SECTION ADP AUTOMATIC DRIVE POSITIONER

CONTENTS

PRECAUTION5
PRECAUTIONS
SYSTEM DESCRIPTION6
COMPONENT PARTS6Component Parts Location6Component Description7
SYSTEM10
AUTOMATIC DRIVE POSITIONER SYSTEM10 AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram
MANUAL FUNCTION
SEAT SYNCHRONIZATION FUNCTION
MEMORY FUNCTION15 MEMORY FUNCTION : System Diagram16 MEMORY FUNCTION : System Description16
EXIT ASSIST FUNCTION18 EXIT ASSIST FUNCTION : System Diagram18 EXIT ASSIST FUNCTION : System Description18
ENTRY ASSIST FUNCTION

INTELLIGENT KEY INTERLOCK FUNCTION20 INTELLIGENT KEY INTERLOCK FUNCTION: System Diagram	F G
DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)23	Н
CONSULT Function23	1
ECU DIAGNOSIS INFORMATION26	1
BCM (BODY CONTROL MODULE)26 List of ECU Reference26	AD
DRIVER SEAT CONTROL UNIT 27 Reference Value 27 Fail Safe 32 DTC Index 33	K
AUTOMATIC DRIVE POSITIONER CONTROL UNIT	L
LIFTING SENSOR CONTROL UNIT37 Reference Value37	M
WIRING DIAGRAM39	Ν
AUTOMATIC DRIVE POSITIONER SYSTEM39 Wiring Diagram39	0
BASIC INSPECTION42	
DIAGNOSIS AND REPAIR WORK FLOW42 Work Flow42	Р
INSPECTION AND ADJUSTMENT45	
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL45	

D

Е

ADDITIONAL SERVICE WHEN REMOVING		B2130 EEPROM	60
BATTERY NEGATIVE TERMINAL : Description .	45	DTC Logic	
ADDITIONAL SERVICE WHEN REMOVING		Diagnosis Procedure	60
BATTERY NEGATIVE TERMINAL : Special Re-		POWER SUPPLY AND GROUND CIRCUIT	0.4
pair Requirement	45	POWER SUPPLY AND GROUND CIRCUIT	61
ADDITIONAL SERVICE WHEN REPLACING		DRIVER SEAT CONTROL UNIT	61
CONTROL UNIT	45	DRIVER SEAT CONTROL UNIT :	
ADDITIONAL SERVICE WHEN REPLACING		Diagnosis Procedure	
CONTROL UNIT : Description	45	DRIVER SEAT CONTROL UNIT : Special Repair	
ADDITIONAL SERVICE WHEN REPLACING		Requirement	61
CONTROL UNIT : Special Repair Requirement	46	AUTOMATIC DRIVE POSITIONER CONTROL	
SYSTEM INITIALIZATION	46	UNIT	61
SYSTEM INITIALIZATION : Description		AUTOMATIC DRIVE POSITIONER CONTROL	
SYSTEM INITIALIZATION : Special Repair Re-		UNIT : Diagnosis Procedure	61
quirement	46	AUTOMATIC DRIVE POSITIONER CONTROL	
·		UNIT : Special Repair Requirement	62
MEMORY STORING		LIFTING SENSOR CONTROL UNIT	-
MEMORY STORING : Description	47	LIFTING SENSOR CONTROL UNIT :	62
MEMORY STORING : Special Repair Require-		Diagnosis Procedure	62
ment	47	Diagnosis Flocedule	02
INTELLIGENT KEY INTERLOCK STORING	47	SLIDING SWITCH	64
INTELLIGENT KEY INTERLOCK STORING: De	-	Component Function Check	64
scription	48	Diagnosis Procedure	64
INTELLIGENT KEY INTERLOCK STORING:		Component Inspection	65
Special Repair Requirement	48	DECLINING CWITCH	
CVCTEM CETTING	40	RECLINING SWITCH	
SYSTEM SETTING		Component Function Check	
SYSTEM SETTING : Description		Diagnosis Procedure Component Inspection	
·	49	Component inspection	07
		LIFTING SWITCH (FRONT)	68
DTC/CIRCUIT DIAGNOSIS	50	Component Function Check	
		Diagnosis Procedure	
U1000 CAN COMM CIRCUIT		Component Inspection	69
Description		LIETING CWITCH (DEAD)	
DTC Logic		LIFTING SWITCH (REAR)	
Diagnosis Procedure	50	Component Function Check	
U1010 CONTROL UNIT (CAN)	51	Diagnosis Procedure Component Inspection	
DTC Logic		Component inspection	/ 1
Diagnosis Procedure		TILT SWITCH	72
		Component Function Check	72
B2112 SLIDING MOTOR		Diagnosis Procedure	72
DTC Logic		Component Inspection	73
Diagnosis Procedure	52	TELESCODIC SWITCH	
B2113 RECLINING MOTOR	54	TELESCOPIC SWITCH	
DTC Logic		Component Function Check Diagnosis Procedure	
Diagnosis Procedure		Component Inspection	
		Component inspection	/5
B2116 TILT MOTOR		SEAT MEMORY SWITCH	76
DTC Logic		Component Function Check	76
Diagnosis Procedure	56	Diagnosis Procedure	76
B2128 UART COMMUNICATION LINE	50	Component Inspection	77
Description		POWER WINDOW MAIN SWITCH	70
DTC Logic		FOWER WINDOW WAIN SWITCH	/8
Diagnosis Procedure		CHANGEOVER SWITCH	78

