# SECTION ADP В AUTOMATIC DRIVE POSITIONER С

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# PRECAUTIONS

# < PRECAUTION >

PRECAUTION

#### PRECAUTIONS Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT **PRF-TENSIONER**" INFOID:000000011152273 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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual. D WARNING: To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer. Ε Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section. Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors. PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS WARNING: When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Igni-Н tion ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury. When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service. Precaution for Work INFOID:000000011152274 ADP 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 Κ with a shop cloth or vinyl tape to protect it. Protect the removed parts with a shop cloth and prevent them from being dropped. Replace a deformed or damaged clip. L • If a part is specified as a non-reusable part, always replace it with a new one. Be sure to tighten bolts and nuts securely to the specified torque. After installation is complete, be sure to check that each part works properly. Follow the steps below to clean components: M - Water soluble dirt: • Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area. • Then rub with a soft, dry cloth. Ν - Oily dirt: • Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area. Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off. Ο • Then rub with a soft, dry cloth. - Do not use organic solvent such as thinner, benzene, alcohol or gasoline. - For genuine leather seats, use a genuine leather seat cleaner. Ρ

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## < PREPARATION >

# PREPARATION

# PREPARATION

# Special Service Tool

INFOID:000000011152275

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description
 (J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

## < SYSTEM DESCRIPTION >



# **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

1.	Push-button ignition switch	2.	BCM (view with instrument panel re-moved)	3.	ТСМ
4.	A. ADP steering switch (if equipped) B. Tilt motor, telescopic motor (if equipped)	5.	<ul><li>A. Driver seat control unit</li><li>B. Front door switch LH</li><li>C. Power seat switch LH</li><li>D. Sliding motor LH, reclining motor</li><li>LH, lifting motor LH (front/rear)</li></ul>	6.	Automatic drive positioner control unit (view with AV control unit re- moved)
7.	Door mirror LH (RH similar)	8.	Power mirror remote control switch	9.	Seat memory switch

INFOID:000000011152277

# Component Description

Component parts	Description
Driver seat control unit	<ul> <li>Main units of automatic drive positioner system.</li> <li>It is connected to the CAN.</li> <li>It communicates with automatic drive positioner control unit via UART communication.</li> <li>It performs memory function after receiving the door unlock signal from BCM.</li> <li>Operates each motor of seat to the registered position.</li> <li>Requests the operation of steering column and door mirror to automatic drive positioner control unit</li> <li>Operates the specific seat motor with the signal from power seat switch.</li> <li>Transmits the ignition switch signal (ACC/ON) via UART communication to automatic drive positioner control unit.</li> </ul>
Automatic drive positioner control unit	<ul> <li>It communicates with driver seat control unit via UART communication.</li> <li>Performs various controls with the instructions of driver seat control unit.</li> <li>Performs the controls of tilt &amp; telescopic (if equipped), door mirror and seat memory switch.</li> <li>Operates steering column (if equipped) and door mirror with the signal from the driver seat control unit</li> </ul>
BCM	<ul> <li>Recognizes the following status and transmits it to driver seat control unit via CAN communication.</li> <li>Handle position: LHD</li> <li>Driver door: OPEN/CLOSE</li> <li>Ignition switch position: ACC/ON</li> <li>Door lock: UNLOCK (with Intelligent Key or driver side door request switch operation)</li> <li>Key ID</li> <li>Starter: CRANKING/OTHER</li> </ul>
ТСМ	<ul> <li>The following signals are transmitted to driver seat control unit via CAN communication.</li> <li>Shift position signal (P range)</li> <li>Identification of transmission: CVT</li> </ul>
Combination meter	Transmits the vehicle speed signal to driver seat control unit via CAN communication.
CVT shift selector (Detention switch)	<ul> <li>Detention switch is installed on CVT shift selector. It is turned OFF when CVT shift selector is in P position.</li> <li>Driver seat control unit judges that CVT shift selector is in P po- sition if continuity does not exist in this circuit.</li> </ul>

# **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

Comp	oonent parts	Description
Power mirror remote con	Mirror switch	<ul> <li>Mirror switch is integrated in power mirror remote control switch.</li> <li>It operates angle of door mirror face.</li> <li>It transmits mirror face adjust operation to automatic drive positioner control unit.</li> </ul>
trol switch	Changeover switch	<ul> <li>Changeover switch is integrated in power mirror remote control switch.</li> <li>Changeover switch has three positions (L, N and R).</li> <li>It changes operating door mirror motor by transmitting control signal to automatic drive positioner control unit.</li> </ul>
ADP steering switch (if	Tilt switch	<ul> <li>Tilt switch is equipped to steering column.</li> <li>The operation signal is input to automatic drive positioner control unit when tilt switch is operated.</li> </ul>
equipped)	Telescopic switch	<ul> <li>Telescopic switch is equipped to steering column.</li> <li>The operation signal is input to automatic drive positioner control unit when telescopic switch is operated.</li> </ul>
	Set switch	It is used for registration and setting change of driving position and Intelligent Key interlock function.
Seat memory switch Se	Seat memory switch	<ul> <li>The maximum 2 driving positions can be registered by memory switch 1 to 2.</li> <li>Driving position is set to the registered driving position when memory switch is pressed while operation conditions are satisfied.</li> </ul>
	Seat memory indicator	Memory indicator indicates the status of auto driving position system by turning ON or blinking.
	Sliding switch	<ul> <li>Sliding switch is equipped to power seat switch on seat cushion side surface.</li> <li>The operation signal is input to driver seat control unit when sliding switch is operated.</li> </ul>
	Reclining switch	<ul> <li>The operation signal is input to driver seat control unit when reclining switch is operated.</li> <li>The operation signal is input to driver seat control unit when reclining switch is operated.</li> </ul>
Power seat switch	Lifting switch (front)	<ul> <li>Lifting switch (front) is equipped to power seat switch on seat cushion side surface.</li> <li>The operation signal is input to driver seat control unit when lifting switch (front) is operated.</li> </ul>
	Lifting switch (rear)	<ul> <li>Lifting switch (rear) is equipped to power seat switch on seat cushion side surface.</li> <li>The operation signal is input to driver seat control unit when lifting switch (rear) is operated.</li> </ul>
Door mirror motor		It makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies.
Door mirror (driver side/ passenger side)	Mirror sensor	<ul> <li>Mirror sensor is installed to door mirror.</li> <li>The resistance of 2 sensors (horizontal and vertical) is changed when door mirror is operated.</li> <li>Automatic drive positioner control unit calculates door mirror po- sition according to the change of the voltage of 2 sensor input terminals.</li> </ul>

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# **COMPONENT PARTS**

## < SYSTEM DESCRIPTION >

Com	ponent parts	Description
	Tilt motor	<ul> <li>Tilt motor is installed to steering column assembly.</li> <li>Tilt motor is activated with automatic drive positioner control unit.</li> <li>Steering column is tilted upward/downward by changing the rotation direction of tilt motor.</li> </ul>
Tilt motor (if equipped)	Tilt sensor	<ul> <li>Tilt sensor is integrated in tilt motor.</li> <li>The resistance of tilt sensor is changed according to the up/ down position of steering column.</li> <li>The terminal voltage of automatic drive positioner control unit will be changed according to a change of tilt sensor resistance.</li> <li>Automatic drive positioner control unit calculates the tilt position from the voltage.</li> </ul>
	Telescopic motor	<ul> <li>Telescopic motor is installed to steering column assembly.</li> <li>Telescopic motor is activated with automatic drive positioner control unit.</li> <li>Compresses steering column by changing the rotation direction of telescopic motor.</li> </ul>
Telescopic motor (if equipped)	Telescopic sensor	<ul> <li>Telescopic sensor is integrated in telescopic motor.</li> <li>The resistance of telescopic sensor is changed according to the forward/backward position of steering column.</li> <li>The terminal voltage of automatic drive positioner control unit will be changed according to a change of telescopic sensor resistance.</li> <li>Automatic drive positioner control unit calculates the telescopic position from the voltage.</li> </ul>
	Sliding motor LH	<ul> <li>Seat sliding motor LH is installed to the seat cushion frame.</li> <li>Seat sliding motor LH is activated with driver seat control unit.</li> <li>Slides the seat frontward/ rearward by changing the rotation direction of sliding motor.</li> </ul>
Sliding motor LH	Sliding sensor	<ul> <li>Sliding sensor is integrated in sliding motor.</li> <li>The pulse signal is input to driver seat control unit when sliding is performed.</li> <li>Driver seat control unit counts the pulse and calculates the sliding amount of the seat.</li> </ul>
	Reclining motor LH	<ul> <li>Seat reclining motor LH is installed to seat back frame.</li> <li>Seat reclining motor LH is activated with driver seat control unit.</li> <li>Seatback is reclined frontward/rearward by changing the rotation direction of reclining motor.</li> </ul>
Reclining motor LH	Reclining sensor	<ul> <li>Reclining sensor is integrated in reclining motor.</li> <li>The pulse signal is input to driver seat control unit when the reclining is operated.</li> <li>Driver seat control unit counts the pulse and calculates the reclining amount of the seat.</li> </ul>
Lifting motor LH (front)	Lifting motor LH (front)	<ul> <li>Lifting motor LH (front) is installed to seat side cushion frame.</li> <li>Lifting motor LH (front) is activated with driver seat control unit.</li> <li>Seat lifter (front) is moved upward/downward by changing the rotation direction of lifting motor (front).</li> </ul>
	Lifting sensor (front)	<ul> <li>Lifting sensor (front) is installed in lifting motor (rear).</li> <li>When lifting motor (rear) operates, pulse signal is transmitted to driver seat control unit from lifting sensor. Driver seat control unit counts the pulse and calculates the lift position (rear) of the seat.</li> </ul>
Lifting motor LH (rear)	Lifting motor LH (rear)	<ul> <li>Lifting motor LH (rear) is installed to seat slide cushion frame.</li> <li>Lifting motor LH (rear) is activated with driver seat control unit.</li> <li>Seat lifter (rear) is moved upward/downward by changing the rotation direction of lifting motor (rear).</li> </ul>
	Lifting sensor (rear)	<ul> <li>Lifting sensor (rear) is installed to seat side cushion frame.</li> <li>The pulse signal is input to driver seat control unit when lifting (rear) is operated.</li> <li>Driver seat control unit counts the pulse and calculates the lifting (rear) amount of the seat.</li> </ul>

#### SYSTEM А AUTOMATIC DRIVE POSITIONER SYSTEM AUTOMATIC DRIVE POSITIONER SYSTEM : System Diagram INFOID:000000011152278 В WITH AROUND VIEW MONITOR С Combination meter AV control unit IPDM E/R D TCM ECM BCM ABS To CAN Ε 4 Lifting sensor (front) Lifting sensor (rear) F CAN communication Lifting motor (front) Lifting motor (front) Lifting motor (rear) Lifting motor (rear) Reclining sensor Reclining motor Reclining motor Sliding sensor Sliding motor Sliding motor Driver seat control unit Н Driver seat Lifting switch (front) Power seat switch LH Lifting switch (rear) Reclining switch Sliding switch ADP Κ UART communication Seat memory switch Telescopic sensor Telescopic motor Telescopic motor L Memory switch Mirror sensor Mirror motor Tilt motor Tilt sensor Set switch Door mirror Tilt motor Indicator Μ drive positioner control unit Automatic Ν 0 ADP Steering Switch Changeover switch Power mirror remote control switch Telescopic switch Mirror switch Tilt switch Ρ

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## < SYSTEM DESCRIPTION >

# WITHOUT AROUND VIEW MONITOR



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# AUTOMATIC DRIVE POSITIONER SYSTEM : System Description

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### OUTLINE

The system automatically moves the driver seat, steering column (if equipped) 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.

## < SYSTEM DESCRIPTION >

Function		Description	
Manual function		The driving position (seat, steering column and door mirror position) can be adjusted by using the power seat switch, ADP steering switch or door mirror remote control switch.	
Memory function		The seat, steering column and door mirror move to the stored driving position by pressing seat memory switch (1 or 2).	
	Exit	On exit, the seat moves backward and the steering column moves upward.	
Entry/Exit assist function	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 is controlled independently with no link to the automatic drive positioner system. MANUAL FUNCTION

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### < SYSTEM DESCRIPTION >

# MANUAL FUNCTION : System Diagram

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#### WITH AROUND VIEW MONITOR





## < SYSTEM DESCRIPTION >

## WITHOUT AROUND VIEW MONITOR



# MANUAL FUNCTION : System Description

#### OUTLINE

The driving position (seat, steering column and door mirror position) can be adjusted manually with power seat switch, ADP steering switch (if equipped) and door mirror remote control switch.

## OPERATION PROCEDURE

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

### DETAIL FLOW

#### Seat

Order	Input	Output	Control unit condition	Ν
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.	0
2	_	Motors (sliding LH, lifting LH, reclining LH)	The driver seat control unit outputs signals to each motor accord- ing to the power seat switch input signal.	D

Tilt and Telescopic (if equipped)

ADP

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## < SYSTEM DESCRIPTION >

Order	Input	Output	Control unit condition
1	ADP steering switch	_	The ADP steering switch signal is input to the automatic drive po- sitioner control unit when the ADP steering switch is operated.
2	_	Motors (tilt, telescopic)	The automatic drive positioner control unit actuates the motors according to the operation of the ADP steering switch signal.
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 motors anymore at that time.

#### 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. MEMORY FUNCTION

### < SYSTEM DESCRIPTION >

# **MEMORY FUNCTION : System Diagram**

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## WITH AROUND VIEW MONITOR



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#### < SYSTEM DESCRIPTION >





# MEMORY FUNCTION : System Description

INFOID:0000000011152283

### OUTLINE

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

#### NOTE:

For further information for the memory storage procedure, refer to Owner's Manual.

#### **OPERATION PROCEDURE**

- 1. Turn ignition switch ON.
- 2. Press desired memory switch.
- 3. Front seat LH, steering column (if equipped) 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.

## < SYSTEM DESCRIPTION >

Item	Request status	A
Ignition position	ON	
Switch inputs		
Power seat switch		В
<ul> <li>ADP steering switch (if equipped)</li> </ul>	OFF	
Door mirror control switch	(Not operated)	
Set switch		
Seat memory switch		С
CVT selector lever	P position	

However, the memory operation can be performed for 45 seconds after opening the front door LH (front door switch LH OFF  $\rightarrow$  ON) even if the ignition switch is OFF.

### DETAIL FLOW

Order	Input	Output	Control unit condition
1	Memory switch	_	The memory switch signal is inputted to the automatic drive positioner control unit when memory switch 1 or 2 is operated. Memory switch signal is input to driver seat control unit via UART communication.
2 —	Motors (seat, steering, door mirror)	Driver seat control unit operates each motor of seat when it recogniz- es the memory switch pressed and requests each motor operation to automatic drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor.	
	_	Memory switch 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 (if equipped), door mirrors]	_	Driver seat control unit judges the operating seat position with each seat sensor input. The positions of the steering column and outside mirrors 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.

EXIT ASSIST FUNCTION

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### < SYSTEM DESCRIPTION >

# EXIT ASSIST FUNCTION : System Diagram

INFOID:000000011152284

## WITH AROUND VIEW MONITOR



# WITHOUT AROUND VIEW MONITOR



EXIT ASSIST FUNCTION : System Description

INFOID:000000011152285

#### OUTLINE

## < SYSTEM DESCRIPTION >

When exiting, if the conditions are satisfied, the seat is moved backward from normal sitting position and the	
steering column is moved up.	А
The seat slide amount at entry/exit operation can be changed.	
NOTE:	
<ul> <li>This function is set to ON before delivery (initial setting).</li> </ul>	
For further information for the system setting procedure, refer to Owner's Manual.	В

#### **OPERATION PROCEDURE**

- Open the front door LH with ignition switch in OFF position.
   Front seat LH 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 switch	OFF	
System setting [Entry/exit assist function]	ON	
Initialization	Done	
Switch inputs <ul> <li>Power seat switch</li> <li>ADP steering switch (if equipped)</li> <li>Door mirror remote control switch</li> <li>Set switch</li> <li>Seat memory switch</li> </ul>	OFF (Not operated)	
CVT selector lever	P position	

# DETAIL FLOW

Order	Input	Output	Control unit condition
1	Front door switch LH	—	Driver seat control unit receives front door switch LH signal (open) from BCM via CAN communication.
2	_	Motors [seat sliding LH, tilt (if equipped)]	Driver seat control unit operates the seat sliding motor LH, which recognizes that the driver side door is opened with ignition switch OFF. Driver seat control unit then requests the operations of tilt mo- tor (if equipped) to auto drive positioner control unit via UART com- munication. The automatic drive positioner control unit operates each motor for a constant amount.

# **ENTRY ASSIST FUNCTION**

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### < SYSTEM DESCRIPTION >

# **ENTRY ASSIST FUNCTION : System Diagram**

INFOID:000000011152286

## WITH AROUND VIEW MONITOR



## WITHOUT AROUND VIEW MONITOR



ENTRY ASSIST FUNCTION : System Description

INFOID:0000000011152287

#### OUTLINE

Revision: September 2014

### < SYSTEM DESCRIPTION >

The seat is in the exiting position when either following condition is satisfied, the seat returns from exiting position to the previous driving position. **NOTE:** 

- This function is set to OFF before delivery (initial setting).
- For further information for the system setting procedure, refer to Owner's Manual.

#### **OPERATION PROCEDURE**

- 1. Turn the ignition switch to ACC.
- 2. Front seat LH 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 <ul> <li>Power seat switch</li> <li>ADP steering switch (if equipped)</li> <li>Door mirror control switch</li> <li>Set switch</li> <li>Memory switch</li> </ul>	OFF (Not operated)
CVT selector lever	P position

#### DETAIL FLOW

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

# INTELLIGENT KEY INTERLOCK FUNCTION

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## < SYSTEM DESCRIPTION >

# INTELLIGENT KEY INTERLOCK FUNCTION : System Diagram



# INTELLIGENT KEY INTERLOCK FUNCTION : System Description

INFOID:000000011152289

INFOID:000000011152288

- By associating Intelligent Key and automatic drive positioner system, the unlock operation of Intelligent Key or driver side door request switch performs memory function and entry/exit assist function.
- Registration of Intelligent Key interlock function can register a different key ID to the driver seat control unit, one by one, for memory switch 1 and 2. A total of 2 key IDs can be registered.
- When ignition switch is OFF, and door unlock operation is performed using Intelligent Key or driver side door request switch, driver seat automatically adjusts to a driving position other than seat sliding. Seat sliding and steering column tilt perform return operation and are set to standby status.
- In standby status, when ignition switch is operated from OFF to ACC, return operation sets seat sliding and steering column tilt to a registered position.

#### NOTE:

- When another key ID is newly registered to a key switch to which a key ID is already registered, the previously registered key ID is overwritten and becomes unusable.
- When starter signal turns ON during return operation, the operation is interrupted, starter signal turns from ON to OFF, and operation restarts.

### OPERATION PROCEDURE

- 1. Unlock driver door by Intelligent Key or driver side door request switch.
- 2. Operation other than memory function of seat sliding is performed. Seat sliding and steering column tilt perform exit assist operation.
- 3. Turn ignition switch ACC.
- 4. Driver seat and steering column will return from the exiting position to entry position.

#### NOTE:

Further information for Intelligent Key interlock function. Refer to <u>ADP-76, "INTELLIGENT KEY INTERLOCK</u> <u>STORING : Description"</u>.

### OPERATION CONDITION

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

## < SYSTEM DESCRIPTION >

ltem	Request status	A
Ignition position	OFF	
Intelligent Key interlock function	Registered	
Switch inputs <ul> <li>Power seat switch</li> <li>Tilt &amp; telescopic switch (if equipped)</li> <li>Door mirror control switch</li> <li>Set switch</li> <li>Memory switch</li> </ul>	OFF (Not operated)	C
CVT shift selector	P position	

# DETAIL FLOW

Order	Input	Output	Control unit condition	E
1	<ul> <li>Door unlock signal (CAN)</li> <li>Key ID signal (CAN)</li> </ul>	_	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.	F
2	_	_	Driver seat control unit performs the seat slide and steering tilt move directly to the exit assist function. Other loads move to the exit assist function after performing memory function.	(
3	—	_	Driver seat control unit performs the entry assist function.	

# Fail Safe

INFOID:000000011152290 Н

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

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
	CAN communication	U1000	<u>ADP-79</u>
Only manual functions operate normally.	CONTROL UNIT	U1010	<u>ADP-80</u>
	EEPROM	B2130	<u>ADP-89</u>
Only manual functions, except door mirror, operate normally.	UART communication	B2128	<u>ADP-87</u>
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	<u>ADP-81</u>
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	<u>ADP-83</u>
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	<u>ADP-85</u>

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# **DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)**

### < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

CONSULT Function (AUTO DRIVE POS.)

INFOID:0000000011152291

#### CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF  $\rightarrow$  ON (for at least 5 seconds)  $\rightarrow$  OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

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

#### **APPLICATION ITEMS**

Diagnostic mode	Description
ECU Identification	Displays part numbers of driver seat control unit parts.
Self Diagnostic Result	Performs self-diagnosis for the auto drive positioner system and displays the results.
Active Test	Drive each output device.
Data Monitor	Displays input signals transmitted from various switches and sensors to driver seat con- trol unit in real time.
Work support	Changes the setting of each function.

#### SELF-DIAGNOSIS RESULTS Refer to <u>ADP-34</u>, "<u>DTC Index</u>".

#### ACTIVE TEST CAUTION: When driving vehicle, do not perform active test.

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

### DATA MONITOR

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
DETENT SW	"ON/OFF"	×	×	The selector lever position "OFF (P position) / ON (other than P position)" judged from the detention switch signal.
P RANG SW CAN	"ON/OFF"	×	×	ON/OFF status judged from the P range switch signal.
STARTER SW	"ON/OFF"	×	×	Ignition key switch ON (START, ON) /OFF (ACC, OFF) status judged from the ignition switch signal.
R RANGE (CAN)	"ON/OFF"	×	×	ON/OFF status judged from the R range switch signal.
VEHICLE SPEED	—	×	×	Display the vehicle speed signal received from combination meter by numerical value [km/h].
DOOR SW-FL	"OPEN/ CLOSED"	×	×	ON/OFF status judged from the door switch (front driver side) signal.
DOOR SW-FR	"OPEN/ CLOSED"	×	×	ON/OFF status judged from the door switch (front passen- ger side) signal.



# DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

## < SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents A
IGN ON SW	"ON/OFF"	×	×	ON/OFF status judged from the ignition switch signal.
ACC ON SW	"ON/OFF"	×	×	ON/OFF status judged from the ACC switch signal.
KYLS DR UNLK	"ON/OFF"	×	×	ON/OFF status judged from the driver side door unlock ac- tuator output switch signal.
KEYLESS ID		×	×	Key ID status judged from the key ID signal.
VHCL SPEED (ABS)	"RCV"	×	×	Vehicle speed status judged from vehicle speed signal.
HANDLE	"RHD/LHD"	×	×	RHD/LHD status judged from handle position signal.
TRANSMISSION	"A/T"	×	×	CVT status judged from transmission.
SET SW	"ON/OFF"	×	×	ON/OFF status judged from the setting switch signal.
MEMORY SW1	"ON/OFF"	×	×	ON/OFF status judged from the seat memory switch 1 signal.
MEMORY SW2	"ON/OFF"	×	×	ON/OFF status judged from the seat memory switch 2 signal.
SLIDE SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the sliding switch (forward) sig- nal.
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.
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 ADP steering switch (up) signal.
TILT SW-DOWN	"ON/OFF"	_	×	ON/OFF status judged from the ADP steering switch (down) signal.
TELESCO SW-FR	"ON/OFF"	_	×	ON/OFF status judged from the ADP steering switch (for-ward) signal.
TELESCO SW-RR	"ON/OFF"	-	×	ON/OFF status judged from the ADP steering switch (back-ward) signal.
SLIDE PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.

