SECTION ADP AUTOMATIC DRIVE POSITIONER

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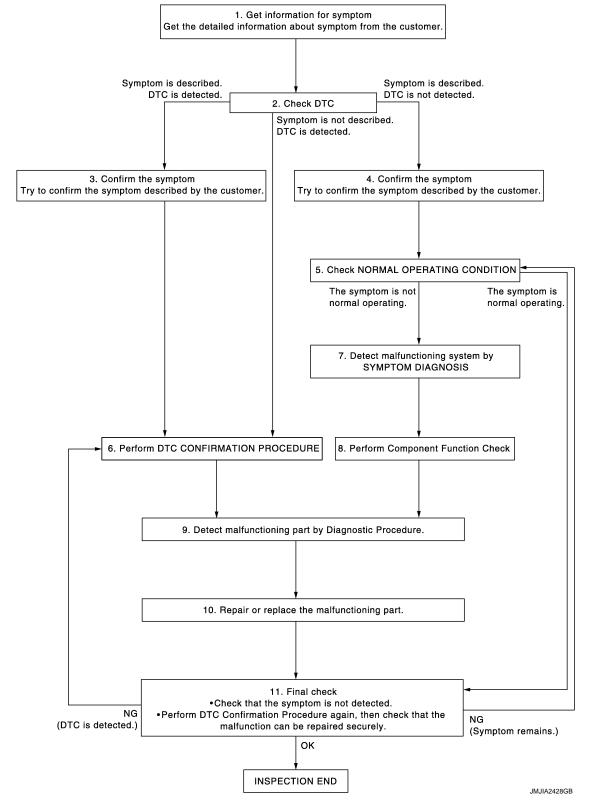
< BASIC INSPECTION >

BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000007463772

OVERALL SEQUENCE



DETAILED FLOW

Revision: 2013 February

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

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. Refer to ADP-144, "DTC Index"
Is any symptom described and any DTC is displayed?
Symptom is described, DTC is displayed.>>GO TO 3. Symptom is not described, DTC is displayed.>>GO TO 6. 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 6.
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-200, "Description".
Is the incident normal operation?
YES >> INSPECTION END NO >> GO TO 7.
6.PERFORM DTC CONFIRMATION PROCEDURE
Perform the confirmation procedure for the detected DTC.
Is the DTC displayed?
YES >> GO TO 8. NO >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .
7.PERFORM COMPONENT FUNCTION CHECK
Perform the component function check for the isolated malfunctioning point.
r enorm the component function check for the isolated manufactioning point.
>> GO TO 8.
8. 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 9.
9. REPARE OR REPLACE
Repair or replace the malfunctioning part.
>> GO TO 10.
10.FINAL CHECK

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

Are all malfunctions corrected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

YES >> INSPECTION END Symptom is detected.>> GO TO 5. DTC is detected.>> GO TO 6.

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : De-

scription

INFOID:000000007463773

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

Function	Condition	Procedure
Memory (Seat, steering, mirror)	Erased	Perform storing
*4	011	Perform initialization
Entry/exit assist ^{*1}	ON	Set slide amount ^{*2}
Intelligent Key interlock	Erased	Perform storing
Seat synchronization	OFF	_
This function only for AT model.		
Default value is 40mm. OTE: Notice that disconnecting the battery when dete DDITIONAL SERVICE WHEN REM		•
.SYSTEM INITIALIZATION		INFOID:00000000746
erform system initialization. Refer to ADP-10.		
>> GO TO 2.		
>> GO TO 2. SYSTEM SETTING		
	TEM SETTING : D	escription".
SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u>	TEM SETTING : D	escription".
SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> >> GO TO 3.	TEM SETTING : D	escription".
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SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> >> GO TO 3.		
SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> >> GO TO 3. .MEMORY STORAGE erform memory storage. Refer to <u>ADP-11, "ME</u> >> END ADDITIONAL SERVICE WHEN RE	<u>EMORY STORING</u> PLACING COI	<u>: Description"</u> . NTROL UNIT
SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> >> GO TO 3. MEMORY STORAGE erform memory storage. Refer to <u>ADP-11, "ME</u> >> END DDITIONAL SERVICE WHEN RE	<u>EMORY STORING</u> PLACING COI	<u>: Description"</u> . NTROL UNIT
 SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> > GO TO 3. MEMORY STORAGE erform memory storage. Refer to <u>ADP-11, "ME</u> > END 	EMORY STORING PLACING COI LACING CONT	: Description". NTROL UNIT 'ROL UNIT : Description
SYSTEM SETTING erform system setting. Refer to <u>ADP-12, "SYS</u> >> GO TO 3. .MEMORY STORAGE erform memory storage. Refer to <u>ADP-11, "ME</u> >> END .DDITIONAL SERVICE WHEN REP .DDITIONAL SERVICE WHEN REP	EMORY STORING PLACING COI LACING CONT	: Description". NTROL UNIT 'ROL UNIT : Description

Memory (Seat, steering, minor)	LIASEU	r enorm storing	
*1	ON	Perform initialization	Ρ
Entry/exit assist ^{*1}		Set slide amount ^{*2}	
Intelligent Key interlock	Erased	Perform storing	
Seat synchronization	OFF	_	
	•		

^{*1}: This function only for AT model.

*2: Default value is 40mm.

NOTE:

< BASIC INSPECTION >

Notice that disconnecting the battery when detected DTC are present will erase the DTC memory. ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to <u>ADP-10, "SYSTEM INITIALIZATION : Description"</u>.

>> GO TO 2.

2.SYSTEM SETTING

Perform system setting. Refer to ADP-12, "SYSTEM SETTING : Description".

>> GO TO 3.

3.MEMORY STORAGE

Perform memory storage. Refer to ADP-11, "MEMORY STORING : Description".

>> END SYSTEM INITIALIZATION

SYSTEM INITIALIZATION : Description

Always perform the initialization when the battery terminal is disconnected or the driver seat control unit is replaced.

The entry/exit assist function will not operate normally if no initialization is performed.

SYSTEM INITIALIZATION : Special Repair Requirement

INITIALIZATION PROCEDURE

1. CHOOSE METHOD

There are two initialization methods. <u>Which method do you use?</u> With door switch>>GO TO 2. With vehicle speed>>GO TO 4.

2. STEP A-1

Turn ignition switch from ACC to OFF position.

>> GO TO 3.

3. STEP A-2

Driver door switch is ON (open) \rightarrow OFF (close) \rightarrow ON (open).

>> END

4. STEP B-1

Drive the vehicle at more than 25 km/h (16 MPH).

>> END MEMORY STORING INFOID:000000007463778

INEQID:000000007463777

< BASIC INSPECTION >

MEMORY STORING : Description INFOID:000000007463779 А 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. В MEMORY STORING : Special Repair Requirement INFOID-000000007463780 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 D Shift AT selector lever to P position (AT model) or applied parking brake (MT model). >> GO TO 2. $2_{\cdot STEP\,2}$ Turn ignition switch ON. >> GO TO 3. 3.Step 3 Adjust driver seat, steering column and outside mirror position manually. Н >> GO TO 4. **4**.STEP 4 1. Push set switch. NOTE: Memory indicator for which driver seat position is already retained in memory is illuminated for 5 sec-ADP onds. 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. Κ 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 M Confirm the operation of each part with memory operation. >> END Ν **6.**STEP 6 Turn ignition switch OFF (LOCK). >> GO TO 7. **7**.STEP 7 Ρ Press and release set switch. Memory switch indicator is illuminated for 5 seconds. During memory switch indicator is illuminated, press Intelligent Key unlock button while pressing memory switch 1 or 2. NOTE:

Memory switch indicator lamp blinks for 5 seconds when registration is complete.

>> GO TO 8.

< BASIC INSPECTION >

8.STEP 8

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

>> END SYSTEM SETTING

SYSTEM SETTING : Description

INFOID:000000007463781

The settings of the automatic driving positioner system can be changed, using CONSULT, 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)

				\times : Applicable
Item	Content	CON- SULT	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	X ON	ON
Entry/exit assist (steering column)	Entry/exit assist (steering column) can be selected: ON (operated) – OFF (not operated)	х	~	ON
Seat synchronization	Seat synchronization can be selected: ON (operated) – OFF (not operated)	_	_	OFF
Reset custom settings	All settings can be set to default (factory setting).	_	—	_

Setting Change (For MT models)

-				×: Applicable
	Item	Content	Set switch	Factory setting
	Seat synchronization	Seat synchronization can be selected: ON (operated) – OFF (not operated)	x	OFF

SYSTEM SETTING : Special Repair Requirement

1. CHECK TYPE OF TRANSMISSION

Check type of transmission for the vehicle.

Witch type of transmission is used for the vehicle?

Turn ignition switch OFF.

>> GO TO 3.

3. STEP 2 (FOR M/T 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

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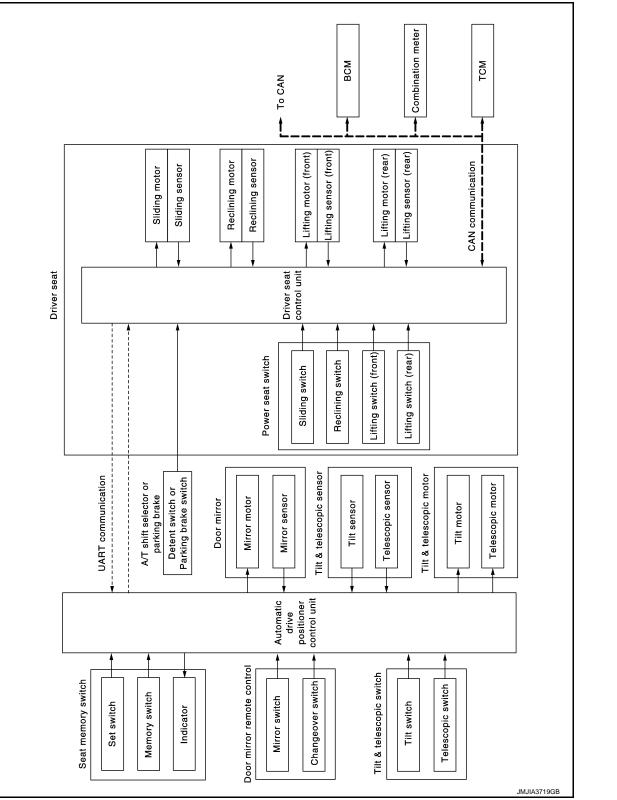
< BASIC INSPECTION >	
There are three way of setting method.	
Which method do you choose?	А
With set switch>>GO TO 5. With CONSULT>>GO TO 7.	
_	В
5. WITH SET SWITCH - STEP 1 (FOR A/T MODELS)	
 Turn ignition switch OFF. Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indicator. 	С
 Entry/exit assist (seat/steering column) and seat are ON: Memory switch indicator blink two times. Entry/exit assist (seat/steering column) and seat are OFF: Memory switch indicator blink once. 	D
>> GO TO 6.	D
6. WITH SET SWITCH - STEP 2 (FOR A/T MODELS)	
	Е
 Turn ignition switch ACC. Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indicator. 	_
 Seat synchronization are ON: Memory switch indicator blink two times. Seat synchronization are OFF: Memory switch indicator blink once. 	F
>> END	G
7. WITH CONSULT - STEP 1 (FOR A/T MODELS)	
Select "Work support".	Н
>> GO TO 8.	
8. WITH CONSULT - STEP 2 (FOR A/T MODELS)	I
 Select "EXIT SEAT SLIDE SETTING", "EXIT TILT SETTING" or "SEAT SLIDE VOLUME SET" then touch 	
	ADF
- EXIT SEAT SLIDE SETTING: Entry/exit assist (seat)	
 EXIT TILT SETTING: Entry/exit assist (steering column) Then touch "OK". 	
	Κ
>> END	
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< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

AUTOMATIC DRIVE POSITIONER SYSTEM AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM : System Diagram



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< SYSTEM DESCRIPTION >

AUTOMATIC DRIVE POSITIONER SYSTEM : System Description

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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		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		The positions of the steering column and door mirror are adjusted to the proper posi- tion 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 for- ward.	
Entry		On entry, the seat and steering column returns from exiting position to the previous driving position.	
Intelligent Key interlock function		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 auto-

SLEEP MODE

•	I he seat control unit adopts the sleep mode to reduce the electric power consumption.	
• 7	The sleep mode is activated when all of the following condition are fulfilled.	
1.	Ignition switch turn OFF (Steering LOCK position)	
2.	No load is applied to the seat control	AD
3.	The seat control unit 45 seconds timer is not activated	
4.	Set switch and memory switch (1 and 2) turn OFF	

WAKE-UP MODE

The sleep mode is cancelled when any status change is detected for the followings.

- 1. CAN communication
- 2. Power seat switch
- 3. Set switch and memory switch (1 and 2)
- 4. Steering column switch
- 5. Door mirror switch

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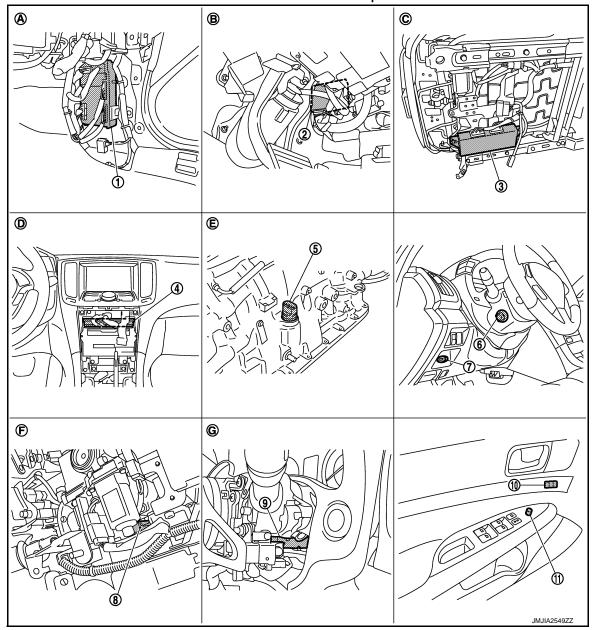
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< SYSTEM DESCRIPTION >

AUTOMATIC DRIVE POSITIONER SYSTEM : Component Parts Location INFOLD:00000007463785

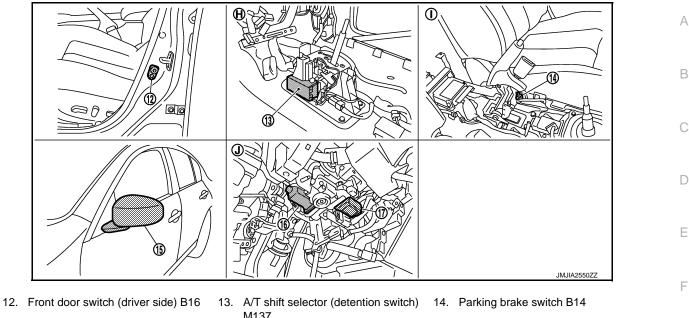


- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- G View with steering column cover lower and upper removed

- 2. Automatic drive positioner control unit 3. M51, M52
- 5. A/T assembly F51
- 8. Tilt sensor M48
- 11. Door mirror remote control switch D17
- B. View with instrument driver lower panel removed
- E. A/T assembly (TCM is built in A/T assembly)

- Driver seat control unit B451, B452
- 6. Tilt & telescopic switch M31
- 9. Telescopic sensor M48
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

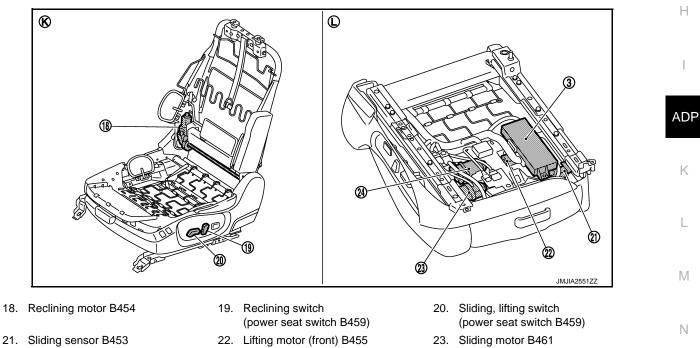
< SYSTEM DESCRIPTION >



- 15. Door mirror (driver side) D3
- View with center console assembly H. removed
- M137
- 16. Telescopic motor M49 View with center console assembly ١. removed
- 17. Tilt motor M49

J.

View with instrument driver lower panel removed



24. Lifting motor (rear) B463

back pad removed

- View with seat cushion pad and seat- L. Backside of the seat cushion
- AUTOMATIC DRIVE POSITIONER SYSTEM : Component Description

Ρ

CONTROL UNITS

K.

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< SYSTEM DESCRIPTION >

Item	Function	
Driver seat control unit	 Main units of automatic drive positioner system It is connected to the CAN. It communicates with the automatic drive positioner control via UART communication. 	
Automatic drive positioner control unit	 It communicates with the driver seat control unit via UART communication. Perform various controls with the instructions of driver seat control unit. Perform the controls of the tilt & telescopic, door mirror and the seat memory switch. 	
ВСМ	 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 communi- cation.	
ТСМ	Transmit the shift position signal (P range) to the driver seat control unit via CAN communication.	

INPUT PARTS

Switches

ltem	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 shift selector (detention switch)	Detect the P range position of A/T selector lever. (only for A/T models)	
Parking break switch	Detect the parking brake status. (only for MT models)	
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).

< SYSTEM DESCRIPTION >

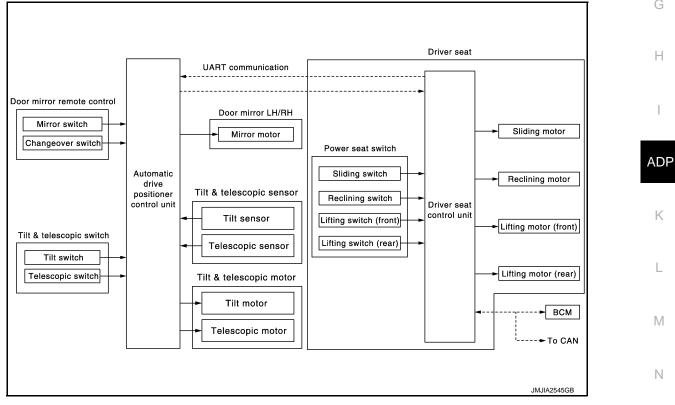
Item	Function	^
Reclining sensor	Detect the tilt of seatback.	A
Sliding sensor	Detect the front/rear position of seat.	

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

MANUAL FUNCTION : System Diagram



MANUAL FUNCTION : System Description

INFOID:000000007463788

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В

OUTLINE

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

OPERATION PROCEDURE

- 1. 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

< SYSTEM DESCRIPTION >

Seat

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

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.
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 oper- ation limit of each actuator via each sensor and will not operate the actuator anymore at that time.*

*: 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.

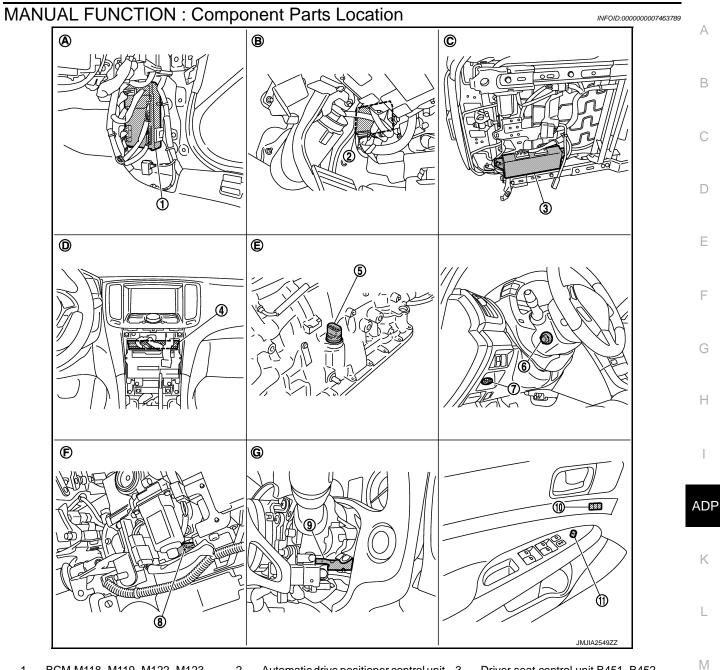
Door Mirror

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

NOTE:

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

< SYSTEM DESCRIPTION >



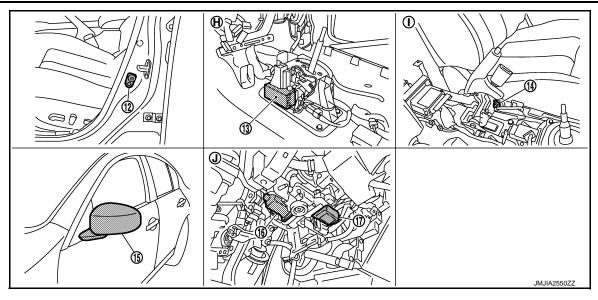
- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- G View with steering column cover lower and upper removed

- 2. Automatic drive positioner control unit 3. Driver seat control unit B451, B452 M51, M52
- 5. AT assembly F51
- 8. Tilt sensor M48
- 11. Door mirror remote control switch D17
- B. View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)
- 6. Tilt & telescopic switch M31
 9. Telescopic sensor M48
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

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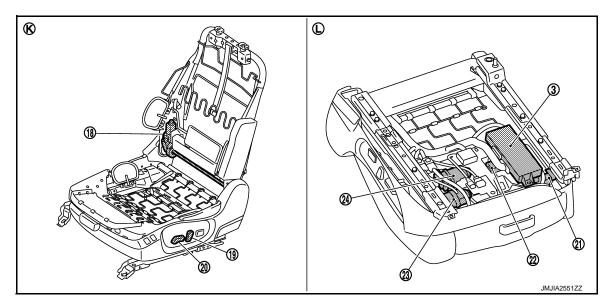
< SYSTEM DESCRIPTION >



- 12. Front door switch (driver side) B16
- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 13. A/T shift selector (detention switch) M137
- 16. Telescopic motor M49 View with center console assembly removed

Ι.

- 14. Parking brake switch B14
- 17. Tilt motor M49
- J. View with instrument driver lower panel removed



- 18. Reclining motor B454
- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463
- 19. Reclining switch (power seat switch B459) 22. Lifting motor (front) B455
- 20. Sliding, lifting switch (power seat switch B459)
 - 23. Sliding motor B461

- K. View with seat cushion pad and seat- L. Backside of the seat cushion back pad removed
- MANUAL FUNCTION : Component Description

INFOID:000000007463790

CONTROL UNITS

Revision: 2013 February

< SYSTEM DESCRIPTION >

Item	Function	
Driver seat control unit	 Operates the specific seat motor with the signal from the power seat switch. Transmits the ignition switch signal (ACC/ON) via UART communication to the automatic drive positioner control unit. 	
Automatic drive positioner control unit	Operates the specific motor with the signal from tilt & telescopic switch or door mir- ror 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	E
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. 	F
Tilt & telescopic switch	 The following switch is installed. Tilt switch Telescopic switch The specific parts can be operated with the operation of each switch. 	— G
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

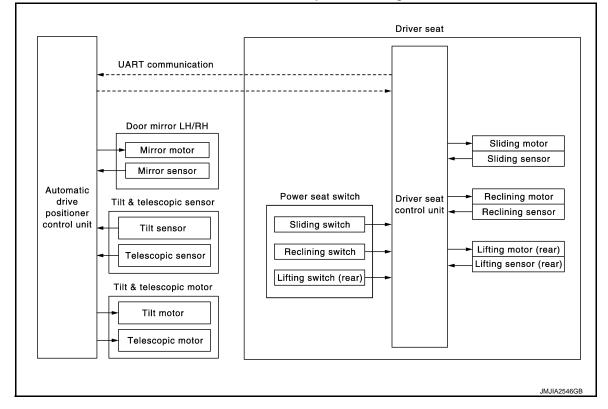
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< SYSTEM DESCRIPTION >

SEAT SYNCHRONIZATION FUNCTION : System Diagram





SEAT SYNCHRONIZATION FUNCTION : System Description

INFOID:000000007463792

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.

This function is set to OFF before delivery (initial setting).

For the system setting procedure. Refer to ADP-12, "SYSTEM SETTING : Description".

OPERATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Adjust seat position [sliding, reclining, lifting (rear)].
- 3. 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.

< SYSTEM DESCRIPTION >

Item	Request status	_
Ignition position	ON	_
System setting	ON	-
Switch inputs • Power seat switch • Tilt & telescopic switch • Door mirror remote control switch • Set switch • Memory switch	OFF (Not operated)	_
A/T selector lever (only for A/T model)	P position	_
Parking break (only for M/T 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, out- side mirror)	Driver seat control unit requests the operation to position accord- ing to the direction and distance of seat movement to the automat- ic 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.

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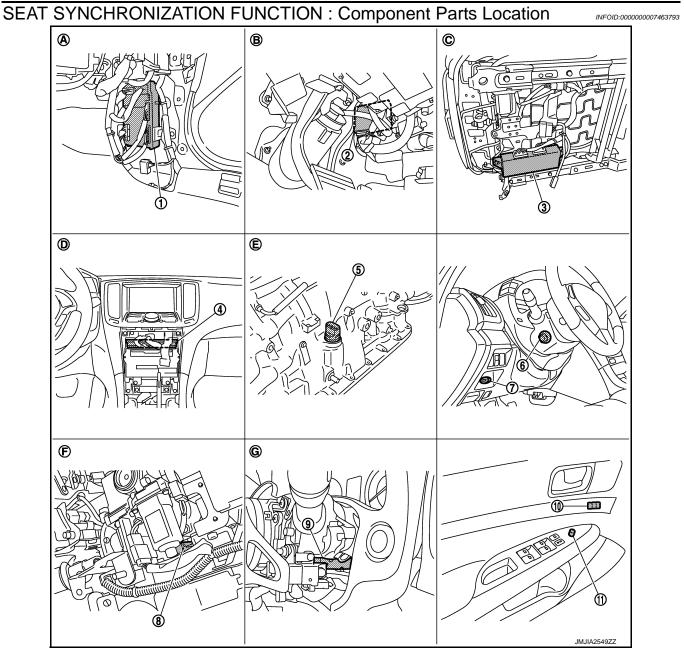
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< SYSTEM DESCRIPTION >

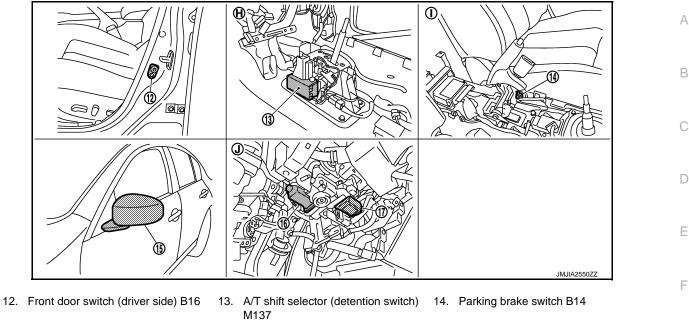


- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- G View with steering column cover lower and upper removed

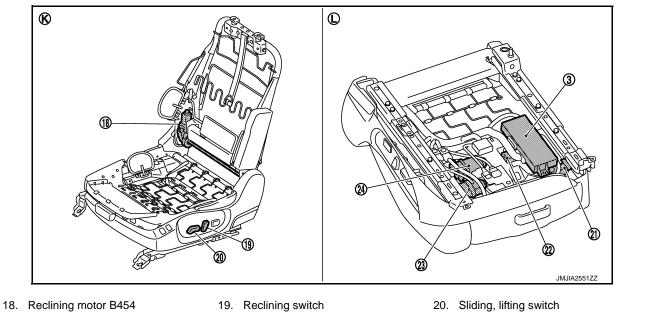
- 2. Automatic drive positioner control unit 3. M51, M52
- 5. AT assembly F51
- 8. Tilt sensor M48
- 11. Door mirror remote control switch D17
- B. View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)

- Driver seat control unit B451, B452
- 6. Tilt & telescopic switch M31
- 9. Telescopic sensor M48
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

< SYSTEM DESCRIPTION >



- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 16. Telescopic motor M49I. View with center console assembly removed
- 17. Tilt motor M49
- J. View with instrument driver lower panel removed



- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463

back pad removed

View with seat cushion pad and seat- L.

 Reclining switch (power seat switch B459)
 Lifting motor (front) B455

Backside of the seat cushion

- Sliding, lifting switch (power seat switch B459)
 Sliding motor B461

SEAT SYNCHRONIZATION FUNCTION : Component Description

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CONTROL UNITS

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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.

< SYSTEM DESCRIPTION >

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.

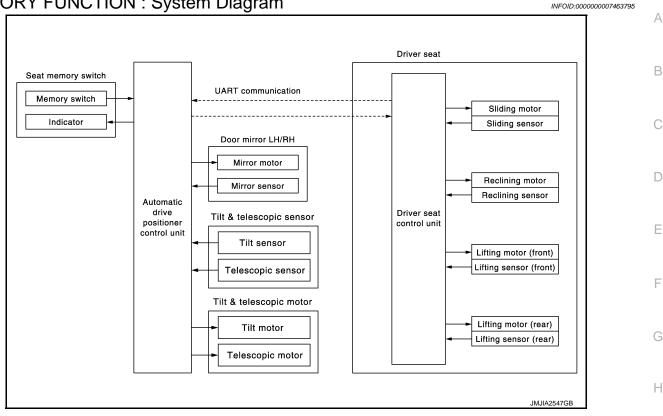
OUTPUT PARTS

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

< SYSTEM DESCRIPTION >

MEMORY FUNCTION : System Diagram



MEMORY FUNCTION : System Description

INFOID:000000007463796

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OUTLINE

The driver seat control unit can store the optimum driving positions (seat, steering column and door mirror ADP 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:

Κ Further information for the memory storage procedure. Refer to ADP-11, "MEMORY STORING : Description".

OPERATION PROCEDURE

- 1. 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.

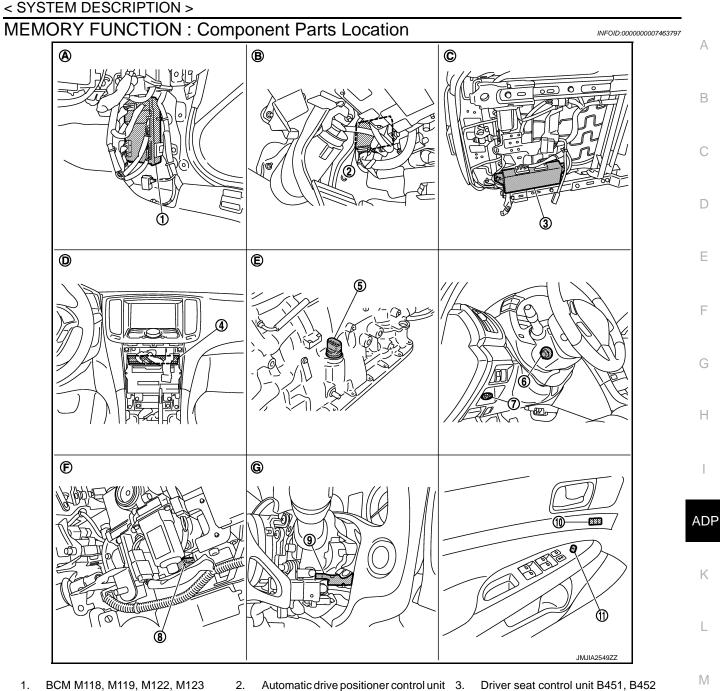
Item	Request status	
Ignition position	ON	
Switch inputs		
Power seat switch		
Tilt & telescopic switch	OFF	
Door mirror control switch	(Not operated)	
Set switch		
Memory switch		
A/T selector lever (only for A/T model)	P position	
Parking break (only for M/T models)	Applied	

DETAIL FLOW

< SYSTEM DESCRIPTION >

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 recogniz- es the memory switch pressed for 0.5 second or more and requests each motor operation to automatic drive positioner control unit via UART communication. The automatic drive positioner control unit op- erates each motor.
		Memory switch Indica- tor	Driver seat control unit requests the flashing of memory indicator to automatic drive positioner control unit via UART communication while either of the motors is operating. The automatic drive positioner con- trol unit illuminates the memory indicator.
3	Sensors (Seat, 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 reach- es the recorded address.
4	_	Memory switch Indica- tor	Driver seat control unit requests the illumination of memory indicator to auto drive positioner control unit via UART communication after all motors stop. The auto driving positioner control unit illuminates the memory indicator for 5 seconds.

