# SECTION ADP AUTOMATIC DRIVE POSITIONER

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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000000960576 В

#### **OVERALL SEQUENCE**



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#### **DIAGNOSIS AND REPAIR WORKFLOW**

#### < BASIC INSPECTION >

# 1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

# 2.CHECK DTC WITH AUTOMATIC DRIVE POSITIONER SYSTEM

Check "Self Diagnostic Result" with CONSULT-III.

Is any symptom described and any DTC is displayed? ADP-156, "DTC Index".

Symptom is described, DTC is displayed.>>GO TO 3.

Symptom is not described, DTC is displayed.>>GO TO 7.

Symptom is described, DTC is not displayed.>>GO TO 4.

# 3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 7.

# 4. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 5.

# 5. CHECK NORMAL OPERATING CONDITION

Check normal operating condition. Refer to ADP-213, "Description".

Is the incident normal operation?

YES >> INSPECTION END

NO >> GO TO 6.

# 6. PERFORM BASIC INSPECTION

Isolate the malfunctioning point with the basic inspection. Refer to .

>> GO TO 8.

# 7. PERFORM DTC CONFIRMATION PROCEDURE

Perform the confirmation procedure for the detected DTC.

Is the DTC displayed?

YES >> GO TO 9.

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

# 8. PERFORM COMPONENT FUNCTION CHECK

Perform the component function check for the isolated malfunctioning point.

>> GO TO 9.

# 9. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Isolate the malfunctioning point by performing the diagnosis procedure relevant to the symptom during the component diagnosis.

>> GO TO 10.

# 10. REPARE OR REPLACE

Repair or replace the malfunctioning part.

>> GO TO 11.

# **DIAGNOSIS AND REPAIR WORKFLOW**

# < BASIC INSPECTION >

# 11. FINAL CHECK

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

#### Are symptom and DTC not detected?

YES >> INSPECTION END Symptom is detected.>> GO TO 4.

DTC is detected.>> GO TO 7.

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#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Each function is reset to the following condition when the battery terminal is disconnected.

Function	Condition	Procedure
Memory (Seat, steering, mirror)	Erased	Perform storing
	OFF	Perform initialization
Entry/exit assist*1	OFF	Set slide amount <sup>*2</sup>
Intelligent Key interlock	Erased	Perform initialization
	Liaseu	Perform storing
Seat synchronization	OFF	_

<sup>\*1:</sup> This function only for AT model.

#### NOTE:

Notice that disconnecting the battery when detected DTC are present will erase the DTC memory.

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement

# 1.SYSTEM INITIALIZATION

Perform system initialization. Refer to ADP-9, "SYSTEM INITIALIZATION: Description".

>> GO TO 2.

# 2. SYSTEM SETTING

Perform system setting. Refer to ADP-11, "SYSTEM SETTING: Description".

>> GO TO 3.

# 3. MEMORY STORAGE

Perform memory storage. Refer to ADP-10, "MEMORY STORING: Description".

# >> END ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

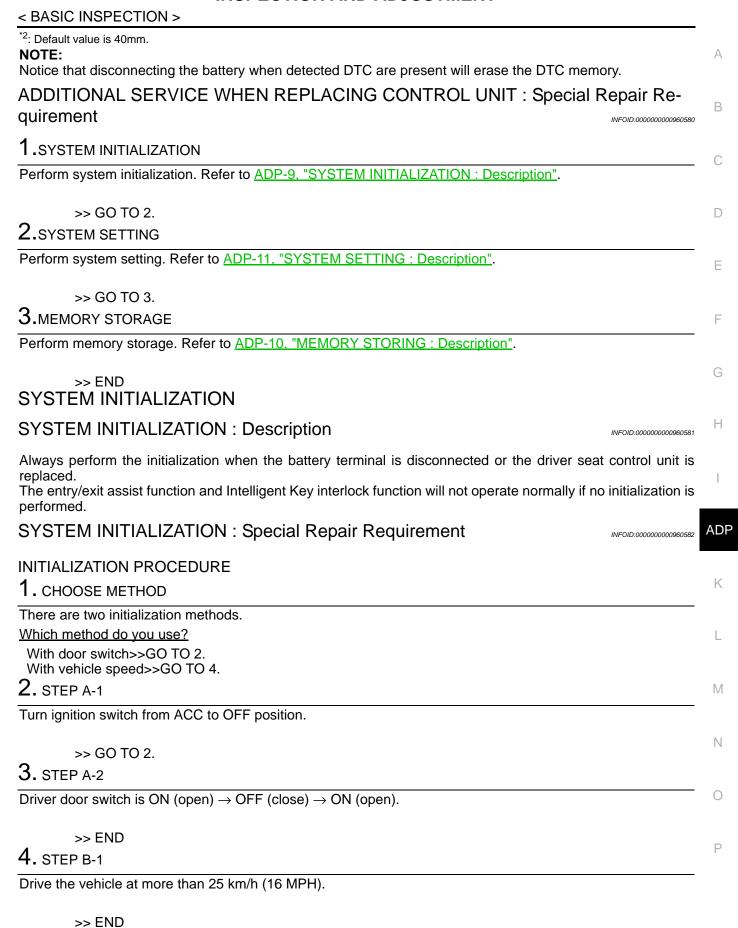
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Each function is reset to the following condition when the driver seat control unit is replaced.

Function	Condition	Procedure
Memory (Seat, steering, mirror)	Erased	Perform storing
	OFF	Perform initialization
Entry/exit assist*1	OFF	Set slide amount <sup>*2</sup>
Intelligent Key interlock	Erased	Perform initialization
intelligent Rey Interlock		Perform storing
Seat synchronization	OFF	_

<sup>\*1:</sup> This function only for AT model.

<sup>\*2:</sup> Default value is 40mm.



MEMORY STORING

#### < BASIC INSPECTION >

# **MEMORY STORING: Description**

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Always perform the memory storage when the battery terminal is disconnected or the driver seat control unit is replaced. The memory function and Intelligent Key interlock function will not operate normally if no memory storage is performed.

# MEMORY STORING: Special Repair Requirement

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#### Memory Storage Procedure

Two positions for the driver seat, steering column and outside mirror can be stored for memory operation by following procedure.

#### 1.STEP 1

Shift AT selector lever to P position (AT model) or applied parking brake (MT model).

>> GO TO 2.

#### **2.**STEP 2

Turn ignition switch ON.

>> GO TO 3.

# **3.**STEP 3

Adjust driver seat, steering column and outside mirror position manually.

>> GO TO 4.

# **4.**STEP 4

Push set switch.

#### NOTE:

- Memory indicator for which driver seat position is already retained in memory is illuminated for 5 seconds.
- Memory indicator for which driver seat position is not retained in memory is illuminated for 0.5 second.
- 2. Push the memory switch (1 or 2) for at least 1 second within 5 seconds after pushing the set switch.

#### NOTE:

- To enter driver seat positions into blank memory, memory indicator will be turned on for 5 seconds.
- To modify driver seat positions, memory indicator will be turned OFF for 0.5 second, then turned ON for 5 seconds.

#### NOTE:

If memory is stored in the same memory switch, the previous memory will be deleted.

#### Do you need linking of Intelligent Key?

YES >> GO TO 6.

NO >> GO TO 5.

#### **5**.STEP 5

Confirm the operation of each part with memory operation.

>> END

#### **6.**STEP 6

Push the Intelligent Key unlock button within 5 seconds after pushing memory switch (while the memory indicator is turned ON).

>> GO TO 7.

# **7.**STEP 7

Confirm the operation of each part with memory operation and Intelligent Key interlock operation.

#### < BASIC INSPECTION >

>> END

# SYSTEM SETTING

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#### SYSTEM SETTING: Description

The settings of the automatic driving positioner system can be changed, using CONSULT-III, the display unit in the center of the instrument panel and the set switch. Always check the settings before and after disconnecting the battery terminal or replacing driver seat control unit.

# Setting Change (For AT models)

×.	Ap	nli	cal	hl
^.	$^{\prime}$	PIII	uai	v

ltem	Content	CON- SULT -III	Display	Set switch	Factory setting
Amount of seat sliding for entry/exit assist	The amount of seat sliding for entry/exit assist can be selected from 3 items. [40mm/80mm/150mm]	Х	_	_	40mm
Entry/exit assist (seat)	Entry/exit assist (seat) can be selected: ON (operated) – OFF (not operated)	х	х	x	OFF
Entry/exit assist (steering column)	Entry/exit assist (steering column) can be selected: ON (operated) – OFF (not operated)	х	х	^	OFF
Seat synchronization	Seat synchronization can be selected: ON (operated) – OFF (not operated)		NOTE: *1		OFF
Reset custom settings	All settings can be set to default (factory setting).	_	х	_	_

<sup>\*1:</sup> If either of entry/exit assist (seat) or entry/exit assist (steering column) is turned OFF, seat synchronizaton function is also turned OFF.

# Setting Change (For MT models)

×: Applicable

Item	Content	Set switch	Factory setting
Seat synchronization	Seat synchronization can be selected: ON (operated) – OFF (not operated)	х	OFF

# SYSTEM SETTING: Special Repair Requirement

INFOID:0000000000960586

# 1. CHECK TYPE OF TRANSMISSION

Check type of transmission for the vehicle.

Witch type of transmission is used for the vehicle?

MT >> GO TO 2.

AT >> GO TO 4.

# $2.\,$ STEP 1 (FOR MT MODELS)

Turn ignition switch OFF.

>> GO TO 3.

# 3. STEP 2 (FOR MT MODELS)

Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indicator.

- Seat synchronization function is ON: Memory switch indicator blink two times.
- · Seat synchronization is OFF: Memory switch indicator blink once.

>> END

# 4. CHOOSE METHOD

There are three way of setting method.

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#### < BASIC INSPECTION >

#### Which method do you choose?

With display>>GO TO 5.

With set switch>>GO TO 7.

With CONSULT-III>>GO TO 9.

# ${f 5.}$ WITH DISPLAY - STEP 1 (FOR AT MODELS)

Turn ignition switch ON.

>> GO TO 6.

# 6. WITH DISPLAY - STEP 2 (FOR AT MODELS)

- 1. Push "SETTING" button.
- Select "Comfort & convenience".
- 3. Select "Lift Steering Wheel ON Exit"or "Slide Driver's Seat Back ON Exit" on display, then push
- Lift Steering Wheel ON Exit: Entry/exit assist (steering column)
- Slide Driver's Seat Back On Exit: Entry/exit assist (seat)

#### NOTE:

If either of entry/exit assist (seat) or entry/exit assist (steering column) is turned OFF, seat synchronization function is also turned OFF.

>> END

# 7. WITH SET SWITCH - STEP 1 (FOR AT MODELS)

Turn ignition switch OFF.

>> GO TO 8.

# 8. WITH SET SWITCH - STEP 2 (FOR AT MODELS)

Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indicator.

- Entry/exit assist (seat/steering column) and seat synchronization are ON: Memory switch indicator blink two times.
- Entry/exit assist (seat/steering column) and seat synchronization are OFF: Memory switch indicator blink once.

>> END

# 9. WITH CONSULT-III - STEP 1 (FOR AT MODELS)

Select "Work support".

>> GO TO 10.

# 10. WITH CONSULT-III - STEP 2 (FOR AT MODELS)

- Select "EXIT SEAT SLIDE SETTING", "EXIT TILT SETTING" or "SEAT SLIDE VOLUME SET" then touch display to change between ON and OFF.
- EXIT SEAT SLIDE SETTING: Entry/exit assist (seat)
- EXIT TILT SETTING: Entry/exit assist (steering column)
- 2. Then touch "OK".

#### NOTE:

If either of entry/exit assist (seat) or entry/exit assist (steering column) is turned OFF, seat synchronization function is also turned OFF.

>> END

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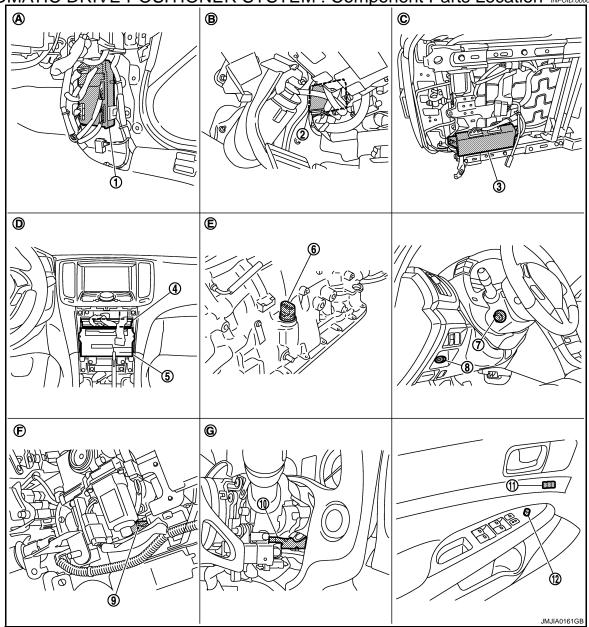
# **FUNCTION DIAGNOSIS**

AUTOMATIC DRIVE POSITIONER SYSTEM AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram

INFOID:0000000000960587 C Conbination meter AV control unit TCM To CAN D Е Lifting sensor (front) Lifting sensor (rear) Lifting motor (front) Lifting motor (rear) Reclining sensor Reclining motor CAN communication Sliding sensor Sliding motor F Driver seat control unit Driver seat Н Lifting switch (front) Lifting switch (rear) Power seat switch Reclining switch Sliding switch ADP K A/T device or parking brake **UART** communication Detent switch or Parking brake switch Telescopic sensor Telescopic motor Mirror sensor Mirror motor Door mirror Tilt sensor ≓ M positionner control unit Automatic Ν drive 0 Door mirror remote control Tilt & telescopic switch Seat memory switch Changeover switch Telescopic switch Memory switch Mirror switch Tilt switch Set switch Indicator Ρ

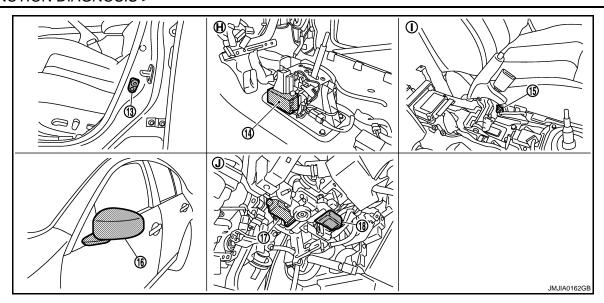
# 



- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Tilt & telescopic switch M31
- 10. Telescopic sensor M48
- A. Dash side lower (Passenger side)
- D. Behind cluster lid C
- G View with steering column cover lower and upper removed

- Automatic drive positioner control unit 3. M51, M52
- 5. AV control unit With NAVI M87, M88 Without NAVI M83, M85
- 8. Key slot M22
- 11. Seat memory switch D5
- View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)

- B. Driver seat control unit B451, B452
- 6. AT assembly connector F51
- 9. Tilt sensor M48
- Door mirror remote control switch D17
- C. Backside of seat cushion (driver side)
- View with instrument driver lower panel removed



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- View with instrument driver lower panel removed

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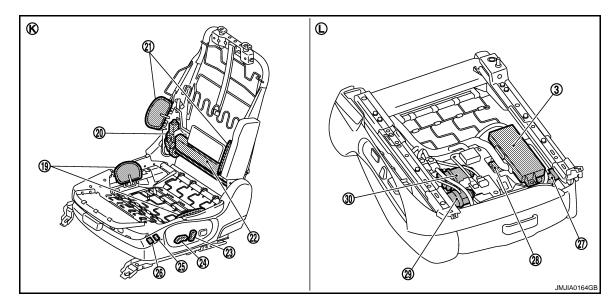
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- 19. Side support (seat cushion) (Side support unit B420)
- 22. Side support unit B420
- 25. Side support switch (seat back side) B419
- 28. Lifting motor (front) B455
- View with seat cushion pad and seat- L. back pad removed
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 29. Sliding motor B461
- Backside of the seat cushion
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453
- 30. Lifting motor (rear) B456

# AUTOMATIC DRIVE POSITIONER SYSTEM: System Description

INFOID:0000000000960589

#### **OUTLINE**

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

#### < FUNCTION DIAGNOSIS >

Function		Description
Manual function		The driving position (seat, steering column and door mirror position) can be adjusted by using the power seat switch, tilt & telescopic switch or door mirror remote control switch.
Seat synchronization function	ı	The positions of the steering column and door mirror are adjusted to the proper position automatically while linking with manual operation [seat sliding, seat lifting (rear) or seat reclining].
Memory function		The seat, steering column and outside mirror move to the stored driving position by pressing seat memory switch (1 or 2).
Entry/Exit assist function	Exit	On exit, the seat moves backward and the steering column moves upward and forward.
Entry Entry		On entry, the seat and steering column returns from exiting position to the previous driving position.
Intelligent Key interlock functi	on	Perform memory operation, exiting operation and entry operation by Intelligent Key unlock operation or driver side door request switch unlock operation.

#### NOTE:

The lumbar support system and the side support system are controlled independently with no link to the automatic drive positioner system.

# AUTOMATIC DRIVE POSITIONER SYSTEM : Component Description

INFOID:0000000000960590

#### **CONTROL UNITS**

Item	Function
Driver seat control unit	<ul> <li>Main units of automatic drive positioner system</li> <li>It is connected to the CAN.</li> <li>It communicates with the automatic drive positioner control via UART communication.</li> </ul>
Automatic drive positioner control unit	<ul> <li>It communicates with the driver seat control unit via UART communication.</li> <li>Perform various controls with the instructions of driver seat control unit.</li> <li>Perform the controls of the tilt &amp; telescopic, door mirror and the seat memory switch.</li> </ul>
BCM	Transmit the following status to the driver seat control unit via CAN communication.  Driver door: OPEN/CLOSE  Ignition switch position: ACC/ON  Door lock: UNLOCK (with Intelligent Key or driver side door request switch operation)  Key ID  Key switch: Insert/Pull out Intelligent Key  Starter: CRANKING/OTHER
Unified meter and A/C amp.	Transmit the vehicle speed signal to the driver seat control unit via CAN communication.
NAVI control unit/AV control unit	The setting change of auto drive positioner system can be performed on the display. (only for AT models)
TCM	Transmit the shift position signal (P range) to the driver seat control unit via CAN communication.

#### **INPUT PARTS**

#### Switches

Item	Function
Key slot	The key switch is installed to detect the key inserted/removed status.
Front door switch (driver side)	Detect front door (driver side) open/close status.
A/T device (detention switch)	Detect the P range position of AT selector lever. (only for AT models)
Parking break switch	Detect the parking brake status. (only for MT models)

# < FUNCTION DIAGNOSIS >

Item	Function
Set switch	The registration and system setting can be performed with its operation.
Memory switch 1/2	The registration and operation can be performed with its operation.
Power seat switch	The following switch is installed.  Reclining switch  Lifting switch (front)  Lifting switch (rear)  Sliding switch  The specific parts can be operated with the operation of each switch.
Tilt & telescopic switch	The following switch is installed.  Tilt switch  Telescopic switch  The specific parts can be operated with the operation of each switch.
Door mirror remote control switch	The following switch is installed.  • Mirror switch  • Changeover switch  The specific parts can be operated with the operation of each switch.

#### Sensors

Item	Function
Door mirror sensor (driverside/passenger side)	Detect the up/down and left/right position of outside mirror face.
Tilt and telescopic sensor	Detect the up/down and left/right position of steering column.
Lifting sensor (front)	Detect the up/down position of seat lifting (front).
Lifting sensor (rear)	Detect the up/down position of seat lifting (rear).
Reclining sensor	Detect the tilt of seatback.
Sliding sensor	Detect the front/rear position of seat.

# **OUTPUT PARTS**

Item	Function
Door mirror motor (driverside/passenger side)	Move the outside mirror face upward/downward and leftward/rightward.
Tilt and telescopic motor	Move the steering column upward/downward and frontward/rearward.
Lifting motor (front)	Move the seat lifting (front) upward/downward.
Lifting motor (rear)	Move the seat lifting (rear) upward/downward.
Reclining motor	Tilt and raise up the seatback.
Sliding motor	Slide the seat frontward/rearward.
Memory indicator	Illuminates or flashes according to the registration/operation status.

# MANUAL FUNCTION

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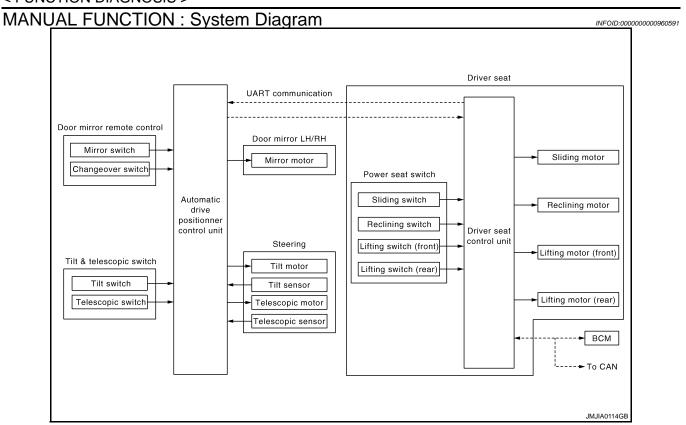
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#### < FUNCTION DIAGNOSIS >



# MANUAL FUNCTION: System Description

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#### **OUTLINE**

The driving position (seat, steering column and door mirror position) can be adjusted manually with power seat switch, tilt & telescopic switch and door mirror remote control switch.

#### **OPERATION PROCEDURE**

- Turn ignition switch ON.
- 2. Operate power seat switch, tilt & telescopic switch or door mirror remote control switch.
- 3. The driver seat, steering column or door mirror operates according to the operation of each switch.

#### **DETAIL FLOW**

#### Seat

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

#### Tilt & Telescopic

Order	Input	Output	Control unit condition
1	Tilt & telescopic switch	_	The tilt & telescopic switch signal is inputted to the automatic drive positioner control unit when the tilt & telescopic switch is operated.

#### < FUNCTION DIAGNOSIS >

Order	Input	Output	Control unit condition
2	_	Motors (Tilt, telescopic)	The automatic drive positioner control unit actuates each motor according to the operation of the tilt & telescopic switch.
3	Sensors (Tilt, telescopic)	_	The automatic drive positioner control unit recognizes any operation limit of each actuator via each sensor and will not operate the actuator anymore at that time.*

<sup>\*:</sup> Tilt does not operates upward when tilt sensor volume is less than 1.2 V, tilt does not operate downward when the sensor value is bigger than 3.4 V. Telescopic does not operates backward when telescopic sensor value is less than 0.8 V, telescopic does not operate forward when the sensor value is bigger than 3.4 V.

#### Door Mirror

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

#### NOTE:

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

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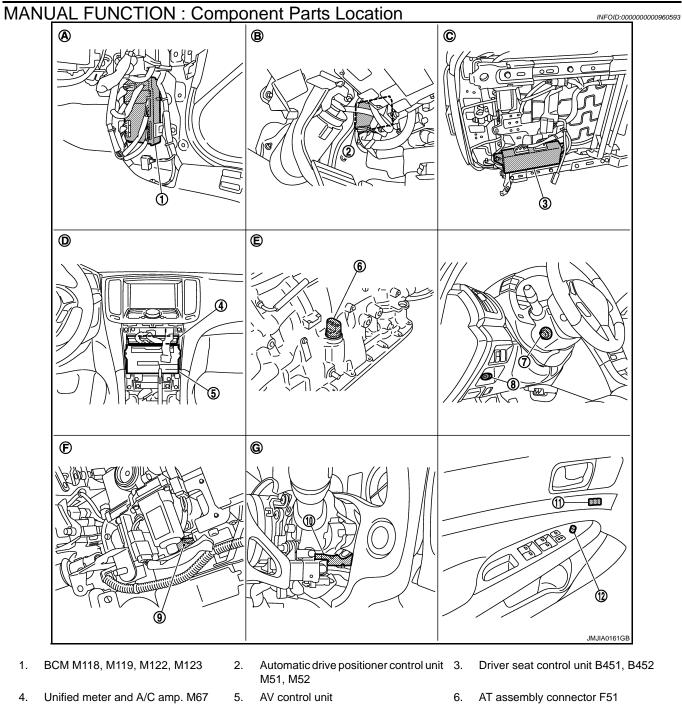
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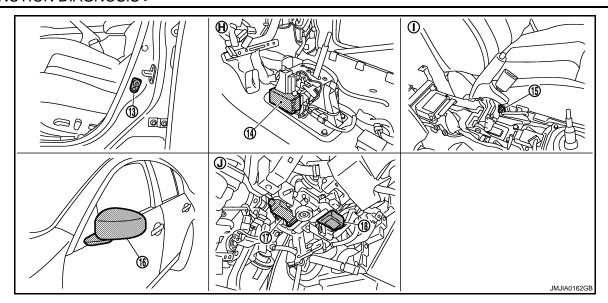
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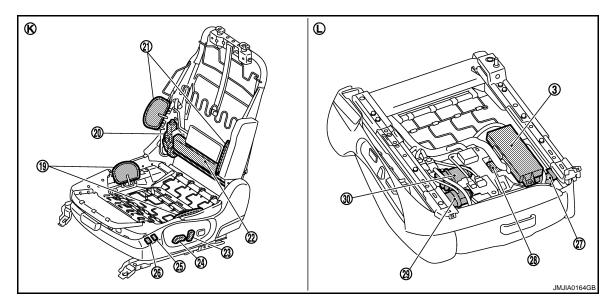
- Tilt & telescopic switch M31 7.
- 10. Telescopic sensor M48
- Dash side lower (Passenger side)
- D. Behind cluster lid C
- View with steering column cover lower and upper removed

- With NAVI M87, M88 Without NAVI M83, M85
- Key slot M22
- 11. Seat memory switch D5
- View with instrument driver lower panel removed
- AT assembly (TCM is built in AT assembly)
- Tilt sensor M48
- 12. Door mirror remote control switch D17
- Backside of seat cushion (driver side) C.
- View with instrument driver lower panel removed

#### < FUNCTION DIAGNOSIS >



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- View with center console assembly removed
- 15. Parking brake switch B14
- Tilt motor M49 18.
- View with instrument driver lower panel removed



- 19. Side support (seat cushion) (Side support unit B420)
- Side support unit B420 22.
- 25. Side support switch (seat back side)
- 28. Lifting motor (front) B455
- View with seat cushion pad and seat- L. back pad removed
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 29. Sliding motor B461
- Backside of the seat cushion
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453
- 30. Lifting motor (rear) B456

MANUAL FUNCTION: Component Description

**CONTROL UNITS** 

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# < FUNCTION DIAGNOSIS >

Item	Function
Driver seat control unit	<ul> <li>Operates the specific seat motor with the signal from the power seat switch.</li> <li>Transmits the ignition switch signal (ACC/ON) via UART communication to the automatic drive positioner control unit.</li> </ul>
Automatic drive positioner control unit	Operates the specific motor with the signal from tilt & telescopic switch or door mirror remote control switch.
ВСМ	Recognizes the following status and transmits it to the driver seat control unit via CAN communication.  • Ignition position: ACC/ON

#### **INPUT PARTS**

#### Switches

Item	Function	
Power seat switch	The following switch is installed.  Reclining switch  Lifting switch (front)  Lifting switch (rear)  Sliding switch  The specific parts can be operated with the operation of each switch.	
Tilt & telescopic switch	The following switch is installed.  • Tilt switch  • Telescopic switch  The specific parts can be operated with the operation of each switch.	
Door mirror remote control switch	The following switch is installed.  • Mirror switch  • Changeover switch  The specific parts can be operated with the operation of each switch.	

#### Sensors

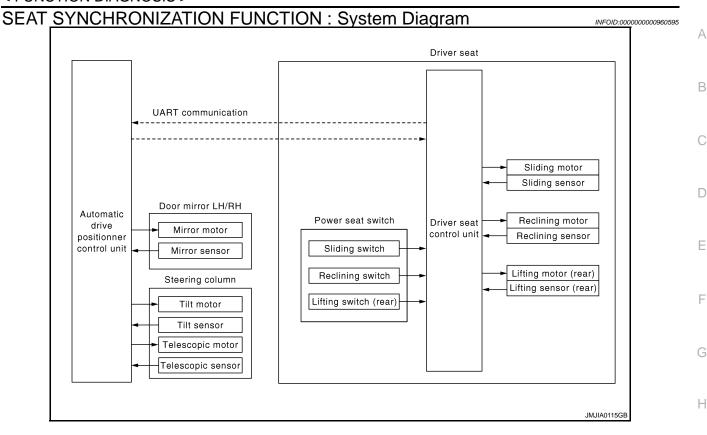
Item	Function
Tilt and telescopic sensor	Detect the up/down and left/right position of steering column.

#### **OUTPUT PARTS**

Item	Function
Door mirror motor (driverside/passenger side)	Move the outside mirror face upward/downward and leftward/rightward.
Tilt & telescopic motor	Move the steering column upward/downward and frontward/rearward.
Lifting motor (front)	Move the seat lifter (front) upward/downward.
Lifting motor (rear)	Move the seat lifter (rear) upward/downward.
Reclining motor	Tilt and raise up the seatback.
Sliding motor	Slide the seat frontward/rearward.

# SEAT SYNCHRONIZATION FUNCTION

#### < FUNCTION DIAGNOSIS >



# SEAT SYNCHRONIZATION FUNCTION: System Description

#### **OUTLINE**

The steering column position and door mirror position is adjusted to the position automatically according to the direction and distance of seat movement when performing the manual operation of sliding, reclining or lifting (rear). This function saves adjusting the mirror and steering column when adjusting the seat.

#### NOTE:

- This function is set to OFF before delivery (initial setting).
- This function can be stopped by turning both or either of the entry/exit assist function (seat) and the entry/ exit assist function (steering) OFF. (only for AT models)

For the system setting procedure. Refer to ADP-11, "SYSTEM SETTING: Description".

#### **OPERATION PROCEDURE**

- Turn ignition switch ON.
- Adjust seat position [sliding, reclining, lifting (rear)].
- The steering and outside mirror is adjusted automatically.

#### NOTE:

The seat synchronization function will not operate if seat adjusting value is more than limit value.

Item	Limit value
Seat sliding	76 [mm]
Seat reclining	9.1 [degrees]
Seat lifter (rear)	20 [mm]

- The seat synchronization function will not operate if the steering column or door mirror moves to the operating end while this function is operating. Perform memory function or drive the vehicle at vehicle speed of 7 km/h or more once to activate this function again.
- If the seat position is uncomfortable after the adjustment, seat position can be adjusted easily by memory operation.

#### **OPERATION CONDITION**

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

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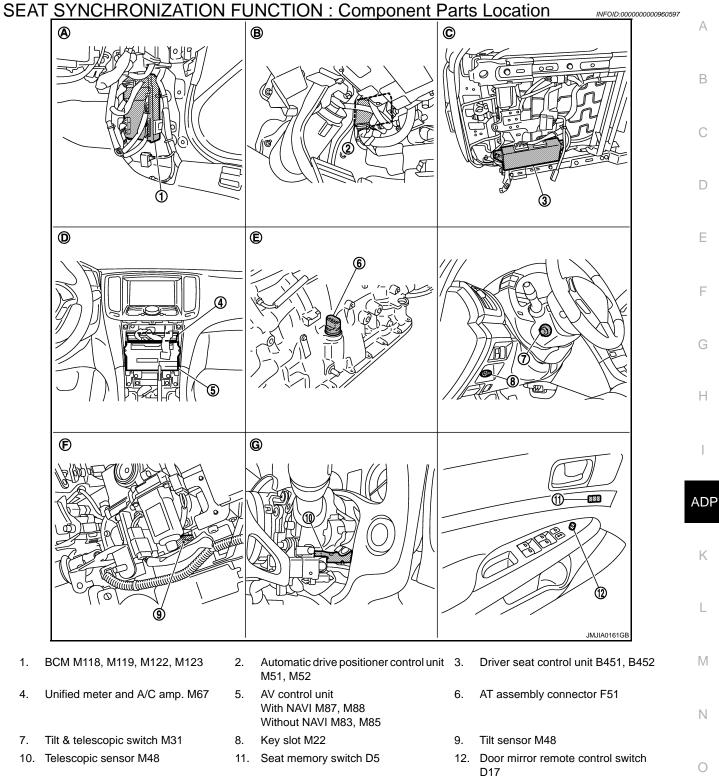
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# < FUNCTION DIAGNOSIS >

Item	Request status
Ignition position	ON
System setting [Entry/exit assist function (seat/steering)]	ON
Switch inputs  Power seat switch  Tilt & telescopic switch  Door mirror remote control switch  Set switch  Memory switch	OFF (Not operated)
AT selector lever (only for AT model)	P position
Parking break (only for MT models)	Applied

# **DETAIL FLOW**

Order	Input	Output	Control unit condition
1	_	_	Perform Manual operation [Sliding, reclining or lifting (rear)].
2	Sensors [Sliding, reclining, lifting (rear)]	_	The driver seat control unit judges the direction and distance of seat movement according to the signal input from each seat sensor during manual operation.
3	_	Motors (Tilt, telescopic, outside mirror)	Driver seat control unit requests the operation to position according to the direction and distance of seat movement to the automatic drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor.
	Sensors (Tilt, telescopic, outside mirror)	_	Driver seat control unit stops the operation of each motor when the value of each sensor that is input to automatic drive positioner control unit via UART communication reaches the target address.



View with steering column cover low-

Dash side lower (Passenger side)

Behind cluster lid C

er and upper removed

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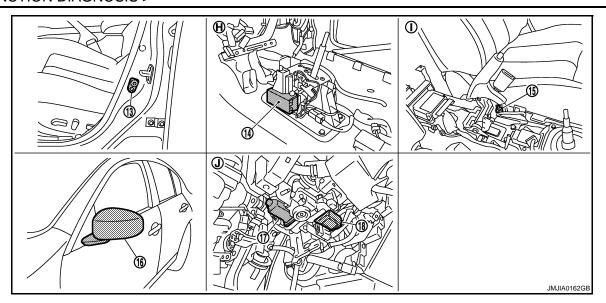
- View with instrument driver lower panel removed
- AT assembly (TCM is built in AT assembly)
- Backside of seat cushion (driver side) C.
- View with instrument driver lower panel removed

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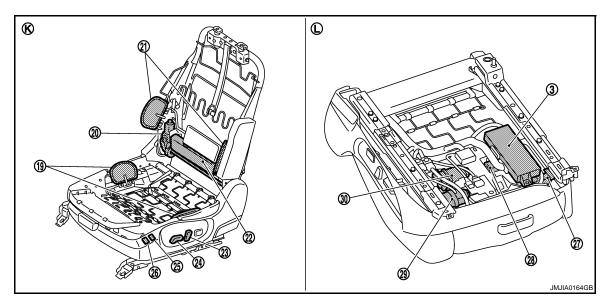
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- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- H. View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- I. View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- J. View with instrument driver lower panel removed



- 19. Side support (seat cushion) (Side support unit B420)
- 22. Side support unit B420
- 25. Side support switch (seat back side) B419
- 28. Lifting motor (front) B455
- K. View with seat cushion pad and seat- L. back pad removed
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 29. Sliding motor B461
  - L. Backside of the seat cushion
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453
- Lifting motor (rear) B456

SEAT SYNCHRONIZATION FUNCTION : Component Description

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**CONTROL UNITS** 

# < FUNCTION DIAGNOSIS >

Item	Function
Driver seat control unit	Operates the specific seat motor with the signal from the power seat switch.
Automatic drive positioner control unit	Operates the steering motor and door mirror with the instructions from the driver seat control unit.