CHANGEOVER SWITCH : Component Function	Diagnosis Procedure107
Check	LIFTING MOTOR (REAR)109
CHANGEOVER SWITCH: Diagnosis Procedure78	Component Function Check109
CHANGEOVER SWITCH : Component Inspection79	Diagnosis Procedure109
MIRROR SWITCH79	TILT MOTOR111
MIRROR SWITCH : Component Function Check79	Component Function Check111
MIRROR SWITCH: Component Function Check79 MIRROR SWITCH: Diagnosis Procedure80	Diagnosis Procedure111
MIRROR SWITCH: Diagnosis Flocedure81	•
·	TELESCOPIC MOTOR113
POWER SEAT SWITCH GROUND CIRCUIT82	Component Function Check
Diagnosis Procedure82	Diagnosis Procedure113
TILT &TELESCOPIC SWITCH GROUND CIR-	DOOR MIRROR MOTOR115
CUIT83	Component Function Check115
Diagnosis Procedure83	Diagnosis Procedure115
OLIDING OFNOOD	Component Inspection116
SLIDING SENSOR84	SEAT MEMORY INDICATOR118
Component Function Check84 Diagnosis Procedure84	Component Function Check118
	Diagnosis Procedure118
RECLINING SENSOR86	
Component Function Check86	SYMPTOM DIAGNOSIS120
Diagnosis Procedure86	MANUAL FUNCTION DOES NOT OPERATE. 120
LIFTING SENSOR (FRONT)88	Н
Component Function Check88	ALL COMPONENT120
Diagnosis Procedure88	ALL COMPONENT : Diagnosis Procedure120
LIFTING SENSOR (REAR)91	POWER SEAT120
Component Function Check91	POWER SEAT : Diagnosis Procedure120
Diagnosis Procedure91	TILT & TELESCOPIC120
	TILT & TELESCOPIC : Diagnosis Procedure120
TILT SENSOR94	
Component Function Check	SEAT SLIDING121
Diagnosis Procedure94	SEAT SLIDING : Diagnosis Procedure121 K
TELESCOPIC SENSOR96	SEAT RECLINING121
Component Function Check96	SEAT RECLINING : Diagnosis Procedure121
Diagnosis Procedure96	SEAT LIFTING (FRONT)122
MIRROR SENSOR99	SEAT LIFTING (FRONT) : Diagnosis Procedure 122
DRIVER SIDE99	3LA1 LII 1110 (ILAN)122
DRIVER SIDE : Component Function Check99	SEAT LIFTING (REAR) : Diagnosis Procedure122
DRIVER SIDE : Diagnosis Procedure99	STEERING TILT123
PASSENGER SIDE100	STEERING TILT : Diagnosis Procedure123
PASSENGER SIDE :	STEERING TELESCOPIC123
Component Function Check	STEERING TELESCOPIC : Diagnosis Procedure.123
PASSENGER SIDE : Diagnosis Procedure 101	· ·
SLIDING MOTOR103	DOOR MIRROR124
Component Function Check103	DOOR MIRROR : Diagnosis Procedure124
Diagnosis Procedure103	MEMORY FUNCTION DOES NOT OPERATE. 125
RECLINING MOTOR105	ALL COMPONENT125
Component Function Check	ALL COMPONENT : Diagnosis Procedure125
Diagnosis Procedure105	
	SEAT SLIDING125
LIFTING MOTOR (FRONT)107	SEAT SLIDING : Diagnosis Procedure125
Component Function Check107	

SEAT RECLINING126	Diagnosis Procedure131
SEAT RECLINING : Diagnosis Procedure126	MEMORY INDICATE DOES NOT OPERATE132
SEAT LIFTING (FRONT)126	Diagnosis Procedure132
SEAT LIFTING (FRONT) : Diagnosis Procedure126	NORMAL OPERATING CONDITION133
SEAT LIFTING (REAR)126 SEAT LIFTING (REAR) : Diagnosis Procedure127	Description
, , ,	REMOVAL AND INSTALLATION134
STEERING TILT127 STEERING TILT : Diagnosis Procedure127	DRIVER SEAT CONTROL UNIT134
STEERING TELESCOPIC127	Removal and Installation 134
STEERING TELESCOPIC : Diagnosis Procedure.127	AUTOMATIC DRIVE POSITIONER CON-
DOOR MIRROR128 DOOR MIRROR : Diagnosis Procedure128	TROL UNIT135 Removal and Installation135
ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE129	LIFTING SENSOR CONTROL UNIT136 Removal and Installation136
Diagnosis Procedure129	SEAT MEMORY SWITCH137
SEAT SYNCHRONIZATION FUNCTION	Removal and Installation
DOES NOT OPERATE130	POWER SEAT SWITCH138
Diagnosis Procedure130	Removal and Installation
INTELLIGENT KEY INTERLOCK FUNCTION	TILT&TELESCOPIC SWITCH139
DOES NOT OPERATE131	Removal and Installation 139

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.

