SECTION ADP В AUTOMATIC DRIVE POSITIONER

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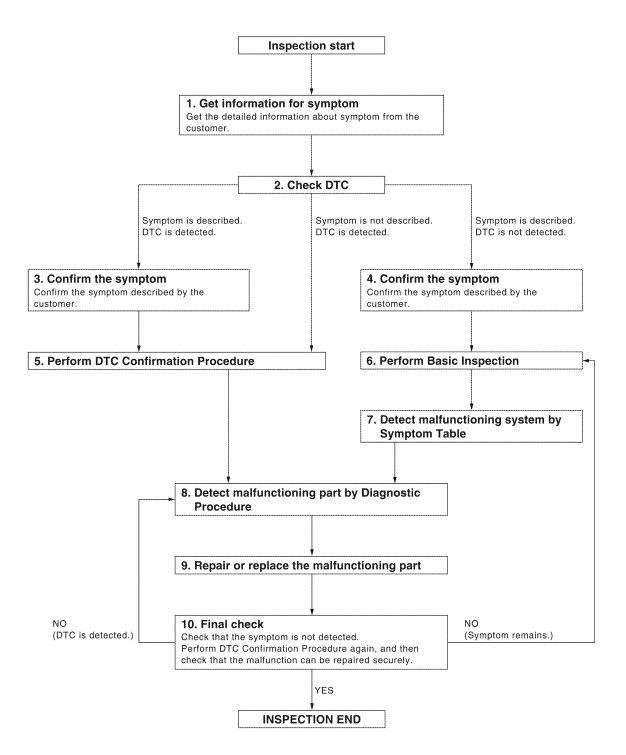
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< BASIC INSPECTION >

BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

WORK FLOW



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DETAILED FLOW

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > 1. GET INFORMATION FOR SYMPTOM А Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred). В >> GO TO 2 2. CHECK DTC WITH AUTOMATIC DRIVE POSITIONER SYSTEM Check "Self Diagnostic Result" with CONSULT-III. Refer to ADP-113, "DTC Index". Is any symptom described and any DTC is displayed? D Symptom is described, DTC is displayed.>>GO TO 3 Symptom is not described, DTC is displayed.>>GO TO 7 Symptom is described, DTC is not displayed.>>GO TO 4 Е 3. CONFIRM THE SYMPTOM Try to confirm the symptom described by the customer. F >> GO TO 7 CONFIRM THE SYMPTOM Try to confirm the symptom described by the customer. >> GO TO 5 Н 5. CHECK NORMAL OPERATING CONDITION Check normal operating condition. Refer to ADP-145, "Description". Is the incident normal operation? >> Inspection End. YES NO >> GO TO 6 ADP **6.** PERFORM BASIC INSPECTION Isolate the malfunctioning point with the basic inspection. Refer to ADP-7, "Preliminary Check". K >> GO TO 8 7. PERFORM DTC CONFIRMATION PROCEDURE Perform the confirmation procedure for the detected DTC. Is the DTC displayed? YES >> GO TO 9 M NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". **8.** PERFORM COMPONENT FUNCTION CHECK Ν Perform the component function check for the isolated malfunctioning point. >> GO TO 9 9. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE Isolate the malfunctioning point by performing the diagnosis procedure relevant to the symptom during the Ρ component diagnosis.

>> GO TO 10

10. REPAIR OR REPLACE

Repair or replace the malfunctioning part.

< BASIC INSPECTION >

>> GO TO 11

11. FINAL CHECK

Perform the DTC confirmation procedure (if DTC is detected) or component function check (if no DTC is detected) again, and then check that the malfunction can be repaired securely.

Are all malfunctions corrected?

YES >> Inspection End. Symptom is detected.>> GO TO 4 DTC is detected.>> GO TO 7

INSPECTION AND ADJUSTMENT

| < BASIC INSPECTION > | |
|--|-----|
| INSPECTION AND ADJUSTMENT | А |
| Preliminary Check | ~ |
| 1. FOREIGN OBJECTS | В |
| Check the following: objects on or behind the seats that could cause binding objects under the seats that may be interfering with the seat's moving parts objects under pedals that may interfere with movement | С |
| Are there any foreign objects that could be causing interference? YES >> Remove objects. NO >> GO TO 2 | D |
| 2. WIRING CONNECTIONS | E |
| Disconnect harness connectors. Check terminals for damage or loose connections. Reconnect harness connectors. Are any connectors damaged or loose? | F |
| YES >> Repair or replace damaged parts. NO >> GO TO 3 3. POWER AND GROUND | G |
| Check power supply and ground circuits for control unit. Refer to <u>ADP-48. "DRIVER SEAT CONTROL UNIT :</u> <u>Diagnosis Procedure"</u> . <u>Is the inspection result normal?</u> | Η |
| YES >> Refer to <u>ADP-113, "DTC Index"</u> . NO >> Repair or replace as necessary. | |
| Special Repair Requirement | |
| Refer to Owner's Manual for Automatic Drive Positioner system operating instructions. | ADP |

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< BASIC INSPECTION >

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

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1. CHECK POWER SUPPLY AND GROUND CIRCUIT

- Check the power supply and ground circuit as shown below.
- Driver seat control unit: Refer to <u>ADP-48</u>, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure".
- Automatic drive positioner control unit: Refer to <u>ADP-49, "AUTOMATIC DRIVE POSITIONER CONTROL</u> <u>UNIT : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

Check the manual function operations by operating the relevant switches as shown below.

- Seat (slide, reclining, lifting front, lifting rear)
- Pedal assembly (forward, backward)

Door mirror

Do all manual functions operate normally?

YES >> GO TO 3

NO (Seat, pedal, door mirror)>>Go to SYMPTOM 1, refer to <u>ADP-143, "Symptom Table"</u>. And, GO TO 4 if the result of SYMPTOM 1 is OK.

3. CHECK MEMORY FUNCTION 1

Register the seat positions (refer to Owner's Manual) and check that all parts of the seat, pedals, steering wheel and door mirrors move to their memory positions correctly.

Are the operations normal?

YES >> Check each malfunction according to the instruction of the SYMPTOM 4, refer to <u>ADP-143</u>, <u>"Symptom Table"</u>.

No (memory indicator operates normally)>> Go to SYMPTOM 2, refer to <u>ADP-143</u>, "<u>Symptom Table</u>". No (memory indicator does not operate normally either)>> GO TO 5

4. CHECK MEMORY FUNCTION 2

Register the seat positions (refer to Owner's Manual) and check that all parts of the seat, pedals and door mirrors move to their memory positions correctly.

Are the operations normal?

YES >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.

NO >> GO TO 7

5. CHECK SEAT MEMORY SWITCH/MEMORY INDICATOR

Check the seat memory switch/memory switch indicator of the SYMPTOM 5, refer to <u>ADP-143, "Symptom</u> <u>Table"</u>.

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair or replace the malfunctioning part.

6. CHECK OPERATION CONDITION

Check the memory operation conditions (refer to <u>ADP-11</u>, "<u>AUTOMATIC DRIVE</u> <u>POSITIONER SYSTEM</u> : <u>System Description</u>").

Are all operation conditions fulfilled?

YES >> Go to SYMPTOM 6, refer to <u>ADP-143, "Symptom Table"</u>.

NO >> Fulfill the operation conditions. Refer to <u>ADP-11, "AUTOMATIC DRIVE POSITIONER SYSTEM :</u> <u>System Description"</u>.

7. CHECK MECHANISM

Check for the following.

• Mechanism deformation or pinched foreign materials.

PRE-INSPECTION FOR DIAGNOSTIC

| < BASI | C INSPECTION > | |
|--------|--|-----|
| | erence with other parts because of poor installation. | |
| | malfunction present in the relevant parts? | А |
| YES | >> Go to SYMPTOM 3, refer to <u>ADP-143, "Symptom Table"</u> . | |
| NO | >> Repair or replace the malfunctioning part. | В |
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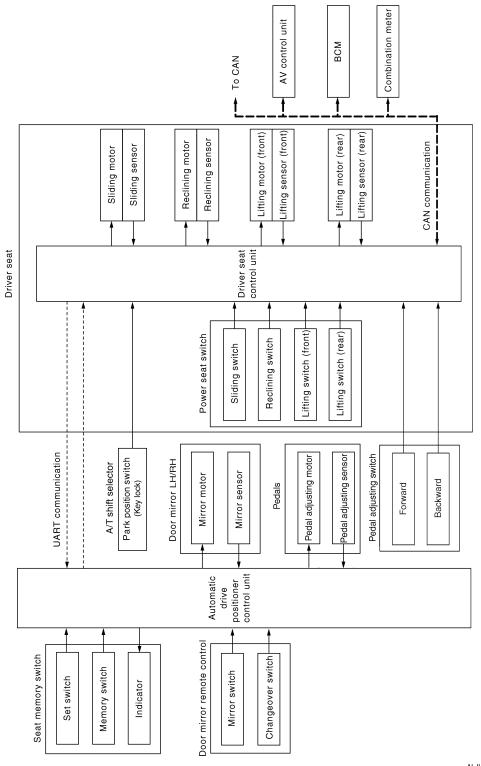
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SYSTEM DESCRIPTION

AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM : System Diagram



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< SYSTEM DESCRIPTION >

AUTOMATIC DRIVE POSITIONER SYSTEM : System Description

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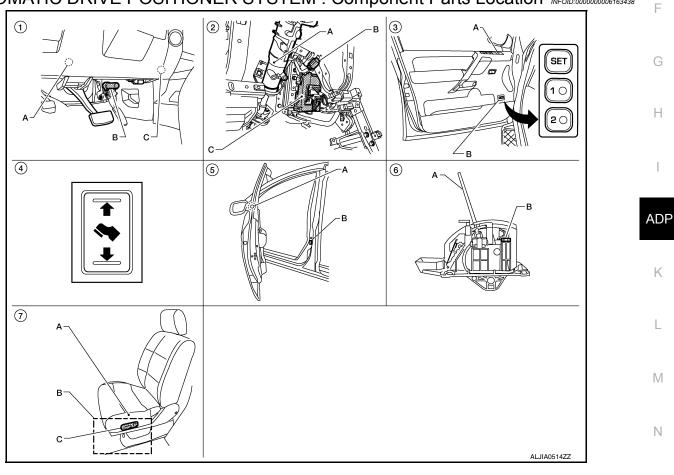
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OUTLINE

The system automatically moves the driver seat, pedal assembly and door mirror position by the driver seat control unit and the automatic drive positioner control unit. The driver seat control unit corresponds with the automatic drive positioner control unit by UART communication.

| Function | | Description |
|----------------------------|-------|---|
| Manual function | | The driving position (seat, pedal assembly and door mirror position) can be adjusted by using the power seat switch, pedal adjusting switch or door mirror remote control switch. |
| Memory function | | The seat, pedal assembly and outside mirror move to the stored driving position by pressing seat memory switch (1 or 2). |
| Entry/Exit assist function | Exit | On exit, the seat moves backward. |
| | Entry | On entry, the seat returns from exiting position to the previous driving position. |

AUTOMATIC DRIVE POSITIONER SYSTEM : Component Parts Location INFOLD:000000006163438



 A. Automatic drive positioner control 2. unit M33, M34
 B. Pedal adjusting motor assembly E109, E110
 C. A/T shift selector (column shift) M68

A. Steering columnB. Key switch and key lock solenoid M27C. BCM M18, M19, M20 (view with instrument panel removed)

 A. Door mirror remote control switch D10
 B. Seat memory switch D5

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< SYSTEM DESCRIPTION >

4. Pedal adjusting switch M96

5. A. Door mirror LH D4, RH D107 B. Front door switch LH B8 A. A/T selector lever (floor shift) B. A/T shift selector (park position switch) M203 (King Cab), M204 (Crew Cab)

6.

 A. Sliding motor LH B204 (driver seat view), reclining motor LH B205, lifting motor (front) B206, lifting motor (rear) B207
 B. Driver seat control unit B202, B203

C. Power seat switch LH B208

AUTOMATIC DRIVE POSITIONER SYSTEM : Component Description

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CONTROL UNITS

| Item | Function |
|---|---|
| Driver seat control unit | Main unit of automatic drive positioner system It is connected to the CAN. It communicates with the automatic drive positioner control unit via UART communication. |
| Automatic drive positioner control unit | It communicates with the driver seat control unit via UART communication. Perform various controls with the instructions of driver seat control unit. Perform the controls of the pedal adjusting, door mirror and the seat memory switch. |
| BCM | Transmit the following status to the driver seat control unit via CAN communication. Front door LH: OPEN/CLOSE Ignition switch position: ACC/ON Door lock: UNLOCK (remote keyless entry request switch operation) Key ID Key switch: Insert/Pull out ignition key Starter: CRANKING/OTHER |
| Combination meter | Transmit the vehicle speed signal to the driver seat control unit via CAN communi- cation. |
| AV control unit | The setting change of auto drive positioner system can be performed on the display. |
| A/T shift selector (park position switch) | Transmit the shift position signal (P range) to the driver seat control unit. |

INPUT PARTS

Switches

| Item | Function |
|---|--|
| Key switch and key lock solenoid | The key switch is installed to detect the key inserted/removed status. |
| Front door switch LH | Detect front door (driver side) open/close status. |
| A/T shift selector (park position switch) | Detect the P range position of A/T selector lever. |
| Set switch | The registration and system setting can be performed with its operation. |
| Seat memory switch 1/2 | The registration and operation can be performed with its operation. |
| Power seat switch | The following switch is installed. Reclining switch Lifting switch (front) Lifting switch (rear) Sliding switch The specific parts can be operated with the operation of each switch. |

< SYSTEM DESCRIPTION >

| Item | Function | _ |
|-----------------------------------|--|---|
| Pedal adjusting switch | The following switch is installed. Pedal forward Pedal backward The specific parts can be operated with the operation of each switch. | B |
| Door mirror remote control switch | The following switch is installed.Mirror switchChangeover switchThe specific parts can be operated with the operation of each switch. | С |

Sensors

| | | D |
|----------------------------|--|---|
| Item | Function | |
| Door mirror sensor (LH/RH) | Detect the up/down and left/right position of outside mirror face. | |
| Pedal adjusting sensor | Detect the forward/backward position of pedal assembly. | E |
| Lifting sensor (front) | Detect the up/down position of seat lifting (front). | |
| Lifting sensor (rear) | Detect the up/down position of seat lifting (rear). | |
| Reclining sensor | Detect the tilt of seatback. | |
| Sliding sensor | Detect the front/rear position of seat. | |

OUTPUT PARTS

| Item | Function | |
|---------------------------|--|--|
| Door mirror motor (LH/RH) | Move the outside mirror face upward/downward and left/right. | |
| Pedal adjusting motor | Move the pedal assembly forward/backward. | |
| Lifting motor (front) | Move the seat lifting (front) upward/downward. | |
| Lifting motor (rear) | Move the seat lifting (rear) upward/downward. | |
| Reclining motor | Tilt and raise up the seatback. | |
| Sliding motor | Slide the seat forward/backward. | |
| Seat memory indicator | Illuminates or flashes according to the registration/operation status. | |

MANUAL FUNCTION

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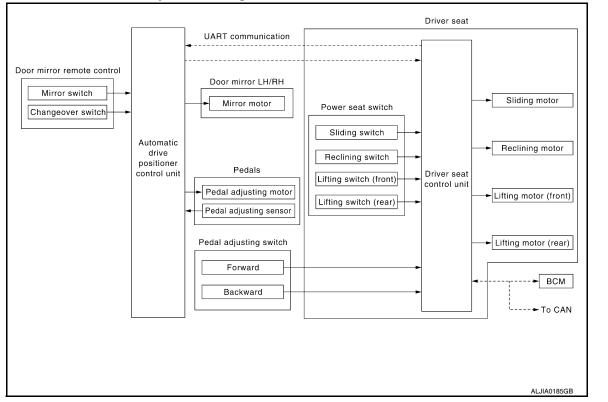
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< SYSTEM DESCRIPTION >

MANUAL FUNCTION : System Diagram



MANUAL FUNCTION : System Description

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OUTLINE

The driving position (seat, pedal assembly and door mirror position) can be adjusted manually with power seat switch, pedal adjusting switch and door mirror remote control switch.

OPERATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Operate power seat switch, pedal adjusting switch or door mirror remote control switch.
- 3. The driver seat, pedal assembly or door mirror operates according to the operation of each switch.

DETAIL FLOW

Seat

| Order | Input | Output | Control unit condition |
|-------|---|--|--|
| 1 | Power seat switch (sliding, lifting, reclin- ing) | _ | The power seat switch signal is inputted to the driver seat control unit when the power seat switch is operated. |
| 2 | _ | Motors (sliding, lifting, reclin- ing) | The driver seat control unit outputs signals to each motor accord- ing to the power seat switch input signal. |

Adjustable pedals

| Order | Input | Output | Control unit condition |
|-------|------------------------|--------|--|
| 1 | Pedal adjusting switch | _ | The pedal adjusting switch signal is input to the automatic drive positioner control unit when the pedal adjusting switch is operat- ed. |

< SYSTEM DESCRIPTION >

| Order | Input | Output | Control unit condition | ٥ |
|-------|--------------------------------|--------|---|---|
| 2 | _ | Motor | The automatic drive positioner control unit actuates the motor ac- cording to the operation of the pedal adjusting switch signal from the driver seat control unit. | A |
| 3 | Sensors (forward, backward) | _ | The automatic drive positioner control unit recognizes any oper- ation limit of each actuator via each sensor and will not operate the actuator anymore at that time. | В |

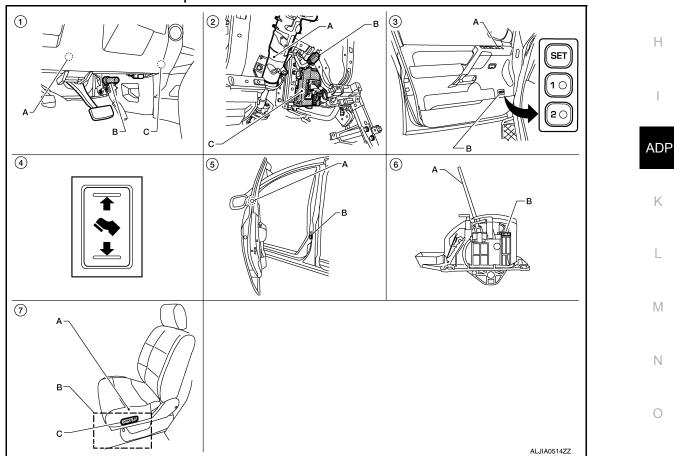
Door Mirror

| Order | Input | Output | Control unit condition | |
|-------|--------------------------------------|-------------------------------|---|--|
| 1 | Door mirror remote control switch | _ | The door mirror remote control switch signal is inputted to the au- tomatic drive positioner control unit when the door mirror remote control switch is operated. | |
| 2 | _ | Motors (Door mirror motor) | The automatic drive positioner control unit actuates each motor according to the operation of the door mirror remote control switch. | |

NOTE:

The door mirrors can be operated manually when ignition switch is in either ACC or ON position. The ignition switch signal (ACC/ON) is transmitted from BCM to the driver seat control unit via CAN communication and from the driver seat control unit to the automatic drive positioner control unit via UART communication.

MANUAL FUNCTION : Component Parts Location



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< SYSTEM DESCRIPTION >

- A. Automatic drive positioner control 2. unit M33, M34
 B. Pedal adjusting motor assembly E109, E110
 C. A/T shift selector (column shift) M68
- 4. Pedal adjusting switch M96
- A. Steering columnB. Key switch and key lock solenoidM27C. BCM M18, M19, M20 (view with
- 5. A. Door mirror LH D4, RH D107 B. Front door switch LH B8

instrument panel removed)

- 3. A. Door mirror remote control switch D10
 - B. Seat memory switch D5
- A. A/T selector lever (floor shift)
 B. A/T shift selector (park position switch) M203 (King Cab), M204 (Crew Cab)

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 A. Sliding motor LH B204 (driver seat view), reclining motor LH B205, lifting motor (front) B206, lifting motor (rear) B207
 B. Driver seat control unit B202, B203
 C. Power seat switch LH B208

MANUAL FUNCTION : Component Description

CONTROL UNITS

| Item | Function | | |
|---|--|--|--|
| Driver seat control unit | Operates the specific seat motor with the signal from the power seat switch. Transmits the ignition switch signal (ACC/ON) via UART communication to the automatic drive positioner control unit. Transmits the pedal adjusting switch signal via UART communication to the automatic drive positioner control unit. | | |
| Automatic drive positioner control unit | Operates the specific motor with the signal from driver seat control unit or door mir- ror remote control switch. | | |
| BCM | Recognizes the following status and transmits it to the driver seat control unit via CAN communication.Ignition position: ACC/ON | | |

INPUT PARTS

Switches

| Item | Function | |
|-----------------------------------|--|--|
| Power seat switch | The following switch is installed. Reclining switch Lifting switch (front) Lifting switch (rear) Sliding switch The specific parts can be operated with the operation of each switch. | |
| Pedal adjusting switch | The following switch is installed. Pedal forward Pedal backward The specific parts can be operated with the operation of each switch. | |
| Door mirror remote control switch | The following switch is installed. Mirror switch Changeover switch The specific parts can be operated with the operation of each switch. | |

Sensors

| Item | Function |
|------------------------|---|
| Pedal adjusting sensor | Detect the forward/backward position of pedal assembly. |

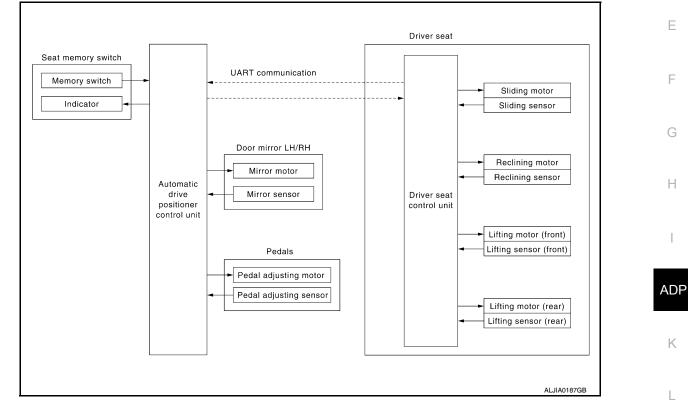
OUTPUT PARTS

< SYSTEM DESCRIPTION >

| Item | Function | А |
|---------------------------|--|---|
| Door mirror motor (LH/RH) | Move the outside mirror face upward/downward and left/right. | |
| Pedal adjusting motor | Move the pedal assembly forward/backward. | |
| Lifting motor (front) | Move the seat lifter (front) upward/downward. | В |
| Lifting motor (rear) | Move the seat lifter (rear) upward/downward. | |
| Reclining motor | Tilt and raise up the seatback. | С |
| Sliding motor | Slide the seat forward/backward. | |

MEMORY FUNCTION

MEMORY FUNCTION : System Diagram



MEMORY FUNCTION : System Description

OUTLINE

The driver seat control unit can store the optimum driving positions (seat, pedal assembly and door mirror position) for 2 people. If the front seat position is changed, one-touch (pressing desired memory switch for more than 0.5 second) operation allows changing to the other driving position. **NOTE:**

Further information for the memory storage procedure. Refer to Owner's Manual.

OPERATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Press desired memory switch for more than 0.5 second.
- 3. Front seat LH, pedal assembly and door mirror will move to the memorized position.

OPERATION CONDITION

Satisfy all of the following items. The memory function is not performed if these items are not satisfied.

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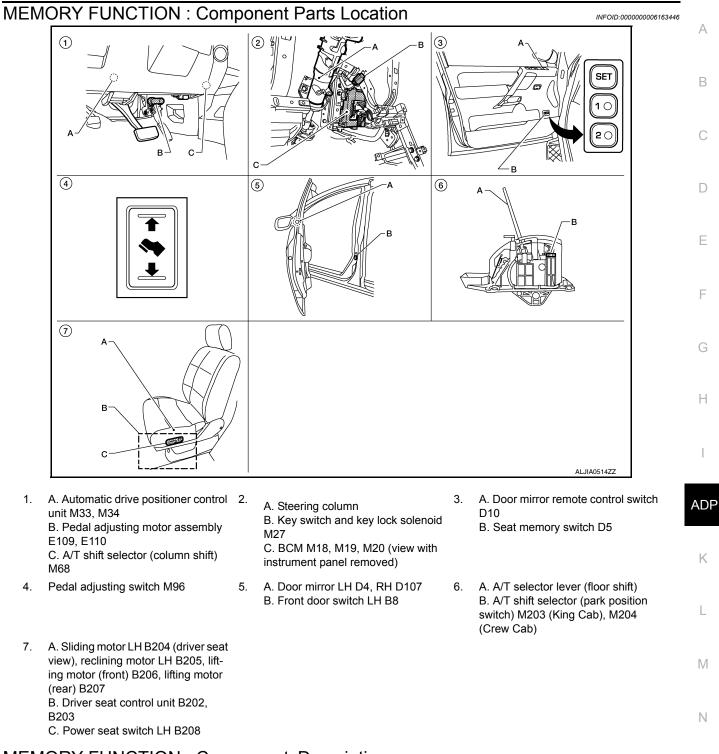
< SYSTEM DESCRIPTION >

| Item | Request status |
|---|-----------------------|
| Ignition position | ON |
| Switch inputs Power seat switch Pedal adjusting switch Door mirror control switch Set switch Seat memory switch | OFF (Not operated) |
| A/T selector lever | P position |

DETAIL FLOW

| Order | Input | Output | Control unit condition |
|-------|--|--|---|
| 1 | Memory switch | _ | The memory switch signal is inputted to the automatic drive positioner control unit when memory switch 1 or 2 is operated. Memory switch signal is input to driver seat control unit via UART communication. |
| 2 — | Motors (seat, pedal adjusting, door mirror) | Driver seat control unit operates each motor of seat when it recogniz- es the memory switch pressed for 0.5 second or more and requests each motor operation to automatic drive positioner control unit via UART communication. The automatic drive positioner control unit op- erates each motor. | |
| | | Memory switch Indica- tor | Driver seat control unit requests the flashing of memory indicator to automatic drive positioner control unit via UART communication while either of the motors is operating. The automatic drive positioner con- trol unit illuminates the memory indicator. |
| 3 | Sensors (seat, pedal adjust- ing, door mirror) | _ | Driver seat control unit judges the operating seat position with each seat sensor input. The positions of the adjustable pedals and outside mirror are monitored with each sensor signal that is input from auto drive positioner control unit via UART communication. Driver seat control unit stops the operation of each motor when each part reach- es the recorded address. |
| 4 | _ | Memory switch Indica- tor | Driver seat control unit requests the illumination of memory indicator to auto drive positioner control unit via UART communication after all motors stop. The auto driving positioner control unit illuminates the memory indicator for 5 seconds. |

< SYSTEM DESCRIPTION >



MEMORY FUNCTION : Component Description

CONTROL UNITS

| Item | Function |
|---|---|
| Driver seat control unit | The address of each part is recorded. Operates each motor of seat to the registered position. Requests the operations of pedal assembly and door mirror to automatic drive positioner control unit. |
| Automatic drive positioner control unit | Operates the pedal adjusting motor and door mirror with the instructions from the driver seat control. |

INFOID:000000006163447

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< SYSTEM DESCRIPTION >

INPUT PARTS

Switches

| Item | Function |
|-------------------|---|
| Memory switch 1/2 | The registration and memory function can be performed with its operation. |

Sensors

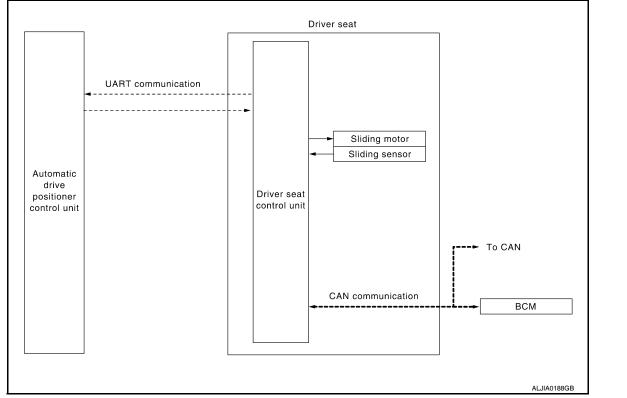
| Item | Function |
|----------------------------|--|
| Door mirror sensor (LH/RH) | Detect the up/down and left/right position of outside mirror face. |
| Pedal adjusting sensor | Detect the forward/backward position of pedal assembly. |
| Lifting sensor (front) | Detect the up/down position of seat lifting (front). |
| Lifting sensor (rear) | Detect the up/down position of seat lifting (rear). |
| Reclining sensor | Detect the tilt of seatback. |
| Sliding sensor | Detect the front/rear position of seat. |

OUTPUT PARTS

| Item | Function |
|---------------------------|---|
| Door mirror motor (LH/RH) | Move the outside mirror face upward/downward and left/right. |
| Pedal adjusting motor | Move the pedal assembly forward/backward. |
| Lifting motor (front) | Move the seat lifter (front) upward/downward. |
| Lifting motor (rear) | Move the seat lifter (rear) upward/downward. |
| Reclining motor | Tilt and raise up the seatback. |
| Sliding motor | Slide the seat forward/backward. |
| Memory indicator | Illuminates or blinks according to the registration/operation status. |

EXIT ASSIST FUNCTION

EXIT ASSIST FUNCTION : System Diagram



< SYSTEM DESCRIPTION >

EXIT ASSIST FUNCTION : System Description INFOID:000000006163449 А OUTLINE When exiting, if the conditions are satisfied, the seat is moved backward from normal sitting position. The seat slide amount at entry/exit operation can be changed. В NOTE: This function is set to OFF before delivery (initial setting). • Further information for the system setting procedure. Refer to Owner's Manual. **OPERATION PROCEDURE** Open the driver door with ignition switch in OFF position. 1. Front seat LH will move to the exiting position. 2. D OPERATION CONDITION Satisfy all of the following items. The exit assist function is not performed if these items are not satisfied. Ε Item Request status OFF Ignition switch F System setting [Entry/exit assist function] ON Initialization Done Switch inputs · Power seat switch · Pedal adjusting switch OFF · Door mirror remote control switch (Not operated) · Set switch Н · Seat memory switch A/T selector lever P position

DETAIL FLOW

| Order | Input | Output | Control unit condition | |
|-------|----------------------|----------------------|--|--|
| 1 | Front door switch LH | _ | Driver seat control unit receives front door switch LH signal (open) from BCM via CAN communication. | |
| 2 | _ | Motor (seat sliding) | (seat sliding) Driver seat control unit operates the seat sliding motor, which reconnizes that the front door LH is opened with ignition switch OFF. | |

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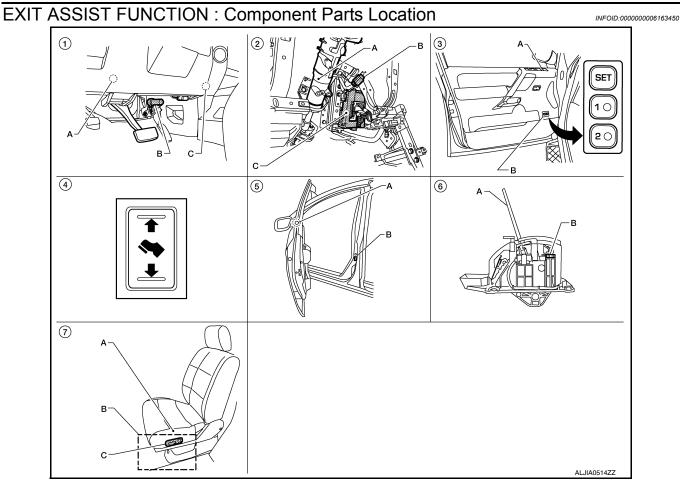
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< SYSTEM DESCRIPTION >



- A. Automatic drive positioner control 2. unit M33, M34
 B. Pedal adjusting motor assembly E109, E110
 C. A/T shift selector (column shift) M68
- 4. Pedal adjusting switch M96
- A. Sliding motor LH B204 (driver seat view), reclining motor LH B205, lifting motor (front) B206, lifting motor (rear) B207
 B. Driver seat control unit B202, B203
 C. Power seat switch LH B208
- A. Steering column B. Key switch and key lock solenoid M27 C. BCM M18, M19, M20 (view with instrument panel removed)
- 5. A. Door mirror LH D4, RH D107 B. Front door switch LH B8
- 3. A. Door mirror remote control switch D10
 - B. Seat memory switch D5
- A. A/T selector lever (floor shift)
 B. A/T shift selector (park position switch) M203 (King Cab), M204 (Crew Cab)

EXIT ASSIST FUNCTION : Component Description

INFOID:000000006163451

CONTROL UNITS

| Item | Function |
|--------------------------|---|
| Driver seat control unit | Operates the seat sliding motor for a constant amount. |
| BCM | Recognizes the following status and transmits it to the driver seat control unit via CAN communication. Front door LH: OPEN/CLOSE |

INPUT PARTS

< SYSTEM DESCRIPTION >

Switches

| Item | Function | |
|----------------------|---|---|
| Front door switch LH | Detect front door LH open/close status. | _ |
| ensors | | В |

Sensors

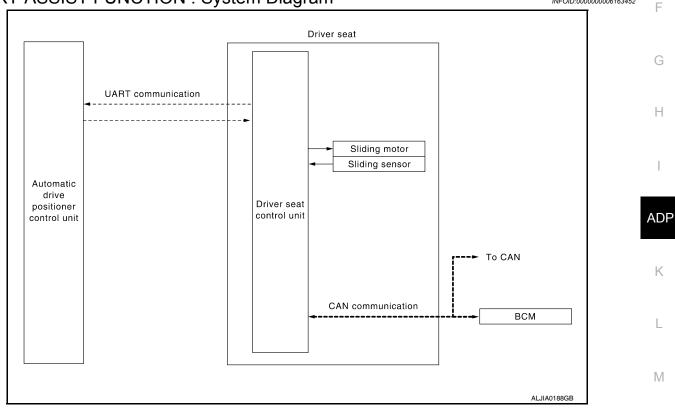
| Item | Function | С |
|----------------|---|---|
| Sliding sensor | Detect the front/rear position of seat. | |

OUTPUT PARTS

| Item | Function |
|---------------|----------------------------------|
| Sliding motor | Slide the seat forward/backward. |

ENTRY ASSIST FUNCTION

ENTRY ASSIST FUNCTION : System Diagram



ENTRY ASSIST FUNCTION : System Description

OUTLINE

The seat is in the exiting position when either following condition (A or B) is satisfied, the seat returns from certain position to the previous driving position.