< SYSTEM DESCRIPTION >



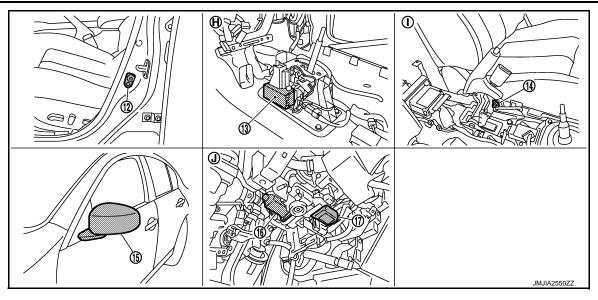
- Unified meter and A/C amp. M67 4.
- Key slot M22 7.
- Seat memory switch D5 10.
- Dash side lower (passenger side) Α.
- D. Behind cluster lid C
- View with steering column cover low-G er and upper removed

- Automatic drive positioner control unit 3. M51, M52
- AT assembly F51 5.
- Tilt sensor M48 8.
- 11. Door mirror remote control switch D17
- View with instrument driver lower Β. panel removed
- E. AT assembly (TCM is built in AT assembly)
- 6. Tilt & telescopic switch M31 9. Telescopic sensor M48
- C. Backside of seat cushion (driver side) 0
- F. View with instrument driver lower panel removed

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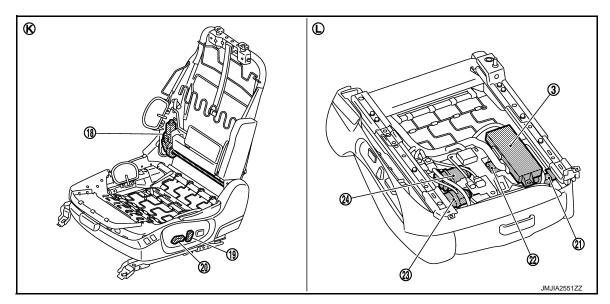
< SYSTEM DESCRIPTION >



- 12. Front door switch (driver side) B16
- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 13. A/T shift selector (detention switch) M137
- 16. Telescopic motor M49 View with center console assembly removed

Ι.

- 14. Parking brake switch B14
- 17. Tilt motor M49
- J. View with instrument driver lower panel removed



- 18. Reclining motor B454
- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463
- 19. Reclining switch (power seat switch B459) 22. Lifting motor (front) B455
- 20. Sliding, lifting switch (power seat switch B459)
- 23. Sliding motor B461

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

MEMORY FUNCTION : Component Description

INFOID:000000007463798

CONTROL UNITS

< SYSTEM DESCRIPTION >

Item	Function	A
Driver seat control unit	 The address of each part is recorded. Operates each motor of seat to the registered position. Requests the operations of steering column and door mirror to automatic drive positioner control unit 	В
Automatic drive positioner control unit	Operates the steering column and door mirror with the instructions from the driver seat control.	0

INPUT PARTS

Switches

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

Sensors

Item	Function	F
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.	G
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

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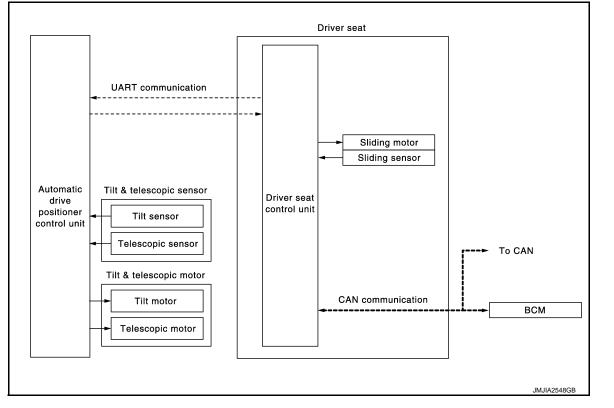
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< SYSTEM DESCRIPTION >

EXIT ASSIST FUNCTION : System Diagram



EXIT ASSIST FUNCTION : System Description

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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 ON before delivery (initial setting).
- Further information for the system setting procedure. Refer to ADP-12, "SYSTEM SETTING : Description".

OPERATION PROCEDURE

- 1. Open the driver door with ignition switch in OFF position.
- 2. 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	ON
Initialization	Done
Switch inputs Power seat switch Tilt & telescopic switch Door mirror remote control switch Set switch Memory switch 	OFF (Not operated)
A/T selector lever	P position

DETAIL FLOW

< SYSTEM DESCRIPTION >

Order	Input	Output	Control unit condition	А
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 recog- nizes 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 com- munication. The automatic drive positioner control unit operates each motor for a constant amount.	B

EXIT ASSIST FUNCTION : Component Parts Location INFOID:000000007463801 D A C B Ε 0 F ĺ Н E D **(4)** ADP Κ L G Ē Μ ത Ν ì Ο JMJIA2549ZZ Ρ

- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- 2. Automatic drive positioner control unit 3. M51, M52
 - AT assembly F51
- 8. Tilt sensor M48

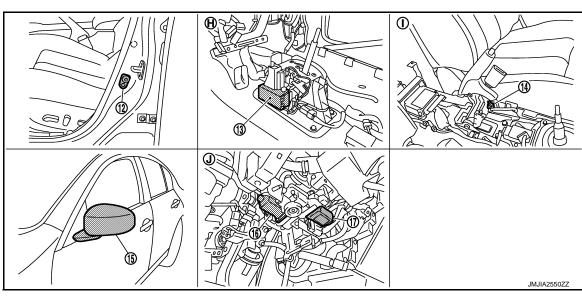
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- 11. Door mirror remote control switch D17
- Driver seat control unit B451, B452
- 6. Tilt & telescopic switch M31
- 9. Telescopic sensor M48

< SYSTEM DESCRIPTION >

- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- B. View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

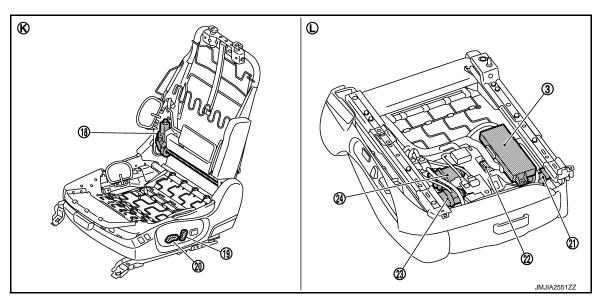
G View with steering column cover lower and upper removed



- 12. Front door switch (driver side) B16
- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 13. A/T shift selector (detention switch) M137
- 16. Telescopic motor M49

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- View with center console assembly J. removed
- 14. Parking brake switch B14
- 17. Tilt motor M49
 - View with instrument driver lower panel removed



- 18. Reclining motor B454
- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463
- K. View with seat cushion pad and seat- L. back pad removed
- (power seat switch B459) 22. Lifting motor (front) B455

Reclining switch

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- Backside of the seat cushion
- Sliding, lifting switch (power seat switch B459)
 Sliding motor B461

< SYSTEM DESCRIPTION >

EXIT ASSIST FUNCTION : Component Description

INFOID:000000007463802

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CONTROL UNITS

Item	Function	
Driver seat control unit	 Operates the seat sliding motor for a constant amount. Requests the operations of tilt motor and telescopic motor to automatic drive positioner control unit. 	
Automatic drive positioner control unit	Operates the tilt motor and telescopic motor with the request from the driver seat control.	
ВСМ	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.	H
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.	ADF
Sliding motor	Slide the seat frontward/rearward.	

ENTRY ASSIST FUNCTION

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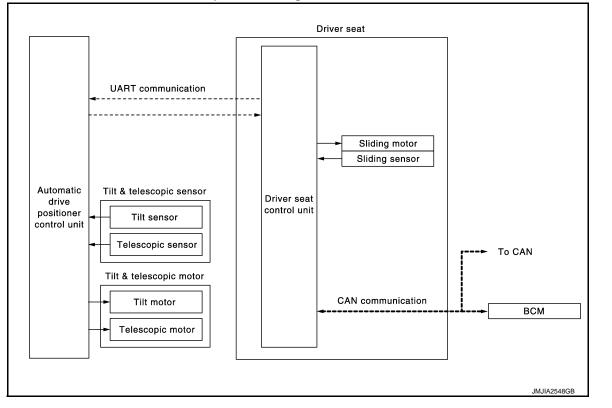
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< SYSTEM DESCRIPTION >

ENTRY ASSIST FUNCTION : System Diagram



ENTRY ASSIST FUNCTION : System Description

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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 ON before delivery (initial setting).
- Further information for the system setting procedure. Refer to <u>ADP-12, "SYSTEM SETTING : Description"</u>.

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

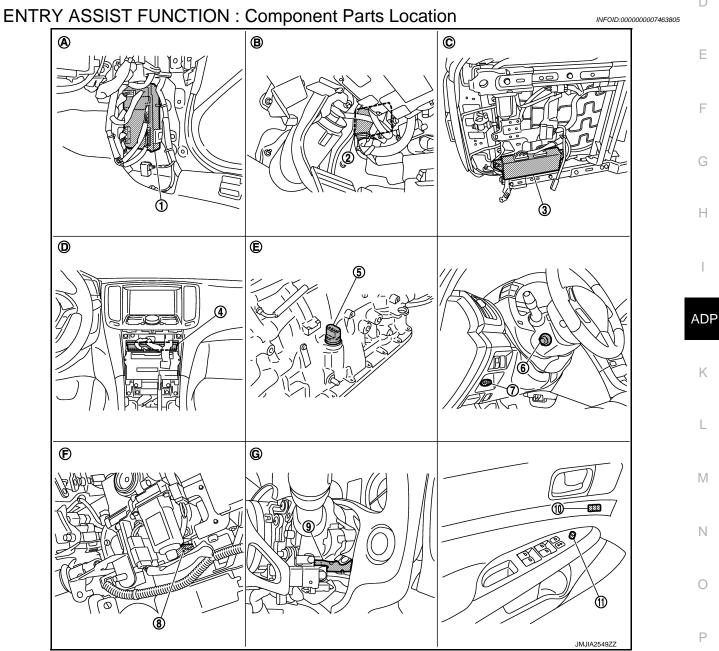
Satisfy all of the following items. The entry assist function is not performed if these items are not satisfied.

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	OFF
Door mirror control switch	(Not operated)
Set switch	
Memory switch	
A/T selector lever (only for A/T model)	P position
Parking break (only for M/T models)	Applied

DETAIL FLOW

< SYSTEM DESCRIPTION >

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, telescop- ic)		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.



- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- M51, M52 5. AT assembly F51
- 8. Tilt sensor M48

2.

- 11. Door mirror remote control switch D17
- Driver seat control unit B451, B452
- 6. Tilt & telescopic switch M31
- 9. Telescopic sensor M48

Revision: 2013 February

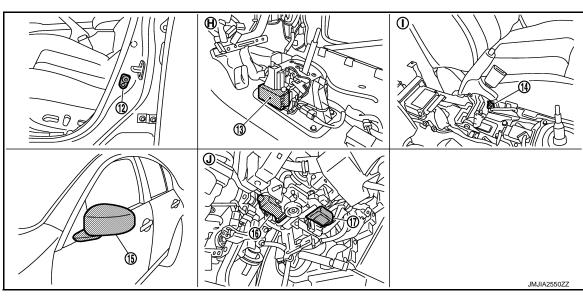
ADP-39

Automatic drive positioner control unit 3.

< SYSTEM DESCRIPTION >

- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- B. View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

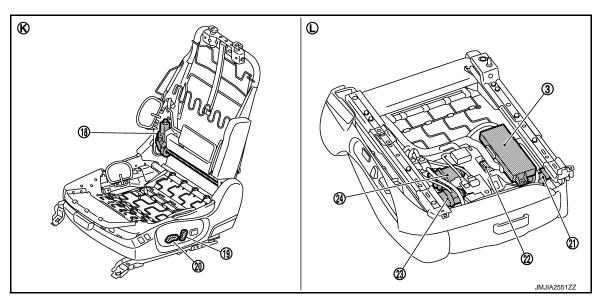
G View with steering column cover lower and upper removed



- 12. Front door switch (driver side) B16
- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 13. A/T shift selector (detention switch) M137
- 16. Telescopic motor M49

Ι.

- View with center console assembly J. removed
- 14. Parking brake switch B14
- 17. Tilt motor M49
 - View with instrument driver lower panel removed



- 18. Reclining motor B454
- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463
- K. View with seat cushion pad and seat- L. back pad removed
- (power seat switch B459)22. Lifting motor (front) B455

Reclining switch

19.

- Backside of the seat cushion
- Sliding, lifting switch (power seat switch B459)
 Sliding motor B461

< SYSTEM DESCRIPTION >

ENTRY ASSIST FUNCTION : Component Description

INFOID:000000007463806

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CONTROL UNITS

Item	Function
Driver seat control unit	 According to the ignition signal and door switch signal (driver side) from BCM, Operates the seat sliding motor for a constant amount. Requests the operations of tilt motor and telescopic motor to automatic drive positioner control unit.
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.	G

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.	I

OUTPUT PARTS

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

INTELLIGENT KEY INTERLOCK FUNCTION

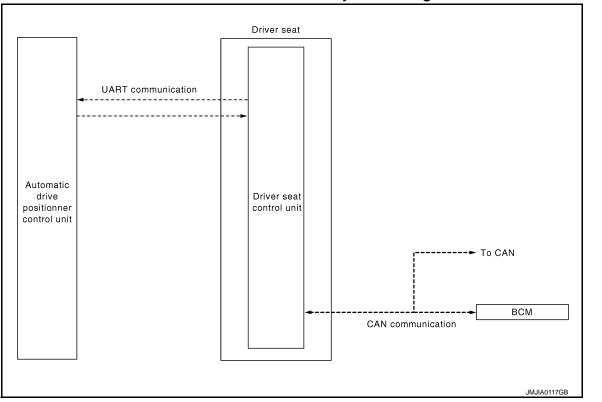
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< SYSTEM DESCRIPTION >

INTELLIGENT KEY INTERLOCK FUNCTION : System Diagram



INTELLIGENT KEY INTERLOCK FUNCTION : System Description

INFOID:000000007463808

INFOID:000000007463807

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 ADP-11, "MEMORY STORING : Description".

OPERATION CONDITION

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

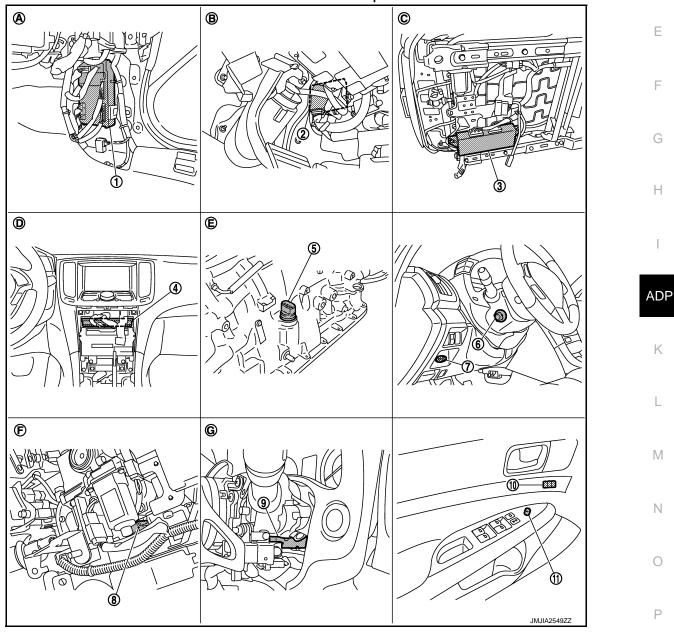
Item	Request status
Ignition position	OFF
System setting	ON
Key switch	OFF (Key is removed.)
Switch inputs Power seat switch Tilt & telescopic switch Door mirror control switch Set switch Memory switch 	OFF (Not operated)
A/T selector lever (only for A/T model)	P position
Parking break (only for M/T models)	Applied

< SYSTEM DESCRIPTION >

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	—	_	Driver seat control unit performs the exit assist function after perform- ing the memory function.
4	—	_	Driver seat control unit performs the entry assist function.

INTELLIGENT KEY INTERLOCK FUNCTION : Component Parts Location INFOLD.00000007463809



- 1. BCM M118, M119, M122, M123
- 4. Unified meter and A/C amp. M67
- 7. Key slot M22
- 10. Seat memory switch D5
- M51, M52 AT assembly F51
- AT assembly F5
 Tilt sensor M48

2.

- 11. Door mirror remote control switch D17
- Automatic drive positioner control unit 3. Driver seat control unit B451, B452
 - 6. Tilt & telescopic switch M31
 - 9. Telescopic sensor M48

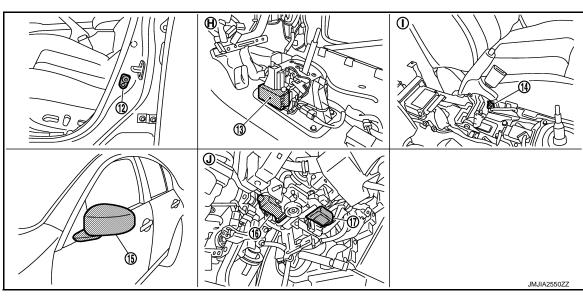
ADP-43

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< SYSTEM DESCRIPTION >

- A. Dash side lower (passenger side)
- D. Behind cluster lid C
- B. View with instrument driver lower panel removed
- E. AT assembly (TCM is built in AT assembly)
- C. Backside of seat cushion (driver side)
- F. View with instrument driver lower panel removed

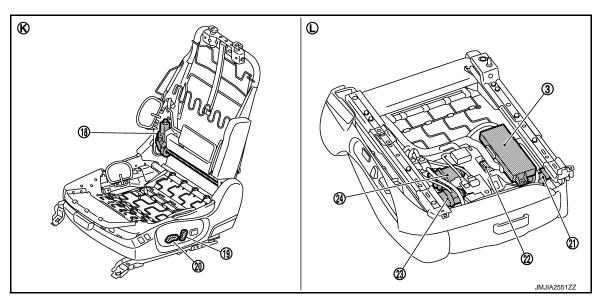
G View with steering column cover lower and upper removed



- 12. Front door switch (driver side) B16
- 15. Door mirror (driver side) D3
- H. View with center console assembly removed
- 13. A/T shift selector (detention switch) M137
- 16. Telescopic motor M49

Ι.

- View with center console assembly J. removed
- 14. Parking brake switch B14
- 17. Tilt motor M49
 - View with instrument driver lower panel removed



- 18. Reclining motor B454
- 21. Sliding sensor B453
- 24. Lifting motor (rear) B463
- K. View with seat cushion pad and seat- L. back pad removed
- 22. Lifting motor (front) B455

(power seat switch B459)

Reclining switch

19.

- Backside of the seat cushion
- Sliding, lifting switch (power seat switch B459)
 Sliding motor B461

< SYSTEM DESCRIPTION >

INTELLIGENT KEY INTERLOCK FUNCTION : Component Description

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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 switch)	

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DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

Diagnosis Description

INFOID:000000007463811

The auto drive positioner system can be checked and diagnosed for component operation with CONSULT. 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 con- trol unit in real time.	
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.	
ACTIVE TEST	Drive each output device.	
ECU PART NUMBER	Displays part numbers of driver seat control unit parts.	

CONSULT Function

SELF-DIAGNOSIS RESULTS Refer to <u>ADP-144, "DTC Index"</u>.

DATA MONITOR

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
SET SW	"ON/OFF"	×	×	ON/OFF status judged from the setting switch signal.
MEMORY 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.

INFOID:000000007463812

DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
MIR CHNG SW-R	"ON/OFF"	×	×	ON/OFF status judged from the door mirror remote control switch (switching to right) signal.
MIR CHNG SW-L	"ON/OFF"	×	×	ON/OFF status judged from the door mirror remote control switch (switching to left) signal.
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 (for-ward) signal.
TELESCO SW-RR	"ON/OFF"	×	×	ON/OFF status judged from the telescoping switch (back-ward) 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 ^{*2}	"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) sta- tus judged from the ignition switch signal.
SLIDE PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
RECLN PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
LIFT FR PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
LIFT RR PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
MIR/SEN RH U-D	" V "	-	×	Voltage input from door mirror sensor (passenger side) up/ down is displayed.
MIR/SEN RH R-L	"V"	-	×	Voltage input from door mirror sensor (passenger side) left/ right is displayed.
MIR/SEN LH U-D	" V "	-	×	Voltage input from door mirror sensor (driver side) up/down is displayed.
MIR/SEN LH R-L	" \ "	-	×	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.

*1:Only for AT models.

^{*2}:Only for MT models.

ACTIVE TEST **CAUTION:**

When driving vehicle, do not perform active test.

Test item	Description	ľ
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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DIAGNOSIS SYSTEM (DRIVER SEAT C/U)

< SYSTEM DESCRIPTION >

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
SEAT SLIDE VOLUME SET		40 mm
	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

DTC/CIRCUIT 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.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition Possible cause		F
U1000	CAN COMM CIRCUIT	 Driver seat control unit cannot communicate to other control units. Driver seat control unit cannot communicate for more than the specified time. 	Harness or connectors (CAN communication line is open or shorted)	G
DTC CON	FIRMATION P	ROCEDURE		
1. STEP 1				Н
		I and wait at least 3 seconds. result" using CONSULT.		I
Is the DTC				
YES >> Perform diagnosis procedure. Refer to <u>ADP-49, "Diagnosis Procedure"</u> . NO >> INSPECTION END				
Diagnosis Procedure				
Refer to LAN-17, "Trouble Diagnosis Flow Chart".				
Special Repair Requirement				
Refer to ADP-10, "SYSTEM INITIALIZATION : Description".				
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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

NOTE:

First perform diagnosis for B2126 if B2126 is detected.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" using CONSULT.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-50, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000007463819

1. CHECK SLIDING MOTOR CIRCUIT (POWER SHORT)

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

(+) Sliding motor		()	Voltage (V) (Approx.)	
Connector	Terminal		(
B461	35 42	Ground	0	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.check driver seat control unit output signal

- 1. Connect driver seat control unit connector.
- 2. Check voltage between driver seat control unit harness connector and ground.

(-	+)			
Driver seat control unit		(—)	Voltage (V) (Approx.)	
Connector	Terminal			
B452	35	Ground	0	
0432	42	Ground	U U	

Is the inspection result normal?

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B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >	
YES >> GO TO 3. NO >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u> 3. CHECK INTERMITTENT INCIDENT	A
Refer to <u>GI-43, "Intermittent Incident"</u> .	В
>> INSPECTION END	0
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B2113 RECLINING MOTOR

Description

- The seat reclining motor is installed to the seatback frame.
- 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

DTC DETECTION LOGIC

NOTE:

First perform diagnosis for B2126 if B2126 is detected.

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

DTC CONFIRMATION PROCEDURE

1.PEFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.

2. Check "Self diagnostic result" using CONSULT.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-52, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK RECLINING MOTOR CIRCUIT (POWER SHORT)

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

· · · · · · · · · · · · · · · · · · ·	(+) Reclining motor		Voltage (V) (Approx.)
Connector	Terminal		()
B454	36	Ground	٥
B404	44	Ground	U

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace harness.

2.CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGNAL

- 1. Connect driver seat control unit connector.
- 2. Check voltage between driver seat control unit harness connector and ground.

	(+) Driver seat control unit		Voltage (V) (Approx.)
Connector	Terminal		(
B452	36 44	Ground	0

Is the inspection result normal?

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INEOID-000000007463821

INFOID:000000007463822

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >	
YES >> GO TO 3. NO >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u> . 3. CHECK INTERMITTENT INCIDENT	А
Refer to <u>GI-43, "Intermittent Incident"</u> .	В
>> INSPECTION END	
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B2118 TILT SENSOR

Description

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- 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

INFOID:000000007463824

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2118	TILT SENSOR	The input voltage of tilt sensor is less then 0.1Vor more than 4.9V.	 Harness and connectors (Tilt sensor circuit is opened/ shorted, tilt sensor power supply circuit is opened/shorted.) Tilt sensor

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" using CONSULT.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-54, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK TILT SENSOR SIGNAL

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

Monitor item	Condition	Value
TILT SEN	Tilt position	Change between 1.1 V (close to top) 3.9 V (close to bottom)

Is the value normal?

YES >> GO TO 6. NO >> GO TO 2.

 $\mathbf{2}$

2.CHECK TILT SENSOR CIRCUIT

- 1. 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 po	sitioner control unit	Tilt & teleso	copic sensor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	7	M48	3	Existed

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

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B2118 TILT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

	e positioner control unit			Continuity
Connector	Termina	l	Ground	
M51	7			Not existed
he inspection result no ES >> GO TO 3. O >> Repair or rep CHECK TILT SENSO	place harness. R POWER SUPPLY			
Connect automatic d Turn ignition switch (Check voltage betwe	DN.			nd.
	(+)			Voltago (V/)
	elescopic sensor		()	Voltage (V) (Approx.)
Connector	Termina	l		
M48 he inspection result no	1		Ground	5
) >> GO TO 4.				
CHECK TILT SENSO	DFF.		actor	
Turn ignition switch C Disconnect automati	DFF. c drive positioner co ween automatic driv ector.	ntrol unit conn /e positioner c		connector and tilt & teles
Turn ignition switch (Disconnect automati Check continuity bet sensor harness conn	DFF. c drive positioner co ween automatic driv ector.	ntrol unit conn /e positioner c	ontrol unit harness c	connector and tilt & teles
Turn ignition switch C Disconnect automati Check continuity bet sensor harness conn Automatic drive posi	DFF. c drive positioner co ween automatic driv ector. tioner control unit	ntrol unit conn /e positioner c Tilt	ontrol unit harness c	
Turn ignition switch C Disconnect automati Check continuity bet sensor harness conn Automatic drive posi Connector M52	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33	ntrol unit conn /e positioner c Tilt Connector M48	ontrol unit harness c & telescopic sensor Terminal 1	Continuity Existed
Turn ignition switch (Disconnect automatic Check continuity bet sensor harness cont Automatic drive position Connector M52 Check continuity bet	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33	ntrol unit conn /e positioner c Tilt Connector M48	ontrol unit harness c & telescopic sensor Terminal 1	Continuity Existed onnector and ground.
Turn ignition switch (Disconnect automatic Check continuity bet sensor harness conno Automatic drive posi Connector M52 Check continuity bet	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv	ntrol unit conn /e positioner c Tilt Connector M48 e positioner co	ontrol unit harness c & telescopic sensor Terminal 1	Continuity Existed
Turn ignition switch C Disconnect automati Check continuity bet sensor harness conn Automatic drive posi Connector M52 Check continuity bet Automatic drive	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv re positioner control unit	ntrol unit conn /e positioner c Tilt Connector M48 e positioner co	ontrol unit harness c telescopic sensor Terminal 1 ntrol unit harness co	Continuity Existed onnector and ground.
Turn ignition switch (Disconnect automati Check continuity bet sensor harness conn Automatic drive posi Connector M52 Check continuity bet Automatic driv Connector M52 the inspection result no	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv re positioner control unit Termina 33 <u>ormal?</u> pomatic drive position place harness.	ntrol unit conn ve positioner c Tilt c Connector M48 e positioner co	Control unit harness of A telescopic sensor A telescopic sensor Terminal 1 ntrol unit harness co Ground	Continuity Existed Innector and ground. Continuity
Turn ignition switch (Disconnect automati Check continuity bet sensor harness conn Automatic drive posi Connector M52 Check continuity bet Automatic driv Connector M52 the inspection result no ES >> Replace auto O >> Repair or rep CHECK TILT SENSO Turn ignition switch (Disconnect automati	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv re positioner control unit e positioner control unit Termina 33 ormal? omatic drive position place harness. R GROUND CIRCU DFF. c drive positioner co ween automatic driv	ntrol unit conn /e positioner c Tilt Connector M48 e positioner co	A telescopic sensor Terminal 1 ntrol unit harness co Ground Refer to <u>ADP-204, "f</u> ector.	Continuity Existed Innector and ground. Continuity Not existed
Turn ignition switch (Disconnect automati Check continuity bet sensor harness conn Automatic drive posi Connector M52 Check continuity bet Automatic driv Connector M52 he inspection result no S >> Replace auto D >> Repair or rep CHECK TILT SENSO Turn ignition switch (Disconnect automati Check continuity bet	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv re positioner control unit Termina 33 ormal? omatic drive position place harness. R GROUND CIRCU DFF. c drive positioner co ween automatic driv ector.	Introl unit conn ve positioner c Tilt Connector M48 e positioner co I I er control unit. IT IT Introl unit conn ve positioner c	A telescopic sensor Terminal 1 ntrol unit harness co Ground Refer to <u>ADP-204, "f</u> ector.	Continuity Existed Innector and ground. Continuity Not existed Removal and Installation Connector and tilt & teles
Turn ignition switch (Disconnect automatic Check continuity bet sensor harness conn Automatic drive posi Connector M52 Check continuity bet Automatic drive Connector M52 the inspection result not S >> Replace auto D >> Repair or rep CHECK TILT SENSO Turn ignition switch (Disconnect automatic Check continuity bet sensor harness conn	DFF. c drive positioner co ween automatic driv ector. tioner control unit Terminal 33 ween automatic driv re positioner control unit Termina 33 ormal? omatic drive position place harness. R GROUND CIRCU DFF. c drive positioner co ween automatic driv ector.	Introl unit conn ve positioner c Tilt Connector M48 e positioner co I I er control unit. IT IT Introl unit conn ve positioner c	Control unit harness of telescopic sensor	Continuity Existed onnector and ground. Continuity Not existed Removal and Installation

Revision: 2013 February

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

B2119 TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

B2119 TELESCOPIC SENSOR

Description

- 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:000000007463827

INFOID:000000007463826

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INFOID:000000007463828

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2119	TELESCOPIC SENSOR	The input voltage of telescopic sensor is less than 0.1V or more than 4.9V.	 Harness and connectors (Telescopic sensor circuit is opened/shorted, telescopic sen- sor power supply circuit is opened/shorted.) Telescopic sensor

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" using CONSULT.

Is the DTC is detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-57, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK TELESCOPIC SENSOR SIGNAL

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

Monitor item	Condition	Value	
TELESCO SEN	Telescopic position	Change between 0.5 V (close to top) 4.5 V (close to bottom)	

Is the valve normal?

2. CHECK TELESCOPIC SENSOR CIRCUIT

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

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

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

ADP-57

B2119 TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive po	ositioner control unit		Continuity
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.

((+)		
Tilt & teleso	copic sensor	()	Voltage (V) (Approx.)
Connector	Terminal		
M48	1	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		Tilt & telescopic sensor		Continuity
Connector	Terminal	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			Continuity
Connector	Terminal	Ground	Continuity
M52	33		Not existed

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>.
- NO >> Repair or replace harness.