#### **INPUT PARTS**

#### Switches

Item Function	
Power seat switch	The following switch is installed.  Reclining switch  Lifting switch (front)  Lifting switch (rear)  Sliding switch  The specific parts can be operated with the operation of each switch.

#### Sensors

Item	Function
Door mirror sensor (driver side/passenger side)	Detect the up/down and left/right position of outside mirror face.
Tilt and telescopic sensor	Detect the up/down and left/right position of steering column.
Lifting sensor (rear)	Detect the up/down position of seat lifter (rear).
Reclining sensor	Detect the tilt of seatback.
Sliding sensor	Detect the front/rear position of seat.

#### **OUTPUT PARTS**

Item	Function
Door mirror motor (driver side/passenger side)	Move the outside mirror face upward/downward and leftward/rightward.
Tilt & telescopic motor	Move the steering column upward/downward and frontward/rearward.
Lifting motor (rear)	Move the seat lifter (rear) upward/downward.
Reclining motor	Tilt and raise up the seatback.
Sliding motor	Slide the seat frontward/rearward.

# MEMORY FUNCTION

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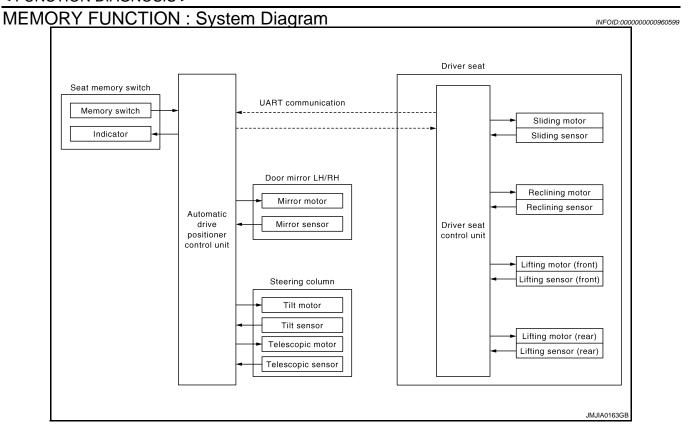
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#### < FUNCTION DIAGNOSIS >



# MEMORY FUNCTION: System Description

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#### **OUTLINE**

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

#### NOTE:

Further information for the memory storage procedure. Refer to ADP-10, "MEMORY STORING: Description".

#### **OPERATION PROCEDURE**

- Turn ignition switch ON
- 2. Press desired memory switch for more than 0.5 second.
- 3. Driver seat, steering and door mirror will move to the memorized position.

#### **OPERATION CONDITION**

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

Item	Request status
Ignition position	ON
Switch inputs  Power seat switch  Tilt & telescopic switch  Door mirror control switch  Set switch  Memory switch	OFF (Not operated)
AT selector lever (only for AT model)	P position
Parking break (only for MT models)	Applied

#### **DETAIL FLOW**

# < FUNCTION DIAGNOSIS >

Order	Input	Output	Control unit condition
1	Memory switch	_	The memory switch signal is inputted to the automatic drive positioner control unit when memory switch 1 or 2 is operated.  Memory switch signal is input to driver seat control unit via UART communication.
2	_	Motors (Seat, Steering, door mirror)	Driver seat control unit operates each motor of seat when it recognizes the memory switch pressed for 0.5 second or more and requests each motor operation to automatic drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor.
		Memory switch Indicator	Driver seat control unit requests the flashing of memory indicator to automatic drive positioner control unit via UART communication while either of the motors is operating. The automatic drive positioner control unit illuminates the memory indicator.
3	Sensors (Seat, steering col- umn, door mirror)	_	Driver seat control unit judges the operating seat position with each seat sensor input. The positions of the steering column and outside mirror are monitored with each sensor signal that is input from auto drive positioner control unit via UART communication. Driver seat control unit stops the operation of each motor when each part reaches the recorded address.
4	_	Memory switch Indicator	Driver seat control unit requests the illumination of memory indicator to auto drive positioner control unit via UART communication after all motors stop. The auto driving positioner control unit illuminates the memory indicator for 5 seconds.

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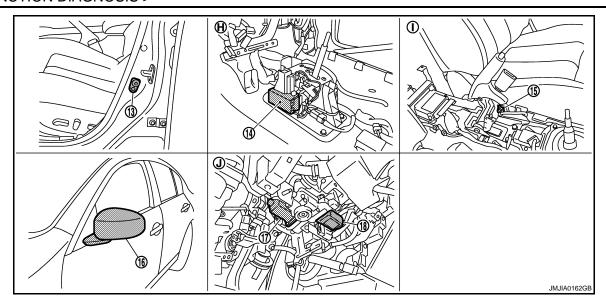
# MEMORY FUNCTION: Component Parts Location INFOID:0000000000960601 ₿ **©** Œ (F) **©** JMJIA0161GB BCM M118, M119, M122, M123

- Unified meter and A/C amp. M67
- Tilt & telescopic switch M31 7.
- 10. Telescopic sensor M48
- Dash side lower (Passenger side)
- D. Behind cluster lid C
- View with steering column cover lower and upper removed

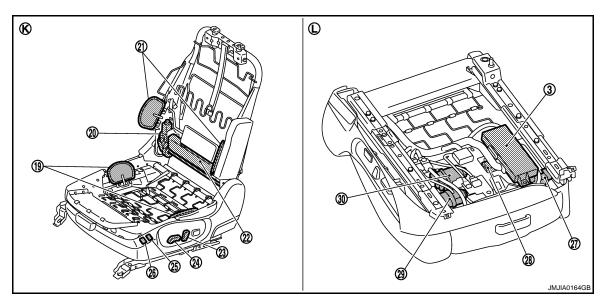
- Automatic drive positioner control unit 3. M51, M52
- AV control unit With NAVI M87, M88 Without NAVI M83, M85
- Key slot M22
- 11. Seat memory switch D5
- View with instrument driver lower panel removed
- AT assembly (TCM is built in AT assembly)

- Driver seat control unit B451, B452
- AT assembly connector F51
- Tilt sensor M48
- 12. Door mirror remote control switch D17
- Backside of seat cushion (driver side) C.
- View with instrument driver lower panel removed

#### < FUNCTION DIAGNOSIS >



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- View with instrument driver lower panel removed



- 19. Side support (seat cushion) (Side support unit B420)
- Side support unit B420 22.
- 25. Side support switch (seat back side)
- 28. Lifting motor (front) B455
- View with seat cushion pad and seat- L. back pad removed
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 29. Sliding motor B461
- Backside of the seat cushion
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453
- Lifting motor (rear) B456

MEMORY FUNCTION: Component Description

**CONTROL UNITS** 

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# < FUNCTION DIAGNOSIS >

Item	Function
Driver seat control unit	<ul> <li>The address of each part is recorded.</li> <li>Operates each motor of seat to the registered position.</li> <li>Requests the operations of steering column and door mirror to automatic drive positioner control unit</li> </ul>
Automatic drive positioner control unit	Operates the steering column and door mirror with the instructions from the driver seat control.

#### **INPUT PARTS**

#### **Switches**

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

#### Sensors

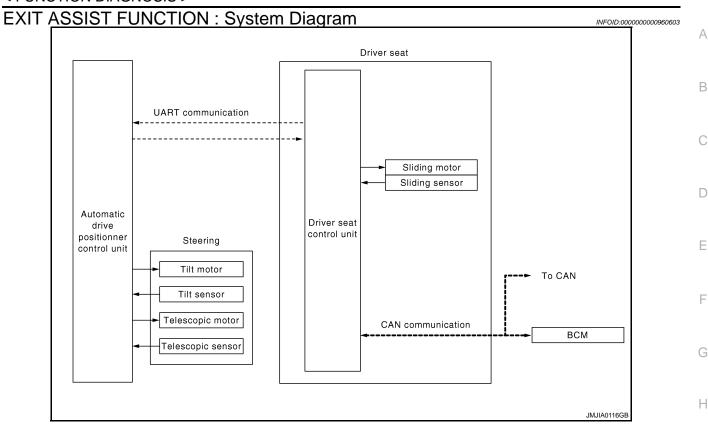
Item	Function
Door mirror sensor (driver side/passenger side)	Detect the up/down and left/right position of outside mirror face.
Tilt & telescopic sensor	Detect the up/down and left/right position of steering column.
Lifting sensor (front)	Detect the up/down position of seat lifting (front).
Lifting sensor (rear)	Detect the up/down position of seat lifting (rear).
Reclining sensor	Detect the tilt of seatback.
Sliding sensor	Detect the front/rear position of seat.

# **OUTPUT PARTS**

Item	Function
Door mirror motor (driver side/passenger side)	Move the outside mirror face upward/downward and leftward/rightward.
Tilt and telescopic motor	Move the steering column upward/downward and frontward/rearward.
Lifting motor (front)	Move the seat lifter (front) upward/downward.
Lifting motor (rear)	Move the seat lifter (rear) upward/downward.
Reclining motor	Tilt and raise up the seatback.
Sliding motor	Slide the seat frontward/rearward.
Memory indicator	Illuminates or blinks according to the registration/operation status.

# **EXIT ASSIST FUNCTION**

#### < FUNCTION DIAGNOSIS >



# **EXIT ASSIST FUNCTION: System Description**

**OUTLINE** 

When exiting, the condition is satisfied, the seat is moved backward 40 mm (1.57 in) from normal sitting position and the steering is moved to the most upper position and front position.

The seat slide amount and the steering operation at entry/exit operation can be changed.

#### NOTE:

- This function is set to OFF before delivery (initial setting).
- Further information for the system setting procedure. Refer to ADP-9, "SYSTEM INITIALIZATION: Descrip-

#### **OPERATION PROCEDURE**

- Open the driver door with ignition switch in OFF position.
- Driver seat and steering column will move to the exiting position.

#### **OPERATION CONDITION**

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

Item	Request status
Ignition position	OFF
System setting [Entry/exit assist function (seat/steering)]	ON
Initialization	Done
Switch inputs  Power seat switch  Tilt & telescopic switch  Door mirror remote control switch  Set switch  Memory switch	OFF (Not operated)
AT selector lever	P position

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Order	Input	Output	Control unit condition
1	Door switch (Driver side)	_	Driver seat control unit receives door switch signal (driver side/ open) from BCM via CAN communication.
2	_	Motors (Seat sliding, tilt, telescopic)	Driver seat control unit operates the seat sliding motor, which recognizes that the driver side door is opened with ignition switch OFF.  Driver seat control unit then requests the operations of tilt motor and telescopic motor to auto drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor for a constant amount.

**EXIT ASSIST FUNCTION: Component Parts Location** INFOID:000000000960605 ₿ **©** € (E) **©** 

- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Tilt & telescopic switch M31
- Automatic drive positioner control unit 3. M51, M52
- 5. AV control unit With NAVI M87, M88 Without NAVI M83, M85
- 8. Key slot M22

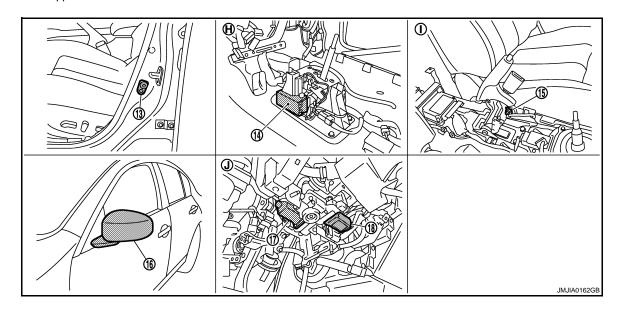
- Driver seat control unit B451, B452
- 6. AT assembly connector F51
- 9. Tilt sensor M48

#### < FUNCTION DIAGNOSIS >

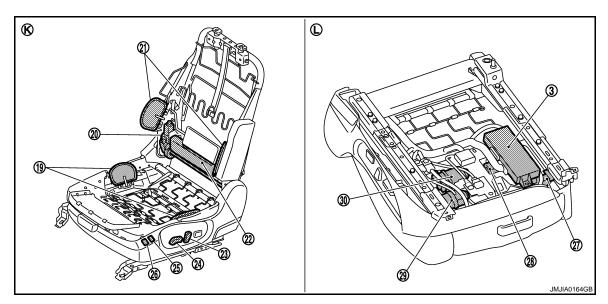
- 10. Telescopic sensor M48
- 11. Seat memory switch D5
- 12. Door mirror remote control switch
- D17
- A. Dash side lower (Passenger side)
- View with instrument driver lower panel removed
- C. Backside of seat cushion (driver side)

- D. Behind cluster lid C
- E. AT assembly (TCM is built in AT assembly)
- View with instrument driver lower panel removed

G View with steering column cover lower and upper removed



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- H. View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- I. View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- View with instrument driver lower panel removed



- Side support (seat cushion)
   (Side support unit B420)
- 22. Side support unit B420
- 25. Side support switch (seat back side) B419
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453

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#### < FUNCTION DIAGNOSIS >

- 28. Lifting motor (front) B455
- 29. Sliding motor B461
- 30. Lifting motor (rear) B456

- K. View with seat cushion pad and seat- L. back pad removed
  - . Backside of the seat cushion

# **EXIT ASSIST FUNCTION: Component Description**

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#### **CONTROL UNITS**

Item	Function
Driver seat control unit	<ul> <li>Operates the seat sliding motor for a constant amount.</li> <li>Requests the operations of tilt motor and telescopic motor to automatic drive positioner control unit.</li> </ul>
Automatic drive positioner control unit	Operates the tilt motor and telescopic motor with the request from the driver seat control.
BCM	Recognizes the following status and transmits it to the driver seat control unit via CAN communication.  • Driver door: OPEN/CLOSE

#### **INPUT PARTS**

#### **Switches**

Item	Function
Front door switch (driver side)	Detect front door (driver side) open/close status.

#### Sensors

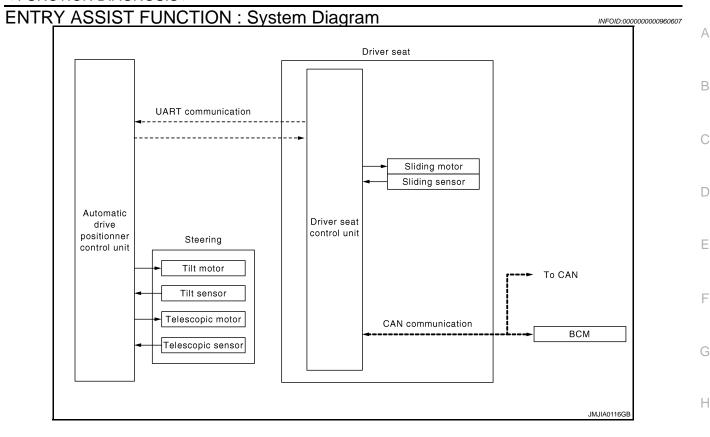
Item	Function
Tilt and telescopic sensor	Detect the up/down and left/right position of steering column.
Sliding sensor	Detect the front/rear position of seat.

#### **OUTPUT PARTS**

Item	Function
Tilt and telescopic motor	Move the steering column upward/downward and frontward/rearward.
Sliding motor	Slide the seat frontward/rearward.

# **ENTRY ASSIST FUNCTION**

#### < FUNCTION DIAGNOSIS >



## **ENTRY ASSIST FUNCTION: System Description**

#### **OUTLINE**

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

#### NOTE:

- This function is set to OFF before delivery (initial setting).
- Further information for the system setting procedure. Refer to ADP-11, "SYSTEM SETTING: Description".

#### **OPERATION PROCEDURE**

- 1. A: Turn the ignition switch ON.
  - B: Turn the ignition switch from OFF to ACC after closing the driver door.
- 2. Driver seat and steering column will return from the exiting position to entry position.

#### **OPERATION CONDITION**

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

Item	Request status
Seat, steering column	The vehicle is not moved after performing the exit assist function.
Switch inputs  Power seat switch  Tilt & telescopic switch  Door mirror control switch  Set switch  Memory switch	OFF (Not operated)
AT selector lever (only for AT model)	P position
Parking break (only for MT models)	Applied

#### **DETAIL FLOW**

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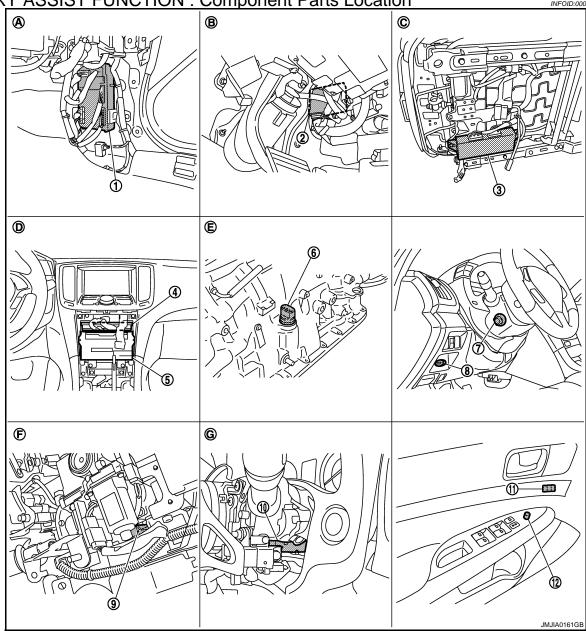
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Order	Input	Output	Control unit condition
1	Door switch/Ignition switch	_	Driver seat control unit receives the signals of [ignition switch signal] and [driver side door switch] from BCM via CAN communication.
2		Motors (Sliding, tilt, tele- scopic)	Driver side control unit operates the sliding motor when the operating conditions are satisfied and requests the operations of tilt motor and telescopic motor to automatic drive positioner control unit via UART communication. The automatic drive positioner operates each motor.
	Sensors (Sliding, tilt, telescopic)	_	Each sensor monitors the operating positions of seat and steering, and then stops the operation of each motor when each part reaches the recorded address.

**ENTRY ASSIST FUNCTION: Component Parts Location** INFOID:0000000000960609



- BCM M118, M119, M122, M123
- Unified meter and A/C amp. M67
- Tilt & telescopic switch M31
- Automatic drive positioner control unit 3. M51, M52
- AV control unit With NAVI M87, M88 Without NAVI M83, M85
- Key slot M22

- Driver seat control unit B451, B452
- AT assembly connector F51
- Tilt sensor M48

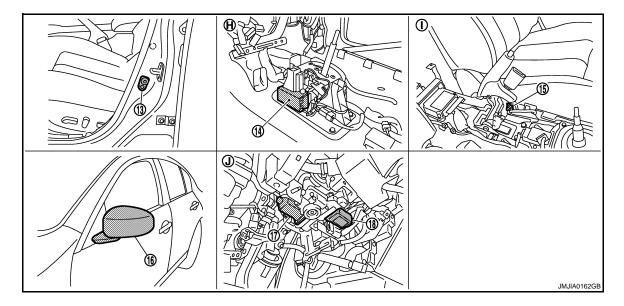
#### < FUNCTION DIAGNOSIS >

- 10. Telescopic sensor M48
- 11. Seat memory switch D5
- 12. Door mirror remote control switch D17
- D17

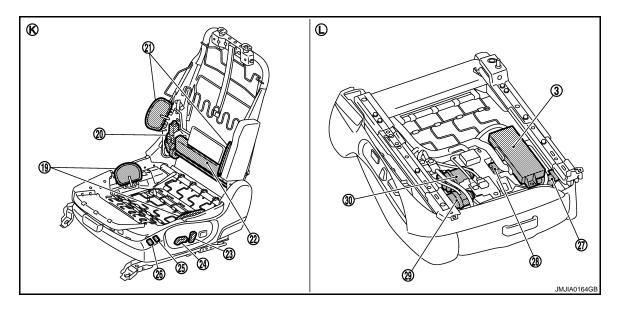
- A. Dash side lower (Passenger side)
  - e) B. View with instrument driver lower panel removed
- C. Backside of seat cushion (driver side)

- D. Behind cluster lid C
- E. AT assembly (TCM is built in AT assembly)
- View with instrument driver lower panel removed

G View with steering column cover lower and upper removed



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- H. View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- I. View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- View with instrument driver lower panel removed



- Side support (seat cushion)
   (Side support unit B420)
- 20. Reclining motor B454
- 21. Side support (seatback) (Side support unit B420)

- 22. Side support unit B420
- 23. Reclining switch (Power seat switch B459)
- 24. Sliding, lifting switch (Power seat switch B459)

- 25. Side support switch (seat back side) B419
- 26. Side support switch (cushion side) B419
- 27. Sliding sensor B453

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#### < FUNCTION DIAGNOSIS >

- 28. Lifting motor (front) B455
- 29. Sliding motor B461
- 30. Lifting motor (rear) B456

- K. View with seat cushion pad and seat- L. back pad removed
- .. Backside of the seat cushion

# **ENTRY ASSIST FUNCTION: Component Description**

INFOID:0000000000960610

### **CONTROL UNITS**

Item	Function		
Driver seat control unit	<ul> <li>According to the ignition signal and door switch signal (driver side) from BCM,</li> <li>Operates the seat sliding motor for a constant amount.</li> <li>Requests the operations of tilt motor and telescopic motor to automatic drive positioner control unit.</li> </ul>		
Automatic drive positioner control unit	Operates the tilt motor and telescopic motor with the instructions from the driver seat control. $ \\$		
BCM	Recognizes the following status and transmits it to the driver seat control unit via CAN communication.  • Driver door: OPEN/CLOSE  • Ignition switch psition: ACC/ON		

#### **INPUT PARTS**

#### **Switches**

Item	Function
Front door switch (driver side)	Detect front door (driver side) open/close status.

#### Sensors

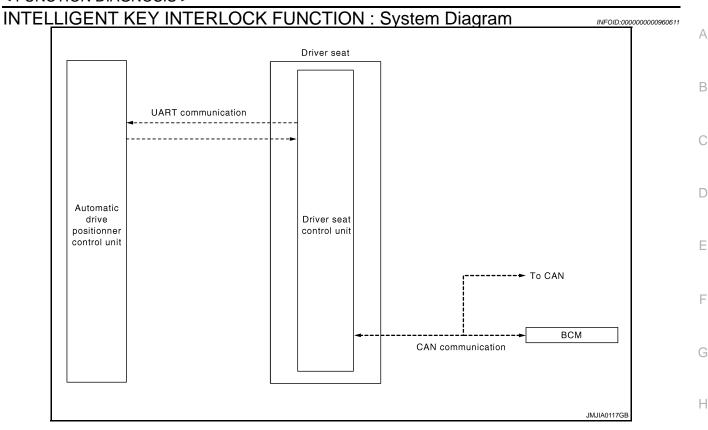
Item	Function	
Tilt & telescopic sensor	Detect the up/down and left/right position of steering column.	
Sliding sensor	Detect the front/rear position of seat.	

#### **OUTPUT PARTS**

Item	Function	
Tilt & telescopic motor	Move the steering column upward/downward and frontward/rearward.	
Sliding motor	Slide the seat frontward/rearward.	

# INTELLIGENT KEY INTERLOCK FUNCTION

#### < FUNCTION DIAGNOSIS >



# INTELLIGENT KEY INTERLOCK FUNCTION: System Description

INFOID:0000000000960612

#### **OUTLINE**

When unlocking doors by using Intelligent Key or driver side door request switch, the system performs memory operation, exiting operation then entry operation.

#### **OPERATION PROCEDURE**

- 1. Unlock doors by using Intelligent Key or driver side door request switch.
- 2. The system performs memory operation, and then performs exit assist operation.

#### NOTE:

If the seat position is in memorized position before unlocking doors, memory operation does not perform. **NOTE:** 

Further information for Intelligent Key interlock function. Refer to <u>ADP-10, "MEMORY STORING: Description".</u>

#### OPERATION CONDITION

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

ltem	Request status	
Ignition position	OFF	
System setting [Entry/exit function (seat/steering)]	ON	
Key switch	OFF (Key is removed.)	
Switch inputs  Power seat switch  Tilt & telescopic switch  Door mirror control switch  Set switch  Memory switch	OFF (Not operated)	
AT selector lever (only for AT model)	P position	
Parking break (only for MT models)	Applied	

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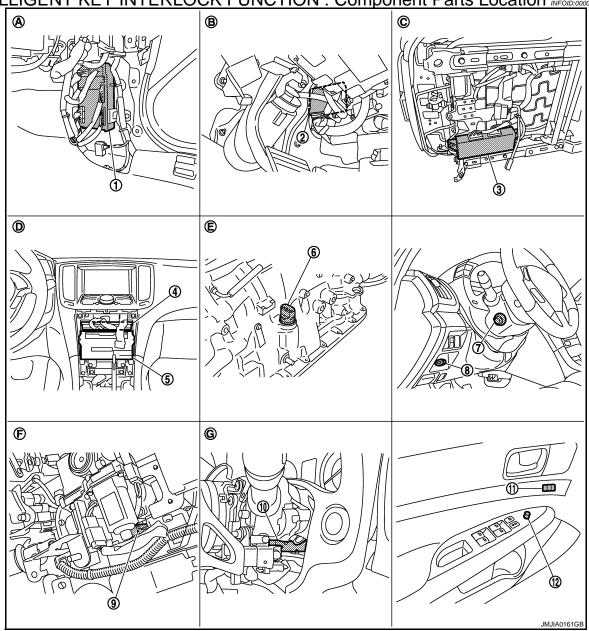
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### **DETAIL FLOW**

Order	Input	Output	Control unit condition
1	Door unlock signal (CAN)     Key ID signal (CAN)	_	Driver seat control unit receives the door unlock signal and the key ID signal from BCM when unlocking the door with Intelligent Key or driver side door request switch.
2	_	_	Driver seat control unit performs the memory function.
3	3 – –		Driver seat control unit performs the exit assist function after performing the memory function.
4	_	_	Driver seat control unit performs the entry assist function.



- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 4. Onlinea meter and 700 amp. Mor
- 7. Tilt & telescopic switch M31
- Automatic drive positioner control unit 3. M51, M52
- 5. AV control unit With NAVI M87, M88 Without NAVI M83, M85
- 8. Key slot M22

- Driver seat control unit B451, B452
- 6. AT assembly connector F51
- 9. Tilt sensor M48

#### < FUNCTION DIAGNOSIS >

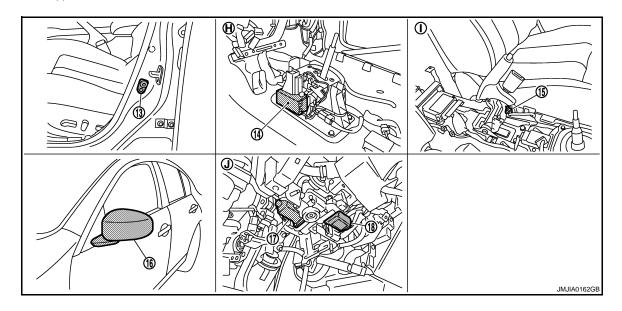
- 10. Telescopic sensor M48
- 11. Seat memory switch D5
- 12. Door mirror remote control switch D17

- B. View with instrument driver lower panel removed
- C. Backside of seat cushion (driver side)

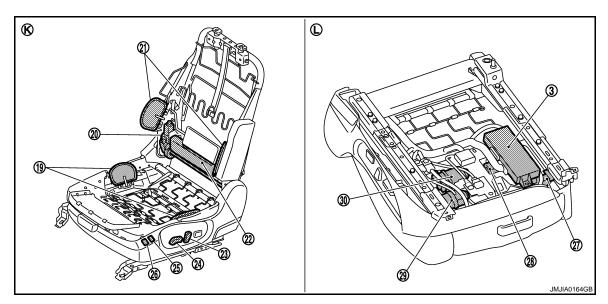
- Behind cluster lid C D.
- AT assembly (TCM is built in AT assembly)
- View with instrument driver lower panel removed

View with steering column cover low-G er and upper removed

Dash side lower (Passenger side)



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- View with center console assembly removed
- 15. Parking brake switch B14
- Tilt motor M49
- View with instrument driver lower panel removed



- 19. Side support (seat cushion) (Side support unit B420)
- Reclining motor B454
- 21. Side support (seatback) (Side support unit B420)

- 22. Side support unit B420
- 23. Reclining switch (Power seat switch B459)
- 24. Sliding, lifting switch (Power seat switch B459)

- 25. Side support switch (seat back side) B419
- Side support switch (cushion side) 26. B419
- 27. Sliding sensor B453

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#### < FUNCTION DIAGNOSIS >

28. Lifting motor (front) B455

29. Sliding motor B461

30. Lifting motor (rear) B456

K. View with seat cushion pad and seat- L. back pad removed

Backside of the seat cushion

## INTELLIGENT KEY INTERLOCK FUNCTION: Component Description

INFOID:0000000000960614

#### **CONTROL UNITS**

Item	Function		
Driver seat control unit	It performs memory function and entry/exit assist function after receiving the door unlock signal from BCM.		
Automatic drive positioner control unit	Operates the steering column and door mirror with the instructions from the driver seat control unit.		
BCM	Recognizes the following status and transmits it to the driver seat control unit via CAN communication.  • Door lock: UNLOCK (with Intelligent Key or driver side door request swtich)		

### SIDE SUPPORT SYSTEM

## SIDE SUPPORT SYSTEM: System Description

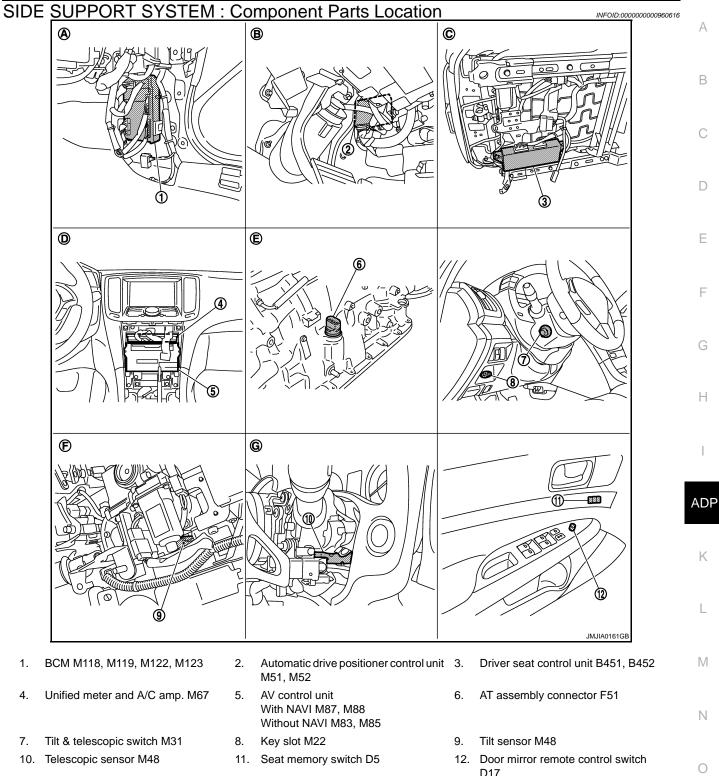
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#### **OUTLINE**

- While operating the side support switch, the pump located inside side support unit operates and adjust theair
  pressure in seat cushion and seatback side support.
- It is possible to soften the side support, by allowing some air to escape, by deflating the solenoid locatedinside side support.
- It is possible to adjust seat cushion and seatback differently while inflating or deflating solenoid located inside support unit.

#### NOTE:

The side support system is controlled independently with no link to the automatic drive positioner system.



View with steering column cover low-

Dash side lower (Passenger side)

Behind cluster lid C

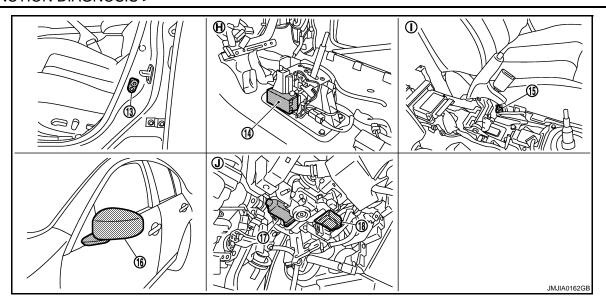
er and upper removed

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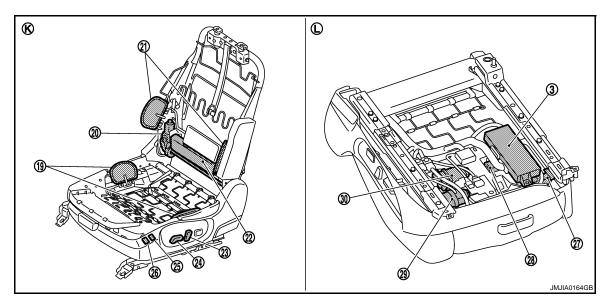
- View with instrument driver lower panel removed
- AT assembly (TCM is built in AT assembly)
- D17
- Backside of seat cushion (driver side) C.

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View with instrument driver lower panel removed



- 13. Front door switch (driver side) B16
- 16. Door mirror (driver side) D3
- View with center console assembly removed
- 14. AT device (detention switch) M137
- 17. Telescopic motor M49
- I. View with center console assembly removed
- 15. Parking brake switch B14
- 18. Tilt motor M49
- J. View with instrument driver lower panel removed



- 19. Side support (seat cushion) (Side support unit B420)
- 22. Side support unit B420
- 25. Side support switch (seat back side) B419
- 28. Lifting motor (front) B455
- K. View with seat cushion pad and seat- L. back pad removed
- 20. Reclining motor B454
- 23. Reclining switch (Power seat switch B459)
- 26. Side support switch (cushion side) B419
- 29. Sliding motor B461
  - L. Backside of the seat cushion
- 21. Side support (seatback) (Side support unit B420)
- 24. Sliding, lifting switch (Power seat switch B459)
- 27. Sliding sensor B453
- 30. Lifting motor (rear) B456

SIDE SUPPORT SYSTEM : Component Description

INFOID:0000000000960617

**CONTROL UNITS** 

# < FUNCTION DIAGNOSIS >

Item	Function	
Side support unit	Built in pump, pump relay and solenoid, operates when pressing ON/OFF on side support switch.	
Side support switch	With a built-in cushion side and seat back side, controls the power supplied to pump and to each solenoid.	

