SECTION MWI
METER, WARNING LAMP & INDICATOR

CONTENTS

HOW TO USE THIS MANUAL

HOW TO USE THIS SECTION

Information

INFOID:0000000013480905

In this manual, “Idling Stop System” is referred to as “Stop / Start System”.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012791744

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

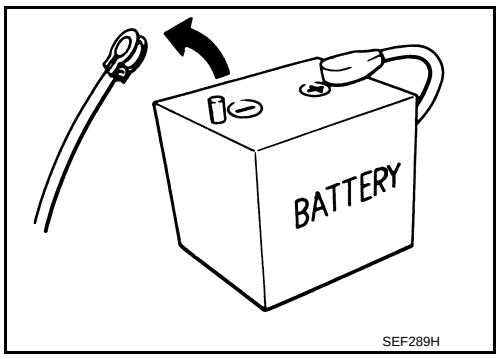
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery or batteries, and wait at least 3 minutes before performing any service.**

Precautions for Removing Battery Terminal

INFOID:0000000013447606

When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:



BR08DE	: 4 minutes	V9X engine	: 4 minutes
D4D engine	: 20 minutes	YD25DDTi	: 2 minutes
HR09DET	: 12 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
  - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
  - Driving for 30 minutes or more on a steep slope.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

Precaution for Trouble Diagnosis

INFOID:0000000012791746

AV COMMUNICATION SYSTEM

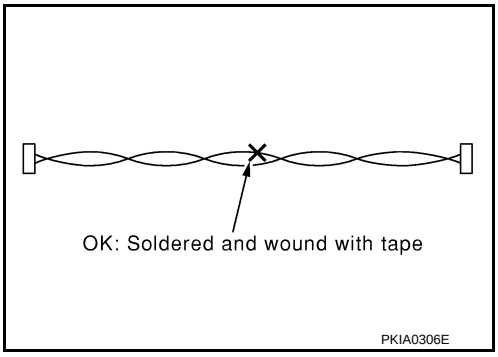
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.
- Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

Precaution for Harness Repair

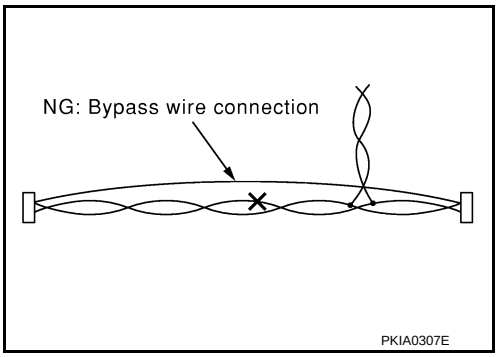
INFOID:0000000012791747

AV COMMUNICATION SYSTEM

- Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in).]



- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)

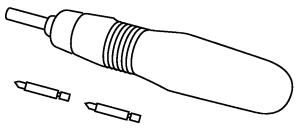
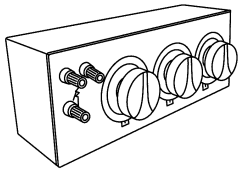


PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000012791748

Tool name	Description
Power tool  PBIC0191E	Loosening screws
Variable resistor  JSNIA6168ZZ	Check fuel gauge indication position

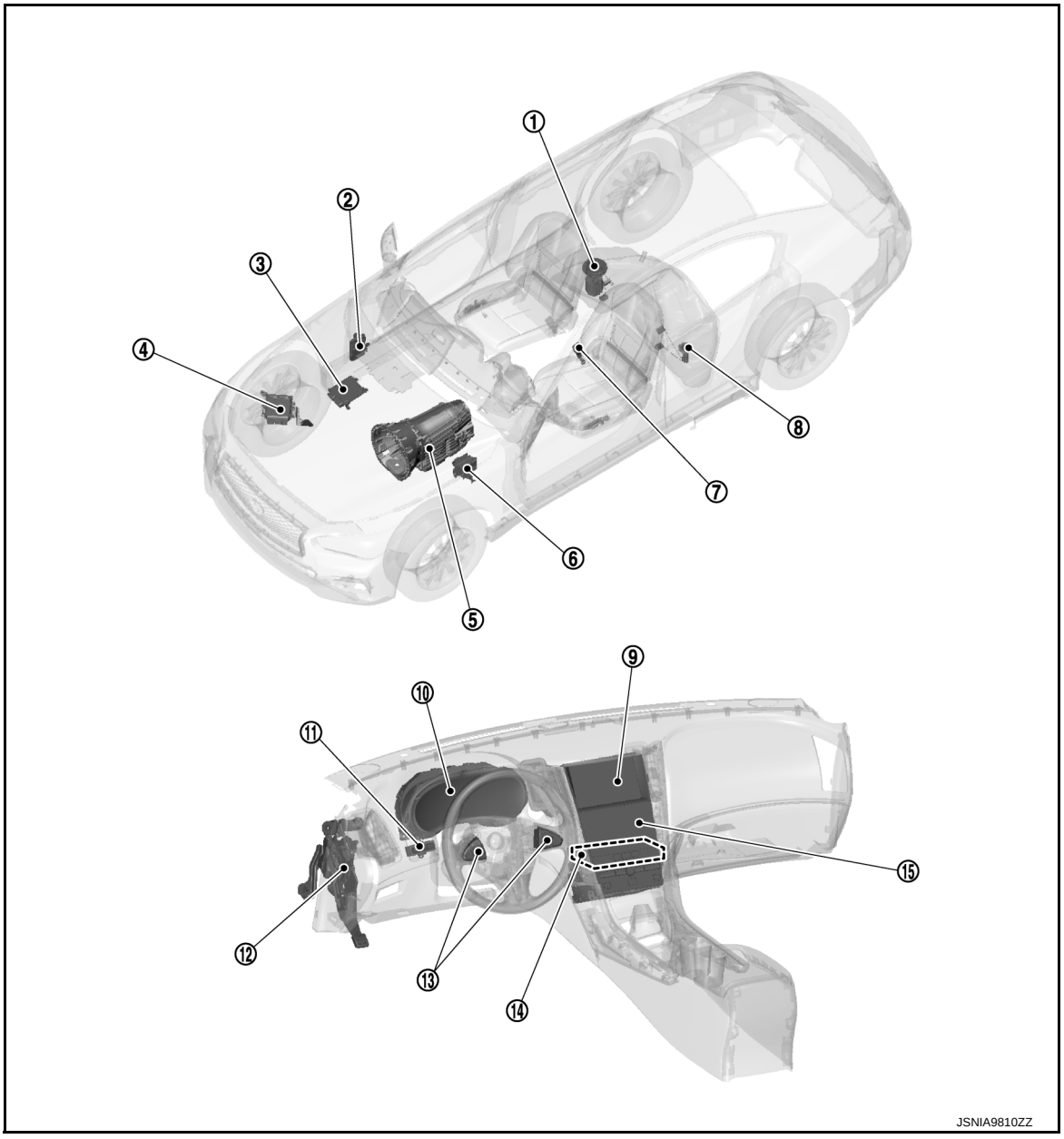
SYSTEM DESCRIPTION

COMPONENT PARTS

METER SYSTEM

METER SYSTEM : Component Parts Location

INFOID:0000000012791749



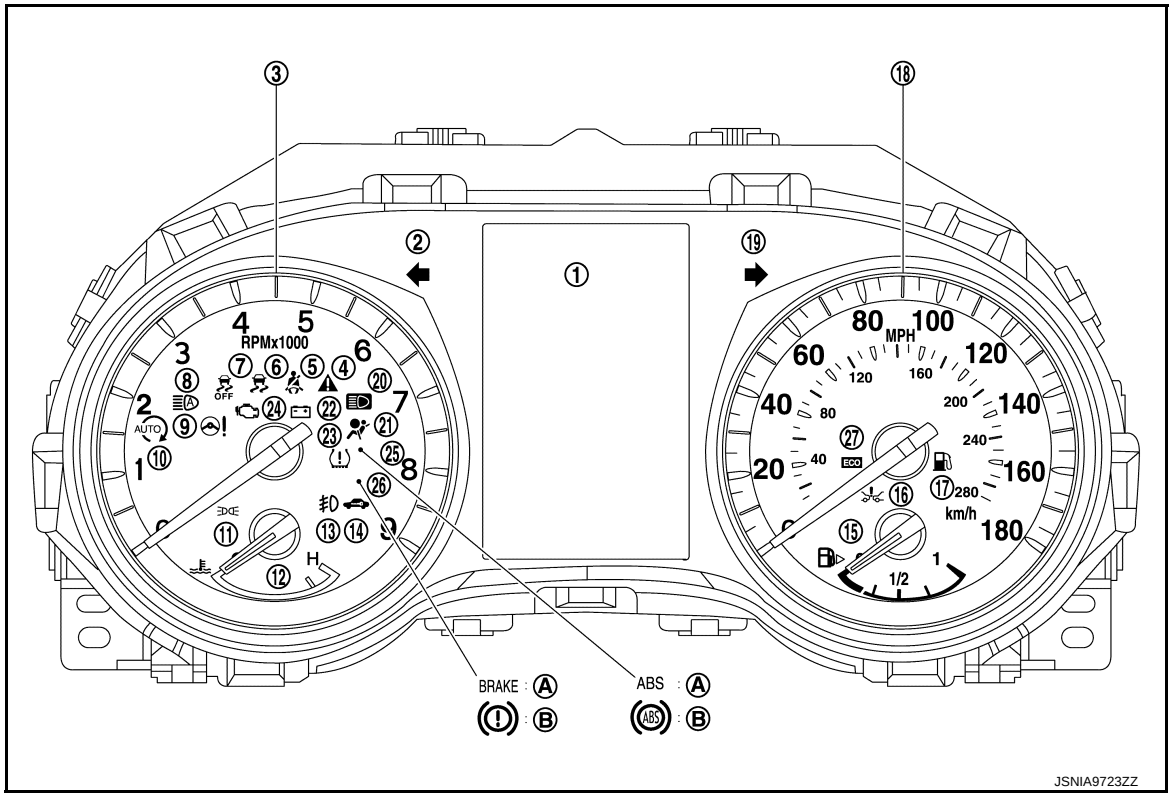
No.	Component	Function
①	Fuel level sensor unit (main)	Transmits the fuel level sensor signal to the combination meter.
②	BCM	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
③	ECM (2.0L turbo gasoline engine models)	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to EC4-25, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location.

No.	Component	Function
④	ECM (VR30DDTT engine models)	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to EC6-33, "ENGINE CONTROL SYSTEM : Component Parts Location" (for USA and Canada) or EC6-1024, "ENGINE CONTROL SYSTEM : Component Parts Location" (for Mexico) for detailed installation location.
⑤	TCM	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to TM-13, "A/T CONTROL SYSTEM : Component Parts Location" for detailed installation location.
⑥	ABS actuator and electric unit (control unit)	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to BRC-10, "Component Parts Location" for detailed installation location.
⑦	Seat belt buckle switch (driver side)	Transmits the seat belt buckle switch signal (driver side) to the combination meter.
⑧	Fuel level sensor unit (sub)	Transmits the fuel level sensor signal to the combination meter.
⑨	Display control unit	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to AV-14, "Component Parts Location" for detailed installation location.
⑩	Combination meter	Refer to MWI-11, "METER SYSTEM : Combination Meter".
⑪	Meter control switch	Refer to MWI-12, "METER SYSTEM : Meter Control Switch".
⑫	Parking brake switch	Transmits the parking brake switch signal to the combination meter.
⑬	Steering switch	Refer to MWI-12, "METER SYSTEM : Steering Switch".
⑭	A/C auto amp.	• Transmits the each signal to the combination meter via CAN communication. Refer to MWI-13, "METER SYSTEM : System Description". • Refer to HAC-6, "AUTOMATIC AIR CONDITIONING SYSTEM : Component Parts Location" for detailed installation location.
⑮	Integral switch	Transmits the meter setting request signal to the combination meter.

METER SYSTEM : Design

INFOID:0000000012791750

ARRANGEMENT OF COMBINATION METER



Ⓐ For U. S. A.

Ⓑ Except for U. S. A.

NOTE:
The scale on a tachometer depends on vehicle specifications as shown below.
- VR30DDTT engine models: 9,000 r/min
- 2.0L turbo gasoline engine models: 8,000 r/min

No.	Indicator lamp/Warning lamp	Color	Function
①	Information display	–	Refer to MWI-61, "INFORMATION DISPLAY : System Description".
②	Turn signal indicator lamp (LH)	Green	Refer to MWI-49, "WARNING LAMPS/INDICATOR LAMPS : Turn Signal Indicator Lamp".
③	Tachometer	–	Refer to MWI-19, "TACHOMETER : System Description".
④	Master warning lamp	Yellow/ Red	Refer to MWI-36, "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp".
⑤	Seat belt warning lamp	Red	Refer toMWI-43, "WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp".
⑥	VDC warning lamp	Yellow	Refer to MWI-52, "WARNING LAMPS/INDICATOR LAMPS : VDC Warning Lamp".
⑦	VDC OFF indicator lamp	Yellow	Refer to MWI-51, "WARNING LAMPS/INDICATOR LAMPS : VDC OFF Indicator Lamp".
⑧	High beam assist indicator lamp	Green	Refer to MWI-30, "WARNING LAMPS/INDICATOR LAMPS : High Beam Assist Indicator Lamp".
⑨	Power steering warning lamp	Yellow	• Refer to MWI-40, "WARNING LAMPS/INDICATOR LAMPS : Power Steering Warning Lamp (Except Direct Adaptive Steering)" (Except direct adaptive steering). • Refer to MWI-41, "WARNING LAMPS/INDICATOR LAMPS : Power Steering Warning Lamp (Direct Adaptive Steering)" (Direct adaptive steering).

No.	Indicator lamp/Warning lamp	Color	Function
⑩	Stop/start indicator lamp	Green	Refer to MWI-48, "WARNING LAMPS/INDICATOR LAMPS : Stop/Start Indicator Lamp".
⑪	Position lamp indicator lamp	Green	Refer to MWI-39, "WARNING LAMPS/INDICATOR LAMPS : Position Lamp Indicator Lamp".
⑫	Engine coolant temperature gauge	–	Refer to MWI-20, "ENGINE COOLANT TEMPERATURE GAUGE : System Description".
⑬	Front fog lamp indicator lamp	Green	Refer to MWI-29, "WARNING LAMPS/INDICATOR LAMPS : Front Fog Lamp Indicator Lamp".
⑭	Security indicator lamp	Red	• Refer to MWI-44, "WARNING LAMPS/INDICATOR LAMPS : Security Indicator Lamp (Turn ON)". • Refer to MWI-45, "WARNING LAMPS/INDICATOR LAMPS : Security Indicator Lamp (Blinks)".
⑮	Fuel gauge	–	Refer to MWI-20, "FUEL GAUGE : System Description".
⑯	FEB warning lamp	Yellow	Refer to MWI-28, "WARNING LAMPS/INDICATOR LAMPS : FEB Warning Lamp".
⑰	Low fuel warning lamp	Yellow	Refer to MWI-32, "WARNING LAMPS/INDICATOR LAMPS : Low fuel warning lamp".
⑱	Speedometer	–	Refer to MWI-19, "SPEEDOMETER : System Description".
⑲	Turn signal lamp (RH)	Green	Refer to MWI-49, "WARNING LAMPS/INDICATOR LAMPS : Turn Signal Indicator Lamp".
⑳	High beam indicator lamp	Blue	Refer to MWI-31, "WARNING LAMPS/INDICATOR LAMPS : High Beam Indicator Lamp".
㉑	SRS air bag warning lamp	Red	Refer to MWI-46, "WARNING LAMPS/INDICATOR LAMPS : SRS Air Bag Warning Lamp".
㉒	Charge warning lamp	Red	• Refer to MWI-25, "WARNING LAMPS/INDICATOR LAMPS : Charge Warning Lamp (VR30DDTT Models)" (VR30DDTT models). • Refer to MWI-24, "WARNING LAMPS/INDICATOR LAMPS : Charge Warning Lamp (2.0L Turbo Gasoline Engine Models)" (2.0L turbo gasoline engine models).
㉓	Low tire pressure warning lamp	Yellow	Refer to MWI-33, "WARNING LAMPS/INDICATOR LAMPS : Low Tire Pressure Warning Lamp".
㉔	Malfunction indicator lamp (MIL)	Yellow	Refer to MWI-35, "WARNING LAMPS/INDICATOR LAMPS : Malfunction Indicator Lamp (MIL)".
㉕	ABS warning lamp	Yellow	Refer to MWI-20, "WARNING LAMPS/INDICATOR LAMPS : ABS Warning Lamp".
㉖	Brake warning lamp	Red	Refer to MWI-22, "WARNING LAMPS/INDICATOR LAMPS : Brake Warning Lamp".
㉗	ECO drive indicator lamp	Green	Refer to MWI-26, "WARNING LAMPS/INDICATOR LAMPS : ECO Drive Indicator Lamp".

METER SYSTEM : Combination Meter

INFOID:0000000012791751

The combination meter controls the following items according to the signals received from each unit via CAN communication and the signals from switches and sensors.

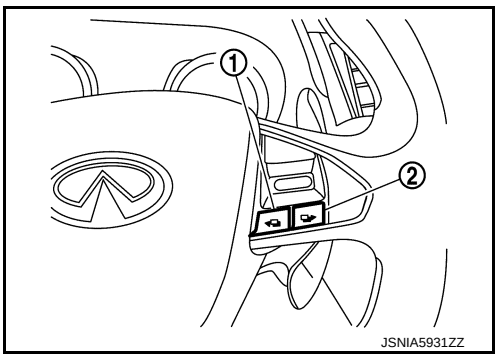
- Measuring instruments
  - Speedometer
  - Tachometer
  - Engine coolant temperature gauge
  - Fuel gauge
- Indicator lamps
- Warning lamps

- Meter illumination control
- Meter effect function
- Information display

METER SYSTEM : Steering Switch

INFOID:0000000012791752

- The steering switch is located on the steering wheel.
- Transmits the steering switch signal to the combination meter.

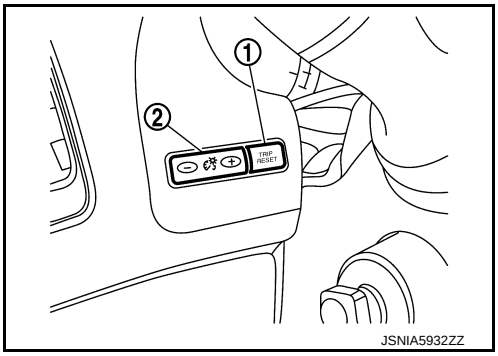


No.	Switch name	Operation	Description
①	Display back switch	Press	The information display screen can be switched.
②	Display next switch		

METER SYSTEM : Meter Control Switch

INFOID:0000000012791753

- The illumination control switch is located on the cluster lid A.
- Transmits the following signals to the combination meter.
- Trip reset switch signal
- Illumination control switch signal (+)
- Illumination control switch signal (–)

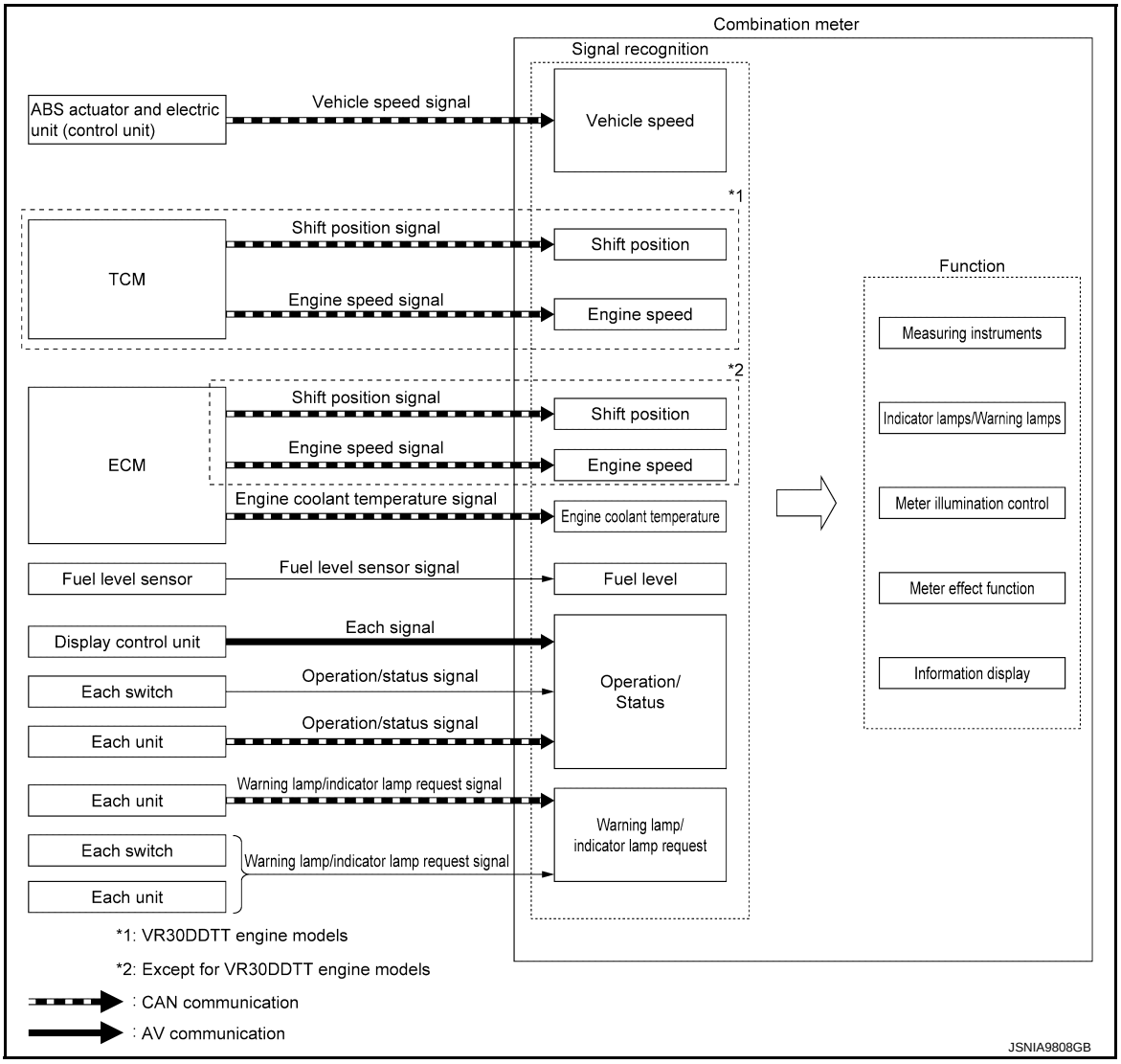


No.	Switch name	Operation	Description
①	Trip reset switch	Press	• The trip meter can be switched between A and B. • Trip meter A/B can be reset by pressing and holding the trip reset switch. • A trip computer value displayed on the information display can be reset by pressing and holding the trip reset switch for 1 second or more. • All trip computer values can be reset by pressing and holding the trip reset switch for 3 seconds or more.
②	Illumination control switch	Press	An illuminance level of the back light of the combination meter can be adjusted.

SYSTEM
METER SYSTEM
METER SYSTEM : System Description

INFOID:0000000012791754

SYSTEM DIAGRAM



Combination Meter Input Signal (CAN Communication Signal)

Transmit unit	Signal name
ABS actuator and electric unit (control unit)	Vehicle speed signal
	ABS warning lamp signal
	VDC warning lamp signal
	VDC OFF indicator lamp signal
	Brake warning lamp signal

Transmit unit	Signal name
BCM	Dimmer signal
	Position light request signal
	Low beam request signal
	Door switch signal
	Front fog light request signal
	Rear fog lamp status signal
	High beam request signal
	Meter display signal
	Sleep wake up signal
	Buzzer output signal
	Tire pressure data signal
	Trunk switch signal
	Key ID signal
	Turn indicator signal
	TPMS malfunction warning lamp signal
	Low tire pressure warning lamp signal
	High beam assist indicator lamp signal
	Starter relay status signal
	Oil pressure switch signal
	Meter ring illumination request signal
	Shipping mode status signal
TCM	Shift position signal
	A/T CHECK indicator lamp signal
	Manual mode shift refusal signal
	Engine speed signal (VR30DDTT models)
ECM	Engine speed signal (Except for VR30DDTT models)
	ASCD status signal
	Engine coolant temperature signal
	Fuel consumption monitor signal
	Malfunctioning indicator lamp signal
	Engine status signal
	ECO drive indicator control signal
	Fuel filler cap warning display signal
	Charge warning lamp signal
	Remaining distance signal
	Shift position signal
	Stop/start indicator lamp signal
	Stop/start status signal
Steering force control module	Power steering warning lamp signal
Power steering control module	Power steering warning lamp signal
AFS control unit	AFS warning signal

Transmit unit	Signal name
Chassis control module	Active Lane Control display signal
	Active Trace Control display signal
	Chassis control malfunction signal
	Interrupt display signal
	Key link signal
	Log-in permit signal
	Tire display signal
	Turn display signal
	Vehicle display signal
	Drive mode signal
Display control unit	User information signal
AWD control unit	AWD warning lamp signal
ADAS control unit	FEB warning lamp signal
	ICC warning lamp signal
	Meter display signal
A/C auto amp.	Ambient sensor signal
Driver seat control unit	Buzzer output signal

DESCRIPTION

Combination Meter

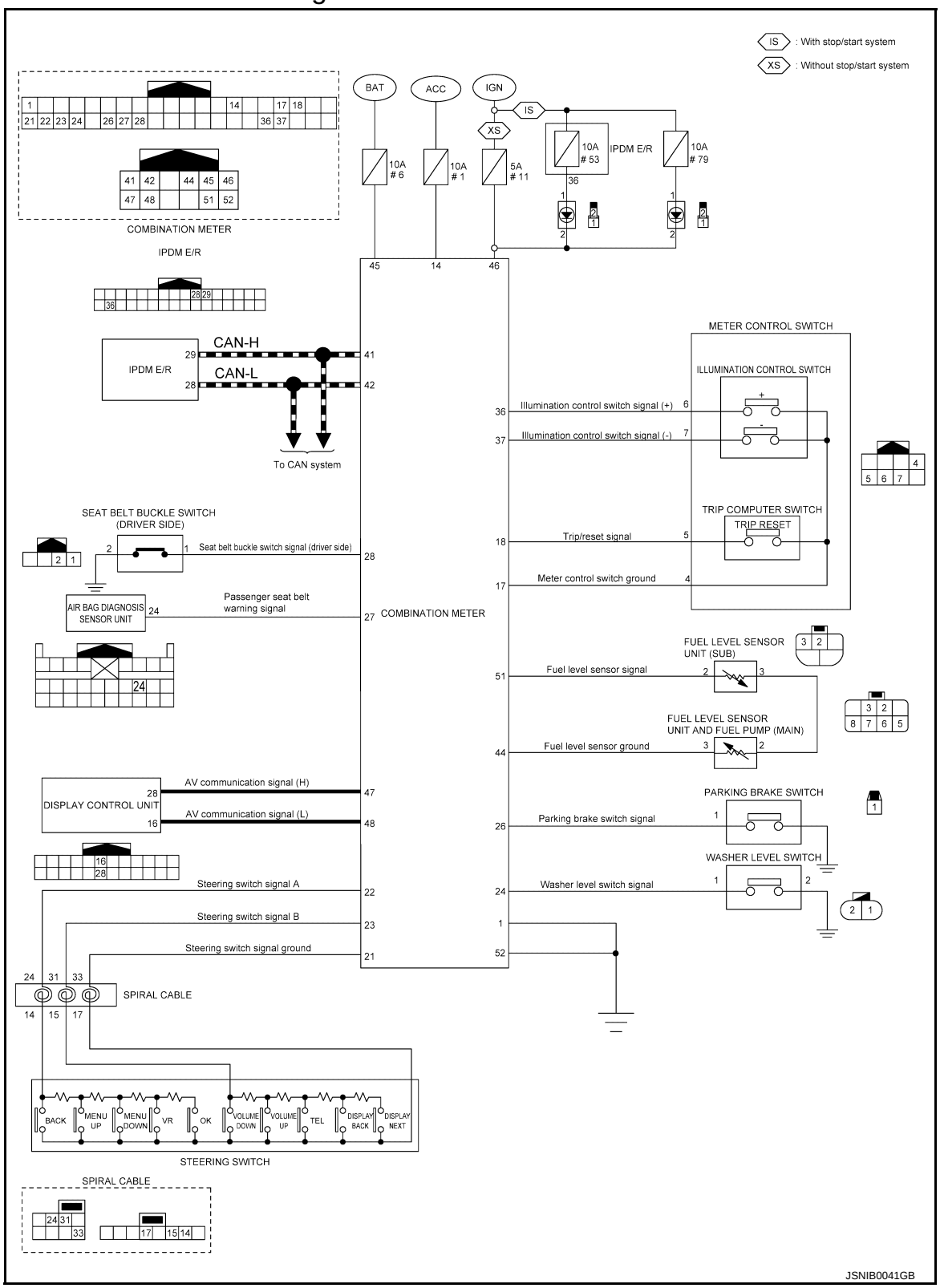
- The combination meter receives necessary signals from each unit, switch, and sensor to control the following functions.
- Measuring instruments
- Speedometer
- Tachometer
- Engine coolant temperature gauge
- Fuel gauge
- Warning lamps
- Indicator lamps
- Meter illumination control
- Meter effect function
- Information display
- The combination meter incorporates a buzzer function that sounds an audible alarm with the integrated buzzer. Refer to WCS-6, "Combination Meter" for further details.
- Settings of combination meter are performed in synchronization with the log-in function of on-board personal assistant. For details of the log-in function, refer to DMS-17, "LOG-IN FUNCTION : System Description".
- The combination meter includes an on board diagnosis function.
- The combination meter can be diagnosed with CONSULT.

METER CONTROL FUNCTION LIST

System		Description	Reference
Measuring instruments	Speedometer	Indicates vehicle speed.	MWI-19, "SPEEDOMETER : System Description"
	Tachometer	Indicates engine speed.	MWI-19, "TACHOMETER : System Description"
	Engine coolant temperature gauge	Indicates engine coolant temperature.	MWI-20, "ENGINE COOLANT TEMPERATURE GAUGE : System Description"
	Fuel gauge	Indicates fuel level.	MWI-20, "FUEL GAUGE : System Description"
Warning lamp/indicator lamp		The warning lamp/indicator lamp turns ON or turns OFF, according to system malfunction or vehicle condition.	MWI-9, "METER SYSTEM : Design"
Information display		The Information display displays status, according to system malfunction or vehicle condition.	MWI-61, "INFORMATION DISPLAY : System Description"
Meter illumination control	Meter illumination control function	Switches back and forth between daytime mode and nighttime mode, according to a light switch position.	MWI-58, "METER ILLUMINATION CONTROL : System Description"
	Back light illumination control function	The operation of the illumination control switch allows the brightness adjustment of meter illumination.	
Meter effect function	Engine-start effect function	Controls pointers of combination meter, back light illumination and information display at engine start to produce illumination effects.	MWI-59, "METER EFFECT FUNCTION : System Description"
	Driver welcome function	Controls meter illumination to produce illumination effects when getting in the vehicle.	

METER SYSTEM : Circuit Diagram

INFOID:0000000012791755



METER SYSTEM : Fail-Safe

INFOID:0000000013447181

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

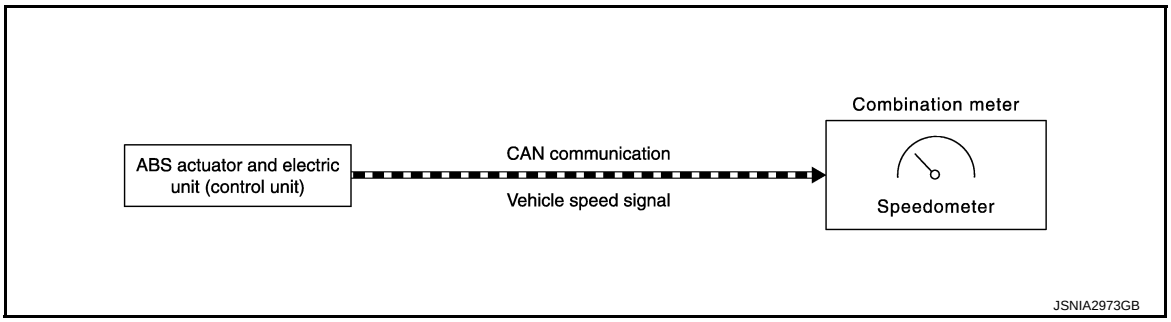
Function			Specifications
Speedometer			Reset to zero by suspending communication.
Tachometer			
Engine coolant temperature gauge			• When reception time of an abnormal signal is 60 seconds or less, the last value received. • When reception time of an abnormal signal is more than 60 seconds, reset to zero.
Illumination control			When suspending communication, changes to nighttime mode.
Information display	Odo/trip meter		An indicated value is maintained at communications blackout.
	Shift position indicator		The display turns OFF by suspending communication.
	Clock		When suspending communication, internal clock time is indicated.
	Chassis control display		The display turns no effect by suspending communication.
	Trip computer	Current fuel consumption	The last result calculated during normal condition is indicated.
		Average fuel consumption	
		Average vehicle speed	
		Travel time	
		Travel distance	
		Distance to empty	
		Idling stop accumulated time	The last result calculated during normal condition is indicated by suspending communication.
	Warning/ indicator	AFS warning	The display turns ON by suspending communication.
		AWD warning	
		Chassis control warning	
		Other than the above	The display turns OFF by suspending communication.
Buzzer			The buzzer turns OFF by suspending communication.
Warning lamp/indicator lamp	ABS warning lamp		The lamp turns ON by suspending communication.
	VDC warning lamp		
	Brake warning lamp		
	FEB warning lamp		
	Power steering warning lamp		
	Malfunction indicator lamp (MIL)		
	Low tire pressure warning lamp		• When reception time of an abnormal signal is 60 seconds or less, the lamp blinking. • When reception time of an abnormal signal is more than 60 seconds, the lamp turns ON.
	Stop/start indicator lamp		The lamp blinking caused by suspending communication.
	High beam indicator lamp		The lamp turns OFF by suspending communication.
	Turn signal indicator lamp		
	VDC OFF indicator lamp		
	Front fog lamp indicator lamp		
	Position lamp indicator lamp		
	High beam assist indicator lamp		
	Charge warning lamp		
	ECO drive indicator lamp		

SPEEDOMETER

SPEEDOMETER : System Description

INFOID:0000000012791757

SYSTEM DIAGRAM



DESCRIPTION

- The ABS actuator and electric unit (control unit) transmits a vehicle speed signal to the combination meter via CAN communication.
- The combination meter indicates a vehicle speed to the speedometer, based on the vehicle speed signal received from the ABS actuator and electric unit.

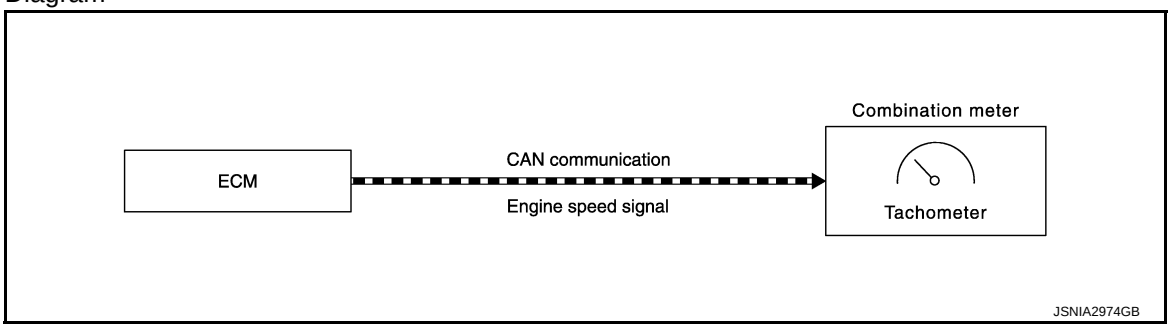
TACHOMETER

TACHOMETER : System Description

INFOID:0000000012791758

EXCEPT FOR VR30DDTT ENGINE MODELS

System Diagram

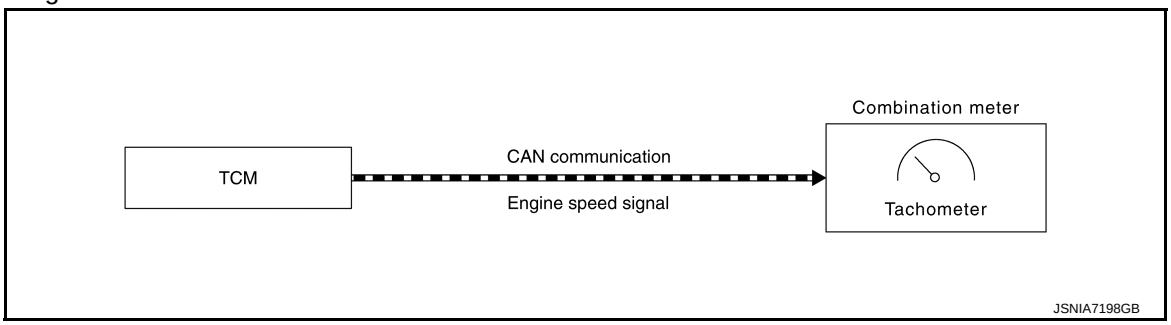


Description

- ECM converts the pulse signal provided by the crankshaft position sensor to an engine speed signal and transmits it to the combination meter via CAN communication.
- The combination meter indicates the engine speed to the tachometer according to the engine speed signal received via CAN communication.

VR30DDTT ENGINE MODELS

System Diagram



Description

- ECM converts the pulse signal provided by the crankshaft position sensor to an engine speed signal and transmits it to the TCM via CAN communication.

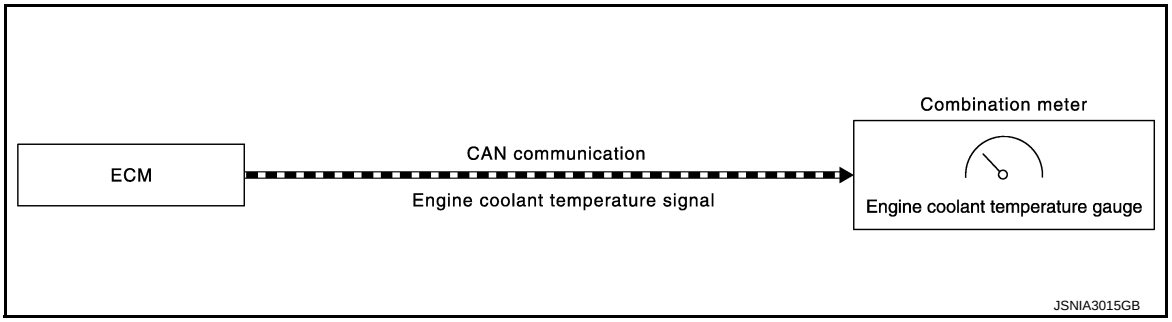
- TCM transmits the engine speed signal received from ECM via CAN communication to the combination meter via CAN communication.
- The combination meter indicates the engine speed to the tachometer according to the engine speed signal received via CAN communication.

ENGINE COOLANT TEMPERATURE GAUGE

ENGINE COOLANT TEMPERATURE GAUGE : System Description

INFOID:0000000012791759

SYSTEM DIAGRAM



DESCRIPTION

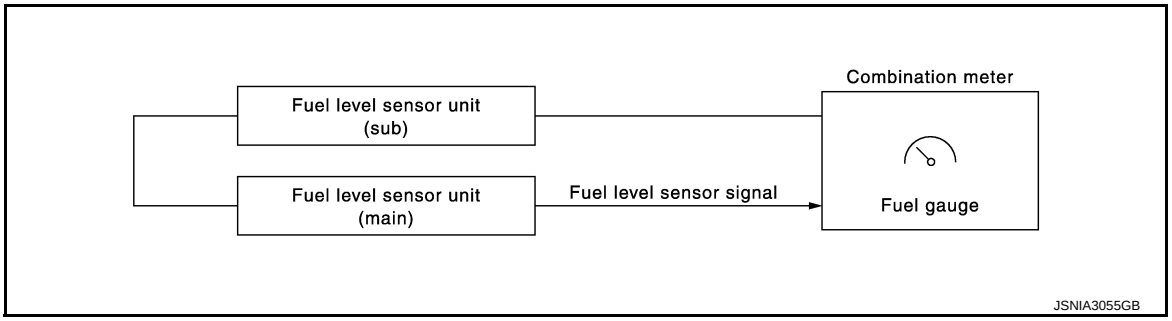
- ECM reads the engine coolant temperature signal from the engine coolant temperature sensor and transmits the signal to the combination meter via CAN communication.
- The combination meter indicates the engine coolant temperature to the engine coolant temperature gauge according to the engine coolant temperature signal received via CAN communication.

FUEL GAUGE

FUEL GAUGE : System Description

INFOID:0000000012791760

SYSTEM DIAGRAM



DESCRIPTION

Control Outline

The combination meter reads the fuel level sensor signal from the fuel level sensor unit and indicates the fuel level to the fuel gauge.

Refuel Control

The combination meter accelerates the fuel gauge if the all conditions listed below are met, or the ignition switch is ON from OFF.

- Ignition switch is ON position.
- The vehicle is not moving.
- The fuel level change by 15 ℓ (4 US gal, 3-1/4 Imp gal) or more.

WARNING LAMPS/INDICATOR LAMPS

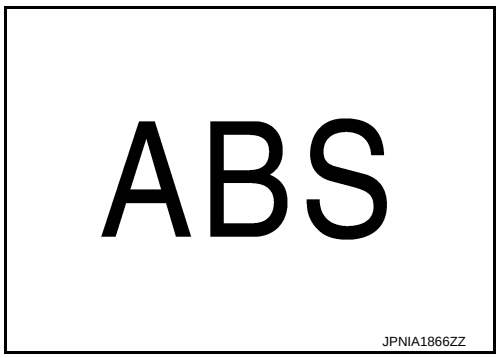
WARNING LAMPS/INDICATOR LAMPS : ABS Warning Lamp

INFOID:0000000012791761

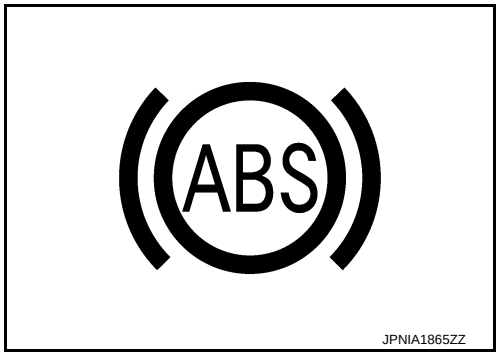
DESIGN/PURPOSE

The ABS warning lamp warns the driver of a malfunction in the ABS function or EBD function of ABS actuator and electric unit (control unit).

- For U.S.A.



- Except for U.S.A.



NOTE:
The ABS warning lamp may turn ON simultaneously with the brake warning lamp, VDC warning lamp. For details, refer to BRC-18, "System Description".

BULB CHECK

The ABS warning lamp turns ON and stays ON for several seconds after turning ON the ignition switch.

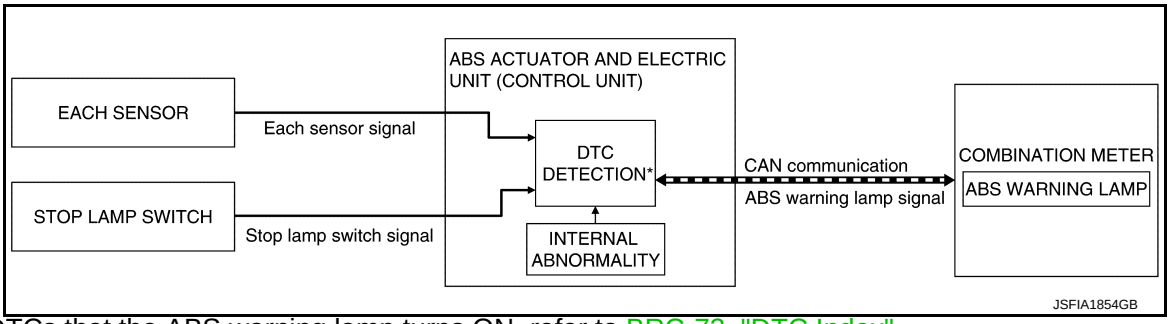
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to BRC-72, "DTC Index".

SYSTEM DIAGRAM



*: For DTCs that the ABS warning lamp turns ON, refer to BRC-72, "DTC Index".