5.CHECK TELESCOPIC SENSOR GROUND 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 po	Automatic drive positioner control unit		copic sensor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M52	41	M48	4	Existed

Is the inspection result normal?

YES >> Replace tilt & telescopic sensor.

NO >> Repair or replace harness.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

	B2119 TELESCOPIC SENSOR
< DTC/CIRCUIT DIAGNOSIS >	
>> INSPECTION END	

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B2126 DETENT SW

Description

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

DTC Logic

INFOID:000000007463830

INFOID:000000007463829

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2126	DETENT SW	Selector lever is in P position and the vehicle speed of 7 ± 4 km/h is detected.	 Harness and connectors (Detention switch circuit is opened/shorted.) Detention switch Unified meter and A/C amp. (CAN communication)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Drive the vehicle at 7±4 km/h or more.
- 2. Check "Self diagnostic result" using CONSULT.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-60, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK DTC WITH "BCM"

Check "Self diagnostic result" for BCM using CONSULT.

Is the either DTC B2601, B2602, B2603, B2604 or B2605 detected?

YES >> Check the DTC. Refer to <u>BCS-74, "DTC Index"</u>.

NO >> GO TO 2.

2. CHECK DTC WITH "METER/M&A"

Check "Self diagnostic result" for METER/M&A using CONSULT.

Is the DTC detected?

YES >> Check the DTC. Refer to <u>MWI-86, "DTC Index"</u>.

NO >> GO TO 3.

3.CHECK DETENTION SWITCH SIGNAL

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

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

Is the status normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK DETENTION SWITCH CIRCUIT

INFOID:000000007463831

B2126 DETENT SW

< DTC/CIRCUIT DIAGNOSIS >

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

Connector Terminal Connector Terminal	D	Continuity	t selector	A/T shift	control unit	Driver seat
B451 21 M137 11 Existed		Continuity	Terminal	Connector	Terminal	Connector
	С	Existed	11	M137	21	B451

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

Driver seat	control unit		Continuity	_
Connector	Terminal	Ground	Continuity	
B451	21		Not existed	_
Is the inspection result norma	<u>al?</u>			_
YES >> Replace driver se NO >> Repair or replace		ADP-203, "Removal and Ins	stallation".	
5. CHECK INTERMITTENT				

>> INSPECTION END

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B2127 PARKING BRAKE SWITCH

Description

INFOID:000000007463832

- 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

INFOID:000000007463833

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2127	PARKING BRAKE	Parking brake is engaged and the vehicle speed of 7 km/h (4MPH) or more is detected.	 Harness and connectors (Parking brake switch circuit is opened/shorted.) Parking brake switch Combination meter (CAN communication) Driver seat control unit

DTC CONFIRMATION PROCEDURE

1.STEP 1

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

>> GO TO 2.

2.STEP 2

Check "Self Diagnostic Result" using CONSULT.

Is the DTC detected?

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

Diagnosis Procedure

INFOID:000000007463834

1.CHECK PARKING BRAKE SWITCH SIGNAL

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

Monitor item	Con	dition	Status
PARK BRAKE SW	Parking brake	Applied	ON
FAIL DIALE SW	Faiking blake	Release	OFF

Is the status normal?

YES >> GO TO 5.

2.CHECK PARKING BRAKE SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect parking brake switch harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between parking brake switch harness connector and ground.

B2127 PARKING BRAKE SWITCH

< DTC/CIRCUIT DIAGNOSIS >

	king brake switch			(-)	Voltage (V) (Approx.)
Connector	Termin	al			
B14	1		G	Ground	Battery voltage
	BRAKE SWITCH HAF	ector and p	arking brak		tor. king brake switch harnes
		i			
	control unit		Parking bra		Continuity
Connector	Terminal		ector	Terminal	
B451	8		14	1	Existed
. Check continuity be	etween driver seat co	ontrol unit h	arness con	nector and grour	nd.
Drive	er seat control unit				Continuity
Connector	Termin	al	G	Ground	
B451	8				Not existed
CHECK PARKING E efer to <u>ADP-63, "Com</u> the inspection result YES >> GO TO 5.	ponent Inspection". normal?				
NO >> Adjust or re .CHECK INTERMITT	eplace parking brake	switch.			
Refer to <u>GI-43, "Intermi</u>					
>> INSPECTIO	ction				INFOID:0000000074638
>> INSPECTIC Component Inspec .CHECK PARKING E					
COMPONENT INSPECT .CHECK PARKING E . Turn ignition switch . Disconnect parking	BRAKE SWITCH		minal and g	round part of pa	rking brake switch.
CHECK PARKING E .CHECK PARKING E . Turn ignition switch . Disconnect parking . Check continuity be	BRAKE SWITCH OFF. J brake switch connect			· · ·	
Component Inspect .CHECK PARKING B . Turn ignition switch Disconnect parking . Check continuity be	BRAKE SWITCH OFF. I brake switch connect etween parking brake		minal and g Cond	· · ·	rking brake switch.

YES >> INSPECTION END

NO >> Adjust or replace parking brake switch.

B2128 UART COMMUNICATION LINE

Description

INFOID:000000007463836

INFOID-00000007463837

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
B2128	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.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Operate tilt & telescopic switch for more than 2 seconds.
- 3. Check "Self diagnostic result" using CONSULT.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to <u>ADP-64</u>, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000007463838

1. CHECK UART COMMUNICATION LINE CONTINUITY

- 1. 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 sea	Driver seat control unit		Automatic drive positioner control unit	
Connector	Terminal	Connector	Terminal	Continuity
B451	1	M51	10	Existed
D401	17		26	Existed

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	1	Ground	Not existed
	17		INDI EXISIEU

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> Repair or replace harness.

PC		D GROUND CIRCU	IT
POWER SUPPLY AN BCM		CUIT	ļ
BCM : Diagnosis Proce	dure		INFOID:000000007463839
1. CHECK FUSE AND FUSIE	BLE LINK		E
Check that the following fuse	and fusible link are not bl	own.	
Signal	name	Fuse and f	usible link No.
			(40A)
Battery pow	er supply	10	(10A)
YES >> Replace the blow blown. NO >> GO TO 2. 2.CHECK POWER SUPPLY 1. Turn ignition switch OFF. 2. Disconnect BCM connect 3. Check voltage between B	CIRCUIT ors.		rcuit if a fuse or fusible link is
		5	
(+) BCI		()	Voltage
Connector	Terminal		(Approx.)
M118	1	Ground	Battery voltage
M119	11		
Is the measurement value norYES>> GO TO 3.NO>> Repair harness or 3. CHECK GROUND CIRCUCheck continuity between BC	r connector. IT	d ground.	
BC	M		
Connector	Terminal	Ground	Continuity
M119	13		Existed
Does continuity exist? YES >> INSPECTION EN NO >> Repair harness o DRIVER SEAT CONTI	r connector.		۸ ۲
DRIVER SEAT CONTR	OL UNIT : Diagnos	is Procedure	INFOID:00000007463840
NOTE: Do not disconnect the battery firmed using CONSULT. 1.CHECK POWER SUPPLY		he driver seat control unit	t connector until DTC is con-
1. Turn ignition switch OFF.			
2. Check voltage between d	river seat control unit har	ness connector and grour	nd.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	+) : control unit	(-)	Voltage (V) (Approx.)	
Connector	Terminal			
B452	33	Ground	Pottony voltago	
D432	40	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> Repair or replace harness between automatic drive positioner control unit and fuse block (J/B).

NO-2 >> Check circuit breaker.

2. CHECK GROUND CIRCUIT

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT : Special Repair Requirement

INFOID:000000007463841

1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to ADP-65, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure".

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure

INFOID:000000007463842

NOTE:

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

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

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

-	+) ositioner control unit	(-)	Voltage (V) (Approx.)
Connector	Terminal		(
M52	34	Ground	Pottony voltage
10152	39	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.

NO - 1 >> Repair or replace harness between automatic drive positioner control unit and fuse block (J/B).

NO - 2 >> Check circuit breaker.

2. CHECK GROUND CIRCUIT

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive po	ositioner control unit		Continuity	Α
Connector	Terminal	Ground	Continuity	
MED	40	Ground	Eviated	
M52	48		Existed	В
Is the inspection result norm YES >> INSPECTION E NO >> Repair or replac	ND			С
AUTOMATIC DRIVE F 1.perform additional		ROL UNIT : Special I	Repair Requirement	D
Perform additional service w		ative terminal.		Е
>> Refer to <u>ADP-9,</u> <u>: Description"</u> .	"ADDITIONAL SERVICE	WHEN REMOVING BATT	ERY NEGATIVE TERMINAL	F
				G
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SLIDING SWITCH

Description

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

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "SLIDE SW-FR", "SLIDE SW-RR" in "Data monitor" mode using CONSULT.
- 3. 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 (forward)	Release	OFF
SLIDE SW-RR	Sliding switch (backward)	Operate	ON
		Release	OFF

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-68, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463846

1.CHECK SLIDING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power seat switch harness connector and ground.

Powers	(+) eat switch	()	Voltage (V) (Approx.)	
Connector	Terminal		(. 1. h. e)	
B459	11	Ground	Potton / voltage	
6439	26	Giouna	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK SLIDING SWITCH CIRCUIT

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

Driver seat control unit		Power seat switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B451	11	B459	11	Existed
D431	26	6439	26	

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

INFOID:000000007463844

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SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit				Continuity	
Connector	7	Ferminal	Ground	Continuity	
B451		11	Ground	Not existed	
		26		Not existed	
ls the inspection resul	t normal?				
		unit. Refer to ADP-203	, "Removal and In	stallation".	
• '	replace harness.				
3. CHECK SLIDING					
Refer to <u>ADP-69, "Co</u>		<u>on"</u> .			
Is the inspection resul					
YES >> GO TO 4. NO >> Replace r		. Refer to <u>ADP-206, "R</u>	emoval and Install	ation"	
4.CHECK INTERMIT				<u>auorr</u> .	
Refer to <u>GI-43, "Intern</u>	<u>nittent Incident"</u> .				
>> INSPECT					
	-				
Component Inspe	ection			INFOID:00000007463847	
1.CHECK SLIDING S	SWITCH				
1. Turn ignition swite	h OFF.				
2. Disconnect power	r seat switch conr				
3. Check continuity	between power se	eat switch terminals.			
Power se	eat switch				
	ninal	Co	ndition	Continuity	
			Operate	Existed	
	11	Sliding switch (backward) Release	Not existed	
32			Operate	Existed	
	26	Sliding switch (forward)	3001010	Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-206, "Removal and Installation"</u>.

Sliding switch (forward)

Release

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Not existed

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

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "RECLN SW-FR", "RECLN SW-RR" in "Data monitor" mode using CONSULT.
- 3. Check reclining switch signal under the following conditions.

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:000000007463850

1.CHECK RECLINING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power seat switch harness connector and ground.

(+) Power seat switch		()	Voltage (V) (Approx.)	
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
B459	12	Ground	Battony voltago	
	27	Giðunu	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK RECLINING SWITCH CIRCUIT

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

Driver sea	at control unit	Power seat switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
B451	12	B459	12	Existed
D451	27	5435	27	

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

INFOID:000000007463848

INFOID:000000007463849

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

2	ver seat control uni	t		Continuity	
Connector		Terminal	Oracia	Continuity Not existed	
B451		12	Ground		
D401		27			
the inspection result	normal?				
NO >> Repair or I	replace harness	ol unit. Refer to <u>ADP-203, "I</u> s.	Removal and In	stallation".	
CHECK RECLININ	G SWITCH				
efer to ADP-71, "Con	nponent Inspec	tion".			
the inspection result	<u>normal?</u>				
YES >> GO TO 4.				- C II	
		ch. Refer to <u>ADP-206, "Rem</u> . 	oval and Installa	<u>ation"</u> .	
CHECK INTERMIT					
efer to <u>GI-43, "Interm</u>	<u>iittent Incident"</u> .				
>> INSPECTI					
component Inspe	CUON			INFOID:0000000740	
	G SWITCH				
-CHECK RECLININ					
. Turn ignition switc	h OFF.				
. Turn ignition switc Disconnect power	seat switch cor				
. Turn ignition switc Disconnect power	seat switch cor	nnector. seat switch terminals.			
. Turn ignition switc Disconnect power	seat switch cor between power	seat switch terminals.	tion	Continuity	
 Turn ignition switc Disconnect power Check continuity b 	seat switch cor between power at switch		lion	Continuity	
 Turn ignition switc Disconnect power Check continuity b Power sea 	seat switch cor between power at switch inal	Seat switch terminals.	tion Operate	Continuity Existed	
Turn ignition switc Disconnect power Check continuity b Power sea	seat switch cor between power at switch	seat switch terminals.			
 Turn ignition switc Disconnect power Check continuity b Power sea 	seat switch cor between power at switch inal	Seat switch terminals.	Operate	Existed	

NO >> Replace power seat switch. Refer to <u>ADP-206, "Removal and Installation"</u>.

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LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (FRONT)

Description

INFOID:000000007463852

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:000000007463853

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "LIFT FR SW-UP", "LIFT FR SW-DN" in "Data monitor" mode using CONSULT.
- 3. Check lifting switch (front) signal under the following conditions.

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:000000007463854

1.CHECK LIFTING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power seat switch harness connector and ground.

(+) Power seat switch		()	Voltage (V) (Approx.)	
Connector	Terminal		(/ ())	
B459	13	Ground	Pottony voltago	
D439	28	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK LIFTING SWITCH (FRONT) CIRCUIT

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

Driver sea	t control unit	Power seat switch Connector Terminal		Continuity
Connector	Terminal			Continuity
B451	13	B459	13	Existed
	28	6439	28	

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

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driv	ver seat control unit			Continuity
Connector	Te	erminal	Ground	Continuity
B451		13	Ground	Not existed
		28		Not existed
Is the inspection result	normal?			
		unit. Refer to ADP-203	, "Removal and Ins	stallation".
^ '	replace harness.			
3.CHECK LIFTING S				
Refer to ADP-73, "Con		<u>on"</u> .		
Is the inspection result	<u>normal?</u>			
YES >> GO TO 4. NO >> Replace p	ower cost switch	Refer to ADP-206, "Re	movel and install	ation"
4.CHECK INTERMIT		Relef to <u>ADF-200, Re</u>		<u>auorr</u> .
Refer to GI-43, "Interm	<u>ittent Incident"</u> .			
>> INSPECT				
Component Inspe	ection			INFOID:00000007463855
1. CHECK LIFTING S	WITCH (FRONT)			
1. Turn ignition switc	h OFF.			
2. Disconnect power	seat switch conn			
3. Check continuity b	etween power se	at switch terminals.		
		1		
Power sea	at switch	-		
Power sea Termi		Cor	ndition	Continuity
		Cor Lifting switch front (down)	ndition Operate	Continuity Existed

Operate

Release

Is the inspection result normal?

32

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-206, "Removal and Installation"</u>.

Lifting switch front (up)

28

M

L

Κ

Existed

Not existed

Ν

0

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< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (REAR)

Description

INFOID:000000007463856

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:000000007463857

1.CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:000000007463858

1.CHECK LIFTING SWITCH (REAR) SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power seat switch harness connector and ground.

Powers	(+) eat switch	(-)	Voltage (V) (Approx.)
Connector	Terminal		
B459	14	Ground	Pottory voltage
D409	29	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK LIFTING SWITCH (REAR) CIRCUIT

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

Driver sea	at control unit	Power sear switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B451	14	B459	14	Existed
D431	29	D435	29	Existed

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

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

				CONTINUITY	
Connector	Term		Ground		
	14		round		
B451	29)		Not existed	
the inspection result	normal?			·	
YES >> Replace dri NO >> Repair or re	ver seat control uni eplace harness.	it. Refer to <u>ADP-203, "Re</u>	emoval and In	stallation".	
CHECK LIFTING SV	VITCH (REAR)				
efer to <u>ADP-75, "Com</u>	ponent Inspection".				
the inspection result	normal?				
/ES >> GO TO 4.					
		efer to <u>ADP-206, "Remo</u>	val and Installa	<u>ation"</u> .	
CHECK INTERMITT	ENT INCIDENT				
efer to <u>GI-43, "Intermi</u>	ttent Incident".				
>> INSPECTIO	ON END				
>> INSPECTIO				INF0ID:000000007463	
omponent Inspec	ction			INFOID:00000007463	
OMPONENT INSPECT	Ction VITCH (REAR)			INF01D:000000007463	
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch	viton VITCH (REAR) OFF.			INFOID:00000007463	
CHECK LIFTING SV Turn ignition switch Disconnect power s	VITCH (REAR) OFF. Seat switch connect			INFOID:000000007463	
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch	VITCH (REAR) OFF. Seat switch connect			INFOID:000000007463	
CHECK LIFTING SV CHECK LIFTING SV Turn ignition switch Disconnect power s Check continuity be	VITCH (REAR) OFF. Seat switch connect		tion		
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch Disconnect power so Check continuity be Power se	Ction VITCH (REAR) OFF. seat switch connect stween power seat s	switch terminals.		INFOID:000000007463	
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch Disconnect power so Check continuity be Power se	Ction VITCH (REAR) OFF. Seat switch connect at switch power seat seat switch	switch terminals.	tion		
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch Disconnect power so Check continuity be Power so Terr	Ction VITCH (REAR) OFF. Seat switch connect Stween power seat stat switch	switch terminals.		Continuity	
OMPONENT INSPECT CHECK LIFTING SV Turn ignition switch Disconnect power so Check continuity be Power se	Ction VITCH (REAR) OFF. Seat switch connect at switch power seat seat switch	switch terminals.	Operate	Continuity Existed	

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< DTC/CIRCUIT DIAGNOSIS >

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

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "TILT SW-UP", "TILT SW-DN" in "Data monitor" mode using CONSULT.
- 3. Check tilt switch signal under the following conditions.

Monitor item	Conc	Condition		
		Operate	ON	
TILT SW-UP	Tilt switch (up)	Release	OFF	
TILT SW-DN	Tilt switch (down)	Operate	ON	
		Release	OFF	

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:000000007463862

1.CHECK TILT SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between tilt & telescopic switch harness connector and ground.

	(+) Tilt & telescopic switch		Voltage (V) (Approx.)	
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
M31	4	Ground	Potton voltago	
	5	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK TILT SWITCH 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 switch harness connector.

Automatic drive po	ositioner control unit	Tilt & telescopic switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	1	M31	4	Existed
NO I	17	10131	5	LAISIEU

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

INFOID:000000007463860

INFOID:000000007463861

TILT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

				Continuity
Connector	Ter	minal	Ground	
M51		1		Not existed
s the inspection result		17		
NO >> Repair or CHECK TILT SWIT Refer to <u>ADP-77. "Cor</u> s the inspection result YES >> GO TO 4.	replace harness. CH <u>mponent Inspection</u> t normal? It & telescopic swite TENT INCIDENT <u>hittent Incident"</u> .			Removal and Installation".
 Check continuity b 	elescopic switch co between tilt & telesc	nnector. copic switch terminals		
Tilt & teles	scopic switch		Condition	Continuity
	rminal	(Condition	Continuity
			Operate	Continuity Existed
	rminal	Tilt switch (up)	Operate Release	Existed Not existed
Te	rminal		Operate Release Operate	Existed Not existed Existed
Te	rminal 4 5	Tilt switch (up)	Operate Release	Existed Not existed
Te 1 <u>s the inspection result</u> YES >> INSPECT	t normal?	Tilt switch (up)	Operate Release Operate Release	Existed Not existed Existed Not existed

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC SWITCH

Description

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

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "TELESCO SW-FR", "TELESCO SW-RR" in "Data monitor" mode using CONSULT.
- 3. Check telescopic switch signal under the following conditions.

Monitor item	Condition		Status
TELESCO SW-FR	Telescopic switch (forward)	Operate	ON
TELESCO SW-FR	relescopic switch (lorward)	Release	OFF
TELESCO SW-RR	Telescopic switch (backward)	Operate	ON
	Telescopic switch (backward)	Release	OFF

Is the indication normal?

- YES >> INSPECTION END
- NO >> Perform diagnosis procedure. Refer to <u>ADP-78, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463866

1. CHECK TELESCOPIC SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between tilt & telescopic switch harness connector and ground.

	(+) Tilt & telescopic switch		Voltage (V) (Approx.)	
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
M31	2	Ground	Pottony voltago	
INIS I	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK TELESCOPIC SWITCH 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 switch harness connector.

Automatic drive po	sitioner control unit	Tilt & telescopic switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	11	M31	2	Existed
	27	10131	3	

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

INFOID:000000007463864

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TELESCOPIC SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Connector Terminal Ground Not existed M51 11 27 Not existed Sthe inspection result normal? YES >> Replace automatic drive positioner control unit. Refer to ADP-203, "Removal and Installation". NO NO >> Repair or replace harness. Scheck TELESCOPIC SWITCH Scheck TELESCOPIC SWITCH Refer to ADP-79, "Component Inspection". Athen inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207, "Removal and Installation". . . .CHECK INTERMITTENT INCIDENT Refer to GI-43, "Intermittent Incident". . . .CHECK TELESCOPIC SWITCH CHECK TELESCOPIC SWITCH Component Inspection CHECK TELESCOPIC SWITCH CHECK TELESCOPIC SWITCH 	Connector				Continuity
M51 27 Not existed a the inspection result normal? YES >> Replace automatic drive positioner control unit. Refer to ADP-203. "Removal and Installation". NO >> Repair or replace harness. S.CHECK TELESCOPIC SWITCH tefer to ADP-79. "Component Inspection". a the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207. "Removal and Installation". .CHECK INTERMITTENT INCIDENT tefer to GI-43. "Intermittent Incident". .>> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .Turn ignition switch OFF. .Disconnect tilt & telescopic switch connector. .Check continuity between tilt & telescopic switch terminals. Telescopic switch (forward) 1 2 Telescopic switch (forward) 0perate Release Not existed	Connector		Terminal	Ground	
a the inspection result normal? YES >> Replace automatic drive positioner control unit. Refer to ADP-203, "Removal and Installation". NO >> Repair or replace harness. CHECK TELESCOPIC SWITCH Refer to ADP-79, "Component Inspection". a the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207, "Removal and Installation". CHECK INTERMITTENT INCIDENT Refer to GI-43, "Intermittent Incident". . >> INSPECTION END Component Inspection serancececcore . CHECK TELESCOPIC SWITCH . . . Turn ignition switch OFF. . Disconnect tilt & telescopic switch connector. . Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity 1 2 Telescopic switch (forward) Operate Existed 1 3 Telescopic switch (backward) Operate Existed	M51		11		Not existed
YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-203. "Removal and Installation"</u> . NO >> Repair or replace harness. CHECK TELESCOPIC SWITCH Refer to <u>ADP-79. "Component Inspection".</u> as the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to <u>ADP-207. "Removal and Installation"</u> . CHECK INTERMITTENT INCIDENT Refer to <u>GI-43. "Intermittent Incident"</u> . .CHECK TELESCOPIC SWITCH Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. .Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity Telescopic switch (forward) 1 2 Telescopic switch (forward) 0perate Existed Release Not existed			27		
NO >> Rejair or replace harness. 3. CHECK TELESCOPIC SWITCH Refer to ADP-79, "Component Inspection". as the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207, "Removal and Installation". A.CHECK INTERMITTENT INCIDENT Refer to GI-43, "Intermittent Incident". >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. . Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition 1 2 1 2 1 1					
Refer to ADP-79. "Component Inspection". is the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207. "Removal and Installation". .CHECK INTERMITTENT INCIDENT Refer to GI-43. "Intermittent Incident". >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH . Turn ignition switch OFF. . Disconnect tilt & telescopic switch connector. . Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch 1 2 1 2 1 2 1 2 1 3 3 Telescopic switch (backward)	NO >> Repair o	or replace harness		r to <u>ADP-203, "F</u>	Removal and Installation".
as the inspection result normal? YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to <u>ADP-207. "Removal and Installation"</u> . .CHECK INTERMITTENT INCIDENT Refer to <u>GI-43. "Intermittent Incident"</u> . >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .CHECK continuity between tilt & telescopic switch connector. . Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch 2 Telescopic switch (forward) 1 2 3 Telescopic switch (backward)	CHECK TELESC	OPIC SWITCH			
YES >> GO TO 4. NO >> Replace tilt & telescopic switch. Refer to ADP-207, "Removal and Installation". .CHECK INTERMITTENT INCIDENT Refer to GI-43, "Intermittent Incident". >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .Turn ignition switch OFF. .Disconnect tilt & telescopic switch connector. .Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Image: Terminal 2 Telescopic switch (forward) 0perate Existed Release Not existed 3 Telescopic switch (backward)	efer to <u>ADP-79, "Co</u>	omponent Inspect	tion".		
NO >> Replace tilt & telescopic switch. Refer to <u>ADP-207. "Removal and Installation"</u> . CHECK INTERMITTENT INCIDENT Refer to <u>GI-43. "Intermittent Incident"</u> . >> INSPECTION END Component Inspection CHECK TELESCOPIC SWITCH CHECK TELESCOPIC SWITCH Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Condition Condition 1 2 Telescopic switch (forward) Operate Existed Release Not existed 1 3 Telescopic switch (backward)					
CHECK INTERMITTENT INCIDENT Refer to GI-43, "Intermittent Incident". >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH .CHECK TELESCOPIC SWITCH .Turn ignition switch OFF. .Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity 1 2 1 2 1 2 1 3 3 Telescopic switch (backward)			witch Refer to ADR-207	Pemoval and In	stallation"
Refer to GI-43, "Intermittent Incident". >> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH . Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity 1 2 1 2 1 3 Telescopic switch (forward) Operate Existed Release Not existed Operate		-			
>> INSPECTION END Component Inspection .CHECK TELESCOPIC SWITCH . Turn ignition switch OFF Disconnect tilt & telescopic switch connector Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity 1 2 1 2 1 3 Telescopic switch (forward) Operate Release Not existed Release Not existed Operate Existed Release Not existed Operate Existed Release Not existed Operate Existed Existed Release Not existed Operate Existed Existed Operate Existed Existed Substantiation					
Component Inspection INFOL:000000074 .CHECK TELESCOPIC SWITCH . . Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. . Disconnect tilt & telescopic switch connector. . . Check continuity between tilt & telescopic switch terminals. . Tilt & telescopic switch Condition Continuity Image: Construct of the system of	elei lo <u>01-43, Illei</u>	millent incident .			
Component Inspection INFOL:000000074 .CHECK TELESCOPIC SWITCH . . Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. . Disconnect tilt & telescopic switch connector. . . Check continuity between tilt & telescopic switch terminals. . Tilt & telescopic switch Condition Continuity Image: Construct of the system of	>> INSPEC	TION END			
.CHECK TELESCOPIC SWITCH . Turn ignition switch OFF. . Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity Terminal 2 Telescopic switch (forward) 1 2 3 Telescopic switch (backward)					
Turn ignition switch OFF. Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Terminal Continuity 1 2 1 2 3 Telescopic switch (forward) Operate Existed Release Not existed Operate Existed					INFOID:0000000746
Disconnect tilt & telescopic switch connector. Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Condition Continuity Tilt & telescopic switch Condition Continuity Terminal Operate Existed 1 2 Telescopic switch (forward) Operate Existed 1 3 Telescopic switch (backward) Operate Existed	.CHECK TELESC	OPIC SWITCH			
 Check continuity between tilt & telescopic switch terminals. Tilt & telescopic switch Terminal Telescopic switch (forward) Operate Existed Release Not existed Operate Existed Existed Release Not existed Operate Existed Existed		tch OFF.			
Tilt & telescopic switch Condition Continuity Terminal Prelescopic switch (forward) Operate Existed 1 3 Telescopic switch (backward) Operate Existed					
Terminal Condition Continuity 1 2 Telescopic switch (forward) Operate Existed 3 Telescopic switch (backward) Operate Existed	. Check continuity		escopic switch terminals.		
Terminal Operate Existed 1 2 Telescopic switch (forward) Operate Existed 3 Telescopic switch (backward) Operate Existed					
2 Telescopic switch (forward) Release Not existed 3 Telescopic switch (backward) Operate Existed	Tilt & teles	copic switch			Orationity
1 Release Not existed 3 Telescopic switch (backward) Operate Existed		-	_ Conditi	on	Continuity
3 Telescopic switch (backward) Operate Existed		minal		I	
Release Not existed	Terr	minal		Operate	Existed
	Terr	2	Telescopic switch (forward)	Operate Release	Existed Not existed
	Terr	2 3	Telescopic switch (forward)	Operate Release Operate	Existed Not existed Existed

SEAT MEMORY SWITCH

Description

INFOID:000000007463868

INFOID:000000007463869

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

Component Function Check

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "MEMORY SW 1", "MEMORY SW 2" "SET SW" in "Data monitor" mode using CONSULT.
- 3. Check seat memory switch signal under the following conditions.

Monitor item	Conc	dition	Status
SET SW	SET SW	Push	ON
SET SW	3ET 3W	Release	OFF
MEMORY SW 1	Mamany awitch 1	Push	ON
WEWORT SW I	Memory switch 1	Release	OFF
	Mamany awitch 2	Push	ON
MEMORY SW 2	Memory switch 2	Release	OFF

Is the indication normal?

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

Diagnosis Procedure

INFOID:000000007463870

1.CHECK SEAT MEMORY SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect seat memory switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between seat memory switch harness connector and ground.

	+) hory switch	()	Voltage (V) (Approx.)
Connector	Terminal		(Approx.)
	1		
D5	2	Ground	5
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK MEMORY SWITCH 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 seat memory switch harness connector.

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive po	ositioner control unit	Seat mer	mory switch	
Connector	Terminal	Connector	Terminal	Continuity
	9		1	
M51	24	D5	3	Existed
	25		2	
. Check continuity b	etween automatic driv	ve positioner control	unit harness conne	ector and ground.
Automatic c	rive positioner control unit			Continuity
Connector	Termin	al		Continuity
	9		Ground	
M51	24			Not existed
	25			
CHECK MEMORY S			nector and ground.	
Se	at memory switch			Questionity
Connector	Termin	al	Ground	Continuity
D5	4			Existed
4.CHECK SEAT MEM Refer to <u>ADP-81, "Com</u> <u>s the inspection result</u> YES >> GO TO 5.	nponent Inspection". normal? eat memory switch. R FENT INCIDENT	efer to <u>ADP-205. "Re</u>	moval and Installa	tion".
>> INSPECTI	ON END			
Component Inspe	ction			INFOID:00000007463
1 .CHECK SEAT MEM	IORY SWITCH			
	n OFF. emory switch connec etween seat memory			

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Seat men	nory switch		Condition	Continuity
Teri	ninal		Jonation	Continuity
	3	Set switch	Push	Existed
	3	Set Switch	Release	Not existed
4	1	Momory quitch 1	Push	Existed
4	I	Memory switch 1	Release	Not existed
	0	Mamany avritab 2	Push	Existed
	2	Memory switch 2	Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat memory switch.Refer to <u>ADP-205, "Removal and Installation"</u>.

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR REMOTE CONTROL SWITCH 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 using CONSULT.

Monitor item	Condition		E
	When operating the mirror switch up or down side.	: ON	
MIR CON SW-UP/DN	Other than above.	: OFF	
	When operating the mirror switch right or left side.	: ON	1
MIR CON SW-RH/LH	Other than above.	: OFF	
s the inspection result nor	mal?		0

- YES >> Mirror switch function is OK.
- NO >> Refer to <u>ADP-83</u>, "<u>MIRROR SWITCH : Diagnosis Procedure</u>".

MIRROR SWITCH : Diagnosis Procedure

1.CHECK MIRROR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect door mirror remote control switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between door mirror remote control switch harness connector and ground.