Revision: September 2014

# DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

## < SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
RECLN PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
LIFT FR PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
LIFT RR PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
MIR/SEN RH U-D	"V"	_	×	Voltage input from door mirror sensor (passenger side) up/ down is displayed.
MIR/SEN RH R-L	"V"	_	×	Voltage input from door mirror sensor (passenger side) left/ right is displayed.
MIR/SEN LH U-D	"V"	_	×	Voltage input from door mirror sensor (driver side) up/down is displayed.
MIR/SEN LH R-L	"V"	_	×	Voltage input from door mirror sensor (driver side) left/right is displayed.
TILT PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves DOWN, the value increases. If it moves UP, the value decreases.
TELESCO PULSE	_	_	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.

## WORK SUPPORT

Work item	Content	Item
	Entry/exit assist (seat) can be selected:	ON
EXIT SEAT SEIDE SETTING	ON (operated) – OFF (not operated)	OFF
EXIT TILT SETTING	Entry/exit assist (steering column) can be selected:	ON
	ON (operated) – OFF (not operated)	OFF
SEAT SLIDE VOLUME SET		40 mm (1.6 in)
	I he amount of seat sliding for entry/exit assist can be selected from 3 items.	80 mm (3.1 in)
		150 mm (6 in)

# ECU DIAGNOSIS INFORMATION DRIVER SEAT CONTROL UNIT

# **Reference Value**

# VALUES ON THE DIAGNOSIS TOOL

#### CONSULT MONITOR ITEM

NSULT MONITOR ITEM				С
Monitor Item	Condi	tion	Value/Status	
		P position	OFF	_
DETERTION	CVT Selector level	Other than above	ON	D
P RANG SW CAN	CV/T aplactor lawor	P position	ON	
	CVT Selector level	Other than above	OFF	Е
	Ignition position	Cranking	ON	
STARTER SW	Ignition position	Other than above	OFF	
	CVT selector lever	R position	ON	F
		Other than above	OFF	
VEHICLE SPEED	The condition of vehicle spe	eed is displayed	km/h	G
	Driver door	Open	OPEN	0
DOOK SW-I L	Driver door	Close	CLOSED	
	Passenger door	Open	OPEN	Н
DOOR SW-FR	Fassenger uoor	Close	CLOSED	
	Ignition switch	ON position	ON	
IGN ON SW	Ignition switch	Other than above	OFF	1
	Ignition switch	ACC or ON position	ON	
ACC ON SW		Other than above	OFF	AD
	Intelligent Key or driver side door request switch	ON	ON	
KILS DR UNLK		OFF	OFF	
KEYLESS ID	UNLOCK button of Intelligent Key is pressed		1, 2, 3, 4 or 5	K
	CAN signal from APS	Received	ON	
VHCL SPEED (ABS)	CAN Signal ITOITI ABS	Not received	OFF	L
		•	LHD	
HANDEL	Driving position		RHD	
TRANSMISSION	Transmission type		A/T	M
	Set switch	Push	ON	
SET SW	Oet Switch	Release	OFF	N
	Memory switch 1	Push	ON	
MEMORY SWI	Memory Switch 1	Release	OFF	
MEMORY SW/2	Memory switch 2	Push	ON	0
MEMORY 3WZ	memory switch z	Release	OFF	
	Sliding switch (forward)	Operate	ON	D
SEIDE SW-IT	Sharry Switch (lotward)	Release	OFF	ſ
	Sliding switch (backward)	Operate	ON	
JUDE JVV-KK	Siluing Switch (Dackward)	Release	OFF	
RECIN SW/ ED	Reclining switch (forward)	Operate	ON	
		Release	OFF	

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INFOID:000000011152292

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condi	tion	Value/Status
	Reclining switch (back-	Operate	ON
RECLIN SW-RR	ward)	Release	OFF
	Lifting switch front (up)	Operate	ON
LIFT FR SW-OF	Litting Switch nont (up)	Release	OFF
LIET ED SW/ DN	Lifting switch front (down)	Operate	ON
	Litting Switch Hont (down)	Release	OFF
	Lifting switch rear (up)	Operate	ON
	Linning Switch Tear (up)	Release	OFF
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON
		Release	OFF
MIR CON SW-UP	Mirror switch	Up	ON
		Other than above	OFF
MIR CON SW-DN	Mirror switch	Down	ON
		Other than above	OFF
MIR CON SW-RH	Mirror switch	Right	ON
		Other than above	OFF
MIR CON SW-IH	Mirror switch	Left	ON
		Other than above	OFF
MIR CHNG SW-R	Changeover switch	Right	ON
		Other than above	OFF
MIR CHNG SW-L	Changeover switch	Left	ON
		Other than above	OFF
TILT SW-UP	Tilt switch	Upward	ON
		Other than above	OFF
TILT SW-DOWN	Tilt switch	Downward	ON
		Other than above	OFF
TELESCO SW-FR	Telescopic switch	Forward	ON
		Other than above	OFF
TELESCO SW-RR	Telescopic switch	Backward	ON
		Other than above	OFF
		Forward	The numeral value decreases *
SLIDE PULSE	Seat sliding	Backward	The numeral value increases*
		Other than above	No change to numeral value*
		Forward	The numeral value decreases*
RECLN PULSE	Seat reclining	Backward	The numeral value increases *
		Other than above	No change to numeral value <sup>*</sup>
		Up	The numeral value decreases *
LIFT FR PULSE	Seat lifter (front)	Down	The numeral value increases *
		Other than above	No change to numeral value <sup>*</sup>
		Up	The numeral value decreases *
LIFT RR PULSE	Seat lifter (rear)	Down	The numeral value increases *
		Other than above	No change to numeral value <sup>*</sup>

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Conc	lition	Value/Status
MIR/SEN RH U-D	Door mirror (passenger sid	de)	Change between 3.4 (close to peak) 0.6 (close to valley)
MIR/SEN RH R-L	Door mirror (passenger sid	le)	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 PULSE		Upward	The numeral value decreases *
	Tilt position	Downward	The numeral value increases *
		Other than above	No change to numeral value <sup>*</sup>
		Forward	The numeral value decreases *
TELESCO PULSE	Telescopic position	Backward	The numeral value increases *
		Other than above	No change to numeral value*

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

## **TERMINAL LAYOUT**



# PHYSICAL VALUES

Terminal No. (wire color)		Description		Con	dition	Voltage (V)	
+	-	Signal name	Input/ Output	Condition		(Approx)	ľ
5 (W)	Ground	Sensor power supply	Output	_		Battery voltage	(
6 (D)	Ground	Lifting switch (rear) down	Input	Lifting switch	Operate (down)	0	
(R)		Signal		(ical)	Release	Battery voltage	F
7 (X)	Ground	Lifting switch (front) down	Input Lifting switch (front) –	Operate (down)	0		
(1)		Signal		(nonc)	Release	Battery voltage	
8 (BR)	Ground	Reclining switch backward	Input	Reclining switch	Operate (backward)	0	
		signai			Release	Battery voltage	

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## < ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description		Condition		Voltage (V)	
+	-	Signal name	Input/ Output	Conc	aition	(Approx)	
9 (SB)	Ground	Sliding switch backward signal	Input	Sliding switch	Operate (backward)	0	
()					Release	Battery voltage	
10	0 Ground Memory indicator 2 signal Output Me		Memory indicator	Illuminate	1		
(G)	oround	memory meloator 2 orginal	output	2	Other than above	Battery voltage	
11	Ground	Memory switch 2 signal	Input	Memory switch 2	Press	0	
(GR)	Cround	momory officin 2 orginal	mput	mennery enner 2	Other than above	5	
12 <sup>*</sup> (W)	Ground	Telescopic sensor signal	Input	Telescopic	Operate	10mSec/div	
					Other than above	0 or 5	
13 (G)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	10mSec/div	
					Stop	0 or 5	
15 (SB)	Ground	UART communication (TX/RX)	Input	Ignition switch ON		10msec/div	
16 (P)		CAN-H	_	-	_	_	
21	Crowned	Pot owitch sizzal	ا ممرا	Cat awit-b	Press	0	
(L)	Ground	Set switch signal	input	Set switch	Other than above	5	
22	Ground	Lifting switch (rear) up sig-	Input	Seat lifting switch	Operate (up)	0	
(•)		i di		(rear)	Release	Battery voltage	
23 (G)	Ground	Lifting switch (front) up sig-	Input	Seat lifting switch (front)	Operate (up)	0	
(-)				()	Release	Battery voltage	
24 (P)	Ground	Reclining switch forward signal	Input	Reclining switch	Operate (forward)	0	
		วเราณ			Release	Battery voltage	
25 (L)	Ground	round Sliding switch forward sig- nal	Input	Sliding switch	Operate (forward)	0	
(∟)					Release	Battery voltage	

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description		Condition		Voltage (V)	A
+	-	Signal name	Input/ Output	Con		(Approx)	
26	Cround	Momory indicator 1 signal	Output	Memory indicator	Illuminate	1	В
(Y)	Ground	Memory indicator i signal	Output	1	Other than above	Battery voltage	
27	Ground	Memory switch 1 signal	Input	Memory switch 1	Press	0	С
(V)	Cround		mput		Other than above	5	
28 <sup>*</sup> (BR)	Ground	Tilt sensor signal	Input	Tilt	Operate	10mSec/div 10mSec/div 2V/div JMJIA0119ZZ	D
					Other than above	0 or 5	F
29 (R)	Ground	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate	10mSec/div 10mSec/div 2V/div JMJIA0119ZZ	G H
					Stop	0 or 5	
30 (Y)	Ground	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate	10mSec/div 10mSec/div 2V/div JMJIA01192Z	AD
					Stop	0 or 5	
31 (L)	Ground	Sliding sensor signal	Input	Seat sliding	Operate	10mSec/div	L M N
					Stop	0 or 5	
32 (W)	_	CAN-L	_	-	_	_	0
34 (SB)	Ground	Lifting motor LH (front) up output signal	Output	Seat lifting (front)	Operate (up)	Battery voltage	
					Stop	0	P
35 (V)	Ground	Reclining motor LH for- ward output signal	Output	Seat reclining	(forward)	Battery voltage	
					Operate	U	
36 (W)	Ground	Sliding motor LH back- ward output signal	Output	Seat sliding	(backward)	Battery voltage	
				Stop	U		

Revision: September 2014

2015 Pathfinder

#### < ECU DIAGNOSIS INFORMATION >

Termi (wire	nal No. color)	Description		Condition		Voltage (V)		
+	-	Signal name	Input/ Output	Condition		(Approx)		
37 (R)	Ground	Power source	Input	_	_	Battery voltage		
39 (B)	Ground	Ground (power)	_	-	_	0		
40	Ground	d Lifting motor LH (rear) down output signal	Output	Seat lifting (rear)	Operate (down)	Battery voltage		
(Ľ)					Stop	0		
41	Ground	Lifting motor LH (rear) up output signal	Output	t Seat lifting (rear)	Operate (up)	Battery voltage		
(1)					Stop	0		
42 (CP)	Ground	Lifting motor LH (front) down output signal	Output	Output Seat lifting (front)	Operate (down)	Battery voltage		
(GIV)					Stop	0		
43 (BP)	Ground Reclining motor LH back- Our		Output	Output	Output	Output Seat reclining	Operate (backward)	Battery voltage
(BR)		ward output signal	_		Stop	0		
44 (G)	Ground	Ground Sliding motor LH forward output signal	Output	Seat sliding	Operate (forward)	Battery voltage		
(0)					Release	0		

\*: If equipped

# Fail Safe

INFOID:000000011152293

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

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
	CAN communication	U1000	<u>ADP-79</u>
Only manual functions operate normally.	CONTROL UNIT	U1010	<u>ADP-80</u>
	EEPROM	B2130	<u>ADP-89</u>
Only manual functions, except door mirror, operate normally.	UART communication	B2128	<u>ADP-87</u>
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	<u>ADP-81</u>
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	<u>ADP-83</u>
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	<u>ADP-85</u>

# DTC Index

INFOID:000000011152294

CONSULT	Tim	ing <sup>*1</sup>			
display	Current mal- function function		Item	Reference page	
CAN COMM CIRCUIT [U1000]	0	1-39	CAN communication	ADP-79	
CONTROL UNIT [U1010]	0	1-39	Control unit	ADP-80	
SEAT SLIDE [B2112]	0	1-39	Seat slide motor output	ADP-81	
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	ADP-83	

**Revision: September 2014** 

2015 Pathfinder

#### < ECU DIAGNOSIS INFORMATION >

CONSULT	Timing <sup>*1</sup>				
display	Current mal- function	Previous mal- function	Item	Reference page	
STEERING TILT [B2116]	0	1-39	Tilt motor output	<u>ADP-85</u>	В
UART COMM [B2128]	0	1-39	UART communication	<u>ADP-87</u>	
EEPROM [B2130]	0	1-39	EEPROM	<u>ADP-89</u>	C

\*1.

• 0: Current malfunction is present

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

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# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

## **Reference Value**

INFOID:000000011152295

## TERMINAL LAYOUT



## PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition		Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx.)
1*	Ground	Tilt switch up signal	loout	Tilt switch	Operate (up)	0
(LG)			input		Other than above	5
2		Changes war switch DLL		Changeover	RH	0
(GR)	Ground	signal	Input	switch position	Neutral or LH	5
3	Ground	Mirror switch up signal	Input	Mirror switch	Operated (up)	0
(G)	Ground				Other than above	5
4	Ground	Mirror switch left signal	Input	Mirror switch	Operated (left)	0
(P)					Other than above	5
5 (W)	Ground	Door mirror sensor (pas- senger side) up/down signal	Input	Door mirror RH position		Change between 3.4 (close to peak) 0.6 (close to valley)
6 (R)	Ground	Door mirror sensor (driv- er side) up/down signal	Input	Door mirror LH po	osition	Change between 3.4 (close to peak) 0.6 (close to valley)
7*	Ground	Telescopic switch for-	Input	Telescopic	Operate (forward)	0
(BR)	Ground	ward signal	ward signal switch		Other than above	5
8 (G)	Ground	UART communication (TX/RX)	Output	Ignition switch ON		10msec/div
## AUTOMATIC DRIVE POSITIONER CONTROL UNIT

### < ECU DIAGNOSIS INFORMATION >

Termi (wire	nal No. color)	Description	Condition		Voltage (V)	A	
+	-	Signal name	Input/ Output	Contail		(Approx.)	
10	Ground	Door mirror motor (pas-	Output	Door mirror BH	Operate (up)	Battery voltage	В
(BR)	Cround	signal	Output		Other than above	0	С
11	Ground	Door mirror motor (pas- senger side) left output	Output	Door mirror RH	Operate (left)	Battery voltage	
(G)		signal			Other than above	0	D
		Door mirror motor (driv- er side) down output sia-			Operate (down)	Battery voltage	E
12	Ground	nal	Output	Door mirror (LH)	Other than above	0	
(BG)		Door mirror motor (driv- er side) right output sig-	Output		Operate (right)	Battery voltage	F
		nal			Other than above	0	G
13*	Ground	Tilt switch down signal	Input	Tilt switch	Operate (down)	0	
(Y)					Other than above	5	Н
14 (P)	Ground	Changeover switch LH signal	Input	Changeover switch position	LH Neutral or	5	I
·					Operate	0	
15 (R)	Ground	Mirror switch down sig- nal	Input	Mirror switch	Other than	5	AD
16					Operate (right)	0	K
(W)	Ground	Mirror switch right signal	Input	Mirror switch	Other than above	5	I
17 (G)	Ground	Door mirror sensor (pas- senger side) left/right signal	Input	Door mirror RH position		Change between 3.4 (close to left edge) 0.6 (close to right edge)	
18 (BG)	Ground	Door mirror sensor (driv- er side) left/right signal	Input	Door mirror LH po	osition	Change between 0.6 (close to left edge) 3.4 (close to right edge)	IVI
19 <sup>*</sup> (L)	Ground	Telescopic switch back- ward signal	Input	Telescopic switch	Operate (back- ward)	0	Ν
(-)					Other than above	5	0
20 (Y)	Ground	Ground	—			0	_
21 (BG)	Ground	Door mirror motor sen- sor power supply	Input			5	Р

## AUTOMATIC DRIVE POSITIONER CONTROL UNIT

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description	O a settit		Voltage (V)	
+	-	Signal name	Input/ Output	Conditi	on	(Approx.)
		Door mirror motor (pas-			Operate (down)	Battery voltage
22	Ground	put signal	Output	Door mirror (RH)	Other than above	0
(SB)	Ground	Door mirror motor (pas-	Output		Operate (right)	Battery voltage
		signal			Other than above	0
23	Ground	Door mirror motor (driv-	Output	Door mirror (I H)	Operate (up)	Battery voltage
(LG)		er side) up output signal	output		Other than above	0
24	Ground	Door mirror motor (driv-	Output	Door mirror (LH)	Operate (left)	Battery voltage
(L)		er side) left output signal			Other than above	0
25 (L)	Ground	Power source	Input	_		Battery voltage
26 <sup>*</sup>	Ground	Telescopic motor back- ward output signal	Output	Steering tele-	Operate (back- ward)	Battery voltage
(•)		hard balpat olghai			Other than above	0
27 <sup>*</sup> (LG)	Ground	Tilt and telescopic motor power source				Battery voltage
28*	Ground	Tilt motor down output	Output	Steering tilt	Operate (down)	Battery voltage
(SB)	Cround	signal	output		Other than above	0
		Tilt motor up output sig-		Steering tilt	Operate (up)	Battery voltage
29*	Ground	nal	Output		Other than above	0
(BR)	Cround	Telescopic motor for-	Supur	Steering tele-	Operate (forward)	Battery voltage
		ward output signal		scopic	Other than above	0
30 (B)	Ground	Ground				0

\*: If equipped

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

# BCM (BODY CONTROL MODULE)

### List of ECU Reference

INFOID:000000011152296

	ECU	Reference	
		BCS-30, "Reference Value"	
DOM		BCS-50, "Fail Safe"	
BCIM		BCS-50, "DTC Inspection Priority Chart"	
		BCS-52. "DTC Index"	

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< WIRING DIAGRAM >

# WIRING DIAGRAM AUTOMATIC DRIVE POSITIONER SYSTEM

WITHOUT AROUND VIEW MONITOR

WITHOUT AROUND VIEW MONITOR : Wiring Diagram



ABJWA0513GB

INFOID:000000011152297

< WIRING DIAGRAM >





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< WIRING DIAGRAM >



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### < WIRING DIAGRAM >

**Revision: September 2014** 

ABJIA0799GB

### < WIRING DIAGRAM >

Signal Name	MIRROR SW (RIGHTWARD)	MIRROR SENSOR (RH HORIZONTAL)	MIRROR SENSOR (LH HORIZONTAL)	I	GND (SENSOR GND)	POWER SUPPLY (SENSOR FOR 5V)	MIRROR MOTOR [RH COMMON (DOWN&RIGHT)]	MIRROR MOTOR [LH VERTICAL (UP)]	MIRROR MOTOR [LH HORIZONTAL (LEFT)]
Color of Wire	M	G	BG	I	Υ	BG	SB	ГG	Ļ
Terminal No.	16	17	18	19	20	21	22	23	24

Signal Name	MIRROR SENSOR (LH VERTICAL)	I	UART (TX/RX)	I	MIRROR MOTOR [RH VERTICAL (UP)]	MIRROR MOTOR [RH HORIZONTAL (LEFT)]	MIRROR MOTOR [LH COMMON (DOWN& RIGHT)]	I	MIRROR SELECT SW (LH)	MIRROR SW (DOWNWARD)	
Color of Wire	В	I	J	I	BR	ŋ	BG	I	Р	В	
Terminal No.	9	7	80	6	10	11	12	13	14	15	



Signal Name	I	I	I	GND (POWER)	
Color of Wire	I	I	I	В	
Terminal No.	27	28	29	30	





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Signal Name Т T Color of Wire ≥ \_ Ferminal No. N -

ABJIA1201GB

### AUTOMATIC DRIVE POSITIONER SYSTEM

### < WIRING DIAGRAM >

Signal Name	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEEDING COLLIMNI)		- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)		I	1
Color of Wire	LG	>	SB	BR	~	BG	≻
Terminal No.	23	24	25	26	27	33	34
Signal Name	1 1	1 1	1 1	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)		DRIVE POSITIONER)

	signal Name	Ι	I	Ι	I	I	I	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)
Color of	Wire	٩	GR	щ	J	٩	Μ	ГG	BG	_
Touristic Nice	l erminal No.	4	5	9	7	8	6	16	17	18





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# **AUTOMATIC DRIVE POSITIONER SYSTEM**

< WIRING DIAGRAM >

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE
H.S.	1     2     3     4     5     6     7       8     9     10     11     12     13     14     15     16

Connector Name WIRE TO WIRE

M91

Connector No.

Connector Color WHITE

		S	14	
		4	13	
		Π	12	
			11	
		3	10	
		2	თ	
		ļ	8	
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Signal Name

Color of Wire ш

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1 E		0 E		Terminal No.
1	9	N	ה	
	- 2	1.3		
	14	8		
	13	6		
	12	28		me
	÷	27	11	Zai
17	10	26	11	all
	თ	25	11	ign
	8	24		S
	7	23		
5	9	22		
	5	21		ď.
	4	20		or /ire
	З	19		No

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Signal Name	I	I	I	I	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)	
Color of Wire	U	۲	N	BG	BR	SB	G	
Terminal No.	9	2	8	6	19	20	21	

Revision: September 2014

### < WIRING DIAGRAM >



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L				STEC	5	⊒[N	5	S		
	Color of Wire	۲	SB	ГG		>	BB	i	≻	
	Terminal No.	9	2	8		ი	10	2	11	
Γ			٦							1
						Je				

10 9 8 7 6	Signal Name	I	Ι	I	
5 4 12 11	Color of Wire	L	Р	В	
雨 H.S.	Terminal No.	Ļ	2	e	

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## **AUTOMATIC DRIVE POSITIONER SYSTEM**

#### < WIRING DIAGRAM >

Connector Name WIRE TO WIRE

B54

Connector No.

BROWN

Connector Color

f

### < WIRING DIAGRAM >



ABJIA1205GB

### < WIRING DIAGRAM >



6 5 4	f Signal Name	1	I	1	- (WITH AUTOMATIC DRIVE POSITIONER	- (WITH AUTOMATIC
	Color o Wire	œ	в	S	_	≻
	Terminal No.	-	2	e	4	9

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Signal Name	I	I	1	I	I	
Color of Wire	GR	>	σ	Y	н	
Terminal No.	8	6	10	11	12	

RE TO WIRE	NMC	9 10 11 12	Signal Name	-
me WIF	lor BR	1     2     3       6     7     8	Color of Wire	٩
Connector Na	Connector Co	国 H.S.	Terminal No.	-

Signal Name	I	I	I	I	I	
Color of Wire	Ь	8	в	SB	L	
Terminal No.	F	2	e	9	7	

Signal Name	I	I	I	I	I	
Color of Wire	٨	Γ	SB	٩	BR	
Terminal No.	9	7	8	6	10	



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B200

Connector No.

