SECTION ADP AUTOMATIC DRIVE POSITIONER

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- 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 Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

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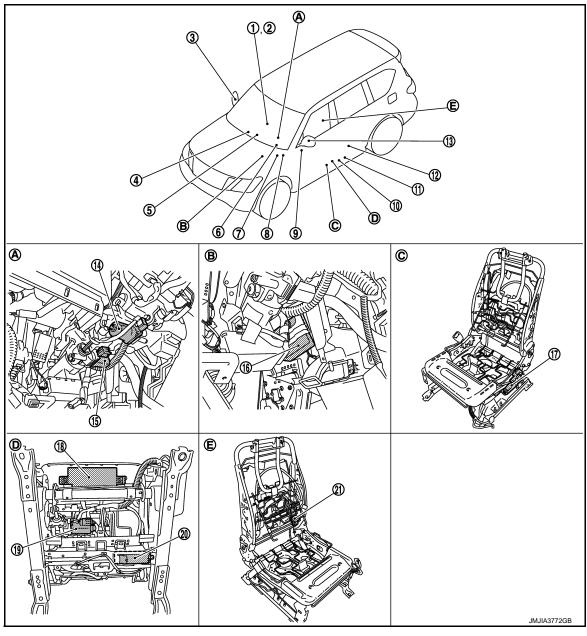
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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- A/T shift selector (detention switch)
 Refer to TM-10, "A/T CONTROL
 SYSTEM: Component Parts Location"
- Unified meter and A/C amp.
 Refer to MWI-6, "METER SYSTEM: Component Parts Location"
- TCM
 Refer to TM-10, "A/T CONTROL
 SYSTEM: Component Parts Location"
- Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location"
- 3. Door mirror (passenger side)
- 6. Tilt & telescopic switch

< SYSTEM DESCRIPTION >

7.	ABS actuator and electric unit (control unit) Refer to <u>BRC-10</u> , "Component Parts <u>Location"</u> (With VDC) or <u>BRC-142</u> , "Component Parts Location" (With BRAKE ASSIST) or <u>BRC-149</u> , "Component Parts Location" (With INTELLIGENT BRAKE ASSIST)	8.	Door mirror remote control switch	9.	Seat memory switch	АВ
10.	Sliding, lifting switch	11.	Reclining switch	12.	Driver side door switch	С
13.	Door mirror (driver side)	14.	Tilt motor	15.	Telescopic motor	
16.	Automatic drive positioner control unit	17.	Lifting motor (rear)	18.	Diver seat control unit	D
19.	Lifting motor (front)	20.	Sliding motor	21.	Reclining motor	
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D.	Backside of seat cushion	E.	View with seat cushion pad and seat back pad removed			Е

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Component Description

Component parts	Description
Driver seat control unit	 Main units of automatic drive positioner system. It is connected to the CAN. It communicates with automatic drive positioner control unit via UART communication. It perform memory function after receiving the door unlock signal from BCM. The address of each part is recorded. Operates each motor of seat to the registered position. Requests the operation of steering column and door mirror to automatic drive positioner control unit Operates the specific seat motor with the signal from power seat switch. Transmits the ignition switch signal (ACC/ON) via UART communication to automatic driver positioner control unit.
Automatic drive positioner control unit	 It communicates with driver seat control unit via UART communication. Perform various controls with the instructions of driver seat control unit. Perform the controls of tilt & telescopic, door mirror and seat memory switch. Operates steering column and door mirror with the signal from the driver seat control
ВСМ	Recognizes the following status and transmits it to driver seat control unit via CAN communication. Handle position: LHD Driver door: OPEN/CLOSE Ignition switch position: ACC/ON Steering lock unit status: LOCK/UNLOCK Door lock: UNLOCK (with Intelligent key or driver side door request switch operation) Key ID Starter: CRANKING/OTHER
IPDM E/R	ON/OFF signal of A/T shift selector (detention switch) is transmitted to driver seat control unit via CAN communication.
ТСМ	The following signals are transmitted to driver seat control unit via CAN communication. • Shift position signal (P range) • Identification of transmission: A/T
Unified meter and A/C amp.	Transmit the vehicle speed signal to driver seat control unit via CAN communication.

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< SYSTEM DESCRIPTION >

Comp	oonent parts	Description
ABS actuator and electric	unit (control unit)	Transmit the vehicle speed signal to driver seat control unit via CAN communication.
A/T sift selector (Detention switch)		 Detention switch is installed on A/T shift selector. It is turned OFF when A/T shift selector is in P position. Driver seat control unit judges that A/T shift selector is in P position if continuity does not exist in this circuit.
	Mirror switch	 Mirror switch is integrated in door mirror remote control switch. It operates angle of door mirror face. It transmits mirror face adjust operation to automatic drive positioner control unit.
Door mirror remote control switch	Changeover switch	 Changeover switch is integrated in door mirror remote control switch. Changeover switch has three positions (L, N and R). It changes operating door mirror motor by transmitting control signal to automatic drive positioner control unit.
	Open/close switch	 Open/close switch is integrated in door mirror remote control switch. Power is supplied to folding mirror from door mirror remote control switch when operating switch.
Tilt 9 talegaggia gwitch	Tilt switch	 Tilt switch is equipped to steering column. The operation signal is input to automatic drive positioner control unit when tilt switch is operated.
Tilt & telescopic switch	Telescopic switch	 Telescopic switch is equipped to steering column. The operation signal is input to automatic drive positioner control unit when telescopic switch is operated.
Seat memory switch	Set switch	It is used for registration and setting change of driving position and Intelligent Key interlock function.
	Seat memory switch	 The maximum 2 driving positions can be registered by memory switch 1 to 2. Driving position is set to the registered driving position when memory switch is pressed while operation conditions are satisfied.
	Seat memory indicator	Memory indicator indicates the status of auto driving position system by turning ON or blinking.
Power seat switch	Sliding switch	 Sliding switch is equipped to power seat switch on seat cushion side surface. The operation signal is input to driver seat control unit when sliding switch is operated.
	Reclining switch	 The operation signal is input to driver seat control unit when reclining switch is operated. The operation signal is input to driver seat control unit when reclining switch is operated.
	Lifting switch (front)	 Lifting switch (front) is equipped to power seat switch on seat cushion side surface. The operation signal is input to driver seat control unit when lifting switch (front) is operated.
	Lifting switch (rear)	 Lifting switch (rear) is equipped to power seat switch on seat cushion side surface. The operation signal is input to driver seat control unit when lifting switch (rear) is operated.

< SYSTEM DESCRIPTION >

Comp	ponent parts	Description	
	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	 Mirror sensor is installed to door mirror. The resistance of 2 sensors (horizontal and vertical) is changed when door mirror is operated. Automatic drive positioner control unit calculates door mirror position according to the change of the voltage of 2 sensor input terminals. 	
	Tilt motor	 Tilt motor is installed to steering column assembly. Tilt motor is activated with automatic drive positioner control unit. Steering column is tilted upward/downward by changing the rotation direction of tilt motor. 	
Tilt motor	Tilt sensor	 Tilt sensor is integrated in tilt motor. The resistance of tilt sensor is changed according to the up/down position of steering column. The terminal voltage of automatic drive positioner control unit will be changed according to a change of tilt sensor resistance. Automatic drive positioner control unit calculates the tilt position from the voltage. 	
	Telescopic motor	 Telescopic motor is installed to steering column assembly. Telescopic motor is activated with automatic drive positioner control unit. Compresses steering column by changing the rotation direction of telescopic motor. 	
Telescopic motor	Telescopic sensor	 Telescopic sensor is integrated in telescopic motor. The resistance of telescopic sensor is changed according to the forward/backward position of steering column. The terminal voltage of automatic drive positioner control unit will be changed according to a change of telescopic sensor resistance. Automatic drive positioner control unit calculates the telescopic position from the voltage. 	
	Sliding motor	 Seat sliding motor is installed to the seat cushion frame. Seat sliding motor is activated with driver seat control unit. Slides the seat frontward/ rearward by changing the rotation direction of sliding motor. 	
Sliding motor	Sliding sensor	 Sliding sensor is integrated in sliding motor. The pulse signal is input to driver seat control unit when sliding is performed. Driver seat control unit counts the pulse and calculates the sliding amount of the seat. 	
	Reclining motor	 Seat reclining motor is installed to seat back frame. Seat reclining motor is activated with driver seat control unit. Seatback is reclined frontward/rearward by changing the rotation direction of reclining motor. 	
Reclining motor	Reclining sensor	 Reclining sensor is integrated in reclining motor. The pulse signal is input to driver seat control unit when the reclining is operated. Driver seat control unit counts the pulse and calculates the reclining amount of the seat. 	
Lifting motor (front)	Lifting motor (front)	 Lifting motor (front) is installed to seat side cushion frame. Lifting motor is activated with driver seat control unit. Seat lifter (front) is moved upward/downward by changing the rotation direction of lifting motor (front). 	
	Lifting sensor (front)	 Lifting sensor (front) is installed in lifting motor (rear). 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. 	

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< SYSTEM DESCRIPTION >

Component parts		Description
Lifting motor (rear)	Lifting motor (rear)	 Lifting motor (rear) is installed to seat slide cushion frame. Lifting motor (rear) is activated with driver seat control unit. Seat lifter (rear) is moved upward/downward by changing the rotation direction of lifting motor (rear).
Lifting motor (rear)	Lifting sensor (rear)	 Lifting sensor (rear) is installed to seat side cushion frame. The pulse signal is input to driver seat control unit when lifting (rear) is operated. Driver seat control unit counts the pulse and calculates the lifting (rear) amount of the seat.

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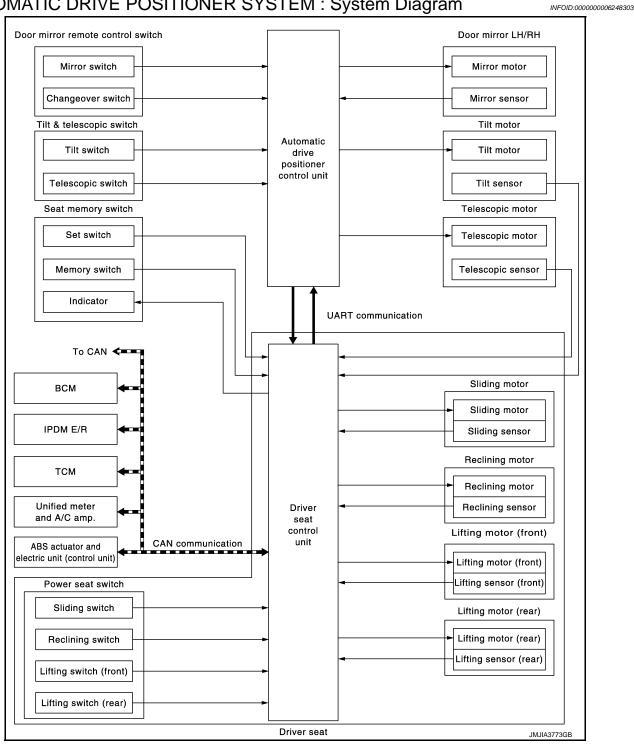
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SYSTEM AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram



AUTOMATIC DRIVE POSITIONER SYSTEM: System Description

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

Function Description		Description
Manual function		The driving position (seat, steering column and door mirror position) can be adjusted by using the power seat switch, tilt & telescopic switch or door mirror remote control switch.
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 are controlled independently with no link to the automatic drive positioner system. Refer to <u>SE-16</u>, "<u>LUMBAR SUPPORT SYSTEM</u>: <u>System Description</u>".

Sleep control

Driver seat control unit equips sleep control for reducing power consumption.

The system switches to sleep control when all of the following conditions are satisfied.

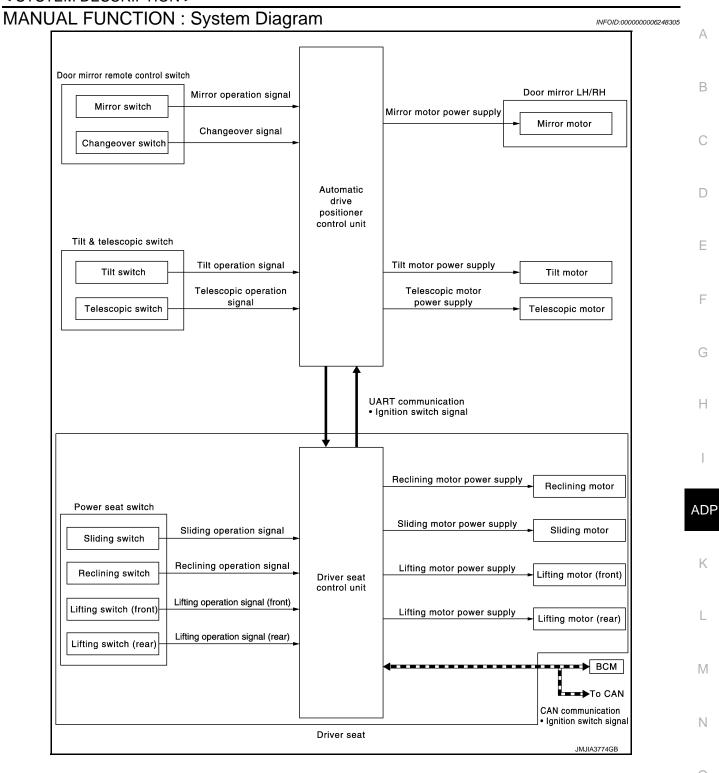
- Ignition switch is OFF (steering lock status).
- All devices of auto driving position system are not operating.
- 45 seconds timer of driver seat control unit is not operating.
- Set switch and memory switch (1 and 2) are OFF.

Wake-up control

Sleep control releases when detecting status change in either of the following item.

- CAN communication
- Power seat switch
- Set switch and seat memory switch (1 and 2)
- Tilt & telescopic switch

MANUAL FUNCTION



MANUAL FUNCTION: System Description

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

OPERATION PROCEDURE

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

Seat operates only up to two places at the same time.

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DETAIL FLOW

Seat

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

NOTE:

The power seat can be operated manually regardless of the ignition switch position.

Tilt & Telescopic

Order	Input	Output	Control unit condition
1	Tilt & telescopic switch	_	The tilt & telescopic switch signal is inputted to the automatic drive positioner control unit when the tilt & telescopic switch is operated.
2	_	Motors (Tilt, telescopic)	The automatic drive positioner control unit actuates each motor according to the operation of the tilt & telescopic switch.

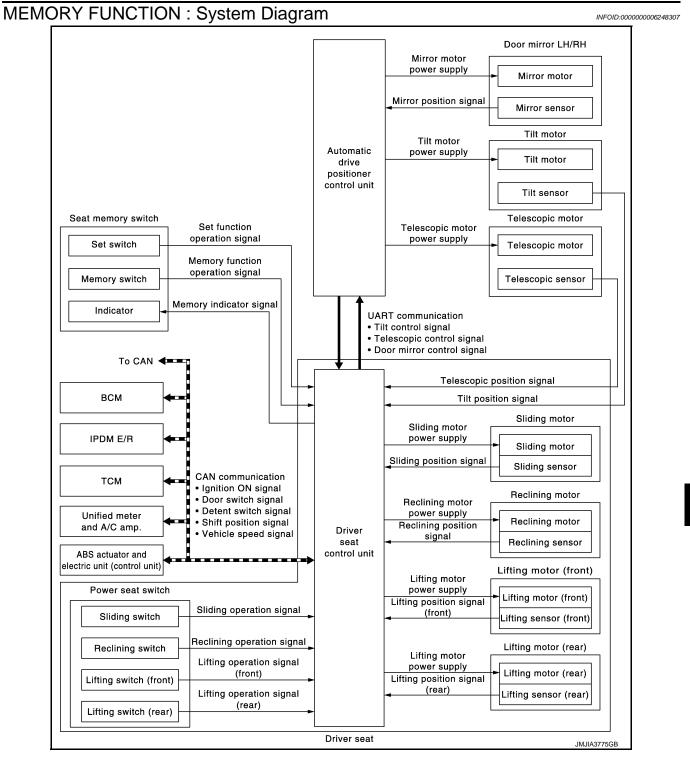
Door Mirror

Order	Input	Output	Control unit condition	
1	Door mirror remote control switch	_	The door mirror remote control switch signal is inputted to the tomatic drive positioner control unit when the door mirror remocontrol 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.

