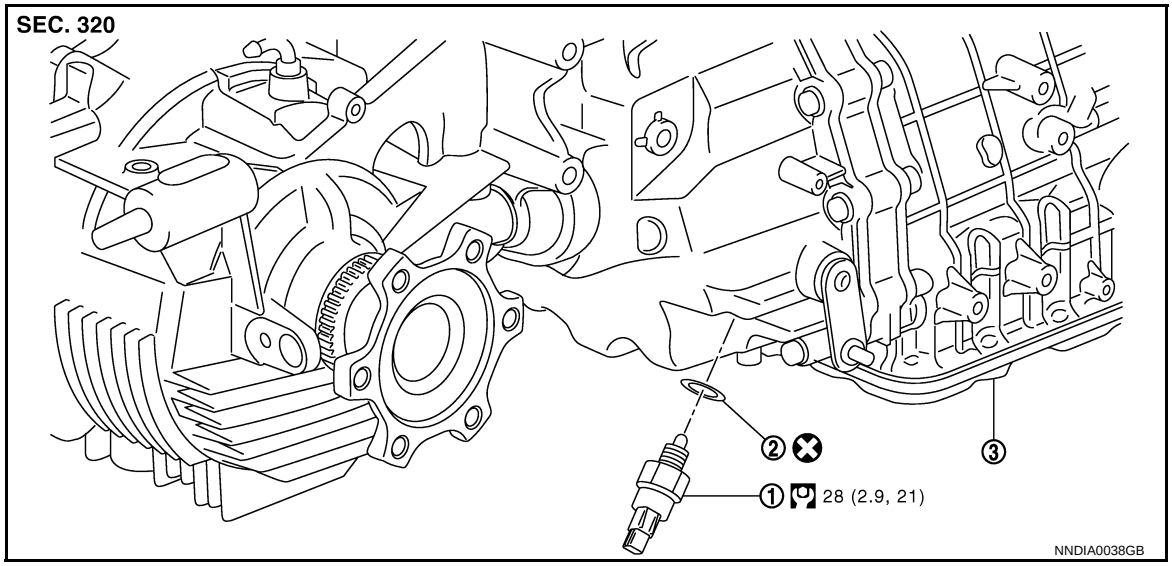
INSPECTION AFTER INSTALLATION

Check the transmission oil for leakage. Refer to TM-365, "Inspection".

PARK POSITION SWITCH

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487989



1. Park position switch
2. Plane washer
3. Transmission assembly

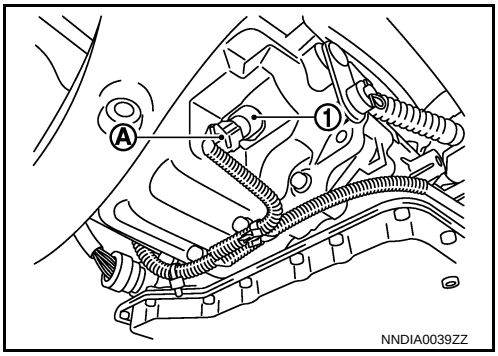
Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487990

REMOVAL

1. Disconnect battery cable from negative terminal.
2. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
3. Drain the transmission oil from the transmission assembly. Refer to TM-367, "Draining".
4. Disconnect the park position switch connector (A).
5. Remove the park position switch (1).



INSTALLATION

Note the following, and install in the reverse order of removal.

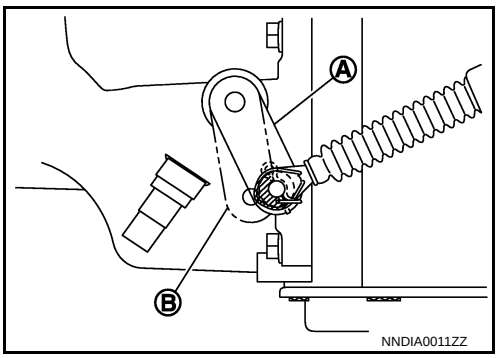
CAUTION:

- **Never reuse plain washer.**
- **Securely remove dust on screws.**
- **Never use gasket fluid or thread locking agent to threads.**

- Install the park position switch with the parking lever in the P range (A).

  B : Other than the P position

- Fill with the transmission oil to the transmission assembly after installation. Refer to TM-368, "Filling".



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487991

INSPECTION AFTER INSTALLATION

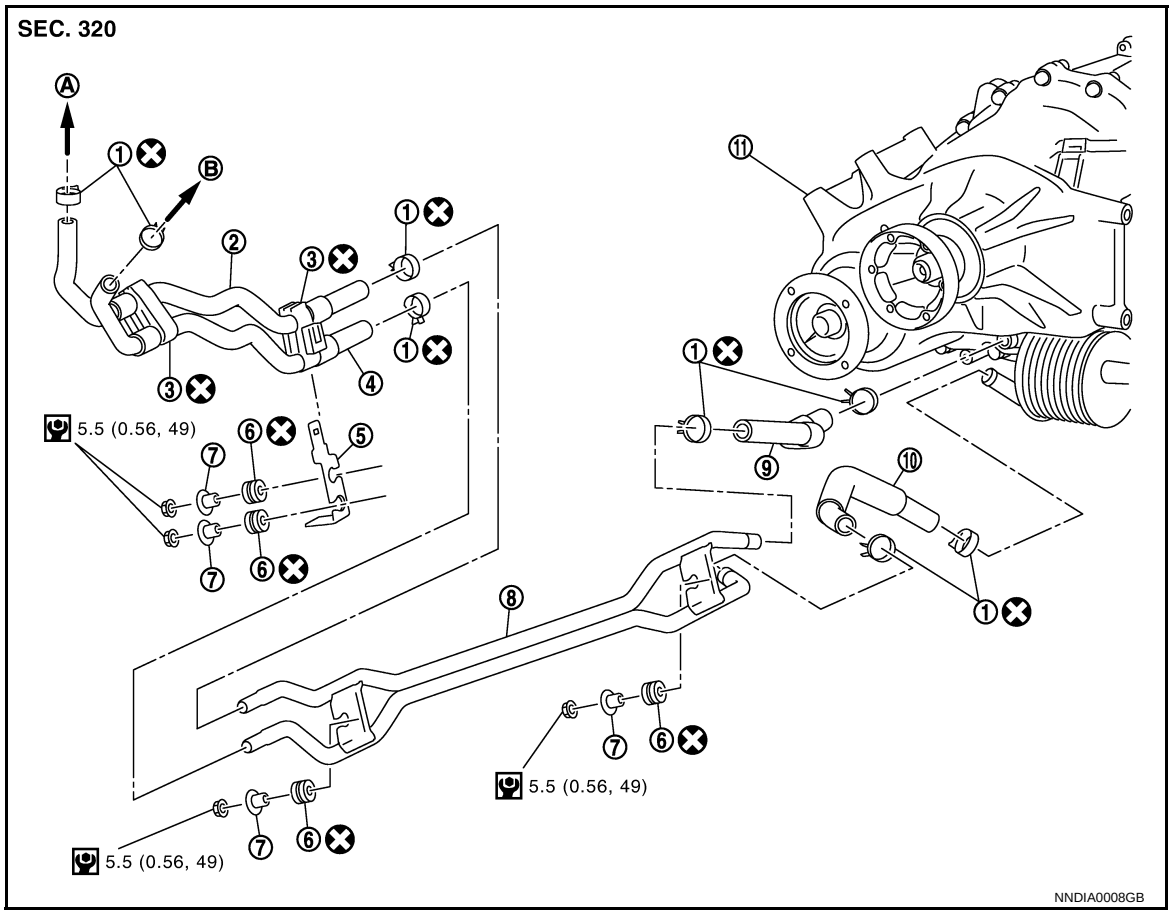
- Check the transmission oil for leakage. Refer to TM-365, "Inspection".
- Check for continuity of park position switch. Refer to TM-82, "Component Inspection (Park Position Switch) (GT-R certified NISSAN dealer)".

HEAT EXCHANGER SYSTEM

HEAT EXCHANGER PIPING

HEAT EXCHANGER PIPING : Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487992



1. Clamp	2. Water hose A	3. Clips
4. Water hose B	5. Bracket	6. Insulator
7. Collar	8. Water tube	9. Water hose C
10. Water hose D	11. Transmission assembly	
A. To water outlet (rear)	B. To heater pipe	

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

HEAT EXCHANGER PIPING : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487993

REMOVAL

CAUTION:

Perform the operation when the engine is cold.

1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
2. Remove the sub-muffler. Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
3. Remove the heat insulator.
4. Remove the water tube, water hose C and water hose D from the vehicle.
5. Remove the water outlet (rear) and heater pipe. Refer to CO-23, "Exploded View (GT-R certified NISSAN dealer)".

6. Remove water hose A and water hose B from the water outlet (rear) and heater pipe.
7. Remove the clips from water hose A and water hose B.

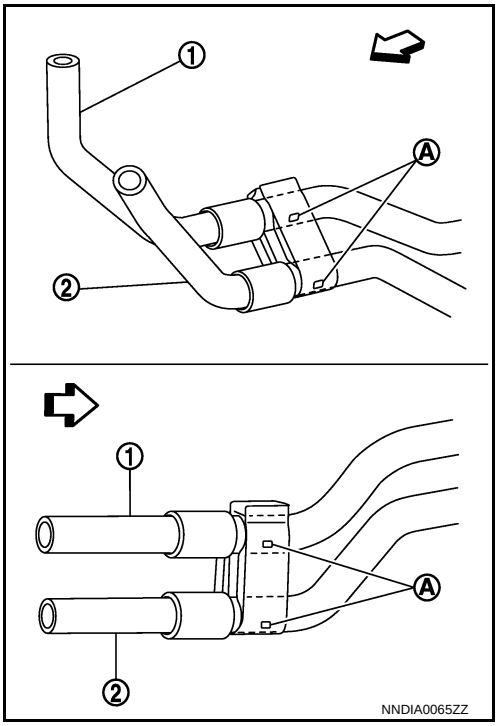
INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

- **Never reuse clamps.**
- **The clip is not reusable. Never reuse it.**
- **Never reuse insulators.**
- Install the clips to water hose A (1) and water hose B (2) with the paint mark (A) of hose in the direction shown in the figure.

⇦ : Front of vehicle



- Refer to the following table when installing the water hose.