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# **DIAGNOSIS SYSTEM (DRIVER SEAT C/U)**

#### < FUNCTION DIAGNOSIS >

# DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

# **Diagnosis Description**

INFOID:0000000000960618

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

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

# **CONSULT-III Function**

INFOID:0000000000960619

SELF-DIAGNOSIS RESULTS Refer to <u>ADP-156</u>, "DTC <u>Index"</u>.

#### **DATA MONITOR**

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

# **DIAGNOSIS SYSTEM (DRIVER SEAT C/U)**

### < FUNCTION DIAGNOSIS >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
MIR CHNG SW-R	"ON/OFF"	×	×	ON/OFF status judged from the door mirror remote control switch (switching to right) signal.
MIR CHNG SW-L	"ON/OFF"	×	×	ON/OFF status judged from the door mirror remote control switch (switching to left) signal.
TILT SW-UP	"ON/OFF"	×	×	ON/OFF status judged from the tilt switch (up) signal.
TILT SW-DOWN	"ON/OFF"	×	×	ON/OFF status judged from the tilt switch (down) signal.
TELESCO SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the telescoping switch (forward) signal.
TELESCO SW-RR	"ON/OFF"	×	×	ON/OFF status judged from the telescoping switch (backward) signal.
DETENT SW*1	"ON/OFF"	×	×	The selector lever position "OFF (P position) / ON (other than P position)" judged from the detention switch signal.
PARK BRAKE SW <sup>*2</sup>	"ON/OFF"	×	×	The parking brake condition "ON (applied) / OFF (release)" judged from the parking brake switch signal.
STARTER SW	"ON/OFF"	×	×	Ignition key switch ON (START, ON) /OFF (ACC, OFF) status judged from the ignition switch signal.
SLIDE PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
RECLN PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
LIFT FR PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
LIFT RR PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
MIR/SEN RH U-D	" <b>V</b> "	_	×	Voltage input from door mirror sensor (passenger side) up/down is displayed.
MIR/SEN RH R-L	"∨"	_	×	Voltage input from door mirror sensor (passenger side) left/right is displayed.
MIR/SEN LH U-D	"√"	-	×	Voltage input from door mirror sensor (driver side) up/down is displayed.
MIR/SEN LH R-L	"∨"	-	×	Voltage input from door mirror sensor (driver side) left/right is displayed.
TILT SEN	"V"	_	×	Voltage input from tilt sensor is displayed.
TELESCO SEN	"V"	_	×	Voltage input from telescopic sensor is displayed.

<sup>\*1:</sup>Only for AT models.

# **ACTIVE TEST**

### **CAUTION:**

### When driving vehicle, do not perform active test.

Test item	Description
SEAT SLIDE	Activates/deactivates the sliding motor.
SEAT RECLINING	Activates/deactivates the reclining motor.
SEAT LIFTER FR	Activates/deactivates the lifting motor (front).
SEAT LIFTER RR	Activates/deactivates the lifting motor (rear).
TILT MOTOR	Activates/deactivates the tilt motor.

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<sup>\*2:</sup>Only for MT models.

# DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

# < FUNCTION DIAGNOSIS >

Test item	Description
TELESCO MOTOR	Activates/deactivates the telescopic motor.
MIRROR MOTOR RH	Activates/deactivates the mirror motor (passenger side).
MIRROR MOTOR LH	Activates/deactivates the mirror motor (driver side).
MEMORY SW INDCTR	Turns ON/OFF the memory indicator.

### **WORK SUPPORT**

### NOTE:

This mode is only for AT model.

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

### **U1000 CAN COMM CIRCUIT**

< COMPONENT DIAGNOSIS >

# COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 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-28, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

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

### DTC CONFIRMATION PROCEDURE

**1.**STEP 1

Turn ignition switch ON and wait at least 3 seconds.

>> GO TO 2.

### 2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-51, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

### Diagnosis Procedure

Refer to LAN-18, "Trouble Diagnosis Flow Chart".

#### Special Repair Requirement

Refer to ADP-9, "SYSTEM INITIALIZATION: Description".

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#### **B2112 SLIDING MOTOR**

#### < COMPONENT DIAGNOSIS >

### **B2112 SLIDING MOTOR**

Description

- The seat sliding motor is installed to the seat cushion frame.
- The seat sliding motor is installed with the driver seat control unit.
- Slides the seat frontward/ rearward by changing the rotation direction of sliding motor.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2112	SEAT SLIDE	The driver seat control unit detects the output of sliding motor output terminal for 0.1 second or more even if the sliding switch is not input.	Driver seat control unit

#### DTC CONFIRMATION PROCEDURE

### **1.**STEP 1

Turn ignition switch ON.

>> GO TO 2.

### 2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-52</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

#### NOTE:

First perform diagnosis for B2126 or B2127 if B2126 or B2127 is detected.

# Diagnosis Procedure

INFOID:0000000000960626

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-52, "DTC Logic".

### Is the DTC displayed again?

YES >> GO TO 2.

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

### 2.REPLACE DRIVER SEAT CONTROL UNIT

Replace driver seat control unit. Refer to ADP-217, "Removal and Installation".

>> INSPECTION END

#### **B2113 RECLINING MOTOR** < COMPONENT DIAGNOSIS > **B2113 RECLINING MOTOR** Α Description INFOID:0000000000960627 The seat reclining motor is installed to the seatback frame. В • The seat reclining motor is activated with the driver seat control unit. Tilts the seatback frontward/rearward by changing the rotation direction of reclining motor. **DTC** Logic INFOID:0000000000960628 DTC DETECTION LOGIC D Trouble diagnosis DTC No. DTC detecting condition Possible cause name The driver seat control unit detects the output of re-Е P2113 SEAT RECLINING clining motor output terminal for 0.1 second or more Driver seat control unit even if the reclining switch is not input. DTC CONFIRMATION PROCEDURE F 1.STFP 1 Turn ignition switch ON. >> GO TO 2. 2.STEP 2 Н Check "Self diagnostic result" with CONSULT-III. Is the DTC detected? YES >> Perform diagnosis procedure. Refer to ADP-53, "Diagnosis Procedure". >> INSPECTION END NO NOTE: ADP First perform diagnosis for B2126 or B2127 if B2126 or B2127 is detected. Diagnosis Procedure INFOID:0000000000960629 1. PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT-III. L Erase the DTC. Perform DTC confirmation procedure. Refer to ADP-53, "DTC Logic". Is the DTC displayed again? M YES >> GO TO 2.

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

Replace driver seat control unit. Refer to ADP-217, "Removal and Installation".

2.replace driver seat control unit

>> INSPECTION END

NO

# **B2118 TILT SENSOR**

**Description** 

- The tilt sensor is installed to the steering column assembly.
- The resistance of tilt sensor is changed according to the up/down position of steering column.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of tilt sensor resistance. Automatic drive positioner control unit calculates the tilt position from the voltage.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2118	TILT SENSOR	The input voltage of tilt sensor is 0.1V or less or 4.9V or more.	Harness and connectors     (Tilt sensor circuit is opened/     shorted, tilt sensor power supply circuit is opened/shorted.)     Tilt sensor

#### DTC CONFIRMATION PROCEDURE

### **1.**STEP 1

Turn ignition switch ON.

>> GO TO 2.

### **2.**STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-54, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000000960632

# 1. CHECK TILT SENSOR SIGNAL

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

Monitor item	Condition		Value
TILT SEN	Tilt position		1.2 [V]
	Till position	Bottom	3.4 [V]

#### Is the value normal?

YES >> GO TO 7.

NO >> GO TO 2.

### 2.CHECK TILT SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and tilt & telescopic sensor connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M51	7	M48	3	Existed

#### **B2118 TILT SENSOR**

### < COMPONENT DIAGNOSIS >

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M51	7		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK TILT SENSOR POWER SUPPLY

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

	V (16 0.0)		
(+)		(-)	Voltage (V) (Approx.)
Tilt & telescopic sensor	Terminal	(-)	
M48	1	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

### 4. CHECK TILT SENSOR POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	33	M48	1	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 5. CHECK TILT SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	41	M48	4	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 6. CHECK DOOR MIRROR OPERATION

1. Connect automatic drive positioner control unit connector and tilt & telescopic sensor connector.

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#### **B2118 TILT SENSOR**

#### < COMPONENT DIAGNOSIS >

- 2. Turn ignition switch ON.
- 3. Check door mirror operation with memory function.

#### Is the operation normal?

YES >> Replace tilt & telescopic sensor. (Built in steering column assembly.)

NO >> Replace automatic drive positioner control unit.

# 7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace the malfunctioning part.

### **B2119 TELESCOPIC SENSOR**

#### < COMPONENT DIAGNOSIS >

### **B2119 TELESCOPIC SENSOR**

Description INFOID:0000000000960633

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

**DTC** Logic INFOID:0000000000960634

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2119	TELESCOPIC SEN- SOR	The input voltage of telescopic sensor is 0.1V or less or 4.9V or more.	Harness and connectors     (Telescopic sensor circuit is     opened/shorted, telescopic sensor power supply circuit is     opened/shorted.)      Telescopic sensor

#### DTC CONFIRMATION PROCEDURE

### **1**.STEP 1

Turn ignition switch ON.

>> GO TO 2.

## 2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC is detected?

YES >> Perform diagnosis procedure. Refer to ADP-57, "Diagnosis Procedure".

>> INSPECTION END NO

# Diagnosis Procedure

1. CHECK TELESCOPIC SENSOR SIGNAL

- Turn ignition switch ON.
- Select "TELESCO SEN" in "Data monitor" mode with CONSULT-III. 2.
- Check the tilt sensor signal under the following condition.

Monitor item	Condition		Value
TELESCO SEN	Telescopic position	Rear	0.8 [V]
TELESCO SEN	Telescopic position	Front	3.4 [V]

#### Is the valve normal?

YES >> GO TO 7.

NO >> GO TO 2.

# 2.CHECK TELESCOPIC SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and tilt & telescopic sensor connector. 2.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

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INFOID:0000000000960635

#### **B2119 TELESCOPIC SENSOR**

#### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M51	23	M48	2	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M51	23		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK TELESCOPIC SENSOR POWER SUPPLY

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

Terminals			) / h
(+)		(-)	Voltage (V) (Approx.)
Tilt & telescopic sensor	Terminal	(-)	(11 - )
M48	2	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4.CHECK TELESCOPIC SENSOR POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- 3. Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	33	M48	1	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 5. CHECK TELESCOPIC SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	41	M48	4	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

### **B2119 TELESCOPIC SENSOR**

# < COMPONENT DIAGNOSIS > NO >> Repair or replace harness. Α 6. CHECK DOOR MIRROR OPERATION Connect automatic drive positioner control unit connector and tilt & telescopic sensor connector. Turn ignition switch ON 2. В Check door mirror operation with memory function. 3. Is the operation normal? YES >> Replace tilt & telescopic sensor. (Built in steering column assembly.) C NO >> Repair or replace harness. 7. CHECK INTERMITTENT INCIDENT Refer to GI-39, "Intermittent Incident". D Is the inspection result normal? YES >> Replace automatic drive positioner control unit. Е >> Repair or replace the malfunctioning part. NO F Н ADP K L M Ν 0

# **B2126 DETENT SW**

- Detention switch is installed on AT device. It is turned OFF when the AT selector lever is in P position.
- The driver seat control unit judges that the AT selector lever is in P position if continuity does not exist in this
  circuit.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2126	DETENT SW	AT selector lever is in P position and the vehicle speed of 7±4km/h is detected.	Harness and connectors     (Detention switch circuit is opened/shorted.)     Detention switch     Combination meter     (CAN communacation )

#### DTC CONFIRMATION PROCEDURE

### **1.**STEP 1

Drive the vehicle at 7±4km/h or more.

>> GO TO 2.

### **2.**STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-60, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

1.CHECK DTC WITH "BCM"

Check "Self diagnostic result" for BCM with CONSULT-III.

Is the either DTC B2602, B2603, B2604, B2605 or B2606 detected?

YES >> Check The DTC. Refer to SEC-167, "DTC Index".

NO >> GO TO 2.

# 2.CHECK DETENTION SWITCH SIGNAL

- Turn ignition switch ON.
- Select "DETENT SW" in "Data Monitor" mode with CONSULT-III.
- 3. Check detention switch signal under the following condition.

Monitor item	Cor	Status	
DETENT SW	AT selector lever	P position	OFF
DETENT OW	Al Selector level	Other than above	ON

INFOID:0000000000960638

#### Is the status normal?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.check detention switch circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit and AT device connector.
- Check continuity between driver seat control unit harness connector and AT device harness connector.

### **B2126 DETENT SW**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	AT device connector	Terminal	Continuity
B451	21	M137	11	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	21		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

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#### **B2127 PARKING BRAKE SWITCH**

#### < COMPONENT DIAGNOSIS >

## **B2127 PARKING BRAKE SWITCH**

- Parking brake switch is installed on parking brake lever. It is turned ON when the parking brake is applied.
- The driver seat control unit judges that the parking brake is engaged if continuity exists in this circuit.

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2127	PARKING BRAKE	Parking brake is engaged and the vehicle speed of 7±4km/h is detected.	Harness and connectors     (Parking brake switch circuit is opened/shorted.)     Parking brake switch     Combination meter     (CAN communacation )

#### DTC CONFIRMATION PROCEDURE

### **1.**STEP 1

Drive the vehicle at 7±4km/h or more.

>> GO TO 2.

### 2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-62, "Diagnosis Procedure".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000000960641

# 1. CHECK PARKING BRAKE SWITCH SIGNAL

- Turn ignition switch ON.
- 2. Select "PARK BRAKE SW" in "Data monitor" mode with CONSULT-III.
- 3. Check parking brake switch signal under the following condition.

Monitor item	Condition		Status
PARK BRAKE SW Parking brake	Parking brako	Applied	ON
	Faiking blake	Release	OFF

#### Is the status normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2. CHECK PARKING BRAKE SWITCH HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect driver seat control unit and parking brake switch connector.
- Check continuity between driver seat control unit harness connector and parking brake switch harness connector.

Driver seat control unit connector	Terminal	Parking brake switch	Terminal	Continuity
M51	8	B14	1	Existed

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

### **B2127 PARKING BRAKE SWITCH**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Ground	Continuity
M51	8		Not existed
the inspection result normal	?		

#### ls

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK PARKING BRAKE SWITCH

Refer to ADP-63, "Component Inspection".

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Adjust or replace parking brake switch.

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

# Component Inspection

# 1. CHECK PARKING BRAKE SWITCH

Turn ignition switch OFF.

2. Disconnect parking brake switch connector.

Check continuity between parking brake switch terminal and ground part of parking brake switch.

Terminal		Condition		Continuity	
Parking	brake switch	Condition		Continuity	
1	Ground part of	Parking brake	Applied	Existed	
	parking brake switch	Faiking blake	Other than above	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Adjust or replace parking brake switch. ADP

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### **B2128 UART COMMUNICATION LINE**

< COMPONENT DIAGNOSIS >

## **B2128 UART COMMUNICATION LINE**

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

DTC Logic

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P2128	UART COMM	The communication between driver seat control unit and auto drive positioner control unit is interrupted for a period of time.	UART communication line (UART communication line is open or shorted)     Driver seat control unit     Automatic drive positioner control unit

#### DTC CONFIRMATION PROCEDURE

### **1.**STEP 1

Turn ignition switch ON.

>> GO TO 2.

### **2.**STEP 2

Operate tilt & telescopic switch for more than 2seconds.

>> GO TO 3.

### 3. PROCEDURE 3

Check "Self diagnostic result" with CONSULT-III.

#### Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-64, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000000960645

# 1. CHECK UART COMMUNICATION LINE CONTINUITY

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

Driver seat control unit connector	Terminal	Automatic drive positioner control unit connector	Terminal	Continuity
B451	1	M51	10	Existed
	17	I GIVI	26	LAISIGU

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

### **B2128 UART COMMUNICATION LINE**

### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal		Continuity
B451	1	Ground	Not existed
D <del>1</del> 31	17		Not existed

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Is the inspection result normal?

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

NO >> Repair or replace harness.

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#### < COMPONENT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT

**BCM** 

BCM : Diagnosis Procedure

INFOID:0000000000960646

### 1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
1	Pottory power cupply	К
11	Battery power supply	10

#### Is the fuse fusing?

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

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

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

(-	+)	(-)	Voltage
BCM			(Approx.)
Connector	Terminal	Ground	
M118	1	Giodila	Battery voltage
M119	11		Ballery Vollage

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# 3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	СМ		Continuity
Connector	Terminal	Ground	Continuity
M119	13		Existed

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

## **BCM**: Special Repair Requirement

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# 1. REQUIRED WORK WHEN REPLACING BCM

Initialize IVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

DRIVER SEAT CONTROL UNIT

DRIVER SEAT CONTROL UNIT: Diagnosis Procedure

#### < COMPONENT DIAGNOSIS >

#### NOTE:

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

# 1. CHECK POWER SUPPLY CIRCUIT

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

	Voltage (V) (Approx.)			
(+)				
Driver seat control unit connector	Terminal	(-)		
B452	33	Ground	Battery voltage	
D+02	40	Giouna	Dattery Voltage	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Check the following.

- Repair or replace harness between driver seat control unit and fuse block (J/B).
- · Circuit breaker.

### 2.CHECK GROUND CIRCUIT

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

Driver seat control unit connector	Terminal		Continuity
B451	32	Ground	Existed
B452	48		LXISIGU

#### Is the inspection result normal?

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

>> Repair or replace harness between driver seat control unit and ground. NO

# DRIVER SEAT CONTROL UNIT: Special Repair Requirement

# 1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to ADP-8, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description".

### AUTOMATIC DRIVE POSITIONER CONTROL UNIT

### AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Diagnosis Procedure

#### NOTE:

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

# 1. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Check voltage between automatic drive positioner control unit harness connector and ground.

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#### < COMPONENT DIAGNOSIS >

(+)			Voltage (V) (Approx.)	
Automatic drive positioner control unit connector Terminal		(–)	(Approx.)	
M52	34	Ground	Battery voltage	
IVIOZ	39	Oround	Dattery voltage	

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness between automatic drive positioner control unit and fuse block (J/B).

## 2.CHECK GROUND CIRCUIT

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

Automatic drive positioner control unit connector	Terminal		Continuity
M52	40	Ground	Existed
	48	-	LAISted

#### Is the inspection result normal?

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

NO >> Repair or replace harness between automatic drive positioner control unit and ground.

### AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Special Repair Requirement

INFOID:0000000000960651

# 1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to <u>ADP-8</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u> : <u>Description"</u>.

### SIDE SUPPORT UNIT

# SIDE SUPPORT UNIT: Diagnosis Procedure

INFOID:0000000000960652

# 1. CHECK POWER SUPPLY CIRCUIT

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

	V/ I/ 0.0			
(+)		(-)	Voltage (V) (Approx.)	
Side support unit connector	nector Terminal		(11 - 7	
B420	1	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 2.

NO

>> Check the following.

- Repair or replace harness between fusible link and side support unit.
- · Circuit breaker.

### 2. CHECK GROUND CIRCUIT

Check continuity between side suppot unit harness connector and ground.

Side support unit connector	Terminal	Ground	Continuity
B420	2		Existed

### < COMPONENT DIAGNOSIS >

### Is the inspection result normal?

YES >> Perform diagnosis procedure. Refer to <u>ADP-68</u>, "SIDE SUPPORT UNIT : <u>Diagnosis Procedure"</u>.

NO >> Repair or replace harness between side support unit and ground.

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### SLIDING SWITCH

Sliding switch is equipped to the power seat switch on the seat cushion side surface. The operation signal is inputted to the driver seat control unit when the sliding switch is operated.

## Component Function Check

INFOID:0000000000960654

# 1. CHECK FUNCTION

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

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

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-70, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000000960655

# 1. CHECK SLIDING SWITCH SIGNAL

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

Driver seat control unit Terminals		inals		Condition	Voltage (V)
connector	(+)	(-)	Gondidon		(Approx.)
	11			Operate (backward)	0
B451		Ground	Sliding switch	Release	Battery voltage
D401	26			Operate (forward)	0
				Release	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.CHECK SLIDING SWITCH CIRCUIT

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

Driver seat control unit connector	Terminal	Power seat switch connector	Terminal	Continuity	
B451	11	B459	11	Existed	
	26	D-109	26	LXISIEU	

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

#### SLIDING SWITCH

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal		Continuity
B451	11	Ground	Not existed
D#01	26		INOL EXISTED

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### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check driver seat control unit output

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

Driver seat control unit	Termi	Voltage (V)	
connector	(+)	(-)	(Approx.)
B451	11	Ground	Pottory voltage
	26	Giouna	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

### 4. CHECK SLIDING SWITCH

Refer to ADP-71, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch.

# 5. CHECK INTERMITTENT INCIDENT

### Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

>> Repair or replace malfunctioning part. NO

### Component Inspection

# 1. CHECK SLIDING SWITCH

Turn ignition switch OFF.

- Disconnect power seat switch (sliding switch) connector.
- Check continuity between power seat switch (sliding switch) terminals.

Terminal  Power seat switch (Sliding switch)		Condition		Continuity	
Power seat switch (Silding switch)			Operate	Existed	
20	11	Sliding switch (backward)	Release	Not existed	
32	26	Sliding switch (forward)	Operate	Existed	
			Release	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. ADP

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### **RECLINING SWITCH**

Description

Reclining switch is equipped to the power seat switch on the seat cushion side surface. The operation signal is inputted to the driver seat control unit when the reclining switch is operated.

## Component Function Check

INFOID:0000000000960658

# 1. CHECK FUNCTION

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

Monitor item	Condition	Condition	
RECLINE SW-FR	Reclining switch (forward)	Operate	ON
RECLINE SW-FR	Reclining Switch (forward)	Release	OFF
RECLINE SW-RR	Reclining switch (backward)	Operate	ON
RECLINE SW-RR	Reclining Switch (backward)	Release	OFF

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-72, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000000960659

# 1. CHECK RECLINING SWITCH SIGNAL

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

Driver seat control unit	Terminals		Condition		Voltage (V)
connector	(+)	(-)	Solia.iio.i		(Approx.)
B451	12	- Ground	Reclining switch	Operate (forward)	0
				Release	Battery voltage
	27			Operate (backward)	0
				Release	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.CHECK RECLINING SWITCH CIRCUIT

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

Driver seat control unit connector	Terminal	Power seat switch connector	Terminal	Continuity
B451	12	B459	12	Existed
	27	D-109	27	

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

#### RECLINING SWITCH

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal		Continuity
B451	12	Ground	Not existed
B451	27		INOL EXISTED

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#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check driver seat control unit output

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

Driver seat control unit	Termi	Voltage (V)	
connector	(+)	(-)	(Approx.)
B451	12	Ground	Battery voltage
	27	Giodila	Dattery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

## 4. CHECK RECLINING SWITCH

Refer to ADP-73, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:0000000000960660

## 1. CHECK RECLINING SWITCH

Turn ignition switch OFF.

- Disconnect power seat switch (reclining switch) connector.
- 3. Check continuity between power seat switch (reclining switch) terminals.

Terminal Power seat switch (Reclining switch)		Condition		Continuity
	12	Reclining switch (backward)	Operate	Existed
32			Release	Not existed
	27	Reclining switch (forward)	Operate	Existed
	1 (Ioi ward)		Release	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

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## **LIFTING SWITCH (FRONT)**

#### < COMPONENT DIAGNOSIS >

## LIFTING SWITCH (FRONT)

Description

Lifting switch (front) is equipped to the power seat switch on the seat cushion side surface. The operation signal is inputted to the driver seat control unit when the lifting switch (front) is operated.

## Component Function Check

INFOID:0000000000960662

## 1. CHECK FUNCTION

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

Monitor item	Condition	Condition		
LIFT FR SW-UP	Lifting switch front (up)	Operate	ON	
	Litting Switch from (up)	Release	OFF	
LIFT FR SW-DN	Lifting switch front (down)	Operate	ON	
	Litting Switch Hofft (down)	Release	OFF	

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-74, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960663

## 1. CHECK LIFTING SWITCH SIGNAL

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

Driver seat control unit	Term	Terminals		Condition	
connector	(+)	(-)	Condition		(Approx.)
	13			Operate (down)	
B451	13	Ground	Lifting switch (front)	Release	Battery voltage
	00			Operate (up)	
	28			Release	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.CHECK LIFTING SWITCH (FRONT) CIRCUIT

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

Driver seat control unit connector	Terminal	Power seat switch connector	Terminal	Continuity
B451	13	B459	13	Existed
	28		28	LAISIEU

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

## **LIFTING SWITCH (FRONT)**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal		Continuity
B451	13	Ground	Not existed
	28		Not existed

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#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check driver seat control unit output

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

Driver seat control unit	Termi	Voltage (V)	
connector	(+)	(–)	(Approx.)
B451	13	Ground	Pattory voltage
	28	Giouna	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

## 4.CHECK LIFTING SWITCH (FRONT)

Refer to ADP-75, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

## Component Inspection

# 1. CHECK LIFTING SWITCH (FRONT)

- Turn ignition switch OFF.
- Disconnect power seat switch (lifting switch front) connector.
- 3. Check continuity between power seat switch (lifting switch front) terminals.

Te	erminal	Condition		Continuity	
Power seat switch (lifting switch front)		Condition		Continuity	
	13	Lifting switch front (down)	Operate	Existed	
32	13	Litting Switch from (down)	Release	Not existed	
32	28	Lifting switch front (up)	Operate	Existed	
	20		Release	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

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INFOID:0000000000960664

**ADP-75** 

## **LIFTING SWITCH (REAR)**

#### < COMPONENT DIAGNOSIS >

## LIFTING SWITCH (REAR)

Description

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

## Component Function Check

INFOID:0000000000960666

## 1. CHECK FUNCTION

- 1. Select "LIFT RR SW-UP", "LIFT RR SW-DN" in "Data monitor" mode with CONSULT-III.
- 2. Check lifting switch (rear) signal under the following conditions.

Monitor item	Condition	Condition		
LIFT RR SW-UP	Lifting switch rear (up)	Operate	ON	
	Litting Switch rear (up)	Release	OFF	
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON	
	Litting Switch real (down)	Release	OFF	

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-76, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000000960667

## 1. CHECK LIFTING SWITCH (REAR) SIGNAL

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

Driver seat control unit Term		inals	Condition		Voltage (V)
connector	(+)	(-)	Condition		(Approx.)
	14	14 Ground		Operate (down)	0
B451	17		Lifting switch (rear)	Release	Battery voltage
	29			Operate (up)	0
				Release	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# $2.\mathsf{CHECK}$ LIFTING SWITCH (REAR) CIRCUIT

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

Driver seat control unit connector	Terminal	Power sear switch connector	Terminal	Continuity
B451	14	B459	14	Existed
	29	6040	29	LAISIEU

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

## **LIFTING SWITCH (REAR)**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal		Continuity
B451	14	Ground	Not existed
D431	29		Not existed

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#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check driver seat control unit output

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

Driver seat control unit	Termi	Voltage (V)		
connector	(+)	(–)	(Approx.)	
D454	14	Ground	Pottory voltage	
B451	29	Giouna	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

## 4. CHECK LIFTING SWITCH (REAR)

Refer to ADP-77, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

## Component Inspection

# 1. CHECK LIFTING SWITCH (REAR)

- Turn ignition switch OFF.
- Disconnect power seat switch (lifting switch rear) connector.
- 3. Check continuity between power seat switch (lifting switch rear) terminals.

Terminal Power seat switch (lifting switch rear)		Condition		Continuity
	14	Lifting switch rear (up)	Operate	Existed
32	14	Litting Switch real (up)	Release	Not existed
32	29	Lifting switch rear (down)	Operate	Existed
	29	Litting Switch rear (down)	Release	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

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INFOID:0000000000960668

**ADP-77** 

#### **TILT SWITCH**

Description

Tilt switch is equipped to the steering column. The operation signal is inputted to the automatic drive positioner control unit when the tilt switch is operated.

## Component Function Check

INFOID:0000000000960670

## 1. CHECK FUNCTION

- 1. Select "TILT SW-UP", "TILT SW-DN" in "Data monitor" mode with CONSULT-III.
- 2. Check tilt switch signal under the following conditions.

Monitor item	Condition	Status	
TILT SW-UP	Tilt switch (up)	Operate	ON
TILI SW-UP	The Switch (up)	Release	OFF
TILT SW-DN	Tilt switch (down)	Operate	ON
TILI SVV-DIN	Till Switch (down)	Release	OFF

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-78, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000000960671

## 1. CHECK TILT SWITCH SIGNAL

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

Automatic drive positioner	Terminals		Condition		Voltage (V)	
control unit connector	(+)	(-)	Condition		(Approx.)	
M51	1	Ground	Tilt switch	Operate (up)	0	
				Release	Battery voltage	
	17		The Switch	Operate (down)	0	
				Release	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2. CHECK TILT SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and tilt & telescopic switch connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic switch harness connector.

Automatic drive positioner control unit connector	Terminal	Tllt & telescopic switch connector	Terminal	Continuity
M51	1	M31	4	Existed
	17	10131	5	LAISIEU

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

#### **TILT SWITCH**

#### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal		Continuity
M51	1	Ground	Not existed
	17		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check automatic drive positioner control unit output

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

Automatic drive positioner	Terminals		Voltage (V)	
control unit connector	(+)	(-)	(Approx.)	
M51	1	Ground	Battery voltage	
I CIVI	17	Giodila	battery voltage	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit.

## 4. CHECK TILT SWITCH

Refer to ADP-79, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace tilt & telescopic switch.

#### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

>> Repair or replace the malfunctioning part. NO

## Component Inspection

## 1. CHECK TILT SWITCH

Turn ignition switch OFF.

Disconnect tilt & telescopic switch connector.

Check continuity between tilt & telescopic switch terminals.

Terminal Tilt switch		Condition		Continuity	
1	4	Till Switch (up)	Release	Not existed	
ı	5	Tilt switch (down)	Operate	Existed	
			Release	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

>> Replace tilt & telescopic switch. NO

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#### **TELESCOPIC SWITCH**

#### < COMPONENT DIAGNOSIS >

## TELESCOPIC SWITCH

Telescopic switch is equipped to the steering column. The operation signal is inputted to the automatic drive positioner control unit when the telescopic switch is operated.

## Component Function Check

INFOID:0000000000960674

## 1. CHECK FUNCTION

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

Monitor item	Condition	Condition		
TELESCO SW-FR	Telesco switch (forward)	Operate	ON	
TELESCO SW-FR	relesco switch (lorward)	Release	OFF	
TELESCO SW-RR	Telesco switch (backward)	Operate	ON	
TELESCO SW-RR	relesco switch (backward)	Release	OFF	

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-80, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960675

## 1. CHECK TELESCOPIC SWITCH SIGNAL

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

Automatic drive positioner	Terminals		Condition		Voltage (V)
control unit connector	(+)	(-)	Condition		(Approx.)
	11			Operate (forward)	0
M51	""	Ground	Telescopic switch	Release	Battery voltage
	27		relescopic switch	Operate (backward)	0
				Release	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2.check telescopic switch circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and tilt & telescopic switch connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic switch harness connector.

Automatic drive positioner control unit connector	Terminal	TIIt & telescopic switch connector	Terminal	Continuity
M51	11	M31	2	Existed
	27	I CIVI	3	LAISIEU

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

#### TELESCOPIC SWITCH

#### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal		Continuity
M51	11	Ground	Not existed
IVIST	27		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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# 3.check automatic drive positioner control unit output

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

Automatic drive positioner	Termi	Voltage (V)	
control unit connector	(+)	(–)	(Approx.)
M51	11	Ground	Battery voltage
I CIVI	27	Giouna	battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit.

## 4. CHECK TELESCOPIC SWITCH

Refer to ADP-81, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace tilt & telescopic switch.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

>> Repair or replace the malfunctioning part. NO

## INFOID:0000000000960676

## Component Inspection

## 1. CHECK TELESCOPIC SWITCH

Turn ignition switch OFF.

- Disconnect tilt & telescopic switch connector.
- 3. Check continuity between tilt & telescopic switch terminals.

Terminal Telescopic switch		Condition		Continuity	
Telesci	opic switch				
	2	Telescopic switch (forward)	Operate	Existed	
1	2	relescopic switch (lorward)	Release	Not existed	
ı	3	Telescopic switch (backward)	Operate	Existed	
	3	Telescopic Switch (backward)	Release	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

>> Replace tilt & telescopic switch. NO

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**ADP-81** 

#### **SEAT MEMORY SWITCH**

#### < COMPONENT DIAGNOSIS >

#### SEAT MEMORY SWITCH

Memory switch is equipped on the seat memory switch installed to the driver side door trim. The operation signal is inputted to the automatic drive positioner control unit when the memory switch is operated.

## Component Function Check

INFOID:0000000000960678

## 1. CHECK FUNCTION

- 1. Select "MEMORY SW 1", "MEMORY SW 2" in "Data monitor" mode with CONSULT-III.
- 2. Check seat memory switch signal under the following conditions.

Monitor item	Cond	Condition		
MEMORY SW 1	Memory switch 1	Push	ON	
WEWORT SW T	Memory Switch	Release	OFF	
MEMORY SW 2	Memory switch 2	Push	ON	
IVIEIVION I SVV Z	iviemory switch 2	Release	OFF	

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-82, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960679

# 1. CHECK SEAT MEMORY SWITCH SIGNAL

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

Automatic drive positioner	Terminals		Condition		Voltage (V)
control unit connector	(+)	(–)	Condition		(Approx.)
	9	Ground	Memory switch 1	Push	0
M51				Release	5
IVIO I	25		Memory switch 2	Push	0
				Release	5

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK MEMORY SWITCH CIRCUIT

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

Automatic drive positioner control unit connector	Terminal	Seat memory switch connector	Terminal	Continuity
M51	9	D5	1	Existed
	25	00	2	LAISIEU

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

#### **SEAT MEMORY SWITCH**

#### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal		Continuity
M51	9	Ground	Not existed
	25		Not existed

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Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check memory switch ground circuit

Check continuity between seat memory switch harness connector and ground.

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Seat memory switch connector	Terminal	Ground	Continuity
D5	4		Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT

- Connect the automatic drive positioner control unit connector.
- Turn ignition switch ON. 2.

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

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Automatic drive positioner	Termi	Voltage (V)	
control unit connector	(+)	(–)	(Approx.)
M51	9	Ground	5
IVIO	25	Giodila	3

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic drive positioner control unit.

## 5.CHECK SEAT MEMORY SWITCH

Refer to ADP-83, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace seat memory switch.

## 6.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

>> Repair or replace the malfunctioning part. NO

## Component Inspection

INFOID:0000000000960680

## 1. CHECK SEAT MEMORY SWITCH

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

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#### **SEAT MEMORY SWITCH**

#### < COMPONENT DIAGNOSIS >

	rminal mory switch	Condition	n	Continuity
	1	Memory switch 1	Push	Existed
4		Welliory Switch i	Release	Not existed
4	2	2 Memory switch 2	Push	Existed
	2		Release	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat memory switch.