MEMORY FUNCTION



MEMORY FUNCTION: System Description

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

Further information for the memory storage procedure. Refer to ADP-53, "MEMORY STORING: Description".

OPERATION PROCEDURE

- Turn ignition switch ON.
- Shift position P position.

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< SYSTEM DESCRIPTION >

- 3. Push desired memory switch.
- 4. Driver seat, steering and door mirror will move to the memorized position.

OPERATION CONDITION

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

Item	Request status
Ignition position	ON*
Switch inputs Power seat switch Tilt & telescopic switch Door mirror control switch Set switch Memory switch	OFF (Not operated)
A/T shift selector	P position
Memory function	Registered
Vehicle speed	0 Km/h (0 MPH)
CONSULT-III	Not connected

^{*:} When timer function does not operate.

DETAIL FLOW

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

TIMER FUNCTION

- The memory function can be performed for 45 seconds after opening the driver door even if the ignition switch position is in OFF position.
- Satisfy all of the following items. The timer function is not performed if these items are not satisfied.

Item	Request status
Ignition position	OFF
Set switch/memory switch	OFF
Memory function	Registered
A/T shift selector	P position
Steering lock unit status	LOCK
Driver side door switch	OFF
CUNSULT-III	Not connected

EXIT ASSIST FUNCTION

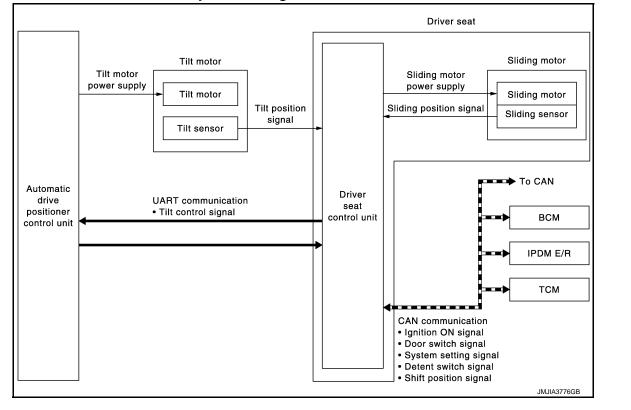
EXIT ASSIST FUNCTION: System Diagram

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EXIT ASSIST FUNCTION: System Description

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- When exiting, the condition is satisfied, the seat is moved backward 40 mm (1.57 in) from normal sitting position and the steering is moved to the most upper position.
- The seat slide amount and the steering operation at entry/exit operation can be changed.

NOTE:

- This function is set to ON before delivery (initial setting).
- Further information for the system setting procedure. Refer to <u>ADP-54, "SYSTEM SETTING: Description"</u>.

OPERATION PROCEDURE

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

OPERATION CONDITION

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

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

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< SYSTEM DESCRIPTION >

Item	Request status
Transmission	A/T
CUNSULT-III	Not connected

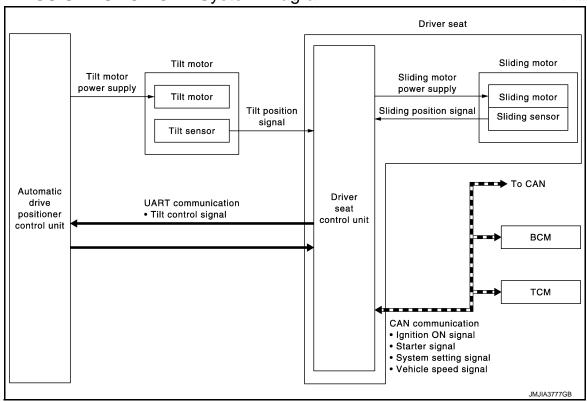
DETAIL FLOW

Order	Input	Output	Control unit condition	
1	Door switch (Driver side)	_	Driver seat control unit receives door switch signal (driver side/open) from BCM via CAN communication.	
2	_	Motors (Sliding, tilt)	Driver seat control unit operates the seat sliding motor, which recognizes that the driver side door is opened with ignition switch OFF. Driver seat control unit then requests the operations of tilt motor to auto drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor for a constant amount.	
3	Sensor (Sliding, tilt)	_	Each sensor monitors the operating positions of seat and steering, and then stops the operation of each motor when each part reaches the recorded address.	

ENTRY ASSIST FUNCTION

ENTRY ASSIST FUNCTION: System Diagram

INFOID:0000000006248311



ENTRY ASSIST FUNCTION : System Description

INFOID:0000000006248312

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

NOTE:

- This function is set to ON before delivery (initial setting).
- Further information for the system setting procedure. Refer to <u>ADP-54, "SYSTEM SETTING: Description"</u>.

OPERATION PROCEDURE

1. Turn ignition switch ACC.

SYSTEM

< SYSTEM DESCRIPTION >

2. Driver seat and steering column will return from the exiting position to entry position.

OPERATION CONDITION

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

Item	Request status
Seat, steering column	The vehicle is not moved after performing the exit assist function.
Switch inputs Power seat switch Tilt & telescopic switch Door mirror control switch Set switch Memory switch	OFF (Not operated)
Vehicle speed	0 Km/h (0 MPH)
Starter	OFF
Transmission	A/T
CONSULT-III	Not connected

DETAIL FLOW

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

INTELLIGENT KEY INTERLOCK FUNCTION

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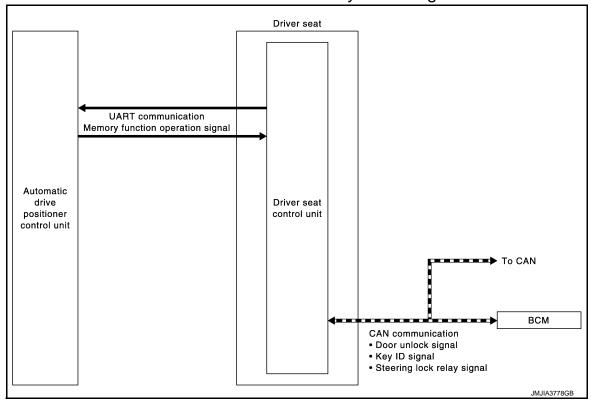
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INTELLIGENT KEY INTERLOCK FUNCTION : System Diagram

INFOID:0000000006248313



INTELLIGENT KEY INTERLOCK FUNCTION: System Description

INFOID:0000000006248314

- 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 (steering lock unit status), 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.
- Operation other than memory function of seat sliding is performed. Seat sliding and steering column tilt perform exit assist operation.
- Turn ignition switch ACC.
- 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-54, "INTELLIGENT KEY INTERLOCK 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

< SYSTEM DESCRIPTION >

Item	Request status
Ignition position	OFF
Intelligent key interlock function	Registered
Steering lock unit status	LOCK
Switch inputs Power seat switch Tilt & telescopic switch Door mirror control switch Set switch Memory switch	OFF (Not operated)
A/T shift selector	P position

DETAIL FLOW

Order	Input	Output	Control unit condition	
1	Door unlock signal (CAN) Key ID signal (CAN)	_	Driver seat control unit receives unlock signal and key ID signal from BCM, when driver seat control unit is unlocked by Intelligent Key of driver side door request switch.	
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:0000000006248315

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	ADP-56
Only manual functions operate normally.	CONTROL UNIT	U1010	ADP-57
	EEPROM	B2130	ADP-66
Only manual functions, except door mirror, operate normally.	UART communication	B2128	ADP-64
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	ADP-58
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	ADP-60
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	ADP-62

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DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

CONSULT-III Function

INFOID:0000000006248316

The automatic drive positioner system can be checked and diagnosed for component operation using CON-SULT-III.

APPLICATION ITEMS

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

SELF-DIAGNOSIS RESULTS

Refer to ADP-31, "DTC Index".

DATA MONITOR

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
STARTER SW	"ON/OFF"	×	×	Ignition key switch ON (START, ON) /OFF (ACC, OFF) status judged from the ignition switch signal.
SET SW	"ON/OFF"	×	×	ON/OFF status judged from the setting switch signal.
MEMORY SW 1	"ON/OFF"	×	×	ON/OFF status judged from the seat memory switch 1 signal.
MEMORY SW 2	"ON/OFF"	×	×	ON/OFF status judged from the seat memory switch 2 signal.
DETENT SW	"ON/OFF"	×	×	The A/T shift selector position "OFF (P position) / ON (other than P position)" judged from the detention switch signal.
STEERING STATUS	"LOCK/UN- LOCK"	×	×	LOCK/UNLOCK status judged from steering lock unit.
SLIDE SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the sliding switch (forward) signal.
SLIDE SW-RR	"ON/OFF"	×	×	ON/OFF status judged from the sliding switch (backward) signal.
RECLN SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the reclining switch (forward) signal.
RECLN SW-RR	"ON/OFF"	×	×	ON/OFF status judged from the reclining switch (backward) signal.
LIFT FR SW-UP	"ON/OFF"	×	×	ON/OFF status judged from the lifting switch front (up) signal.
LIFT FR SW-DN	"ON/OFF"	×	×	ON/OFF status judged from the lifting switch front (down) signal.
LIFT RR SW-UP	"ON/OFF"	×	×	ON/OFF status judged from the lifting switch rear (up) signal.
LIFT RR SW-DN	"ON/OFF"	×	×	ON/OFF status judged from the lifting switch rear (down) signal.
TILT SW-UP	"ON/OFF"	×	×	ON/OFF status judged from the tilt switch (up) signal.
TILT SW-DOWN	"ON/OFF"	×	×	ON/OFF status judged from the tilt switch (down) signal.

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
TELESCO SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the telescoping switch (forward) signal.
TELESCO SW-RR	"ON/OFF"	×	×	ON/OFF status judged from the telescoping switch (backward) signal.
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.
VEHICLE SPEED	_	×	×	Display the vehicle speed signal received from combination meter by numerical value [km/h].
P RANG SW CAN	"ON/OFF"	×	×	ON/OFF status judged from the P range switch signal.
R RANGE (CAN)	"ON/OFF"	×	×	ON/OFF status judged from the R range switch signal.
DOOR SW-FL	"ON/OFF"	×	×	ON/OFF status judged from the door switch (front driver side) signal.
DOOR SW-FR	"ON/OFF"	×	×	ON/OFF status judged from the door switch (front passenger side) signal.
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.
KEY ON SW	"ON/OFF"	×	×	ON/OFF status judged from the key on switch signal.
KEYLESS ID	_	×	×	Key ID status judged from the key ID signal.
KYLS DR UNLK	"ON/OFF"	×	×	ON/OFF status judged from the driver side door unlock actuator output switch signal.
VHCL SPEED (ABS)	"ON/OFF"	×	×	ON/OFF status judged from vehicle speed signal.
HANDLE	"RHD/LHD"	×	×	RHD/LHD status judged from handle position signal.
TRANSMISSION	"AT or CVT/ MT"	×	×	AT or CVT/MT status judged from transmission.
SLIDE PULSE	_	-	×	Value (32768) when battery connections are standard. If it moves backward, the value increases. If it moves forward, the value decreases.
RECLN PULSE	_	I	×	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	"√"	_	×	Voltage input from door mirror sensor (passenger side) left/right is displayed.
MIR/SEN LH U-D	"√"	_	×	Voltage input from door mirror sensor (driver side) up/down is displayed.

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DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
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.

ACTIVE TEST

CAUTION:

When driving vehicle, do not perform active test.

Test item	Description
SEAT SLIDE	Activates/deactivates the sliding motor.
SEAT RECLINING	Activates/deactivates the reclining motor.
SEAT LIFTER FR	Activates/deactivates the lifting motor (front).
SEAT LIFTER RR	Activates/deactivates the lifting motor (rear).
TILT MOTOR	Activates/deactivates the tilt motor.
TELESCO MOTOR	Activates/deactivates the telescopic motor.
MIRROR MOTOR RH	Activates/deactivates the mirror motor (passenger side).
MIRROR MOTOR LH	Activates/deactivates the mirror motor (driver side).
MEMORY SW INDCTR	Turns ON/OFF the memory indicator.

WORK SUPPORT

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

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

DRIVER SEAT CONTROL UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condi	tion	Value/Status
SET SW	Set switch	Push	ON
SET SW	Set switch	Release	OFF
MEMORY CWA	Managara suitab d	Push	ON
MEMORY SW1	Memory switch 1	Release	OFF
MEMORY CWO	Mamany quitab 0	Push	ON
MEMORY SW2	Memory switch 2	Release	OFF
01.105.014.50	Oliding quitab (forward)	Operate	ON
SLIDE SW-FR	Sliding switch (forward)	Release	OFF
SLIDE SW-RR	Cliding awitch (hadaward)	Operate	ON
SLIDE SW-KK	Sliding switch (backward)	Release	OFF
DECLN CW ED	Declining quitab (forward)	Operate	ON
RECLN SW-FR	Reclining switch (forward)	Release	OFF
DECLN CW DD	Reclining switch (back-	Operate	ON
RECLN SW-RR	ward)	Release	OFF
LIFT FR SW-UP	Lifting quitab front (up)	Operate	ON
LIFT FR SW-UP	Lifting switch front (up)	Release	OFF
LIFT FR SW-DN	Lifting switch front (down)	Operate	ON
		Release	OFF
LIFT RR SW-UP	Lifting switch rear (up)	Operate	ON
LII I KK SW-OI	Litting Switch real (up)	Release	OFF
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON
LII I KK SW-DN	Litting Switch real (down)	Release	OFF
MIR CON SW-UP	Mirror switch	Up	ON
WIIN CON OW-OI	WIII OF SWILOT	Other than the above	OFF
MIR CON SW-DN	Mirror switch	Down	ON
WIIN CON OW-DIN	WIII OF SWILOT	Other than the above	OFF
MIR CON SW-RH	Mirror switch	Right	ON
WIIIC OOK OW TOT	WIII OF SWILOT	Other than the above	OFF
MIR CON SW-LH	Mirror switch	Left	ON
WIIN OON OW EN	WIII OF SWILOFF	Other than the above	OFF
MIR CHNG SW-R	Changeover switch	Right	ON
wiii. Oi ii O Ovv-i	Shangeover switch	Other than the above	OFF
MIR CHNG SW-L	Changeover switch	Left	ON
0.1140 044-6	Changeover switch	Other than the above	OFF
TILT SW-UP	Tilt switch	Upward	ON
	THE SWILOTT	Other than the above	OFF
TILT SW-DOWN	Tilt switch	Downward	ON
	THE STREET	Other than the above	OFF