Water hose	Hose end (Paint shape / Color)	Direction of hose paint mark (Paint shape / Color)	Hose insertion amount	Direction of clamp tab
Water hose A	Water outlet (rear) (— / —)	Rear of vehicle (△ / Green)	Until it contacts a tube end	Rear of vehicle
	Water tube (□ / Green)	Right of vehicle (□ / Green)	Until it reaches the point where the winding radius stops	Right of vehicle
Water hose B	Heater pipe (— / —)	Upside of vehicle (△ / Yellow)	Until it contacts a tube end	Upside of vehicle
	Water tube (□ / Yellow)	Right of vehicle (□ / Yellow)	Until it reaches the point where the winding radius stops	Downside of vehicle
Water hose C	Water tube (□ / Green)	Right of vehicle (△ / Pink)	Until the tube insertion indication stops	Right of vehicle
	Heat exchanger (— / Green)	Right of vehicle (□ / Pink)		
Water hose D	Water tube (□ / Yellow)	Right of vehicle (△ / Yellow)		Right of vehicle
	Heat exchanger (— / Blue)	Right of vehicle (□ / Yellow)		

- Fill with the coolant after installation. Refer to CO-10, "Refilling".

HEAT EXCHANGER PIPING : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487994

INSPECTION AFTER INSTALLATION

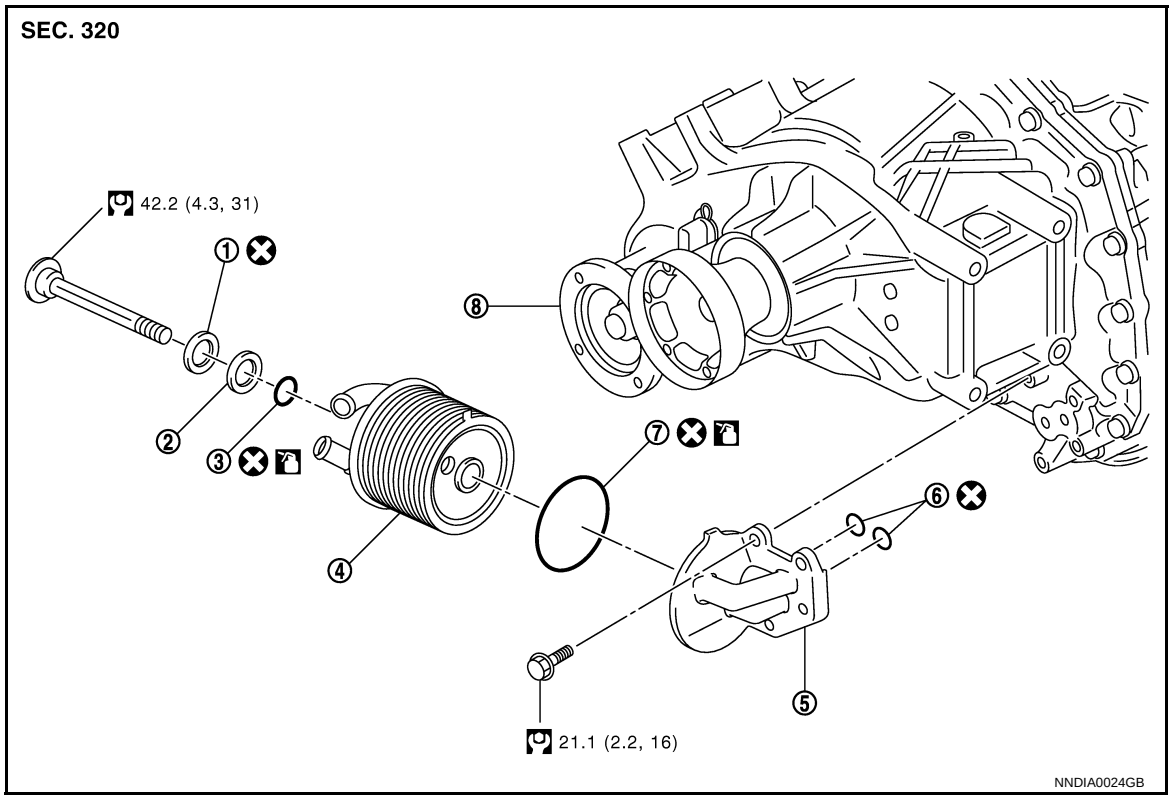
Check the following items.

- Coolant leakage from the part removed and installed.
- Coolant amount. Refer to CO-9, "Inspection".

HEAT EXCHANGER

HEAT EXCHANGER : Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487995



1.	Spring washer	2.	Plane washer	3.	O-ring
4.	Heat exchanger	5.	Heat exchanger bracket	6.	O-ring
7.	O-ring	8.	Transmission assembly		

: Apply Genuine NISSAN Transmission oil R35 Special

Refer to GI-4, "Components" in GI section for the symbols other than above.

HEAT EXCHANGER : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487996

REMOVAL

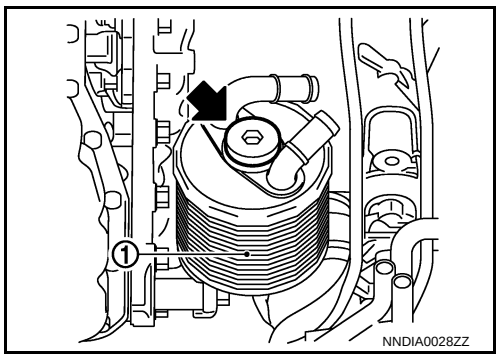
CAUTION:

Be careful because the heat exchanger unit and transmission oil are hot during work.

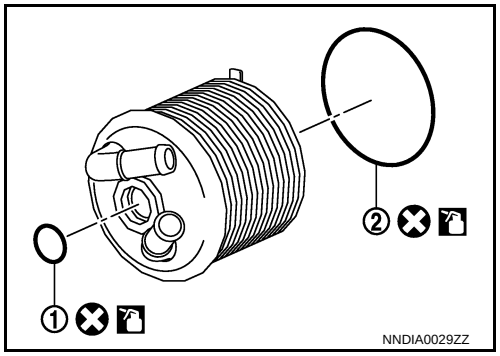
1. Remove the main muffler. Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
2. Remove the heat insulator.
3. Remove water hose C and water hose D from the heat exchanger. Refer to TM-386, "HEAT EXCHANGER PIPING : Exploded View (GT-R certified NISSAN dealer)".

4. Remove the heat exchanger (1).

⬅ : Bolt

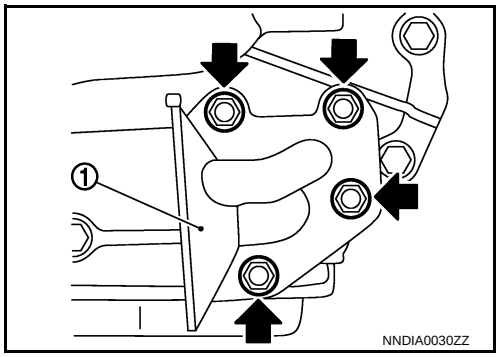


5. Remove O-rings (1) and (2) from the heat exchanger.

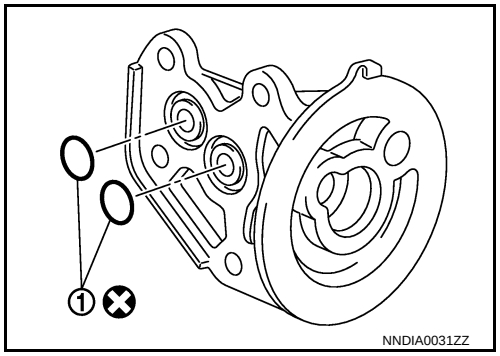


6. Remove the heat exchanger bracket (1) from the transmission assembly.

⬅ : Bolt



7. Remove O-ring (1) from the heat exchanger bracket.



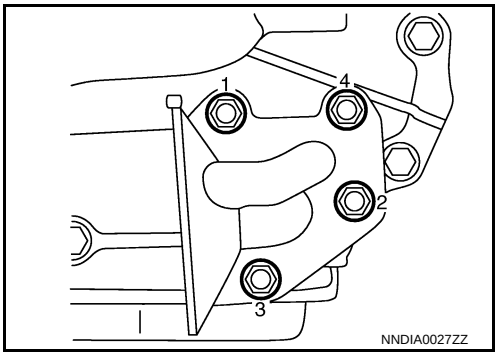
INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

- **Never reuse O-ring.**
- **Apply the transmission oil to O-ring when the O-ring is installed to the heat exchanger.**

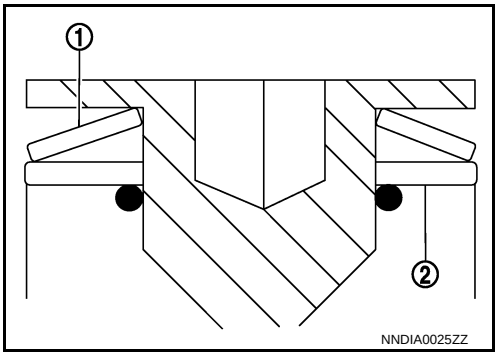
- Temporally tighten the mounting bolt, and then tighten it to the specified torque in the order shown in the figure when installing the heat exchanger bracket to the transmission assembly.



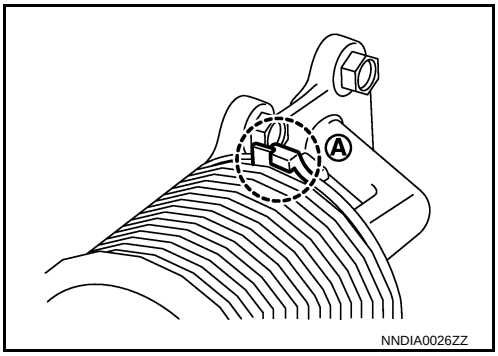
- Install the heat exchanger so that the spring washer (1) is positioned as shown in the figure.

2 : Plane washer

CAUTION:
Never reuse spring washer.



- Tighten the heat exchanger mounting bolt under the condition that the heat exchanger is fitted with the stopper (A) of heat exchanger bracket.
- Fill with the transmission oil to the transmission assembly after installation. Refer to TM-368, "Filling".