NOTE:

- This function is set to OFF before delivery (initial setting).
- · Further information for the system setting procedure. Refer to Owner's Manual.

OPERATION PROCEDURE

- 1. A: Turn the ignition switch ON.
- B: Turn the ignition switch from OFF to ACC after closing the driver door.
- Front seat LH will return from the exiting position to entry position.

OPERATION CONDITION

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INFOID:000000006163453

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< SYSTEM DESCRIPTION >

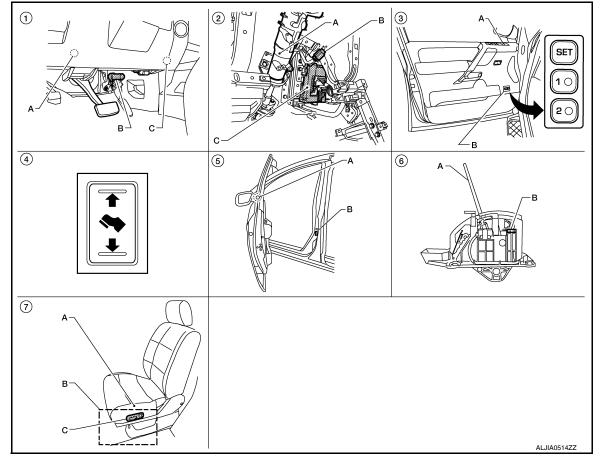
Satisfy all of the following items. The entry assist function is not performed if these items are not satisfied.

| Item | Request status |
|--|---|
| Seat | The vehicle is not moved after performing the exit assist function. |
| Switch inputs Power seat switch Pedal adjusting switch Door mirror control switch Set switch Memory switch | OFF (Not operated) |
| A/T selector lever | P position |

DETAIL FLOW

| Order | Input | Output | Control unit condition |
|-------|-----------------------------|-----------------|---|
| 1 | Door switch/Ignition switch | _ | Driver seat control unit receives the signals of ignition switch signal and front door switch from BCM via CAN communication. |
| 2 | _ | Motor (sliding) | Driver seat control unit operates the sliding motor when the operating conditions are satisfied. |
| 2 | Sensor (sliding) | _ | Sensor monitors the operating positions of seat and then stops the operation of motor when seat reaches the recorded address. |

ENTRY ASSIST FUNCTION : Component Parts Location



< SYSTEM DESCRIPTION >

| 1. | A. Automatic drive positioner control unit M33, M34 B. Pedal adjusting motor assembly E109, E110 C. A/T shift selector (column shift) M68 | 2. | A. Steering column B. Key switch and key lock solenoid M27 C. BCM M18, M19, M20 (view with instrument panel removed) | 3. | A. Door mirror remote control switch D10 B. Seat memory switch D5 | A B |
|-----|--|-----|---|----|--|--------|
| 4. | Pedal adjusting switch M96 | 5. | A. Door mirror LH D4, RH D107 B. Front door switch LH B8 | 6. | A. A/T selector lever (floor shift) B. A/T shift selector (park position switch) M203 (King Cab), M204 (Crew Cab) | С |
| 7. | A. Sliding motor LH B204 (driver seat view), reclining motor LH B205, lift- ing motor (front) B206, lifting motor (rear) B207 | | | | | D |
| | B. Driver seat control unit B202, B203 C. Power seat switch LH B208 | | | | | Е |
| ENT | RY ASSIST FUNCTION | : C | component Description | | INFOID:00000006163455 | F |

CONTROL UNITS

| Item | Function |
|--------------------------|--|
| Driver seat control unit | According to the ignition signal and front door switch LH signal from BCM,Operates the seat sliding motor for a constant amount. |
| BCM | Recognizes the following status and transmits it to the driver seat control unit via CAN communication. Front door LH: OPEN/CLOSE Ignition switch position: ACC/ON |

INPUT PARTS

Switches

| Item | Function | |
|----------------------|---|---|
| Front door switch LH | Detect front door LH open/close status. | K |

Sensors

| Item | Function | |
|----------------|---|--|
| Sliding sensor | Detect the front/rear position of seat. | |

OUTPUT PARTS

| Item | Function | NI |
|---------------|----------------------------------|----|
| Sliding motor | Slide the seat forward/backward. | IN |

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DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

Diagnosis Description

INFOID:000000006163456

The auto drive positioner system can be checked and diagnosed for component operation with CONSULT-III. DIAGNOSTIC MODE

| Diagnostic mode [AUTO DRIVE POS.] | Description | |
|--------------------------------------|---|--|
| WORK SUPPORT | Changes the setting of each function. | |
| SELF DIAGNOSTIC RESULT | Performs self-diagnosis for the auto drive positioner system and displays the results. | |
| DATA MONITOR | Displays input signals transmitted from various switches and sensors to driver seat con- trol unit in real time. | |
| CAN DIAG SUPPORT MNTR | The result of transmit/receive diagnosis of CAN communication can be read. | |
| ACTIVE TEST | Drive each output device. | |
| ECU IDENTIFICATION | Displays part numbers of driver seat control unit parts. | |

CONSULT-III Function

SELF-DIAGNOSIS RESULTS Refer to <u>ADP-113, "DTC Index"</u>.

DATA MONITOR

| Monitor Item | Unit | Main Signals | Selection From Menu | Contents |
|---------------|----------|-----------------|---------------------------|--|
| SET SW | "ON/OFF" | × | × | ON/OFF status judged from the setting switch signal. |
| MEMORY SW1 | "ON/OFF" | × | × | ON/OFF status judged from the seat memory switch 1 signal. |
| MEMORY SW2 | "ON/OFF" | × | × | ON/OFF status judged from the seat memory switch 2 signal. |
| SLIDE SW-FR | "ON/OFF" | × | × | ON/OFF status judged from the sliding switch (forward) signal. |
| SLIDE SW-RR | "ON/OFF" | × | × | ON/OFF status judged from the sliding switch (backward) signal. |
| RECLN SW-FR | "ON/OFF" | × | × | ON/OFF status judged from the reclining switch (forward) signal. |
| RECLN SW-RR | "ON/OFF" | × | × | ON/OFF status judged from the reclining switch (backward) signal. |
| LIFT FR SW-UP | "ON/OFF" | × | × | ON/OFF status judged from the lifting switch front (up) signal. |
| LIFT FR SW-DN | "ON/OFF" | × | × | ON/OFF status judged from the lifting switch front (down) signal. |
| LIFT RR SW-UP | "ON/OFF" | × | × | ON/OFF status judged from the lifting switch rear (up) signal. |
| LIFT RR SW-DN | "ON/OFF" | × | × | ON/OFF status judged from the lifting switch rear (down) signal. |
| MIR CON SW-UP | "ON/OFF" | × | × | ON/OFF status judged from the mirror switch (up) signal. |
| MIR CON SW-DN | "ON/OFF" | × | × | ON/OFF status judged from the mirror switch (down) signal. |
| MIR CON SW-RH | "ON/OFF" | × | × | ON/OFF status judged from the door mirror remote control switch (passenger side) signal. |
| MIR CON SW-LH | "ON/OFF" | × | × | ON/OFF status judged from the door mirror remote control switch (driver side) signal. |

DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

| Monitor Item | Unit | Main Signals | Selection From Menu | Contents |
|----------------|----------|-----------------|---------------------------|---|
| MIR CHNG SW-R | "ON/OFF" | × | × | ON/OFF status judged from the door mirror remote control switch (switching to right) signal. |
| MIR CHNG SW-L | "ON/OFF" | × | × | ON/OFF status judged from the door mirror remote control switch (switching to left) signal. |
| PEDAL SW-FR | "ON/OFF" | × | × | ON/OFF status judged from the pedal adjusting switch (for- ward) signal. |
| PEDAL SW-RR | "ON/OFF" | × | × | ON/OFF status judged from the pedal adjusting switch (backward) signal. |
| DETENT SW | "ON/OFF" | × | × | The selector lever position "OFF (P position) / ON (other than P position)" judged from the park position switch signal. |
| STARTER SW | "ON/OFF" | × | × | Ignition key switch ON (START, ON) /OFF (ACC, OFF) sta- tus judged from the ignition switch signal. |
| SLIDE PULSE | _ | - | × | Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases. |
| RECLN PULSE | _ | _ | × | Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases. |
| LIFT FR PULSE | _ | _ | × | Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases. |
| LIFT RR PULSE | _ | _ | × | Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases. |
| MIR/SEN RH U-D | "V" | - | × | Voltage input from door mirror sensor (passenger side) up/ down is displayed. |
| MIR/SEN RH R-L | "V" | - | × | Voltage input from door mirror sensor (passenger side) left/ right is displayed. |
| MIR/SEN LH U-D | "V" | - | × | Voltage input from door mirror sensor (driver side) up/down is displayed. |
| MIR/SEN LH R-L | "V" | - | × | Voltage input from door mirror sensor (driver side) left/right is displayed. |
| PEDAL SEN | "V" | - | × | Pedal position (voltage) judged from the pedal adjusting sensor signal is displayed. |

ACTIVE TEST CAUTION:

When driving vehicle, do not perform active test.

| Test item | Description | N |
|------------------|--|---|
| SEAT SLIDE | Activates/deactivates the sliding motor. | |
| SEAT RECLINING | Activates/deactivates the reclining motor. | 0 |
| SEAT LIFTER FR | Activates/deactivates the lifting motor (front). | |
| SEAT LIFTER RR | Activates/deactivates the lifting motor (rear). | |
| PEDAL MOTOR | Activates/deactivates the pedal adjusting motor. | P |
| MIRROR MOTOR RH | Activates/deactivates the mirror motor (passenger side). | |
| MIRROR MOTOR LH | Activates/deactivates the mirror motor (driver side). | |
| MEMORY SW INDCTR | Turns ON/OFF the memory indicator. | |

WORK SUPPORT

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DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

| Work item | Content | Item |
|-------------------------|---|--------|
| | | 40 mm |
| SEAT SLIDE VOLUME SET | The amount of seat sliding for entry/exit assist can be selected from 3 items. | 80 mm |
| | | 150 mm |
| EXIT SEAT SLIDE SETTING | Entry/exit assist (seat) can be selected: | ON |
| EAT SEAT SLIDE SETTING | ON (operated) – OFF (not operated) | OFF |

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

Refer to BCS-27, "Description".

DTC Logic

DTC DETECTION LOGIC

| DTC | Trouble diagnosis name | DTC detecting condition | Possible cause | |
|-------|---------------------------|--|---|--|
| U1000 | CAN COMM CIR- CUIT | Driver seat control unit cannot communicate to other control units. Driver seat control unit cannot communicate for more than the specified time. | Harness or connectors (CAN communication line is open or shorted) | |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON and wait at least 3 seconds.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>BCS-27, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Special Repair Requirement

Refer to Owner's Manual.

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- INFOID:000000006163460
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< DTC/CIRCUIT DIAGNOSIS >

B2112 SLIDING MOTOR

Description

INFOID:000000006163461

- The seat sliding motor is installed to the power seat frame assembly.
- The seat sliding motor is installed with the driver seat control unit.

• Slides the seat frontward/rearward by changing the rotation direction of sliding motor.

DTC Logic

INFOID:000000006163462

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|---------------------------|--|--------------------------|
| B2112 | SEAT SLIDE | The driver seat control unit detects the output of slid- ing motor output terminal for 0.1 second or more even if the sliding switch is not input. | Driver seat control unit |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-30, "Diagnosis Procedure"</u>.

NO >> Inspection End.

NOTE:

First perform diagnosis for B2126 if B2126 is detected. Refer to <u>ADP-43</u>, "Diagnosis Procedure (Column Shift)".

Diagnosis Procedure

INFOID:000000006163463

Regarding Wiring Diagram information, refer to <u>ADP-128, "Wiring Diagram"</u>.

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to <u>ADP-30, "DTC Logic"</u>.

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.

2. CHECK SLIDING MOTOR CIRCUIT (POWER SHORT)

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding motor and driver seat control unit connector.
- 3. Check voltage between sliding motor harness connector and ground.

B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| | (+) | | Voltage (V) |
|-----------------------------------|--|--|--------------------------|
| Sliding motor Connector Terminals | | () | (Approx.) |
| B204 | 1 | Ground | 0 |
| CHECK DRIVER SEA | t for short to voltage. T CONTROL UNIT OUTPUT | T SIGNAL arness connector and ground. | |
| | (+) | | |
| Driver s | eat control unit | (-) | Voltage (V) (Approx.) |
| Connector | Terminals | | · · · · / |
| B203 | 35 42 | Ground | 0 |
| >> Inspection E | <u>ent Incident"</u> . nd. | | |
| | | | |
| | | | |
| | | | |
| | | | |

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2113 RECLINING MOTOR

Description

INFOID:000000006163464

- · The seat reclining motor is installed to the seatback assembly.
- The seat reclining motor is activated with the driver seat control unit.
- Tilts the seatback frontward/rearward by changing the rotation direction of reclining motor.

DTC Logic

INFOID:000000006163465

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|---------------------------|--|----------------|
| B2113 | SEAT RECLINING | The driver seat control unit detects the output of re- clining motor output terminal for 0.1 second or more even if the reclining switch is not input. | |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-32, "Diagnosis Procedure".

NO >> Inspection End.

NOTE:

First perform diagnosis for B2126 if B2126 is detected. Refer to <u>ADP-43</u>, "Diagnosis Procedure (Column <u>Shift)</u>".

Diagnosis Procedure

INFOID:000000006163466

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to <u>ADP-32, "DTC Logic"</u>.
- Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.

2. CHECK RECLINING MOTOR CIRCUIT (POWER SHORT)

- 1. Turn ignition switch OFF.
- 2. Disconnect reclining motor and driver seat control unit connector.
- 3. Check voltage between reclining motor harness connector and ground.

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Reclining motorConnectorTerminalsB205233s the inspection result normal?YES>> GO TO 3.NO>> Repair circuit for short to voltage.3.CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGN1. Connect driver seat control unit connector.2. Check voltage between driver seat control unit harness $(+)$ $(+)$ Driver seat control unit $(+)$ | | Voltage (V) (Approx.) 0 Voltage (V) (Approx.) 0 |
|--|------------------------------------|--|
| B205 2 3 3 s the inspection result normal? YES >> GO TO 3. NO >> Repair circuit for short to voltage. 3.CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGN 1. Connect driver seat control unit connector. 2. Check voltage between driver seat control unit harness (+) Driver seat control unit Connector (+) Driver seat control unit Connector Terminals 36 32 36 44 s the inspection result normal? YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | NAL connector and ground (–) | Voltage (V) (Approx.) |
| YES >> GO TO 3. NO >> Repair circuit for short to voltage. CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGN . Connect driver seat control unit connector. 2. Check voltage between driver seat control unit harness (+) Driver seat control unit Connector (+) Driver seat control unit Connector Terminals 36 44 s the inspection result normal? YES YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | connector and ground | Voltage (V) (Approx.) |
| Driver seat control unit Connector Terminals B203 36 44 44 s the inspection result normal? YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | | (Approx.) |
| Connector Terminals B203 36 44 s the inspection result normal? YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | | (Approx.) |
| B203 36 44 s the inspection result normal? YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | Ground | 0 |
| B203 44 s the inspection result normal? YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to ADP-1 | Ground | 0 |
| YES >> GO TO 4. NO >> Replace driver seat control unit. Refer to <u>ADP-1</u> | | |
| >> Inspection End. | | |
| | | |
| | | |
| | | |
| | | |

B2114 SEAT LIFTER FR

< DTC/CIRCUIT DIAGNOSIS >

B2114 SEAT LIFTER FR

Description

INFOID:000000006163467

INEOID-000000006163468

- The lifting motor (front) is installed to the power seat frame assembly.
- The lifting motor (front) is activated with the driver seat control unit.
- Tilts the seat front up/down by changing the rotation direction of lifting motor (front).

DTC Logic

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|------------------------|--|--------------------------|
| B2114 | SEAT LIFTER FR | The driver seat control unit detects the output of lift- ing motor (front) output terminal for 0.1 second or more even if the lifting switch is not input. | Driver seat control unit |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-34, "Diagnosis Procedure".

NO >> Inspection End.

NOTE:

First perform diagnosis for B2126 if B2126 is detected. Refer to <u>ADP-43</u>, "Diagnosis Procedure (Column <u>Shift)</u>".

Diagnosis Procedure

INFOID:000000006163469

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to <u>ADP-34, "DTC Logic"</u>.
- Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.

2.CHECK LIFTING MOTOR (FRONT) CIRCUIT (POWER SHORT)

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and tilt motor connector.
- 3. Check voltage between tilt motor harness connector and ground.

B2114 SEAT LIFTER FR

< DTC/CIRCUIT DIAGNOSIS >

| | (+) | | Voltage (V) |
|--------------------------------------|-------------------------------|-------------------------------|--------------------------|
| Lifting motor (front) | | (-) | (Approx.) |
| Connector | Terminals 1 | | |
| B206 | 5 | Ground | 0 |
| e inspection result nor | mal? | | |
| S >> GO TO 3. >> Repair circuit f | or short to voltage. | | |
| | | ITROL UNIT OUTPUT SIGN | 4L |
| | ve positioner control unit co | | |
| | | r control unit harness connec | tor and ground. |
| | (+) | | |
| | ositioner control unit | (-) | Voltage (V) (Approx.) |
| Connector | Terminals | | |
| B203 | <u> </u> | Ground | 0 |
| ne inspection result nor | | | |
| >> Inspection End | | | |
| | | | |
| | - | | |
| | - | | |
| | - | | |
| | - | | |
| | - | | |
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< DTC/CIRCUIT DIAGNOSIS >

B2115 SEAT LIFTER RR

Description

INFOID:000000006163470

INFOID:000000006163471

- The lifting motor (rear) is installed to the power seat frame assembly.
- The lifting motor (rear) is activated with the driver seat control unit.
- Tilts the seat rear up/down by changing the rotation direction of lifting motor (rear).

DTC Logic

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|------------------------|---|--------------------------|
| B2115 | SEAT LIFTER RR | The driver seat control unit detects the output of lift- ing motor (rear) output terminal for 0.1 second or more even if the lifting switch is not input. | Driver seat control unit |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-36, "Diagnosis Procedure".

NO >> Inspection End.

NOTE:

First perform diagnosis for B2126 if B2126 is detected. Refer to <u>ADP-43</u>, "Diagnosis Procedure (Column <u>Shift)</u>".

Diagnosis Procedure

INFOID:000000006163472

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to <u>ADP-36, "DTC Logic"</u>.
- Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.

2.CHECK LIFTING MOTOR (REAR) CIRCUIT (POWER SHORT)

- 1. Turn ignition switch OFF.
- 2. Disconnect reclining motor and driver seat control unit connector.
- 3. Check voltage between reclining motor harness connector and ground.

B2115 SEAT LIFTER RR

< DTC/CIRCUIT DIAGNOSIS >

| Lifting motor (rear) Connector Terminals B207 1 B207 5 the inspection result normal? YES >> GO TO 3. NO >> Repair circuit for short to voltage. CHECK DRIVER SEAT CONTROL UNIT OUTPUT S | (–) Ground | Voltage (V) (Approx.) |
|---|---------------|--------------------------|
| B207 1 the inspection result normal? YES YES NO >> Repair circuit for short to voltage. | Ground | |
| B207 5 the inspection result normal? YES >> GO TO 3. NO >> Repair circuit for short to voltage. | Ground | |
| YES >> GO TO 3. NO >> Repair circuit for short to voltage. | | 0 |
| NO >> Repair circuit for short to voltage. | | |
| | | |
| | SIGNAL | |
| Connect driver seat control unit connector. | | |
| Check voltage between driver seat control unit harn | | |
| (+) | | Voltage (V) |
| Driver seat control unit Connector Terminals | () | (Approx.) |
| 38 | | |
| B203 39 | Ground | 0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

B2117 ADJ PEDAL MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2117 ADJ PEDAL MOTOR

Description

INFOID:000000006163473

- · The pedal adjusting sensor is installed to pedal adjusting motor assembly.
- The resistance of pedal adjusting sensor is changed according to the forward/backward position of pedal assembly.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of pedal adjusting sensor resistance. Automatic drive positioner control unit calculates the pedal position from the voltage.

DTC Logic

INFOID:000000006163474

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|------------------------|--|---|
| B2117 | ADJ PEDAL MOTOR | When any manual or automatic operations are not performed, if motor operation is detected for 0.1 second or more, status is judged "Output error". | Harness and connectors (pedal adjusting sensor circuit is opened/shorted, pedal adjusting sensor power supply circuit is opened/shorted.) Pedal adjusting sensor |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-38, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000006163475

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK PEDAL ADJUSTING MECHANISM

Check the following.

- Operation malfunction caused by pedal adjusting mechanism deformation or pinched harness or other foreign materials
- Operation malfunction and interference with other parts by poor installation

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part and check again.

2. CHECK FUNCTION

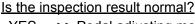
1. Turn ignition switch ON.

2. Check "PEDAL MOTOR" in "Active test" mode with CONSULT-III.

| Test item | Description |
|-------------|---|
| PEDAL MOTOR | The pedal adjusting motor is activated by receiving the drive signal. |

B2117 ADJ PEDAL MOTOR





- YES >> Pedal adjusting motor assembly circuit is OK.
- NO >> GO TO 3

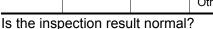
3. CHECK PEDAL ADJUSTING MOTOR ASSEMBLY CIRCUIT HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and pedal 2. adjusting motor assembly.
- Check continuity between automatic drive positioner control unit 3. connector M34 (A) terminals 37, 45 and pedal adjusting motor assembly connector E109 (B) terminals 1, 2.
 - 37 1 45 - 2

: Continuity should exist. : Continuity should exist.

- 4. Check continuity between automatic drive positioner control unit connector M34 (A) terminals 37, 45 and ground.
 - 37 Ground
- : Continuity should not exist.
- 45 Ground
- : Continuity should not exist.
- Is the inspection result normal?
- YES >> GO TO 4
- NO >> Repair or replace harness.
- ${f 4}$. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
- 1. Connect the automatic drive positioner control unit and pedal adjusting motor assembly.
- Check voltage between automatic drive positioner control unit 2. connector and ground.

| Connec- | Terminals | | Condition | Voltage (V) |
|---------|-----------|------------------|--|-----------------|
| tor | (+) | (-) | Condition | (Approx.) |
| 37 | | | Pedal adjusting switch ON (FORWARD operation) | Battery voltage |
| M34 45 | | Ground | Other than above | 0 |
| | 45 | | Pedal adjusting switch ON (BACKWARD operation) | Battery voltage |
| | | Other than above | 0 | |



- YES >> Replace pedal adjusting motor assembly. Refer to ADP-152, "Removal and Installation".
- NO >> GO TO 5
- CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

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Automatic drive positioner

37 45

37, 45

C/U connector

2

ALJIA0195Z2

-2 HS

> 45 37,45

< DTC/CIRCUIT DIAGNOSIS >

B2120 ADJ PEDAL SENSOR

Description

INFOID:000000006163476

- · The pedal adjusting sensor is installed in the pedal adjusting motor assembly.
- The resistance of pedal adjusting sensor is changed according to the forward/backward position of pedal adjusting motor assembly.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of pedal adjusting sensor resistance. Automatic drive positioner control unit calculates the pedal assembly position from the voltage.

DTC Logic

INFOID:000000006163477

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|---------------------------|---|---|
| B2120 | ADJ PEDAL SENSOR | The input voltage of pedal adjusting sensor is 0.5V or less or 4.5V or higher, for 0.5 seconds or more. | Harness and connectors (Pedal adjusting sensor circuit is opened/shorted, pedal adjusting sensor power supply circuit is opened/shorted.) Pedal adjusting sensor |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC is detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-40</u>, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000006163478

Regarding Wiring Diagram information, refer to <u>ADP-128, "Wiring Diagram"</u>.

1. CHECK PEDAL ADJUSTING SENSOR SIGNAL

- 1. Turn ignition switch ON.
- 2. Select "PEDAL SEN" in "Data monitor" mode with CONSULT-III.
- 3. Check the pedal adjusting sensor signal under the following condition.

| Monitor item | Condition | | Value |
|--------------|----------------|----------|-------|
| PEDAL SEN | Pedal position | Forward | 0.5V |
| | | Backward | 4.5V |

Is the value normal?

YES >> Pedal adjusting circuit is OK.

NO >> GO TO 2

2. CHECK PEDAL ADJUSTING MOTOR ASSEMBLY CIRCUIT HARNESS CONTINUITY

B2120 ADJ PEDAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect automatic drive positioner control unit and pedal adjusting motor assembly.
- Check continuity between automatic drive positioner connector M33 (A) terminal 8, M34 (C) terminals 33 and 41 and pedal adjusting motor assembly connector E110 (B) terminals 3, 4, 5.

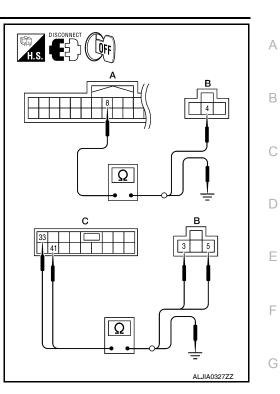
| 8 - 4 | : Continuity should exist. |
|--------|----------------------------|
| 33 - 3 | : Continuity should exist. |
| 41 - 5 | : Continuity should exist. |

3. Check continuity between automatic drive positioner control unit connector M33 (A) terminal 8, M34 (C) terminals 33 and 41 and ground.

| 8 - Ground | : Continuity should not exist. |
|-------------|--------------------------------|
| 33 - Ground | : Continuity should not exist. |
| 41 - Ground | : Continuity should not exist. |

Is the inspection result normal?

- YES >> Replace pedal adjusting motor assembly. Refer to <u>ADP-152</u>, "Removal and Installation".
- NO >> Repair or replace harness.