#### < COMPONENT DIAGNOSIS >

## DOOR MIRROR REMOTE CONTROL SWITCH CHANGEOVER SWITCH

INFOID:000000000096068:

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## CHANGEOVER SWITCH: Description

Changeover switch is integrated into door mirror remote control switch.

Changeover switch has three positions (L, N and R).

It changes door mirror motor operation by transmitting control signal to automatic drive positioner control unit.

## CHANGEOVER SWITCH: Component Function Check

INFOID:0000000000960682

## 1. CHECK CHANGEOVER SWITCH FUNCTION

Check the operation on "MIR CHNG SW-R" or "MIR CHNG SW-L" in "DATA MONITOR" mode with CON-SULT-III.

Refer to ADP-48, "CONSULT-III Function".

#### Is the inspection result normal?

YES >> Changeover switch function is OK.

>> Refer to ADP-85, "CHANGEOVER SWITCH: Diagnosis Procedure". NO

## CHANGEOVER SWITCH: Diagnosis Procedure

INFOID:0000000000960683

## 1. CHECK CHANGEOVER SWITCH SIGNAL

Turn ignition switch ON. 1.

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

Terminals					
(+)	(+)		Change over switch condition	Voltage (V)	
Automatic drive positioner control unit connector		(-)	S .	(Approx.)	
	2	Ground	RIGHT	0	
M51			Other than above	5	
I CIVI	40		LEFT	0	
	18		Other than above	5	

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

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## 2.CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

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- Disconnect automatic drive positioner control unit and door mirror remote control switch connector.
- Check continuity between automatic drive positioner control unit connector and door mirror remote control switch connector.

Automatic drive positioner control unit connector	Terminal	Door mirror remote control switch connector	Terminal	Continuity	
M51	2	D7	11	- Existed	
	18	- D1	10	LAISIEU	

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

Automatic drive positioner control unit connector	Terminal		Continuity
M51	2	Ground	Not existed
	18		NOL EXISTED

#### Is the inspection result normal?

#### < COMPONENT DIAGNOSIS >

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

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

Door mirror remote control switch connector	Terminal	Ground	Continuity
D7	7	Glound	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## f 4.CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

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

(+)			Voltage (V) (Approx.)
Automatic drive positioner control unit connector	Terminal	(-)	(Approx.)
M51	2	Ground	5
IVIO I	18	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic drive positioner control unit. Refer to ADP-218, "Removal and Installation".

#### 5. CHECK CHANGEOVER SWITCH

Check changeover switch.

Refer to ADP-86, "CHANGEOVER SWITCH: Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace door mirror remote control switch. Refer to MIR-68, "Removal and Installation".

## 6. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-218, "Removal and Installation".

NO >> Repair or replace the malfunctioning parts.

## CHANGEOVER SWITCH: Component Inspection

INFOID:0000000000960684

#### 1. CHECK CHANGEOVER SWITCH

Check door mirror remote control switch.

	minal	Change over switch condition	Continuity	
Door mirror remote control switch		•	•	
10		LEFT	Existed	
10	7	Other than above	Not existed	
11	, r	RIGHT	Existed	
11		Other than above	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END.

#### < COMPONENT DIAGNOSIS >

NO >> Replace door mirror remote control switch. Refer to MIR-68, "Removal and Installation".

#### MIRROR SWITCH

#### MIRROR SWITCH: Description

It operates angle of the door mirror face.

It transmits mirror face adjust operation to AUTOMATIC DRIVE POSITIONER CONTROL UNIT.

## MIRROR SWITCH: Component Function Check

## 1. CHECK MIRROR SWITCH FUNCTION

Check the operation on "MIR CON SW-UP/DN" and "MIR CON SW-RH/LH" in "DATA MONITOR" mode with CONSULT-III.

Refer to ADP-48, "CONSULT-III Function".

#### Is the inspection result normal?

YES >> Mirror switch function is OK.

NO >> Refer to ADP-87, "MIRROR SWITCH: Diagnosis Procedure".

## MIRROR SWITCH: Diagnosis Procedure

## 1. CHECK MIRROR SWITCH FUNCTION

1. Turn ignition switch ON.

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

Terminals				
(+)			Mirror switch	Voltage (V)
Automatic drive positioner control unit connector	Terminal	(–)	Condition	(Approx.)
	3		UP	0
	3	Ground	Other than above	5
	4		LEFT	0
M51			Other than above	5
I GIVI	19		DOWN	0
			Other than above	5
	20	1	RIGHT	0
	20		Other than above	5

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

## 2. CHECK HARNESS CONTINUITY

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

Automatic drive positioner control unit connector	Terminal	Door mirror remote control switch connector	Terminal	Continuity
M51	3		15	Existed
	4	D7 .	13	
	19		12	
	20		4	

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

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#### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal		Continuity
	3	Ground	Not existed
M51	4		
IVIS I	19		
	20		

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

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

Door mirror remote control switch connector	Terminal	Ground	Continuity
D7	7	Oround	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

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

Terminals			
(+)			Voltage (V) (Approx.)
Automatic drive positioner control unit connector	Terminal	(-)	
	3	Ground	5
M51	4		
I GIVI	19		
	20		

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic drive positioner control unit. Refer to ADP-218, "Removal and Installation".

#### 5. CHECK MIRROR SWITCH

Check mirror switch

Refer to ADP-88, "MIRROR SWITCH: Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace door mirror remote control switch. Refer to MIR-68, "Removal and Installation".

#### 6.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-218</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning parts.

#### MIRROR SWITCH: Component Inspection

## 1. CHECK MIRROR SWITCH

INFOID:0000000000960688

#### < COMPONENT DIAGNOSIS >

Check door mirror remote control switch.

Term Door mirro control	or remote	Mirror switch condition	Continuity	
4		RIGHT	Existed	
4	7	Other than above	Not existed	
13		LEFT	Existed	
13			Other than above	Not existed
15		UP	Existed	
15		Other than above	Not existed	
12		DOWN	Existed	
12		Other than above	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace door mirror remote control switch.Refer to MIR-68, "Removal and Installation".

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#### POWER SEAT SWITCH GROUND CIRCUIT

#### < COMPONENT DIAGNOSIS >

## POWER SEAT SWITCH GROUND CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000000960689

# 1. CHECK POWER SEAT SWITCH GROUND CIRCUIT

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

Power seat switch connector	Terminal	Ground	Continuity
B459	32	Giodila	Existed

#### Is the inspection result normal?

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

NO >> Repair or replace harness.

#### SIDE SUPPORT SWITCH

#### < COMPONENT DIAGNOSIS >

## SIDE SUPPORT SWITCH

Description INFOID:0000000000960690

With a built-in cushion side and seatback side, side support switch controls the power supplied to pump and to each solenoid.

## Component Function Check

## 1. CHECK SIDE SUPPORT SWITCH FUNCTION

Check side support operation with side support switch.

#### Is the inspection results normal?

YES >> Side support switch is OK.

>> Refer to ADP-91, "Diagnosis Procedure". NO

## Diagnosis Procedure

## 1. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect side support switch connector.
- Check continuity between side support switch and ground.

Side support switch connector	Terminal	Ground	Continuity
B419	2	Ground	Existed

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace ground circuit.

#### 2.CHECK SIDE SUPPORT SWITCH

Check side support switch function.

Refer to ADP-91, "Component Inspection".

#### Is the inspection result normal?

YES >> Side support switch is OK.

NO >> Replace side support switch.

## Component Inspection

## 1. CHECK SIDE SUPPORT SWITCH

- Turn ignition switch OFF.
- Remove side support switch. 2.
- Detect the malfunctioning switch.

#### Which switch is malfunctioning?

CUSHION SIDE>>GO TO 2.

SEATBACK SIDE>>GO TO 3.

## 2.CHECK CUSHION SIDE SWITCH

Check continuity between side support switch (cushion side) terminals.

Teri	minal	Cushion side switch condition	Continuity	
		Inflate	Existed	
15		Neutral	Not existed	
	2	Deflate	Not existed	
	2	2	Inflate	Not existed
16		Neutral	Not existed	
		Deflate	Existed	

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**ADP-91** 

#### SIDE SUPPORT SWITCH

#### < COMPONENT DIAGNOSIS >

#### Is the inspection result normal?

>> Side support switch (cushion side) is OK.

NO >> Replace side support switch. Refer to <u>SE-110</u>, "Removal and Installation".

# 3. CHECK SEATBACK SIDE SWITCH

Check continuity between power seat switch terminals.

Terr	ninal	Seatback side switch condition	Continuity
		Inflate	Existed
17		Neutral	Not existed
		Deflate	Not existed
	2	Inflate	Not existed
18		Neutral	Not existed
		Deflate	Existed

#### Is the inspection result normal?

YES

>> Side support switch (seatback side) is OK.
>> Replace side support switch. Refer to <a href="SE-110">SE-110</a>, "Removal and Installation". NO

#### **DETENTION SWITCH**

#### < COMPONENT DIAGNOSIS >

## **DETENTION SWITCH**

Description

Detention switch is installed on AT device. It is turned OFF when the AT selector lever is in P position. The driver seat control unit judges that the AT selector lever is in P position if continuity does not exist in this circuit.

## Component Function Check

# 1. CHECK FUNCTION

- 1. Select "DETENT SW" signal in "Data monitor" mode with CONSULT-III.
- 2. Check detention switch signal under the following conditions.

Monitor item	Condition		Status
		P position	OFF
DETENT SW	AT selector lever	Other than above	ON

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-93, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

## 1. CHECK DTC WITH "BCM"

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

Is the either DTC B2602, B2603, B2604, B2605 or B2606 detected?

YES >> Check the DTC. Refer to <u>SEC-167</u>, "DTC Index".

NO >> GO TO 2.

## 2. CHECK DETENTION SWITCH INPUT SIGNAL

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

Driver seat control unit	Terr	minal	Condition Voltage (V) (Approx.)		Voltage (V)
connector	(+)	(-)			(Approx.)
B451	21	Ground	AT selector lever		0
D43 I	21	Giodila	Al Selector level	Other than above	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

## 3.check detention switch circuit

- Turn ignition switch OFF.
- Disconnect driver seat control unit and AT device connector.
- 3. Check continuity between driver seat control unit harness connector and AT device harness connector.

Driver seat control unit connector	Terminal	AT device connector	Terminal	Continuity
B451	21	M137	11	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	21		Not existed

Is the inspection result normal?

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#### **DETENTION SWITCH**

#### < COMPONENT DIAGNOSIS >

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

#### **PARKING BRAKE SWITCH**

#### < COMPONENT DIAGNOSIS >

## PARKING BRAKE SWITCH

Description INFOID:0000000000960697

Parking brake switch is installed on parking brake lever. It is turned ON when the parking brake is applied. The driver seat control unit judges that the parking brake is engaged if continuity exists in this circuit.

## Component Function Check

# 1. CHECK PARKING BRAKE SWITCH INPUT SIGNAL

- Turn ignition switch ON.
- Select "PARK BRAKE SW" in "Data monitor" mode with CONSULT-III. 2.
- Check parking brake switch signal under the following conditions.

Monitor item	Condition		Status
PARK BRAKE SW	Parking brake	Applied	ON
FAIR BRAKE SW	Faiking brake	Release	OFF

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-95, "Diagnosis Procedure".

## Diagnosis Procedure

## 1. CHECK PARKING BRAKE SWITCH SIGNAL

Turn ignition switch ON.

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

Driver seat control unit	Terr	Terminal		tion	Voltage (V)
connector	(+)	(-)	Condition (App		(Approx.)
M51	Ω	Ground	Parking brake Applied		0
IVIOT	0	Ground	I aikiiig blake	Release	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

## 2.check parking brake switch circuit

- Turn ignition switch OFF.
- Disconnect driver seat control unit and parking brake switch connector.
- Check continuity between driver seat control unit harness connector and parking brake switch harness connector.

Driver seat control unit connector	Terminal	Parking brake switch	Terminal	Continuity
M51	8	B14	1	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
M51	8		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK PARKING BRAKE SWITCH

Refer to ADP-96, "Component Inspection".

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#### **PARKING BRAKE SWITCH**

#### < COMPONENT DIAGNOSIS >

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Adjust or replace parking brake switch.

#### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace malfunctioning part.

## Component Inspection

#### INFOID:0000000000960700

# 1. CHECK PARKING BRAKE SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect parking brake switch connector.
- 3. Check continuity between parking brake switch terminal and ground part of parking brake switch.

Te	erminal	Condition		Continuity	
Parking	brake switch	Condition		Continuity	
1	Ground part of	Parking brake	Applied	Existed	
ı	parking brake switch	Faiking blake	Release	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Adjust or replace parking brake switch.

## FRONT DOOR SWITCH (DRIVER SIDE)

#### < COMPONENT DIAGNOSIS >

## FRONT DOOR SWITCH (DRIVER SIDE)

Description INFOID:0000000000960701

Detects front door (driver side) open/close condition.

## Component Function Check

# 1. CHECK FUNCTION

- Select "DOOR SW-DR" in "Data monitor" mode with CONSULT-III.
- Check the front door switch (driver side) signal under the following conditions.

Monitor item		Condition		
DOOR SW-DR	Front door switch	Open	ON	
DOOK SW-DK	(driver side)	Close	OFF	

#### Is the inspection result normal?

YES >> INSPECTION END

>> Perform diagnosis procedure. Refer to ADP-97, "Diagnosis Procedure". NO

## Diagnosis Procedure

1. CHECK FRONT DOOR SWITCH (DRIVER SIDE) SIGNAL

- Turn ignition switch OFF.
- Check signal between BCM connector and ground with oscilloscope.

	Terminals				
(-	(+)		Condition		Voltage (V)
BCM connector	Terminal	(–)	Condition		(Approx.)
				Open	0
M123	150	Ground	Front door (driver side)	Close	(V) 15 10 10 10 ms  JPMIA0011GB

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.check front door switch (driver side) circuit

- Disconnect BCM connector.
- Check continuity between BCM connector and front door switch (driver side) connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M123	150	B16 (Driver side)	2	Existed

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M123	150	Glound	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

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## FRONT DOOR SWITCH (DRIVER SIDE)

#### < COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

# 3.CHECK FRONT DOOR SWITCH (DRIVER SIDE)

Refer to ADP-98, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front door switch (driver side).

## 4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace BCM.

NO >> Repair or replace the malfunctioning part.

## Component Inspection

INFOID:0000000000960704

# 1. CHECK FRONT DOOR SWITCH (DRIVER SIDE)

- Turn ignition switch OFF.
- 2. Disconnect front door switch (driver side) connector.
- 3. Check continuity between front door switch (driver side) terminals.

Terminal		Condition		Continuity	
Front door switch (driver side)					
2	Ground part of door	Front door switch	Pushed	Not existed	
2	switch	(driver side)	Released	Existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front door switch (driver side).

#### **SLIDING SENSOR**

#### < COMPONENT DIAGNOSIS >

## SLIDING SENSOR

Description

- The sliding sensor is installed to the seat slide cushion frame.
- The pulse signal is inputted to the driver seat control unit when sliding is performed.
- The driver seat control unit counts the pulse and calculates the sliding amount of the seat.

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "SLIDE PULSE" in "Data monitor" mode with CONSULT-III.
- 2. Check sliding sensor signal under the following conditions.

Monitor item	Condition		Valve
SLIDE PULSE	Seat sliding	Operate (forward)	Change (increase)*1
		Operate (backward)	Change (decrease)
		Release	No change <sup>*1</sup>

<sup>\*1:</sup> The value at the seat position attained when the battery is connected is considered to be 32768.

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform daiagnosis procedure. Refer to <u>ADP-99, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

1. CHECK SLIDING SENSOR SIGNAL

- 1. Turn ignition switch ON.
- 2. Read voltage signal between driver seat control unit harness connector and ground with osiloscope.

Te	Terminals					
(+)			Condition		Voltage signal	
Sliding sensor connector Terminal		(-)				
B453	24	Ground	Seat sliding	Operate Other than above	10mSec/div = 2V/div JMJIA0119ZZ	

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

## 2.CHECK SLIDING SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect driver seat control unit and sliding sensor connector.
- Check continuity between driver seat control unit harness connector and sliding sensor harness connector.

Driver seat control unit connector	Terminal	Sliding sensor connector	Terminal	Continuity
B451	24	B453	24	Existed

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#### **SLIDING SENSOR**

#### < COMPONENT DIAGNOSIS >

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	24		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK SLIDING SENSOR POWER SUPPLY

- Connect driver seat control unit connector.
- 2. Turn ignition switch ON.
- 3. Check sliding sensor harness connector and ground.

	)/-lt () ()		
(+)		(-)	Voltage (V) (Approx.)
Sliding sensor connector	Terminal	( )	
B453	16	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK SLIDING SENSOR POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and sliding sensor harness connector.

Driver seat control unit connector	Terminal	Sliding sensor connector	Terminal	Continuity
B451	16	B453	16	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	16		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 5. CHECK SLIDING SENSOR GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and sliding sensor harness connector.

Driver seat control unit connector	Terminal	Sliding sensor connector	Terminal	Continuity
B451	31	B453	31	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

#### **6.**CHECK SEAT OPERATION

1. Connect driver seat control unit and sliding sensor connector.

#### **SLIDING SENSOR**

# < COMPONENT DIAGNOSIS > Check seat operation (except sliding operation) with memory function. Is the operation normal? YES >> Replace sliding sensor. (Built in seat slide cushion frame.) NO >> Replace driver seat control unit.

# 7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

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#### **RECLINING SENSOR**

#### < COMPONENT DIAGNOSIS >

## RECLINING SENSOR

**Description** 

- The reclining motor is installed to the seatback frame.
- The pulse signal is inputted to the driver seat control unit when the reclining is operated.
- The driver seat control unit counts the pulse and calculates the reclining amount of the seat.

## Component Function Check

INFOID:00000000000960709

## 1. CHECK FUNCTION

- 1. Select "RECLN PULSE" in "Data monitor" mode with CONSULT-III.
- 2. Check reclining sensor signal under the following conditions.

Monitor item	Condition		Value
		Operate (forward)	Change (increase)*1
RECLN PULSE	Seat reclining	Operate (backward)	Change (decrease)*1
		Release	No change <sup>*1</sup>

<sup>\*1:</sup> The value at the seat position attained when the battery is connected is considered to be 32768.

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-102, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960710

## 1. CHECK RECLINING SENSOR SIGNAL

- 1. Turn ignition switch ON.
- 2. Read voltage signal between driver seat control unit harness connector and ground with oscilloscope.

Te	Terminals				
(+)	(+)		Cor	ndition	Voltage signal
Reclining motor connector	Terminal	(–)			s stange organis
B454	9	Ground	Seat reclining	Operate Other than above	10mSec/div 2V/div JMJIA0119ZZ

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

## 2. CHECK RECLINING SENSOR CIRCUIT

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

#### **RECLINING SENSOR**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Reclining motor connector	Terminal	Continuity
B451	9	B354	9	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	9		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK RECLINING SENSOR POWER SUPPLY

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

	V. Itaara (1.0)		
(+)		(-)	Voltage (V) (Approx.)
Reclining motor connector	Terminal	(-)	(11 - 7
B454	16	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK RECLINING SENSOR POWER SUPPLY CIRCUIT

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

Driver seat control unit connector	Terminal	Reclining motor connector	Terminal	Continuity
B451	16	B454	16	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	16		Not existed

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 5. CHECK RECLINING SENSOR GROUND

- 1. Turn ignition switch OFF.
- Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and reclining motor harness connector.

Driver seat control unit connector	Terminal	Reclining motor connector	Terminal	Continuity
B451	31	B454	31	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

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#### **RECLINING SENSOR**

#### < COMPONENT DIAGNOSIS >

>> Repair or replace harness. NO

# 6. CHECK SEAT OPERATION

- Connect driver seat control unit and sliding sensor connector.
   Check seat operation (except reclining operation) with memory function.

#### Is the operation normal?

>> Replace reclining motor. (Built in seat slide cushion frame.) >> Replace driver seat control unit. YES

NO

# 7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit.

>> Repair or replace the malfunctioning part. NO

## LIFTING SENSOR (FRONT)

#### < COMPONENT DIAGNOSIS >

## LIFTING SENSOR (FRONT)

Description INFOID:000000000960711

- The lifting sensor (front) is installed to the seat slide cushion frame.
- The pulse signal is inputted to the driver seat control unit when the lifting (front) is operated.
- The driver seat control unit counts the pulse and calculates the lifting (front) amount of the seat.

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "LIFT FR PULSE" in "Data monitor" mode with CONSULT-III.
- 2. Check the lifting sensor (front) signal under the following conditions.

Monitor item	Condition		Value
		Operate (Up)	Change (increase)*1
LIFT FR PULSE	Seat lifting (front)	Operate (Down)	Change (decrease)*1
		Release	No change <sup>*1</sup>

<sup>\*1:</sup>The value at the seat position attained when the battery is connected is considered to be 32768.

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-105, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

1. CHECK LIFTING SENSOR (FRONT) SIGNAL

- 1. Turn ignition switch ON.
- 2. Read the voltage signal driver seat control unit harness connector and ground with an oscilloscope.

Terminals						
(+)		Condition		Voltage signal		
Lifting motor (front) connector	Terminal	(–)	Condition		vollago digital	
B455	25	Ground	Seat Lifting (front)	Operate Other than above	10mSec/div 2V/div JMJIA0119ZZ	

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

## 2. CHECK LIFTING SENSOR (FRONT) CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit and lifting motor (front) connector.
- 3. Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

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## **LIFTING SENSOR (FRONT)**

#### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Lifting motor (front) connector	Terminal	Continuity
B451	25	B455	25	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	25		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check lifting sensor (front) power supply

- 1. Connect driver seat control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between lifting motor (front) harness connector and ground.

	V I 00		
(+)		(-)	Voltage (V) (Approx.)
Lifting motor (front) connector	Terminal	(-)	
B455	16	Ground	5

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK LIFTING SENSOR (FRONT) POWER SUPPLY CIRCUIT

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

Driver seat control unit connector	Terminal	Lifting motor (front) connector	Terminal	Continuity
B451	16	B455	16	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	16		Not existed

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 5. CHECK LIFTING SENSOR (FRONT) GROUND

- Turn ignition switch OFF.
- 2. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

Driver seat control unit connector	Terminal	Lifting motor (front) connector	Terminal	Continuity
B451	31	B455	31	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

## **LIFTING SENSOR (FRONT)**

# < COMPONENT DIAGNOSIS > NO >> Repair or replace harness. 6. CHECK SEAT OPERATION Α Connect driver seat control unit and sliding sensor connector. Check seat operation [except lifting (front) operation] with memory function. В Is the operation normal? YES >> Replace lifting motor (front). (Built in seat slide cushion frame.) >> Replace driver seat control unit. NO C 7. CHECK INTERMITTENT INCIDENT Refer to GI-39, "Intermittent Incident". $\mathsf{D}$ Is the inspection result normal? YES >> Replace driver seat control unit. >> Repair or replace the malfunctioning part. NO Е F Н ADP M Ν 0

## LIFTING SENSOR (REAR)

#### < COMPONENT DIAGNOSIS >

## LIFTING SENSOR (REAR)

- The lifting sensor (rear) is installed to the seat slide cushion frame.
- The pulse signal is inputted to the driver seat control unit when the lifting (rear) is operated.
- The driver seat control unit counts the pulse and calculates the lifting (rear) amount of the seat.

## Component Function Check

INFOID:0000000000960715

## 1. CHECK FUNCTION

- 1. Select "LIFT RR PULSE" in "Data monitor" mode with CONSULT-III.
- 2. Check lifting sensor (rear) signal under the following conditions.

Monitor item	Condition		Value
LIFT RR PULSE	Seat lifting (rear)	Operate (Up)	Change (increase)*1
		Operate (Down)	Change (decrease)*1
		Release	No change <sup>*1</sup>

<sup>\*1:</sup> The value at the seat position attained when the battery is connected is considered to be 32768.

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-108, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960716

## 1. CHECK LIFTING SENSOR (REAR) SIGNAL

- 1. Turn ignition switch ON.
- 2. Read voltage signal between driver seat control unit harness connector and ground with oscilloscope.

Terminals						
(+)			Condition		Voltage signal	
Lifting motor (rear) connector	Terminal	(–)	Condition:		. S. a.g. olgila	
B456	25	Ground	Seat Lifting (rear)	Operate Other than above	10mSec/div 2V/div JMJIA0119ZZ	

#### Is the inspection result normal?

YES >> GO TO 7. NO >> GO TO 2.

# 2.check lifting sensor (rear) circuit

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

Driver seat control unit connector	Terminal	Lifting motor (rear) connector	Terminal	Continuity
B451	10	B456	25	Existed

## LIFTING SENSOR (REAR)

### < COMPONENT DIAGNOSIS >

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	10		Not Existed

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### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check lifting sensor (rear) power supply

- Connect driver seat control unit connector.
- 2. Turn ignition switch ON.

Check the voltage between lifting motor (rear) harness connector and ground.

	Terminals		Voltage (V) (Approx.)
(+)		/ \	
Lifting motor (rear)	Terminal	(-)	(11 - /
B456	16	Ground	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4.CHECK LIFTING SENSOR (REAR) POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect driver seat control unit connector.
- 3. Check the continuity between driver seat control unit harness connector and lifting motor (rear) harness connector.

Driver seat control unit connector	Terminal	Lifting motor (rear) connector	Terminal	Continuity
B451	16	B456	16	Existed

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

Driver seat control unit connector	Terminal	Ground	Continuity
B451	16		Not existed

## Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

# 5. CHECK LIFTING SENSOR (REAR) GROUND

- Turn ignition switch OFF.
- Disconnect driver seat control unit connector.
- 3. Check the continuity between driver seat control unit harness connector and lifting motor (rear) harness connector.

Driver seat control unit connector	Terminal	Lifting motor (rear) connector	Terminal	Continuity
B451	31	B456	31	Existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### **O.**CHECK SEAT OPERATION

Connect driver seat control unit and sliding sensor connector.

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## **LIFTING SENSOR (REAR)**

### < COMPONENT DIAGNOSIS >

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

### Is the operation normal?

YES >> Replace lifting motor (rear). (Built in seat slide cushion frame.)

NO >> Replace driver seat control unit.

# 7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

### Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

## **TILT SENSOR**

Description INFOID:0000000000960717

- The tilt sensor is installed to the steering column assembly.
- The resistance of tilt sensor is changed according to the up/down position of steering column.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of tilt sensor resistance. Automatic drive positioner control unit calculates the tilt position from the voltage.

## Component Function Check

INFOID:0000000000960718

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## 1. CHECK FUNCTION

- Select "TILT SEN" in "Data monitor" mode with CONSULT-III.
- Check the tilt sensor signal under the following condition.

Monitor item	Con	Value	
TILT SEN	Tilt position	Тор	1.2 [V]
TIET SEN		Bottom	3.4 [V]

#### Is the indication normal?

>> INSPECTION END YES

NO >> Perform diagnosis procedure. Refer to ADP-111, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000000960719

# 1. CHECK TILT SENSOR SIGNAL

- Turn ignition switch ON.
- Check voltage automatic drive positioner control unit harness connector and ground.

Terminal						
(+)	(+)		Condition		Voltage (V)	
Tilt & telescopic sensor connector	Terminal	(-)	Condition		(Approx.)	
M48	3	Ground	Tilt position	Тор	1.2 [V]	
10140	3	Ground	Tilt position	Bottom	3.4 [V]	

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

# 2.check tilt sensor circuit

Turn ignition switch OFF.

- 2. Disconect automatic drive positioner control unit and tilt & telescopic sensor connector.
- Check continuity between automatic drive positioner control unit harnnes connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M51	7	M48	3	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M51	7		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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### **TILT SENSOR**

### < COMPONENT DIAGNOSIS >

# 3.check tilt sensor power supply

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

	Voltage (V) (Approx.)		
(+)			
Tilt & telescopic sensor Terminal		(-)	(11 - 7
M48	1	Ground	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK TILT SENSOR POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	33	M48	1	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## ${f 5.}$ CHECK TILT SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	41	M48	4	Existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6.CHECK DOOR MIRROR OPERATION

- Connect automatic drive positioner control unit connector and tilt & telescopic sensor connector.
- 2. Turn ignition switch ON.
- 3. Check door mirror operation with memory function.

### Is the operation normal?

YES >> Replace tilt sensor. (Built in steering column assembly.)

NO >> Replace automatic drive positioner control unit.

## 7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

## **TILT SENSOR**

## < COMPONENT DIAGNOSIS >

YES	>> Replace automatic drive positioner control unit.
NO	>> Repair or replace the malfunctioning part.

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# TELESCOPIC SENSOR

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

## Component Function Check

INFOID:0000000000960721

## 1. CHECK FUNCTION

- 1. Select "TELESCO SEN" in "Data monitor" mode with CONSULT-III.
- Check the tilt sensor signal under the following conditions.

Monitor item	Con	Value	
TELESCO SEN	Telescopic position	Rear	0.8 [V]
TELESCO SEN	relescopic position	Front	3.4 [V]

#### Is the indication normal?

YES >> INSPECTION END.

NO >> Perform diagnosis procedure. Refer to <u>ADP-114, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960722

# 1. CHECK TELESCOPIC SENSOR SIGNAL

- Turn ignition switch ON.
- 2. Check voltage automatic drive positioner control unit harness connector and ground.

Terminal					
(+)			Condition		Voltage (V)
Tilt & telescopic sensor connector	Terminal	(-)	Condition		(Approx.)
M48	2	Ground	Telescopic position	Rear	0.8 [V]
WHO	2	Ground	relescopic position	Front	3.4 [V]

#### Is the inspection result normal?

YES >> GO TO 7. NO >> GO TO 2.

# 2.check telescopic sensor circuit

- Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit and tilt & telescopic sensor connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal Tilt & telescopic sensor connector		Terminal	Continuity
M51	M51 23 M48		2	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M51	23		Not existed

### TELESCOPIC SENSOR

### < COMPONENT DIAGNOSIS >

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK TELESCOPIC SENSOR POWER SUPPLY

- 1. Connect automatic drive positioner control unit connector.
- 2. Turn ignition switch ON.
- Check voltage between tilt & telescopic sensor harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)	
Tilt & telescopic sensor Terminal		(-)	(11 - )	
M48	2	Ground	5	

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK TELESCOPIC SENSOR POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Terminal Tilt & telescopic sensor connector		Continuity
M52	33	M48	1	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 5.check telescopic sensor ground circuit

- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic sensor harness connector.

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic sensor connector	Terminal	Continuity
M52	41	M48	4	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6. CHECK DOOR MIRROR OPERATION

- 1. Connect automatic drive positioner control unit connector and tilt & telescopic sensor connector.
- 2. Turn ignition switch ON.
- 3. Check door mirror operation with memory function.

#### Is the operation normal?

YES >> Replace telescopic sensor. (Built in steering column assembly.)

NO >> Repair or replace harness.

### .CHECK INTERMITTENT INCIDENT

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## **TELESCOPIC SENSOR**

## < COMPONENT DIAGNOSIS >

Refer to GI-39, "Intermittent Incident".

## Is the inspection result normal?

>> Replace automatic drive positioner control unit. >> Repair or replace the malfunctioning part. YES

NO

### < COMPONENT DIAGNOSIS >

# MIRROR SENSOR DRIVER SIDE

# **DRIVER SIDE: Description**

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- The mirror sensor (driver side) is installed to the door mirror (driver side).
- The resistance of 2 sensors (horizontal and vertical) is changed when the door mirror (driver side) is operated.
- Automatic drive positioner control unit calculates the door mirror position according to the change of the voltage of 2 sensor input terminals.

## DRIVER SIDE : Component Function Check

### INFOID:0000000000960724

# 1. CHECK FUNCTION

- 1. Select "MIR/SEN LH U-D", "MIR/SEN LH R-L" in "Data monitor" with CONSULT-III.
- 2. Check mirror sensor (driver side) signal under the following condition.

Monitor item	Con	Value	
MIR/SEN LH U-D		Close to peak	3.4 [V]
	Door mirror (driver side)	Close to valley	0.6 [V]
MIR/SEN LH R-L	Door militor (driver side)	Close to right edge	3.4 [V]
		Close to left edge	0.6 [V]

#### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-117, "DRIVER SIDE : Diagnosis Procedure"</u>.

## **DRIVER SIDE**: Diagnosis Procedure

#### INFOID:0000000000960725

# 1. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between door mirror (driver side) harness connector and ground.

Terminals					
(+)				Condition	
Door mirror (driver side) connector	Terminal	(-)			(Approx.)
	9		Door mirror	Close to peak	3.4
D3	9	Ground		Close to valley	0.6
D3	10	Giouna	(Driver side)	Close to right edge	
	10			Close to left edge	

### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

# 2.CHECK DOOR MIRROR (DRIVER SIDE) SENSOR CIRCUIT

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

Automatic drive positioner control unit connector	Terminal	Door mirror (driver side) connector	Terminal	Continuity
M51	6	D3	9	Existed
	22		10	Existed

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### < COMPONENT DIAGNOSIS >

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

Automatic drive positioner control unit connector	Terminal		Continuity
M51	6	Ground	Not existed
	22		

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check door mirror (driver side) sensor power supply

- 1. Connect automatic drive positioner control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between door mirror (driver side) harness connector and ground.

(+)			Voltage (V) (Approx.)
Door mirror (driver side) Terminal		(–)	(Approx.)
D3	11	Ground	5

## Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and door mirror (driver side) harness connector.

Automatic drive positioner control unit connector	Terminal	Door mirror (driver side) connector	Terminal	Continuity
M52	33	D3	11	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

# 5. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR GROUND

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

Automatic drive positioner control unit connector	Terminal	Door mirror (driver side) connector	Terminal	Continuity
M52	41	D3	12	Existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

#### < COMPONENT DIAGNOSIS >

# 6. CHECK TILT & TELESCOPIC OPERATION

- 1. Connect driver seat control unit connector and door mirror (driver side) connector.
- 2. Turn ignition switch ON.
- Check tilt & telescopic operation with memory function.

### Is the operation normal?

YES >> Replace door mirror sensor. (Built in driver side door mirror.)

NO >> Replace automatic drive positioner control unit.

## 7.CHECK INTERMITTENT INCIDENT

### Refer to GI-39, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace the malfunctioning part.

### PASSENGER SIDE

## PASSENGER SIDE: Description

• The mirror sensor (passenger side) is installed to the door mirror (passenger side).

• The resistance of 2 sensors (horizontal and vertical) is changed when the door mirror (passenger side) is operated.

Automatic drive positioner control unit calculates the door mirror position according to the change of the voltage of 2 sensor input terminals.

## PASSENGER SIDE: Component Function Check

## 1. CHECK FUNCTION

- 1. Select "MIR/SEN RH U-D", "MIR/SEN RH R-L" in "Data monitor" with CONSULT-III.
- 2. Check the mirror sensor (passenger side) signal under the following conditions.