SIGNAL PATH

- The ABS actuator and electric unit (control unit) transmits an ABS warning lamp signal to the combination meter via CAN communication when detecting a malfunction.
- The combination meter turns ON the ABS warning lamp when receiving an ABS warning lamp signal.
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

LIGHTING CONDITION

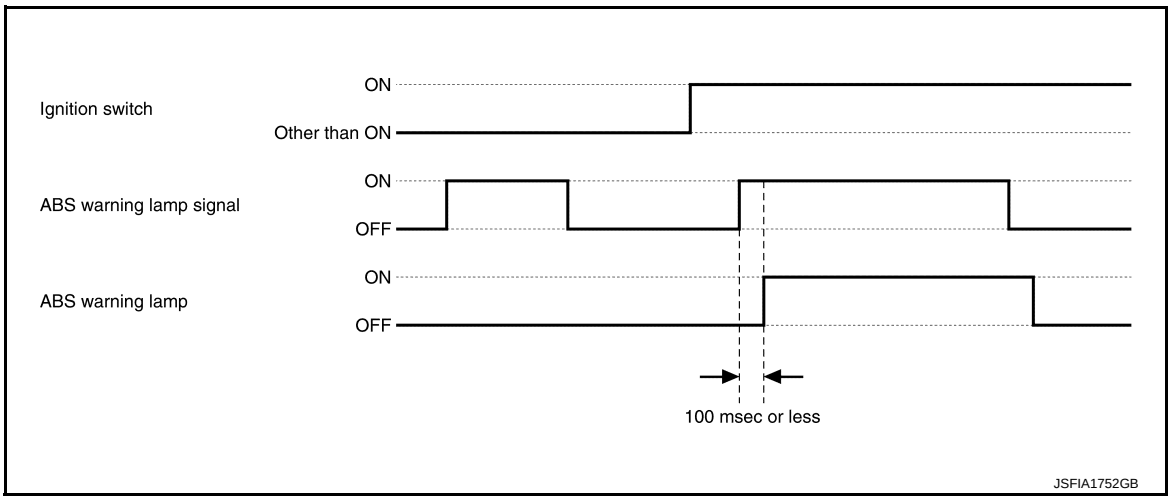
The warning lamp turns ON when:

- A malfunction is detected in the ABS function or EBD function of the ABS actuator and electric unit (control unit).
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

SHUTOFF CONDITION

- When the condition listed below is satisfied while the ignition switch ON:
- Erase DTC
- The ignition switch is in a position other than ON.

TIMING CHART

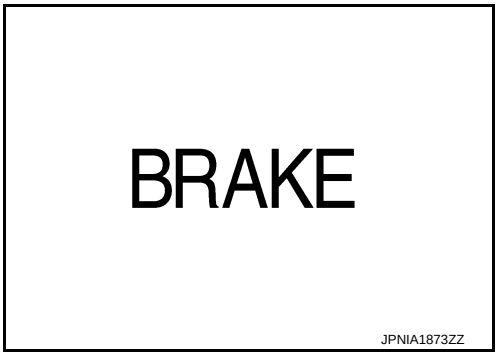


WARNING LAMPS/INDICATOR LAMPS : Brake Warning Lamp

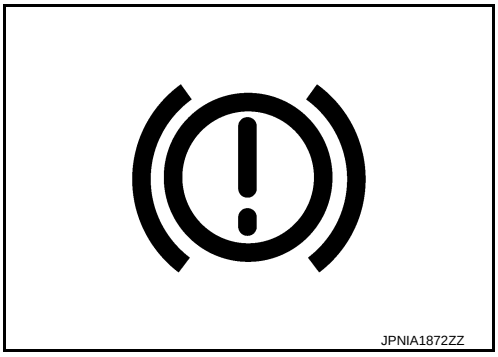
INFOID:0000000012791762

DESIGN/PURPOSE

- The brake warning lamp warns the driver of brake fluid shortages.
- For U.S.A.



- Except for U.S.A.



- The brake warning lamp warns the driver that the parking brake is engaged.
- The brake warning lamp warns the driver of a malfunction in the EBD function of ABS actuator and electric unit (control unit).

NOTE:

The brake warning lamp may turn ON simultaneously with the ABS warning lamp, VDC warning lamp. For details, refer to BRC-18, "System Description".

BULB CHECK

When the ignition switch is ON.

SYNCHRONIZATION WITH WARNING CHIME

Applicable

For warning chime, refer to WCS-17, "WARNING CHIME : Parking Brake Release Warning Chime"

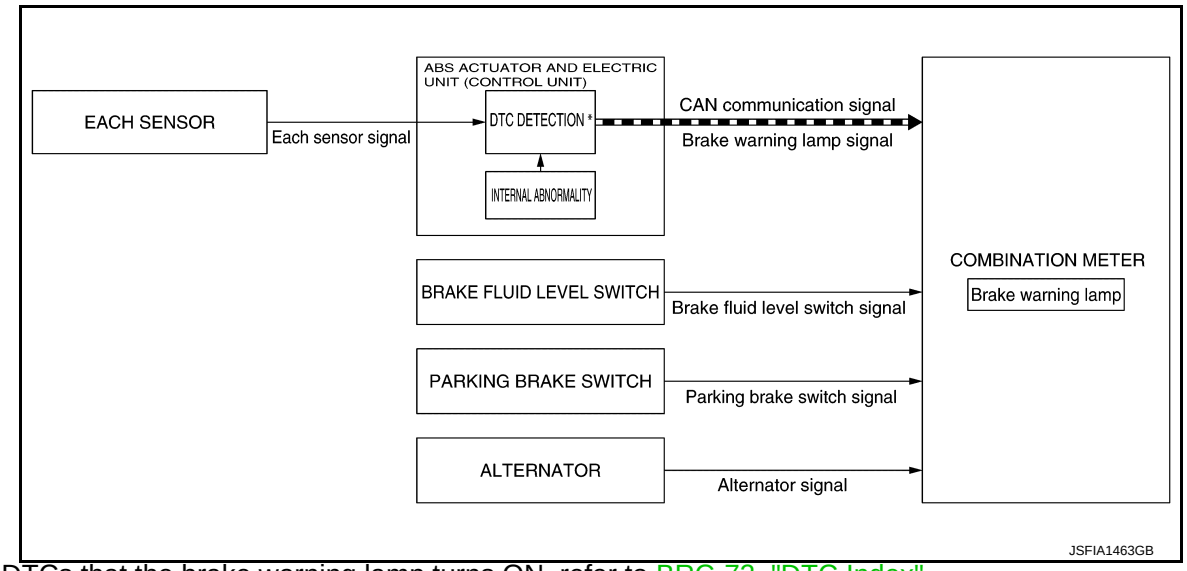
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



*: For DTCs that the brake warning lamp turns ON, refer to BRC-72, "DTC Index".

SIGNAL PATH

When Brake Fluid Is Insufficient

The combination meter turns ON/OFF the brake warning lamp, according to the ON/OFF state of the brake fluid level switch.

When Operating The Parking Brake

The combination meter turns ON/OFF the brake warning lamp, according to the ON/OFF state of the parking brake switch.

When The EBD Function Is In Abnormal State

- The ABS actuator and electric unit (control unit) transmits a brake warning lamp signal to the combination meter via CAN communication when detecting a malfunction in the EBD function.
- The combination meter turns ON the brake warning lamp when receiving a brake warning lamp signal.
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

LIGHTING CONDITION

When any of the condition listed below is satisfied while the engine is running:

- Brake fluid level switch ON.
- Parking switch ON.
- A malfunction is detected in the EBD function of the ABS actuator and electric unit (control unit).
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

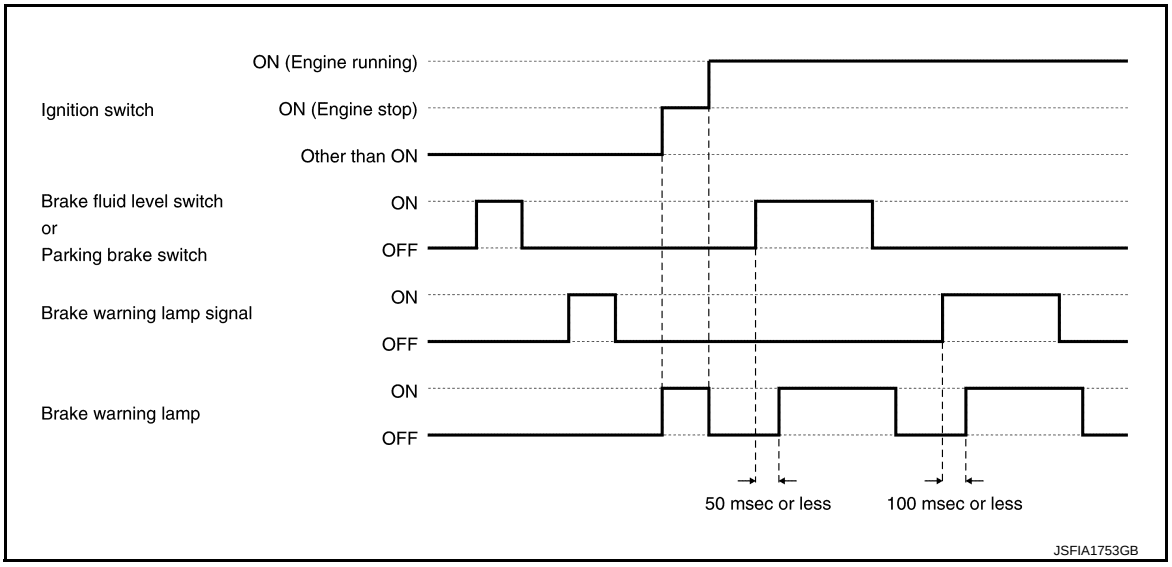
SHUTOFF CONDITION

- When the condition listed below is satisfied while the ignition switch ON:

- Brake fluid level switch is OFF.
- Parking brake switch is OFF.
- Erase DTC

• The ignition switch is in a position other than ON.

TIMING CHART

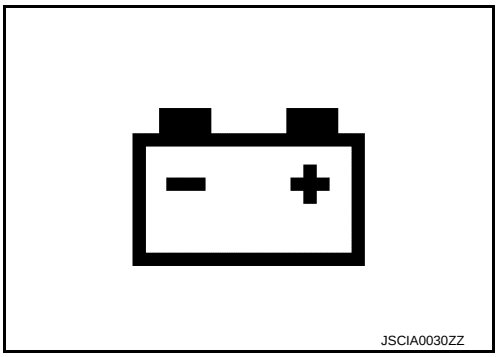


WARNING LAMPS/INDICATOR LAMPS : Charge Warning Lamp (2.0L Turbo Gasoline Engine Models)

INFOID:0000000013347465

DESIGN/PURPOSE

Charge warning lamp warns the driver of the unexpected power generation.



BULB CHECK

The bulb turns ON after turning ON the ignition switch (engine stop) and turn OFF after the engine is started.

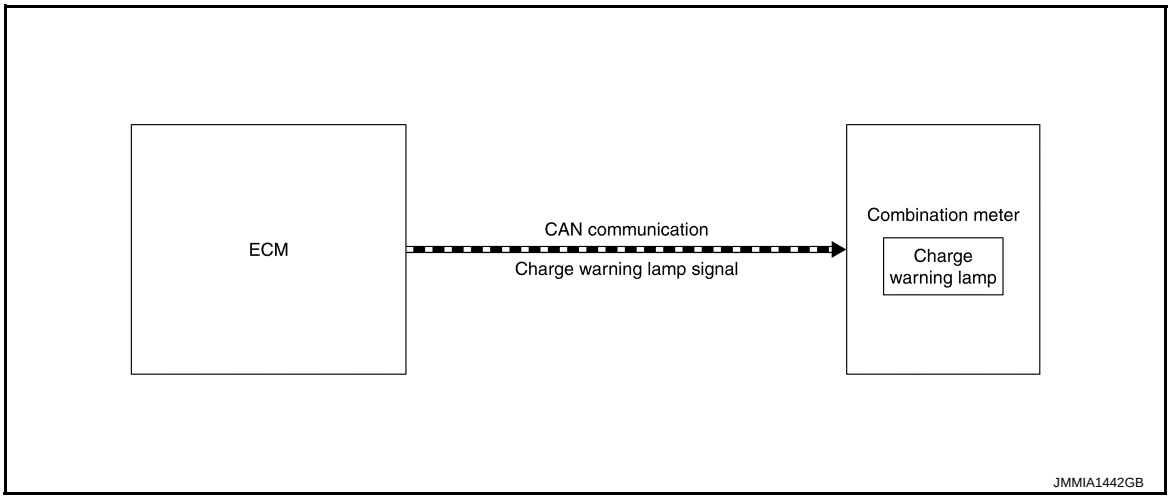
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- ECM transmits charge warning lamp signal to combination meter via CAN communication when the operation of alternator is unexpected or when the vehicle is in chassis dynamometer mode.
- Combination meter indicates charge warning lamp judged with charge warning lamp signal received from ECM.

LIGHTING CONDITION

When any of the following symptoms occur while alternator is operating:

- Communication between alternator and ECM is malfunctioning.
- Excessive voltage is produced.
- No voltage is produced.

BLINKING CONDITION

When chassis dynamometer mode is activated, charge warning lamp blinks for a few seconds and then turns OFF.

SHUTOFF CONDITION

When any of the condition listed below is satisfied:

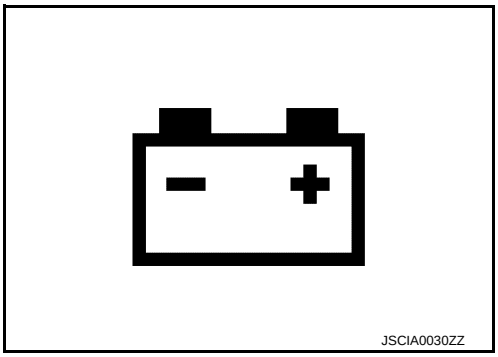
- Ignition switch is OFF.
- The power generation of alternator is normal.

WARNING LAMPS/INDICATOR LAMPS : Charge Warning Lamp (VR30DDTT Models)

INFOID:0000000013480467

DESIGN/PURPOSE

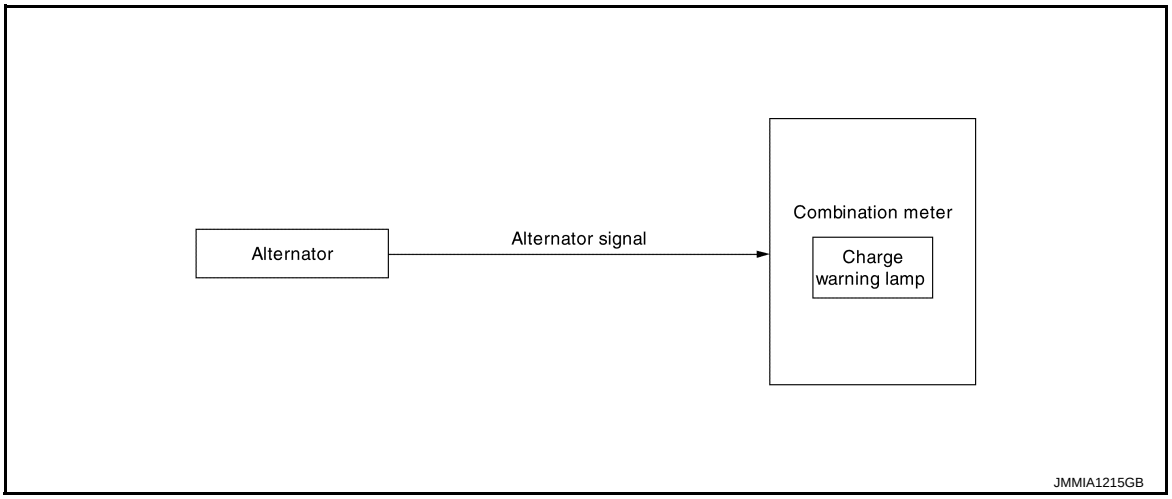
Charge warning lamp warns the driver of the unexpected power generation.



BULB CHECK

The bulb turns ON after turning ON the ignition switch (engine stop) and turn OFF after the engine is started.

SYSTEM DIAGRAM



SIGNAL PATH

- When excessive voltage is produced or no voltage is produced, alternator transmits alternator signal to combination meter.
- Combination meter indicates charge warning lamp judged with alternator signal received from alternator.

LIGHTING CONDITION

When any of the following symptoms occur while alternator is operating:

- Excessive voltage is produced.
- No voltage is produced.

SHUTOFF CONDITION

When any of the condition listed below is satisfied:

- Ignition switch is OFF.
- The power generation of alternator is normal.

WARNING LAMPS/INDICATOR LAMPS : ECO Drive Indicator Lamp

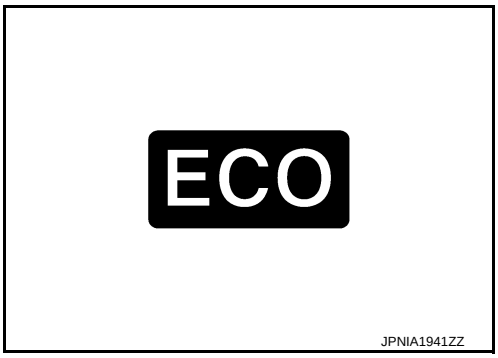
INFOID:0000000012791764

DESIGN/PURPOSE

ECO drive indicator lamp inform driver the status of ECO mode by illuminating, or blinking the ECO drive indicator lamp when the vehicle drives in ECO mode selected by the drive selector.

NOTE:

For the ECO mode, refer to EC6-95, "Infiniti Drive Mode Selector : System Description".



BULB CHECK

ECO drive indicator lamp turns ON after the vehicle status becomes READY: A few seconds

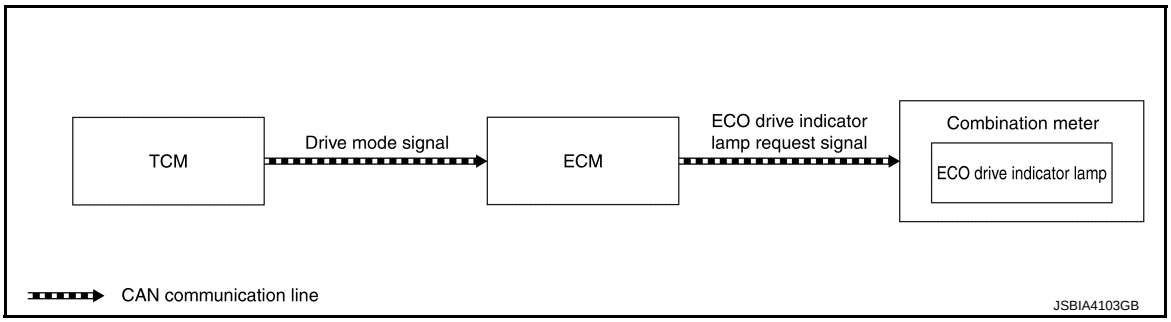
SYNCRONIZATION WITH MASTER WARNING LAMP

None.

PROCESS WHEN CAN COMMUNICATION FROM COMBINATION METER BREAKS, OR ABNORMAL SIGNAL IS RECEIVED

For the process when CAN communication from combination meter breaks, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- ECM transmits ECO drive indicator signal to combination meter according to the drive mode select signal from TCM
- Combination meter turns ECO drive indicator lamp on according to the signal from ECM

WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied:

- When the ignition switch is turned ON
- Drive mode selector switch: ECO position
- Within the driving range of ECO drive

NOTE:

For the ECO mode, refer to EC6-95, "Infiniti Drive Mode Selector : System Description".

WARNING/INDICATOR CANCEL CONDITION

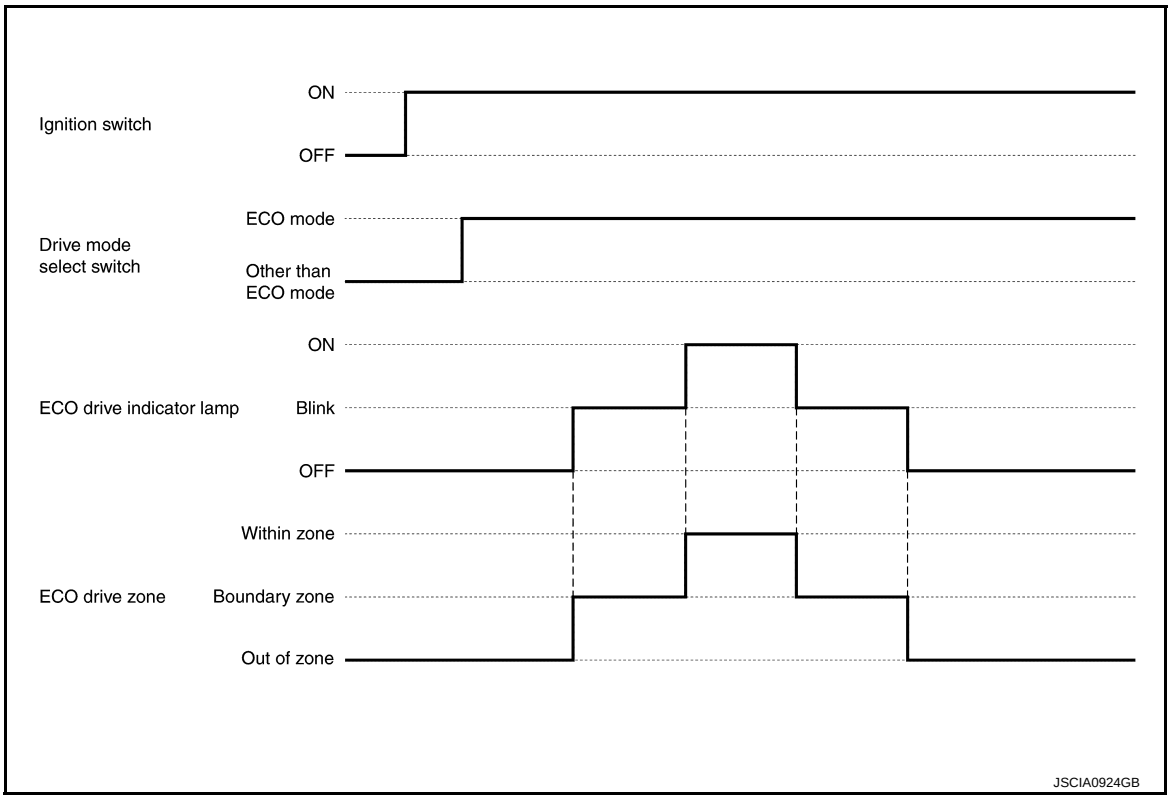
When any of the following conditions are satisfied:

- When the ignition switch is turned OFF
- Drive mode selector switch: Not in ECO position
- Out of the driving range of ECO drive

NOTE:

For the ECO mode, refer to EC6-95, "Infiniti Drive Mode Selector : System Description".

TIMING CHART

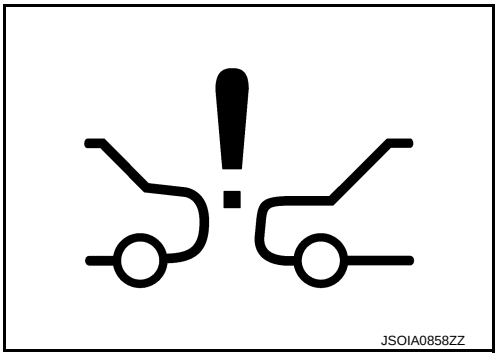


WARNING LAMPS/INDICATOR LAMPS : FEB Warning Lamp

INFOID:0000000012791765

DESIGN/PURPOSE

- The FEB warning lamp warns the driver that FEB system is OFF.
- The FEB warning lamp warns the driver of a malfunction in the FEB system.



BULB CHECK

The FEB warning lamp turns ON and stays ON for approximately one second after turning ON the ignition switch.

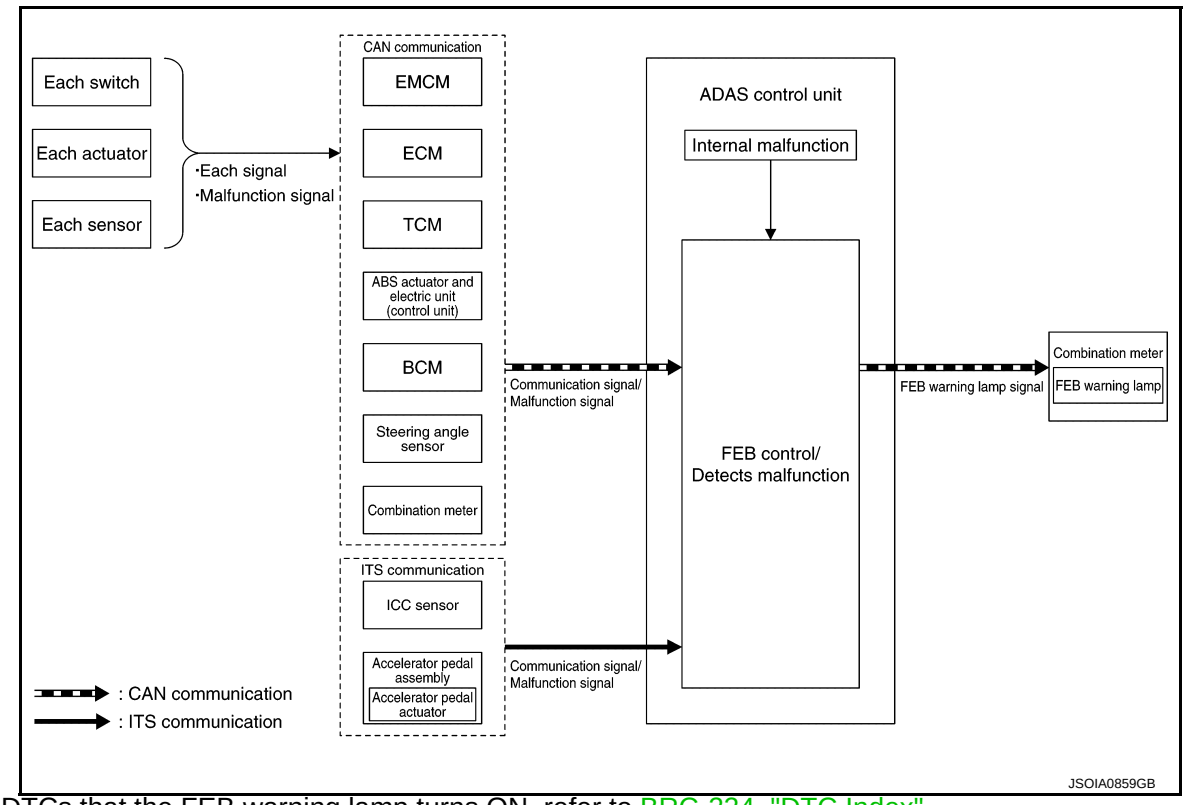
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



*: For DTCs that the FEB warning lamp turns ON, refer to BRC-224, "DTC Index".

SIGNAL PATH

- The ADAS control unit receives a system selection signal from the display control unit via CAN communication when FEB system ON is not selected.
- The ADAS control unit transmits an FEB warning lamp signal to the combination meter via CAN communication when detecting a malfunction or FEB system ON is not selected.

- The combination meter turns ON the FEB warning lamp when receiving an FEB warning lamp signal.
- For the relationship between warning lamp and DTC, refer to BRC-224, "DTC Index".

LIGHTING CONDITION

The warning lamp turns ON when:

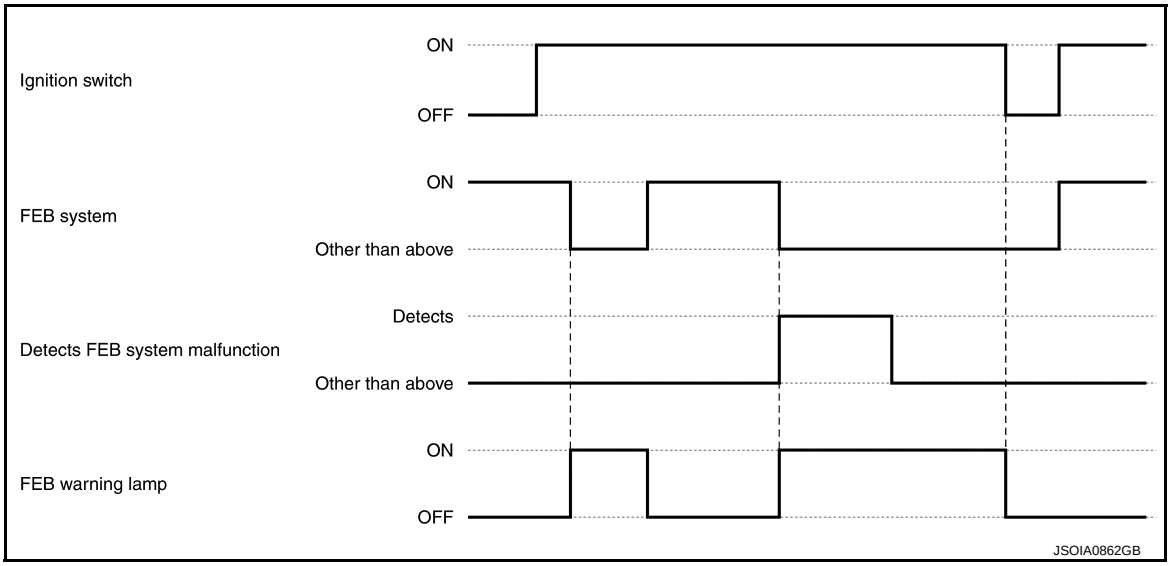
- FEB system OFF.
- A malfunction is detected in the FEB system.
- For the relationship between warning lamp and DTC, refer to BRC-224, "DTC Index".

SHUTOFF CONDITION

The warning lamp turns OFF when:

- FEB system ON.
- DTC is deleted.
- The ignition switch is in a position other than ON.

TIMING CHART

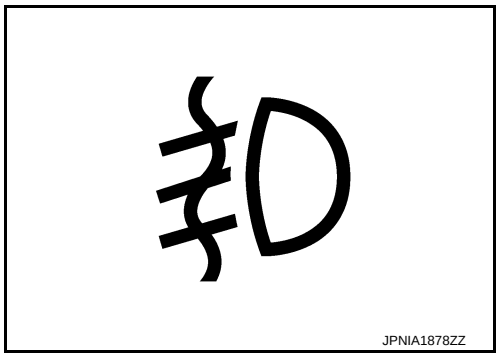


WARNING LAMPS/INDICATOR LAMPS : Front Fog Lamp Indicator Lamp

INFOID:0000000012791766

DESIGN/PURPOSE

Front fog lamp indicator lamp informs the driver that front fog lamp is in ON status.



BULB CHECK

Not applicable

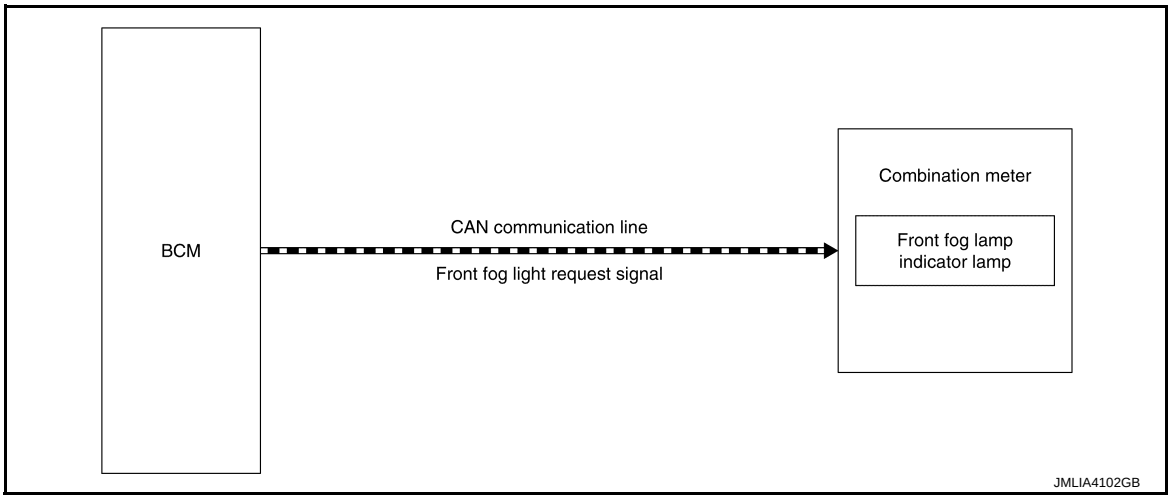
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits front fog light request signal to combination meter via CAN communication when front fog lamp is in ON status.
- When combination meter receives front fog light request signal, combination meter turns front fog lamp indicator lamp ON.

LIGHTING CONDITION

When front fog lamp is turned ON.

SHUTOFF CONDITION

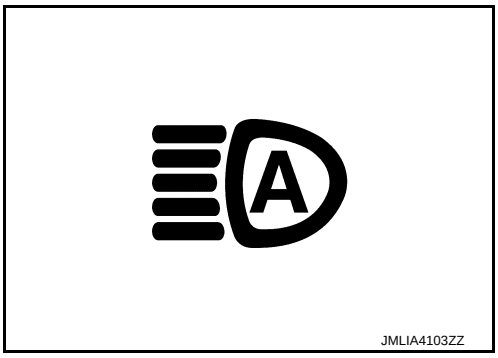
When front fog lamp is turned OFF.

WARNING LAMPS/INDICATOR LAMPS : High Beam Assist Indicator Lamp

INFOID:0000000012791767

DESIGN/PURPOSE

High beam assist indicator lamp informs the driver that the high beam assist system is in operating status.



BULB CHECK

Not applicable

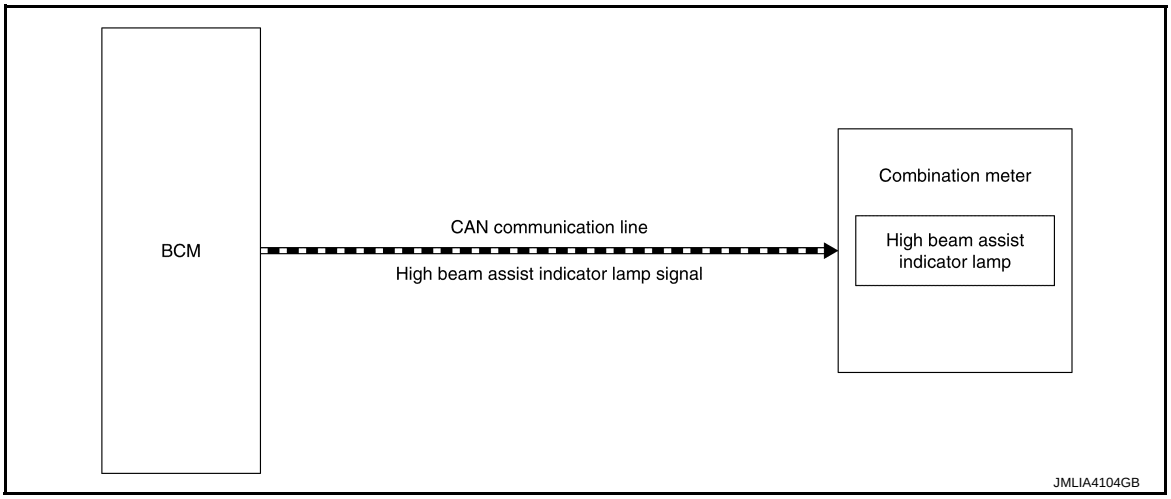
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits the high beam assist indicator lamp signal to the combination meter via CAN communication when the high beam assist system operation permission conditions are satisfied.
- When combination meter receives high beam assist indicator lamp signal, combination meter turns high beam assist indicator lamp ON.

LIGHTING CONDITION

High beam assist system operation permission conditions are satisfied.
[Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illuminating judgment by auto light function is ON. For details, refer to EXL-20, "AUTO LIGHT SYSTEM : System Description".)]

SHUTOFF CONDITION

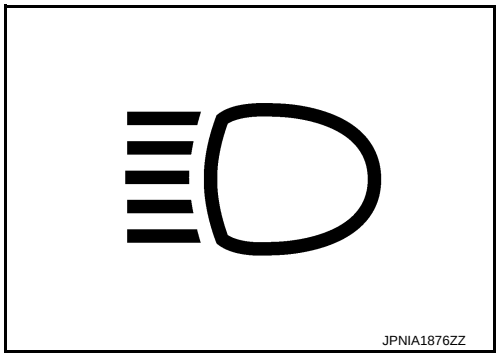
High beam assist system operation permission conditions are not satisfied.

WARNING LAMPS/INDICATOR LAMPS : High Beam Indicator Lamp

INFOID:0000000012791768

DESIGN/PURPOSE

High beam indicator lamp informs the driver that headlamp (HI) is in ON status.



BULB CHECK

Not applicable

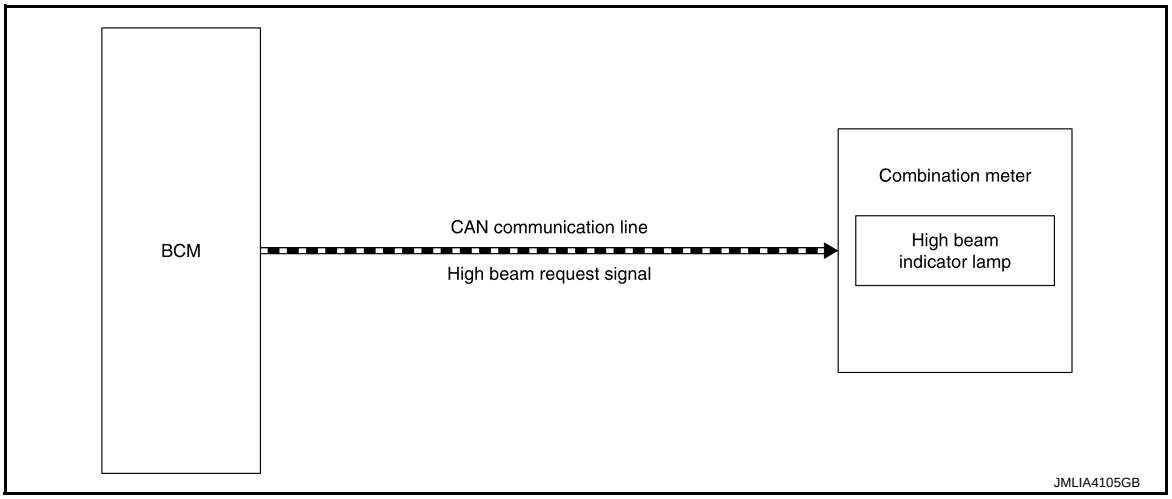
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits high beam request signal to combination meter via CAN communication when headlamp (HI) is in ON status.
- When combination meter receives high beam request signal, combination meter turns high beam indicator lamp ON.

LIGHTING CONDITION

When headlamp (HI) is turned ON.

SHUTOFF CONDITION

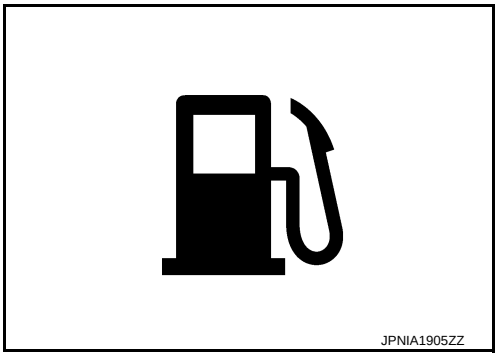
When headlamp (HI) is turned OFF.

WARNING LAMPS/INDICATOR LAMPS : Low fuel warning lamp

INFOID:0000000012791769

DESIGN AND USAGE

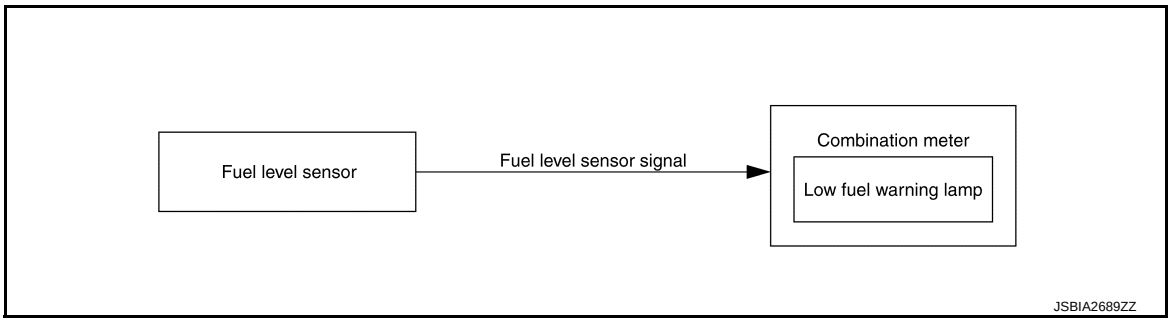
Low fuel warning lamp warns the driver that the fuel level is low.



BULB CHECK

Not applicable

SYSTEM SCHEMATIC



SIGNAL PATH

- The combination meter receives the fuel level sensor signal (resistance value) from the fuel level sensor and turns ON the low fuel warning when fuel level sensor signal (resistance value) is less than the specified value.

LIGHTING CONDITION

When all of the following conditions are satisfied:
- After a lapse of 7 seconds after the ignition switch is turned ON.
- Fuel level is lower than the specified level.

Fuel level warning indication timing (Vehicle: Parked on the level)	
Fuel level	Approx. 15.1 ℓ (4 us gal, 3-3/8 Imp gal) or less (fuel tank dead amount included)
Fuel tank dead amount	Approx. 3.9 ℓ (4-1/8 us qt, 3-3/8 Imp qt)

SHUTOFF CONDITION

When any of the following conditions are satisfied:
- Ignition switch OFF
- Fuel level is the specified level or more.

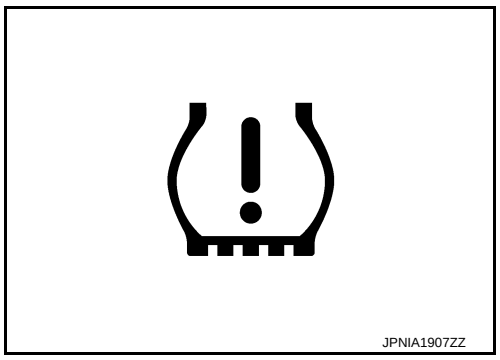
WARNING LAMPS/INDICATOR LAMPS : Low Tire Pressure Warning Lamp

INFOID:0000000012791770

DESIGN/PURPOSE

- When tire pressure is low, TPMS (Tire Pressure Monitoring System) turns low tire pressure warning lamp ON to warn the driver.
- When the TPMS detects the system malfunction, the system blinks (1 minute) ⇒ turns ON low tire pressure warning lamp.

Details for TPMS (Tire Pressure Monitoring System), Refer to WT-11, "System Description".



BULB CHECK

Turns ON for 1second, then turns OFF.

SYNCHRONIZATION WITH MASTER WARNING

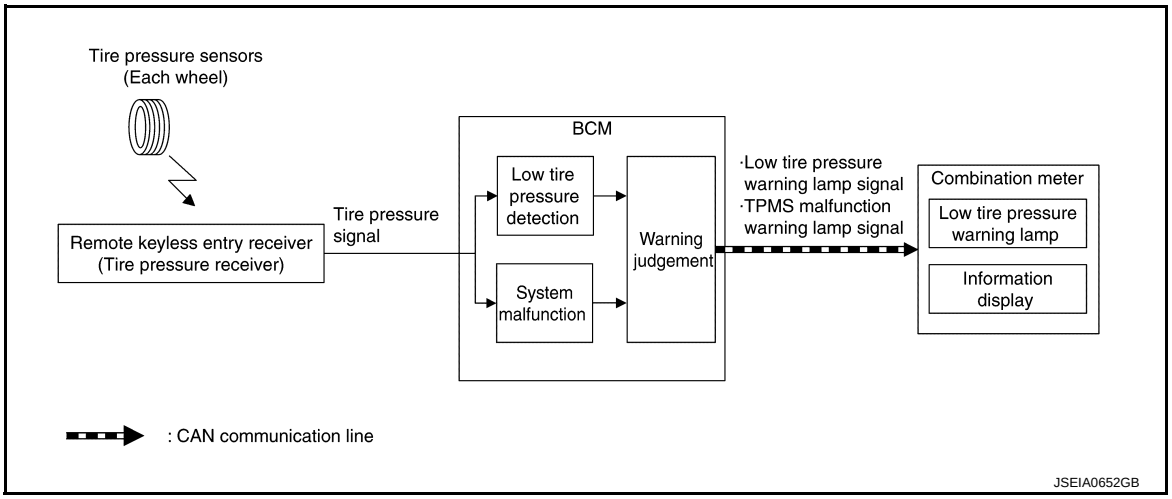
Applicable

For master warning, refer to MWI-36, "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp".

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For the operation for CAN communication blackout in the combination meter, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- Remote keyless entry receiver (tire pressure receiver) receives a signal transmitted from the tire pressure sensors/transmitters installed in each wheel.
- If BCM detects following condition, it sends the signal to the combination meter via CAN communication.
  - Tire pressure is low
  - System malfunction is detected
- Combination meter turns the low tire pressure warning lamp ON according to the signal. In addition, warning message will be displayed in the vehicle information display.

LIGHTING CONDITION

When any of the following conditions is satisfied:

- Tire pressure is low.
- System malfunction is detected.