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< DTC/CIRCUIT DIAGNOSIS >

B2126 DETENT SW

Description

INFOID:00000006163479

- The park position switch is installed on A/T shift selector. It is turned OFF when the A/T shift selector is in P
 position.
- The driver seat control unit judges that the A/T shift selector is in P position if continuity does not exist in this circuit.

DTC Logic

INFOID:000000006163480

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|------------------------|---|--|
| B2126 | DETENT SW | A/T shift selector is in P position and the vehicle speed of 4 ± 2 MPH (7 ± 4 km/h) is detected. | Harness and connectors (Park position switch circuit is opened/shorted.) A/T shift selector (park position switch) Combination meter (CAN communication) |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Drive the vehicle at 4 ± 2 MPH (7 ± 4 km/h) or more.

>> GO TO 2

2. STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-42</u>, "<u>Diagnosis Procedure (Floor Shift)</u>" or <u>ADP-43</u>, "<u>Diagnosis Procedure (Column Shift)</u>".
- NO >> Inspection End.

Diagnosis Procedure (Floor Shift)

INFOID:000000006163481

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. СНЕСК DTC

Check "Self diagnostic result" for BCM with CONSULT-III. Are other DTCs detected?

YES >> Check the DTC.

- 2. CHECK PARK POSITION SWITCH SIGNAL
- 1. Turn ignition switch ON.
- 2. Select "DETENT SW" in "Data Monitor" mode with CONSULT-III.
- 3. Check park position switch signal under the following condition.

| Monitor item | Condition | | Status |
|--------------|--------------------|------------------|--------|
| DETENT SW | A/T shift selector | P position | OFF |
| DETENT SW | | Other than above | ON |

Is the status normal?

B2126 DETENT SW

| < DTC/CIRCUIT DIAGNOSIS | > | | |
|---|----------------------|-------------------------------|-------------------------------|
| YES >> A/T shift selector (p NO >> GO TO 3 | ark position switch | n) circuit is OK. | |
| 3. CHECK A/T SHIFT SELECT | OR (PARK POSI | TION SWITCH) HARNESS | |
| 1. Turn ignition switch OFF. | | | |
| 2. Disconnect A/T shift selecto | VT shift selector of | connector M203 (King Cab) c | or M204 (Crew Cab) terminal 6 |
| 6 - 21 | : Continuity s | should exist. | |
| Check continuity between A and ground. | VT shift selector o | connector M203 (King Cab) c | or M204 (Crew Cab) terminal 6 |
| 6 - Ground | : Continuity s | hould not exist. | |
| Is the inspection result normal? | | | |
| YES >> GO TO 4 NO >> Repair or replace ha | arnoss | | |
| 4. CHECK A/T SHIFT SELECT | | TION SWITCH) | |
| Check continuity between A/T s | , | , | follows. |
| · · · · · · · · · · · · · · · | | ,, | |
| | dition | Continuity | |
| 5 6 P position | | No | |
| Other than Is the inspection result normal? | P position | Yes | |
| YES >> GO TO 5 | | | |
| NO >> Replace A/T shift se | | M-185, "A/T Shift Selector Re | emoval and Installation". |
| 5. CHECK INTERMITTENT IN | | | |
| Refer to <u>GI-39, "Intermittent Inci</u> | <u>dent"</u> . | | A |
| <u>Is the inspection result normal?</u> YES >> Replace driver seat | control unit Refe | r to ADP-148, "Removal and | Installation" |
| NO >> Repair or replace th | | | <u>Installation</u> . |
| Diagnosis Procedure (Co | olumn Shift) | | INFOID:00000006163482 |
| | | | |
| Regarding Wiring Diagram infor | mation, refer to Al | OP-128, "Wiring Diagram". | |
| | · · · | | |
| 1. CHECK DTC | | | |
| Check "Self diagnostic result" fo | r BCM with CONS | SULT-III. | |
| Are other DTCs detected? | | | |
| YES >> Check the DTC. NO >> GO TO 2 | | | |
| 2. CHECK PARK POSITION S | WITCH SIGNAL | | |
| 1. Turn ignition switch ON. | | | |
| Select "DETENT SW" in "Data 3. Check park position switch | | | |
| Monitor item | | Condition | Status |
| | | P position | OFF |

| Monitor item | Condition | | Status |
|--------------|--------------------|------------------|--------|
| DETENT SW | A/T shift selector | P position | OFF |
| | | Other than above | ON |

Is the status normal?

B2126 DETENT SW

< DTC/CIRCUIT DIAGNOSIS >

YES >> A/T shift selector (park position switch) circuit is OK.

NO >> GO TO 3

3. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) HARNESS

- 1. Turn ignition switch OFF.
- 2. Disconnect A/T shift selector and driver seat control unit.
- 3. Check continuity between A/T shift selector connector M68 terminal 8 and driver seat control unit connector B202 terminal 21.

8 - 21

: Continuity should exist.

4. Check continuity between A/T shift selector connector M68 terminal 8 and ground.

8 - Ground

: Continuity should not exist.

5. Check continuity between A/T shift selector connector M68 terminal 1 and ground.

1 - Ground

: Continuity should exist.

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH)

Check continuity between A/T shift selector (park position switch) terminals as follows.

| Term | inals | Condition | Continuity |
|------|-------|-----------------------|------------|
| 8 | 1 | P position | No |
| ŏ | I | Other than P position | Yes |

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace A/T shift selector. Refer to TM-185. "A/T Shift Selector Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

< DTC/CIRCUIT DIAGNOSIS >

B2128 UART COMMUNICATION LINE

Description

Driver seat control unit performs UART communication with the automatic drive positioner control unit using 2 В communication lines, TX and RX line. Driver seat control unit receives the operation signals of pedal adjusting switch, door mirror remote control switch, set switch and memory switch and the position signals of adjustable pedal sensor and door mirror sensor from the automatic drive positioner control unit and transmits the operation request signal.

DTC Logic

DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---------|------------------------|---|---|
| B2128 | UART COMM | The communication between driver seat control unit and automatic drive positioner control unit is interrupt- ed for a period of time. | UART communication line (UART communication line is open or shorted) Driver seat control unit Automatic drive positioner control unit |

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON.

>> GO TO 2

2. STEP 2

Operate pedal adjusting switch for more than 2 seconds.

>> GO TO 3

3. PROCEDURE 3

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-45, "Diagnosis Procedure".

NO >> Inspection End.

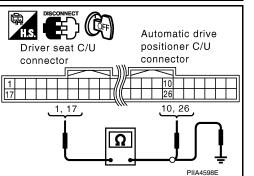
Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK UART COMMUNICATION LINE CONTINUITY

- Turn ignition switch OFF. 1.
- 2. Disconnect driver seat control unit and automatic drive positioner control unit.
- 3. Check continuity between driver seat control unit harness connector and automatic drive positioner control unit harness connector.

| Driver seat control unit connector | Automatic drive positioner control unit connector | Terminal | Continuity |
|---------------------------------------|--|----------|------------|
|---------------------------------------|--|----------|------------|



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B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

| B202 | 1 | M33 | 10 | Yes |
|------|----|-----|----|-----|
| | 17 | | 26 | res |

4. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit con- nector | Terminal | | Continuity |
|---|----------|--------|------------|
| B202 | 1 | Ground | No |
| | 17 | _ | NO |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace harness.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM : Diagnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not blown.

| | Fuses and fusible link No. | Signal name | Terminal No. |
|-----|----------------------------|-----------------------|--------------|
| [| 22 (15A) | Better / power ourply | 57 |
| | F (50A) | Battery power supply | 70 |
| | 4 (10A) | Ignition ACC or ON | 11 |
| — E | 59 (10A) | Ignition ON or START | 38 |

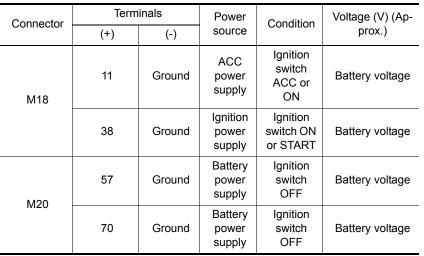
Is the fuse blown?

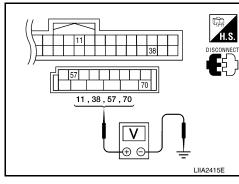
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 3. Check voltage between BCM harness connector and ground.







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Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

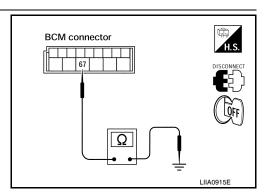
| B | CM | | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal | Ground | Continuity |
| M20 | 67 | | Yes |

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT



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INFOID:000000006163486

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DRIVER SEAT CONTROL UNIT : Diagnosis Procedure

INFOID:000000006163487

NOTE:

Do not disconnect the battery negative terminal and the driver seat control unit connector until DTC is confirmed with CONSULT-III.

Condition

Ignition

switch

START

Ignition

switch

OFF

(Approx.)

Battery

voltage

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

Power

source

START

power sup-

ply

Battery

power sup-

ply

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

(+)

Driver seat

control unit

connector

B202

B203

NO

Disconnect driver seat control unit. 2.

Terminals

Terminal

6

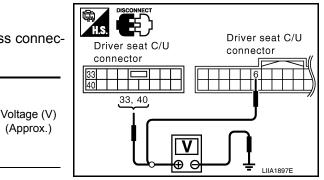
33

40

Check voltage between driver seat control unit harness connec-3. tor and ground.

(-)

Ground



Is the inspection result normal?

>> GO TO 2 YES

>> Check the following.

Repair or replace harness.

Circuit breaker.

$\mathbf{2}$. CHECK GROUND CIRCUIT

Check continuity between the driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| B202 | 32 | Ground | Yes |
| B203 | 48 | | 165 |

Is the inspection result normal?

>> Driver seat control unit power supply and ground circuit YES are OK.

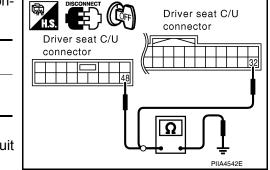
NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT : Special Repair Requirement

1. PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to Owner's Manual. AUTOMATIC DRIVE POSITIONER CONTROL UNIT



INFOID:00000006163488

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure

NOTE:

Do not disconnect the battery negative terminal and the driver seat control unit connector until DTC is confirmed with CONSULT-III.

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect the automatic drive positioner control unit.
- 3. Check voltage between automatic drive positioner control unit harness connector and ground.

| Te | | | | |
|---|----|--------|-----------------|--|
| (+) | | | Voltage (V) | |
| Automatic drive positioner control unit connector Terminal | | (-) | (Approx.) | |
| M34 | 34 | Ground | Battery voltage | |
| 10104 | 39 | Ground | Dattery voltage | |

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace harness.

2. CHECK GROUND CIRCUIT

Check continuity between the automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| M34 | 40 | Ground | Yes |
| 10134 | 48 | • | 165 |

Is the inspection result normal?

YES >> Automatic drive positioner control unit power supply and ground circuit are OK.

NO >> Repair or replace harness.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Special Repair Requirement

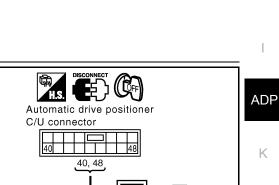
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1. PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to Owner's Manual.



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Automatic drive positioner

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C/U connector



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< DTC/CIRCUIT DIAGNOSIS >

SLIDING SWITCH

Description

Sliding switch is equipped to the power seat switch LH on the seat cushion trim cover. The operation signal is input to the driver seat control unit when the sliding switch is operated.

Component Function Check

1. CHECK FUNCTION

- Select "SLIDE SW-FR", "SLIDE SW-RR" in "Data monitor" mode with CONSULT-III. 1.
- Check sliding switch signal under the following conditions. 2.

| Monitor item | Condition | | Status |
|--------------|---------------------------|---------|--------|
| SLIDE SW-FR | Sliding switch (forward) | Operate | ON |
| SLIDE SW-FR | | Release | OFF |
| SLIDE SW-RR | Sliding switch (backward) | Operate | ON |
| | | Release | OFF |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-50, "Diagnosis Procedure".

Diagnosis Procedure

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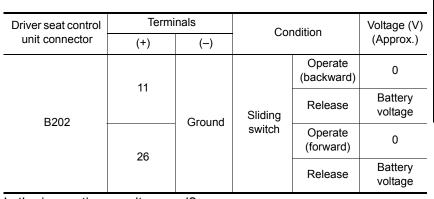
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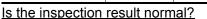
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Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK SLIDING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check voltage between driver seat control unit harness connector and ground.





YES >> GO TO 5

NO >> GO TO 2

2. CHECK SLIDING SWITCH CIRCUIT

Driver seat C/U connector

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SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and power seat switch LH.
- 2. Check continuity between driver seat control unit harness connector and power seat switch LH harness connector.

| Driver seat control unit connector | Terminal | Power seat switch LH connector | Terminal | Continuity |
|---------------------------------------|----------|-----------------------------------|----------|------------|
| B202 (A) | 11 | B208 (B) | 1 | Yes |
| 0202 (N) | 26 | B200 (B) | 5 | 163 |

3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| B202 (A) | 11 | Ground | No |
| | 26 | - | No |

Is the inspection result normal?

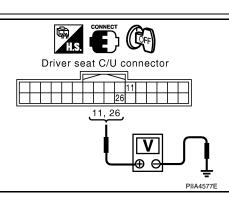
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

- 1. Connect the driver seat control unit.
- 2. Turn ignition switch ON.
- 3. Check voltage between driver seat control unit harness connector and ground.

| Driver seat control unit | Term | Voltage (V) | |
|--------------------------|------|-------------|-----------------|
| connector | (+) | (-) | (Approx.) |
| B202 | 11 | Ground | Battery voltage |
| D202 | 26 | Ground | Ballery Vollage |



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Is the inspection result normal?

YES >> GO TO 4

NO >> Replace driver seat control unit. Refer to SE-30, "Removal and Installation For Front Seat".

CHECK SLIDING SWITCH

Refer to ADP-51, "Component Inspection". Is the inspection result normal? YES >> GO TO 5 NO >> Replace power seat switch LH. Refer to SE-44, "Disassembly and Assembly". CHECK INTERMITTENT INCIDENT Refer to GI-39, "Intermittent Incident". Is the inspection result normal? YES >> Replace driver seat control unit. Refer to ADP-148, "Removal and Installation". NO >> Repair or replace malfunctioning part. **Component Inspection** INFOID:000000006163494

CHECK SLIDING SWITCH



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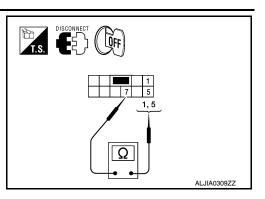
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SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.
- 3. Check continuity between power seat switch LH terminals.

| Ter | minal | Condition | | Continuity |
|-----------|--------------|---------------------------|---------|------------|
| Power sea | at switch LH | | | Continuity |
| | 1 | Sliding switch (backward) | Operate | Yes |
| 7 | I | Shung Switch (Dackward) | Release | No |
| 1 | 5 | Sliding switch (forward) | Operate | Yes |
| | 5 | Shung switch (lorward) | Release | No |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>SE-44, "Disassembly and Assembly"</u>.

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

RECLINING SWITCH

Description

Reclining switch is equipped to the power seat switch LH on the seat cushion trim cover. The operation signal В is input to the driver seat control unit when the reclining switch is operated.

Component Function Check

1. CHECK FUNCTION

Select "RECLN SW-FR", "RECLN SW-RR" in "Data monitor" mode with CONSULT-III. 1.

Check reclining switch signal under the following conditions. 2.

| Monitor item | Condition | | Status |
|--------------|-----------------------------|---------|--------|
| | | Operate | ON |
| RECLN SW-FR | Reclining switch (forward) | Release | OFF |
| RECLN SW-RR | | Operate | ON |
| | Reclining switch (backward) | Release | OFF |

<u>inuication normal?</u>

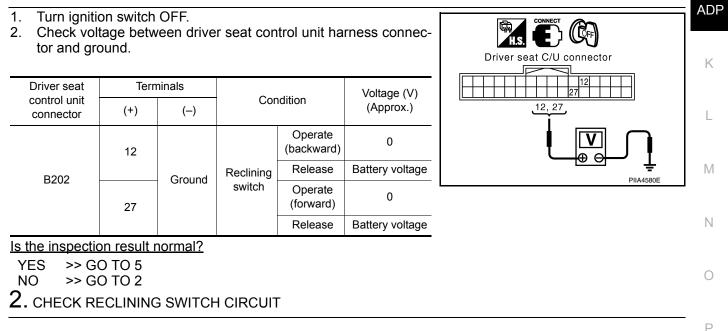
| YES >> Inspection End. | YES | >> Inspection End. |
|------------------------|-----|--------------------|
|------------------------|-----|--------------------|

NO >> Perform diagnosis procedure. Refer to <u>ADP-53</u>, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK RECLINING SWITCH SIGNAL



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RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and power seat switch LH.
- 2. Check continuity between driver seat control unit harness connector and power seat switch LH harness connector.

| Driver seat control unit connector | Terminal | Power seat switch LH connector | Terminal | Continuity |
|---------------------------------------|----------|-----------------------------------|----------|------------|
| B202 (A) | 12 | B208 (B) | 3 | Yes |
| 5202 (A) | 27 | B200 (B) | 4 | 103 |

3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| B202 (A) | 12 | Ground | No |
| | 27 | _ | NO |

Is the inspection result normal?

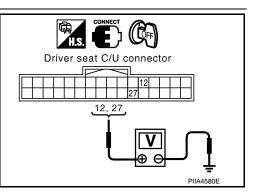
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

- 1. Connect the driver seat control unit.
- 2. Turn ignition switch OFF.
- 3. Check voltage between driver seat control unit harness connector and ground.

| Driver seat control | Termir | als | Voltage (V) |
|---------------------|--------|--------|-----------------|
| unit connector | (+) | (-) | (Approx.) |
| B202 | 12 | Ground | Battery voltage |
| 5202 | 27 | Ground | Dattery Voltage |



Is the inspection result normal?

YES >> GO TO 4

NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".

4. CHECK RECLINING SWITCH

Refer to ADP-54, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace power seat switch LH. Refer to <u>SE-44, "Disassembly and Assembly"</u>.

CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".

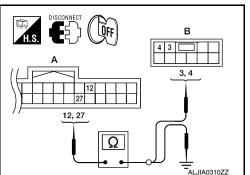
NO >> Repair or replace the malfunctioning part.

Component Inspection

1. CHECK RECLINING SWITCH

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at control unit harness connec-

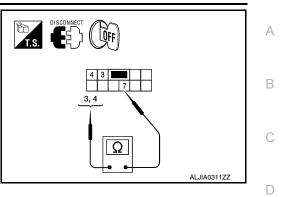


RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.
- 3. Check continuity between power seat switch LH terminals.

| Terr | ninals | Condition | | Continuity |
|-----------|--------------|------------------|---------|------------|
| Power sea | at switch LH | Condition | | Continuity |
| | 3 | Reclining switch | Operate | Yes |
| 7 | 5 | (backward) | Release | No |
| I | 4 | Reclining switch | Operate | Yes |
| | 4 (forwa | (forward) | Release | No |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>SE-44, "Disassembly and Assembly"</u>.



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Revision: August 2010

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (FRONT)

Description

INFOID:000000006163499

Lifting switch (front) is equipped to the power seat switch LH on the seat cushion trim cover. The operation signal is input to the driver seat control unit when the lifting switch (front) is operated.

Component Function Check

INFOID:000000006163500

1. CHECK FUNCTION

- 1. Select "LIFT FR SW-UP", "LIFT FR SW-DN" in "DATA MONITOR" mode with CONSULT-III.
- 2. Check lifting switch (front) signal under the following conditions.

| Monitor item | Condition | | Status |
|---------------|-----------------------------|---------|--------|
| LIFT FR SW-UP | Lifting switch front (up) | Operate | ON |
| | Lining switch from (up) | Release | OFF |
| LIFT FR SW-DN | Lifting switch front (down) | Operate | ON |
| | | Release | OFF |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-56, "Diagnosis Procedure".

Diagnosis Procedure

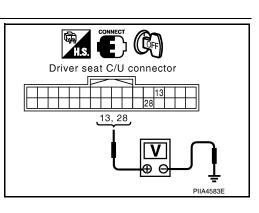
INFOID:000000006163501

Regarding Wiring Diagram information, refer to <u>ADP-128, "Wiring Diagram"</u>.

1. CHECK LIFTING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check voltage between driver seat control unit harness connector and ground.

| Driver seat | Term | ninals | Condition | | Voltage (V) | |
|---------------------------|--------------|---------|-----------|--------------|-------------------|---------|
| control unit connector | (+) | (–) | | | (Approx.) | |
| | 13 Ground | Lifting | | | Operate (down) | 0V |
| B202 | | | | Ground | 0 | Release |
| | | | (front) | Operate (up) | 0V | |
| | 28 | 28 | | Release | Battery voltage | |



Is the inspection result normal?

YES >> GO TO 5

2. CHECK LIFTING SWITCH (FRONT) CIRCUIT

LIFTING SWITCH (FRONT)

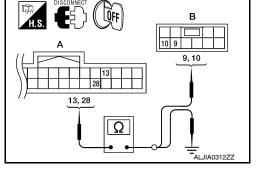
< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and power seat switch LH.
- Check continuity between driver seat control unit harness connector and power seat switch LH harness connector.

| Driver seat control unit connector | Terminal | Power seat switch LH connector | Terminal | Continuity |
|---------------------------------------|----------|-----------------------------------|----------|------------|
| B202 (A) | 13 | B208 (B) | 9 | Yes |
| 6202 (A) | 28 | B208 (B) | 10 | 165 |

 Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| B202 (A) | 13 | Ground | No |
| | 28 | + | INO |
| | | | |



Is the inspection result normal?

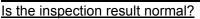
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

- 1. Connect the driver seat control unit.
- 2. Turn ignition switch OFF.
- 3. Check voltage between driver seat control unit harness connector and ground.

| Driver seat control unit | Terminals | | Voltage (V) | |
|--------------------------|-----------|--------|-----------------|--|
| connector | (+) | (-) | (Approx.) | |
| B202 | 13 | Ground | Pattony voltage | |
| BZUZ | 28 | Ground | Battery voltage | |



YES >> GO TO 4

NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".

4. CHECK LIFTING SWITCH (FRONT)

Refer to ADP-57, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace power seat switch LH. Refer to <u>SE-44, "Disassembly and Assembly"</u>.

5. CHECK INTERMITTENT INCIDENT

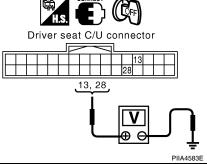
Refer to <u>GI-39</u>, "Intermittent Incident". Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

Component Inspection

1. CHECK LIFTING SWITCH (FRONT)



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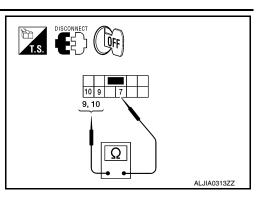
INFOID:000000006163502

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.
- 3. Check continuity between power seat switch LH terminals.

| Terr | minal | Condition | | Continuity | |
|-----------|--------------|-----------------------------|---------|------------|--|
| Power sea | at switch LH | Condition | | Continuity | |
| | 9 | Lifting switch front (down) | Operate | Yes | |
| 7 | 5 | | Release | No | |
| 7 | 10 | Lifting switch front (up) | Operate | Yes | |
| | 10 | Enting Switch Holit (up) | Release | No | |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>SE-44. "Disassembly and Assembly"</u>.

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (REAR)

Description

Lifting switch (rear) is equipped to the power seat switch LH on the seat cushion trim cover. The operation signal is inputted to the driver seat control unit when the lifting switch (rear) is operated.

Component Function Check

1. CHECK FUNCTION

1. Select "LIFT RR SW-UP", "LIFT RR SW-DN" in "Data monitor" mode with CONSULT-III.

2. Check lifting switch (rear) signal under the following conditions.

| Monitor item | Condition | ı | Status |
|---------------|----------------------------|---------|--------|
| | | Operate | ON |
| LIFT RR SW-UP | Lifting switch rear (up) | Release | OFF |
| LIFT RR SW-DN | | Operate | ON |
| | Lifting switch rear (down) | Release | OFF |

is the indication normal?

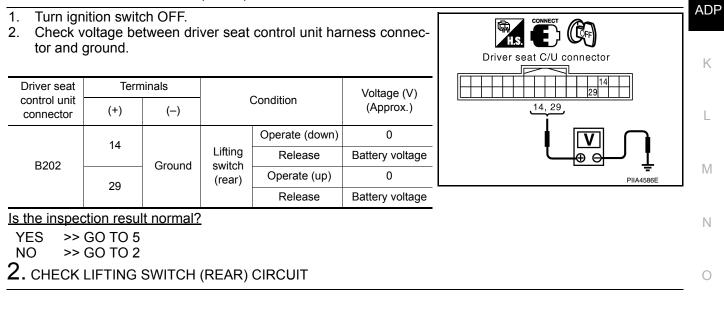
| YES | >> Inspection End. |
|-----|--------------------|
| IES | ~~ Inspection End. |

NO >> Perform diagnosis procedure. Refer to <u>ADP-59, "Diagnosis Procedure"</u>.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK LIFTING SWITCH (REAR) SIGNAL



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LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and power seat switch LH.
- 2. Check continuity between driver seat control unit harness connector and power seat switch LH harness connector.

| Driver seat control unit connector | Terminal | Power seat switch LH connector | Terminal | Continuity |
|---------------------------------------|----------|-----------------------------------|----------|------------|
| B202 (A) | 14 | B208 (B) | 2 | Yes |
| 6202 (A) | 29 | B200 (B) | 6 | 163 |

3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|---------------------------------------|----------|--------|------------|
| B202 (A) | 14 | Ground | No |
| | 29 | - | No |

Is the inspection result normal?

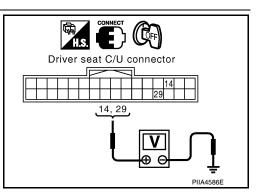
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

- 1. Connect the driver seat control unit.
- 2. Turn ignition switch OFF.
- 3. Check voltage between driver seat control unit harness connector and ground.

| Driver seat control unit | Ter | minals | Voltage (V) |
|--------------------------|-----|--------|-----------------|
| connector | (+) | (-) | (Approx.) |
| B202 | 14 | Ground | Battery voltage |
| DZUZ | 29 | Ground | Dattery voltage |



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Is the inspection result normal?

YES >> GO TO 4

NO >> Replace driver seat control unit. Refer to <u>ADP-148, "Removal and Installation"</u>.

4. CHECK LIFTING SWITCH (REAR)

Refer to ADP-60, "Component Inspection".

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Replace power seat switch LH. Refer to <u>SE-44, "Disassembly and Assembly"</u>.

CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

Component Inspection

1. CHECK LIFTING SWITCH (REAR)

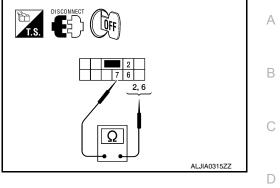
INFOID:000000006163506

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.
- 3. Check continuity between power seat switch LH terminals.

| Terr | minal | Condition | | Continuity |
|-----------|--------------|----------------------------|---------|------------|
| Power sea | at switch LH | | | Continuity |
| | 2 | Lifting switch rear (down) | Operate | Yes |
| 7 | 2 | | Release | No |
| , | 6 | Lifting switch rear (up) | Operate | Yes |
| | 0 | Enting switch lear (up) | Release | No |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>SE-44. "Disassembly and Assembly"</u>.

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< DTC/CIRCUIT DIAGNOSIS >

PEDAL ADJUSTING SWITCH

Description

Pedal adjusting switch is on the instrument panel. The operation signal is input to the driver seat control unit when the pedal adjusting switch is operated. The pedal adjusting switch signal is sent to the automatic drive positioner control unit via UART communication.

Component Function Check

1. CHECK FUNCTION

- 1. Select "PEDAL SW-FR", "PEDAL SW-RR" in "Data monitor" mode with CONSULT-III.
- 2. Check pedal adjusting switch signal under the following conditions.

| Monitor item | Condition | Condition | | |
|--------------|-----------------------------------|-----------|-----|--|
| PEDAL SW-FR | Pedal adjusting switch (forward) | Operate | ON | |
| | | Release | OFF | |
| PEDAL SW-RR | Pedal adjusting switch (backward) | Operate | ON | |
| FEDAL SW-NR | | Release | OFF | |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-62, "Diagnosis Procedure"</u>.

Diagnosis Procedure

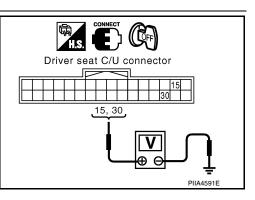
INFOID:000000006163509

Regarding Wiring Diagram information, refer to <u>ADP-128, "Wiring Diagram"</u>.

1. CHECK PEDAL ADJUSTING SWITCH SIGNAL

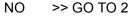
- 1. Turn ignition switch OFF.
- Check voltage between driver seat control unit harness connector and ground.

| Driver seat | Tern | ninals | | | Voltage (V) | |
|---------------------------|------|--|--------|----------------------|-----------------------|-----------------|
| control unit connector | (+) | (-) | Con | Condition | | |
| | 45 | 15 Pedal ad- Justing switch 30 | | Operate (forward) | 0 | |
| B202 | 15 | | Ground | Pedal ad- | Release | Battery voltage |
| BLUL | 30 | | | | Operate (backward) | 0 |
| | 30 | | | Release | Battery voltage | |



Is the inspection result normal?

YES >> GO TO 5



2. CHECK PEDAL ADJUSTING SWITCH CIRCUIT

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INFOID:000000006163508

PEDAL ADJUSTING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and pedal adjusting switch.
- Check continuity between driver seat control unit harness connector and pedal adjusting switch harness connector.

| Driver seat control unit connector | Terminal | Pedal adjusting switch connector | Terminal | Continuity |
|--|----------|----------------------------------|----------|------------|
| B202 | 15 | M96 | 2 | Yes |
| B202 | 30 | 10190 | 3 | 165 |

3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | Ground | Continuity | | |
|------------------------------------|----------|--------|------------|--|--|
| B202 | 15 | | No | | |
| B202 | 30 | | INO | | |
| | | | | | |

Is the inspection result normal?