Monitor item	Con	Value	
MIR/SEN RH U-D		Close to peak	3.4 [V]
	Door mirror (passenger side)	Close to valley	0.6 [V]
MIR/SEN RH R-L	Door militor (passenger side)	Close to right edge	3.4 [V]
		Close to left edge	0.6 [V]

### Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-119, "PASSENGER SIDE : Diagnosis Procedure".

# PASSENGER SIDE : Diagnosis Procedure

# ${f 1}$ .CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR SIGNAL

Turn ignition switch ON.

Check voltage between door mirror (passenger side) harness connector and ground.

Terminals					
(+)		Condition		Voltage (V)	
Door mirror (passenger side) connector	Terminal	(-)			(Approx.)
D33	9	Ground	Door mirror (passenger side)	Close to peak	3.4
				Close to valley	0.6
				Close to right edge	3.4
				Close to left edge	0.6

Is the inspection result normal?

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### < COMPONENT DIAGNOSIS >

YES >> GO TO 7. NO >> GO TO 2.

# 2.CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR HARNESS CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect automatic drive positioner control unit and door mirror (passenger side) connector.
- Check continuity between automatic drive positioner control unit harness connector and door mirror (passenger side) harness connector.

Automatic drive positioner control unit connector	Terminal	Door mirror (passenger side) connector	Terminal	Continuity
M51	5	D33	9	Existed
	21	D33	10	EXISTEC

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

Automatic drive positioner control unit connector	Terminal		Continuity
M51	5	Ground	Not existed
	21		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK DOOR MIRROR SENSOR (PASSENGER SIDE) POWER SUPPLY

- 1. Connect automatic drive positioner control unit connector.
- Turn ignition switch ON.
- 3. Check voltage between door mirror (passenger side) harness connector and ground.

(+)			Voltage (V) (Approx.)
Door mirror (passenger side) Connector Terminal		(–)	(Approx.)
D33	11	Ground	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4. CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit connector.
- Check continuity between automatic drive positioner control unit harness connector and door mirror (passenger side) harness connector.

Automatic drive positioner control unit connector	Terminal	Door mirror (passenger side) connector	Terminal	Continuity
M52	33	D33	11	Existed

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

Automatic drive positioner control unit connector	Terminal	Ground	Continuity
M52	33		Not existed

### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

### < COMPONENT DIAGNOSIS >

# $5.\mathsf{CHECK}$ DOOR MIRROR (PASSENGER SIDE) SENSOR GROUND

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

Automatic drive positioner control unit connector	Terminal	Door mirror (passenger side) connector	Terminal	Continuity
M52	41	D33	12	Existed

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 6. CHECK TILT & TELESCOPIC OPERATION

- 1. Connect driver seat control unit connector and door mirror (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check tilt & telescopic operation with memory function.

### Is the operation normal?

- YES >> Replace door mirror sensor. (Built in passenger side door mirror.)
- NO >> Replace automatic drive positioner control unit.

# 7. CHECK INTERMITTENT INCIDENT

### Refer to GI-39, "Intermittent Incident".

### Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit.
- NO >> Repair or replace the malfunctioning part.

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## SLIDING MOTOR

- The seat sliding motor is installed to the seat cushion frame.
- The seat sliding motor is installed with the driver seat control unit.
- The seat is slid frontward/rearward by changing the rotation direction of sliding motor.

## Component Function Check

INFOID:0000000000960730

# 1. CHECK FUNCTION

- 1. Select "SEAT SLIDE" in "Active test" mode with CONSULT-III.
- Check the sliding motor operation.

Test item		Description	
	OFF		Stop
SEAT SLIDE	FR	Seat sliding	Forward
	RR		Backward

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-122, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960731

# 1. CHECK SLIDING MOTOR POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect sliding motor connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("SEAT SLIDE") with CONSULT-III
- 5. Check voltage between sliding motor harness connector and ground.

Terminal					
(+	(+)		Test item		Voltage (V)
Sliding motor connector	Terminal	(-)			(Approx.)
		- Ground		OFF	0
	35			FR (forward) RR (backward) OFF FR (forward)	Battery voltage
B461			SEAT SLIDE		0
D40 I			SEAT SLIDE		0
	42				0
				RR (backward)	Battery voltage

### Is the inspection result normal?

YES >> Replace sliding motor. (Built in seat slide cushion frame.)

NO >> GO TO 2.

# 2. CHECK SLIDING MOTOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect driver seat control unit connector.
- 3. Check continuity between driver seat control unit harness connector and sliding motor harness connector.

Driver seat control unit connector	Terminal	Sliding motor connector	Terminal	Continuity	
P.452	35	D461	35	Existed	
B452	42	B461	42	Existed	

## **SLIDING MOTOR**

### < COMPONENT DIAGNOSIS >

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

Driver seat control unit connector	Terminal		Continuity
B452	35	Ground	Not existed
D432	42		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES

>> Replace driver seat control unit.
>> Repair or replace the malfunctioning part. NO

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## **RECLINING MOTOR**

### < COMPONENT DIAGNOSIS >

## RECLINING MOTOR

Description

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

## Component Function Check

INFOID:0000000000960733

## 1. CHECK FUNCTION

- 1. Select "SEAT RECLINING" in "Active test" mode with CONSULT-III.
- Check the reclining motor operation.

Test item		Description		
	OFF		Stop	
SEAT RECLINING	FR	Seat reclining	Forward	
	RR		Backward	

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-124, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960734

# 1. CHECK RECLINING MOTOR POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect reclining motor connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("SEAT RECLINING") with CONSULT-III
- 5. Check voltage between reclining motor harness connector and ground.

Terminal					
(+)			Test item		Voltage (V)
Reclining motor connector	Terminal	(-)			(Approx.)
		- Ground	SEAT RECLIN-	OFF	0
	36			FR (forward)	Battery voltage
B454				RR (backward)	0
D404			ING	OFF	0
	44			FR (forward)	0
				RR (backward)	Battery voltage

### Is the inspection result normal?

YES >> Replace reclining motor. (Built in seat back frame.)

NO >> GO TO 2.

# 2.CHECK RECLINING MOTOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and reclining motor harness connector.

## **RECLINING MOTOR**

## < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Reclining motor connector	Terminal	Continuity
B452	36	B454	36	Existed
D402	44	D-3-	44	LXISIEU

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

Driver seat control unit connector	Terminal		Continuity
B452	36	Ground	Not existed
	44		NOL EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

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## LIFTING MOTOR (FRONT)

### < COMPONENT DIAGNOSIS >

# LIFTING MOTOR (FRONT)

- The lifting motor (front) is installed to the seat slide cushion frame.
- The lifting motor (front) is activated with the driver seat control unit.
- The lifter (front) is moved upward/downward by changing the rotation direction of lifting motor (front).

## Component Function Check

INFOID:0000000000960736

## 1. CHECK FUNCTION

- Select "SEAT LIFTER FR" in "Active test" mode with CONSULT-III.
- 2. Check the lifting motor (front) operation.

Test item		Description		
	OFF		Stop	
SEAT LIFTER FR	UP	Seat lifting (front)	Upward	
	DWN		Downward	

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-126, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960737

# 1.CHECK LIFTING MOTOR (FRONT) POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect lifting motor (front) connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("SEAT LIFTER FR") with CONSULT-III.
- 5. Check voltage between lifting motor (front) harness connector and ground.

	Terminal				
(+)			Test item		Voltage (V)
Lifting motor (front) connector (-)		(-)			(Approx.)
	37	Ground		OFF	0
				UP	0
B455			SEAT LIFTER	DWN (down)	Battery voltage
Б400			FR	OFF	0
	45			UP	Battery voltage
				DWN (down)	0

### Is the inspection result normal?

YES >> Replace lifting motor (front). (Built in seat slide cushion frame.)

NO >> GO TO 2.

# 2.CHECK LIFTING MOTOR (FRONT) CIRCUIT

- Turn ignition switch OFF.
- Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector and lifting motor (front) harness connector.

# **LIFTING MOTOR (FRONT)**

### < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Lifting motor (front) connector	Terminal	Continuity
B452	37	B455	37	Existed
D432	45	D400	45	LAISIEU

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

Driver seat control unit connector	Terminal	2	Continuity
B452	37	Ground	Not existed
D402	45		NOI EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

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# **LIFTING MOTOR (REAR)**

### < COMPONENT DIAGNOSIS >

# LIFTING MOTOR (REAR)

- The lifting motor (rear) is installed to the seat slide cushion frame.
- The lifting motor (rear) is activated with the driver seat control unit.
- The seat lifter (rear) is moved upward/downward by changing the rotation direction of lifting motor (rear).

## Component Function Check

INFOID:0000000000960739

## 1. CHECK FUNCTION

- 1. Select "SEAT LIFTER RR" in "Active test" mode with CONSULT-III.
- 2. Check the lifting motor (rear) operation.

Test item		Description		
	OFF		Stop	
SEAT LIFTER RR	UP	Seat lifting (rear)	Upward	
	DWN		Downward	

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-128, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960740

# 1. CHECK LIFTING MOTOR (REAR) POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect lifting motor (rear) connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("SEAT LIFTER RR") with CONSULT-III
- 5. Check voltage between lifting motor (rear) harness connector and ground.

Terminal					
(+)			Test item		Voltage (V)
Lifting motor (rear) connector					(Approx.)
				OFF	0
	38	Ground	SEAT LIFTER RR	UP	Battery voltage
B456				DWN (DOWN)	0
D430				OFF	0
	39			UP	0
				DWN (DOWN)	Battery voltage

#### Is the inspection result normal?

YES >> Replace lifting motor (rear). (Built in seat slide cushion frame.)

NO >> GO TO 2.

# 2.CHECK LIFTING MOTOR (REAR) CIRCUIT

- Turn ignition switch OFF.
- Disconnect driver seat control unit connector and lifting motor (rear) connector.
- Check continuity between driver seat control unit harness connector and lifting motor (rear) harness connector.

# **LIFTING MOTOR (REAR)**

## < COMPONENT DIAGNOSIS >

Driver seat control unit connector	Terminal	Lifting motor (rear) connector	Terminal	Continuity
B452	38	B456	38	Existed
D432	39	D-100	39	LAISIEU

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

Driver seat control unit connector	Terminal		Continuity
B452	38	Ground	Not existed
D402	39		Not existed

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

## Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace the malfunctioning part.

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## **TILT MOTOR**

- The tilt motor is installed to the steering column assembly.
- The tilt motor is activated with the automatic drive positioner control unit.
- The steering column is tilted upward/downward by changing the rotation direction of tilt motor.

## Component Function Check

INFOID:0000000000960742

# 1. CHECK FUNCTION

- 1. Select "TILT MOTOR" in "Active test" mode with CONSULT-III.
- 2. Check the tilt motor operation.

Test item		Description	
	OFF		Stop
TILT MOTOR	UP	Steering tilt	Upward
	DWN		Downward

#### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-130, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960743

# 1. CHECK TILT MOTOR POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic motor connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("TILT MOTOR") with CONSULT-III.
- 5. Check voltage between tilt & telescopic motor harness connector and ground.

Terminal					
(+)			Test item		Voltage (V)
Tilt & telescopic motor connector	Terminal	(-)			(Approx.)
			TILT MOTOR	OFF	0
	4	Ground		UP	0
M49				DWN (down)	Battery voltage
				OFF	0
				UP	Battery voltage
			DWN (down)	0	

### Is the inspection result normal?

YES >> Replace tilt motor. (Built in steering column assembly.)

NO >> GO TO 2.

# 2. CHECK TILT MOTOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and tilt & telescopic motor connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic motor harness connector.

## **TILT MOTOR**

### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic motor connector	Terminal	Continuity
M52	35	M49	4	Existed
IVIOZ	42	IVIAS	3	LXISIEU

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

automatic drive positioner control unit connector	Terminal		Continuity
M52	35	Ground	Not existed
	42		Not existed

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

## Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace the malfunctioning part.

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### **TELESCOPIC MOTOR**

### < COMPONENT DIAGNOSIS >

## **TELESCOPIC MOTOR**

- The tilt motor is installed to the steering column assembly.
- The tilt motor is activated with the automatic drive positioner control unit.
- Compresses the steering column by changing the rotation direction of tilt motor.

## Component Function Check

INFOID:0000000000960745

## 1. CHECK FUNCTION

- Select "TELESCO MOTOR" in "Active test" mode with CONSULT-III.
- 2. Check the telescopic motor operation.

Test item		Description	
	OFF		Stop
TELESCO MOTOR	FR	Steering telescopic	Forward
	RR		Backward

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-132, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000000960746

# 1. CHECK TELESCOPIC MOTOR POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic motor connector.
- 3. Turn the ignition switch ON.
- 4. Perform "Active test" ("TELESCO MOTOR") with CONSULT-III
- 5. Check voltage between tilt & telescopic motor harness connector and ground.

	Terminal				
(+)			-	Test item	
Tilt & telescopic motor connector	Terminal	Terminal (-)			
M49 2			Ground TELESCOP-IC MOTOR	OFF	0
	2	Ground		FR (forward)	0
				RR (backward)	Battery voltage
				OFF	0
				FR (forward)	Battery voltage
				RR (backward)	0

#### Is the inspection result normal?

YES >> Replace telescopic motor. (Built in steering column assembly.)

NO >> GO TO 2.

# 2.CHECK TELESCOPIC MOTOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit and tilt & telescopic motor connector.
- Check continuity between automatic drive positioner control unit harness connector and tilt & telescopic motor harness connector.

## **TELESCOPIC MOTOR**

### < COMPONENT DIAGNOSIS >

Automatic drive positioner control unit connector	Terminal	Tilt & telescopic motor connector	Terminal	Continuity
M52	36	M49	2	Existed
IVISZ	44	ivi+3	1	LAISIGU

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

Automatic drive positioner control unit connector	Terminal		Continuity
M52	36	Ground	Not existed
IVISZ	44		Not existed

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

## Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace the malfunctioning part.

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### **DOOR MIRROR MOTOR**

### < COMPONENT DIAGNOSIS >

## DOOR MIRROR MOTOR

It makes mirror face operate from side to side and up and down with the electric power that AUTOMATIC DRIVE POSITIONER CONTROL UNIT supplies.

## Component Function Check

INFOID:0000000000960748

## 1. CHECK DOOR MIRROR MOTOR FUNCTION

Check the operation with "MIRROR MOTOR RH" and "MIRROR MOTOR LH" in "ACTIVE TEST" mode with CONSULT-III

Refer to ADP-48, "CONSULT-III Function".

### Is the inspection result normal?

YES >> Door mirror motor function is OK.

NO >> Refer to ADP-134, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000000960749

# 1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

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

Term	ninals				
(+)			Door mirror remote control switch	Voltage (V)	
Door mirror connector	Terminal	(-)	condition	(Approx.)	
	-	5		UP	Battery voltage
	3		Other than above	0	
D3 (Driver side)	6	Ground	LEFT	Battery voltage	
D33 (Passenger side)	б	Ground	Other than above	0	
	7		DOWN / RIGHT	Battery voltage	
	,		Other than above	0	

## Is the inspection result normal?

YES >> Refer to ADP-136, "Component Inspection".

NO >> GO TO 2.

## 2. CHECK HARNESS CONTINUITY

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

[Door mirror driver side]

Automatic drive positioner control unit connector	Terminal	Door mirror (driver side) connector	Terminal	Continuity
	16		7	
M51	31	D3	5	Existed
	32		6	
[Door mirror passenger side]				

Automatic drive positioner control	Townsin of	Door mirror (passenger side)	Terminal	Continuity	
unit connector	Terminal	connector		Continuity	
	14		5		
M51	15	D33	6	Existed	
	30		7		

## **DOOR MIRROR MOTOR**

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### < COMPONENT DIAGNOSIS >

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

[Door mirror driver side]			
Automatic drive positioner control unit connector	Terminal		Continuity
	16	Ground	
M51	31		Not existed
	32		
[Door mirror passenger side]			
Automatic drive positioner control unit connector	Terminal		Continuity
	14	Ground	
M51	15		Not existed
	30		

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.check automatic drive positioner control unit output signal

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

[Door mirror driver side]

Terminals							
(+)	(+)		Mirror switch condition	Voltage (V)			
Automatic drive positioner control unit connector	Terminal	(-)		(Approx.)			
	40		DOWN / RIGHT	Battery voltage			
	16	Ground	Other than above	0			
M51	31		Cround	Ground	Ground	UP	Battery voltage
I CIVI	31		Other than above	0			
	32		LEFT	Battery voltage			
	32		Other than above	0			

[Door mirror passenger side]

Terminals					
(+)			Mirror switch condition	Voltage (V)	
Automatic drive positioner control unit connector	Terminal	(-)		(Approx.)	
	14	UP	Battery voltage		
	14		Other than above	0	
M51	15	Ground	LEFT	Battery voltage	
I CIVI	15	Giouna	Other than above	0	
	20		DOWN / RIGHT	Battery voltage	
	30		Other than above	0	

### Is the inspection result normal?

YES >> Refer to ADP-136, "Component Inspection".

NO >> Replace automatic drive positioner control unit. Refer to ADP-218, "Removal and Installation".

## 4. CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-136, "Component Inspection".

## **DOOR MIRROR MOTOR**

### < COMPONENT DIAGNOSIS >

### Is the inspection result normal?

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

NO >> Replace door mirror. Refer to MIR-67, "Removal and Installation".

## Component Inspection

INFOID:0000000000960750

## 1. CHECK DOOR MIRROR MOTOR-I

Check that door mirror motor does not trap foreign objects and does not have any damage. Refer to MIR-69, "Exploded View".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace door mirror.Refer to MIR-67, "Removal and Installation".

## 2. CHECK DOOR MIRROR MOTOR-II

- 1. Turn ignition switch OFF.
- 2. Disconnect door mirror connector.
- 3. Apply 12V to each power supply terminal of door mirror motor.

Door mirror connector	Ter	minal	Operational direction
Door mirror connector	(+)	(-)	Operational direction
	7	6	RIGHT
D3 (Driver side)	6	7	LEFT
D33 (Passenger side)	5	7	UP
	7	5	DOWN

### Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace door mirror. Refer to MIR-67, "Removal and Installation".

### SIDE SUPPORT UNIT

### < COMPONENT DIAGNOSIS >

## SIDE SUPPORT UNIT

Description INFOID:0000000000960751

Built-in pump, pump relay and solenoid, side support unit operates when pressing ON/OFF on side support switch.

## Component Function Check

# 1. CHECK SIDE SUPPORT UNIT FUNCTION

Check side support operation with side support switch.

### Is the inspection results normal?

YES >> Side support unit is OK.

NO >> Refer to ADP-137, "Diagnosis Procedure".

## Diagnosis Procedure

# 1. CHECK SIDE SUPPORT UNIT SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Disconnect side support unit and side support switch connectors.
- Check continuity between side support unit and side support switch connector.

Side support unit connector	Terminal	Side support switch connector	Terminal	Continuity
	15		15	
B420	16	B419	16	Existed
D420	17		17	Existed
	18		18	

Check continuity between side support unit and ground.

Side support unit connector	Terminal		Continuity
	15	15 16 Ground	
B420	16		Not evieted
D420	17		Not existed
	18		

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace circuit.

# 2.check side support unit ground circuit

Check continuity between side support unit and ground.

Side support unit connector	Terminal	Ground	Continuity
B420	2	Ground	Existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace circuit.

# 3. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-39, "Intermittent Incident".

### Is the inspection result normal?

YES >> Replace side support unit.

NO >> Repair or replace malfunction part. ADP

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## **SEAT MEMORY INDICATOR LAMP**

### < COMPONENT DIAGNOSIS >

## SEAT MEMORY INDICATOR LAMP

Description INFOID:0000000000960754

 Memory switch is equipped on the seat memory switch installed to the driver side door trim. The operation signal is inputted to the automatic drive positioner control unit when the memory switch is operated.

• The status of automatic drive positioner system can be checked according to the illuminating/flashing status.

## Component Function Check

INFOID:0000000000960755

## 1. CHECK FUNCTION

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

Test item		Description		
	OFF		OFF	
MEMORY SW INDCTR	ON-1	Memory switch indicator	Indicator 1: ON	
	ON-2		Indicator 2: ON	

### Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-138</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000000960756

# 1. CHECK MEMORY INDICATOR CIRCUIT

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

Automatic drive positioner control unit connector	Terminal	Seat memory switch connector	Terminal	Continuity
M51	12	D5	6	Existed
IVIOT	13	D3	7	LAISIEU

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

Automatic drive positioner control unit connector	Terminal		Continuity
M51	12	Ground	Not existed
IVIO	13		

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

## 2.CHECK MEMORY INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector and ground.

Seat memory switch	Termi	Terminals		
connector	(+)	(–)	(Approx.)	
D5	5	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the following.

Fuse

## SEAT MEMORY INDICATOR LAMP

### < COMPONENT DIAGNOSIS >

• Harness for open or short between memory indicator and fuse.

# 3. CHECK MEMORY INDICATOR

Refer to ADP-139, "Component Inspection".

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace seat memory switch.

## 4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace the malfunctioning part.

## Component Inspection

# 1. CHECK SEAT MEMORY INDICATOR

1. Disconnect seat memory switch connector.

2. Check continuity between seat memory switch terminals.

	Terminal	Continuity		
Sea	memory switch			
(+)	(-)			
6	5	Existed		
7		Existed		

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat memory switch.

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# **ECU DIAGNOSIS**

# DRIVER SEAT CONTROL UNIT

Reference Value

## VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
SET SW	Set switch	Push	ON
SET SW	Set Switch	Release	OFF
	Mamanu quitale 4	Push	ON
MEMORY SW1	Memory switch 1	Release	OFF
MEMORY OWN		Push	ON
MEMORY SW2	Memory switch 2	Release	OFF
01 105 014/ 50	OF Francis State (for all)	Operate	ON
SLIDE SW-FR	Sliding switch (front)	Release	OFF
01105 011 00		Operate	ON
SLIDE SW-RR	Sliding switch (rear)	Release	OFF
DEOLIN OW ED	D 11 1 11 11 11 11 11 11 11 11 11 11 11	Operate	ON
RECLN SW-FR	Reclining switch (front)	Release	OFF
	<b>D B C C C C C C C C C C</b>	Operate	ON
RECLN SW-RR	Reclining switch (rear)	Release	OFF
		Operate	ON
LIFT FR SW-UP	Lifting switch front (up)	Release	OFF
LIFT FR SW-DN	Lifting switch front (down)	Operate	ON
		Release	OFF
LIFT RR SW-UP	Lifting switch rear (up)	Operate	ON
		Release	OFF
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON
		Release	OFF
	Mirror switch	Up	ON
MIR CON SW-UP		Other than above	OFF
1415 OOM OM DM		Down	ON
MIR CON SW-DN	Mirror switch	Other than above	OFF
MID CON OW DU		Right	ON
MIR CON SW-RH	Mirror switch	Other than above	OFF
MID OOM OW III	A Comment of the	Left	ON
MIR CON SW-LH	Mirror switch	Other than above	OFF
1415 OLING OW 5	0, ", 1	Right	ON
MIR CHNG SW-R	Changeover switch	Other than above	OFF
MID OURS OVER	Ohanna a sa	Left	ON
MIR CHNG SW-L	Changeover switch	Other than above	OFF
THE OWNER	Tileit-le	Up	ON
TILT SW-UP	Tilt switch	Other than above	OFF
TILT 014/ 5 014% :	T10 - 10 1	Down	ON
TILT SW-DOWN	Tilt switch	Other than above	OFF

## < ECU DIAGNOSIS >

Monitor Item	Condit	ion	Value/Status
TEL 5000 0W 5D	T-lanania switch	Forward	ON
TELESCO SW-FR	Telescopic switch	Other than above	OFF
TELESCO SW-RR	Tilt switch	Backward	ON
TELESCO SW-RR	THE SWILCH	Other than above	OFF
DETENT SW <sup>*1</sup>	AT selector lever	P position	OFF
DETENT SW	AT Selector level	Other than above	ON
PARK BRAKE SW*2	Parking brake	Applied	ON
FARR BRAKE SW	1 diking brake	Release	OFF
STARTER SW	Ignition position	Cranking	ON
OTARTER OW	ignition position	Other than above	OFF
		Forward	The numeral value decreases *3
SLIDE PULSE	Seat sliding	Backward	The numeral value increases *3
		Other than above	No change to numeral value*3
	Seat reclining	Forward	The numeral value decreases *3
RECLN PULSE		Backward	The numeral value increases *3
		Other than above	No change to numeral value*3
	Seat lifter (front)	Up	The numeral value decreases *3
LIFT FR PULSE		Down	The numeral value increases *3
		Other than above	No change to numeral value*3
	Seat lifter (rear)	Up	The numeral value decreases *3
LIFT RR PULSE		Down	The numeral value increases *3
		Other than above	No change to numeral value*3
MIR/SEN RH U-D	Door mirror (passenger side)	Close to peak	3.4
WIIIYOLIV KIT O D	Door Hillror (passeriger side)	Close to valley	0.6
MIR/SEN RH R-L	Door mirror (passenger side)	Close to left edge	3.4
WIII/OLIV KIT K L	Door Hillror (passeriger side)	Close to right edge	0.6
MIR/SEN LH U-D	Door mirror (driver side)	Close to peak	3.4
WINVOEN EN O B	Door mirror (universide)	Close to valley	0.6
MIR/SEN LH R-L	Door mirror (driver side)	Close to left edge	0.6
WINVOEN EN IX E	Door mirror (universide)	Close to right edge	3.4
TILT SEN	Tilt position	Тор	1.2
	The position	Bottom	3.4
TELESCO SEN	Telescopic position	Тор	3.4
	10000pio podition	Bottom	0.8

<sup>\*1:</sup> Only for AT model

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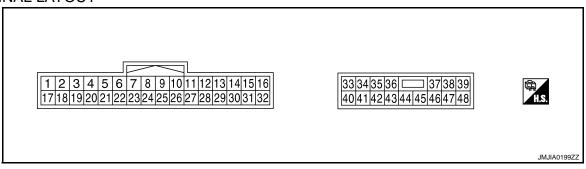
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<sup>\*2:</sup> Only for MT model

 $<sup>^{\</sup>star3}$ : The value at the position attained when the battery is connected is regarded as 32768.

## TERMINAL LAYOUT



## PHYSICAL VALUES

Term	ninal No.	Wire	Description				Valtage (V)
+	-	color	Signal name	Input/ Output	Condition		Voltage (V) (Approx)
1	Ground	L/W	UART communication (RX)	Input	Ignition switch ON		2mSec/div
3	_	R/Y	CAN-H	_	<del>-</del>		<del>-</del>
8 <sup>*1</sup>	Ground	LG	Parking brake switch	Input	Parking brake	Applied	0
	0.00		signal		r anning aranto	Release	Battery voltage
9	Ground	W/G	Reclining sensor sig- nal	Input	Seat reclining	Operate	10mSec/div
						Stop	0 or 5
10	Ground	P/B	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate	10mSec/div 2V/div JMJIA0119ZZ
						Stop	0 or 5
11	Ground	BR	Sliding switch back- ward signal	Input	Sliding switch	Operate (back- ward)	0
						Release	Battery voltage
12	Ground	SB	Reclining switch back- ward signal	Input	Reclining switch	Operate (back- ward)	0
						Release	Battery voltage

# < ECU DIAGNOSIS >

Term	ninal No.	\A /:	Description				\/-\ \/ \/ \					
+	-	Wire color	Signal name	Input/ Output	Condition		Voltage (V) (Approx)					
13	Ground	LG/R	Lifting switch (front) down signal	Input	Lifting switch (front)	Operate (down)	0 Dottor wolkers					
						Release Operate	Battery voltage					
14	Ground	GB	Lifting switch (rear) down signal	Input	Lifting switch (rear)	(down)  Release	0  Battery voltage					
16	Ground	0	Sensor power supply	Output		Neicase	5					
17	Ground	Y/R	UART communication (TX)	Output	Ignition switch ON		10mSec/div 2V/div JMJIA0121ZZ					
19	_	V	CAN-L	_	_		_					
						P position	0					
21 <sup>*2</sup>	Ground	L/Y	Detention switch	Input	A/T selector lever	Except P position	20mSec/div  MANAMANANA  SV/div  JMJIA0120ZZ					
24	Ground	R	Sliding sensor signal	Input	Seat sliding	Operate	10mSec/div 2V/div JMJIA0119ZZ					
						Stop	0 or 5					
25	Ground	Y/B	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate	10mSec/div 2V/div JMJIA0119ZZ					
						Stop	0 or 5					
26	Ground	Υ	Sliding switch forward signal	Input	Sliding switch	Operate (forward) Release	0 Battery voltage					
						Operate						
27	Ground	R/G	Reclining switch for- ward signal	Input	Reclining switch	(forward)	0 Rattory voltage					
20	Crowns	\\/\D	Lifting switch (front) up	lan::4	Seat lifting switch	Release Operate (up)	Battery voltage 0					
28	Ground	nd W/B	W/B signal	Input (front)	input	Input					Release	Battery voltage

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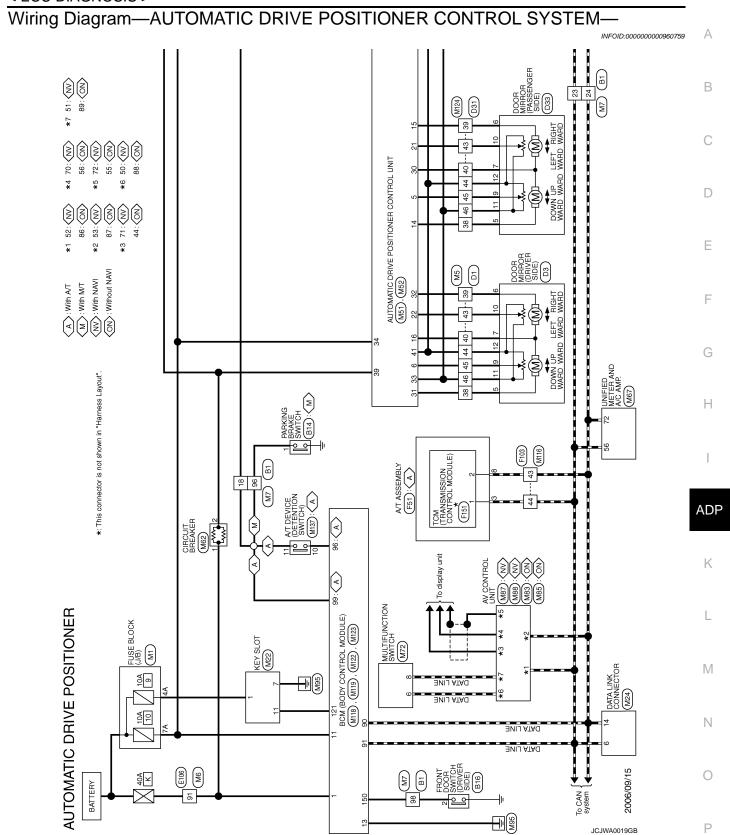
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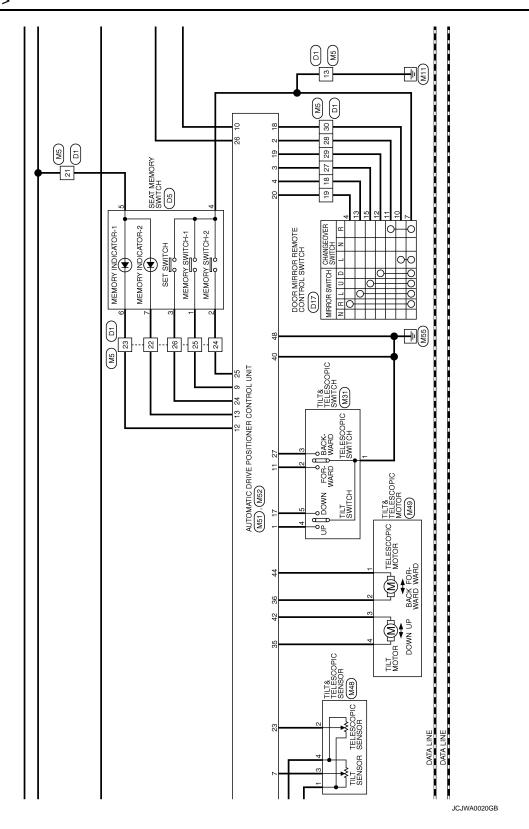
## < ECU DIAGNOSIS >

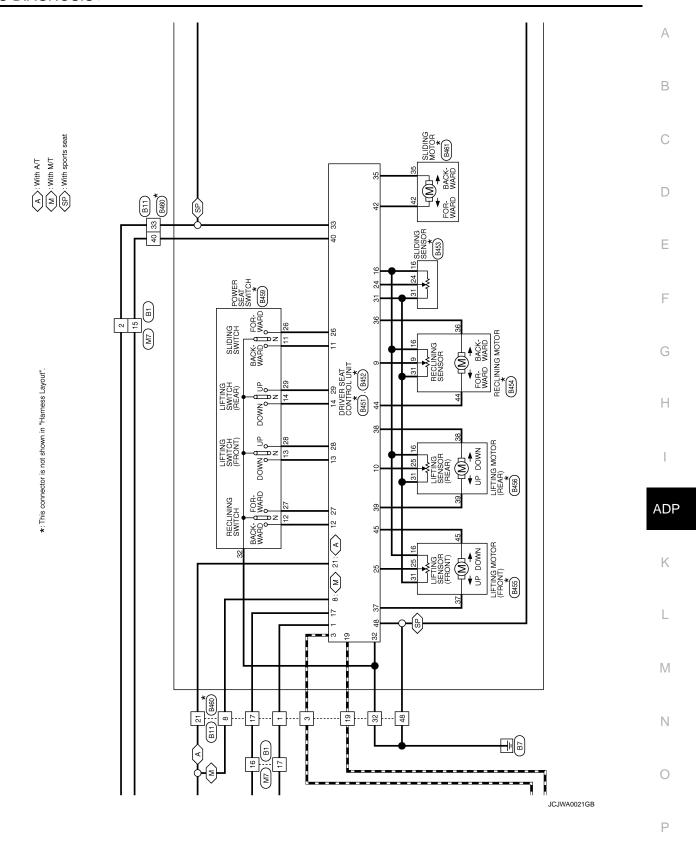
Term	ninal No.	\ <i>\(\(\(\)</i> \)	Description		Condition		Valta va (V)			
+	-	Wire color	Signal name	Input/ Output			Voltage (V) (Approx)			
29	Ground	P/L	Lifting switch (rear) up signal	Input	Input Seat lifting switch	Operate (up)	0			
			Signal		(rear)	Release	Battery voltage			
31	Ground	GR	Sensor ground	_	_		0			
32	Ground	B/W	Ground (signal)		_		0			
33	Ground	R	Power source (C/B)	Input	_		Battery voltage			
35	Ground	W/R	Sliding motor forward output signal	Output	Seat sliding	Operate (forward)	Battery voltage			
			output oignai			Release	0			
36	Ground	G/Y	Reclining motor forward output signal	Output	Seat reclining	Operate (forward)	Battery voltage			
			ward output signal			Release	0			
37	Ground	Ground G/W	G/W	Ground G/W Lifting motor (front) down output signal		Output Seat lifting	Output	Seat lifting (front)	Operate (down)	Battery voltage
			down output signal			Stop	0			
38	Ground L/Y Lifting motor (rear) up			L/Y Lifting motor (rear) up output signal Output Seat lifting (rear	Seat lifting (rear)	Operate (up)	Battery voltage			
			output signal			Stop	0			
39	Ground	R/B	Lifting motor (rear) down output signal	Output	Seat lifting (rear)	Operate (down)	Battery voltage			
			down odiput signal			Stop	0			
40	Ground	R/W	Power source (Fuse)	Input	_		Battery voltage			
42	Ground	W/B	Sliding motor back- ward output signal	Output	Seat sliding	Operate (back- ward)	Battery voltage			
						Stop	0			
44	Ground	Р	Reclining motor back- ward output signal	Output	Seat reclining	Operate (back- ward)	Battery voltage			
						Stop	0			
45	Ground	L/R	Lifting motor (front) up output signal		Seat lifting (front)	Operate (up)	Battery voltage			
			output orginal			Stop	0			
48	Ground	В	Ground (power)	_	_		0			