Connector Name SLIDING MOTOR LH

B211

Connector No.

Connector Color GRAY

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### < WIRING DIAGRAM >

Signal Name	SET SW	REAR LIFTER SW (UPWARD)	FRONT LIFTER SW (UPWARD)	RECLINER SW (FORWARD)	SLIDE SW (FORWARD)	IND 1	ADDRESS 1	Ι	PULSE (REAR LIFTER)	PULSE (FRONT LIFTER)	PULSE (SLIDE)	CAN-L
Color of Wire		>	ŋ	Р	_	≻	>	Ι	ш	۲	Γ	Ν
Terminal No.	21	22	53	54	25	26	27	28	29	30	31	32

Signal Name	SLIDE SW (BACKWARD)	IND 2	ADDRESS 2	I	PULSE (RECLINER)	1	UART (TX/RX)	CAN-H	1	I	ļ	I
Color of Wire	SB	G	GR	-	σ	I	SB	٩	I	I	Ι	I
Terminal No.	6	10	11	12	13	14	15	16	17	18	19	20



Signal Name	I	FRONT LIFTER MOTOR (UPWARD)	RECLINER MOTOR (FORWARD)	SLIDE MOTOR (BACKWARD)
Color of Wire	I	SB	٨	M
erminal No.	33	34	35	36

ABJIA1207GB

Signal Name	- (WITH AUTOMATIC DRIVE POSITIONER)	I	I	I	- (WITH AUTOMATIC DRIVE POSITIONER)
Color of Wire	N	ГG	В	Μ	IJ
Terminal No.	F	2	в	4	5

	Signal Name	BAT (PTC)	L	GND	REAR LIFTER MOTOR (DOWNWARD)	REAR LIFTER MOTOR (UPWARD)	FRONT LIFTER MOTOR (DOWNWARD)	RECLINER MOTOR (BACKWARD)	SLIDE MOTOR (FORWARD)
Color of	Wire	н	T	ш	<b>ب</b>	~	GR	BR	ŋ
T	lerminal No.	37	38	39	40	41	42	43	44

Connector No. B209



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### < WIRING DIAGRAM >



DOOR MIRROR LH (WITHOUT AROUND VIEW MONITOR SYSTEM)	WHITE	2 5 5 5 5 5 5 5 5 5 7 2 1 1 10 9 8 7	
Connector Name	Connector Color	H.S.	

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Connector No.

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Connector No.

Signal Name	I	I	I	I	I	I	I
Color of Wire	SB	BG	٢	>	ГG	Γ	BG
Terminal No.	e	4	5	9	8	6	10



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#### < WIRING DIAGRAM >



## WITH AROUND VIEW MONITOR

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**Revision: September 2014** 

DOWNWARD

ABJWA0510GB

### < WIRING DIAGRAM >

 $\langle TZ \rangle$ : WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN



Revision: September 2014



< WIRING DIAGRAM >





#### < WIRING DIAGRAM >



ABJIA0835GB

#### < WIRING DIAGRAM >

Signal Name	MIRROR SW (RIGHTWARD)	MIRROR SENSOR (RH HORIZONTAL)	MIRROR SENSOR (LH HORIZONTAL)	TELESCOPIC SW (BACKWARD)	GND (SENSOR GND)	POWER SUPPLY (SENSOR FOR 5V)	MIRROR MOTOR [RH COMMON (DOWN&RIGHT)]	MIRROR MOTOR [LH VERTICAL (UP)]	MIRROR MOTOR [LH HORIZONTAL (LEFT)]
Color of Wire	M	G	BG	L	Y	BG	SB	ГG	_
Terminal No.	16	17	18	19	20	21	22	23	24

Signal Name	MIRROR SENSOR (LH VERTICAL)	TELESCOPIC SW (FRONTWARD)	UART (TX/RX)	I	MIRROR MOTOR [RH VERTICAL (UP)]	MIRROR MOTOR [RH HORIZONTAL (LEFT)]	MIRROR MOTOR [LH COMMON (DOWN& RIGHT)]	TILT SW (DOWNWARD)	MIRROR SELECT SW (LH)	MIRROR SW (DOWNWARD)	
Color of Wire	ш	BR	U	I	BR	g	BG	٢	٩	Я	
Terminal No.	9	7	œ	6	10	11	12	13	14	15	



Signal Name	TELESCOPIC MOTOR (BACKWARD)	POWER SUPPLY (SENSOR FOR 16V)	TILT MOTOR (DOWNWARD)	STRG MOTOR COMMON (UPWARD/ FORWARD)	GND (POWER)
Color of Wire	>	ГG	SB	ВВ	В
Terminal No.	26	27	28	29	30



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#### < WIRING DIAGRAM >



### < WIRING DIAGRAM >



Signal Name	I	I	1	I	I
Color of Wire	BR	>	٢	SB	LG
Terminal No.	Ļ	2	3	4	5





M91

Connector No.

Signal Name	Ι	T	I	I
Color of Wire	BR	SB	٢	_
Ferminal No.	1	2	3	4

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Signal Name

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### < WIRING DIAGRAM >

Signal Name	- (WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	I	I	I	1	I	I
Color of Wire	ГG	BR	≻	ВG	≻	н	ВG	M
Terminal No.	26	26	27	33	34	35	36	37

Signal Name	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	- (WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	I	
Color of Wire	BG	L	L	ГG	BR	>	SB	
Terminal No.	17	18	23	23	24	24	25	





Signal Name	I	I	I
Color of Wire	Μ	8	Ν
Terminal No.	۲	2	З



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### **AUTOMATIC DRIVE POSITIONER SYSTEM**

#### **Revision: September 2014**

Connector No. M170

#### < WIRING DIAGRAM >



### < WIRING DIAGRAM >

Concept No.									
Connector No	CH PC		Terminal	No. Color of Wire	Signal Name	Terminal No	Color of Wire	Signal Name	
Connector Co			5		1			- (WITHOUT ELECTRIC	
	5		9	~	1	6	>	TILT AND TELESCOPIC	
	ľ	4 - 3 1	7	SB	I				
H.S.	121		8		- (WITH ELECTRIC TILT AND TELESCOPIC	10	ГG	- (WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	
Terminal No.	Color oi Wire	f Signal Name			- (WITHOUT ELECTRIC	C T	a		
<del>.</del> .	_   (	1	∞	ГG	TILT AND TELESCOPIC STFFRING COLUMN)	2	6	STEERING COLUMN)	
N	<u>م</u>	1				=	≻	I	
ი .	۳	I	6	BR	- (WITH ELECTRIC TILT AND TELESCOPIC	12	_	I	
4	Ha	-			STEERING COLUMN)				
of a standard No.				10 volo		Connector N	0. R2C		
Connector Na	, me MI	RE TO WIRE	Terminal	No. Wire	Signal Name	Connector N	ame WIF	RE TO WIRE	
Connector Co	lor GR	AY	V 10	-		Connector C	olor BR	NMO	
			410	2	STEERING COLUMN)				
H.S.		5A 4A 3A 2A 1A	38A	BR	- (WITH ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	EE H.S.H	1 2 3 6 7 8	4     5       9     10     11     12	
	21A 20A 15	10A 9A 8A 7A 6A 9A18A17A16A15A14A13A12A11A	38A	>	- (WITHOUT ELECTRIC TILT AND TELESCOPIC STEERING COLUMN)	Terminal No	Color of Wire	Signal Name	
	30A 2.	9A 28A 27A 26A 25A 24A 23A 22A	39A	BS	1	-	₽	I	
	41A 40A 3	9A 38A 37A 36A 35A 34A 33A 32A 31A			- (WITH ELECTRIC TILT	N	≥	1	
	50A 4.	9A 48A 47A 46A 45A 44A 43A 42A	40A	ГG	AND TELESCOPIC STEERING COLUMN)	ი -	<u>е</u>	I	
	61A 60A 5	9A 58A 57A 56A 55A 54A 53A 52A 51A			- (WITHOUT ELECTRIC	4		I	
	70A 6	9A 68A 67A 66A 65A 64A 63A 62A	404	ня ———	STEERING COLUMN)	n 0	R B	I	
	81A 80A 7	94 784 774 764 755 744 734 72A 714	41A	≻	I	2	-	1	
	90A 8	84 884 874 889 839 844 834 824	59A	BR	I	∞	GВ	1	
		95A 94A 93A 92A 91A	60A		I	6	>	I	
		100A 99A 98A 97A 96A	61A	~	I	10	σ	1	
			66A	-	I	=	≻	1	
			89A		I	12	æ	1	
Terminal No.	Color of Wire	1 Signal Name	90A	۹.	I				
		- (WITH ELECTRIC TILT	98A	_	I				
37A	_	AND TELESCOPIC STEERING COLUMN)							

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### < WIRING DIAGRAM >

Signal Name	I	I	I	1	I	
Color of Wire	Y	Γ	SB	Р	BR	
Terminal No.	6	7	8	6	10	

Connector Name POWER SEAT SWITCH LH

Connector Name LIFTING MOTOR LH (REAR)

B207

Connector No.

B208

Connector No.

Connector Color WHITE

H.S.		
Terminal No.	Color of Wire	Signal Name
-	>	I
N	щ	I
З	В	- (WITH AUTOMATIC DRIVE POSITIONER)
2	თ	I

-							
ITE	8 5 4	Signal Name	I	I	I	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)
lor WH		Color of Wire	œ	в	×	_	≻
Connector Co	品. H.S.	Terminal No.	Ļ	2	С	7	9

	B209	DRIVER SEAT CONTROL UNIT	MHITE	
	Connector No.	Connector Name	Connector Color	

	Connect	ſ		Ч. Ч.	
	tor O		16	32	
	1 S		15	31	Ľ
	or		14	30	
2	Ś		13	29	
5	I		12	28	H
			=	27	
2		\	10	58	
ונ			6	25	
			80	24	
-		17	~	83	
			9	ន	
			ŝ	5	
			4	ຊ	
			e	19	

2	14 13 12 11	10 9	∞ ;	~	9	ŝ	4	en 1	~ !	- !
31 30 2	28 27	26 25	24	33	52	5	20	₽ ₽	~	~
Colo	or of ire	S	gn;	al N	Var	ne				
'				Т						
'										
				Т						
				Τ						
5		Р О	١ <u></u>	6	إلا	10-6				

Signal Name	I	I	I	I	POWER SUPPLY (ENCODER)	REAR LIFTER SW (DOWNWARD)	
Color of Wire	I	I	I	I	Μ	В	
Ferminal No.	-	2	3	4	5	9	

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98765	Signal Name	Т	I	- (WITH AUTOMATIC DRIVE POSITIONER)	I	
4	Color of Wire	٨	ш	В	IJ	
品.S.H	Terminal No.	Ļ	2	£	£	

Signal Name	FRONT LIFTER SW (DOWNWARD)	RECLINER SW (BACKWARD)	SLIDE SW (BACKWARD)	IND 2	ADDRESS 2	PULSE (TELESCOPIC)	PULSE (RECLINER)	I	UART (TX/RX)	CAN-H	-	-	I	I
Color of Wire	≻	BR	SB	G	GR	Μ	g	I	SB	٩.	I	T	T	ı
Terminal No.	7	8	6	10	11	12	13	14	15	16	17	18	19	20

Signal Name	FRONT LIFTER SW (DOWNWARD)	RECLINER SW (BACKWARD)	SLIDE SW (BACKWARD)	IND 2	ADDRESS 2	PULSE (TELESCOPIC)	PULSE (RECLINER)	I	UART (TX/RX)	CAN-H	Ι	Ι	I	
Color of Wire	~	BR	SB	σ	GR	W	G	I	SB	۵.	I	I	I	

	Signal Name	SET SW	REAR LIFTER SW (UPWARD)	FRONT LIFTER SW (UPWARD)	RECLINER SW (FORWARD)	SLIDE SW (FORWARD)	I UD 1	ADDRESS 1	PULSE (TILT)	PULSE (REAR LIFTER)	PULSE (FRONT LIFTER)	PULSE (SLIDE)	CAN-L
	Color of Wire	_	>	ŋ	Р	_	۲	>	BR	щ	۲		Μ
	erminal No.	21	22	23	24	25	26	27	28	29	30	31	32

**AUTOMATIC DRIVE POSITIONER SYSTEM** 

Revision: September 2014	

--- (WITH AUTOMATIC DRIVE POSITIONER)

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### < WIRING DIAGRAM >

Connector No	o. B21	-
Connector Né	ame SLII	DING MOTOR LH
Connector Co	olor GR/	Jt.
劻 H.S.	5 4	3 2 1
Terminal No.	Color of Wire	Signal Name
<del>.</del>	M	- (WITH AUTOMATIC DRIVE POSITIONER)
N	ГG	I

Signal Name	GND	REAR LIFTER MOTOR (DOWNWARD)	REAR LIFTER MOTOR (UPWARD)	FRONT LIFTER MOTOR (DOWNWARD)	RECLINER MOTOR (BACKWARD)	SLIDE MOTOR (FORWARD)	
Color of Wire	В	L	7	GR	BR	ß	
Terminal No.	39	40	41	42	43	44	



Connector No.	B217
Connector Name	RECLINING MOTOR LH
Connector Color	WHITE

Connector Name LIFTING MOTOR LH (FRONT)

B218

Connector No.

Connector Color WHITE



2 10 1

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1					_	
	Signal Name	Т	-	Т	Н	- (WITH AUTOMATIC DRIVE POSITIONER)
	Color of Wire	თ	в	≥	ВВ	>
	Terminal No.	-	2	e	4	9

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 – (WITH AUTOMATIC DRIVE POSITIONER)
– (WITH AUTOMATIC DRIVE POSITIONER)

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GR SB

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Signal Name

Color of Wire

Terminal No.

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6 3 1 6 3 2 1

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B210

Connector No.

### < WIRING DIAGRAM >

ctor No. B224	ctor Color PINK		10 9 8 7 6 5			Color of Color of	Wire Wire	8	B	В	B	otor No	ctor Name WIBF TO WI	ector Color WHITE			18 17 16 15 14 13 13 11 10 0	38 37 36 35 34 33 32 31 30 29		al No. Color of Si	Wire	B	FG	L	BR	>	Y	e LG			
NECTOR-R00			4 3 2 1	14 13 12 11		Momo		1	I	I	I		BF	1		[[		9 28 27 26 25 24 23 22 21		innal Name		1	1	1	1	1	1	1			
Terminal No.	ω	6	10	14	15	16	17	18	19	20			Terminal No.	17	8	23	24	25	26	27	33	34	35	36	37						
Color of Wire	B	ш	ш	œ	œ	3	3	×	3	8		10 10 U	Wire	BG		_	BR	SB	Ľ	≻	>	٢	BG	SB	>						
Signal Name	1	I	1	1	I	1	1	1	1	1			Signal Name	- (WITH AUTOMATIC DRIVE POSITIONER)	- (WITH AUTOMATIC DRIVE POSITIONER)	1	1	1	I	I	I	I	I	I	I						
Connector No Connector Na	Connector Co			SH	Ď	Torminal No		e				Connector No	Connector No	Connector Co		H.S.				Terminal No		2	6	10	13	14	15	16			
, D2 ma WIRF TC	Inc WHITE		7 6 5 4 1	16 15 14 13 12		Color of	Wire	в				D10	MIRF TO	olor WHITE		8 7 6 5 16 15 14 13	2			Color of	Wire	SB	ш	BB	ГG	۲	>				
			321	11 10 9 8	1	Ciccol Nomo		I					O WIBF			4 3 2 1 12 11 10 9				Signal Name		I	I	I	I	I	I	1			

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### < WIRING DIAGRAM >

Connector No. D52 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name	2 SB –	е В В	10 BR –	13 LG –	14 Y –	15 V –	16 L –	Connector No. D128	Connector Name (WITH AROUND VIEW MONITOR SYSTEM)	Connector Color WHITE	低限 H.S. [12]11]10]9876543213 [24]23221201918[17]16[15]14[13]
Connector No. D28 Connector Name DOOR MIRROR LH Connector Name (WITH AROUND VIEW MONITOR SYSTEM) Connector Color WHITE	Terminal No. Color of Signal Name	10 BG –	11 L -	12 LG –	21 BG –	22 V –	23 SB –	24 Y –	Connector No. D101	Connector Name WIRE TO WIRE Connector Color WHITE		H.S. (16) 15 14 13 12 111 10 9 8 7 6 5 4 3 2 1 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
Connector No. D22 Connector Name CONTROL SWITCH (WITH AUTOMATIC DRIVE Connector Color GRAY	Terminal No. Color of Signal Name	1 V -	3 LG –	4 SB –	- × 6	12 BR –	15 B –	16 L –	Connector No. D60	Connector Name SEAT MEMORY SWITCH Connector Color WHITE		H.S. 16 15 14 13 12 11 10 9

Signal Name	I	I	I	I	I	I	I
Color of Wire	SB	ГG	BR	BR	۲	٨	L
Terminal No.	10	£	12	21	22	23	24

Signal Name	I	1	1	I	I	I	I
Color of Wire	۲	_	BR	>	BR	SB	ГG
Terminal No.	9	7	8	6	19	20	21



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< BASIC INSPECTION >

# BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

### Work Flow

WORK FLOW



DETAILED FLOW

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В

INFOID:000000011152299

### DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

### **1.** GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2. CHECK DTC WITH AUTOMATIC DRIVE POSITIONER SYSTEM

Check "Self Diagnostic Result" with CONSULT. Refer to <u>ADP-34, "DTC Index"</u>.

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

**3.** CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 7.

**4.** CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 5.

5. CHECK NORMAL OPERATING CONDITION

Check normal operating condition. Refer to <u>ADP-162, "Description"</u>.

Is the incident normal operation?

YES >> Inspection End.

NO >> GO TO 6.

**6.** PERFORM BASIC INSPECTION

Isolate the malfunctioning point with a basic inspection.

>> GO TO 8.

**7.** PERFORM DTC CONFIRMATION PROCEDURE

Perform the confirmation procedure for the detected DTC.

Is the DTC displayed?

YES >> GO TO 9.

NO >> Check intermittent incident. Refer to <u>GI-47, "Intermittent Incident"</u>.

**8.** PERFORM COMPONENT FUNCTION CHECK

Perform the component function check for the isolated malfunctioning point.

>> GO TO 9.

9. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

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

>> GO TO 10.

**10.** REPAIR OR REPLACE

Repair or replace the malfunctioning part.
## DIAGNOSIS AND REPAIR WORK FLOW

BASIC INCOLOTION

< BASIC INSPECTION >	
>> GO TO 11.	
11. FINAL CHECK	А
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?	В
YES >> Inspection End. Symptom is detected.>> GO TO 4. DTC is detected.>> GO TO 7.	С
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### **INSPECTION AND ADJUSTMENT**

#### < BASIC INSPECTION >

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:000000011152300

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

Function	Condition	Procedure
Memory [Seat, steering (if equipped), mirror]	Erased	Perform storing
		Perform initialization
Entry/exit assist	ON	Set slide amount <sup>*1</sup>
Intelligent Key interlock	Frased	Perform initialization
intelligent rey intender	Liaseu	Perform storing

<sup>\*1</sup>: Default value is 40 mm.

#### NOTE:

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

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Work Procedure INFOID:0000000011152301

### **1**.SYSTEM INITIALIZATION

Perform system initialization. Refer to ADP-75, "SYSTEM INITIALIZATION : Work Procedure".

>> GO TO 2.

### 2.MEMORY STORAGE

Perform memory storage. Refer to ADP-76, "MEMORY STORING : Work Procedure".

#### >> GO TO 3.

### ${f 3}.$ INTELLIGENT KEY INTERLOCK STORAGE

Perform Intelligent Key interlock storage. Refer to ADP-77, "INTELLIGENT KEY INTERLOCK STORING : Work Procedure".

#### >> GO TO 4.

**4**.SYSTEM SETTING

Perform system setting. Refer to ADP-77, "SYSTEM SETTING : Work Procedure".

## >> Inspection End.

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000011152302

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

Function	Condition	Procedure	
Memory [Seat, steering (if equipped), mirror]	Erased	Perform storing	
	ON	Perform initialization	
	ON	Set slide amount <sup>*1</sup>	

## INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

Function	Condition	Procedure
Intelligent Key interlock	Erased	Perform initialization
	Lidood	Perform storing
<sup>l</sup> : Default value is 40 mm.		
Notice that disconnecting the battery when detected	I DTC are prese	nt will erase the DTC memory.
ADDITIONAL SERVICE WHEN REPLAC	CING CONTI	ROL UNIT : Work Procedure
		INFOID:000000011152303
<b>1</b> .SYSTEM INITIALIZATION		
Perform system initialization. Refer to ADP-75, "SYS	STEM INITIALIZ	ATION : Work Procedure".
>> GO TO Z. 2 MEMORY STORAGE		
Perform memory storage Refer to ADP-76 "MEMO	RY STORING :	Work Procedure"
choin memory storage. Neich to <u>Abr 70, MEMO</u>		Work Procedure.
>> GO TO 3.		
<b>3.</b> INTELLIGENT KEY INTERLOCK STORAGE		
Perform Intelligent Key interlock storage. Refer to	ADP-77, "INTE	LLIGENT KEY INTERLOCK STORING :
Work Procedure.		
>> GO TO 4.		
<b>4</b> .SYSTEM SETTING		
Perform system setting. Refer to ADP-77, "SYSTEM	A SETTING : Wo	ork Procedure".
>> Increation End		
SYSTEM INITIALIZATION		
SYSTEM INITIAL IZATION · Description		NEO/D-000000011152204
	()	INF-012-000000011132304
eplaced.	terminal is disco	onnected or the driver seat control unit is
The entry/exit assist function will not operate norma	lly if no initializat	tion is performed.
SYSTEM INITIALIZATION : Work Procee	dure	INFOID:000000011152305
NITIALIZATION PROCEDURE		
1. CHOOSE METHOD		
There are two initialization methods.		
Which method do you use?		
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.		
J. SIEP A-Z		

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

< BASIC INSPECTION >

>> Inspection End.

### **4.** STEP B-1

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

#### >> Inspection End. MEMORY STORING

### **MEMORY STORING : Description**

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

#### **MEMORY STORING : Work Procedure**

INFOID:0000000011152307

INFOID:0000000011152306

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

Check the following conditions.

Ignition switch: ON

• CVT shift selector: P (Park) position

>> GO TO 2.

## **2.**STEP 2

Adjust driver seat, steering column (if equipped) and outside mirror position manually.

>> GO TO 3.

## 3.STEP 3

- 1. Push set switch.
  - NOTE:
  - Memory indicator for which driver seat position is already retained in memory is illuminated for 5 seconds.
- Memory indicator for which driver seat position is not retained in memory is illuminated for 0.5 seconds.
- 2. Push the memory switch (1 or 2) for at least 1 second within 5 seconds after pushing the set switch. **NOTE:** 
  - To enter driver seat positions into blank memory, memory indicator will be turned on for 5 seconds.
  - To modify driver seat positions, memory indicator will be turned OFF for 0.5 seconds, then turned ON for 5 seconds.