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Monitor Item	Condi	ition	Value/Status	
TEL 5000 0W 5D	Talaanania ausitah	Forward	ON	
TELESCO SW-FR	Telescopic switch	Other than the above	OFF	
TELESCO SW DD	Talagagaig gwitch	Backward	ON	
TELESCO SW-RR	Telescopic switch	Other than the above	OFF	
DETENT SW	A/T shift selector	P position	OFF	
DETENT SW	AV I SIIII SEIECIOI	Other than the above	ON	
STARTER SW	Ignition position	Cranking	ON	
- STAIRTER OW	ignition position	Other than the above	OFF	
		Forward	The numeral value decreases *	
SLIDE PULSE	Seat sliding	Backward	The numeral value increases*	
		Other than the above	No change to numeral value*	
		Forward	The numeral value decreases*	
RECLN PULSE	Seat reclining	Backward	The numeral value increases *	
		Other than the above	No change to numeral value*	
		Up	The numeral value decreases *	
LIFT FR PULSE	Seat lifter (front)	Down	The numeral value increases *	
		Other than the above	No change to numeral value*	
		Up	The numeral value decreases *	
LIFT RR PULSE	Seat lifter (rear)	Down	The numeral value increases *	
		Other than the above	No change to numeral value*	
MIR/SEN RH U-D	Door mirror (passenger sid	e)	Change between 3.4 (close to peak) 0.6 (close to valley)	
MIR/SEN RH R-L	Door mirror (passenger sid	e)	Change between 3.4 (close to left edge) 0.6 (close to right edge)	
MIR/SEN LH U-D	Door mirror (driver side)		Change between 3.4 (close to peak) 0.6 (close to valley)	
MIR/SEN LH R-L	Door mirror (driver side)		Change between 0.6 (close to left edge) 3.4 (close to right edge)	
		Upward	The numeral value decreases *	
TILT PULSE	Tilt position	Downward	The numeral value increases *	
		Other than the above	No change to numeral value*	
		Forward	The numeral value decreases *	
TELESCO PULSE	Telescopic position	Backward	The numeral value increases *	
		Other than the above	No change to numeral value*	
075500000000000000000000000000000000000	0	LOCK	LOCK	
STEERING STATUS	Steering lock unit	unlock	UNLOCK	
VEHICLE SPEED	The condition of vehicle sp	eed is displayed	km/h	
P RANG SW CAN	A/T shift selector	P position	ON	
F RAING SW CAIN	AV I SHIII SCIECTOI	Other than the above	OFF	
R RANGE (CAN)	A/T shift selector	R position	ON	
INTINGE (UAN)	AN I SHIIL SCIECTOI	Other than the above	OFF	
DOOR SW-FL	Driver door	Open	ON	
		Close	OFF	

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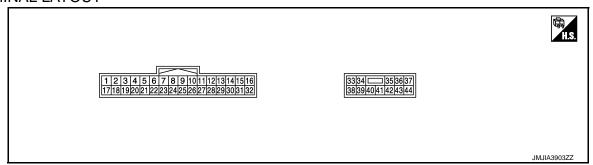
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Monitor Item	Condi	ition	Value/Status
DOOR SW-FR	Passenger door	Open	ON
DOOK SW-FK	rassenger door	Close	OFF
IGN ON SW	Ignition switch	ON position	ON
IGIN OIN SW	Igrillion Switch	Other than the above	OFF
ACC ON SW	Ignition switch	ACC or ON position	ON
ACC ON SW	Ignition switch	Other than the above	OFF
KEY ON SW	Intelligent Koy	Inserted is key slot	ON
KET ON SW	Intelligent Key	Inserted is not key slot	OFF
KEYLESS ID	UNLOCK button of Intellige	ent Key is pressed	1, 2, 3, 4 or 5
KYLS DR UNLK	Intelligent Key or driver	ON	ON
KILS DK UNLK	side door request switch	OFF	OFF
VHCL SPEED (ABS)	Can signal from ABS	Received	ON
VHCL SPEED (ABS)	Call Signal Holli Ab3	Not received	OFF
HANDLE	The PCM for handle position	on is displayed	LHD
MANULE	The BCM for handle position	on is displayed	RHD
TRANSMISSION	Transmission type is displa	wod	AT or CVT
INANSIMISSION	Transmission type is displa	iyeu	MT

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

TERMINAL LAYOUT



PHYSICAL VALUES

	inal No. e color)	Description		Condition	Voltage (V)	
+	-	Signal name	Input/ output	Condition	(Approx.)	
1 (R/Y)	_	CAN-H	_	_	_	
2 (R)	Ground	UART communication (TX/RX)	Input	Ignition switch ON	10msec/div 5V/div JMJIA1391ZZ	

4 (R/L)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	10mSec/div
					Other than the above	0 or 5
5 (R/B)	Ground	Telescopic sensor signal	Input	Steering telescopic	Operate	10mSec/div 2V/div JMJIA0119ZZ
					Other than the above	0 or 5
•		Manager Male Online			Press	0
6 (R/W)	Ground	Memory switch 2 sig- nal	Input	Memory switch 2	Other than the above	5
					Illuminate	1
7 (R/G)	Ground	Memory indicator 2 signal	Output	Memory indicator 2	Other than the above	12
8	Ground	Sliding switch back-	Innut	Sliding switch	Operate (backward)	0
(SB)	Ground	ward signal	Input	Sliding switch	Other than the above	12
9	Ground	Reclining switch back-	Input	Reclining switch	Operate (backward)	0
(L)		ward signal			Other than the above	12
10	Ground	Lifting switch (front)	Input	Lifting switch	Operate (down)	0
(L/B)		down signal	•	(front)	Other than the above	12
11 (L/W)	Ground	Lifting switch (rear) down signal	Input	Lifting switch (rear)	Operate (down)	0
		down signal		(leai)	Other than the above	12
12 (L/R)	Ground	Sensor power supply	Output	_		12
17 (V)	_	CAN-L	_	_		_
18 (B/W)	Ground	Sliding sensor signal	Input	Seat sliding	Operate	10mSec/div
					Other than the above	0 or 5

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19 (B/R)	Ground	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate Other than the	10mSec/div 2V/div JMJIA0119ZZ
20 (B/L)	Ground	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate Other than the	10mSec/div 2V/div JMJIA0119ZZ
					above	0 or 5
21 (W/B)	Ground	Tilt sensor signal	Input	Steering tilt	Operate	2V/div JMJIA0119ZZ
					Other than the above	0 or 5
22	Ground	Memory switch 1 sig-	Input	Memory switch 1	Press Other than the	0
(W/L)		nal	•	,	above	5
23 (W/R)	Ground	Memory indicator 1 signal	Output	Memory indicator	Other than the	1 12
					above Operate	
24 (V/W)	Ground	Sliding switch forward signal	Input	Sliding switch	(forward) Other than the	0
					above	12
25		Reclining switch for-		.	Operate (forward)	0
(Y/B)	Ground	ward signal	Input	Reclining switch	Other than the above	12
26	0	Lifting switch (front) up		Lifting switch	Operate (up)	0
(Y/R)		signal	Input	(front)	Other than the above	12
27	Ground	Lifting switch (rear) up	Input	Lifting switch	Operate (up)	0
(Y/L)	Giound	signal	mput	(rear)	Other than the above	12
28		0.4		0.1	Press	0
(G)	Ground	Set switch signal	Input	Set switch	Other than the above	5

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33 (R)	Ground	Battery power supply	Input	_		Battery voltage
34	Ground	Sliding motor back-	Outroit	Seat sliding	Operate (backward)	12
(B)		ward output signal	Output		Other than the above	0
35		Reclining motor for-	0.1.1	O and a supplied to	Operate (forward)	12
(G)	Ground	ward output signal	Output	Seat reclining	Other than the above	0
36	Crawad	Lifting motor (front) down output signal	Output	Coat litting (front)	Operate (down)	12
(L)	Ground			Seat lifting (front)	Other than the above	0
38	38 Ground Sliding motor forward Output Seat sliding	Coat oliding	Operate (forward)	12		
(GR)		output signal	Output	Seat sliding	Other than the above	0
39		Reclining motor back- ward output signal	Output	t Seat reclining	Operate (backward)	12
(Y)					Other than the above	0
40	40 . Lifting mo	Lifting motor (front) up	Output	Seat lifting (front)	Operate (up)	12
(W)	Ground	output signal	Output	Seat litting (ITOTIL)	Other than the above	0
41	Ground	Lifting motor (rear) up	motor (rear) up	Seat lifting (rear)	Operate (up)	12
(V)	Ground	output signal	Output	Seat litting (rear)	Other than the above	0
42	Ground	Lifting motor (rear) down output signal	Output	Seat lifting (rear)	Operate (down)	12
(P/B)	Stourid				Other than the above	0
43 (LG)	Ground	Ground	_	_		0

Fail Safe

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	ADP-56
Only manual functions operate normally.	CONTROL UNIT	U1010	ADP-57
	EEPROM	B2130	ADP-66
Only manual functions, except door mirror, operate normally.	UART communication	B2128	ADP-64
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	<u>ADP-58</u>
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	ADP-60
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	ADP-62

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DTC Index

CONSULT-III	Tim	ing ^{*1}		Reference page	
display	Current mal- function	Previous mal- function	Item		
CAN COMM CIRCUIT [U1000]	0	1-39	CAN communication	ADP-56	
CONTROL UNIT [U1010]	0	1-39	Control unit	ADP-57	
SEAT SLIDE [B2112]	0	1-39	Seat slide motor output	ADP-58	
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	ADP-60	
STEERING TILT [B2116]	0	1-39	Tilt motor output	ADP-62	
UART COMM [B2128]	0	1-39	UART communication	ADP-64	
EEPROM [B2130]	0	1-39	EEPROM	ADP-66	

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^{• 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.

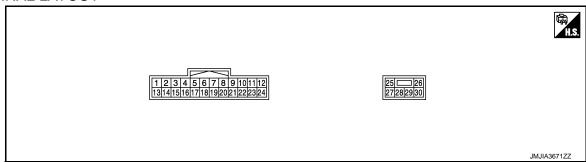
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition		Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx.)
1	Ground	Tilt quitab un aignal	lanut	Tilt switch	Operate (up)	0
(Y)	Ground	Tilt switch up signal	Input		Other than the above	5
2	Ground	Changeover switch RH	Input	Changeover	RH	0
(GR/B)	Ground	signal	iriput	switch position	Neutral or LH	5
3	Ground	Mirror switch up signal	Input	Mirror switch	Operated (up)	0
(Y/G)	Ground	Mirror switch up signal		Mirror switch	Other than the above	5
4	Ground	Mirror switch left signal	Input	Mirror switch	Operated (left)	0
(GR/R)					Other than the above	5
5 (R/B)	Ground	Door mirror sensor (passenger side) up/down signal	Input	Door mirror RH position		Change between 3.4 (close to peak) 0.6 (close to valley)
6 (L/Y)	Ground	Door mirror sensor (driver side) up/down signal	Input	Door mirror LH p	osition	Change between 3.4 (close to peak) 0.6 (close to valley)
7	Ground	Telescopic switch for-	lanut	Telescopic	Operate (forward)	0
(P)	Ground	ward signal	Input	switch	Other than the above	5
8 (LG/R)	Ground	UART communication (TX/RX)	Output	Ignition switch ON		10msec/div

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description		Q Pitt		Voltage (V)
+	-	Signal name	Input/ Output	Cor	ndition	(Approx.)
10	Ground	Door mirror motor (passenger side) up output	Output	Door mirror RH	Operate (up)	12
(L/O)	Ground	signal	Output	Door million Kiri	Other than the above	0
11	Ground	Door mirror motor (pas- senger side) left output	Output	Door mirror RH	Operate (left)	12
(Y/B)	Ground	signal	Output	Door militer ter	Other than the above	0
12	Ground	Door mirror motor (driver side) down/right output	Output	Door mirror (LH)	Operate (down/right)	12
(SB)		signal			Other than the above	0
13	Ground	Tilt switch down signal	Input	Tilt switch	Operate (down)	0
(LG)		J	•		Other than the above	5
14	Ground	Changeover switch LH	Input	Changeover	LH	0
(BR)	0.00	signal		switch position	Neutral or RH	5
15	Ground	Mirror switch down sig- nal	Input	Mirror switch	Operate (down)	0
(O/L)					Other than the above	5
16	Ground	Mirror switch right signal	Input	Mirror switch	Operate (right)	0
(V/W)	Ground	imiror omion right dightal	mpar	······································	Other than the above	5
17 (L/R)	Ground	Door mirror sensor (passenger side) left/right signal	Input	Door mirror RH p	osition	Change between 3.4 (close to left edge) 0.6 (close to right edge)
18 (G/W)	Ground	Door mirror sensor (driver side) left/right signal	Input	Door mirror LH po	osition	Change between 0.6 (close to left edge) 3.4 (close to right edge)
19	Ground	Telescopic switch back-	Input	Telescopic	Operate (backward)	0
(G)	Ground	ward signal	mpat	switch	Other than the above	5
20 (Y)	Ground	Sensor ground	_			0
21 (W/L)	Ground	Door mirror motor sensor power supply	Input	_		5
22	Ground	Door mirror motor (pas- senger side) down/right output signal	Output	Door mirror (RH)	Operate (down/right)	12
(V)					Other than the above	0
23	Ground	Ground Door mirror motor (driver side) up output signal	Output	Door mirror (LH)	Operate (up)	12
(L/W)	Giound				Other than the above	0

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AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

<u> </u>	101100	INFORMATION >				
Terminal No. (wire color)		Description		Condition		Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx.)
24	0	Door mirror motor (driver	Outrout	t Door mirror (LH)	Operate (left)	12
(BR/Y)	Ground	side) left output signal	Output		Other than the above	0
25 (W/R)	Ground	Battery power supply	Input			Battery voltage
26	Ground	Telescopic motor back- ward output signal	Output	Steering tele- scopic	Operate (backward)	12
(L)					Other than the above	0
27 (P)	Ground	Tilt & telescopic sensor power supply	Output	-		12
28	Ground	Tilt motor down output	Output	Steering tilt	Operate (down)	12
(G)	Oround	signal	Output	oteering tilt	Other than the above	0
	Ground	Tilt motor up output sig- nal	Output	Steering tilt	Operate (up)	12
29 (W/B)					Other than the above	0
		Telescopic motor for-		Steering tele- scopic	Operate (forward)	12
		ward output signal			Other than the above	0
30 (B)	Ground	Ground		_		0

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:000000000062	48321

ECU	Reference
	BCS-33, "Reference Value"
BCM	BCS-54, "Fail-safe"
DCIVI	BCS-56, "DTC Inspection Priority Chart"
	BCS-57, "DTC Index"