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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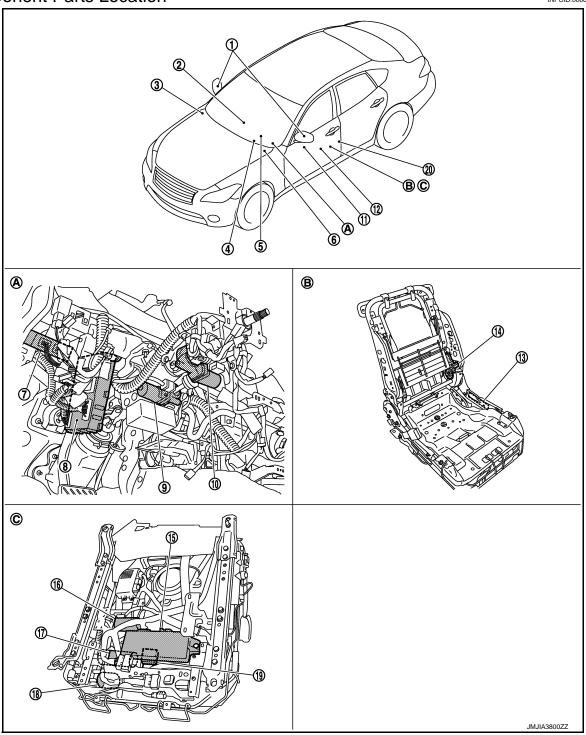
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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1. Door mirror

- 2. TCM
 Refer to TM-10, "A/T CONTROL
 SYSTEM: Component Parts Location"
- 4. Combination meter
 Refer to MWI-6, "METER SYSTEM:
 Component Parts Location"
- 5. Tilt & telescopic switch
- IPDM E/R
 Refer to PCS-5, "IPDM E/R : Component Parts Location"
- ABS actuator and electric unit (control unit)
 Refer to <u>BRC-9</u>, "Component Parts <u>Location"</u>

COMPONENT PARTS

< SYSTEM DESCRIPTION >

7.	Automatic drive positioner control unit	8.	BCM Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location"	9.	Telescopic motor
10.	Tilt motor	11.	Reclining switch	12.	Power window main switch (door mir- ror remote control switch)
13.	Power seat switch	14.	Reclining motor	15.	Diver seat control unit
16.	Lifting motor (rear)	17.	Lifting motor (front)	18.	Sliding motor
19.	Lifting sensor control unit	20.	Driver side door switch		
A.	View with steering column cover low- er and instrument driver lower panel removed	B.	View with seat cushion pad and seat back pad removed	C.	Backside of the seat cushion

Component Description

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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 			
Lifting sensor control unit	Lifting position signal from lifter sensor (front) and lifter sensor (rear) is converted and transmitted to driver seat control unit.			
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 (detent 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			
Combination meter	Transmit the vehicle speed signal to driver seat control unit via CAN communication.			
ABS actuator and electric unit (control unit)	Transmit the vehicle speed signal to driver seat control unit via CAN communication.			

Revision: 2013 September ADP-7 2012 M

COMPONENT PARTS

< SYSTEM DESCRIPTION >

Comp	ponent parts	Description		
A/T sift selector (Detention	n switch)	 Detention switch is installed on A/T shift selector. It is turned OFF when A/T selector lever is in P position. Driver seat control unit judges that A/T selector lever is in P position if continuity does not exist in this circuit. 		
	Mirror switch	 Mirror switch is integrated in mirror remote control switch. It operates angle of door mirror face. It transmits mirror face adjust operation to automatic drive positioner control unit. 		
Power window main switch (door mirror remote control switch)	Changeover switch	 Changeover switch is integrated in 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 mirror remote control switch Power is supplied to folding mirror from door mirror remote control switch when operating switch. 		
Tile 0 de le consideration	Tilt switch	 Tilt switch is equipped to steering column. The operation signal is input to automatic drive positioner contro 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 contro unit when telescopic switch is operated. 		
	Set switch	It is used for registration and setting change of driving position and Intelligent Key interlock function.		
Seat memory switch	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 cushior side surface. The operation signal is input to driver seat control unit when slicing switch is operated. 		
	Reclining switch	 The operation signal is input to driver seat control unit when re clining switch is operated. The operation signal is input to driver seat control unit when re clining 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. 		
	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. 		

Co	omponent parts	Description
	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 directior 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	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 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 slicing amount of the seat.
Reclining motor	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 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 sea
	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.

^{*:} With steering lock models

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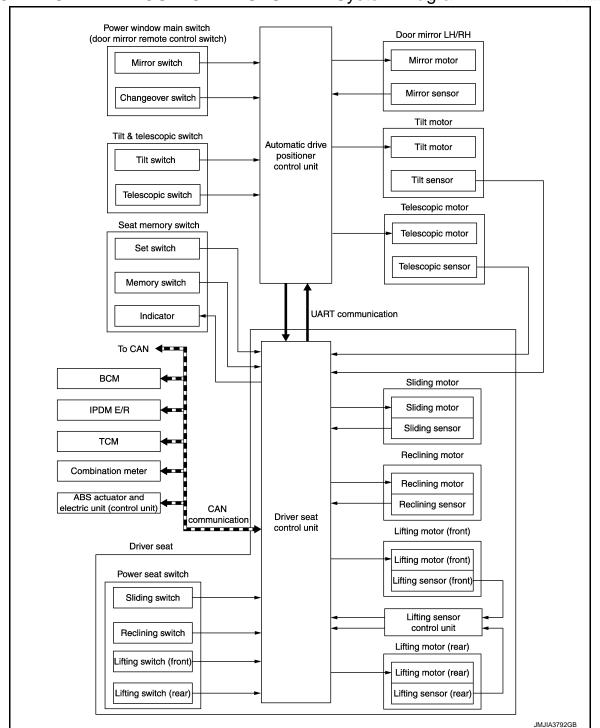
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SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM

AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram

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AUTOMATIC DRIVE POSITIONER SYSTEM : System Description

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

Function		Description	
Manual function		The driving position (seat, steering column and door mirror position) can be adjusted by using the power seat switch, tilt & telescopic switch or door mirror remote control switch.	
Seat synchronization function		The positions of the steering column and door mirror are adjusted to the proper position automatically while linking with manual operation [seat sliding, seat lifting (rear) or seat reclining].	
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 funct	on	Perform memory operation, exiting operation and entry operation by Intelligent Key unlock operation or driver side door request switch unlock operation.	