#### NOTE:

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

#### >> GO TO 4.

### **4**.STEP 4

Confirm the operation of each part with memory operation.

>> Inspection End. INTELLIGENT KEY INTERLOCK STORING

#### INTELLIGENT KEY INTERLOCK STORING : Description

INFOID:0000000011152308

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

### **ADP-76**

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

#### INTELLIGENT KEY INTERLOCK STORING : Work Procedure

#### Intelligent Key Interlock Storage Procedure

Performing the following operation associates the registered driving position with Intelligent Key. When driver door unlock operation is performed by Intelligent Key or driver door request switch, display of the registered B driving position and turnout operation can be performed.

### **1.**STEP 1

Check the following conditions.

- Ignition switch: OFF
- Initialization: done
- · Driving position: registered

#### >> GO TO 2.

## **2.**STEP 2

- 1. Push set switch. **NOTE:**
- Memory indicator for which driver seat position is already retained in memory is illuminated for 5 seconds. 2. Push the Intelligent Key unlock button within 5 seconds after pushing memory switch (while the memory
- indicator is turned ON). NOTE:
  - From the time registration is performed, the applicable memory indicator blinks for 5 seconds.

>> GO TO 3.

## **3.**STEP 3

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

### >> Inspection End. SYSTEM SETTING

## SYSTEM SETTING : Description

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

#### Setting Change

				×: Applicab	le
Item	Content	CONSULT	Set switch	Factory setting	IV
Amount of seat sliding for entry/exit assist	The amount of seat sliding for entry/exit assist can be selected from 3 items. [40 mm/80 mm/150 mm]	х	_	40 mm	Ν
Entry/exit assist (seat)	Entry/exit assist (seat) can be selected: ON (operated) – OFF (not operated)	х	~	ON	0
Entry/exit assist [steering column (if equipped)]	Entry/exit assist (steering column) can be selected: ON (operated) – OFF (not operated)	x	*	ON	

## SYSTEM SETTING : Work Procedure

### **1.** CHOOSE METHOD

There are three setting methods. <u>Which method do you choose?</u> With CONSULT>>GO TO 2. ADP

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INFOID:0000000011152310

INFOID:000000011152309

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### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

With set switch>>GO TO 4.

2. WITH CONSULT - STEP 1

Select "Work support".

>> GO TO 3.

**3.** WITH CONSULT - STEP 2

- Select "EXIT SEAT SLIDE SETTING", or "EXIT TILT SETTING" then touch display to change between ON and OFF.
- EXIT SEAT SLIDE SETTING: Entry/exit assist (seat)
- EXIT TILT SETTING: Entry/exit assist (steering column)
- 2. Select "SEAT SLIDE VOLUME SET" and touch either of "40 mm", "80 mm", or "150 mm".
- 3. Then touch "OK".

>> Inspection End.

4. WITH SET SWITCH - STEP 1

Turn ignition switch OFF.

>> GO TO 5.

## 5. WITH SET SWITCH - STEP 2

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

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

>> Inspection End.

## **U1000 CAN COMM CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

DTC/C	IRCUIT DI	AGNOSIS		٨
U1000 C	AN COMM C	IRCUIT		A
Descriptio	on		INFOID:000000011152312	В
Refer to LAI	<u>N-38, "CAN COMMU</u>	JNICATION SYSTEM : CAN Communication Sig	nal Chart".	
DTC Logi	с		INFOID:000000011152313	С
DTC DETE	CTION LOGIC			D
DTC	Trouble diagnosis name	DTC detecting condition	Possible cause	D
U1000	CAN COMM CIR- CUIT	<ul> <li>Driver seat control unit cannot communicate to other control units.</li> <li>Driver seat control unit cannot communicate for more than the specified time.</li> </ul>	Harness or connectors (CAN communication line is open or shorted)	E
	FIRMATION PROC	EDURE		F
<b>1.</b> STEP 1				G
I urn ignitior	switch ON and wai	t at least 3 seconds.		
>> <b>2</b> . STEP 2	GO TO 2.			Н
Check "Self	diagnostic result" w	ith CONSULT.		
<u>Is the DTC (</u>	<u>detected?</u> Perform diagnosis r	procedure Refer to ADR-79 "Diagnosis Procedu	Iro"	I
NO >>	Inspection End.	nocedule. Relei lo <u>ADF-79, Diagnosis Frocedi</u>	<u> </u>	ADP
Diagnosis	8 Procedure		INFOID:000000011152314	
Refer to LAI	N-21, "Trouble Diagr	nosis Flow Chart".		K
Special R	epair Requirem	ent	INFOID:000000011152315	
Refer to AD	P-75, "SYSTEM INI	TIALIZATION : Work Procedure".		L
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## U1010 CONTROL UNIT (CAN)

#### < DTC/CIRCUIT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

## Description

### Refer to LAN-38, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

## DTC Logic

INFOID:0000000011152317

INFOID:000000011152316

## DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN con- troller of driver seat control unit.	Driver seat control unit

## **Diagnosis Procedure**

INFOID:000000011152318

## 1. REPLACE DRIVER SEAT CONTROL UNIT

When DTC [U1010] is detected, replace driver seat control unit.

>> Replace driver seat control unit. Refer to ADP-163, "Removal and Installation".

## **B2112 SLIDING MOTOR**

## < DTC/CIRCUIT DIAGNOSIS >

#### **B2112 SLIDING MOTOR** А Description INFOID:000000011152319 The seat sliding motor LH is installed to the seat frame. The seat sliding motor LH is installed with the driver seat control unit. Slides the seat frontward/rearward by changing the rotation direction of sliding motor LH. DTC Logic INFOID 000000011152320 DTC DETECTION LOGIC D Trouble diagnosis DTC No. DTC detecting condition Possible cause name Ε The driver seat control unit detects the output of slid- Driver seat control unit B2112 SEAT SLIDE ing motor LH output terminal for 0.1 second or more Front power seat LH (sliding moeven if the sliding switch is not input. tor) harness is shorted DTC CONFIRMATION PROCEDURE **1.**PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT. Is the DTC detected? YES >> Refer to ADP-81, "Diagnosis Procedure". Н NO >> Inspection End. Diagnosis Procedure INFOID:0000000011152321 Regarding Wiring Diagram information, refer to <u>ADP-56. "WITH AROUND VIEW MONITOR : Wiring Diagram"</u> ADP or ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram". 1 PERFORM DTC CONFIRMATION PROCEDURE Κ 1. Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT. 3. Erase the DTC. 4. Perform DTC confirmation procedure. Refer to <u>ADP-81, "DTC Logic"</u>. Is the DTC displayed again? YES M >> GO TO 2. NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident". **2.**CHECK SLIDING MOTOR LH CIRCUIT (POWER SHORT) Ν 1. Turn ignition switch OFF. Disconnect sliding motor LH and driver seat control unit connector. 2. Check voltage between sliding motor LH harness connector and ground. 3. (+)Voltage (V) Sliding motor LH (-) (Approx.) Ρ Connector Terminals 1 0 B211 Ground

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

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## **B2112 SLIDING MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

# 3. 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)
Connector	Terminals		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
B210	36	Ground	0
DZ TU	44	Giouna	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End

## **B2113 RECLINING MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2113 RECLINING MOTOR**

### Description

The seat reclining motor LH is installed to the seatback assembly.

• The seat reclining motor LH is activated with the driver seat control unit.

• Tilts the seatback frontward/rearward by changing the rotation direction of reclining motor LH.

## DTC Logic

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2113	SEAT RECLINING	The driver seat control unit detects the output of re- clining motor LH output terminal for 0.1 second or more even if the reclining switch is not input.	<ul> <li>Driver seat control unit</li> <li>Front power seat LH (reclining motor) harness is shorted</li> </ul>	
	IRMATION PROCE	EDURE		
<b>1.</b> PERFOR	M DTC CONFIRMAT	ION PROCEDURE		
1. Turn ign 2. Check " Is the DTC c	ition switch ON. Self diagnostic result letected?	' with CONSULT.		
YES >> NO >>	Refer to <u>ADP-83, "Di</u> Inspection End.	agnosis Procedure".		
Diagnosis	Procedure		INFOID:000000011152324	
Regarding V or ADP-40 '	Viring Diagram inform	ation, refer to <u>ADP-56, "WITH AROUND VIE</u> VIEW MONITOR · Wiring Diagram"	EW MONITOR : Wiring Diagram"	

1.PERFORM DTC CONFIRMATION PROCEDURE	K
1. Turn ignition switch ON.	
2. Check "Self diagnostic result" with CONSULT.	
3. Erase the DTC.	L
<ol><li>Perform DTC confirmation procedure. Refer to <u>ADP-83, "DTC Logic"</u>.</li></ol>	
Is the DTC displayed again?	
YES >> GO TO 2.	M
NO >> Check intermittent incident. Refer to <u>GI-47, "Intermittent Incident"</u> .	
2. CHECK RECLINING MOTOR LH CIRCUIT (POWER SHORT)	

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

				0
(+) Reclining motor LH		()	Voltage (V) (Approx.)	
Connector	Terminals		()	Ρ
D017	4	Ground	0	
DZ 17	6	Ground	0	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector. А

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INFOID:000000011152322

## **B2113 RECLINING MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

# 3. 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	Terminals		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
B210	35	Ground	0	
DZ TO	43	Giouna	0	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End.

## **B2116 TILT MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

## B2116 TILT MOTOR

### Description

• The tilt motor is installed to the steering column assembly.

• The tilt motor is activated with the automatic drive positioner control unit.

• The steering column is tilted up/down by changing the rotation direction tilt motor.

## **DTC Logic**

### DTC DETECTION LOGIC

					D
DTC No.	Trouble diagnosis name	DTC detec	ting condition	Possible cause	
B2116	STEERING TILT	The automatic drive posit motor operation for 0.1 set has not been turned on, a matic operation.	oner control unit detects tilt cond or more when tilt switch nd there is no output of auto-	<ul> <li>Automatic drive positioner control unit</li> <li>Tilt motor harness is shorted</li> </ul>	E
DTC CON	<b>IFIRMATION PROC</b>	EDURE			F
1.PERFO	RM DTC CONFIRMA	TION PROCEDURE			
1. Turn iç 2. Check	nition switch ON.	" with CONSULT			G
Is the DTC	detected?				
YES >: NO >:	Refer to <u>ADP-85, "D</u> Inspection End.	iagnosis Procedure".			Н
Diagnos	is Procedure			INEO/D-00000011152327	
					I
Regarding	Wiring Diagram infor	mation, refer to <u>ADP</u>	-56, "WITH AROUND '	VIEW MONITOR : Wiring Dia-	
<u>gram</u> .					AD
1					
I.PERFU		TION PROCEDURE			Κ
1. Turn ig	nition switch ON.	" with CONSULT			
3. Erase	the DTC.				1
4. Perfor	m DTC confirmation p	rocedure. Refer to <u>AD</u>	<u>P-85, "DTC Logic"</u> .		L
Is the DTC	displayed again?				
YES >	> GO TO 2. > Chock intermittent in	aidant Dafar to CL 47	"Intermittent Incident"		M
			<u>, memilient mouent</u> .		
Z.CHECK		II (POWER SHORT)			
1. Turn iç 2 Discor	nition switch OFF.	ositioner control unit	and tilt motor connector		N
3. Check	voltage between tilt n	otor harness connect	or and ground.		
	-		~		0
	(+)				

(	+)			
Tilt r	notor	(-)	(Approx.)	
Connector Terminals			( FF - 7	
M95	1	Cround	0	
Moo	2	Ground	0	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

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INFOID:000000011152325

## **B2116 TILT MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

# $\overline{\mathbf{3.}}$ CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

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

Automatic drive po	+) isitioner control unit	(-)	Voltage (V) (Approx.)	
Connector	Terminals			
M24	28	Cround	0	
IVI34	29	Giouna	U	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-47, "Intermittent Incident"</u>

NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-164</u>, "Removal and Installation".

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2128 UART COMMUNICATION LINE**

### Description

Driver seat control unit performs UART communication with the automatic drive positioner control unit using 1 communication line. Driver seat control unit receives the operation signals of ADP steering switch, door mirror remote control switch and the position signals of tilt sensor, telescopic sensor and door mirror sensors from the automatic drive positioner control unit and transmits the operation request signal.

### DTC Logic

INFOID:000000011152329

INFOID:000000011152328

### DTC DETECTION LOGIC

_	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
_	B2128	UART COMM	The communication between driver seat control unit and automatic drive positioner control unit is interrupt- ed for a period of time.	<ul> <li>UART communication line (UART communication line is open or shorted)</li> <li>Driver seat control unit</li> <li>Automatic drive positioner control unit</li> </ul>	E
DT	C CONFI	RMATION PROCE	DURE		
1.	PERFORM	M DTC CONFIRMATIO	ON PROCEDURE		G
1.	Turn iani	tion switch ON.			
2.	Check "S	Self diagnostic result"	with CONSULT.		Н
<u>ls t</u>	he DTC de	etected?			
YE	ES >>F C) >>lı	Refer to <u>ADP-87, "Diag</u> aspection End	<u>gnosis Procedure"</u> .		
Dia	anosis	Procedure			
	agr10313	Trocedure		INFOID:000000011152330	
					ADI
Re	garding W	iring Diagram informa	tion, refer to <u>ADP-56, "WITH AROUND VIEW</u> /IEW MONITOR : Wiring Diagram"	MONITOR : Wiring Diagram	
01 /			NEW MORTORY, Wining Blagram.		Κ
1					
1.			JN PROCEDURE		L
1. 2.	Check "S	tion switch ON. Self diagnostic result" v	with CONSULT.		
3.	Erase the	e DTC.			
4.	Perform	DTC confirmation pro	cedure. Refer to <u>ADP-87, "DTC Logic"</u> .		M
<u>ls t</u>	he DTC di	splayed again?			
Y E N(	<u>-</u> S >>(	50 TO 2. Check intermittent inci	dent Refer to GI-47 "Intermittent Incident"		Ν
2.	CHECK L	JART COMMUNICATI	ON LINE CONTINUITY		
1.	Turn iani	tion switch OFF.			0
2.	Disconne	ect driver seat control	unit and automatic drive positioner control un	it.	0
3.	Check co	ontinuity between driv	er seat control unit harness connector and a	utomatic drive positioner con-	

Driver seat co	ntrol unit	Automatic drive position	Continuity	
Connector Terminal		Connector	Terminal	Continuity
B209	15	M33	8	Yes

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

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## **B2128 UART COMMUNICATION LINE**

#### < DTC/CIRCUIT DIAGNOSIS >

Driver seat control		Continuity		
Connector	Terminal	Ground	Continuity	
B209	15		No	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-47, "Intermittent Incident"</u>.

NO >> Repair or replace harness.

### B2130 EEPROM

### < DTC/CIRCUIT DIAGNOSIS >

## B2130 EEPROM

## **DTC Logic**

DTC No.

B2130

INFOID:000000011152331 DTC DETECTION LOGIC Trouble diagnosis DTC detecting condition Possible cause name Driver seat control unit detected CPU malfunction. · Driver seat control unit

## DTC CONFIRMATION PROCEDURE

EEPROM

## **1.**PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch Of
----------------------------

2. Check "Self diagnostic result" with CONSULT.

### Is the DTC detected?

- >> Refer to ADP-89, "Diagnosis Procedure". YES NO >> Inspection End.
- **Diagnosis** Procedure

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON. 1. 2. Check "Self diagnostic result" with CONSULT. Erase the DTC. 3. Perform DTC confirmation procedure. Refer to ADP-89, "DTC Logic". 4.
- Is the DTC displayed again?
- YES >> GO TO 2.
- NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
- 2. REPLACE DRIVER SEAT CONTROL UNIT

Replace driver seat control unit. Refer to ADP-163, "Removal and Installation".

>> Inspection End.

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< DTC/CIRCUIT DIAGNOSIS >

# POWER SUPPLY AND GROUND CIRCUIT BCM

**BCM** : Diagnosis Procedure

INFOID:000000011615198

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

### **1.** CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
139	Fusible link battery power	O (40A)
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

NO >> GO TO 2

## 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M81.

2. Check voltage between BCM connector M81 terminals 131, 139 and ground.

B	CM	Ground	Voltage	
Connector Terminal		Ground	(Approx.)	
 M81	131		Battery voltage	
10101	139	_	Ballery Vollage	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

**3.** CHECK GROUND CIRCUIT

Check continuity between BCM connector M81 terminals 134, 143 and ground.

B	CM	Cround	Continuity	
Connector Terminal		Ground	Continuity	
M81	134		Yes	
WO I	143			

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

#### DRIVER SEAT CONTROL UNIT

#### DRIVER SEAT CONTROL UNIT : Diagnosis Procedure

INFOID:0000000011152334

#### NOTE:

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

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

<b>1.</b> CHECK F	POWER SU		RCUIT				Δ
1. Turn igni	tion switch	OFF.					A
<ol> <li>Disconne</li> <li>Check vo</li> </ol>	ect driver s oltage betw	eat control veen driver	l unit. <sup>-</sup> seat contro	ol unit harn	ess connec	tor and ground.	В
(+)	)						
Driver seat of	control unit	(-)	Power source	Condition	Voltage (V) (Approx.)		С
Connector	Terminal				(		
B210	37	Ground	Battery power sup- ply	lgnition switch OFF	Battery voltage		D
Is the inspect	tion result i	normal?					
YES >> (	GO TO 2.	o following					E
•	Repair or	replace ha	arness.				
•	Circuit bro	eaker-2.					F
<b>2.</b> CHECK (	GROUND (	CIRCUIT					
Check contin	uity betwe	en the driv	er seat con	trol unit ha	rness conne	ector and ground.	G
						-	G
Driv	ver seat contr	ol unit		C	Continuity		
Conne	o	Iermina	Grour		Vaa	_	Η
B21	U tion requilt (	39			Yes	-	
VES >>1	nspection	<u>normar?</u> End					I
NO >> F	Repair or re	eplace har	ness.				
DRIVER S	SEAT CC	NTROL	UNIT : S	Special F	Repair Re	auirement	
							AD
Perform addi	tional serv	ice when r	emoving ba	ttery nega	live termina	I.	Κ
>> F	Refer to Al	DP-74 "AI		SERVICE		EMOVING BATTERY NEGATIVE TERMI-	
1	VAL : Desc	ription"'.					L
AUTOMA	TIC DRI	VE POS	SITIONE	R CONT	ROL UN	IJТ	
AUTOMAT	FIC DRIN	/E POSI	ITIONER	CONTR	ROL UNIT	: Diagnosis Procedure	M
NOTE:							
Do not disco firmed with C	nnect the CONSULT.	battery neg	gative termi	nal and th	e driver sea	at control unit connector until DTC is con-	Ν
Regarding W or <u>ADP-40, "</u>	/iring Diagr WITHOUT	am informa	ation, refer t	to <u>ADP-56</u> NTOR : Wi	, "WITH AR	OUND VIEW MONITOR : Wiring Diagram" m".	0
<b>1.</b> CHECK F	POWER SI	JPPLY CIF	RCUIT				Ρ
1 Turn ioni	tion switch						
2. Disconne	ect automa	tic drive po	ositioner co	ntrol unit.			

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

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

(+)				
Automatic drive position	(–)	Voltage (V) (Approx.)		
Connector	Terminal			
M34	25	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2. NO >> Check th

- >> Check the following.
  - Repair or replace harness.
  - Circuit breaker.

## 2. CHECK GROUND CIRCUIT

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

Automatic drive position		Continuity	
Connector	Ground	Continuity	
M34 30			Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness.

## AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Special Repair Requirement

INFOID:0000000011152337

### **1.**PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to <u>ADP-74</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-</u><u>NAL : Description</u>".

## < DTC/CIRCUIT DIAGNOSIS >

# SLIDING SWITCH

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

## Component Function Check

## 1. CHECK FUNCTION

#### Select "SLIDE SW-FR", "SLIDE SW-RR" in "DATA MONITOR" mode with CONSULT. 1.

Check sliding switch signal under the following conditions. 2.

Monitor item	Condition	Condition			
	Oliding owitch (forward)	Operate	ON		
SLIDE SW-FR	Sliding switch (lorward)	Release	OFF		
		Operate	ON		
SLIDE SW-RR	Sliding switch (backward)	Release	OFF		
the inspection result normal?					
ES >> Inspection End. O >> Perform diagnosis	procedure. Refer to ADP-93, "Diag	nosis Procedure".			
agnosis Procedure			INEQID:000000011152340		

Regarding Wiring Diagram information, refer to ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram" or ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK SLIDING SWITCH SIGNAL

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

(+)						
Driver seat control unit		(—)	Condition		Voltage (V) (Approx.)	
Connector	Terminals				(	
	9 Cround		Ground Sliding switch	Operate (backward)	0	
<b>D</b> 200		Cround		Release	Battery voltage	
6209	25	Ground		Operate (forward)	0	
	25			Release	Battery voltage	
(l						

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK SLIDING SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit and power seat switch LH.

Check continuity between driver seat control unit harness connector and power seat switch LH harness 3. connector.

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## **SLIDING SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit		Power seat sv	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B200	9	B208	8	Vec
B209	25	6200	7	163

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

Driver seat control un		Continuity		
Connector	Connector Terminal		Continuity	
<b>B</b> 200	9	Giouna	No	
	25	]	NO	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# **3.** CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.

2. Turn ignition switch ON.

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

(+)		Voltage (V/)		
Driver seat contr	(-)	(Approx.)		
Connector	Terminals			
B200	9	Ground	Battery voltage	
B205	25	Ground	Dattery voltage	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

**4.** CHECK SLIDING SWITCH

Refer to ADP-94, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to <u>ADP-166, "Removal and Installation"</u>.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "Removal and Installation".

NO >> Repair or replace malfunctioning part.

### **Component Inspection**

## 1. CHECK SLIDING SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch LH.

3. Check continuity between power seat switch LH terminals.

## **SLIDING SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Terminal Power seat switch LH		Condition		Continuity	
2	0	Shulling Switch (Dackward)	Release	No	
5	7	Sliding switch (forward)	Operate	Yes	
		Silulity Switch (IOI ward)	Release	No	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>ADP-166, "Removal and Installation"</u>.