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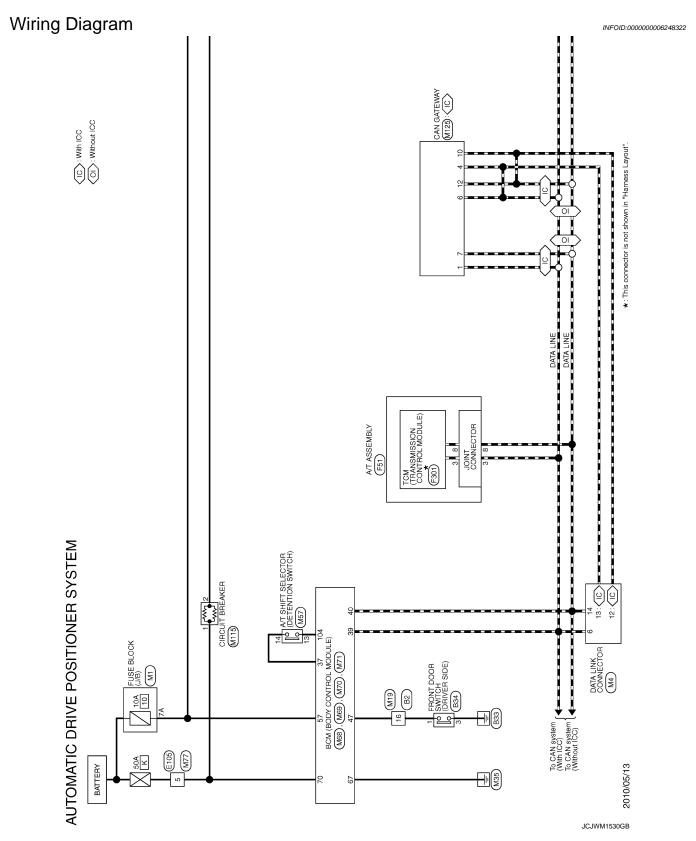
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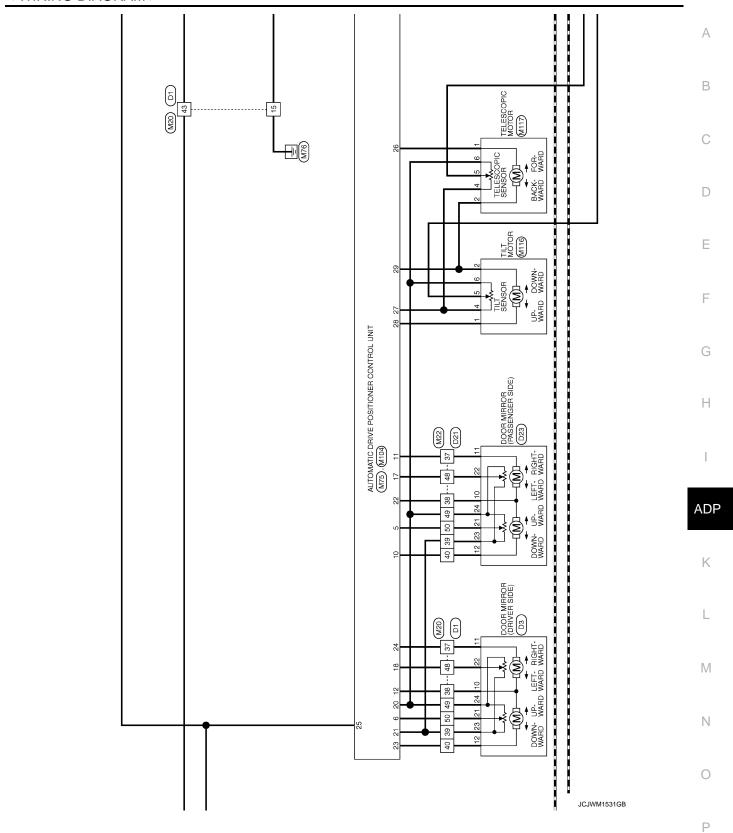
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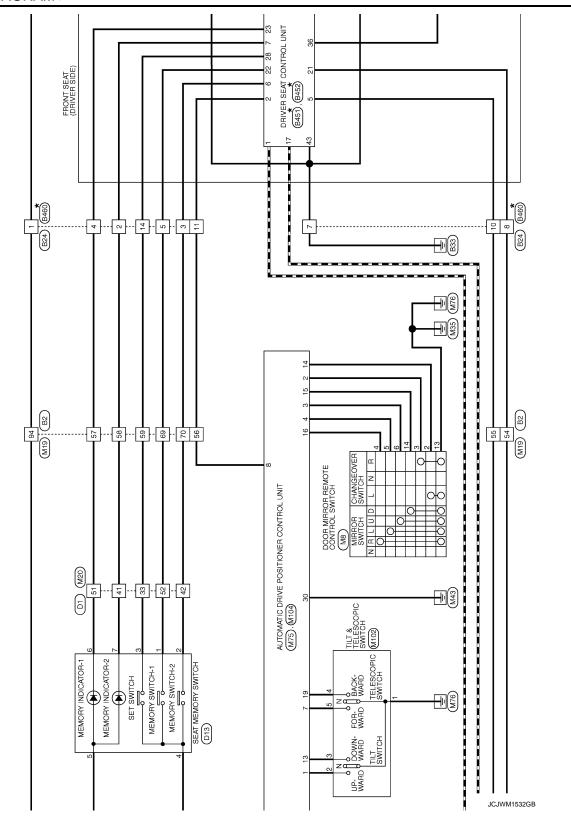
WIRING DIAGRAM

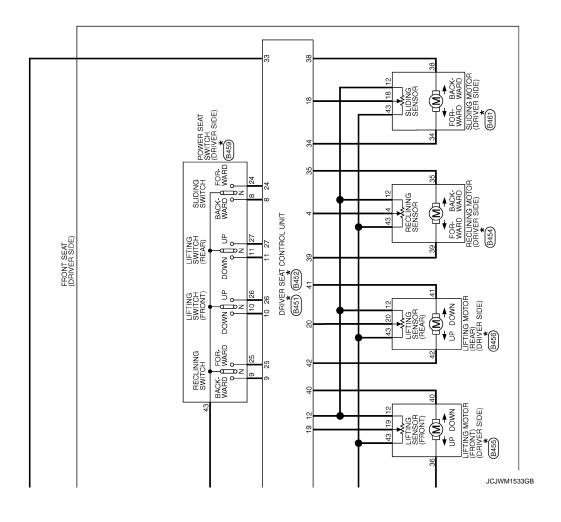
AUTOMATIC DRIVE POSITIONER SYSTEM



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AUTC	MATIC	AUTOMATIC DRIVE POSITIONER SYSTEM	STEM									
Connector No.	r No. B2	2	45	R/Y		Connector No.	П	B24	Con	Connector No.	B451	
Connector Name		WIRE TO WIRE	46	8 E	1 1	Connect	Connector Name	WIRE TO WIRE	Con	Connector Name	DRIVER SEAT CONTROL UNIT	
Connector Type	П	TH80MW-CS16-TM4	20	Н	B	Connector Type	П	NS16FW-CS	Con	Connector Type	TH32FW-NH	
€ C	L		52	W/R	24 ×				Œ			
E			53	Н	B -	E	L		ţ.	y A E		
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No.	of Wire	Signal Name [Specification]	8 9	$^{+}$		S S	_	Signal Name [Specification]	_ Z	_	Signal Name [Specification]	
2	_	1	63	╀	1	- 	W/R	ı		- 8√	CAN-H	
3	BR	1	94	~	-	2	5/A	1		~	UART (TX/RX)	
5	R/W	1	65	W		3	P/L	-		4 R/L	PULSE (RECLINER)	
9	٦	-	99	9	_	4	GR/R	-		5 R/B	TELE	
7	^		67	П	-	9	LG/B			6 R/W	ADDRESS 2	
6	g		89		T	7	В	-		R/G	IND-2	
11	W/B	_	69	LG/B	/B	8	0/5	1		8 SB	SLIDE SW (BACKWARD)	
12	BR	1	70	P/L		6	L	-		9 F	RECLINER SW (BACKWARD)	
13	G/R		71	L	-	10	R/B	_	_	10 L/B	FRONT LIFTER SW (DOWNWARD)	
14	B/Y	-	72	Ж		11	LG/R	_	_	11 L/W	REAR LIFTER SW (DOWNWARD)	
15	W/R	1	77	A/B	1	12	Ь	1		12 L/R	SENSOR POWER SUPPLY	
16	GR/R	-	78	Y/L	1	13	٦	-	_	١٧ /	CAN-L	
18	G/W	-	79	Υ	_	14	W/W	-	_	Н		
19	>	_	80	Н		15	BR	_		19 B/R	_	
20	M/G	1	18	\dashv					~	20 B/L	PULSE (REAR LIFTER)	
21	B/W	_	83	BR					2	21 W/B		
22	^	1	84	0/7	- 0	Connector No.		B34	2	Н	ADDRESS 1	
23	SHIELD	-	98	Н	-	100000	Name Name	CECUT DOOD SWITCH (DBIVED SIDE)	2	23 W/R		
24	g	1	87	W/R		Collinect		TOWN DOOR SWILCH (DRIVER SIDE)	2	24 V/W		
25	0	•	88	0	-	Connect	Connector Type /	A03FW	2	25 Y/B	RECLINER SW (FORWARD)	
56	Υ.	-	88	Н	1				2	26 Y/R	FRONT LIFTER SW (UPWARD)	
27	0/7	•	06	GR/L	V	修		E	2	27 Y/L	REAR LIFTER SW (UPWARD)	
28	Y/R	-	91	W	/				2	28 G	SET SW	
59	_ 7	-	92	5	-	2	_	-				
30	В	-	94	H	W/R			<u> </u>				
31	K/√S	-	96	T/W	M			Ţ				
32	B/SB	1	97	~	-	1		<u>m</u>				
33	LG/R	1	86	>	-]				
34	BR/W	_	66	L/W		Terminal	_	Cimal Name [Concification]				
35	GR/R	1	100	D/B	- B	No.	of Wire	Ognal valle Copedition				
36	SB	-				_	GR/R	-				
37	P	1				8	В	ı				
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40	M/G	1										
42	G/R	1										
43	M//A	ı										
44	LG/B	-										

JCJWM1534GB

< WIRING DIAGRAM >

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Signal Name [Specification]	В
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IC DRIVE POSITIONER 98432 DRIVER SEAT CONTROL UNIT NSIZEW-CS SIGNAL DEST CONTROL UNIT SIGNAL DEST CONTROL UNIT SIGNAL DEST CONTROL UNIT SIGNAL DEST CONTROL CONVARD) FROM LIFTER MOTOR (GORWARD) FROM LIFTER MOTOR (LOWWARD) FROM LIFTER MOTOR (LOWWARD) FROM LIFTER MOTOR (LOWWARD) FRAR LIFTER MOTOR (LOWWARD)	M
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JCJWM1535GB	Р

Revision: 2010 May ADP-41 2011 QX56

22 Y/R	47 LG	
Connector No. D13 Connector Name SEAT MEMORY SWITCH Connector Type A08FW TIS 3 5 6 7 2 1 1 4	Terminal Color Of Wire Signal Name [Specification] 2	20 P
STEM	13 14 14 15 15 15 15 15 15	
AUTOMATIC DRIVE POSITIONER SYGEOmeter No. Disconnector No. Disconnector No. Disconnector Type TH40FW-CS15 TH5 H140FW-CS15 TH5 TH5	Terminal Color No. of Wire 1 V V 2 W V 4 Y V 5 LG/R 6 BR/W 8 C C C 111 L/O 112 L/O 113 R C C 123 P/R 114 R C C 125 W/R 126 R C C 127 C C C 127 C C C 128 B C C C 129 P C C C 120 P C C C 120 P C C C 121 L/O 120 P C C C 121 L/O 121 L/O 122 R/W 124 R C C C C 125 W/R 126 W/R 127 C C C C C 128 W/R 129 W/R 120 P C C C C 120 W/R 120 W/R 121 V/W 122 W/R 123 W/R 124 R/W 125 W/R 126 C C C C 127 C C C C C 128 W/R 129 W/R 120 C C C C C 120 W/R 120 C C C C C C C 120 C C C C C C C 120 C C C C C C C C 120 C C C C C C C C C 120 C C C C C C C C C C 120 C C C C C C C C C C C C 120 C C C C C C C C C C C C C C C 120 C C C C C C C C C C C C C C C C C C C	51 GR/R –

JCJWM1536GB

< WIRING DIAGRAM >

Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Signal Name [Specification]	АВ
10 - GND Connector Name FUSE BLOCK (J/B) Connector Type NSOGFW-M2 Terminal Color Signal Name Sama A	C
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AUTOMATIC DRIVE POSITIONER Jonnector Name DOOR MIRROR (PASSENGER SIDE) ALS TREAMWINH LOS TREAMWINH LOS TREAMWINH SIDE CAMERA LH IMAGE GND TO V TO SIDE CAMERA LH IMAGE GND TO SI	M
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Revision: 2010 May ADP-43 2011 QX56

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3	Connector No.	MB	2	¥		9	7/4	1	2	י מ	1	7
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Revision: 2010 May ADP-45 2011 QX56

	92 L/W		Н	100 W/B –		Connector No. M102	Connector Name TILT & TELESCOPIC SWITCH	Connector Type TK06FGY				3 4 1 5 2			la la	re	n -	>	3 LG -	- G			Connector No. M104	Connector Name AUTOMATIC DRIVE POSITIONER CONTROL UNIT	Connector Type NS06FW-CS	ą.	唐	H.S.	07 00 00 00	20 ZS		Tomainel	Ŭ	25 W/R UPWARD]	Ь	g	W/B UPW/	30 B GND		
	Signal Name [Specification]		1	1		-		-	- [With ICG] - [Without ICG]		1	1		-	1		ı	1		ı	1	1	1		1	-	-	11 1	1	-	1	11 1		Т	-	-	-	1	1		
	Terminal Color No. of Wire	- W	3 R/B	4 L	5 × ×	8 P/B	9 W/B	11	12 P	Ľ	Н	7	17 P	18 BR	19 Y/G	20 BR/Y	21 ^	+	23 Y	╁	27 L/W	\forall	+	31 0/2	32 GR/R	34 Y	+	36 B/0	t	40 SB	^	42 K	51 1/0	٣	Н	54 GR/L	M 09	61 B	62 G	S3 S4 SHELD	91 BR
	M75 AUTOMATIC DRIVE POSITIONER CONTROL UNIT	TH24FW-NH	1		7	3 4 5 6 7 8 1011	15 16 17 18 19 20 21 22 23 24		Signal Name [Specification]	UPWARD	SELECT RH	UPWARD	MIR SENS UP DOWN (RH)	MIR SENS UP DOWN (LH)	FORWARD	RX/TX	MIR MTR UP (RH)	MIR MTR LEFT (RH)	MIR MTR DOWN RIGHT (LH)	SELECT LH	DOWNWARD	RIGHTWARD	MIR SENS LEFT&RIGHT (RH)	MIR SENS LEFT (RHIGHT (LH) BACKWARD	SENS GND	SENS POWER	MIR MTR DOWN RIGHT (RH)	MIR MTR UP (LH)				T	S16-TM4			1	2 2 2	2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
STEM	Connector No. Connector Name	Connector Type	4	E	H.S.		1314		Terminal Color No. of Wire	H	2 GR/B	3 4/6	5 R/B	H	7 P	8 LG/R	+	Υ/Β	12 SB MIF	╀	Н	M//A	L/R	W/5 61	╀	21 W/L	>	23 LW	1		Connector No. M77	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS16-TM4	1		8				<u>'</u>	
rsT.	M71 BCM (BODY CONTROL MODULE)	TH40FW-NH Connector Type		修	HS	75 76 77 78 79 80 61 62 83 84 85 86 67 86 89 90			Signal Name [Specification] No.	PUDDLE LAMP CONT	ON IND 2	TRAILER TURN SIG RH CONT 3	PASSENGER DOOR REQUEST SW 5	9	DRIVER DOOR ANT+	DRIVER DOOR ANT- 8	PASSENGER DOOR ANT+ 10	PASSENGER DOOR ANT- 11 Y/B	BACK DOOR ANT+ 12 SB 13 15	ROOM ANT1+	15	. 16 V/W	17 CR	M C	VR 20	Н	LOW SIDE PUSH LED 22 V	E-KEY WARN BUZZER 23	S/L UNIT PWR SPLY		STARTER RELAY CONT Connector No.		Connector Type	IGN PWR SPLY 2	SHIFT N/P	A/T SHIFT SELECT PWR SPLY	STOP LAMP SW 2	BLWR FAN MTR RELAY CONT	S/L CONDITION1	S/L CONDITION2	
ATIC DRIVE POSITIONER SYST				修	HS.	75 76 77 78 79 80 61 62 83 84 85 86 67 86 89 90			Terminal No.	PUDDLE LAMP CONT	W ON IND 2	Y/B TRAILER TURN SIG RH CONT 3	+ 10	O/L TRAILER TURN SIG LH CONT 6		V DRIVER DOOR ANT- 8	LG/B PASSENGER DOOR ANT+ 10	Y/R PASSENGER DOOR ANT- 11 Y/B	12 SB	BR ROOM ANT1+	Y ROOM ANT1-	W ROOM ANT2+ 16 V/W	B ROOM ANT2- 17 L/R	19 G/W	Y PUSH-BTN IGN SW ILL PWR 20	21	L LOW SIDE PUSH LED 22 V	Z3 Z3	W S/L UNIT PWR SPLY		R/W STARTER RELAY CONT Connector No.	Connector Name	SB PUSH SW Connector Type	W/B IGN PWR SPLY 2	BR SHIFT N/P	R/B A/T SHIFT SELECT PWR SPLY	O/L STOP LAMP SW 2	Y/G BLWR FAN MTR RELAY CONT	7		L/W