HEAT EXCHANGER : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011487997

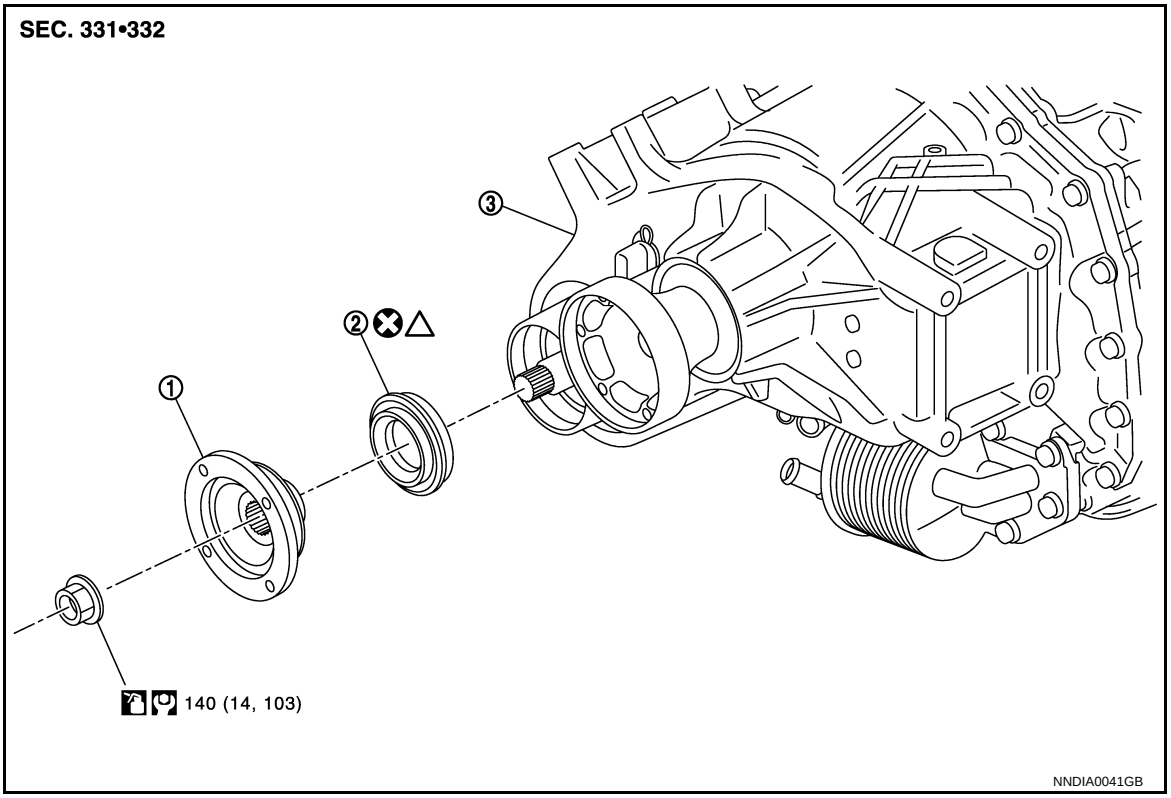
INSPECTION AFTER INSTALLATION

Check the transmission oil for leakage after installation. Refer to TM-365, "Inspection".

FRONT OIL SEAL

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011487998



1. Companion flange
2. Front oil seal
3. Transmission assembly

: Apply anti-corrosion oil.

△ : Check that the grease is applied to the lip and all inner walls of front oil seal. Apply multi-purpose grease or equivalent if the grease is not applied. Refer to TM-391, "Removal and Installation (GT-R certified NISSAN dealer)".
CAUTION:
Never use including extreme pressure additives.

Refer to GI-4, "Components" in GI section for the symbols other than above.

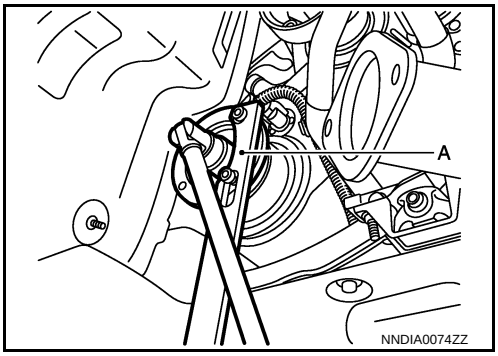
Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011487999

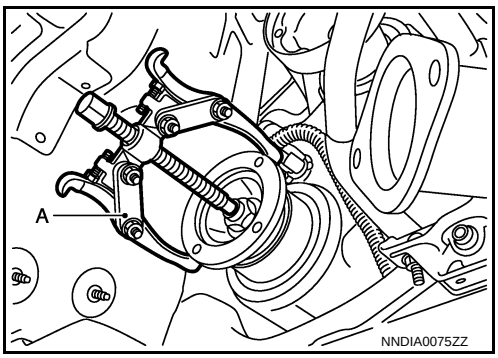
REMOVAL

1. Remove the front diffuser. Refer to EXT-43, "FRONT DIFFUSER : Exploded View".
2. Remove the sub-muffler. Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
3. Remove the heat insulator.
4. Separate the front propeller shaft assembly. Refer to DLN-51, "Exploded View".
5. Drain the transmission oil from the transmission assembly. Refer to TM-367, "Draining".

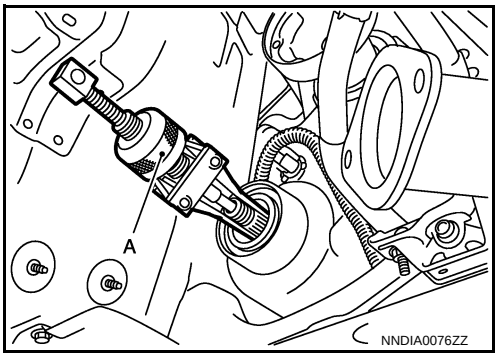
6. Install the flange wrench (commercial service tool) (A) to the companion flange of transfer, and then remove the mounting nut.



7. Remove companion flange using a puller (commercial service tool) (A).
CAUTION:
Never damage the companion flange.



8. Remove the front oil seal using the puller [SST: KV381054S0 (J-34286)] (A).
CAUTION:
Never damage case.



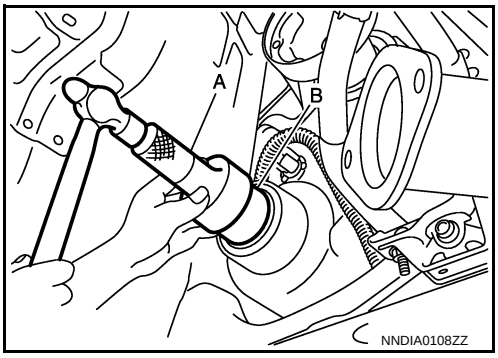
INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:
Apply anti-corrosion oil to threads and seat surfaces when installing the companion flange mounting nut.

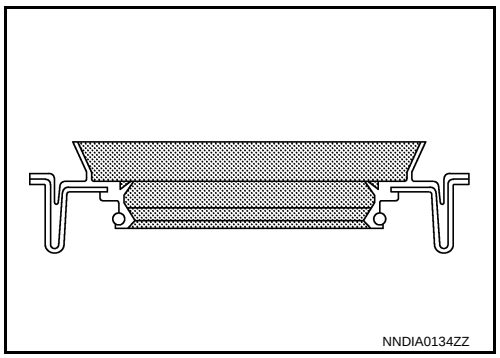
- Drive and install the front oil seal to the case end surface using a drift.

A : Drift [SST: ST30720000 (J-25405)]
B : Drift [SST: KV40104830 (—)]



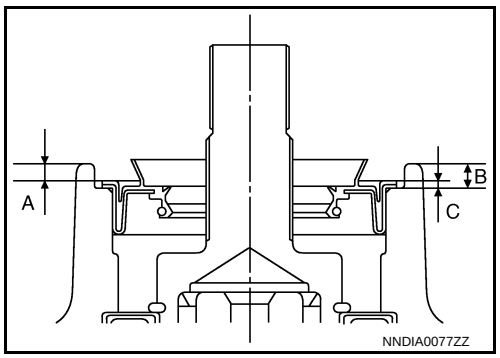
CAUTION:
- **Never reuse oil seals.**

- **Check that the grease is applied to the lip and all inner walls of oil seal. Apply multi-purpose grease or equivalent if the grease is not applied.**
- **Never use including extreme pressure additives.**
- **Never incline the oil seal during installation.**
- **Never allow oil and dust, etc. to get on the oil seal press-fitting surface.**
- **Never damage the oil seal.**
- **Never damage the front drive shaft when installing the oil seal.**


NNDIA0134ZZ

NOTE:
For OK/NG judgment of oil seal installation, measure the oil seal press-fitting depth (on 2 locations or more) and check if they exceed the dimension “A”. Always calculate the dimension “A” before measurement. Dimension “A” can be calculated by the formula below.

A = B − C − 0.5 mm (0.020 in)
A : Oil seal press-fitting depth
B : Case depth
C : Oil seal flange thickness



NNDIA0077ZZ

- Fill with the transmission oil to the transmission assembly after installation. Refer to TM-368, "Filling".

Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011488000

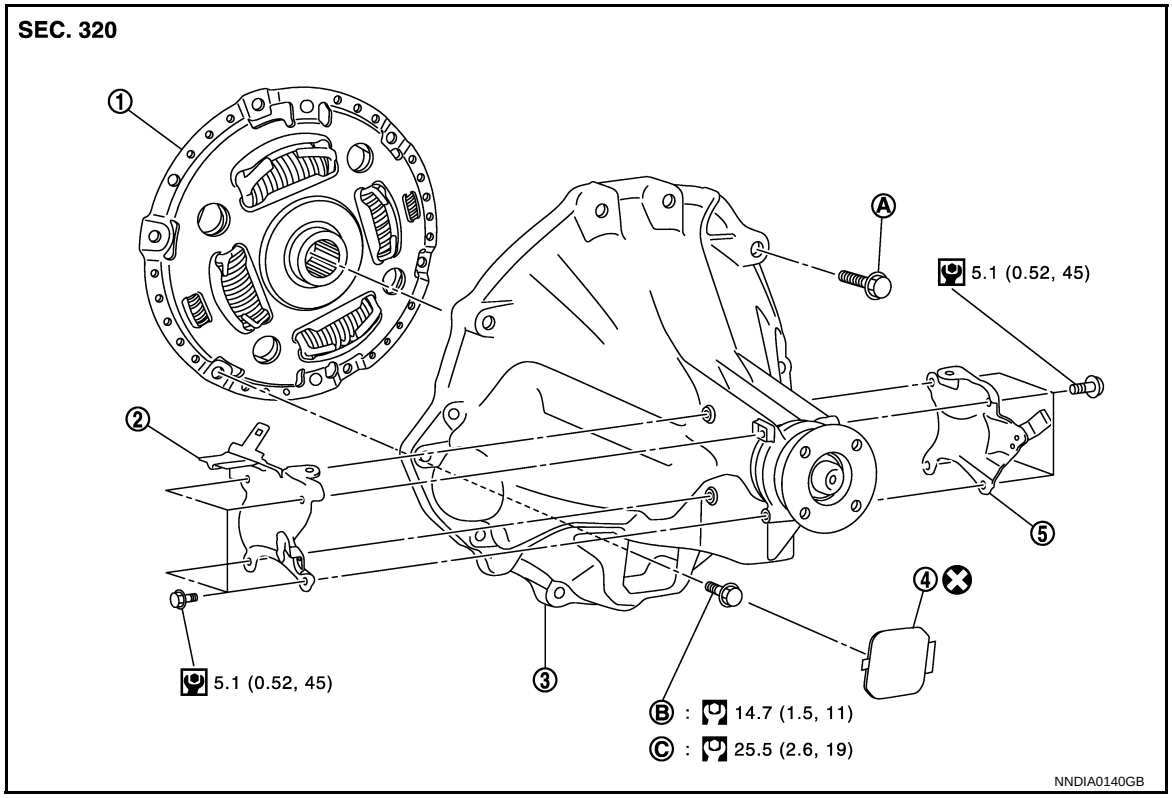
INSPECTION AFTER INSTALLATION

Check the transmission oil for leakage. Refer to TM-365, "Inspection".