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#### < DTC/CIRCUIT DIAGNOSIS >

## RECLINING SWITCH

## Description

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

### **Component Function Check**

## 1.CHECK FUNCTION

1. Select "RECLN SW-FR", "RECLN SW-RR" in "DATA MONITOR" mode with CONSULT.

2. Check reclining switch signal under the following conditions.

Monitor item	Condition	Status	
	Poolining quitch (forward)	Operate	ON
RECLIN SW-FR	Reciming Switch (lorward)	Release	OFF
	Poolining quitch (backward)	Operate	ON
KEGEN SW-KK		Release	OFF

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-96, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000011152344

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK RECLINING SWITCH SIGNAL

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

(+) Driver seat co	ntrol unit		Condition		Voltage (V)
Connector	Termi- nals	(-)	Cor		(Approx.)
B209	24 Ground 8	Ground	Reclining	Operate (forward)	0
				Release	Battery voltage
		Ground	switch	Operate (backward)	0
				Release	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK RECLINING SWITCH CIRCUIT

1. Turn ignition switch OFF.

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

INFOID:000000011152342

## **RECLINING SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

Driver seat co	ntrol unit	Power seat sy	witch I H conne	ctor	-	
Connector	Terminal	Connecto	r Termin	Continuity		
B209	24	– B208	9	Yes	-	
	8		10		-	
Check contir	nuity betwee	en driver sea	t control unit	harness conne	ector and ground.	
Driver	seat control un	nit			-	
Connector		Terminal		Continuity		
		24	Ground		-	
B209		8		No		
s the inspection	result norm	nal?		I		
YES >> GO	ТО 3.					
	air or replac	control u		· <b>T</b>		
	VER SEAL			)		
Connect the     Turn ignition	driver seat	control unit.				
3. Check voltag	ge between	driver seat c	ontrol unit h	arness connect	tor and ground.	
	(+)			Voltage (V)		
Driver se	at control unit		(-)	(Approx.)		
Connector	Tern	ninals				
B209		8	Ground	Battery voltage		
e the increation	rocult porm	24				
YES >> GO	<u>TO 4.</u>	<u>iai :</u>				
NO >> Repl	ace driver	seat control u	init. Refer to	ADP-163, "Re	moval and Installation".	
<b>1.</b> CHECK REC	LINING SV	VITCH				
Refer to ADP-97	. "Compone	ent Inspectior	<u>ı"</u> .			
s the inspection	result norm	nal?				
YES >> GO	TO 5.	cont owitch I	U Dofor to		noval and Installation"	
				ADP-100, Rei	noval and mstallation.	
Defer to CL 47 "						
s the inspection	result norm	<u>incident</u> .				
YES >> Renl	ace driver	seat control u	init. Refer to	ADP-163 "Re	moval and Installation"	
NO >> Repa	air or replac	the malfun	ctioning part	<u> </u>	<u></u>	
Component I	nspectior	า			INFOID:000000011152	345
1. CHECK REC	LINING SV	VITCH				
1. Turn ianition	switch OFF	=				
2. Disconnect p	power seat	switch LH.				
<ol><li>Check contir</li></ol>	nuity betwee	en power sea	at switch LH	terminals.		

## **RECLINING SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Terminals		Condition		Continuity	
Power seat switch LH					
	10	Reclining switch	Operate	Yes	
3	10	(backward)	Release	No	
	9	Reclining switch	Operate	Yes	
		(forward)	Release	No	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>ADP-166, "Removal and Installation"</u>.

## LIFTING SWITCH (FRONT)

#### < DTC/CIRCUIT DIAGNOSIS >

## LIFTING SWITCH (FRONT)

### Description

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

## Component Function Check

## 1. CHECK FUNCTION

### 1. Select "LIFT FR SW-UP", "LIFT FR SW-DN" in "DATA MONITOR" mode with CONSULT.

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

Monitor item	Condition	1	Status
	Lifting quitch front (up)	Operate	ON
LIFT FR SW-UP	Enting switch nont (up)	Release	OFF
		Operate	ON
LIFT FR SW-DN	Lifting switch front (down)	Release	OFF

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

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK LIFTING SWITCH SIGNAL

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

(+)		(-)								
Driver seat co	ontrol unit		()	(-)	Condition	ondition	Voltage (V)			
Connector	Termi- nals				(Approx.)					
	7	Ground	Ground	Ground	Ground	Ground	Ground		Operate (down)	0V
B209								Ground	Ground	Ground
				(front)	Operate (up)	0V				
	23			Release	Battery voltage					

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK LIFTING SWITCH (FRONT) CIRCUIT

1. Turn ignition switch OFF.

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

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INFOID:000000011152347

## LIFTING SWITCH (FRONT)

#### < DTC/CIRCUIT DIAGNOSIS >

Driver seat cor	itrol unit	Power seat sv	witch LH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B200	7	B208	6	Ves
B209	23	6200	5	165

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

Connector     Terminal     Continuity       B209     7     No	Driver seat contr	rol unit		Continuity
B209 7 No	Connector	Terminal	Ground	Continuity
23	P200	7	Giouna	No
	B209	23	_	NO

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# **3.** CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.

2. Turn ignition switch ON.

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

(+)			
Driver seat con	trol unit	(-)	Voltage (V) (Approx.)
Connector	Terminals		( PF - )
P200	7	Ground	Battery voltage
B209	23	Ground	Dattery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

**4.** CHECK LIFTING SWITCH (FRONT)

Refer to ADP-100, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to <u>ADP-166, "Removal and Installation"</u>.

5. CHECK INTERMITTENT INCIDENT

Refer to <u>GI-47</u>, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

## **Component Inspection**

### **1.** CHECK LIFTING SWITCH (FRONT)

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

## LIFTING SWITCH (FRONT)

### < DTC/CIRCUIT DIAGNOSIS >

Те	erminal	Condition		Continuity
Power se	eat switch LH	Condition		Continuity
	6	Lifting switch front (down)	Operate	Yes
3	0	Lining Switch Horit (down)	Release	No
5	5	Lifting switch front (up)	Operate	Yes
		Lining Switch nonit (up)	Release	No
Is the ins	spection res	ult normal?		
YES	>> Inspecti	on End.		
NO	>> Replace	e power seat switch LH.	Refer to <u>A</u>	<u>DP-166, "Rei</u>

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#### < DTC/CIRCUIT DIAGNOSIS >

## LIFTING SWITCH (REAR)

### Description

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

### Component Function Check

INFOID:000000011152351

INFOID:000000011152350

## 1. CHECK FUNCTION

Select "LIFT RR SW-UP", "LIFT RR SW-DN" in "DATA MONITOR" mode with CONSULT. 1.

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

Monitor item	Condition		Status
	Lifting quitch roor (up)	Operate	ON
LIFT KK SW-OF	Litting switch real (up)	Release	OFF
	Lifting switch roor (down)	Operate	ON
		Release	OFF

#### Is the inspection result normal?

YES >> Inspection End.

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

### Diagnosis Procedure

INFOID:000000011152352

Regarding Wiring Diagram information, refer to ADP-56. "WITH AROUND VIEW MONITOR : Wiring Diagram" or ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

## 1. CHECK LIFTING SWITCH (REAR) SIGNAL

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

(+)					
Driver seat c	ontrol unit	(-)		Condition	Voltage (V)
Connector	Termi- nals				(Approx.)
	6			Operate (down)	0
B209	0	Ground	Lifting	Release	Battery voltage
D203	22	Ground	(rear)	Operate (up)	0
	22			Release	Battery voltage

Is the inspection result normal?

YES >> GO TO 5. NO >> GO TO 2.

2. CHECK LIFTING SWITCH (REAR) CIRCUIT

1. Turn ignition switch OFF.

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

## LIFTING SWITCH (REAR)

#### < DTC/CIRCUIT DIAGNOSIS >

Driver seat co	ontrol unit	Powe	er sear sw	vitch LH	0	-	
Connector	Terminal	Conne	ctor	Terminal	Continuity		
B209	6 22	B20	B208		Yes	_	
I. Check conti	nuity betweer	n driver se	rer seat control unit ha		ness conne	ector and ground.	
Driver	seat control unit				Continuity		
Connector	Те	rminal	Grou	und	onunuity		
B209		6	GIU		No		
BEUU		22					
s the inspection         YES       >> GO         NO       >> Rep         CHECK DRI	<u>result norma</u> TO 3. air or replace	harness.					
Connect the Turn ignitior Check volta	e driver seat o n switch ON. ge between o	ontrol unit	t. control	unit harnes	ss connect	or and ground.	
(	+)				- 0.0		
Driver seat	control unit		(-)	Voltag (App	rox.)		
Connector	Termina	ls					
B209	6 22	Gr	round	Battery	voltage		
the inspection YES >> GO NO >> Rep	<u>result norma</u> TO 4. Jace driver se	eat control	unit. R	efer to <u>ADF</u>	P-163, "Rer	moval and Installation".	/
efer to ADP-10	)3 "Compone	ent Inspec	tion"				
the inspection YES >> GO NO >> Rep	TO 5. I result norma TO 5. Iace power s ERMITTENT	eat switch	LH. Re	efer to <u>ADP</u>	- <u>166, "Rem</u>	noval and Installation".	
efer to <u>GI-47,</u> '	'Intermittent I	ncident".					
the inspection	result norma	1?					
YES >> Rep NO >> Rep	lace driver se air or replace	eat control the malfu	unit. R Inctionii	efer to <u>ADF</u> ng part.	<u> 2-163, "Rer</u>	moval and Installation".	
component l	nspection						INFOID:000000011152353
. CHECK LIFT	TING SWITCI	H (REAR)					
. Turn ignitior . Disconnect . Check conti	n switch OFF. power seat sy nuity betweer	witch LH. 1 power se	eat swit	ch LH term	inals.		

## LIFTING SWITCH (REAR)

#### < DTC/CIRCUIT DIAGNOSIS >

Terr	minal	Condition		Continuity
Power sea	t switch LH	Condition		Continuity
	1	Lifting switch rear (up)	Operate	Yes
з	I	Lining Switch rear (up)	Release	No
5	2	Lifting switch rear (down)	Operate	Yes
	2		Release	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to <u>ADP-166, "Removal and Installation"</u>.

## TILT SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

## TILT SWITCH

### Description

ADP steering switch (tilt switch) is equipped to the steering column. The operation signal is input to the automatic drive positioner control unit when the ADP steering switch is operated.

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "TILT SW-UP", "TILT SW-DOWN" in "DATA MONITOR" mode with CONSULT.
- 2. Check tilt switch signal under the following conditions.

Monitor item	C	Condition	Status	
	Tilt switch (up)	Operate	ON	
TILT SW-OF	The Switch (up)	Release	OFF	
	Tilt owitch (down)	Operate	ON	
	The Switch (down)	Release	OFF	

#### Is the inspection result normal?

YES >> Inspection End.

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

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Dia-</u> gram".

### 1. CHECK TILT SWITCH SIGNAL

- 1. Disconnect ADP steering switch (tilt switch).
- 2. Check voltage between ADP steering switch harness connector and ground.

(	+)		Voltage (V) (Approx.)
ADP steering s	witch (tilt switch)	(-)	
Connector	Terminals		
M16	2	- Ground	Pattory voltago
WITO	5		Ballery Vollage
s the inspection	result normal?		
YES >> GO	TO 3		

NO >> GO 10 2.

2. CHECK TILT SWITCH CIRCUIT

- 1. Disconnect automatic drive positioner control unit.
- 2. Check continuity between automatic drive positioner control unit harness connector and ADP steering switch harness connector.

Automatic drive positioner control unit		ADP steering switch (tilt switch)		Continuity	
Connector	Terminal	Connector	Terminal		
 M33	1	M16	5	Ves	
Moo	13	WITO	2	163	

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

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## TILT SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive po	sitioner control unit	Ground	Continuity	
Connector	Terminal			
M22	1		No	
10135	13			

#### Is the inspection result normal?

YES >> Replace automatic drive positioner unit. Refer to <u>ADP-164</u>, "Removal and Installation".

NO >> Repair or replace harness.

3. CHECK TILT SWITCH

Refer to ADP-106, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace ADP steering switch (tilt switch). Refer to <u>ADP-167, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End.

#### **Component Inspection**

INFOID:000000011152357

## 1. CHECK TILT SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect ADP steering switch (tilt switch).
- 3. Check continuity between ADP steering switch terminals.

ADP steering switch (tilt switch)		Condition		Continuity	
reminal					
3	5	Tilt switch (up)	Operate	Yes	
			Release	No	
	2	Tilt switch (down)	Operate	Yes	
			Release	No	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace ADP steering switch (tilt switch). Refer to <u>ADP-167, "Removal and Installation"</u>.

## **TELESCOPIC SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## **TELESCOPIC SWITCH**

## Description

ADP steering switch (telescopic switch) is equipped to the steering column. The operation signal is input to the automatic drive positioner control unit when the telescopic switch is operated.

### Component Function Check

## 1. CHECK FUNCTION

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

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

#### Is the inspection result normal?

- YES >> Inspection End.
- NO >> Perform diagnosis procedure. Refer to ADP-107, "Diagnosis Procedure".

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Dia-</u> gram".

## 1. CHECK TELESCOPIC SWITCH SIGNAL

- 1. Disconnect ADP steering switch (telescopic switch).
- 2. Check voltage between ADP steering switch harness connector and ground.

(+) ADP steering switch (telescopic switch)		(-)	Voltage (V)
Connector	Terminals		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
M16	1	Ground	Battery voltage
	6		
Is the inspection re	esult normal?		

Is the inspection result normal?

YES >> GO TO 3.

2. CHECK TELESCOPIC SWITCH CIRCUIT

- 1. Disconnect automatic drive positioner control unit.
- 2. Check continuity between automatic drive positioner control unit harness connector and ADP steering switch harness connector.

-						
Automatic drive positioner control unit		ADP steering switch (tele- scopic switch)		Continuity		
	Connector	Terminal	Connector	Terminal		
M33		7	M16	1	Ves	
	1000	19	WIG	6	163	

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

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## **TELESCOPIC SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M33	7	Ground	No	
	19		NO	

Is the inspection result normal?

YES >> Replace automatic drive positioner unit. Refer to <u>ADP-164</u>, "Removal and Installation".

NO >> Repair or replace harness.

**3**. CHECK TELESCOPIC SWITCH

Refer to ADP-108, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace ADP steering switch (telescopic switch). Refer to <u>ADP-167, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End.

#### **Component Inspection**

## 1. CHECK TELESCOPIC SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect ADP steering switch (telescopic switch).
- 3. Check continuity between ADP steering switch terminals.

ADP steering switch (tele- scopic switch) Terminal		Condition		Continuity
3	1	Telescopic switch (forward)	Operate	Yes
			Release	No
	6	Telescopic switch (backward)	Operate	Yes
			Release	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace ADP steering switch (telescopic switch). Refer to ADP-167, "Removal and Installation".
### < DTC/CIRCUIT DIAGNOSIS >

# SEAT MEMORY SWITCH

### Description

Seat memory switch is installed to the front door LH trim. The operation signal is input to the driver seat control unit when the memory switch is operated.

### Component Function Check

# 1. CHECK FUNCTION

1. Select "MEMORY SW 1", "MEMORY SW 2", "SET SW" in "DATA MONITOR" mode with CONSULT.

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

Monitor item	Con	lition	Status
	Momony quitch 1	Push	ON
WENORY SW I	Memory switch 1	Release	OFF
	Manual a link O	Push	ON
WENORY SW 2	Memory Switch 2	Push Release Push Release	OFF
	Cet ewitch	Push	ON
SETSW	Set switch	Release	OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-109</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram"</u> or <u>ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram"</u>.

# 1. CHECK SEAT MEMORY SWITCH SIGNAL

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

(	(+)		
Seat mer	nory switch	()	Voltage (V) (Approx.)
Connector	Terminals		(
	2		
D60	10	Ground	5
	16	_	
the inspection r	esult normal?		L

NO >> GO TO 2.

2. CHECK MEMORY SWITCH CIRCUIT

1. Turn ignition switch OFF.

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

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# SEAT MEMORY SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit		Seat memory switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	11		16	Yes
B209	21	D60	2	
	27		10	

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

Driver seat control unit			Continuity	
Connector	Terminal		Continuity	
	11	Ground		
B209	21		No	
	27			

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-163, "Removal and Installation".

NO >> Repair or replace harness.

# 3. CHECK MEMORY SWITCH GROUND CIRCUIT

Check continuity between seat memory switch harness connector and ground.

Seat memo	ry switch		Continuity
Connector	Terminal	Ground	Continuity
D60	9	*	Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK SEAT MEMORY SWITCH

Refer to ADP-110, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-47. "Intermittent Incident".
- NO >> Replace seat memory switch. Refer to <u>ADP-165, "Removal and Installation"</u>.

### **Component Inspection**

# 1. CHECK SEAT MEMORY SWITCH

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

Terminal		Condition		Continuity
Seat memory switch				Continuity
	10	Memory switch 1	Push	Yes
	16 Memory switch 2	Relea	Release	No
0		Mamany awitch 0	Push	Yes
9		Release	No	
		Sot switch	Push	Yes
	2	Set Switch	Release	No

Is the inspection result normal?

YES >> Inspection End.

INFOID:000000011152365

# SEAT MEMORY SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

NO	>> Replace seat memory switch. Refer to <u>ADP-165, "Removal and Installation"</u> .	

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< DTC/CIRCUIT DIAGNOSIS >

# DOOR MIRROR REMOTE CONTROL SWITCH CHANGEOVER SWITCH

### **CHANGEOVER SWITCH : Description**

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

# CHANGEOVER SWITCH : Component Function Check

INFOID:000000011152367

INFOID:000000011152366

# 1. CHECK FUNCTION

- 1. Select "MIR CHNG SW-R", "MIR CHNG SW-L" in "DATA MONITOR" mode with CONSULT.
- 2. Check changeover switch signal under the following conditions.

Monitor item	Condition		Status
MIR CHNG SW-R	Mirror switch (right)	Operate	ON
		Release	OFF
	Mirror switch (left)	Operate	ON
		Release	OFF

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Perform diagnosis procedure. Refer to <u>ADP-112, "CHANGEOVER SWITCH : Diagnosis Proce-</u> <u>dure"</u>.

### CHANGEOVER SWITCH : Diagnosis Procedure

INFOID:000000011152368

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK CHANGEOVER SWITCH SIGNAL

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

(+) Automatic drive positioner con- trol unit		(-)	Change over switch condition	Voltage (V) (Approx.)
Connector	Terminal			
	2		RIGHT	0
Maa	2	Ground	Other than above	5
WI33	4.4		LEFT	0
	14		Other than above	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

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

### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive pos unit	sitioner control	Door mirror rem	ote control switch	Continuity	
Connector	Terminal	Connector	Terminal		
	2		3		-
M33	14	- D22	4	Yes	
4. Check contir	uity betwee	n automatic dr	ive positioner	control unit	connector and ground.
					_
Automatic dri	ve positioner c	ontrol unit		Continuity	-
Connect	tor	Terminal	Ground	Continuity	
МЗЗ		2	Ground	No	-
WI00		14		NO	
s the inspection	result norma	al?			-
YES >> GO	TO 3.				
NO >> Repa	air or replac	e harness.			
<b>5.</b> CHECK DOC	OR MIRROR	REMOTE CO	NTROL SWIT	CH GROUN	ND CIRCUIT
Check continuity	between do	or mirror remo	te control swit	tch connecte	or and ground.
Door mirror	remote contro	I switch		Continuity	
Connec	tor	Terminal	Ground	Continuity	
D22		15		Yes	
s the inspection	result norma	al?			
YES >> GO	TO 4.				
NO >> Repa	air or replac	e harness.			
<ol> <li>CHECK CHA</li> </ol>	NGEOVER	SWITCH			
Check changeov	er switch.				
Refer to ADP-11	<u>3, "CHANGE</u>	EOVER SWITC	<u>CH : Compone</u>	ent Inspectio	<u>יח"</u> .
s the inspection	result norma	al?			
YES >> Refe	r to <u>GI-47. "</u>	Intermittent Inc	<u>cident"</u> .		22 "Domovel and Installation"
			ntroi switch. R	erer to <u>MIR</u>	
J. CHECK INTE	RMITTENT	INCIDENT			
Check intermitter	nt incident.	la sistera ("			
Refer to $GI-47$ , "I		incident".			
	result norma	<u>al (</u> tio drive nooitie		hit Dofert-	ADD 164 "Domovol and Installation"
TES >> Repl	ace automa air or replace	tic drive position the malfunction	oner control ur oning parts	nit. Refer to	ADP-164, "Removal and Installation".
			onont Inch	oction	
		Cri . Comp			INFOID:000000011152369
<b>1.</b> снеск сна	NGEOVER	SWITCH			
Check door mirro	or remote co	ntrol switch.			
Termi	nal	Change over	switch		

Terminal		Change over switch	Continuity	
Door mirror remote control switch		condition		
4	15	LEFT	Yes	
		Other than above	No	
3		RIGHT	Yes	
		Other than above	No	

< DTC/CIRCUIT DIAGNOSIS >

<u>Is the inspection result normal?</u> YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to <u>MIR-22, "Removal and Installation"</u>. MIRROR SWITCH

MIRROR SWITCH : Description

It operates angle of the door mirror face.

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

### MIRROR SWITCH : Component Function Check

INFOID:000000011152371

INFOID:0000000011152370

### 1. CHECK FUNCTION

1. Select "MIR CON SW-UP", "MIR CON SW-DN", "MIR CON SW-RH", "MIR CON SW-LH" in "DATA MONI-TOR" mode with CONSULT.

2. Check mirror switch signal under the following conditions.

Monitor item	Condition		Status
	Mirror switch (up)	Operate	ON
MIR CON SW-OF		Release	OFF
MIR CON SW-DN	Mirror switch (down)	Operate	ON
		Release	OFF
MIR CON SW-RH	Mirror switch (right)	Operate	ON
		Release	OFF
MIR CON SW-LH	Mirror switch (left)	Operate	ON
		Release	OFF

Is the inspection result normal?

YES >> Inspection End.

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

# MIRROR SWITCH : Diagnosis Procedure

INFOID:000000011152372

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK MIRROR SWITCH FUNCTION

1. Turn ignition switch ON.

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

### < DTC/CIRCUIT DIAGNOSIS >

(+)				
Automatic drive positioner con- trol unit		()	Mirror switch Condition	Voltage (V) (Approx.)
Connector	Terminal			
	з		UP	0
	5		Other than above	5
	4	Ground	LEFT	0
M33			Other than above	5
M33	15	15	DOWN	0
	15		Other than above	5
	16		RIGHT	0
	10		Other than above	5

### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

# 2. CHECK HARNESS CONTINUITY

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

Automatic drive po trol un	ositioner con- it	Door mirror remote control switch		Continuity
Connector	Terminal	Connector	Terminal	
M33	3		12	Yes
	4	<b>D</b> 22	1	
	15	DZZ	16	
	16		9	

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

Automatic drive position	er control unit		Continuity
Connector	Terminal		Continuity
	3	Ground	
M33	4	Ground	No
MOO	15		NO
	16		
he increation regult n	ormol?		

is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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

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

Door mirror remote cont		Continuity	
Connector	Terminal	Ground	Continuity
D22	15		Yes

### Is the inspection result normal?

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### NO >> Repair or replace harness.

**4.** CHECK MIRROR SWITCH

Check mirror switch.

Refer to ADP-116, "MIRROR SWITCH : Component Inspection".

Is the inspection result normal?

YES >> Refer to <u>GI-47, "Intermittent Incident"</u>.

NO >> Replace door mirror remote control switch. Refer to MIR-22, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-47, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-164</u>. "Removal and Installation". NO >> Repair or replace the malfunctioning parts.

### **MIRROR SWITCH : Component Inspection**

INFOID:0000000011152373

# **1.** CHECK MIRROR SWITCH

Check door mirror remote control switch.

Terminal Door mirror remote control switch		Mirror switch condition	Continuity
0		RIGHT	Yes
5	15	Other than above	No
1		LEFT	Yes
I		Other than above	No
12		UP	Yes
12		Other than above	No
16		DOWN	Yes
		Other than above	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to MIR-22, "Removal and Installation".