NOTE:

The lumbar support system are controlled independently with no link to the automatic drive positioner system. Refer to SE-13. "LUMBAR SUPPORT SYSTEM: System Description".

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

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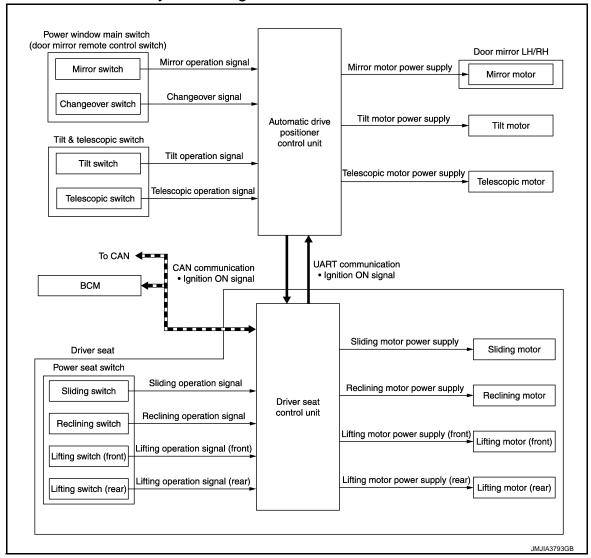
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^{*:} with steering lock models

MANUAL FUNCTION: System Diagram

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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

- 1. Turn ignition switch ON.
- 2. Operate power seat switch, tilt & telescopic switch or door mirror remote control switch.
- 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.

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.

SYSTEM

< SYSTEM DESCRIPTION >

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 automatic drive positioner control unit when the door mirror remote control switch is operated.
2	_	Motors (Door mirror motor)	The automatic drive positioner control unit actuates each motor according to the operation of the door mirror remote control switch.

NOTE:

The door mirrors can be operated manually when ignition switch is in either ACC or ON position. SEAT SYNCHRONIZATION FUNCTION

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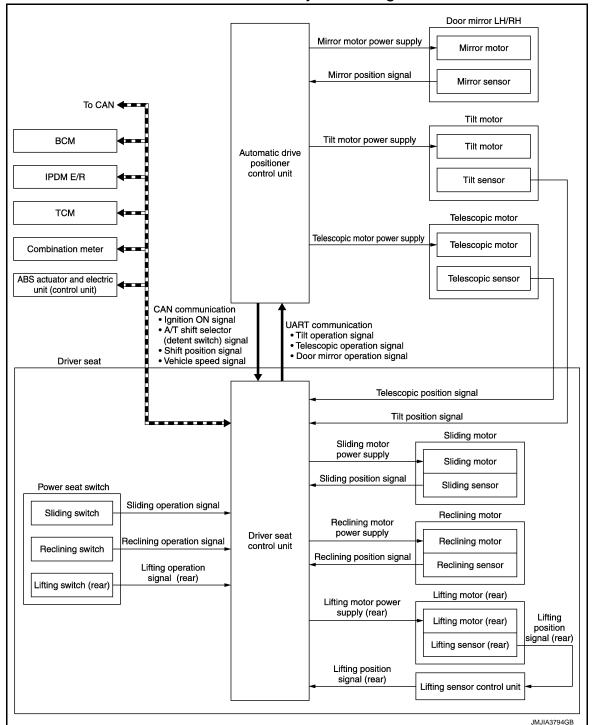
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SEAT SYNCHRONIZATION FUNCTION: System Diagram

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SEAT SYNCHRONIZATION FUNCTION : System Description

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

- This function is set to OFF before delivery (initial setting).
- For the system setting procedure. Refer to ADP-48, "SYSTEM SETTING: Description".

OPERATION PROCEDURE

1. Turn ignition switch ON.

SYSTEM

< SYSTEM DESCRIPTION >

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

NOTE:

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

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

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

OPERATION CONDITION

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

Item	Request status
Ignition position	ON
System setting	ON
Switch inputs Power seat switch Tilt & telescopic switch Door mirror remote control switch Set switch Memory switch	OFF (Not operated)
A/T shift selector	P position
CONSULT	Not connected

DETAIL FLOW

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

MEMORY FUNCTION

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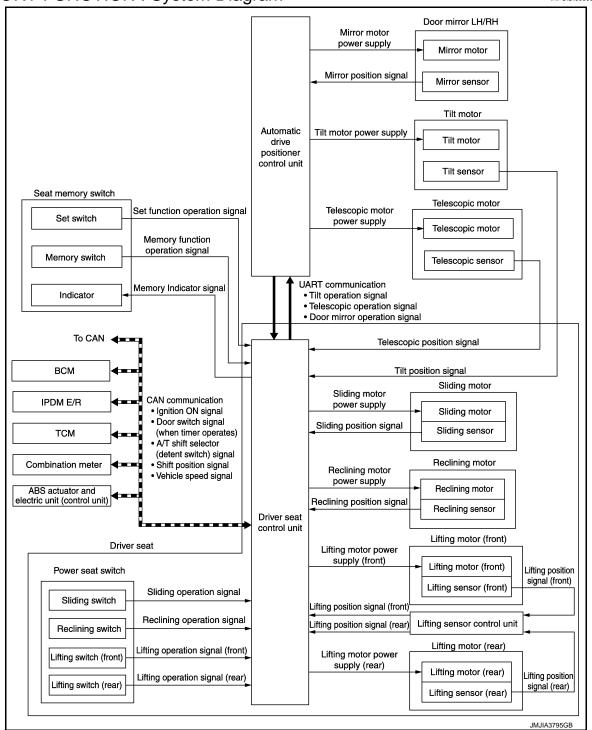
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MEMORY FUNCTION: System Diagram

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MEMORY FUNCTION : System Description

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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.