FLYWHEEL HOUSING ASSEMBLY

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011488001



1. Drive line torsional damper
2. Heat insulator
3. Flywheel housing
4. Rear plate cover
5. Heat insulator
A. Refer to TM-394, "Removal and Installation (GT-R certified NISSAN dealer)" for tightening torque.
B. First step
C. Second step

Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011488002

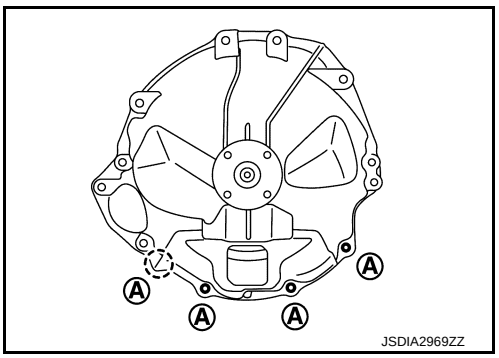
REMOVAL

1. Disconnect the air fuel ratio sensor harness connectors (bank 1 and bank 2). Refer to EM-50, "Exploded View".
2. Lift up the vehicle.
3. Remove the floor under cover. Refer to EXT-41, "FLOOR UNDER COVER : Exploded View".
4. Remove front under cover. Refer to EXT-40, "FRONT UNDER COVER : Exploded View".
5. Remove front cross bar assembly. Refer to EX-7, "Exploded View".
6. Remove the nuts mounting bracket (No.2). Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
7. Remove the nuts for fixing main muffler assembly and sub muffler. Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
8. Remove the nuts for fixing three way catalyst and sub muffler. Refer to EX-7, "Exploded View" (stainless steel muffler), EX-14, "Exploded View" (titanium muffler).
9. Remove the sub muffler, as per the following steps:

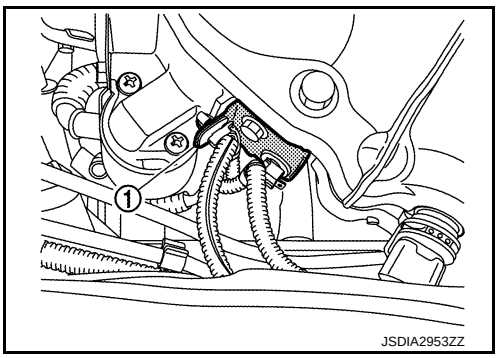
a. Push the sub muffler toward vehicle rear.
b. Pull out the stud bolts of the three way catalyst from the sub muffler.

c. Remove the sub muffler from the vehicle.

10. Separate the front propeller shaft assembly. Refer to DLN-51, "Exploded View".
11. Separate the main propeller shaft assembly. Refer to DLN-60, "Exploded View".
12. Remove the bolts (A) for fixing engine assembly and flywheel housing.
13. Remove three way catalyst bracket. Refer to EM-50, "Exploded View".

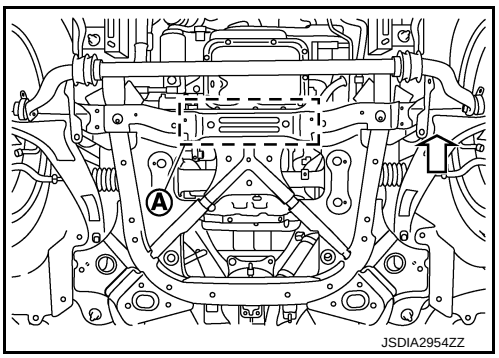


14. Remove harness bracket (1).
15. Remove the crankshaft position sensor (POS). Refer to EM-97, "Exploded View (GT-R certified NISSAN dealer)".
16. Remove the front stabilizer clamp mounting nuts. Refer to FSU-25, "TYPE 1 : Exploded View".



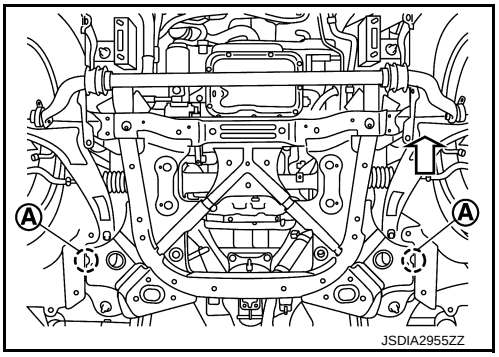
17. Support the front suspension member with a transmission jack.

A : Jack point
⇦ : Vehicle front



18. Loosen the front suspension member mounting bolts (A).

⇦ : Vehicle front



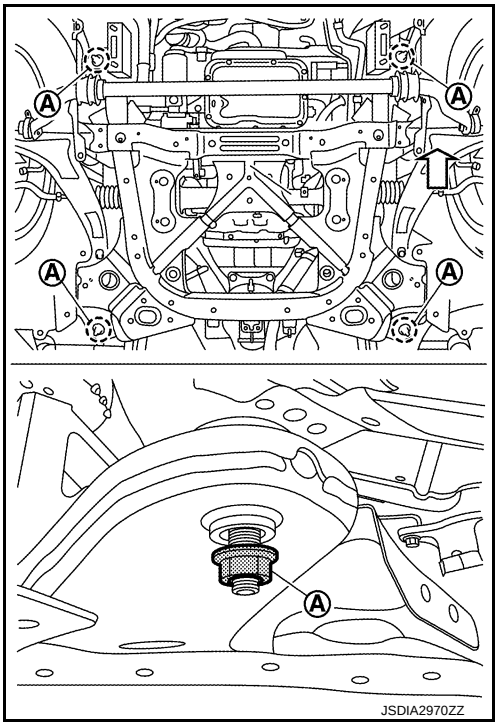
19. Loosen (but do not remove) front suspension member mounting nuts (A) and lower the mounting position of front suspension member.

⇦ : Vehicle front

20. Disconnect the heated oxygen sensor harness connectors (bank 1 and bank 2). Refer to EM-50, "Exploded View".

CAUTION:

Place an identification mark on the harness connectors of heated oxygen sensor 2 for discrimination between right and left to facilitate the installation.

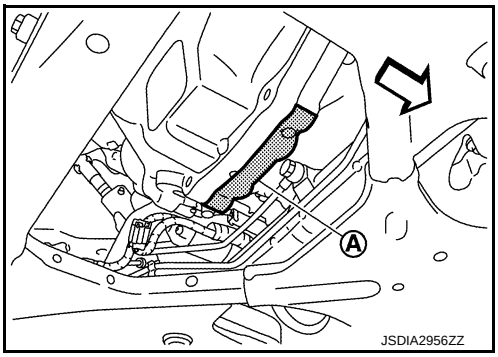


21. Set the support bar to the engine assembly rear end (A).

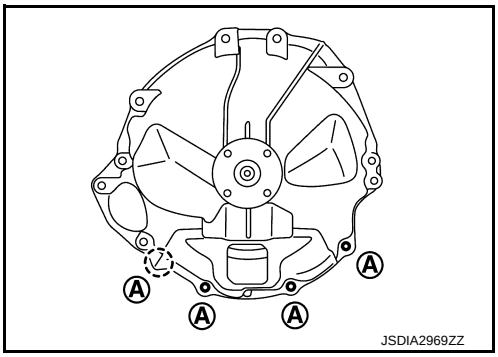
⇦ : Vehicle front

CAUTION:

- **Always use a tool that can support the engine assembly rear end safely and securely without interfering with the transmission jack that supports the front suspension member. Use a piece of wood if necessary.**
- **When supporting the engine assembly rear end, be careful not to allow flywheel housing to be hidden.**

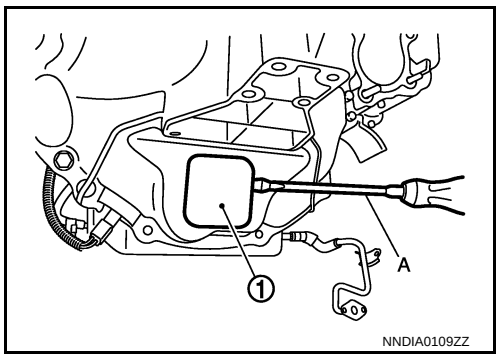


- **When installing flywheel housing, adjust the position of support bar so that the tightening bolts (A) of flywheel housing and engine assembly can be tightened.**

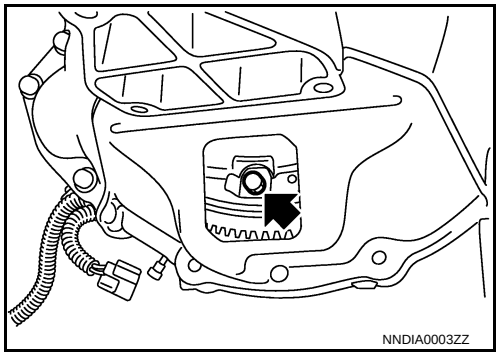


22. Remove the bolt for fixing engine mounting insulator (rear) and front suspension member.
23. Remove the engine mounting insulator (rear) mounting bolts. Refer to EM-53, "Exploded View (GT-R certified NISSAN dealer)".
24. Operate the support bar. Lift up the engine assembly rear end to a position so that the engine mounting insulator (rear) can be removed.
25. Remove the engine mounting insulator (rear). Refer to EM-53, "Exploded View (GT-R certified NISSAN dealer)".
26. Operate the support bar. Return the engine assembly position to the original height.