# POWER SEAT SWITCH GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

# POWER SEAT SWITCH GROUND CIRCUIT

# Diagnosis Procedure

INFOID:000000011152374

А

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram"</u> or <u>ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram"</u> .						
1. CHECK POWER	SEAT SWITCH	LH GROUND	CIRCUIT		U	
<ol> <li>Turn ignition swite</li> <li>Disconnect powe</li> <li>Check continuity</li> </ol>	ch OFF. r seat switch LH between power	l. seat switch Ll	H connector an	d ground.	D	
Power seat sw	/itch I H				Ε	
Connector	Terminal	Ground	Continuity			
B208	3		Yes		F	
Is the inspection result	It normal?					
<ul> <li>YES &gt;&gt; Check intermittent incident. Refer to <u>GI-47, "Intermittent Incident"</u>.</li> <li>NO &gt;&gt; Repair or replace harness.</li> </ul>					G	
					Н	

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# **TILT & TELESCOPIC SWITCH GROUND CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

# **TILT & TELESCOPIC SWITCH GROUND CIRCUIT**

### Diagnosis Procedure

INFOID:000000011152375

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram".

1. CHECK ADP STEERING SWITCH (TILT & TELESCOPIC SWITCH) GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect ADP steering switch (tilt & telescopic switch).
- 3. Check continuity between ADP steering switch (tilt & telescopic switch) and ground.

ADP steering switch (til	t & telescopic switch)		Continuity	
Connector	Connector Terminal		Continuity	
M16	3		Yes	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace harness.

# **SLIDING SENSOR**

# < DTC/CIRCUIT DIAGNOSIS >

SLIDIN	IG SI	ENSO	R					
Descrip	otion						A INFOID:000000011152376	
<ul> <li>The slid</li> <li>The pull</li> <li>The drive</li> </ul>	ding ser lse sign ver sea	nsor is in al is inpu t control	stalled ut to the unit cou	to the sea driver sea unts the p	at frame. eat control unit when sliding is pulse and calculates the slidin	s performed. g amount of the seat.	В	
Compo	nent	Functio	on Ch	neck			INFOID:000000011152377 C	
<b>1.</b> CHEC	CK FUN	ICTION						
1. Selection 2. Check	ct "SLIE ck slidin	)E PULS g senso	E" in "E r switch	ATA MO signal ur	NITOR" mode with CONSULT nder the following conditions.	Γ.	D	
	Monitor it	em			Condition	Value	E	
					Operate (forward)	Change (decreas	e)	
SLIDE	PULSE		Seat sli	ding	Operate (backward)	Change (increase	e)	
					Release	No change	F	
YES NO Diagno	>> Insp >> Perf sis Pi	ection E orm diag	nd. jnosis p re	procedure	Refer to <u>ADP-119, "Diagnos</u>	sis Procedure".	INFOID:000000011152378	
or <u>ADP-4</u>	CK SLIE	DING SE		D VIEW I	MONITOR : Wiring Diagram".	ND VIEW MONITOR . W	AD	
2. Read	d voltag	e signal	betwee	n driver s	eat control unit harness conn	ector and ground with os	cilloscope.	
(+	)							
Driver's s trol u	eat con- unit	(-)	Cor	ndition	Voltage signal	Voltage signal		
tor	nal							
B209	31	Ground	Seat sliding	Operate	10mSec/div		M	
				Other than above	0 or 5		P	
Is the ins	pection	result n	ormal?					
YES NO <b>2.</b> CHEO 1. Turn	>> Rep >> GO CK SLIE	lace driv TO 2. DING SE	er seat NSOR OFF.	control u	nit. Refer to <u>ADP-163, "Remo</u>	oval and Installation".		
2. Disco	onnect (	driver se	at contr	ol unit an	id sliding motor LH.			

# SLIDING SENSOR

### < DTC/CIRCUIT DIAGNOSIS >

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

Driver seat	control unit	Sliding r	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
B209	31	B211	2	Yes	

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

Driver seat	t control unit		Continuity
Connector	Connector Terminal		Continuity
B209	B209 31		No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.** CHECK SLIDING SENSOR POWER SUPPLY

1. Connect driver seat control unit.

2. Turn ignition switch ON.

3. Check voltage between sliding motor LH harness connector and ground.

(	+)		Voltage (V) (Approx.)	
Sliding r	notor LH	(-)		
Connector	Connector Terminals			
B211	B211 4		Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

### **4.** CHECK SLIDING SENSOR POWER SUPPLY CIRCUIT

### 1. Turn ignition switch OFF.

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

Driver seat control unit		Sliding motor LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B209	5	B211	4	Yes

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B209	5		No

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

NO >> Repair or replace harness.

### **5.** CHECK SLIDING SENSOR GROUND

- 1. Turn ignition switch OFF.
- 2. Check continuity between sliding motor LH harness connector and ground.

# **SLIDING SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

Sliding m	otor LH				Δ
Connector	Terminal	Ground	Continuity		
B211	3		Yes		F
<u>ls the inspection res</u> YES >> Replace NO >> Repair o	ult normal? sliding motor LH or replace harness	. Refer to <u>SE-</u> 3.	87, "Removal and	Installation".	C
					[
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					1

# **RECLINING SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

# RECLINING SENSOR

### Description

- · The reclining motor LH is installed to the seatback assembly.
- The pulse signal is input 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

# 1. CHECK FUNCTION

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

Monitor item	Condition		Value
	PULSE Seat reclining	Operate (forward)	Change (decrease)
RECLN PULSE		Operate (backward)	Change (increase)
		Release	No change

Is the inspection result normal?

YES >> Inspection End.

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

### **Diagnosis** Procedure

INFOID:0000000011152381

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK RECLINING SENSOR SIGNAL

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

(+ Driver sea un	) t control it	(-)	Condition		Voltage signal
Connec- tor	Termi- nal				
B209	13	Ground	Seat reclin- ing	Operate	10mSec/div
				Other than above	0 or 5

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163. "Removal and Installation"</u>.

2. CHECK RECLINING SENSOR CIRCUIT

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

INFOID:0000000011152379

INEOID-000000011152380

<sup>1.</sup> Turn ignition switch OFF.

# **RECLINING SENSOR**

necioi.	nuity betwee	n driver sea	t control unit	harness conn	ector and reclining motor LH harness con-
Driver seat c	ontrol unit	Reclini	na motor I H		-
Connector	Terminal	Connector	Terminal		
B209	13	B217	1	Yes	-
. Check conti	nuity betwee	n driver sea	t control unit	harness conne	ector and ground.
Driver s	eat control unit				
Connector	Term	inal	Ground	Continuity	
B209	13	3		No	
YES >> GO NO >> Rep CHECK REC	TO 3. air or replace CLINING SEI	arr e harness. NSOR POW	ER SUPPLY		
. Turn ignitior . Check volta	switch ON. ge between i	reclining mo	tor LH harne	ss connector a	and ground.
	(+)		<i>(</i> )	Voltage (V)	
Reclinir	ig motor LH	-1-	(-)	(Approx.)	
Connector	Iermina	ais			_
YES >> GO NO >> GO	TO 5. TO 4.	<u>41 (</u>			
• CHECK RE	CLINING SE	NSOR POW	ER SUPPLY	CIRCUIT	
<ul> <li>CHECK REG</li> <li>Turn ignition</li> <li>Disconnect</li> <li>Check continector.</li> </ul>	CLINING SEI switch OFF driver seat co nuity betwee	NSOR POW ontrol unit. n driver sea	t control unit	CIRCUIT	ector and reclining motor LH harness con-
CHECK RE(     Turn ignitior     Disconnect     Check continector.	CLINING SEI switch OFF driver seat co nuity betwee	NSOR POW ontrol unit. n driver sea	t control unit	CIRCUIT	ector and reclining motor LH harness con-
CHECK RE(     Turn ignitior     Disconnect     Check continector.     Driver seat co	CLINING SEI n switch OFF driver seat co nuity betwee	NSOR POW ontrol unit. n driver sea Reclinin Connector	ER SUPPLY t control unit g motor LH Terminal	CIRCUIT	ector and reclining motor LH harness con-
CHECK RE(     Turn ignitior     Disconnect     Check continector.     Driver seat co     Connector     B209	CLINING SEI or switch OFF driver seat co nuity betwee ontrol unit Terminal 5	NSOR POW ontrol unit. n driver sea Reclinin Connector B217	t control unit	CIRCUIT	ector and reclining motor LH harness con- -
CHECK RE( Turn ignition Disconnect Check continector. Driver seat co Connector B209 Check conti	CLINING SEI a switch OFF driver seat can nuity betwee ontrol unit Terminal 5 nuity betwee	NSOR POW ontrol unit. n driver sea Reclinin Connector B217 n driver sea	ER SUPPLY t control unit g motor LH Terminal 3 t control unit	CIRCUIT harness conn Continuity Yes harness conne	ector and reclining motor LH harness con-
CHECK REC Turn ignition Disconnect Check conti nector. Driver seat co Connector B209 Check conti Driver sea	CLINING SEI on switch OFF driver seat connuity betwee pontrol unit Terminal 5 nuity betwee	NSOR POW ontrol unit. n driver sea Reclinin Connector B217 n driver sea	ER SUPPLY	Continuity	ector and reclining motor LH harness con- - - ector and ground.
CHECK RE( Turn ignition Disconnect Check continector Driver seat co Connector B209 Check conti Driver seat Connector	CLINING SEI a switch OFF driver seat can nuity betwee control unit Terminal 5 nuity betwee at control unit Termina	NSOR POW ontrol unit. n driver sea Reclinin Connector B217 n driver sea	ER SUPPLY t control unit g motor LH Terminal 3 t control unit	CIRCUIT harness conn Continuity Continuity Continuity	ector and reclining motor LH harness con- - ector and ground.
CHECK REC Turn ignition Disconnect Check continector Driver seat co Connector B209 Check conti Driver sea Connector B209 Check conti Driver sea Connector B209 Check conti	CLINING SEI n switch OFF driver seat can nuity betwee pontrol unit Terminal 5 nuity betwee it control unit Termina 5	NSOR POW iontrol unit. n driver sea Reclinin Connector B217 n driver sea Grou	ER SUPPLY	CIRCUIT harness conn Continuity Continuity No	ector and reclining motor LH harness con- - ector and ground.

2. Check continuity between reclining motor LH harness connector and ground.

# **RECLINING SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

Reclining motor LH			Continuity
Connector	Terminal	Ground	Continuity
B217	2		Yes

Is the inspection result normal?

YES >> Replace reclining motor LH. Refer to <u>SE-87. "Removal and Installation"</u>.

NO >> Repair or replace harness.

# LIFTING SENSOR (FRONT)

### < DTC/CIRCUIT DIAGNOSIS >

# LIFTING SENSOR (FRONT)

# Description INFOID:000000011152382 • The lifting sensor (front) is installed to the seat frame. • • The pulse signal is input to the driver seat control unit when the lifting (front) is operated. • • The driver seat control unit counts the pulse and calculates the lifting (front) amount of the seat. • Component Function Check INFOID:000000011152383 C 1. CHECK FUNCTION 1. Select "LIFT FR PULSE" in "DATA MONITOR" mode with CONSULT. D 2. Check the lifting sensor (front) signal under the following conditions. D

Monitor item	Condition		Value	Ε
		Operate (up- ward)	Change (decrease)	
LIFT FR PULSE	Seat lifting (front)	Operate (down- ward)	Change (increase)	F
		Release	No change	
s the inspection result n	ormal?			G

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-125, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK LIFTING SENSOR (FRONT) SIGNAL

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

(+)						L
Driver seat co	ontrol unit	(—)	Cone	dition	Voltage signal	
Connector	Terminal					M
B209	30	Ground	Seat lifting (front)	Operate	10mSec/div 2V/div JMJIA0119ZZ	N
				Other than above	0 or 5	Р
Is the inspection	on result no	ormal?				
YES >> Re NO >> Ge	eplace driv O TO 2. ETING SEI	er seat con	trol unit. Refe	r to <u>ADP-163</u> т	a, "Removal and Installation".	

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit and lifting motor LH (front).

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INFOID:000000011152384

# LIFTING SENSOR (FRONT)

### < DTC/CIRCUIT DIAGNOSIS >

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

Driver seat control unit		Lifting moto	Continuity	
Connector	Terminal	Connector Terminal		Continuity
B209	30	B218	1	Yes

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B209	30		No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# **3.** CHECK LIFTING SENSOR (FRONT) POWER SUPPLY

1. Connect driver seat control unit.

2. Turn ignition switch ON.

3. Check voltage between lifting motor LH (front) harness connector and ground.

(+)			Voltage (V) (Approx.)	
Lifting motor LH (front)		()		
Connector	Terminals		( 11 )	
B218 3		Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

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

### 1. Turn ignition switch OFF.

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

Driver seat control unit		Lifting motor	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B209	5	B218	3	Yes

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

Driver seat of	control unit		Continuity
Connector	Terminal	Ground	Continuity
B209	5		No

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

NO >> Repair or replace harness.

5. CHECK LIFTING SENSOR (FRONT) GROUND

1. Turn ignition switch OFF.

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

# LIFTING SENSOR (FRONT)

### < DTC/CIRCUIT DIAGNOSIS >

Lifting mo	otor LH (front)			-		А
Connector	Terminal	Ground	Continuity			
B218	2	_	Yes	-		В
Is the inspection YES >> Rep NO >> Rep	<u>n result normal?</u> blace lifting motor bair or replace har	LH (front). Re ness.	fer to <u>SE-87, "Remov</u>	al and Installatio	<u>"n</u> .	С
						D
						E
						F
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						Ν
						0
						Р

### < DTC/CIRCUIT DIAGNOSIS >

# LIFTING SENSOR (REAR)

### Description

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

# Component Function Check

# 1. CHECK FUNCTION

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

Monitor item	Condition	n	Value
		Operate (up- ward)	Change (decrease)
LIFT RR PULSE	Seat lifting (rear)	Operate (down- ward)	Change (increase)
		Release	No change

Is the inspection result normal?

YES >> Inspection End.

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

### Diagnosis Procedure

INFOID:0000000011152387

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK LIFTING SENSOR (REAR) SIGNAL

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



### Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "<u>Removal and Installation</u>". NO >> GO TO 2.

```
2. CHECK LIFTING SENSOR (REAR) CIRCUIT
```

INFOID:0000000011152385

INFOID:000000011152386

# LIFTING SENSOR (REAR)

### < DTC/CIRCUIT DIAGNOSIS >

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

eat control unit Lifting motor LH (rear)	seat control unit Lifting motor LH (rea
Terminal Connector Terminal	or Terminal Connector Term
29 B207 1 Yes	29 B207 1

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

Driver se	at control unit		Continuity
Connector	Terminal	Ground	Continuity
B209	29	-	No

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.

- 2. Turn ignition switch ON.
- 3. Check the voltage between lifting motor LH (rear) harness connector and ground.

(	+)		
Lifting mot	or LH (rear)	(-)	Voltage (V) (Approx.)
Connector	Terminals		
B207	3	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.
- Check the continuity between driver seat control unit harness connector and lifting motor LH (rear) harness connector.

Driver seat	control unit	Lifting mote	or LH (rear)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B209	5	B207	3	Yes

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

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B209	5		No

### Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "Removal and Installation".
- NO >> Repair or replace harness.

### 5. CHECK LIFTING SENSOR (REAR) GROUND

1. Turn ignition switch OFF.

2. Check the continuity between lifting motor LH (rear) harness connector and ground.

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# LIFTING SENSOR (REAR)

### < DTC/CIRCUIT DIAGNOSIS >

Lifting mot	or LH (rear)		Continuity
Connector	Terminal	Ground	Continuity
B207	2	*	Yes

Is the inspection result normal?

YES >> Replace lifting motor LH (rear). Refer to <u>SE-87, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# **TILT SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

# **TILT SENSOR**

Description	INFOID:000000011152388
<ul> <li>The tilt sensor is installed to the steering column assembly.</li> <li>The pulse signal is input to the driver seat control unit when the tilt is operated.</li> <li>The driver seat control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse and calculates the tilt amount of the steering control unit counts the pulse amount of the pulse amount of the pulse amount of the p</li></ul>	blumn.
Component Function Check	INFOID:000000011152389
1.CHECK FUNCTION	

- Select "TILT PULSE" in "DATA MONITOR" mode with CONSULT. 1.
- 2. Check tilt sensor signal under the following conditions.

Monitor item	Con	dition	Value	E
		Operate (upward)	Change (decrease)	_
TILT PULSE	Steering column	Operate (downward)	Change (increase)	_
		Release	No change	F
Is the inspection result nor	mal?			

YES >> Inspection End.

>> Perform diagnosis procedure. Refer to ADP-131, "Diagnosis Procedure". NO

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK TILT SENSOR SIGNAL

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

	+) eat con- unit	(-)	Condition		Voltage (V)	
Con- nector	Termi- nals				(Αρριοχ.)	
B209	28	Ground	Steer- ing col- umn	Oper- ate	10mSec/div	
				Other than above	0 or 5	
s the in	spectio	n result	normal?	) 		

YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "Removal and Installation". 2.

2. CHECK TILT SENSOR CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect driver seat control unit and tilt motor. А

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INFOID:000000011152390

# TILT SENSOR

### < DTC/CIRCUIT DIAGNOSIS >

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

Driver seat	Driver seat control unit		Tilt motor	
Connector	Terminal	Connector Terminal		Continuity
B209	28	M85	4	Yes

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

Driver seat control unit				Continuity	
	Connector Terminal		Ground	Continuity	
	B209	28	Ť	No	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.** CHECK TILT SENSOR POWER SUPPLY

1. Connect driver seat control unit.

- 2. Turn ignition switch ON.
- 3. Check voltage between tilt motor harness connector and ground.

(+) Tilt m	) otor	(-)	Voltage (V)	
Connector	Terminals		(********	
M85	5	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

### **4.** CHECK TILT SENSOR POWER SUPPLY CIRCUIT

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

Automatic drive positioner con- trol unit		Tilt motor		Continuity
Connector	Terminal	Connector	Terminal	
M34	27	M85	5	Yes

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

Automatic drive pos	itioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M34	27		No

Is the inspection result normal?

- YES >> Replace automatic drive positioner control unit. Refer to ADP-164, "Removal and Installation".
- NO >> Repair or replace harness or connector.

### $\mathbf{5}$ . CHECK TILT SENSOR GROUND CIRCUIT

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

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# TILT SENSOR

### < DTC/CIRCUIT DIAGNOSIS >

Automatic di t	rive positioner con- rol unit	Tilt m	otor	Continuity
Connecto	r Terminal	Connector	Terminal	, y
M33	20	M85	3	Yes
Is the inspe	ction result norm	nal?		1
YES >> NO >>	<ul> <li>Replace tilt mot</li> <li>Repair or replace</li> </ul>	tor. Refer to <u>S</u> ce harness.	<u> </u>	ed View".

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# **TELESCOPIC SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

# TELESCOPIC SENSOR

### Description

- · The telescopic sensor is installed to the steering column assembly.
- The pulse signal is input to the driver seat control unit when telescopic is performed.
- The driver seat control unit counts the pulse and calculates the telescopic amount of the steering column.

## **Component Function Check**

# 1.CHECK FUNCTION

- 1. Select "TELESCO PULSE" in "DATA MONITOR" mode with CONSULT.
- 2. Check telescopic sensor signal under the following conditions.

Monitor item	Con	Valve	
		Operate (forward)	Change (decrease)
TELESCO PULSE	Steering column	Operate (backward)	Change (increase)
		Release	No change

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-134, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000011152393

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Dia-</u> gram".

# 1. CHECK TELESCOPIC SENSOR SIGNAL

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



### Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Installation"</u>.

2. CHECK TELESCOPIC SENSOR CIRCUIT

2. Disconnect driver seat control unit and telescopic motor.

INFOID:0000000011152391

INFOID:000000011152392

<sup>1.</sup> Turn ignition switch OFF.

# **TELESCOPIC SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between driver seat control unit harness connector and telescopic motor harness connector. А Driver seat control unit Telescopic motor Continuity В Connector Terminal Connector Terminal B209 12 M94 4 Yes Check continuity between driver seat control unit harness connector and ground. 4. Driver seat control unit Continuity Terminal Connector Ground D B209 12 No Is the inspection result normal? Ε YES >> GO TO 3. NO >> Repair or replace harness. **3.** CHECK TELESCOPIC SENSOR POWER SUPPLY 1. Connect driver seat control unit. 2. Turn ignition switch ON. 3. Check voltage between telescopic motor harness connector and ground. (+) Voltage (V) Telescopic motor Н (-) (Approx.) Connector Terminals M94 5 Ground Battery voltage Is the inspection result normal? YES >> GO TO 5. NO >> GO TO 4. ADP **4.** CHECK TELESCOPIC SENSOR POWER SUPPLY CIRCUIT Turn ignition switch OFF. 1. Disconnect automatic drive positioner control unit. 2. Κ Check continuity between automatic drive positioner control unit harness connector and telescopic motor 3. harness connector. L Automatic drive positioner control Telescopic motor unit Continuity Terminal Connector Terminal Connector M M34 27 M94 5 Yes Check continuity between automatic drive positioner control unit harness connector and ground. Ν Automatic drive positioner control unit Continuity Connector Terminal Ground M34 27 No Is the inspection result normal? >> Replace automatic drive positioner control unit. Refer to ADP-164, "Removal and Installation". P YES NO >> Repair or replace harness. 5. CHECK TELESCOPIC SENSOR GROUND CIRCUIT 1. Turn ignition switch OFF. 2. Disconnect automatic drive positioner control unit. Check continuity between automatic drive positioner control unit harness connector and telescopic motor 3. harness connector.

### ADP-135

# **TELESCOPIC SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner con- trol unit		Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	
M33	20	M94	3	Yes

Is the inspection result normal?

YES >> Replace telescopic motor. Refer to <u>ST-47, "Exploded View"</u>.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >
MIRROR SENSOR

DRIVER SIDE									A
DRIVER SIDE : Des	scriptio	n						INFOID:000000011152394	D
<ul> <li>The mirror sensor LH is</li> <li>The resistance of 2 sen</li> <li>Automatic drive position age of 2 sensor input te</li> </ul>	installed sors (hor ner contro rminals.	l to the do rizontal ar ol unit calo	oor mirro nd vertic culates t	or LH. al) is cha he door r	nged whe nirror pos	en the door ition accord	mirror LH is ling to the c	s operated. hange of the volt-	С
DRIVER SIDE : Cor	nponer	nt Func	tion C	Check				INFOID:000000011152395	
<b>1.</b> CHECK FUNCTION									D
<ol> <li>Select "MIR/SEN LH</li> <li>Check mirror sensor</li> </ol>	U-D", "M (driver si	IIR/SEN L de) signa	.H R-L" i I under f	in "DATA the follow	MONITO	R" mode wi tion.	th CONSU	LT.	E
Monitor item				Conc	lition			Value	
					Close to p	eak		3.4V	F
MIR/SEN LH U-D		<b>.</b> .		-	Close to va	alley		0.6V	
		Door mirro	r LH	_	Close to rig	ght edge		3.4V	0
MIR/SEN LH R-L				-	Close to le	ft edge		0.6V	G
Regarding Wiring Diagram or ADP-40. "WITHOUT A <b>1.</b> CHECK DOOR MIRR 1. Turn ignition switch to 2. Check voltage betwee	m informa ROUND OR LH S D ACC. en door r	ation, refe <u>VIEW MC</u> SENSOR S	r to <u>ADF</u> DNITOR SIGNAL	<u>P-56, "WI</u> : Wiring	TH AROU Diagram" or and gr	UND VIEW	MONITOR	: Wiring Diagram"	ADI K
(+)									L
Door mirror LH		(-)		Conditior	ı	Voltage (V)			
Connector	Terminal					(Approx.)			M
				Close to	peak	3.4			
D28 (with around view moni-	21	Cround	Door	Close to	valley	0.6			Ν
tor system)	22	Giouna	LH	Close to	right edge	3.4			
	22			Close to	left edge	0.6			0
	1			Close to	peak	3.4			0
D4 (without around view	4	Ground	Door	Close to	valley	0.6			
monitor system)	6	Ground	LH	Close to	right edge	3.4			Ρ
	0			Close to	left edge	0.6			
Is the inspection result no YES >> GO TO 5. NO >> GO TO 2. 2. CHECK DOOR MIRR	ormal? OR LH S	SENSOR	CIRCUI	T 1					
1. Turn ignition switch C	DFF.								