YES >> GO TO 3

- NO >> Repair or replace harness.
- $\mathbf{3}$. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

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- 1. Connect the driver seat control unit.
- 2. Turn ignition switch OFF.
- Check voltage between driver seat control unit harness connector and ground.

(-)

Ground

Terminals

| nec- | |
|------|---------------------------|
| | Driver seat C/U connector |
| | |
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Pedal adjusting

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Driver seat C/U connector

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Is the inspection result normal?

YES >> GO TO 4

Driver seat control unit

connector

B202

NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "<u>Removal and Installation</u>".

Voltage (V) (Approx.)

Battery voltage

4. CHECK PEDAL ADJUSTING SWITCH

Refer to ADP-64, "Component Inspection".

| <u>Is the</u> | inspec | ction | result | normal? |
|---------------|--------|-------|--------|---------|
| | | | | |

YES >> GO TO 5

NO >> Replace pedal adjusting switch. Refer to <u>IP-11, "Exploded View"</u>.

 ${f 5.}$ CHECK PEDAL ADJUSTING SWITCH GROUND CIRCUIT

Check continuity between pedal adjusting switch connector M96 terminal 1 and ground.

1 - Ground

: Continuity should exist.

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair or replace harness.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

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PEDAL ADJUSTING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149, "Removal and Installation"</u>.
- NO >> Repair or replace the malfunctioning part.

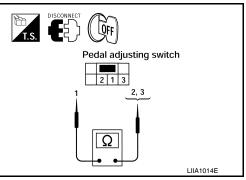
Component Inspection

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1. CHECK PEDAL ADJUSTING SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect pedal adjusting switch.
- 3. Check continuity between pedal adjusting switch terminals.

| - | minal Isting switch | Condition | | Continuity |
|---|------------------------|------------------------|---------|------------|
| | isting switch | Pedal adjusting switch | Operate | Yes |
| 4 | 2 | (backward) | Release | No |
| 1 | 2 | Pedal adjusting switch | Operate | Yes |
| | 3 (forward) | | Release | No |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace pedal adjusting switch. Refer to <u>IP-11, "Exploded View"</u>.

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY SWITCH

Description

The seat memory switch is installed on the front door LH trim. The operation signal is input to the automatic drive positioner control unit when the memory switch is operated.

Component Function Check

1. CHECK FUNCTION

1. Select "MEMORY SW 1", "MEMORY SW 2", "SET SW" in "Data monitor" mode with CONSULT-III.

2. Check seat memory switch signal under the following conditions.

| Monitor item | Cond | ition | Status | |
|--------------|-----------------|---------|--------|--|
| | | Push | ON | |
| MEMORY SW1 | Memory switch 1 | Release | OFF | |
| | | Push | ON | |
| MEMORY SW2 | Memory switch 2 | Release | OFF | |
| | Set ewitch | Push | ON | |
| SET SW | Set switch | Release | OFF | |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-65. "Diagnosis Procedure"</u>.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK MEMORY SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and seat memory switch.
- 3. Check continuity between automatic drive positioner control unit harness connector and seat memory switch harness connector.

| Automatic drive positioner control unit connector | Terminal | Seat memory switch connector | Terminal | Continuity |
|---|----------|------------------------------|----------|------------|
| | 9 | | 1 | |
| M33 | 24 | D5 | 3 | Yes |
| | 25 | | 2 | |

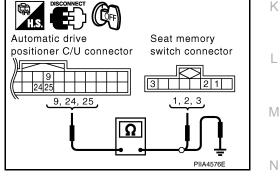
4. Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| | 9 | Ground | |
| M33 | 24 | | No |
| | 25 | | |

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace harness.



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< DTC/CIRCUIT DIAGNOSIS >

2. CHECK MEMORY SWITCH GROUND CIRCUIT

Check continuity between seat memory switch harness connector and ground.

| Seat memory switch connector | Terminal | Ground | Continuity |
|------------------------------|----------|--------|------------|
| D5 | 4 | | Yes |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK SEAT MEMORY SWITCH

Refer to ADP-66, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace seat memory switch. Refer to <u>ADP-150, "Removal and Installation"</u>.

CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

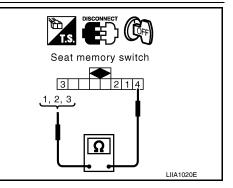
NO >> Repair or replace the malfunctioning part.

Component Inspection

1. CHECK SEAT MEMORY SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect seat memory switch.
- 3. Check continuity between seat memory switch terminals.

| Terminal | | Condition | | Continuity | |
|--------------------|--------------|-----------------|---------|------------|--|
| Seat memory switch | | | | | |
| | 1 | Memory switch 1 | Push | Yes | |
| | I | | Release | No | |
| 4 | 2 | | Push | Yes | |
| 4 | 2 | Memory switch 2 | Release | No | |
| | 3 Set switch | Set switch | Push | Yes | |
| | 5 | Set Switch | Release | No | |

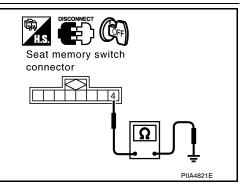


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Is the inspection result normal?

YES >> Inspection End.

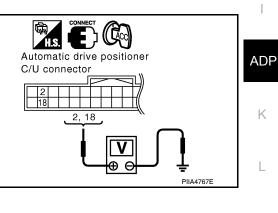
NO >> Replace seat memory switch. Refer to <u>ADP-150, "Removal and Installation"</u>.



| DOOR MIRROR REMOTE CONTROL SWITCH | |
|---|--|
| < DTC/CIRCUIT DIAGNOSIS > | |
| DOOR MIRROR REMOTE CONTROL SWITCH | |
| CHANGEOVER SWITCH | |
| CHANGEOVER SWITCH : Description | |
| Changeover switch is integrated into door mirror remote control switch. Changeover switch has three positions (L, N and R). It changes door mirror motor operation by transmitting control signal to automatic drive positioner control unit. | |
| CHANGEOVER SWITCH : Component Function Check | |
| 1. CHECK CHANGEOVER SWITCH FUNCTION | |
| Check the operation on "MIR CHNG SW-R" or "MIR CHNG SW-L" in "DATA MONITOR" mode with CON- SULT-III. | |
| Refer to <u>ADP-26, "CONSULT-III Function"</u> . | |
| Is the inspection result normal? | |
| YES >> Changeover switch function is OK. NO >> Refer to <u>ADP-67, "CHANGEOVER SWITCH : Diagnosis Procedure"</u> . | |
| CHANGEOVER SWITCH : Diagnosis Procedure | |
| | |
| Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram". | |
| | |
| 1. CHECK CHANGEOVER SWITCH SIGNAL | |
| 1 Turn ignition switch to ACC | |

- Turn ignition switch to ACC. 1.
- 2. Check voltage between automatic drive positioner control unit connector and ground.

| Terminals | | | | | |
|---|----------|-------------|--------------------|-------------|--|
| (+) | (+) | | Change over switch | Voltage (V) | |
| Automatic drive positioner control unit connector | Terminal | (-) | condition | (Approx.) | |
| | 2 | 2 Ground | RIGHT | 0 | |
| M33 | 2 | | Other than above | 5 | |
| 10135 | 10 | | LEFT | 0 | |
| | 18 | | Other than above | 5 | |



Is the inspection result normal?

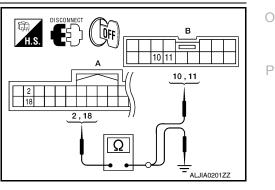
YES >> GO TO 6

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and door mirror remote control switch.
- 3. Check continuity between automatic drive positioner control unit connector and door mirror remote control switch connector.

| Automatic drive positioner control unit connector | Terminal | Door mirror re- mote control switch connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| M33 (A) | 2 | D10 (B) | 11 | Yes |
| 1005 (A) | 18 | D10(D) | 10 | 165 |



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< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between automatic drive positioner control unit connector and ground.

| Automatic drive positioner control unit connector | Terminal | Quest | Continuity |
|--|----------|--------|------------|
| M33 (A) | 2 | Ground | No |
| 1000 (A) | 18 | * | NO |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

Check continuity between door mirror remote control switch connector and ground.

| Door mirror remote control switch connector | lerminal | | Continuity |
|---|----------|--|------------|
| D10 | 7 | | Yes |

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

- 1. Connect automatic drive positioner control unit.
- 2. Turn ignition switch to ACC.
- 3. Check voltage between automatic drive positioner control unit connector and ground.

| Terminals | | | |
|--|----------|--------|-------------|
| (+) | | | Voltage (V) |
| Automatic drive positioner control unit connector | Terminal | (-) | (Approx.) |
| M33 | 2 | Ground | 5 |
| WIJJ | 18 | Giouna | 5 |

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

5. CHECK CHANGEOVER SWITCH

Check changeover switch.

Refer to ADP-69, "CHANGEOVER SWITCH : Component Inspection".

Is the inspection result normal?

YES >> Refer to GI-39, "Intermittent Incident".

NO >> Replace door mirror remote control switch. Refer to <u>ADP-151, "Removal and Installation"</u>.

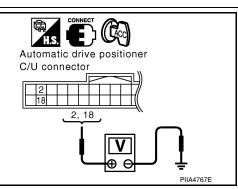
6. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning parts.



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< DTC/CIRCUIT DIAGNOSIS >

CHANGEOVER SWITCH : Component Inspection

1. CHECK CHANGEOVER SWITCH

Check door mirror remote control switch.

| Terminal | | Change over switch | Continuity |
|-----------------------------------|------------------|--------------------|------------|
| Door mirror remote control switch | | condition | |
| 10 | 7 | LEFT | Yes |
| 10 | | Other than above | No |
| 11 | 1 | RIGHT | Yes |
| | Other than above | No | |

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Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to <u>ADP-151, "Removal and Installation"</u>. MIRROR SWITCH

MIRROR SWITCH : Description

It operates angle of the door mirror face.

It transmits mirror face adjust operation to automatic drive positioner control unit.

MIRROR SWITCH : Component Function Check

1. CHECK MIRROR SWITCH FUNCTION

Check the operation on "MIR CON SW–UP/DN" and "MIR CON SW–RH/LH" in "DATA MONITOR" mode with CONSULT-III. Refer to ADP-26, "CONSULT-III Function".

Is the inspection result normal?

YES >> Mirror switch function is OK.

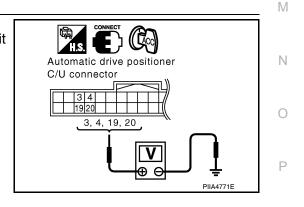
NO >> Refer to <u>ADP-69</u>, "<u>MIRROR SWITCH</u> : <u>Diagnosis Procedure</u>".

MIRROR SWITCH : Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128. "Wiring Diagram".

1. CHECK MIRROR SWITCH FUNCTION

- 1. Turn ignition switch to ACC.
- Check voltage between automatic drive positioner control unit connector and ground.



< DTC/CIRCUIT DIAGNOSIS >

| Terminals | | | | |
|---|----------|----------|------------------|-------------|
| (+) | | | Mirror switch | Voltage (V) |
| Automatic drive positioner control unit connector | Terminal | (–) | Condition | (Approx.) |
| | 3 | | UP | 0 |
| | 5 | - Ground | Other than above | 5 |
| | 4 | | LEFT | 0 |
| M33 | 4 | | Other than above | 5 |
| 19 | 19 | | DOWN | 0 |
| | | | Other than above | 5 |
| | 20 | | RIGHT | 0 |
| | 20 | | Other than above | 5 |

Is the inspection result normal?

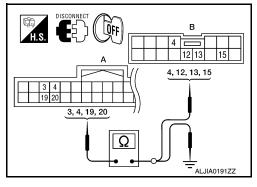
YES >> GO TO 6

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and door mirror remote control switch.
- 3. Check continuity between automatic drive positioner control unit connector and door mirror remote control switch connector.

| Automatic drive positioner control unit connector | Terminal | Door mirror remote control switch con- nector | Terminal | Continuity |
|---|----------|---|----------|------------|
| M33 (A) | 3 | D10 (B) | 15 | Yes |
| | 4 | | 13 | |
| | 19 | | 12 | Tes |
| | 20 | | 4 | |



4. Check continuity between automatic drive positioner control unit connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity | |
|--|----------|--------|------------|--|
| M33 (A) | 3 | | | |
| | 4 | Ground | No | |
| | 19 | | | |
| | 20 | | | |

Is the inspection result normal?

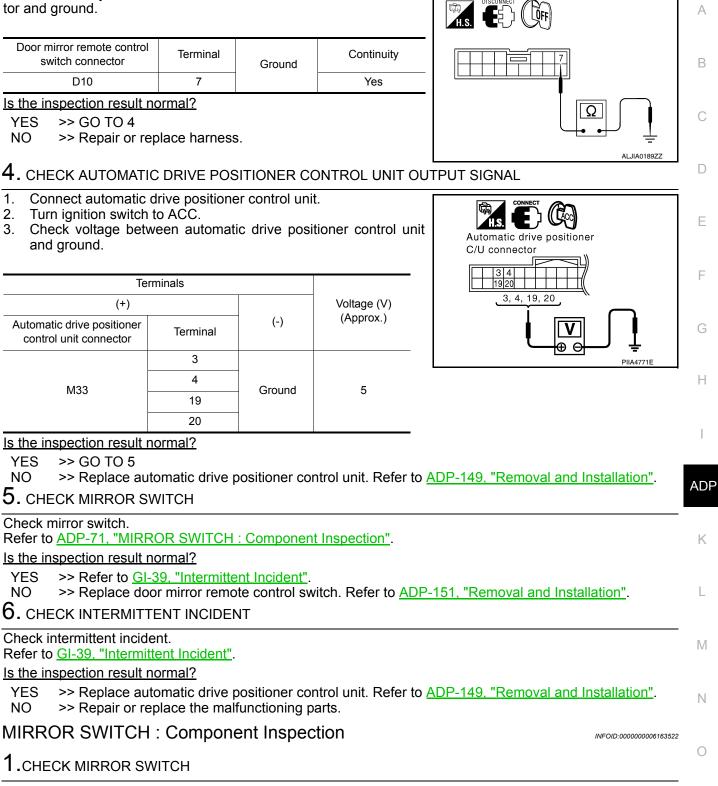
YES >> GO TO 3

NO >> Repair or replace harness.

$\mathbf{3}$. CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Check continuity between door mirror remote control switch connec-

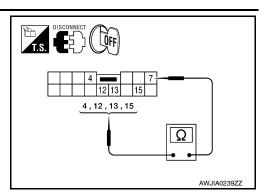


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< DTC/CIRCUIT DIAGNOSIS >

Check door mirror remote control switch.

| Termir | al | | | |
|--------------------------|----|-------------------------|------------|--|
| Door mirror control s | | Mirror switch condition | Continuity | |
| 4 | | RIGHT | Yes | |
| 4 | | Other than above | No | |
| 13 | 7 | LEFT | Yes | |
| 15 | | Other than above | No | |
| 15 | | UP | Yes | |
| 15 | | Other than above | No | |
| 12 | | DOWN | Yes | |
| 12 | | Other than above | No | |



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to <u>ADP-151, "Removal and Installation"</u>.

POWER SEAT SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SEAT SWITCH GROUND CIRCUIT

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-128. "Wiring Diagram"</u>.

1. CHECK POWER SEAT SWITCH LH GROUND CIRCUIT

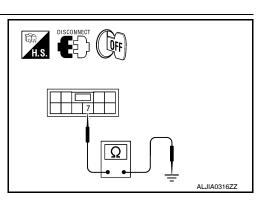
- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.
- 3. Check continuity between power seat switch LH connector and ground.

| B208 7 Yes | Power seat switch LH connector | Terminal | Ground | Continuity |
|------------|--------------------------------|----------|--------|------------|
| | B208 | 7 | | Yes |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-39</u>, "Intermittent Incident".

NO >> Repair or replace harness.



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< DTC/CIRCUIT DIAGNOSIS >

PARK POSITION SWITCH

Description

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The park position switch is installed on the A/T shift selector. It is turned OFF when the A/T selector lever is in P position. The driver seat control unit judges that the A/T shift selector is in P position if continuity does not exist in this circuit.

Component Function Check

1. CHECK FUNCTION

- 1. Select "DETENT SW" signal in "Data monitor" mode with CONSULT-III.
- 2. Check park position switch (key lock) signal under the following conditions.

| Monitor item | Condition | | Status |
|--------------|--------------------|------------------|--------|
| | | P position | OFF |
| DETENT SW | A/T shift selector | Other than above | ON |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-75</u>, "<u>Diagnosis Procedure (Column Shift)</u>" or <u>ADP-74</u>, "<u>Diagnosis Procedure (Floor Shift)</u>".

Diagnosis Procedure (Floor Shift)

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Regarding Wiring Diagram information, refer to <u>ADP-128, "Wiring Diagram"</u>.

1. CHECK DTC WITH "BCM"

Check "Self Diagnostic Result" for BCM with CONSULT-III.

Is any DTC detected?

YES >> Check the DTC.

NO >> GO TO 2

2. CHECK A/T SHIFT SELECTOR [PARK POSITION SWITCH (KEY LOCK)] INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit.
- 3. Mechanical key must be inserted into the key switch and key lock solenoid.
- 4. Check voltage between driver seat control unit harness connector and ground.

| Driver seat | Terminal | | | | Voltage (V) |
|---------------------------|----------|-----------|--------------------|------------------|----------------------|
| control unit connector | (+) | (-) | Condition | | (Approx.) |
| | | ۸/T shift | P position | 0 | |
| B202 | 21 | Ground | A/T shift selector | Other than above | Battery volt- age |

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 3

3. CHECK A/T SHIFT SELECTOR [PARK POSITION SWITCH (KEY LOCK)] CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit and A/T shift selector.
- Check continuity between driver seat control unit harness connector and A/T shift selector harness connector.

ADP-74

PARK POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Connector | | Terminal | Connector | Terminal | Continuity | | A |
|-------------------------------------|-------------------|--------------|----------------------------------|--------------------------|------------------|--|---|
| B202 | | 21 | M203 (King Cab) M204 (Crew | 6 | Yes | | В |
| . Check co | ntinuity | between | Cab) | control unit h | arness conn | ector and ground. | D |
| Carriente | | Taurain | | | | - | С |
| Connecto B202 | or | Termin 21 | | und | Continuity No | | |
| the inspect | ion resu | | ? | | | | D |
| YES >> G | ю то 4 | | | | | | |
| | • | • | harness. | | | | E |
| CHECK IN | | | | | | | |
| efer to <u>GI-39</u> the inspect | | | | | | | F |
| | | | | it. Refer to A | DP-148, "Re | moval and Installation". | |
| | | | the malfunct | | | | C |
| iagnosis | Proce | dure (C | Column Sh | nift) | | INFOID:00000006163527 | C |
| | | | | | | | |
| egarding Wi | ring Dia | igram inf | ormation, ref | er to <u>ADP-1</u> 2 | 28, "Wiring D | iagram". | |
| 0 0 | U | 0 | | | | | |
| . CHECK D | TC WIT | H "BCM | " | | | | |
| | | | " for BCM wi | th CONSUL | T-III. | | |
| any DTC de | - | | | | | | A |
| | heck th | | | | | | |
| | ю то 2 /т спл | | | | | | |
| | | | JUR (PAR | POSITION | SWITCH) IN | PUT SIGNAL | |
| Turn ignit Disconne | | | ntrol unit. | | | | |
| Check co | ntinuity | between | driver seat o | control unit h | arness conn | ector and ground. | |
| Driver seat | | | | | | - | |
| control unit | Те | rminal | Cor | ndition | Continuity | | ľ |
| connector | | | | D 'I' | NL | _ | |
| B202 | 21 | Ground | A/T shift | P position Other than | No | _ | |
| | | | selector | above | Yes | | |
| the inspect | ion resu | lt normal | ? | | | - | |
| | | | | | | | (|
| | Ю ТО 3 /т shif | | ים גםו סרדר | | | | |
| | | | UN LARK | FUSITION | | EY LOCK)] CIRCUIT | I |
| Turn ignit Disconne | | | ctor. | | | | |
| Check co | | | | control unit | harness coni | nector and A/T shift selector harness con- | |
| nector. | | | | | | | |
| | | | | | | | |
| Connector | . · | Terminal | Connector | Terminal | Continuity | | |

| Connector | Terminal | Connector | Terminal | Continuity |
|-----------|----------|-----------|----------|------------|
| B202 | 21 | M68 | 8 | Yes |

PARK POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between A/T shift selector harness connector and ground.

| Connector | Terminal | Ground | Continuity |
|-----------|----------|--------|------------|
| M68 | 1 | Ground | Yes |

5. Check continuity between A/T shift selector harness connector and ground.

| Connector | Terminal | Ground | Continuity |
|-----------|----------|--------|------------|
| M68 | 8 | Ground | No |

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH)

Check continuity between A/T shift selector (park position switch) terminals as follows.

| Term | inals | Condition | Continuity |
|------|-------|-----------------------|------------|
| 8 | 8 1 | P position | No |
| 0 | I | Other than P position | Yes |

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace A/T shift selector. Refer to TM-185. "A/T Shift Selector Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-148, "Removal and Installation"</u>.

NO >> Repair or replace the malfunctioning part.

FRONT DOOR SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

Description

Detects front door LH open/close condition.

Component Function Check

1. CHECK FUNCTION

1. Select "DOOR SW-DR" in "Data monitor" mode with CONSULT-III.

2. Check the front door switch LH signal under the following conditions.

| | nitor item | | | Condition | | Status |
|---|--|---|----------------------------|-----------------|-----------------|--------------------------------------|
| | ם אא סר | Erant | | Open | | ON |
| DOC | OR SW-DR | Front | door switch LH | Close | | OFF |
| | pection End form diagno | l. osis procedur | e. Refer to <u>ADF</u> | P-77, "Diagnos | sis Procedure". | INFOID:0000000061 |
| Regarding Wirir | | | | 28, "Wiring Dia | gram". | |
| 1. CHECK FRO | ONT DOOR | SWITCH LH | I CIRCUIT | | | |
| | inuity betwe | ront door swit een BCM con | tch LH. nector and fror | nt door switch | | Front door switch LH connector |
| BCM connector | Terminal | Front door swit | Terminal | Continuity | | 2 |
| M19 | 47 | B8 | 2 | Yes | ļ | |
| . Check cont | inuity betwe | en BCM con | nector and grou | und. | | |
| BCM connecto | r Te | erminal | Ground | Continuity | | LIIA1027E |
| M19 | | 47 | | No | | |
| | | | | | | |
| 2. CHECK FRO | oair or repla ONT DOOR | R SWITCH LH | | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> | pair or repla ONT DOOR 8, "Compon | SWITCH LH | | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> is the inspection | Dair or repla ONT DOOR 8. "Compon 1 result norr | SWITCH LH | | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> is the inspection YES >> GO | Dair or repla ONT DOOR 8. "Compon <u>n result norr</u> TO 3 | SWITCH LH | <u>n"</u> . | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> is the inspection YES >> GO | Dair or repla DNT DOOR 8. "Compon <u>n result norr</u> TO 3 Diace front c | R SWITCH LH <u>eent Inspectio</u> <u>mal?</u> door switch Ll | <u>n"</u> . H. | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> is the inspection YES >> GO NO >> Rep | Dair or repla DNT DOOR 8. "Compon <u>n result norr</u> TO 3 Diace front of ERMITTEN | R SWITCH LH ment Inspectio mal? door switch LI IT INCIDENT | <u>n"</u> . H. | | | |
| YES >> GO NO >> Rep 2. CHECK FRO Refer to <u>ADP-78</u> is the inspection YES >> GO NO >> Rep 3. CHECK INT | Dair or repla DNT DOOR <u>8. "Componentesult norresult nor</u> | R SWITCH LH ent Inspectio mal? door switch Li IT INCIDENT t Incident". | <u>n"</u> . H. | | | |

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FRONT DOOR SWITCH (DRIVER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

Component Inspection

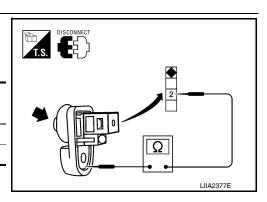
INFOID:000000006163531

1. CHECK FRONT DOOR SWITCH LH

- 1. Turn ignition switch OFF.
- 2. Disconnect front door switch LH.
- 3. Check continuity between front door switch LH terminals.

| | Terminal | Conditic | 'n | Continuity | |
|-------|----------------|-------------------|----------|------------|--|
| Front | loor switch LH | Condition | | Continuity | |
| 2 | Ground part of | Front door switch | Pushed | No | |
| 2 | door switch | LH | Released | Yes | |

- YES >> Inspection End.
- NO >> Replace front door switch LH.



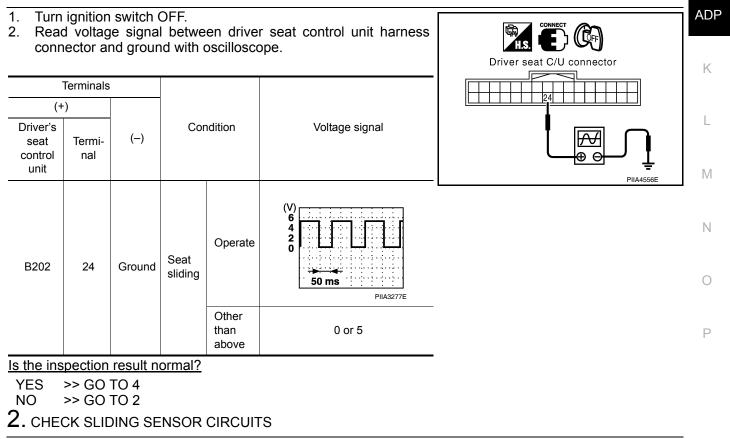
SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

| SLIDING SENSOR | |
|----------------|--|
| | |
| | |

| Description | | | INFOID:00000006163532 | | | |
|---|--|---|-----------------------|---|--|--|
| The pulse signal is input | ut to the driver se | wer seat frame assembly. eat control unit when sliding is pulse and calculates the sliding | | В | | |
| Component Function | on Check | | INFOID:00000006163533 | С | | |
| 1. CHECK FUNCTION | | | | | | |
| | 1. Select "SLIDE PULSE" in "Data monitor" mode with CONSULT-III. | | | | | |
| 2. Check sliding senso | r signal under the | e following conditions. | | | | |
| Monitor item | | Condition | Valve | Е | | |
| | | Operate (forward) | Change (increase) | | | |
| SLIDE PULSE | Seat sliding | Operate (backward) | Change (decrease) | _ | | |
| | | Release | No change | F | | |
| - | nd. gnosis procedure | e. Refer to <u>ADP-79, "Diagnosis</u> | Procedure". | G | | |
| Diagnosis Procedu Regarding Wiring Diagra | | efer to ADP-128, "Wiring Diagra | INFOID:00000006163534 | Η | | |
| | | | | | | |

1. CHECK SLIDING SENSOR SIGNAL



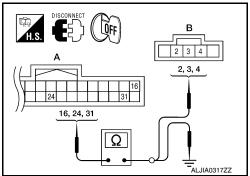
А

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and sliding motor LH.
- Check continuity between driver seat control unit harness connector and sliding motor LH harness connector.

| Driver seat control unit connector | Terminal | Sliding motor LH connector | Terminal | Continuity | |
|---------------------------------------|----------|-------------------------------|----------|------------|--|
| | 16 | | 3 | | |
| B202 (A) | 24 | B204 (B) | 4 | Yes | |
| | 31 | 31 | | | |



3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| | 16 | Ground | |
| B202 (A) | 24 | | No |
| | 31 | | |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK SEAT OPERATION

1. Connect driver seat control unit and sliding motor LH.

2. Check seat operation (except sliding operation) with memory function.

Is the inspection result normal?

- YES >> Replace sliding motor LH. (Built in power seat frame assembly). Refer to <u>SE-44, "Disassembly</u> and <u>Assembly"</u>.
- NO >> Replace driver seat control unit. Refer to <u>ADP-148. "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

RECLINING SENSOR

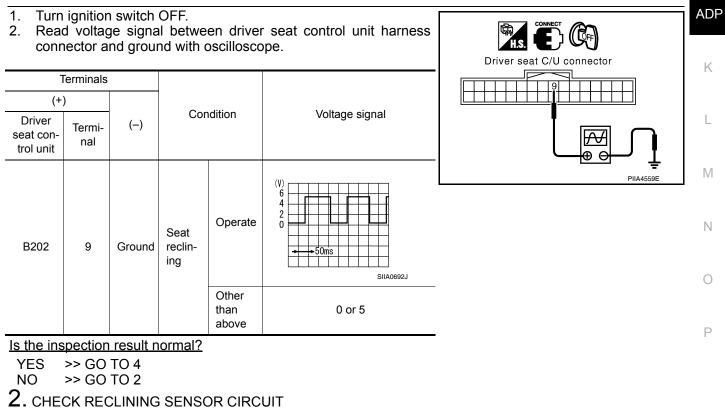
| < DTC/CIRCUIT DIAGNOSIS : | > |
|---------------------------|---|
|---------------------------|---|

RECLINING SENSOR

| Description | INFC | =OID:000000006163535 | A | | |
|--|----------------------------------|--|---|----------------------|--------|
| | utted to the drive | eatback assembly. r seat control unit when the pulse and calculates the recl | | | В |
| Component Functi | on Check | | INFO | =OID:000000006163536 | С |
| 1. CHECK FUNCTION | | | | | |
| | | nitor" mode with CONSULT- | III. | | D |
| 2. Check reclining sen | sor signal under t | the following conditions. | | | |
| 2. Cneck reclining sen | - | | Value | | Е |
| | - | - | Value Change (increase) | | Е |
| | - | Condition | | | E |
| Monitor item | C | Condition Operate (forward) | Change (increase) | | E |
| Monitor item RECLN PULSE Is the indication normal? YES >> Inspection E | Seat reclining Seat reclining | Condition Operate (forward) Operate (backward) | Change (increase) Change (decrease) No change | | E F |

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK RECLINING SENSOR SIGNAL

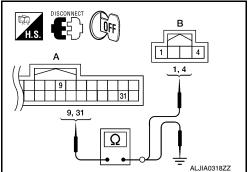


RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and reclining motor LH.
- 2. Check continuity between driver seat control unit harness connector and reclining motor LH harness connector.

| Driver seat control unit connector | Terminal | Reclining motor connector | Terminal | Continuity |
|---------------------------------------|-------------|---------------------------|----------|------------|
| B202 (A) | 9 | B205 (B) | 1 | Yes |
| D202 (A) | 31 B205 (B) | | 4 | 163 |



3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity | |
|---------------------------------------|----------|--------|------------|--|
| B202 (A) | 9 | Ground | No | |
| B202 (A) | 31 | - | NO | |

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.
- $\mathbf{3}$. CHECK SEAT OPERATION
- 1. Connect driver seat control unit and reclining motor LH connector.
- 2. Check seat operation (except reclining operation) with memory function.