(+)			
Door mirror remo	te control switch	()	Voltage (V) (Approx.)	ľ
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	4			_
D17	12	Ground	F	
D17 -	13	- Ground	5	
-	15			N

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2.

2. CHECK MIRROR SWITCH 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 door mirror remote control switch harness connector.

ADP-83

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В

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INFOID:000000007463873

INFOID:000000007463872

INFOID:00000007463874

ADP

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive p	oositioner control unit	Door mirror remo	ote control switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	3		15	
M51	4	D17	13	Existed
NIS I	19		12	Existed
	20		4	

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

Automatic drive po	ositioner control unit		Continuity
Connector	Terminal		Continuity
	3	Ground	
M51	4	Ground	Not existed
WO I	19		Not existed
	20		

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-204, "Removal and Installation".

NO >> Repair or replace harness.

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

- 1. Turn ignition switch OFF.
- Check continuity between door mirror remote control switch harness connector and ground. 2.

Door mirror rem	ote control switch		Continuity
Connector	Terminal	Ground	Continuity
D17	7		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK MIRROR SWITCH

Check door mirror remote control switch (mirror switch). Refer to ADP-84, "MIRROR SWITCH : Component Inspection".

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Replace door mirror remote control switch (mirror switch). Refer to MIR-18, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

MIRROR SWITCH : Component Inspection

1.CHECK MIRROR SWITCH

1. Turn ignition switch OFF.

Disconnect door mirror remote control switch connector. 2.

Check continuity between door mirror remote control switch terminals. 3.

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< DTC/CIRCUIT DIAGNOSIS >

Door mirror rem	ote control switch		Condition	Continuity	А
Ter	minal		Condition	Continuity	
			RIGHT	Existed	_
4			Other than above	Not existed	В
10	-		LEFT	Existed	
13	7		Other than above	Not existed	С
45	-	Mirror switch	UP	Existed	
15			Other than above	Not existed	
10	-		DOWN	Existed	D
12			Other than above	Not existed	
Is the inspection result	normal?				Е

YES >> INSPECTION END

>> Replace door mirror remote control switch. Refer to MIR-18, "Removal and Installation". NO CHANGEOVER SWITCH

CHANGEOVER SWITCH : Description

Changeover switch is integrated into door mirror remote control switch. Changeover switch has three positions (L, N and R). It changes operating door mirror motor by transmitting control signal to automatic drive positioner control unit.

CHANGEOVER SWITCH : Component Function Check

1. CHECK CHANGEOVER SWITCH FUNCTION

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

Monitor item		Condition	
	When operating the changeove	er toward the right or left side.	: ON
MIR CHNG SW-R/L	Other than above.		: OFF
s the inspection result ne	ormal?		
	switch function is OK. 2-85. "CHANGEOVER SWITC	H : Diagnosis Procedure'	2
CHANGEOVER SV	/ITCH : Diagnosis Proc	edure	INFOID:00000007463878
	ER SWITCH INPUT SIGNAL		
 Turn ignition switch (Disconnect door min Turn ignition switch (OFF. For remote control switch connection		r and ground.
 Turn ignition switch (Disconnect door min Turn ignition switch (DFF. For remote control switch conner DN.		
 Turn ignition switch (Disconnect door mining Turn ignition switch (Check voltage between 	DFF. For remote control switch conne DN. Seen door mirror remote control		Voltage (V)
 Turn ignition switch (Disconnect door mining Turn ignition switch (Check voltage between 	DFF. For remote control switch conne DN. Been door mirror remote control	switch harness connecto	
Turn ignition switch (Disconnect door min Turn ignition switch (Check voltage between	DFF. For remote control switch connection DN. een door mirror remote control (+) remote control switch	switch harness connecto	Voltage (V)

NO >> GO TO 2.

2.CHECK CHANGEOVER SWITCH CIRCUIT

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< DTC/CIRCUIT DIAGNOSIS >

- 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 remote control switch harness connector.

Automatic drive po	sitioner control unit	Door mirror remote control switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	2	D17	11	Existed
	18		10	LNSted

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M51	2	Ground	Not existed
I GIVI	18		NOT EXISTED

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>. NO >> Repair or replace harness.

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

1. Turn ignition switch OFF.

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

Door mirror reme	Door mirror remote control switch		Continuity
Connector	Terminal Ground		Continuity
D17	7	_	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK CHANGEOVER SWITCH

Check door mirror remote control switch (changeover switch). Refer to ADP-86, "CHANGEOVER SWITCH : Component Inspection".

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Replace door mirror remote control switch (changeover switch). Refer to <u>MIR-18, "Removal and</u> <u>Installation"</u>.

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

CHANGEOVER SWITCH : Component Inspection

INFOID:000000007463879

1.CHECK CHANGEOVER SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door mirror remote control switch connector.
- 3. Check continuity between door mirror remote control switch terminals.

< DTC/CIRCUIT DIAGNOSIS >

Door mirror remo	ote control switch	Condition		Continuity	А
Terr	ninal			Continuity	
10			LEFT	Existed	_
10	7	Changeover owitch	Other than above	Not existed	В
	1	Changeover switch	RIGHT	Existed	
11			Other than above	Not existed	С

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door mirror remote control switch. Refer to <u>MIR-18, "Removal and Installation"</u>.

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Revision: 2013 February

POWER SEAT SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SEAT SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000007463880

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 se	Power seat switch		Continuity
Connector	Terminal	Ground	Continuity
B459	32		Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK POWER SEAT SWITCH INTERNAL CIRCUIT

Check reclining switch.

Refer to ADP-71, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace power seat switch. Refer to <u>ADP-206</u>, "Removal and Installation".

3.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

~ -

TILT &1	ELESCOPIC SW	ITCH GROUND CIR	CUIT
< DTC/CIRCUIT DIAGNOSIS			
TILT & TELESCOPIC S	SWITCH GROU	ND CIRCUIT	ŀ
Diagnosis Procedure			INFOID:000000007463881
1. CHECK POWER TILT & TEL	ESCOPIC SWITCH G	ROUND CIRCUIT	E
 Turn ignition switch OFF. Disconnect power tilt & tele Check continuity between p 			(
Tilt & telescopi	c switch		Continuity
Connector	Terminal	Ground	
M31 Is the inspection result normal?	1		Existed
YES >> GO TO 2. NO >> Repair or replace h 2. CHECK POWER TILT & TEL		ITERNAL CIRCUIT	E F
Check tilt switch. Refer to <u>ADP-77, "Component I</u> <u>Is the inspection result normal?</u> YES >> GO TO 3. NO >> Replace tilt & teleso		ADP-207, "Removal and Ins	c
3.CHECK INTERMITTENT IN			lanation . F
Refer to GI-43. "Intermittent Inc			
			I
>> INSPECTION END			_
			A
			ŀ
			L
			Ν
			Ν
			C
			F

< DTC/CIRCUIT DIAGNOSIS >

DETENTION SWITCH

Description

INFOID:000000007463882

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

Component Function Check

INFOID:000000007463883

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "DETENT SW" signal in "Data monitor" mode using CONSULT.
- 3. Check detention switch signal under the following conditions.

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-90, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK DTC WITH "BCM"

Check "Self Diagnostic Result" for BCM using CONSULT.

Is the either DTC B2601, B2602, B2603, B2604 or B2605 detected?

YES >> Check the DTC. Refer to <u>BCS-74, "DTC Index"</u>.

NO >> GO TO 2.

2.CHECK DETENTION SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect A/T shift selector harness connector.

3. Turn ignition switch ON.

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

	(+) A/T shift selector		Voltage (V) (Approx.)
Connector	Terminal		
M137	11	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK DETENTION SWITCH CIRCUIT 1

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

Driver seat	Driver seat control unit		A/T shift selector	
Connector	Terminal	Connector	Terminal	Continuity
B451	21	M137	11	Existed

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

INFOID:000000007463884

DETENTION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

	seat control unit			Continuity
Connector	Termin	al	Ground	
B451	21			Not existed
the inspection result n 'ES >> Replace driv IO >> Repair or re .CHECK DETENTION	rer seat control unit. place harness.	Refer to <u>ADP-203</u>	3, "Removal and Ins	tallation".
efer to <u>ADP-91, "Comp</u>				
the inspection result n				
'ES >> GO TO 5.				
•			D : Exploded View".	
CHECK DETENTION		2		
Turn ignition switch Disconnect BCM con Check continuity bet	nnector and A/T shit	connector and A	/T shift selector har	ness connector.
	BCM A/T shift selector		shift selector	
				Continuity
Connector	Terminal	Connector	Terminal	
	Terminal 96	Connector M137	Terminal 10	Existed
Connector M122	Terminal 96	Connector M137 ntrol unit harness	Terminal 10	Existed
Connector M122 Check continuity bet	Terminal 96 ween driver seat co BCM	Connector M137 ntrol unit harness	Terminal 10 s connector and grou	Existed
Connector M122 Check continuity bet Connector	Terminal 96 ween driver seat co BCM Termin 96	Connector M137 ntrol unit harness	Terminal 10 s connector and grou	Existed und. Continuity
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u>	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC NO >> Repair or re	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> olace harness.	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> olace harness.	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC NO >> Repair or re	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> blace harness.	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity Not existed
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC NO >> Repair or reported Component Inspection	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> olace harness. tion SWITCH	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity Not existed
Connector M122 Check continuity bet Connector M122 the inspection result n (ES >> Replace BC NO >> Repair or re omponent Inspection CHECK DETENTION	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to BCS-80 olace harness. tion SWITCH DFF. selector connector.	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity Not existed
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC NO >> Repair or reponent Inspec Omponent Inspec CHECK DETENTION Turn ignition switch of Disconnect A/T shift	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> blace harness. tion SWITCH DFF. selector connector. ctor terminals.	Connector M137 ntrol unit harness	Ground	Existed und. Continuity Not existed
Connector M122 Check continuity bet Connector M122 the inspection result n YES >> Replace BC NO >> Repair or rep Omponent Inspect Omponent Inspect CHECK DETENTION Turn ignition switch of Disconnect A/T shift Check A/T shift sele	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> blace harness. tion SWITCH OFF. selector connector. ctor terminals.	Connector M137 ntrol unit harness	Terminal 10 s connector and grou Ground	Existed und. Continuity Not existed
Connector M122 Check continuity bet Connector M122 the inspection result n (ES >> Replace BC O >> Repair or rep Omponent Inspection CHECK DETENTION Turn ignition switch of Disconnect A/T shift Check A/T shift sele	Terminal 96 ween driver seat co BCM Termin 96 ormal? M. Refer to <u>BCS-80</u> blace harness. tion SWITCH OFF. selector connector. ctor terminals.	Connector M137 ntrol unit harness	Ground	Existed und. Continuity Not existed

PARKING BRAKE SWITCH

< DTC/CIRCUIT DIAGNOSIS >

PARKING BRAKE SWITCH

Description

INFOID:000000007463886

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

INFOID:000000007463887

1. CHECK PARKING BRAKE SWITCH INPUT SIGNAL

- 1. Select "PARK BRAKE SW" in "Data Monitor" mode using CONSULT.
- 2. Check parking brake switch signal under the following conditions.

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-92, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463888

1. CHECK PARKING BRAKE SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect A/T shift selector harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between parking brake switch harness connector and ground.

(+) Parking brake switch		()	Voltage (V) (Approx.)
Connector	Connector Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
B14	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit connector.

Check continuity between driver seat control unit harness connector and parking brake switch harness connector.

Driver seat	Driver seat control unit		Parking brake switch	
Connector	Terminal	Connector	Terminal	Continuity
B451	8	B14	1	Existed

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	8		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203</u>, "Removal and Installation".

NO >> Repair or replace harness.

PARKING BRAKE SWITCH

CTC/CIR	CUIT DIAG	SNOSIS >			
3.снеск	PARKING E	BRAKE SWITCH			
Refer to AD	P-93, "Com	ponent Inspection".			
	ction result	normal?			
	GO TO 4.	raplace perking brok	a awitch (nadal type)) Defer to DD 6 "DD	
NO-1 >>	View".	replace parking brake	e switch (pedal type)). Relef 10 <u>PB-6, PE</u>	DAL TYPE : Exploded
	<u>View"</u> .		e switch (lever type)). Refer to <u>PB-7, "LE\</u>	/ER TYPE : Exploded
1. CHECK	INTERMIT	FENT INCIDENT			
Refer to GI	43, "Interm	ittent Incident".			
	INSPECTI				
Jompone	ent Inspe	cuon			INFOID:000000007463889
1.CHECK	PARKING E	BRAKE SWITCH			
	nition switch				
		g brake switch connec etween parking brake		around part of parking	n brake switch
		etween parking brake	Switch terminal and	ground part of parking	
	Parkin	ng brake	Con	dition	Continuity
	Т	minal	Condition		e en antj
	Ieri	minai			
	1	Ground part of parking	Parking brake	Applied	Existed
	1	Ground part of parking brake switch	Parking brake	Applied Release	Existed Not existed
-	1 ction result	Ground part of parking brake switch normal?	Parking brake		
YES >>	1 <u>ction result</u> INSPECTIO Adjust or r	Ground part of parking brake switch normal? ON END		Release	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTIO Adjust or r <u>View"</u> .	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTIO Adjust or r <u>View"</u> .	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTIO Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTIO Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTIO Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed
YES >> NO-1 >>	1 <u>ction result</u> INSPECTION Adjust or n <u>View</u> ". Adjust or n	Ground part of parking brake switch normal? ON END replace parking brake	e switch (pedal type	Release). Refer to <u>PB-6, "PE</u>	Not existed

SLIDING SENSOR

< DTC/CIRCUIT 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. Turn ignition switch ON.
- 2. Select "SLIDE PULSE" in "Data monitor" mode using CONSULT.
- 3. Check sliding sensor signal under the following conditions.

Monitor item	Condition		Valve
		Operate (forward)	Change (increase) ^{*1}
SLIDE PULSE Se	Seat sliding	Operate (backward)	Change (decrease) ^{*1}
		Release	No change ^{*1}

^{*1}: 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-94, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463892

1.CHECK SLIDING SENSOR SIGNAL

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

(+) Driver seat control unit		()	Condition		Voltage (V) (Approx.)
Connector	Terminal				(Approx.)
B451	24	Ground	Seat sliding	Operate Other than above	10mSec/div 10mSec/div 2V/div JMJIA011922 0 or 5

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

2. CHECK SLIDING SENSOR CIRCUIT

1. Turn ignition switch OFF.

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

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SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	t control unit	SI	iding sensor		.
Connector	Terminal	Connector	Terminal		Continuity
B451	24	B453	24		Existed
Check continuity b	etween driver seat co	ntrol unit harness	connector and gro	ound.	
	er seat control unit		_		Continuity
Connector	Termina	al	Ground		-
B451	24				Not existed
CHECK SLIDING S Connect driver sea Turn ignition switcl	eplace harness. ENSOR POWER SUI at control unit connect	or.	and ground		
enteen venage ser					
	(+) Sliding sensor		()		Voltage (V) (Approx.)
Connector	Termina	al			(Αρριολ.)
B453	16		Ground		Battery voltage
ES >> GO TO 5. O >> GO TO 4. CHECK SLIDING S Turn ignition switcl	ENSOR POWER SU	PPLY CIRCUIT			
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver		ector.	s connector and sl	iding se	ensor harness co
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver s Check continuity b tor.	n OFF. seat control unit conne	ector. ontrol unit harnes	s connector and sl	iding se	
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver s Check continuity b tor.	n OFF. seat control unit conne etween driver seat co	ector. ontrol unit harnes		iding se	ensor harness co Continuity
O >> GO TO 4. CHECK SLIDING S Turn ignition switcl Disconnect driver Check continuity b tor. Driver sea	n OFF. seat control unit conne etween driver seat co t control unit	ector. ontrol unit harnes Si	iding sensor	iding so	
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor. Driver sea Connector B451	n OFF. seat control unit conne etween driver seat co t control unit Terminal	ector. ontrol unit harnes SI Connector B453	iding sensor Terminal 16		Continuity
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver s Check continuity b tor. Driver sea Connector B451 Check continuity b	n OFF. seat control unit conne etween driver seat co t control unit Terminal 16	ector. ontrol unit harnes SI Connector B453	iding sensor Terminal 16		Continuity Existed
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver s Check continuity b tor. Driver sea Connector B451 Check continuity b	n OFF. seat control unit conne etween driver seat co t control unit Terminal 16 etween driver seat co	ector. ontrol unit harnes: SI Connector B453 ntrol unit harness	iding sensor Terminal 16		Continuity
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor. Driver sea Connector B451 Check continuity b Driv Connector B451	n OFF. seat control unit connective etween driver seat control unit t control unit Terminal 16 etween driver seat control unit rer seat control unit 16	ector. ontrol unit harnes: SI Connector B453 ntrol unit harness	iding sensor Terminal 16 connector and gro		Continuity Existed
O >> GO TO 4. CHECK SLIDING S Turn ignition switcl Disconnect driver so Check continuity b tor. Driver sea Connector B451 Check continuity b Driver sea Connector B451 Check continuity b Driver sea Connector B451 the inspection result ES >> Replace d O >> Repair or r CHECK SLIDING S Turn ignition switch Disconnect driver so	n OFF. seat control unit connective etween driver seat control unit t control unit Terminal 16 etween driver seat control unit rer seat control unit 16 normal? river seat control unit. eplace harness. ENSOR GROUND CI	ector. ontrol unit harnes: Connector B453 ntrol unit harness al Refer to <u>ADP-20</u> RCUIT 1 ector.	iding sensor Terminal 16 connector and gro Ground 3, "Removal and Ir	Dund.	Continuity Existed Continuity Not existed
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor. Driver sea Connector B451 Check continuity b Connector B451 the inspection result ES >> Replace d O >> Repair or r CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor.	t control unit t control unit Terminal 16 etween driver seat co rer seat control unit Termina 16 etween driver seat co rer seat control unit 16 normal? river seat control unit. eplace harness. ENSOR GROUND CI n OFF. seat control unit conne etween driver seat co	ector. ontrol unit harness Connector B453 ntrol unit harness al Refer to ADP-20 RCUIT 1 ector. ontrol unit harness	iding sensor Terminal 16 connector and gro Ground 3, "Removal and Ir s connector and sl	Dund.	Continuity Existed Continuity Not existed
O >> GO TO 4. CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor. Driver sea Connector B451 Check continuity b Connector B451 the inspection result ES >> Replace d O >> Repair or r CHECK SLIDING S Turn ignition switch Disconnect driver so Check continuity b tor.	t control unit connective of the control unit to the control unit. The control unit to the control unit control	ector. ontrol unit harness Connector B453 ntrol unit harness al Refer to ADP-20 RCUIT 1 ector. ontrol unit harness	iding sensor Terminal 16 connector and gro Ground 3, "Removal and Ir	Dund.	Continuity Existed Continuity Not existed

B451

31

B453

31

Existed

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

 $6. {\sf CHECK \ SLIDING \ SENSOR \ GROUND \ CIRCUIT \ 2}$

1. Connect driver seat control unit connector.

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

	Driver seat	control unit		Continuity
-	Connector	Terminal	Ground	Continuity
	B451	31		Existed

Is the inspection result normal?

YES >> Replace sliding sensor (Built in seat slide cushion frame). Refer to <u>SE-60, "Exploded View"</u>.

NO >> Replace driver seat control unit. Refer to <u>ADP-203</u>, "Removal and Installation".

RECLINING SENSOR

< DTC/CIRCUIT	DIAGNOSIS >	

RECLINING SENSOR

А Description INFOID:000000007463893 • The reclining motor is installed to the seatback frame. В • 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:000000007463894 **1.**CHECK FUNCTION 1. Turn ignition switch ON. D Select "RECLN PULSE" in "Data monitor" mode using CONSULT. 2. Check reclining sensor signal under the following conditions. 3. Condition Value Monitor item Operate (forward) Change (increase)*1 F **RECLN PULSE** Seat reclining Operate (backward) Change (decrease)*1 Release No change^{*1} ^{*1}: The value at the seat position attained when the battery is connected is considered to be 32768. Is the indication normal? YES >> INSPECTION END Н >> Perform diagnosis procedure. Refer to ADP-97, "Diagnosis Procedure". NO Diagnosis Procedure INFOID:000000007463895 1.CHECK RECLINING SENSOR SIGNAL Turn ignition switch ON. 1. Check voltage signal between driver seat control unit harness connector and ground using oscilloscope. 2. ADP

(+ Driver seat		()	Co	ondition	Voltage (V) (Approx.)
Connector	Terminal	-			(Approx.)
B451	9	Ground	Seat reclining	Operate	10mSec/div
				Other than above	0 or 5

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

NO >> GO TO 2.

2. CHECK RECLINING SENSOR CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit and reclining motor connector.

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

P

RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	Driver seat control unit		Reclining motor	
Connector	Terminal	Connector	Terminal	Continuity
B451	9	B454	9	Existed

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

Driv	seat control unit		Continuity
Connector	Connector Terminal		Continuity
B451	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

$\mathbf{3}.$ CHECK RECLINING SENSOR POWER SUPPLY

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

3. Check voltage between reclining motor harness connector and ground.

Reclin	(+) Reclining motor		Voltage (V) (Approx.)	
Connector	Terminal	1		
B454	16	Ground	Battery voltage	

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.
- Check continuity between driver seat control unit harness connector and reclining motor harness connector.

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

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

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

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

NO >> Repair or replace harness.

5.CHECK RECLINING SENSOR GROUND CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit connector.

Check continuity between driver seat control unit harness connector and reclining motor harness connector.

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

RECLINING SENSOR

the inspection result norr 'ES >> GO TO 6.	<u>mal?</u>			
IO >> Repair or repla	ce harness.			
CHECK RECLINING SE	ENSOR GROUND CIRCUI	Т 2		
Connect driver seat co Check continuity betwe	ntrol unit connector. een reclining sensor harnes	ss connector and ground.		_
Driver se	Driver seat control unit			
Connector	Terminal	Ground	Continuity	
B451	31		Existed	
the inspection result nor	mal?			

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (FRONT)

Description

- 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. Turn ignition switch ON.
- 2. Select "LIFT FR PULSE" in "Data monitor" mode using CONSULT.
- 3. 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 ^{*1}

^{*1}: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-100, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463898

1.CHECK LIFTING SENSOR (FRONT) SIGNAL

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

(+) Driver seat control unit		(–) Condition				
				ondition	Voltage (V) (Approx.)	
Connector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
B451	25	Ground	Seat Lifting (front)	Operate Other than above	10mSec/div 10mSec/div 2V/div JMJIA011922 0 or 5	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203</u>, "Removal and Installation".

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

INFOID:000000007463896

INFOID-000000007463897

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

	control unit	Lifting	motor (front)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B451	25	B455	25	Existed
Check continuity be	etween driver seat co	ntrol unit harness c	onnector and ground	3.
Drive	er seat control unit			Continuity
Connector	Termina	al	Ground	
B451	25			Not existed
CHECK LIFTING SE Connect driver sea Turn ignition switch	eplace harness. ENSOR (FRONT) PO t control unit connect	or.	tor and ground.	
	- ·			
I ;f4	(+) ting motor (front)		()	Voltage (V)
Connector	Termina	al	(-)	(Approx.)
B455	16		Ground	Battery voltage
he inspection result	_		orodina	Battory Voltage
Turn ignition switch		WER SUPPLY CIR	CUIT	
Turn ignition switch Disconnect driver s	OFF.	ector.		motor (front) harnes
Turn ignition switch Disconnect driver s Check continuity be nector.	OFF. seat control unit conne	ector. ntrol unit harness c		
Turn ignition switch Disconnect driver s Check continuity be nector.	OFF. seat control unit connective etween driver seat co	ector. ntrol unit harness c	connector and lifting i	motor (front) harnes — Continuity
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat	OFF. eat control unit connective etween driver seat co	ector. ntrol unit harness c Lifting	connector and lifting i	
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451	OFF. eat control unit connective etween driver seat co control unit Terminal	ector. ntrol unit harness c Lifting Connector B455	motor (front)	Continuity Existed
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be	OFF. eat control unit connective etween driver seat co control unit Terminal 16	ector. ntrol unit harness c Lifting Connector B455	motor (front)	Continuity Existed
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be	OFF. eat control unit connective etween driver seat co control unit Terminal 16 etween driver seat co	ector. ntrol unit harness c Lifting Connector B455 ntrol unit harness c	motor (front)	Continuity Existed
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be Drive	o OFF. seat control unit connective etween driver seat co control unit Terminal 16 etween driver seat co er seat control unit	ector. ntrol unit harness c Lifting Connector B455 ntrol unit harness c	connector and lifting motor (front) Terminal 16 onnector and ground	Continuity Existed
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be Drive Connector B451	a OFF. seat control unit connective etween driver seat control unit Terminal 16 etween driver seat control unit Terminal 16 etween driver seat control unit	ector. ntrol unit harness c Lifting Connector B455 ntrol unit harness c	connector and lifting motor (front) Terminal 16 onnector and ground	Continuity Existed d. Continuity
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be Connector B451 he inspection result S >> Replace dri D >> Repair or re CHECK LIFTING SE Turn ignition switch Disconnect driver s	o OFF. eat control unit connective of driver seat control unit control unit Terminal 16 etween driver seat control unit er seat control unit Terminal 16 normal? iver seat control unit. eplace harness. ENSOR (FRONT) GR OFF. seat control unit connective	ector. ntrol unit harness c Lifting Connector B455 ntrol unit harness c al Refer to <u>ADP-203</u> , OUND CIRCUIT 1 ector.	connector and lifting in motor (front) Terminal 16 onnector and ground Ground	Continuity Existed d. Continuity Not existed Ilation".
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be Connector B451 he inspection result S >> Replace dri D >> Repair or re CHECK LIFTING SE Turn ignition switch Disconnect driver s	o OFF. eat control unit connective of driver seat control unit control unit Terminal 16 etween driver seat control unit er seat control unit 16 normal? iver seat control unit. eplace harness. ENSOR (FRONT) GR	ector. ntrol unit harness c Lifting Connector B455 ntrol unit harness c al Refer to <u>ADP-203</u> , OUND CIRCUIT 1 ector.	connector and lifting in motor (front) Terminal 16 onnector and ground Ground	Continuity Existed d. Continuity Not existed Ilation".
Turn ignition switch Disconnect driver s Check continuity be nector. Driver seat Connector B451 Check continuity be Connector B451 he inspection result f S >> Replace dri D >> Repair or re CHECK LIFTING SE Turn ignition switch Disconnect driver s Check continuity be nector.	o OFF. eat control unit connective of driver seat control unit control unit Terminal 16 etween driver seat control unit er seat control unit Terminal 16 normal? iver seat control unit. eplace harness. ENSOR (FRONT) GR OFF. seat control unit connective	ector. ntrol unit harness of Lifting Connector B455 ntrol unit harness of al Refer to <u>ADP-203</u> , OUND CIRCUIT 1 ector. ntrol unit harness of	connector and lifting in motor (front) Terminal 16 onnector and ground Ground	Continuity Existed d. Continuity Not existed Ilation".

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B451

31

B455

31

Existed

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

 $6. {\sf CHECK\ LIFTING\ SENSOR\ (FRONT)\ GROUND\ CIRCUIT\ 2}$

1. Connect driver seat control unit connector.

2. Check continuity between lifting motor (front) harness connector and ground.

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	31		Existed

Is the inspection result normal?

YES >> Replace lifting motor (front). Refer to <u>SE-60, "Exploded View"</u>.

NO >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (REAR)

А Description INFOID:000000007463899 The lifting sensor (rear) is installed to the seat slide cushion frame. В 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:000000007463900 **1.**CHECK FUNCTION 1. Turn ignition switch ON. D Select "LIFT RR PULSE" in "Data monitor" mode using CONSULT. 2. Check lifting sensor (rear) signal under the following conditions. 3. Condition Monitor item Value Operate (Up) Change (increase)*1 F LIFT RR PULSE Seat lifting (rear) Operate (Down) Change (decrease)*1 Release No change^{*1} ^{*1}: The value at the seat position attained when the battery is connected is considered to be 32768. Is the indication normal? YES >> INSPECTION END Н >> Perform diagnosis procedure. Refer to ADP-103, "Diagnosis Procedure". NO Diagnosis Procedure INFOID:000000007463901 1.CHECK LIFTING SENSOR (REAR) SIGNAL Turn ignition switch ON. 1. Check voltage signal between driver seat control unit harness connector and ground using oscilloscope. 2. ADP (+) Voltage (V) Driver seat control unit (-) Condition Κ (Approx.) Connector Terminal

	Connector	Terrinia					
-	B451	10	Ground	Seat Lifting (rear)	Operate	10mSec/div	L
					Other than above	0 or 5	Ν
-		I	1	1	1		

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-203, "Removal and Installation".

NO >> GO TO 2.

2.CHECK LIFTING SENSOR (REAR) CIRCUIT

Turn ignition switch OFF. 1.

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

Ρ

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit		Lifting motor (rear)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B451	10	B463	10	Existed	

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK LIFTING SENSOR (REAR) POWER SUPPLY

1. Connect driver seat control unit connector.

2. Turn ignition switch ON.

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

(+) Lifting motor (rear)		()	Voltage (V) (Approx.)	
Connector	Terminal		(
B463	16	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (REAR) POWER SUPPLY CIRCUIT

1. 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	Driver seat control unit		Lifting motor (rear)		
Connector	Terminal	Connector Terminal		Continuity	
B451	16	B463	16	Existed	

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

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

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

NO >> Repair or replace harness.

5.CHECK LIFTING SENSOR (REAR) GROUND CIRCUIT 1

1. 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	Driver seat control unit		Lifting motor (rear)		
Connector	Terminal	Connector Terminal		Continuity	
B451	31	B463	31	Existed	

LIFTING SENSOR (REAR)

	LIFTING SEN	SUR (REAR)		
< DTC/CIRCUIT DIAGNOS	SIS >			
Is the inspection result norm	al?			
YES >> GO TO 6.				А
NO >> Repair or replac	e harness.			
6. CHECK LIFTING SENSC		CUIT 2		
1. Connect driver seat con				B
	en lifting motor (rear) harne	ss connector and around		
Driver seat	t control unit			С
Connector	Terminal	Ground	Continuity	
B451	31		Existed	-
Is the inspection result norm				D
-	notor (rear). Refer to <u>SE-60</u>) "Exploded View"		
NO >> Replace driver s	seat control unit. Refer to <u>A</u>	DP-203. "Removal and In:	stallation".	E
				F
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TILT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

TILT SENSOR

Description

INFOID:000000007463902

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

Component Function Check

INFOID:000000007463903

1.CHECK FUNCTION

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

Monitor item	Condition	Value
TILT SEN	Tilt position	Change between 1.1 V (Close to top) 3.9 V (Close to bottom)

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:000000007463904

1.CHECK TILT SENSOR SIGNAL

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

(+) Automatic drive positioner control unit		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			() () () () () () () () () ()
M51	7	Ground	Tilt position	Change between 1.1 V (Close to top) 3.9 V (Close to bottom)

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>. NO >> GO TO 2.

2. CHECK TILT SENSOR CIRCUIT

1. Turn ignition switch OFF.

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

Automatic drive po	sitioner control unit	Tilt & telescopic sensor		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M51	7	M48	3	Existed	

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

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

Is the inspection result normal?