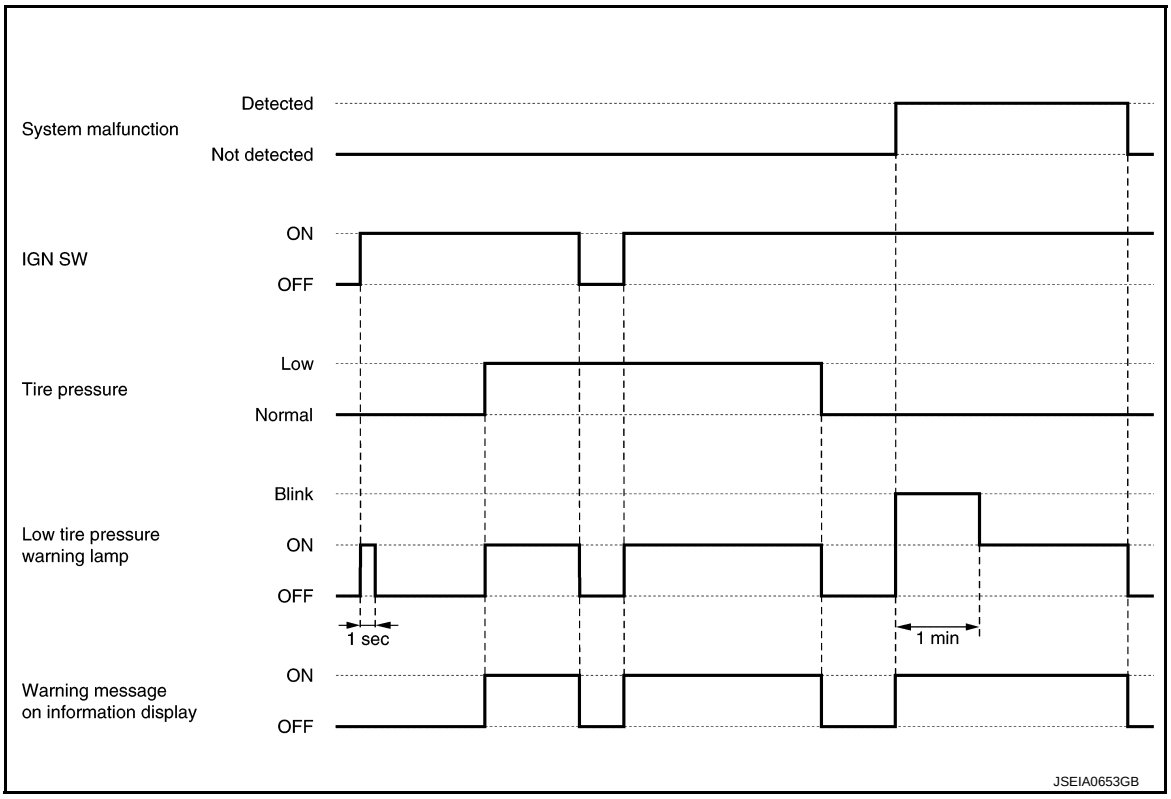
For DTC, refer to WT-22, "DTC Index".

SHUTOFF CONDITION

When any of the following conditions is satisfied:

- Tire pressure of all the tires reaches the reference value. For the reference value of tire pressure, refer to WT-82, "Tire Air Pressure".
- System malfunction is not detected.

TIMING CHART



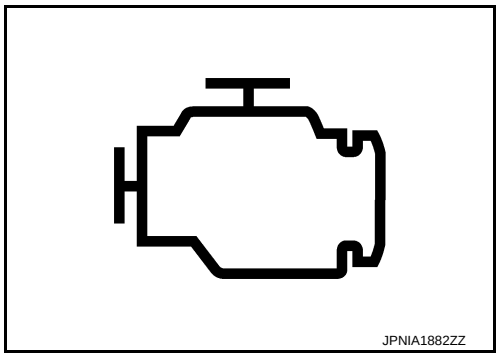
WARNING LAMPS/INDICATOR LAMPS : Malfunction Indicator Lamp (MIL)

INFOID:0000000012791771

DESIGN/PURPOSE

When a malfunction which increases exhaust gases is detected, ECM turns ON MIL and informs the driver of the necessity of inspection and repair.

When a malfunction which causes damage to the catalyst is detected, ECM immediately blinks MIL to alert the driver.



BULB CHECK

The bulb turns ON after turning ON the ignition switch (engine stop) and turns OFF after restarting the engine.

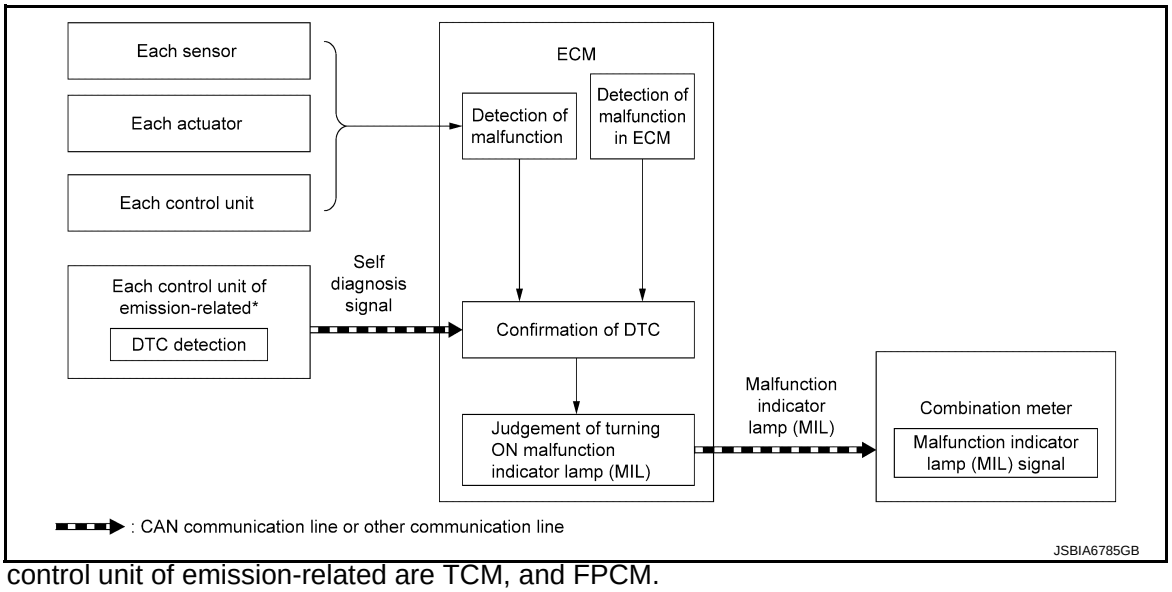
SYNCHRONIZATION WITH MASTER WARNING

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For the operation for CAN communication blackout in the combination meter, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



*: Each control unit of emission-related are TCM, and FPCM.

SIGNAL PATH

- When the lighting conditions of the malfunction indicator lamp (MIL) are satisfied, ECM transmits a malfunction indicator lamp (MIL) signal to the combination meter via CAN communication.
- The combination meter turns ON or blinks the malfunction indicator lamp (MIL), according to a signal received from ECM.

LIGHTING CONDITION

When all of the following conditions are satisfied:

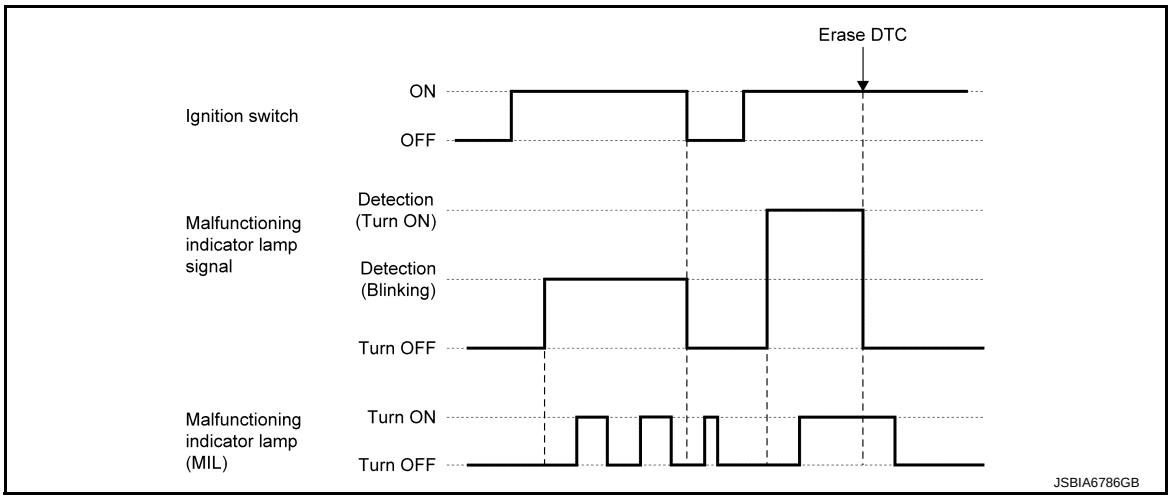
- Ignition switch: ON
- DTC which influences on exhaust gasses is judged.

SHUTOFF CONDITION

When any of the following conditions is satisfied:

- Ignition switch: OFF
- Erase DTC

TIMING CHART

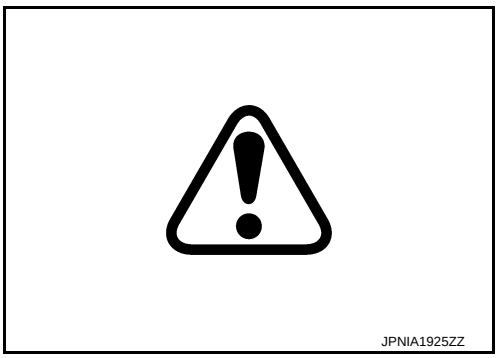


WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp

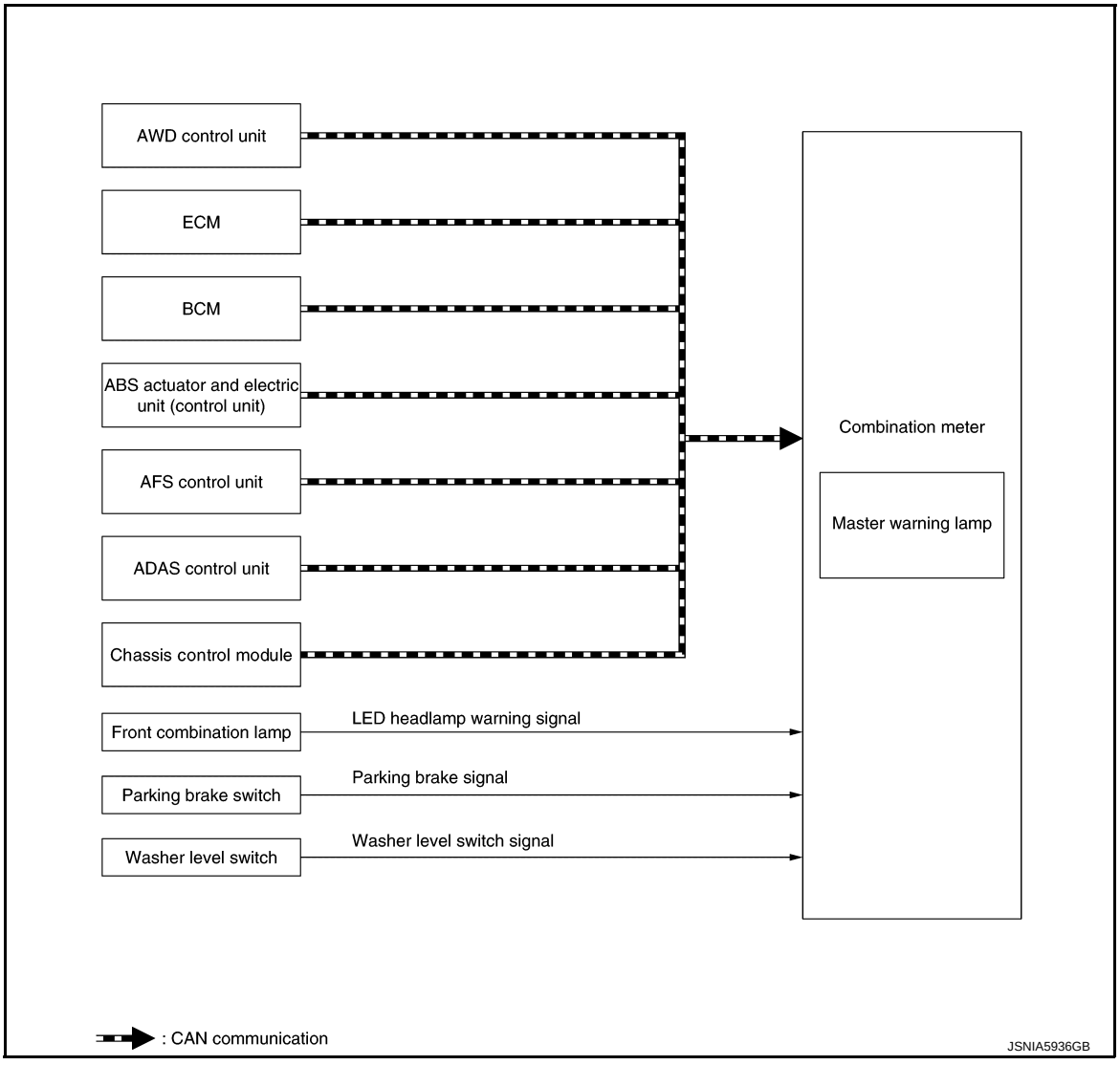
INFOID:0000000012791772

DESIGN/PURPOSE

The master warning lamp warns to driver when information display warning displayed.



SYSTEM DIAGRAM



DESCRIPTION

The master warning lamp (red) and master warning lamp (yellow) turn ON/OFF in coordination with warning on the information display.

X: Applicable

Information display warning item	Master warning lamp		Reference
	Red	Yellow	
Door open warning (While driving)	X		DLK-35, "INFORMATION DISPLAY (COMBINATION METER) : Door and Trunk Lid Open Warning"
Door and trunk lid open warning (While not driving)		X	DLK-35, "INFORMATION DISPLAY (COMBINATION METER) : Door and Trunk Lid Open Warning"
Engine oil pressure warning	X		EC6-99, "INFORMATION DISPLAY (COMBINATION METER) : Engine Oil Pressure Warning" (VR30DDTT for USA and Canada) or EC6-1079, "INFORMATION DISPLAY (COMBINATION METER) : Engine Oil Pressure Warning" (VR30DDTT for Mexico)
Parking break release warning	X		PB-4, "INFORMATION DISPLAY (COMBINATION METER) : Parking Brake Release Warning"
ACC warning		X	DLK-34, "INFORMATION DISPLAY (COMBINATION METER) : ACC Warning (Information Display)"
Intelligent Key system malfunction		X	DLK-39, "INFORMATION DISPLAY (COMBINATION METER) : Intelligent Key System Malfunction"
Key ID warning		X	DLK-41, "INFORMATION DISPLAY (COMBINATION METER) : Key ID Warning"
Low tire pressure warning		X	WT-14, "INFORMATION DISPLAY (COMBINATION METER) : Low Tire Pressure Warning"
P position warning	X		DLK-42, "INFORMATION DISPLAY (COMBINATION METER) : P Position Warning (Information Display)"
Shipping mode information		X	BCS-15, "SHIPPING MODE CONTROL SYSTEM : System Description"
Take away warning		X	DLK-43, "INFORMATION DISPLAY (COMBINATION METER) : Take Away Warning (Information Display)"
Washer fluid warning		X	WW-19, "INFORMATION DISPLAY (COMBINATION METER) : Washer Fluid Warning"
Chassis control warning		X	DAS-523, "INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display"
AFS warning	X	X	EXL-46, "INFORMATION DISPLAY (COMBINATION METER) : AFS Warning"
AWD warning		X	DLN-19, "INFORMATION DISPLAY (COMBINATION METER) : AWD Warning"
Fuel filler cap warning		X	• EC6-100, "INFORMATION DISPLAY (COMBINATION METER) : Fuel Filler Cap Warning" (VR30DDTT engine for USA and Canada) • EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (2.0L turbo gasoline engine)
Headlamp warning	X	X	EXL-47, "INFORMATION DISPLAY (COMBINATION METER) : Headlamp Warning"
ICC system warning		X	• CCS-24, "VEHICLE-TO-VEHICLE DISTANCE CONTROL MODE FUNCTION : Menu Displayed by Pressing Each Switch" • CCS-28, "CONVENTIONAL (FIXED SPEED) CRUISE CONTROL MODE FUNCTION : Menu Displayed by Pressing Each Switch"

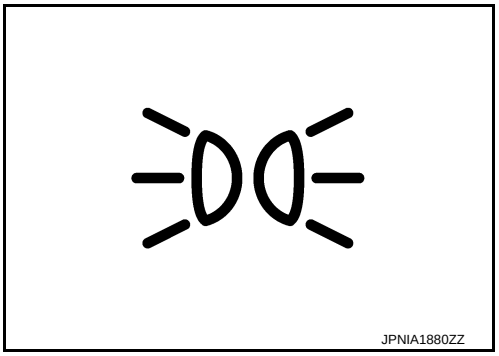
Information display warning item	Master warning lamp		Reference
	Red	Yellow	
FCW/LDW/BSW system warning		X	DAS-266, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch"
DCA/LDP/Blind Spot Intervention system warning		X	DAS-272, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch"
BCI system warning		X	DAS-279, "BCI : Menu Displayed by Pressing Each Switch"
FEB system warning		X	BRC-210, "Menu Displayed by Pressing Each Switch"

WARNING LAMPS/INDICATOR LAMPS : Position Lamp Indicator Lamp

INFOID:0000000012791773

DESIGN/PURPOSE

Position lamp indicator lamp informs the driver that parking lamp, license plate lamp, side marker lamp and tail lamp are in ON status.



BULB CHECK

Not applicable

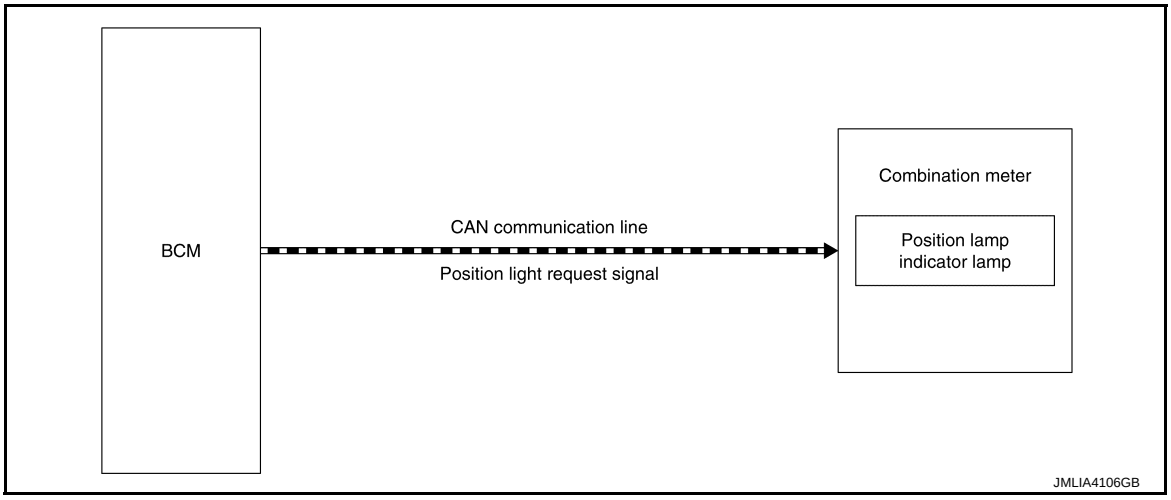
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits position light request signal to combination meter via CAN communication when parking lamp, license plate lamp, side marker lamp and tail lamp are in ON status.
- When combination meter receives position light request signal, combination meter turns position lamp indicator lamp ON.

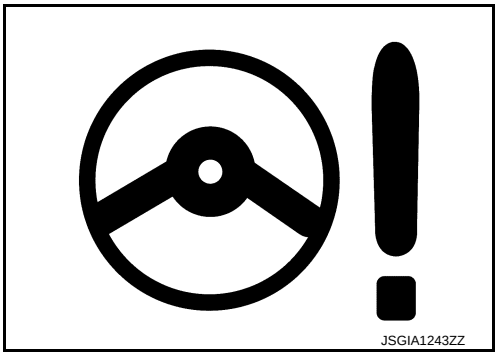
LIGHTING CONDITION
When parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON.

SHUTOFF CONDITION
When parking lamp, license plate lamp, side marker lamp and tail lamp are turned OFF.

WARNING LAMPS/INDICATOR LAMPS : Power Steering Warning Lamp (Except Direct Adaptive Steering)

INFOID:0000000013358450

DESIGN/PURPOSE
It indicates that fail-safe mode is engaged and enters a manual steering state (Control turning force steering wheel becomes heavy).

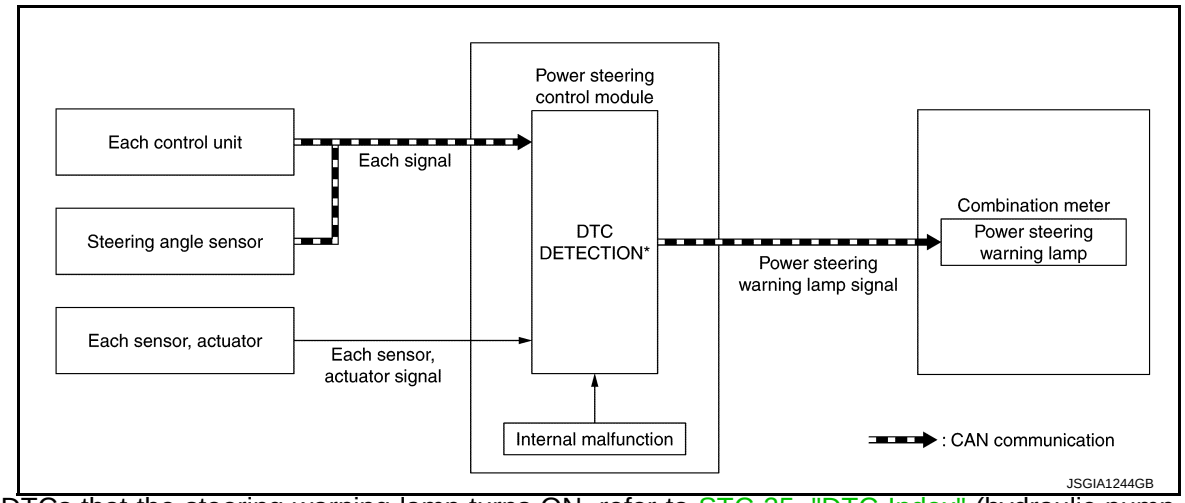


BULB CHECK
Also turns ON when ignition switch is turned ON, for purpose of lamp check. Turns OFF after the engine starts, if system is normal.

SYNCHRONIZATION WITH MASTER WARNING LAMP
Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL
For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



*: For DTCs that the steering warning lamp turns ON, refer to STC-25, "DTC Index" (hydraulic pump electric power steering), STC-76, "DTC Index" (EPS).

SIGNAL PATH
- If any malfunction occurs in the system and the system enters into a manual steering state according to fail-safe function, power steering control module transmits power steering warning lamp signal to combination meter.
- Combination meter turns ON the power steering warning lamp according to the power steering warning lamp signal.

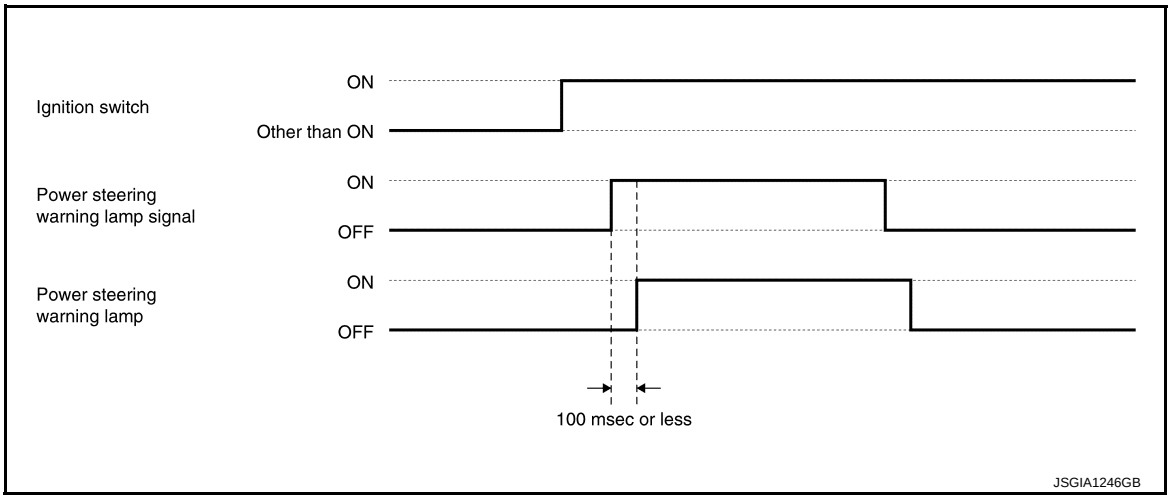
LIGHTING CONDITION

- Any malfunction occurs in the hydraulic pump electric power steering system and steering assist torque is not generated.
- For the relationship between warning lamp and DTC, refer to STC-25, "DTC Index" (hydraulic pump electric power steering), STC-76, "DTC Index" (EPS).

SHUTOFF CONDITION

- The ignition switch is in a position OFF.
- DTC is deleted.

TIMING CHART

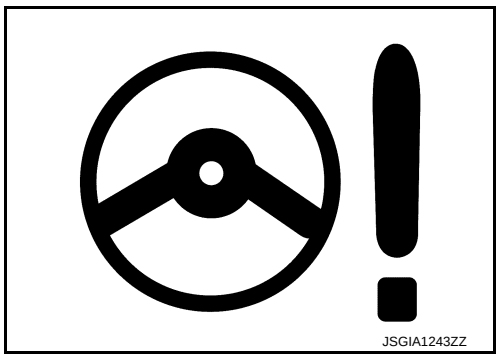


WARNING LAMPS/INDICATOR LAMPS : Power Steering Warning Lamp (Direct Adaptive Steering)

INFOID:0000000012791774

DESIGN/PURPOSE

It indicates that fail-safe mode is engaged and enters a manual steering state (Control turning force steering wheel becomes heavy).



BULB CHECK

Also turns ON when ignition switch is turned ON, for purpose of lamp check. Turns OFF after the engine starts, if system is normal.

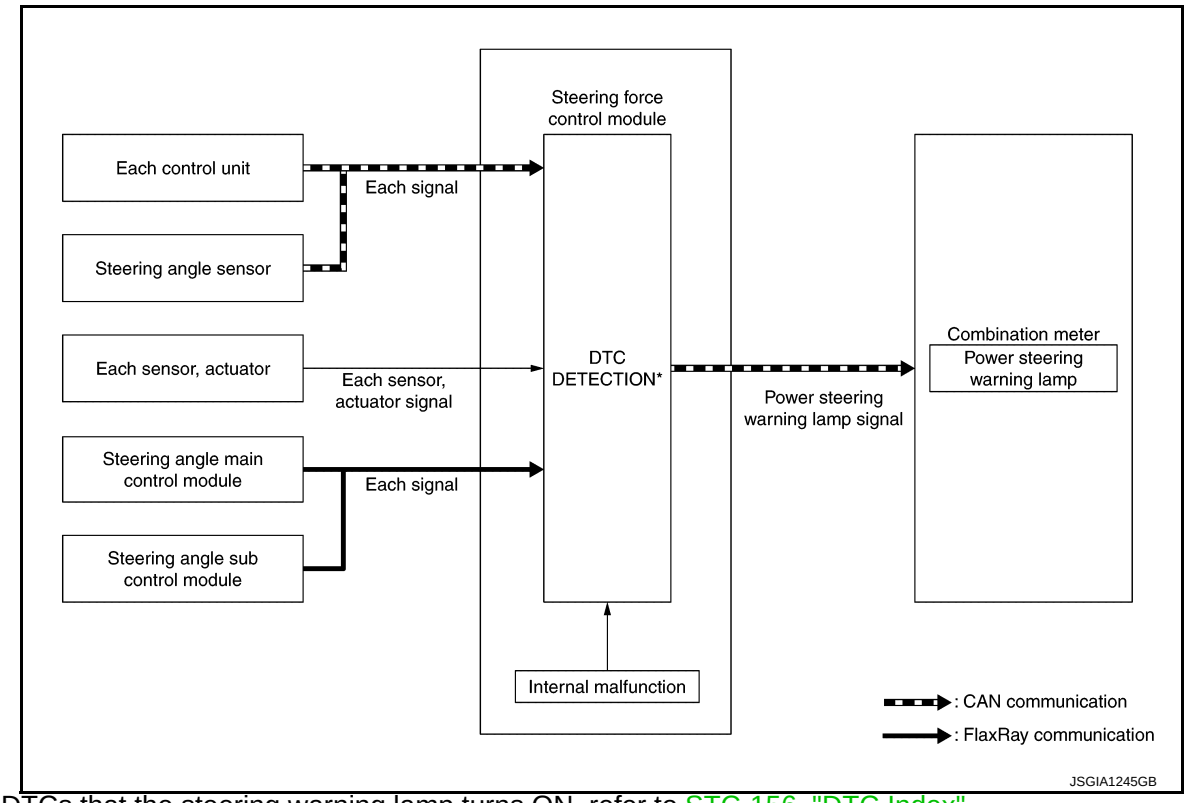
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



*: For DTCs that the steering warning lamp turns ON, refer to STC-156, "DTC Index".

SIGNAL PATH

- If any malfunction occurs in the system and the system enters into a manual steering state according to fail-safe function, steering force control module transmits power steering warning lamp signal to combination meter.
- Combination meter turns ON the power steering warning lamp according to the power steering warning lamp signal.

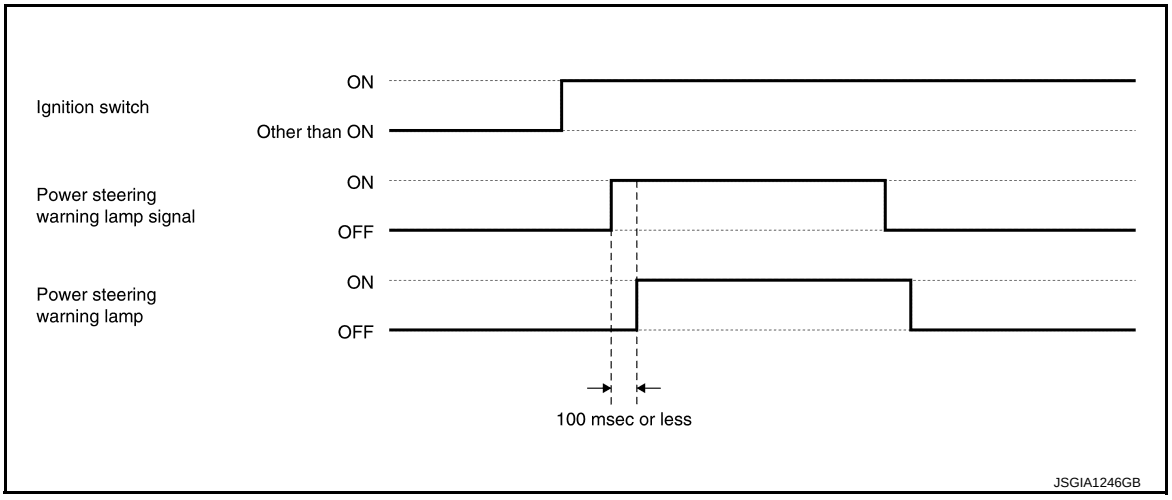
LIGHTING CONDITION

- Any malfunction occurs in the direct adaptive steering system and system is stopped. (manual steering state)
- For the relationship between warning lamp and DTC, refer to STC-156, "DTC Index".

SHUTOFF CONDITION

- The ignition switch is in a position OFF.
- DTC is deleted.

TIMING CHART



WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp

INFOID:0000000012791775

DESIGN/PURPOSE

Seat belt warning lamp warns the driver that driver or passenger seat belt is not fastened.

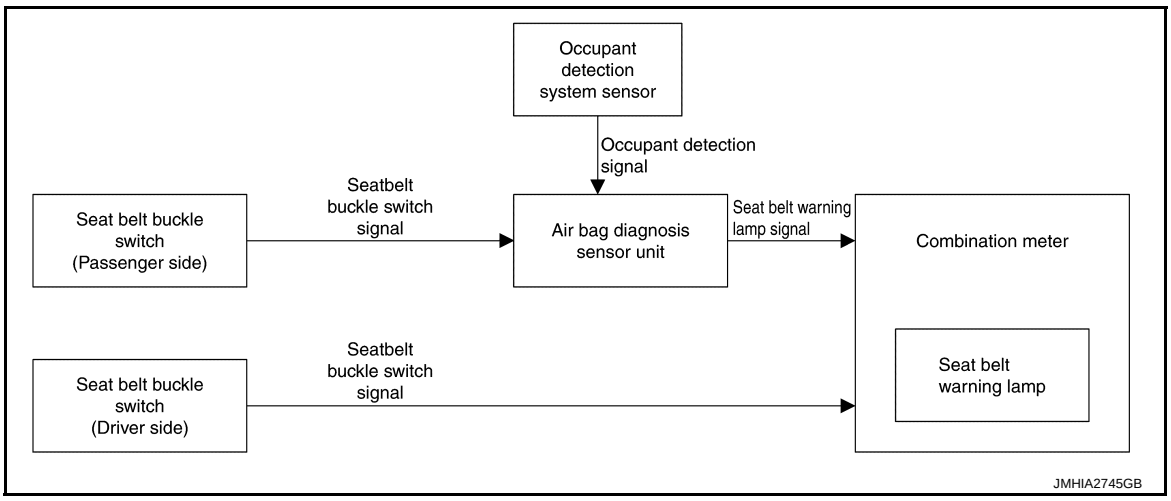
BULB CHECK

Not applicable.

SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable.

SYSTEM DIAGRAM



SIGNAL PATH

- Combination meter turns seat belt warning lamp ON according to driver or passenger seat belt buckle switch signal.
- The passenger side seat belt buckle switch signals only sent to combination meter when the air bag diagnosis sensor unit detects that a person sits in the passenger seat.
- Subsequently, when a person does not sit in the passenger seat, the illumination control of the warning lamp of the passenger side seat belt is not performed.

LIGHTING CONDITION

The illumination control that the seat belt warning lamp performs for the driver seat belt and the passenger seat belt each differ.
When either the driver seat belt or the passenger seat belt match the lighting conditions, the seat belt warning lamp illuminates.

Driver seat belt

Combination meter turns seat belt warning lamp ON when all of the following conditions are satisfied.

- Ignition switch is ON.
- Driver seat belt is not fastened.

Passenger seat belt

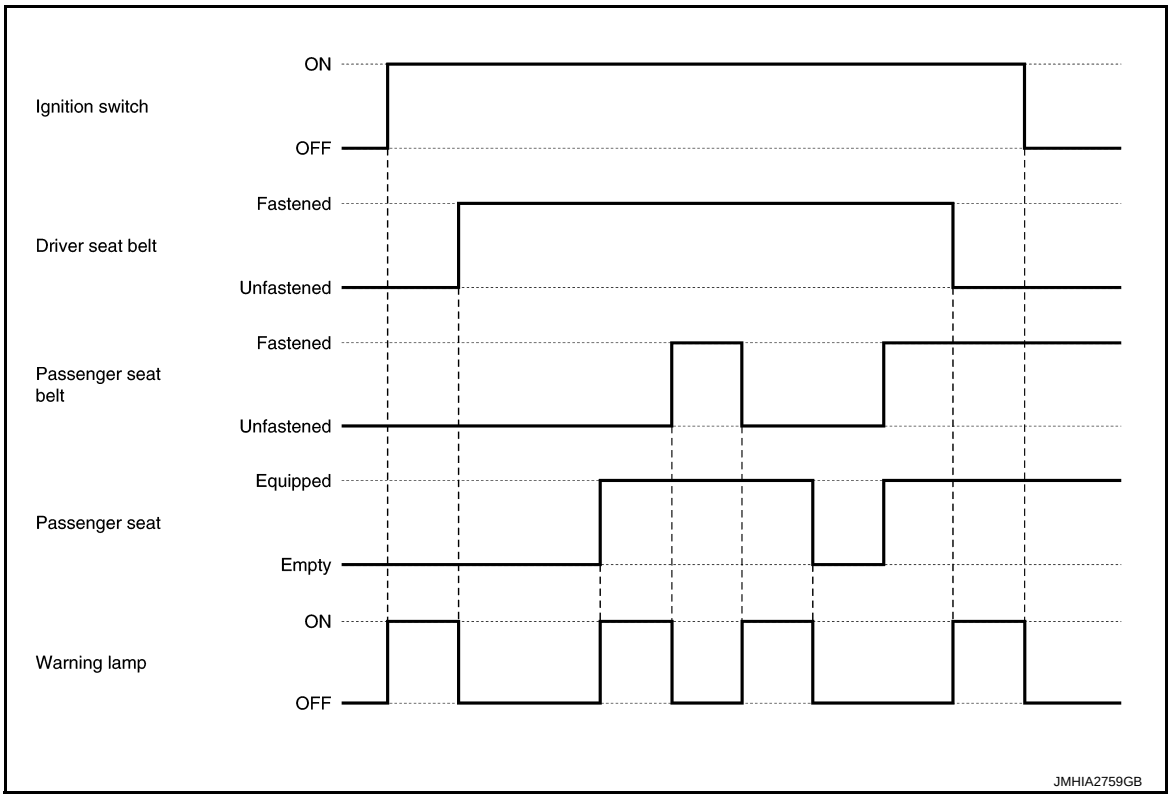
Combination meter turns seat belt warning lamp ON when all of the following conditions are satisfied.

- Ignition switch is ON.
- A person sits in the passenger seat.
- Passenger seat belt is not fastened.

SHUTOFF CONDITION

- Ignition switch is other than ON.
- Driver seat belt is fastened.
- Passenger seat belt is fastened or a person does not sit in the passenger seat.

TIMING CHART

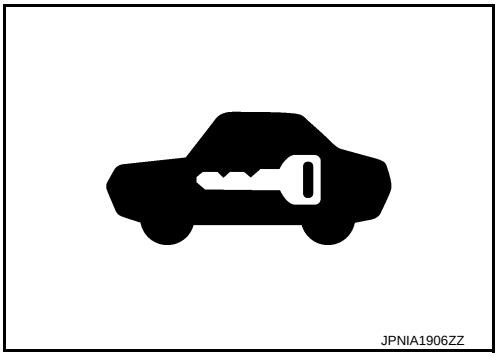


WARNING LAMPS/INDICATOR LAMPS : Security Indicator Lamp (Turn ON)

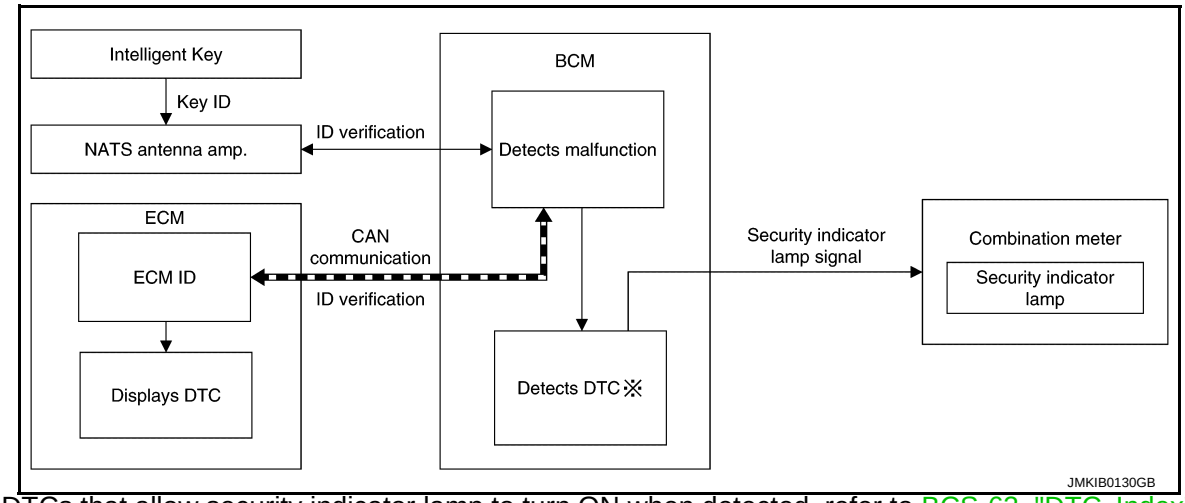
INFOID:0000000012791776

DESIGN/PURPOSE

The warning lamp warns the driver that INFINITI VEHICLE IMMOBILIZER SYSTEM is not normal.



SYSTEM DIAGRAM



*: For DTCs that allow security indicator lamp to turn ON when detected, refer to BCS-63, "DTC Index".

SIGNAL PATH

- BCM transmits security indicator lamp signal to combination meter when a malfunction of INFINITI VEHICLE IMMOBILIZER SYSTEM is detected.
- Combination meter turns security indicator lamp ON, according to security indicator lamp signal.

LIGHTING CONDITION

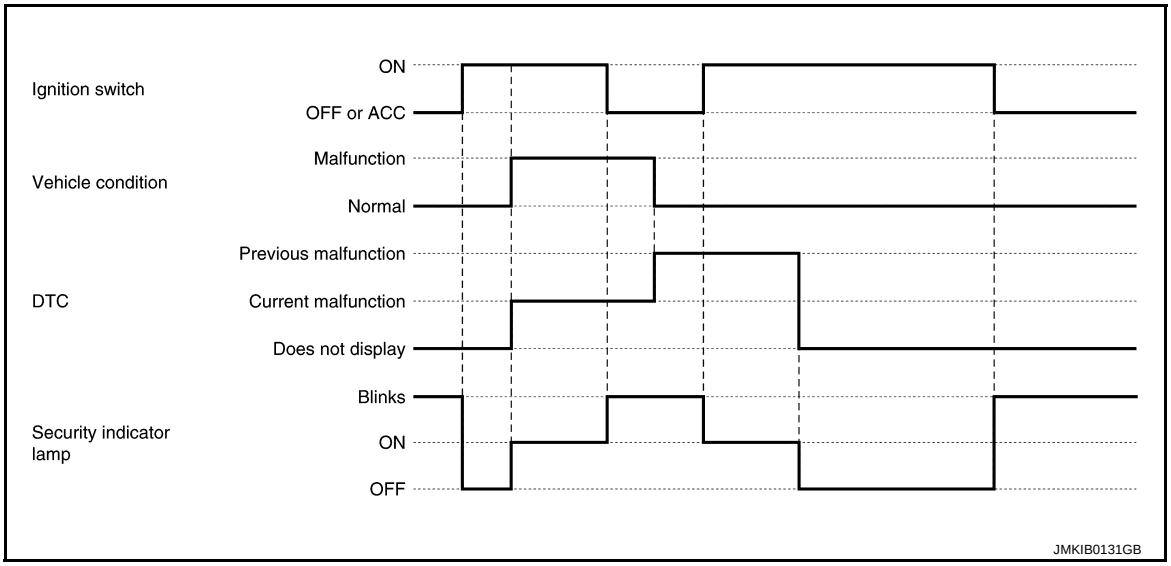
When all of the following conditions are satisfied.

- Ignition switch: ON position
- A malfunction of engine immobilizer system is detected

SHUTOFF CONDITION

Erase DTC

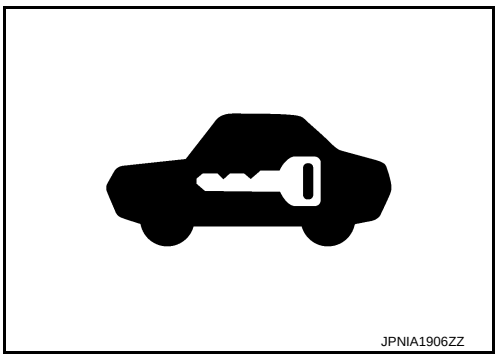
TIMING CHART



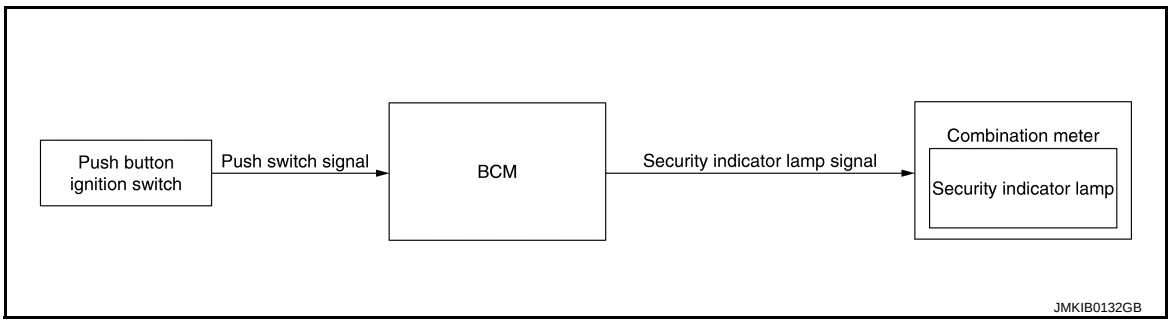
WARNING LAMPS/INDICATOR LAMPS : Security Indicator Lamp (Blinks) INFOID:0000000012791777

DESIGN/PURPOSE

The indicator lamp warns externally that the vehicle is equipped with INFINITI VEHICLE IMMOBILIZER SYSTEM.



SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits security indicator lamp signal to combination meter when ignition switch is turned OFF
- Combination meter blinks security indicator lamp, according to security indicator lamp signal.

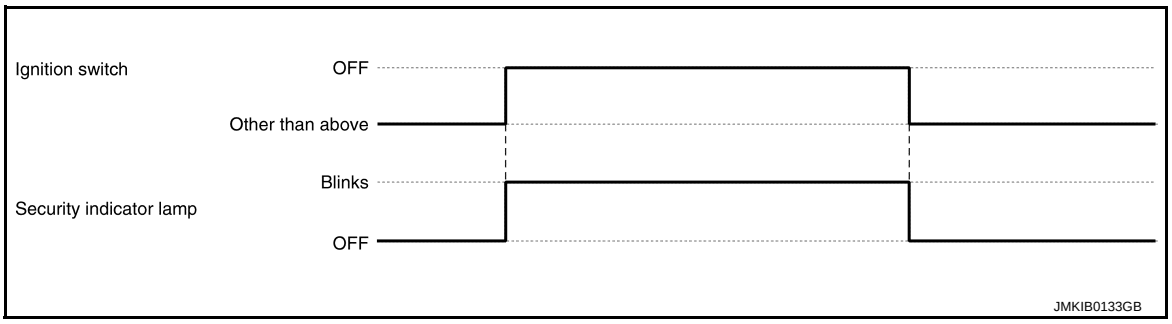
LIGHTING CONDITION

Ignition switch: OFF position

SHUTOFF CONDITION

Ignition switch: Except OFF position

TIMING CHART

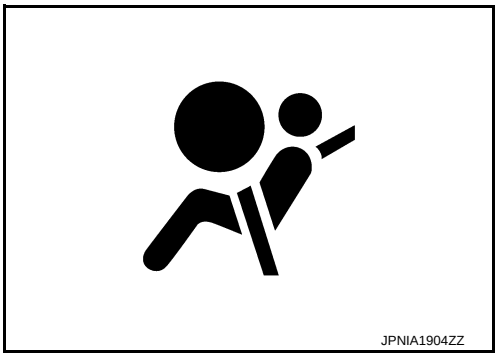


WARNING LAMPS/INDICATOR LAMPS : SRS Air Bag Warning Lamp

INFOID:0000000012791778

DESIGN/PURPOSE

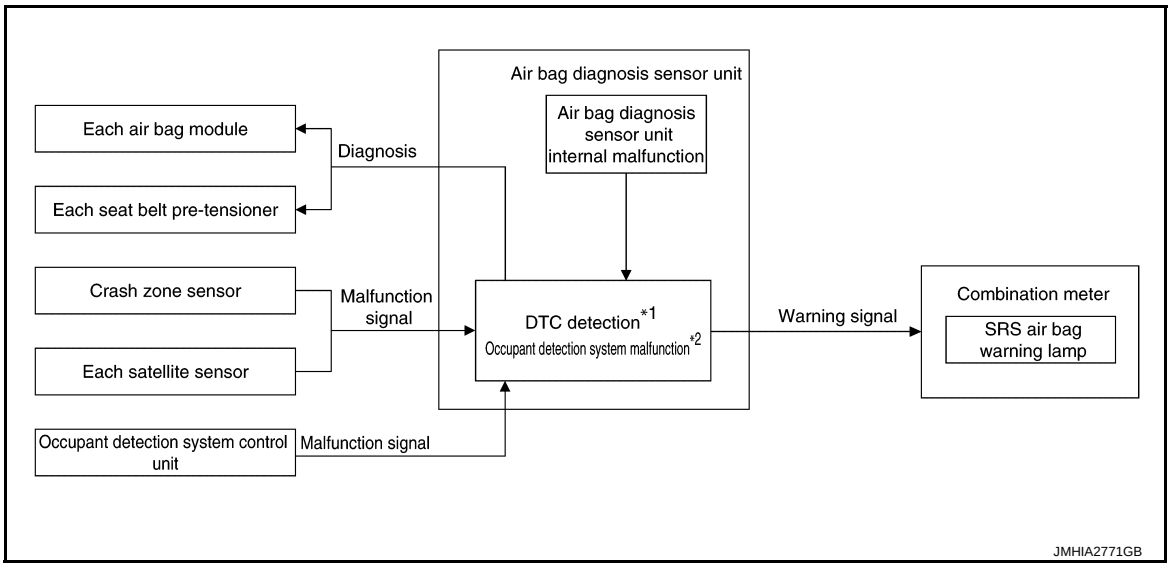
The warning lamp warns the driver that SRS air bag system is not normal.



BULB CHECK

For seven seconds after the ignition switch is turned ON.

SYSTEM DIAGRAM



NOTE:

- *1: For DTCs of the SRS air bag system, refer to SRC-16, "On Board Diagnosis Function".
- *2: For occupant detection system control unit, malfanction signal includes the zero point reset not yet performed.

SIGNAL PATH

- When a malfunction is detected, air bag diagnosis sensor unit transmits the warning signal to combination meter.
- Combination meter turns SRS air bag warning lamp ON, according to the received signal.

LIGHTING CONDITION

When a malfunction of the following part or status is detected.

- Deployment of air bag
- Air bag diagnosis sensor unit
- Combination meter
- Circuit between air bag diagnosis sensor unit and combination meter
- Battery voltage not normal (approximately 9 V or less, or 16 V or more)
- Each air bag module main unit
- Each seat belt pre-tensioner main unit
- Crash zone sensor main unit
- Each satellite sensor
- Circuit between each air bag module and air bag diagnosis sensor unit
- Circuit between each seat belt pre-tensioner and air bag diagnosis sensor unit
- Circuit between crash zone sensor and air bag diagnosis sensor unit
- Circuit between each satellite sensor and air bag diagnosis sensor unit
- Occupant detection system control unit (Includes the zero point reset not yet performed.)

NOTE:

For the relation between warning lamp and DTC, refer to SRC-16, "On Board Diagnosis Function", SRC-21, "CONSULT Function", and SRC-23, "DTC Index".

SHUTOFF CONDITION

When Being Turned ON Due to Deployment of Air Bag

Replace air bag diagnosis sensor unit.

NOTE:

After air bag deployment, perform collision diagnosis including replacement of each air bag module, refer to SR-11, "FOR FRONTAL COLLISION : When SRS is activated in a collision" (For front collision), and SR-13, "FOR SIDE AND ROLLOVER COLLISION : When SRS is activated in a collision" (For side collision).

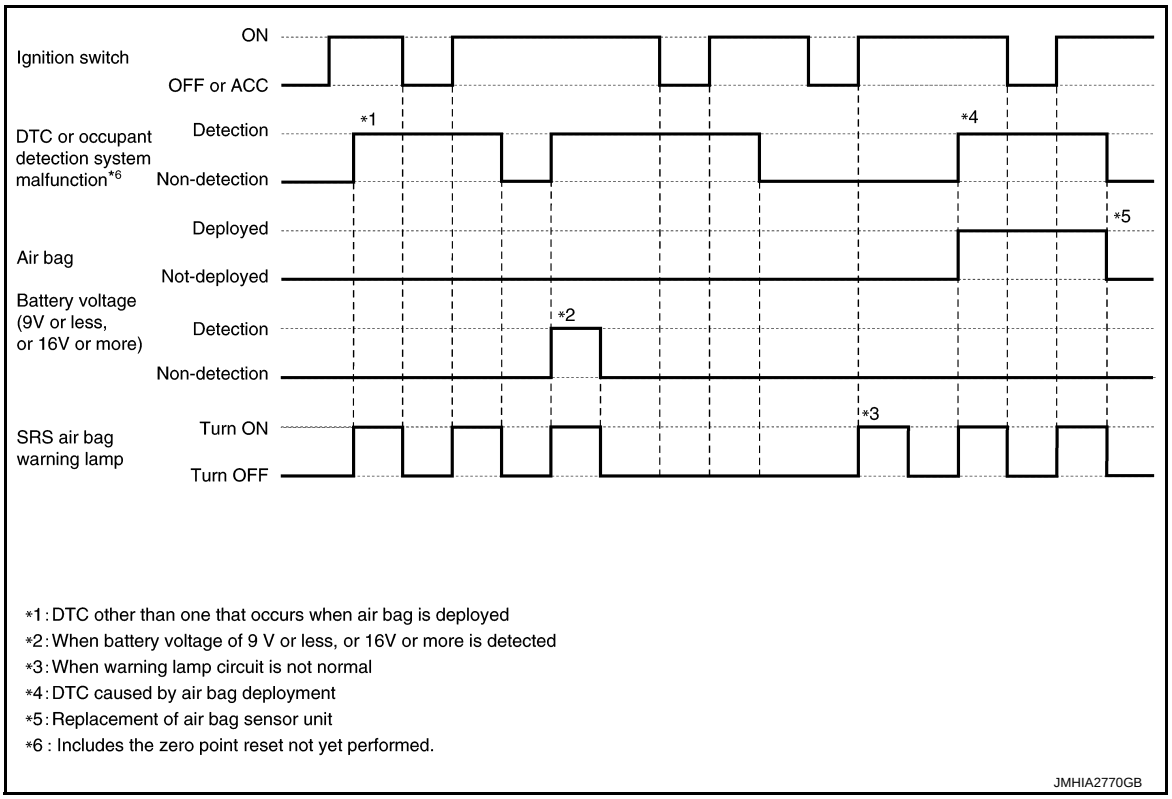
When Turned ON Due to a Malfunction of SRS Air Bag Warning Lamp Circuit

Repair SRS air bag warning lamp circuit system.

When Turned ON Due to a Malfunction of Air Bag Module or Air Bag Module Circuit
Repair the malfunctioning part. Erase self-diagnosis result memory.

When Turned ON Due to a Malfunction of Occupant Detection System Control Unit
- Performe the zero point reset.
- Replace Occupant detection system control unit or the malfunction parts.

TIMING CHART

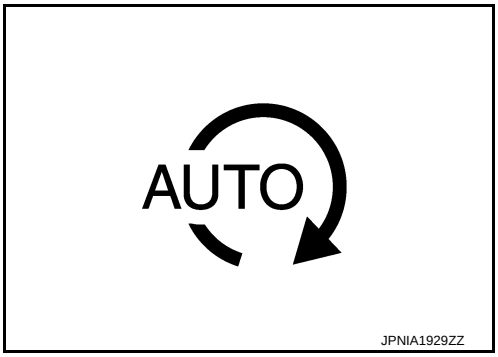


WARNING LAMPS/INDICATOR LAMPS : Stop/Start Indicator Lamp

INFOID:0000000013448008

DESIGN/PURPOSE

The stop/start indicator lamp informs the driver of the status of the stop/start system.
- Turns ON while the stop/start system is operating.
- Blinks at low speed when a malfunction related to the stop/start system is detected after engine start.
- Blinks at high speed and sounds the warning buzzer when the driver's operation is judged as improper operation while the stop/start system is operating.



BULB CHECK

Not applicable

SYNCHRONIZATION WITH WARNING CHIME

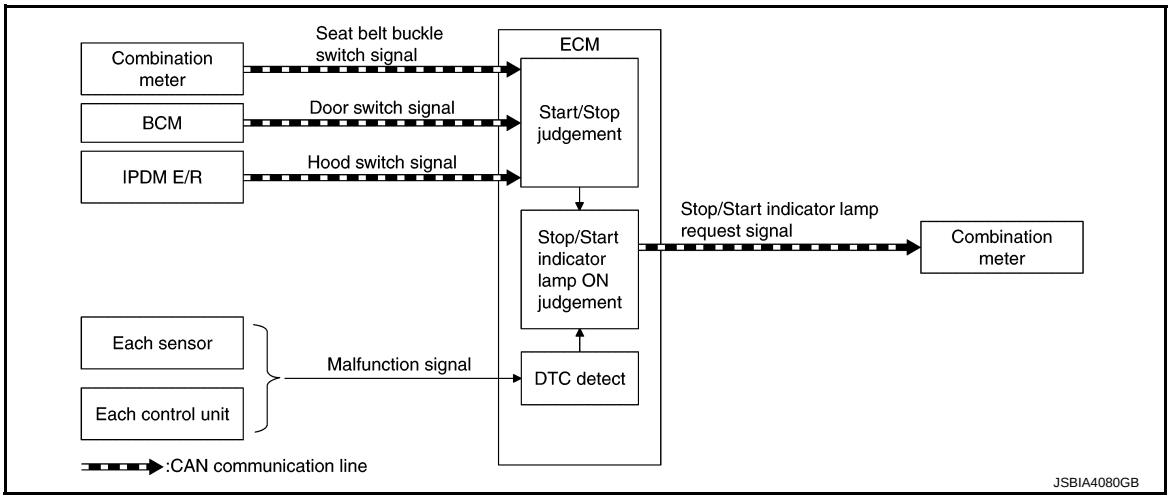
Applicable

For warning chime, refer to WCS-20, "WARNING CHIME : Stop/Start warning".

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For the operation for CAN communication blackout in the combination meter, refer to MWI-86, "Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- ECM transmits a stop/start indicator lamp request signal to the combination meter via CAN communication when the stop/start system operation is permitted or a malfunction is detected.
- The combination meter turns ON or blinks the stop/start indicator lamp according to a signal transmitted from ECM.

LIGHTING CONDITION

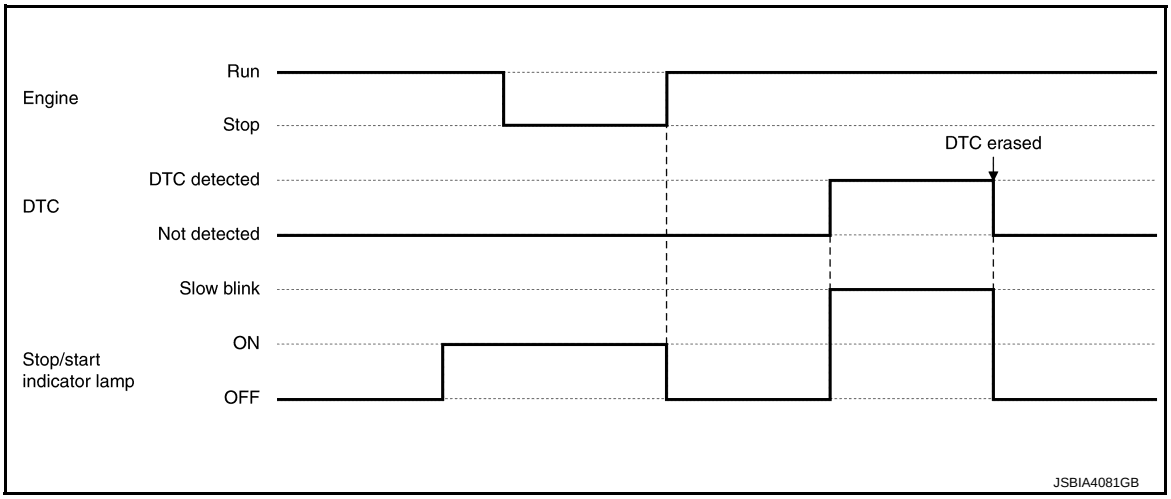
- During stop/start system operation.
- DTC is detected. (Low speed blinking.)
- The hood is opened during stop/start system operation. (High speed blinking and buzzer sounding.)

NOTE:
When the hood is opened, the stop/start system is cancelled and the engine cannot be restarted automatically. Accordingly, the engine needs to be started with the ignition key.
For details, refer to WCS-20, "WARNING CHIME : Stop/Start warning".

SHUTOFF CONDITION

- The operation permit conditions of the stop/start system are not satisfied.
- After an engine restart.
- After erasing DTC.

TIMING CHART

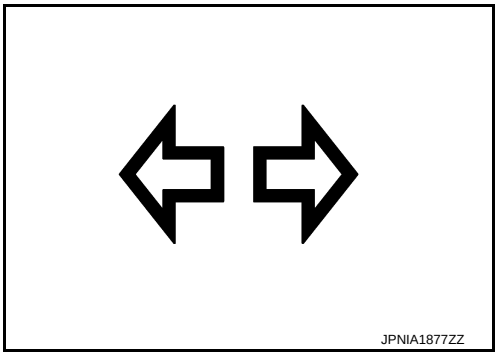


WARNING LAMPS/INDICATOR LAMPS : Turn Signal Indicator Lamp

INFOID:0000000012791779

DESIGN/PURPOSE

Turn signal indicator lamp informs the driver that turn signal lamp is in ON status.



BULB CHECK

Not applicable

SYNCHRONIZATION WITH WARNING CHIME

Synchronization is applied.
For warning chime, refer to EXL-34, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description".

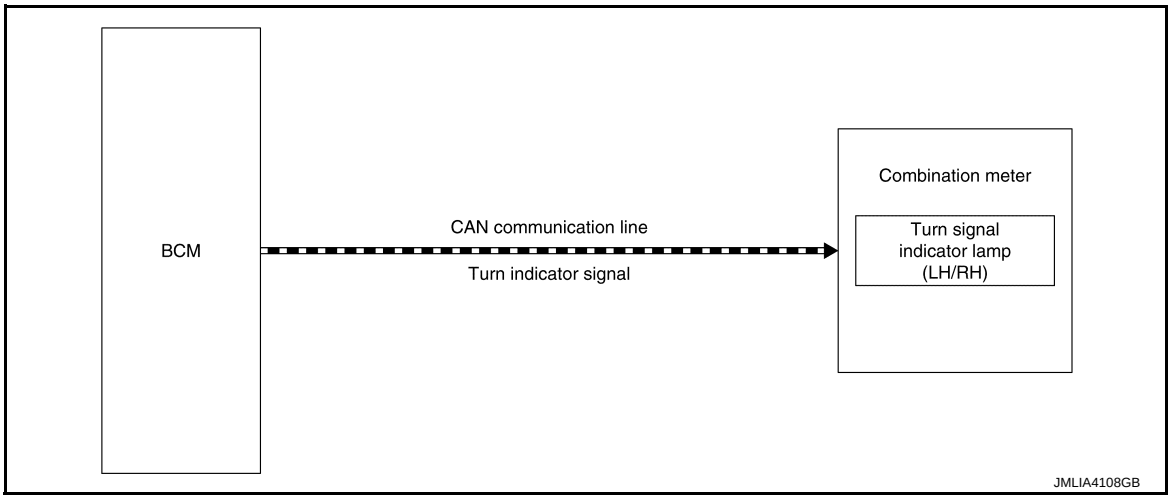
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM transmits turn indicator signal to combination meter via CAN communication when turn signal lamp is in ON status.
- When combination meter receives turn indicator signal, combination meter turns turn signal indicator lamp ON.

LIGHTING CONDITION

Turn Signal Indicator Lamp (LH)
When turn signal lamp (LH) is turned ON.

Turn Signal Indicator Lamp (RH)
When turn signal lamp (RH) is turned ON.

SHUTOFF CONDITION

Turn Signal Indicator Lamp (LH)
When turn signal lamp (LH) is turned OFF.

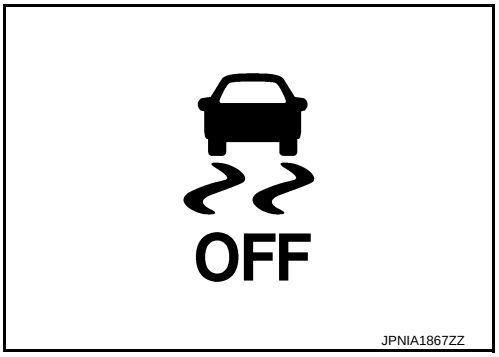
Turn Signal Indicator Lamp (RH)
When turn signal lamp (RH) is turned OFF.

WARNING LAMPS/INDICATOR LAMPS : VDC OFF Indicator Lamp

INFOID:0000000012791780

DESIGN/PURPOSE

The VDC OFF indicator lamp warns the driver that VDC function and TCS function are OFF.



BULB CHECK

The VDC OFF indicator lamp turns ON and stays ON for several seconds after turning ON the ignition switch.

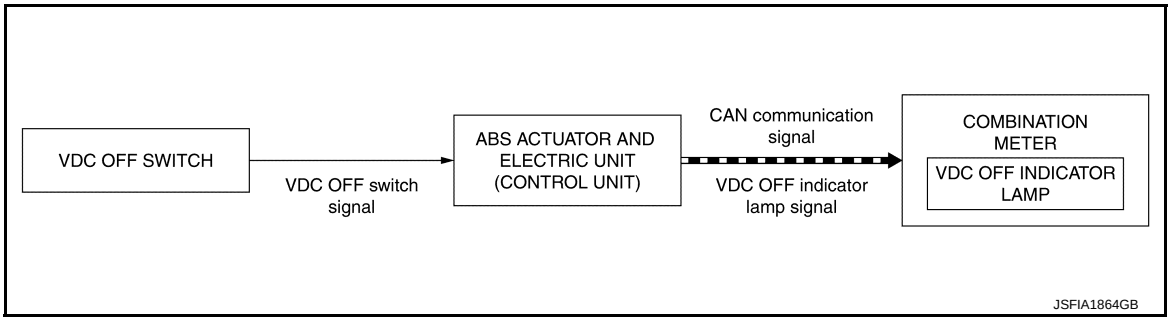
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- The ABS actuator and electric unit (control unit) receives a VDC OFF switch signal from the VDC OFF switch.
- The ABS actuator and electric unit (control unit) transmits a VDC OFF indicator lamp signal to the combination meter via CAN communication according to the received VDC OFF switch signal.
- The combination meter turns ON the VDC OFF indicator lamp when receiving a VDC OFF indicator lamp signal.

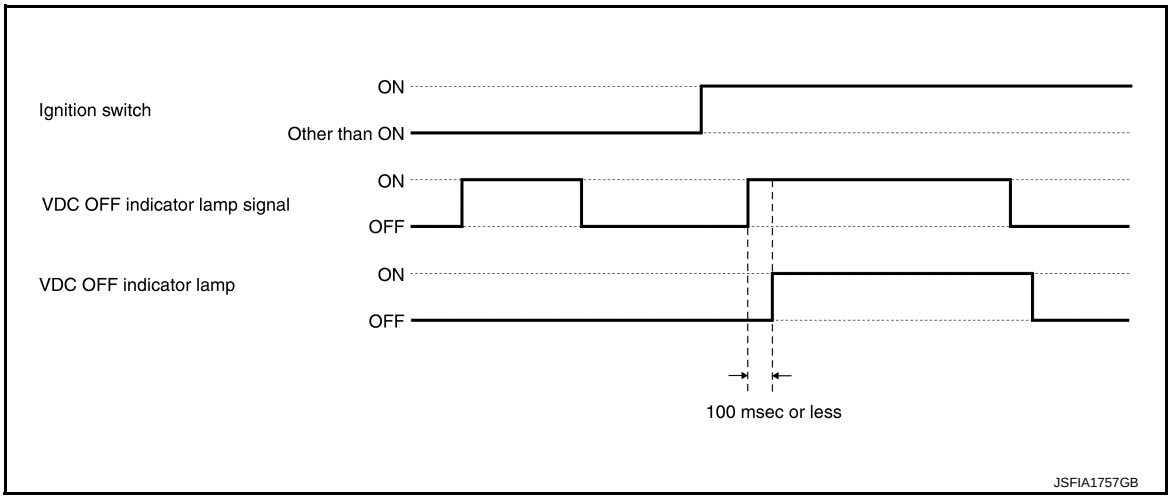
LIGHTING CONDITION

When all of the following conditions are satisfied:
- Ignition switch ON
- VDC OFF switch ON (VDC function and TCS function non-operational status)

SHUTOFF CONDITION

When any of the following conditions is satisfied:
- Ignition switch other than ON
- VDC OFF switch OFF (VDC function and TCS function standby status)

TIMING CHART

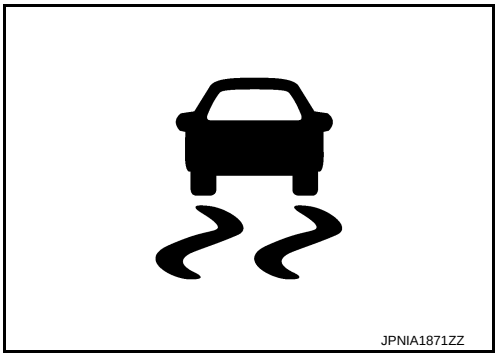


WARNING LAMPS/INDICATOR LAMPS : VDC Warning Lamp

INFOID:0000000012791781

DESIGN/PURPOSE

- When VDC function, TCS function, or brake limited slip differential (BLSD) function is activated, the VDC warning lamp blinks to inform the driver of the activation of the function.
- When VDC function, TCS function, ABS function, EBD function, brake limited slip differential (BLSD) function brake assist function, hill start assist function or brake force distribution function of the ABS actuator and electric unit (control unit) has a malfunction, the VDC warning lamp turns ON to warn the driver of the malfunction.
  NOTE:
  The VDC warning lamp may turn ON when the brake warning lamp or ABS warning lamp turns ON. For details, refer to BRC-18, "System Description".



BULB CHECK

The VDC warning lamp turns ON and stays ON for several seconds after turning ON the ignition switch.

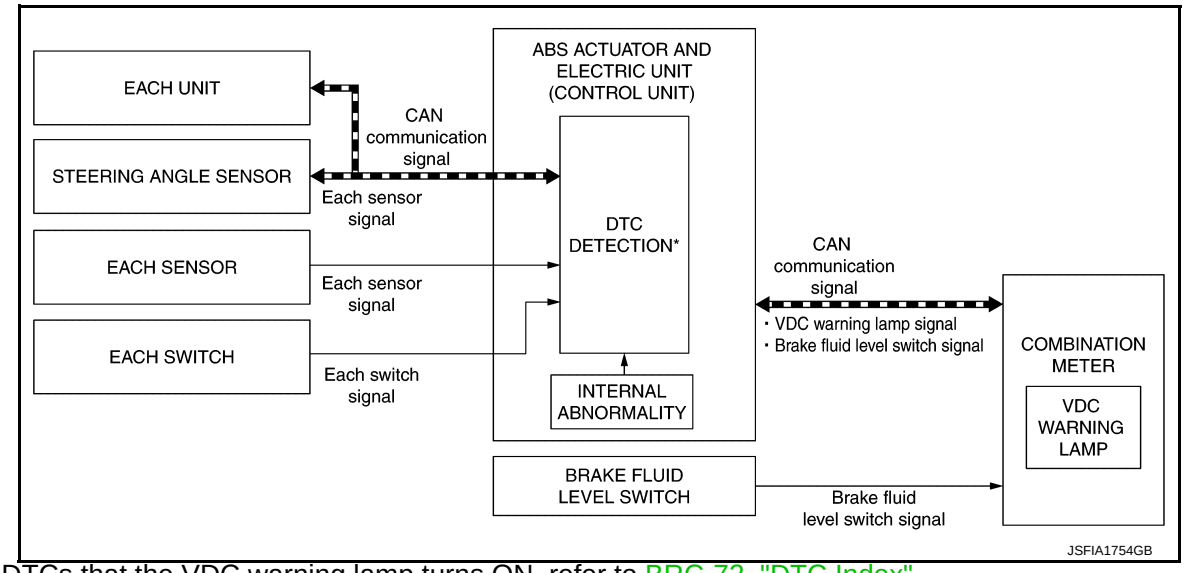
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to MWI-17, "METER SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



*: For DTCs that the VDC warning lamp turns ON, refer to BRC-72, "DTC Index".

SIGNAL PATH

When Operating VDC Function, TCS Function, Brake Limited Slip Differential (BLSD) Function

- The ABS actuator and electric unit (control unit) transmits a VDC warning lamp signal to the combination meter via CAN communication when operating in the VDC function, TCS function, or brake limited slip differential (BLSD) function.
- The combination meter blinks the VDC warning lamp when receiving a VDC warning lamp signal.

When VDC Function, TCS Function, Brake Limited Slip Differential (BLSD) Function, Brake Assist Function, hill start assist Function or Brake Force Distribution Function Are In Abnormal State

- The ABS actuator and electric unit (control unit) transmits a VDC warning lamp signal to the combination meter via CAN communication when detecting a malfunction in the VDC function, TCS function, brake limited slip differential (BLSD) function, brake assist function, hill start assist function or brake force distribution function
- The combination meter turns ON the VDC warning lamp when receiving a VDC warning lamp signal.
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

LIGHTING CONDITION

LIGHTING CONDITION

- A malfunction is detected in the VDC function, TCS function, ABS function, EBD function brake limited slip differential (BLSD) function, brake assist function, hill start assist function or brake force distribution function of the ABS actuator and electric unit (control unit).
- For the relationship between warning lamp and DTC, refer to BRC-72, "DTC Index".

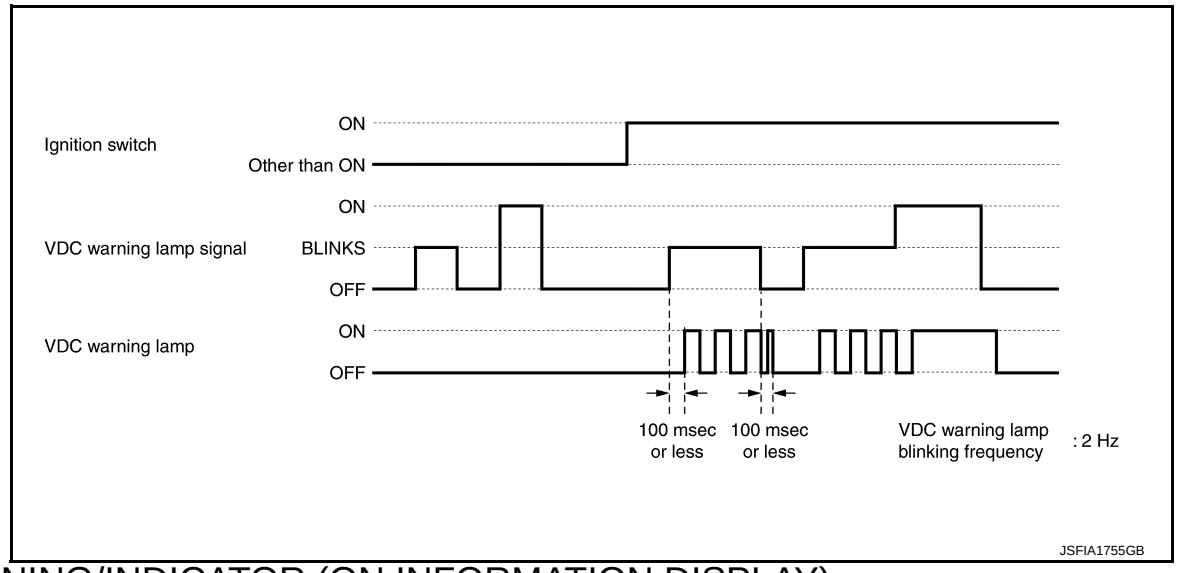
BLINKING CONDITION

When VDC function, TCS function, or brake limited slip differential (BLSD) function is under operating conditions.

SHUTOFF CONDITION

- DTC is deleted.
- When VDC function, TCS function, or brake limited slip differential (BLSD) function is not under operating conditions.
- The ignition switch is in a position other than ON.

TIMING CHART



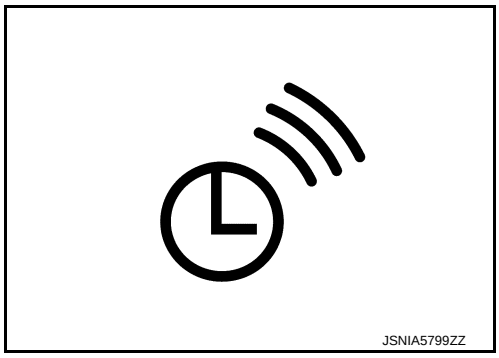
WARNING/INDICATOR (ON INFORMATION DISPLAY)

WARNING/INDICATOR (ON INFORMATION DISPLAY) : Alert

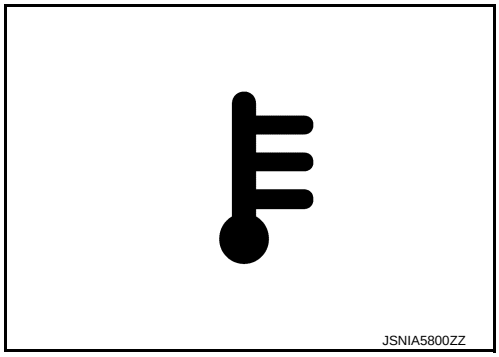
INFOID:0000000012791782

DESIGN/PURPOSE

Travel Time
To warn the driver when driving the vehicle more than set value time.

Symbol	Massage
 JSNIA5799ZZ	Time for a driver break?

Low Outside Temperature
To warn the driver that the outside air temperature is low.

Symbol	Massage
 JSNIA5800ZZ	Low Outside Temperature

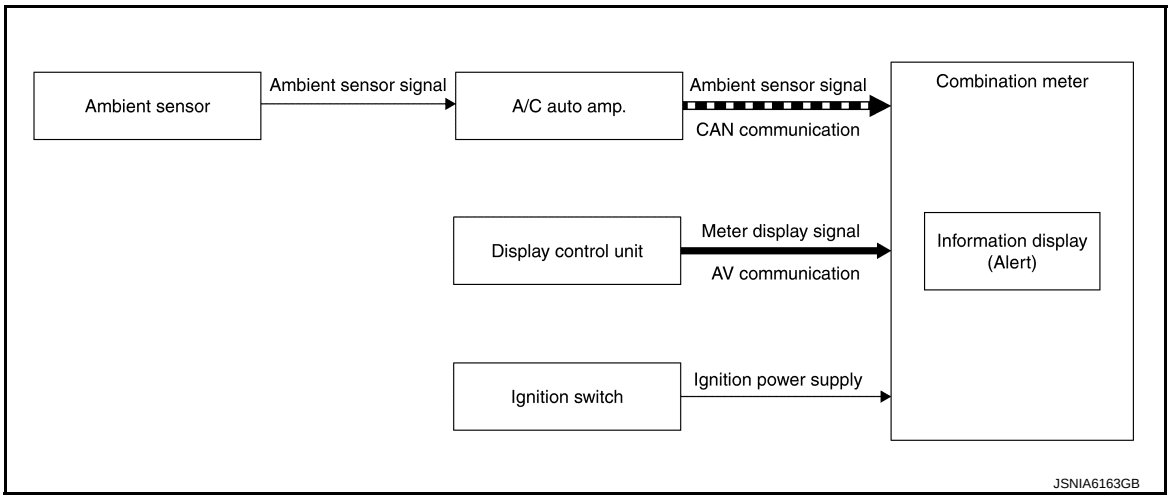
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

SYNCHRONIZATION WITH WARNING CHIME

Not applicable

SYSTEM DIAGRAM



SIGNAL PATH

Travel Time

Combination meter shows the interrupt travel time according to a meter display signal transmitted via AV communication.

Low Outside Temperature

Combination meter shows the interrupt low outside temperature according to an ambient sensor signal transmitted from A/C auto amp. via CAN communication.

For outside temperature display, refer to MWI-61, "INFORMATION DISPLAY : System Description".

WARNING/INDICATOR OPERATING CONDITION

Travel Time

When all of the following conditions are satisfied:

- Ignition switch ON
- Time is more than the value set with the integral switch.

Low Outside Temperature

When all of the following conditions are satisfied:

- Ignition switch ON
- Outside temperature display less than 3°C (37°F)
- Setting ON

WARNING/INDICATOR CANCEL CONDITION

Travel Time

- Ignition switch OFF
- Press the display switch

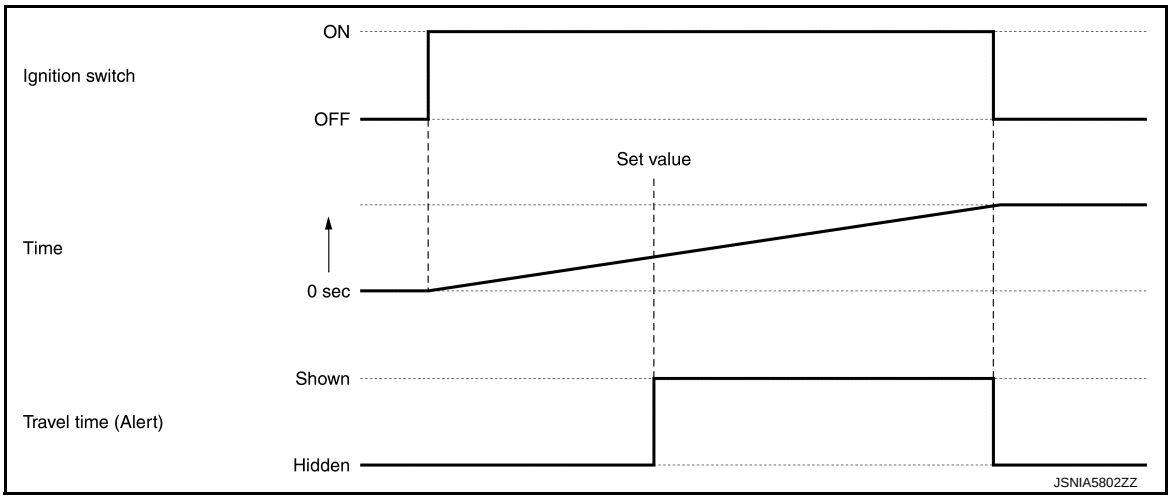
Low Outside Temperature

When any of the following conditions are satisfied:

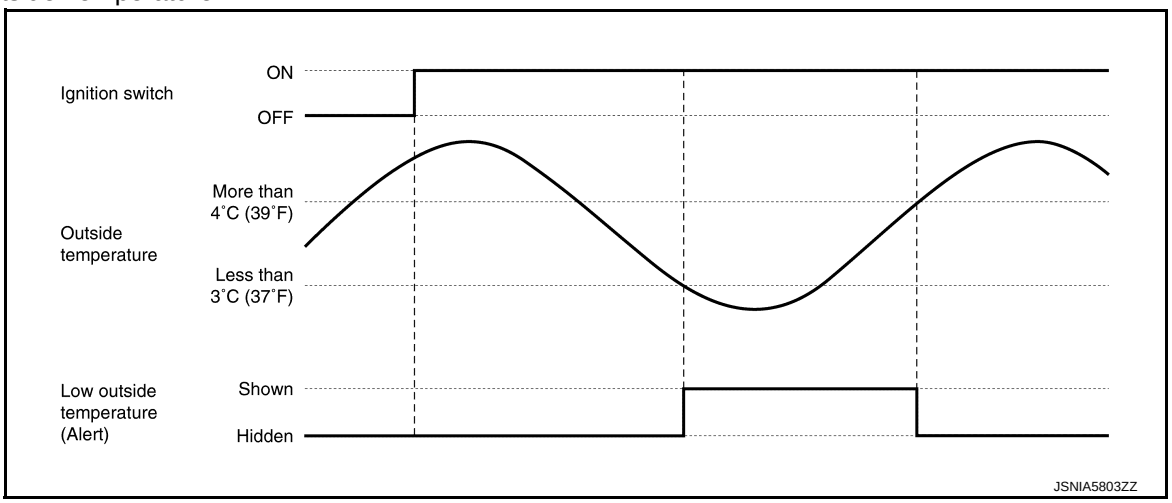
- Outside temperature display more than 4°C (39°F)
- Press the display switch

TIMING CHART

Travel Time



Low Outside Temperature

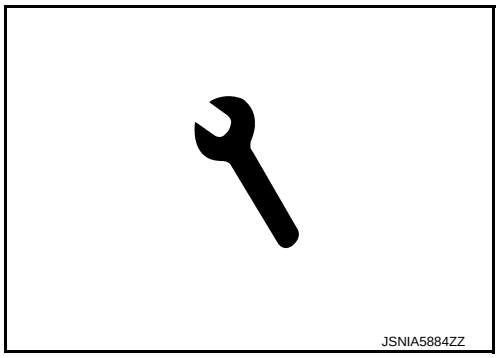
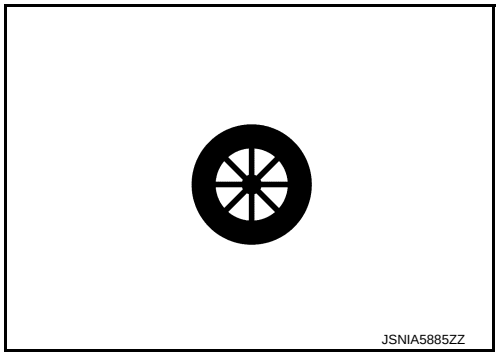
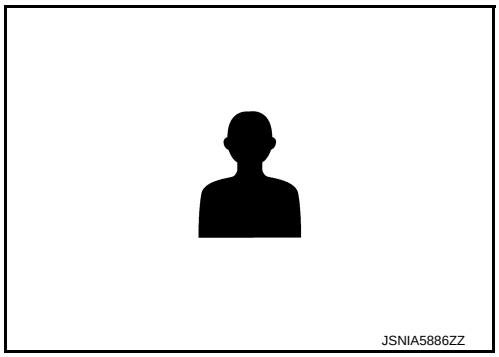


WARNING/INDICATOR (ON INFORMATION DISPLAY) : Maintenance

INFOID:0000000012791783

DESIGN/PURPOSE

The combination meter alerts the driver maintenance items (engine oil, oil filter, tires or other) when mileage exceeds a set value.

Symbol	Message
 JSNIA5884ZZ	Oil and Filter
 JSNIA5885ZZ	Tire
 JSNIA5886ZZ	Other

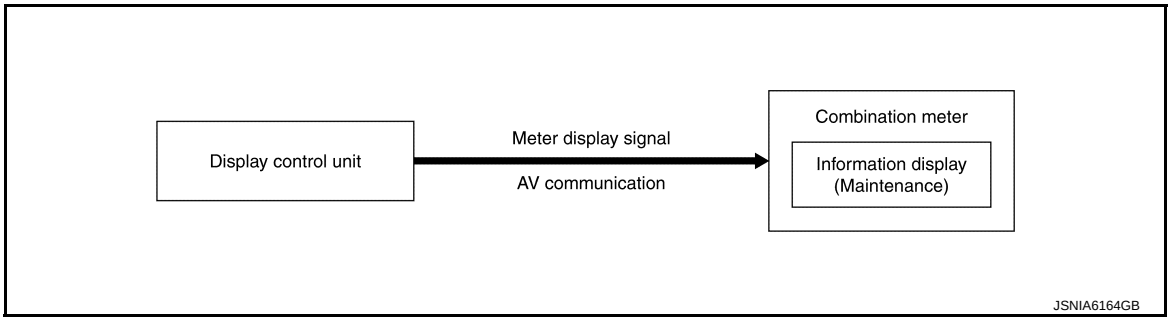
SYNCHRONIZATION WITH MASTER WARNING LAMP

Not applicable

SYNCHRONIZATION WITH WARNING CHIME

Not applicable

SYSTEM DIAGRAM



SIGNAL PATH

Combination meter shows the maintenance items, according to a meter display signal transmitted via AV communication.

WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied:
- Ignition switch ON
- Distance traveled is more than the value set with the integral switch.

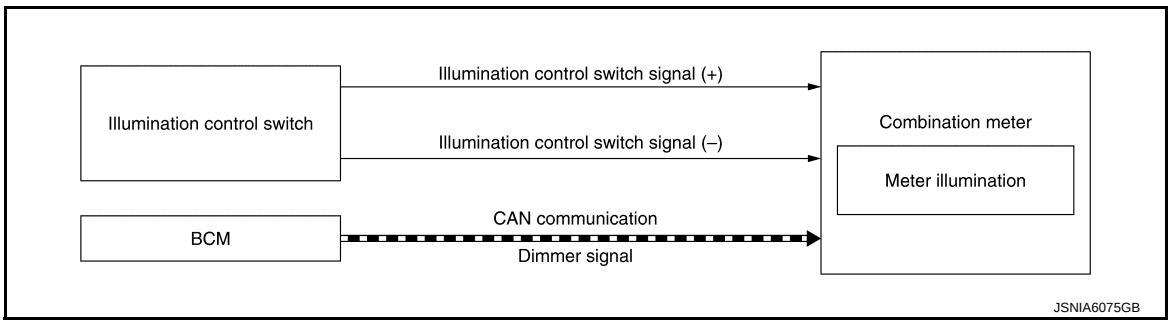
WARNING/INDICATOR CANCEL CONDITION
When being reset with integral switch.