Is the operation normal?

- YES >> Replace reclining motor LH. (Built in power seat frame assembly). Refer to <u>SE-44, "Disassembly</u>".
- NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>. "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

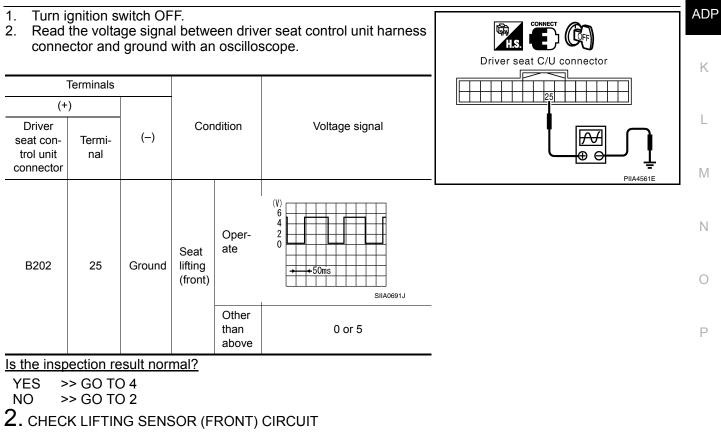
LIFTING SENSOR (FRONT)

А Description INFOID:000000006163538 The lifting sensor (front) is installed to the power seat frame assembly. В The pulse signal is input to the driver seat control unit when the lifting (front) is operated. The driver seat control unit counts the pulse and calculates the lifting (front) amount of the seat. **Component Function Check** INEOID:000000006163539 1. CHECK FUNCTION Select "LIFT FR PULSE" in "Data monitor" mode with CONSULT-III. 1. D Check the lifting sensor (front) signal under the following conditions. 2. Monitor item Condition Value Ε Operate (up) Change (increase) LIFT FR PULSE Seat lifting (front) Operate (down) Change (decrease) Release No change Is the indication normal? YES >> Inspection End. NO >> Perform diagnosis procedure. Refer to ADP-83, "Diagnosis Procedure". Diagnosis Procedure INFOID:000000006163540

Н

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK LIFTING SENSOR (FRONT) SIGNAL



LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and lifting motor (front).
- Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

| Driver seat control unit connector | Terminal | Lifting motor (front) connector | Terminal | Continuity |
|---------------------------------------|----------|------------------------------------|----------|------------|
| | 16 | | 3 | |
| B202 (A) | 25 | B206 (B) | 4 | Yes |
| | 31 | | 2 | |

3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|---------------------------------------|----------|--------|------------|
| | 16 | Ground | No |
| B202 (A) | 25 | | |
| | 31 | | |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

 $\mathbf{3}$. CHECK SEAT OPERATION

1. Connect driver seat control unit and lifting motor (front) connector.

2. Check seat operation [except lifting (front) operation] with memory function.

Is the operation normal?

- YES >> Replace lifting motor (front). (Built in power seat frame assembly). Refer to <u>SE-44. "Disassembly</u>".
- NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>. "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (REAR)

А Description INFOID:000000006163541 The lifting sensor (rear) is installed to the power seat frame assembly. В • The pulse signal is input to the driver seat control unit when the lifting (rear) is operated. • The driver seat control unit counts the pulse and calculates the lifting (rear) amount of the seat. **Component Function Check** INEOID:000000006163542 1. CHECK FUNCTION Select "LIFT RR PULSE" in "Data monitor" mode with CONSULT-III. D 1. Check lifting sensor (rear) signal under the following conditions. 2. Monitor item Condition Value Ε Operate (up) Change (increase) LIFT RR PULSE Seat lifting (rear) Operate (down) Change (decrease) F Release No change Is the indication normal? YES >> Inspection End. NO >> Perform diagnosis procedure. Refer to ADP-85, "Diagnosis Procedure". Diagnosis Procedure INFOID:000000006163543 Н

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK LIFTING SENSOR (REAR) SIGNAL

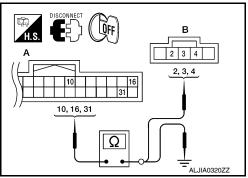
| 2. Read | voltage | | betwee | en drive scillosco | r seat control unit harness ope. | Driver seat C/U connector | ADP K |
|----------------------------------|--------------------|----------|---------------------------|------------------------|---|---------------------------|----------|
|] | Ferminals | | | | | | |
| (+ |) | | | | | | |
| Driver seat con- trol unit | Termi- nal | (–) | Coi | ndition | Voltage signal | | L |
| connector | | | | | | PIIA4563E | Μ |
| B202 | 10 | Ground | Seat lifting (rear) | Oper- ate | (V) 6 4 2 0 •••50ms SIIA0693J | | N |
| | | | | Other than above | 0 or 5 | | Ρ |
| Is the insp | ection r | esult no | rmal? | | | | |
| | •> GO T •> GO T | | | | | | |
| 2. CHEC | K LIFTI | NG SEN | ISOR (| REAR) | CIRCUIT | | |

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and lifting motor (rear).
- 2. Check the continuity between driver seat control unit harness connector and lifting motor (rear) harness connector.

| Terminal | Lifting motor (rear) connector | Terminal | Continuity |
|----------|-----------------------------------|--|---|
| 10 | | 4 | |
| 16 | B207 (B) | 3 | Yes |
| 31 | | 2 | |
| | 10 16 | Terminal Connector 10 16 16 B207 (B) | TerminalConnectorTerminal10416B207 (B)3 |



3. Check the continuity between driver seat control unit harness connector and ground.

| Terminal | | Continuity |
|----------|----------|-----------------|
| 10 | Ground | |
| 16 | | No |
| 31 | | |
| | 10 16 | 10 Ground 16 |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK SEAT OPERATION

1. Connect driver seat control unit and lifting motor (rear) connector.

2. Check the seat operation [except lifting (rear) operation] with memory function.

Is the operation normal?

- YES >> Replace lifting motor (rear). (Built in power seat frame assembly). Refer to <u>SE-44, "Disassembly</u>".
- NO >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

PEDAL ADJUSTING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

PEDAL ADJUSTING SENSOR

Description

- The pedal adjusting sensor is installed to the pedal adjusting motor assembly.
- The resistance of pedal adjusting sensor is changed according to the forward/backward position of pedal assembly.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of pedal adjusting sensor resistance. Automatic drive positioner control unit calculates the pedal assembly position from the voltage.

Component Function Check

1. CHECK FUNCTION

- 1. Select "PEDAL SEN" in "Data monitor" mode with CONSULT-III.
- 2. Check the pedal sensor signal under the following condition.

| Monitor item | Condition | | Value |
|--------------|----------------|----------|-------|
| PEDAL SEN | Dodal position | Forward | 0.5V |
| PEDAL SEN | Pedal position | Backward | 4.5V |

Is the indication normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-87, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK PEDAL ADJUSTING SENSOR SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between automatic drive positioner control unit harness connector and ground.

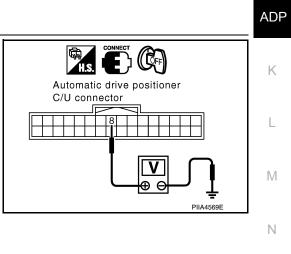
| | Terminal | | | | |
|---|----------|----------|-----------------------------|---------|-------------|
| (+) | | | | | Voltage (V) |
| Automatic drive position- er control unit | Terminal | (-) | Condition | | (Approx.) |
| | | <u> </u> | Pedal as- | Forward | 0.5 |
| M33 | 8 | Ground | sembly position Backward | | 4.5 |

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 2

2. CHECK PEDAL ADJUSTING SENSOR CIRCUIT



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INFOID:000000006163544

INFOID:000000006163545

INFOID:00000006163546

Revision: August 2010

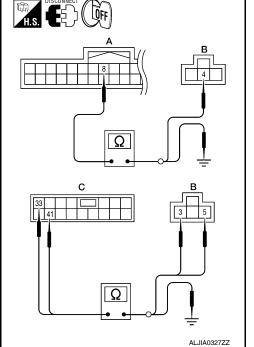
PEDAL ADJUSTING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect automatic drive positioner control unit and pedal adjusting motor assembly.
- 2. Check continuity between automatic drive positioner control unit harness connector and pedal adjusting motor assembly harness connector.

| Automatic drive posi- tioner control unit connector | Terminal | Pedal adjusting motor assembly connector | Terminal | Continuity |
|---|----------|--|----------|------------|
| M33 (A) | 8 | | 4 | |
| M24 (C) | 33 | E110 (B) | 3 | Yes |
| M34 (C) | 41 | | 5 | |

3. Check continuity between automatic drive positioner control unit harness connector and ground.



| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| M33 (A) | 8 | Ground | |
| M34 (C) | 33 | | No |
| 10104 (C) | 41 | | |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

 $\mathbf{3}$. CHECK DOOR MIRROR OPERATION

- 1. Connect automatic drive positioner control unit and pedal adjusting motor assembly.
- 2. Turn ignition switch ON.
- 3. Check door mirror operation with memory function.

Is the operation normal?

- YES >> Replace pedal adjusting motor assembly. Refer to ADP-152, "Removal and Installation".
- NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-149, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149. "Removal and Installation"</u>.
- NO >> Repair or replace the malfunctioning part.

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS > MIRROR SENSOR

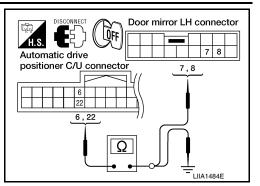
| ORIVER S | | | | | | | |
|---|--|---|-----------------------------------|---|--|------|--|
| ORIVER S | SIDE : D | escripti | on | | | | INFOID:000000006163547 |
| The resista Automatic of age of 2 se | nce of 2 so drive positi nsor input | ensors (h ioner con terminals | iorizonta trol unit s. | | or mirror positio | | -H is operated. he change of the volt- |
| | | • | ent F | unction Check | | | INFOID:000000006163548 |
| . Select "M | /IR/SEN L | .H U-D", ' | | EN LH R-L" in "Data gnal under the follo | | | |
| | Monitor item | 1 | | C | ondition | | Value |
| | | | | | Close to peak | | 3.4V |
| MIR/SEN LI | H U-D | | | | Close to valley | y | 0.6V |
| | | | Door I | mirror LH | Close to right | edge | 3.4V |
| MIR/SEN LI | H R-L | | | | Close to left ed | dge | 0.6V |
| YES >> I NO >> F ORIVER S | SIDE : D | agnosis p iagnosi | s Pro | re. Refer to <u>ADP-8</u> cedure refer to <u>ADP-128,</u> | | | Procedure". |
| YES >> In NO >> F RIVER S egarding W . CHECK E | Perform dia SIDE : D Firing Diago DOOR MIF | agnosis p iagnosi ram inform RROR LH n to ACC. | mation, | cedure | "Wiring Diagra | | |
| YES >> In NO >> F PRIVER S egarding W . CHECK E . Turn igni . Check vo ground. | Perform dia SIDE : D Tiring Diago DOOR MIF tion switch oltage betw | agnosis p iagnosi ram inform RROR LH n to ACC. | mation, | cedure refer to <u>ADP-128,</u> OR SIGNAL | "Wiring Diagra | | INFOID:00000000616354 |
| YES >> In NO >> F ORIVER S Regarding W . CHECK I . Turn igni . Check vo ground. | Perform dia SIDE : D Viring Diago DOOR MIF tion switch oltage betw | agnosis p iagnosi ram inform RROR LH n to ACC. | mation, | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness coni | "Wiring Diagra | IM". | INFOID:00000000616354 |
| YES >> In NO >> F PRIVER S egarding W . CHECK E . Turn igni . Check vo ground. T (+) Door mirror | Perform dia SIDE : D Viring Diago DOOR MIF tion switch oltage betw | agnosis p iagnosi ram inform RROR LH n to ACC. | mation, | cedure refer to <u>ADP-128,</u> OR SIGNAL | "Wiring Diagra | IM". | INFOID:00000000616354 |
| YES >> In NO >> F PRIVER S egarding W . CHECK E . Turn igni . Check vo ground. T (+) Door mirror | Perform dia SIDE : D Firing Diago DOOR MIF tion switch bitage betw Ferminals | agnosis p iagnosi ram inform RROR LH n to ACC. ween doo | mation, | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness coni | Wiring Diagra | Im". | INFOID:00000000616354 |
| YES >> In NO >> F PRIVER S egarding W . CHECK D . Turn igni . Check vo ground. T (+) Door mirror LH connector | Perform dia SIDE : D Viring Diago DOOR MIF tion switch oltage betw | agnosis p iagnosi ram inform RROR LH In to ACC. ween door | To mation, I SENS for mirro | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness cont Condition | Wiring Diagra | Im". | INFOID:00000000616354 |
| YES >> In NO >> F ORIVER S Regarding W . CHECK E . Turn igni . Check vo ground. T (+) | Perform dia SIDE : D Firing Diago DOOR MIF DOOR MIF DItage betw Ferminals | agnosis p iagnosi ram inform RROR LH n to ACC. ween doo | mation, I SENS | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness cont Condition | "Wiring Diagra nector and Voltage (V) (Approx.) 3.4 | Im". | $\frac{1}{10000000000000000000000000000000000$ |
| NO >> F ORIVER S Regarding W . CHECK E . Turn igni . Check vo ground. T (+) Door mirror LH connector | Perform dia SIDE : D Firing Diago DOOR MIF tion switch bitage betw Ferminals | agnosis p iagnosi ram inform RROR LH In to ACC. ween door | mation, I SENS or mirro | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness cont Condition | Wiring Diagra | Im". | $\frac{1}{10000000000000000000000000000000000$ |
| YES >> In NO >> F DRIVER S Regarding W . CHECK I . Turn igni . Check vo ground. T (+) Door mirror LH connector | Perform dia SIDE : D Firing Diago DOOR MIF tion switch oltage betw Ferminals Terminal 7 8 | agnosis p iagnosi ram inform RROR LH n to ACC. ween door | mation, I SENS or mirro | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness cont Condition Close to peak Close to valley Close to right edge | Wiring Diagra nector and Voltage (V) (Approx.) 3.4 0.6 3.4 | Im". | $\frac{1}{10000000000000000000000000000000000$ |
| YES >> In NO >> F ORIVER S Regarding W . CHECK E . Turn igni . Check vo ground. T (+) Door mirror LH connector D4 | Perform dia SIDE : D Tiring Diago DOOR MIF tion switch oltage betw Terminal 7 8 tion result GO TO 5. GO TO 2. | agnosis p iagnosi ram inform RROR LH n to ACC. ween door (-) Ground normal? | Door mirror LH | cedure refer to <u>ADP-128,</u> OR SIGNAL r LH harness cont Condition Close to peak Close to valley Close to right edge | Wiring Diagra nector and Voltage (V) (Approx.) 3.4 0.6 3.4 | Im". | $\frac{1}{10000000000000000000000000000000000$ |

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and door mirror LH connector.
- 3. Check continuity between automatic drive positioner control unit harness connector and door mirror LH harness connector.

| Automatic drive positioner control unit connector | Terminal | Door mirror LH connector | Terminal | Continuity |
|---|----------|-----------------------------|----------|------------|
| M33 | 6 | D4 | 7 | Yes |
| IVISS | 22 | 04 | 8 | 165 |



4. Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| M33 | 6 | Ground | No |
| 1000 | 22 | | NO |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DOOR MIRROR LH SENSOR CIRCUIT 2

1. Check continuity between automatic drive positioner control unit harness connector and door mirror LH harness connector.

| Automatic drive positioner control unit connector | Terminal | Door mirror LH connector | Terminal | Continuity |
|---|----------|-----------------------------|----------|------------|
| M34 | 33 | D4 | 5 | Yes |
| 10104 | 41 | D4 | 6 | 165 |

 Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | Ground | Continuity |
|--|----------|--------|------------|
| M34 | 33 | | No |
| 1010-4 | 41 | | NO |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK PEDAL ADJUSTING OPERATION

1. Connect driver seat control unit connector and door mirror LH connector.

- 2. Turn ignition switch ON.
- 3. Check pedal adjusting operation with memory function.

Is the operation normal?

- YES >> Replace door mirror actuator LH. Refer to <u>MIR-18, "Mirror Actuator"</u>.
- NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

ADP-90

| H.S. DISCONNECT (C) Door mirror LH connector |
|--|
| Automatic drive |
| positioner C/U connector $5, 6$ |
| |
| 33 41 41 |
| 33,41 |
| |

>> GO TO 5

>> GO TO 2

 $\mathbf{2}.$ CHECK DOOR MIRROR RH SENSOR HARNESS CONTINUITY

YES

NO

< DTC/CIRCUIT DIAGNOSIS >

PASSENGER SIDE PASSENGER SIDE : Description INEOID:000000006163550 • The mirror sensor RH is installed to the door mirror RH. The resistance of 2 sensors (horizontal and vertical) is changed when the door mirror RH is operated. Automatic drive positioner control unit calculates the door mirror position according to the change of the voltage of 2 sensor input terminals. PASSENGER SIDE : Component Function Check INFOID:000000006163551 **1**.CHECK FUNCTION D Select "MIR/SEN RH U-D", "MIR/SEN RH R-L" in "Data monitor" with CONSULT-III. 1. Check the mirror sensor RH signal under the following conditions. 2. Ε Monitor item Condition Value 3.4V Close to peak MIR/SEN RH U-D 0.6V Close to valley Door mirror RH 3.4V Close to right edge MIR/SEN RH R-L 0.6V Close to left edge Is the indication normal? YES >> Inspection End. >> Perform diagnosis procedure. Refer to ADP-91, "PASSENGER SIDE : Diagnosis Procedure". NO Н PASSENGER SIDE : Diagnosis Procedure INFOID:000000006163552 Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram". 1. CHECK DOOR MIRROR RH SENSOR SIGNAL Turn ignition switch to ACC. 1. H.S. 2. Check voltage between door mirror RH harness connector and K ACC ground. Door mirror RH connector Terminals L 7 (+)Voltage (V) 7,8 Condition Door mirror (Approx.) (-) RH con-Terminal Μ nector Θ Ð Close to peak 3.4 LIIA1485E 7 Close to valley 0.6 Door mirror Ν D107 Ground RH Close to right edge 3.4 8 Close to left edge 0.6 Is the inspection result normal?

ADP-91

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ADP

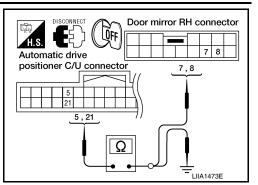
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MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and door mirror RH.
- 3. Check continuity between automatic drive positioner control unit harness connector and door mirror RH harness connector.

| Automatic drive posi- tioner control unit connector | Terminal | Door mirror RH connector | Terminal | Continuity |
|---|----------|-----------------------------|----------|------------|
| M33 | 5 | D107 | 7 | Yes |
| NICO | 21 | 0107 | 8 | 163 |



4. Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| M33 | 5 | Ground | No |
| MISS | 21 | | INU |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.check door mirror RH sensor power supply circuit

1. Check continuity between automatic drive positioner control unit harness connector and door mirror RH harness connector.

| Automatic drive posi- tioner control unit connector | Terminal | Door mirror RH connector | Terminal | Continuity |
|---|----------|-----------------------------|----------|------------|
| M34 | 33 | D107 | 5 | Yes |
| 10154 | 41 | 5107 | 6 | 165 |

 Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity | |
|--|----------|--------|------------|--|
| M34 | 33 | Ground | No | |
| W04 | 41 | | INO | |

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK PEDAL ADJUSTING OPERATION

1. Connect driver seat control unit connector and door mirror RH connector.

- 2. Turn ignition switch ON.
- 3. Check pedal adjusting operation with memory function.

Is the operation normal?

YES >> Replace door mirror actuator. Refer to MIR-18, "Mirror Actuator".

NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

b.CHECK INTERMITTENT INCIDENT

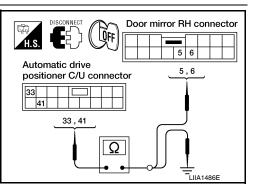
Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

ADP-92



SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Description | | | | | | |
|--|--------------------|--|----------|--|---|--|
| • The sliding motor LH is | installed with the | wer seat frame assembly driver seat control unit. nging the rotation direction | | | В | |
| Component Function Check | | | | | | |
| 1. CHECK FUNCTION | 1. CHECK FUNCTION | | | | | |
| Select "SEAT SLIDE" Check the sliding mo | | ode with CONSULT-III. | | | D | |
| Test | | E | | | | |
| | OFF | | Stop | | | |
| SEAT SLIDE | FR | Seat sliding | Forward | | _ | |
| | RR | | Backward | | F | |
| Is the operation of relevant parts normal? YES >> Inspection End. NO >> Perform diagnosis procedure. Refer to <u>ADP-93, "Diagnosis Procedure"</u> . | | | | | | |
| Diagnosis Procedure | | | | | | |
| Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram". | | | | | | |

1. CHECK SLIDING MOTOR LH POWER SUPPLY

Turn the ignition switch OFF. ŝ Perform "Active test" ("SEAT SLIDE") with CONSULT-III Check voltage between driver seat control unit harness connec-Driver seat C/U tor and ground. connector 3 Terminal 42 35, 42 (+) Voltage (V) Test Item Driver seat (Approx.) (-) control unit Terminal Ð connector PIIA4801E OFF 0 FR (forward) 35 Battery voltage RR (backward) 0 SEAT B203 Ground SLIDE OFF 0 42 FR (forward) 0 RR (backward) Battery voltage

Is the inspection result normal?

- YES >> Replace sliding motor LH. (Built in power seat frame assembly). Refer to <u>SE-44, "Disassembly</u> P <u>and Assembly"</u>.
- NO >> GO TO 2

1.

2. 3.

2. CHECK SLIDING MOTOR LH CIRCUIT

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SLIDING MOTOR

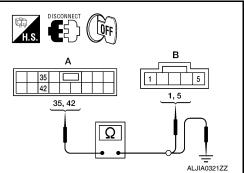
< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and sliding motor LH.
- 2. Check continuity between driver seat control unit harness connector and sliding motor LH harness connector.

| Driver seat control unit connector | Terminal | Sliding motor LH connector | Terminal | Continuity |
|---------------------------------------|----------|----------------------------|----------|------------|
| B203 (A) | 35 | B204 (B) | 5 | Yes |
| | 42 | B204 (B) | 1 | 163 |

Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity | |
|---------------------------------------|----------|--------|------------|--|
| B203 (A) | 35 | Ground | No | |
| | 42 | | NO | |



| Driver seat control unit connector | Terminal | | Continuity | |
|---------------------------------------|----------|--------|------------|--|
| B203 (A) | 35 | Ground | No | |
| B203 (A) | 42 | - | NO | |

Is the inspection result normal?

YES >> GO TO 3

3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to ADP-148, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| REULII | NING I | VIOTOr | ۲ | | | | А |
|---|-----------------------------------|--|--------------------------------|---------------|--------------------------|--|-------------|
| Descript | tion | | | | | INFOID:00000006163556 | 1 |
| • The recl | ining mot | or LH is a | ctivated w | | eat control unit. | direction of reclining motor LH. | В |
| Compor | nent Fu | Inction | Check | | | INFOID:00000006163557 | С |
| 1 . CHEC | K FUNCI | ΓΙΟΝ | | | | | |
| | | | G" in "Acti or LH opera | | with CONSULT- | III. | D |
| | | Test Ite | em | | | Description | Е |
| | | | OFF | | | Stop | |
| SEAT R | ECLINING | | FR | 5 | Seat reclining | Forward | _ |
| _ | | | RR | | | Backward | F |
| NO > Diagnos Regarding 1. CHEC 1. Turn t | Wiring D KRECLII | n diagnos cedure Diagram in NING MO n switch (| formation, TOR LH P DFF. | | | INFOID:00000006163558 gram". | G H I |
| 3. Check | k voltage d ground | between o | | | arness connec- | Driver seat C/U connector | K |
| | Terminal | | | | | | 1 |
| (+ Driver seat con- trol unit connector | Terminal | (-) | Te | est Item | Voltage (V) (Approx.) | | M |
| | | | | OFF | 0 | | |
| | 36 | | | FR (forward) | Battery voltage | | Ν |
| B203 | | Ground | SEAT RE- | RR (backward) | 0 | | |
| B203 | | Ground | CLINING | OFF | 0 | | 0 |
| | 44 | | | FR (forward) | 0 | | 0 |
| | | | | RR (backward) | Battery voltage | | |
| | Replac <u>Assem</u> > GO TC | e reclinin <u>bly"</u> . 2 | g motor L | · | eatback assemb | ly). Refer to <u>SE-44, "Disassembly and</u> | Ρ |

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit connector and reclining motor LH.
- 2. Check continuity between driver seat control unit harness connector and reclining motor harness connector.

| Driver seat control unit connector | Terminal | Terminal Reclining motor LH connector | | Continuity |
|---------------------------------------|----------|---------------------------------------|---|------------|
| B203 (A) | 36 | B205 (B) | 2 | Yes |
| | 44 | 6203 (B) | 3 | 165 |

 Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|---------------------------------------|----------|--------|------------|
| B203 (A) | 36 | Ground | No |
| | 44 | | No |

Is the inspection result normal?

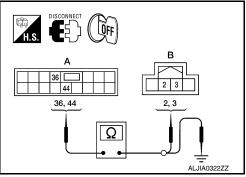
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.



LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS > LIFTING MOTOR (FRONT) А Description INFOID:000000006163559 The lifting motor (front) is installed to the power seat frame assembly. The lifting motor (front) is activated with the driver seat control unit. • The lifter (front) is moved upward/downward by changing the rotation direction of lifting motor (front). **Component Function Check** INFOID:000000006163560 1. CHECK FUNCTION Select "SEAT LIFTER FR" in "Active test" mode with CONSULT-III. D 1. 2. Check the lifting motor (front) operation. Test Item Description Ε OFF Stop UP SEAT LIFTER FR Seat lifting (front) Upward DWN Downward Is the operation of relevant parts normal? YES >> Inspection End. NO >> Perform diagnosis procedure. Refer to ADP-97, "Diagnosis Procedure". Diagnosis Procedure INFOID:000000006163561 Н Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram". 1. CHECK LIFTING MOTOR (FRONT) POWER SUPPLY

- 1. Turn the ignition switch OFF.
- 2. Perform "Active test" ("SEAT LIFTER FR") with CONSULT-III.
- 3. Check voltage between driver seat control unit harness connector and ground.

| | Terminal | | | | | |
|--|----------|--------|-----------------------|------------|-----------------|--|
| (+) | (+) | | т. | | Voltage (V) | |
| Driver seat control unit connector | Terminal | (-) | | st Item | (Approx.) | |
| | | | | OFF | 0 | |
| | 37 | | | UP | 0 | |
| B203 | | Cround | SEAT | DWN (down) | Battery voltage | |
| B203 | | Ground | Ground LIFTER - FR | OFF | 0 | |
| | 45 | | | UP | Battery voltage | |
| | | | | DWN (down) | 0 | |

Is the inspection result normal?

>> Replace lifting motor (front). (Built in power seat frame assembly). Refer to SE-44, "Disassembly P YES and Assembly".

Driver seat

C/U connector

45 37, 45

- NO >> GO TO 2
- 2. CHECK LIFTING MOTOR (FRONT) CIRCUIT

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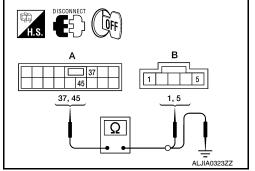
PIIA4805E

LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and lifting motor (front) connectors.
- 2. Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

| Driver seat control unit connector | Terminal | Lifting motor (front) connector | Terminal | Continuity |
|---------------------------------------|----------|------------------------------------|----------|------------|
| B203 (A) | 37 | B206 (B) | 1 | Yes |
| | 45 | B200 (B) | 5 | 165 |



3. Check continuity between driver seat control unit harness connector and ground.

| Driver seat control unit connector | Terminal | | Continuity |
|------------------------------------|----------|--------|------------|
| B203 (A) | 37 | Ground | No |
| | 45 | | NO |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to <u>ADP-148, "Removal and Installation"</u>.
- NO >> Repair or replace the malfunctioning part.

LIFTING MOTOR (REAR)

| < DTC/CIRCUIT DIAGNOSIS > | | , , , , , , , , , , , , , , , , , , , | | |
|--|-------------------|---------------------------------------|--------------------------|-----|
| LIFTING MOTOR (REAR | R) | | | А |
| Description | | | INFOID:00000006163562 | ~ |
| The lifting motor (rear) is installed The lifting motor (rear) is activated The seat lifter (rear) is moved upw | with the driver | seat control unit. | of lifting motor (rear). | В |
| Component Function Chec | k | | INFOID:00000006163563 | С |
| 1. CHECK FUNCTION | | | | |
| Select "SEAT LIFTER RR" in "A Check the lifting motor (rear) op | | e with CONSULT-III. | | D |
| Test Item | | Description | | E |
| | OFF | | Stop | |
| SEAT LIFTER RR | UP | Seat lifting (rear) | Upward | F |
| | DWN | | Downward | I |
| Is the operation of relevant parts noYES>> Inspection End.NO>> Perform diagnosis proc | | ADP-99, "Diagnosis Procedure". | | G |
| Diagnosis Procedure | | | INFOID:00000006163564 | |
| | | | | Н |
| Regarding Wiring Diagram informat | ion, refer to ADI | P-128, "Wiring Diagram". | | |
| | | | | |
| 1. CHECK LIFTING MOTOR (REA | R) POWER SU | PPLY | | |
| Turn the ignition switch OFF. Perform "Active test" ("SEAT LI Check voltage between driver statement of the statement of | | | (CFF) | ADF |

3. Check voltage between driver seat control unit harness connector and ground.

| - | | | | | | connector |
|--|---------------|--------|--------------|------------|--------------------------|-----------|
| (+) | Terminal | | - | | | |
| Driver seat control unit connector |) Terminal | (-) | Т | est Item | Voltage (V) (Approx.) | |
| | | | | OFF | 0 | riiA4004E |
| | 38 | | | UP | Battery voltage | |
| D202 | | Cround | SEAT | DWN (down) | 0 | |
| B203 — | | Ground | LIFTER RR | OFF | 0 | |
| | 39 | | | UP | 0 | |
| | | | | DWN (down) | Battery voltage | |

Driver seat C/U

.