JCJWM1540GB

SYSTEM	lar	No. or wire	2 W/B	t	5 R/B -	t			Connector No. M125	Connector Name CAN GATEWAY	Connector Type TH12FW-NH	á			1 3 4 5 6	7 9 10 11 12		Terminal Color	_	1 L CAN-H	3 Y BATTERY	4 L CAN-H	5 B GND	6 L CAN-H	7 P CAN-L	GR	α .	m	IZ K											
AUTOMATIC DRIVE POSITIONER SY	M115	CIRCUIT BREAKER	M02FW-P-I C				<u> </u>	<u>-</u>]	2]		Signal Name [Specification]	-	1		M116	TILT MOTOR	NS06FW-CS				2 1 1	7 9	0			Signal Name [Specification]		1 1	-	T	-	M117	40100001	LELESCOPIC MOTOR	NS06FW-CS			_	
AUTOMA	Connector No.	Connector Name	Connector Type		Œ		į.				Terminal Color	No. of Wire	$^{+}$	2 W/R		Connector No.	Connector Name	Connector Type	(E	<u>ا</u>	ė E				L	la.	No. or wire	- 0	t	5 G/0	9	Connector No.		Connector Name	Connector Type	E	U E	112	

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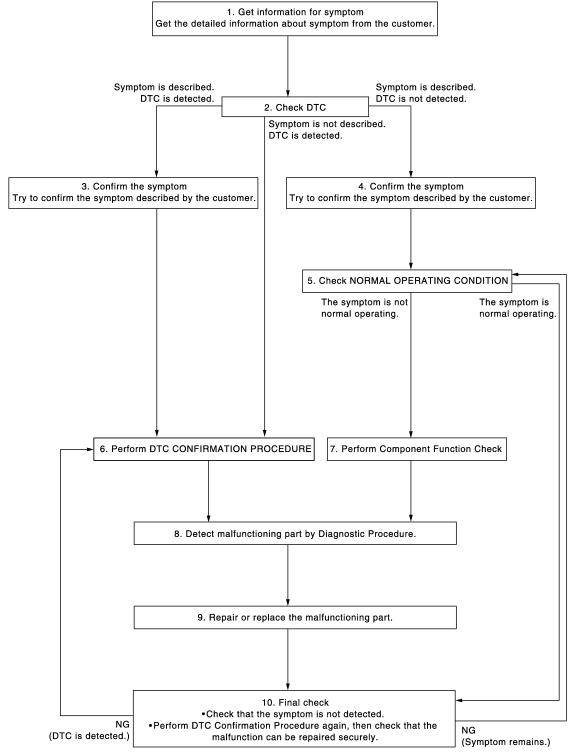
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORK FLOW < BASIC INSPECTION > $1.\mathsf{GET}$ INFORMATION FOR SYMPTOM Α Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred). В >> GO TO 2. 2.CHECK DTC WITH AUTOMATIC DRIVE POSITIONER SYSTEM Check "Self Diagnostic Result" with CONSULT-III. Refer to ADP-31, "DTC Index" Is any symptom described and any DTC is displayed? Symptom is described, DTC is displayed.>>GO TO 3. D Symptom is not described, DTC is displayed.>>GO TO 6. Symptom is described, DTC is not displayed.>>GO TO 4. 3.CONFIRM THE SYMPTOM Е Try to confirm the symptom described by the customer. >> GO TO 6. 4.CONFIRM THE SYMPTOM Try to confirm the symptom described by the customer. >> GO TO 5. CHECK NORMAL OPERATING CONDITION Н Check normal operating condition. Refer to ADP-134, "Description". Is the incident normal operation? >> INSPECTION END YES NO >> GO TO 7. $\mathsf{6}.$ PERFORM DTC CONFIRMATION PROCEDURE ADP Perform the confirmation procedure for the detected DTC. Is the DTC displayed? YES >> GO TO 8. NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". 7. PERFORM COMPONENT FUNCTION CHECK Perform the component function check for the isolated malfunctioning point. >> GO TO 8. M 8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE Isolate the malfunctioning point by performing the diagnosis procedure relevant to the symptom during the component diagnosis.

>> GO TO 9.

9.REPARE OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the malfunctioning part.

>> GO TO 10.

10. FINAL CHECK

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

Р

Are all malfunctions corrected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

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

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000006248324

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

Function	Condition	Procedure
Memory (Seat, steering, mirror)	Erased	Perform storing
Fahrulasit assist	ON	Perform initialization
Entry/exit assist	ON	Set slide amount*1
Intelligent Key interlock	Erased	Perform initialization
intelligent key interlock	Eraseu	Perform storing

^{*1:} 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: Special Repair Requirement INFOID:0000000006248325

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to ADP-52, "SYSTEM INITIALIZATION: Special Repair Requirement".

>> GO TO 2.

2.MEMORY STORAGE

Perform memory storage. Refer to ADP-53, "MEMORY STORING: Special Repair Requirement".

>> GO TO 3.

3.INTELLIGENT KEY INTERLOCK STORAGE

Perform Intelligent Key interlock storage. Refer to ADP-54, "INTELLIGENT KEY INTERLOCK STORING: Special Repair Requirement".

>> GO TO 4.

f 4.SYSTEM SETTING

Perform system setting. Refer to ADP-55, "SYSTEM SETTING: Special Repair Requirement".

>> END

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

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

Function Condition Procedure Memory (Seat, steering, mirror) Erased Perform storing Perform initialization ON Entry/exit assist Set slide amount*1

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INFOID:0000000006248326

< BASIC INSPECTION >

Function	Condition	Procedure
Intelligent Key interlock	Erased	Perform initialization
intelligent Ney Interlock	Liaseu	Perform storing

^{*1:} Default value is 40 mm.

NOTE:

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to ADP-52, "SYSTEM INITIALIZATION: Special Repair Requirement".

>> GO TO 2.

2.MEMORY STORAGE

Perform memory storage. Refer to ADP-53, "MEMORY STORING: Special Repair Requirement".

>> GO TO 3.

3.INTELLIGENT KEY INTERLOCK STORAGE

Perform Intelligent Key interlock storage. Refer to <u>ADP-54</u>, "INTELLIGENT KEY INTERLOCK STORING : <u>Special Repair Requirement</u>".

>> GO TO 4.

4. SYSTEM SETTING

Perform system setting. Refer to ADP-55, "SYSTEM SETTING: Special Repair Requirement".

>> END

SYSTEM INITIALIZATION

SYSTEM INITIALIZATION: Description

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

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

SYSTEM INITIALIZATION: Special Repair Requirement

INFOID:0000000006248329

INFOID:0000000006248328

INITIALIZATION 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.

3. STEP A-2

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

< BASIC INSPECTION > Α >> END **4.** STEP B-1 Drive the vehicle at more than 25 km/h (16 MPH). В >> END MEMORY STORING **MEMORY STORING: Description** INFOID:0000000006248330 D 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: Special Repair Requirement Е 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. Ignirion switch: ON A/T shift selector: P position Н >> GO TO 2. 2.STEP $_{2}$ Adjust driver seat, steering column and outside mirror position manually. >> GO TO 3. ADP **3.**STEP 3 Push set switch. NOTE: Memory indicator for which driver seat position is already retained in memory is illuminated for 5 sec- Memory indicator for which driver seat position is not retained in memory is illuminated for 0.5 second. L 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. M To modify driver seat positions, memory indicator will be turned OFF for 0.5 second, then turned ON for 5 seconds. NOTE: If memory is stored in the same memory switch, the previous memory will be deleted. Ν >> GO TO 4. **4**.STEP 4 Confirm the operation of each part with memory operation.

ADP-53

INTELLIGENT KEY INTERLOCK STORING

>> END

Revision: 2010 May

< BASIC INSPECTION >

INTELLIGENT KEY INTERLOCK STORING: Description

INFOID:0000000006248332

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.

INTELLIGENT KEY INTERLOCK STORING: Special Repair Requirement INFOID-00000000248333

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 driving position and turnout operation can be performed.

1.STEP 1

Check the following conditions.

Ignition switch: OFFInitialization: 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.

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.

>> END SYSTEM SETTING

SYSTEM SETTING: Description

INFOID:0000000006248334

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

Setting Change

x: Applicable

Item	Content	CON- SULT -III	Display	Set switch	Factory setting
Amount of seat sliding for entry/exit assist	The amount of seat sliding for entry/exit assist can be selected from 3 items. [40 mm/80 mm/150 mm]	х	_	_	40 mm
Entry/exit assist (seat)	Entry/exit assist (seat) can be selected: ON (operated) – OFF (not operated)	х	х	v	ON
Entry/exit assist (steering column)	Entry/exit assist (steering column) can be selected: ON (operated) – OFF (not operated)	х	х	X	ON

< BASIC INSPECTION >

SYSTEM SETTING: Special Repair Requirement INFOID:0000000006248335 Α 1. CHOOSE METHOD There are three way of setting method. В Which method do you choose? With CONSULT-III>>GO TO 2. With set switch>>GO TO 4. 2. WITH CONSULT-III - STEP 1 Select "Work support". D >> GO TO 3. 3. WITH CONSULT-III - STEP 2 Е 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) F EXIT TILT SETTING: Entry/exit assist (steering column) Select "SEAT SLIDE VOLUME SET" and touch either of "40 mm", "80 mm", or "150 mm". Then touch "OK". >> 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. ADP 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. >> END L M Ν Р

ADP-55 Revision: 2010 May 2011 QX56

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:0000000006248336

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

DTC Logic

DTC DETECTION LOGIC

DTC No.	CONSULT-III display description	DTC detecting condition	Possible cause
U1000	CAN COMM CIR- CUIT	 Driver seat control unit cannot communicate to other control units. When driver seat control unit cannot communicate CAN communication signal continuously for 2 seconds or more. 	CAN communication system

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON and wait at least 3 seconds.

>> GO TO 2.

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-56, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248338

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

Special Repair Requirement

INFOID:0000000006248339

Refer to ADP-52, "SYSTEM INITIALIZATION: Description".

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic INFOID:0000000006248340

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 controller of driver seat control unit.	Driver seat control unit

Diagnosis Procedure

INFOID:0000000006248341

1. REPLACE DRIVER SEAT CONTROL UNIT

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

>> Replace driver seat control unit.

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B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2112 SLIDING MOTOR

DTC Logic

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON.

>> GO TO 2.

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-58</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248343

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- Perform DTC confirmation procedure. Refer to <u>ADP-58, "DTC Logic"</u>.

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

2.CHECK SLIDING MOTOR CIRCUIT (POWER SHORT)

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

	+)	(-)	Voltage (V) (Approx.)	
Slidin	g motor			
Connector	Terminals		, , , , , , , , , , , , , , , , , , ,	
B461	34	Ground	0	
D40 I	38	Ground	U	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGNAL

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

B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

(+) Driver seat control unit Connector Terminals		(-)	Voltage (V) (Approx.)	
			(· 'pp' o')	
B451	34	Ground	0	
D431	38	Ground	U	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

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B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2113 RECLINING MOTOR

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 output terminal for 0.1 second or more even if the reclining switch is not input.	Driver seat control unit Reclining motor harness is shorted

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON.

>> GO TO 2.

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-60. "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248345

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- Perform DTC confirmation procedure. Refer to <u>ADP-60, "DTC Logic"</u>.

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

2.CHECK RECLINING MOTOR CIRCUIT (POWER SHORT)

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

(+)	(-)	Voltage (V) (Approx.)	
Reclini	ng motor			
Connector	Terminals		, , ,	
B454	35	Ground	0	
D404	39	Ground	U	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK DRIVER SEAT CONTROL UNIT OUTPUT SIGNAL

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

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

(+) Driver seat control unit Connector Terminals		(-)	Voltage (V) (Approx.)	
		D454	35	- Ground
B451	39	0		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

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B2116 TILT MOTOR

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2116	STEERING TILT	The automatic drive positioner control unit detects the output of tilt motor output terminal for 0.1 second or more even if the tilt switch is not input.	Automatic drive positioner control unitTilt motor harness is shorted

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON.

>> GO TO 2.

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248347

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-62, "DTC Logic".

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

2.CHECK TILT MOTOR CIRCUIT (POWER SHORT)

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

(+) Tilt motor		(-)	Voltage (V) (Approx.)	
				Connector
M116	1	Ground	0	
WITTO	2	Ground	U	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK AUTOMATIC DRIVER POSITIONER CONROL UNIT OUTPUT SIGNAL

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

B2116 TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

(+) Automatic drive positioner control unit		(-)	Voltage (V) (Approx.)	
Connector	Connector Terminals		(44)	
M104	28	Ground	0	
IVI 104	29		U	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

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B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

B2128 UART COMMUNICATION LINE

Description INFOID:000000000248348

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

DTC Logic

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON.

>> GO TO 2.

2.PROCEDURE

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248350

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-62, "DTC Logic".

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

2. CHECK UART COMMUNICATION LINE CONTINUITY

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

Driver seat control unit		Automatic drive po	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
B452	2	M75	8	Existed

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

B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity
Connector	Connector Terminal		Continuity
B452	2		Not existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> Repair or replace harness or connector.

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B2130 EEPROM

< DTC/CIRCUIT DIAGNOSIS >

B2130 EEPROM

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2130	EEPROM	Driver seat control unit detected CPU malfunction.	Driver seat control unit

DTC CONFIRMATION PROCEDURE

1.STEP 1

Turn ignition switch ON.

>> GO TO 2.

2.STEP 2

Check "Self diagnostic result" with CONSULT-III.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to <u>ADP-66, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006248352

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-66, "DTC Logic".

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

2. REPLACE DRIVER SEAT CONTROL UNIT

Replace driver seat control unit.

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT DRIVER SEAT CONTROL UNIT

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DRIVER SEAT CONTROL UNIT: Diagnosis Procedure

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	K (50 A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2.check driver seat control unit power supply

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

(+)		(-)	Voltage (V) (Approx.)
Driver seat control unit			
Connector Terminals			
B451 33		Ground	Battery voltage

Is the inspection result normal?

>> GO TO 3. YES

>> Repair or replace harness. NO

3.CHECK DRIVER SEAT CONTROL UNIT GROUND CIRCUIT

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

Driver seat control unit			Continuity
Connector	Connector Terminal		Continuity
B451	B451 43		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT: Special Repair Requirement

INFOID:0000000006248354

1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to ADP-51, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-NAL: Description".

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Diagnosis Procedure

INFOID:0000000006248355

NOTE:

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

1.CHECK FUSE

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

ADP-67 Revision: 2010 May 2011 QX56

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Signal name	Fuse No.
Battery power supply	K (50 A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit.

2.CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT POWER SUPPLY

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

(+) Automatic drive positioner control unit		(-)	Voltage (V) (Approx.)
Connector Terminals			(11 - /
M104 25		Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT GROUND CIRCUIT

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M104	30		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Special Repair Requirement

INFOID:0000000006248356

1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to <u>ADP-51</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

< DTC/CIRCUIT DIAGNOSIS >

SLIDING SWITCH

Component Function Check

INFOID:0000000006248357

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1. CHECK FUNCTION

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

Monitor item	Co	Condition	
SLIDE SW-FR Sliding switch (forward)	Operate	ON	
SLIDE SW-I K	Sliding Switch (lorward)	Release	OFF
SLIDE SW-RR Sliding switch (backward)	Operate	ON	
SLIDE SW-KK	Sliding switch (backward)	Release	OFF

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-69</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000006248358

1. CHECK SLIDING SWITCH INPUT SIGNAL

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

(+) Power seat switch		(-)	Voltage (V) (Approx.)
Connector	Terminals		(11 - 7
B459	8	Ground 12	12
	24	Giodila	12

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SLIDING SWITCH CIRCUIT

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

Driver seat	control unit	Power seat switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	8	B459	8	Existed
D432	24	5400	24	LAIGIGU

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B452	8	Giouna	Not existed
D432	24	-	inoi existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK SLIDING SWITCH

Refer to ADP-70, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248359

1. CHECK SLIDING SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch (sliding switch) connector.
- 3. Check continuity between power seat switch (sliding switch) terminals.