METER ILLUMINATION CONTROL

METER ILLUMINATION CONTROL : System Description

INFOID:0000000012791784

SYSTEM DIAGRAM



DESCRIPTION

Back Light Illumination Control Function
The operation of the illumination control switch allows the brightness adjustment of meter illumination.

Meter illumination	The number of adjustable steps
Daytime	22 step
Nighttime	22 step

Meter Illumination Control Function
- Combination meter controls meter illumination, based on the dimmer signal.
- The combination meter switches mode between Daytime mode and Nighttime mode, according to the following conditions.

Condition			Meter illumination
Combination switch (lighting switch)	1ST or 2ND position	Outdoor: Bright*	Daytime mode
		Outdoor: Dark*	Nighttime mode
	AUTO POSITION	Outdoor: Bright*	Daytime mode
		Outdoor: Dark*	Nighttime mode
	Off		Daytime mode

*: For further information, refer to INL-14, "ILLUMINATION CONTROL SYSTEM : System Description".

Signal Path

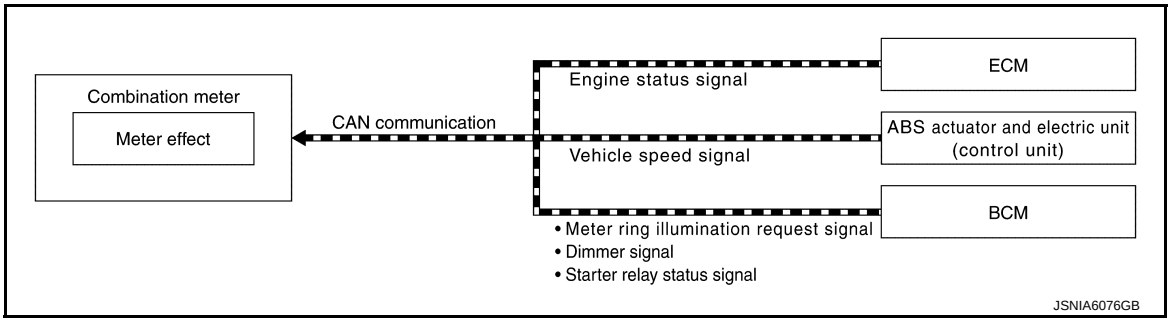
Signal name	Signal path
Ignition signal	—
Dimmer signal	BCM —CAN→ Combination meter

METER EFFECT FUNCTION

METER EFFECT FUNCTION : System Description

INFOID:0000000012791785

SYSTEM DIAGRAM



DESCRIPTION

Driver Welcome Function

Meter and Illumination Operations During Driver Welcome Function

The combination meter controls the following items during the driver welcome function.

Control item	Operation
Illumination ring	Increases the brightness to the effect level in stages.

NOTE:

Illumination is turned off while cranking the engine.

Driver Welcome Judgement

The combination meter judges “driver welcome” and activates the driver welcome function only once when the following operational conditions are all satisfied.

Operational condition	
Ignition switch	LOCK position
Driver side door	Open → Close*

*: Close the driver side door with the intelligent key left inside the vehicle.

Signal Path

The combination meter judges “driver welcome”, according to the following signals and activates the engine-start effect function.

Signal name	Signal path
Ignition signal	—
Meter ring illumination request signal	BCM —CAN→ Combination meter

NOTE:

The driver welcome function ends if any one of the above conditions is lost during the activation of this function.

Engine-start Effect Function

When recognizing an engine start, the combination meter controls the following items for producing the effect.

- Speedometer
- Tachometer
- Information display
- Meter illumination

Meter and Illumination Operations During Engine-start Effect

The combination meter controls the following items during the engine-start effect.

Control item	Operation
Speedometer	Sweeps the pointer.
Tachometer	Sweeps the pointer.
Illumination ring	Increases the brightness to the effect level in stages.
Pointers	Turns on the illumination at the effect level.
Information display	Display the animation.

NOTE:
The pointers are stopped and illumination is turned off while cranking the engine.

Engine Start Judgement
The combination meter judges “engine-start” and activates the engine-start effect only once when the following operational conditions are all satisfied.

Operational condition	
Ignition switch	ON position
Vehicle speed	Less than 1 km/h (0.6 MPH)
Engine state	Other than the time of cranking the engine
Setting (Integral switch)	The setting of “Illumination Effect” is “On”

NOTE:
The engine-start effect exits when any of the above operational conditions is cancelled during the engine-start effect.

Signal Path
The combination meter judges “engine-start”, according to the following signals and activates the engine-start effect function.

Signal name	Signal source
Ignition signal	—
Dimmer signal	BCM CAN Combination meter
Engine status signal	ECM CAN Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) CAN Combination meter
Starter relay status signal	BCM CAN Combination meter

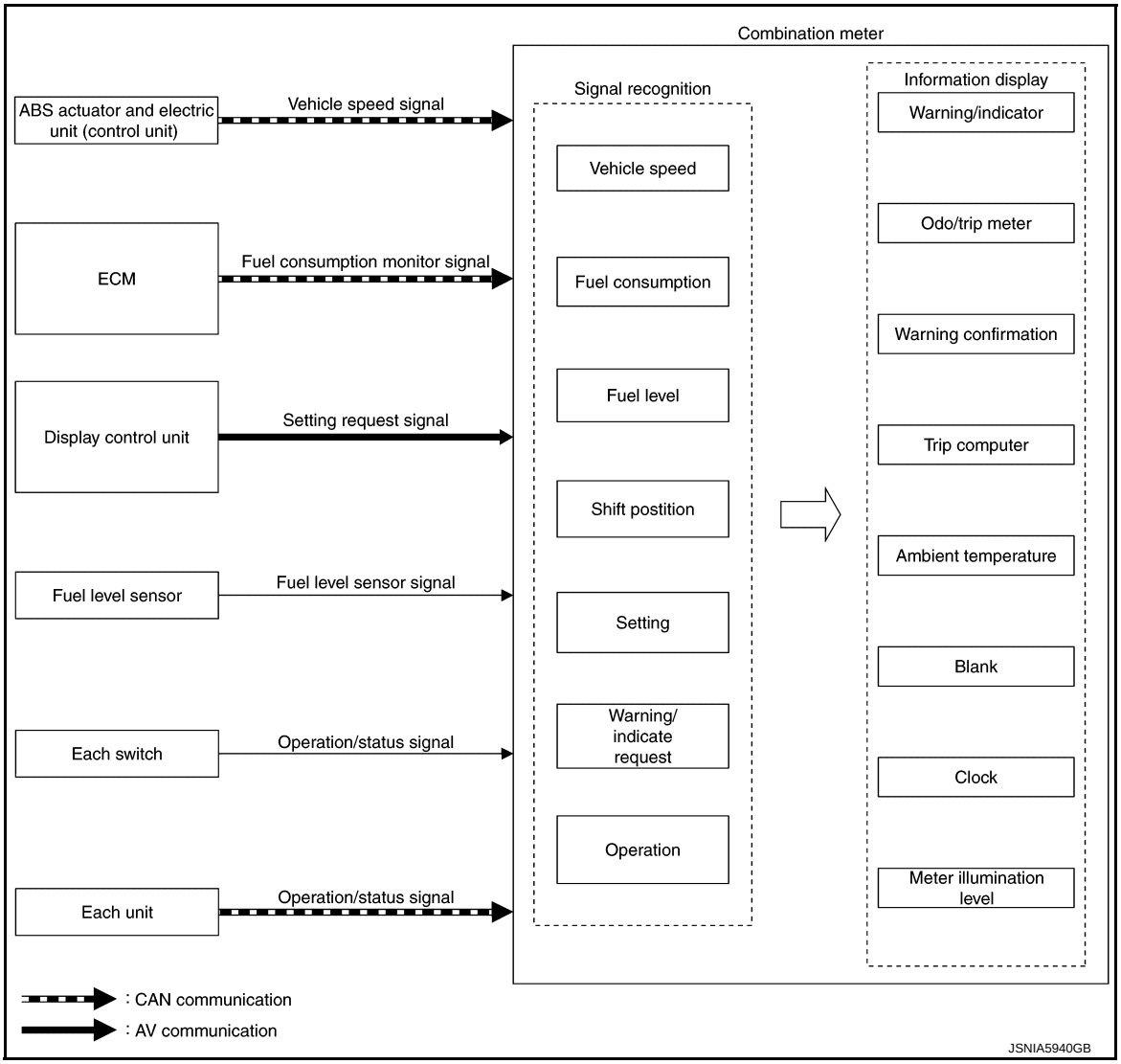
NOTE:
The engine-start effect function ends if any one of the above conditions is lost during the activation of this function.

INFORMATION DISPLAY

INFORMATION DISPLAY : System Description

INFOID:0000000012791786

SYSTEM DIAGRAM



DESCRIPTION

- The combination meter receives signals necessary for controlling the operation of the information display from each unit, sensor and switch.
- The combination meter incorporates a trip computer that displays the warning/information according to the information received from each unit, sensor and switch.
- The combination meter shows the following functions on the information display.

- Warning/Indicator
- Odo/trip meter
- Blank
- Warning confirmation
- Trip computer
- Ambient temperature
- Meter illumination level
- Clock

- Setting of combination meter is operated by integral switch.
- The items that displayed to information display can be selected by the steering switch. Refer to MWI-67, "Switch Name and Function" for further details.

WARNING/INDICATOR LIST

WARNING

Warning	Reference
ACC warning	DLK-34, "INFORMATION DISPLAY (COMBINATION METER) : ACC Warning (Information Display)"
AFS warning	EXL-46, "INFORMATION DISPLAY (COMBINATION METER) : AFS Warning"
Door and trunk lid open warning	DLK-35, "INFORMATION DISPLAY (COMBINATION METER) : Door and Trunk Lid Open Warning"
Chassis control warning	DAS-523, "INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display"
Intelligent key low battery warning	DLK-38, "INFORMATION DISPLAY (COMBINATION METER) : Intelligent Key Low Battery Warning"
Intelligent key system malfunction	DLK-39, "INFORMATION DISPLAY (COMBINATION METER) : Intelligent Key System Malfunction"
Key ID warning	DLK-41, "INFORMATION DISPLAY (COMBINATION METER) : Key ID Warning"
Headlamp warning	EXL-47, "INFORMATION DISPLAY (COMBINATION METER) : Headlamp Warning"
Light reminder warning (information display)	EXL-49, "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)"
Parking brake release warning	PB-4, "INFORMATION DISPLAY (COMBINATION METER) : Parking Brake Release Warning"
Take away warning (information display)	DLK-43, "INFORMATION DISPLAY (COMBINATION METER) : Take Away Warning (Information Display)"
Washer fluid warning	WW-19, "INFORMATION DISPLAY (COMBINATION METER) : Washer Fluid Warning"
Engine oil pressure warning	EC6-99, "INFORMATION DISPLAY (COMBINATION METER) : Engine Oil Pressure Warning" (VR30DDTT for USA and Canada) or EC6-1079, "INFORMATION DISPLAY (COMBINATION METER) : Engine Oil Pressure Warning" (VR30DDTT for Mexico)
Low tire pressure warning	WT-14, "INFORMATION DISPLAY (COMBINATION METER) : Low Tire Pressure Warning"
P position warning (information display)	DLK-42, "INFORMATION DISPLAY (COMBINATION METER) : P Position Warning (Information Display)"
Fuel filler cap warning	EC6-100, "INFORMATION DISPLAY (COMBINATION METER) : Fuel Filler Cap Warning" (VR30DDTT for USA and Canada) or EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (2.0L turbo gasoline engine)
AWD warning	DLN-19, "INFORMATION DISPLAY (COMBINATION METER) : AWD Warning"
Stop/start system warning	EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information"

INDICATOR

Indicator	Reference
Shift position indicator	TM-81, "INFORMATION DISPLAY (COMBINATION METER) : Shift Position Indicator"
Navigation	AV-74, "System Description"
Audio	AV-65, "WITH BOSE SYSTEM : System Description" (With BOSE system) or AV-68, "WITHOUT BOSE SYSTEM : System Description" (Without BOSE system)
SMS indicator	AV-71, "WITH BOSE SYSTEM : System Description" (With BOSE system) or AV-72, "WITHOUT BOSE SYSTEM : System Description" (Without BOSE system)

Indicator	Reference
Compass	AV-74, "System Description"
Key ID verification information	DLK-40, "INFORMATION DISPLAY (COMBINATION METER) : Key ID Verification Information"
Chassis control indicator	DAS-523, "INFORMATION DISPLAY (COMBINATION METER) : Chassis Control Display"
Ignition Battery Saver System Information (After operation)	PCS-49, "POWER DISTRIBUTION SYSTEM : System Description"
Ignition Battery Saver System Information (Three Minutes Before operation)	PCS-49, "POWER DISTRIBUTION SYSTEM : System Description"
Shipping mode information	BCS-15, "SHIPPING MODE CONTROL SYSTEM : System Description"
Alert	MWI-54, "WARNING/INDICATOR (ON INFORMATION DISPLAY) : Alert"
Maintenance	MWI-56, "WARNING/INDICATOR (ON INFORMATION DISPLAY) : Maintenance"
Engine start information	DLK-36, "INFORMATION DISPLAY (COMBINATION METER) : Engine Start Information"
Stop/start guidance indicator	EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information"
Stop/start status indicator	EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information"
Tire pressure display	WT-15, "INFORMATION DISPLAY (COMBINATION METER) : Tire Pressure Display"
Drive mode indicator	DMS-23, "INFORMATION DISPLAY (COMBINATION METER) : Warning/Indicator/Information"
OCS indicator	EC6-98, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (VR30DDTT for USA and Canada) or EC6-1078, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (VR30DDTT for Mexico)
ASCD indicator	EC6-98, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (VR30DDTT for USA and Canada), EC6-1078, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (VR30DDTT for Mexico) or EC4-93, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information" (2.0L turbo gasoline engine)
ICC system display	• CCS-24, "VEHICLE-TO-VEHICLE DISTANCE CONTROL MODE FUNCTION : Menu Displayed by Pressing Each Switch" • CCS-28, "CONVENTIONAL (FIXED SPEED) CRUISE CONTROL MODE FUNCTION : Menu Displayed by Pressing Each Switch"
FCW/LDW/BSW system display	DAS-266, "PFCW/LDW/BSW : Menu Displayed by Pressing Each Switch"
DCA/LDP/Blind Spot Intervention system display	DAS-272, "DCA/LDP/BLIND SPOT INTERVENTION : Menu Displayed by Pressing Each Switch"
BCI system display	DAS-279, "BCI : Menu Displayed by Pressing Each Switch"
FEB system display	BRC-210, "Menu Displayed by Pressing Each Switch"

ODO/TRIP METER

The combination meter calculates mileage, based on the following signals and displays the mileage on the information display.

Signal name	Signal path
Ignition signal	—
Vehicle speed signal	ABS actuator and electric unit (control unit) → CAN → Combination meter

BLANK

The combination meter displays a blank.

WARNING CONFIRMATION

- The combination meter can cause an interrupt on the information display to indicate a warning, based on signals received from each unit and switch.
- The indicated warning can be checked with “WARNING” during the satisfaction of an interrupt indication condition for each warning.

TRIP COMPUTER

Current Fuel Consumption

The combination meter calculates current fuel consumption based on the following signals, and the calculated value is displayed on the information display.
Current fuel consumption can be compared with average fuel consumption.

Signal name	Signal path
Ignition signal	—
Fuel consumption monitor signal	ECM → CAN → Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) → CAN → Combination meter

NOTE:

- Current fuel consumption on the information display is updated approximately every 0.1 seconds.
- Current fuel consumption on the information display shows 0 l/100km (0 mpg) when vehicle speed is 0 km/h (0 MPH).

Average Fuel Consumption

The combination meter calculates average fuel consumption based on the following signals, and the calculated value is displayed on the information display.

Signal name	Signal path
Ignition signal	—
Fuel consumption monitor signal	ECM → CAN → Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) → CAN → Combination meter
Steering switch signal	Steering switch → Combination meter

NOTE:

- Average fuel consumption on the information display is updated approximately every 30 seconds.
- Soon after a reset or when the ignition switch is turned ON right after battery removal and installation, “–––” is displayed until after a travel of 30 seconds and approximately 500 m (0.31 mile).
- Values of both combination meter and Infinity In Touch are reset when resetting a value by using either combination meter or Infiniti InTouch.

Average Vehicle Speed

The combination meter calculates average vehicle speed based on the following signals, and the calculated value is displayed on the information display.

Signal name	Signal path
Ignition signal	—
Vehicle speed signal	ABS actuator and electric unit (control unit) —CAN→ Combination meter
Steering switch signal	Steering switch → Combination meter

NOTE:
- Average fuel consumption on the information display is updated approximately every 30 seconds.
- Soon after a reset or when the ignition switch is turned ON right after battery removal and installation, "–––" is displayed until after a travel of 30 seconds and approximately 500 m (0.31 mile).

Distance to Empty

The combination meter calculates distance to empty based on the following signals, and the calculated value is displayed on the information display.

Signal name	Signal path
Ignition signal	—
Fuel level sensor signal	Fuel level sensor unit → Combination meter
Fuel consumption monitor signal	ECM —CAN→ Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) —CAN→ Combination meter

NOTE:
- Distance to empty on the information display is updated approximately every 30 seconds.
- When the ignition switch is turned ON right after battery removal and installation, "–––" is displayed until after a travel of 30 seconds.

Travel Time

The combination meter measures and displays travel time (ignition switch ON time).

Travel Distance

The combination meter measures and displays travel distance.

Idling Stop Accumulated Time (2.0L turbo gasoline engine models)

The combination meter calculates idling stop display based on the following signals, and the calculated value is displayed on the information display.
- The combination meter calculates the operating time/fuel saved of the stop/start system.
- The value calculated during the time/fuel saved between the previous reset and the next reset is displayed, regardless of ignition switch ON/OFF and an integrated value can be reset by pressing the trip reset switch for 0.8 seconds or more.

Signal name	Signal path
Ignition signal	—
Stop/start status signal	ECM —CAN→ Combination meter
Engine speed signal	ECM —CAN→ Combination meter
Stop/start indicator lamp signal	ECM —CAN→ Combination meter

AMBIENT TEMPERATURE

The combination meter calculates ambient temperature based on the following signals, and the calculated value is displayed on the information display.

Signal name	Signal path
Ignition signal	—
A/C auto amp. recognition signal	A/C auto amp. CAN Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) CAN Combination meter

NOTE:
- The indicated temperature is corrected based on an ignition signal, ambient temperature detected by the ambient sensor, and vehicle speed signal. The indicated temperature is not raised under vehicle speed less than 20 km/h (12 MPH).
- The ambient sensor input value that is displayed on “Data Monitor” of CONSULT is the value before the correction. It may not match the indicated temperature on the information display.
- Depending on engine heat or heat on the road surfaces, an ambient temperature may be indicated higher than actual one.

CLOCK

The information displays the current time on the clock according to the current time signal received from the display control unit via AV communication line.

Signal name	Signal path
Current time signal	Display control unit COMM Combination meter

NOTE:
The settings screen of the integral switch display allows the user to switch the setting of the current time indication between 12-hour and 24-hour formats.

SETTING (OPERATED BY INTEGRAL SWITCH)

Various setting of information display based on the following signals can be set.

Signal name	Signal path
Setting request signal	Integral switch COMM Display control unit COMM Combination meter

METER ILLUMINATION LEVEL

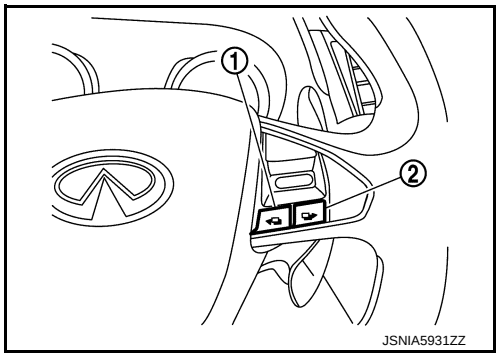
The combination meter displays the illuminance level of the back light on the information display by turning the illumination control switch.
Refer to MWI-58, "METER ILLUMINATION CONTROL : System Description".

OPERATION

Switch Name and Function

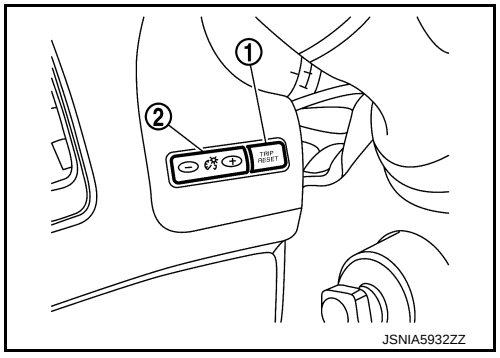
INFOID:0000000012791787

STEERING SWITCH



No.	Switch name	Operation	Description
①	Display back switch	Press	The information display screen can be switched.
②	Display next switch		

METER CONTROL SWITCH



No.	Switch name	Operation	Description
①	Trip reset switch	Press	• The trip meter can be switched between A and B. • Trip meter A/B can be reset by pressing and holding the trip reset switch. • A trip computer value displayed on the information display can be reset by pressing and holding the trip reset switch for 1 second or more. • All trip computer values can be reset by pressing and holding the trip reset switch for 3 seconds or more.
②	Illumination control switch	Press	An illuminance level of the back light of the combination meter can be adjusted.

DIAGNOSIS SYSTEM (COMBINATION METER)

On Board Diagnosis Function

INFOID:0000000012791788

COMBINATION METER SELF-DIAGNOSIS MODE

The following meter functions can be checked during Combination Meter Self-Diagnosis Mode:

- Pointer sweep of speedometer, tachometer and gauges.
- Illumination of LCD color patterns for meter displays.
- Illumination of all lamps/LEDs that are controlled by the combination meter (regardless of switch status).
- Error code

STARTING COMBINATION METER SELF-DIAGNOSIS MODE

NOTE:

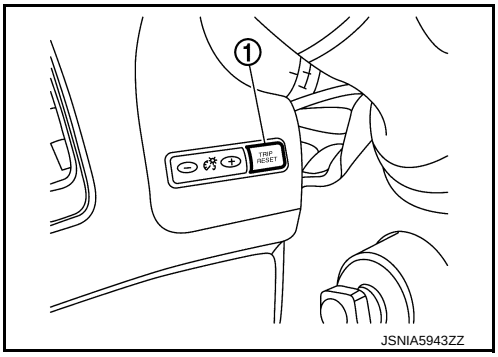
- Check combination meter power supply and ground circuits if self-diagnosis mode does not start. Refer to MWI-120, "COMBINATION METER : Diagnosis Procedure". Replace combination meter if power supply and ground circuits are found to be normal and self-diagnosis mode does not start. Refer to MWI-141, "Removal and Installation".
- Combination meter self-diagnosis mode will function with the ignition switch in ON. Combination meter self-diagnosis mode will exit upon turning the ignition switch to OFF.

How to Initiate Self-Diagnosis Mode

1. Turn ignition switch OFF.
2. While pressing the trip reset switch ①, turn ignition switch ON.
3. Keep the trip reset switch for 1 seconds or more.
4. Press the trip reset switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)
5. “Work instruction code” is indicated in the top portion of information display and self-diagnosis is started.
6. The mode switches in the order shown below each time the trip reset switch is pressed.

NOTE:

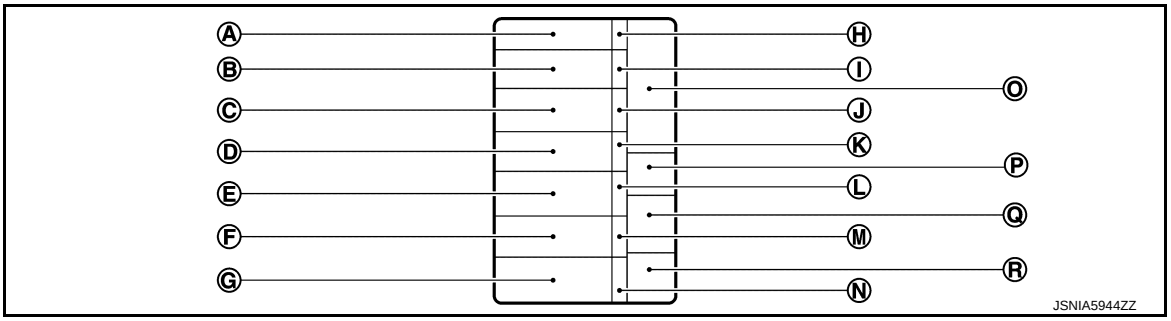
If the trip reset switch is not operated for 20 seconds or more, the self-diagnosis mode is automatically cancelled.



Test order	Test item	Description
1	Work instruction code	This item is displayed, but not used.
2	Part number	
3	Software code	
4	EEPROM code	
5	Hardware code	
6	P.C.B code	
7	Circuit check	The pointer of the following items moves from 0 to MAX twice. • Speedometer • Tachometer • Engine coolant temperature gauge • Fuel gauge **NOTE:** If any one of the pointers does not sweep, replace combination meter.
8	Color check*1	Performs the color check of the information display.

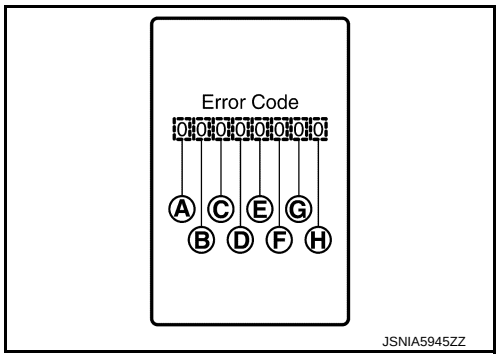
Test order	Test item	Description
9	error code*2	Displays the error code of the following items. • Speedometer • Tachometer • Engine coolant temperature gauge • Fuel gauge • Meter control switch
10	Warning/indicator lamp check	All warning/indicator lamp illuminate. **NOTE:** • When either one of them does not turn ON, replace combination meter. • SRS air bag warning lamp and security indicator lamp are not illuminate.

NOTE:
When the trip reset switch is pressed during the indication of Test order “10,” test item returns to Test order “2.”
*1: Color Check



Ⓐ Blue	Ⓑ Red	Ⓒ Pink
Ⓓ Green	Ⓔ Light blue	Ⓕ Yellow
Ⓖ White	Ⓗ White	Ⓘ Black
Ⓙ Light blue	Ⓚ Black	Ⓛ Pink
Ⓜ Black	Ⓝ Blue	Ⓞ Black
Ⓟ Dark blue	Ⓠ White	Ⓡ Blue

*2: Error Code



Item		Code	Description	Action to take/Reference
Ⓐ	Speedometer	0	Normal	—
		1	A vehicle speed signal cannot be received from ABS actuator and electric unit (control unit).	Perform “Self Diagnostic Result” of “ABS.” Refer to BRC-72, "DTC Index".
		2	A vehicle speed signal received from the ABS actuator and electric unit (control unit) is abnormal.	

Item		Code	Description	Action to take/Reference
Ⓑ	Tachometer	0	Normal	—
		1	An engine speed signal cannot be received from TCM. (VR30DDTT engine models)	Perform “Self Diagnostic Result” of “TCM”. Refer to TM-102, "2.0L TURBO GASOLINE ENGINE : DTC Index".
			An engine speed signal cannot be received from ECM. (Except for VR30DDTT engine models)	Perform “Self Diagnostic Result” of “ECM”. Refer to EC4-146, "DTC Index".
Ⓒ	Fuel gauge	0	Normal	—
		1	Fuel gauge circuit is short.	Refer to MWI-125, "Component Function Check".
		2	Fuel gauge circuit is open.	
Ⓓ	Engine coolant temperature gauge	0	Normal	—
		1	An engine coolant temperature signal cannot be received from ECM.	Perform “Self Diagnostic Result” of “ECM.” Refer to EC6-164, "TURBO HIGH PRESSURE MODEL : DTC Index" [VR30DDTT for USA and Canada (turbo high pressure model)], EC6-205, "TURBO LOW PRESSURE MODEL : DTC Index" [VR30DDTT for USA and Canada (turbo low pressure model)], EC6-1139, "DTC Index" (VR30DDTT for Mexico) or EC4-146, "DTC Index" (2.0L turbo gasoline engine)
Ⓔ	Meter control switch	0	Normal	—
		1	When judging that the illumination control switch signal circuit is short-circuited for 5 minutes or more.	Refer to MWI-123, "Component Function Check".
		2	When judging that the trip reset switch signal circuit is short-circuited for 5 minutes or more.	
		3	When judging that the both switch signal circuit is short-circuited for 5 minutes or more.	
Ⓕ	—	0	Displays “0” constantly.	—
Ⓖ	—	0	Displays “0” constantly.	—
Ⓗ	—	0	Displays “0” constantly.	—

How to Reset Error Code

Error codes stored in combination meter can be reset by following the instructions below:

1. Turn ignition switch OFF.
2. While pressing the trip reset switch, turn ignition switch ON.
3. Keep the trip reset switch for 1 seconds or more.
4. Press the trip reset switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)
5. Turn ignition switch OFF.
6. Perform self-diagnosis and check that the error codes are reset.

CONSULT Function

INFOID:0000000012791789

APPLICATION ITEMS

CONSULT can perform the following diagnosis modes via CAN communication and the combination meter.

System	Diagnosis mode	Description
METER/M&A	Self Diagnostic Results	The combination meter checks the conditions and displays memorized errors.
	Data Monitor	Displays the combination meter input/output data in real time.
	Work Support	Displays diagnosis procedure of each work item.
	Ecu Identification	Displays combination meter part number.
	Warning History	Lighting history of the warning lamp and indicator lamp can be checked.

SELF-DIAGNOSTIC RESULTS

For details, refer to MWI-87, "DTC Index".

When “CRNT” is displayed on self-diagnosis result,
- The system is presently malfunctioning.

When “PAST” is displayed on self-diagnosis result,
- System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

Item name	Display item
IGN counter (0 – 39)	The number of times that ignition switch is turned ON after the DTC is detected is displayed. • When “0” is displayed: It indicates that the system is presently malfunctioning. • When except “0” is displayed: It indicates that system malfunction in the past is detected, but the system is presently normal. **NOTE:** Each time when ignition switch is turned OFF to ON, numerical number increases in 1 → 2 → 3...38 → 39. When the operation number of times exceeds 39, the number do not increase and “39” is displayed until self-diagnosis is erased.

WORK SUPPORT

Work support item	Description
Turn signal buzzer diagnosis	A possible malfunction can be narrowed down by following displayed instructions.
Outside air temperature diagnosis	
Fuel meter diagnosis (Analog pointer)*1	
Warning/Indicator lamp diagnosis	

*1: Although a segment type fuel gauge can display work items, it is not used.

ECU IDENTIFICATION

Combination meter part number can be read.

DATA MONITOR

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

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description
SPEED METER [km/h]	X	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication. **NOTE:** 655.35 is displayed when the malfunction signal is received.
SPEED OUTPUT [km/h]	X	Vehicle speed signal value transmitted to other units via CAN communication. **NOTE:** 655.35 is displayed when the malfunction signal is received.
ODO OUTPUT [km/h or mph]		Odometer signal value transmitted to other units via CAN communication.

Display item [Unit]	MAIN SIGNALS	Description
TACHO METER [rpm]	X	• Value of the engine speed signal received from TCM via CAN communication. (VR30DDTT engine models) • Value of the engine speed signal received from ECM via CAN communication. (Except for VR30DDTT engine models) **NOTE:** 8191.875 is displayed when the malfunction signal is received.
FUEL METER [L]	X	Fuel level indicated on combination meter.
W TEMP METER [°C]	X	Value of engine coolant temperature signal is received from ECM via CAN communication. **NOTE:** 215 is displayed when the malfunction signal is input.
ABS W/L [On/Off]		Status of ABS warning lamp detected from ABS warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
VDC/TCS IND [On/Off]		Status of VDC OFF indicator lamp detected from VDC OFF indicator lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
SLIP IND [On/Off]		Status of VDC warning lamp detected from VDC warning lamp signal received from ABS actuator and electric unit (control unit) via CAN communication.
BRAKE W/L [On/Off]		Status of brake warning lamp detected from brake warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication and brake fluid level switch signal from brake fluid level switch. **NOTE:** Displays “Off” if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.
DOOR W/L [On/Off]		Status of door open warning detected from door switch signal received from BCM via CAN communication.
TRUNK/GLAS-H [On/Off]		Status of trunk open warning detected from trunk switch signal received from BCM via CAN communication.
HI-BEAM IND [On/Off]		Status of high beam indicator lamp detected from high beam request signal is received from BCM via CAN communication.
TURN IND [On/Off]		Status of turn signal indicator lamp detected from turn indicator signal is received from BCM via CAN communication.
FR FOG IND [On/Off]		Status of front fog lamp indicator lamp detected from front fog light request signal is received from BCM via CAN communication.
RR FOG IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
LIGHT IND [On/Off]		Status of position lamp indicator lamp detected from position light request signal is received from BCM via CAN communication.
OIL W/L [On/Off]		Status of engine oil pressure warning detected from oil pressure warning signal is received from ECM via CAN communication.
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator signal is received from ECM via CAN communication.
BA W/L [On/Off]		Status of FEB warning lamp judged from FEB warning lamp signal received from ADAS control unit via CAN communication.
ATC/T-AMT W/L [On/Off]		Status of A/T check warning judged from A/T CHECK indicator signal received from TCM via CAN communication.
GEAR SHIFT IND [Up, Down, Up/Dwn]		Status of gear shift indicator judged from gear shift indicator signal received from ECM via CAN communication.
4WD W/L [On/Off]		Status of AWD warning judged from AWD warning signal received from AWD control unit via CAN communication.
FUEL W/L [On/Off]		Low fuel warning lamp status detected by the identified fuel level.

Display item [Unit]	MAIN SIGNALS	Description
WASHER W/L [On/Off]		Status of low washer fluid warning judged from washer level switch input to combination meter.
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp judged from low tire pressure lamp signal received from BCM via CAN communication.
KEY G/Y W/L [ON/Off]		Status of Intelligent Key system warning judged from meter display signal received from BCM via CAN communication.
EPS W/L [On/Off]		Status of power steering warning lamp judged from power steering warning lamp signal received from steering force control module via CAN communication.
AFS OFF IND [On/Off]		Status of AFS warning judged from AFS warning signal received from AFS control unit via CAN communication.
READY IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
SYS FAIL W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
SFT POSI W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
HEV BRAKE W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
IDOL STOP IND [On/Off]		Status of stop/start indicator lamp judged from stop/start indicator lamp signal received from ECM via CAN communication.
CHAGE W/L [On/Off]		Status of charge warning lamp judged from charge warning lamp signal received from ECM via CAN communication.
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC DISTANCE [Off, Short, Middle, Long]		Status of set distance indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC SET SPEED [On/Off]		Status of set vehicle speed indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC UNIT [On/Off]		Status of display unit judged from meter display signal received from ADAS control unit via CAN communication.
SHIFT IND [P, R, N, D, M1, M2, M3, M4, M5, M6, M7]		Status of shift position indicator judged from shift position signal received from TCM via CAN communication.
ECO DRIVE IND G [On/Off]		Status of ECO drive indicator (green) judged from ECO drive indicator control signal received from ECM via CAN communication.
FUEL CAP W/L [On/Off]		Status of fuel filler cap warning display detected from fuel filler cap warning display signal received from ECM via CAN communication.
M RANGE SW [On/Off]		Status of manual mode switch.
NM RANGE SW [On/Off]		Status of non-manual mode switch.
AT SFT UP SW [On/Off]		Status of manual mode shift up switch.
AT SFT DWN SW [On/Off]		Status of manual mode shift down switch.
ST SFT UP SW [On/Off]		Status of paddle shifter up switch.
ST SFT DWN SW [On/Off]		Status of paddle shifter down switch.
PKB SW [On/Off]		Status of parking brake switch.

Display item [Unit]	MAIN SIGNALS	Description
BUCKLE SW [On/Off]		Status of seat belt buckle switch (driver side).
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.
LED LMP R OPEN [On/Off]		Status of front combination lamp RH judged based on LED headlamp (RH) warning signal input from front combination lamp RH.
LED LMP L OPEN [On/Off]		Status of front combination lamp LH judged based on LED headlamp (LH) warning signal input from front combination lamp LH.
DISTANCE [km] or [Mi]		Value of distance to empty calculated by combination meter.
OUTSIDE TEMP [°C or °F]		Ambient temperature value converted from ambient sensor signal received from ambient sensor. **NOTE:** This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the ambient sensor input value.)
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to display control unit via AV communication.
CRANKING SIG [On/Off]		Status of cranking judged from engine status signal received from BCM via CAN communication line.
ST CNT SIG [On/Off]		Status of starter relay status signal received from BCM via CAN communication line.
BUZZER [On/Off]	X	Buzzer status (in the combination meter) is detected from the buzzer output signal received from each unit via CAN communication and the warning output condition of the combination meter.
BAT CIR STA [Normal/Open]		Status of battery power supply circuit.
TPMS FLT TIRE [On/Off]		Status of flat tire detected from tire pressure data signal is received form BCM via CAN communication.
TPMS PRESS L [On/Off]		Status of tire pressure low from tire pressure data signal is received form BCM via CAN communication
ASCD SPD BLINK [On/Off]		Blinking status of ASCD set vehicle speed judged by the ASCD status signal received from ECM via CAN communication.
ASCD STATUS [Off, ASCD, CRUISE]		Status of ASCD status display judged by the ASCD status signal received from ECM via CAN communication.
ASCD REQ SPD [km/h/Off]		ASCD set vehicle speed value judged by the ASCD status signal received from ECM via CAN communication.
HILL HOLD WARNING [Off]		**NOTE:** This item is displayed, but cannot be monitored.
ASSIST/CHARGE GAUGE [%]		**NOTE:** This item is displayed, but cannot be monitored.
EV IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
ECO DRIVE NAVI [LEVEL 0]		**NOTE:** This item is displayed, but cannot be monitored.
LCD [B&P N, B&P I, C&P N, C&P I, SFT P, BATT, NO KY, LK WN, IGN AUTO OFF, 3 min before IGN OFF, OFF]	X	Status of engine start operation indicator lamp, shift P warning lamp and KEY warning lamp, detected from engine start operation indicator lamp signal, shift P warning lamp signal and key warning lamp signal are received from BCM via CAN communication.
STRG SW INPUT [SW1-SW10, Off]		Status of steering switch.

Display item [Unit]	MAIN SIGNALS	Description
ITS SONER SET OUTPUT [FCW ON/OFF, LDW ON/OFF, BSW ON/OFF, DCA ON/OFF/HIGH/MID/LOW, LDP ON/OFF/T MID/T LATE, BSI ON/BRIGHT/STD/DARK, BCI IGN ON/OFF, IBA ON/OFF, BCI AUTO ON/OFF, NO SW ST]		Status of warning systems indicator or dynamic driver assistance systems indicator judged by the meter display signal received from ADAS control unit via CAN communication.
CHASSIS CONTROL WARN [On/Off]		Status of chassis control warning from chassis control malfunction signal is received form chassis control module via CAN communication.
LOW LI-ION BAT CHG WARN [Off]		**NOTE:** This item is displayed, but cannot be monitored.
VSP OFF IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
HI-BEAM ASST IND [km/h/Off]		Status of high beam assist indicator lamp from high beam assist indicator lamp signal is received form BCM via CAN communication.
DIPPED BEAM IND [Off]	X	**NOTE:** This item is displayed, but cannot be monitored.
TIRE PRESS FR [kPa, kg/cm2 or Psi]		The data of front RH tire pressure form BCM via CAN communication.
TIRE PRESS FL [kPa, kg/cm2 or Psi]		The data of front LH tire pressure form BCM via CAN communication.
TIRE PRESS RR [kPa, kg/cm2 or Psi]		The data of rear RH tire pressure form BCM via CAN communication.
TIRE PRESS RL [kPa, kg/cm2 or Psi]		The data of rear LH tire pressure form BCM via CAN communication.
METER RAM [ERROR/NORMAL]		Status of ram error data.

WARNING HISTORY

- Stores histories when warning/indicator lamp is turned on.
- “WARNING HISTORY” indicates the “TIME” when the warning/ indicator lamp is turned on.
- The “TIME” above is:
  - 0: The condition that the warning/indicator lamp has been turned on 1 or more times after starting the engine and waiting for 30 seconds.
  - 1 - 39: The number of times the engine was restarted after the 0 condition.
  - NO WARNING HISTORY: Stores NO (0) turning on history of warning/indicator lamp.

NOTE:

- WARNING HISTORY is not stored for approximately 30 seconds after the engine starts.
- Brake warning lamp does not store any history when the parking brake is applied or the brake fluid level gets low.

Display Item

Display item	Description
ABS W/L	Lighting history of ABS warning lamp.
VDC/TCS IND	Lighting history of VDC OFF indicator lamp.
SLIP IND	Lighting history of VDC warning lamp.
BRAKE W/L	Lighting history of brake warning lamp.
ATC/T-AMT W/L	Lighting history of A/T check warning.
DOOR W/L	Lighting history of door open warning.
OIL W/L	Lighting history of engine oil pressure warning.
C-ENG W/L	Lighting history of malfunction indicator lamp (MIL).
BA W/L	Lighting history of FEB warning lamp.
4WD W/L	Lighting history of AWD warning.

Display item	Description
FUEL W/L	Lighting history of low fuel warning lamp.
WASHER W/L	Lighting history of low washer fluid warning lamp.
AIR PRES W/L	Lighting history of low tire pressure warning lamp.
KEY G/Y W/L	Lighting history of Intelligent Key system warning.
EPS W/L	Lighting history of power steering warning lamp.
AFS OFF IND	Lighting history of AFS warning.
CHAGE W/L	Lighting history of charge warning lamp.

NOTE:
In items displayed on the CONSULT screen, only those listed in the above table are used.

ECU DIAGNOSIS INFORMATION

COMBINATION METER

Reference Value

INFOID:0000000012791790

VALUES ON THE DIAGNOSIS TOOL

NOTE:
The following table includes information (items) inapplicable to this vehicle. for information (items) applicable to this vehicle, refer to consult display items.