- YES >> Replace lifting motor (rear). (Built in power seat frame assembly). Refer to <u>SE-44, "Disassembly</u> P <u>and Assembly"</u>.
- NO >> GO TO 2
- 2. CHECK LIFTING MOTOR (REAR) CIRCUIT

LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect driver seat control unit and lifting motor (rear).
- 2. Check continuity between driver seat control unit harness connector and lifting motor (rear) harness connector.

| A B B 1 5 |
|-----------------|
| |
| |

| Uriver seat control unit connector | Terminal | Lifting motor (rear) connector | Terminal | Continuity |
|---------------------------------------|-------------|-----------------------------------|----------|------------|
| B203 (A) | 38 B207 (B) | | 5 | Yes |
| B200 (A) | 39 | B207 (B) | 1 | 163 |
| | | | | |

Lifting motor (rear)

Check continuity between driver seat control unit harness con-3. nector and ground.

| Driver seat control unit connector | Terminal | _ | Continuity |
|------------------------------------|----------|--------|------------|
| B203 (A) | 38 | Ground | No |
| | 39 | 1 | INO |

Is the inspection result normal?

YES >> GO TO 3

Driver seat control

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

- YES >> Replace driver seat control unit. Refer to ADP-148, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

PEDAL ADJUSTING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

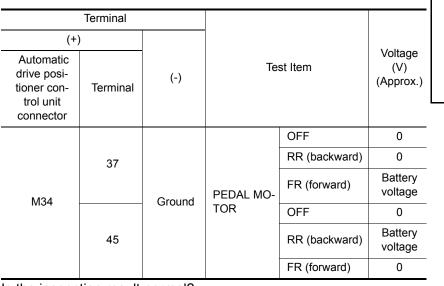
1.

PEDAL ADJUSTING MOTOR

Description The pedal adjusting motor is installed to the pedal adjusting motor assembly. The pedal adjusting motor is activated with the automatic drive positioner control unit. • The pedal assembly is adjusted forward/backward by changing the rotation direction of pedal adjusting motor. Component Function Check 1. CHECK FUNCTION Select "PEDAL MOTOR" in "Active test" mode with CONSULT-III. 2. Check the pedal adjusting motor operation. Test item Description Stop OFF PEDAL MOTOR FR Forward Pedal adjusting motor RR Backward Is the operation of relevant parts normal? YES >> Inspection End. NO >> Perform diagnosis procedure. Refer to ADP-101, "Diagnosis Procedure". Diagnosis Procedure Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK PEDAL ADJUSTING MOTOR POWER SUPPLY

- Turn the ignition switch OFF. 1.
- Perform "Active test" ("PEDAL MOTOR") with CONSULT-III. 2.
- Check voltage between automatic drive positioner control unit 3. harness connector and ground.



Is the inspection result normal?

YES >> Replace pedal adjusting motor assembly. Refer to ADP-152, "Removal and Installation".

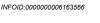
NO >> GO TO 2

 $\mathbf{2}$. CHECK PEDAL ADJUSTING MOTOR CIRCUIT

| | ADP |
|---|-----|
| Automatic drive positioner C/U connector | К |
| 37, 45 | L |
| | Μ |
| | Ν |

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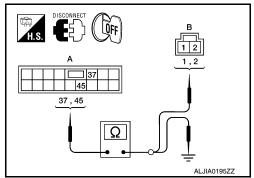
А

PEDAL ADJUSTING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

- 1. Disconnect automatic drive positioner control unit and pedal adjusting motor assembly.
- 2. Check continuity between automatic drive positioner control unit harness connector and pedal adjusting motor assembly harness connector.

| _ | | | | | |
|---|---|----------|--|----------|------------|
| | Automatic drive positioner control unit connector | Terminal | Pedal adjusting motor assembly connector | Terminal | Continuity |
| _ | M34 (A) | 37 | E109 (B) | 1 | Yes |
| | | 45 | E100 (B) | 2 | 103 |



3. Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive positioner control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| M34 (A) | 37 | Ground | No |
| | 45 | | INU |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR MOTOR

Description

It makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies.

Component Function Check

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INFOID:000000006163570

INFOID:000000006163568

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1. CHECK DOOR MIRROR MOTOR FUNCTION

Check the operation with "MIRROR MOTOR RH" and "MIRROR MOTOR LH" in "ACTIVE TEST" mode with CONSULT-III Refer to ADP-26, "CONSULT-III Function".

Is the inspection result normal?

YES >> Door mirror motor function is OK.

NO >> Refer to <u>ADP-103</u>, "Diagnosis Procedure".

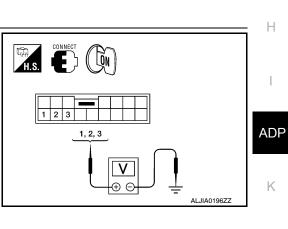
Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-128. "Wiring Diagram".

1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between door mirror connector and ground.

| | Terminals | | | | |
|--------------------------|-----------|--------|---------------------------------|-----------------|--|
| (+) | (+) | | Door mirror re- mote control | Voltage (V) | |
| Door mirror connector | Terminal | (-) | switch condition | (Approx.) | |
| | 1 | | UP | Battery voltage | |
| | | Ground | Other than above | 0 | |
| D4 (LH) | | | LEFT | Battery voltage | |
| D107 (RH) | | | Other than above | 0 | |
| | 3 | | DOWN / RIGHT | Battery voltage | |
| | 3 | | Other than above | 0 | |



Is the inspection result normal?

YES >> Refer to <u>ADP-105</u>, "Component Inspection".

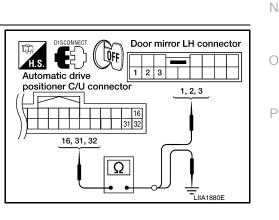
```
NO >> GO TO 2
```

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and door mirror.
- Check continuity between automatic drive positioner control unit connector and door mirror connector.

Door mirror LH

| Automatic drive positioner control unit connector | Terminal | Door mirror LH connector | Terminal | Continuity |
|---|----------|-----------------------------|----------|------------|
| | 16 | | 3 | |
| M33 | 31 | D4 | 1 | Yes |
| | 32 | | 2 | |

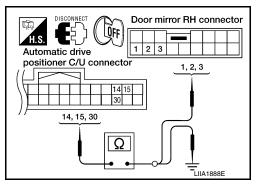


Revision: August 2010

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Door mirror RH | | | | |
|---|----------|-----------------------------|----------|------------|
| Automatic drive posi- tioner control unit con- nector | Terminal | Door mirror RH connector | Terminal | Continuity |
| | 14 | | 1 | |
| M33 | 15 | D107 | 2 | Yes |
| | 30 | | 3 | |



4. Check continuity between automatic drive positioner control unit connector and ground.

| Door mirr | or LH |
|-----------|-------|
|-----------|-------|

| Automatic drive position- er control unit connector | Terminal | | Continuity |
|--|----------|--------|------------|
| | 16 | Ground | |
| M33 | 31 | | No |
| | 32 | | |
| Door mirror RH | | | |
| Automatic drive position- er control unit connector | Terminal | | Continuity |
| | 14 | Ground | |
| M33 | 15 | 1 | No |
| - | 30 | 1 | |

Is the inspection result normal?

YES >> GO TO 3

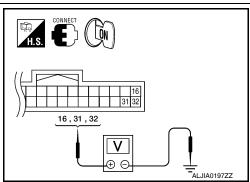
NO >> Repair or replace harness.

3. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

- 1. Connect automatic drive positioner control unit.
- 2. Turn ignition switch ON.
- 3. Check voltage between automatic drive positioner control unit connector and ground.

Door mirror LH

| - | Terminals | | | |
|---|--------------|-----------|------------------|-----------------|
| (+) | | | Mirror switch | Voltage (V) |
| Automatic drive positioner control unit connector | Terminal | (-) | condition | (Approx.) |
| | 16 | | DOWN / RIGHT | Battery voltage |
| | 10 | | Other than above | 0 |
| M33 | 21 | 31 Ground | UP | Battery voltage |
| 10133 | M33 31 32 | | Other than above | 0 |
| | | | LEFT | Battery voltage |
| | 32 | | Other than above | 0 |



DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Door mirror RH | ł | | | | | А |
|---|--------------|------------|------------------------------|--------------------------|---|----|
| | Terminals | | | | H.S. C | |
| (+) Automatic drive positioner con- trol unit connec- tor | Terminal | (-) | Mirror switch con- dition | Voltage (V) (Approx.) | () 14,15,30 | В |
| | | | UP | Battery voltage | | С |
| | 14 | | Other than above | 0 | | |
| - | 45 | | LEFT | Battery voltage | ALDINOTOLL | D |
| M33 | 15 | Ground | Other than above | 0 | | |
| | 00 | _ | DOWN / RIGHT | Battery voltage | | _ |
| | 30 | | Other than above | 0 | | E |
| Is the inspection | n result nor | mal? | | | | |
| YES >> GO | | | | | | F |
| 4 | | | | unit. Refer to <u>A</u> | ADP-149, "Removal and Installation". | |
| 4. CHECK DO | OR MIRRO | OR MOTOF | R | | | |
| Check door mir | | | | | | G |
| Refer to <u>ADP-1</u> | | | ection". | | | |
| Is the inspection YES >> Ref | | | ent Incident". | | | Н |
| | | | ator. Refer to <u>MIF</u> | R-18, "Mirror Ac | stuator". | |
| Component | Inspectio | on | | | INFOID:00000006163571 | 1 |
| 1. снеск do | - | | R-1 | | | |
| Check that door Refer to MIR-15 | | | | ects and does r | not have any damage. | AD |
| Is the inspection | n result nor | mal? | | | | |
| YES >> GO | - | | | | | K |
| <u> </u> | | | ator. Refer to <u>MIF</u> | <u>R-18, "Mirror Ac</u> | <u>ctuator"</u> . | |
| 2. CHECK DO | OR MIRRO | OR MOTOF | R-11 | | | |
| 1. Turn ignitio | | | | | | L |
| Disconnect Apply 12V f | | | terminal of door r | mirror motor | | |
| 5. Apply 12V | | wei suppiy | | | | N |
| | | Terminal | | | $\underbrace{1,2,3}_{i} \underbrace{1,2,3}_{i}$ | |
| Door mirror conn | | | Operatio | nal direction | | _ |
| | | | | IGHT | FUSE | Ν |
| D4 (LH) | | | | EFT | | |
| D4 (LH) D107 (RH) | | | | UP | BAT | 0 |
| | | | | OWN | ALJIA0199ZZ | |
| Is the inspection | n result nor | mal? | | | | |
| | pection En | | | | | Ρ |
| | | | ator. Refer to <u>MIF</u> | R-18, "Mirror Ac | <u>stuator"</u> . | |

SEAT MEMORY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY INDICATOR LAMP

Description

- The seat memory switch is installed on the driver side door trim. The operation signal is inputted to the automatic drive positioner control unit when the memory switch is operated.
- The status of automatic drive positioner system can be checked according to the illuminating/flashing status.

Component Function Check

1. CHECK FUNCTION

- 1. Select "MEMORY SW INDCTR" in "Active test" mode with CONSULT-III.
- 2. Check the memory indicator operation.

| Test item | | Descript | ion |
|------------------|------|-------------------------|-----------------|
| | OFF | | OFF |
| MEMORY SW INDCTR | ON-1 | Memory switch indicator | Indicator 1: ON |
| | ON-2 | - | Indicator 2: ON |

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-106, "Diagnosis Procedure"</u>.

Diagnosis Procedure

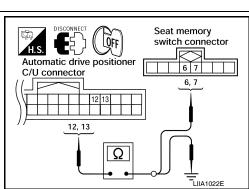
INFOID:000000006163574

Regarding Wiring Diagram information, refer to ADP-128, "Wiring Diagram".

1. CHECK SEAT MEMORY INDICATOR CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and seat memory switch.
- 3. Check continuity between automatic drive positioner control unit harness connector and seat memory switch harness connector.

| Automatic drive positioner control unit connector | Terminal | Seat memory switch connector | Terminal | Continuity |
|---|----------|------------------------------|----------|------------|
| M33 | 12 | D5 | 6 | Yes |
| Moo | 13 | 55 | 7 | 103 |



4. Check continuity between automatic drive positioner control unit harness connector and ground.

| Automatic drive position- er connector | Terminal | | Continuity | |
|---|----------|--------|------------|--|
| M33 | 12 | Ground | No | |
| WISS | 13 | - | NO | |
| Is the inspection result normal? | | | | |

YES >> GO TO 2

NO >> Repair or replace harness.

2. CHECK MEMORY INDICATOR POWER SUPPLY

INFOID:000000006163572

INFOID:000000006163573

SEAT MEMORY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

Check voltage between seat memory switch harness connector and ground.

| Seat memory switch | Termir | als | Voltage (V) |
|--------------------|--------|--------|-----------------|
| connector | (+) | (—) | (Approx.) |
| D5 | 5 | Ground | Battery voltage |

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Check the following.
 - Fuse
 - · Harness for open or short between memory indicator and fuse.
- **3.** CHECK MEMORY INDICATOR

Refer to ADP-107, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace seat memory switch. Refer to <u>ADP-150</u>, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-149</u>, "Removal and Installation".

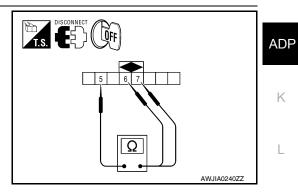
NO >> Repair or replace the malfunctioning part.

Component Inspection

1. CHECK SEAT MEMORY INDICATOR

- 1. Disconnect seat memory switch.
- 2. Check continuity between seat memory switch terminals.

| Terr | ninal | |
|----------|-------------|------------|
| Seat men | nory switch | Continuity |
| (+) | (-) | |
| 6 | 5 | Yes |
| 7 | 5 | 163 |



Seat memory switch

connector

5

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace seat memory switch. Refer to <u>ADP-150, "Removal and Installation"</u>.

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ECU DIAGNOSIS INFORMATION DRIVER SEAT CONTROL UNIT

Reference Value

INFOID:000000006163576

VALUES ON THE DIAGNOSIS TOOL

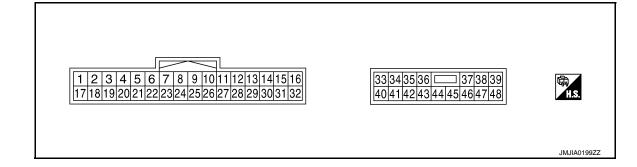
CONSULT-III MONITOR ITEM

| Monitor Item | Conc | lition | Value/Status |
|---------------|-----------------------------|------------------|--------------|
| SET SW | Set switch | Push | ON |
| SET SW | Set Switch | Release | OFF |
| MEMORY SW1 | Momory awitch 1 | Push | ON |
| MEMORY SWI | Memory switch 1 | Release | OFF |
| | Maman (awitch 2 | Push | ON |
| MEMORY SW2 | Memory switch 2 | Release | OFF |
| | Olidia a switch (frant) | Operate | ON |
| SLIDE SW-FR | Sliding switch (front) | Release | OFF |
| | Sliding owitch (rear) | Operate | ON |
| SLIDE SW-RR | Sliding switch (rear) | Release | OFF |
| | Declining entitleh (freut) | Operate | ON |
| RECLN SW-FR | Reclining switch (front) | Release | OFF |
| | | Operate | ON |
| RECLN SW-RR | Reclining switch (rear) | Release | OFF |
| | | Operate | ON |
| LIFT FR SW-UP | Lifting switch front (up) | Release | OFF |
| LIFT FR SW-DN | Lifting switch front (down) | Operate | ON |
| | | Release | OFF |
| | | Operate | ON |
| LIFT RR SW-UP | Lifting switch rear (up) | Release | OFF |
| | Lifting switch rear (down) | Operate | ON |
| LIFT RR SW-DN | | Release | OFF |
| | Mirror switch | Up | ON |
| MIR CON SW-UP | | Other than above | OFF |
| | Mirror owitch | Down | ON |
| MIR CON SW-DN | Mirror switch | Other than above | OFF |
| | Mirror owitch | Right | ON |
| MIR CON SW-RH | Mirror switch | Other than above | OFF |
| | Mirror owitch | Left | ON |
| MIR CON SW-LH | Mirror switch | Other than above | OFF |
| | Changeover owitch | Right | ON |
| MIR CHNG SW-R | Changeover switch | Other than above | OFF |
| | Changeover switch | Left | ON |
| MIR CHNG SW-L | Changeover switch | Other than above | OFF |
| | Dodol odjupting switch | Forward | ON |
| PEDAL SW-FR | Pedal adjusting switch | Other than above | OFF |
| | Podal adjusting awitch | Backward | ON |
| PEDAL SW-RR | Pedal adjusting switch | Other than above | OFF |

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condit | ion | Value/Status |
|----------------|------------------------------|---------------------|-----------------------------|
| DETENT OW | AT a sla stan lavran | P position | OFF |
| DETENT SW | AT selector lever | Other than above | ON |
| | lonition position | Cranking | ON |
| STARTER SW | Ignition position | Other than above | OFF |
| | | Forward | The numeral value decreases |
| SLIDE PULSE | Seat sliding | Backward | The numeral value increases |
| | | Other than above | No change to numeral value |
| | | Forward | The numeral value decreases |
| RECLN PULSE | Seat reclining | Backward | The numeral value increases |
| | | Other than above | No change to numeral value |
| | | Up | The numeral value decreases |
| LIFT FR PULSE | Seat lifter (front) | Down | The numeral value increases |
| | | Other than above | No change to numeral value |
| | Seat lifter (rear) | Up | The numeral value decreases |
| LIFT RR PULSE | | Down | The numeral value increases |
| | | Other than above | No change to numeral value |
| MIR/SEN RH U-D | | Close to peak | 3.4 |
| MIR/SEN RH U-D | Door mirror (passenger side) | Close to valley | 0.6 |
| MIR/SEN RH R-L | | Close to left edge | 3.4 |
| MIR/SEN RH R-L | Door mirror (passenger side) | Close to right edge | 0.6 |
| | | Close to peak | 3.4 |
| MIR/SEN LH U-D | Door mirror (driver side) | Close to valley | 0.6 |
| | | Close to left edge | 0.6 |
| MIR/SEN LH R-L | Door mirror (driver side) | Close to right edge | 3.4 |
| | nodel position | Forward | 0.5 |
| PEDAL SEN | pedal position | Backward | 4.5 |

TERMINAL LAYOUT



PHYSICAL VALUES

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| Tern | ninal No. | Miro | Description | | | | |
|------|-----------|---------------|---------------------------------------|------------------|---------------------------|----------------------------|---|
| + | - | Wire color | Signal name | Input/ Output | Condition | 1 | Voltage (V) (Approx) |
| 1 | Ground | W | UART LINE (RX) | Input | Ignition switch ON | | (V) 6 4 2 0 1 ms PIIA4813E |
| 3 | | L/B | CAN-H | | | | |
| 6 | Ground | R | Ignition switch (START) | Input | Ignition switch | OFF START | 0 Battery voltage |
| 9 | Ground | R/B | Reclining sensor sig- nal | Input | Seat reclining | Operate | (V) 6 4 2 0 •••••50ms SIIA0692J |
| | | | | | | Stop | 0 or 5 |
| 10 | Ground | B/R | Lifting sensor (rear) signal | Input | Seat lifting (rear) | Operate | (V) 6 4 2 0 •••••50ms SIIA0693J |
| | | | | | | Stop | 0 or 5 |
| 11 | Ground | Y/R | Sliding switch back- ward signal | Input | Sliding switch | Operate (back- ward) | 0 |
| | | | | | | Release | Battery voltage |
| 12 | Ground | L/W | Reclining switch back- ward signal | Input | Reclining switch | Operate (back- ward) | 0 |
| | | | | | | Release | Battery voltage |
| 13 | Ground | V | Lifting switch (front) down signal | Input | Lifting switch (front) | Operate (down) | 0 |
| | | | | | · · / | Release | Battery voltage |
| 14 | Ground | P/L | Lifting switch (rear) down signal | Input | Lifting switch (rear) | Operate (down) | 0 |
| | | | | | | Release | Battery voltage |
| 15 | Ground | SB | Pedal switch backward signal | Input | Pedal switch | Operate (back- ward) | 0 |
| | | | | | | Release | Battery voltage |
| 16 | Ground | R/W | Sensor power supply | Output | — | | 5 |

| Term | ninal No. | Wire | Description | | | | Voltage (V/) | |
|------|-----------|-------|---|------------------|----------------------------|------------------------------------|--|---|
| + | - | color | Signal name | Input/ Output | Condition | ו | Voltage (V) (Approx) | Α |
| 17 | Ground | Y/R | UART LINE (TX) | Output | Ignition switch ON | | (V) 6 4 2 0 2 ms PIIA4814E | B |
| 19 | _ | G | CAN-L | | _ | | _ | |
| 21 | Ground | L | A/T shift selector (park position switch) | Input | A/T selector lever | P position Except P position | 0 Battery voltage | E |
| 24 | Ground | R/L | Sliding sensor signal | Input | Seat sliding | Operate | (V) 6 4 2 0 | F |
| | | | | | | Stop | 50 ms PIIA3277E | ŀ |
| 25 | Ground | Y/G | Lifting sensor (front) signal | Input | Seat lifting (front) | Operate | (V) 6 2 0 •••••50ms SIIA0691J | A |
| | | | | | | Stop | 0 or 5 | |
| 26 | Ground | L/R | Sliding switch forward signal | Input | Sliding switch | Operate (forward) | 0 | k |
| | | | | | | Release | Battery voltage | L |
| 27 | Ground | V/W | Reclining switch for- ward signal | Input | Reclining switch | Operate (forward) Release | 0 Battery voltage | |
| 28 | Ground | BR/Y | Lifting switch (front) up | Input | Seat lifting switch | Operate (up) | 0 | Ν |
| | | | signal | • | (front) | Release | Battery voltage | Ν |
| 29 | Ground | G/R | Lifting switch (rear) up signal | Input | Seat lifting switch (rear) | Operate (up) | 0 | |
| | | | | | · / | Release | Battery voltage | C |
| 30 | Ground | L/Y | Pedal switch forward signal | Input | Pedal switch | Operate (forward) Release | 0 Battery voltage | F |
| 31 | Ground | GR/R | Sensor ground | | | Release | 0 | F |
| 32 | Ground | G/W | Ground (signal) | | | | 0 | |
| 33 | Ground | W/B | Battery power source (C/B) | Input | | | Battery voltage | |

< ECU DIAGNOSIS INFORMATION >

| Term | ninal No. | Wire | Description | | | | Voltage (V) |
|------|-----------|-------|---|------------------|----------------------|----------------------------|-----------------|
| + | - | color | Signal name | Input/ Output | Conditior | ı | (Approx) |
| 35 | Ground | R/G | Sliding motor forward output signal | Output | Output Seat sliding | | Battery voltage |
| | | | | | | Release | 0 |
| 36 | Ground | L | Reclining motor for- ward output signal | Output | | Operate (forward) | Battery voltage |
| _ | | | ward output signal | | | Release | 0 |
| 37 | Ground | В | Lifting motor (front) down output signal | Output | Seat lifting (front) | Operate (down) | Battery voltage |
| | | | down output signal | | | Stop | 0 |
| 38 | Ground | GR | Lifting motor (rear) up output signal | Output | Seat lifting (rear) | Operate (up) | Battery voltage |
| | | | output signal | | | Stop | 0 |
| 39 | Ground | R | Lifting motor (rear) down output signal | Output | Seat lifting (rear) | Operate (down) | Battery voltage |
| | | | down output signal | | | Stop | 0 |
| 40 | Ground | G | Power source (Fuse) | Input | | | Battery voltage |
| 42 | Ground | R/Y | Sliding motor back- ward output signal | Output | Seat sliding | Operate (back- ward) | Battery voltage |
| | | | | | | Stop | 0 |
| 44 | Ground | G/B | Reclining motor back- ward output signal | Output | Seat reclining | Operate (back- ward) | Battery voltage |
| | | | | | | Stop | 0 |
| 45 | Ground | G/Y | Lifting motor (front) up output signal | Output | Seat lifting (front) | Operate (up) | Battery voltage |
| | | | | | | Stop | 0 |
| 48 | Ground | В | Ground (power) | | | | 0 |

Fail Safe

INFOID:000000006163578

The fail-safe mode may be activated if the following symptoms are observed.

FAIL-SAFE MODE

When any manual and automatic operations are not performed, if any motor operations of front seat LH or pedals are detected for T2 or more, status is judged "Output error".

| OPERATED PORTION | T2 |
|----------------------|------------------|
| Seat sliding | Approx. 0.1 sec. |
| Seat reclining | Same as above |
| Seat lifting (Front) | Same as above |
| Seat lifting (Rear) | Same as above |
| Pedal adjust | Same as above |

NOTE:

The front seat LH position and pedal adjustment functions (see the following table) operate simultaneously in the order of priority.

< ECU DIAGNOSIS INFORMATION >

| Priority | Function | Priority | Function | A |
|--------------|------------------------------------|----------|----------------|---|
| 1 | Seat sliding, (door mirror LH/RH)* | 4 | Seat lifter-FR | - |
| 2 | Pedal | 5 | Seat lifter-RR | |
| 3 | Seat reclining | | | В |

*: In conjunction with sliding the seat, the door mirrors are positioned.

CANCEL OF FAIL-SAFE MODE

The mode is cancelled when the A/T selector lever is shifted to P position from any other position.

DTC Index

| CONSULT-III | Tim | ing ^{*1} | | |
|------------------------------|--------------------------|---------------------------|---------------------------------|----------------|
| display | Current mal- function | Previous mal- function | Item | Reference page |
| CAN COMM CIRCUIT [U1000] | 0 | 1-39 | CAN communication | ADP-29 |
| SEAT SLIDE [B2112] | 0 | 1-39 | Seat slide motor output | <u>ADP-30</u> |
| SEAT RECLINING [B2113] | 0 | 1-39 | Seat reclining motor output | ADP-32 |
| SEAT LIFTER FRONT [B2114] | 0 | 1-39 | Seat lifting motor front output | <u>ADP-34</u> |
| SEAT LIFTER REAR [B2115] | 0 | 1-39 | Seat lifting motor rear output | <u>ADP-36</u> |
| ADJ PEDAL MOTOR [B2117] | 0 | 1-39 | Pedal adjusting motor output | ADP-38 |
| ADJ PEDAL SENSOR [B2120] | 0 | 1-39 | Pedal adjusting sensor input | ADP-40 |
| DETENT SW [B2126] | 0 | 1-39 | T. R. switch condition | ADP-42 |
| UART COMM [B2128] | 0 | 1-39 | UART communication <u>ADP-4</u> | |

*1.

• 0: Current malfunction is present

• 1-39: Displayed if any previous malfunction is present when current condition is normal. The numeral value increases by one at each IGN ON to OFF cycle from 1 to 39. The counter remains at 39 even if the number of cycles exceeds it. However, the counter is reset to 1 if any malfunction is detected again, the normal operation is resumed and the ignition switch is turned from OFF to ON.