27. Remove the rear plate cover (1) using a remover tool (A).
CAUTION:
Never damage the flywheel housing.

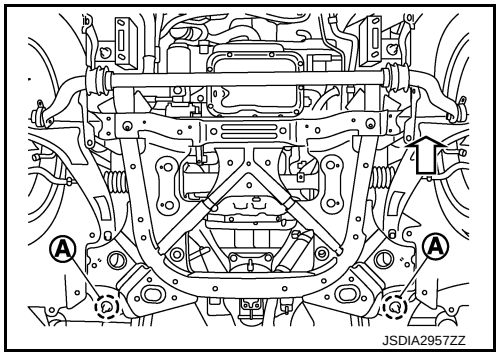


28. Rotate the crankshaft and remove the bolts (⬅: 6 places) that secure the flywheel to drive line torsional damper.
CAUTION:
Rotate crankshaft clockwise (as viewed from the front of the engine).
29. Remove the three way catalysts (bank1 and bank 2). Refer to EM-50, "Exploded View".
30. Remove the heated oxygen sensor harness and coolant tube clamp from flywheel housing heat insulators.
31. Remove heat insulators from flywheel housing.

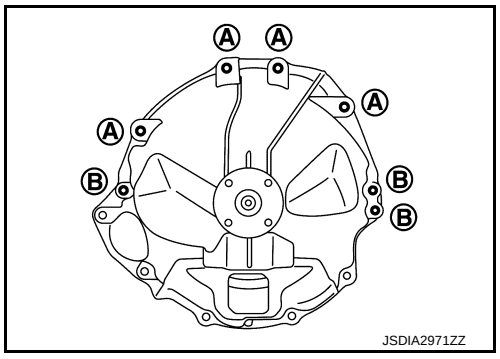


32. Remove mounting nuts (A) on the front suspension member rear side with the front suspension member held with a transmission jack.

⇦ : Vehicle front

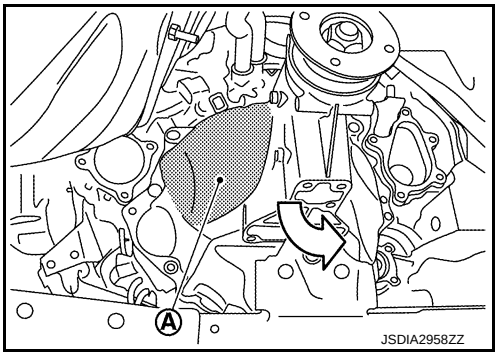


33. Operate the transmission jack. Lower the position of the front suspension member so that the stud bolts of the rear side of the front suspension member are hidden.
34. Remove starter motor mounting bolts. Pull the starter motor toward vehicle front to remove the starter motor from the flywheel housing. Refer to STR-19, "Exploded View (GT-R certified NISSAN dealer)".
35. Remove the bolts (A) and (B) for fixing engine assembly and flywheel housing.
36. Remove the flywheel housing assembly from the vehicle according to the following steps.
CAUTION:
Never allow the flywheel housing to damage the vehicle body. Apply protection using a cloth tape or appropriate materials so that floor tunnel is not damaged.



a. Remove the flywheel housing assembly from engine assembly.
CAUTION:
- **Remove drive line torsional damper and flywheel housing together.**
- **Remove the flywheel housing assembly slowly and carefully. If this is not observed, the drive line torsional damper may become accidentally detached from the flywheel housing shaft and remain on the flywheel side.**

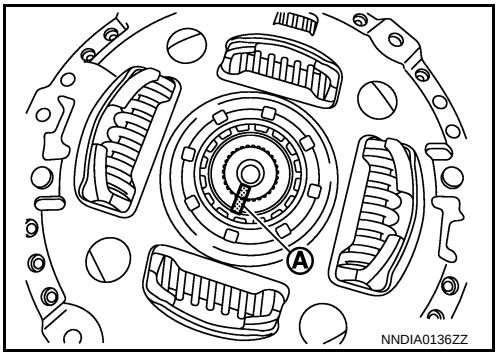
b. Rotate the flywheel housing counterclockwise so that concave (A) of the flywheel housing faces down.



c. Remove the flywheel housing assembly from the vehicle by rotating the flywheel housing assembly to the right side while facing the housing companion flange side down.

CAUTION:

- **After removing the flywheel housing assembly, always hold or place the flywheel housing assembly with its front side faced upward to avoid the drive line torsional damper from becoming detached and falling.**
- **If the drive line torsional damper remains on the flywheel side, check and align the matching marks (A) on the drive line torsional damper and the flywheel housing shaft end to return to the original assembly condition. If the matching marks cannot be identified and the drive line torsional damper and the flywheel housing cannot be returned to their original condition, check spline clearance between the drive line torsional damper and the flywheel housing shaft. Refer to TM-401, "Inspection (GT-R certified NISSAN dealer)".**

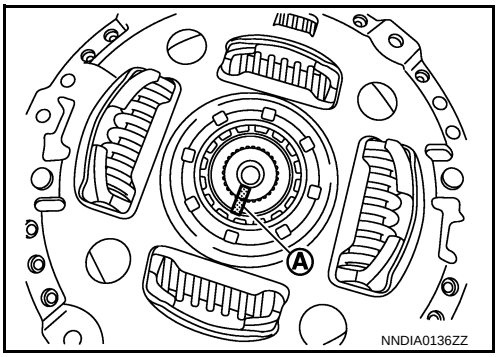


INSTALLATION

Note the following and install in the reverse order of removal.

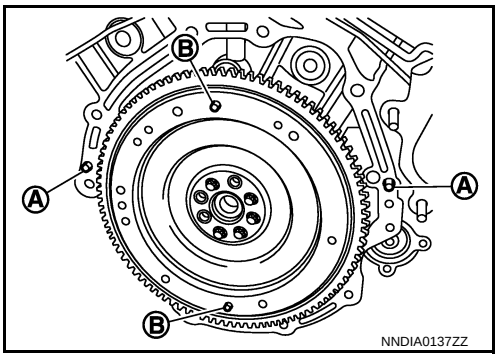
CAUTION:

Confirm match marks (A) on drive line torsional damper and flywheel housing shaft edge. In case match marks is invisible, wipe the grease at end-face and make match marks again. Do not wipe the grease at spline fitting point.

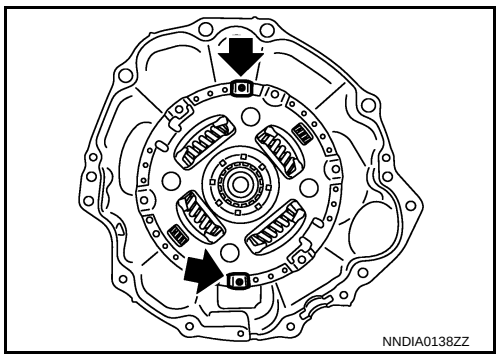


- Read the following instructions to install flywheel housing assembly to the engine.

1. Check that the cylinder block dowel pin (A) and flywheel dowel pin (B) are not damaged and detached. Turn the crankshaft clockwise viewed from the engine front to adjust the flywheel dowel pins to the 12 o'clock and 6 o'clock positions.



2. Adjust each dowel pin entry (convex par) (⬅) of the drive line torsional damper to the 12 o'clock and 6 o'clock positions.



3. Rotate the flywheel housing companion flange to fit the flywheel dowel pin in the drive line torsional damper dowel pin entry. Install the flywheel housing assembly to the engine assembly.

CAUTION:

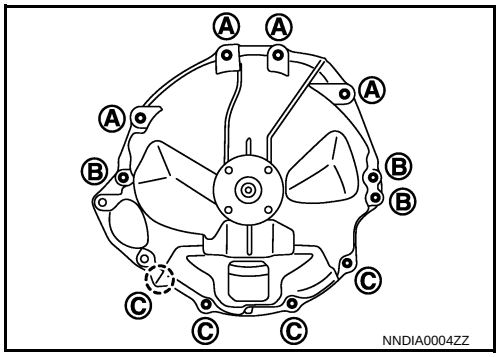
When installing the flywheel housing assembly, always hold the flywheel housing assembly with its front side faced upward to avoid the drive line torsional damper from becoming detached and falling.

NOTE:

If the drive line torsional damper dowel pin entry is hard to identify, remove the drive line torsional damper from the flywheel housing and place a paint mark on the back (an area seen from the access hole) of the dowel pin entry (convex part) for easier identification of the dowel pin entry. When removing the drive line torsional damper, be sure to check that there are matching marks on the drive line torsional damper and the flywheel housing shaft end. After placing a paint mark, align the matching marks to return to the original assembly condition.

4. Manually rotate the flywheel housing companion flange right and left to check that it does not move.

5. Tighten the bolts for fixing flywheel housing and engine assembly in accordance with the following standard.



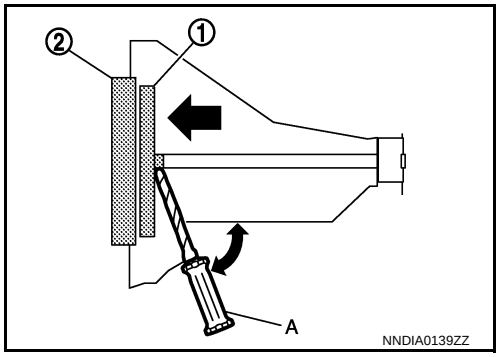
Bolt symbol	A (Housing side → Engine side)	B (Housing side → Engine side)	C (Engine side → Housing side)
Quantity	4	3	4
Nominal length mm (in)	65 (2.56)	40 (1.57)	40 (1.57)
Tightening torque N·m (kg-m, ft-lb)	75 (7.7, 55)	34 (3.5, 25)	65 (6.6, 48)

NOTE:

The universal joint can be used only for tightening the fixing bolts (A) and (B).

6. Rotate the engine crank shaft clockwise, viewed from the engine front to check that the drive line torsional damper rotates together with the flywheel.