Power seat switch (Sliding switch) Terminal		Condition		Continuity
8	43	Sliding switch (backward)	Operate	Existed
			Release	Not existed
24		Sliding switch (forward)	Operate	Existed
			Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

RECLINING SWITCH

Component Function Check

INFOID:0000000006248360

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1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-71, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248361

1. CHECK RECLINING SWITCH INPUT SIGNAL

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

(+) Power seat switch		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(Approx.)	
B459	9	Ground	12	
	25	Ground		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK RECLINING SWITCH CIRCUIT

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

Driver seat control unit		Power seat switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B452	9	B459	9	- Existed	
	25		25		

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

Driver seat control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B452	9		Not existed	
	25			

Is the inspection result normal?

YES >> Replace driver seat control unit.

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK RECLINING SWITCH

Refer to ADP-72, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248362

1. CHECK RECLINING SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect power seat switch (reclining switch) connector.
- 3. Check continuity between power seat switch (reclining switch) terminals.

Power seat switch (Reclining switch)		Condition		Continuity
Terminal				
9	43	Reclining switch (backward)	Operate	Existed
			Release	Not existed
25		Reclining switch (forward)	Operate	Existed
			Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (FRONT)

Component Function Check

INFOID:0000000006248363

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1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-73, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248364

1. CHECK LIFTING SWITCH (FRONT) INPUT SIGNAL

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

(+) Power seat switch		(-)	Voltage (V) (Approx.)
Connector			
B459	10	Ground	12
	26	Ground	12

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK LIFTING SWITCH (FRONT) CIRCUIT

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

Driver seat	control unit	Power seat switch		Power seat switch Continuity		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
B452	10	B459	10	Existed		
D432	26	D400	26	LAISIEU		

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B452	10	Ground	Not existed
	26		inol existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3.CHECK LIFTING SWITCH (FRONT)

Refer to ADP-74, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248365

1. CHECK LIFTING SWITCH (FRONT)

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

Power seat switch (lifting switch front)		Condition		Continuity
Terr	ninal	Condition		Continuity
10		Lifting switch front (down)	Operate	Existed
10	43	Litting Switch Horit (down)	Release	Not existed
26	43	Lifting switch front (up)	Operate	Existed
		Litting Switch front (up)	Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (REAR)

Component Function Check

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-75, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK LIFTING SWITCH (REAR) INPUT SIGNAL

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

(+) Power seat switch		(-)	Voltage (V) (Approx.)
Connector	Terminals		(/ .pp. 0/)
B459	11	Ground	12
D439	27	Ground	12

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK LIFTING SWITCH (REAR) CIRCUIT

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

Driver seat	control unit	Power se	eat switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	11	B459	11	Existed
D402	27	5400	27	LAIGIGU

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

Driver seat control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B452	11	Giouna	Not existed	
	27	-	INOL EXISTED	

Is the inspection result normal?

>> Replace driver seat control unit.

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LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

$3. {\sf CHECK\ LIFTING\ SWITCH\ (REAR)}$

Refer to ADP-76, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248368

1. CHECK LIFTING SWITCH (REAR)

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

Power seat switch	Power seat switch (lifting switch rear)		Condition	
Term	inal	Condition		Continuity
11		Lifting switch rear (down)	Operate	Existed
11	43	Litting Switch rear (down) =	Release	Not existed
27	43	Lifting switch rear (up)	Operate	Existed
21			Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch.

TILT SWITCH

Component Function Check

INFOID:0000000006248369

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1. CHECK FUNCTION

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

Monitor item		Condition	
TILT SW-UP Tilt switch	Tilt switch (up)	Operate	ON
	The Switch (up)	Release	OFF
TILT SW-DOWN Tilt switch (do	Tilt quitch (down)	Operate	ON
	Till Switch (down)	Release	OFF

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to ADP-77, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006248370

1. CHECK TILT SWITCH INPUT SIGNAL

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

(+) Tilt & telescopic switch		(-)	Voltage (V) (Approx.)
Connector	Terminals		(, 44, 2, 11)
M102	2	Ground	5
IVITOZ	3	- Ground	3

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK TILT SWITCH CIRCUIT

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

Automatic drive po	sitioner control unit	Tilt & telescopic switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	1	M102	2	Existed
IVI7 3	13	WITOZ	3	LXISIEU

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	1	Ground	Not existed
WI75	13		INOL EXISTED

Is the inspection result normal?

>> Replace automatic drive positioner control unit.

ADP-77 Revision: 2010 May 2011 QX56

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TILT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK TILT SWITCH

Refer to ADP-78, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace tilt & telescopic switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248371

1. CHECK TILT SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic switch connector.
- 3. Check continuity between tilt & telescopic switch terminals.

Tilt switch Terminal		Condition		Continuity
Ierr	ninai			
2		Tilt switch (upward)	Operate	Existed
2	1	Till Switch (upward)	Release	Not existed
3	ı	Tilt switch (downward)	Operate	Existed
3		Till Switch (downward)	Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace tilt & telescopic switch.

TELESCOPIC SWITCH

Component Function Check

INFOID:0000000006248372

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1. CHECK FUNCTION

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

Monitor item	Condition		Status
TELESCO SW-FR	Telescopic switch (forward)	Operate	ON
TELEGOO OW-I K		Release	OFF
TELESCO SW-RR	Telescopic switch (backward)	Operate	ON
TELESCO SW-RR		Release	OFF

Is the indication normal?

YES >> INSPECTION END

>> Perform diagnosis procedure. Refer to ADP-79, "Diagnosis Procedure". NO

Diagnosis Procedure

INFOID:0000000006248373

1. CHECK TELESCOPIC SWITCH INPUT SIGNAL

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

(+) Tilt & telescopic switch		(-)	Voltage (V) (Approx.)
Connector	Terminals		(11 - /
M102	5	Ground	5
IVITOZ	4	Giodila	3

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK TELESCOPIC SWITCH CIRCUIT

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

Automatic drive po	sitioner control unit	Tilt & telescopic switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	7	M102	5	Existed
IVI7 3	19	WITOZ	4	LAISted

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	7	Giouna	Not existed
IVI73	19		Not existed

Is the inspection result normal?

>> Replace automatic drive positioner control unit.

ADP-79 Revision: 2010 May 2011 QX56

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TELESCOPIC SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3.CHECK TELESCOPIC SWITCH

Refer to ADP-80, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace tilt & telescopic switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248374

1. CHECK TELESCOPIC SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect tilt & telescopic switch connector.
- 3. Check continuity between tilt & telescopic switch terminals.

Telescopic switch Terminal		Condition		Continuity	
					5
3	1	Telescopic switch (lorward)	Release	Release	Not existed
	1	Telescopic switch (backward)	Operate	Existed	
4	4		Release	Not existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace tilt & telescopic switch.

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY SWITCH

Component Function Check

INFOID:0000000006248375

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1. CHECK FUNCTION

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

Monitor item	Condition		Status
MEMORY SW 1	Memory switch 1	Push	ON
WEWORT SW I		Release	OFF
MEMORY SW 2	Mamary awitch 2	Push	ON
WEWORT SW 2	Memory switch 2	Release	OFF
SET SW Set switch	Set quiteb	Push	ON
	Set Switch	Release	OFF

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-81, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248376

1. CHECK SEAT MEMORY SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Seat memory switch			
Connector	Terminals		, , ,
	1		
D13	2	Ground	5
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK SEAT MEMORY SWITCH CIRCUIT

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

Driver seat	control unit	Seat memory switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	6		2	
B452	22	D13	1	Existed
	28		3	

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

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SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity
Connector	Terminal		Continuity
	6	Ground	
B452	22		Not existed
	28		

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

${f 3.}$ CHECK SEAT MEMORY SWITCH GROUND CIRCUIT

Check continuity between seat memory switch harness connector and ground.

Seat memory switch			Continuity
Connector	Connector Terminal		Continuity
D13	4		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

4. CHECK SEAT MEMORY SWITCH

Refer to ADP-82, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace seat memory switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006248377

1. CHECK SEAT MEMORY SWITCH

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

Seat memory switch Terminal		Condition		Continuity	
					1
I		Release	Not existed		
2	4	Memory switch 2 Set switch	Memory switch 2	Push	Existed
2	- -			Release	Not existed
3			Push	Existed	
			Release	Not existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat memory switch.

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR REMOTE CONTROL SWITCH CHANGEOVER SWITCH

INFOID:0000000006248378

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CHANGEOVER SWITCH: Component Function Check

1. CHECK CHANGEOVER SWITCH FUNCTION

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

Monitor item	Condition		
MID CHNC SW D/I	When operating the changeover toward the right or left side.	: ON	
MIR CHNG SW-R/L	Other than the above.	: OFF	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to ADP-83, "CHANGEOVER SWITCH: Diagnosis Procedure".

CHANGEOVER SWITCH: Diagnosis Procedure

INFOID:0000000006248379

$oldsymbol{1}$.CHECK CHANGEOVER SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Door mirror remote control switch			
Connector	Terminal		(11 /
M8	2	Ground	5
IVIO	3	Ground	3

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Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.check changeover switch circuit

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

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ı	V	ı	

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Automatic drive positioner control unit		Door mirror remote control switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
M75	2	M8	3	Existed
	14	IVIO	2	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	2	Ground	Not existed
	14	1	I VOL GXISLEU

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >

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

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

Door mirror remote control switch			Continuity
Connector	Terminal	Ground	Continuity
M8	13		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK CHANGEOVER SWITCH

Check door mirror remote control switch (changeover switch).

Refer to ADP-84, "CHANGEOVER SWITCH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace door mirror remote control switch (changeover switch).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

CHANGEOVER SWITCH: Component Inspection

INFOID:0000000006248380

1. CHECK CHANGEOVER SWITCH

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

Door mirror rem	Door mirror remote control switch		Condition	
Terr	minal		idition	Continuity
2		Changeover switch	LEFT	Existed
	13		Other than the above	Not existed
3			RIGHT	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door mirror remote control switch.

MIRROR SWITCH

MIRROR SWITCH: Component Function Check

INFOID:0000000006248381

1. CHECK MIRROR SWITCH FUNCTION

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

Monitor item	Condition		
MIR CON SW-UP/DN	When operating the mirror switch toward the up or down side.	: ON	
WIIN CON SW-OF/DIN	Other than the above.	: OFF	

< DTC/CIRCUIT DIAGNOSIS >

Monitor item	Condition		
MIR CON SW-RH/LH	When operating the mirror switch toward the right or left side.	: ON	
WIIX CON SW-IXI //EI I	Other than the above.	: OFF	

Is the inspection result normal?

YES >> INSPECTION END

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

MIRROR SWITCH: Diagnosis Procedure

1. CHECK MIRROR SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Door mirror remote control switch			
Connector	Terminal		(r.pp. 5/11)
	4	Ground	5
M8	5		
	6		
	14		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK MIRROR SWITCH CIRCUIT

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

Automatic drive po	Automatic drive positioner control unit Door mirror remote control switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
	3	M8	6	
M75	4		5	Existed
IVI75	15		14	Existed
	16		4	

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

Automatic drive po	Automatic drive positioner control unit		Continuity
Connector	Terminal		Continuity
	3	Ground	
M75	4	Giodila	Not existed
	15		Not existed
	16		

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness.

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

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

Door mirror remote control switch			Continuity
Connector	Connector Terminal		Continuity
M8	13		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK MIRROR SWITCH

Check door mirror remote control switch (mirror switch).

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace door mirror remote control switch (mirror switch).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

MIRROR SWITCH: Component Inspection

INFOID:0000000006248383

1. CHECK MIRROR SWITCH

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

Door mirror remo	Door mirror remote control switch Terminal		Condition	
Terr				
4			RIGHT	Existed
4			Other than the above	Not existed
5			LEFT	Existed
5	13		Other than the above	Not existed
6		Mirror switch	UP	Existed
6			Other than the above	Not existed
14			DOWN	Existed
14			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door mirror remote control switch.

POWER SEAT SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SEAT SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006248384

1. CHECK POWER SEAT SWITCH GROUND CIRCUIT

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

Power seat switch			Continuity	
Connector Terminal		Ground	Continuity	
B459	43		Existed	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> Repair or replace harness or connector.

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TILT &TELESCOPIC SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TILT &TELESCOPIC SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006248385

1. CHECK TILT & TELESCOPIC SWITCH GROUND CIRCUIT

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

Tilt & telescopic switch			Continuity
Connector Terminal		Ground	Continuity
M102	1		Existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> Repair or replace harness.

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

SLIDING SENSOR

Component Function Check

INFOID:0000000006248386

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1. CHECK FUNCTION

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

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

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-89</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000006248387

1. CHECK SLIDING SENSOR SIGNAL

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

(+) Driver seat control unit		(-)) Condition		Signal	
Connector	Terminals		Condition		(Reference value)	
B452	18	Ground	Seat sliding	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ	

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2. CHECK SLIDING SENSOR CIRCUIT

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

Driver seat	Driver seat control unit		Sliding motor	
Connector	Terminal	Connector Terminal		Continuity
B452	18	B461	18	Existed

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

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SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity
Connector	Connector Terminal		Continuity
B452	18		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK SLIDING SENSOR POWER SUPPLY

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

(+) Sliding motor		(-)	Voltage (V) (Approx.)	
Connector	Connector Terminals			
B461	12	Ground	12	

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

Driver seat	control unit	Sliding motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
B452	12	B461	12	Existed

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B452	12		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

5. CHECK SLIDING SENSOR GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Check continuity between sliding sensor harness connector and ground.

Sliding motor			Continuity
Connector	Connector Terminal		Continuity
B461	43		Existed

Is the inspection result normal?

YES >> Replace sliding motor.

NO >> Repair or replace harness or connector.

RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING SENSOR

Component Function Check

INFOID:0000000006248388

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1. CHECK FUNCTION

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

Monitor item	Condition		Value
		Operate (forward)	Change (increase)*1
RECLN PULSE	Seat reclining	Operate (backward)	Change (decrease)*1
		Release	No change ^{*1}

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-91, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248389

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.

	+) control unit	(-)	Con	dition	Signal (Reference value)
Connector	Terminals				
B452	4	Ground	Seat reclining	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2. CHECK RECLINING SENSOR CIRCUIT

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

Driver seat control unit		Reclining motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
B452	4	B454	4	Existed

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

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RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	Driver seat control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	4		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK RECLINING SENSOR POWER SUPPLY

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

(+)			V-16 0.0
Reclini	Reclining motor		Voltage (V) (Approx.)
Connector	Terminals		(11 /
B454	12	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK RECLINING SENSOR POWER SUPPLY CIRCUIT

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

Driver seat	control unit	Reclinir	ng motor	Continuity
Connector	Terminal	Connector Terminal		Continuity
B452	12	B454	12	Existed

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

Driver seat	Driver seat control unit		Continuity
Connector	Connector Terminal		Continuity
B452	12		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

${f 5.}$ CHECK RECLINING SENSOR GROUND CIRCUIT

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

Reclining motor			Continuity
Connector	Terminal	Ground	Continuity
B454	43		Existed

Is the inspection result normal?

YES >> Replace reclining motor.

NO >> Repair or replace harness or connector.

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (FRONT)

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Value
		Operate (up)	Change (increase)*1
LIFT FR PULSE	Seat lifting (front)	Operate (down)	Change (decrease)*1
		Release	No change ^{*1}

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

1. CHECK LIFTING SENSOR (FRONT) SIGNAL

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

(+) Driver seat control unit		(-)	(-) Condition		Voltage (V) (Approx.)
Connector	Terminals				(, (рр. ох.)
B452	19	Ground	Seat Lifting (front)	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2.check lifting sensor (front) circuit

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

Driver seat	Driver seat control unit		Lifting motor (front)	
Connector	Terminal	Connector Terminal		Continuity
B452	19	B455	19	Existed

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

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LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B452	19		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

${f 3.}$ CHECK LIFTING SENSOR (FRONT) POWER SUPPLY

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

(+)			V-16 0.0	
Lifting motor (front)		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(11 -)	
B455	12	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (FRONT) POWER SUPPLY CIRCUIT

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

Driver seat	Driver seat control unit		Lifting motor (front)	
Connector	Terminal	Connector Terminal		Continuity
B452	12	B455	12	Existed

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

Driver seat	Driver seat control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	12		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

5.CHECK LIFTING SENSOR (FRONT) GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Check continuity between lifting motor (front) harness connector and ground.