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< ECU DIAGNOSIS INFORMATION >

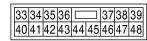
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

INFOID:000000006163580

TERMINAL LAYOUT







JMJIA0199ZZ

PHYSICAL VALUES

| Terr | ninal No. | | Description | | | | |
|------|-----------|---------------|---------------------------|-----------------------|----------------------|-----------------------------------|--|
| + | - | Wire color | Signal name | Input/ Out- put | Conditio | on | Voltage (V) (Approx.) |
| | | | Changeover switch RH | | Changeover | RH | 0 |
| 2 | Ground | LG | signal | Input | switch position | Neutral or LH | 5 |
| 3 | Cround | Y/B | Mirror quitch up gignal | loout | Mirror switch | Operated (up) | 0 |
| 3 | Ground | τ/d | Mirror switch up signal | Input | WINTOF SWITCH | Other than above | 5 |
| 4 | Ground | V/W | Mirror switch left signal | Input | Mirror switch | Operated (left) | 0 |
| 4 | Ground | V/VV | | mput | WIITOF SWITCH | Other than above | 5 |
| 5 | Ground | R/B | Door mirror sensor (RH) | Input | Door mirror RH | Peak | 3.4 |
| 5 | Ground | R/D | up/down signal | input | position | Valley | 0.6 |
| 6 | Ground | L/Y | Door mirror sensor (LH) | Input | Door mirror LH | Peak | 3.4 |
| 0 | Ground | L/ I | up/down signal | input | position | Valley | 0.6 |
| 8 | Ground | BR/Y | Pedal sensor input sig- | Input | Pedal sensor | Forward | 0.5 |
| 0 | Ground | DIVI | nal | input | | Backward | 4.5 |
| | | | | | | Push | 0 |
| 9 | Ground | LG/B | Memory switch 1 signal | Input | Memory switch 1 | Other than above | 5 |
| 10 | Ground | L | UART LINE (TX) | Out- put | Ignition switch ON | I | (V) 6 4 2 0 1 ms PIIA4813E |
| 12 | Ground | Ρ | Memory indictor 1 signal | Out- put | Memory indictor 1 | Illuminate Other than above | 0 Battery voltage |

| Terr | minal No. | | Description | | | | | | |
|------|------------|---------------|----------------------------|-----------------------|--------------------|--------------------|--|-----------------------|---|
| + | - | Wire color | Signal name | Input/ Out- put | Conditio | on | Voltage (V) (Approx.) | A | |
| | | | | Out- | Memory indictor | Illuminate | 0 | В | |
| 13 | Ground | Y/G | Memory indictor 2 signal | put | 2 | Other than above | Battery voltage | | |
| 14 | Ground | GR/R | Door mirror motor (RH) | Out- | Door mirror RH | Operate (up) | 1.5 - Battery voltage | С | |
| | oround | Chin | up output signal | put | | Other than above | 0 | D | |
| 15 | Ground | V/R | Door mirror motor (RH) | Out- | Door mirror RH | Operate (left) | 1.5 - Battery voltage | _ | |
| | oround | | left output signal | put | | Other than above | 0 | E | |
| | | | Door mirror motor (LH) | | | Operate (down) | 1.5 - Battery voltage | F | |
| 16 | Ground | 0 | down output signal | Out- | Door mirror (LH) | Other than above | 0 | | |
| 10 | oround | U | Door mirror motor (LH) | put | put | | Operate (right) | 1.5 - Battery voltage | G |
| | | | right output signal | | | Other than above | 0 | Н | |
| | | | Changeover switch LH | | Changeover | LH | 0 | | |
| 18 | Ground | BR/W | signal | Input | switch position | Neutral or RH | 5 | | |
| 19 | Ground | SB | Mirror switch down sig- | Input | Mirror switch | Operate (down) | 0 | | |
| | oround | 00 | nal | mpar | | Other than above | 5 | AD | |
| 20 | Ground | GR | Mirror switch right signal | Input | Mirror switch | Operate (right) | 0 | Κ | |
| | 0.00110 | | | mpat | | Other than above | 5 | | |
| 21 | Ground | L/W | Door mirror sensor (RH) | Input | Door mirror RH | Left edge | 3.4 | L | |
| | 0.00.00 | | left/right signal | mpar | position | Right edge | 0.6 | | |
| 22 | Ground | G | Door mirror sensor (LH) | Input | Door mirror LH | Left edge | 0.6 | M | |
| | | | left/right signal | | position | Right edge | 3.4 | | |
| 24 | Cround | C/O | Set owitch signal | Innut | Sat awitab | Push | 0 | | |
| 24 | Ground | G/O | Set switch signal | Input | Set switch | Other than above | 5 | Ν | |
| | • • | 5.4 | | | | Push | 0 | | |
| 25 | Ground | P/L | Memory switch 2 signal | Input | Memory switch 2 | Other than above | 5 | 0 | |
| 26 | Ground | W | UART LINE (RX) | Input | Ignition switch ON | I | (V) 6 4 2 0 2 ms PIIA4814E | Ρ | |

| Terr | minal No. | | Description | | | | |
|------|-----------|---------------|---|-----------------------|-----------------------|----------------------------|--------------------------|
| + | - | Wire color | Signal name | Input/ Out- put | Conditio | on | Voltage (V) (Approx.) |
| | | | Door mirror motor (RH) | | | Operate (down) | 1.5 - Battery voltage |
| 30 | Ground | Y | down output signal | Out- | Door mirror (RH) | Other than above | 0 |
| 50 | Ground | I | Door mirror motor (RH) | put | | Operate (right) | 1.5 - Battery voltage |
| | | | right output signal | | | Other than above | 0 |
| 31 | Ground | R | Door mirror motor (LH) | Out- | Door mirror (LH) | Operate (up) | 1.5 - Battery voltage |
| 51 | Ground | K | up output signal | put | | Other than above | 0 |
| 32 | Ground | BR | Door mirror motor (LH) | Out- | Door mirror (LH) | Operate (left) | 1.5 - Battery voltage |
| 52 | Ground | DIX | left output signal | put | | Other than above | 0 |
| 33 | Ground | W/L | Sensor power supply | Input | — | | 5 |
| 34 | Ground | Y/R | Battery power source | Input | _ | | Battery voltage |
| 37 | Ground | G | Pedal adjusting motor | Out- | Pedal adjusting | Operate (forward) | Battery voltage |
| 57 | Ground | 9 | forward output signal | put | motor | Other than above | 0 |
| 39 | Ground | L/B | Battery power source | | — | | Battery voltage |
| 40 | Ground | B/W | Ground | | — | | 0 |
| 41 | Ground | W/G | Sensor ground | _ | — | | 0 |
| 45 | Ground | R | Pedal adjusting motor backward output signal | Out- put | Pedal adjusting motor | Operate (back- ward) | Battery voltage |
| | | | backwaru oulput siyildi | put | motor | Other than above | 0 |
| 48 | Ground | В | Ground | | _ | | 0 |

< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

| Monitor Item | Condition | Value/Status | |
|---------------|--|-------------------------------|-----|
| | Ignition switch OFF or ON | Off | С |
| ACC ON SW | Ignition switch ACC | On | |
| AIR COND SW | A/C switch OFF | Off | D |
| AIR COND SW | A/C switch ON | On | U |
| AIR PRESS FL | Front left tire air pressure value | kPa, kg/cm ² , psi | |
| AIR PRESS FR | Front right tire air pressure value | kPa, kg/cm ² , psi | E |
| AIR PRESS RL | Rear left tire air pressure value | kPa, kg/cm ² , psi | |
| AIR PRESS RR | Rear right tire air pressure value | kPa, kg/cm ² , psi | F |
| | Lighting switch OFF | Off | |
| AUTO LIGHT SW | Lighting switch AUTO | On | 0 |
| | Brake pedal released | Off | G |
| BRAKE SW | Brake pedal applied | On | |
| | Seat belt buckle unfastened | Off | Н |
| BUCKLE SW | Seat belt buckle fastened | On | |
| | Buzzer in combination meter OFF | Off | |
| BUZZER | Buzzer in combination meter ON | On | |
| | Cargo lamp switch OFF | Off | |
| CARGO LAMP SW | Cargo lamp switch ON | On | ADF |
| CDL LOCK SW | Door lock/unlock switch does not operate | Off | |
| CDL LOCK SW | Press door lock/unlock switch to the LOCK side | On | |
| CDL UNLOCK SW | Door lock/unlock switch does not operate | Off | K |
| CDL UNLOCK SW | Press door lock/unlock switch to the UNLOCK side | On | |
| DOOR SW-AS | Front door RH closed | Off | |
| DOOR SW-AS | Front door RH opened | On | |
| | Front door LH closed | Off | |
| DOOR SW-DR | Front door LH opened | On | M |
| DOOR SW-RL | Rear door LH closed | Off | |
| DOOR SW-RL | Rear door LH opened | On | N |
| | Rear door RH closed | Off | — N |
| DOOR SW-RR | Rear door RH opened | On | |
| FAN ON SIG | Blower motor fan switch OFF | Off | 0 |
| FAN ON SIG | Blower motor fan switch ON | On | |
| | Front fog lamp switch OFF | Off | |
| FR FOG SW | Front fog lamp switch ON | On | — P |
| | Front washer switch OFF | Off | |
| FR WASHER SW | Front washer switch ON | On | |
| | Front wiper switch OFF | Off | |
| FR WIPER LOW | Front wiper switch LO | On | |

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| Monitor Item | Condition | Value/Status |
|----------------|---|--------------|
| FR WIPER HI | Front wiper switch OFF | Off |
| | Front wiper switch HI | On |
| FR WIPER INT | Front wiper switch OFF | Off |
| | Front wiper switch INT | On |
| FR WIPER STOP | Any position other than front wiper stop position | Off |
| | Front wiper stop position | On |
| HAZARD SW | When hazard switch is not pressed | Off |
| TAZARD SW | When hazard switch is pressed | On |
| HEAD LAMP SW1 | Headlamp switch OFF | Off |
| TIEAD LAWF SWI | Headlamp switch 1st | On |
| HEAD LAMP SW2 | Headlamp switch OFF | Off |
| HEAD LAWF 3002 | Headlamp switch 1st | On |
| HI BEAM SW | High beam switch OFF | Off |
| | High beam switch HI | On |
| ID REGST FL1 | ID registration of front left tire incomplete | YET |
| ID REGST FLT | ID registration of front left tire complete | DONE |
| | ID registration of front right tire incomplete | YET |
| ID REGST FR1 | ID registration of front right tire complete | DONE |
| | ID registration of rear left tire incomplete | YET |
| ID REGST RL1 | ID registration of rear left tire complete | DONE |
| | ID registration of rear right tire incomplete | YET |
| ID REGST RR1 | ID registration of rear right tire complete | DONE |
| | Ignition switch OFF or ACC | Off |
| IGN ON SW | Ignition switch ON | On |
| | Ignition switch OFF or ACC | Off |
| IGN SW CAN | Ignition switch ON | On |
| INT VOLUME | Wiper intermittent dial is in a dial position 1 - 7 | 1 - 7 |
| | Door key cylinder LOCK position | Off |
| KEY CYL LK-SW | Door key cylinder other than LOCK position | On |
| | Door key cylinder UNLOCK position | Off |
| KEY CYL UN-SW | Door key cylinder other than UNLOCK position | On |
| | Mechanical key is removed from key cylinder | Off |
| KEY ON SW | Mechanical key is inserted to key cylinder | On |
| | LOCK button of key fob is not pressed | Off |
| KEYLESS LOCK | LOCK button of key fob is pressed | On |
| | PANIC button of key fob is not pressed | Off |
| KEYLESS PANIC | PANIC button of key fob is pressed | On |
| | UNLOCK button of key fob is not pressed | Off |
| KEYLESS UNLOCK | UNLOCK button of key fob is pressed | On |
| | Lighting switch OFF | Off |
| LIGHT SW 1ST | Lighting switch 1st | On |
| OIL PRESS SW | Ignition switch OFF or ACC Engine running | Off |
| 0.211.200.077 | Ignition switch ON | On |

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|----------------|---|-----------------------------------|
| OPTICAL SENSOR | Bright outside of the vehicle | Close to 5V |
| OPTICAL SENSOR | Dark outside of the vehicle | Close to 0V |
| PASSING SW | Other than lighting switch PASS | Off |
| PASSING SW | Lighting switch PASS | On |
| REAR DEF SW | Rear window defogger switch OFF | Off |
| REAR DEF SW | Rear window defogger switch ON | On |
| TURN SIGNAL L | Turn signal switch OFF | Off |
| TURN SIGNAL L | Turn signal switch LH | On |
| TURN SIGNAL R | Turn signal switch OFF | Off |
| TURN SIGNAL R | Turn signal switch RH | On |
| VEHICLE SPEED | While driving | Equivalent to speedometer reading |
| WARNING LAMP | Low tire pressure warning lamp in combination meter OFF | Off |
| WARINING LAWP | Low tire pressure warning lamp in combination meter ON | On |

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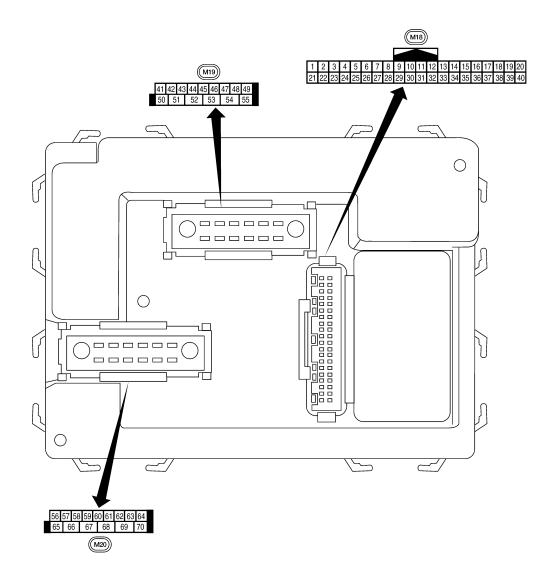
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< ECU DIAGNOSIS INFORMATION >

Terminal Layout

INFOID:000000006601980



LIIA2443E

INFOID:000000006601981

Physical Values

| | Wire | | Signal | | Measuring condition | Reference value or waveform |
|----------|-------|---|------------------|--------------------|--|--|
| Terminal | color | Signal name | input/ output | lgnition switch | Operation or condition | (Approx.) |
| 2 | SB | Combination switch input 5 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 4 0 0 |
| 3 | G/Y | Combination switch input 4 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 2 0 + 5ms SKIA5292E |
| 4 | Y | Combination switch input 3 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 2 0 • • • 5 ms • • • 5 ms • • • 5 ms • • • 5 ms |
| 5 | G/B | Combination switch input 2 | | | | (V) |
| 6 | v | Combination switch input 1 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 | skia5292E |
| 9 | Y/B | Rear window defogger switch (Crew Cab) | Input | ON | Rear window defogger switch ON Rear window defogger switch | 0V 5V |
| 11 | 0 | Ignition switch (ACC or ON) | Input | ACC or ON | OFF Ignition switch ACC or ON | Battery voltage |
| 12 | R/L | Front door switch RH (All) Rear door switch low- er RH (King Cab) Rear door switch up- per RH (King Cab) | Input | OFF | ON (open) OFF (closed) | 0V Battery voltage |
| 13 | GR | Rear door switch RH (Crew Cab) | Input | OFF | ON (open) | 0V |
| 15 | L/W | Tire pressure warning check connector | Input | OFF | OFF (closed) | Battery voltage 5V |
| 18 | Р | Remote keyless entry receiver and optical sensor (ground) | Output | OFF | | 0V |

| | 14/5-2-2 | | Signal | | Measuring condition | Defense velve en vereferre | | |
|----------|---------------|--|------------------|--------------------|--|---|--|---|
| Terminal | Wire color | Signal name | input/ output | Ignition switch | Operation or condition | Reference value or waveform (Approx.) | | |
| 19 | V/W | Remote keyless entry receiver (power sup- ply) | Output | OFF | Ignition switch OFF | (V) 6 4 2 0 + 50 ms LIIA1893E | | |
| 20 | G/W | Remote keyless entry | Input | OFF | Stand-by (keyfob buttons re- leased) | (V) 6 4 2 0 ++50 ms LIIA1894E | | |
| | | receiver (signal) | | | | | When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) | (V) 6 4 2 0 + + 50 ms LIIA1895E |
| 21 | G | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF \rightarrow ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. | | |
| 22 | G | BUS | _ | | Ignition switch ON or power window timer operates | (V) 15 10 5 0 200 ms PIIA2344E | | |
| 23 | G/O | Security indicator lamp | Output | OFF | Goes OFF \rightarrow illuminates (Every 2.4 seconds) | Battery voltage \rightarrow 0V | | |
| 25 | BR | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF \rightarrow ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. | | |
| 27 | W/R | Compressor ON sig- | Input | ON | A/C switch OFF | 5V | | |
| | | nal | | 2 | A/C switch ON | 0V | | |
| 28 | L/R | Front blower monitor | Input | ON | Front blower motor OFF | Battery voltage | | |
| | | | | | Front blower motor ON ON | 00 | | |
| 29 | W/B | Hazard switch | Input | OFF | OFF | 5V | | |
| | D." | | 1 | 055 | Cargo lamp switch ON | 0 | | |
| 31 | P/L | Cargo lamp switch | Input | OFF | Cargo lamp switch OFF | Battery voltage | | |

| | 10/: | | Signal | | Measuring condition | | |
|----------|---------------|---|------------------|--------------------|--|---|---|
| Terminal | Wire color | Signal name | input/ output | Ignition switch | Operation or condition | Reference value or waveform (Approx.) | А |
| 32 | R/G | Combination switch output 5 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 4 2 0 + 5ms SKIA5291E | B |
| 33 | R/Y | Combination switch output 4 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 2 0 5 ms SKIA5292E | E |
| 34 | L | Combination switch output 3 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 | (V) 6 4 2 0 | G |
| 35 | O/B | Combination switch output 2 | | | | (V) | |
| 36 | R/W | Combination switch output 1 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 | SKIA5292E | A |
| 07 | D/D | Key switch and key | lanut | 055 | Key inserted | Battery voltage | |
| 37 | B/R | lock solenoid | Input | OFF | Key inserted | 0V | |
| 38 | W/L | Ignition switch (ON) | Input | ON | — | Battery voltage | L |
| 39 | L | CAN-H | | | _ | _ | |
| 40 | Р | CAN-L | | | _ | _ | Ν |
| 47 | SB | Front door switch LH (AII) Rear door switch low- er LH (King Cab) Rear door switch up- per LH (King Cab) | Input | OFF | ON (open) OFF (closed) | 0∨ Battery voltage | Ν |
| | | Rear door switch LH | | | ON (open) | 0V | C |
| 48 | R/Y | (Crew Cab) | Input | OFF | OFF (closed) | Battery voltage | |
| | | Cargo bed lamp con- | | | Cargo lamp switch (ON) | 0V | F |
| 50 | R/Y | trol | Output | OFF | Cargo lamp switch (OFF) | Battery voltage | |

| | 10/1 | | Signal | Measuring condition | | | |
|----------|---------------|--|------------------|---------------------|---|------------------------|---|
| Terminal | Wire color | Signal name | input/ output | Ignition switch | Operation or co | ondition | Reference value or waveform (Approx.) |
| 51 | G/Y | Trailer turn signal (right) | Output | ON | Turn right ON | | (V) 15 10 50 500 ms 500 ms 500 ms 500 ms 500 ms 500 ms 500 ms 500 ms |
| 52 | G/B | Trailer turn signal (left) | Output | ON | Turn left ON | | (V) 15 10 50 500 ms 500 ms 500 ms 500 ms 500 ms 500 ms 500 ms |
| 56 | R/G | Battery saver output | Output | OFF | 15 minutes after igr switch is turned OF | | 0V |
| | | | | ON | | | Battery voltage |
| 57 | Y/R | Battery power supply | Input | OFF | | | Battery voltage |
| 58 | W/R | Optical sensor | Input | ON | When optical sensor is illumi- nated | | 3.1V or more |
| | | | mpar | UN1 | When optical sensor is not illu- minated | | 0.6V or less |
| 59 | G | Front door lock as- sembly LH actuator | Output | OFF | OFF (neutral) ON (unlock) | | 0V |
| 59 | G | (unlock) | Output | OFF | | | Battery voltage |
| 60 | G/B | Turn signal (left) | Output | ON | Turn left ON | | (V) 15 10 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5 |
| 61 | G/Y | Turn signal (right) | Output | ON | Turn right ON | | (V) 15 10 50 50 500 ms SKIA3009J |
| 62 | R/W | Step lamp LH and RH | Output | OFF | ON (any door open) | | 0V |
| <u> </u> | | | Saipai | | OFF (all doors close | | Battery voltage |
| 63 | L | Interior room/map lamp | Output | OFF | | l (open) F (closed) | 0V Battery voltage |
| | | All door lock actuators | 0.1.1 | 055 | OFF (neutral) | | 0V |
| 65 | V | (lock) | Output | OFF | ON (lock) | | Battery voltage |
| 66 | G/Y | Front door lock actua- tor RH and rear door lock actuators LH/RH (unlock) | Output | OFF | OFF (neutral) ON (unlock) | | 0V Battery voltage |

< ECU DIAGNOSIS INFORMATION >

| Wire | | | Signal | Signal Measuring condition | | Reference value or waveform | | | | |
|----------|--------------------------------------|-------------------------------------|--------------------|----------------------------|---|-----------------------------|---|---|---|----|
| Terminal | inal color Signal name input/ Igniti | | Ignition switch | Operation or condition | (Approx.) | | | | | |
| 67 | В | Ground | Input | ON | — | 0V | | | | |
| | | | | | Ignition switch ON | Battery voltage | | | | |
| | | | | | Within 45 seconds after igni- tion switch OFF | Battery voltage | | | | |
| 68 | W/L | W/L Power window power supply (RAP) | Output | _ | — | — | _ | _ | More than 45 seconds after ig- nition switch OFF | 0V |
| | | | | | When front door LH or RH is open or power window timer operates | 0V | | | | |
| 69 | W/R | Power window power supply | Output | _ | — | Battery voltage | | | | |
| 70 | W/B | Battery power supply | Input | OFF | — | Battery voltage | | | | |

Fail Safe

Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

| Display contents of CONSULT | Fail-safe | Cancellation | |
|-----------------------------|-------------------------|--|---|
| U1000: CAN COMM CIRCUIT | Inhibit engine cranking | When the BCM re-establishes communication with the other mod- ules. | Н |

DTC Inspection Priority Chart

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

| Priority | DTC | |
|----------|---|---|
| 1 | U1000: CAN COMM CIRCUIT | — |
| 2 | B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM | K |
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< ECU DIAGNOSIS INFORMATION >

| Priority | DTC |
|----------|--|
| 3 | C1729: VHCL SPEED SIG ERR C1735: IGNITION SIGNAL |
| 4 | C1735. IGNITION SIGNAL C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [CODE ERR] FR C1720: [CODE ERR] FR C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR |
| | C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL |

DTC Index

INFOID:000000006601985

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

| CONSULT display | Fail-safe | Tire pressure monitor warning lamp ON | Reference page |
|--|-----------|---|----------------|
| No DTC is detected. further testing may be required. | _ | _ | _ |
| U1000: CAN COMM CIRCUIT | — | — | <u>BCS-27</u> |
| B2190: NATS ANTTENA AMP | — | — | <u>SEC-18</u> |
| B2191: DIFFERENCE OF KEY | — | — | <u>SEC-21</u> |
| B2192: ID DISCORD BCM-ECM | — | — | <u>SEC-22</u> |
| B2193: CHAIN OF BCM-ECM | — | — | <u>SEC-24</u> |
| C1708: [NO DATA] FL | — | — | <u>WT-14</u> |
| C1709: [NO DATA] FR | — | — | <u>WT-14</u> |
| C1710: [NO DATA] RR | — | — | <u>WT-14</u> |
| C1711: [NO DATA] RL | — | — | <u>WT-14</u> |
| C1712: [CHECKSUM ERR] FL | — | — | <u>WT-16</u> |
| C1713: [CHECKSUM ERR] FR | — | — | <u>WT-16</u> |
| C1714: [CHECKSUM ERR] RR | — | — | <u>WT-16</u> |
| C1715: [CHECKSUM ERR] RL | — | — | <u>WT-16</u> |

< ECU DIAGNOSIS INFORMATION >

| CONSULT display | Fail-safe | Tire pressure monitor warning lamp ON | Reference page |
|---------------------------|-----------|---|----------------|
| C1716: [PRESSDATA ERR] FL | — | — | <u>WT-18</u> |
| C1717: [PRESSDATA ERR] FR | _ | _ | <u>WT-18</u> |
| C1718: [PRESSDATA ERR] RR | _ | _ | <u>WT-18</u> |
| C1719: [PRESSDATA ERR] RL | _ | _ | <u>WT-18</u> |
| C1720: [CODE ERR] FL | _ | - | <u>WT-16</u> |
| C1721: [CODE ERR] FR | - | - | <u>WT-16</u> |
| C1722: [CODE ERR] RR | _ | _ | <u>WT-16</u> |
| C1723: [CODE ERR] RL | _ | _ | <u>WT-16</u> |
| C1724: [BATT VOLT LOW] FL | _ | - | <u>WT-16</u> |
| C1725: [BATT VOLT LOW] FR | _ | _ | <u>WT-16</u> |
| C1726: [BATT VOLT LOW] RR | _ | _ | <u>WT-16</u> |
| C1727: [BATT VOLT LOW] RL | - | - | <u>WT-16</u> |
| C1729: VHCL SPEED SIG ERR | _ | - | <u>WT-19</u> |
| C1735: IGNITION SIGNAL | _ | _ | <u>WT-20</u> |

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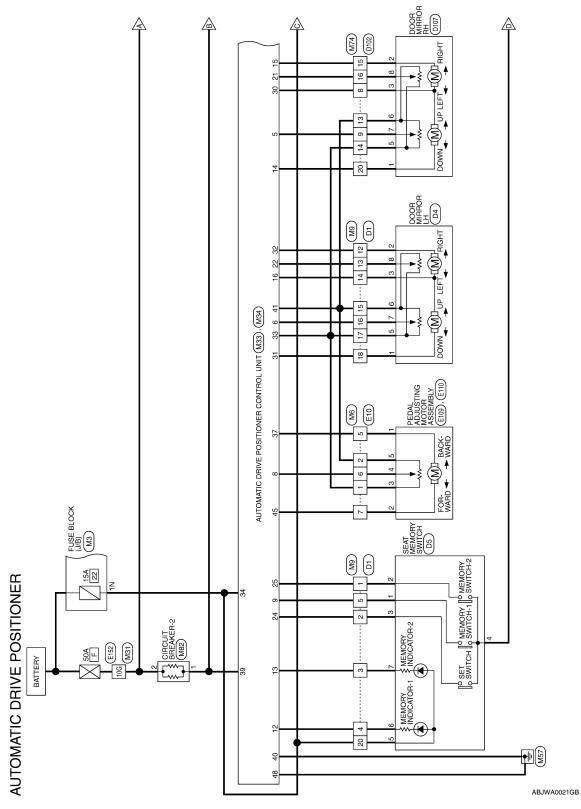
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WIRING DIAGRAM

AUTOMATIC DRIVE POSITIONER

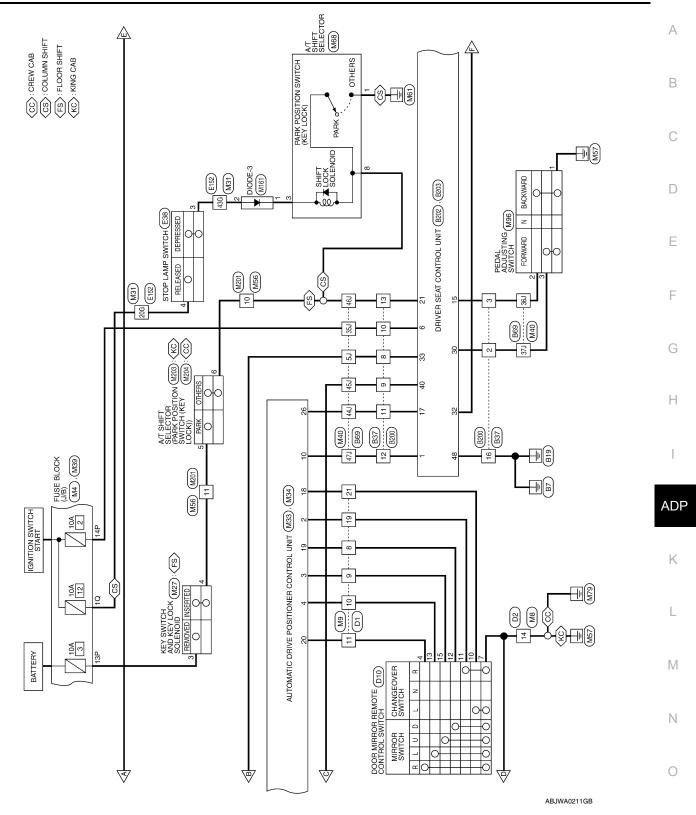
Wiring Diagram





AUTOMATIC DRIVE POSITIONER

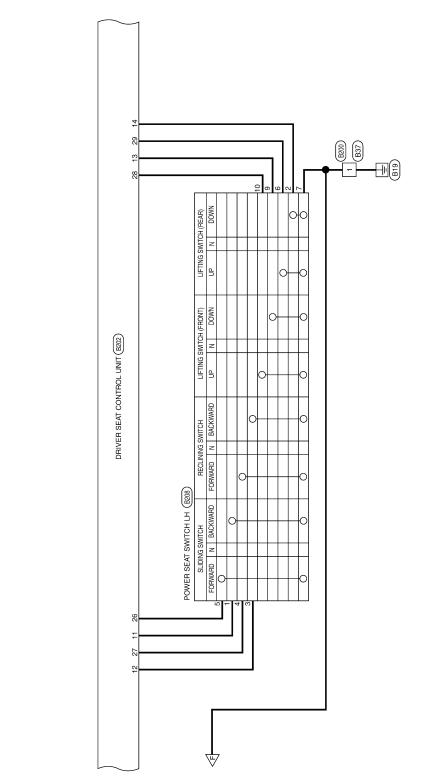
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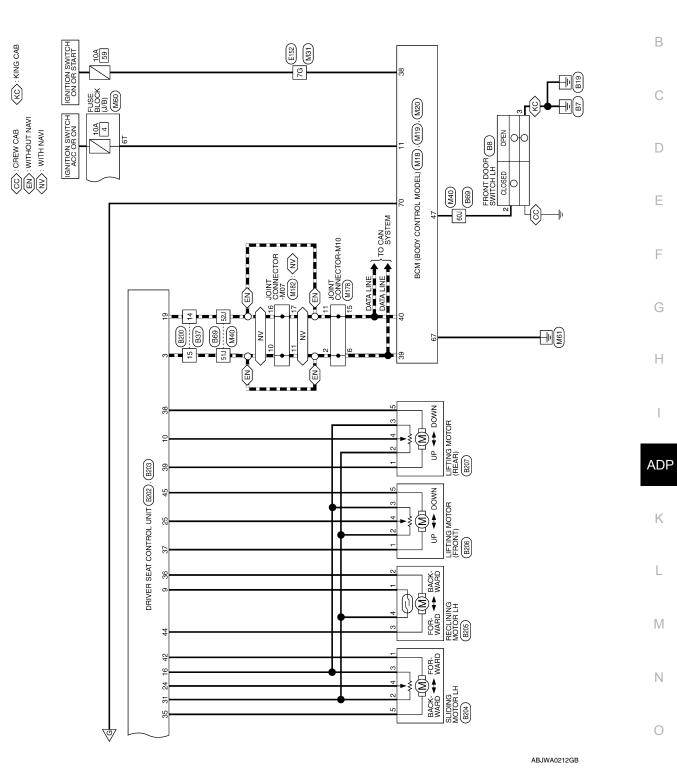
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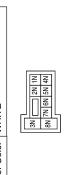


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AUTOMATIC DRIVE POSITIONER CONNECTORS

| M3 | Connector Name FUSE BLOCK (J/B) | WHITE | |
|---------------|---------------------------------|-----------------------|--|
| Connector No. | Connector Name | Connector Color WHITE | |



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| Color of Wire | Ч | 0 | |
| Terminal No. Color of Wire | 13P | 14P | |
| | | | |
| 0 | | | |

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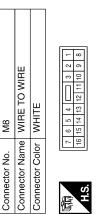
Color of Wire

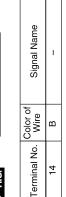
Terminal No. Ļ

| Signal Name | I | I | I | I | I | 1 | I | I | I | 1 | I | I | I | I |
|------------------|----|-----|-----|----|----|----|----|-----|----|-----|----|----|-----|------|
| Color of Wire | SB | Y/B | W/N | GR | BR | σ | 0 | D/M | ΓΛ | W/L | œ | ГG | Y/R | BR/W |
| Terminal No. | 80 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |



| Signal Name | I | I | I | I | |
|------------------|-----|-----|-----|---|------|
| Color of Wire | P/L | G/O | γ/G | Ч | LG/B |
| Terminal No. | Ļ | 2 | 3 | 4 | 5 |





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AUTOMATIC DRIVE POSITIONER

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- (WITH AUTOMATIC DRIVE POSITIONER)

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Signal Name

Color of Wire

Terminal No.