Monitor Item	Condition		Value/Status
SPEED METER [mph or km/h]	Ignition switch ON	While driving	Input value of vehicle speed signal (CAN communication signal)
SPEED OUTPUT [mph or km/h]	Ignition switch ON	While driving	Output value of vehicle speed signal (CAN communication signal)
ODO OUTPUT [mph or km/h]	Ignition switch ON	—	Output value of odometer signal (CAN communication signal)
TACHO METER [rpm]	Ignition switch ON	Engine running	Input value of engine speed signal (CAN communication signal)
FUEL METER [L]	Ignition switch ON	—	Input value of fuel level sensor signal
W TEMP METER [°F] or [°C]	Ignition switch ON	—	Input value of engine coolant temperature signal (CAN communication signal)
ABS W/L	Ignition switch ON	ABS warning lamp ON	On
		ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch ON	VDC OFF indicator lamp ON	On
		VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch ON	VDC warning lamp ON	On
		VDC warning lamp OFF	Off
BRAKE W/L	Ignition switch ON	Brake warning lamp ON	On*1
		Brake warning lamp OFF	Off
DOOR W/L	Ignition switch ON	During door open warning indication	On
		Other than the above	Off
TRUNK/GLAS-H	Ignition switch ON	During trunk open warning indication	On
		Other than the above	Off
HI-BEAM IND	Ignition switch ON	High beam indicator lamp ON	On
		High beam indicator lamp OFF	Off
TURN IND	Ignition switch ON	Turn signal indicator lamp ON	On
		Turn signal indicator lamp OFF	Off
FR FOG IND	Ignition switch ON	Front fog lamp indicator lamp ON	On
		Front fog lamp indicator lamp OFF	Off
RR FOG IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
LIGHT IND	Ignition switch ON	Position lamp indicator lamp ON	On
		Position lamp indicator lamp OFF	Off
OIL W/L	Ignition switch ON	During engine oil pressure warning indication	On
		Other than the above	Off

Monitor Item	Condition		Value/Status
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off
BA W/L	Ignition switch ON	FEB warning lamp ON	On
		FEB warning lamp OFF	Off
ATC/T-AMT W/L	Ignition switch ON	A/T CHECK warning indication	On
		Other than the above	Off
GEAR SHIFT IND	Ignition switch ON	Gear shift indicator UP indication	Up
		Gear shift indicator DOWN indication	Down
		Other than the above	Up/Dwn
4WD W/L	Ignition switch ON	During AWD warning indication	On
		Other than the above	Off
FUEL W/L	Ignition switch ON	Low fuel warning lamp ON	On
		Low fuel warning lamp OFF	Off
WASHER W/L	Ignition switch ON	During low washer fluid warning indication	On
		Other than the above	Off
AIR PRES W/L	Ignition switch ON	Low tire pressure warning lamp ON	On
		Low tire pressure warning lamp OFF	Off
KEY G/Y W/L	Ignition switch ON	Intelligent Key system warning indication	On
		Other than the above	Off
EPS W/L	Ignition switch ON	Power steering warning lamp ON	On
		Power steering warning lamp OFF	Off
AFS OFF IND	Ignition switch ON	During AFS warning indication	On
		Other than the above	Off
READY IND	Power switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
SYS FAIL W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
SFT POSI W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
HEV BRAKE W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
IDOL STOP IND	Ignition switch ON	Stop/start indicator lamp ON	On
		Stop/start indicator lamp OFF	Off
CHAGE W/L	Ignition switch ON	Charge warning lamp ON	On
		Charge warning lamp OFF	Off
ACC TARGET	Ignition switch ON	During vehicle ahead detection indicator indication	On
		Other than the above	Off
ACC DISTANCE	Ignition switch ON	When following distance set to “LONG”	LONG
		When following distance set to “MIDDLE”	MID
		When following distance set to “SHORT”	SHORT
		Set distance indicator not displayed	Off

Monitor Item	Condition		Value/Status
ACC SET SPEED	Ignition switch ON	During set vehicle speed indicator not displayed	Off
		During set vehicle speed indicator displayed	Indicates the set vehicle speed
ACC UNIT	Ignition switch ON	Set vehicle speed indicator unit display ON	On
		Set vehicle speed indicator unit display OFF	Off
SHIFT IND	Ignition switch ON	During the indication of “P” by shift position indicator	P
		During the indication of “R” by shift position indicator	R
		During the indication of “N” by shift position indicator	N
		During the indication of “D” by shift position indicator	D
		During the indication of “M1” by shift position indicator	M1
		During the indication of “M2” by shift position indicator	M2
		During the indication of “M3” by shift position indicator	M3
		During the indication of “M4” by shift position indicator	M4
		During the indication of “M5” by shift position indicator	M5
		During the indication of “M6” by shift position indicator	M6
		During the indication of “M7” by shift position indicator	M7
ECO DRIVE IND G	Ignition switch ON	ECO drive indicator (green) ON	On
		ECO drive indicator (green) OFF	Off
FUEL CAP W/L	Ignition switch ON	During fuel filler cap warning indication	On
		Other than the above	Off
M RANGE SW	Ignition switch ON	Shift selector in manual mode position	On
		Other than the above	Off
NM RANGE SW	Ignition switch ON	Shift selector in manual mode position	Off
		Other than the above	On
AT SFT UP SW	Ignition switch ON	Shift selector operated in the up position	On
		Other than the above	Off
AT SFT DWN SW	Ignition switch ON	Shift selector operated in the down position	On
		Other than the above	Off
ST SFT UP SW	Ignition switch ON	Paddle shifter operated in up position	On
		Shift selector is in non manual mode up position	Off
ST SFT DWN SW	Ignition switch ON	Paddle shifter operated in down position	On
		Other than the above	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off

Monitor Item	Condition		Value/Status
BUCKLE SW	Ignition switch ON	Driver seat belt not fastened	On
		Driver seat belt fastened	Off
BRAKE OIL SW	Ignition switch ON	Brake fluid level switch ON	On
		Brake fluid level switch OFF	Off
LED LMP R OPEN	Power switch ON	Front combination lamp RH malfunction	On
		Front combination lamp RH normal	Off
LED LMP L OPEN	Power switch ON	Front combination lamp LH malfunction	On
		Front combination lamp LH normal	Off
DISTANCE [mile] or [km]	Ignition switch ON	—	Distance to empty
OUTSIDE TEMP [°F] or [°C]	Ignition switch ON	—	Displays the ambient air temperature which is input from the ambient sensor
FUEL LOW SIG	—	During low fuel level indication	On
		Except during low fuel level indication	Off
CRANKING SIG	Ignition switch ON		On
	At engine cranking		Off
ST CNT SIG	Ignition switch ON		On
	At engine cranking		Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off
BAT CIR STA	Ignition switch ON	Battery power supply circuit is normal	Normal
		Battery power supply circuit is open	Open
TPMS FLT TIRE	Ignition switch ON	Flat tire	On
		Other than above	Off
TPMS PRESS L	Ignition switch ON	Tire pressure is low	On
		Tire pressure is normal	Off
ASCD SPD BLNK	Ignition switch ON	Set vehicle speed indicator blinking	On
		Set vehicle speed indicator not blinking	Off
ASCD STATUS	Ignition switch ON	ASCD and speed limiter system OFF	Off
		ASCD system ON	ASCD
		ASCD set vehicle speed	CRUISE
ASCD REQ SPD [km/h or Off]	Ignition switch ON	While driving	Same value as ASCD set vehicle speed
HILL HOLD WARNING	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
ASSIST/CHARGE GAUGE	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	0 %
EV IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
ECO DRIVE NAVI	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	LEVEL0

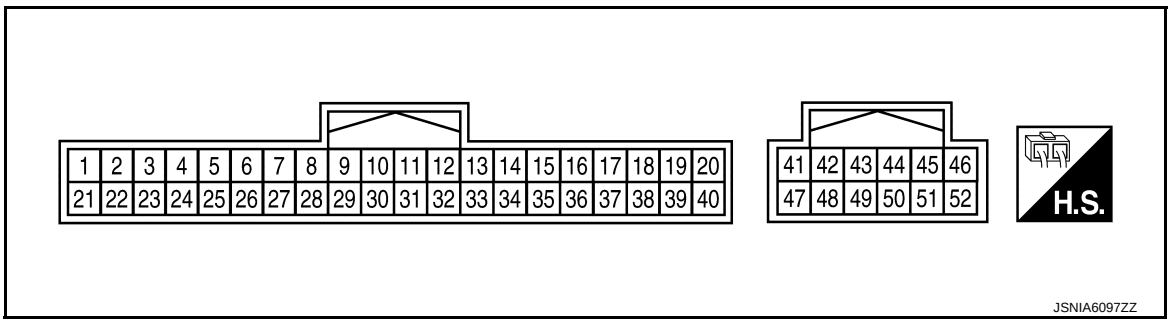
Monitor Item	Condition		Value/Status
LCD	Ignition switch ON	During engine start information indication	B&P I
	Ignition switch ACC	During engine start information indication	B&P N
	Ignition switch LOCK	During key ID warning indication	ID NG
	Ignition switch LOCK	During steering lock information indication	ROTAT
	Ignition switch LOCK	During P position warning indication	SFT P
	Ignition switch LOCK	During Intelligent Key insert information indication	INSRT
	Ignition switch LOCK	During Intelligent Key low battery warning indication	BATT
	Ignition switch ON	During take away warning indication	NO KY
	Ignition switch LOCK	During key warning indication	OUTKY
	Ignition switch ON	During ACC warning indication	LK WN
	Ignition switch ON	During ignition battery saver system information (after operation) indication	IGN AUTO OFF
	Ignition switch ON	During ignition battery saver system information (three minutes before operation) indication	3 min before IGN OFF
	Ignition switch ON	Other than above	OFF
STRG SW INPUT	Ignition switch ON	BACK switch is pressed	SW1
		MENU UP switch is pressed	SW2
		MENU DOWN switch is pressed	SW3
		Voice recognition switch is pressed	SW4
		MENU OK switch is pressed	SW5
		VOL DOWN switch is pressed	SW6
		VOL UP switch is pressed	SW7
		TEL switch is pressed	SW8
		Display back switch is pressed	SW9
		Display next switch is pressed	SW10
		Other than above	NO INPUT

Monitor Item	Condition		Value/Status
ITS SONER SET OUTPUT	Ignition switch ON	FCW indicator indication	FCW ON
		FCW indicator is not indication	FCW OFF
		LDW indicator indication	LDW ON
		LDW indicator is not indication	LDW OFF
		Blind Spot Intervention indicator indication	BSW ON
		Blind Spot Intervention indicator is not indication	BSW OFF
		DCA indicator indication	DCA ON
		DCA indicator is not indication	DCA OFF
		LDP indicator indication	LDP ON
		LDP indicator is not indication	LDP OFF
		Blind Spot Warning/Blind Spot Intervention warning indication	BSI ON
		Blind Spot Warning/Blind Spot Intervention warning brightness control is bright	BSI BRIGHT
		Blind Spot Warning/Blind Spot Intervention warning brightness control is standard	BSI STD
		Blind Spot Warning/Blind Spot Intervention warning brightness control is dark	BSI DARK
		LDP timing control status is early	LDP T EARLY
		LDP timing control status is middle	LDP T MID
		LDP timing control status is late	LDP T LATE
		DCA pedal sensitivity control status is high	DCA HIGH
		DCA pedal sensitivity control status is middle	DCA MID
		DCA pedal sensitivity control status is low	DCA LOW
		BCI ignition on status is ON	BCI IGN ON
		BCI ignition on status is OFF	BCI IGN OFF
		FEB control status is ON	IBA ON
		FEB control status is OFF	IBA OFF
		BCI auto resume control status is ON	BCI AUTO ON
		BCI auto resume control status is OFF	BCI AUTO OFF
		Other than above	NO SW ST
CHASSIS CONTROL WARN	Ignition switch ON	Chassis control warning indication	On
		Other than above	Off
LOW LI-ION BAT CHG WARN	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
VSP OFF IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
HI-BEAM ASST IND	Ignition switch ON	High beam assist indicator lamp ON	On
		High beam assist indicator lamp OFF	Off
DIPPED BEAM IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
TIRE PRESS FR	Ignition switch ON	—	0 - 63.75
TIRE PRESS FL	Ignition switch ON	—	0 - 63.75

Monitor Item	Condition		Value/Status
TIRE PRESS RR	Ignition switch ON	—	0 - 63.75
TIRE PRESS RL	Ignition switch ON	—	0 - 63.75
METER RAM	Ignition switch ON	RAM error detected	ERROR
		Other than above	NORMAL

*1: Displays “Off” if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.

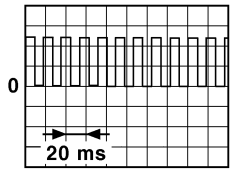
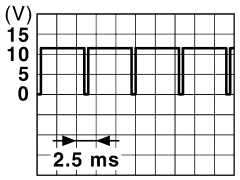
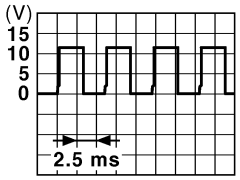
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—	—	0 V
6 (GR)	Ground	Stop/start OFF switch indicator signal	—	Ignition switch ON	Stop/start OFF switch indicator ON	0 V
					Stop/start OFF switch indicator OFF	12 V
7 (G)	Ground	Security signal	Input	Ignition switch OFF	Security indicator ON	0 V
					Security indicator OFF	12 V
8*1 (B)	—	—	—	—	—	0 V
11 (W)	Ground	Alternator signal	—	Ignition switch ON	Charge warning lamp ON	2 V
					Charge warning lamp OFF	12 V
12 (G)	Ground	LED headlamp (RH) warning signal	Input	Ignition switch ON	Headlamp ON	1.0 V
					Headlamp OFF	12 V
13 (BR)	Ground	LED headlamp (LH) warning signal	Input	Ignition switch ON	Headlamp ON	1.0 V
					Headlamp OFF	12 V
14 (V)	Ground	ACC power supply	—	Ignition switch ACC	—	Battery voltage
16 (V)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	—
					Air bag warning lamp OFF	—
17 (BR)	Ground	Meter control switch ground	—	—	—	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
18 (SB)	Ground	Trip/reset signal	Input	Ignition switch OFF or ON	Trip/Reset switch is pressed	0 V
					Other than the above	5.0 V
21 (B)	Ground	Steering switch signal ground	—	—	—	0 V
22 (P)	Ground	Steering switch signal A	Input	Ignition switch OFF or ON	Keep pressing BACK switch	0 V
					Keep pressing MENU UP switch	0.5 V
					Keep pressing MENU DOWN switch	1.2 V
					Keep pressing Voice Recognition switch	2.1 V
					Keep pressing MENU OK switch	3.3 V
23 (W/B)	Ground	Steering switch signal B	Input	Ignition switch OFF or ON	Keep pressing VOLUME DOWN switch	0 V
					Keep pressing VOLUME UP switch	0.5 V
					Keep pressing TEL switch	1.2 V
					Keep pressing display back switch (◀)	2.1 V
					Keep pressing display next switch (▶)	3.3 V
24 (L)	Ground	Washer level switch signal	Input	Ignition switch ON	Washer level switch ON	0 V
					Washer level switch OFF	12 V
25 (LG)	Ground	Brake fluid level switch signal	Input	Ignition switch ON	Brake fluid level low	0 V
					Brake fluid level normal	12 V
26 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake applied	0 V
					Parking brake released	12 V
27 (G)	Ground	Passenger seat belt warning signal	Input	Ignition switch ON	• When getting in the passenger seat. • When passenger seat belt is fastened.	—
					• When getting in the passenger seat. • When passenger seat belt is unfastened.	—
28 (W)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch ON	When driver seat belt is fastened.	12 V
					When driver seat belt is unfastened.	0 V
30 (G)*2 (SB)*3	Ground	Manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	0 V
					Other than the above	12 V
31 (L)*2 (G)*3	Ground	Non-manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	12 V
					Other than the above	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
32 (BG)	Ground	Manual mode shift up signal	Input	Ignition switch ON	Selector lever UP operation	0 V
					Other than the above	12 V
33 (P)*2 (GR)*3	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever DOWN operation	0 V
					Other than the above	12 V
34 (BG)	Ground	Paddle shifter up switch signal	Input	Ignition switch ON	Paddle shift up operated	0 V
					Other than the above	12 V
35 (G)	Ground	Paddle shifter down switch signal	Input	Ignition switch ON	Paddle shift down operated	0 V
					Other than the above	12 V
36 (V)	Ground	Illumination control switch signal (+)	Input	Ignition switch OFF or ON	When illumination control switch (+) is pressed	0 V
					Other than the above	5.0 V
37 (GR)	Ground	Illumination control switch signal (-)	Input	Ignition switch OFF or ON	When illumination control switch (-) is pressed	0 V
					Other than the above	5.0 V
38 (R)	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 25 MPH (40 km/h)]	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
41 (L)	Ground	CAN-H	—	—	—	—
42 (P)	Ground	CAN-L	—	—	—	—
43 (B)	Ground	Illumination control signal	Output	Ignition switch ON	• Lighting switch 1ST position • When meter illumination is minimum	 JSNIA5983GB
					• Lighting switch 1ST position • When meter illumination is step 11	 JPNIA1686GB
					• Lighting switch 1ST position • When meter illumination is maximum	0 V

Terminal No. (Wire color)		Description		Condition			Value (Approx.)
+	–	Signal name	Input/ Output				
44 (Y)	Ground	Fuel level sensor ground	—	Ignition switch ON	—		0 V
45 (W)	Ground	Battery power supply	—	—	—		Battery voltage
46 (BG)*4 (R)*5	Ground	Ignition signal	—	Ignition switch ON or START	—		12 V
47 (SB)	Ground	AV communication signal (H)	—	—	—		—
48 (LG)	Ground	AV communication signal (L)	—	—	—		—
51 (BR)	Ground	Fuel level sensor signal	—	Ignition switch ON	Fuel gauge indication position	Full	Less than 98 Ω
						1/2	186 Ω
						1/4	232 Ω
						1/8	255 Ω
						Empty	More than 275 Ω
52 (B)	Ground	Ground	—	—	—		0 V

*1: This harness is not used.
*2: 2.0L turbo gasoline engine
*3: VR30DDTT engine
*4: Except for VR30DDTT engine and without stop/start system
*5: VR30DDTT engine and without stop/start system

Fail-Safe

INFOID:0000000012791791

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

Function	Specifications
Speedometer	Reset to zero by suspending communication.
Tachometer	
Engine coolant temperature gauge	• When reception time of an abnormal signal is 60 seconds or less, the last value received. • When reception time of an abnormal signal is more than 60 seconds, reset to zero.
Illumination control	When suspending communication, changes to nighttime mode.

Function			Specifications
Information display	Odo/trip meter		An indicated value is maintained at communications blackout.
	Shift position indicator		The display turns OFF by suspending communication.
	Clock		When suspending communication, internal clock time is indicated.
	Chassis control display		The display turns no effect by suspending communication.
	Trip computer	Current fuel consumption	The last result calculated during normal condition is indicated.
		Average fuel consumption	
		Average vehicle speed	
		Travel time	
		Travel distance	
		Distance to empty	
		Idling stop accumulated time	The last result calculated during normal condition is indicated by suspending communication.
	Warning/ indicator	AFS warning	The display turns ON by suspending communication.
		AWD warning	
		Chassis control warning	
		Other than the above	The display turns OFF by suspending communication.
Buzzer			The buzzer turns OFF by suspending communication.
Warning lamp/indicator lamp	ABS warning lamp		The lamp turns ON by suspending communication.
	VDC warning lamp		
	Brake warning lamp		
	FEB warning lamp		
	Power steering warning lamp		
	Malfunction indicator lamp (MIL)		
	Low tire pressure warning lamp		• When reception time of an abnormal signal is 60 seconds or less, the lamp blinking. • When reception time of an abnormal signal is more than 60 seconds, the lamp turns ON.
	Stop/start indicator lamp		The lamp blinking caused by suspending communication.
	High beam indicator lamp		The lamp turns OFF by suspending communication.
	Turn signal indicator lamp		
	VDC OFF indicator lamp		
	Front fog lamp indicator lamp		
	Position lamp indicator lamp		
	High beam assist indicator lamp		
	Charge warning lamp		
	ECO drive indicator lamp		

DTC Index

INFOID:0000000012791792

DTC	CONSULT display	Reference
U1000	CAN COMM CIRCUIT	MWI-114, "DTC Description"
U1010	CONTROL UNIT (CAN)	MWI-115, "DTC Description"
B2205	VEHICLE SPEED	MWI-116, "DTC Description"

DTC	CONSULT display	Reference
B2267	ENGINE SPEED	MWI-117, "VR30DDTT : DTC Description"
B2268	WATER TEMP	MWI-119, "DTC Description"

IPDM E/R

List of ECU Reference

INFOID:0000000012791793

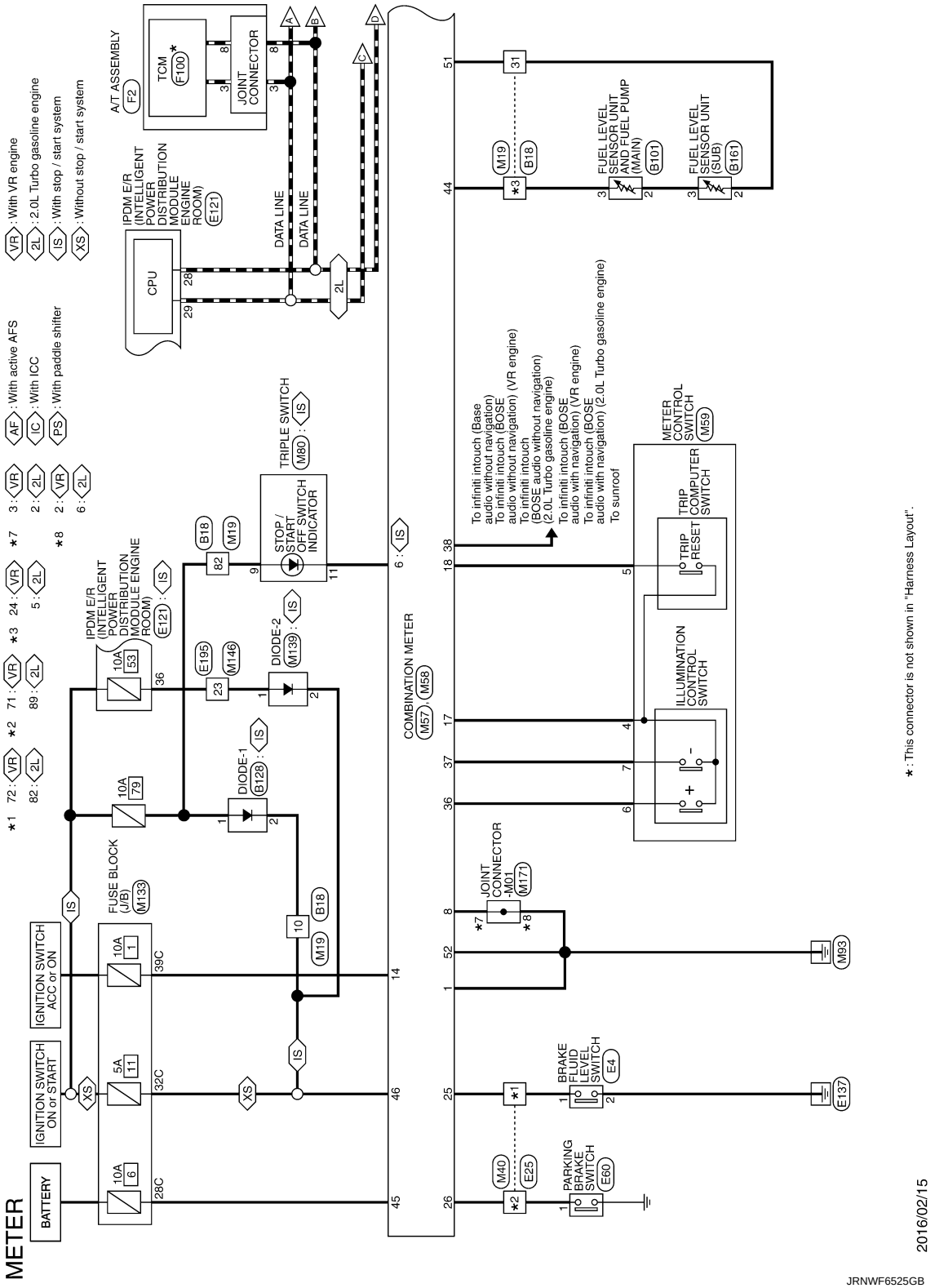
ECU	Reference
IPDM E/R	PCS-16, "Reference Value"
	PCS-24, "Fail-safe"
	PCS-26, "DTC Index"

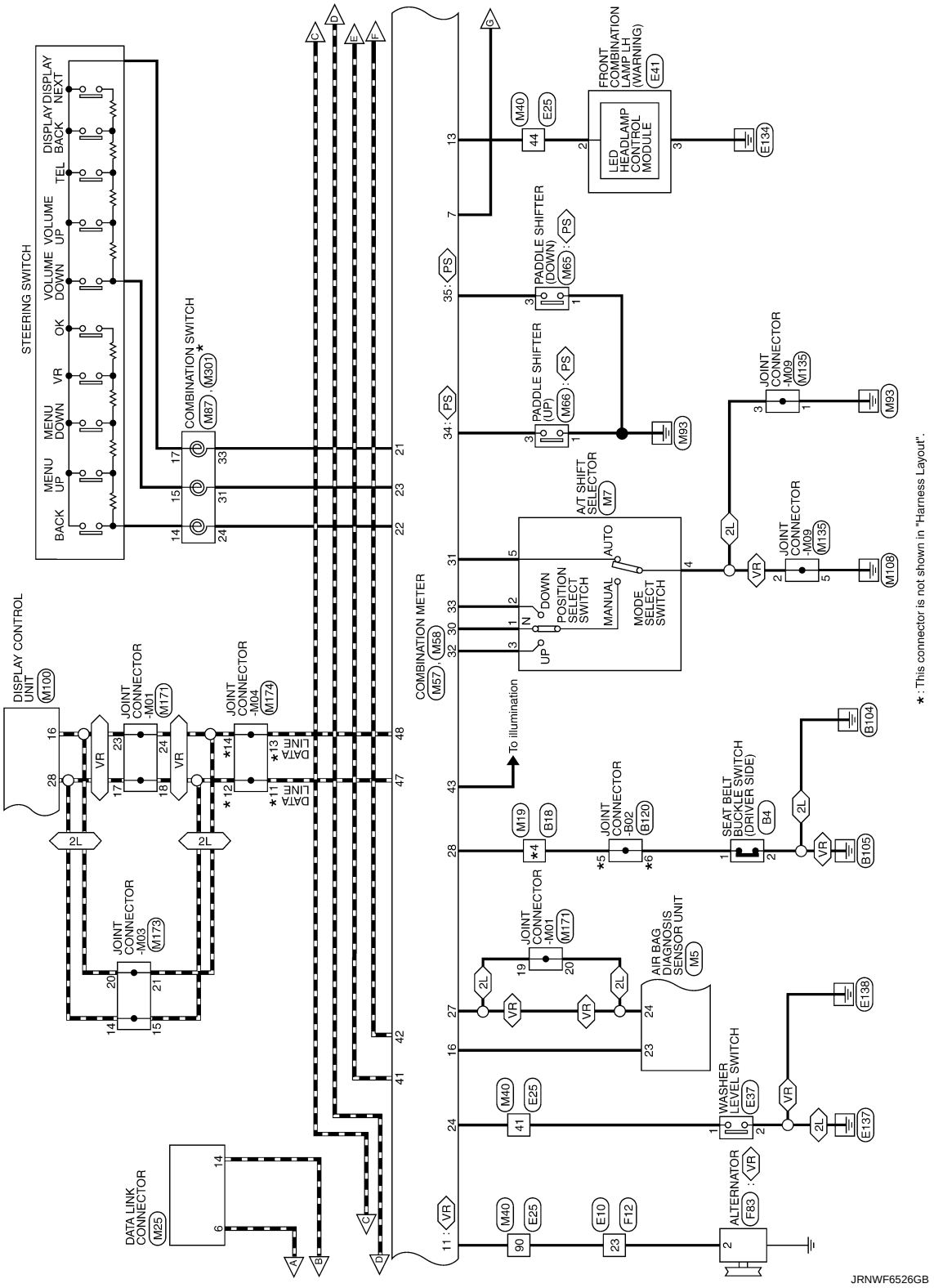
WIRING DIAGRAM

METER SYSTEM

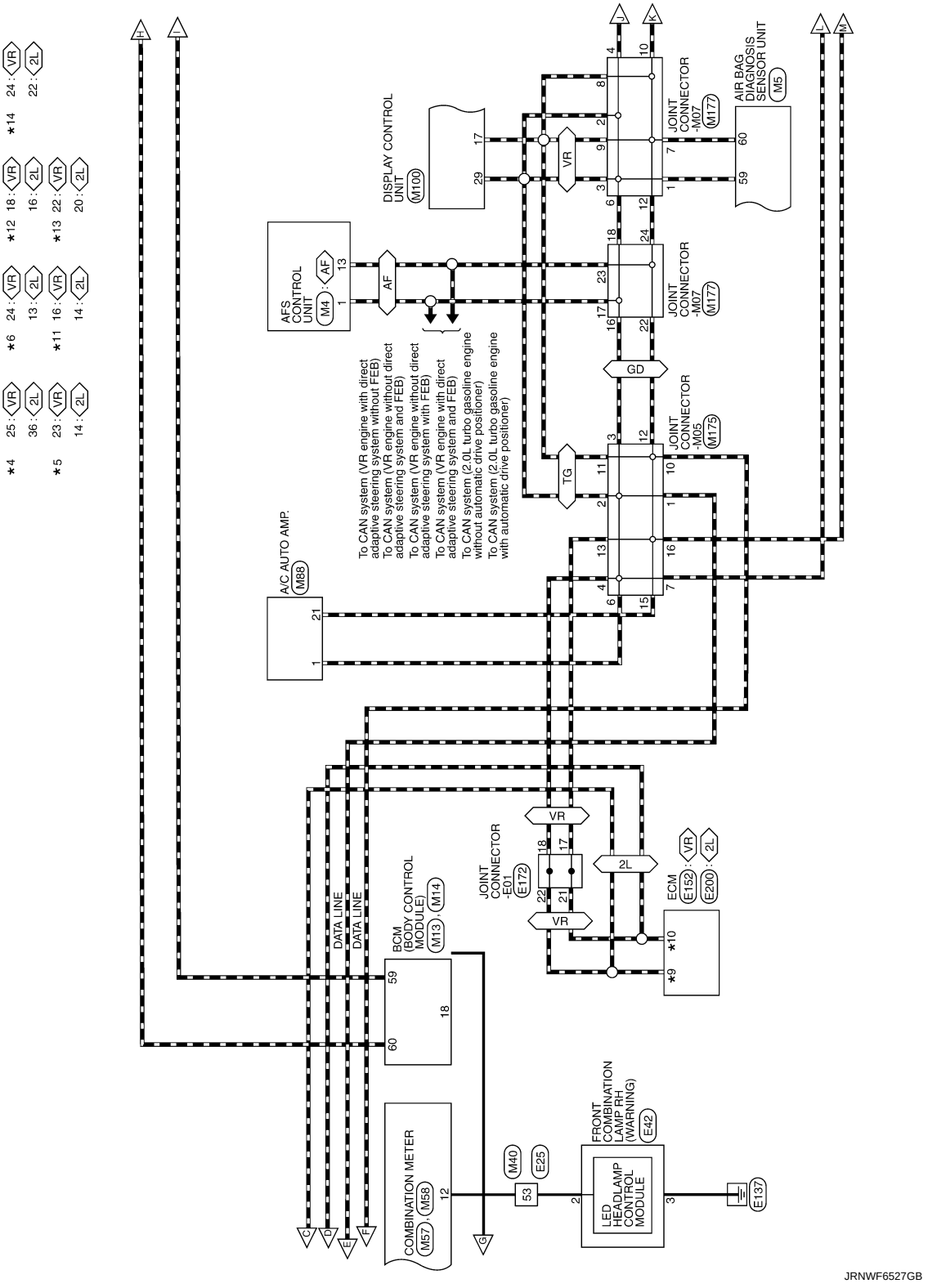
Wiring Diagram

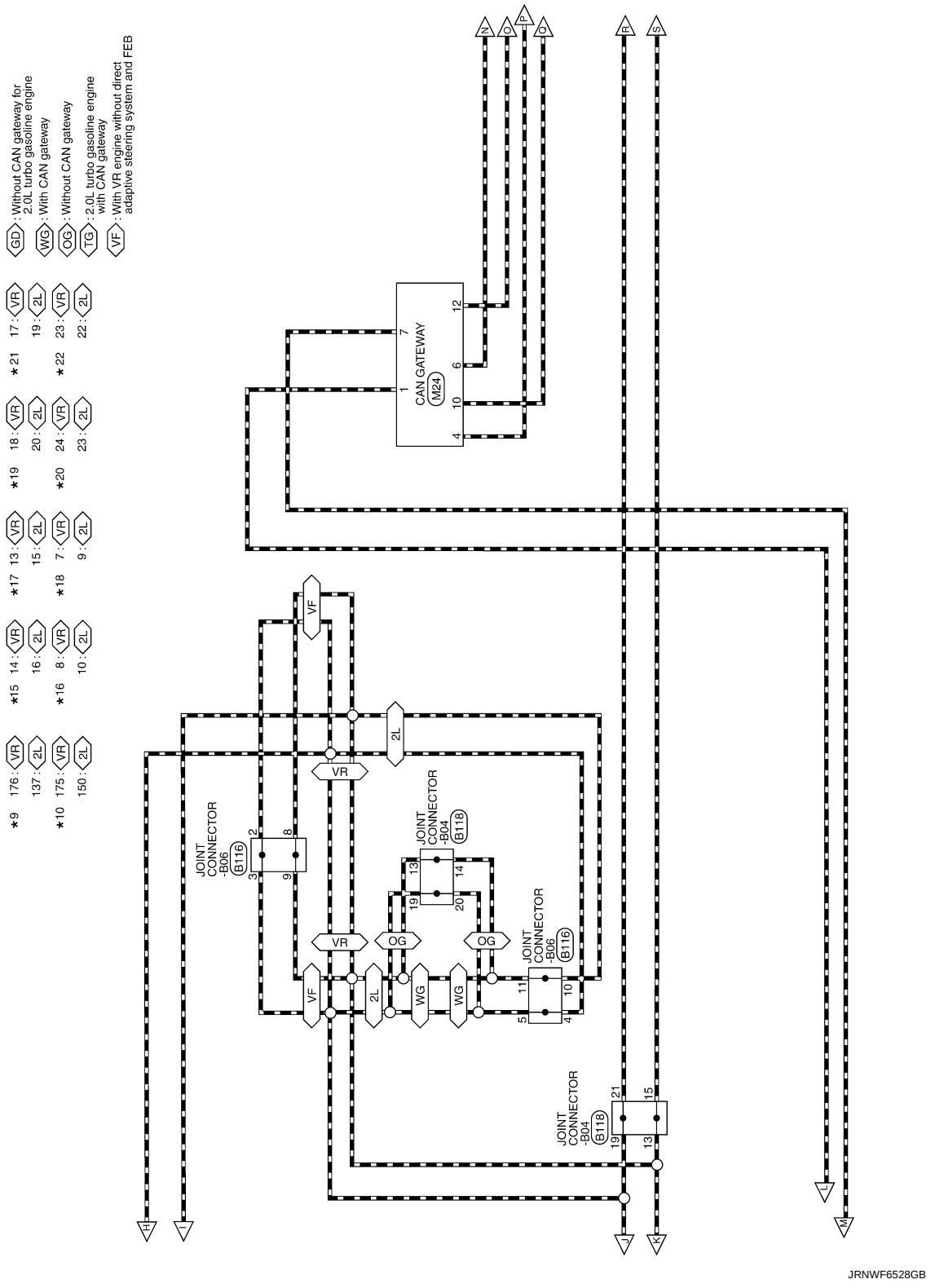
INFOID:0000000012791794

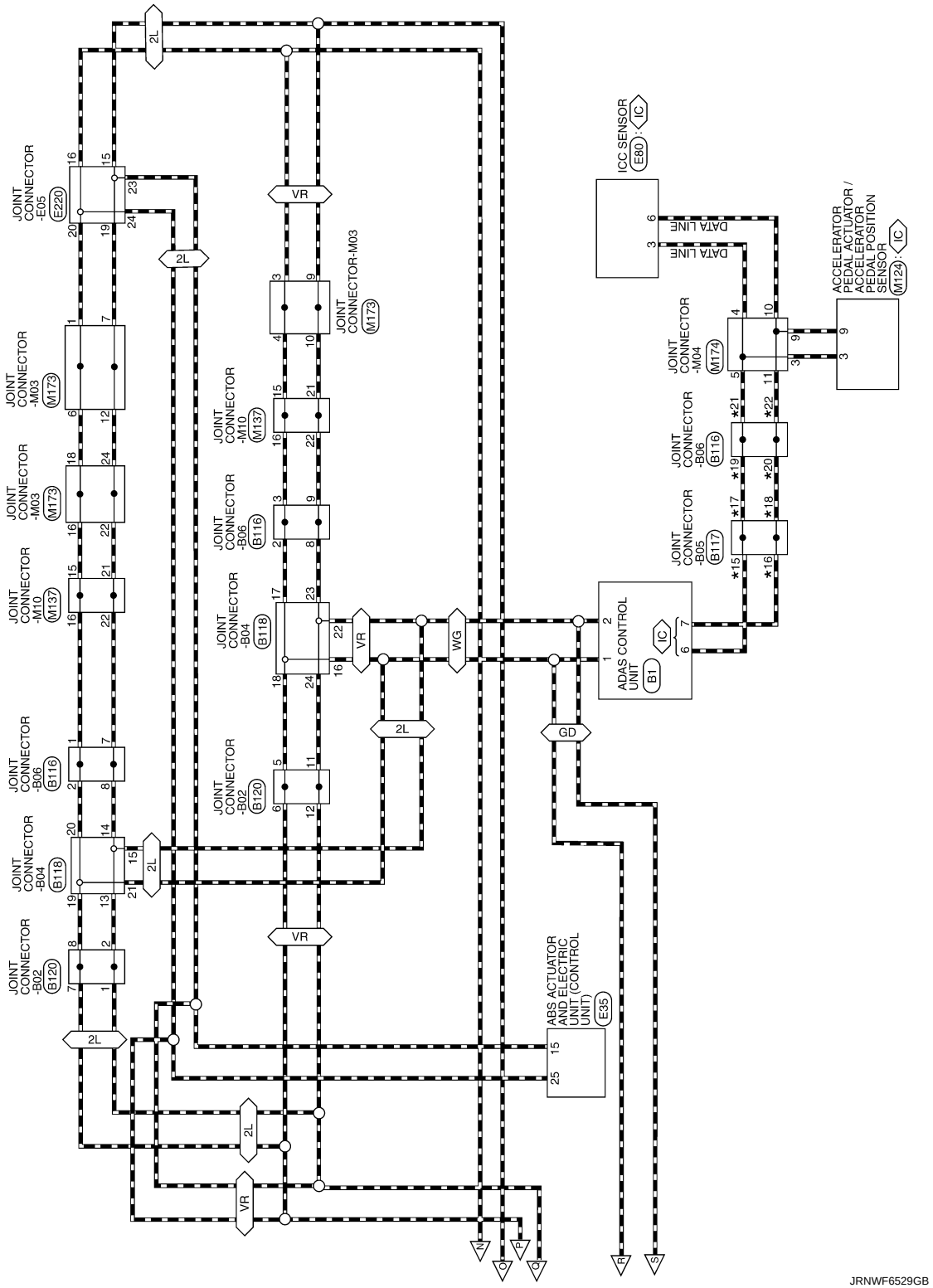




*: This connector is not shown in "Harness Layout".


DISPLAY CONTROL UNIT (M100)
AFS CONTROL UNIT (M4)
AF
A/C AUTO AMP. (M88)
JOINT CONNECTOR -M07 (M177)
JOINT CONNECTOR -M05 (M175)
AIR BAG DIAGNOSIS SENSOR UNIT (M5)
JOINT CONNECTOR -E01 (E172)
BCM (BODY CONTROL MODULE) (M13), (M14)
ECM (E152), (E200)
COMBINATION METER (M57), (M58)
FRONT COMBINATION LAMP RH (WARNING) (E42)
LED HEADLAMP CONTROL MODULE
DATA LINE
DATA LINE
VR
2L
TG
GD
To CAN system (VR engine with direct adaptive steering system without FEB)
To CAN system (VR engine without direct adaptive steering system and FEB)
To CAN system (VR engine without direct adaptive steering system with FEB)
To CAN system (VR engine with direct adaptive steering system and FEB)
To CAN system (2.0L turbo gasoline engine without automatic drive positioner)
To CAN system (2.0L turbo gasoline engine with automatic drive positioner)
JRNWF6527GB


GD : Without CAN gateway for 2.0L turbo gasoline engine
WG : With CAN gateway
OG : Without CAN gateway
TG : 2.0L turbo gasoline engine with CAN gateway
VF : With VR engine without direct adaptive steering system and FEB
CAN GATEWAY
M24
JOINT CONNECTOR -B06
B116
JOINT CONNECTOR -B04
B118
VR
2L
OG
WG
VF
JRNWF6528GB


JOINT CONNECTOR -E05 (E220)
JOINT CONNECTOR -M03 (M173)
JOINT CONNECTOR -M10 (M137)
JOINT CONNECTOR -B04 (B118)
JOINT CONNECTOR -B06 (B116)
JOINT CONNECTOR -B02 (B120)
JOINT CONNECTOR-M03 (M173)
JOINT CONNECTOR -M10 (M137)
JOINT CONNECTOR -B06 (B116)
JOINT CONNECTOR -B04 (B118)
JOINT CONNECTOR -B02 (B120)
ICC SENSOR (E80) : IC
DATA LINE
DATA LINE
JOINT CONNECTOR -M04 (M174)
JOINT CONNECTOR -B06 (B116)
JOINT CONNECTOR -B05 (B117)
ACCELERATOR PEDAL ACTUATOR / ACCELERATOR PEDAL POSITION SENSOR (M124) : IC
ADAS CONTROL UNIT (B1)
IC
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (E35)
2L
VR
WG
GD
N
O
P
O
R
S
JRNWF6529GB

METER

Connector No.	B1
Connector Name	ADAS CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	R	CAN-L
5	B	GROUND
6	L	ITS COMM-H
7	Y	ITS COMM-L
8	L	CHASSIS COMM-H
9	R	CHASSIS COMM-L
12	G	IGNITION [Except with VR30 engine and without ISS]
12	GR	IGNITION [VR30 engine and without ISS]
17	V	BRAKE HOLD RLY DRIVE SIGNAL
23	Y	STEERING SW SIGNAL GROUND
24	SB	STEERING SW SIGNAL

Connector No.	B4
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	B	-
3	W	-

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
5	Y	-
6	R	-
7	V	-
8	LG	-
10	BG	-
11	BG	-
12	LG	-
13	GR	-
14	R	-
15	L	-
16	V	-
18	W	-
19	BR	-
20	W	-
22	R	-
23	V	-
24	R	- [With 2.0L turbo gasoline engine]
24	Y	- [With VR30 engine]
25	P	- [With 2.0L turbo gasoline engine and without gateway]
25	V	- [With 2.0L turbo gasoline engine and with gateway]
25	W	- [With VR30 engine]
26	G	-
27	R	-
28	R	-
31	B	- [With VR30 engine]
31	BR	- [With 2.0L turbo gasoline engine]
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	BG	-
46	R	-
50	W	-
51	SB	-
52	V	-
53	LG	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
60	G	-
61	G	-
62	BG	-
63	BR	-
64	Y	-
66	R	-
70	R	-
71	W	-
72	B	-
73	W	-
74	L	-
75	R	- [Without paddle shift]
75	V	- [With paddle shift]
76	BR	-
77	B	-
78	SB	-
79	V	- [With VR30 engine]
79	W	- [With 2.0L turbo gasoline engine]
81	B	-
82	R	-
83	BG	-
84	L	-
85	R	- [Without paddle shift]
85	V	- [With paddle shift]
86	B	-
88	G	-
89	V	- [With 2.0L turbo gasoline engine]
89	W	- [With VR30 engine]
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	- [With VR30 engine and with BOSE system]
98	Y	- [Except with VR30 engine and with BOSE system]

Connector No.	B101
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN)
Connector Type	HS08FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
3	Y	-
5	G	- [With VR30 engine]
5	O	- [With 2.0L turbo gasoline engine]
6	BR	- [With VR30 engine]
6	G	- [With 2.0L turbo gasoline engine]
7	B	-
8	P	-

Connector No.	B116
Connector Name	JOINT CONNECTOR-B06
Connector Type	24342_4GA2A

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	R	-

JRNWF6530GB

METER

8	R	- [With Gateway]
8	V	- [Without Gateway]
9	R	- [With Gateway]
9	V	- [Without Gateway]
10	R	- [With VR30 engine]
10	V	- [With 2.0L turbo gasoline engine]
11	V	-
12	P	- [With Gateway]
12	R	- [Without Gateway]
13	SHIELD	-
14	SHIELD	-
15	B	- [With 2.0L turbo gasoline engine]
15	SHIELD	- [With VR30 engine]
16	L	- [With VR30 engine]
16	SHIELD	- [With 2.0L turbo gasoline engine]
17	L	- [With VR30 engine]
17	SHIELD	- [With 2.0L turbo gasoline engine]
18	L	- [With VR30 engine]
18	SHIELD	- [With 2.0L turbo gasoline engine]
19	L	- [With 2.0L turbo gasoline engine]
19	SHIELD	- [With VR30 engine]
20	L	- [With 2.0L turbo gasoline engine]
20	SHIELD	- [With VR30 engine]
21	L	-
22	P	-
23	P	-
24	P	- [With VR30 engine]
24	Y	- [With 2.0L turbo gasoline engine]

Connector No.	B117
Connector Name	JOINT CONNECTOR-B05
Connector Type	24342_4GA2A

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	- [With 2.0L turbo gasoline engine]
1	SHIELD	- [With VR30 engine]
2	B	-
2	SHIELD	- [With VR30 engine]
3	SHIELD	-
4	B	- [With VR30 engine]
4	SHIELD	-
5	B	- [With VR30 engine]
5	SHIELD	- [With 2.0L turbo gasoline engine]
6	B	-

5	B	-
6	B	-
7	Y	-
8	Y	-
9	P	- [With VR30 engine]
9	Y	- [With 2.0L turbo gasoline engine]
10	P	- [With VR30 engine]
10	Y	- [With 2.0L turbo gasoline engine]
11	P	-
12	P	-
13	L	-
14	L	-
15	L	-
16	L	-
17	L	-
18	L	-
19	B	-
20	B	-
21	B	- [With 2.0L turbo gasoline engine]
21	SHIELD	- [With VR30 engine]
22	B	- [With 2.0L turbo gasoline engine]
22	SHIELD	- [With VR30 engine]
23	SHIELD	-
24	SHIELD	-

Connector No.	B118
Connector Name	JOINT CONNECTOR-B04
Connector Type	24342_4GA2A

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	- [With VR30 engine]
1	SHIELD	- [With 2.0L turbo gasoline engine]
2	LG	- [With VR30 engine]
2	SHIELD	- [With 2.0L turbo gasoline engine]
3	SHIELD	-
4	LG	- [With VR30 engine]
4	SHIELD	- [With 2.0L turbo gasoline engine]
5	LG	- [With VR30 engine]
5	SHIELD	- [With 2.0L turbo gasoline engine]
6	LG	- [With VR30 engine]

6	SHIELD	- [With 2.0L turbo gasoline engine]
7	R	- [Color of wire differs depending on production]
7	V	- [Color of wire differs depending on production]
8	LG	- [With 2.0L turbo gasoline engine]
8	R	- [With VR30 engine and without paddle shift]
8	V	- [With VR30 engine and with paddle shift]
9	LG	- [With 2.0L turbo gasoline engine]
9	R	- [With VR30 engine and without paddle shift]
9	V	- [With VR30 engine and with paddle shift]
10	LG	- [With 2.0L turbo gasoline engine]
10	SHIELD	-
11	LG	- [With 2.0L turbo gasoline engine]
11	SHIELD	- [With VR30 engine]
12	LG	- [With 2.0L turbo gasoline engine]
12	SHIELD	- [With VR30 engine]
13	L	-
13	P	- [With 2.0L turbo gasoline engine and without gateway]
13	R	- [With 2.0L turbo gasoline engine and with gateway]
14	L	- [With VR30 engine]
14	P	- [With 2.0L turbo gasoline engine and without gateway]
14	R	- [With 2.0L turbo gasoline engine and with gateway]
15	L	- [With VR30 engine]
15	R	- [With 2.0L turbo gasoline engine]
16	L	-
17	L	-
18	L	-
19	L	- [With 2.0L turbo gasoline engine]
19	SHIELD	- [With VR30 engine]
20	L	- [With 2.0L turbo gasoline engine]
20	SHIELD	- [With VR30 engine]
21	L	- [With 2.0L turbo gasoline engine]
21	SHIELD	- [With VR30 engine]
22	R	-
23	R	-
24	R	-

Connector No.	B120
Connector Name	JOINT CONNECTOR-B02
Connector Type	24342_4GA2A

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	L	- [With VR30 engine]
3	R	- [With 2.0L turbo gasoline engine]
4	L	- [With VR30 engine]
4	R	- [With 2.0L turbo gasoline engine]
5	L	-
6	L	-
7	L	-
8	L	-
9	L	- [With 2.0L turbo gasoline engine]
9	R	- [With VR30 engine]
10	L	- [With 2.0L turbo gasoline engine]
10	R	- [With VR30 engine]
11	R	-
12	R	-
13	W	-
14	W	-
15	W	-
17	SHIELD	-
18	B	-
19	B	- [With 2.0L turbo gasoline engine]
19	GR	- [With VR30 engine]
20	GR	- [With VR30 engine]
20	SHIELD	- [With 2.0L turbo gasoline engine]
21	B	- [With 2.0L turbo gasoline engine]
21	GR	- [With VR30 engine]
22	W	-
23	W	-
24	W	-

JRNWF6531GB

METER

Connector No.	B128
Connector Name	DIODE-1
Connector Type	ET02-2W

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	BG	-

Connector No.	B161
Connector Name	FUEL LEVEL SENSOR UNIT [SUB]
Connector Type	HS05FW-1V

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-
2	BR	- [With VR30 engine]
3	W	- [With 2.0L turbo gasoline engine]

Connector No.	E4
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	YW02FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	B/W	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8

H.S.