7. Insert a rod-shaped tool [20 cm (7.87 in) long or more] (A) into the access hole of the flywheel housing and push the center of the drive line torsional damper (1) to the front side to bring the drive line torsional damper into intimate contact with the flywheel (2).



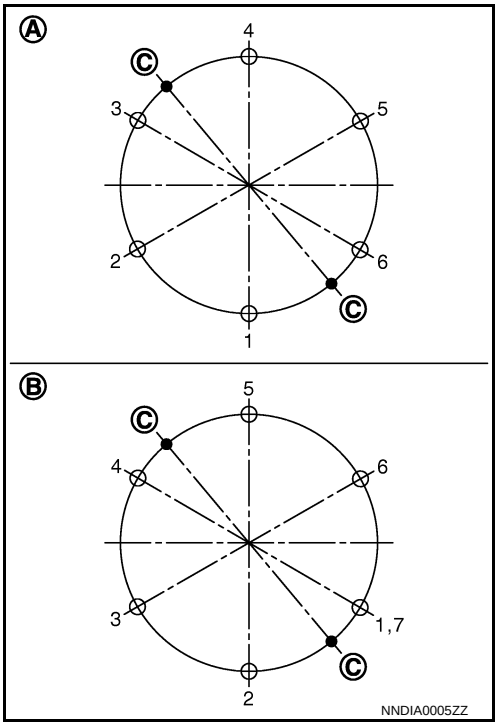
CAUTION:

- **Never damage the drive line torsional damper when pressing the drive line torsional damper to the flywheel.**
- **Select a rod-shaped tool that does not damage the drive line torsional damper. When using a long screw driver, select one with a metal part 20 cm (7.87 in) or more and cover the metal part with waste to protect the drive line torsional damper from damage.**

8. Tighten the bolts of flywheel and drive line torsional damper evenly in 2 steps as shown in the figure after temporarily tightening the bolt. The figure shows the view from the rear of the vehicle.

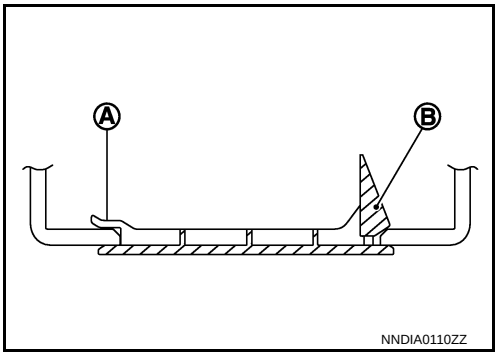
A : First step
B : Second step
C : Dowel pin

CAUTION:
- **Rotate crankshaft clockwise (as viewed from the front of the engine).**
- **Check the tightening torque for crankshaft pulley mounting bolts after drive line torsional damper bolts are tightened and crankshaft pulley mounting bolts are secured.**

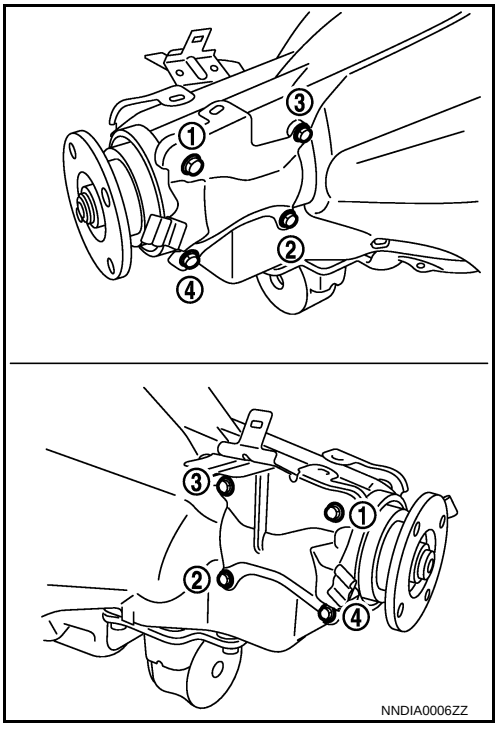


- Press the tabs (B) into the flywheel housing assembly after inserting the tabs (A) into the flywheel housing assembly when installing the rear plate cover. The figure shows the view from the top of the vehicle.

CAUTION:
- **Never reuse rear plate cover.**
- **Check for installation direction.**
- **Press surrounding area of tabs when pressing the tabs in.**
- **Never tap the cover when installing.**
- **Check cover unit for excessive looseness and surrounding embossment.**



- Temporally tighten the mounting bolt, and then tighten it to the specified torque in the order shown in the figure when installing the heat insulator to the flywheel housing assembly.



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011488003

INSPECTION AFTER INSTALLATION

Check that noise does not occur from the flywheel housing, according to the following procedures.

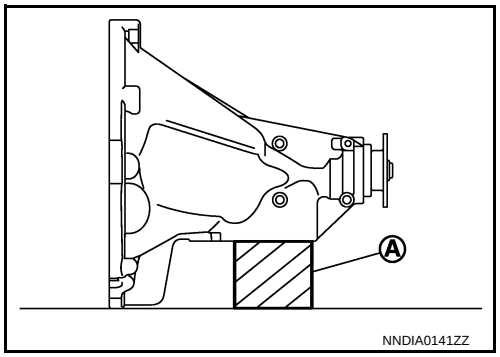
1. Set the transmission oil temperature to 70°C (158°F) or more.
2. Lift up the vehicle.
   NOTE:
   Noise is reflected by the ground surface and noise location identification becomes difficult when trying to check the noise without lifting up the vehicle.
3. Slowly increase the engine speed from the idling status at P range.
4. Check that noise does not occur from surrounding area of the flywheel housing while the engine speed is 1,000 rpm or more. Perform the inspection of the flywheel housing if noise occurs. Refer to TM-371, "Inspection (GT-R certified NISSAN dealer)".

MEASURE SPLINE CLEARANCE

CAUTION:
It is necessary to check spline clearance of drive line torsional damper and flywheel housing shaft, if drive line torsional damper remains to flywheel side and matching mark between drive line torsional damper and flywheel housing shaft end cannot be identified, after removing flywheel housing assembly.

Prepare to measure spline clearance

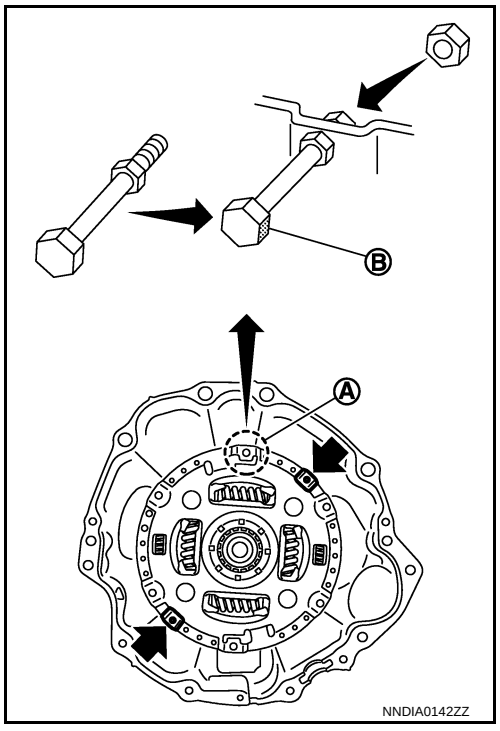
1. Place flywheel housing on level surface. Support flywheel housing rear end using a piece of wood (A) and adjust drive line torsional damper to the vertical position.



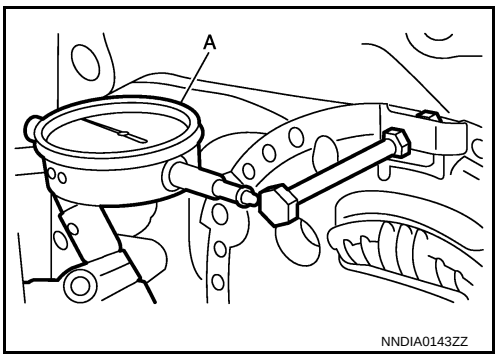
2. Install a hexagon head bolt [M8×80 mm (3.15 in) – 100 mm (3.94 in)] to connecting bolt hole (A) (at the 12 o'clock position) of flywheel and drive line torsional damper as shown in the figure.

   ⬅ : Dowel pin entry (convex par)

   CAUTION:
   Install a hexagon head bolt so that a bolt head surface (B) faces vertically.



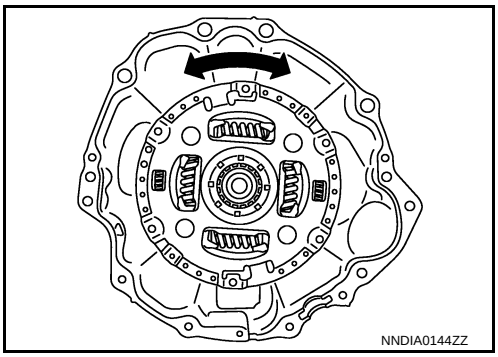
3. Secure a dial indicator (A) in the level position so that gauge head of dial indicator contacts to the vertical surface of hexagon head bolt, as shown in the figure.
CAUTION:
Be careful that the positions of both flywheel housing and dial indicator do not move.



Measure spline clearance

1. Secure companion flange of flywheel housing by hand, so that flywheel housing shaft does not rotate.
2. Rotate drive line torsional damper clockwise or counterclockwise by a load of 9.8 N·m (approximately 1 kg·m, 87 in-lb) – 19.6 N·m (approximately 2 kg·m, 14 ft-lb) and measure spline clearance.

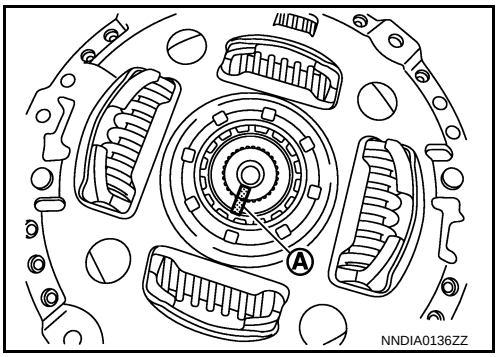
Spline clearance : 0.52 mm (0.0205 in) or less



Judge spline clearance measurement

Spline clearance is 0.52 mm (0.0205 in) or less
- Put a matching mark (A) on drive line torsional damper and end of flywheel housing shaft.