TILT SENSOR

DTC/CIRCUIT DIAGNOS	SIS >				
VO >> Repair or replace	e harness.				
CHECK TILT SENSOR P		ſ			
Connect automatic drive			nector.		
Turn ignition switch ON.					
Check voltage between	tilt & telescopic	sensor ha	rness conr	ector and ground.	
	+)				
Tilt & teles	copic sensor		-	()	Voltage (V) (Approx.)
Connector	Termin	al			(, , , , , , , , , , , , , , , , , , ,
M48	1			Ground	5
the inspection result norm	al?				
YES >> GO TO 5. NO >> GO TO 4.					
CHECK TILT SENSOR F					
Turn ignition switch OFF Disconnect automatic d		ontrol unit	connector		
Check continuity betwee				unit harness conne	ctor and tilt & telescopic
sensor harness connect		·			
Automatic drive position	er control unit		Tilt & teles	copic sensor	
Connector	Terminal	Con	nector	Terminal	- Continuity
M52	33	N	148	1	Existed
Check continuity betwee	en automatic driv	ve position	er control	unit harness connect	tor and ground.
Automatic drive po	ositioner control unit		-		Continuity
Connector	Termin	al	-	Ground	
M52	33				Not existed
the inspection result norm					
YES >> Replace automa NO >> Repair or replace	•	ner control	unit. Refe	r to <u>ADP-204, "Remo</u>	oval and Installation".
CHECK TILT SENSOR		ЛТ 1			
 Turn ignition switch OFF Disconnect automatic disconnection 		ontrol unit	connector.		
. Check continuity betwee	en automatic dr	ive positio	ner control	unit harness conne	ctor and tilt & telescopic
sensor harness connect	or.				
Automatic drive position	er control unit		Tilt & teles	copic sensor	
Connector	Terminal	Con	nector	Terminal	- Continuity
M52	41	N	148	4	Existed
s the inspection result norm	al?	1		1	<u> </u>
YES >> GO TO 6.					
NO >> Repair or replac					
CHECK TILT SENSOR	ROUND CIRCL	JIT 2			
. Connect automatic drive					
. Check continuity betwee	en automatic driv	ve position	er control	unit harness connect	tor and ground.
Automatic drive po	ositioner control unit				
Connector	Termin		-	Ground	Continuity
			1		

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M52

41

Existed

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace tilt & telescopic sensor (Built in steering column assembly). Refer to <u>ST-21, "WITH</u> <u>ELECTRIC MOTOR : Exploded View"</u>.
- NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>.

TELESCOPIC SENSOR

	TC/CIRCUIT DIAGN					
ΙĿ	LESCOPIC SE	INSOR				
De	escription					INFOID:00000007463905
• T • T	he terminal voltage o	copic sensor change f automatic drive po	es according to the sitioner control un	forward/b t changes	according to	ition of steering column. o a change of telescopic position from the voltage.
Co	mponent Functi	on Check				INFOID:00000007463906
1.	CHECK FUNCTION					
1. 2. 3.	Turn ignition switch Select "TELESCO S Check the tilt sensor	EN" in "Data monito		NSULT.		_
-	Monitor iter	n	Condition			Value
_	TELESCO SEN	Telesco	opic position		0.5	nange between [V] (close to top)] (close to bottom)
N Dia	ES >> INSPECTIO O >> Perform diag agnosis Procedu CHECK TELESCOPI	gnosis procedure. R I re		<u>Diagnosis</u>	Procedure"	• INFOID:000000007463907
1. 2.	Turn ignition switch Check voltage autor		r control unit harne	ess connec	ctor and grou	ind.
-	(+))				
	Automatic drive pos	itioner control unit	(-)	(Condition	Voltage (V) (Approx.)
_	Connector	Terminal				
	M51	23	Ground	Telesco	pic position	Change between 0.5 [V] (close to top) 4.5 [V] (close to bottom)
۲۱ N 2.	0 >> GO TO 2. CHECK TELESCOPI	omatic drive position		fer to <u>ADF</u>	2-204, "Remo	oval and Installation".
1. 2. 3.	Turn ignition switch Disconnect automat Check continuity be sensor harness cont	ic drive positioner co tween automatic dri				nector. ctor and tilt & telescopic
-	Automatic drive pos	itioner control unit	Tilt & tel	escopic sens	sor	Continuity
_	Connector	Terminal	Connector		Terminal	Continuity
_	M51	23	M48		2	Existed
4. -	Check continuity bet Automatic dri	tween automatic driv		ol unit harr	ness connec	tor and ground.

 Automatic drive positioner control unit
 Continuity

 Connector
 Terminal
 Ground

 M51
 23
 Not existed

Is the inspection result normal?

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 3.
- NO >> Repair or replace harness.

3.CHECK TELESCOPIC SENSOR POWER SUPPLY

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

Check voltage between tilt & telescopic sensor harness connector and ground. 3.

· · · · · · · · · · · · · · · · · · ·	(+) Tilt & telescopic sensor		Voltage (V) (Approx.)
Connector	Terminal		
M48	1	Ground	5

Is the inspection result normal?

>> GO TO 5. YES

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

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M52	33		Not existed

Is the inspection result normal?

- >> Replace automatic drive positioner control unit. Refer to ADP-204, "Removal and Installation". YES NO >> Repair or replace harness.

5.CHECK TELESCOPIC SENSOR GROUND CIRCUIT 1

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

Automatic drive po	ositioner control unit	Tilt & teleso	copic sensor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M52	41	M48	4	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK TELESCOPIC SENSOR GROUND CIRCUIT 2

Connect automatic drive positioner control unit connector. 1.

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M52	41		Existed

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES	>> Replace tilt & telescopic sensor (Built in steering column assembly). Refer to ST-21, "WITH	A
	ELECTRIC MOTOR : Exploded View".	

NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-204</u>, "<u>Removal and Installation</u>".

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< DTC/CIRCUIT DIAGNOSIS >

MIRROR SENSOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000007463908

- 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:000000007463909

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "MIR/SEN LH U-D", "MIR/SEN LH R-L" in "Data monitor" using CONSULT.
- 3. Check mirror sensor (driver side) signal under the following condition.

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-112, "DRIVER SIDE : Diagnosis Procedure"</u>.

DRIVER SIDE : Diagnosis Procedure

INFOID:000000007463910

1.CHECK DOOR MIRROR SENSOR (DRIVER SIDE) SIGNAL

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

	(+) ositioner control unit	()	Condition	Voltage (V) (Approx.)
Connector	Terminal			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
M51	6	- Ground	Door mirror (driver side) position	Change between 3.4 [V] (close to peak) 0.6 [V] (close to valley)
I CIVI	22			Change between 3.4 [V] (close to left edge) 0.6 [V] (close to right edge)

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204</u>, "<u>Removal and Installation</u>". NO >> GO TO 2.

2. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR CIRCUIT

1. Turn ignition OFF.

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

< DTC/CIRCUIT DIAGNOSIS >

Connector Terminal Connector Terminal M51 6 D3 9 Existed 10 22 10 10 Existed theck continuity between automatic drive positioner control unit harness connector and ground. 10 Continuity Automatic drive positioner control unit Ground Continuity Connector Terminal Ground Continuity M51 6 22 Not existed inspection result normal? >> 60 TO 3. >>> Repair or replace harness. Sec OD 3. >>> Repair or replace harness. ECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY Connector Image: Connector and ground. (+) Connector (-) Voltage (V) (Approx.) Connector (Approx.) Connector Terminal Ground 5 Sec OT 5. >> GO TO 5. Se OT 5. Se OT 5. Se OT 5. Sec OT 5.
M51 22 D3 10 Existed theck continuity between automatic drive positioner control unit harness connector and ground. Automatic drive positioner control unit Continuity Automatic drive positioner control unit Ground Continuity M51 6 Not existed M51 22 Not existed inspection result normal? >> Repair or replace harness. >> Repair or replace harness. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY connect automatic drive positioner control unit connector. unightion switch ON. where voltage between door mirror (driver side) harness connector and ground. Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Connector Terminal 5 Second 5 Second 5 >> GO TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT unightion switch OFF. isconnect automatic drive positioner control unit connector. theck continuity between automatic drive positioner control unit connector. heck continuity between automatic drive positioner control unit connector. heck contin
Interview of the control unit drive positioner control unit harness connector and ground. Automatic drive positioner control unit Continuity Connector Terminal Ground Continuity M51 6 0 Not existed Inspection result normal? >> GO TO 3. >> Repair or replace harness. Sector Control unit connector. Sector Content und Control Unit connector. Sector Connector Control Unit Connector.
Automatic drive positioner control unit Continuity Connector Terminal Ground Continuity M51 6 Not existed Not existed Inspection result normal? >> GO TO 3. >> Repair or replace harness. See pair or replace harness. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY Sonnect automatic drive positioner control unit connector. urn ignition switch ON. Scheck voltage between door mirror (driver side) harness connector and ground. (-) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Door mirror (driver side) (-) Voltage (V) (Approx.) Connector Terminal 5 D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. isconnect automatic drive positioner control unit connector. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. isconnect automatic drive positioner control unit connector. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT isconnect aut
Connector Terminal Ground Continuity M51 6 Not existed Not existed inspection result normal? >> GO TO 3. >> Repair or replace harness. Second Not existed ECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY Sonnect automatic drive positioner control unit connector. urn ignition switch ON. Unit connector Unit (Approx.) Meck voltage between door mirror (driver side) harness connector and ground. (-) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Door mirror (driver side) (-) Voltage (V) (Approx.) Door mirror (driver side) (-) Voltage (V) (Approx.) D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 5. >> GO TO 4. ECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. isconnect automatic drive positioner control unit connector. isconnect automatic drive positioner control unit connector. where nautomatic drive positioner control unit connector. where nautomatic drive positioner control unit harness connector and door driver side) harness connector.
Connector Terminal Ground M51 6 22 inspection result normal? >> GO TO 3. >> Repair or replace harness. IECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY Sonnect automatic drive positioner control unit connector. urn ignition switch ON.
M51 6 Not existed inspection result normal? >> GO TO 3. >> Repair or replace harness. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY Inspection result normal? Inspection result normal? inspection result normal: (-) Voltage (V) inspection result normal? (-) Voltage (V) inspection result normal? (-) Voltage (V) inspection result normal? (-) Voltage (V) Connector Terminal Ground 5 Inspection result normal? >> GO TO 5. >> GO TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT Inspection result normal? win ignition switch OFF. isconnect automatic drive positioner control unit connector. theck continuity between automatic drive positioner control unit harness connector and door driver side) harness connector. Automatic drive positioner control unit connector. Automatic drive positioner control unit Door mirror (driver side) Continuity
22 inspection result normal? >> GO TO 3. >> Repair or replace harness. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY connect automatic drive positioner control unit connector. urn ignition switch ON. theck voltage between door mirror (driver side) harness connector and ground. (+) Door mirror (driver side) (-) Voltage (V) (Approx.) Connector Terminal D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. visconnect automatic drive positioner control unit connector. heck continuity between automatic drive positioner control unit connector. heck drive positioner control unit connector. heck drive positioner control unit connector. heck ontinuity between automatic drive positioner control unit harness connector and door driver side) harness connector. Automatic drive positioner control unit Door mirror (driver side)
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>> Repair or replace harness. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY connect automatic drive positioner control unit connector. um ignition switch ON. theck voltage between door mirror (driver side) harness connector and ground. (+) (-) Voltage (V) (Approx.) Connector Terminal D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT um ignition switch OFF. bisconnect automatic drive positioner control unit connector. wheck continuity between automatic drive positioner control unit connector. wheck continuity between automatic drive positioner control unit connector. wheck continuity between automatic drive positioner control unit harness connector and door dutomatic drive positioner control unit Automatic drive positioner control unit Door mirror (driver side)
IECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY connect automatic drive positioner control unit connector. urn ignition switch ON. (+) Voltage (V) Operation of the colspan="2">Voltage (V) Solspan="2">Voltage (V) Voltage (V) Voltage (V)
connect automatic drive positioner control unit connector. urn ignition switch ON. wheek voltage between door mirror (driver side) harness connector and ground. (+) Voltage (V) Operation mirror (driver side) (-) Voltage (V) (Approx.) Connector Terminal D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. bisconnect automatic drive positioner control unit connector. heck continuity between automatic drive positioner control unit harness connector and door Automatic drive positioner control unit Automatic drive positioner control unit Door mirror (driver side) Continuity
urn ignition switch ON. wheck voltage between door mirror (driver side) harness connector and ground. (+) Voltage (V) (Approx.) Connector Terminal D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. isconnect automatic drive positioner control unit connector. wheck continuity between automatic drive positioner control unit connector. Automatic drive positioner control unit Door mirror (driver side) Continuity
Check voltage between door mirror (driver side) harness connector and ground. (+) Voltage (V) Door mirror (driver side) (-) Connector Terminal D3 11 D3 11 Go TO 5. >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. visconnect automatic drive positioner control unit connector. check continuity between automatic drive positioner control unit connector. check continuity between automatic drive positioner control unit connector. Automatic drive positioner control unit Door mirror (driver side)
(+) Voltage (V) Door mirror (driver side) (-) Voltage (V) (Approx.) D3 11 D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. visconnect automatic drive positioner control unit connector. theck continuity between automatic drive positioner control unit connector. theck continuity between automatic drive positioner control unit connector. Automatic drive positioner control unit Door mirror (driver side) Automatic drive positioner control unit Door mirror (driver side)
Door mirror (driver side) (-) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. > Second 2 HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. Second 2 urn ignition switch OFF. Disconnect automatic drive positioner control unit connector. Second 2 beck continuity between automatic drive positioner control unit harness connector and door Continuity Continuity Automatic drive positioner control unit Door mirror (driver side) Continuity
Door minror (driver side) (-) (Approx.) Connector Terminal (-) (Approx.) D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. It connector. urn ignition switch OFF. bisconnect automatic drive positioner control unit connector. It continuity between automatic drive positioner control unit harness connector and door driver side) harness connector. Automatic drive positioner control unit Door mirror (driver side) Continuity
D3 11 Ground 5 inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF.
inspection result normal? >> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. visconnect automatic drive positioner control unit connector. check continuity between automatic drive positioner control unit harness connector and door driver side) harness connector. Automatic drive positioner control unit Door mirror (driver side) Continuity
>> GO TO 5. >> GO TO 4. HECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY CIRCUIT urn ignition switch OFF. bisconnect automatic drive positioner control unit connector. check continuity between automatic drive positioner control unit harness connector and door driver side) harness connector. Automatic drive positioner control unit Door mirror (driver side) Continuity
Continuity
Continuity
Connector Terminal Connector Terminal
M52 33 D3 11 Existed
heck continuity between automatic drive positioner control unit harness connector and ground.
Automatic drive positioner control unit Continuity
Connector Terminal Ground
M52 33 Not existed
inspection result normal?
Deplese sutemptic drive positioner control unit Defer to ADD 004 (Demoved and be falled
>> Replace automatic drive positioner control unit. Refer to ADP-204, "Removal and Installati
>> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installati</u> >> Repair or replace harness. IECK DOOR MIRROR (DRIVER SIDE) SENSOR GROUND CIRCUIT 1

3. Check continuity between automatic drive positioner control unit harness connector and door mirror (driver side) harness connector.

< DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

${f 6}.$ CHECK DOOR MIRROR (DRIVER SIDE) SENSOR GROUND CIRCUIT 2

1. Connect automatic drive positioner control unit connector.

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

Automatic drive	Automatic drive positioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M52	41		Existed

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>.
- NO >> Replace door mirror sensor (Built in driver side door mirror). Refer to <u>MIR-15, "DOOR MIRROR</u> <u>ASSEMBLY : Removal and Installation"</u>.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000007463911

INFOID:000000007463912

- 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. Turn ignition switch ON.
- 2. Select "MIR/SEN RH U-D", "MIR/SEN RH R-L" in "Data monitor" using CONSULT.
- 3. Check the mirror sensor (passenger side) signal under the following conditions.

Monitor item	Condition	Value
MIR/SEN RH U-D	Deer mirror (nooconger side)	Change between 3.4 [V] (close to peak) 0.6 [V] (close to valley)
MIR/SEN RH R-L	 Door mirror (passenger side) 	Change between 3.4 [V] (close to left edge) 0.6 [V] (close to right edge)

Is the indication normal?

YES >> INSPECTION END

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

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000007463913

1.CHECK DOOR MIRROR SENSOR (PASSENGER SIDE) SIGNAL

1. Turn ignition switch ON.

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

< DTC/CIRCUIT DIAGNOSIS >

(+) Automatic drive positioner control unit		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal	-		
M54	5	Cround	Door mirror (passenger	Change between 3.4 [V] (close to peak) 0.6 [V] (close to valley)
M51 21		- Ground	side) position	Change between 3.4 [V] (close to left edge) 0.6 [V] (close to right edge)

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>. NO >> GO TO 2.

2.CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR CIRCUIT

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

Automatic drive po	sitioner control unit	Door mirror (passenger side)		Continuity	G
Connector	Terminal	Connector	Terminal	Continuity	
M51	5	D33	9	Existed	Ц
I CIVI	21	033	10	Existed	H

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

Automatic drive po	sitioner control unit		Continuity	-
 Connector	Terminal	Ground	Continuity	
 M51	5	Ground	Not existed	ADP
	21		NOL 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.

2. Turn ignition switch ON.

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

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

${f 4.}$ CHECK DOOR MIRROR (PASSENGER SIDE) 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 door mirror (passenger side) harness connector. Ε

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< DTC/CIRCUIT DIAGNOSIS >

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

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M52	33		Not existed

Is the inspection result normal?

YES >> Replace automatic driver positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>. NO >> Repair or replace harness.

5.CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR GROUND CIRCUIT 1

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR GROUND CIRCUIT 2

1. Connect automatic drive positioner control unit connector.

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

Automatic drive po	itioner control unit		Automatic drive positioner control unit		Continuity
Connector	Terminal	Ground	Continuity		
M52	41		Existed		

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>.

NO >> Replace door mirror sensor (Built in passenger side door mirror). Refer to <u>MIR-15. "DOOR MIR-ROR ASSEMBLY : Removal and Installation"</u>.

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Description					
The seat sliding mote The seat sliding mote The seat is slid front	or is activated w	vith the driver s	eat control unit.	n of sliding motor.	
Component Fund	tion Check				INFOID:000000007463915
	N				
. Turn ignition switc 2. Select "SEAT SLII 3. Check the sliding	DE" in "Active te		CONSULT.		
	Test item			Description	
	OFF			Stop	
SEAT SLIDE	FR		Seat sliding	Forward	
	RR			Backwa	rd
s the operation of rele YES >> INSPECT NO >> Perform d Diagnosis Proced	ION END iagnosis proced dure	lure. Refer to <u>A</u>	<u>DP-117, "Diagno</u>	sis Procedure".	INFOID:000000007463916
YES >> INSPECT NO >> Perform d Diagnosis Proced CHECK SLIDING N Turn ignition switc Disconnect sliding Turn the ignition s Perform "Active te	ION END iagnosis proced dure MOTOR POWER h OFF. motor connecto witch ON. est" ("SEAT SLIE	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON	ISULT-III		INFOID:000000007463916
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING N . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te	ION END iagnosis proced dure MOTOR POWER h OFF. motor connecto witch ON. est" ("SEAT SLIE	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON	ISULT-III		INFOID:000000007463916
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING N . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet	ION END iagnosis proced dure MOTOR POWER th OFF. motor connector witch ON. est" ("SEAT SLIE tween sliding mo	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON	ISULT-III onnector and grou		Voltage (V)
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING M . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet	ION END iagnosis proced dure MOTOR POWER th OFF. motor connector witch ON. est" ("SEAT SLIE tween sliding mo	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	ISULT-III onnector and grou	ınd.	
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING M . Turn ignition switc . Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet (+) Sliding m	ION END iagnosis proced dure MOTOR POWER th OFF. motor connecto witch ON. est" ("SEAT SLIE tween sliding mo	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	ISULT-III onnector and grou	ınd.	Voltage (V)
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING M . Turn ignition switc . Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet (+) Sliding m	ION END iagnosis proced dure MOTOR POWER th OFF. motor connecto witch ON. est" ("SEAT SLIE tween sliding mo	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	ISULT-III onnector and grou	Ind. Condition	Voltage (V) (Approx.)
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING N . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet (+) Sliding m Connector	ION END iagnosis proced dure MOTOR POWER th OFF. motor connector witch ON. est" ("SEAT SLIE tween sliding motor tween sliding motor Terminal	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	NSULT-III onnector and grou	ondition OFF FR (forward) RR (backward)	Voltage (V) (Approx.) 0
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING M . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet (+) Sliding m	ION END iagnosis proced dure MOTOR POWER th OFF. motor connected witch ON. est" ("SEAT SLIE tween sliding motor tween sliding motor Terminal	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	ISULT-III onnector and grou	Ind. Condition OFF FR (forward) RR (backward) OFF	Voltage (V) (Approx.) 0 Battery voltage 0 0
YES >> INSPECT NO >> Perform d Diagnosis Proced .CHECK SLIDING N . Turn ignition switc Disconnect sliding . Turn the ignition s . Perform "Active te . Check voltage bet (+) Sliding m Connector	ION END iagnosis proced dure MOTOR POWER th OFF. motor connector witch ON. est" ("SEAT SLIE tween sliding motor tween sliding motor Terminal	lure. Refer to <u>A</u> R SUPPLY or. DE") using CON otor harness co	NSULT-III onnector and grou	ondition OFF FR (forward) RR (backward)	Voltage (V) (Approx.) 0 Battery voltage 0

YES >> Replace sliding motor. (Built in seat slide cushion frame.) Refer to <u>SE-60. "Exploded View"</u>. NO >> GO TO 2.

2. CHECK SLIDING MOTOR CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit connector.

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

Ο

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	Driver seat control unit		g motor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B/52	35	B461	35	Existed
B452	42	0401	42	LXISIEU

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	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 SLIDING MOTOR

Refer to ADP-118, "Component Inspection".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

NO >> Replace sliding motor. (Built in seat slide cushion frame.) Refer to <u>SE-60. "Exploded View"</u>.

Component Inspection

INFOID:000000007463917

1.CHECK SLIDING MOTOR-1

Check visually the sliding motor to see if any foreign object is not disturbing the functioning or if the sliding motor is not broken.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace seat cushion frame (sliding motor).

2. CHECK SLIDING MOTOR-2

1. Turn ignition switch OFF.

- 2. Disconnect sliding motor connector.
- 3. Supply sliding motor terminals with battery voltage and check operation.

Tern	ninal	Operation
(+)	(-)	Operation
35	42	Forward
42	35	Backward

Is the inspection result normal?

YES >> Sliding motor is OK.

NO >> Replace sliding motor. (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING					
Description					INFOID:000000007463918
The seat reclining	g motor is installed g motor is activated eclined frontward/re	with the drive		lirection of reclini	ng motor.
component Fu	Inction Check				INFOID:000000007463919
.CHECK FUNCT	ION				
	vitch ON. RECLINING" in "Ac ning motor operation		using CONSULT.		
	Test item			Description	
	OFF			Stop	
SEAT RECLINING	FR		Seat reclining	Forward	
	RR			Backwa	rd
YES >> INSPE NO >> Perforr Piagnosis Prod .CHECK RECLIN	cedure	ure. Refer to <u>A</u>	<u>DP-119, "Diagnosis", NDP-119, "Diagnosis</u>	Procedure".	INFOID:000000007463920
YES >> INSPE NO >> Perform Diagnosis Proc CHECK RECLIN . Turn ignition sv Disconnect rec . Turn the ignitio . Perform "Active . Check voltage	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r	URE. Refer to <u>A</u> VER SUPPLY ctor.			INFOID:000000007463920
YES >> INSPE NO >> Perform Pagnosis Proc CHECK RECLIN Turn ignition sw Disconnect rec Turn the ignitio Perform "Active Check voltage	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou	nd.	
YES >> INSPE NO >> Perform iagnosis Proc .CHECK RECLIN Turn ignition sv Disconnect rec Turn the ignitio Perform "Active Check voltage Reclini	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r	URE. Refer to <u>A</u> VER SUPPLY ctor.	g CONSULT. connector and grou		INFOID:000000007463920 Voltage (V) (Approx.)
YES >> INSPE NO >> Perform Pagnosis Proc CHECK RECLIN Turn ignition sw Disconnect rec Turn the ignitio Perform "Active Check voltage	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou	nd. dition	Voltage (V) (Approx.)
YES >> INSPE NO >> Perform iagnosis Prod .CHECK RECLIN Turn ignition sv Disconnect rec Turn the ignitio Perform "Active Check voltage	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r (+) ng motor Terminal	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou	nd. dition OFF	Voltage (V) (Approx.) 0
YES >> INSPE NO >> Perform iagnosis Proc .CHECK RECLIN Turn ignition sw Disconnect rec Turn the ignitio Perform "Active Check voltage Reclini Connector	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou Con	nd. dition OFF FR (forward)	Voltage (V) (Approx.)
YES >> INSPE NO >> Perform iagnosis Prod .CHECK RECLIN Turn ignition sv Disconnect rec Turn the ignitio Perform "Active Check voltage	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r (+) ng motor Terminal	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou	nd. dition OFF	Voltage (V) (Approx.) 0 Battery voltage
YES >> INSPE NO >> Perform Diagnosis Proc .CHECK RECLIN . Turn ignition sw Disconnect rec . Turn the ignitio . Perform "Active . Check voltage 	CTION END n diagnosis proced cedure NING MOTOR POV vitch OFF. lining motor conner n switch ON. e test" ("SEAT REC between reclining r (+) ng motor Terminal	UR. Refer to A VER SUPPLY ctor. LINING") using motor harness	g CONSULT. connector and grou Con	nd. dition OFF FR (forward) RR (backward)	Voltage (V) (Approx.) 0 Battery voltage 0

NO >> GO TO 2.

2. CHECK RECLINING MOTOR 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.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	at control unit	Reclinir	ng motor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	36	B454	36	Existed
D452	44	D404	44	EXISTED

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	36	Ground	Not existed
D432	44		NOT EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

 $\mathbf{3}$.CHECK RECLINING MOTOR

Refer to ADP-120, "Component Inspection".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-203, "Removal and Installation".

NO >> Replace reclining motor. (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

Component Inspection

INFOID:000000007463921

1.CHECK RECLINING MOTOR-1

Check visually reclining motor to see if any foreign object is not disturbing the functioning or if the reclining motor is not broken.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace seatback frame (reclining motor).

2. CHECK RECLINING MOTOR-2

1. Turn ignition switch OFF.

- 2. Disconnect reclining motor connector.
- 3. Supply reclining motor terminals with battery voltage and check operation.

Terr	ninal	Operation		
(+)	(-)	Operation		
36	44	Forward		
44	36	Backward		

Is the inspection result normal?

YES >> Reclining motor is OK.

NO >> Replace reclining motor. (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

LIFTING MOTOR (FRONT)

.11	FTING MOTOR (FF)			
)e	scription					INFOID:00000000746392
Tł	he lifting motor (front) is ins he lifting motor (front) is act he lifter (front) is moved up	tivated w	ith the driver	seat control unit.	direction of lift	ing motor (front).
0	mponent Function C	Check				INFOID:00000000746392
.(CHECK FUNCTION					
•	Turn ignition switch ON. Select "SEAT LIFTER FR' Check the lifting motor (fro			e using CONSULT.		
	Test item	ı			Description	
		OF	FF			Stop
	SEAT LIFTER FR	UF	Þ	Seat lifting (front)		Upward
		DWN			Downward	
YE NC	5	D		ADP-121, "Diagnosis	s Procedure".	
YE NC Dia	ES >> INSPECTION EN	D procedu	ure. Refer to	-	s Procedure".	INFOID:000000074639;
YE NC Dia	ES >> INSPECTION EN D >> Perform diagnosis agnosis Procedure	D procedu (FRONT) ront) con N. AT LIFTE	ure. Refer to) POWER SU nector. ER FR") usin	JPPLY		
	ES >> INSPECTION END >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+)	D procedu (FRONT) ront) con N. AT LIFTE	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g	ground.	INFOID:0000000074639
ia 	ES >> INSPECTION END D >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+) Lifting motor (front)	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") usin	JPPLY g CONSULT. ness connector and g		
YENC	ES >> INSPECTION END >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+)	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g	ground.	INFOID:000000074639
/E	ES >> INSPECTION END D >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+) Lifting motor (front)	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g	ground.	Voltage (V) (Approx.)
/E	ES >> INSPECTION END >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+) Lifting motor (front) Connector Termin 37	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g Cor	ground. Idition	INFOID:0000000074639
/E NC .(ES >> INSPECTION ENID D >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR Image: CHECK LIFTING MOTOR Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OFF. Check voltage between lifting motor (fromt) (+) Lifting motor (front) Connector Termin	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g	ground. Idition OFF UP	Voltage (V) (Approx.) 0
	ES >> INSPECTION END >> Perform diagnosis agnosis Procedure CHECK LIFTING MOTOR (Turn ignition switch OFF. Disconnect lifting motor (fr Turn the ignition switch OI Perform "Active test" ("SE Check voltage between lift (+) Lifting motor (front) Connector Termin 37	D (FRONT) ront) con N. AT LIFTE ting moto	ure. Refer to) POWER SU nector. ER FR") using or (front) harr	JPPLY g CONSULT. ness connector and g Cor	ground. dition OFF UP DWN (down)	INFOID:000000074639

2.check lifting motor (front) circuit

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit connector.

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

LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	t control unit	Lifting mo	otor (front)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	37	B455	37	Existed
D452	45	B400	45	Existed

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	Ground 37		Not existed
D432	45		NUL EXISIEU

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK LIFTING MOTOR (FRONT)

Refer to ADP-122, "Component Inspection".

Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to <u>ADP-203</u>, "Removal and Installation".
- NO >> Replace lifting motor (front). (Built in seat slide cushion frame.) Refer to <u>SE-60. "Exploded View"</u>.

Component Inspection

INFOID:000000007463925

1.CHECK LIFTING MOTOR-1

Check visually the lifting motor (front) to see if any foreign object is not disturbing the functioning or if the lifting motor (front) is not broken.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace seat cushion frame (lifting motor).

2. CHECK LIFTING MOTOR-2

1. Turn ignition switch OFF.

- 2. Disconnect lifting motor connector.
- 3. Supply lifting motor terminals with battery voltage and check operation.

Item	Terminal		Operation	
nem	(+)	()	Operation	
Lifting motor (front)	45	37	Up	
	37	45	Down	

Is the inspection result normal?

YES >> Lifting motor (front) is OK.

NO >> Replace lifting motor (front). (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

LIFTING MOTOR (REAR)

)				
Description	`	,				
					INFOID:00000000746392	
The lifting motor (r The lifting motor (r The seat lifter (rea	ear) is activated	with the driver		tion direction o	f lifting motor (rear).	
Component Fur	nction Chec	k			INFOID:00000000746392	
CHECK FUNCTION	NC					
. Turn ignition swi 2. Select "SEAT LI 3. Check the lifting	FTER RR" in "A		e using CONSULT.			
	Test item			Description		
		OFF			Stop	
SEAT LIFTER RR		UP	Seat lifting (rear)		Upward	
		DWN			Downward	
CHECK LIFTING . CHECK LIFTING . Turn ignition swi Disconnect liftin . Turn the ignition . Perform "Active . Check voltage b	MOTOR (REAl itch OFF. g motor (rear) c switch ON. test" ("SEAT LII	onnector. FTER RR") using		round.	INFOID:0000000074639	
9		()				
	-)					
		(-)	Con	dition	Voltage (V) (Approx.)	
(+			Con	dition	(Approx.)	
(+ Lifting mo	otor (rear) Terminal		Con	OFF	(Approx.)	
(+ Lifting mo	otor (rear)		Con	OFF UP	(Approx.) 0 Battery voltage	
(+ Lifting mo	otor (rear) Terminal		Con SEAT LIFTER RR	OFF UP DWN (DOWN)	(Approx.) 0 Battery voltage 0	
(+ Lifting mo Connector	tor (rear) Terminal 38	(-)		OFF UP DWN (DOWN) OFF	(Approx.) 0 Battery voltage 0 0	
(+ Lifting mo Connector	otor (rear) Terminal	(-)		OFF UP DWN (DOWN)	(Approx.) 0 Battery voltage 0	

Is the inspection result normal?