Lifting motor (front)			Continuity
Connector	Terminal	Ground	Continuity
B455	43		Existed

Is the inspection result normal?

YES >> Replace lifting motor (front).

NO >> Repair or replace harness or connector.

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (REAR)

Component Function Check

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1. CHECK FUNCTION

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

Monitor item	Condition		Value
		Operate (up)	Change (increase)*1
LIFT RR PULSE	Seat lifting (rear)	Operate (down) Change (decrease)*1	Change (decrease)*1
		Release	No change ^{*1}

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248393

1. CHECK LIFTING SENSOR (REAR) SIGNAL

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

(+) Driver seat control unit		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminals				, , ,
B452	20	Ground	Seat Lifting (rear)	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2.CHECK LIFTING SENSOR (REAR) CIRCUIT

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

Driver seat	Driver seat control unit		Lifting motor (rear)	
Connector	Terminal	Connector Terminal		Continuity
B452	20	B456	20	Existed

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

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LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	Driver seat control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	20		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.check lifting sensor (rear) power supply

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

(+)			V-14 () ()	
Lifting motor (rear)		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(11 -)	
B456	12	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK LIFTING SENSOR (REAR) POWER SUPPLY CIRCUIT

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

Driver sea	Driver seat control unit		Lifting motor (rear)	
Connector	Terminal	Connector Terminal		Continuity
B452	12	B456	12	Existed

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

Driver seat control unit			Continuity
Connector	Connector Terminal		Continuity
B452	12		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

5. CHECK LIFTING SENSOR (REAR) GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check the continuity between lifting motor (rear) harness connector and ground.

Lifting m	otor (rear)		Continuity
Connector	Terminal	Ground	Continuity
B456	43		Existed

Is the inspection result normal?

YES >> Replace lifting motor (rear).

NO >> Repair or replace harness or connector.

TILT SENSOR

Component Function Check

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1. CHECK FUNCTION

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

Monitor item	Condition		Value
	<u>.</u>	Operate (up)	Change (increase)*1
TILT PULSE		Operate (down)	Change (decrease)*1
		Release	No change ^{*1}

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248395

1. CHECK TILT SENSOR SIGNAL

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

	+) control unit Terminals	(-)	Condition		Voltage (V) (Approx.)
B452	21	Ground	Steering col- umn	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2. CHECK TILT SENSOR CIRCUIT

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

Driver seat	control unit	Tilt motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
B452	21	M116	5	Existed

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

Driver seat control unit			Continuity
Connector Terminal		Ground	Continuity
B452	21		Not existed

TILT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.check tilt sensor power supply

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

(+) Tilt motor		(-)	Voltage (V) (Approx.)
Connector	Connector Terminals		
M116	4	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK TILT SENSOR POWER SUPPLY CIRCUIT

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

Automatic drive po	sitioner control unit	Tilt r	motor	Continuity
Connector	Terminal	Connector Terminal		Continuity
M104	27	M116	4	Existed

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

Automatic drive po	Automatic drive positioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M104	27		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

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

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

Automatic drive po	sitioner control unit	Tilt motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	20	M116	6	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

Is the inspection result normal?

YES >> Replace tilt motor.

NO >> Repair or replace harness or connector.

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC SENSOR

Component Function Check

INFOID:0000000006248396

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1. CHECK FUNCTION

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

Monitor item	Condition		Value
		Operate (forward)	Change (increase)*1
TELESCO PULSE	Steering column	Operate (backward)	Change (decrease)*1
		Release	No change ^{*1}

^{*1:} The value at the seat position attained when the battery is connected is considered to be 32768.

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248397

1. CHECK TELESCOPIC SENSOR SIGNAL

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

(+) Driver seat control unit		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminals				
B452	5	Ground	Steering col- umn	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> GO TO 2.

2. CHECK TELESCOPIC SENSOR CIRCUIT

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

Driver seat	control unit	Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B452	5	M117	5	Existed

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

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TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B452	5		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.check telescopic sensor power supply

- 1. Turn ignition switch ON.
- 2. Check voltage between telescopic motor harness connector and ground.

	(+) Telescopic motor		Voltage (V) (Approx.)
Connector	Terminals		(/ (pprox.)
M117	4	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK TELESCOPIC SENSOR POWER SUPPLY CIRCUIT

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

Automatic drive po	sitioner control unit	Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M104	27	M117	4	Existed

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M104	27		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

CHECK TELESCOPIC SENSOR GROUND CIRCUIT

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

Automatic drive po	sitioner control unit	Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	20	M117	6	Existed

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

Automatic drive po	ositioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace telescopic motor.
NO >> Repair or replace harness or connector.

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< DTC/CIRCUIT DIAGNOSIS >

MIRROR SENSOR

DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000006248398

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000006248399

1. CHECK DOOR MIRROR (DRIVER SIDE) SENSOR POWER SUPPLY

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

(+) Door mirror (driver side)		(-)	Voltage (V) (Approx.)	
Connector	Terminals		,	
D3	23	Ground	5	

Is the inspection result normal?

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

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

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

Automatic drive po	ositioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	21	D3	23	Existed

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

Automatic drive po	ositioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M75	21		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

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${f 3.}$ CHECK DOOR MIRROR (DRIVER SIDE) SENSOR GROUND CIRCUIT

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

Automatic drive po	sitioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	20	D3	24	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

4.CHECK DOOR MIRROR (DRIVER SIDE) SENSOR CIRCUIT

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

Automatic drive p	ositioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	6	Da	21	Existed
IVI75	18 D3	- 03	22	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	6	Giodila	Not existed
WI73	18		Not existed

Is the inspection result normal?

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

>> Repair or replace harness or connector. NO

PASSENGER SIDE

PASSENGER SIDE: Component Function Check

1. CHECK FUNCTION

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

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

Is the indication normal?

>> INSPECTION END

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NO >> Perform diagnosis procedure. Refer to ADP-104, "PASSENGER SIDE: Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000006248401

1.CHECK DOOR MIRROR SENSOR (PASSENGER SIDE) POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect door mirror (passenger side) connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between door mirror (passenger side) harness connector and ground.

(-	+)		V-16 (V)
Door mirror (passenger side)		(-)	Voltage (V) (Approx.)
Connector Terminals			(11 -)
D23	23	Ground	5

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

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

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

Automatic drive po	sitioner control unit	Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	21	D23	23	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	21		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

$3. \mathsf{CHECK}\ \mathsf{DOOR}\ \mathsf{MIRROR}\ (\mathsf{PASSENGER}\ \mathsf{SIDE})\ \mathsf{SENSOR}\ \mathsf{GROUND}\ \mathsf{CIRCUIT}$

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

Automatic drive po	sitioner control unit	Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	20	D23	24	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M75	20		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

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4. CHECK DOOR MIRROR (PASSENGER SIDE) SENSOR CIRCUIT

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

Automatic drive po	ositioner control unit	Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	5	D23	21	Existed
IVI7 S	17	D23	22	Existed

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

Automatic drive po	sitioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M75	5	Giouna	Not existed
IVI7 J	17		NOT EXISTED

Is the inspection result normal?

YES >> Replace door mirror sensor (built in passenger side door mirror).

NO >> Repair or replace harness or connector.

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SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

SLIDING MOTOR

Component Function Check

INFOID:0000000006248402

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248403

1. CHECK SLIDING MOTOR INPUT SIGNAL

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

(+) Sliding motor		(-) C		ondition	Voltage (V) (Approx.)
Connector	Connector Terminals				(·
				OFF	0
	38			FR (forward)	12
B461		Ground	SEAT SLIDE	RR (backward)	0
D40 I		Ground	SEAT SLIDE	OFF	0
	34			FR (forward)	0
				RR (backward)	12

Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK SLIDING MOTOR CIRCUIT

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

Driver seat control unit		Sliding motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B451	34	B461	34	Existed
	38	D401	38	LXISIEU

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

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	Driver seat control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	34	Glound	Not existed
D 4 01	38		inot existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

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RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING MOTOR

Component Function Check

INFOID:0000000006248404

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248405

1. CHECK RECLINING MOTOR INPUT SIGNAL

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

	(+) Reclining motor		(-) Cond		Voltage (V) (Approx.)
Connector	Terminals				(44)
				OFF	0
	35			FR (forward)	12
B454		Ground	SEAT RECLINING	RR (backward)	0
D434		Ground	SEAT RECLINING	OFF	0
	39	39		FR (forward)	0
				RR (backward)	12

Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK RECLINING MOTOR CIRCUIT

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

Driver seat control unit		Reclining motor		Continuity
Connector	Terminal	Connector		
B451	35	D454	35	Existed
D401	39	B454 39		EXISTECT

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

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Driver se	at control unit		Continuity	
Connector	Terminal	Ground	Continuity	
B451	35	Not exi	Not existed	
D40 I	39		NOT EXISTED	

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

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LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING MOTOR (FRONT)

Component Function Check

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-110, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248407

INFOID:0000000006248406

1. CHECK LIFTING MOTOR (FRONT) INPUT SIGNAL

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

	(+) Lifting motor (front) Connector Terminals		(-) Condition		Voltage (V) (Approx.)
Connector					(/ (pp/o/)
	36 B455 — Ground S		OFF	0	
		- Ground	SEAT LIFTER FR	UP	0
D455				DWN (down)	12
D400				OFF	0
	40			UP	12
				DWN (down)	0

Is the inspection result normal?

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

NO >> GO TO 2.

2.CHECK LIFTING MOTOR (FRONT) CIRCUIT

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

Driver sea	t control unit	Lifting motor (front)		Continuity
Connector	Terminal	Connector Terminal		Continuity
B451	36	B455	36	Existed
D431	40	6400	40	Existed

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

LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driver se	at control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	36	Ground	Not existed
D431	40		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

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LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING MOTOR (REAR)

Component Function Check

INFOID:0000000006248408

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248409

1. CHECK LIFTING MOTOR (REAR) INPUT SIGNAL

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

	(+) Lifting motor (rear)		(-) Condition		Voltage (V) (Approx.)
Connector	Connector Terminals				(
				OFF	0
	41	41 Ground 42	SEAT LIFTER RR	UP	12
B456				DWN (DOWN)	0
D430	B450			OFF	0
	42			UP	0
				DWN (DOWN)	12

Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK LIFTING MOTOR (REAR) CIRCUIT

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

Driver sea	t control unit	Lifting motor (rear)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B451	41	B456	41	Existed	
D431	42	B430	42	Existed	

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

LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver se	at control unit		Continuity
Connector	Terminal	Ground	Continuity
B451	41	Ground	Not existed
D431	42		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

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TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

TILT MOTOR

Component Function Check

INFOID:0000000006248410

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006248411

1. CHECK TILT MOTOR INPUT SIGNAL

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

	(+) Tilt motor		(-) Cond		Voltage (V) (Approx.)		
Connector	Terminals				(Approxi)		
				OFF	0		
	1	Ground	THE MOTOR	UP	0		
M116				DWN (down)	12		
IVITO			Ground FILT IV	Glound TIET WOTOK	TILT MOTOR	OFF	0
	2			UP	12		
				DWN (down)	0		

Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK TILT MOTOR CIRCUIT

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

Automatic drive po	ositioner control unit	Tilt motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M104	28	M116	1	Existed
W104	29	WITTO	2	Existed

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

TILT MOTOR

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Automatic drive p	Automatic drive positioner control unit		Continuity
Connector	Terminal	— Ground	Continuity
M104	28	Giouna	Not existed
W1104	29		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

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TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC MOTOR

Component Function Check

INFOID:0000000006248412

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-116, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248413

1. CHECK TELESCOPIC MOTOR INPUT SIGNAL

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

	(+) Telescopic motor		Con	Condition	
Connector	Terminals				(Approx.)
				OFF	0
	M117 2	Ground	TELESCOPIC MOTOR	FR (forward)	0
N4417				RR (backward)	12
IVI I I /				OFF	0
				FR (forward)	12
				RR (backward)	0

Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK TELESCOPIC MOTOR CIRCUIT

- 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 harness connector.

Automatic drive po	ositioner control unit	Telesco	pic motor	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M75	26	M117	1	Existed
IVI / S	29	M117	2	Existed

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

TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive p	Automatic drive positioner control unit		Continuity
Connector	Terminal	Ground	Continuity
M75	26	Ground	Not existed
IVI75	29		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

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DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR MOTOR

Component Function Check

1. CHECK DOOR MIRROR MOTOR FUNCTION

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

Refer to ADP-22, "CONSULT-III Function".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to ADP-118, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006248415

INFOID:0000000006248414

1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

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

(+) Door mirror		(-) Co		ndition	Voltage (V) (Approx.)	
Connector	Terminals				(, , , , , , , , , , , , , , , , , , ,	
	12			UP	12	
	12	Ground	Door mirror remote	Other than the above	0	
D3 (Driver side)	D3 (Driver side)			LEFT	12	
D23 (Passenger side)	11		Ground	control switch	Other than the above	0
	10			DOWN / RIGHT	12	
	10			Other than the above	0	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR MIRROR MOTOR CIRCUIT

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

[driver side]

		(driver side)	Continuity
Terminal	Connector	Terminal	Continuity
12		10	
23	D3	12	Existed
24		11	
_	12 23	12 23 D3	12 10 23 D3 12

[passenger side]

Automatic drive p	ositioner control unit	Door mirror (p	assenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
	22		10	
M75	10	D23	12	Existed
	11	-	11	

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

DOOR MIRROR MOTOR

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Automatic drive positioner control unit			Continuity	
Connector	Terminal		Continuity	
	12	Ground	Ground	
M75	23		Not existed	
	24			
enger side]				
Automatic drive pos	sitioner control unit		Continuity	
		-	Continuity	
Connector	Terminal			
Connector	Terminal 22	Ground		
Connector M75		Ground	Not existed	

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit.

NO >> Repair or replace harness or connector.

3. CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-119, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident.Refer to GI-40, "Intermittent Incident".

NO >> Replace door mirror.

Component Inspection

INFOID:0000000006248416

1. CHECK DOOR MIRROR MOTOR 1

Check that door mirror motor does not trap foreign objects and does not have any damage. Refer to MIR-32. "Exploded View".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace door mirror.

2. CHECK DOOR MIRROR MOTOR 2

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

Connector	Terminal		Operational direction	
Connector	(+)	(-)		
D3 (Driver side)	10	11	RIGHT	
	11	10	LEFT	
D23 (Passenger side)	12	10	UP	
	10	12	DOWN	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door mirror.

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SEAT MEMORY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY INDICATOR

Component Function Check

1. CHECK FUNCTION

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

Test item		Description	
	OFF		OFF
MEMORY SW INDCTR	ON-1	Memory switch indicator	Indicator 1: ON
	ON-2		Indicator 2: ON

Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-120, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006248418

INFOID:0000000006248417

1. CHECK SEAT MEMORY SWITCH INDICATOR OPERATION

Check seat memory switch indicator operation.

Which is the malfunctioning indicator?

All indicators are NG>>GO TO 2.

An indicator is NG>>GO TO 4.

2.CHECK FUSE

- Turn ignition switch OFF.
- 2. Check that the blown fuse after repairing the affected circuit if a fuse is blown.

Signal name	Fuse No.
Battery power supply	10 (10 A)

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

3. CHECK SEAT MEMORY SWITCH INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector and ground.

	(+)		Voltage (V)	
Seat memory switch		(-)	(Approx.)	
Connector	Terminals			
D13	5	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace seat memory switch.

NO >> Repair or replace harness or connector.

4. CHECK SEAT MEMORY SWITCH INDICATOR CIRCUIT

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

SEAT MEMORY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	at control unit	Seat memory switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B452	23	D13	6	Existed	
	7	Dis	7	Existed	

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B452	23	Ground	Not existed
	7		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.

NO >> Repair or replace harness or connector.