Spline clearance is more than 0.52 mm (0.0205 in)
- Remove drive line torsional damper from flywheel housing. Move the engaging position of drive line torsional damper and flywheel housing shaft, 1 tooth at a time, and repeat measuring.
- Replace flywheel housing assembly if spline clearance is more than 0.52 mm (0.0205 in) when changing the engaging positions of drive line torsional damper and flywheel housing shaft.

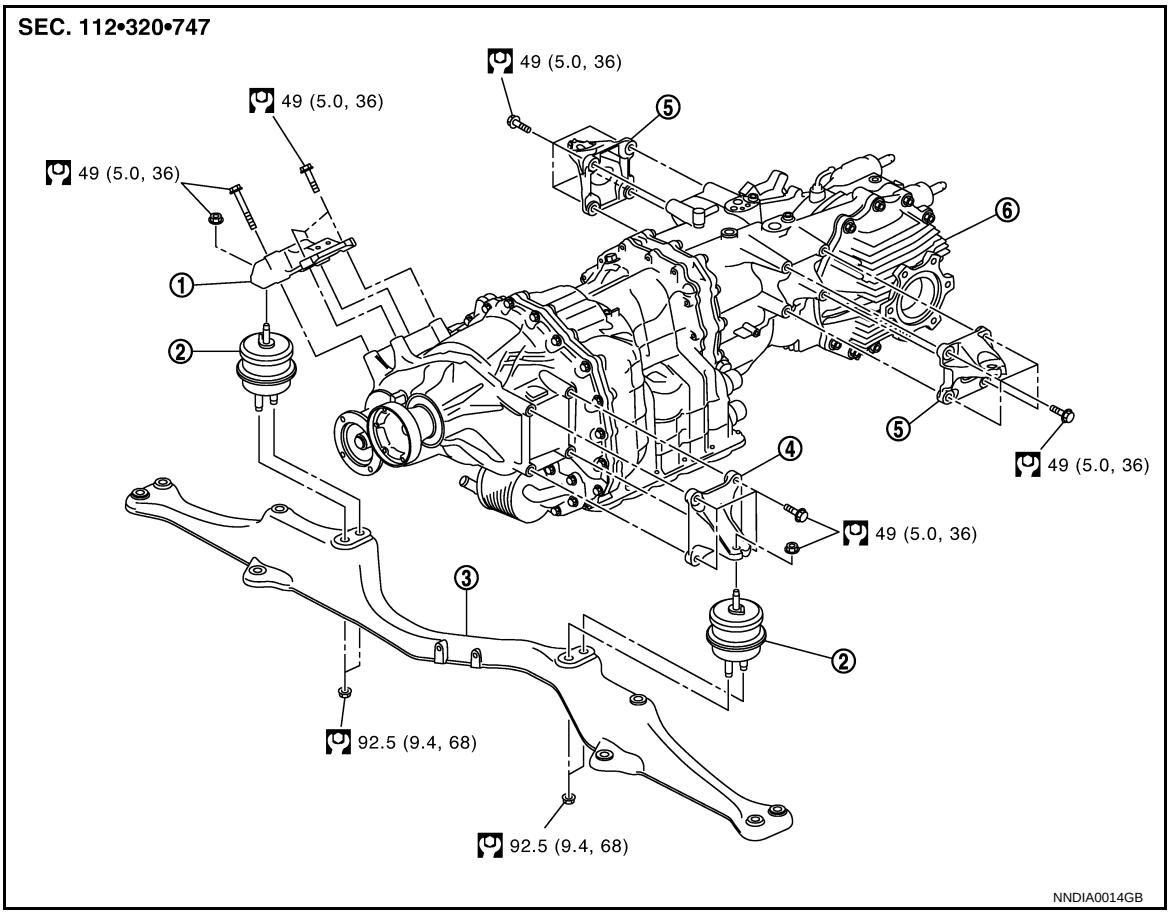


UNIT REMOVAL AND INSTALLATION

TRANSMISSION ASSEMBLY

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011488004



1. Bracket
2. Mounting insulator
3. Transmission mounting stay
4. Bracket
5. Bracket
6. Transmission assembly

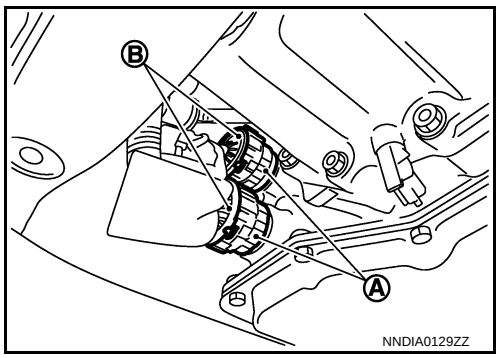
Refer to GI-4, "Components" in GI section for the symbols shown in the figure.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011488005

REMOVAL

1. Disconnect the transmission unit harness connector with the following procedure.
   - Rotate the bayonet ring (A) counterclockwise, and then pull out the transmission unit harness connectors (B).
2. Remove the transmission assembly and rear suspension assembly from the vehicle. Refer to RSU-36, "Exploded View".
3. Remove the air breather hose from the transmission assembly. Refer to DLN-117, "Removal and Installation (GT-R certified NISSAN dealer)".
4. Remove the transmission assembly from the rear suspension assembly. Refer to RSU-36, "Exploded View".
5. Remove the transmission mounting stay, mounting insulator, and bracket.



CAUTION:

- **Never allow oil or grease to get on the mounting insulator. Never damage the tube.**

- **Never use an impact wrench to remove the mounting insulator from the transmission mounting stay.**

6. Disconnect the rear cable. Refer to PB-7, "Exploded View (GT-R certified NISSAN dealer)".

INSTALLATION

Note the following, and install in the reverse order of removal.

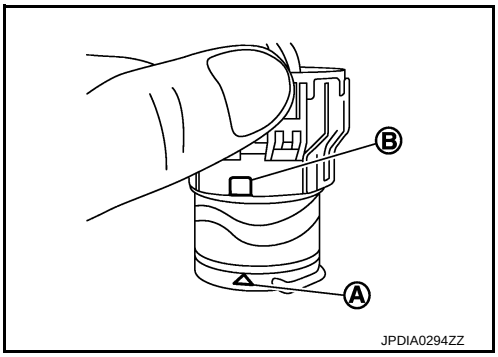
CAUTION:

- **Refer to TM-356, "Precautions for Replacement of TCM and Transmission Assembly (GT-R certified NISSAN dealer)" when the transmission assembly is replaced.**
- **Never allow oil or grease to get on the mounting insulator. Never damage the tube.**
- **Never twist the rubber parts when installing the mounting insulator.**
- **Never use an impact wrench to install the insulator to the transmission mounting stay.**
- Connect the transmission unit harness connector with the following procedure.

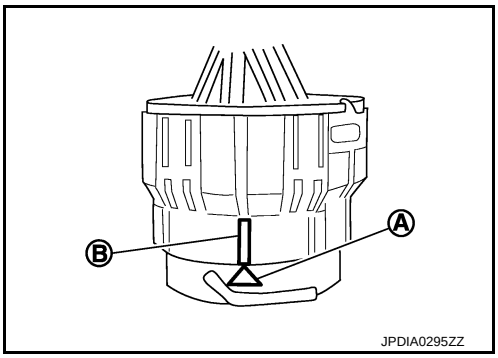
  CAUTION:

  Connect harness connectors between the connectors of the same color.

1. Align the △ marking (A) of transmission connector terminal unit and the □ marking (B) of bayonet ring, insert the transmission unit harness connector, and then rotate the bayonet ring clockwise.

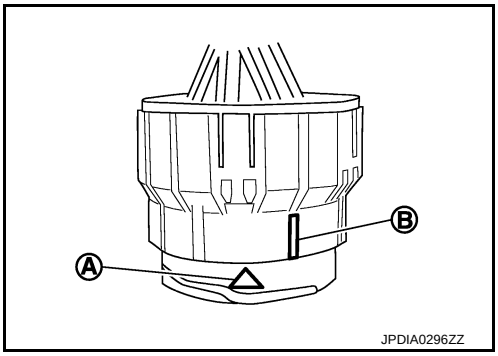


2. Rotate the bayonet ring clockwise until the △ marking (A) of transmission connector terminal unit and the slit (B) of bayonet ring are aligned as shown in the figure (specified joint condition), and then connect the transmission unit harness connector to the transmission connector terminal unit.



NOTE:

- Securely align the positions of the △ marking (A) of transmission connector terminal unit and the slit (B) of bayonet ring. In addition, avoid the partial joint condition as shown in the figure.
- Do not confuse the bayonet ring slit with other dents.



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011488006

INSPECTION AFTER INSTALLATION

Check the following items.

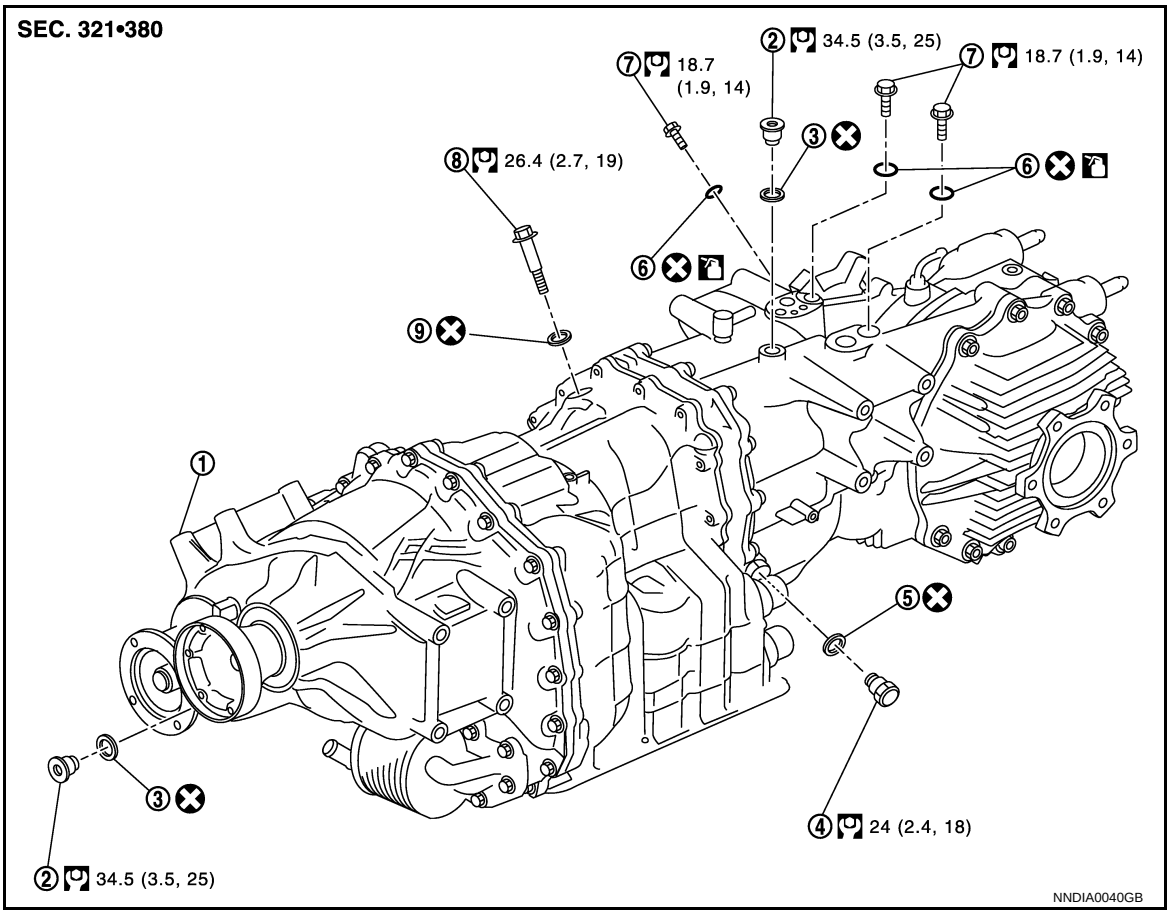
- Transmission oil leakage. Refer to TM-365, "Inspection".
- Check shift position. Adjust the shift position if necessary. Refer to TM-370, "Inspection and Adjustment".