NOTE:

Further information for the memory storage procedure. Refer to ADP-47, "MEMORY STORING: Description".

OPERATION PROCEDURE

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

< 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	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, steering col- umn, door mirror)	_	Driver seat control unit judges the operating seat position with each seat sensor input. The positions of the steering column and outside mirror are monitored with each sensor signal. Driver seat control unit stops the operation of each motor when each part reaches the recorded address.
4	_	Memory switch Indicator	Driver seat control unit requests the illumination of memory indicator 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
Handle position	LHD
CUNSULT	Not connected

^{*:} With steering lock models

Revision: 2013 September ADP-17 2012 M

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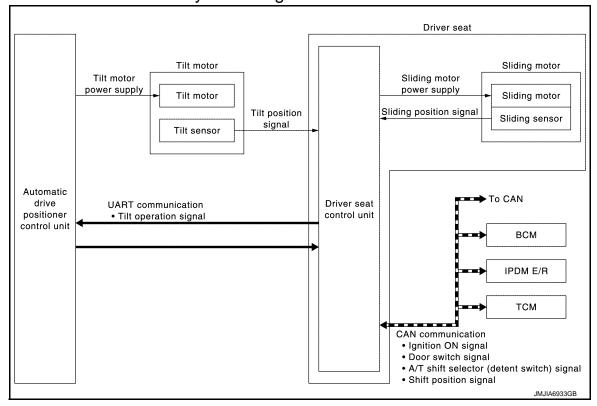
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EXIT ASSIST FUNCTION

EXIT ASSIST FUNCTION: System Diagram

INFOID:0000000006885946



EXIT ASSIST FUNCTION: System Description

INFOID:0000000006885947

- 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 ADP-48, "SYSTEM SETTING: Description".

OPERATION PROCEDURE

- 1. Shift position P position.
- 2. Open the driver door with ignition switch in OFF position.
- 3. 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

< SYSTEM DESCRIPTION >

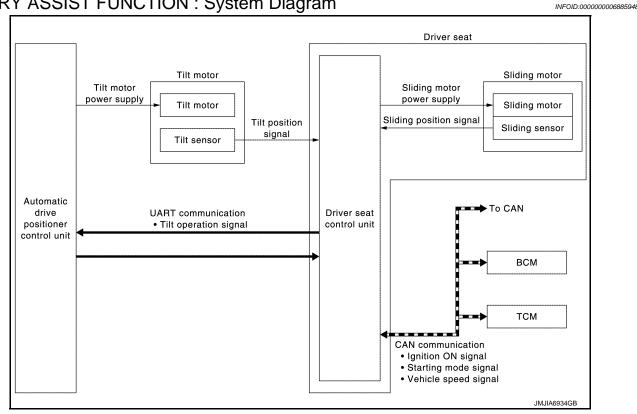
Item	Request status
Transmission	A/T
CUNSULT	Not connected

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 steering reaches to the tilt top position and seat reaches to the rearmost position.

ENTRY ASSIST FUNCTION

ENTRY ASSIST FUNCTION: System Diagram



ENTRY ASSIST FUNCTION: System Description

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-48, "SYSTEM SETTING: Description"</u>.

OPERATION PROCEDURE

- Turn ignition switch ACC.
- Driver seat and steering column will return from the exiting position to entry position.

ADP-19 Revision: 2013 September 2012 M

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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	Not connected

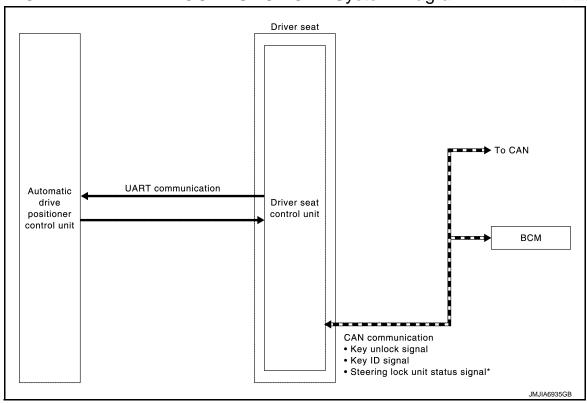
DETAIL FLOW

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 seat 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 positions.

INTELLIGENT KEY INTERLOCK FUNCTION

INTELLIGENT KEY INTERLOCK FUNCTION: System Diagram

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INTELLIGENT KEY INTERLOCK FUNCTION: System Description

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- 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.
- *: With steering lock models

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

NOTE:

Further information for Intelligent Key interlock function. Refer to <u>ADP-48, "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.

ltem	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)
CONSULT	Not connected

^{*:} With steering lock models

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 or 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.

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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-50
Only manual functions operate normally.	CONTROL UNIT	U1010	ADP-51
	EEPROM	B2130	ADP-60
Only manual functions, except door mirror, operate normally.	UART communication	B2128	<u>ADP-58</u>
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	ADP-52
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	ADP-54
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	<u>ADP-56</u>

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

CONSULT Function

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

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

SELF-DIAGNOSIS RESULTS

Refer to ADP-33, "DTC Index".

DATA MONITOR

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

Revision: 2013 September ADP-23 2012 M

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DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

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

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

Monitor Item	Unit	Main Signals	Selection From Menu	Contents
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.
STEERING STATUS*	"LOCK/UN- LOCK"	×	×	LOCK/UNLOCK status judged from steering lock unit.