<sup>\*1:</sup> Only for MT models

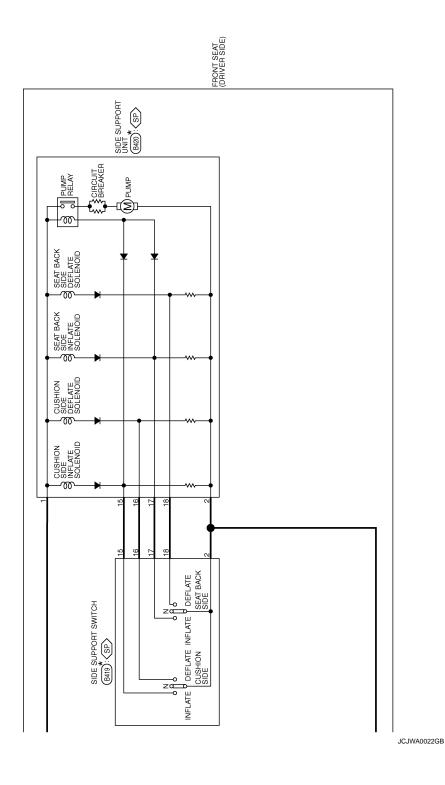
<sup>\*2:</sup> Only for AT models







SP>: With sports seat



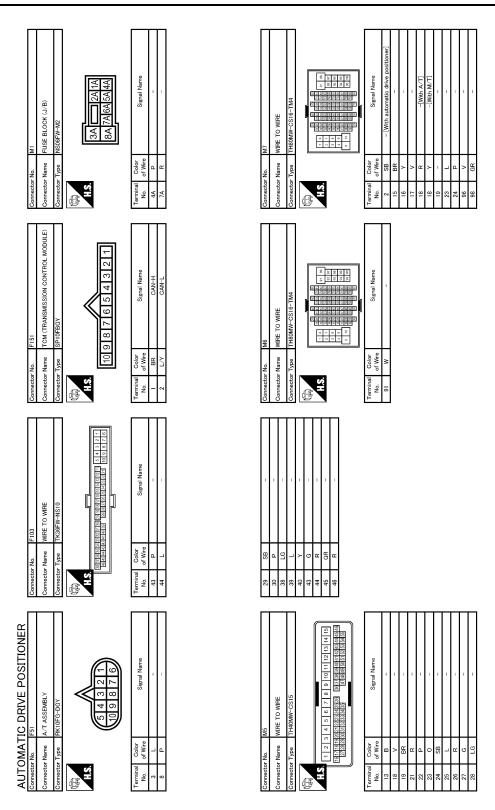
	H (DRIVER SIDE)	Signal Name	CAN-L P PANGE SW PULSE(SLIDING) PULSE(FR LITING) SUDING SW(FORWARD) RECLINING SW(FORWARD) RECHILING SW(FORWARD) RECHILING SW(FORWARD) REAR LITING SW(FORWARD) REAR LITING SW(FORWARD) REAR LITING SW(FORWARD) REAR LITING SW		A B
	No. Bil 6  Name FRONT DOOR SWITCH (DRIVER SIDE)  Type A03FW	Color Sign	V		С
	Connector No. Connector Type	Terminal No. 2 2 2	19 24 25 25 27 27 29 29 31 32		D
		ewe	OL UNIT 111213 [41 15 16 27 23 29 30 31 32	Signal Name RX PARTHER BEAKE SW PULSE(RECLIANG) SULDING SWIRADOWNWARD) RECHINING SWIRADOWNWARD) RECHINING SWIRADOWNWARD) REAN LITTING SWICOWNWARD) REANT LITTING SWICOWNWARD) REANT LITTING SWICOWNWARD) REANT LITTING SWICOWNWARD) RYCC TX	Е
	B14 PARKING BRAKE SWITCH POIFED-A	Signal Name	SEAT CONTR 7 8 9 10 23 24 25 26	Signal Name RAT CAN1-H PARKING BRAKE SW PULSE(RR LIFTING) PULSE(RR	F
		Objer	999	Color of Wire P. W. G.	G
	Connector No.	Terminal O O O	Connector No. Connector Type  LS.  LS.  LS.  1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	No. n	Н
	th automatic	Signal Name	L	Signal Name	ı
	E TO WRE (W s positioner) 6FW-CS 17	ισ. 	SIDE SUPPORT UNIT	Signature autom  - Whith autom - With autom - With autom	ADP
	Connector No. Will Connector Name Will Connector Type NSI 64 40	Color   Colo	Connector No. B420 Connector Name SIDE: Connector Type NSOB! H.S.	Color   Color   Color   No.   Color   No.   Color	К
띪	$\prod$			3 G G G	L
AUTOMATIC DRIVE POSITIONER	W-GSI6-TM4	Signal Name	SIDE SUPPORT SWITCH NSD6FW-CS  18 11 16 15 2	Signal Name  - [With automatic drive positioner]	M
TIC DRI	MRE TO WRE  TH80PW-CS16-TM  I ROUGH IN TH80PW-CS				Ν
AUTOMA	Connector Name Connector Type H.S.	Terminal Color Coor State Coor Coor Coor Coor Coor Coor Coor Coo	Connector No. Connector Type	Color   Colo	0
۱-	<u> </u>			JCJWA0023GB	P
					P

**ADP-149** 

Connector No. B455 Connector Name LIFTING MOTOR/FRONT/ORIVER SIDE) Connector Type NSD6FW-CS  H.S. 45 125	Terminal   Color   Signal Name   Color   Signal Name   Color   Color	Connector No. B461 Connector Name SLIDING MOTORIORAVER SIDE) Connector Type (6998-0239  H.S.	Terminal   Color   Signal Name   Signal Na
Connector No. B454 Connector Name RECLINING MOTOR Connector Type NS06FW-CS  H.S. 36 14	Terminal   Color   Signal Name   No. of Wive   Signal Name   No. of W/G	Connector No. B460 Connector Name drive positioners) Connector Type NS16MW-CS  HS16MW-CS  HS2 3 1 17 40 64  8 32 48 21 33 65	Terminal No.         Color         Signal Name           1         L/W         -           3         R/Y         -           19         V         -           21         L/Y         -           22         B/W         -           32         B/W         -           43         R         -           46         R         -
Connector No. B453 Cornector Type 8098 0241  H.S. Table 1018  24 31 16	Terminal   Color   Signal Name   No. of Wire   Color   Color	Connector No. 8459  Connector Name POWER SEAT SWITCH(DRIVER SIDE)  Connector Type NS10PW-CS  H.S. 32 11126 13 28	Terminal         Color         Signal Name           No.         of Wire         -           11         BR         -           12         SB         -           13         LG/R         -           26         Y         -           27         R/G         -           28         W/B         -           29         P/L         -           29         R/W         -           29         R/W         -           29         R/W         -           29         R/W         -
AUTOMATIC DRIVE POSITIONER Connector Name   B452 Connector Name   DRIVER SEAT CONTROL UNIT Connector Type   NS185W-CS	Terminal   Color   Signal Name   Color   Signal Name   S	Connector No. 8456 Connector Name LIFTING MOTOR/REAR/DRIVER SIDE) Connector Type NSO6/EBR-CS  LLS  38	Terminal         Color         Signal Name           16         O         -           25         P.P.B         -           31         GR         -           38         L/Y         -           39         R/B         -

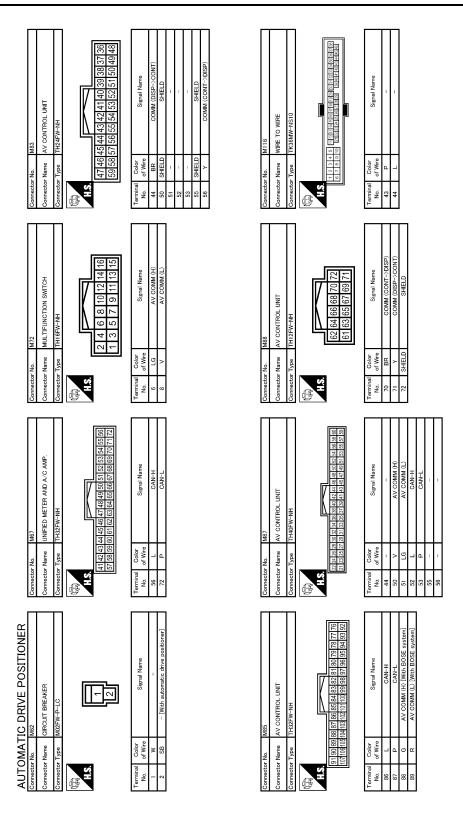
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4				Α
2647 MEMORY SWITCH A08FW  3 5 6 7 2 1 1  Signal Name	T-	Signal Name		В
No. Name Type	E106 WIRE 1 H80F	Color W Wree		C
Connector Connector Connector In I S  H.S.  H.S.  4  5	Comm	Torminal No. 91		
SIDE)  8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	GER SIDE)	ine positioner] Tive positioner] Tive positioner]		Е
W-NH  (C 7 2 1  (1) 10 9 3  Signal N  Signal N  Signal Liver automatic d  (With automatic d	MIRROR (PASSEN W-NH	Signal M Signal M With automatic d With automatic d		F
		Color   W W Wire   W W W W W   W W W   W W   W W   W		G
ector lost of	11 W 12 No. Oomestor No. Oomestor Name	Terminal No. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Н
ППППП				
		eme EA		I
	No. D31  Name WIRE TO WIRE  Type   TH40FW-CS15	Signal Name  - [with A/T]  - [with A/T]  - [with A/T]  - [with M/T]		ADP
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D31   MME TO WIRE   TH40FW-CS15	δ.ξ	•	
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Connector No. Connector Name Connector Type  H.S. 15 14	Torminal Codor No. of Wire No.		K
				L
110NER	ONTROL. ve positioner) 6 7 6 7			
POSIT	REMOTE CC automatic driv	Signal Name		M
NAATIC DRIVE POSITIONE   Name   WIRE TO WIRE   TH40FW-CS15	DR MIRROF FEBR 3 4 1			Ν
AUTOMATIC DRIVE POSITIONER  Connector Name  WIRE TO WIRE  TH40FW-CS15  HS  HS  TH413 12 11 10 10 18 17 16 18 18 12 11  TEMPERATURATION THAN THAN THAN THAN THAN THAN THAN THA		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
AUTOMA  Connector Name Connector Type  (15) 15) 14  Terminal Codo No. No. No. No. No. No. No. No. No. No	24 88 25 1	Terminal No 10 10 11 11 12 13		0
			JCJWA0025GB	Р
				1

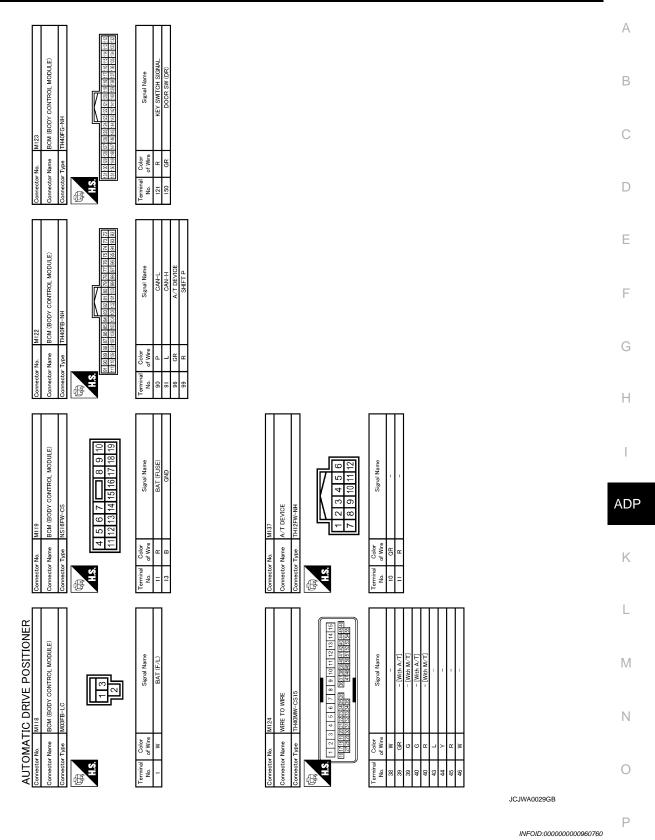


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Connector No.   M48	Connector No.   MS2	A B C
Connector No. MSI Connector Type TT/09FGY  Terminal Color No. of Vive Signal Name  1 B B	13   P   MIRROR MOTOR (BH VERTICAL)     15   GR   MIRROR MOTOR (BH VERTICAL)   MIRROR MOTOR (BH HORIZONTAL) [Mth ArT]     16   T   MIRROR MOTOR (BH HORIZONTAL) [Mth ArT]     17   W   MIRROR MOTOR (BH ORIZONTAL) [Mth ArT]     18   P   MIRROR SELECT SWI (LIH)     19   SB   MIRROR SELECT SWI (LIH)     20   BR   MIRROR SELECT SWI (LIH)     21   L   MIRROR SENSOR (BH HORIZONTAL)     22   G   MIRROR SENSOR (BH HORIZONTAL)     23   T   C   TELESCOPIC SWI BCANKWRD)     24   R   SET SWI     25   G   MIRROR MOTOR (BH COMMONI) [With ArT]     30   R   MIRROR MOTOR (BH COMMONI) [With ArT]     31   LG   MIRROR MOTOR (LH HORIZONTAL)     32   L   MIRROR MOTOR (LH HORIZONTAL)     33   LG   MIRROR MOTOR (LH HORIZONTAL)     34   MIRROR MOTOR (LH HORIZONTAL)     35   L   MIRROR MOTOR (LH HORIZONTAL)     36   MIRROR MOTOR (LH HORIZONTAL)     37   L   MIRROR MOTOR (LH HORIZONTAL)     38   MIRROR MOTOR (LH HORIZONTAL)     39   MIRROR MOTOR (LH HORIZONTAL)     30   MIRROR MOTOR (LH HORIZONTAL)     30   MIRROR MOTOR (LH HORIZONTAL)     31   LC   MIRROR MOTOR (LH HORIZONTAL)     32   LC   MIRROR MOTOR (LH HORIZONTAL)     34   MIRROR MOTOR (LH HORIZONTAL)     35   MIRROR MOTOR (LH HORIZONTAL)     35   MIRROR MOTOR (LH HORIZONTAL)     36   MIRROR MOTOR (LH HORIZONTAL)     37   MIRROR MOTOR (LH HORIZONTAL)     38   MIRROR MOTOR (LH HORIZONTAL)     38   MIRROR MOTOR (LH HORIZONTAL)     39   MIRROR MOTOR (LH HORIZONTAL)     30   MIRROR MOTOR (LH HORIZONTAL)     31   MIRROR MOTOR (LH HORIZONTAL)     32   MIRROR MOTOR (LH HORIZONTAL)     33   MIRROR MOTOR (LH HORIZONTAL)     34   MIRROR MOTOR (LH HORIZONTAL	E F G
Connector No.   M24   Connector Name   DATA LINK CONNECTOR   Connector Type   BD16FW   BD16FW   Connector Type   BD16FW   Connector Type   D10111213141516   Terminal   Color   Signal Name   Color   Signal Name   Color   Signal Name   Color   Signal Name   Color   Color   Signal Name   Color   Color	M61   M61   M61	ADP
AUTOMATIC DRIVE POSITIONER  Connector No. M22  Connector Name KEY SLOT  Connector Type THISPW-NH  THISPW-NH  TO STATE STATE  Terminal Color Signal Name No. of Wire BAT  TERM SHITCH SIGNAL	Connector No.   M49	M N O
		Р



JCJWA0028GB



Fail Safe

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

#### < ECU DIAGNOSIS >

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
	CAN communication	U1000	<u>ADP-51</u>
	Tilt sensor	B2118	ADP-54
Only manual functions operate normally.	Telescopic sensor	B2119	<u>ADP-57</u>
	Detent switch	B2126	<u>ADP-60</u>
	Parking brake switch	B2127	ADP-62
Only manual functions, except door mirror, operate normally.	UART communication	B2128	ADP-64
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	<u>ADP-52</u>
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	ADP-52

DTC Index

CONSULT-III	Tim	ing <sup>*1</sup>		
display	Current mal- function	Previous mal- function	Item	Reference page
CAN COMM CIRCUIT [U1000]	0	1-39	CAN communication	ADP-51
SEAT SLIDE [B2112]	0	1-39	Seat slide motor output	ADP-52
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	ADP-53
TILT SENSOR [B2118]	0	1-39	Tilt sensor input	ADP-54
TELESCO SENSOR [B2119]	0	1-39	Telescopic sensor input	ADP-57
DETENT SW [B2126]	0	1-39	Detention switch condition	ADP-60
PARKING BRAKE [B2127]	0	1-39	Parking brake switch condition	ADP-62
UART COMM [B2128]	0	1-39	UART communication	ADP-64

<sup>\*1:</sup> 

<sup>• 0:</sup> Current malfunction is present

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

< ECU DIAGNOSIS >

## **AUTOMATIC DRIVE POSITIONER CONTROL UNIT**

Reference Value INFOID:0000000000960762

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#### **TERMINAL LAYOUT**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 33|34|35|36| - 37|38|39 40 41 42 43 44 45 46 47 48 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

### PHYSICAL VALUES

Teri	minal No.		Description				
+	-	Wire color	Signal name	Signal name Input/ Condition Out- put		on	Voltage (V) (Approx.)
1	Ground	Y	Tilt quitab un aignal	lanut	Tilt switch	Operate (up)	0
'	Ground	ĭ	Tilt switch up signal	Input	The Switch	Other than above	5
			Change aver quitab DII		Changeaver	RH	0
2	Ground	LG	Changeover switch RH signal	Input	Changeover switch position	Neutral or LH	5
3	Ground	G	Mirror switch up signal	Innut	Mirror switch	Operated (up)	0
3	Giouna	G	Militor switch up signal	Input	WIIITOI SWIICII	Other than above	5
4	Ground	V	Mirror switch left signal	lan. it	out Mirror switch	Operated (left)	0
4	Ground	V	will of switch left signal	πραι		Other than above	5
5	Ground	R	Door mirror sensor (RH)	Input	Door mirror RH	Peak	3.4
J	Giodila	IX	up/down signal	IIIput	position	Valley	0.6
6	Ground	GR	Door mirror sensor (LH)	Input	Door mirror LH	Peak	3.4
	Olodila	OIX	up/down signal	IIIput	position	Valley	0.6
7	Ground	0	Tilt sensor signal	Input	Tilt position	Тор	1.2
	Orodria	Ŭ	The solidor signal	Прис	The position	Bottom	3.4
						Push	0
9	Ground	L	Memory switch 1 signal	Input	Memory switch 1	Other than above	5
10	Ground	V	UART communication (TX)	Out- put	Ignition switch ON	I	2mSec/div

Terminal No. Description							
+	- -	Wire color	Signal name	Input/ Out- put	Condition	on	Voltage (V) (Approx.)
11	Ground	GR	Telescopic switch for-	Input	Telescopic	Operate (forward)	0
	Ground	OK	ward signal	mput	switch	Other than above	5
				Out-	Memory indictor	Illuminate	0
12	Ground	0	Memory indictor 1 signal	put	1	Other than above	Battery voltage
				Out-	Memory indictor	Illuminate	0
13	Ground	Р	Memory indictor 2 signal	put	2	Other than above	Battery voltage
14	Ground	W	Door mirror motor (RH)	Out-	Door mirror RH	Operate (up)	Battery voltage
	Ground		up output signal	put	Door Himtor Tu 1	Other than above	0
15	Ground	GR <sup>*1</sup>	Door mirror motor (RH)	Out-	Door mirror RH	Operate (left)	Battery voltage
		G*2	left output signal	put	Door million two	Other than above	0
	Ground		Door mirror motor (LH) down output signal  Y  Door mirror motor (LH) right output signal	Out- put	1)oor mirror (I H)	Operate (down)	Battery voltage
16		Y				Other than above	0
10						Operate (right)	Battery voltage
						Other than above	0
17	Ground	W	Tilt switch down signal	Input	Tilt switch	Operate (down)	0
17	Ground	VV	The switch down signal	три	THE SWIGHT	Other than above	5
			Changeover switch LH		Changeover	LH	0
18	Ground	Р	signal	Input	switch position	Neutral or RH	5
19	Ground	SB	Mirror switch down sig-	Input	Mirror switch	Operate (down)	0
13	Ground	OB	nal	три	Will of Switch	Other than above	5
20	Ground	BR	Mirror switch right signal	Input	Mirror switch	Operate (right)	0
20	Giodila	ÞΚ	will or switch right signal	mput	WIIITOI SWILCH	Other than above	5
21	Ground	L	Door mirror sensor (RH)	Input	Door mirror RH	Left edge	3.4
	Ciound		left/right signal	iiiput	position	Right edge	0.6
22	Ground	G	Door mirror sensor (LH)	Input	Door mirror LH	Left edge	0.6
	Cibana		left/right signal	mput	position	Right edge	3.4
23	Ground	Р	Telescopic sensor signal	Input	Telescopic position	Тор	0.8
	Ground	P	reiescopic sensor signal			Bottom	3.4

### < ECU DIAGNOSIS >

Terminal No.			Description				
+	-	Wire color	Signal name	Input/ Out- put	Condition	on	Voltage (V) (Approx.)
						Push	0
24	Ground	R	Set switch signal	Input	Set switch	Other than above	5
						Push	0
25	Ground	SB	Memory switch 2 signal	Input	Memory switch 2	Other than above	5
26	Ground	Υ	UART communication (RX)	Input	Ignition switch ON		10mSec/div 2V/div JMJIA0121ZZ
27	' Ground	G	Telescopic switch back-	Input	Telescopic	Operate (back- ward)	0
			ward signal	mpac	switch	Other than above	5
	Ground		Door mirror motor (RH) down output signal  G*1 R*2  Door mirror motor (RH) right output signal	Out- put	LUCOR MIRROR (RH)	Operate (down)	Battery voltage
30		G*1				Other than above	0
30		R*2				Operate (right)	Battery voltage
						Other than above	0
31	Ground	round LG	Door mirror motor (LH)	Out-	Door mirror (LH)	Operate (up)	Battery voltage
	Cround		up output signal	put		Other than above	0
32	Ground	L	Door mirror motor (LH)	Out-	Door mirror (LH)	Operate (left)	Battery voltage
	Orodina	_	left output signal	put		Other than above	0
33	Ground	R	Sensor power supply	Input			5
34	Ground	R	Power source (Fuse)	Input			Battery voltage
35	Ground	L	Tilt motor up output sig-	Out-	Steering tilt	Operate (up)	Battery voltage
	Cround	L	nal	put	Olooming unt	Other than above	0
36	Ground	GR	Telescopic motor for-	Out-	Steering tele-	Operate (forward)	Battery voltage
			ward output signal	put	scopic	Other than above	0
39	Ground	W	Power source (C/B)		_		Battery voltage
40	Ground	В	Ground	_	<u> </u>		0
41	Ground	R	Sensor ground		_		0

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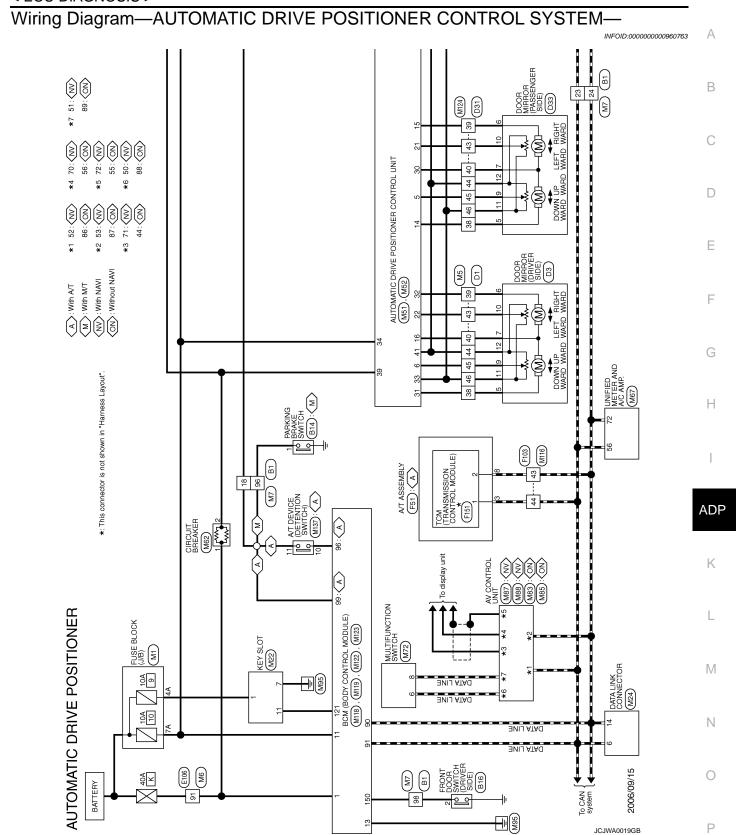
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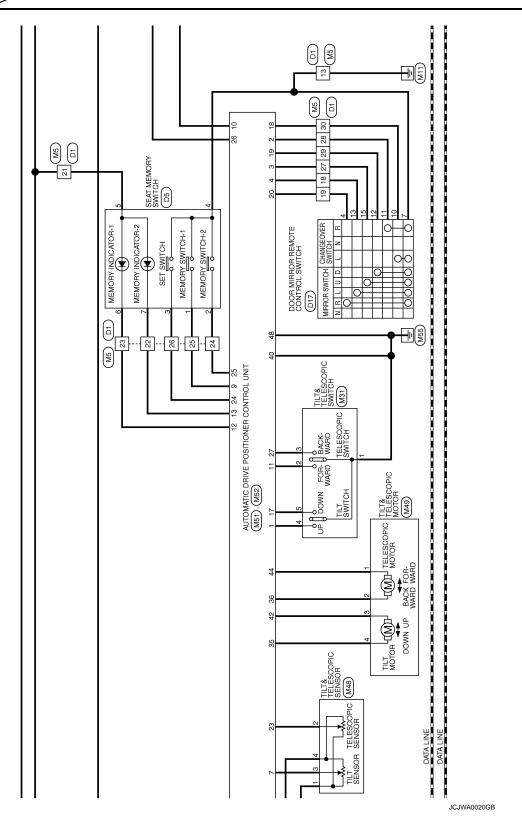
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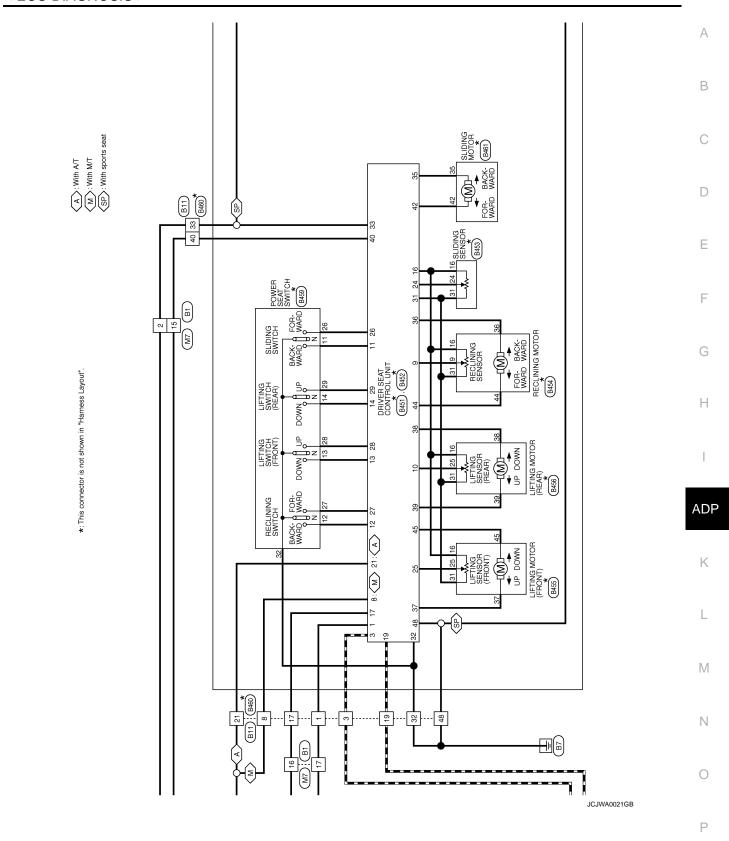
Terr	Terminal No.		Description					
+	-	Wire color	Signal name	Input/ Out- put	Condition		Voltage (V) (Approx.)	
42	Ground	0	Tilt motor down output	Out-	Steering tilt	Operate (down)	Battery voltage	
42	Ground		signal	put	Steering tilt	Other than above	0	
44	Ground	G	Telescopic motor back- ward output signal	Out- put	Steering tele- scopic	Operate (back- ward)	Battery voltage	
			waru output signal	put	σουρίο	Other than above	0	
48	Ground	В	Ground	_	_		0	

<sup>\*1:</sup> For AT models

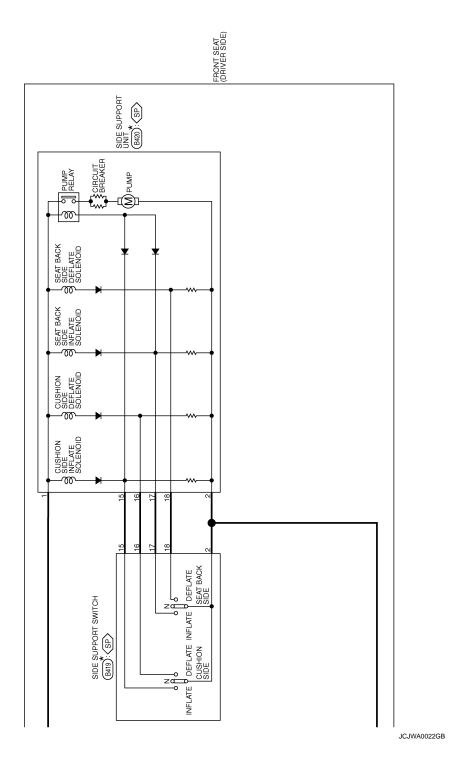
<sup>\*2:</sup> For MT models







SP>: With sports seat

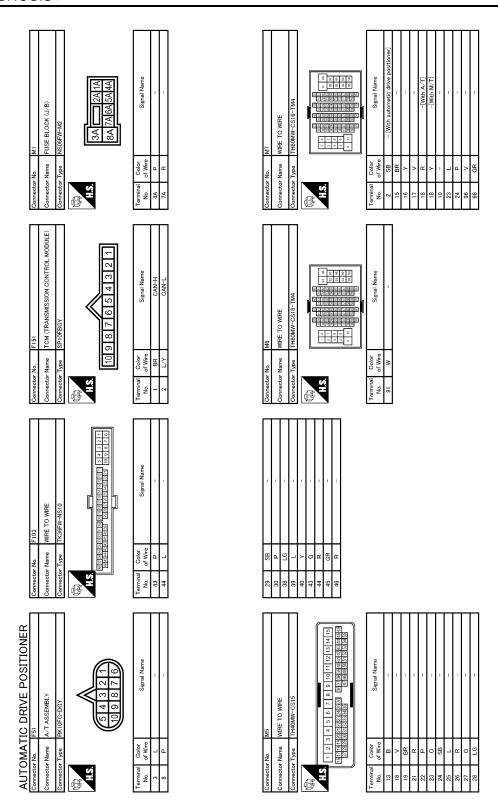


WER SIDE)	NG) NG) NG) NG) NG) NG) NG(AMARD) NGWARD) (UPWARD) (UPWARD) (UPWARD) (UPWARD) (UPWARD) (UPWARD)	А
FRONT DOOR SWITCH (DRIVER SIDE) A03FW Signal Name	D RANGE SW PULSEISLIDING) PULSEISRIDING) PULSEISR ILFITING) SUDDING SWFORWARD) RECLINING SWFORWARD) REAUT ITTING SWICHWARD) REAU ILFITING SWICHWARD) REAUT INTING SWICHWARD) REAUT STORY SWICHWARD) REAUT SWICHWARD) REAUT SWICHWARD GNUSSIGNAL)	В
Connector No. Connector Name Connector Type  Terminal Color No. of Wire 2 V	19 V V 2 21 L/V V/B 22 V/B 22 V/B 22 V/B 22 S W/B 22 S W/	D
T. eee	OL UNIT  1112 [3] [4] [5] [6] [6] [6] [7] [7] [7] [6] [6] [7] [7] [7] [7] [7] [7] [7] [7] [7] [7	Е
BIA PARKING BRAKE SWITCH POIFB-A Signal Name	Signal Signal Signal THESE SECTION SIGNAL STATE	F
Connector No. B14 Connector Name PAR Connector Type P011 No. of Wire 1 V	Connector No.   P45	G
		Н
Nith automatic   1   3   19   32   8   19   1   1   1   1   1   1   1   1	Signal Name Signal Name  Signal Automatic drive positioner  - (With automatic drive positioner) - (With automatic drive positioner) - (With automatic drive positioner)	l
NS:16FW-CS NS:16FW-CS Signal Name Signal Name  Signal Name	Sign Sign Sign Sign Sign Sign Sign Sign	ADP
Connector No.   E   Connector Name   W   Connector Type   No.   Connector Type   No.   Connector Type   No.   Connector Type   No.   Color	Connector Name S  Connector Name S  Connector Type No. 6 9 W R 1 1 7 V/W 18 B/R 11 7 V/W 18 B/R 11 R/L 11 R	К
#		L
POSITION MATERIAL SIGNAL SIGN	Signal Name Signal Name Signal Andromatic drive positioner] - [With automatic drive positioner] - [With automatic drive positioner] - [With automatic drive positioner]	M
IC DRIVE BI MIRE TO WIRE THOOPW-CS-16-1	SIDE (NSOBILE)	N
AUTOMAT  Connector No.  Connector Type  Connec	Connector No. Connector Name Connector Type Connector Type IIS COOP IIS COOP IIS B/R IIS V/M IIS R/I	0
	JCJWA0023GB	Р

SENSOR   Connector No.   B454   Connector No.   B455   Connector No.   B455   Connector No.   B455   Connector Name   LIFTING MOTOR/FRONT)OR/VER SIDE.   Connector Name   LIFTING MOTOR/FRONT   LIFTING MOTO	Signal Name         Terminal Color         Signal Name         Terminal Color         Signal Name         Signal Name           1         1         0         -         1         0         -	Edisonmentary   Commentary   Commentary	Signal Name         Terminal Color         Color of Wire         Signal Name         Terminal Color         Signal Name           -         1         L/W         -         35         W/R         -           -         17         Y/R         -         -         -           -         17         Y/R         -         -           -         17         Y/R         -         -           -         22         B/W         -         -           -         22         B/W         -         -           -         22         B/W         -         -           -         23         B/W         -         -           -         24         -         -         -
Connector No. 8453 Connector Name SLIDING SENSOR Connector Type 8008 0241  H.S.	No. of Wire   Sigra	Connector No. 8459 Connector Name POWER SEAT SWITCH Connector Type NS10FW-CS  H.S. 1227111261	Terminal Color No. of Wire 11 BR 11 BR 13 LG/R 14 G/B 28 Y 28 WB 29 P/L
AUTOMATIC DRIVE POSITIONER  Somestor No	Color   Signal Name	B456   ILITING MOTOR(REAR)DRIVER SIDE)	Color Signal Name of Wire Oolor Signal Name Of Wire Or Color
AUTOMA Connector No. Connector Type	Terminal Of No.	Connector No. Connector Name Connector Type H.S.	Terminal   CC   No. O.