UNIT DISASSEMBLY AND ASSEMBLY

TRANSMISSION ASSEMBLY

Exploded View

INFOID:0000000011488007



1.	Transmission assembly	2.	Filler plug	3.	Filler plug gasket
4.	3rd-5th check pin	5.	Plane washer	6.	O-ring
7.	Plug	8.	Idler bolt	9.	Plane washer

: Apply Genuine NISSAN Transmission oil R35 Special.

Refer to GI-4, "Components" in GI section for the symbols other than above.

Disassembly and assembly (GT-R certified NISSAN dealer)

INFOID:0000000011488008

DISASSEMBLY

NOTE:

For any parts other than filler plug, remove and replace only when a trace of oil leakage is detected.
Be careful of the following items when removing the component parts.

- Drain the transmission oil before removing the 3rd-5th check pin. Refer to TM-367, "Draining".
- Stop the engine with the shift lever in the P position before removing the 3rd-5th check pin.

ASSEMBLY

Be careful of the following items when installing the component parts.

CAUTION:

- **Never reuse filler plug gasket.**
- **Never reuse plain washer.**
- **Never reuse O-ring.**
- **Apply the transmission oil when installing the O-ring.**

- **Temporarily tighten by hand, and then tighten to the specified torque when installing the parts to the transmission assembly.**
- Fill with the transmission oil after installation. Refer to TM-368, "Filling".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specification

INFOID:0000000011488009

Applied model	VR38DETT
	AWD
Transmission model	GR6Z30A

Applied model						VR38DETT AWD
Transmission	Transmission model code number(*1)					KJ10A
	Operating system					Remote control floor shifter and paddle shifter
	Shift position	P				Fixed to output shaft (engine start is possible)
		R				Reverse
		N				Neutral (engine start is possible)
		A	R			1←→2←→3←→4←→5←→6
			Normal			1←→2←→3←→4←→5←→6
			SAVE			1←→2←→3←→4←→5←→6
		M	R	6^M	Fixed to 6GR	With the under rev protection automatic shift function (In order to keep running function, it shifts down automatically when engine speed becomes low.)
				5^M	Fixed to 5GR	
				4^M	Fixed to 4GR	
				3^M	Fixed to 3GR	
				2^M	Fixed to 2GR	
				1^M	Fixed to 1GR	
			Normal	6^M	Fixed to 6GR	With the over rev and under rev protection automatic shift function (In order to keep running function, it shifts down automatically when engine speed becomes low. In order to avoid engine over-speed, it shifts up automatically under red zone.)
				5^M	Fixed to 5GR	
				4^M	Fixed to 4GR	
				3^M	Fixed to 3GR	
				2^M	Fixed to 2GR	
				1^M	Fixed to 1GR	
			SAVE	6^M	Fixed to 6GR	With the over rev and under rev protection automatic shift function (In order to keep running function, it shifts down automatically when engine speed becomes low. In order to avoid engine over-speed, it shifts up automatically under red zone.)
				5^M	Fixed to 5GR	
				4^M	Fixed to 4GR	
				3^M	Fixed to 3GR	
				2^M	Fixed to 2GR	
				1^M	Fixed to 1GR	
	Gear ratio		1GR			4.056
			2GR			2.301
			3GR			1.595
			4GR			1.248
			5GR			1.001
			6GR			0.796
			Reverse			3.383
	Control system					Electronic controls
	Function		Self-diagnosis function			With
			Fail safe function			With
	Synchronizer system					Borg Warner type triple cone synchronizer
	Oil pump		Type			External gear pump
			Drive type			Drive with the engine
	Oil		Recommended			Genuine NISSAN Transmission Oil R35 Special
			Capacity			9.4 liter (9-7/8 US qt, 8-1/4 Imp qt)(*2)

- *1: The model No. refers to the lower five digits of the part number (32000 XXXXX).
- *2: The indicated oil level is only a guide, therefore check the oil level according to the Service Manual.

Vehicle Speed at Which Gear Shifting Occurs (GT-R certified NISSAN dealer)

INFOID:0000000011488010

NORMAL MODE

Gear position		Vehicle speed km/h (MPH)	
		Accelerator pedal position 4.0/8	Accelerator pedal position 8.0/8
UP	$A_1 \rightarrow A_2$	41 – 45 (25 – 28)	52 – 56 (32 – 35)
	$A_2 \rightarrow A_3$	73 – 79 (45 – 50)	97 – 105 (60 – 65)
	$A_3 \rightarrow A_4$	101 – 109 (62 – 68)	143 – 153 (89 – 95)
	$A_4 \rightarrow A_5$	127 – 135 (78 – 84)	186 – 196 (116 – 122)
	$A_5 \rightarrow A_6$	156 – 164 (96 – 102)	234 – 244 (145 – 152)
DOWN	$A_6 \rightarrow A_5$	124 – 132 (77 – 83)	170 – 180 (105 – 112)
	$A_5 \rightarrow A_4$	84 – 92 (52 – 58)	125 – 135 (77 – 84)
	$A_4 \rightarrow A_3$	41 – 49 (25 – 31)	76 – 86 (47 – 54)
	$A_3 \rightarrow A_2$	30 – 36 (18 – 23)	39 – 47 (24 – 30)
	$A_2 \rightarrow A_1$	0 (0)	0 (0)

SAVE MODE

Gear position		Vehicle speed km/h (MPH)	
		Accelerator pedal position 4.0/8	Accelerator pedal position 8.0/8
UP	$A_1 \rightarrow A_2$	41 – 45 (25 – 28)	52 – 56 (32 – 35)
	$A_2 \rightarrow A_3$	73 – 79 (45 – 50)	97 – 105 (60 – 65)
	$A_3 \rightarrow A_4$	101 – 109 (62 – 68)	143 – 153 (89 – 95)
	$A_4 \rightarrow A_5$	127 – 135 (78 – 84)	186 – 196 (116 – 122)
	$A_5 \rightarrow A_6$	156 – 164 (96 – 102)	234 – 244 (145 – 152)
DOWN	$A_6 \rightarrow A_5$	124 – 132 (77 – 83)	170 – 180 (105 – 112)
	$A_5 \rightarrow A_4$	84 – 92 (52 – 58)	125 – 135 (77 – 84)
	$A_4 \rightarrow A_3$	41 – 49 (25 – 31)	76 – 86 (47 – 54)
	$A_3 \rightarrow A_2$	31 – 37 (19 – 23)	39 – 47 (24 – 30)
	$A_2 \rightarrow A_1$	0 (0)	0 (0)

Solenoid Valve (GT-R certified NISSAN dealer)

INFOID:0000000011488011

Items	Transmission unit harness connector			Resistance (Approx.)		
	Connector	Terminal		Transmission oil temperature 20°C (68°F)	Transmission oil temperature 50°C (122°F)	Transmission oil temperature 80°C (176°F)
Shift solenoid valve 1	B49	13	Ground	6.6 – 7.4 Ω	7.3 – 8.3 Ω	8.1 – 9.2 Ω
Shift solenoid valve 2		20				
Shift solenoid valve 3		27				
Shift solenoid valve 4		7				
Sequence solenoid valve		6				
Axis A feed pressure solenoid valve		14	15	3.8 – 4.4 Ω	4.3 – 5.0 Ω	4.7 – 5.4 Ω
Axis B feed pressure solenoid valve		21	22			

Items	Transmission unit harness connector			Resistance (Approx.)		
	Connector	Terminal		Transmission oil temperature 20°C (68°F)	Transmission oil temperature 50°C (122°F)	Transmission oil temperature 80°C (176°F)
Clutch A solenoid valve	B50	37	38	4.6 – 5.0 Ω	5.1 – 5.6 Ω	5.6 – 6.2 Ω
Clutch B solenoid valve		42	43			
Line pressure solenoid valve		48	49	3.8 – 4.4 Ω	4.3 – 5.0 Ω	4.7 – 5.4 Ω
Lubricating flow solenoid valve		54	55			

Fluid Temperature Sensor (GT-R certified NISSAN dealer)

INFOID:0000000011488012

Items	Transmission unit harness connector			Resistance (Approx.)		
	Connector	Terminal		Transmission oil temperature 20°C (68°F)	Transmission oil temperature 50°C (122°F)	Transmission oil temperature 80°C (176°F)
Fluid temperature sensor	B50	45	46	6.36 – 6.68 kΩ	2.17 – 2.23 kΩ	0.86 – 0.89 kΩ

Flywheel Housing Assembly (GT-R certified NISSAN dealer)

INFOID:0000000011488013

Unit: mm (in)

Radial play	0 – 0.55 (0 – 0.0217)
Axial play	0 – 3.4 (0 – 0.134)