^{*:} With steering lock models

ACTIVE TEST

CAUTION:

When driving vehicle, do not perform active test.

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000006885955

ECU	Reference	
	BCS-34, "Reference Value"	
BCM	BCS-54, "Fail-safe"	
BCIVI	BCS-56, "DTC Inspection Priority Chart"	
	BCS-57, "DTC Index"	

< ECU DIAGNOSIS INFORMATION >

DRIVER SEAT CONTROL UNIT

Α Reference Value INFOID:0000000006885956

VALUES ON THE DIAGNOSIS TOOL

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Monitor Item	Condi	tion	Value/Status
SET SW	Sot quitab	Push	ON
SLI SW	Set switch	Release	OFF
MEMORY OWN	Memory switch 1	Push	ON
MEMORY SW1	Welliory Switch i	Release	OFF
MEMORY SW2	Memory switch 2	Push	ON
IVIEIVIORT 3VV2	Welliory Switch 2	Release	OFF
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
RECLN SW-FR	Reclining switch (forward)	Operate	ON
	recining switch (forward)	Release	OFF
RECLN SW-RR	Reclining switch (back-	Operate	ON
THE OWN THIS	ward)	Release	OFF
LIFT FR SW-UP	Lifting switch front (up)	Operate	ON
		Release	OFF
LIFT FR SW-DN	Lifting switch front (down)	Operate	ON
LII I I I I OW-DIN		Release	OFF
LIFT RR SW-UP	Lifting switch rear (up)	Operate	ON
		Release	OFF
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON
	Litting Switch real (down)	Release	OFF
MIR CON SW-UP	Mirror switch	Up	ON
WIII CON OW OI	Will of Switch	Other than the above	OFF
MIR CON SW-DN	Mirror switch	Down	ON
WIII OON OW DIN	Will of Switch	Other than the above	OFF
MIR CON SW-RH	Mirror switch	Right	ON
	or omton	Other than the above	OFF
MIR CON SW-LH	Mirror switch	Left	ON
5577 577 211	Millor Switch	Other than the above	OFF
MIR CHNG SW-R	Changeover switch	Right	ON
5111.5 577 10	Sharigootor ownorr	Other than the above	OFF
MIR CHNG SW-L	Changeover switch	Left	ON
51115 511 2	Shangsovor ownorr	Other than the above	OFF
TILT SW-UP	Tilt switch	Upward	ON
		Other than the above	OFF
TILT SW-DOWN	Tilt switch	Downward	ON
	THE OWNORD	Other than the above	OFF

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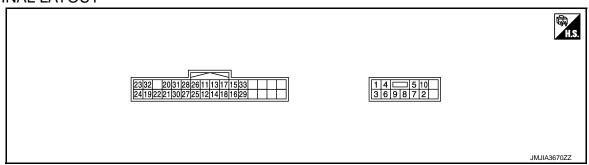
Monitor Item	Con	dition	Value/Status
TELESCO SW-FR	Telescopic switch	Forward	ON
TELESCO SW-FR	relescopic switch	Other than the above	OFF
TELESCO SW-RR	Telescopic switch	Backward	ON
TELESCO SW-KK	relescopic switch	Other than the above	OFF
DETENT SW	A/T selector lever	P position	OFF
DETERM OW	7 (1 30100101 10 (01	Other than the above	ON
STARTER SW	Ignition position	Cranking	ON
	·g·····o··· poomo··	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 $^{^{\star}}$
		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 s	ide)	Change between 3.4 (close to peak) 0.6 (close to valley)
MIR/SEN RH R-L	Door mirror (passenger s	ide)	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 *1
TILT PULSE	Tilt position	Downward	The numeral value increases *1
		Other than the above	No change to numeral value*1
		Forward	The numeral value decreases *1
TELESCO PULSE	Telescopic position	Backward	The numeral value increases *1
		Other than the above	No change to numeral value*1
*0	Ota anima de de la compansión de la comp	LOCK	LOCK
STEERING STATUS*2	Steering lock unit	unlock	UNLOCK
VEHICLE SPEED	The condition of vehicle s	speed is displayed	km/h
P RANG SW CAN	A/T coloctor lover	P position	ON
F IVAING OW CAIN	A/T selector lever	Other than the above	OFF
D DANGE (CAN)	A/T selector lever	R position	ON
R RANGE (CAN)	Av i Selectol level	Other than the above	OFF
DOOR SW-FL	SW-FL Driver door		ON
	211701 0001	Close	OFF

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Cond	ition	Value/Status
DOOR SW-FR	December door	Open	ON
DOOK SW-FK	Passenger door	Close	OFF
IGN ON SW	Ignition switch	ON position	ON
IGIN ON SW	ignition 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 Key	Inserted is key slot	ON
RET ON 3W	Intelligent Key	Inserted is not key slot	OFF
KEYLESS ID	UNLOCK button of Intellige	ent Key is pressed	1,2,3,4or5
KYLS DR UNLK	Intelligent Key or driver	ON	ON
KILO DI VINLI	side door request switch	OFF	OFF
VHCL SPEED (ABS)	Can signal from ABS	Received	ON
VHCL SPEED (ABS)	Can signal from ABS	Not received	OFF
HANDLE	The PCM for handle position	on is displayed	LHD
HANDLE	The BCM for handle position	ori is displayed	RHD
TRANSMISSION	Transmission type is displa	avod	AT or CVT
HANSIMISSION	Transmission type is displa	ayeu	MT

^{*1:} The value at the position attained when the battery is connected is regarded as 32768.