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< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

MANUAL FUNCTION DOES NOT OPERATE ALL COMPONENT

ALL COMPONENT: Diagnosis Procedure

INFOID:0000000006248419

${f 1}.$ CHECK DRIVER SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check driver seat control unit power supply and ground circuit.

Refer to ADP-67, "DRIVER SEAT CONTROL UNIT: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check automatic drive positioner control unit power supply and ground circuit.

Refer to ADP-67, "AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

POWER SEAT

POWER SEAT : Diagnosis Procedure

INFOID:0000000006248420

1. CHECK POWER SEAT SWITCH GROUND CIRCUIT

Check power seat switch ground circuit.

Refer to ADP-87, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

TILT & TELESCOPIC

TILT & TELESCOPIC : Diagnosis Procedure

INFOID:00000000006248421

1. CHECK TILT & TELESCOPIC SWITCH GROUND CIRCUIT

Check tilt & telescopic switch ground circuit.

Refer to ADP-88. "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

2.CONFIRM THE OPERATION

Confirm the operation again.

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< SYMPTOM DIAGNOSIS >	
Is the result normal?	
YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". NO >> GO TO 1.	
SEAT SLIDING	
SEAT SLIDING : Diagnosis Procedure	INFOID:0000000006248422
1. CHECK SLIDING MECHANISM	
Check for the following.	
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Repair or replace the malfunction parts.	
2.CHECK SLIDING SWITCH	
Check sliding switch. Refer to ADP-69, "Component Function Check".	_
Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	
3. CHECK SLIDING MOTOR	
Check sliding motor.	
Refer to ADP-106, "Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.	
4. CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
NO >> GO TO 1.	
SEAT RECLINING	
SEAT RECLINING : Diagnosis Procedure	INFOID:0000000006248423
1. CHECK RECLINING MECHANISM	
Check for the following.	
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Repair or replace the malfunction parts.	
2.check reclining switch	
Check reclining switch. Refer to ADP-71, "Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	
3. CHECK RECLINING MOTOR	
Check reclining motor.	_
Refer to ADP-108, "Component Function Check".	

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< SYMPTOM DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunction parts.

4. CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (FRONT)

SEAT LIFTING (FRONT): Diagnosis Procedure

INFOID:0000000006248424

1. CHECK LIFTING (FRONT) MECHANISM

Check for the following.

- Mechanism deformation or pinched foreign materials.
- Interference with other parts because of poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2. CHECK LIFTING SWITCH (FRONT)

Check lifting switch (front).

Refer to ADP-73, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CHECK LIFTING MOTOR (FRONT)

Check lifting motor (front).

Refer to ADP-110, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunction parts.

4. CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (REAR)

SEAT LIFTING (REAR): Diagnosis Procedure

INFOID:0000000006248425

1. CHECK LIFTING (REAR) MECHANISM

Check for the following.

- Mechanism deformation or pinched foreign materials.
- Interference with other parts because of poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2.CHECK LIFTING SWITCH (REAR)

Check lifting switch (rear).

Refer to ADP-75, "Component Function Check".

Is the inspection result normal?

< SYMPTOM DIAGNOSIS >
YES >> GO TO 3.
NO >> Repair or replace the malfunction parts.
3.CHECK LIFTING MOTOR (REAR)
Check lifting motor (rear). Refer to ADP-112, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.
4. CONFIRM THE OPERATION
Check the operation again.
Is the result normal?
YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". NO >> GO TO 1. STEERING TILT
STEERING TILT : Diagnosis Procedure
1. CHECK STEERING TILT MECHANISM
Check for the following. • Mechanism deformation or pinched foreign materials. • Interference with other parts because of poor installation.
Is the inspection result normal?
YES >> GO TO 2.
NO >> Repair or replace the malfunction parts. 2.CHECK TILT SWITCH
Check tilt switch. Refer to ADP-77, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 3.
NO >> Repair or replace the malfunction parts.
3.CHECK TILT MOTOR
Check tilt motor. Refer to ADP-114, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 4.
NO >> Repair or replace the malfunction parts.
4.CONFIRM THE OPERATION Check the energtion again
Check the operation again. Is the result normal?
YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.
STEERING TELESCOPIC
STEERING TELESCOPIC : Diagnosis Procedure
1. CHECK STEERING TELESCOPIC MECHANISM
Check for the following. • Mechanism deformation or pinched foreign materials
 Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation.
Is the inspection result normal?

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YES >> GO TO 2.

< SYMPTOM DIAGNOSIS >

NO >> Repair or replace the malfunction parts.

2. CHECK TELESCOPIC SWITCH

Check telescopic switch.

Refer to ADP-79, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CHECK TELESCOPIC MOTOR

Check telescopic motor.

Refer to ADP-116, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunction parts.

4.CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

DOOR MIRROR

DOOR MIRROR : Diagnosis Procedure

INFOID:0000000006248428

1. CHECK DOOR MIRROR MECHANISM

Check for the following.

- Mechanism deformation or pinched foreign materials.
- Interference with other parts because of poor installation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2.check door mirror remote control switch

Check door mirror remote control switch. Refer to following.

- Mirror switch: Refer to ADP-84, "MIRROR SWITCH: Component Function Check".
- Changeover switch: Refer to ADP-83, "CHANGEOVER SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-118, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunction parts.

4.CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

< SYMPTOM DIAGNOSIS > MEMORY FUNCTION DOES NOT OPERATE Α ALL COMPONENT ALL COMPONENT : Diagnosis Procedure INFOID:0000000006248429 В 1. CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunction parts. D 2.perform initialization and memory storing procedure Perform initialization procedure. Refer to ADP-52, "SYSTEM INITIALIZATION: Special Repair Requirement". Е Perform memory storing procedure. Refer to ADP-53, "MEMORY STORING: Special Repair Requirement". 3. Check memory function. Refer to ADP-15, "MEMORY FUNCTION: System Description". Is the inspection result normal? >> Memory function is normal. NO >> GO TO 3. 3. CHECK SEAT MEMORY SWITCH Check seat memory switch. Refer to ADP-81, "Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Replace seat memory switch. 4.CONFIRM THE OPERATION ADP Confirm the operation again. Is the result normal? >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". YES NO >> GO TO 1. SEAT SLIDING SEAT SLIDING: Diagnosis Procedure INFOID:0000000006248430 1. CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. Ν NO >> Refer to ADP-123, "SEAT SLIDING: Diagnosis Procedure" 2.CHECK SLIDING SENSOR Check sliding sensor. Refer to ADP-89, "Component Function Check". Is the inspection result normal? Р YES >> GO TO 3. NO >> Repair or replace the malfunction parts. 3.CONFIRM THE OPERATION Check the operation again. Is the result normal?

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>> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

SEAT RECLINING

SEAT RECLINING : Diagnosis Procedure

INFOID:0000000006248431

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-123, "SEAT RECLINING: Diagnosis Procedure"

2.CHECK RECLINING SENSOR

Check reclining sensor.

Refer to ADP-91, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

 ${f 3.}$ CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (FRONT)

SEAT LIFTING (FRONT): Diagnosis Procedure

INFOID:0000000006248432

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-124, "SEAT LIFTING (FRONT): Diagnosis Procedure"

2.CHECK LIFTING SENSOR (FRONT)

Check lifting sensor (front).

Refer to ADP-93, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (REAR)

SEAT LIFTING (REAR): Diagnosis Procedure

INFOID:0000000006248433

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-124, "SEAT LIFTING (REAR) : Diagnosis Procedure"

< SYMPTOM DIAGNOSIS > 2.CHECK LIFTING SENSOR (REAR) Check lifting sensor (rear). Refer to ADP-95, "Component Function Check". Is the inspection result normal? В YES >> GO TO 3. NO >> Repair or replace the malfunction parts. 3.CONFIRM THE OPERATION Check the operation again. Is the result normal? D YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". NO >> GO TO 1. STEERING TILT Е STEERING TILT: Diagnosis Procedure INFOID:0000000006248434 1. CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. NO >> Refer to ADP-125, "STEERING TILT: Diagnosis Procedure" 2.CHECK TILT SENSOR Check steering tilt sensor. Refer to ADP-97, "Component Function Check". Is the inspection result normal? YES >> GO TO 3. >> Repair or replace the malfunction parts. NO ADP $oldsymbol{3}.$ CONFIRM THE OPERATION Check the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". >> GO TO 1. NO STEERING TELESCOPIC STEERING TELESCOPIC: Diagnosis Procedure INFOID:0000000006248435 1. CHECK MANUAL OPERATION M Check manual operation. Is the inspection result normal? Ν YES >> GO TO 2. NO >> Refer to ADP-125, "STEERING TELESCOPIC: Diagnosis Procedure" 2. CHECK TELESCOPIC SENSOR Check steering telescopic sensor. Refer to ADP-99, "Component Function Check". Р Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunction parts. 3.CONFIRM THE OPERATION Check the operation again.

Is the result normal?

< SYMPTOM DIAGNOSIS >

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1. DOOR MIRROR

DOOR MIRROR: Diagnosis Procedure

INFOID:0000000006248436

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-126, "DOOR MIRROR : Diagnosis Procedure"

2. CHECK MIRROR SENSOR

Check mirror sensor. Refer to following.

- Driver side: <u>ADP-102, "DRIVER SIDE: Component Function Check"</u>.
 Passenger side: <u>ADP-103, "PASSENGER SIDE: Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS > ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE	
Diagnosis Procedure	Α
1.CHECK SYSTEM SETTING	В
Check system setting. Refer to ADP-55, "SYSTEM SETTING: Special Repair Requirement".	
2. Check the operation.	С
Is the inspection result normal? YES >> Entry/Exit function is normal.	
NO $>>$ GO TO 2. 2.PERFORM SYSTEM INITIALIZATION	D
Perform system initialization. Refer to <u>ADP-52, "SYSTEM INITIALIZATION : Special Repair Requirement"</u> . Check the operation.	Е
Is the inspection result normal?	F
YES >> Entry/Exit function is normal. NO >> GO TO 3.	
3.CHECK FRONT DOOR SWITCH (DRIVER SIDE)	G
Check front door switch (driver side). Refer to DLK-117 , "Component Function Check".	
Is the inspection result normal? YES >> GO TO 4.	Н
NO >> Repair or replace the malfunction parts. 4.CONFIRM THE OPERATION	I
Confirm the operation again.	
Is the result normal? YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	ADP
NO >> GO TO 1.	
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INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000006248438

1. PERFORM INTELLIGENT KEY INTERLOCK STORING PROCEDURE

Perform Intelligent Key interlock storing procedure.
 Refer to ADP-54, "INTELLIGENT KEY INTERLOCK STORING: Special Repair Requirement".

2. Check the operation.

Is the inspection result normal?

YES >> Intelligent Key interlock function is normal.

NO >> GO TO 2.

2.CHECK DOOR LOCK FUNCTION

Check door lock function.

Refer to DLK-77, "Work Flow".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

MEMORY INDICATE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS > MEMORY INDICATE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000006248439 1. CHECK SEAT MEMORY SWITCH INDICATOR В Check seat memory switch indicator. Refer to ADP-120, "Component Function Check". C Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunction parts. 2.CONFIRM THE OPERATION D Confirm the operation again. Is the result normal? Е YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". NO >> GO TO 1. F Н ADP K L M Ν 0

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NORMAL OPERATING CONDITION

NORMAL OPERATING CONDITION

Description INFOID:0000000006248440

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

Symptom	Cause	Action to take	Reference page
Entry/exit assist function do not operate.	No initialization has been performed.	Perform initialization.	ADP-52, "SYSTEM INI- TIALIZATION : Descrip- tion"
	Entry/exit assist function is disabled. NOTE: Entry/exit assist function is set to ON before delivery (initial setting).	Change the settings.	ADP-54, "SYSTEM SETTING : Description"
Entry assist function does not operate.	Manual operation with power seat switch was performed after exit assist function execution.	Perform the entry assist function.	ADP-18, "ENTRY AS- SIST FUNCTION : Sys- tem Description"
Lumbar support does not perform memory operation.	The lumbar support system are controlled independently with no link to the automatic drive positioner system.	_	SE-16, "LUMBAR SUP- PORT SYSTEM : Sys- tem Description"
Memory function, entry/exit assist function, or Intelligent Key interlock function does not operate.	The operating conditions are not fulfilled.	Fulfill the operation conditions.	Memory function : ADP-15, "MEMORY FUNCTION : System Description"
			Entry assist function : ADP-18, "ENTRY AS- SIST FUNCTION : Sys- tem Description"
			Exit assist function : ADP-17, "EXIT ASSIST FUNCTION : System Description"
			Intelligent Key interlock function : ADP-20, "IN- TELLIGENT KEY IN- TERLOCK FUNCTION : System Description"

DRIVER SEAT CONTROL UNIT

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

DRIVER SEAT CONTROL UNIT

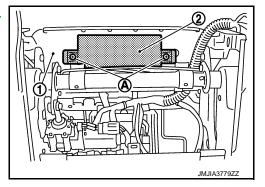
Removal and Installation

REMOVAL

CAUTION:

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

- 1. Remove driver seat (1). Refer to <u>SE-112, "Removal and Installation"</u>.
- 2. Remove screws (A).
- 3. Remove driver seat control unit (2).



INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place.

NOTE:

After installing the driver seat, perform additional service when replacing control unit. Refer to <u>ADP-51, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description".</u>

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Revision: 2010 May ADP-135 2011 QX56

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INFOID:0000000006248441

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< REMOVAL AND INSTALLATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Removal and Installation

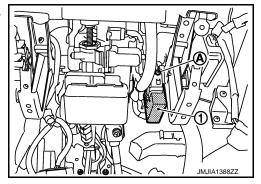
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REMOVAL

CAUTION:

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

- 1. Remove instrument lower panel LH. Refer to <u>IP-14, "Removal and Installation"</u>.
- 2. Remove screws (A).
- 3. Remove automatic drive positioner control unit (1).



INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place.

NOTE:

After installing the driver seat, perform additional service when replacing control unit. Refer to <u>ADP-51</u>, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description".

SEAT MEMORY SWITCH

< REMOVAL AND INSTALLATION >

SEAT MEMORY SWITCH

Removal and Installation

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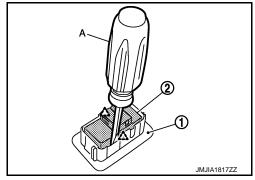
REMOVAL

CAUTION:

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

- 1. Remove front door garnish (1). Refer to INT-14, "Removal and <a href="Installation".
- 2. Press pawls and remove seat memory switch (2) from front door garnish (1), with flat-bladed screw driver (A).





INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place.

NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-51</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

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POWER SEAT SWITCH

< REMOVAL AND INSTALLATION >

POWER SEAT SWITCH

Removal and Installation

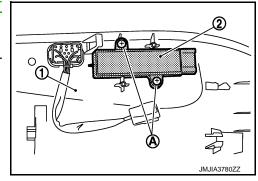
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REMOVAL

CAUTION:

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

- 1. Remove seat cushion outer finisher (1). Refer to <u>SE-116, "SEAT CUSHION: Disassembly and Assembly"</u>.
- 2. Remove screws (A).
- 3. Remove power seat switch (2) from seat cushion outer finisher (1).



INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place.

NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-51, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

TILT&TELESCOPIC SWITCH

< REMOVAL AND INSTALLATION >

TILT&TELESCOPIC SWITCH

Removal and Installation

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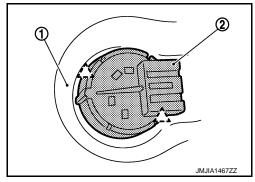
REMOVAL

CAUTION:

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

- 1. Remove steering column lower cover (1). Refer to <u>IP-14.</u> "Removal and Installation".
- 2. Press pawls and remove tilt & telescopic switch (2) from the steering column lower cover (1).





INSTALLATION

Install in the reverse order of removal.

CAUTION:

Be sure to clump the harness to the right place.

NOTE:

After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-51, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

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