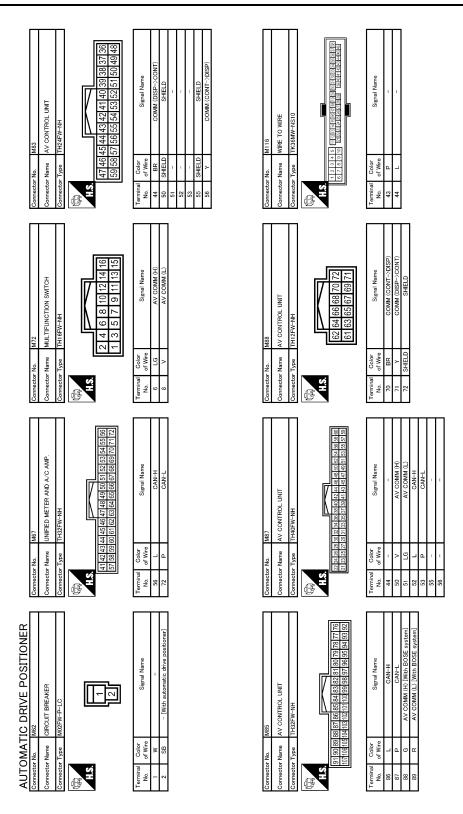
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4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				A
Connector No.   D5	Connector No. E106 Connector Name WIPE TO WIPE Connector Type TH80FW-CS16-TM4  LLS.	Octor of Wire		С
Connector No. Connector Typ	Gornector No. Connector Name Connector Type H.S.	Torminal No. 91		D
SIDE)  Mean and a section of a	GER SIDE)	me into positioner] ve positioner] ve positioner		Е
DOOR MIRROR (DRIVER SIDE) THIZMW-NH	EMWNH  EMW	Signal N Signal N With automatic of [With automatic		F
No Nor Nire		O CO Color of Wife of Color of Wife of Color of		G
Connector No.  Connector Name Connector Type  H.S.  Terminal Color No. of Will No. of Will 10 G 6 10 M M 9 10 B P 9 10 B P P 10 10 B P P 10 10 CONNECTOR 11 CONNECTOR 12 CONNECTOR 13 CONNECTOR 14 CONNECTOR 15 CONNECTOR 16 CONNECTOR 17 CONNECTOR 18 CONNE	11 W II W II Connector No. Connector Name Connector Type II S. II	Terminal No. 6 6 6 7 7 7 7 10 11 11 11 11 112		Н
	Name	Signal Mane  Signal Mane  [with A.T.]  [with A.T.]  [with M.T.]  [with M.T.]  [with M.T.]		ADP
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cornector No. D31 Cornector Name WRR Cornector Type TH4  15 14 12 12 REGARD STREET REG	Terminal Color No. of Wire 38 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		K
				L
AUTOMATIC DRIVE POSITIONER  Connector Name WRE TO WRE  Damoetor Type TH40FW-CS15  HAS REGISTRATED TH 109   8   7   1   1   1   1   1   1   1   1   1	DIT DOOR NIRROR REMOTE CONTROL SWITCH With automatic drive positioner) TKIGFBR  2 3 4	Signal Name		M
MATIC DRIVE   No.   Di	D17 D000 MIRRE SWITCH (WA TK16FBR 2 3 4 9 10 11 11			Ν
AUTOMAT Connector No. Connector Type Connector Type HS FS 14 17 FS 14 17 FS 14 17 FS 14 17 FS 15 14 17	23 0 0 24 BR 25 L 26 GR 27 Y 28 LG COnnector No. Connector Type Connector Type 11.5 LS	Terminal Color No. of Wire 4 B R 4 B R 10 GR 11 LG 11		0
			JCJWA0025GB	Р
				-

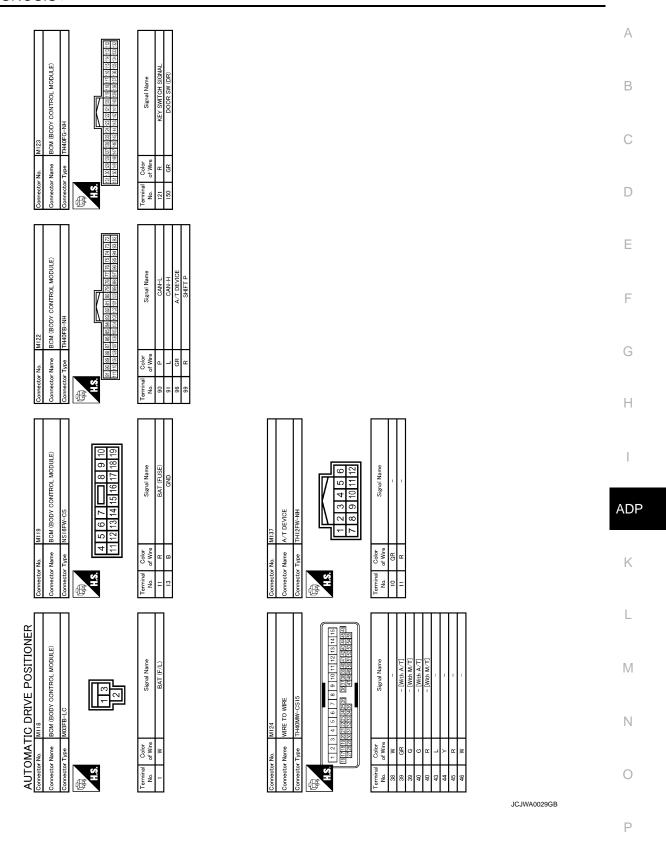


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Cornector No. M46 Connector Name TILT & TELESCOPIC SENSOR Connector Type TKO4FW  A.S.  Terminal Color No. Signal Name 1 WWre 1 WWre	2 P	FER SUF TELESC (SENSO)		A B C
M31 TILT & TELESCOPIC SWITCH TK06FGY 3 4 1 5 2 Signal Name	V   V   V   V   V   V   V   V   V   V	22 G MIRROR SELSOR (LH HORIZONTAL) 23 P TELESCOPIC SENSOR 24 R TELESCOPIC SENSOR 25 SB ADDRESS2 27 G TELESCOPIC SW (BARKWRD) 30 G MIRROR MOTOR (HC COMMON) (With A/T) 31 LG MIRROR MOTOR (LH HORIZONTAL) 32 L MIRROR MOTOR (LH HORIZONTAL) 32 L MIRROR MOTOR (LH HORIZONTAL)		E F G
Commector No. M24 Commector Type BD16FW  Commector Type BD16FW	14   P       P	Tremina   Color   Signal Name   No. of Wire   TILT SW (LIWARD)   1   Y   TILT SW (LIWARD)   2   LG   MIRROR SELECT SW (RH)   4   V   MIRROR SENSOR (RH VERTICAL)   5   R   MIRROR SENSOR (RH VERTICAL)   6   GR   MIRROR SENSOR (RH VERTICAL)   7   C   ADDRESSI   11   SENSOR SW (LIWARD)   11   SENSOR SW (LIWARD)   11   C   MIRROR SENSOR (RH VERTICAL)   10   V   TELESCORIC SW (FRONTWARD)   11   GR   TELESCORIC SW (FRONTWARD)   12   GR   TELESCORIC SW (FRONTWARD)   13   GR   TELESCORIC SW (FRONTWARD)   14   GR   TELESCORIC SW (FRONTWARD)   15   GR   TELESCORIC SW	A	    K
MTIC DRIVE    M82	7   8   KEY SWITCH SIGNAL	Terminal   Color   No.   Of Wire   Signal Name		M N
			JCJWA0027GB	Р



JCJWA0028GB



### < ECU DIAGNOSIS >

# **BCM (BODY CONTROL MODULE)**

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

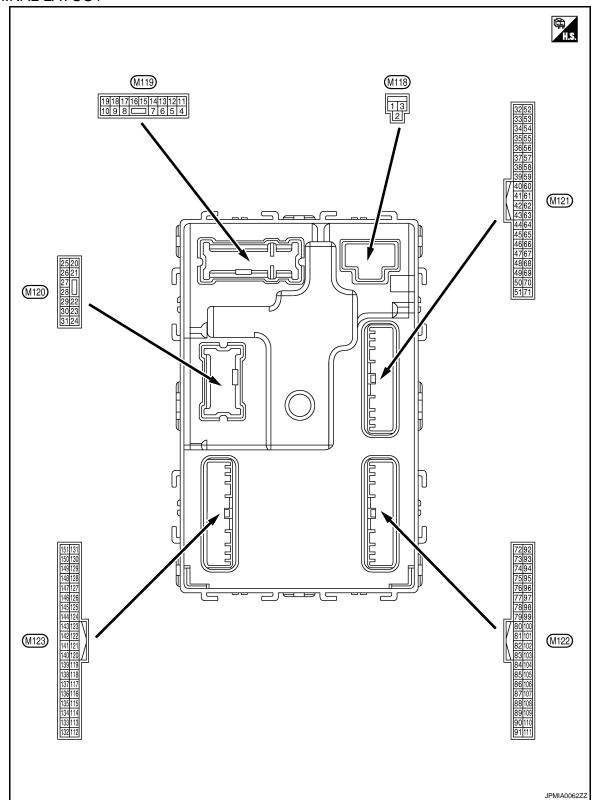
Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
TIX WIII EIXTII	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
TR WASHER SW	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
FR WIFER IIVI	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
FR WIFER STOP	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TUDNI CICNIAL D	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TUDNI CIONIAL I	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMP OW	Other than lighting switch 1ST and 2ND	OFF
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
	Other than lighting switch HI	OFF
HI BEAM SW	Lighting switch HI	ON
	Other than lighting switch 2ND	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
	Other than lighting switch 2ND	OFF
HEAD LAMP SW 2	Lighting switch 2ND	ON
5.000.000.00	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
	Other than lighting switch AUTO	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
RR FOG SW	NOTE: The item is indicated, but not monitored.	OFF
	Driver door closed	OFF
DOOR SW-DR	Driver door opened	ON
	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
	Rear RH door closed	OFF
DOOR SW-RR	Rear RH door opened	ON
	Rear LH door closed	OFF
DOOR SW-RL	Rear LH door opened	ON

Monitor Item	Condition	Value/Status	_
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	OFF	_
SDL LOOK SW	Other than power door lock switch LOCK	OFF	_
CDL LOCK SW	Power door lock switch LOCK	ON	_
	Other than power door lock switch UNLOCK	OFF	_
CDL UNLOCK SW	Power door lock switch UNLOCK	ON	_
VEV 0V/1 1 / 0V/	Other than driver door key cylinder LOCK position	OFF	_
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON	_
1/51/ O./. LINI O./.	Other than driver door key cylinder UNLOCK position	OFF	_
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON	_
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF	_
114.74.D.D. O.M.	Hazard switch is not pressed	OFF	_
HAZARD SW	Hazard switch is pressed	ON	_
REAR DEF SW	NOTE: The item is indicated, but not monitored.	OFF	_
H/L WASH SW	NOTE: The item is indicated, but not monitored.	OFF	_
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF	_
TR O/MOLL OV	Trunk lid opener cancel switch ON	ON	
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF	
IN DD OI LIN OW	While the trunk lid opener switch is turned ON	ON	
TRNK/HAT MNTR	Trunk lid closed	OFF	_
	Trunk lid opened	ON	
RKE-LOCK	LOCK button of Intelligent Key is not pressed	OFF	
TATE LOOK	LOCK button of Intelligent Key is pressed	ON	_
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF	
TATE ONLOOK	UNLOCK button of Intelligent Key is pressed	ON	
RKE-TR/BD	TRUNK OPEN button of Intelligent Key is not pressed	OFF	
TITLE THOUSE	TRUNK OPEN button of Intelligent Key is pressed	ON	
RKE-PANIC	PANIC button of Intelligent Key is not pressed	OFF	_
	PANIC button of Intelligent Key is pressed	ON	_
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	OFF	_
	UNLOCK button of Intelligent Key is pressed and held	ON	_
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF	
TAKE MODE ONE	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON	
OPTICAL SENSOR	Outside of the vehicle bright	Close to 5 V	_
O. HOAL GLIGOR	Outside of the vehicle dark	Close to 0 V	
REQ SW-DR	Driver door request switch is not pressed	OFF	
NEW OW-DIV	Driver door request switch is pressed	ON	_
REQ SW-AS	Passenger door request switch is not pressed	OFF	_
	Passenger door request switch is pressed	ON	_
REQ SW-BD/TR	Trunk request switch is not pressed	OFF	_
\\_\\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Trunk request switch is pressed	ON	_

Monitor Item	Condition	Value/Status
PUSH SW	Push-button ignition switch (push switch) is not pressed	OFF
1 GOIT GW	Push-button ignition switch (push switch) is pressed	ON
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	OFF
ION INETZ -17B	Ignition switch in ON position	ON
ACC RLY -F/B	Ignition switch in OFF position	OFF
ACC REI -1/B	Ignition switch in ACC or ON position	ON
CLUCH SW	The clutch pedal is not depressed	OFF
CLUCH SW	The clutch pedal is depressed	ON
DDAVE CW 1	The brake pedal is not depressed	ON
BRAKE SW 1	The brake pedal is depressed	OFF
DETE/OANOL OW	Selector lever in P position	OFF
DETE/CANCL SW	Selector lever in any position other than P	ON
OFT DAI/ALOVA	Selector lever in any position other than P and N	OFF
SFT PN/N SW	Selector lever in P or N position	ON
0// 1 001/	Steering is locked	OFF
S/L -LOCK	Steering is unlocked	ON
0// 100 000	Steering is unlocked	OFF
S/L -UNLOCK	Steering is locked	ON
S/L RELAY-F/B	Ignition switch is OFF or ACC position	OFF
	Ignition switch is ON position	ON
UNLK SEN-DR	Driver door is unlocked	OFF
	Driver door is locked	ON
	Push-button ignition switch (push-switch) is not pressed	OFF
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	ON
	Ignition switch is OFF or ACC position	OFF
IGN RLY1 -F/B	Ignition switch is ON position	ON
	Selector lever in P position	OFF
DETE SW -IPDM	Selector lever in any position other than P	ON
	Selector lever in any position other than P and N	OFF
SFT PN -IPDM	Selector lever in P or N position	ON
	Selector lever in any position other than P	OFF
SFT P -MET	Selector lever in P position	ON
	Selector lever in any position other than N	OFF
SFT N -MET	Selector lever in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Steering is locked	OFF
S/L LOCK-IPDM	Steering is inlocked	ON
	Steering is unlocked	OFF
S/L UNLK-IPDM		ON
	Steering is locked	
S/L RELAY-REQ	Ignition switch in OFF or ACC position	OFF
	Ignition switch in ON position	ON

Monitor Item	Condition	Value/Status
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLK
ID OK ELAG	Ignition switch in ACC or ON position	RESET
ID OK FLAG	Ignition switch in OFF position	SET
DDMT ENO OTDT	The engine start is prohibited	RESET
PRMT ENG STRT	The engine start is permitted	SET
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	RESET
KEY SW -SLOT	Intelligent Key is not inserted into key slot	OFF
	Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	DONE
ID NEGOT FET	ID of front LH tire transmitter is not registered	YET
ID DECCT ED4	ID of front RH tire transmitter is registered	DONE
ID REGST FR1	ID of front RH tire transmitter is not registered	YET
ID DECCT DD4	ID of rear RH tire transmitter is registered	DONE
ID REGST RR1	ID of rear RH tire transmitter is not registered	YET
ID DECCT DL4	ID of rear LH tire transmitter is registered	DONE
ID REGST RL1	ID of rear LH tire transmitter is not registered	YET
	Tire pressure indicator OFF	OFF
WARNING LAMP	Tire pressure indicator ON	ON
DUZZED	Tire pressure warning alarm is not sounding	OFF
BUZZER	Tire pressure warning alarm is sounding	ON

## TERMINAL LAYOUT



PHYSICAL VALUES

	inal No.	Description				Value	Α
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	В
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage	С
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage	
4	0	Interior room lamp	Outrout	After passing the ir er operation time	nterior room lamp battery sav-	0 V	D
(LG)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage	Е
5	0	Passenger door UN-	0 1 1	B	UNLOCK (Actuator is activated)	Battery voltage	
(V)	Ground	LOCK	Output	Passenger door	Other than UNLOCK (Actuator is not activated)	0 V	F
7	Ground	Step lamp	Output	Step lamp	ON	0 V	
(Y)	Giodila	Otep lamp	Output	Step lattip	OFF	Battery voltage	G
8	Ground	All doors, fuel lid	Output	All doors, fuel lid	LOCK (Actuator is activated)	Battery voltage	
(V)	Ground	LOCK	Output	All doors, ruer lid	Other than LOCK (Actuator is not activated)	0 V	Н
9	Ground	Driver door, fuel lid	Output	Driver door, fuel	UNLOCK (Actuator is activated)	Battery voltage	I
(G)	Giodila	UNLOCK	Output	Other than UNLOCK (Acator is not activated)	Other than UNLOCK (Actuator is not activated)	0 V	
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage	ADP
(BR)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V	K
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	
13 (B)	Ground	Ground	_	Ignition switch ON		0 V	L
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	NOTE: When the illumination brightening/dimming level is in the neutral position  (V)  10  0  2 ms  JSNIA0010GB	M N
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage	Р
(Y)		·			ACC or ON	0 V	

	inal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal (front RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
					Turn signal switch OFF	0 V
18 (O)	Ground	Turn signal (front LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(V)		control		lamp	ON	0 V
20 (V)	Ground	Turn signal (rear RH)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	(V) 15 10 5 0 PKID0926E 6.5 V
23	Ground	Trunk lid opening.	Output	Trunk lid	Open (Trunk lid opener actuator is activated)	Battery voltage
(G)	Cround	Talk ha oponing.	- Carput	. rom no	Close (Trunk lid opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (G)	Ground	Turn signal (rear LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
30	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0 V
(R)	Giouria	Trunk room lamp	Output	Trunk room lamp	OFF	Battery voltage

	ninal No. e color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
34		Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Ground	1 (-)	Output	ŎFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
35	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(V)	Ground	1 (+)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
38	0	Rear bumper anten-	0	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground	na (-)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

	inal No. e color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
39	Cround	Rear bumper anten-	Quitout	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(W)	Ground	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage 0 V
50 (R)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk is closed)	(V) 15 10 10 10 ms  JPMIA0011GB 11.8 V
					ON (Trunk is open)	0 V
				Ignition switch OFF (M/T mod-	When the clutch pedal is depressed	Battery voltage
				els)	When the clutch pedal is not depressed	0 V
52 (SB)	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage
				ON (A/T models)	When selector lever is in P or N position and the brake is not depressed	0 V
					ON (Pressed)	0 V
61 (W)	Ground	Trunk request switch	Input	Trunk request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms 10 ms JPMIA0016GB
64	0	Request switch buzz-	O	Request switch	Sounding	0 V
(V)	Ground	er	Output	buzzer	Not sounding	Battery voltage

	inal No.	Description			• "	Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed  Not pressed	0 V  (V) 15 10 5 0 10 ms  JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	11.8 V  (V) 15 10 5 0 JPMIA0011GB 11.8 V
69 (R) Ground	Rear LH door switch	ar LH door switch Input	Rear LH door switch	ON (When rear RH door opens)  OFF (When rear LH door closes)	0 V	
					ON (When rear LH door opens)	JPMIA0011GB 11.8 V
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
72 (R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB

	ninal No. e color)	Description			Condition	Value (Approx.)	
+	-	Signal name	Input/ Output		Condition		
73	Ground	Room antenna 2 (+)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
(G)	Glound	(center console)	Output	ŌFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
74	Cround	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(SB)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
75	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(BR)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	

Term	ninal No. e color)	Description				Value	А
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)	
				When the driver	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	В
76 (V)	Ground	Driver door antenna (-)	Output	door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E F
77	77 Driver	Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0062GB	G H
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	AD K
70		Room antonna ( ) (in		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	M
78 (Y)	Ground	Room antenna (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	O

	inal No. e color)	Description				Value
+	– COIOI)	Signal name	Input/ Output		Condition	(Approx.)
79	Ground	Room antenna (+)		Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(BR)	Glodina	(instrument panel)	Output		When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0063GB
80 (GR)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay (relay box) control	Output	Ignition switch	OFF or ACC	0 V Battery voltage
83	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		(V) 15 10 5 0 1 ms  JMKIA0064GB
(Y)				When operating ei	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB

	inal No.	Description				Value
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB

	inal No. e color)	Description	T		Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
		Combination switch INPUT 3	Input		All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
88	Ground			Combination switch	Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
(V)					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
89		Push-button ignition		Push-button igni-	Pressed	0 V
(BR)	Ground	switch (push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage
90 (P)	Ground	CAN - L	Input/ Output		_	_
91 (L)	Ground	CAN - H	Input/ Output		_	_
					OFF	0 V
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s
					ON	6.5 V  Battery voltage

# < ECU DIAGNOSIS >

	inal No.	Description				Value
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)
93	Ground	ON indicator lamp	Output	Ignition quitab	OFF or ACC	0 V
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(O)	Giodila	ACC relay control	Output	ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T device (detention switch) power supply	Output		_	Battery voltage
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)	Cround	tion No. 1	mpat	Oloching look	UNLOCK status	Battery voltage
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	Battery voltage
(P)	Ciouna	tion No. 2	mput	Clooning look	UNLOCK status	0 V
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(R)	Ciouna	tion switch	input	COLOCIOI IEVEI	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (G)	Ground	Passenger door request switch	Innit	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 10 ms JPMIA0016GB
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V
(O)	Ciodila	lay control	Output	ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage
106	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage
(W)	Giouila	unit power supply	Output	ignition switch	ON	0 V

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	inal No. e color)	Description			O a life a	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB

## < ECU DIAGNOSIS >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
			Inniit	Combination switch	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB
108 (R)					Lighting switch 1ST (Wiper intermittent dial 4)	1.3 V  (V) 15 10 5 0  JPMIA0036GB  1.3 V
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms

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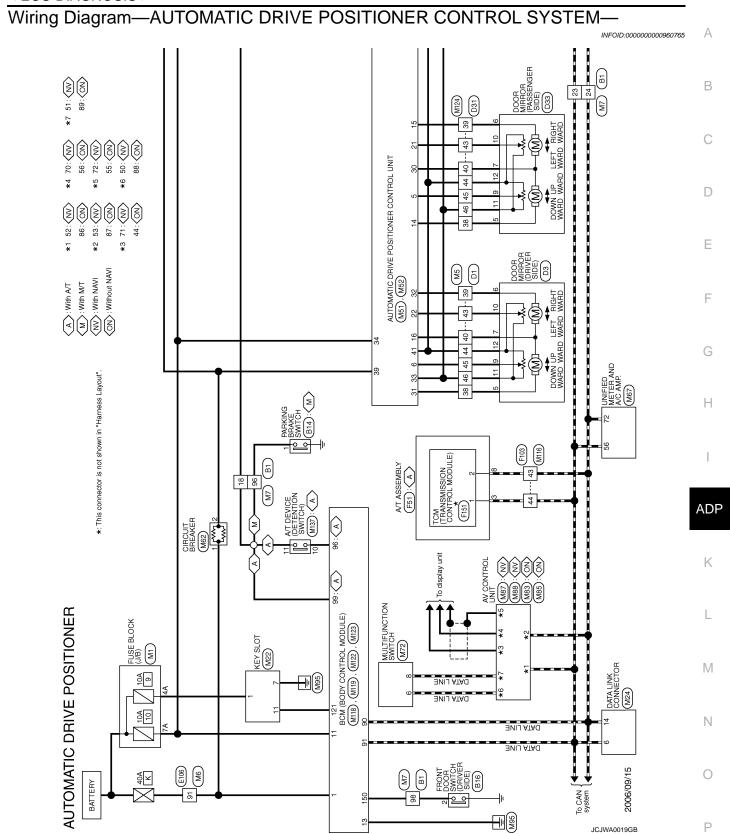
	inal No. e color)	Description	T		O a little	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB	
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB	
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB	
					Front wiper switch HI	(V) 15 10 2 ms JPMIA0040GB	
					Pressed	0 V	
110 (G)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB	

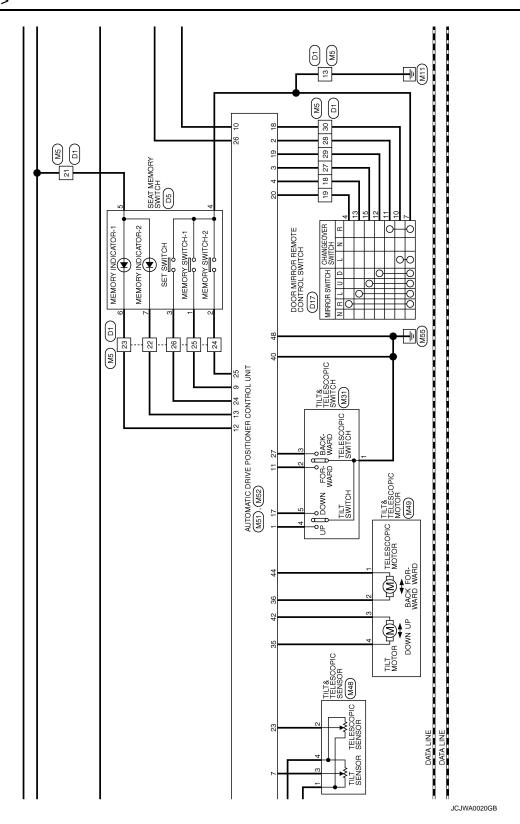
	inal No.	Description				Value
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	Battery voltage
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 5 0 50 ms
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113	Ground	Optical sensor signal	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	Siddild	Spilosi digital	put	ON	When dark outside of the vehicle	Close to 0 V
114	Ground	Ground Clutch interlock switch Input	Input	Clutch interlock	OFF (Clutch pedal is not depressed)	0 V
(R)	0.000			switch	ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage
				Stop lamp switch	OFF (Brake pedal is not depressed)	o v
118 (P)	Ground	Stop lamp switch 2	Input		ON (Brake pedal is depressed)	Battery voltage
				ICC brake hold relay (With ICC)	OFF ON	0 V Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (unlock sensor)	Input	Driver door	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB
					UNLOCK status	0 V
121 (R)	Ground	Key slot switch	Input	_	(ey is inserted into key slot	Battery voltage
					ey is not inserted into key slot  OFF	0 V
122 (V)	Ground	ACC feedback signal	Input	Ignition switch	ACC or ON	Battery voltage
123	Cround	ICN foodback sizes!	lpp::4	lanition quitab	OFF or ACC	0 V
(W)	Ground	IGN feedback signal	Input	Ignition switch	ON	Battery voltage

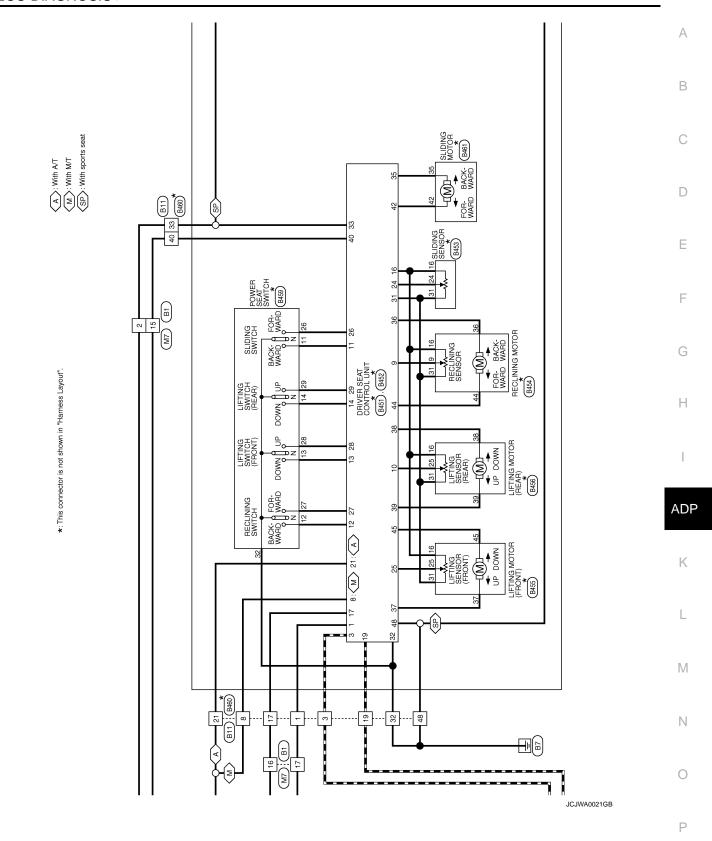
	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (When passenger door opens)	0 V
129 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB
				Ignition switch OFF or ACC		0 V
					ON (When tail lamps OFF)	5.5 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5 U JPMIA0159GB
					OFF	0 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON OFF	0 V  Battery voltage
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON	<u> </u>	0 V
138 (V)	Ground	Receiver and sensor power supply output	Output	Ignition switch	OFF ACC or ON	0 V 5.0 V

Terminal No. Description (Wire color) Condition		Value				
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
139		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
(L)	Ground	er signal	Output	ON ON	When receiving the signal from the transmitter	(V) 6 4 2 0 • 0.2s
140	0	Selector lever P/N		O de de de de	P or N position	12.0 V
(GR)	Ground	position signal	Input	Selector lever	Except P and N positions	0 V
					ON	0 V
141 (G)	Ground	Security indicator signal	Output	Security indicator	Blinking	(V) 15 10 5 0 11.3 V
					OFF	Battery voltage
142		Combination switch		Combination switch	All switch OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND	0 V
(O)	Ground	OUTPUT 5	Output	(Wiper intermittent dial 4)	Turn signal switch RH	0
					All switch OFF (Wiper intermittent dial 4)	10.7 V
					Front wiper switch HI (Wiper intermittent dial 4)	(V)
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0032GB

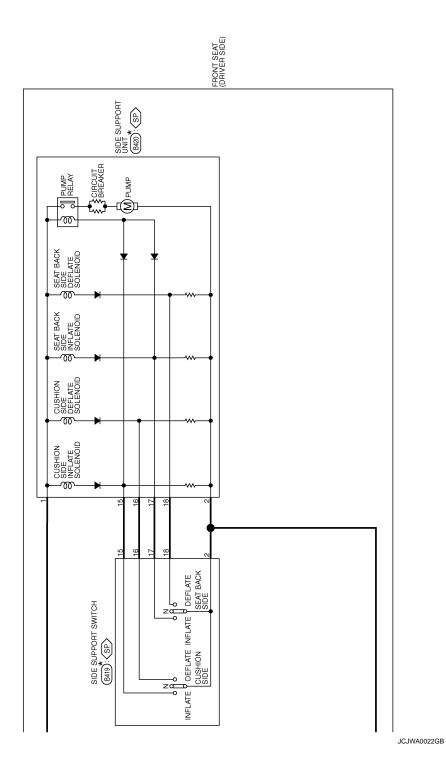
	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4) Front washer switch ON	0 V
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	(Wiper intermittent dial 4)  Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 0 2 ms JPMIA0033GB
					All switches OFF	0 V
					Front wiper switch INT	0.0
				Combination	Front wiper switch LO	(V)
145 (L)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms
					All switch OFF	10.7 V
						0 0
					Front fog lamp switch ON	(V) <del>[</del>
146		Combination switch		Combination switch	Lighting switch 2ND Lighting switch PASS	15
(SB)	Ground	OUTPUT 4	Output	(Wiper intermittent dial 4)	Turn signal switch LH	0
149 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5 V
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (When driver door opens)	0 V
151	0	Rear window defog-	0	Rear window de-	Active	0 V
(G)	Ground	ger relay	Output	fogger	Not activated	Battery voltage