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. color)	Description		Condition		Voltage (V)	
+	-	Signal name	Input/ output	Condition		(Approx.)	
1 (R)	Ground	Battery power supply	Input	_		Battery voltage	
2 (B)	Ground	Ground	_	_		0	
3	Ground	Sliding motor forward output	Out-		Operate (forward)	12	
(G)		signal	put	Seat sliding	Other than the above	0	
4	Ground	Sliding motor backward output	Out-	Seat sliding	Operate (backward)	12	
G/R)	Ground	signal	put	oeat shully	Other than the above	0	

ADP-29 Revision: 2013 September 2012 M Α

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^{*2:} With steering lock models.

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5	Cround	Reclining motor	Out-	Seet realizing	Operate (forward)	12
(V)	Ground	forward output signal	put	Seat reclining	Other than the above	0
6	Ground	Reclining motor backward output	Out-	Seat reclining	Operate (backward)	12
(R/L)	Ground	signal	put	Geat recilining	Other than the above	0
7	Ground	Lifting motor (rear) down out-	Out-	Seat lifting (rear)	Operate (down)	12
(L)	Cround	put signal	put	Coat many (roar)	Other than the above	0
8	Ground	Lifting motor (rear) up output	Out-	Seat lifting (rear)	Operate (up)	12
(L/W)	Ground	signal	put	ocat ming (rear)	Other than the above	0
9	Ground	Lifting motor (front) up output	Out-	Seat lifting (front)	Operate (up)	12
(L/R)	Ground	signal	put	ocat inting (nont)	Other than the above	0
10	Ground	Lifting motor (front) down out-	Out-	Seat lifting (front)	Operate (down)	12
(L/B)	Ground	put signal	put	ocat inting (nont)	Other than the above	0
11	11 Ground	Sliding switch	Input	t Sliding switch -	Operate (backward)	0
(G/B)	Cround	backward signal	трис		Other than the above	12
12	Ground	Sliding switch	Input	Input Sliding switch	Operate (forward)	0
(G/W)	Cround	forward signal	трис	Circuity Switch	Other than the above	12
13	Ground	Reclining switch	Input	Reclining switch	Operate (backward)	0
(R/G)	Ground	backward signal	mput	rtooming outlon	Other than the above	12
14	Ground	Reclining switch	Input	Reclining switch	Operate (forward)	0
(R/W)	Cround	forward signal	трис	resulting switch	Other than the above	12
15	Ground	Lifting switch (rear) down sig-	Input	Lifting switch (rear)	Operate (down)	0
(Y/B)		nal			Other than the above	12
16	Ground	Lifting switch	Input	Lifting switch (rear)	Operate (up)	0
(Y/R)		(rear) up signal	1, 2	3 ()	Other than the above	12
17	Ground	Lifting switch (front) down sig-	Input	Lifting switch (front)	Operate (down)	0
(LG/B)		Other than the above	12			

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(LG/R)	Ground	(front) up signal	Input	Lifting switch (front)	Other than the above	12
19 (G/Y)	Ground	Sliding sensor signal	Input	Seat sliding	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ
20 (R/Y)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	10mSec/div 2V/div JMJIA0119ZZ
					Other than the above	0 or 5
21 (Y)	Ground	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate	10mSec/div 5V/div JMJIA3675ZZ
					Other than the above	0 or 12
22 (R)	Ground	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate	10mSec/div 5V/div JMJIA3675ZZ
					Other than the above	0 or 12
23 (P)	_	CAN-H	_	_		_
24 (P/L)	_	CAN-L	_			_
25 (G/O)	Ground	Memory indica- tor 1 signal	Out- put	Memory indicator 1 Other than the above		1 12
26 (L/O)	Ground	Memory indica- tor 2 signal	Out- put	Memory indicator 2	Illuminate Other than the above	1 12

< ECU DIAGNOSIS INFORMATION >

					Press	0
27 (V)	Ground	Memory switch 1 signal	Input	Memory switch 1	Other than the	
(•)		Signal			above	5
28		Memory switch 2			Press	0
(V/W)	Ground	signal	Input	Memory switch 2	Other than the above	5
29					Press	0
(L)	Ground	Set switch signal	Input	Set switch	Other than the above	5
30 (BR)	Ground	Tilt sensor signal	Input	Steering tilt	Operate	10mSec/div 2V/div JMJIA0119ZZ
					Other than the above	0 or 5
31 (BR/W)	Ground	Telescopic sensor signal	Input	Steering telescopic	Operate	10mSec/div 2V/div JMJIA0119ZZ
					Other than the above	0 or 5
32 (W/L)	Ground	UART communication (TX/RX)	Input	Ignition switch ON		10msec/div 5V/div JMJIA1391ZZ
33 (W)	Ground	Sensor power supply	Out- put	_	_	12

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-50
Only manual functions operate normally.	CONTROL UNIT	U1010	ADP-51
	EEPROM	B2130	ADP-60
Only manual functions, except door mirror, operate normally.	UART communication	B2128	<u>ADP-58</u>
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	ADP-52
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	<u>ADP-54</u>
Only manual functions, except steering tilt, operate normally.	Steering column tilt output	B2116	ADP-56

< ECU DIAGNOSIS INFORMATION >

DTC Index

CONSULT	Tim	ing ^{*1}			
display	Current mal- function Previous mal- function		Item	Reference page	
CAN COMM CIRCUIT [U1000]	0	1-39	CAN communication	ADP-50	
CONTROL UNIT [U1010]	0	1-39	Control unit	ADP-51	
SEAT SLIDE [B2112]	0	1-39	Seat slide motor output	ADP-52	
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	ADP-54	
STEERING TILT [B2116]	0	1-39	Tilt motor output	ADP-56	
UART COMM [B2128]	0	1-39	UART communication	ADP-58	
EEPROM [B2130]	0	1-39	EEPROM	ADP-60	

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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.