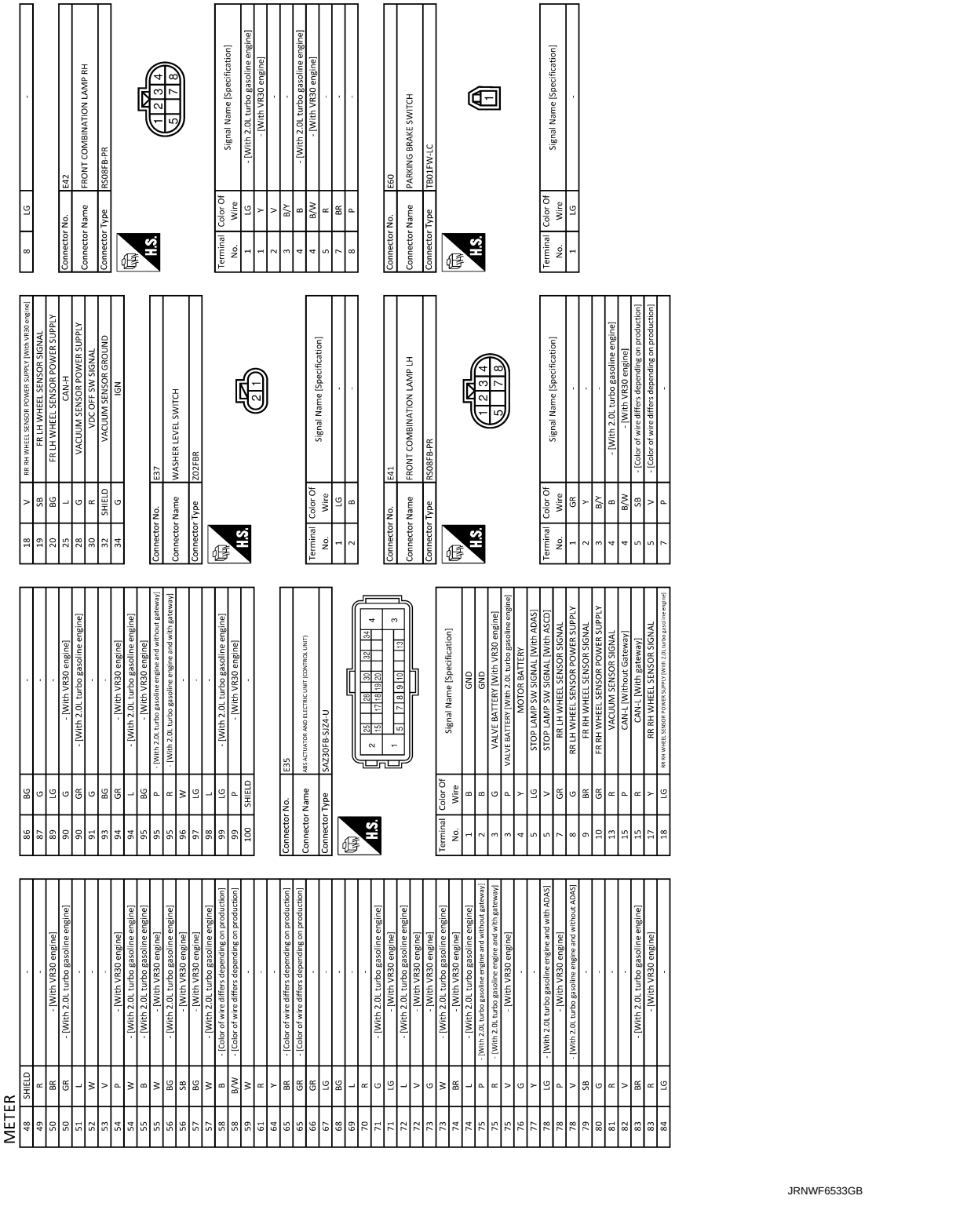
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	LG	-
4	R	-
5	G	-
7	V	-
8	W	-
9	W	-
10	BG	-
11	LG	-
12	BG	-
13	L	-
14	Y	-
15	LG	-
16	G	-
17	L	-
18	P	-
19	GR	-
20	G	-
21	GR	-
22	W	-
23	G	-
24	BG	-
25	V	-
26	BR	-
27	W	-
28	BG	-
29	LG	-
30	G	-
31	Y	-
32	R	-
33	B	-
34	V	-
35	LG	-
36	W	-
37	V	-
38	BR	-
39	GR	-
40	SHIELD	-
41	B	-
42	R	-
43	Y	-
44	SHIELD	-
45	Y	-
46	P	-
47	L	-
48	LG	-
49	BG	-
50	SHIELD	-
51	W	-
52	G	-

Connector No.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
6	V	-
7	L	-
8	BG	- [With VR30 engine]
8	BR	- [With 2.0L turbo gasoline engine]
9	B	- [With 2.0L turbo gasoline engine]
9	GR	- [With VR30 engine] (Color of wire differs depending on production)
9	LG	- [With VR30 engine] (Color of wire differs depending on production)
10	BR	-
11	L	-
12	GR	- [With VR30 engine]
12	P	- [With 2.0L turbo gasoline engine]
13	SHIELD	- [With 2.0L turbo gasoline engine]
13	W	- [With VR30 engine]
14	B	-
15	GR	- [With 2.0L turbo gasoline engine]
15	SB	- [With VR30 engine]
16	BR	- [With 2.0L turbo gasoline engine]
16	Y	- [With VR30 engine]
17	BR	- [With VR30 engine]
17	GR	- [With 2.0L turbo gasoline engine]
18	G	- [With 2.0L turbo gasoline engine]
18	P	- [With VR30 engine]
19	Y	-
31	W	- [With 2.0L turbo gasoline engine]
31	Y	- [With VR30 engine]
32	G	- [With 2.0L turbo gasoline engine]
32	GR	- [With VR30 engine]
33	L	- [With VR30 engine]
33	Y	- [With 2.0L turbo gasoline engine]
34	P	-
35	GR	-
36	R	-
37	L	- [With 2.0L turbo gasoline engine]
37	V	- [With VR30 engine]
38	L	- [With VR30 engine]
38	P	- [With 2.0L turbo gasoline engine and without gateway]
38	R	- [With 2.0L turbo gasoline engine and with gateway]
39	BR	- [With 2.0L turbo gasoline engine]
39	Y	- [With VR30 engine]
40	SB	-
41	LG	-
44	Y	-
45	L	- [With 2.0L turbo gasoline engine]
45	W	- [With VR30 engine]
46	B	- [With VR30 engine]
46	Y	- [With 2.0L turbo gasoline engine]
47	G	-

JRNWF6532GB

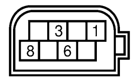


JRNWF6533GB

METER

Connector No.	E80
Connector Name	ICC SENSOR
Connector Type	AAZ08FB

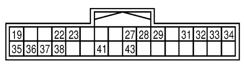
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	IGNITION
3	L	ITS COMM-H
6	Y	ITS COMM-L
8	B	GROUND

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH32FW-NH

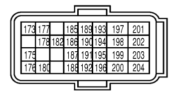
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
19	L	- [With 2.0L turbo gasoline engine]
19	P	- [With VR30 engine]
22	BG	-
23	GR	- [With VR30 engine]
23	LG	- [With 2.0L turbo gasoline engine and without Anti theft diode]
23	P	- [With 2.0L turbo gasoline engine and with Anti theft diode]
27	GR	-
28	P	-
29	L	-
31	G	-
32	SB	-
33	SB	-
34	Y	-
35	G	-
36	SB	- [With VR30 engine]
36	W	- [With 2.0L turbo gasoline engine]
37	GR	-
38	BR	-
41	GR	-
43	V	-

Connector No.	E152
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-RH

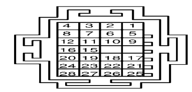
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
173	SB	FUEL TANK PRESSURE SENSOR
175	P	CAN-L
176	L	CAN-H
177	G	SENSOR POWER SUPPLY [FUEL TANK PRESSURE SENSOR]
178	V	TACHO METER SIGNAL
180	P	FUEL TANK TEMPERATURE SENSOR
182	W	FUEL PUMP CONTROL MODULE (FPCM) CHECK
185	SB	IGNITION SWITCH
186	SB	ASCD STEERING SWITCH
187	BG	SENSOR GROUND [ASCD STEERING SWITCH]
188	Y	FUEL PUMP CONTROL MODULE (FPCM)
189	Y	ENGINE COMMUNICATION LINE-L
190	L	ENGINE COMMUNICATION LINE-H
191	P	STOP LAMP SWITCH
192	BG	BRAKE PEDAL POSITION SWITCH
193	GR	EVAP CANISTER VENT CONTROL VALVE [Color of wire differs depending on production]
193	LG	EVAP CANISTER VENT CONTROL VALVE [Color of wire differs depending on production]
194	W	SENSOR POWER SUPPLY
195	BR	ACCELERATOR PEDAL POSITION SENSOR 2
196	R	SENSOR GROUND [ACCELERATOR PEDAL POSITION SENSOR 2]
197	R	ECM POWER SUPPLY
198	L	SENSOR POWER SUPPLY
199	B	ECM GROUND
200	V	SENSOR GROUND
201	B	ECM GROUND
202	Y	ACCELERATOR PEDAL POSITION SENSOR 1
203	G	SENSOR GROUND
204	B	ECM GROUND

Connector No.	E172
Connector Name	JOINT CONNECTOR-E01
Connector Type	SGA28FLBR-J

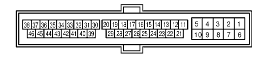
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	Y	-
3	W	-
4	L	-
5	GR	-
6	Y	-
7	W	-
8	L	-
9	GR	-
10	Y	-
11	W	-
12	L	-
15	W	-
16	BG	-
17	P	-
18	L	-
19	W	-
20	BG	-
21	P	-
22	L	-
23	SB	- [Color of wire differs depending on production]
23	W	- [Color of wire differs depending on production]
24	BG	- [Color of wire differs depending on production]
24	LG	- [Color of wire differs depending on production]
25	P	-
26	L	-
27	Y	-
28	L	-

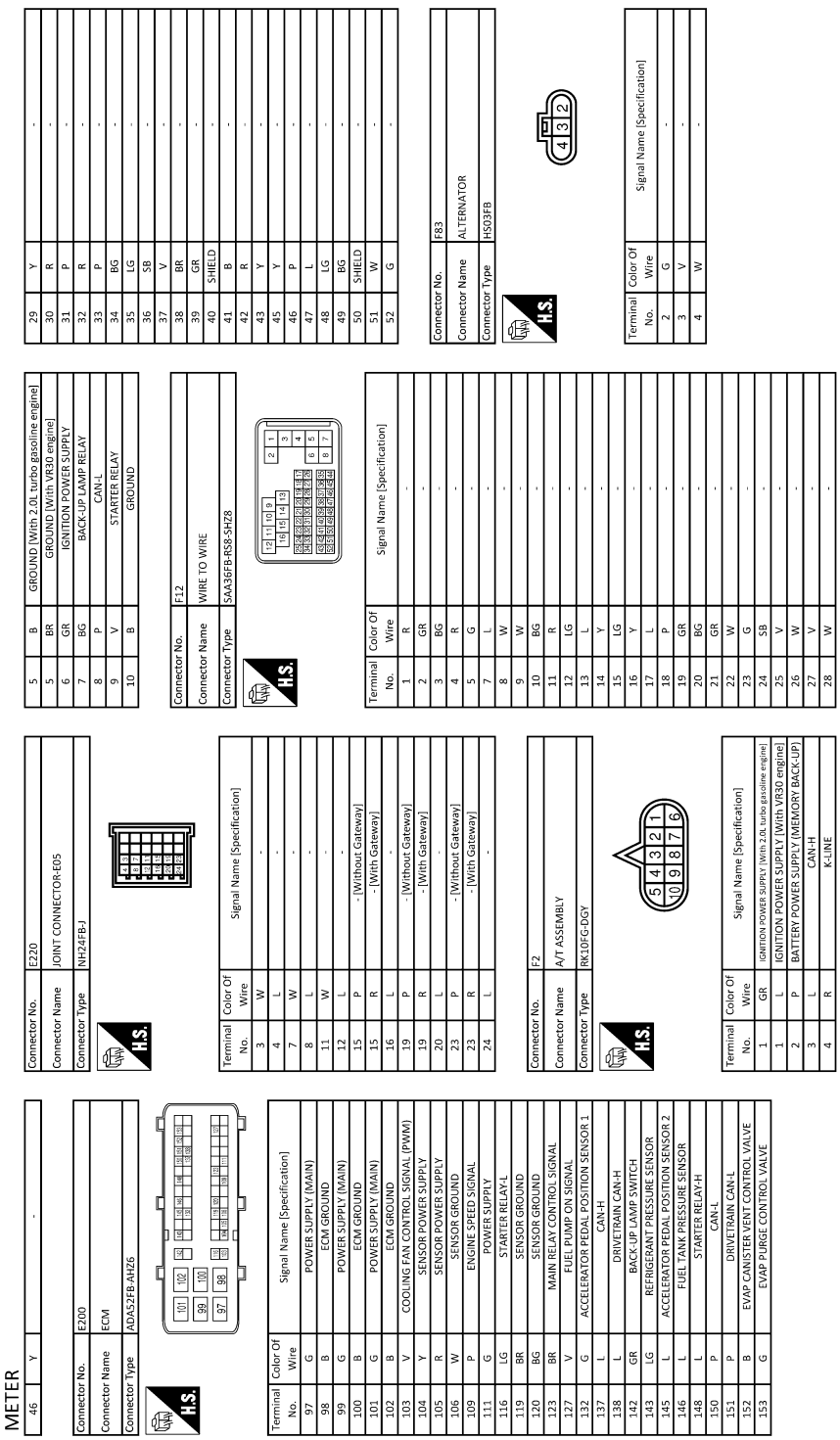
Connector No.	E195
Connector Name	WIRE TO WIRE
Connector Type	TK36FW-NS10

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
5	BR	-
8	GR	-
9	P	-
10	R	-
11	L	-
12	P	-
13	GR	-
14	Y	-
15	G	-
16	W	-
17	L	-
18	R	-
19	BR	-
20	SHIELD	-
21	BR	-
22	V	-
23	W	-
24	L	-
25	G	-
26	G	-
30	Y	-
31	GR	-
32	SB	-
33	W	-
34	W	-
35	B	-
36	G	-
37	SHIELD	-
38	R	-
39	L	-
40	GR	-
41	W	-
42	B	-
43	BR	-
44	P	-
45	SB	-

JRNWF6534GB

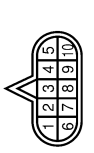


JRNWF6535GB

METER

Connector No.	F100
Connector Name	TCM
Connector Type	SP10FG

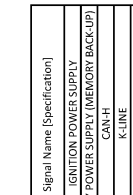
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	-	IGNITION POWER SUPPLY
2	-	BATTERY POWER SUPPLY [MEMORY BACK-UP]
3	-	CAN-H
4	-	K-LINE
5	-	GROUND
6	-	IGNITION POWER SUPPLY
7	-	BACK-UP LAMP RELAY
8	-	CAN-L
9	-	STARTER RELAY
10	-	GROUND

Connector No.	M4
Connector Name	AFS CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

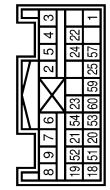


Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
6	BR	HEIGHT SENSOR SIGNAL
8	GR	SWIVEL ACTUATOR LIN SIGNAL
11	B	GROUND
12	R	IGNITION POWER SUPPLY [With VR30 engine]
12	W	IGNITION POWER SUPPLY [With 2.0L turbo gasoline engine]
13	P	CAN-L
19	P	SWIVEL ACTUATOR GROUND
21	LG	HEIGHT SENSOR POWER SUPPLY
22	SB	AIMING MOTOR DRIVE SIGNAL

23	GR	HEIGHT SENSOR GROUND
24	B	AIMING MOTOR GROUND

Connector No.	M5
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

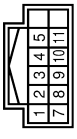
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	IGN
2	B	GND
3	Y/R	DR1 (+)
4	Y/B	DR1 (-)
5	Y	DR2 (+)
6	Y/R	AS1 (+)
7	Y/B	AS1 (-)
8	Y/G	AS2 (+)
9	Y	AS2 (-)
18	Y	ECZS+
19	BR	ECZS-
20	Y/R	ACT_VENT+
21	Y/B	ACT_VENT-
22	SHIELD	GND
23	V	AIRBAG W/L
24	G	-
25	GR	A/B_OFF_IND
51	G	SATELLITE RH2 (+)
52	R	SIDE_SENS_RH2-
53	V	SIDE_SENS_LH2+
54	L	SIDE_SENS_LH2-
57	LG	IVCS
59	L	CAN-H
60	P	CAN-L

Connector No.	M7
Connector Name	A/T SHIFT SELECTOR
Connector Type	TH12FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	GR	-
3	BG	-
4	B	-
5	G	-
7	R	-
8	P	- [With VR30 engine]
8	V	- [With 2.0L turbo gasoline engine]
9	B	-
10	GR	-
11	R	-

Connector No.	M13
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

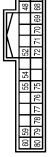
H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	IGN RLY/AY (F/B) CONT
3	V	SENS PWR SPLY
4	BG	OPTICAL SENSOR
5	LG	-
10	W	COMBI SW OUTPUT 5
11	SB	COMBI SW OUTPUT 4
12	L	COMBI SW OUTPUT 3
13	G	COMBI SW OUTPUT 2
14	P	COMBI SW OUTPUT 1

15	G	ONE TOUCH UNLK SENS (DR)
16	G	ONE TOUCH UNLK SENS (PASS)
17	P	RCEIEVER/SENSOR GND
18	L	SECURITY IND LAMP CONT
20	R	DETENT SW
21	SB	STEP LAMP CONT
25	R	STOP LAMP SW2
26	R	EXTENDED STORAGE FUSE SW
27	P	STOP LAMP SW
30	W	DR DOOR UNLK SENS
33	V	TR LID OP CANCEL SW
36	G	HAZARD SW
39	BR	P/N POSITION

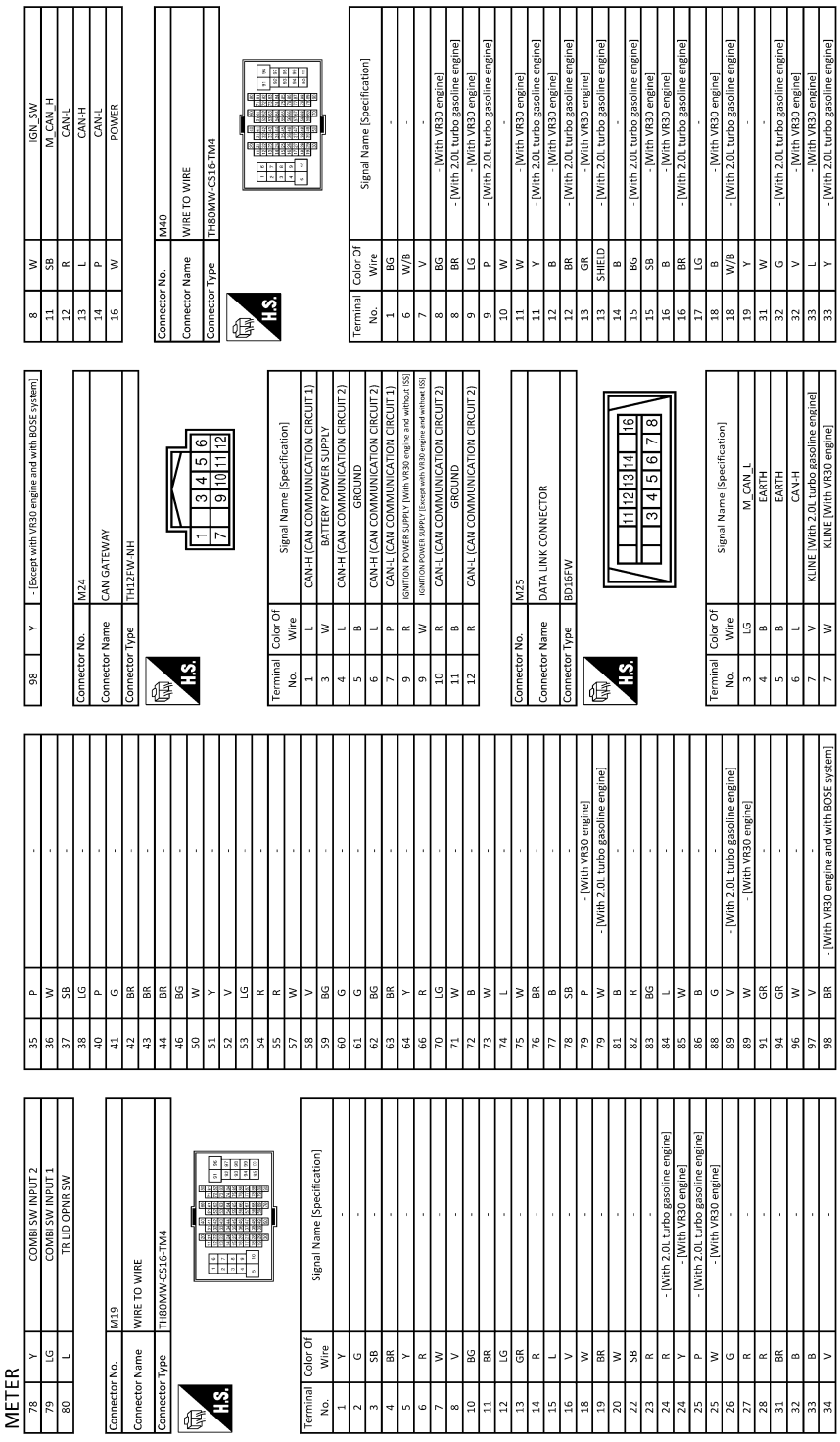
Connector No.	M14
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
48	R	PUSH-BTN IGN SW ILL PWR
52	G	DONGLE LINK
54	V	COMM LINE
55	R	RAIN SENSOR
59	P	CAN-L
60	L	CAN-H
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	I-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT [With VR30 engine]
66	Y	BLOWER FAN RLY CONT [With 2.0L turbo gasoline engine]
67	W/B	IGN RLY/AY (F/B) CONT
68	R	DIMMER
69	GR	A/T SHIFT SELECT PWR SPLY
70	B	IGN RLY/AY (IPDM E/R) CONT
71	G	DR DOOR REQ SW
72	SB	PASS DOOR REQ SW
75	BR	COMBI SW INPUT 5
76	BG	COMBI SW INPUT 4
77	V	COMBI SW INPUT 3

JRNWF6536GB



JRNWF6537GB

METER

34	P	-
35	BG	-
36	G	-
37	B	- [With VR30 engine]
37	L	- [With 2.0L turbo gasoline engine]
38	L	- [With VR30 engine]
38	P	- [With 2.0L turbo gasoline engine and without gateway]
38	R	- [With 2.0L turbo gasoline engine and with gateway]
39	R	- [With 2.0L turbo gasoline engine]
39	Y	- [With VR30 engine]
40	GR	-
41	L	-
44	BR	-
45	L	- [With 2.0L turbo gasoline engine]
45	W	- [With VR30 engine]
46	G	- [With VR30 engine]
46	Y	- [With 2.0L turbo gasoline engine]
47	BG	- [With 2.0L turbo gasoline engine]
47	R	- [With VR30 engine]
48	SHIELD	-
49	B	- [With VR30 engine]
49	G	- [With 2.0L turbo gasoline engine]
50	B	- [With 2.0L turbo gasoline engine]
50	BR	- [With VR30 engine]
51	L	-
52	W	-
53	G	-
54	SB	- [With 2.0L turbo gasoline engine]
54	Y	- [With VR30 engine]
55	B	- [With 2.0L turbo gasoline engine]
55	P	- [With VR30 engine]
56	BG	- [With VR30 engine]
56	GR	- [With 2.0L turbo gasoline engine]
57	GR	- [With VR30 engine]
57	P	- [With 2.0L turbo gasoline engine]
58	B	-
59	SB	-
61	W/B	-
64	Y	-
65	R	-
66	P	- [Color of wire differs depending on production]
66	V	- [Color of wire differs depending on production]
67	LG	-
68	BG	-
69	L	-
70	R	-
71	V	- [With VR30 engine]
71	W	- [With 2.0L turbo gasoline engine]
72	L	- [With 2.0L turbo gasoline engine]
72	LG	- [With VR30 engine]
73	R	- [With VR30 engine]
73	W	- [With 2.0L turbo gasoline engine]
74	BR	- [With VR30 engine]
74	L	- [With 2.0L turbo gasoline engine]
75	B	- [With VR30 engine]
75	P	- [With 2.0L turbo gasoline engine and without gateway]
75	R	- [With 2.0L turbo gasoline engine and with gateway]
76	W/B	
77	SB	-
78	G	- [With VR30 engine]
78	LG	- [With 2.0L turbo gasoline engine]
79	R	-
80	G	
81	R	-
82	LG	-
83	BR	- [With 2.0L turbo gasoline engine]
83	R	- [With VR30 engine]
84	V	-
86	V	-
87	G	-
89	V	-
90	G	- [With VR30 engine]
90	V	- [With 2.0L turbo gasoline engine]
91	W	-
92	G	
93	BR	-
94	GR	- [With VR30 engine]
94	L	- [With 2.0L turbo gasoline engine]
95	BR	- [With VR30 engine]
95	P	- [With 2.0L turbo gasoline engine and without gateway]
95	R	- [With 2.0L turbo gasoline engine and with gateway]
96	W	-
97	LG	-
98	Y	-
99	BR	- [With VR30 engine]
99	LG	- [With 2.0L turbo gasoline engine]
100	SHIELD	-

Connector No.	M57
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24		25	26	27	28	29	30	31	32

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
6	GR	STOP/START OFF SWITCH INDICATOR SIGNAL
7	G	SECURITY SIGNAL
8	B	-
11	W	ALTERNATOR SIGNAL
12	G	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	LED HEADLAMP (LH) WARNING SIGNAL
14	V	ACC POWER SUPPLY
16	V	AIR BAG SIGNAL
17	BR	METER CONTROL SWITCH GROUND
18	SB	TRIP/RESET SIGNAL
21	B	STEERING SWITCH SIGNAL GROUND
22	P	STEERING SWITCH SIGNAL A
23	W/B	STEERING SWITCH SIGNAL B
24	L	WASHER LEVEL SWITCH SIGNAL
25	LG	BRAKE FLUID LEVEL SWITCH SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	G	PASSENGER SEAT BELT WARNING SIGNAL
28	W	SEAT BELT BUCKLE SWITCH SIGNAL [DRIVER SIDE]
30	G	MANUAL MODE SIGNAL [With 2.0L turbo gasoline engine]
30	SB	MANUAL MODE SIGNAL [With VR30 engine]
31	G	NON-MANUAL MODE SIGNAL [With VR30 engine]
31	L	NON-MANUAL MODE SIGNAL [With 2.0L turbo gasoline engine]
32	BG	MANUAL MODE SHIFT UP SIGNAL
33	GR	MANUAL MODE SHIFT DOWN SIGNAL [With VR30 engine]
33	P	MANUAL MODE SHIFT DOWN SIGNAL [With 2.0L turbo gasoline engine]
34	BG	PADDLE SHIFTER UP SWITCH SIGNAL
35	G	PADDLE SHIFTER DOWN SWITCH SIGNAL
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (+)
37	GR	ILLUMINATION CONTROL SWITCH SIGNAL (-)
38	R	VEHICLE SPEED SIGNAL (8-PULSE)

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH

H.S.

41	42	43	44	45	46
47	48			51	52

Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY
46	BG	IGNITION SIGNAL [Except with VR30 engine and without ISS]
46	R	IGNITION SIGNAL [With VR30 engine and without ISS]
47	SB	AV COMMUNICATION SIGNAL (H)
48	LG	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M59
Connector Name	METER CONTROL SWITCH
Connector Type	TH08FW-NH

H.S.

1	2	4
5	6	7

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	B	-
4	BR	-
5	SB	-
6	V	-
7	GR	-

JRNWF6538GB

METER

Connector No.	M65
Connector Name	PADDLE SHIFTER (DOWN)
Connector Type	A03FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	G	-

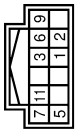
Connector No.	M66
Connector Name	PADDLE SHIFTER (UP)
Connector Type	A04FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
3	BG	-

Connector No.	M80
Connector Name	TRIPLE SWITCH
Connector Type	TH12FB-NH

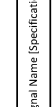
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	R	-
5	B	-
6	R	-
7	B	-
9	R	INDICATOR+
11	GR	INDICATOR-

Connector No.	M87
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V

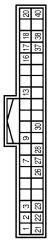
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
24	P	-
25	SB	-
31	W/B	-
32	Y	-
33	B	-

Connector No.	M88
Connector Name	A/C AUTO AMP.
Connector Type	TH40FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	B	GROUND
3	W	BATTERY POWER SUPPLY
7	G	AMBIENT SENSOR SIGNAL
9	R	SUNLOAD SENSOR SIGNAL
13	SB	ACC POWER SUPPLY [With 2.0L turbo gasoline engine]
13	V	ACC POWER SUPPLY [With VR30 engine]
16	P	LIN SIGNAL
17	R	DOOR MOTOR POWER SUPPLY
18	P	BLOWER MOTOR CONTROL SIGNAL
20	L	HEATED STEERING WHEEL RELAY CONTROL SIGNAL
21	P	CAN-L
22	B	GROUND
23	R	IGNITION POWER SUPPLY [With VR30 engine and with ISS]
23	W	IGNITION POWER SUPPLY [Except with VR30 engine and with ISS]
26	B	SENSOR GROUND
27	LG	IN-VEHICLE SENSOR SIGNAL
28	BR	INTAKE SENSOR SIGNAL
30	BG	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL
37	B	GROUND
38	BG	IONIZER (ON/OFF) CONTROL SIGNAL
40	BG	ECV CONTROL SIGNAL

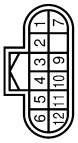
Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
16	LG	AV COMM (L)
17	P	CAN-L
19	R	DIMMER SIGNAL
20	BR	REVERSE SIGNAL
22	B	GND
26	BR	CAMERA SWITCH SIGNAL
28	SB	AV COMM (H)
29	L	CAN-H
30	R	IGN [For VR30 engine]
30	W	IGN [For 2.0L turbo gasoline engine]
31	R	VEHICLE SPEED SIGNAL (8-PULSE)
33	SB	ACC [Except for VR30 engine and with ISS]
33	V	ACC [For VR30 engine and with ISS]
34	Y	BAT

Connector No.	M124
Connector Name	ACCELERATOR PEDAL ACTUATOR/ACCELERATOR PEDAL POSITION SENSOR
Connector Type	RH12FB

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	BATTERY
2	G	IGNITION
3	L	ITS COMM-H
4	W	-
5	G	-
6	Y	-

JRNWF6539GB

METER

7	B
9	Y
10	L
11	R
12	BR

GROUND	
ITS COMM-L	
-	
-	
-	

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	-
12C	L	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]
18C	P	- [With DRPO]
19C	B	-
1C	R	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
29C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	- [With VR30 engine]
33C	R	- [With 2.0L turbo gasoline engine]
34C	W/B	-
35C	SB	-
36C	R	-

37C	W
38C	SB
39C	V
3C	P
40C	G
4C	P
5C	P
6C	G
7C	G
8C	G
9C	V

Connector No.	M135
Connector Name	JOINT CONNECTOR-M09
Connector Type	24342_4GA2A

H.S.

6	5	4	3	2	1																		
						11	10	9															
18	17	16	15	14	13																		
24	23	22	21	20	19																		

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	B	-
3	B	-
4	B	-
5	B	-
6	B	-
9	LG	-
10	LG	-
11	LG	-
13	B	- [With VR30 engine]
13	SB	- [With 2.0L turbo gasoline engine]
14	B	- [With VR30 engine]
14	SB	- [With 2.0L turbo gasoline engine]
15	B	- [With VR30 engine]
15	SB	- [With 2.0L turbo gasoline engine]
16	SB	- [With 2.0L turbo gasoline engine]
16	Y	- [With VR30 engine]
17	SB	- [With 2.0L turbo gasoline engine]
17	Y	- [With VR30 engine]
18	SB	- [With 2.0L turbo gasoline engine]
18	Y	- [With VR30 engine]
19	SHIELD	-
20	R	-

21	R
22	SHIELD
23	L
24	L

-	
-	
-	
-	

Connector No.	M137
Connector Name	JOINT CONNECTOR-M10
Connector Type	24342_4GA2A

H.S.

						5	4	3	2	1													
						11	10	9	8	7													
								16	15	14	13												
								22	21	20	19												

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	B	-
3	B	-
4	B	-
5	B	-
7	B	-
8	B	-
9	B	-
10	B	-
11	B	-
13	L	-
14	L	-
15	L	-
16	L	-
19	R	-
20	R	-
21	R	-
22	R	-

Connector No.	M139
Connector Name	DIODE-2
Connector Type	ET02-2W

H.S.

1	2	

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-

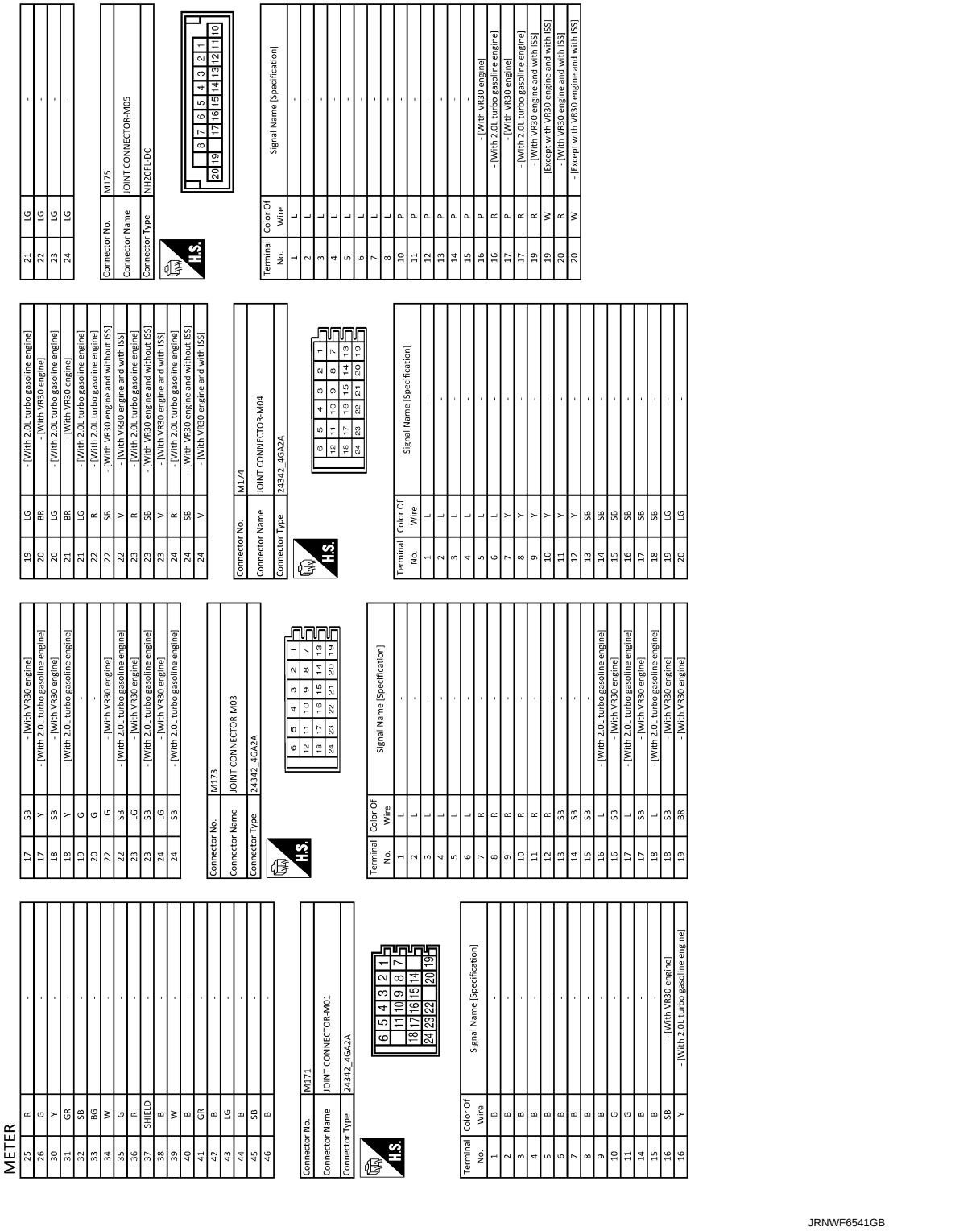
Connector No.	M146
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10

H.S.

12	11	10	9	8	7	6	5	4	3	2	1												
24	23	22	21	20	19	18	17	16	15	14	13												

Terminal No.	Color Of Wire	Signal Name [Specification]
5	R	-
8	GR	-
9	V	-
10	BG	-
11	L	-
12	P	-
13	SB	-
14	Y	-
15	G	-
16	BR	-
17	W	-
18	R	-
19	L	-
20	SHIELD	-
21	BR	-
22	B	-
23	G	-
24	L	-

JRNWF6540GB



JRNWF6541GB

METER

Connector No.	M177
Connector Name	JOINT CONNECTOR-M07
Connector Type	24342_4GA2A

H.S.

6	5	4	3	2	1	
12	11	10	9	8	7	
18	17	16	15	14	13	
24	23	22	21	20	19	

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	P	-
7	P	-
8	P	-
9	P	-
10	P	-
11	P	-
12	P	-
13	L	-
14	L	-
15	L	-
16	L	-
17	L	-
18	L	-
19	W	-
20	W	-
21	W	-
22	P	-
23	P	-
24	P	-

Connector No.	M301
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY

H.S.