YES >> Replace lifting motor (rear). (Built in seat slide cushion frame.) Refer to <u>SE-60. "Exploded View"</u>. NO >> GO TO 2.

2. CHECK LIFTING MOTOR (REAR) CIRCUIT

1. Turn ignition switch OFF.

- 2. 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.

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LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	at control unit	Lifting me	otor (rear)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	38	B463	38	Existed
D402	39	0405	39	LXISIEU

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

	Driver seat control unit			Continuity
Con	nector	Terminal	Ground	Continuity
P	B452	38	Ground	Not existed
D	452	39		NUL EXISIEU

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK LIFTING MOTOR (REAR)

Refer to ADP-124, "Component Inspection".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-203, "Removal and Installation".

NO >> Replace lifting motor (rear). (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

Component Inspection

INFOID:000000007463929

1.CHECK LIFTING MOTOR-1

Check visually the lifting motor (rear) to see if any foreign object is not disturbing the functioning or if the lifting motor (rear) is not broken.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace seat cushion frame (lifting motor).

2. CHECK LIFTING MOTOR-2

1. Turn ignition switch OFF.

- 2. Disconnect lifting motor connector.
- 3. Supply lifting motor terminals with battery voltage and check operation.

Item	Terminal		Operation	
nem	(+)	()	Operation	
Lifting motor (rear)	38	39	Up	
	39	38	Down	

Is the inspection result normal?

YES >> Lifting motor (rear) is OK.

NO >> Replace lifting motor (rear). (Built in seat slide cushion frame.) Refer to <u>SE-60, "Exploded View"</u>.

TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Description					
20001121011					INFOID:00000007463930
 The tilt motor is in: The tilt motor is ac The steering colur 	ctivated with the	automatic drive	positioner control u	nit. on direction of tilt	motor.
Component Fu	nction Chec	k			INFOID:000000007463931
1.снеск гилсті	ON				
 Turn ignition sw Select "TILT MC Check the tilt m 	DTOR" in "Active	test" mode usir	ng CONSULT.		
	Test item			Description	
		OFF			Stop
TILT MOTOR		UP	Steering tilt		Upward
		DWN Downwa		Downward	
 Turn ignition sw Perform "Active 	OTOR POWER S itch OFF. & telescopic moto itch ON. test" ("TILT MO	or connector. TOR") using CO	NSULT. arness connector a		INFOID:000000007463932
				na grouna.	
(· 		na grouna.	1
	+) copic motor		Co	na grouna.	Voltage (V)
	+)	(-)	Co	-	Voltage (V) (Approx.)
Tilt & teles	+) copic motor		Co	-	
Tilt & teles	+) copic motor		Co	ndition	(Approx.)
Tilt & teles	+) copic motor Terminal	(-)		ndition OFF	(Approx.)
Tilt & teles	+) copic motor Terminal		Co TILT MOTOR	OFF UP	(Approx.) 0 0
Tilt & teles	+) copic motor Terminal	(-)		OFF UP DWN (down)	(Approx.) 0 0 Battery voltage
Tilt & teles Connector	+) copic motor Terminal 3 4	(-)		OFF UP DWN (down) OFF	(Approx.) 0 0 Battery voltage 0

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

TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive po	ositioner control unit	Tilt & teles	Tilt & telescopic motor	
Connector	Terminal	Connector	Terminal	Continuity
M52	35	M49	4	Existed
M52	42	10149	3	EXISTED

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M52	35	Ground	Not existed
10152	42		NUL EXISIEU

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK TILT MOTOR

Refer to ADP-126, "Component Inspection".

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204</u>, "Removal and Installation".
- NO >> Replace tilt motor. (Built in steering column assembly.) Refer to <u>ST-21, "WITH ELECTRIC</u> <u>MOTOR : Exploded View"</u>.

Component Inspection

INFOID:000000007463933

1.CHECK SLIDING MOTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt motor connector.
- 3. Supply tilt motor terminals with battery voltage and check operation.

Terminal		Operation
(+)	()	
4	3	Up
3	4	Down

Is the inspection result normal?

YES >> Tilt motor is OK.

NO >> Replace tilt motor. (Built in steering column assembly.) Refer to <u>ST-21, "WITH ELECTRIC</u> <u>MOTOR : Exploded View"</u>.

TELESCOPIC MOTOR

< DTC/CIRCUIT [DIAGNOSIS >					
TELESCOPI	C MOTOR					Δ
Description					INFOID:000000007463934	А
	otor is activated w	vith the automation	umn assembly. c drive positioner con otation direction of te			В
Component Fi	unction Checl	<			INFOID:000000007463935	С
1.CHECK FUNCT	ΓΙΟΝ					
 Turn ignition s Select "TELES 	witch ON.		e using CONSULT.			D
	Test item			Description		E
		OFF		·•	Stop	
TELESCO MOTOR	२	FR	Steering telescopic		Forward	F
		RR			Backward	
NO >> Perfor	CTION END m diagnosis proce		DP-127, "Diagnosis I	Procedure".		G
Diagnosis Pro	cedure				INFOID:000000007463936	Н
1. CHECK TELES	COPIC MOTOR	POWER SUPPLY	(
 Turn ignition s Disconnect tilt Turn ignition s 	& telescopic moto	or connector.				I
4. Perform "Activ	e test" ("TELESC		g CONSULT. Irness connector and	ground.		ADF
(+)					K
Tilt & teles	copic motor Terminal	()	Conditio	on	Voltage (V) (Approx.)	L/
				OFF	0	L
	1			FR (forward)	0	

Is the inspection result normal?

YES >> Replace telescopic motor. (Built in steering column assembly.) Refer to <u>ST-21. "WITH ELECTRIC</u> <u>MOTOR : Exploded View"</u>.

TELESCOPIC MOTOR

Ground

RR (backward)

FR (forward)

RR (backward)

OFF

M49

2. CHECK TELESCOPIC MOTOR CIRCUIT

2

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 motor harness connector.

Battery voltage

0

Battery voltage

0

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TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive p	ositioner control unit	Tilt & telescopic motor		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M52	36	M49	2	Existed	
M52	44	10149	1	Existed	

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M52	36	Ground	Not existed
W32	44		NOI EXISIEU

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

 $\mathbf{3.}$ CHECK SLIDING MOTOR

Refer to ADP-128, "Component Inspection".

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204</u>, "<u>Removal and Installation</u>".
- NO >> Replace telescopic motor. (Built in steering column assembly.) Refer to <u>ST-21. "WITH ELECTRIC</u> <u>MOTOR : Exploded View"</u>.

Component Inspection

INFOID:000000007463937

1.CHECK SLIDING MOTOR-2

- 1. Turn ignition switch OFF.
- 2. Disconnect telescopic motor connector.
- 3. Supply telescopic motor terminals with battery voltage and check operation.

Tern	ninal	Operation
(+)	()	
2	1	Forward
1	2	Backward

Is the inspection result normal?

YES >> Telescopic motor is OK.

NO >> Replace telescopic motor. (Built in steering column assembly.) Refer to <u>ST-21, "WITH ELECTRIC</u> <u>MOTOR : Exploded View"</u>.

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR MOTOR

Description

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

Component Function Check

1. CHECK DOOR MIRROR MOTOR FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "DOOR MIRROR MOTOR" in "Active test" mode using CONSULT.
- 3. Check the door mirror motor operation.

 iption	Descript	tem	Test it
 Stop		OFF	
 Outward		L	
 Inward	Door mirror face	R	DOOR MIRROR MOTOR LH
 Upward		UP	_
 Downward		DWN	

Test	item	Desc	ription	
	OFF		Stop	Н
	L		Inward	
DOOR MIRROR MOTOR RH	R	Door mirror face	Outward	
	UP		Upward	
	DWN		Downward	

Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-129</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK DOOR MIRROR MOTOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect door mirror connector.
- 3. Turn ignition switch ON.

4. Check voltage between door mirror connector and ground.

		+) mirror	()	Con	dition	Voltage (V) (Approx.)	Ν
	Connector	Terminal				(• • • • • • • • • • • • • • • • • • •	
		5			UP	Battery voltage	\bigcirc
		5			Other than above	0	0
	D3 (Driver side) D33 (Passenger	6	Ground	Door mirror remote	LEFT	Battery voltage	
	side)	0	Ground	control switch	Other than above	0	Р
		7			DOWN / RIGHT	Battery voltage	
_		I			Other than above	0	

Is the inspection result normal?

YES >> GO TO 3. NO >> GO TO 2. ADP

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INFOID:000000007463938

INFOID:000000007463939

- К
- INFOID:000000007463940
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DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

2. CHECK HARNESS CONTINUITY

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

Automatic drive positioner control unit		Door mirror	Continuity		
Connector	Terminal	Connector	Terminal	- Continuity	
	16		7		
M51	31	D3	5	Existed	
	32	-	6		
oor mirror passenger si	de]				
Automatic drive pos	sitioner control unit	Door mirror (pa	assenger side)	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
	14		5		
				1	
M51	15	D33	6	Existed	

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

[Door mirror driver side]				
Automatic drive p	ositioner control unit		Continuity	
Connector	Terminal		Continuity	
	16 Ground	Ground		
M51	31		Not existed	
	32			
[Door mirror passenger side]				
Automatic drive p	ositioner control unit		Continuity	
Connector	Terminal		Continuity	
	14	Ground		
M51	15		Not existed	
	30	1		

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-204, "Removal and Installation"</u>. NO >> Repair or replace harness.

3.CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-130, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace door mirror. Refer to <u>MIR-15</u>, "DOOR MIRROR ASSEMBLY : Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1.CHECK DOOR MIRROR MOTOR-I

Check that door mirror motor does not trap foreign objects and does not have any damage. Refer to <u>MIR-15, "DOOR MIRROR ASSEMBLY : Exploded View"</u>.

ADP-130

INFOID:000000007463941

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS	>		
Is the inspection result normal?			
YES >> GO TO 2.			
-		OOR MIRROR ASSEMB	LY : Removal and Installation".
2. CHECK DOOR MIRROR MC	DTOR-II		
 Turn ignition switch OFF. Disconnect door mirror cont Supply door mirror motor te 		oltage and check operati	ion.
	Door mirror		
Connector	Те	rminal	Operational direction
Connector	(+)	(-)	
	7	6	RIGHT
D3 (Driver side)	6	7	LEFT
D33 (Passenger side)	5	7	UP

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door mirror. Refer to MIR-15, "DOOR MIRROR ASSEMBLY : Removal and Installation".

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< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY INDICATOR

Description

INFOID:000000007463942

INFOID:000000007463943

- Memory indicator 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

1.CHECK FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "MEMORY SW INDCTR" in "Active test" mode using CONSULT.
- 3. 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-132, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000007463944

1.CHECK MEMORY INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector and ground.

(+) Seat memory switch		(-)	Voltage (V) (Approx.)	
Connector Terminal			()	
D5	5	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> 10 A fuse [No. 10 located in fuse block (J/B)].

NO-2 >> Harness for open or short between memory indicator and fuse.

2.CHECK MEMORY INDICATOR CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect automatic drive positioner control unit and seat memory switch connector.
- 3. Check continuity between automatic drive positioner control unit harness connector and seat memory switch harness connector.

Automatic drive p	ositioner control unit	Seat men	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M51	12	D5	6	Existed
ICIVI	13	0	7	

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

Automatic drive po	sitioner control unit		Continuity	
 Connector	Terminal	Ground	Continuity	
 M51	12	Ground	Not existed	
	13		NUL EXISIEU	

SEAT MEMORY INDICATOR	
< DTC/CIRCUIT DIAGNOSIS >	
Is the inspection result normal?	-
YES >> Replace seat memory switch. Refer to <u>ADP-205, "Removal and Installation"</u> . NO >> Repair or replace harness.	А
	В
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	N I
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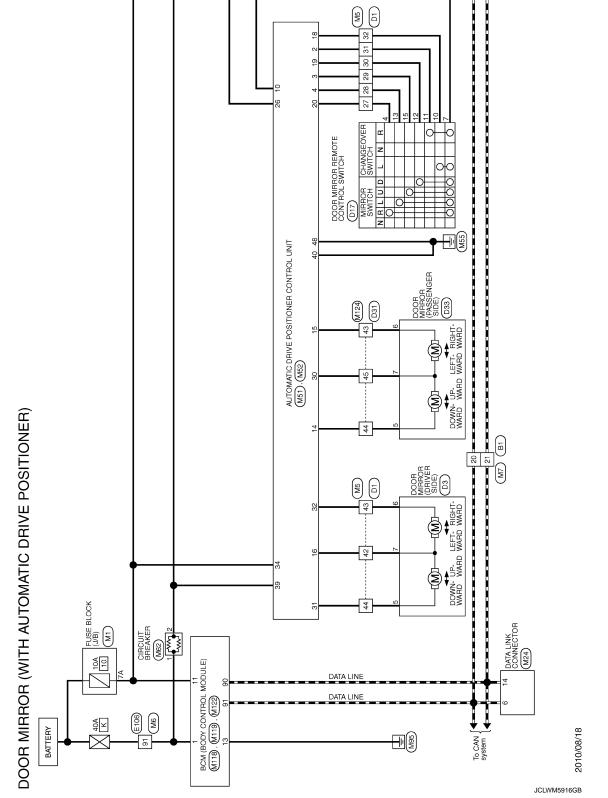
< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR SYSTEM

Wiring Diagram - DOOR MIRROR (WITH AUTOMATIC DRIVE POSITIONER) -

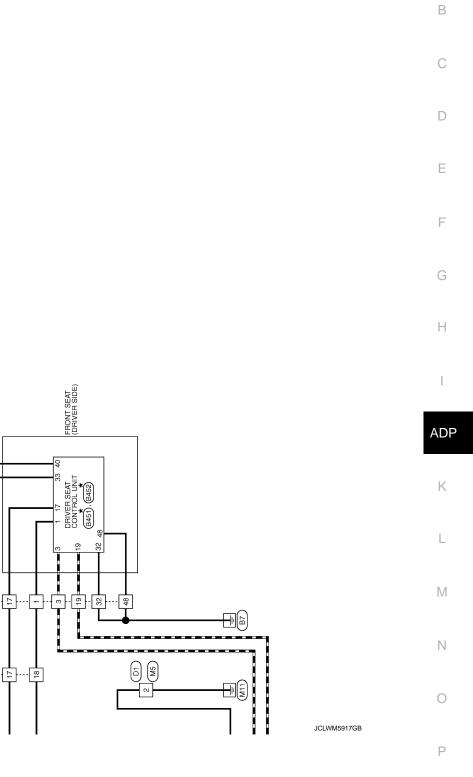
INFOID:000000007463945

For connector terminal arrangements, harness layouts, and alphabets in a \bigcirc (option abbreviation; if not described in wiring diagram), refer to <u>GI-12. "Connector Information"</u>.



DOOR MIRROR SYSTEM

< DTC/CIRCUIT DIAGNOSIS >



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

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Revision: 2013 February

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ECU DIAGNOSIS INFORMATION DRIVER SEAT CONTROL UNIT

Reference Value

INFOID:000000007463946

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condit	ion	Value/Status
SET SW	Set switch	Push	ON
SET SW	Set Switch	Release	OFF
	Mamon (quitch 1	Push	ON
MEMORY SW1	Memory switch 1	Release	OFF
MEMORY SW2	Mamon (quitch 2	Push	ON
MEMORY SW2	Memory switch 2	Release	ON OFF ON OFF
	Oliding quitch (front)	Operate	ON
SLIDE SW-FR	Sliding switch (front)	Release	OFF
	Oliding quitch (rear)	Operate	ON
SLIDE SW-RR	Sliding switch (rear)	Release	OFF
	De aliminar avritati (far at)	Operate	ON
RECLN SW-FR	Reclining switch (front)	Release	OFF
		Operate	ON
RECLN SW-RR	Reclining switch (rear)	Release	OFF
LIFT FR SW-UP	Lifting a souther fragment (com)	Operate	ON
	Lifting switch front (up)	Release	OFF
LIFT FR SW-DN	Lifting owitch front (down)	Operate	ON
	Lifting switch front (down)	Release	
		Operate	ON
LIFT RR SW-UP	Lifting switch rear (up)	Release	OFF
		Operate	ON
LIFT RR SW-DN	Lifting switch rear (down)	Release	OFF
	NAinnen erritek	Up	ON
MIR CON SW-UP	Mirror switch	Other than above	OFF
	Mirror outtob	Down	ON
MIR CON SW-DN	Mirror switch	Other than above	OFF
	Mirror outtob	Right	ON
MIR CON SW-RH	Mirror switch	Other than above	OFF
	NAinnen erritek	Left	ON
MIR CON SW-LH	Mirror switch	Other than above	OFF
		Right	ON
MIR CHNG SW-R	Changeover switch	Other than above	OFF
		Left	ON
MIR CHNG SW-L	Changeover switch	Other than above	OFF
	Tileie -1	Up	ON
TILT SW-UP	Tilt switch	Other than above	OFF
	Tile and all	Down	ON
TILT SW-DOWN	Tilt switch	Other than above	OFF

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condit	tion	Value/Status
	Talaaaniait-h	Forward	ON
TELESCO SW-FR	Telescopic switch	Other than above	OFF
TELESCO SW-RR	Tilt switch	Backward	ON
TELESCO SW-RR		Other than above	OFF
DETENT SW ^{*1}	AT selector lever	P position	OFF
DETENT SW		Other than above	ON
PARK BRAKE SW ^{*2}	Parking brake	Applied	ON
FARR DRAKE SW		Release	OFF
STARTER SW	Ignition position	Cranking	ON
0////2//0//		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}
		Forward	The numeral value decreases *3
RECLN PULSE	Seat reclining	Backward	The numeral value increases *3
		Other than above	No change to numeral value ^{*3}
		Up	The numeral value decreases *3
LIFT FR PULSE	Seat lifter (front)	Down	The numeral value increases *3
		Other than above	No change to numeral value ^{*3}
		Up	The numeral value decreases *3
LIFT RR PULSE	Seat lifter (rear)	Down	The numeral value increases *3
		Other than above	No change to numeral value ^{*3}
MIR/SEN RH U-D	Door mirror (passenger sid	e)	Change between 3.4 (close to peak) 0.6 (close to valley)
MIR/SEN RH R-L	Door mirror (passenger sid	e)	Change between 3.4 (close to left edge) 0.6 (close to right edge)
MIR/SEN LH U-D	Door mirror (driver side)		Change between 3.4 (close to peak) 0.6 (close to valley)
MIR/SEN LH R-L	Door mirror (driver side)		Change between 0.6 (close to left edge) 3.4 (close to right edge)
TILT SEN	Tilt position		Change between 1.2 (close to top) 3.4 (close to bottom)
TELESCO SEN	Telescopic position		Change between 3.4 (close to top) 0.8 (close to bottom)

^{*1}: Only for A/T model

*2: Only for M/T model

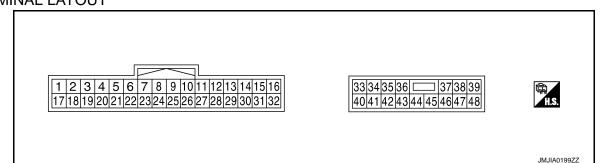
*3: The value at the position attained when the battery is connected is regarded as 32768.

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< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No.		Description				Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx)
1 (L/W)	Ground	UART communication (RX)	Input	Ignition switch ON		2mSec/div
3 (R/Y)	—	CAN-H	—	_		_
8 ^{*1}	Ground	Parking brake switch	Input	Parking brake	Applied	0
(LG)	Cround	signal	mput		Release	Battery voltage
9 (W/G)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	10mSec/div
					Stop	0 or 5
10 (P/B)	Ground	Lifting sensor (rear) sig- nal	Input	Seat lifting (rear)	Operate	10mSec/div
					Stop	0 or 5
11 (BR)	Ground	Sliding switch backward signal	Input	Sliding switch	Operate (back- ward)	0
					Release	Battery voltage
12 (SB)	Ground	Reclining switch back- ward signal	Input	Reclining switch	Operate (back- ward)	0
-					Release	Battery voltage

Revision: 2013 February

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				
+	-	Signal name	Input/ Output	Condition		Voltage (V) (Approx)
13 (LG/R)	Ground	Lifting switch (front) down signal	Input	Lifting switch (front)	Operate (down)	0
14 (G/B)	Ground	Lifting switch (rear) down signal	Input	Lifting switch (rear)	Release Operate (down) Release	0 Battery voltage
16 (O)	Ground	Sensor power supply	Output			5
17 (Y/R)	Ground	UART communication (TX)	Output	Ignition switch ON		10mSec/div
19 (V)	_	CAN-L	_	_		_
					P position	0
21 ^{*2} (L/Y)	Ground	Detention switch	Input	A/T selector lever	Except P position	20mSec/div
24 (R)	Ground	Sliding sensor signal	Input	Seat sliding	Operate	10mSec/div
					Stop	0 or 5
25 (Y/B)	Ground	Lifting sensor (front) sig- nal	Input	Seat lifting (front)	Operate	10mSec/div
					Stop	0 or 5
26 (Y)	Ground	Sliding switch forward signal	Input	Sliding switch	Operate (forward) Release	0 Battery voltage
27	Ground	Reclining switch forward	Input	Reclining switch	Operate (forward)	0
(R/G)	Ground	signal	input		Release	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Voltage (V)	
+	-	Signal name	Input/ Output	Condition		(Approx)	
28 (W/B)	Ground	Lifting switch (front) up signal	Input	Seat lifting switch (front)	Operate (up)	0	
				· · ·	Release	Battery voltage	
29 (P/L)	Ground	Lifting switch (rear) up signal	Input	Seat lifting switch (rear)	Operate (up)	0	
(- / _/				()	Release	Battery voltage	
31 (GR)	Ground	Sensor ground	—	—		0	
32 (B/W)	Ground	Ground (signal)		_		0	
33 (R)	Ground	Power source (C/B)	Input	_		Battery voltage	
35	Ground	Sliding motor forward output signal	Output	Seat sliding	Operate (forward)	Battery voltage	
(W/R)				Coutonaing	Release	0	
36	Ground	Reclining motor forward output signal	Output	Seat reclining	Operate (forward)	Battery voltage	
(G/Y)					Release	0	
37 (G/W)	Ground	Lifting motor (front) down output signal	Output	Seat lifting (front)	Operate (down)	Battery voltage	
(G/W)					Stop	0	
38 (L/Y)	Ground	Lifting motor (rear) up output signal	Output	Seat lifting (rear)	Operate (up)	Battery voltage	
(L/1)					Stop	0	
39 (R/B)	Ground	Lifting motor (rear) down output signal	Output	Seat lifting (rear)	Operate (down)	Battery voltage	
(R/D)					Stop	0	
40 (R/W)	Ground	Power source (Fuse)	Input	_		Battery voltage	
42 (W/B)	Ground	Fround Sliding motor backward output signal	Output	Seat sliding	Operate (back- ward)	Battery voltage	
					Stop	0	
44 (P)	Ground	round Reclining motor back- ward output signal	Output	Seat reclining	Operate (back- ward)	Battery voltage	
				-	Stop	0	
45 (L/R)	Ground	und Lifting motor (front) up output signal	Output	Seat lifting (front)	Operate (up)	Battery voltage	
					Stop	0	
48 (B)	Ground	Ground (power)	_			0	

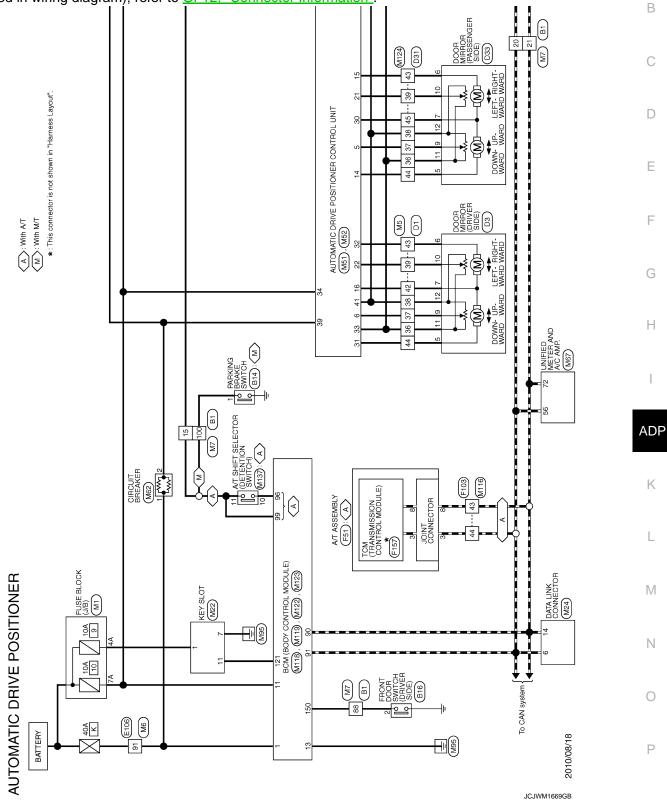
*1: Only for M/T models

*2: Only for A/T models

< ECU DIAGNOSIS INFORMATION >

Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -

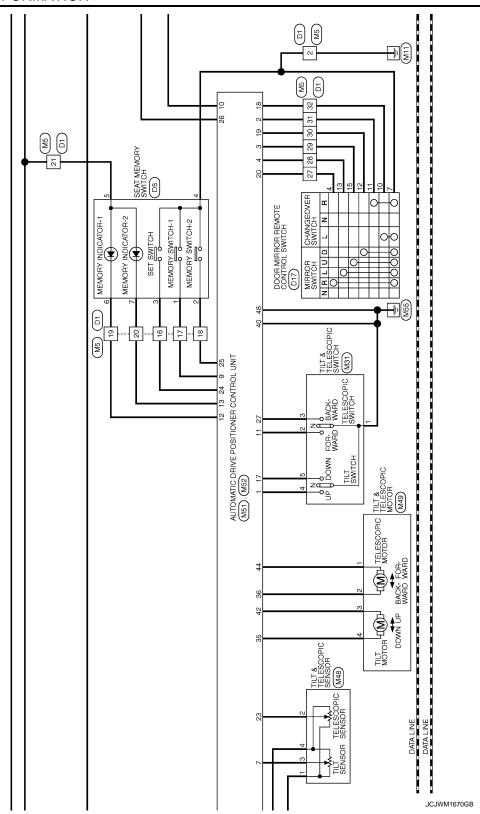
For connector terminal arrangements, harness layouts, and alphabets in a \bigcirc (option abbreviation; if not described in wiring diagram), refer to <u>GI-12, "Connector Information"</u>.



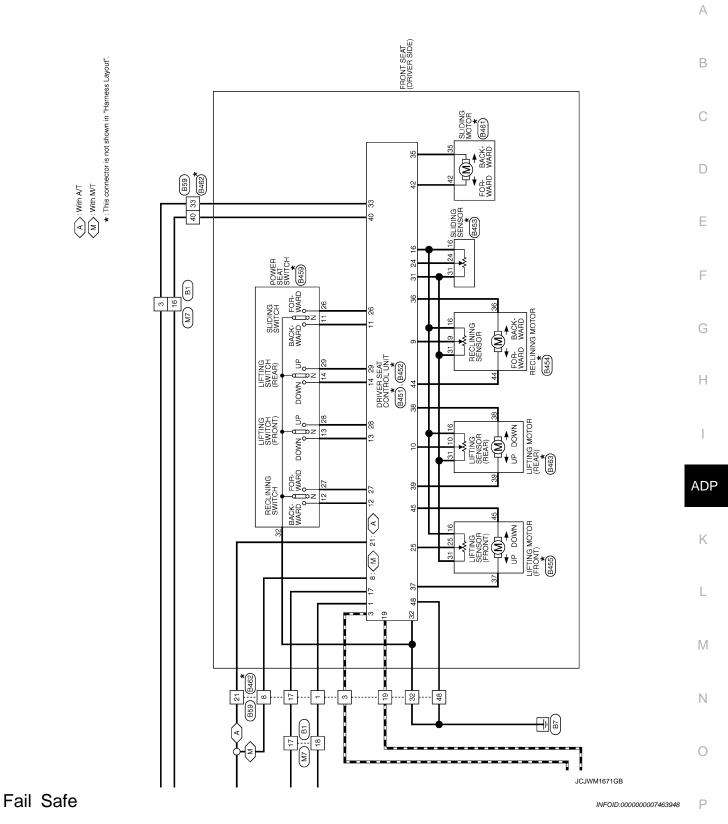
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< ECU DIAGNOSIS INFORMATION >



< ECU DIAGNOSIS INFORMATION >



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

< ECU DIAGNOSIS INFORMATION >

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
	CAN communication	U1000	<u>ADP-49</u>
	Tilt sensor	B2118	<u>ADP-54</u>
Only manual functions operate normally.	Telescopic sensor	B2119	<u>ADP-57</u>
	Detent switch	B2126	<u>ADP-60</u>
	Malfunction ItemDTCCAN communicationU1000Tilt sensorB2118Telescopic sensorB2119Detent switchB2126Parking brake switchB2127UART communicationB2128Seat sliding outputB2112	<u>ADP-62</u>	
Only manual functions, except door mirror, operate normally.	UART communication	B2128	<u>ADP-64</u>
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	<u>ADP-50</u>
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	<u>ADP-52</u>

DTC Index

INFOID:000000007463949

CONSULT	Tim	ing ^{*1}		Reference page
display	Current mal- function	Previous mal- function	Item	
CAN COMM CIRCUIT [U1000]	0 1-3		CAN communication	<u>ADP-49</u>
SEAT SLIDE [B2112]	0	1-39	Seat slide motor output	<u>ADP-50</u>
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	<u>ADP-52</u>
TILT SENSOR [B2118]	0	1-39	Tilt sensor input	<u>ADP-54</u>
TELESCO SENSOR [B2119]	0	1-39	Telescopic sensor input	<u>ADP-57</u>
DETENT SW [B2126]	0	1-39	Detention switch condition	<u>ADP-60</u>
PARKING BRAKE [B2127]	0	1-39	Parking brake switch condition	<u>ADP-62</u>
UART COMM [B2128]	0	1-39	UART communication	<u>ADP-64</u>

*1.