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Connector Name WIRE TO WIRE

Connector No. M4 Connector Name FUSE BLOCK (J/B)

Connector Color WHITE

Connector No. M6

Connector Color WHITE

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 7P
 6P
 5P
 4P
 3P
 2P
 1P

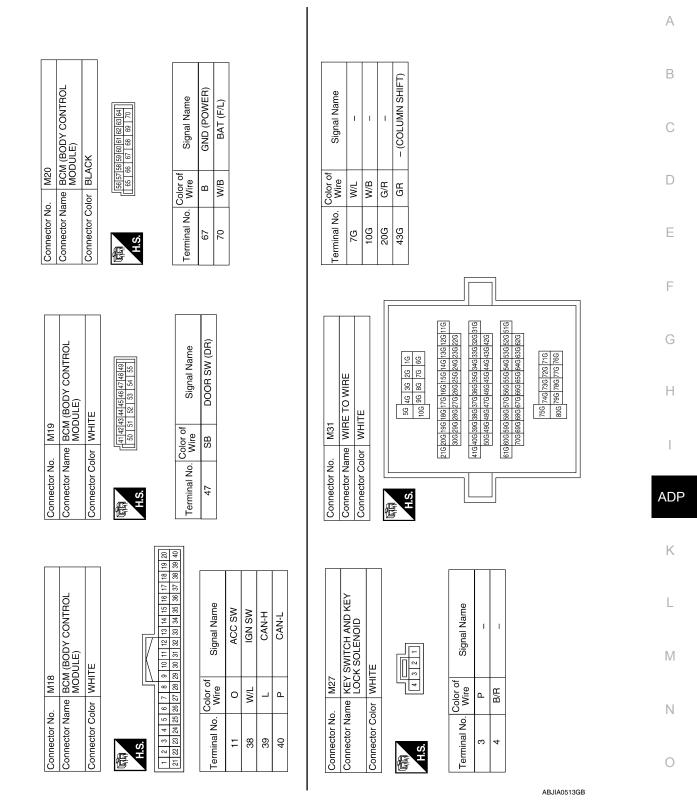
 16P
 15P
 14P
 13P
 12P
 11P
 10P
 9P
 8P

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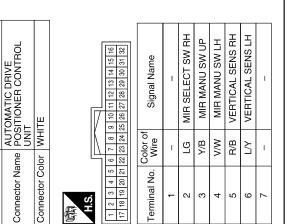
M33

Connector No.

| Signal Name | I | SET SW | MEMORY2 SW | RX | I | I | I | RH MTR (COM) | LH MTR (UP-DWN) | LH MTR (LT) |
|------------------|----|--------|------------|----|----|----|----|--------------|-----------------|-------------|
| Color of Wire | I | G/O | P/L | × | I | I | I | ≻ | œ | ВВ |
| Terminal No. | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

< WIRING DIAGRAM >

| | Color of Signal Name | BR/Y PEDAL POTENTION | LG/B MEMORY1 SW | TX | I | MEMORY1 IND | Y/G MEMORY2 IND | GR/R RH MTR (UP-DN) | V/R RH MTR (LT) | LH MTR (COM) | I | BR/W MIR SELECT SW LH | MIR MANU SW DN | MIR MANU SW RH | -/W HORIZONTAL SENS | HORIZONTAL SENS |
|--|----------------------|----------------------|-----------------|----|----|-------------|-----------------|---------------------|-----------------|--------------|----|-----------------------|----------------|----------------|---------------------|-----------------|
| | Terminal No. | 8 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |



| Connector No. | M34 |
|-----------------------|---|
| Connector Name | Connector Name POSITIONER CONTROL UNIT |
| Connector Color WHITE | WHITE |
| | |
| 33 | 33 34 35 36 37 37 38 39 |
| | |



| Signal Name | MEMORY(POT FEED) | BAT (FUSE) | Ι | I | |
|------------------|------------------|------------|----|----|--|
| Color of Wire | W/L | Y/R | - | Ι | |
| Terminal No. | 33 | 34 | 35 | 36 | |



| | | | _ | | _ | | | | | | | _ |
|------------------|---------|----|----------|-----------|-----------------|----|----|----|--------------|----|----|-------------|
| Signal Name | FORWARD | - | BAT(PTC) | (SIG) GND | МЕМОRY(РОТ-RET) | - | Т | - | PEDAL RR OUT | Т | Т | GND (POWER) |
| Color of Wire | ŋ | Ι | L/B | B/W | W/G | I | I | I | щ | T | I | ш |
| Terminal No. | 28 | 86 | 66 | 40 | 41 | 42 | 43 | 74 | 45 | 46 | 47 | 48 |

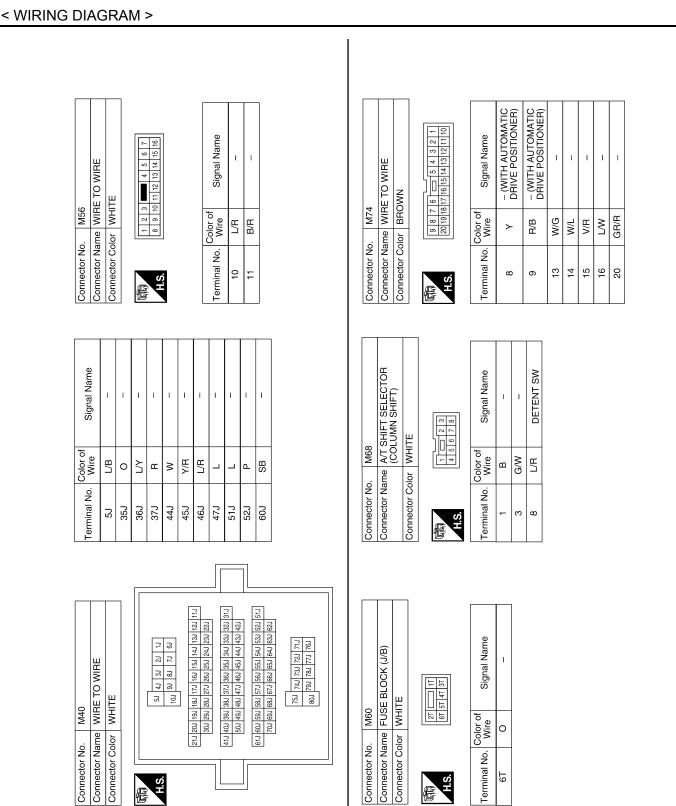
| 6 | FUSE BLOCK (J/B) | ILLE | | <u>80 70 60 50 40</u> | | | Signal Nar | |
|---------------|------------------|-----------------------|--------|-----------------------|--------|--|-------------------|-----|
| . M39 | | lor W | ∐ © | 8Q 7Q | | | Wire | |
| Connector No. | Connector Name | Connector Color WHITE | E | SH | | | Terminal No. Wire | |
| | | | | | | | | |
| em e | | RD | 0 | (E | T-RET) | | | !!; |

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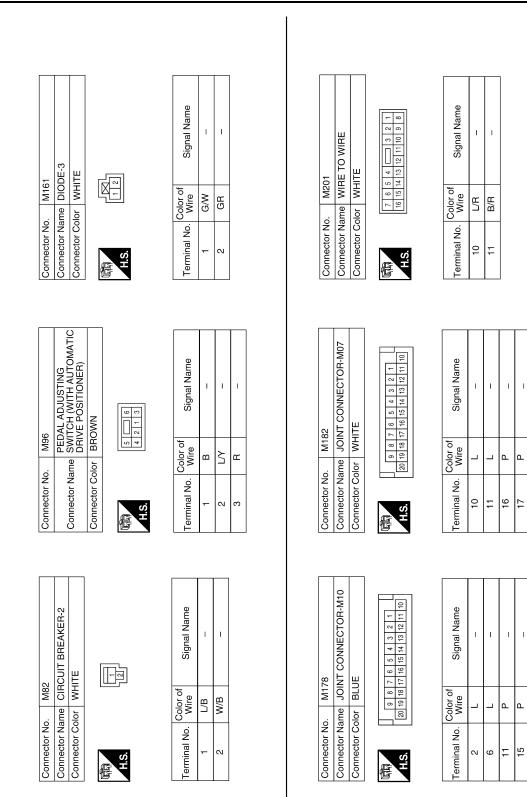
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AUTOMATIC DRIVE POSITIONER

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| 国内 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 日本 | Terminal No. Color of Signal Name 1 W/L – | 2 W/G - 5 G - (WITH AUTOMATIC 6 BR/Y - | 7 R – (WITH AUTOMATIC DRIVE POSITIONER) | | | | (1) H.S. | Terminal No. Color of Signal Name | 3 W/L – | BR/Y | - MG |
|--|--|--|--|--------------------|---|-----------------------|-------------|-----------------------------------|---------|---------|-------------|
| H. | Terminal No. Color of Signal Name 5 B/R DETENT KEY SW | Н | | Connector No. E109 | - | Connector Color GRAY | H.S. | Terminal No. Color of Signal Name | | 2 8 | |
| H.S. | Terminal No. Color of Signal Name 5 B/R DETENT KEY SW | | | Connector No. E38 | | Connector Color WHITE | (1) H.S. | Terminal No. Vire Signal Name | | 4 G/R – | ABJIA0517GB |

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Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name A/T SHIFT SELECTOR (FLOOR SHIFT) (CREW CAB)

Connector Name A/T SHIFT SELECTOR (FLOOR SHIFT) (KING CAB)

Connector No. M203

Connector Color WHITE

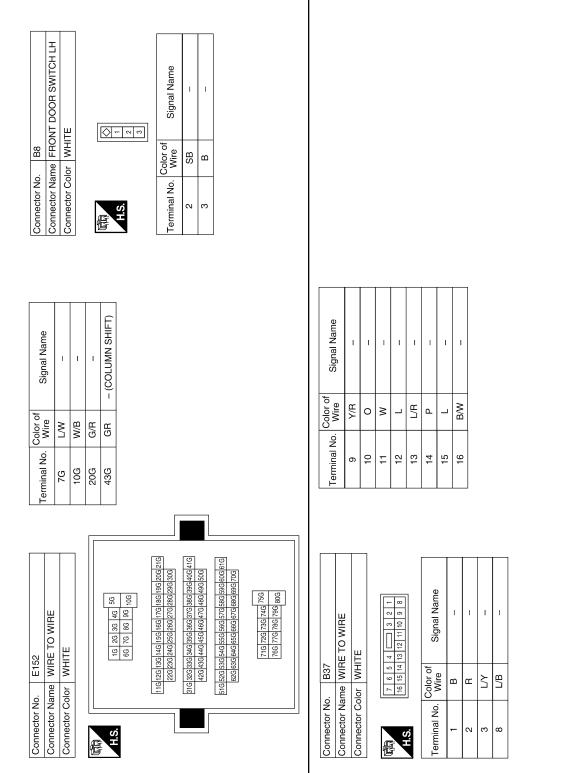
M204

Connector No.

Connector Color WHITE

Connector No. E10

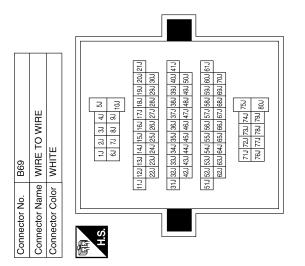




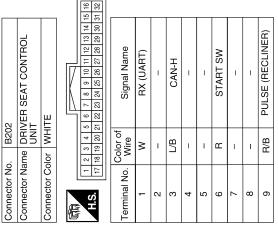
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| Signal Name | Connector No. Connector Name | e e | B200 WIRE TO WIRE |
|-----------------|---------------------------------|------------------|--------------------------|
| 1 | Connector Color | | WHITE |
| 1 | | - | |
| 1 | E | 1 2 | 4 5 |
| 1 | H.S. | 8 | 10 11 12 13 14 15 16 |
| 1 | Taurian | Color of | |
| 1 | I erminal No. | Wire | signal Name |
| 1 | 1 | G/W | I |
| 1 | 2 | Γ | 1 |
| 1 | 3 | SB | I |
| 1 | 8 | W/B | I |
| 1 | 6 | σ | 1 |
| | 10 | æ | I |
| | 11 | Y/R | I |
| | 12 | × | 1 |
| | 13 | _ | I |
| | 14 | σ | 1 |
| | 15 | L/B | 1 |
| | 16 | ш | I |
| ignal Name | Terminal No. | Color of Wire | Signal Name |
| E (REAR LIFTER) | 21 | L | P RANGE SW |
| SW (BACKWARD) | 22 | I | I |
| JER SW | 23 | Т | I |
| ACKWARD) | 24 | R/L | PULSE (SLIDE) |
| OWNWARD) | 25 | λ/G | PULSE (FRONT LIFTER) |
| R LIFTER SW | 26 | ЦЯ | SLIDE SW (FORWARD) |
| AL SW | 27 | M/N | RECLINER SW (FORWARD) |
| ACKWARD) | 28 | BR/Y | FRONT LIFTER SW |
| ENCODER) | ę | Ę | REAR LIFTER SW |
| TX (UART) | 67 | ב/ח פ/ח | (UPWARD) |
| 1 | 30 | Γ | PEDAL SW (FORWARD) |
| CAN-L | 31 | GR/R | GND (SENSOR GND) |
| I | 32 | G/W | GND (SIGNAL) |
| | | | |

| Signal Name | I | I | I | I | I | I | I | I | I | I | I |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Color of Wire | L/B | 0 | 5 | œ | × | Y/R | L/R | _ | _ | ٩. | SB |
| Terminal No. | 5J | 35J | 36J | 37J | 44J | 45J | 46J | 47J | 51J | 52J | 60J |



| Sig | PULSE | SLIDE SV | REC (BA | FRON ^T (DO | REAR (DO | PE (BA | LED (EI | 1 | | | |
|------------------|-------|----------|------------|--------------------------|-------------|-----------|------------|-----|----|----|----|
| Color of Wire | B/R | Y/R | L/W | > | P/L | SB | B/W | Y/R | I | თ | - |
| Terminal No. | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | | | 16 | | | | | | | | |



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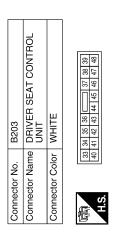
< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

| | | | | | | | | _ | |
|------------------|------------|----|---------------------------|----|------------------------------|--------------------------------|----|----|-------------|
| Signal Name | BAT (FUSE) | I | SLIDE MOTOR (BACKWARD) | I | RECLINER MOTOR (BACKWARD) | FRONT LIFTER MOTOR (UPWARD) | I | I | GND (POWER) |
| Color of Wire | σ | - | R/Y | I | G/B | G/Y | I | I | в |
| Terminal No. | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |

| Signal Name | BAT(PTC) | I | SLIDE MOTOR (FORWARD) | RECLINER MOTOR (FORWARD) | FRONT LIFTER MOTOR (DOWNWARD) | REAR LIFTER MOTOR (UPWARD) | REAR LIFTER MOTOR (DOWNWARD) |
|------------------|----------|----|--------------------------|-----------------------------|----------------------------------|-------------------------------|---------------------------------|
| Color of Wire | W/B | I | R/G | L | В | GR | В |
| Terminal No. | 33 | 34 | 35 | 36 | 28 | 38 | 68 |



| Connector No. B206 | Connector Name LIFTING MOTOR (FRONT) | Connector Color WHITE | |
|--------------------|--------------------------------------|-----------------------|---|
| Con | Con | Con | ł |

Connector No. B205 Connector Name RECLINING MOTOR LH

Connector Color WHITE



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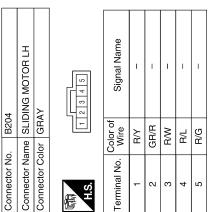
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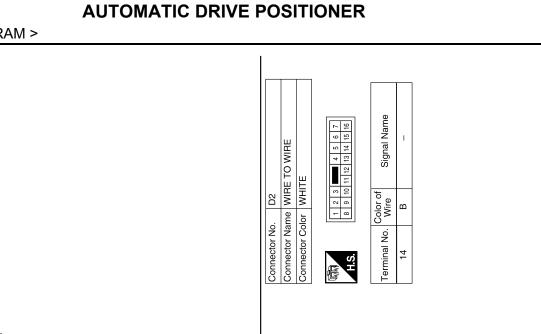
| 1 2 3 4 | Signal Name | I | I |
|-----------|----------------------------|-----|---|
| | Color of Wire | R/B | _ |
| 回 H.S. | Terminal No. Color of Wire | + | 2 |

| + 0 4 - | Signal Name | I | I | - | I |
|---------|------------------|-----|---|-----|------|
| | Color of Wire | R/B | _ | G/B | GR/R |
| H.S. | Terminal No. | F | 2 | 3 | 4 |



| Signal Name | I | I | I | Ι | I | |
|------------------|-----|------|-----|-----|-----|--|
| Color of Wire | R/Y | GR/R | R/W | B/L | R/G | |
| Terminal No. | ٢ | 2 | 3 | 4 | 5 | |

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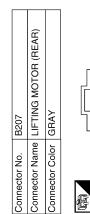
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|------|---|
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| | П |
| | Ш |
| 0 m | e |
| 4 0 | 4 |

H.S.

| | I | I | | | | | | | | |
|------------------|-----|-----|----|---------|-----|-----|-----|---|---|------|
| Signal Name | I | 1 | 1 | 1 | 1 | 1 | I | I | 1 | I |
| Color of Wire | Y/R | P/L | LW | W/N | L/R | G/R | B/W | I | > | BR/Y |
| Terminal No. | - | 2 | e | 4 | ъ | 9 | 7 | 8 | 6 | 10 |

Ι

| Signal Name | I | I | - (WITH AUTOMATIC DRIVE POSITIONER | I | I | I | I | I | I | I | I | I | . 1 | |
|------------------|-----|-----|---------------------------------------|----|----|----|-----|----|-----|----|----|-----|------|--|
| Color of Wire | Y/B | W/N | GR | BR | g | 0 | W/G | ΓΛ | M/L | н | ГG | Y/R | BR/W | |
| Terminal No. | 6 | 10 | Ħ | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | |



| 1 2 3 4 0 | F Signal Name | I | I |
|-----------|------------------|---|------|
| | Color of Wire | В | GR/R |
| H.S. | erminal No. | 1 | 2 |

| Signal Name | I | I | I | I | I |
|------------------|---|------|-----|-----|-----|
| Color of Wire | в | GR/R | R/W | Y/G | G/Y |
| Terminal No. | 1 | 2 | Э | 4 | £ |

| | | |] | | |
|---------------|-----------------------------|-----------------------|---|-----------------------|--|
| D1 | Connector Name WIRE TO WIRE | r BROWN | | 3 4 5 6 - 7 8 9 10 11 | 12 13 14 15 16 17 18 19 20 21 22 23 24 |
| Connector No. | Connector Name | Connector Color BROWN | | 喃 | H.S. 12 13 14 |

| | Signal Name | I | I | I | 1 |
|-----|------------------|-----|-----|-----|---|
| | Color of Wire | P/L | G/O | Y/G | Ч |
| e u | Terminal No. | - | 2 | e | 4 |

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AUTOMATIC DRIVE POSITIONER

DOOR MIRROR REMOTE CONTROL SWITCH (WITH AUTOMATIC DRIVE POSITIONER) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 BROWN D10 Connector Name Connector Color Connector No. E

| | f Signal Name | I | I | I | I | I | 1 | 1 | |
|-------|------------------|----|---|------|----|----|-----|-----|--|
| 0 8 0 | Color of Wire | GR | В | BR/W | ГG | SB | M/N | Y/B | |
| H.S. | Terminal No. | 4 | 7 | 10 | 11 | 12 | 13 | 15 | |

| Connector No. | D107 |
|-----------------------|-------------------------------|
| Connector Name | Connector Name DOOR MIRROR RH |
| Connector Color WHITE | WHITE |
| 雨雨 H.S. | 1 2 3 4 5 6 7 8 9 |

| | | | _ | | | _ | |
|----------------------------|------|-----|---|-----|-----|-----|----|
| Signal Name | I | I | I | I | I | I | 1 |
| Color of Wire | GR/R | V/R | ۲ | W/L | W/G | R/B | ۲W |
| Terminal No. Color of Wire | F | 2 | 3 | 5 | 9 | 2 | 8 |

| Connector No. | D5 |
|-----------------------|-----------------------------------|
| Connector Name | Connector Name SEAT MEMORY SWITCH |
| Connector Color WHITE | WHITE |
| 副 H.S. | 5 6 7 2 1 4 |

| Signal Name | SET 1 | SET 2 | SET SW | GND | I | IND1 | IND2 | |
|------------------|-------|-------|--------|-----|-----|------|------|--|
| Color of Wire | LG/B | P/L | G/O | В | Y/R | ٩ | Y/G | |
| Terminal No. | ٢ | 2 | З | 4 | 5 | 9 | 7 | |

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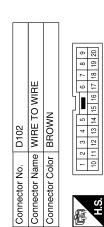
W/G ≤ G

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| Signal Name | - (WITH AUTOMATIC DRIVE POSITIONER) | - (WITH AUTOMATIC DRIVE POSITIONER) | Ι | I | I | Ι | - (WITH AUTOMATIC DRIVE POSITIONER) | |
|------------------|--|--|-----|-----|-----|----|--|--|
| Color of Wire | ≻ | R/B | W/G | W/L | V/R | ΓW | GR/R | |
| Terminal No. | 8 | 6 | 13 | 14 | 15 | 16 | 20 | |



| 4 5 6 7 8 9 | Signal Name | - | I | - | 1 |
|-------------------|------------------|---|----|---|-----|
| 10 11 12 1 | Color of Wire | н | BR | 0 | M/L |
| 国 H.S. | Terminal No. | - | 2 | 3 | сл |



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SYMPTOM DIAGNOSIS ADP SYSTEM SYMPTOMS

Symptom Table

NOTE:

Always perform the "Basic Inspection" before performing diagnosis in the following table. Refer to <u>ADP-4</u>. "<u>Work Flow</u>".

SYMPTOM 1

| Symptom | 1 | Diagnosis procedure | Reference page |
|--|---------------------------|--|----------------|
| Manual functions (for specific part) do not operate | Sliding operation | Check sliding switch. | <u>ADP-50</u> |
| | Reclining operation | Check reclining switch. | <u>ADP-53</u> |
| | Lifting operation (front) | Check lifting switch (front). | <u>ADP-56</u> |
| | Lifting operation (rear) | Check lifting switch (rear). | <u>ADP-59</u> |
| | Pedal operation | 1. Check pedal adjusting switch. | <u>ADP-62</u> |
| | | 2. Check pedal adjusting sensor. | <u>ADP-87</u> |
| | Door mirror operation | 1. Changeover switch. | <u>ADP-67</u> |
| | | 2. Mirror switch | <u>ADP-69</u> |
| | All parts of seat | Check power seat switch ground cir- cuit. | <u>ADP-73</u> |

SYMPTOM 2

| Symptom | 1 | Diagnosis procedure | Reference page |
|--|---------------------------|-------------------------------|--|
| Memory functions (for specific part) do not operate | Sliding operation | Check sliding sensor. | <u>ADP-79</u> |
| | Reclining operation | Check reclining sensor. | <u>ADP-81</u> |
| | Lifting operation (front) | Check lifting sensor (front). | <u>ADP-83</u> |
| | Lifting operation (rear) | Check lifting sensor (rear). | <u>ADP-85</u> |
| | Pedal operation | Check pedal adjusting sensor. | <u>ADP-87</u> |
| | Door mirror operation | Check door mirror sensor. | Driver side: <u>ADP-89</u> Passenger side: <u>ADP-91</u> |

SYMPTOM 3

| Sympton | 1 | Diagnosis procedure | Reference page |
|---|---------------------------|------------------------------|-------------------|
| Memory functions and manual func- tions (for specific part) do not operate | Sliding operation | Check sliding motor. | <u>ADP-93</u> |
| | Reclining operation | Check reclining motor. | ADP-95 |
| | Lifting operation (front) | Check lifting motor (front). | ADP-97 |
| | Lifting operation (rear) | Check lifting motor (rear). | ADP-99 |
| | Pedal operation | Check pedal adjusting motor. | ADP-101 |
| | Door mirror operation | Check door mirror motor. | ADP-103 |

SYMPTOM 4

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ADP SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

| Symptom | Diagnosis procedure | Reference page |
|--|---|-------------------|
| Entry/Exit assist function does not operate. | 1. Check system setting. | <u>ADP-11</u> |
| | 2. Perform initialization. | ADP-7 |
| | 3. Check front door switch (driver side). | <u>ADP-77</u> |

SYMPTOM 5

| Symptom | Diagnosis procedure | Reference page |
|---|---------------------------------|----------------|
| Memory indicators 1 and/or 2 do not illuminate. | 1. Check seat memory switch. | <u>ADP-65</u> |
| | 2. Check seat memory indicator. | <u>ADP-106</u> |

SYMPTOM 6

| Symptom | Diagnosis procedure | Reference page |
|------------------------------------|--|-------------------|
| Memory operation does not operate. | Check A/T shift selector (park position switch). | <u>ADP-74</u> |

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

The following symptoms are normal operations, and they do not indicate a malfunction.

| Symptom | Cause | Action to take | Reference page |
|--|---|-----------------------------------|---|
| | No initialization has been performed. | Perform initialization. | ADP-7 |
| Entry/Exit assist function does not operate. | Entry/exit assist function is disabled. NOTE: The entry/exit assist function is disabled before delivery (initial setting). | Change the settings. | <u>ADP-23</u> |
| Entry assist function does not op- erate. | Manual operation with power seat switch was performed after exit assist function execution. | Perform the memory function. | ADP-23 |
| Memory function, entry/exit as- sist function does not operate. | | | Memory function: <u>ADP-17</u> |
| | | Fulfill the operation conditions. | Exit assist function: <u>ADP-21</u> |
| | | | Entry assist function: <u>ADP-23</u> |

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PRECAUTION PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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 SR and SB section of this Service Man-

ual. WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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.

Precaution for Work

INFOID:000000006163592

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and keep them.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After re-installation is completed, be sure to check that each part works normally.
- Follow the steps below to clean components.
- Water soluble foul: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the fouled area.
 - Then rub with a soft and dry cloth.
- Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the fouled area.

Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

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INFOID:000000006163593 В

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

| Tool number | | | С |
|--|-----------|------------------------------|-----|
| (Kent-Moore No.) Tool name | | Description | |
| (J-39570) Chassis ear | | Locating the noise | D |
| | | | E |
| | SilA0993E | | F |
| | | Repairing the cause of noise | G |
| (J-43980) NISSAN Squeak and Rattle Kit | | | Н |
| | SIIA0994E | | I |
| | | | ADF |
| (J-46534) Trim Tool Set | | Removing trim components | K |
| | | | L |
| Commercial Service Tool | | INFQID:00000006163594 | M |
| (Kent-Moore No.) Tool name | | Description | Ν |
| (J-39565) Engine ear | | Locating the noise | 0 |
| | SIIA0995E | | Ρ |
| | | | |

PREPARATION

PREPARATION

Revision: August 2010

Special Service Tool

< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION DRIVER SEAT CONTROL UNIT

Removal and Installation

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The driver seat control unit is part of the driver seat. Remove the driver seat, then the driver seat control unit. Refer to <u>SE-30</u>, "Removal and Installation For Front Seat".

< UNIT REMOVAL AND INSTALLATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

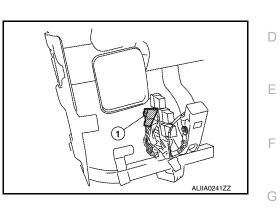
Removal and Installation

CAUTION:

When removing and installing, use shop cloths to protect parts from damage.

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-17, "Removal and Installation".
- 2. Remove the lower knee protector.
- 3. Remove the screw from the automatic drive positioner control unit (1).
- 4. Remove automatic drive positioner control unit (1) from bracket and disconnect electrical connectors.



INSTALLATION Installation is in the reverse order of removal. CAUTION: Clamp the harness in position.



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< UNIT REMOVAL AND INSTALLATION >

SEAT MEMORY SWITCH

Removal and Installation

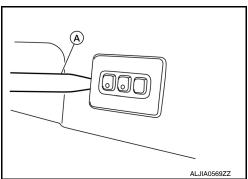
REMOVAL

CAUTION:

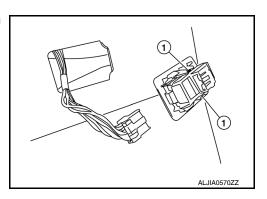
When removing and installing, use shop cloths to protect parts from damage.

1. Remove the seat memory switch from the front door finisher by using Tool.

Tool Number : — (J-46534)



- 2. Disconnect the electrical connector from the seat memory switch.
- 3. Release the clips (1) and remove the seat memory switch from the finish panel.



INSTALLATION Install in the reverse order of removal.

DOOR MIRROR REMOTE CONTROL SWITCH

< UNIT REMOVAL AND INSTALLATION >

DOOR MIRROR REMOTE CONTROL SWITCH

Removal and Installation

REMOVAL

- 1. Remove the main power window, door lock/unlock and door mirror remote control switch finisher from the front door finisher LH. Refer to <u>INT-10</u>, "Removal and Installation".
- 2. Disconnect the electrical connector (1), release the retaining tabs (2) and remove the door mirror remote control switch from the finisher panel.

INSTALLATION

Installation is in the reverse order of removal.

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PEDAL ADJUSTING MOTOR

< UNIT REMOVAL AND INSTALLATION >

PEDAL ADJUSTING MOTOR

Removal and Installation

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The pedal adjusting motor is serviced as a part of the accelerator pedal. Refer to <u>ACC-3</u>, "<u>Removal and Instal-</u> <u>lation</u>" for accelerator pedal and <u>BR-19</u>, "<u>Removal and Installation</u>" for brake pedal when removing pedal adjusting motors.