### < DTC/CIRCUIT DIAGNOSIS >

- 2. Disconnect automatic drive positioner control unit and door mirror LH connector.
- 3. Check continuity between automatic drive positioner control unit harness connector and door mirror LH harness connector.

Automatic drive position	ner control unit	Door mirror LH	1	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6	D28 (with around view monitor system)	21	
M33	0	D4 (without around view monitor system)	4	Vec
Wi35	18	D28 (with around view monitor system)	22	165
		D4 (without around view monitor system)	6	

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

Automatic drive positioner		Continuity		
Connector	Terminal	Ground	Continuity	
M22	6	Ground	No	
MISS	18		INO	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.** CHECK DOOR MIRROR LH SENSOR CIRCUIT 2

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

Automatic drive positioner control unit		Door mirror LH	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	20	D28 (with around view monitor system) 24		
M33 –	20	D4 (without around view monitor system)	5	Ves
	21	D28 (with around view monitor system)	23	163
		D4 (without around view monitor system)	3	

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

Automatic drive positione		Continuity		
Connector	Terminal	Ground	Continuity	
M33	20	Ground	No	
10155	21			

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

- **4.** CHECK TILT MOTOR ADJUSTING OPERATION
- 1. Connect automatic drive positioner control unit and door mirror LH.

2. Turn ignition switch ON.

3. Check tilt motor adjusting operation with memory function.

< D	TC/CIRCUIT DIAGN	OSIS >							
ls t	he operation normal?								
YE	YES >> Replace door mirror actuator. (Built in door mirror LH). Refer to <u>MIR-20, "Removal and Installa-</u> A <u>tion"</u> .								А
	NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-164, "Removal and Installation"</u> .								
5.	<b>).</b> CHECK INTERMITTENT INCIDENT								В
Ref	fer to <u>GI-47, "Intermitte</u>	ent Incide	ent".						
<u>ls t</u>	he inspection result no	<u>prmal?</u>							С
YE NO PA	ES >> Replace auto O >> Repair or rep SSENGER SIDE	matic dri lace the	ve positio malfunctio	ner cont oning pa	trol unit. art.	Refer to <u>/</u>	<u>\DP-164, "R</u>	emoval and Installation".	0
PΔ	SSENGER SIDE	- · Desc	rintion						D
		. DC30	npuon					INFOID:000000011152397	
• T • T • A a	he mirror sensor RH is he resistance of 2 sen utomatic drive positior ge of 2 sensor input te	s installed sors (hor ter contro erminals.	d to the do izontal an ol unit calo	oor mirro d vertica culates t	or RH. al) is cha he door i	inged whe nirror pos	en the door i ition accord	mirror RH is operated. ing to the change of the volt-	E
PA	SSENGER SIDE	: Com	ponent	Funct	ion Ch	neck		INFOID:000000011152398	
1.	CHECK FUNCTION								G
1.	Select "MIR/SEN RH	U-D", "N	1IR/SEN F	RH R-L"	in "DATA		DR" mode w	ith CONSULT.	
2.	Check the mirror sen	sor RH s	ignal und	er the fo	llowing c	onditions			
-	Monitor item				Con	dition		\/alue	H
_	Worldor dem				Con		eak	3 4V	
	MIR/SEN RH U-D				·			0.6V	
_			Door mirro	RH	-	Close to right edge		3.4V	
	MIR/SEN RH R-L				Close to left edge		0.6V		
ls t	he inspection result no	ormal?					0		ADF
YE	ES >> Inspection Er	<u>า</u> d.							
N	O >> Perform diag	nosis pro	cedure. F	Refer to	ADP-139	), "PASSE	NGER SID	E : Diagnosis Procedure".	Κ
PA	SSENGER SIDE	: Diagi	nosis P	roced	ure			INFOID:000000011152399	
		Ū							
_									L
Ree	garding Wiring Diagrar	n informa	ation, refe	r to <u>ADF</u>	<u>2-56, "Wl</u> • Wiring	TH AROL Diagram	JND VIEW I	MONITOR : Wiring Diagram"	
01 7					. wing	Diagram			M
1.	CHECK DOOR MIRR	OR RH §	SENSOR	SIGNAL	_				
1.	Turn ignition switch to	ACC.							Ν
2.	Check voltage betwe	en door r	mirror RH	harness	s connec	tor and gr	ound.		
	(+)						Voltage (V/)		U
	Door mirror LH		(-)		Conditio	n (Approx.)			
	Connector	Terminal			1				Ρ
		21		Deer	Close to	peak	3.4		
D1	28 (with around view mon-		Ground	mirror	Close to	valley	0.6		
	itor system)	22		RH	Close to	right edge	3.4		
				Close	Close to	left edge	0.6		

### < DTC/CIRCUIT DIAGNOSIS >

(+) Door mirror LH		()	Condition		Voltage (V) (Approx.)	
Connector	Terminal				(	
D107 (without around view monitor system)	1	Ground		Close to peak	3.4	
	4		Door mirror RH	Close to valley	0.6	
	6			Close to right edge	3.4	
				Close to left edge	0.6	

Is the inspection result normal?

# 2. CHECK DOOR MIRROR RH SENSOR CIRCUIT 1

1. Turn ignition switch OFF.

- 2. Disconnect automatic drive positioner control unit and door mirror RH.
- Check continuity between automatic drive positioner control unit harness connector and door mirror RH harness connector.

Automatic drive positioner control unit		Door mirror RI	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	5	D128 (with around view monitor system)	21	
M33	5	D107 (without around view monitor system)	4	Ves
	17	D128 (with around view monitor system)	22	163
		D107 (without around view monitor system)	6	

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

Automatic drive position		Continuity		
Connector	Terminal	Ground	Continuity	
M22	5	Giodila	No	
M33	17	-	INO	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.** CHECK DOOR MIRROR RH SENSOR CIRCUIT 2

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

Automatic drive position	ner control unit	Door mirror RI	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	20	D128 (with around view monitor system)	24	
M33 -	20	D107 (without around view monitor system)	5	Yee
	21	D128 (with around view monitor system)	23	163
		D107 (without around view monitor system)	3	

< DTC/CIRCUIT	DIAGNOSIS >				
2. Check contin	uity between automat	ic drive position	er control unit	harness connector and ground.	А
Automatic drive	positioner control unit			-	
Connector	Terminal	Cround	Continuity		D
	20	Ground	No	_	В
IVI33	21		INU		
Is the inspection r	esult normal?			-	С
YES >> GO T NO >> Repa 4. CHECK TILT	O 4. ir or replace harness. MOTOR ADJUSTING				D
1 Connect auto	matic drive positioner		1 door mirror F	3H	
2. Turn ignition	switch ON.			N1.	_
3. Check tilt mo	or adjusting operation	n with memory f	unction.		E
Is the operation n	ormal?				
YES >> Repla	ice door mirror actua	tor. (Built in doc	or mirror RH).	Refer to MIR-20, "Removal and Installa-	F
NO >> Repla	ace automatic drive po	ositioner control	unit. Refer to	ADP-164, "Removal and Installation".	
5. CHECK INTE	RMITTENT INCIDEN	т			C
Refer to GI-47, "II	ntermittent Incident".				G
Is the inspection i	esult normal?				
YES >> Repla NO >> Repa	ice automatic drive po ir or replace the malfu	ositioner control unctioning part.	unit. Refer to	ADP-164, "Removal and Installation".	Н

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## **SLIDING MOTOR**

## < DTC/CIRCUIT DIAGNOSIS >

# SLIDING MOTOR

## Description

- The sliding motor LH is installed to the seat frame.
- The sliding motor LH is activated with the driver seat control unit.
- The seat is slid forward/backward by changing the rotation direction of sliding motor LH.

# **Component Function Check**

### **1.** CHECK FUNCTION

- 1. Select "SEAT SLIDE" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the sliding motor LH operation.

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

### Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-142, "Diagnosis Procedure"</u>.

### **Diagnosis** Procedure

INFOID:0000000011152402

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### **1.** CHECK SLIDING MOTOR LH POWER SUPPLY

- 1. Turn the ignition switch to ACC.
- 2. Perform "ACTIVE TEST" ("SEAT SLIDE") with CONSULT.
- 3. Check voltage between driver seat control unit harness connector and ground.

(+) Driver seat control unit		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				()
		Ground SEAT SLIDE	OFF	0	
	36		SEAT SLIDE	FR (forward)	0
B210				RR (backward)	Battery voltage
6210				OFF	0
	44			FR (forward)	Battery voltage
				RR (backward)	0

Is the inspection result normal?

YES >> Replace sliding motor LH. Refer to <u>SE-87, "Removal and Installation"</u>. NO >> GO TO 2.

2. CHECK SLIDING MOTOR LH CIRCUIT

1. Turn ignition switch OFF.

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

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# **SLIDING MOTOR**

### < DTC/CIRCUIT DIAGNOSIS >

Driver seat cor	ntrol unit		Sliding moto	r LH		
Connector	Terminal	Co	nnector	Terminal	- Continuity	
 D210	36		2014	1	Vaa	
B210	44	t	3211	5	- Yes	
4. Check contir	nuity betwee	en drive	er seat cor	ntrol unit l	narness conne	
	tral unit agains	otor				
Connector	Term	ninal			Continuity	
	30	6	Grou	nd		
B210	44	4			No	
Is the inspection	result norm	nal?				
YES >> GO	TO 3. air or replac	na harn	966			
3 CHECK INTE			)FNT			
Refer to GI-47			>⊑			
Is the inspection	result norm	nal?	<u></u> .			
YES >> Repl	lace driver s	seat co	ntrol unit.	Refer to A	<u>ADP-163, "Rei</u>	
NO >> Repa	air or replac	e the n	nalfunctior	ning part.		

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## **RECLINING MOTOR**

### < DTC/CIRCUIT DIAGNOSIS >

# RECLINING MOTOR

### Description

- The reclining motor LH is installed to the seatback assembly.
- The reclining motor LH is activated with the driver seat control unit.
- The seatback is reclined forward/backward by changing the rotation direction of reclining motor LH.

# Component Function Check

### **1.** CHECK FUNCTION

- 1. Select "SEAT RECLINING" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the reclining motor LH operation.

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

### Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-144, "Diagnosis Procedure"</u>.

### **Diagnosis** Procedure

INFOID:0000000011152405

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

### 1. CHECK RECLINING MOTOR LH POWER SUPPLY

- 1. Turn the ignition switch to ACC.
- 2. Perform "ACTIVE TEST" ("SEAT RECLINING") with CONSULT.
- 3. Check voltage between driver seat control unit harness connector and ground.

(+) Driver seat control unit		(-)	Condition		Voltage (V) (Approx.)
Connec- tor	Terminal				
B210	43	Ground	SEAT RE- CLINING	OFF	0
				FR (forward)	0
				RR (backward)	Battery voltage
	35			OFF	0
				FR (forward)	Battery voltage
				RR (backward)	0

Is the inspection result normal?

YES >> Replace reclining motor LH. Refer to <u>SE-87, "Removal and Installation"</u>.

NO >> GO TO 2.

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

### ADP-144



INFOID:000000011152404
## **RECLINING MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

Driver seat cont	trol unit	Re	clining mo	otor LH		
Connector	Termin	al Conn	ector	Termi	nal Cont	inuity
R210	35		17	6	~	26
6210	43	D2	17	4	T	38
4. Check continu	uity betv	veen driver :	seat con	ntrol unit	harness o	onne
Driver sea	at control	unit				
Connector		Terminal			Continui	у
		35	Grou	und –	Ne	
B210		43			NO	
Is the inspection re	esult no	<u>rmal?</u>				
YES >> GO T NO >> Repai	O 3. ir or ren	lace harnes	s			
3. CHECK INTER	RMITTE		NT			
Refer to GI-47, "In	ntermitte	ent Incident"				
Is the inspection re	esult no	<u>rmal?</u>				
YES >> Repla	ice drive	er seat contr	ol unit. F	Refer to	ADP-163	"Rer
NO >> Repai	li oi iep	lace the mai	lunction	ing part		

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## LIFTING MOTOR (FRONT)

#### < DTC/CIRCUIT DIAGNOSIS >

## LIFTING MOTOR (FRONT)

### Description

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

## **Component Function Check**

### 1. CHECK FUNCTION

- 1. Select "SEAT LIFTER FR" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the lifting motor LH (front) operation.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-146, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000011152408

Regarding Wiring Diagram information, refer to ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram" or ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK LIFTING MOTOR LH (FRONT) POWER SUPPLY

- 1. Turn the ignition switch to ACC.
- 2. Perform "ACTIVE TEST" ("SEAT LIFTER FR") with CONSULT.
- Check voltage between driver seat control unit harness connector and ground. 3.

(+)						
Driver seat of	control unit	(-)	Condition		(Approx.)	
Connector	Connector Terminal				, II <i>,</i>	
				OFF	0	
	34	Ground	SEAT LIFTER FR	UP	Battery voltage	
<b>B</b> 210				DWN (down)	0	
6210	42	Ground		OFF	0	
				UP	0	
				DWN (down)	Battery voltage	

Is the inspection result normal?

YES >> Replace lifting motor LH (front). Refer to SE-87, "Removal and Installation". >> GO TO 2.

NO

2. CHECK LIFTING MOTOR LH (FRONT) CIRCUIT

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

INFOID:000000011152406

<sup>1.</sup> Turn ignition switch OFF.

# LIFTING MOTOR (FRONT)

### < DTC/CIRCUIT DIAGNOSIS >

Connector       Terminal       Connector       Terminal         B210       34       B218       6       Yes         4.       Check continuity between driver seat control unit harness connector and g         Driver seat control unit       Ground       Continuity         B210       34       Ground       Continuity         Driver seat control unit       Ground       Continuity         B210       34       Ground       No         B210       34       No       No         Is the inspection result normal?       YES       >> GO TO 3.         NO       >> Repair or replace harness.       3.         CHECK INTERMITTENT INCIDENT       Refer to G1-47, "Intermittent Incident".         Is the inspection result normal?       YES         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and NO         NO       >> Repair or replace the malfunctioning part.	Dr	iver seat cor	ntrol unit	Liftin	g motor Ll	H (front)	Continuity
B210       34 42       B218       6 4       Yes         4.       Check continuity between driver seat control unit harness connector and g         Driver seat control unit       Continuity         Connector       Terminal       Ground         B210       34       orgoing         B210       34       No         Is the inspection result normal?       YES         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3.       CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and NO         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and NO	Cor	nnector	Terminal	Conn	ector	Termir	nal
B210       42       B218       4       Yes         4. Check continuity between driver seat control unit harness connector and ground       Driver seat control unit       Continuity         Driver seat control unit       Ground       Ground       No         B210       34       Ground       No         B210       34       Ground       No         Is the inspection result normal?       YES       >> GO TO 3.         NO       >> Repair or replace harness.       S. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".       Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Ir NO         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Ir NO		2210	34		10	6	Ver
4. Check continuity between driver seat control unit harness connector and grou         Driver seat control unit         Connector       Terminal         B210       34         42       Ground         No         Is the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Ins NO         YES       >> Repair or replace the malfunctioning part.	E	3210	42	B2	18	4	Yes
Driver seat control unit       Continuity         Connector       Terminal       Ground         B210       34       No         Is the inspection result normal?       No         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Inst NO         YES       >> Repair or replace the malfunctioning part.	4. Ch	eck contin	uity betw	een driver s	eat cont	trol unit l	narness conn
Driver seat control unit       Continuity         Connector       Terminal       Ground         B210       34       No         Is the inspection result normal?       YES       >> GO TO 3.         NO       >> Repair or replace harness.       S. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".       Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Insta NO         YES       >> Repair or replace the malfunctioning part.					1		
Connector       Terminal       Ground         B210       34       No         42       No         Is the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163. "Removal and Insta NO         YES       >> Repair or replace the malfunctioning part.		Driver se	eat control u	init	4		Continuity
B210       34       No         Is the inspection result normal?       YES >> GO TO 3.         YES >> Repair or replace harness.       NO >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES >> Replace driver seat control unit. Refer to ADP-163, "Removal and Insta NO >> Repair or replace the malfunctioning part.		Connector		Terminal	Gro	ound	
42         Is the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Instal NO         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Instal NO		B210		34			No
Is the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Instal NO         NO       >> Repair or replace the malfunctioning part.		22.0		42			
YES       >> GO TO 3.         NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163, "Removal and Instal NO         NO       >> Repair or replace the malfunctioning part.	<u>Is the ir</u>	nspection	result nor	mal?			
NO       >> Repair or replace harness.         3. CHECK INTERMITTENT INCIDENT         Refer to GI-47, "Intermittent Incident".         Is the inspection result normal?         YES       >> Replace driver seat control unit. Refer to ADP-163. "Removal and Insta NO         NO       >> Repair or replace the malfunctioning part.	YES	>> GO 1	ГО 3.				
<ul> <li><b>J.</b> CHECK INTERMITTENT INCIDENT</li> <li>Refer to <u>GI-47, "Intermittent Incident"</u>.</li> <li><u>Is the inspection result normal?</u></li> <li>YES &gt;&gt; Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Insta</u> NO &gt;&gt; Repair or replace the malfunctioning part.</li> </ul>		>> Repa	air or repla	ace harness	6.		
Refer to <u>GI-47, "Intermittent Incident"</u> . <u>Is the inspection result normal?</u> YES >> Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Insta</u> NO >> Repair or replace the malfunctioning part.	<b>3.</b> CH	ECK INTE	RMITTE		١T		
<u>Is the inspection result normal?</u> YES >> Replace driver seat control unit. Refer to <u>ADP-163</u> , " <u>Removal and Insta</u> NO >> Repair or replace the malfunctioning part.	Refer to	o <u>GI-47, "I</u>	ntermitte	<u>nt Incident"</u> .			
<ul> <li>YES &gt;&gt; Replace driver seat control unit. Refer to <u>ADP-163, "Removal and Instal</u></li> <li>NO &gt;&gt; Repair or replace the malfunctioning part.</li> </ul>	<u>Is the ir</u>	nspection	result nor	mal?			
NO >> Repair or replace the malfunctioning part.	YES	>> Repl	ace drive	r seat contro	ol unit. F	Refer to A	<u>ADP-163, "Re</u>
	NO	>> Repa	air or repla	ace the mal	functioni	ng part.	

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## LIFTING MOTOR (REAR)

#### < DTC/CIRCUIT DIAGNOSIS >

## LIFTING MOTOR (REAR)

### Description

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

## **Component Function Check**

### 1. CHECK FUNCTION

- 1. Select "SEAT LIFTER RR" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the lifting motor LH (rear) operation.

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

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

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-148, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000011152411

Regarding Wiring Diagram information, refer to ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram" or ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK LIFTING MOTOR LH (REAR) POWER SUPPLY

- 1. Turn the ignition switch to ACC.
- 2. Perform "ACTIVE TEST" ("SEAT LIFTER RR") with CONSULT.
- 3. Check voltage between driver seat control unit harness connector and ground.

(+) Driver seat control unit		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				, , ,
				OFF	0
	40	Ground	SEAT LIFTER RR	UP	0
<b>B</b> 210				DWN (down)	Battery voltage
6210				OFF	0
				UP	Battery voltage
				DWN (down)	0

Is the inspection result normal?

YES >> Replace lifting motor LH (rear). Refer to SE-87, "Removal and Installation". NO >> GO TO 2.

- 2. CHECK LIFTING MOTOR (REAR) CIRCUIT



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

INFOID:000000011152409

# LIFTING MOTOR (REAR)

### < DTC/CIRCUIT DIAGNOSIS >

Driver seat o	ontrol uni	t	l if	fting motor l	H (rear)		
Connector	Term	ninal	Cor	nector	Termi	nal	Continuity
	4	1		007	6		N <sub>2</sub> ,
B210	40	0	В	3207	4		Yes
4. Check conti	nuity be	etweer	n driver	seat con	trol unit	harn	ess conne
Driver se	eat contro	ol unit					
Connector		Teri	minal	Cro	und	С	ontinuity
B210		2	41	Giot	una	No	
			40				
Is the inspection	<u>result i</u>	<u>norma</u>	<u>al?</u>				
NO >> Rep	air or re	eplace	e harne:	SS.			
3. CHECK INT	ERMIT	ΓΕΝΤ	INCIDE	ENT			
Refer to GI-47, '	'Intermi	ttent I	ncident	<u>.</u> .			
Is the inspection	result i	norma	<u>al?</u>				
YES >> Rep NO >> Rep	blace dri bair or re	iver se eplace	eat cont the mathe	trol unit. F alfunction	Refer to ing part	<u>ADP</u>	<u>-163, "Ren</u>
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## TILT MOTOR

#### < DTC/CIRCUIT DIAGNOSIS >

## TILT MOTOR

### Description

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

### **Component Function Check**

### 1. CHECK FUNCTION

- 1. Select "TILT MOTOR" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the tilt motor operation.

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

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

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to <u>ADP-150, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:000000011152414

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Dia-</u>gram".

# 1. CHECK TILT MOTOR POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt motor.
- 3. Turn the ignition switch ON.
- 4. Perform "ACTIVE TEST" ("TILT MOTOR") with CONSULT.
- 5. Check voltage between tilt motor harness connector and ground.

(+) Tilt motor		(—)	Co	ondition	Voltage (V) (Approx.)
Connector	Terminals				
				OFF	0
	2	Cround	TILT MOTOR	UP	0
M85				DWN (down)	Battery voltage
Moo		Ground		OFF	0
	1			UP	Battery voltage
				DWN (down)	0

#### Is the inspection result normal?

- YES >> Replace tilt motor. Refer to <u>ST-47, "Exploded View"</u>.
- NO >> GO TO 2.
- 2. CHECK TILT MOTOR CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect automatic drive positioner control unit.
- 3. Check continuity between automatic drive positioner control unit harness connector and tilt motor harness connector.