• 0: Current malfunction is present

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

< ECU DIAGNOSIS INFORMATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

INFOID:000000007463950

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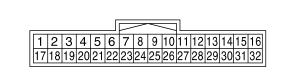
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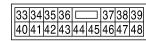
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TERMINAL LAYOUT







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PHYSICAL VALUES

	nal No. color)	Description		- Condition		Voltage (V)	F
+	-	Signal name	Input/ Output			(Approx.)	G
1	Ground	Tilt switch upward signal	Input	Tilt switch	Operate (upward)	0	
(Y)	Ground	The switch upward signal	input		Other than above	5	Н
2		Changeswar switch DLL		Changeover	RH	0	
(LG)	Ground	Changeover switch RH signal	Input	Changeover switch position	Neutral or LH	5	I
3	Ground	Mirror switch upward sig-	Input	Mirror switch	Operated (upward)	0	ADP
(G)	Ciouna	nal	input	WINTER SWITCH	Other than above	5	
4	Ground	Mirror switch leftward sig-	Input	Operated (leftward)		0	K
(Y)	Ground	nal	mput	Mirror switch	Other than above	5	L
5 (R)	Ground	Door mirror sensor (RH) upward/downward signal	Input	Mirror face (door mirror RH)		Change between 3.4 (close to peak) 0.6 (close to valley)	
6 (GR)	Ground	Door mirror sensor (LH) upward/downward signal	Input	Mirror face (door n	nirror LH)	Change between 3.4 (close to peak) 0.6 (close to valley)	Μ
7 (BG)	Ground	Tilt sensor signal	Input	Tilt position		Change between 1.2 (close to top) 3.8 (close to bottom)	Ν
9					Press	0	
(BR)	Ground	Memory switch 1 signal	Input	Memory switch 1	Other than above	5	0
10 (V)	Ground	UART communication (TX)	Output	Ignition switch ON		2mSec/div	Ρ

	nal No. color)	Description	Condition		Voltage (V)										
+	_	Signal name	Input/ Output	/		(Approx.)									
11	Ground	Telescopic switch forward	Input	Telescopic switch	Operate (forward)	0									
(GR)		signal			Other than above	5									
12	Oneveral	Manager in distant distant	Quitaut	Manager and the distance of	Illuminate	1									
(BG)	Ground	Memory indictor 1 signal	Output	Memory indictor 1	Other than above	Battery voltage									
13	Ground	Memory indictor 2 signal	Output	Momony indictor 2	Illuminate	1									
(P)	Ground	Memory Indictor 2 Signal	Output	Memory indictor 2	Other than above	Battery voltage									
14	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (upward)	Battery voltage									
(W)	Cround	upward output	Output		Other than above	0									
15	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (leftward)	Battery voltage									
(BG)	Ground	leftward output	Output	Door mirror RH	Other than above	0									
		Door mirror motor (LH)	Output											Operate (down- ward)	Battery voltage
16	Ground	downward output		Door mirror (LH)	Other than above	0									
(Y)		Door mirror motor (LH)									Operate (rightward)	Battery voltage			
		rightward output						Other than above	0						
17 (BR)	Ground	Tilt switch downward sig-	Input	Input	Input	Tilt switch	Operate (down- ward)	0							
(BR)		nal			Other than above	5									
18		Changeover switch LH		Changeover	LH	0									
(W)	Ground	signal	Input	switch position	Neutral or RH	5									
19	Ground	Mirror switch downward	Input	Mirror switch	Operate (down- ward)	0									
(SB)		signal			Other than above	5									
20	0	Mirror switch rightward	le (Minnonital	Operate (rightward)	0									
(L)	Ground	signal	Input	Mirror switch	Other than above	5									
21 (L)	Ground	Door mirror sensor (RH) leftward/rightward signal	Input	Door mirror RH position		Change between 3.4 (close to left edge) 0.6 (close to right edge)									
22 (B)	Ground	Door mirror sensor (LH) leftward/rightward signal	Input	Door mirror LH pos	sition	Change between 0.6 (close to left edge) 3.4 (close to right edge)									
23 (P)	Ground	Telescopic sensor signal	Input	Telescopic position	I	Change between 0.8 (close to top) 4.4 (close to bottom)									

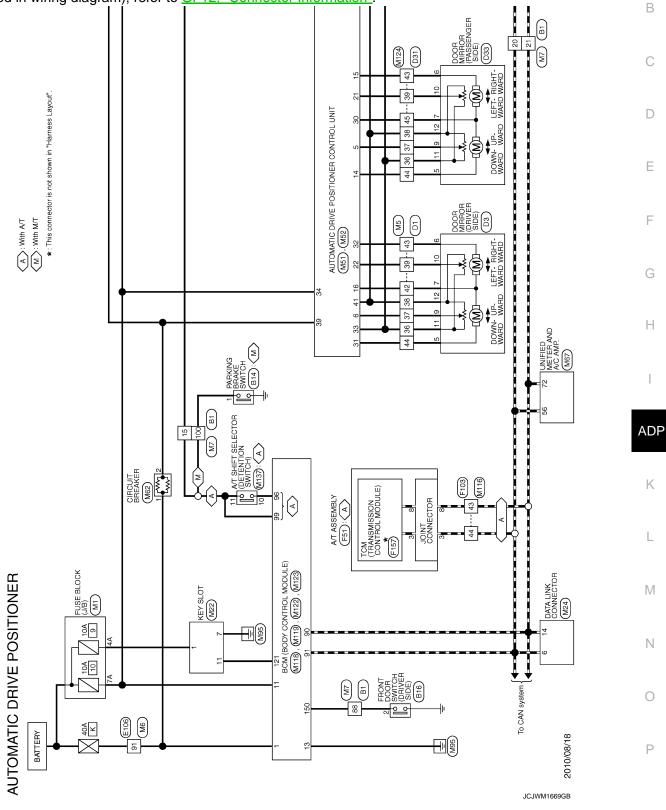
	nal No. e color)	Description		Conditi	on	Voltage (V)	
+	-	Signal name	Input/ Output			(Approx.)	
24 (R)	Ground	Set switch signal	Input	Set switch	Press Other than above	0 5	_
25 (V)	Ground	Memory switch 2 signal	Input	Memory switch 2	Press Other than above	0 5	_ (
26 (P)	Ground	UART communication (RX)	Input	Ignition switch ON		10mSec/div	_
27		Telescopic switch back-			Operate (backward)	0	-
(G)	Ground	ward signal	Input	Telescopic switch	Other than above	5	(
		Door mirror motor (RH)			Operate (down- ward)	Battery voltage	
30	Ground	downward output Door mirror motor (RH) rightward output	Output	Door mirror (RH)	Other than above	0	-
(SB)					Operate (rightward)	Battery voltage	-
					Other than above	0	A
31		Door mirror motor (LH)	Output	D . (11)	Operate (upward)	Battery voltage	_
(G)	Ground	upward output		Door mirror (LH)	Other than above	0	-
32		Door mirror motor (LH)		D . (11)	Operate (leftward)	Battery voltage	-
(L)	Ground	leftward output	Output	Door mirror (LH)	Other than above	0	_
33 (W)	Ground	Sensor power supply	Input			5	-
34 (V)	Ground	Power source (Fuse)	Input			Battery voltage	_
35					Operate (upward)	Battery voltage	-
(L)	Ground	Tilt motor upward output Outp	notor upward output Output Steering tilt	Other than above	0	-	
36		Telescopic motor forward		Steering telescop-	Operate (forward)	Battery voltage	-
(GR)	Ground	output signal Output ic Othe		Other than above	0	-	
39 (W)	Ground	Power source (C/B)	Input		1	Battery voltage	-
40 (B)	Ground	Ground				0	-

	nal No. color)	Description		Description		20	Voltage (V)	
+	_	Signal name	Input/ Output	Condition		(Approx.)		
41 (Y)	Ground	Sensor ground	_	_		0		
42 (BG)	Ground	Tilt motor downward out-	Output Steering tilt	downward out- Output Stee	Steering tilt	Operate (down- ward)	Battery voltage	
(00)	put			Other than above	0			
44	Ground	Telescopic motor back-	motor back-	Steering telescop-	Operate (backward)	Battery voltage		
(G)	Ground	ward output	Output	ic	Other than above	0		
48 (B)	Ground	Ground				0		

< ECU DIAGNOSIS INFORMATION >

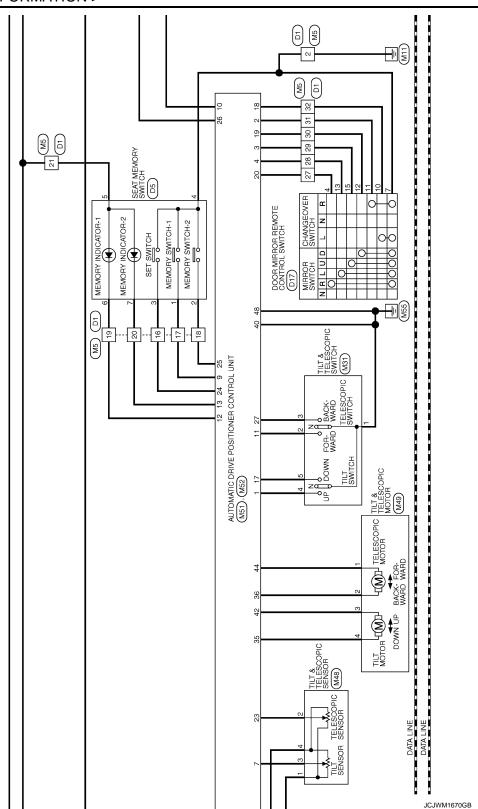
Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -

For connector terminal arrangements, harness layouts, and alphabets in a \bigcirc (option abbreviation; if not described in wiring diagram), refer to <u>GI-12, "Connector Information"</u>.



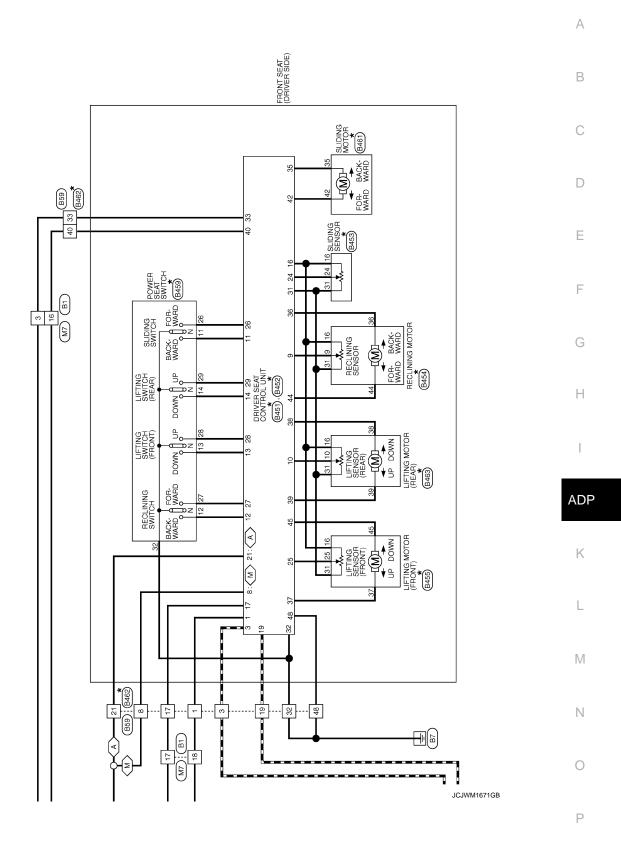
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AUTOMATIC DRIVE POSITIONER CONTROL UNIT < ECU DIAGNOSIS INFORMATION >





< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000007715438

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	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
FR WASHER SW	Front washer switch ON	On
	Other than front wiper switch INT/AUTO	Off
FR WIPER INT	Front wiper switch INT/AUTO	On
	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial posi- tion
	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
	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
	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 LH door opened	On
	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On

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Monitor Item	Condition	Value/Status	
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off	_
CDL LOCK 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	-
KEY CYL LK-SW	Other than driver door key cylinder LOCK	Off	-
REFUTE LR-SW	Driver door key cylinder LOCK	On	_
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK	Off	_
REFUTE UN-SW	Driver door key cylinder LOCK	On	_
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	-
	Hazard switch is OFF	Off	-
HAZARD SW	Hazard switch is ON	On	-
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off	-
	Trunk lid opener cancel switch OFF	Off	-
TR CANCEL SW	Trunk lid opener cancel switch ON	On	-
	Trunk lid opener switch OFF	Off	_
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	On	-
	Trunk lid closed	Off	-
TRNK/HAT MNTR	Trunk lid opened	On	-
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off	-
	LOCK button of the Intelligent Key is not pressed	Off	-
RKE-LOCK	LOCK button of the Intelligent Key is pressed	On	-
	UNLOCK button of the Intelligent Key is not pressed	Off	
RKE-UNLOCK	UNLOCK button of the Intelligent Key is pressed	On	_
	TRUNK OPEN button of the Intelligent Key is not pressed	Off	-
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is pressed	On	
	PANIC button of the Intelligent Key is not pressed	Off	-
RKE-PANIC	PANIC button of the Intelligent Key is pressed	On	_
	UNLOCK button of the Intelligent Key is not pressed	Off	-
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is pressed and held	On	-
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta- neously	Off	-
_	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On	-
	Bright outside of the vehicle	Close to 5 V	-
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V	-
	Driver door request switch is not pressed	Off	-
REQ SW -DR	Driver door request switch is pressed	On	-
	Passenger door request switch is not pressed	Off	-
REQ SW -AS	Passenger door request switch is pressed	On	-
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off	_
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off	-

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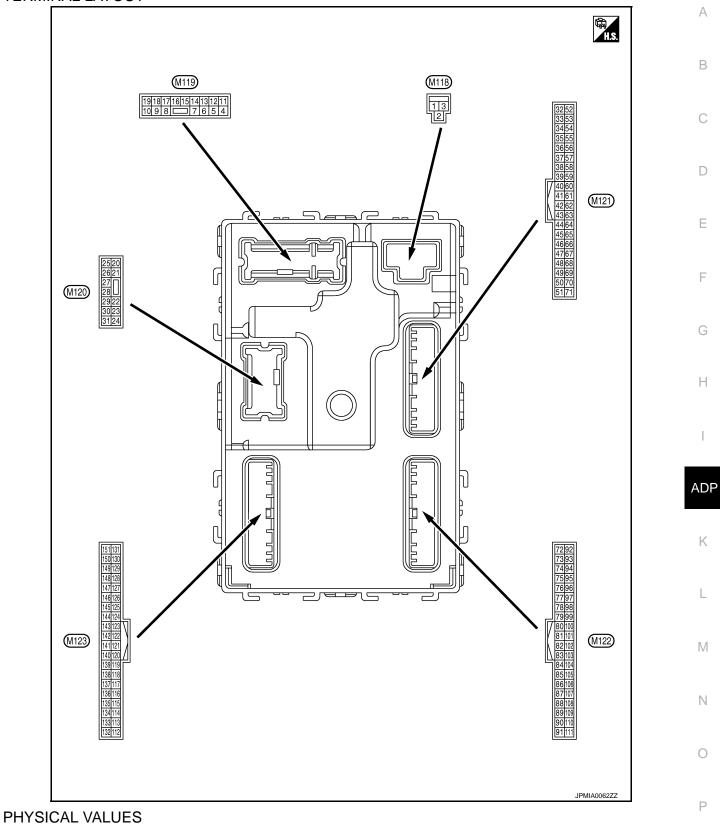
Monitor Item	Condition	Value/Status
REQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off
	Trunk lid opener request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
0311.000	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
	The clutch pedal is not depressed	Off
CLUCH SW	The clutch pedal is depressed	On
	The brake pedal is depressed when No. 7 fuse is blown	Off
3RAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is nor- mal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
	 Selector lever in P position (Except M/T models) The clutch pedal is depressed (M/T models) 	Off
DETE/CANCL SW	 Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) 	On
	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
	Driver door is unlocked	Off
JNLK SEN -DR	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 in OFF or ACC position	Off
GN RLY1 -F/B	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
DETE SW -IPDM	Selector lever in P position	On
	 Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models) 	Off
SFT PN -IPDM	 Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) 	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

Monitor Item	Condition	Value/Status
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (60 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (60 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
	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
	The Intelligent Key is not inserted into key slot	Off
KEY SW -SLOT	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
	The key ID that the key slot receives is not recognized by the second key ID reg- istered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
	The key ID that the key slot receives is not recognized by the first key ID regis- tered to BCM.	Yet
CONFIRM ID1	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done

Monitor Item	Condition	Value/Status
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
1F 4	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
IF J	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
IF Z	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
IPI	The ID of first Intelligent Key is registered to BCM	Done
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 of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGST PRI	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGGI KKI	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
ID REGST RET	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
DULLER	Tire pressure warning alarm is sounding	On

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TERMINAL LAYOUT



Description				Value
Signal name	Input/ Output		Condition	(Approx.)
Battery power supply	Input	Ignition switch OFF		Battery voltage
P/W power supply (BAT)	Output	Ignition switch C	DFF	12 V
P/W power supply (RAP)	Output	Ignition switch C	N	12 V
			np battery saver is activated. or room lamp power supply)	0 V
Interior room lamp power supply	Output	vated.	mp battery saver is not acti- erior room lamp power sup-	12 V
Passenger door UN-	Output	Passenger	UNLOCK (Actuator is activated)	12 V
LOCK	Output	door	Other than UNLOCK) Ac- tuator is not activated	0 V
Step lamp	Output	Step lamp	ON	0 V
			OFF	12 V
All doors, fuel lid	Output	All doors, fuel	LOCK (Actuator is activated)	12 V
LOCK		lid	Other than LOCK (Actuator is not activated)	0 V
Driver door, fuel lid	Output	Driver door,	UNLOCK (Actuator is activated)	12 V
UNLOCK	Output	fuel lid	Other than UNLOCK (Actuator is not activated)	0 V
Rear RH door and rear LH door UN-	Output	Rear RH door and rear LH	UNLOCK (Actuator is activated)	12 V
LOCK	Output	door	Other than UNLOCK (Actuator is not activated)	0 V
Battery power supply	Input	Ignition switch C	DFF	Battery voltage
Ground	_	Ignition switch C	N	0 V
_	_		—	_
ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
	•	5	ACC	0 V
			Turn signal switch OFF	0 V
Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 1 5
				signal RH Output Ignition switch

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Terminal No. Description (Wire color)				Value	А		
+	-	Signal name	Input/ Output		Condition	(Approx.)	\cap
					Turn signal switch OFF	0 V	В
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s Fillow 1 s Fillow F	C
19		Interior room lamp		Interior room	OFF	12 V	_
(V)	Ground	control	Output	lamp	ON	0 V	E
					Turn signal switch OFF	0 V	
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 10 0 10 10 10 10 10 10 10 10	F G H
23	Cround	Trunk lid open	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	12 V	I
(LG)	Ground	Trunk lid open	Output		Other than OPEN (Trunk lid opener actuator is not activated)	0 V	AD
					Turn signal switch OFF	0 V	
25 (Y)	Ground	Turn signal LH (Rear)	Output	lgnition switch ON	Turn signal switch LH	(V) 15 0 10 10 10 10 10 10 10 10 10	K L M
30	0	Truck as an low	Out	Trunk room	ON	0 V	
(P)	Ground	Trunk room lamp	Output	lamp	OFF	12 V	Ν

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	nal No.	Description				Value
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)
34	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
(SB)		(-)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB
35	Ground	Trunk room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0062GB
(V)	Clound				When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB
38	Ground	Rear bumper anten- na (-)		When the trunk lid opener re- quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 15 15 15 15 15 15 15 15 15 15
(B)			Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
39	Ground	Rear bumper anten-	Output	When the trunk lid opener re- quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 15 0 15 0 15 15 15 15 15 15 15 15 15 15	B C D
(W)	Ground	na (+)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB	F
47	Cround	Ignition relay (IPDM	Output	Innition owitch	OFF or ACC	12 V	G
(Y)	Ground	E/R) control	Output	Ignition switch	ON	0 V	
50 (BG)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk lid is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	H I ADP
					ON (Trunk lid is opened)	0 V	
		Starter relay control	Output	Ignition switch ON (A/T mod- els)	When selector lever is in P or N position	12 V	Κ
52	Ground				When selector lever is not in P or N position	0 V	L
(R)	Croana		ouput	Ignition switch ON (M/T mod-	When the clutch pedal is depressed	Battery voltage	
				els)	When the clutch pedal is not depressed	0 V	M
60	Ground	Push-button ignition	Input	Push-button ig- nition switch	Pressed	0 V	
(BR)	Ground	switch (Push switch)	mput	(push switch)	Not pressed	Battery voltage	Ν
					ON (Pressed)	0 V	
61 (SB)	Ground	Trunk lid opener re- quest switch	Input	Trunk lid open- er request switch	OFF (Not pressed)	(V) 15 0 5 10 10 ms JPMIA0016GB 1.0 V	O
64		Intelligent Key warn-		Intelligent Key	Sounding	0 V	
64 (G)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	12 V	

	nal No.	Description				Value
(VVire +	color)	Signal name	Input/ Output		Condition	(Approx.)
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid open- er switch	Pressed Not pressed	0 V (V) 15 0 10 10 ms JPMIA0011GB 11.8 V
68 (BG)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes) ON (When rear RH door	(V) 15 0 10 ms JPMIA0011GB 11.8 V 0 V
					opens)	0 V
69 (L)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	(V) 15 0 10 ms JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72	Ground	nd Room antenna 2 (–) (Center console) Ou	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 s JMKIA0062GB
(R)					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB

	nal No.	Description				Value	Λ
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	A
73	Ground	Room antenna 2 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	B C D
(G)	Ground	(Center console)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	E
74	Ground	round Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H
(SB)	Glound				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	ADF K
75	Ground	Passenger door an- tenna (+)		When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 10 50 10 10 50 10 10 10 10 10 10 10 10 10 1	M
(BR)			Sapar	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 10 50 1 s JMKIA0063GB	P

	nal No.	Description				Value
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)
76	Ground	Driver door antenna (–)	Output	When the driv- er door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(V)	Giouna		Cuput	switch is oper- ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
77	Ground	Driver door antenna (+)	Output	When the driv- er door request switch is oper- ated with igni- tion switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10
(LG)	Giouna				When Intelligent Key is not in the antenna detection area	(V) 15 0 15 0 15 0 15 0 15 0 15 0 15 0 15
78	Ground	Room antenna 1 (–) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(Y)					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB

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	nal No. color)	Description				Value
(vvire +		Signal name	Input/ Output		Condition	(Approx.)
79		Room antenna 1 (+)		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 1 1 1 1 1 5 1 1 5
(BR)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (SB)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC ON	0 V 12 V
83	Ground	Remote keyless entry receiver communica- tion	Input/	During waiting		(V) 15 0 5 0 1 ms JMKIA0064GB
(Y) GI	Ground		Output	When operating gent Key	either button on the Intelli-	(V) 15 10 50 1 ms JMKIA0065GB

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	nal No.	Description				Value
(Wire +	color) –	Signal name	Input/ Output	Condition		(Approx.)
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
87 (Y)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper volume dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3 V
					Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V

Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + _ Output В (V 15 10 All switches OFF С (Wiper volume dial 4) 2 ms JPMIA0041GB D 1.4 V $(\setminus$ 15 10 Ε Lighting switch HI ٢ (Wiper volume dial 4) F 2 ms JPMIA0036GB 1.3 V Combination 88 Combination switch Ground Input (BG) **INPUT 3** switch 15 10 Н Lighting switch 2ND ٢ (Wiper volume dial 4) 2 ms JPMIA0037GB 1.3 V ADP 15 Any of the conditions be-10 low with all switches OFF ſ · Wiper volume dial 1 Κ · Wiper volume dial 2 · Wiper volume dial 3 2 ms JPMIA0040GB 1.3 V L 90 Input/ CAN-L Ground (P) Output Μ 91 Input/ Ground CAN-H ____ (L) Output OFF 12 V Ν (V 15 10 5 92 Key slot illumi-Key slot illumination Output Blinking Ground (LG) nation 1 s Ρ JPMIA0015GB 6.5 V ON 0 V OFF (LOCK indicator is Battery voltage 93 not illuminated) Ground ON indicator lamp Output Ignition switch (GR) ON 0 V

BCM (BODY CONTROL MODULE)

	nal No. color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(BG)	Cround	All the relay control	Output	Ignition Switch	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (De- tention switch) power supply	Output		_	12 V
		Selector lever P posi-		O a la ata a lavara	P position	0 V
99 (R)* ² Ground (BR)* ³	tion switch (A/T mod- els)		Selector lever	Any position other than P	12 V	
		ASCD clutch switch (M/T models without ICC)		ASCD clutch	OFF (Clutch pedal is de- pressed)	0 V
	Ground		Input	switch	ON (Clutch pedal is not depressed)	12 V
		ICC clutch switch (M/ T models with ICC)		ICC clutch switch	OFF (Clutch pedal is de- pressed)	0 V
					ON (Clutch pedal is not depressed)	12 V
				Passenger door request switch	ON (Pressed)	0 V
100 (Y) Ground	Ground	Passenger door re- quest switch	Input		OFF (Not pressed)	(V) 15 0 10 10 ms JPMA0016GB 1.0 V
					ON (Pressed)	0 V
101 (P)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 0 5 10 10 ms JPMIA0016GB 1.0 V
102	Crownel	Blower fan motor re-	Quitt	Ignition owitet	OFF or ACC	0 V
(BG)	Ground	lay control	Output	Ignition switch	ON	12 V
103 (P)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch C	DFF	12 V

Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + _ Output В (V 15 10 Ō All switches OFF С 2 ms JPMIA0041GB D 1.4 V (V) 15 10 Ε 0 Turn signal switch LH F 2 ms JPMIA0037GB 1.3 V G (V 15 10 Combination Н 107 Combination switch switch Ground Input Turn signal switch RH 0 **INPUT 1** (LG) (Wiper volume dial 4) 2 ms JPMIA0036GB 1.3 V ADP (V 15 10 Ę 0 Front wiper switch LO Κ 2 ms JPMIA0038GB L 1.3 V (V 15 Μ 10 5 0 Front washer switch ON Ν 2 ms JPMIA0039GB 1.3 V Ο

BCM (BODY CONTROL MODULE)

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	nal No. color)	Description	I		-	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
108	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper volume dial 4)	(V) 15 10 2 ms JPMIA0038GB 1.3 V	
(R)		INPUT 4		switch	Lighting switch 1ST (Wiper volume dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3 V	
					Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	(V) 15 10 2 ms JPMIA0039GB 1.3 V	

Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + _ Output В (V 15 10 ٢ All switches OFF С 2 m s JPMIA0041GB D 1.4 V (V) 15 10 Е C Lighting switch PASS F 2 ms JPMIA0037GB 1.3 V G (V 15 10 Combination Н 109 switch Combination switch Lighting switch 2ND n Ground Input **INPUT 2** (W) (Wiper volume dial 4) 2 ms JPMIA0036GB 1.3 V ADP (V 15 10 Front wiper switch INT/ 0 Κ AUTO 2 ms JPMIA0038GB L 1.3 V (V 15 Μ 10 5 Front wiper switch HI 0 Ν 2 ms JPMIA0040GB 1.3 V Ο ON 0 V Ρ 10 110 Ground Hazard switch Input Hazard switch 5 (G) ò OFF 10 ms JPMIA0012GB 1.1 V

BCM (BODY CONTROL MODULE)

	nal No.	Description				Value
(VVire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 0 0 0 0 0 0 0 0 0 0 0 0
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(BG)				ON	When dark outside of the vehicle	Close to 0 V
114	Ground	Clutch interlock	Input	Clutchinterlock	OFF (Clutch pedal is not depressed)	0 V
(R)	(R) Ground	switch	Input	switch	ON (Clutch pedal is de- pressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage
		Stop lamp switch 2 (Without ICC) d Inpu Stop lamp switch 2 (With ICC)		Stop lamp	OFF (Brake pedal is not depressed)	0 V
118	Ground		Innut	switch	ON (Brake pedal is de- pressed)	Battery voltage
(BR)	Ground		input		h OFF (Brake pedal is not ICC brake hold relay OFF	0 V
				Stop lamp switch ON (Brake pedal is de- pressed) or ICC brake hold relay ON		Battery voltage
119 (SB)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 0 10 ms JPMIA0012GB 1.1 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121	Ground	Key slot switch	Input	When the Intellig	gent Key is inserted into key	12 V
(SB)	Ground	Ney SIUL SWILLI	input	When the Intellig	gent Key is not inserted into	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(V)			'	•	ON	Battery voltage

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description	I			Value	Δ
+	-	Signal name	Input/ Output		Condition	(Approx.)	1
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 0 0 10 ms JPMIA0011GB	E
					ON (Door open)	11.8 V 0 V	Ľ
							E
	d Trunk lid opener can- cel switch	Input	Trunk lid open- er cancel switch	CANCEL	(V) 15 10 5 0 •••••••••••••••••••••••••••••	F	
						JPMIA0012GB 1.1 V	C
					ON	0 V	
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch C	DN	(V) 15 0 5 0 10 ms JPMIA0013GB	 AI
						10.2 V	
				Ignition switch C Push-button ig-	OFF or ACC ON (Tail lamps OFF)	12 V 9.5 V	
133 (L)	Ground	Push-button ignition switch illumination	Output	nition switch il-	OFF	9.5 V 0 V	k
134				LOCK indicator	OFF	Battery voltage	I
(LG)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V	L
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch C	 DN	0 V	N
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V	11
(V)	Ground	power supply	Culput	ignition switch	ACC or ON	5.0 V	Ν

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	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s OCC3881D
(L)		er communication	Output ON	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s	
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	12 V
(B)	Cround	position	mput		Except P and N positions	0 V
141 (W)	Ground	Security indicator lamp	Output	Security indica- tor lamp	ON Blinking	0 V
					OFF	12 V
142 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper volume dial 4)	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	0 V
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper volume dial 4) Front wiper switch HI (Wiper volume dial 4) Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7	0 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color) + –		Description				Value
		Signal name	Input/ Output	Condition		(Approx.)
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	
					Any of the conditions be- low with all switches OFF	15 10 5 0
					 Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6 	2 ms
					All switches OFF	10.7 V 0 V
	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	Front wiper switch INT/	0 V
					AUTO	(V)
145					Front wiper switch LO	
(L)					Lighting switch AUTO	5 0 2 ms JPMIA0034GB
						10.7 V
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	
					Lighting switch 2ND	(V) 15
					Lighting switch PASS	10 5 2 ms JPMIA0035GB 10.7 V
					Turn signal switch LH	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1
						11.8 V
					ON (Door open)	0 V
151 (G)	Ground	Rear window defog- ger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

• *2: A/T models

• *3: M/T models

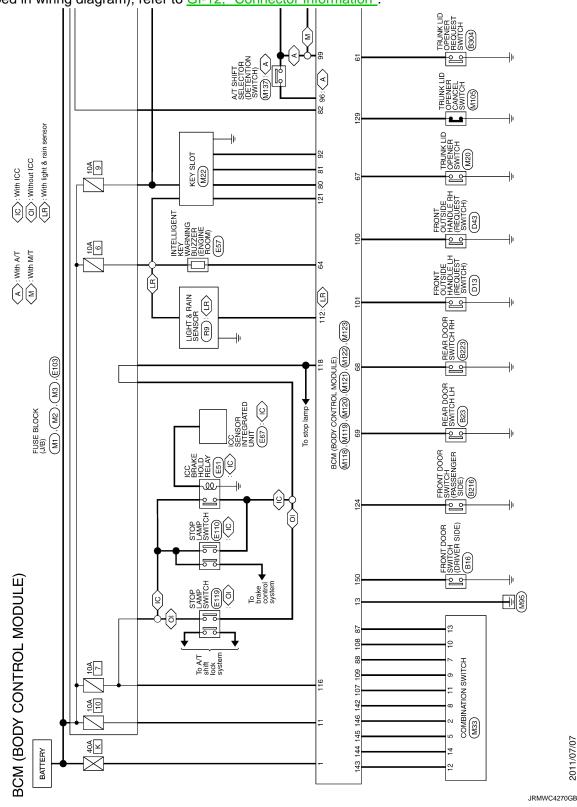
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< ECU DIAGNOSIS INFORMATION >