20	19	18	17	16	15	14	13					

Terminal No.	Color Of Wire	Signal Name [Specification]
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-

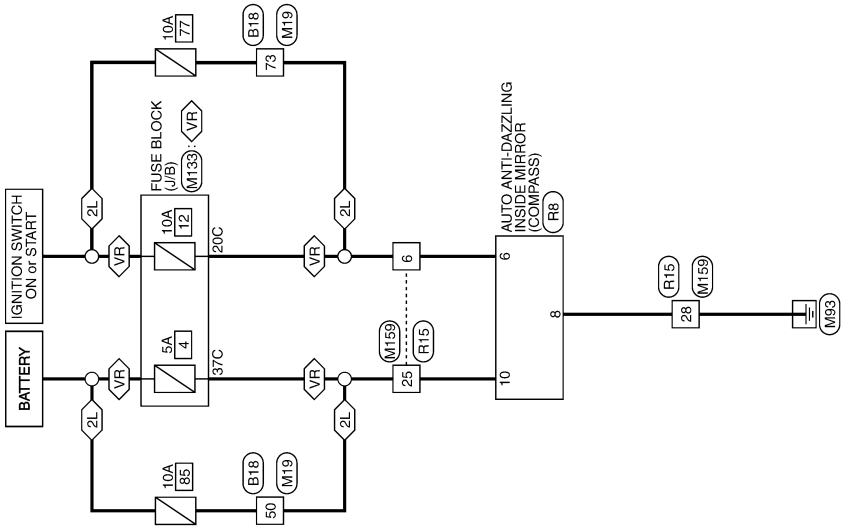
JRNWF6542GB

COMPASS

Wiring Diagram

INFOID:0000000012791795

2L : 2.0L turbo gasoline engine
VR : With VR engine



COMPASS

2015/11/27

JRNWF4690GB

COMPASS

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
5	Y	-
6	R	-
7	V	-
8	LG	-
10	BG	-
11	BG	-
12	LG	-
13	GR	-
14	R	-
15	L	-
16	V	-
18	W	-
19	BR	-
20	W	-
22	R	-
23	V	-
24	R	- [With 2.0L turbo gasoline engine]
24	Y	- [With VR30 engine]
25	P	- [With 2.0L turbo gasoline engine and without gateway]
25	V	- [With 2.0L turbo gasoline engine and with gateway]
25	W	- [With VR30 engine]
26	G	-
27	R	-
28	R	-
31	B	- [With VR30 engine]
31	BR	- [With 2.0L turbo gasoline engine]
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	R	-
46	W	-
50	W	-
51	SB	-
52	V	-
53	LG	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
60	G	-
61	G	-
62	BG	-
63	BR	-
64	Y	-
66	R	-
70	R	-
71	W	-
72	B	-
73	W	-
74	L	-
75	R	- [Without paddle shift]
75	V	- [With paddle shift]
76	BR	-
77	B	-
78	SB	-
79	V	- [With VR30 engine]
79	W	- [With 2.0L turbo gasoline engine]
81	B	-
82	R	-
83	BG	-
84	L	- [Without paddle shift]
85	R	- [With paddle shift]
85	V	-
86	B	-
88	G	-
89	V	- [With 2.0L turbo gasoline engine]
89	W	- [With VR30 engine]
91	GR	-
94	GR	-
96	Y	-
97	V	-

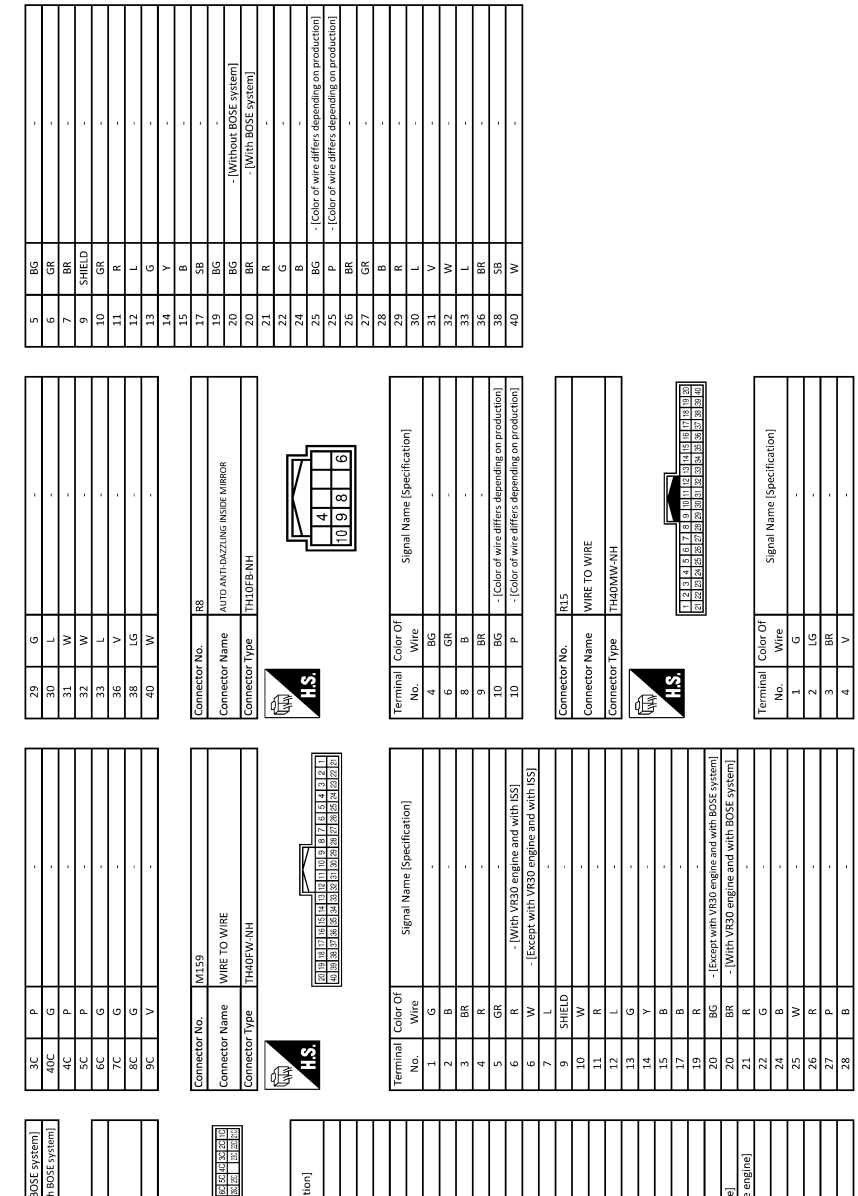
98	BR	- [With VR30 engine and with BOSE system]
98	Y	- [Except with VR30 engine and with BOSE system]

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	SB	-
4	BR	-
5	Y	-
6	R	-
7	W	-
8	V	-
10	BG	-
11	BR	-
12	LG	-
13	GR	-
14	R	-
15	L	-
16	V	-
18	W	-
19	BR	-
20	W	-
22	SB	-
23	R	-
24	Y	- [With 2.0L turbo gasoline engine]
25	P	- [With 2.0L turbo gasoline engine]
25	W	- [With VR30 engine]
26	G	-
27	R	-
31	G	-
31	R	- [With 2.0L turbo gasoline engine]
32	R	-
33	B	-
34	V	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	G	-
42	BR	-
43	BR	-
44	BR	-
46	BG	-
50	W	-
51	Y	-
52	V	-
53	LG	-
54	R	-
55	R	-
57	W	-
58	V	-
59	BG	-
60	G	-
61	G	-
62	BG	-
63	BR	-
64	Y	-
66	R	-
70	LG	-
71	W	-
72	B	-
73	W	-
74	L	-
75	W	-
76	BR	-
77	B	-
78	SB	-
79	P	- [With VR30 engine]
79	W	- [With 2.0L turbo gasoline engine]
81	B	-
82	R	-
83	BG	-
84	L	-
85	W	-
86	B	-
88	G	-
89	V	- [With 2.0L turbo gasoline engine]
89	W	- [With VR30 engine]
91	GR	-
94	GR	-
96	W	-
97	V	-

JRNWF6543GB



JRNWF6544GB

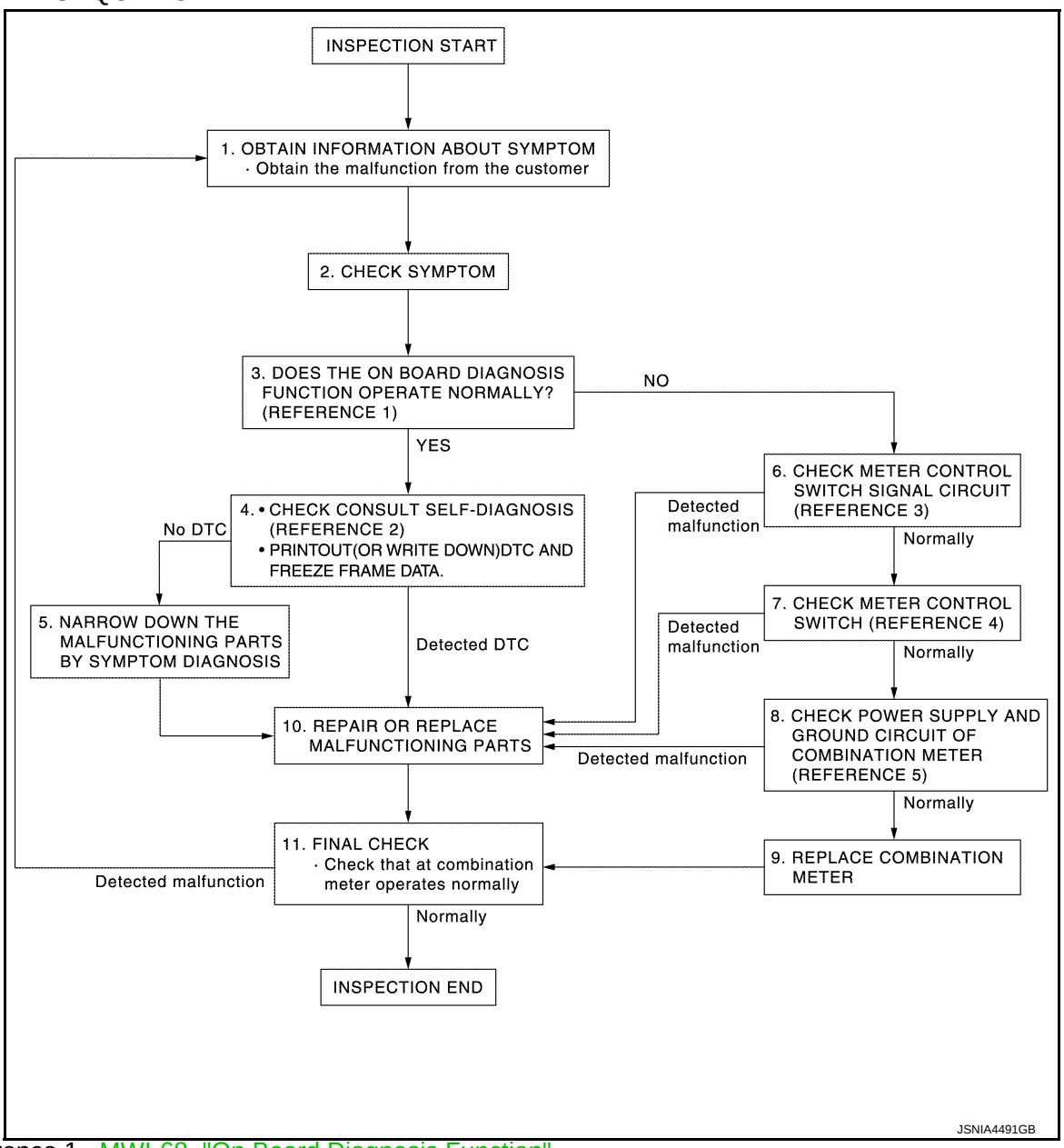
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW (METER SYSTEM)

Work flow

INFOID:0000000012791796

OVERALL SEQUENCE



- Reference 1···MWI-68, "On Board Diagnosis Function".
- Reference 2···MWI-87, "DTC Index".
- Reference 3···MWI-123, "Diagnosis Procedure".
- Reference 4···MWI-124, "Component Inspection".
- Reference 5···MWI-120, "COMBINATION METER : Diagnosis Procedure".

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

>> GO TO 2.

2.CHECK SYMPTOM

- Check the symptom based on the information obtained from the customer.
- Check that any other malfunctions are present.

>> GO TO 3.

3.CHECK ON BOARD DIAGNOSIS OPERATION

Check that the on board diagnosis function operates. Refer to MWI-68, "On Board Diagnosis Function".

Does the on board diagnosis function operate normally?

YES >> GO TO 4.
NO >> GO TO 6.

4.CHECK CONSULT SELF-DIAGNOSIS RESULTS

1. Connect CONSULT and perform self-diagnosis. Refer to MWI-87, "DTC Index".
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Are self-diagnosis results normal?

YES >> GO TO 5.
NO >> GO TO 10.

5.NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 10.

6.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

Check meter control switch signal circuit. Refer to MWI-123, "Diagnosis Procedure".

Is inspection result OK?

YES >> GO TO 7.
NO >> GO TO 10.

7.CHECK METER CONTROL SWITCH

Check meter control switch. Refer to MWI-124, "Component Inspection".

Is inspection result OK?

YES >> GO TO 8.
NO >> GO TO 10.

8.CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUITS

Check combination meter power supply and ground circuits. Refer to MWI-120, "COMBINATION METER : Diagnosis Procedure".

Is inspection result OK?

YES >> GO TO 9.
NO >> GO TO 10.

9.REPLACE COMBINATION METER

Replace combination meter.

>> GO TO 11.

10.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

NOTE:

If DTC is displayed, erase DTC after repair or replace malfunctioning parts.

>> GO TO 11.

11. FINAL CHECK

Check that the combination meter operates normally.

Do they operate normally?

YES >> INSPECTION END
NO >> GO TO 1.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:0000000012791797

CAN (Controller Area Network) is a serial communication system for real time application. It is an on-vehicle multiplex communication system with high data communication speed and excellent error detectability. Many electronic control units are equipped onto vehicles, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with two communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart. Refer to LAN-67, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart (2.0L Turbo Gasoline Engine Models)".

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1000	CAN COMM CIRCUIT (CAN communication circuit)	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning. Refer to MWI-86, "Fail-Safe".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000012791798

1.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Erase DTC.
3. Perform DTC confirmation procedure again. Refer to MWI-114, "DTC Description".

Is DTC U1000 detected again?

YES >> Perform the trouble diagnosis for CAN communication system. Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000012791799

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	When detecting error during the initial diagnosis of the CAN controller of combination meter.

POSSIBLE CAUSE

Combination meter

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning. Refer to MWI-86, "Fail-Safe".

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “CONTROL UNIT (CAN)” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000012791800

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Erase the self-diagnostic results.
3. Perform DTC confirmation procedure. Refer to MWI-115, "DTC Description".

Is DTC detected?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> INSPECTION END

B2205 VEHICLE SPEED

DTC Description

INFOID:0000000012791801

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2205	VEHICLE SPEED (Vehicle speed)	An abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more

POSSIBLE CAUSE

- Wheel sensor
- ABS actuator and electric unit (control unit)

FAIL-SAFE

Reset to zero by suspending communication.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “VEHICLE SPEED” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000012791802

1.PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Perform “Self Diagnostic Result” of “ABS.”

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to BRC-72, "DTC Index".
NO >> INSPECTION END

B2267 ENGINE SPEED

VR30DDTT

VR30DDTT : DTC Description

INFOID:0000000012791803

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2267	ENGINE SPEED (Engine speed)	TCM continuously transmits abnormal engine speed signals for 2 seconds or more

POSSIBLE CAUSE

- Crankshaft position sensor (POS)
- ECM
- TCM

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

- Reset to zero by suspending communication.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “ENGINE SPEED” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

VR30DDTT : Diagnosis Procedure

INFOID:0000000012791804

1.PERFORM SELF-DIAGNOSIS OF ECM

Perform “Self Diagnostic Result” of “ECM.”

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to EC6-164, "TURBO HIGH PRESSURE MODEL : DTC Index" [for USA and Canada (turbo high pressure model)], EC6-205, "TURBO LOW PRESSURE MODEL : DTC Index" [for USA and Canada (turbo low pressure model)] or EC6-1139, "DTC Index" (for Mexico).
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS OF TCM

Perform “Self Diagnostic Result” of “TCM.”

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to TM-102, "2.0L TURBO GASOLINE ENGINE : DTC Index".
NO >> INSPECTION END

2.0L TURBO GASOLINE ENGINE

2.0L TURBO GASOLINE ENGINE : DTC Description

INFOID:0000000013484167

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2267	ENGINE SPEED (Engine speed)	ECM continuously transmits abnormal engine speed signals for 2 seconds or more

POSSIBLE CAUSE

- Crankshaft position sensor (POS)
- ECM

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

- Reset to zero by suspending communication.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “ENGINE SPEED” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

2.0L TURBO GASOLINE ENGINE : Diagnosis Procedure

INFOID:0000000013484168

1.PERFORM SELF-DIAGNOSIS OF ECM

Perform “Self Diagnostic Result” of “ECM.”

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to EC4-146, "DTC Index".
NO >> INSPECTION END

B2268 WATER TEMP

DTC Description

INFOID:0000000012791805

DTC DETECTION LOGIC

DTC	Trouble diagnosis (Trouble diagnosis contents)	Detecting condition
B2268	WATER TEMP (Water temperature)	ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more

POSSIBLE CAUSE

- Engine coolant temperature sensor
- ECM

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

- When reception time of an abnormal signal is 60 seconds or less, the last value received.
- When reception time of an abnormal signal is more than 60 seconds, reset to zero.

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait for 60 seconds or more.
2. Check “Self Diagnostic Result” of “METER/M&A.”

Is “WATER TEMP” displayed?

YES >> Refer to LAN-41, "Trouble Diagnosis Flow Chart".
NO-1 >> To check malfunction symptom before repair: Refer to GI-45, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000012791806

1.PERFORM SELF-DIAGNOSIS OF ECM

Perform “Self Diagnostic Result” of “ECM.”

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to EC6-164, "TURBO HIGH PRESSURE MODEL : DTC Index" [for USA and Canada (turbo high pressure model)], EC6-205, "TURBO LOW PRESSURE MODEL : DTC Index" [for USA and Canada (turbo low pressure model)] or EC4-146, "DTC Index" (2.0L turbo gasoline engine).
NO >> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT
COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:0000000012791807

1.CHECK FUSE

Check for blown fuses.

Power source		Fuse No.
Battery		6
Ignition switch ON or START	With stop/start system	53
		79
	Without stop/start system	11
Ignition switch ON or ACC		1

Is the inspection result normal?

YES >> GO TO 2.
NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector and ground.

Terminals			Ignition switch position	Voltage (Approx.)
(+)		(–)		
Combination meter				
Connector	Terminal			
M58	45	Ground	OFF	Battery voltage
M57	14		ACC	
M58	46		ON	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check harness between combination meter and fuse.

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	1		Existed
M58	52		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair harness or connector.

STEERING SWITCH SIGNAL B CIRCUIT

Component Function Check

INFOID:0000000012791808

1.PERFORM COMPONENT FUNCTION CHECK (1)

1. Turn ignition switch ON.
2. Perform On Board Diagnosis Function of AV system, and then check steering switch input signal. Refer to AV-83, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.PERFORM COMPONENT FUNCTION CHECK (2)

Check “Self Diagnostic Result” of “MULTI AV.”

Is “U1300” detected?

YES >> Refer to AV-338, "DTC Description".
NO >> Refer to MWI-121, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012791809

1.CHECK STEERING SWITCH SIGNAL B CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector and spiral cable harness connector.
3. Check continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	23	M87	31	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	23		Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK STEERING SWITCH GROUND CIRCUIT

1. Disconnect combination meter harness connector and spiral cable harness connector.
2. Check continuity between combination meter harness connector and spiral cable harness connector.

Combination meter		Spiral cable		Continuity
Connector	Terminal	Connector	Terminal	
M57	21	M87	33	Existed

3. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M57	21		Not existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK SPIRAL CABLE

1. Disconnect steering switch connector.
2. Check continuity between spiral cable harness connectors.

Spiral cable				Continuity
Connector	Terminal	Connector	Terminal	
M87	31	M301	15	Existed
	33		17	

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace spiral cable. Refer to SR-22, "Removal and Installation".

4.CHECK STEERING SWITCH

Check steering switch. Refer to MWI-122, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to MWI-143, "Removal and Installation".

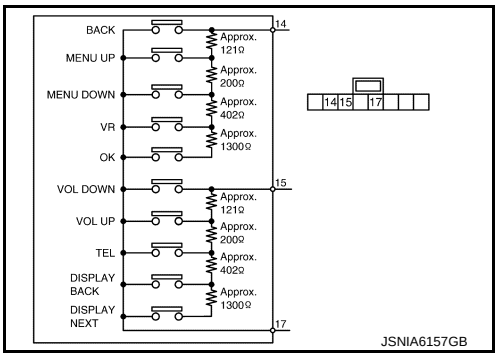
Component Inspection

INFOID:0000000012791810

1.CHECK STEERING SWITCH

1. Remove steering switch. Refer to MWI-143, "Removal and Installation".
2. Measure the resistance between the steering switch connector.

Steering switch		Condition	Resistance (Approx.) Ω
Terminal	Terminal		
14	17	BACK switch ON	1
		MENU UP switch ON	119 – 123
		MENU DOWN switch ON	315 – 327
		Voice recognition switch ON	709 – 737
		MENU OK switch ON	1983 – 2063
15		VOL DOWN switch ON	1
		VOL UP switch ON	119 – 123
		TEL switch ON	315 – 327
		Display back switch (◀) ON	709 – 737
		Display next switch (▶) ON	1983 – 2063



Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace steering switch. Refer to MWI-143, "Removal and Installation".

METER CONTROL SWITCH SIGNAL CIRCUIT

Component Function Check

INFOID:0000000012791811

1.CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Measure voltage between the following terminals of the combination meter.

Combination meter			Condition	Voltage (Approx.)
Connector	Terminals			
	(+)	(–)		
M57	36	17	When illumination control switch (+) is pressed	0 V
			Other than the above	5.0 V
	37		When illumination control switch (–) is pressed	0 V
			Other than the above	5.0 V
	18		When trip reset switch is pressed	0 V
			Other than the above	5.0 V

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to MWI-123, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012791812

1.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and meter control switch connector.
3. Check continuity between combination meter harness connector and meter control switch harness connector.

Terminals				Continuity
Combination meter		Meter control switch		
Connector	Terminal	Connector	Terminal	
M57	17	M59	4	Existed
	18		5	
	36		6	
	37		7	

4. Check continuity between combination meter harness connector and ground.

Combination meter			Continuity
Connector	Terminal		
M57	17	Ground	Not existed
	18		
	36		
	37		

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK METER CONTROL SWITCH

Check meter control switch. Refer to MWI-124, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace meter control switch. Refer to MWI-144, "Removal and Installation".

Component Inspection

INFOID:0000000012791813

1.CHECK METER CONTROL SWITCH

1. Turn ignition switch OFF.
2. Disconnect meter control switch connector.
3. Check meter control switch.

Terminals		Condition	Continuity
Meter control switch			
6	4	When illumination control switch (+) is pressed	Existed
		Other than the above	Not existed
7		When illumination control switch (–) is pressed	Existed
		Other than the above	Not existed
5		When trip reset switch is pressed	Existed
		Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace meter control switch. Refer to MWI-144, "Removal and Installation".

FUEL LEVEL SENSOR SIGNAL CIRCUIT

Component Function Check

INFOID:0000000012791814

1.PERFORM COMPONENT FUNCTION CHECK (1)

1. Turn ignition switch OFF.
2. Disconnect fuel level sensor unit and fuel pump (main) connector and fuel level sensor unit (sub) connector.
3. Connect variable resistor between harness connector terminals located on the vehicle side of the fuel level sensor unit and fuel pump (main) and fuel level sensor unit (sub).

Fuel level sensor unit and fuel pump (main)		Fuel level sensor unit (sub)	
Connector	Terminals	Connector	Terminals
B101	3	B161	2

4. Set variable resistor according to the resistance value shown in the following table and turn ignition switch ON.

Resistance (Ω)* (Approx.)	Fuel gauge indication position (Approx.)
Less than 98	Full
186	1/2
232	1/4
255	1/8
More than 275	Empty

*: Reference resistance values used when the combination meter judges the indication position of the fuel gauge.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to MWI-125, "Diagnosis Procedure".

2.PERFORM COMPONENT FUNCTION CHECK (2)

Check the fuel level sensor unit and fuel pump (main) and/or fuel level sensor unit (sub). Refer to MWI-126, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace the fuel level sensor unit and fuel pump (main) and/or fuel level sensor unit (sub). Refer to FL-10, "Removal and Installation" (VR30DDTT engine) or FL-30, "Removal and Installation" (2.0L turbo gasoline engine).

Diagnosis Procedure

INFOID:0000000012791815

1.CHECK FUEL LEVEL SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and fuel level sensor unit (sub) connector.
3. Check continuity between combination meter harness connector and fuel level sensor unit (sub) harness connector.

Combination meter		Fuel level sensor unit (sub)		Continuity
Connector	Terminal	Connector	Terminal	
M58	51	B161	2	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M58	51		Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK FUEL LEVEL SENSOR UNIT (MAIN-SUB) CIRCUIT

1. Disconnect fuel level sensor unit and fuel pump (main) connector.
2. Check for continuity between the fuel level sensor unit (sub) harness connector and the fuel level sensor unit (main) harness connector.

Fuel level sensor unit (sub)		Fuel level sensor unit and fuel pump (main)		Continuity
Connector	Terminal	Connector	Terminal	
B161	3	B101	2	Existed

3. Check for continuity between the fuel level sensor unit (sub) harness connector and the ground.

Fuel level sensor unit (sub)		Ground	Continuity
Connector	Terminal		
B161	3		Not existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK FUEL LEVEL SENSOR GROUND CIRCUIT

1. Check continuity between fuel level sensor unit and fuel pump (main) harness connector and combination meter harness connector.

Fuel level sensor unit and fuel pump (main)		Combination meter		Continuity
Connector	Terminal	Connector	Terminal	
B101	3	M58	44	Existed

2. Check for continuity between the fuel level sensor unit and fuel pump (main) harness connector and the ground.

Fuel level sensor unit and fuel pump (main)		Ground	Continuity
Connector	Terminal		
B101	3		Not existed

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair harness or connector.

Component Inspection

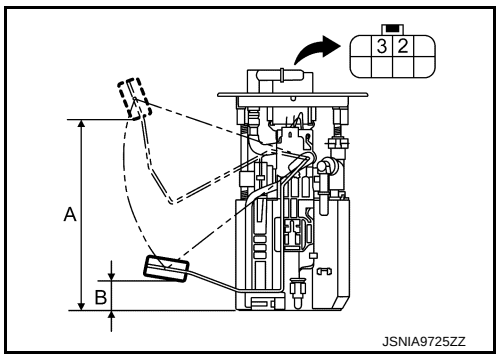
INFOID:0000000012791816

VR30DDTT

1.CHECK FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN)

1. Remove the fuel level sensor unit and fuel pump (main). Refer to FL-10, "Removal and Installation".

2. Check the resistance between fuel level sensor unit and fuel pump (main).



Terminals		Condition	Resistance (Ω) (Approx.)	Height [mm (in)]
Fuel level sensor unit and fuel pump (main)				
2	3	Full* (A)	44	183 (7.20)
		Empty* (B)	142	26 (1.02)

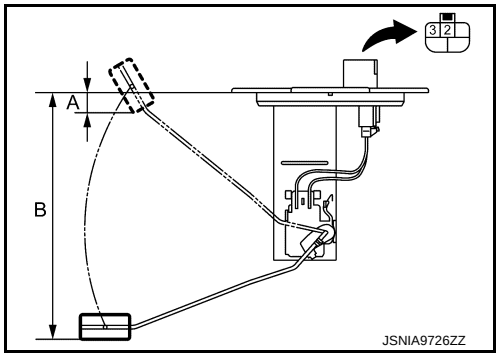
*: When float rod is contact with stopper.

Is inspection result normal?

YES >> GO TO 2.
NO >> Replace fuel level sensor unit and fuel pump (main). Refer to FL-10, "Removal and Installation".

2.CHECK FUEL LEVEL SENSOR UNIT (SUB)

1. Remove the fuel level sensor unit (sub). Refer to FL-10, "Removal and Installation".
2. Check the resistance between fuel level sensor unit (sub).



Terminals		Condition	Resistance (Ω) (Approx.)	Height [mm (in)]
Fuel level sensor unit (sub)				
2	3	Full* (A)	7	14.7 (0.579)
		Empty* (B)	142	183.7 (7.23)

*: When float rod is contact with stopper.

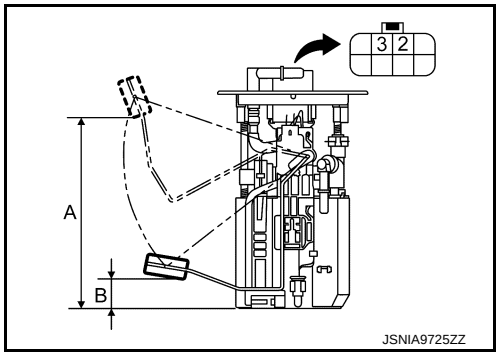
Is inspection result normal?

YES >> INSPECTION END
NO >> Replace fuel level sensor unit (sub). Refer to FL-10, "Removal and Installation".

2.0L TURBO GASOLINE ENGINE

1.CHECK FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN)

1. Remove the fuel level sensor unit and fuel pump (main). Refer to FL-30, "Removal and Installation".
2. Check the resistance between fuel level sensor unit and fuel pump (main).



Terminals		Condition	Resistance (Ω) (Approx.)	Height [mm (in)]
Fuel level sensor unit and fuel pump (main)				
2	3	Full* (A)	44	183 (7.20)
		Empty* (B)	142	26 (1.02)

*: When float rod is contact with stopper.

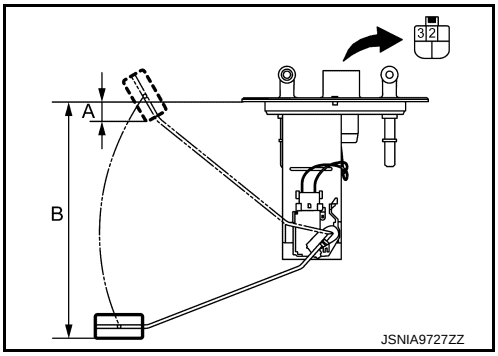
Is inspection result normal?

YES >> GO TO 2.
NO >> Replace fuel level sensor unit and fuel pump (main). Refer to FL-30, "Removal and Installation".

2.CHECK FUEL LEVEL SENSOR UNIT (SUB)

1. Remove the fuel level sensor unit (sub). Refer to FL-30, "Removal and Installation".

2. Check the resistance between fuel level sensor unit (sub).



Terminals		Condition	Resistance (Ω) (Approx.)	Height [mm (in)]
Fuel level sensor unit (sub)				
2	3	Full* (A)	7	14.7 (0.579)
		Empty* (B)	142	183.7 (7.23)

*: When float rod is contact with stopper.

Is inspection result normal?

YES >> INSPECTION END
NO >> Replace fuel level sensor unit (sub). Refer to FL-30, "Removal and Installation".

WASHER LEVEL SWITCH SIGNAL CIRCUIT

Component Function Check

INFOID:0000000012791820

1.CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Measure voltage between the following terminals of the combination meter.

Terminals			Condition	Voltage (Approx.)
Combination meter		Ground		
Connector	(+)			
M57	24		Washer level switch ON	0 V
			Washer level switch OFF	12 V

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to MWI-129, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012791821

1.CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and washer level switch connector.
3. Check continuity between combination meter harness connector and washer level switch harness connector.

Terminals				Continuity
Combination meter		Washer level switch		
Connector	Terminal	Connector	Terminal	
M57	24	E37	1	Existed

4. Check continuity between combination meter harness connector and ground.

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M57	24		Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair harness or connector.

2.CHECK WASHER LEVEL SWITCH GROUND CIRCUIT

Check continuity between washer level switch connector and ground.

Terminals			Continuity
Washer level switch		Ground	
Connector	Terminal		
E37	2		Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK WASHER LEVEL SWITCH

Check washer level switch. Refer to MWI-130, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace washer level switch. Refer to WW-65, "WASHER LEVEL SWITCH : Removal and Installation".

Component Inspection

INFOID:0000000012791822

1. CHECK WASHER LEVEL SWITCH

1. Turn ignition switch OFF.
2. Disconnect washer level switch connector.
3. Check washer level switch.

Terminals		Condition	Continuity
Washer level switch			
1	2	Washer level switch: ON	Existed
		Washer level switch: OFF	Not existed

Is the inspection result normal?

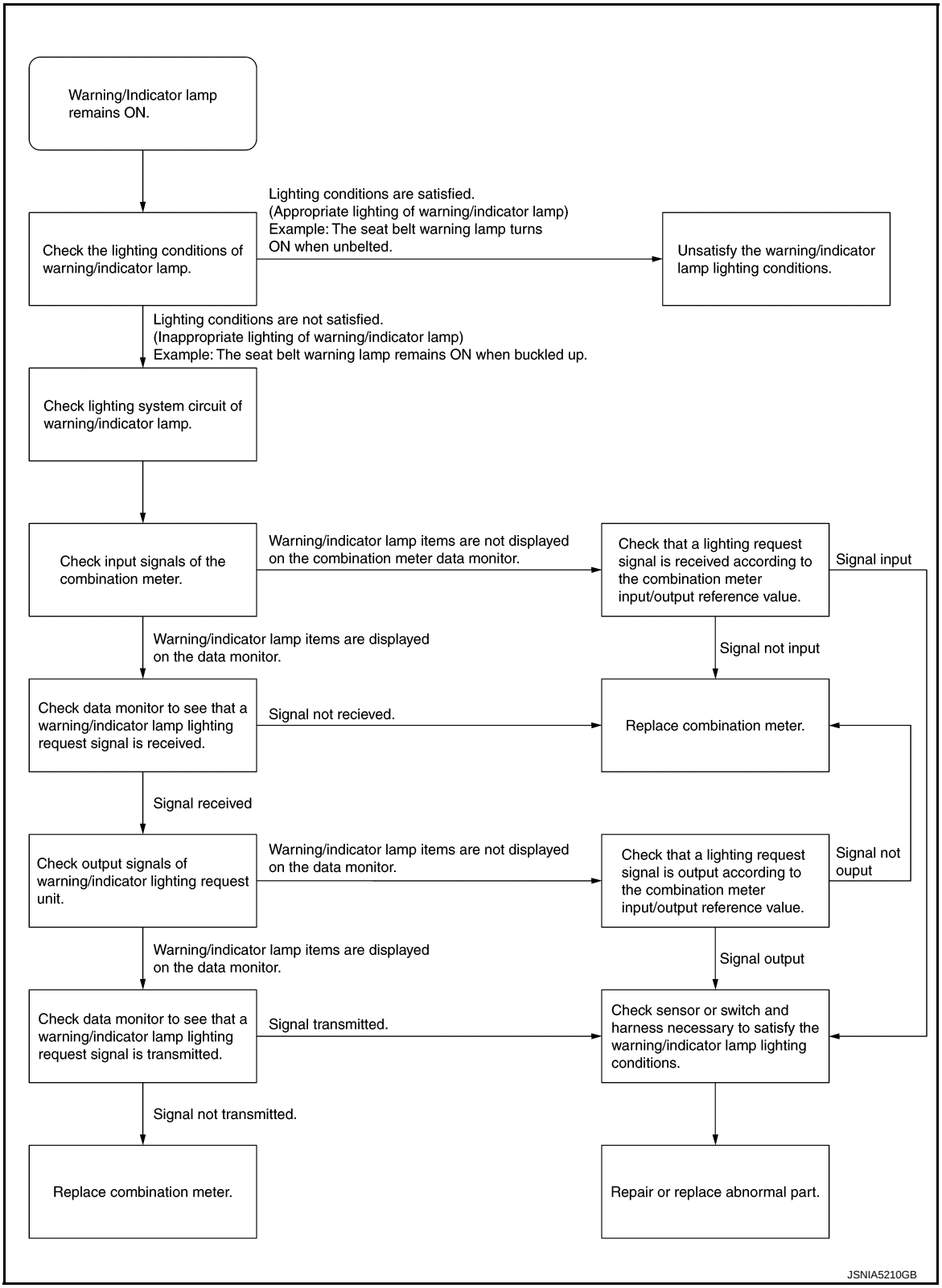
YES >> INSPECTION END
NO >> Replace washer level switch. Refer to WW-65, "WASHER LEVEL SWITCH : Removal and Installation".

SYMPTOM DIAGNOSIS

WARNING/INDICATOR LAMP REMAINS ON

Work Flow

INFOID:0000000012791823



THE FUEL GAUGE INDICATOR DOES NOT OPERATE

Description

INFOID:0000000012791824

Fuel gauge will not indicate from a certain position.

Diagnosis Procedure

INFOID:0000000012791825

1.CONDUCTING THE COMBINATION METER SELF-DIAGNOSIS MODE

Perform the self-diagnosis mode of combination meter, and then check that the fuel gauge operates normally. Refer to MWI-68, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the combination meter. Refer to MWI-141, "Removal and Installation".

2.CHECK FLOAT INTERFERENCE

Check that the float arm interferes with or binds to other components in the fuel tank.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning part.

3.CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT

Check the fuel level sensor signal circuit. Refer to MWI-125, "Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-45, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

THE STEERING SWITCHES ARE INOPERATIVE

Description

INFOID:0000000012791826

If any of the following malfunctions is found for the steering switch operation.
- All switches are inoperative
- The specified switch cannot be operated

Diagnosis Procedure

INFOID:0000000012791827

1.PERFORM STEERING SWITCH SIGNAL B CIRCUIT

Check the steering switch signal B circuit. Refer to MWI-121, "Component Function Check".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

THE METER CONTROL SWITCH IS INOPERATIVE

Description

INFOID:0000000012791828

If any of the following malfunctions is found for the meter control switch operation.
- All switches are inoperative
- The specified switch cannot be operated

Diagnosis Procedure

INFOID:0000000012791829

1.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

Check the meter control switch signal circuit. Refer to MWI-123, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

THE PARKING BRAKE RELEASE WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:0000000012791830

- The parking brake warning is displayed during vehicle travel even though the parking brake is released.
- The parking brake warning is not displayed even though driving the vehicle with the parking brake applied.

Diagnosis Procedure

INFOID:0000000012791831

1.CHECK PARKING BRAKE WARNING LAMP OPERATION

1. Start engine.
2. Check the operation of the brake warning lamp when operating the parking brake.

Condition	Warning lamp status
Parking brake is applied.	ON
Parking brake is released.	OFF

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> GO TO 2.

2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Check the parking brake switch signal circuit. Refer to WCS-65, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair harness or connector.

3.CHECK PARKING BRAKE SWITCH UNIT

Perform a unit check for the parking brake switch. Refer to WCS-65, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace parking brake switch. Refer to PB-9, "Exploded View".

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:0000000012791832

- The warning is still displayed even after washer fluid is added.
- The warning is not displayed even though the washer tank is empty.

Diagnosis Procedure

INFOID:0000000012791833

1.CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

Check the washer level switch signal circuit. Refer to MWI-129, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:0000000012791834

- The door ajar warning is displayed even though all of the doors are closed.
- The door ajar warning is not displayed even though a door is ajar.

Diagnosis Procedure

INFOID:0000000012791835

1.CHECK DOOR SWITCH CIRCUIT

Connect CONSULT and check the BCM input signals. Refer to DLK-117, "Component_Function_Check".

Is the inspection result normal?

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

2.CHECK COMBINATION METER INPUT SIGNAL

Select the “Data Monitor” for the “METER/M&A” and check the “DOOR W/L” monitor value.

“DOOR W/L”	
Door open	: On
Door closed	: Off

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-99, "Removal and Installation".

THE TRUNK OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:0000000012791836

- The trunk ajar warning is displayed continuously even though the trunk lid is closed.
- The trunk ajar warning is not displayed even though the trunk lid is open.

Diagnosis Procedure

INFOID:0000000012791837

1.CHECK TRUNK LID OPEN SIGNAL CIRCUIT

1. Connect the CONSULT.
2. Check the BCM input signals. Refer to DLK-131, "Component Function Check".

Is the inspection result normal?

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

2.CHECK COMBINATION METER INPUT SIGNAL

Select the “Data Monitor” for the “METER/M&A” and check the “TRUNK/GLAS-H” monitor value.

“TRUNK/GLAS-H”	
Trunk lid open	: On
Trunk lid closed	: Off

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-99, "Removal and Installation".

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

Description

INFOID:0000000012791838

- The displayed ambient air temperature is higher than the actual temperature.
- The displayed ambient air temperature is lower than the actual temperature.

Diagnosis Procedure

INFOID:0000000012791839

NOTE:
Check that the symptom is not applicable to the normal operating condition before starting diagnosis. Refer to MWI-140, "INFORMATION DISPLAY : Description".

1.CHECK AMBIENT SENSOR SIGNAL CIRCUIT

Check the ambient sensor signal circuit. Refer to HAC-89, "Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK COMBINATION METER INPUT SIGNAL

Select the “Data Monitor” for the “METER/M&A” and check the “OUTSIDE TEMP” monitor value.

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Check “Self Diagnostic Result” of “HVAC.” Refer to HAC-48, "DTC Index".

NORMAL OPERATING CONDITION
INFORMATION DISPLAY

INFORMATION DISPLAY : Description

INFOID:0000000012791840

AMBIENT TEMPERATURE

The displayed ambient temperature on the information display may differ from the actual temperature because it is a corrected value calculated from the ambient sensor signal by the combination meter. Refer to MWI-61, "INFORMATION DISPLAY : System Description" for details on the correction process.

DISTANCE TO EMPTY

The calculated distance to empty may differ from the actual distance to empty if the refueling amount is approximately 15 ℓ (4 US gal, 3-1/4 Imp gal) or less. This is because the refuel control (moves the fuel gauge needle quicker than normal judging that the driver is refueling the vehicle) is not performing.

REMOVAL AND INSTALLATION

COMBINATION METER

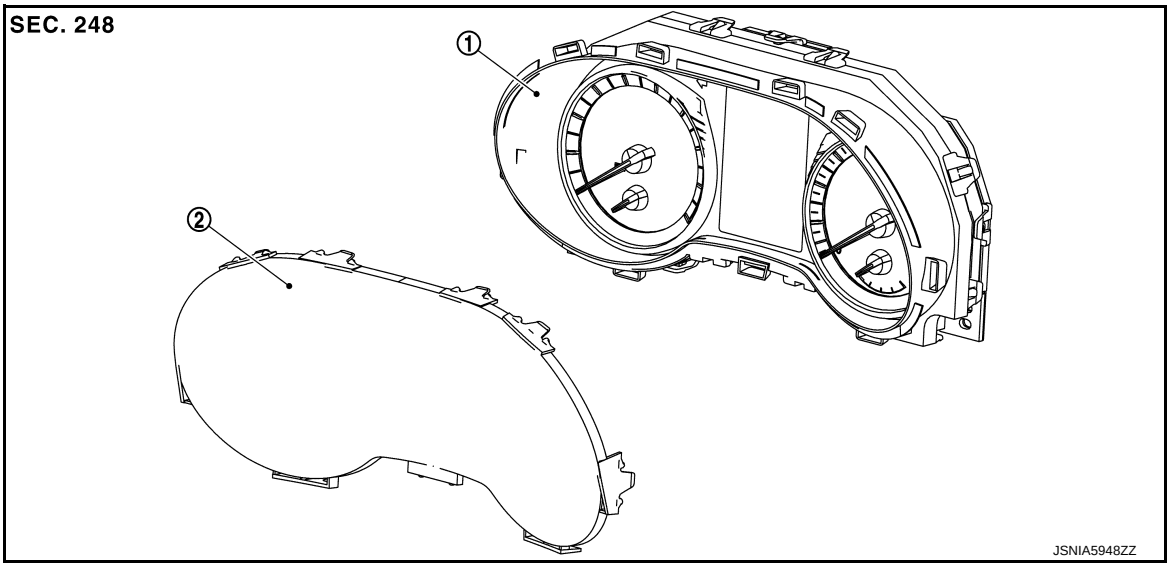
Exploded View

INFOID:0000000012791841

REMOVAL

Refer to IP-12, "Exploded View".

DISASSEMBLY



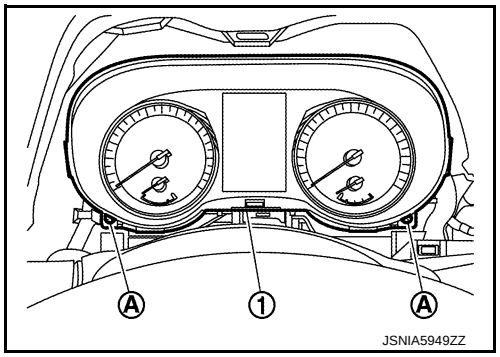
① Unified meter control unit ② Front cover

Removal and Installation

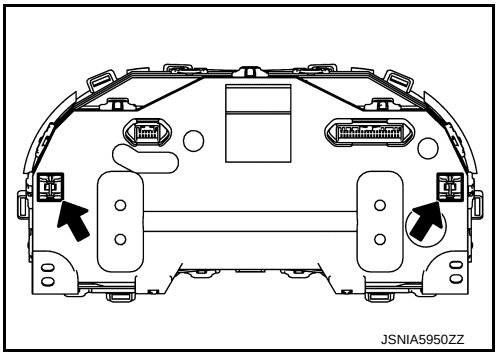
INFOID:0000000012791842

REMOVAL

1. Disconnect the battery cable from the negative terminal.
2. Remove cluster lid A. Refer to IP-13, "Removal and Installation".
3. Remove the mounting screws Ⓐ of the combination meter ①.



4. Pull the combination meter straight to disengage resin clips. (The figure shows the clip positions on the back of the combination meter.)
CAUTION:
Never damage the front cover.



5. Disconnect the harness connector and remove the combination meter.
CAUTION:
Never damage the front cover.

INSTALLATION

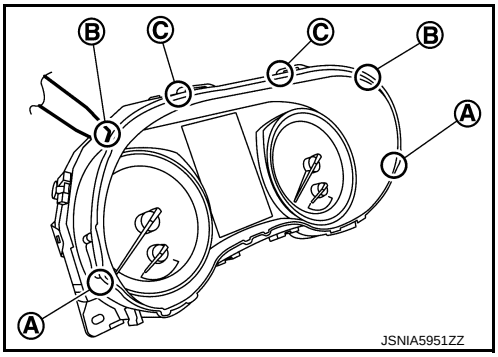
Installation is in the reverse order of removal.

Disassembly and Assembly

INFOID:0000000012791843

DISASSEMBLY

1. Remove the finisher.
2. Disengage the pawls (3 on the lower part) of the combination meter.
3. Insert the removal tool into the clearance (in the order of Ⓐ, Ⓑ, Ⓒ) between the front cover and the meter control unit. Remove 4 pawls on the upper part and 2 pawls on the sides of the front cover by turning the tool while increasing the clearance.
CAUTION:
Wrap the removal tools with protective tape to prevent scratches.



4. Pull the front cover straight to remove it from the unified meter control unit.
CAUTION:
- **Never touch the display, pointer, the inside of front cover and the printed area of the dial during the work.**
- **Keep away from magnetic sources.**
- **Never damage the front cover.**

ASSEMBLY

Install the front/rear cover straight to the unified meter control unit and engage all the pawl.
CAUTION:
- **Never touch the display, pointer, the inside of front/rear cover and the printed area of the dial during the work.**
- **Keep away from magnetic sources.**
- **Never damage the front cover.**

STEERING SWITCH

Removal and Installation

INFOID:0000000012791844

Refer to ST-32, "Removal and Installation" (VEHICLE SPEED SENSITIVE P/S) or ST-134, "Removal and Installation" (DIRECT ADAPTIVE STEERING).

NOTE:

Always remove steering switch together with steering wheel.

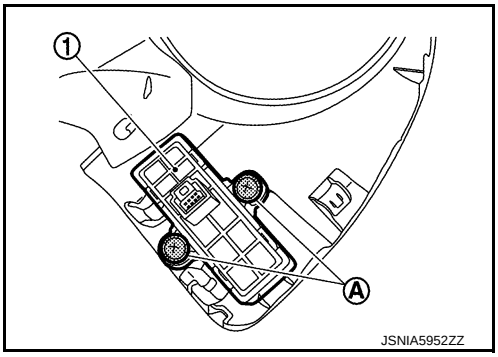
METER CONTROL SWITCH

Removal and Installation

INFOID:0000000012791846

REMOVAL

1. Remove cluster lid A. Refer to IP-13, "Removal and Installation".
2. Remove the meter control switch mounting screws Ⓐ, and then remove the meter control switch ①.



INSTALLATION

Install in the reverse order of removal.