### ADP-150

INFOID:0000000011152412

## TILT MOTOR

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner con- trol unit		Tilt r	notor	Continuity		
Connector	Terminal	Connector	Terminal			
M24	28	M95	2	Voc		
IVI34	29	CQINI	1	ies		
4. Check con	tinuity betwee	en automatic o	drive position	er control uni	harness connector and ground.	

Automatic drive pos	sitioner control unit	Ground	Continuity		
Connector	Terminal		Continuity		
M24	28	Ground	No		
10154	29	-			

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-164</u>, "<u>Removal and Installation</u>". NO >> Repair or replace harness.

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## TELESCOPIC MOTOR

#### < DTC/CIRCUIT DIAGNOSIS >

### **TELESCOPIC MOTOR**

### Description

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

## **Component Function Check**

### 1.CHECK FUNCTION

- 1. Select "TELESCO MOTOR" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the telescopic motor operation.

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

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

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to ADP-152, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011152417

Regarding Wiring Diagram information, refer to ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram".

# 1. CHECK TELESCOPIC MOTOR POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect telescopic motor.
- Turn the ignition switch ON. 3.
- Perform "ACTIVE TEST" ("TELESCO MOTOR") with CONSULT.
- 5. Check voltage between telescopic motor harness connector and ground.

(+ Telescop	-) vic motor	(-)	с	ondition	Voltage (V) (Approx.)
Connector	Terminals				
				OFF	0
	2		FR (forward)	0	
MOA		Ground	TELE-	RR (backward)	Battery voltage
10134	Ground	MOTOR	OFF	0	
	1			FR (forward)	Battery voltage
				RR (backward)	0

#### Is the inspection result normal?

- YES >> Replace telescopic motor. Refer to ST-47, "Exploded View". NO >> GO TO 2.
- 2. CHECK TELESCOPIC MOTOR CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect automatic drive positioner control unit. 2.
- Check continuity between automatic drive positioner control unit harness connector and telescopic motor 3. harness connector.

### **ADP-152**

INFOID:000000011152415

## **TELESCOPIC MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

utomatic drive ເ	positioner control unit	Telesco	pic motor	Continuity	
Connector	Terminal	Connector	Terminal		
M24	29	MQ4	1	Voc	
10134	26	10194	2	165	
. Check co	ntinuity betwee	n automatic	drive positione	er control uni	harness connector and ground.

Automatic drive pos	itioner control unit		Continuity
Connector	Terminal	Cround	Continuity
M24	29	Ground	No
M34	26		INO

#### Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-164, "Removal and Installation". NO >> Repair or replace harness.

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#### < 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**

INFOID:000000011152419

INFOID:000000011152418

## **1.** CHECK DOOR MIRROR MOTOR FUNCTION

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

Refer to ADP-26, "CONSULT Function (AUTO DRIVE POS.)".

Is the inspection result normal?

- YES >> Door mirror motor function is OK.
- NO >> Refer to <u>ADP-154, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000011152420

Regarding Wiring Diagram information, refer to <u>ADP-56</u>, "WITH AROUND VIEW MONITOR : Wiring Diagram" or <u>ADP-40</u>, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram".

#### WITH AROUND VIEW MONITOR SYSTEM

- 1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL
- 1. Turn ignition switch ON.
- 2. Check voltage between door mirror connector and ground.

(+) Door mirror		(-)	Door mirror re- mote control	Voltage (V) (Approx.)	
Connector	Terminal		switch condition	(Approx.)	
	12		UP	Battery voltage	
D28 (LH) D128 (RH)	12		Other than above	0	
	11	Ground	LEFT	Battery voltage	
	11	Gibunu	Other than above	0	
	10		DOWN / RIGHT	Battery voltage	
	10		Other than above	0	

#### Is the inspection result normal?

YES >> Refer to <u>ADP-158</u>, "Component Inspection".

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

## 2. CHECK HARNESS CONTINUITY

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

Automatic drive positioner control unit		Door mirror L	Continuity	
Connector	Terminal	Connector	Terminal	
	12		10	
M33	23	D28	12	Yes
	24		11	

### < DTC/CIRCUIT DIAGNOSIS >

Door mirror RI	ł					Δ
Automatic drive p	ositioner contro	ol unit	Door mirro	or RH	0 11 11	~
Connector	Term	ninal Co	nnector	Terminal	- Continuity	
	1	0		12		В
M33	1	1 [	D128 11		Yes	
	2	2		10		C
4. Check cont Door mirror LH	inuity betwe	en autom	atic drive	position	er control unit	connector and ground.
Automatic driv	e positioner co	ntrol unit				D
Connecto	r T	Ferminal			ontinuity	
		12	Ground	1		_
M33		23			No	E
		24				
Door mirror RH	ł			÷		F
Automatic driv	e positioner co	ntrol unit			ontinuity	
Connector	· T	erminal			Jinninunty	
		10	Ground	1		G
M33		11			No	
		22				н
Is the inspection	n result norr	nal?				
YES >> GC	) TO 3.					
NO >> Re	pair or repla	ce harnes	S.			
<b>3.</b> CHECK AU	TOMATIC D	RIVE POS	SITIONEF	R CONTI	ROL UNIT O	
1. Connect au	itomatic driv	e position	er control	unit.		АГ
2. Turn ignitio	n switch ON age betweer	l. Nautomati	c drive no	sitioner	control unit c	onnector and ground
Door mirror LF	l	radomati				
(+)						- K
Automatic drive p	ositioner con-		Mirror	switch	Voltage (V)	
trol u	nit	(-)	conc	dition	(Approx.)	
Connector	Terminal					L
	12		DOWN /	RIGHT	Battery voltage	_
	12		Other that	an above	0	M
M22	22	Ground	UP		Battery voltage	_
IVI33	23	Giouna	Other that	an above	0	-
	24		LEFT		Battery voltage	- N
	24		Other that	an above	0	-
						-
Door mirror RI	ł					
(+)						P
Automatic drive p trol ur	ositioner con- nit	(-)	Mirror swi ditio	itch con- on	Voltage (V) (Approx.)	
Connector	Terminal		1			
1	Terminal					

#### < DTC/CIRCUIT DIAGNOSIS >

	10		UP	Battery voltage
	10		Other than above	0
M33	11	Ground	LEFT	Battery voltage
10100	11	Giouna	Other than above	0
22		DOWN / RIGHT	Battery voltage	
	22		Other than above	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit. Refer to <u>ADP-164, "Removal and Installation"</u>.

**4.** CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-158, "Component Inspection".

Is the inspection result normal?

YES >> Refer to <u>GI-47, "Intermittent Incident"</u>.

NO >> Replace door mirror actuator. Refer to <u>MIR-20. "Removal and Installation"</u>.

#### WITHOUT AROUND VIEW MONITOR SYSTEM

1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

1. Turn ignition switch ON.

2. Check voltage between door mirror connector and ground.

(+) Door mirror		(-)	Door mirror re- mote control	Voltage (V) (Approx.)	
Connector	Terminal		switch condition	()	
	8		UP	Battery voltage	
D4 (LH) D107 (RH)	0		Other than above	0	
	Q	Ground	LEFT	Battery voltage	
	5	Cround	Other than above	0	
	40		DOWN / RIGHT	Battery voltage	
	10		Other than above	0	

Is the inspection result normal?

YES >> Refer to <u>ADP-158</u>, "Component Inspection".

NO >> GO TO 2.

# 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

2. Disconnect automatic drive positioner control unit and door mirror.

3. Check continuity between automatic drive positioner control unit connector and door mirror connector. Door mirror LH

Automatic drive positioner control unit		Door mirror LH connector		Continuity	
Connector	Terminal	Connector	Terminal		
	12		10		
M33	23	D4	8	Yes	
	24		9		

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner control unit       Door mirror RH       Continuity         10       8       10         M33       11       D107       9         12       10       Yes         Automatic drive positioner control unit       0       Yes         Automatic drive positioner control unit       Continuity         Automatic drive positioner control unit       Continuity         Automatic drive positioner control unit       Continuity         M33       12       Ground         M33       12       Ground         M33       23       No         Door mirror RH       Ground       No         M33       11       No         10       Ground       No         M33       11       No         24       No       No         10       Ground       No         M33       11       No         22       Sthe inspection result normal?       No         YES       > GO TO 3.       No         NO       >> Repair or replace harness.         Automatic drive positioner or replace harness.       Scheck AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
ConnectorTerminalConnectorTerminalContinuityM331089YesM3311D1079Yes22101010Continuity between automatic drive positioner control unit connector and ground. Door mirror LHAutomatic drive positioner control unit ConnectorTerminal GroundContinuity12GroundNoM3323No24ContinuityDoor mirror RHGroundNoM3311Ground10GroundNo222Nos the inspection result normal? YES> GO TO 3. NONO>> Repair or replace harness.Acteck AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
M3310 11 228 9 10YesA. Check continuity between automatic drive positioner control unit connector and ground. Door mirror LHContinuityAutomatic drive positioner control unit ConnectorTerminal 12 23ContinuityM3323 24NoDoor mirror RHContinuityAutomatic drive positioner control unit 24NoM3311 22NoSthe inspection result normal? YESS GO TO 3. NONO>> Repair or replace harness.A. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
M33     11     D107     9     Yes       12     10     10       . Check continuity between automatic drive positioner control unit connector and ground. Door mirror LH     Continuity       Automatic drive positioner control unit     Continuity       12     Ground       M33     23       12     Ground       M33     23       24     No       Door mirror RH     Continuity       Automatic drive positioner control unit     No       24     No       Door mirror RH     Continuity       Automatic drive positioner control unit     Continuity       10     Ground       M33     11       22     No
22       10         A. Check continuity between automatic drive positioner control unit connector and ground. Door mirror LH         Automatic drive positioner control unit         Automatic drive positioner control unit         12       Ground         M33       23         12       Ground         M33       23         24       No         Door mirror RH       Continuity         Automatic drive positioner control unit       Continuity         M33       11         10       Ground         M33       11         22       No         Sthe inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
Automatic drive positioner control unit       Continuity         Automatic drive positioner control unit       Continuity         Automatic drive positioner control unit       Continuity         M33       23         M33       23         Door mirror RH       No         Automatic drive positioner control unit       Continuity         Mathematic drive positioner control unit       Continuity         Door mirror RH       Continuity         Mass       11         Mass       11         Mass       11         Mass       11         No       No         Sthe inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         OCHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
Automatic drive positioner control unit       Continuity         Connector       Terminal         M33       23         Date       24         Door mirror RH       No         Automatic drive positioner control unit       Continuity         Connector       Terminal         Automatic drive positioner control unit       Continuity         Connector       Terminal         M33       11         M33       11         Sthe inspection result normal?         YES       > GO TO 3.         NO       >> Repair or replace harness.         CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
ConnectorTerminal12GroundM332324NoDoor mirror RHAutomatic drive positioner control unitConnectorTerminalGroundGroundM331110GroundM331122Nos the inspection result normal?YES>> GO TO 3.NO>> Repair or replace harness.OCHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
$ \begin{array}{c c c c c c c c } \hline 12 & Ground & & & & & & & & & & & & & & & & & & &$
M33       23       No         24       24         Door mirror RH       Continuity         Automatic drive positioner control unit       Continuity         Connector       Terminal         10       Ground         M33       11         10       Orego and the second and
24         Door mirror RH         Automatic drive positioner control unit         Connector       Terminal         10       Ground         M33       11         22       No         s the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
Door mirror RH         Automatic drive positioner control unit       Continuity         Connector       Terminal       Continuity         M33       10       Ground       No         M33       11       No       Sthe inspection result normal?         YES       >> GO TO 3.       NO       >> Repair or replace harness.         NO       >> Repair or replace harness.       Control UNIT OUTPUT SIGNAL
Automatic drive positioner control unit       Continuity         Connector       Terminal         M33       10         M33       11         Sthe inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
Connector     Terminal       10     Ground       M33     11       22     No       s the inspection result normal?       YES     >> GO TO 3.       NO     >> Repair or replace harness.       And the control of the contro of the control of the control of the contro of the contro
M33     10     Ground       M33     11     No       22     No       s the inspection result normal?       YES     >> GO TO 3.       NO     >> Repair or replace harness.       J. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
M33     11     No       22     22       s the inspection result normal?       YES     >> GO TO 3.       NO     >> Repair or replace harness.       3. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
22         s the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         S. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
<u>s the inspection result normal?</u> YES >> GO TO 3. NO >> Repair or replace harness. 3. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL
<ul> <li>Connect automatic drive positioner control unit.</li> <li>Turn ignition switch ON.</li> <li>Check voltage between automatic drive positioner control unit connector and ground.</li> </ul>
Door mirror LH
(+)
Automatic drive positioner con- trol unit     (-)     Mirror switch condition     Voltage (V) (Approx.)
Connector Terminal
12 DOWN / RIGHT Battery voltage
Other than above 0
M33 23 Ground UP Battery voltage
Other than above 0
24 LEFT Battery voltage
Other than above 0

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#### < DTC/CIRCUIT DIAGNOSIS >

	10		UP	Battery voltage
	10		Other than above	0
M33	11	Ground	LEFT	Battery voltage
10155	VISS 11	Ground	Other than above	0
21	22		DOWN / RIGHT	Battery voltage
	22		Other than above	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit. Refer to ADP-164, "Removal and Installation".

**4.** CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-158, "Component Inspection".

Is the inspection result normal?

YES >> Refer to <u>GI-47. "Intermittent Incident"</u>.

NO >> Replace door mirror actuator. Refer to <u>MIR-20, "Removal and Installation"</u>.

**Component Inspection** 

INFOID:0000000011152421

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-17, "Exploded View"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace door mirror actuator. Refer to <u>MIR-20, "Removal and Installation"</u>.

2. CHECK DOOR MIRROR MOTOR-II

1. Turn ignition switch OFF.

2. Disconnect door mirror.

3. Apply 12V to each power supply terminal of door mirror motor.

With around view monitor system

Door mirror connector	Tern	ninal	Operational direction	
	(+)	(-)		
	10	11	RIGHT	
D28 (LH) D128 (RH)	11	10	LEFT	
	12	10	UP	
	10	12	DOWN	

Without around view monitor system

Door mirror connector	Terminal		Operational direction	
Door mintor connector	(+)	(–)		
D4 (LH) D107 (RH)	10	9	RIGHT	
	9	10	LEFT	
	8	10	UP	
	10	8	DOWN	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror actuator. Refer to <u>MIR-20. "Removal and Installation"</u>.

## SEAT MEMORY INDICATOR

#### < DTC/CIRCUIT DIAGNOSIS >

## SEAT MEMORY INDICATOR

### Description

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

### **Component Function Check**

### 1. CHECK FUNCTION

- 1. Select "MEMORY SW INDCTR" in "ACTIVE TEST" mode with CONSULT.
- 2. Check the memory indicator operation.

Test item		Description		Ε	
	OFF		OFF		
MEMORY SW INDCTR	ON-1	Memory switch indicator	Indicator 1: ON		
	ON-2	ON-2		F	
s the operation of relevant pa	the operation of relevant parts normal?				
<ul> <li>YES &gt;&gt; Inspection End.</li> <li>NO &gt;&gt; Perform diagnosis procedure. Refer to <u>ADP-159</u>, "Diagnosis Procedure".</li> </ul>					
Diagnosis Procedure					
				H	

Regarding Wiring Diagram information, refer to <u>ADP-56, "WITH AROUND VIEW MONITOR : Wiring Diagram"</u> or <u>ADP-40, "WITHOUT AROUND VIEW MONITOR : Wiring Diagram"</u>.

### 1. CHECK SEAT MEMORY INDICATOR CIRCUIT

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

Driver seat co	ntrol unit	Seat memory switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
P200	10	D60	13	Voc
B209	26	Doo	14	165

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

Driver seat control unit				
	Connector	Terminal	Cround	Continuity
	B209	10	Ground	Giouna
6209	26		NO	
Is the in	nspection result	<u>t normal?</u>		
YES	>> GO TO 2.		-	
	>> Repair or	replace harnes	S.	

**2.** CHECK MEMORY INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector and ground.

## SEAT MEMORY INDICATOR

#### < DTC/CIRCUIT DIAGNOSIS >

(+)				
Seat memory	y switch	(—)	Voltage (V)	
Connector	Terminals		(Approx.)	
D60	15	Ground	Battery voltage	

Is the inspection result normal?

#### YES >> GO TO 3. NO >> Check th

>> Check the following:

- 10A fuse no.1.
- Harness for open or short between memory indicator and fuse.

## **3.** CHECK MEMORY INDICATOR

Refer to ADP-160, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 4.

#### NO >> Replace seat memory switch. Refer to <u>ADP-165</u>, "Removal and Installation".

**4.** CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

#### Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to <u>ADP-163</u>, "Removal and Installation".
- NO >> Repair or replace the malfunctioning part.

#### Component Inspection

INFOID:000000011152425

## 1. CHECK SEAT MEMORY INDICATOR

1. Disconnect seat memory switch.

2. Check continuity between seat memory switch terminals.

Ten		
Seat men	Continuity	
(+)	(-)	
15	13	Vec
15	14	Tes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace seat memory switch. Refer to <u>ADP-165. "Removal and Installation"</u>.

# SYMPTOM DIAGNOSIS ADP SYSTEM SYMPTOMS

### Symptom Table

#### NOTE:

Always perform the "Basic Inspection" before performing diagnosis in the following table. Refer to <u>ADP-71</u>. "Work Flow".

Symptom		Diagnosis procedure	Reference page
	Sliding operation	Check sliding switch.	ADP-93
	Reclining operation	Check reclining switch.	ADP-96
	Lifting operation (front)	Check lifting switch (front).	ADP-99
	Lifting operation (rear)	Check lifting switch (rear).	ADP-102
Manual functions (for specific part) do	Tilt operation (if equipped) Check tilt switch.		ADP-105
not operate.	Telescopic sensor (if equipped)	Check telescopic switch.	ADP-107
	Door mirror operation	1. Changeover switch.	ADP-112
		2. Mirror switch	ADP-114
	All parts of seat	Check power seat switch ground cir- cuit.	ADP-117
	Sliding operation	Check sliding sensor.	ADP-119
	Reclining operation	Check reclining sensor.	ADP-122
	Lifting operation (front)	Check lifting sensor (front).	ADP-125
	Lifting operation (rear)	Check lifting sensor (rear).	ADP-128
lemory functions (for specific part) do	Tilt operation (if equipped)	Check tilt sensor.	ADP-131
not operate.	Telescopic operation (if equipped)	Check telescopic sensor.	ADP-134
	Door mirror operation	Check door mirror sensor.	Driver side: <u>ADP-137</u> Passenger side <u>ADP-139</u>
	Sliding operation	Check sliding motor LH.	ADP-142
	Reclining operation	Check reclining motor LH.	ADP-144
	Lifting operation (front)	Check lifting motor LH (front).	ADP-146
lemory functions and manual functions	Lifting operation (rear)	Check lifting motor LH (rear).	ADP-148
for specific part) do not operate.	Tilt operation (if equipped)	Check tilt motor.	ADP-150
	Telescopic operation (if equipped)	Check telescopic motor.	ADP-152
	Door mirror operation	Check door mirror motor.	<u>ADP-154</u>
Entry/Exit assist function does not operate.		1. Check system setting.	ADP-12
		2. Perform initialization.	<u>ADP-75</u>
		3. Check front door switch (driver side).	DLK-172
Intelligent Key interlock function does not operate. (Other automatic operations and Intelligent Key system are normal)		1. Check door lock function.	DLK-20
		2. Perform memory storing.	ADP-76

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#### < SYMPTOM DIAGNOSIS >

# NORMAL OPERATING CONDITION

## Description

INFOID:000000011152427

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-75</u>
Entry/exit assist function do not operate.	Entry/exit assist function is disabled. <b>NOTE:</b> Entry/exit assist function is set to ON be- fore delivery (initial setting).	Change the settings.	<u>ADP-77</u>
Entry assist function does not operate.	Manual operation with power seat switch was performed after exit assist function execution.	Perform the entry as- sist function.	<u>ADP-22</u>
			Memory function: <u>ADP-18</u>
Memory function, entry/exit as- sist function, or Intelligent Key in- terlock function does not operate.	The operating conditions are not fulfilled	Fulfill the operation conditions.	Entry assist function: <u>ADP-22</u>
			Exit assist function: <u>ADP-20</u>
			Intelligent Key interlock function: <u>ADP-24</u>

# REMOVAL AND INSTALLATION DRIVER SEAT CONTROL UNIT

## Removal and Installation

### REMOVAL

- 1. Remove the driver seat. Refer to SE-87, "Removal and Installation".
- Remove the two driver seat control unit screws (A).
   <⊐: Front</li>
- 3. Disconnect the two harness connectors from driver seat control unit (1).
- 4. Remove the driver seat control unit (1).



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INSTALLATION Installation is in the reverse order of removal. NOTE:

After installing the driver seat, perform additional service when replacing control unit. Refer to <u>ADP-75, "ADDI-</u><u>H</u> <u>TIONAL SERVICE WHEN REPLACING CONTROL UNIT : Work Procedure"</u>.

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**Revision: September 2014** 

## **AUTOMATIC DRIVE POSITIONER CONTROL UNIT**

#### < REMOVAL AND INSTALLATION >

## AUTOMATIC DRIVE POSITIONER CONTROL UNIT

### Removal and Installation

INFOID:000000011152429

#### REMOVAL

- 1. Disconnect the negative battery terminal. Refer to <u>PG-95, "Removal and Installation"</u>.
- 2. Remove the A/C assembly switch. Refer to <u>HAC-154</u>, "Removal and Installation With Navigation" or <u>HAC-153</u>, "Removal and Installation Without Navigation".
- 3. Remove the automatic drive positioner control unit screw (A).
- 4. Disconnect the two harness connectors from the automatic drive positioner control unit (1).
- 5. Remove automatic drive positioner control unit (1).



INSTALLATION Installation is in the reverse order of removal. **NOTE:** After installing the automatic drive positioner of

After installing the automatic drive positioner control unit, perform additional service. Refer to <u>ADP-75, "ADDI-</u><u>TIONAL SERVICE WHEN REPLACING CONTROL UNIT : Work Procedure"</u>.

### < REMOVAL AND INSTALLATION >

# SEAT MEMORY SWITCH

### Removal and Installation

#### REMOVAL

- 1. Remove front door finisher LH. Refer to <u>INT-15, "Removal and Installation"</u>.
- 2. Release the pawls using a suitable tool (A) and remove seat memory switch (2) from switch finisher (1).

INSTALLATION Installation is in the reverse order of removal.

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## < REMOVAL AND INSTALLATION >

# POWER SEAT SWITCH

### Removal and Installation

#### REMOVAL

- 1. Remove seat cushion outer finisher LH (2). Refer to <u>SE-126</u>, <u>"Seat Cushion"</u>. <⊅: Front
- 2. Remove the power seat switch screws (A).
- 3. Remove power seat switch (1) from seat cushion outer finisher LH (2).



INSTALLATION Installation is in the reverse order of removal.

### < REMOVAL AND INSTALLATION >

## ADP STEERING SWITCH

### Removal and Installation

#### REMOVAL

- 1. Remove steering column lower cover (1). Refer to <u>IP-17.</u> <u>"Removal and Installation"</u>.
- Release the pawls and remove ADP steering switch (2) from the steering column lower cover (1).
   (\_): Pawl



## INSTALLATION

Installation is in the reverse order of removal.

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