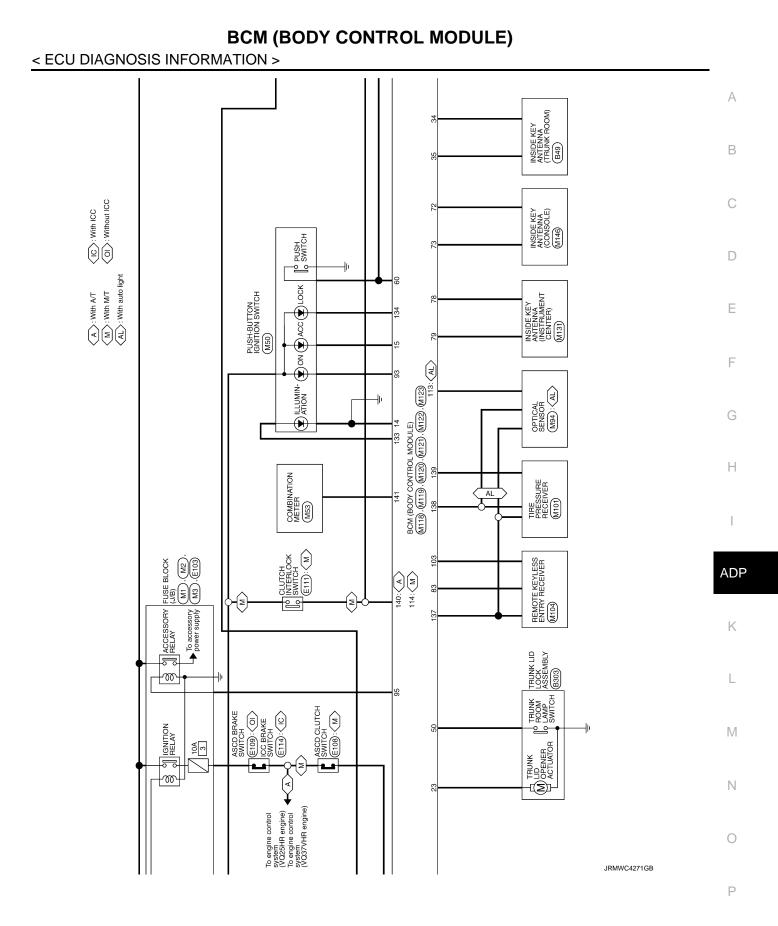
Wiring Diagram - BCM -

INFOID:000000007715439

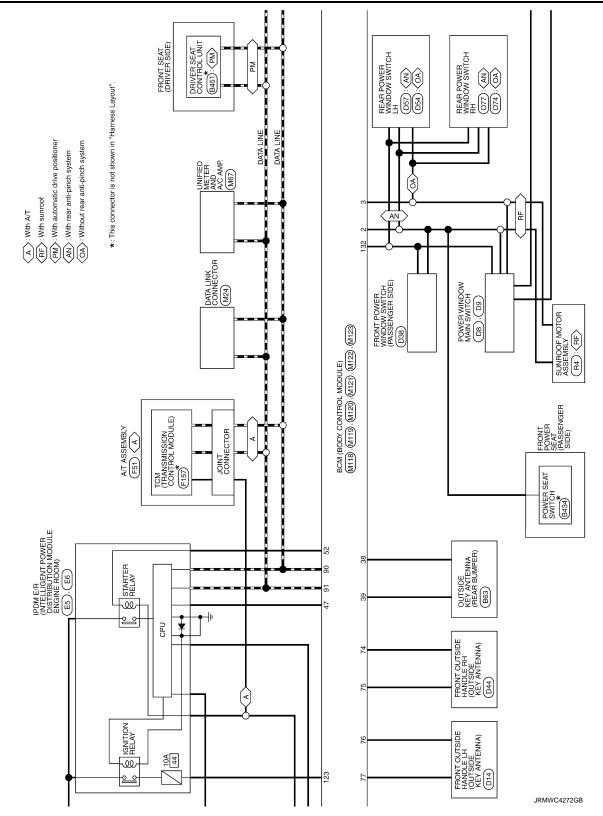
For connector terminal arrangements, harness layouts, and alphabets in a 🔿 (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



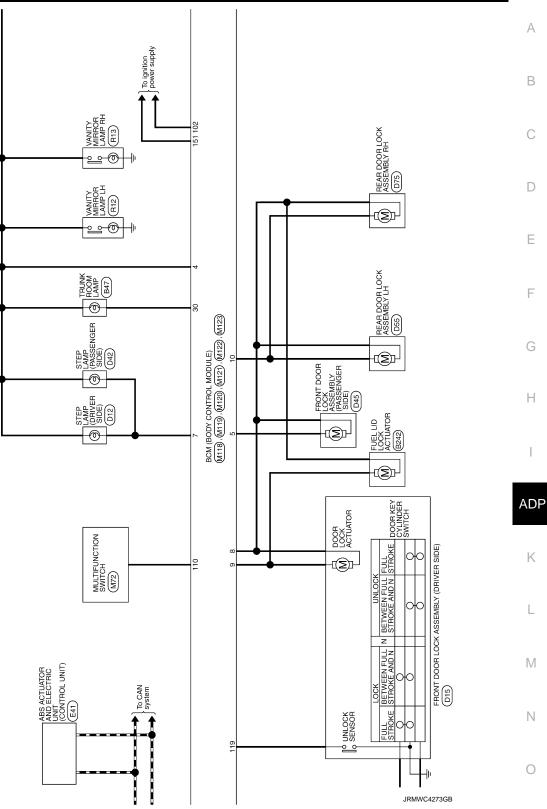
2011/07/07



Revision: 2013 February

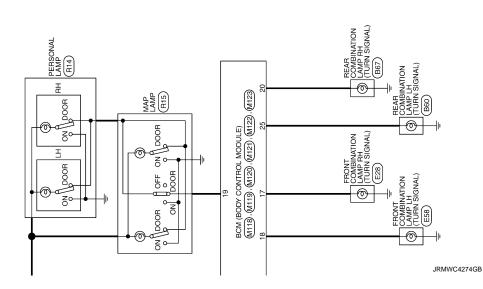


< ECU DIAGNOSIS INFORMATION >



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< ECU DIAGNOSIS INFORMATION >



Fail-safe

INFOID:000000007715440

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

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Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA 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
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch $ON \rightarrow OFF$
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status be- comes consistentStarter control relay signalStarter relay status signal
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)
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (12 V) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2617: BCM	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 be- comes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E8: CLUTCH SW	Inhibit engine cranking	 When any of the following BCM recognition conditions are fulfilled Status 1 Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: ON (Battery voltage)

DTC Inspection Priority Chart

INFOID:000000007715441

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		
2	U1000: CAN COMM U1010: CONTROL UNIT(CAN)		
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING 		

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< ECU DIAGNOSIS INFORMATION >

Priority	DTC
4	 B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2608: STARTER RELAY B2608: IGNITION RELAY B2608: IGNITION RELAY B2607: ENG STATE SIG LOST B2614: BCM B2615: BCM B2615: BCM B2616: BCM B2617: BCM B2618: BCM B2618: BCM B2618: CLUTCH SW B2618: CLUTCH SW B2618: VEHICLE TYPE B268: CLUTCH SW B268: SCLUTCH SW B268: CLUTCH SW
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA

DTC Index

NOTE:

The details of time display are as follows.

• CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-16, "COM-MON ITEM : CONSULT Function (BCM - COMMON ITEM)"</u>.

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page
No DTC is detected. further testing may be required.	_	_			
U1000: CAN COMM	_				BCS-35
U1010: CONTROL UNIT(CAN)	—			_	BCS-36
U0415: VEHICLE SPEED	—	—		_	BCS-37
B2190: NATS ANTENNA AMP	×				<u>SEC-44</u>

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< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page	A
B2191: DIFFERENCE OF KEY	×	—	—	—	<u>SEC-47</u>	E
B2192: ID DISCORD BCM-ECM	×	—	—	—	<u>SEC-48</u>	-
B2193: CHAIN OF BCM-ECM	×	—	—	—	<u>SEC-50</u>	_
B2195: ANTI-SCANNING	×	—	—	—	<u>SEC-51</u>	C
B2553: IGNITION RELAY	_	×	—	—	PCS-48	-
B2555: STOP LAMP		×	_	_	<u>SEC-52</u>	C
B2556: PUSH-BTN IGN SW	—	×	×	—	<u>SEC-54</u>	_
B2557: VEHICLE SPEED	×	×	×	—	<u>SEC-56</u>	-
B2560: STARTER CONT RELAY	×	×	×	—	<u>SEC-57</u>	E
B2562: LOW VOLTAGE	_	×	—	_	BCS-38	-
B2601: SHIFT POSITION	×	×	×	—	<u>SEC-58</u>	F
B2602: SHIFT POSITION	×	×	×	_	<u>SEC-61</u>	- 1
B2603: SHIFT POSI STATUS	×	×	×		<u>SEC-64</u>	-
B2604: PNP/CLUTCH SW	×	×	×		<u>SEC-67</u>	G
B2605: PNP/CLUTCH SW	×	×	×		<u>SEC-69</u>	-
B2608: STARTER RELAY	×	×	×	_	<u>SEC-71</u>	-
B260A: IGNITION RELAY	×	×	×	_	PCS-50	- -
B260F: ENG STATE SIG LOST	×	×	×	_	<u>SEC-73</u>	-
B2614: BCM	_	×	×	_	PCS-52	-
B2615: BCM	_	×	×	_	PCS-54	-
B2616: BCM		×	×	_	PCS-56	
B2617: BCM	×	×	×		<u>SEC-78</u>	A
B2618: BCM	×	×	×		PCS-58	_
B261A: PUSH-BTN IGN SW		×	×		PCS-59	- K
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-80</u>	_
B2621: INSIDE ANTENNA		×		_	DLK-59	L
B2622: INSIDE ANTENNA		×		_	DLK-61	-
B2623: INSIDE ANTENNA	_	×	_	_	DLK-63	_
B26E8: CLUTCH SW	×	×	×	_	<u>SEC-75</u>	N
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-77</u>	-
C1704: LOW PRESSURE FL	_			×		- N
C1705: LOW PRESSURE FR	_			×		
C1706: LOW PRESSURE RR	_		—	×	<u>WT-20</u>	C
C1707: LOW PRESSURE RL				×	-	
C1708: [NO DATA] FL	_			×		-
C1709: [NO DATA] FR				×		F
C1710: [NO DATA] RR				×	<u>WT-22</u>	
C1711: [NO DATA] RL	_			×	-	

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page
C1716: [PRESSDATA ERR] FL	—	—	—	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	<u>WT-25</u>
C1718: [PRESSDATA ERR] RR	—	—	—	×	<u>VV1-25</u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-26</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-27</u>

MANUAL FUNCTION DOES NOT OPERATE < SYMPTOM DIAGNOSIS >	
SYMPTOM DIAGNOSIS	
MANUAL FUNCTION DOES NOT OPERATE	A
ALL COMPONENT	
ALL COMPONENT : Description	B INFOID:000000007463957
All functions do not operate when manually operated.(power seat, tilt & telescopic, and door min	rror. C
ALL COMPONENT : Diagnosis Procedure	INFOID:000000007463958
1. CHECK DRIVER SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT	D
Check driver seat control unit power supply and ground circuit. Refer to <u>ADP-65</u> , " <u>DRIVER SEAT CONTROL UNIT</u> : <u>Diagnosis Procedure</u> ". <u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunction parts.	E
2. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT POWER SUPPLY AND GROU	IND CIRCUIT
Check automatic drive positioner control unit power supply and ground circuit. Refer to <u>ADP-66. "AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure"</u> <u>Is the inspection result normal?</u> YES >> GO TO 3.	<u> </u>
NO >> Repair or replace the malfunction parts.	Н
3.CONFIRM THE OPERATION	
Confirm the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1. POWER SEAT	ADP
POWER SEAT : Description	INFOID:000000007463959
Power seat does not operate when manually operated.	1 X
POWER SEAT : Diagnosis Procedure	INFOID:000000007463960
1. CHECK POWER SEAT SWITCH GROUND CIRCUIT	
Check power seat switch ground circuit. Refer to <u>ADP-88, "Diagnosis Procedure"</u> .	M
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace harness or connector. 2.CONFIRM THE OPERATION	Ν
Confirm the operation again.	0
Is the result normal? YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1. STEERING POSITION FUNCTION DOES NOT OPERATE	Ρ
STEERING POSITION FUNCTION DOES NOT OPERATE : Description	INFOID:000000007463961
Tilt & telescopic do not operate when manually operated.	

< SYMPTOM DIAGNOSIS >

STEERING POSITION FUNCTION DOES NOT OPERATE : Diagnosis Procedure

	INFOID:000000007463962
1. CHECK TILT & TELESCOPIC SWITCH GROUND CIRCUIT	
Check tilt & telescopic switch ground circuit. Refer to <u>ADP-89, "Diagnosis Procedure"</u> .	
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Repair or replace harness or connector. 2.CONFIRM THE OPERATION	
Confirm the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> GO TO 1. SEAT SLIDING	
SEAT SLIDING : Description	INFOID:000000007463963
Seat sliding alone does not operate when manually operated.	
SEAT SLIDING : Diagnosis Procedure	INFOID:000000007463964
1.CHECK SLIDING MECHANISM	
Check for the following.	
Mechanism deformation or pinched foreign materials.Interference with other parts because of poor installation.	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunction parts.	
2. CHECK SLIDING SWITCH	
Check sliding switch.	
Refer to <u>ADP-68, "Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	
3. CHECK SLIDING MOTOR	
Check sliding motor. Refer to <u>ADP-117, "Component Function Check"</u> .	
Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	
4. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	
SEAT RECLINING	
SEAT RECLINING : Description	INFOID:000000007463965
Seat reclining only does not operate when manually operated.	

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< SYMPTOM DIAGNOSIS >	
SEAT RECLINING : Diagnosis Procedure	INFOID:000000007463966
1.CHECK RECLINING MECHANISM	
 Check for the following. Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunction parts. 	
2.CHECK RECLINING SWITCH	
Check reclining switch. Refer to <u>ADP-97, "Component Function Check"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 3. NO >> Repair or replace the malfunction parts. 3. CHECK RECLINING MOTOR	
Check reclining motor.	
Refer to ADP-119, "Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunction parts. 4.CONFIRM THE OPERATION	
Check the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1. SEAT LIFTING (FRONT)	ŀ
SEAT LIFTING (FRONT) : Description	INFOID:000000007463967
Seat lifting (front) only does not operate when manually operated. SEAT LIFTING (FRONT) : Diagnosis Procedure	INFOID:000000007463968
1.CHECK LIFTING (FRONT) MECHANISM	
Check for the following.Mechanism deformation or pinched foreign materials.Interference with other parts because of poor installation.	
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunction parts. 2.CHECK LIFTING SWITCH (FRONT)	
Check lifting switch (front). Refer to <u>ADP-72, "Component Function Check"</u> .	
<u>Is the inspection result normal?</u> YES >> GO TO 3. NO >> Repair or replace the malfunction parts. 3. CHECK LIFTING MOTOR (FRONT)	
Check lifting motor (front). Refer to <u>ADP-121, "Component Function Check"</u> . Is the inspection result normal?	

Is the inspection result normal?

MANUAL FUNCTION DOES NOT OPER	ATE
< SYMPTOM DIAGNOSIS >	
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	
4. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> GO TO 1. SEAT LIFTING (REAR)	
SEAT LIFTING (REAR) : Description	INFOID:000000007463969
Seat lifting (rear) only does not operate when manually operated.	
SEAT LIFTING (REAR) : Diagnosis Procedure	INFOID:000000007463970
1.CHECK LIFTING (REAR) MECHANISM	
Check for the following.	
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunction parts.	
NO >> Repair or replace the malfunction parts. 2.CHECK LIFTING SWITCH (REAR)	
Check lifting switch (rear). Refer to <u>ADP-74</u> , "Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts. 3.CHECK LIFTING MOTOR (REAR)	
Check lifting motor (rear).	
Refer to <u>ADP-123, "Component Function Check"</u> .	
Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	
4. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> GO TO 1. STEERING TILT	
STEERING TILT : Description	INFOID:000000007463971
Steering tilt only does not operate when manually operated.	
STEERING TILT : Diagnosis Procedure	INFOID:00000007463972
1.CHECK STEERING TILT MECHANISM	
Check for the following.	
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	
Is the inspection result normal?	
YES >> GO TO 2.	

< SYMPTOM DIAGNOSIS >	
NO >> Repair or replace the malfunction parts.	
2.CHECK TILT SWITCH	А
Check tilt switch. Refer to <u>ADP-76, "Component Function Check"</u> .	В
Is the inspection result normal?	D
YES >> GO TO 3. NO >> Repair or replace the malfunction parts.	
3. CHECK TILT MOTOR	С
Check tilt motor.	
Refer to <u>ADP-125, "Component Function Check"</u> .	D
Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	Е
4. CONFIRM THE OPERATION	
Check the operation again.	_
Is the result normal?	F
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> GO TO 1. STEERING TELESCOPIC	G
STEERING TELESCOPIC : Description	Н
Steering telescopic only does not operate when manually operated.	
STEERING TELESCOPIC : Diagnosis Procedure	
1.CHECK STEERING TELESCOPIC MECHANISM	
Check for the following.	ADF
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	
Is the inspection result normal?	K
YES >> GO TO 2.	
NO >> Repair or replace the malfunction parts. 2.CHECK TELESCOPIC SWITCH	I
	L
Check telescopic switch. Refer to <u>ADP-78, "Component Function Check"</u> .	
Is the inspection result normal?	M
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts. 3.CHECK TELESCOPIC MOTOR	Ν
Check telescopic motor.	
Refer to <u>ADP-127, "Component Function Check"</u> .	0
Is the inspection result normal?	
Is the inspection result normal? YES >> GO TO 4.	_
Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	Ρ
Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunction parts. 4.CONFIRM THE OPERATION	Ρ
Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	Ρ
Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunction parts. 4. CONFIRM THE OPERATION Check the operation again.	Ρ

MANUAL FUNCTION DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS >	
DOOR MIRROR : Description	INFOID:000000007463975
Door mirror does not operate when manually operated.	
DOOR MIRROR : Diagnosis Procedure	INFOID:000000007463976
1. CHECK DOOR MIRROR MECHANISM	
Check for the following. Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunction parts. 2.CHECK MIRROR SWITCH	
Check mirror switch. Refer to <u>ADP-83, "MIRROR SWITCH : Component Function Check"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts. 3. CHECK MIRROR MOTOR	
Check mirror motor. Refer to <u>ADP-129</u> , "Component Function Check". <u>Is the inspection result normal?</u> YES >> GO TO 4. NO >> Repair or replace the malfunction parts. 4. CONFIRM THE OPERATION	
Check the operation again.	

Is the result normal?

- YES >> Check intermittent incident. Refer to <u>GI-40, "How to Check Terminal"</u>.
- NO >> GO TO 1.

< SYMPTOM DIAGNOSIS >	
MEMORY FUNCTION DOES NOT OPERATE	
ALL COMPONENT	A
ALL COMPONENT : Description	INFOID:000000007463977
All functions do not operate when memory operated. (power seat, tilt & telescopic, and door mire	ror)
ALL COMPONENT : Diagnosis Procedure	INFOID:000000007463978
1.CHECK MANUAL OPERATION	
Check manual operation.	D
<u>Is the inspection result normal?</u> YES >> GO TO 2.	
NO >> Refer to <u>ADP-185. "ALL COMPONENT : Diagnosis Procedure"</u>	E
2.PERFORM MEMORY STORING PROCEDURE	
Perform memory storing procedure. Refer to <u>ADP-11, "MEMORY STORING : Special Repair Requirement"</u> .	F
Is the inspection result normal?	
YES >> Memory function is normal. NO >> GO TO 3.	G
3. CHECK SEAT MEMORY SWITCH	
Check seat memory switch. Refer to <u>ADP-80, "Component Function Check"</u> .	Н
Is the inspection result normal?	
YES >> GO TO 4. NO >> Replace seat memory switch.	I
4. CHECK DETENTION SWITCH	
Check detention switch. Refer to <u>ADP-90</u> , "Component Function Check".	ADP
Is the inspection result normal?	K
YES >> GO TO 5. NO >> Repair or replace the malfunction parts.	K
5. CONFIRM THE OPERATION	
Confirm the operation again.	L
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	M
SEAT SLIDING	
SEAT SLIDING : Description	N INFOID:000000007463979
Seat sliding only does not operate when memory operated.	0
SEAT SLIDING : Diagnosis Procedure	INFOID:000000007463980
1. CHECK MANUAL OPERATION	Р
Check manual operation.	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Refer to <u>ADP-186. "SEAT SLIDING : Diagnosis Procedure"</u>	
2. CHECK SLIDING SENSOR	

Check sliding sensor.

MEMORY FUNCTION DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS >	
Refer to ADP-94, "Component Function Check"	
<u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	
3. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1.	
SEAT RECLINING	
SEAT RECLINING : Description	INFOID:000000007463981
Seat reclining only does not operate when memory operated.	
SEAT RECLINING : Diagnosis Procedure	INFOID:000000007463982
1. CHECK MANUAL OPERATION	
Check manual operation.	
<u>Is the inspection result normal?</u> YES >> GO TO 2.	
NO >> Refer to <u>ADP-187, "SEAT RECLINING : Diagnosis Procedure"</u>	
2. CHECK RECLINING SENSOR	
Check reclining sensor. Refer to <u>ADP-97, "Component Function Check"</u> .	
Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts. 3.CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> GO TO 1. SEAT LIFTING (FRONT)	
SEAT LIFTING (FRONT) : Description	INFOID:000000007463983
Seat lifting (front) only does not operate when memory operated.	
SEAT LIFTING (FRONT) : Diagnosis Procedure	INFOID:000000007463984
1. CHECK MANUAL OPERATION	
Check manual operation.	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Refer to <u>ADP-187, "SEAT LIFTING (FRONT) : Diagnosis Procedure"</u>	
2. CHECK LIFTING SENSOR (FRONT)	
Check lifting sensor (front).	
Refer to <u>ADP-100, "Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	

< SYMPTOM DIAGNOSIS >	
3. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	
SEAT LIFTING (REAR)	
SEAT LIFTING (REAR) : Description	INFOID:000000007463985
Seat lifting (rear) only does not operate when memory operated.	
SEAT LIFTING (REAR) : Diagnosis Procedure	INFOID:000000007463986
1.CHECK MANUAL OPERATION	
Check manual operation.	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Refer to <u>ADP-188, "SEAT LIFTING (REAR) : Diagnosis Procedure"</u>	
2.CHECK LIFTING SENSOR (REAR)	
Check lifting sensor (rear).	
Refer to <u>ADP-103</u> , "Component Function Check".	
<u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	
3. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	
STEERING TELESCOPIC	
STEERING TELESCOPIC : Description	INFOID:000000007463987
Steering telescopic only does not operate when memory operated.	
STEERING TELESCOPIC : Diagnosis Procedure	INFOID:000000007463988
1.CHECK MANUAL OPERATION	
Check manual operation. <u>Is the inspection result normal?</u>	
YES >> GO TO 2.	
NO >> Refer to <u>ADP-189</u> , "STEERING TELESCOPIC : Diagnosis Procedure"	
2.CHECK TELESCOPIC SENSOR	
Check steering telescopic sensor. Refer to <u>ADP-109, "Component Function Check"</u> .	
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunction parts.	
3. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1. STEERING TILT STEERING TILT : Description INFOID:000000007463989 Steering tilt only does not operate when memory operated. STEERING TILT : Diagnosis Procedure INFOID:000000007463990 **1.**CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. NO >> Refer to ADP-188, "STEERING TILT : Diagnosis Procedure" 2. CHECK TILT SENSOR Check steering tilt sensor. Refer to ADP-106, "Component Function Check". Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunction parts. ${f 3.}$ CONFIRM THE OPERATION Check the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". >> GO TO 1. NO DOOR MIRROR **DOOR MIRROR : Description** INFOID:000000007463991 Door mirror does not operate when memory operated. DOOR MIRROR : Diagnosis Procedure INFOID:000000007463992 **1.**CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. NO >> Refer to ADP-190, "DOOR MIRROR : Diagnosis Procedure" 2. CHECK MIRROR SENSOR Check mirror sensor. Refer to ADP-112, "DRIVER SIDE : Component Function Check". (Driver side) Refer to ADP-114, "PASSENGER SIDE : Component Function Check". (Passenger side) Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunction parts. ${
m 3.}$ confirm the operation Check the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". NO >> GO TO 1.

MEMORY INDICATE DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >		
MEMORY INDICATE DOES NOT ILLUMINATE		А
Diagnosis Procedure	INFOID:000000007463993	A
1.CHECK MEMORY INDICATOR		В
Check memory indicator. Refer to ADP-132, "Component Function Check".		
Is the inspection result normal?		С
YES >> GO TO 2. NO >> Repair or replace the malfunction parts.		
2.CONFIRM THE OPERATION		D
Confirm the operation again. Is the result normal?		Е
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.		
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SEAT SYNCHRONIZATION FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

SEAT SYNCHRONIZATION FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000007463994

1. CHECK SYNCHRONIZATION FUNCTION

Check seat synchronization function. Refer to <u>ADP-24, "SEAT SYNCHRONIZATION FUNCTION : System Description"</u>.

Is the inspection result normal?

YES >> Seat synchronization is OK.

NO >> GO TO 2.

2.CHECK SYSTEM SETTING

Check system setting. Refer to ADP-12, "SYSTEM SETTING : Special Repair Requirement".

Is the inspection result normal?

YES >> Synchronization function is normal.

NO >> GO TO 3.

3.CONFIRM THE OPERATION

Check the operation again.

Refer to <u>ADP-24, "SEAT SYNCHRONIZATION FUNCTION : System Description"</u>.

Is the result normal?

- YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE

		Δ
Diagnosis Procedure	INFOID:000000007463995	A
1.PERFORM SYSTEM INITIALIZATION		В
Check system initialization. Refer to <u>ADP-10, "SYSTEM INITIALIZATION : Special Repair Requirement"</u> .		
<u>Is the inspection result normal?</u> YES >> Entry/Exit function is OK.		С
NO >> GO TO 2. 2.CHECK FRONT DOOR SWITCH (DRIVER SIDE)		D
Check front door switch (driver side). Refer to <u>DLK-66, "Component Function Check"</u> . Is the inspection result normal?		Е
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> Repair or replace the malfunction parts.		F
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INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000007463996

1. CHECK DOOR LOCK FUNCTION

Check door lock function. Refer to DLK-7, "Work Flow".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2. PERFORM MEMORY STORING PROCEDURE

- Perform memory storing procedure. Refer to <u>ADP-11, "MEMORY STORING : Special Repair Requirement"</u>.
- Check Intelligent Key interlock function. Refer to <u>ADP-42</u>, "INTELLIGENT KEY INTERLOCK FUNCTION : System Description".

Is the inspection result normal?

- YES >> Intelligent Key inter lock function is normal.
- NO >> Replace driver seat control unit. Refer to <u>ADP-203, "Removal and Installation"</u>.

< SYMPTOM DIAGNOSIS >	
ALL FUNCTIONS DO NOT OPERATE	A
Diagnosis Procedure	INFOID:00000007463997
1. POWER SUPPLY AND GROUND CIRCUIT	В
Check power supply and ground circuit for driver seat control unit.	
Refer to <u>ADP-65</u> , "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure". Is the inspection result normal?	С
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
NO >> Repair or replace malfunction part.	D
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< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

INFOID:000000007463998

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.	<u>ADP-10</u>
Entry/exit assist function does not operate.	Entry/exit assist function is disabled. NOTE: The entry/exit assist function are enabled before delivery (initial setting).	Change the settings.	ADP-12
Entry assist function does not op- erate.	Manual operation with power seat switch was performed after exit assist function execution.	Perform the memory function.	<u>ADP-11</u>
	Seat synchronization function is dis- abled. NOTE: The entry/exit assist function are dis- abled before delivery (initial setting).	<u>ADP-12</u>	
Seat synchronization function does not operate.	The synchronization function will not op- erate 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 7 km/h (4 MPH).	<u>ADP-24</u>
	Seat adjustment load has exceed any of the volumes below. • Seat sliding: 76 mm • Seat reclining: 9.1 degrees • Seat lifting (rear): 20 mm	_	_
	function, seat synchroniza- function, or Intelligent Key rlock function does not oper-		Memory function: <u>ADP-29</u>
Memory function, entry/exit as- sist function, seat synchroniza- tion function, or Intelligent Key interlock function does not oper- ate.			Exit assist function: <u>ADP-34</u>
			Entry assist function: <u>ADP-38</u>
			Seat synchronization function: <u>ADP-24</u>
			Intelligent Key interloc function: <u>ADP-42</u>

< PRECAUTION > 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 AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Service

- 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.

Work

- 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.

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PRECAUTIONS

< PRECAUTION >

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.

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION DRIVER SEAT CONTROL UNIT

Exploded View

Refer to SE-60, "Exploded View".

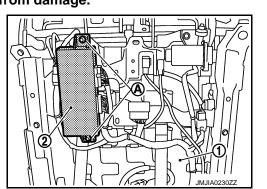
Removal and Installation

REMOVAL

CAUTION:

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

- 1. Remove the driver seat (1). Refer to <u>SE-63, "Removal and</u> <u>Installation"</u>.
- 2. Remove the mounting bolts (A).
- 3. Remove driver seat control unit (2).



INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place. NOTE:

After installing the driver seat, perform additional service when replacing control unit. Refer to <u>ADP-10</u>, "<u>ADDI-</u><u>TIONAL SERVICE WHEN REPLACING CONTROL UNIT</u> : <u>Special Repair Requirement</u>".

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Revision: 2013 February

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< REMOVAL AND INSTALLATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Exploded View

Refer to IP-11, "A/T MODELS : Exploded View".

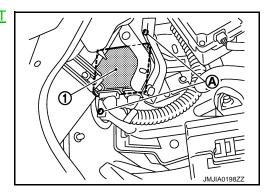
Removal and Installation

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, "A/T</u> <u>MODELS : 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: Be sure to clump the harness to the right place. NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-10, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

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INFOID:000000007464005

SEAT MEMORY SWITCH

< REMOVAL AND INSTALLATION > SEAT MEMORY SWITCH А **Exploded View** INFOID:000000007464006 Refer to INT-11, "Exploded View". В **Removal and Installation** INFOID:000000007464007 REMOVAL **CAUTION:** When removing and installing, use shop cloths to protect parts from damage. D 1. Disconnect battery negative terminal. 2. Remove the front door finisher (1). Refer to INT-11, "Removal RRW and Installation". Ε Press pawls and remove seat memory switch (2) from front door 3. finisher (1). 0 F <u>⁄</u>: Pawl 0 10 0 Ð 2 JMJIA0197ZZ **INSTALLATION** Н Install in the reverse order of removal. **CAUTION:** Be sure to clump the harness to the right place. NOTE: After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-10, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement". ADP

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< REMOVAL AND INSTALLATION >

POWER SEAT SWITCH

Exploded View

Refer to SE-60, "Exploded View".

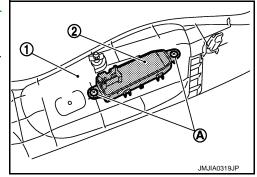
Removal and Installation

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-63</u>, <u>"Removal and Installation"</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: Be sure to clump the harness to the right place. NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u> : <u>Special Repair</u> <u>Requirement</u>".

INFOID:000000007464008

INFOID:000000007464009

TILT&TELESCOPIC SWITCH < REMOVAL AND INSTALLATION > **TILT&TELESCOPIC SWITCH** А **Exploded View** INFOID:000000007464010 Refer to IP-11, "A/T MODELS : Exploded View". В **Removal and Installation** INFOID:000000007464011 REMOVAL **CAUTION:** When removing and installing, use shop cloths to protect parts from damage. D 1. Disconnect battery negative terminal. 2. Remove the steering column mask (1). Refer to IP-12, "A/T MODELS : Removal and Installation". 3. Press pawls and remove tilt & telescopic switch (2) from the Ε steering column mask (1). \bigcirc Q Pawl $\hat{}$ F Ð .IM.IIA019577 Н INSTALLATION Install in the reverse order of removal. CAUTION: Be sure to clump the harness to the right place. NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u> : <u>Special Repair</u> <u>ADP</u> <u>Requirement</u>".

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