SP>: With sports seat



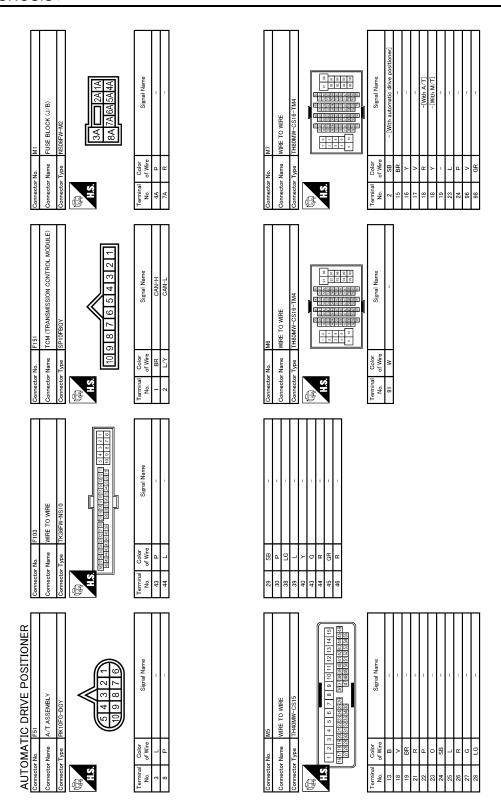
FR SIDE)		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )			А
B16 FRONT DOOR SWITCH (DRIVER SIDE) AGBPW  2 3 3	Signal Name	CAN-L P RANIGE SW POLLSEGISLIDING) POLLSECR LIFTING) SLIDING SW/CORWARD) RECLINIOS SW/CORWARD) RECLINIOS SW/LIPWARD) REAR LIFTING SW/LIPWARD) REAR LIFTING SW/LIPWARD) REAR LIFTING SW/LIPWARD) REAR LIFTING SW/LIPWARD) GWISIGNAL)			В
No. Name Type	Color Of Wire 2 V	19 V 21 L/Y 25 V/B 26 V/B 26 V/B 28 W/B 29 P/L 29 P/L 31 G/R			C
Common Co	<u> </u>				
, , , , , , , , , , , , , , , , , , ,	Авте	OL UNIT 11 12 13 14 15 16 27 28 29 30 31 32	Signal Name  RX  CANI-H  PARKUG BENACE SW  PULSE/RECLINNG)  SLIDING SWIRACKWARD)  RECLINING SWIRACKWARD)  RECLINING SWIRACKWARD)  RECLINING SWIRACKWARD)  RECLINING SWIRACKWARD)  RECLINING SWIRACKWARD)  TOO'C  TX		Е
B14 PARKING BRAKE SWITCH POIFB-A	Signal Name	AT CONTR 7 8 9 10 3 24 25 26	Signal Name  RX CAN-H CAN-H PARKING BRAKE SW PUL SE(FRCLINNG) PUL SE(FRCLINNG) PUL SE(FRCLINNG) RECLINING SW(BACKWAN REAR LIFTING SW(DOWNW REAR LIFTING SW		F
	O'Color V V	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Color of Wire LVW RV/G W/G BR BR BR BR BR BR BR BR BR BR BR BR BR		G
	Terminal O of or	Connector No. Connector Name Connector Type H.S. 1 2	No. of O O O O O O O O O O O O O O O O O O		Н
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	Signal Name	NNT 5	Signal Name	_	ı
11 OWITE (With automatic driver To WITE (With automatic driver positioner) NS16FW-CS (17 CT) 1 3 (10 S) 2 1 4 8 3 2 (18 S)		SUPPORT U	- [With auto - [With auto - [With auto - [With auto		ADP
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	96 99	Color of Wire of Wire B B B/R V/W R/L		K
Connector No. Connector Name Connector Type	Terminal No.   1   3   8   17   17   19   21   21   32   33   40   48	Connector No. Connector Name Connector Type	Terminal No. 1. 2. 2. 1.5. 1.5. 1.6. 1.7. 1.8. 1.7. 1.8. 1.8. 1.8. 1.8. 1.8		
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Value of the control	Signal Name	17	Signal Name		M
AUTOMATIC DRIVE POSITIONER Comester None Wife TO WIRE Comester Type TH60FW-CS16-TM  I I I I I I I I I I I I I I I I I I I	<i>α</i>	INDE SUPPORT SWITCH INSOFW-CS	S.  - [With autor - [With autor - [With autor - [With autor		N
No. BI Name WIRE Type TH8	Octor of Wire of Wire of Work of Wire of Work of Wire of Octor of	9 9	Color of Wire of Wire B B B B V V/W R/L		
AUTOMA Connector No. Connector Name Connector Type	Terminal No. No. 2 2 1 15 115 117 118 23 24 24 96 96	Connector No. Connector Name Connector Type	Terminal No. 2 2 2 2 15 16 16 17 17 17 17		0
				JCJWA0023GB	Р

**ADP-199** 

Connector No.   8455   Connector No.   Connector No.   Connector Name   LIFTING MOTOR/FRONT), DRIVER SIDE.)	Signal Name         Terminal Color Nic.         Color of Wire         Signal Name           -         16         0         -           -         25         V/B         -           -         37         G/W         -           -         37         G/W         -           -         45         L/R         -	Connector No.   8461   Connector Type   6098-0239   Connector Type   6098-0239   Connector Type   6098-0239   Connector No.   1.5   Connector No.	Signal Name Terminal Color Signal Name Nb. of Wire Signal Name A2 W/R
Connector No.   B454   Connector No.   B454   Connector Name   RECLINING MOTOR   Connector Type   NS08FW-CS   MS08FW-CS   MS	Signal Name   Terminal Color   No. of Wire	POWER SEAT SWITCH(DRIVER SIDE)	Signal Mame  No. of Whea  No. of Whea  1 L/M  2 3 R/Y  - 3 R/Y  - 19 Y/R  - 19 Y/R  - 19 WW  - 21 L/Y  - 19 R/W  - 32 B/W  - 33 R  - 40 R/W
C DRIVE POSITIONER   B452     DRIVE POSITIONER     DRIVER SEAT CONTROL UNIT     NSI 16PW-CS     34 35 36	Signal Name   Terminal Color	Commector No. Commector Name Commector Type    Commector Type   Commector	Signal Name Name Name Name Name Name Name Name
AUTOMATIC DRIVE POSITIONER  Connector Name DRIVER SEAT CONTROL UNIT  Connector Type NS16FW-CS  H.S.  (4041142 43 444 45 46 47 48	Terminal   Color	Connector No. B456 Connector Name LIFTING MOTOI Connector Type NS06F8R-CS H.S. 38	Terminal   Color

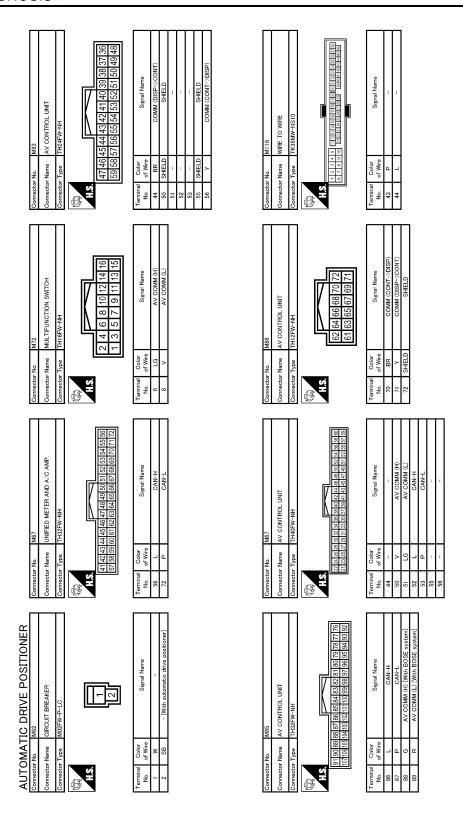
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ыу змтон 6 7 2 1 4	Signal Name	W-CSIG-TM4	Signal Name		В
DS SEAT MEMC AOBEW	Color	#WIRE 1 #WIRE 1 #WIRE 1 #WIRE 1	Color of Wire W		С
Connector No. Connector Name Connector Type H.S.	Terminal No. 0. 0. 2 2 2 2 3 3 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Connector No. Connector Name Connector Type H.S.	Terminal No. 91		D
side (1)	ane The positioner Tive positioner Tive positioner	GER SIDE)	ame Tive positioner] Tive positioner] Tive positioner]		Е
OR MIRROR (DRIVER)  IZMW-NH  5 6 7 2 1  12 11 10 9 3	Signal Name  - [With automatic drive positioner]  - [With automatic drive positioner]  - [With automatic drive positioner]  - [The first of the positioner]	D008 MIRROR (PASSENGER SIDE) THIZMW-NH	Signal Name  - [With automatic drive positioner]  - [With automatic drive positioner]  - [With automatic drive positioner]		F
ector No.	O O O O O O O O O O O O O O O O O O O	Connector No. D33 Connector Name DOC Connector Type H11:	of Wire of Office of office of office of office office of office		G
Composition (Composition Composition Compo	Terminal No. 10 10 10 10 10 10 10 10 10 10 10 10 10	Comm	Terminal No. 10 10 10 11 11 11 11 11 11 11 11 11 11		Н
		Name   WIRE TO WIRE	Signal Name  [cuth AT]  [cuth MT]  [cuth MT]  [cuth MT]  [cuth MT]  [cuth MT]  [cuth MT]	ı	I
		MIRE TO WIRE THADFW-CS15   1140FW-CS15   12   11   10   9   8   12   11   10   9   8   12   11   10   9   8   12   11   10   9   8   12   11   10   9   8   12   11   10   9   12   11   10   12   12   12   12   12			ADP
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Connector No.  Connector Name Connector Type  15 14 13	Color   Colo		K
2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		Comm	Terminal No. 18 88 38 38 38 39 40 40 40 40 44 44 44 44 44 44 44 44 44		L
ONER 3 2 1 1 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1		TROL Dositioner)			
POSITI	Signal Name	automatic drive p	Signal Name		M
AUTOMATIC DRIVE POSITIONER  Connector Name WIRE TO WIRE  Connector Type TH40FW-CS15    15   14   12   11   10   9   7   6   5   4   3   2   1      15   16   16   16   16   16   16   16	Color B B B B B B B C C C C C C C C C C C C	DOOR MIRRO SWITCH (With TK16FBR	Color of Wire BR R B B B B B B B B B B B B B B B B B		Ν
AUTOMA Connector No. Connector Name Connector Type H.S. [15] 14	Terminal 1 13	Connector No. Connector Name Connector Type	Terminal No. o 4 4 7 7 7 10 112 112 115 115 115		0
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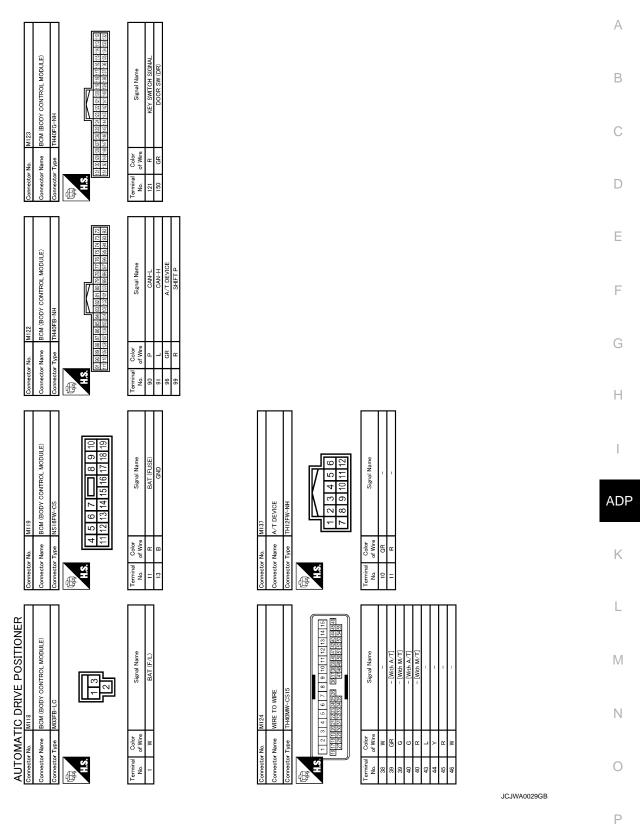


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Connector No. M48  Connector Name TILT & TELESCOPIC SENSOR  Connector Type TKG4FW  H.S.  4 3 2 1	Color   Colo	MISS   MISS   Connector No.   MISS   Connector Name   CONTROL UNIT   Connector Type   NIS16FW-CS   Connector Type   NIS16FW-CS   Connector Type   NIS16FW-CS   Consector Type   NIS16FW-CS   Consector Type   NIS16FW-CS   Consector Terminal   Color   Signal Name   Consector Terminal   Color   Signal Name   Color   Signal Name   Color   Signal Name   Color   Color   Signal Name   Color   C		A B C
Connector No. M31 Connector Name TILT & TELESCOPIC SWITCH Connector Type TK08FGY  M.S. 13 4 1 5 2	Terminal   Color   Nume   Signal Name     Color   Co	13   P   MIRROR MOTOR (BH VERTICAL)     15   GR   MIRROR MOTOR (BH VERTICAL)     16   G   MIRROR MOTOR (BH HORZOWTAL) [With ArT]     16   G   MIRROR MOTOR (BH HORZOWTAL) [With ArT]     17   W   MIRROR REH GOTOR (LH COMMON)     18   P   MIRROR SELECT SW (LH)     19   SB   MIRROR SELECT SW (LH)     19   SB   MIRROR SELECT SW (LH)     22   G   MIRROR SELECT SW (LH)     23   G   MIRROR SELECT SW (LH)     24   SB   MIRROR SELECT SW (LH)     25   G   MIRROR SELECT SW (LH)     26   SB   MODRESSZ     27   G   TELESCOPIC SENSOR     28   ADDRESSZ     29   A   MIRROR MOTOR (BH COMMON) [With ArT]     30   R   MIRROR MOTOR (BH COMMON) [With ART]     31   LG   MIRROR MOTOR (LH HORZONITAL)     32   L   MIRROR MOTOR (LH HORZONITAL)     33   LG   MIRROR MOTOR (LH HORZONITAL)     34   LG   MIRROR MOTOR (LH HORZONITAL)     35   L   M		E F G
Connector No. M24  Connector Name DATA LINK CONNECTOR  Connector Type BD16FW  H.S    9   10   11   12   13   14   15   6   7   8	Terminal   Color   Signal Name   Color   Col	MS   MS		ADP
AUTOMATIC DRIVE POSITIONER  Connector No. M22  Connector Name KEY SLOT  Connector Type THI2FW-NH  H.S. 1 2 3 4 5 6 7 8 9 10 11 112	Terminal   Color   Signal Name   Color   Color   Signal Name   Color   Color	Connector No. M49 Connector Name TILT & TELESCOPIC MOTOR Connector Type NSO4FW-CS  H.S. A 2 1  1		M N O
			JCJWA0027GB	Р



JCJWA0028GB



Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following CAN signal communication status has become consistent</li> <li>Starter control relay signal</li> <li>Starter relay status signal</li> </ul>
B2563: HI VOLTAGE	<ul><li>Inhibit engine cranking</li><li>Inhibit steering lock</li></ul>	500 ms after the power supply voltage decreases to less than 18 \
B2601: SHIFT POSITION	Inhibit steering lock	<ul> <li>500 ms after the following signal reception status becomes consistent</li> <li>Selector lever P position switch signal</li> <li>P range signal (CAN)</li> </ul>
B2602: SHIFT POSITION	Inhibit steering lock	<ul> <li>5 seconds after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (battery voltage)</li> <li>Vehicle speed: 4 /h or more</li> </ul>
B2603: SHIFT POSI STATUS	Inhibit steering lock	<ul> <li>500 ms after the following BCM recognition conditions are fulfilled</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P position switch signal: Except P position (battery voltage)</li> <li>Selector lever P/N position signal: Except P and N positions (0 V</li> </ul>
B2604: PNP SW	Inhibit steering lock	<ul> <li>500 ms after any of the following BCM recognition conditions is ful filled</li> <li>Status 1</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: P and N position (battery volt age)</li> <li>P range signal or N range signal (CAN): ON</li> <li>Status 2</li> <li>Ignition switch is in the ON position</li> <li>Selector lever P/N position signal: Except P and N positions (0 V</li> <li>P range signal and N range signal (CAN): OFF</li> </ul>
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is ful filled  • Ignition switch is in the ON position  - Power position: IGN  - Selector lever P/N position signal: Except P and N positions (0 V - Interlock/PNP switch signal (CAN): OFF  • Status 2  - Ignition switch is in the ON position  - Selector lever P/N position signal: P or N position (battery voltage)  - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent  • Steering lock relay signal (Request signal)  • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following CAN signal communication status has become consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>

## < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent  • Starter motor relay control signal  • Starter relay status signal (CAN)
B2609: S/L STATUS	Inhibit engine cranking     Inhibit steering lock	When the following steering lock conditions agree  BCM steering lock control status  Steering lock condition No. 1 signal status  Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
B2612: S/L STATUS	Inhibit engine cranking     Inhibit steering lock	When any of the following conditions is fulfilled  Steering lock unit status signal (CAN) is received normally  The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)

# DTC Inspection Priority Chart

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

Priority	DTC
1	B2562: LOW VOLTAGE     B2563: HI VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTTENA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

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Priority	DTC
4	<ul> <li>B2013: ID DISCORD BCM-S/L</li> <li>B2014: CHAIN OF S/L-BCM</li> <li>B2555: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSITION</li> <li>B2604: PNP SW</li> <li>B2604: PNP SW</li> <li>B2606: S/L RELAY</li> <li>B2606: S/L RELAY</li> <li>B2607: S/L RELAY</li> <li>B2608: STARTER RELAY</li> <li>B2609: S/L STATUS</li> <li>B2609: S/L STATUS</li> <li>B2609: S/L STATUS</li> <li>B2600: STEERING LOCK UNIT</li> <li>B2600: STEERING LOCK UNIT</li> <li>B2600: STEERING LOCK UNIT</li> <li>B2601: STATUS</li> <li>B2611: ACC RELAY</li> <li>B2611: ACC RELAY</li> <li>B2611: ACC RELAY</li> <li>B2611: ACC RELAY</li> <li>B2611: ACC RELAY CIRC</li> <li>B2616: BLOWER RELAY CIRC</li> <li>B2616: BN RELAY CIRC</li> <li>B2616: STARTER RELAY CIRC</li> <li>B2616: BCM</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> <li>B2619: BCM</li> <li>B2611: VEHICLE TYPE</li> <li>B2611: ENG STATE NO RECIV</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>
5	<ul> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RR</li> <li>C1711: [NO DATA] RR</li> <li>C1712: [CHECKSUM ERR] FL</li> <li>C1713: [CHECKSUM ERR] FR</li> <li>C1714: [CHECKSUM ERR] RR</li> <li>C1715: [CHECKSUM ERR] RR</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RR</li> <li>C1720: [CODE ERR] FL</li> <li>C1721: [CODE ERR] FR</li> <li>C1722: [CODE ERR] RR</li> <li>C1723: [CODE ERR] RR</li> <li>C1724: [BATT VOLT LOW] FR</li> <li>C1725: [BATT VOLT LOW] FR</li> <li>C1726: [BATT VOLT LOW] RR</li> <li>C1727: [BATT VOLT LOW] RL</li> <li>C1727: [BATT VOLT LOW] RL</li> <li>C1734: CONTROL UNIT</li> </ul>
6	B2621: INSIDE ANTENNA     B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA

DTC Index

#### < ECU DIAGNOSIS >

#### NOTE:

Details of time display

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_		BCS-33
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-34
U0415: VEHICLE SPEED SIG	_	_	_	BCS-35
B2013: ID DISCORD BCM-S/L	×	_	_	SEC-43
B2014: CHAIN OF S/L-BCM	×	_		SEC-44
B2190: NATS ANTTENA AMP	×	_	_	<u>SEC-37</u>
B2191: DIFFERENCE OF KEY	×	_	_	SEC-40
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-41
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-42
B2553: IGNITION RELAY	_	_	_	PCS-48
B2555: STOP LAMP	_	_	_	SEC-47
B2556: PUSH-BTN IGN SW	_	×	_	<u>SEC-49</u>
B2557: VEHICLE SPEED	×	×	_	SEC-51
B2560: STARTER CONT RELAY	×	×	_	SEC-52
B2562: LOW VOLTAGE	_	_	_	BCS-36
B2563: HI VOLTAGE	×	×	_	BCS-37
B2601: SHIFT POSITION	×	×	_	SEC-53
B2602: SHIFT POSITION	×	×	_	SEC-56
B2603: SHIFT POSI STATUS	×	×	_	<u>SEC-58</u>
B2604: PNP SW	×	×	_	SEC-61
B2605: PNP SW	×	×	_	SEC-63
B2606: S/L RELAY	×	×	_	<u>SEC-65</u>
B2607: S/L RELAY	×	×	_	SEC-66
B2608: STARTER RELAY	×	×	_	SEC-68
B2609: S/L STATUS	×	×	_	<u>SEC-70</u>
B260A: IGNITION RELAY	×	×	_	PCS-50
B260B: STEERING LOCK VNIT	_	×	_	<u>SEC-74</u>
B260C: STEERING LOCK VNIT	_	×	_	<u>SEC-75</u>
B260D: STEERING LOCK VNIT	_	×	_	<u>SEC-76</u>
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-77</u>
B2611: ACC RELAY	_	_	_	PCS-52
B2612: S/L STATUS	×	×	_	SEC-79
B2614: ACC RELAY CIRC	_	×	_	PCS-54
B2615: BLOWER RELAY CIRC	_	×	_	PCS-57

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CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2616: IGN RELAY CIRC	_	×	_	PCS-60
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-83</u>
B2618: BCM	×	×	_	PCS-63
B2619: BCM	×	×	_	<u>SEC-85</u>
B261A: PUSH-BTN IGN SW	_	×	_	<u>SEC-86</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	SEC-88
B2621: INSIDE ANTENNA	_	_	_	DLK-58
B2622: INSIDE ANTENNA	_	_	_	DLK-60
B2623: INSIDE ANTENNA	_	_	_	<u>DLK-62</u>
B26E1: ENG STATE NO RES	×	×	_	<u>SEC-78</u>
C1704: LOW PRESSURE FL	_	_	×	<u>WT-14</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-14</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-14</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-14</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-16</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-16</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-16</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-16</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-19</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-19</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-19</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-19</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-22</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-22</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-22</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-22</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-24</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-24</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-24</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-24</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-27</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-27</u>
C1726: [BATT VOLT LOW] RR		_	×	<u>WT-27</u>
C1727: [BATT VOLT LOW] RL		_	×	<u>WT-27</u>
C1729: VHCL SPEED SIG ERR		_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-31</u>

### **ADP SYSTEM SYMPTOMS**

# SYMPTOM DIAGNOSIS

# ADP SYSTEM SYMPTOMS

Symptom Table

#### NOTE:

Always perform the "Basic Inspection" before performing diagnosis in the following table. Refer to <u>ADP-215</u>, "Basic Inspection".

### SYMPTOM 1

Sympton	1	Diagnosis procedure	Reference page
	Sliding operation	Check sliding switch.	ADP-70
	Reclining operation	Check reclining switch.	ADP-72
	Lifting operation (front)	Check lifting switch (front).	ADP-74
	Lifting operation (rear)	Check lifting switch (rear).	ADP-76
Manual functions (for specific part) do not operate	Tilt operation	1. Check tilt switch.	<u>ADP-78</u>
		2. Check tilt sensor.	ADP-111
	Telescopic operation	Check telescopic switch.	ADP-80
		2. Check telescopic sensor.	ADP-114
	Door mirror operation	1. Changeover switch.	ADP-85
		2. Mirror switch	ADP-87
	All parts of seat	Check power seat switch ground circuit.	ADP-90

### SYMPTOM 2

Symptom	1	Diagnosis procedure	Reference page
Memory functions (for specific part) do not operate	Sliding operation	Check sliding sensor.	ADP-99
	Reclining operation	Check reclining sensor.	ADP-102
	Lifting operation (front)	Check lifting sensor (front).	ADP-105
	Lifting operation (rear)	Check lifting sensor (rear).	ADP-108
	Tilt operation	Check tilt sensor.	ADP-111
	Telescopic operation	Check telescopic sensor.	ADP-114
	Door mirror operation	Check door mirror sensor.	Driver side:  ADP-117  Passenger  side:  ADP-119

SYMPTOM 3

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Symptom	1	Diagnosis procedure	Reference page
	Sliding operation	Check sliding motor.	ADP-122
Memory functions and manual functions (for specific part) do not operate	Reclining operation	Check reclining motor.	ADP-124
	Lifting operation (front)	Check lifting motor (front).	ADP-126
	Lifting operation (rear)	Check lifting motor (rear).	ADP-128
	Tilt operation	Check tilt motor.	ADP-130
	Telescopic operation	Check telescopic motor.	ADP-132
	Door mirror operation	Check door mirror motor.	ADP-134

# SYMPTOM 4

Symptom	Diagnosis procedure	Reference page
	Check system setting.	ADP-11
Entry/Exit assist function does not operate.	2. Perform initialization.	ADP-9
	3. Check front door switch (driver side).	<u>ADP-97</u>
Seat synchronization function does not operate.	Check system setting.	<u>ADP-11</u>
Intelligent Key interlock function does not operate.	1. Check door lock function.	DLK-6
(Other automatic operations and Intelligent Key system are normal)	2. Perform memory storing.	ADP-11

## SYMPTOM 5

Symptom	Diagnosis procedure	Reference page
Memory indicators 1 and/or 2 do not illuminate.	Check seat memory switch.	ADP-82
Memory indicators 1 and/of 2 do not indiffinate.	2. Check seat memory indicator.	ADP-138

## SYMPTOM 6

Symptom	Diagnosis procedure	Reference page
Mamory eneration does not enerate	Check detention switch/parking break switch.	AT model: ADP-93
Memory operation does not operate.	Check determion switch/parking break switch.	MT model: ADP-95

### SYMPTOM 7

Symptom	Diagnosis procedure	Reference page
All of side support components dose not operate.	Check power supply and ground circuit of side support unit.	ADP-68
Seat back side support dose not operate.	Check side support unit.	ADP-137
Seat back side support dose not operate.	Check side support switch.	ADP-91
Seat cushion side support dose not operate.	Check side support unit.	ADP-137
Seat custilion side support dose not operate.	Check side support switch.	ADP-91

### **NORMAL OPERATING CONDITION**

### < SYMPTOM DIAGNOSIS >

# NORMAL OPERATING CONDITION

**Description** 

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

Symptom	Cause	Action to take	Reference page
	No initialization has been performed.	Perform initialization.	ADP-9
Entry/exit assist function and seat synchronization do not operate.	Entry/exit assist function is disabled.  NOTE: The entry/exit assist function and seat synchronization function are disabled before delivery (initial setting).	Change the settings.	ADP-11
Entry assist function does not operate.	Manual operation with power seat switch was performed after exit assist function excution.	Perform the memory function.	ADP-23
	Either the entry/exit assist function (seat) or the entry/exit assist function (steering) is disabled. (only for AT models)	Enable both functions.	ADP-11
Seat synchronization function does not operate.	The synchronization function will not operate if the steering (tilt, telescopic) or the door mirror moves to the operating end while the seat synchronization function is operating.	Perform the memory function or drive the vehicle at more than 7km/h (4 MPH).	ADP-23
	Seat adjustment load has exceed any of the volumes below.  • Seat sliding: 76 mm  • Seat reclining: 9.1 degrees  • Seat lifting (rear): 20 mm	_	_
Side support or lumbar support does not perform memory opera-	The side support system and the lumbar support system are controlled indepen-		Side support system: <u>ADP-44</u>
tion.	dently with no link to the automatic drive positioner system.		Lumbar support system: <u>SE-5</u>
			Memory function: ADP-28
Memory function, entry/exit assist function, seat synchronization function, or Intelligent Key interlock function does not operate.			Exit assist function: <u>ADP-33</u>
	The operating conditions are not fulfilled.	Fulfill the operation conditions.	Entry assist function: <u>ADP-37</u>
			Seat synchronization function: ADP-23
			Intelligent Key interlock function: ADP-41

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# **PRECAUTION**

### **PRECAUTIONS**

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

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

- When removing or installing various parts, place a cloth or padding onto the vehicle body to prevent scratches.
- Handle trim, molding, instruments, grille, etc. carefully during removing or installing. Be careful not to oil or damage them.
- Apply sealing compound where necessary when installing parts.
- When applying sealing compound, be careful that the sealing compound does not protrude from parts.
- When replacing any metal parts (for example body outer panel, members, etc.), be sure to take rust prevention measures.

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

#### PRE-INSPECTION FOR DIAGNOSTIC

#### < ON-VEHICLE MAINTENANCE > ON-VEHICLE MAINTENANCE Α PRE-INSPECTION FOR DIAGNOSTIC **Basic Inspection** INFOID:0000000000960774 ${f 1}$ .CHECK POWER SUPPLY AND DROUND CIRCUIT Check the power supply and ground circuit as shown below. Driver seat control unit :Refer to ADP-66, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure". Automatic drive positioner control unit: Refer to ADP-67, "AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Diagnosis Procedure". D Is the inspection result normally? YES >> GO TO 2. NO >> Repair or replace the malfunctioning part. Е 2 .CHECK MANUAL FUNCTION Check the manual function operations by operating the relevant switches as shown below. Seat (slide, reclining, lifting front, lifting rear) F Steering column (tilt, telescopic) Door mirror Side support Do all manual functions operate normally? >> GO TO 3. NO (Seat, steering, door mirror)>>Go to SYMPTOM 1, refer to ADP-211, "Symptom Table". And, GO TO 4 if the result of SYMPTOM 1 is OK. NO (Side support)>>Go to SYMPTOM 7, refer to ADP-211, "Symptom Table". 3.CHECK MEMORY FUNCTION 1 Register the seat positions (refer to ADP-10, "MEMORY STORING: Description") and check that all parts of the seat, steering column, and door mirrors move to their memory positions correctly. ADP Are the operations normal? YES >> Check each malfunction according to the instruction of the SYMPTOM 4, refer to ADP-211 "Symptom Table". No (memory indicator operates normally)>> Go to SYMPTOM 2, refer to ADP-211, "Symptom Table". K No (memory indicator does not operate normally either)>> GO TO 5. 4.CHECK MEMORY FUNCTION 2 Register the seat positions (refer to ADP-10, "MEMORY STORING: Description") and check that all parts of the seat, steering column, and door mirrors move to their memory positions correctly. Are the operations normal? M YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO >> GO TO 7. 5. CHECK SEAT MEMORY SWITCH/MEMORY INDICATOR Ν Check the seat memory switch/memory switch indicator of the SYMPTOM 5, refer to ADP-211, "Symptom Table". Is the inspection result normal? YES >> GO TO 6. NO >> Repair or replace the malfunctioning part. **6.**CHECK OPERATION CONDITION Р

<u>Description"</u>).

Are all operation conditions fulfilled?

YES >> Go to SYMPTOM 6, refer to ADP-211, "Symptom Table".

NO >> Fulfill the operation conditions. Refer to ADP-28, "MEMORY FUNCTION: System Description".

Check the memory operation conditions (refer to ADP-23, "SEAT SYNCHRONIZATION FUNCTION: System

### PRE-INSPECTION FOR DIAGNOSTIC

### < ON-VEHICLE MAINTENANCE >

# 7. CHECK MECHANISM

Check for the following.

- Mechanism deformation or pinched foreign materials.
  Interference with other parts because of poor installation.

### Is any malfunction present in the relevant parts?

>> Go to SYMPTOM 3, refer to <u>ADP-211, "Symptom Table"</u>. >> Repair or replace the malfunctioning part. YES

NO

### **DRIVER SEAT CONTROL UNIT**

< ON-VEHICLE REPAIR >

# **ON-VEHICLE REPAIR**

# DRIVER SEAT CONTROL UNIT

Exploded View

Refer to IP-11, "Exploded View".

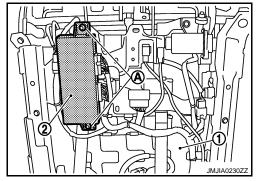
Removal and Installation

#### REMOVAL

#### **CAUTION:**

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

- 1. Remove the driver seat (1). Refer to <u>SE-95, "Removal and Installation"</u>.
- 2. Remove the mounting bolts (A).
- 3. Remove driver seat control unit (2).



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when replacing control unit. Refer to <u>ADP-8</u>, "<u>ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Description</u>".

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### **AUTOMATIC DRIVE POSITIONER CONTROL UNIT**

< ON-VEHICLE REPAIR >

## AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Exploded View

Refer to IP-11, "Exploded View".

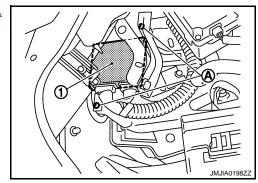
Removal and Installation

#### **REMOVAL**

#### **CAUTION:**

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

- 1. Remove the battery negative terminal.
- 2. Remove the instrument driver lower panel. Refer to <u>IP-12</u>, <u>"Removal and Installation"</u>.
- 3. Remove the screws (A).
- 4. Remove automatic drive positioner control unit (1).



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-8</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

#### **SEAT MEMORY SWITCH**

#### < ON-VEHICLE REPAIR >

## **SEAT MEMORY SWITCH**

Exploded View

Refer to INT-10, "Exploded View".

Removal and Installation

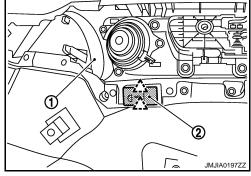
#### **REMOVAL**

#### **CAUTION:**

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

- 1. Disconnect battery negative terminal.
- 2. Remove the front door finisher (1). Refer to <a href="INT-10">INT-10</a>, "Removal and Installation".
- 3. Press pawls and remove seat memory switch (2) from front door finisher (1).





#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-8</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

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### **POWER SEAT SWITCH**

#### < ON-VEHICLE REPAIR >

## **POWER SEAT SWITCH**

Exploded View

Refer to SE-92, "Exploded View".

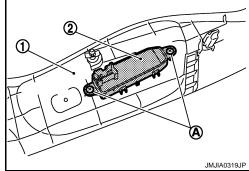
Removal and Installation

#### **REMOVAL**

#### **CAUTION:**

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

- 1. Remove the seat cushion outer finisher (1). Refer to <u>SE-96</u>, "<u>Disassembly and Assembly</u>".
- 2. Remove the screws (A).
- 3. Remove the power seat switch (2) from the seat cushion outer finisher (1).



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-8, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

#### SIDE SUPPORT SWITCH

#### < ON-VEHICLE REPAIR >

## SIDE SUPPORT SWITCH

Exploded View

Refer to SE-92, "Exploded View".

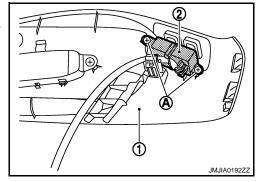
Removal and Installation

#### **REMOVAL**

#### **CAUTION:**

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

- 1. Remove the seat cushion outer finisher (1). Refer to SE-95, "Removal and Installation".
- 2. Remove the screws (A).
- 3. Remove side support switch (2) from the seat cushion outer finisher.



#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

· Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-8, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

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#### TILT&TELESCOPIC SWITCH

< ON-VEHICLE REPAIR >

# TILT&TELESCOPIC SWITCH

Exploded View

Refer to IP-11, "Exploded View".

Removal and Installation

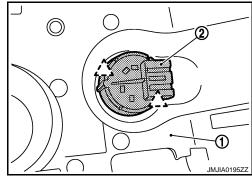
#### **REMOVAL**

#### **CAUTION:**

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

- 1. Disconnect battery negative terminal.
- 2. Remove the steering column mask (1). Refer to <a href="IP-12">IP-12</a>, "Removal and Installation".
- 3. Press pawls and remove tilt & telescopic switch (2) from the steering column mask (1).





#### **INSTALLATION**

Install in the reverse order of removal.

#### **CAUTION:**

• Clamp the harness in position.

#### NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-8, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description"</u>.