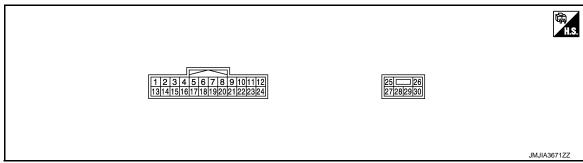
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. color)	Description		Con	dition	Voltage (V)	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
1	Ground	Tilt switch up signal	Input	Tilt switch	Operate (up)	0	
(Y)	Giodila	Till Switch up Signal	прис	THE SWILCH	Other than the above	5	
2	Ground	Changeover switch RH	Input	Changeover	RH	0	
(V)	Orodina	signal	mpac	switch position	Neutral or LH	5	
3	Ground	Mirror switch up signal	Input	Mirror switch	Operate (up)	0	
(Y)	Ground	Will of Switch up Signal	iiiput	Will Of Switch	Other than the above	5	
4	4	Mirror switch left signal	Input	Mirror switch	Operate (left)	0	
(V)	Ground				Other than the above	5	
5 (BR)	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 (BR)	Ground	Door mirror sensor (driver side) up/down signal	Input	Door mirror LH pos	sition	Change between 3.4 (close to peak) 0.6 (close to valley)	
7	Ground	Telescopic switch forward	lanut	Telescopic switch	Operate (forward)	0	
(W)	Ground	signal	Input	relescopic switch	Other than the above	5	
8 (LG)	Ground	UART communication (TX/RX)	Output	Ignition switch ON		10msec/div 5V/div JMJIA1391ZZ	

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description		Com	dition	Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx.)
10			Output	Door mirror RH	Operate (up/right)	12
(BR)	Ground	put signal	Output	Boot millor Ret	Other than the above	0
11	Ground	Door mirror motor (passenger side) down/left	Output	Door mirror RH	Operate (down/left)	12
(L)	Ground	output signal	Output	Boot millor Ret	Other than the above	0
12	Ground	Door mirror motor (driver side) down/right output	Output	Door mirror (LH)	Operate (down/right)	12
(G)	Ground	signal	Output	Boot militor (Erry	Other than the above	0
13	Ground	Tilt switch down signal	Input	Tilt switch	Operate (down)	0
(SB)	Ground	The Switch down Signal	прис	THE SWILOTT	Other than the above	5
14	Ground	Changeover switch LH	Input	Changeover	LH	0
(BG)	Giound	signal	iriput	switch position	Neutral or RH	5
15	Ground	Mirror switch down signal	Input	Minner	Operate (down)	0
(L)	Ground	Ground Mirror Switch down Signal Input Mirror Swit	Mirror switch	Other than the above	5	
16	16	Mirror switch right signal	Innut	Input Mirror switch -	Operate (right)	0
(V)	Ground	Militor switch right signal	mpat		Other than the above	5
17 (G)	Ground	Door mirror sensor (passenger side) left/right signal	Input	Door mirror RH position		Change between 3.4 (close to left edge) 0.6 (close to right edge)
18 (G)	Ground	Door mirror sensor (driver side) left/right signal	Input	Door mirror LH pos	ition	Change between 0.6 (close to left edge) 3.4 (close to right edge)
19	Ground	Telescopic switch back-	Innut	Telescopic switch	Operate (backward)	0
(G)	Giouna	ward signal	Input	relescopic switch	Other than the above	5
20 (Y)	Ground	Ground (sensor)	_	_		0
21 (GR)	Ground	Door mirror motor sensor power supply	Input	_		5
22	Ground	Door mirror motor (passenger side) down/right	Output	Operate (down/right)		12
(Y)	Giodila	output signal	Output	Door mirror (RH)	Other than the above	0
23	Ground	Door mirror motor (driver side) up/right output sig-	Outout	Door mirror (LH)	Operate (up/right)	12
(BG)	Giound	nal	Output	DOOL HIIITOL (LTI)	Other than the above	0

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

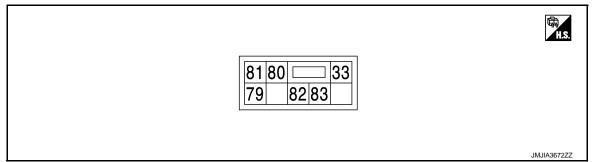
	517 (0110	0313 INFORMATION				
	nal No. color)	Description		Condition		Voltage (V)
+	-	Signal name	Input/ Output			(Approx.)
24	Ground	Door mirror motor (driver side) down/left output sig-	Output	Door mirror (LH)	Operate (down/left)	12
(GR)	(GR)	nal	Output	Door militor (Erri)	Other than the above	0
25 (W)	Ground	Battery power supply	Input	_	_	Battery voltage
26	Ground	Telescopic motor back- ward output signal	Output	Steering telescopic	Operate (backward)	12
(L)	Ground				Other than the above	0
27 (P)	Ground	Tilt&telescopic sensor power supply	Output	_		12
28	Ground	Tilt motor down output signal	Output	utput Steering tilt -	Operate (down)	12
(G)	Ground				Other than the above	0
		Tilt motor up output signal			Operate (up)	12
29	Ground		Output	Steering tilt	Other than the above	0
(LG)	Giouila	Telescopic motor forward	Output	Steering telescop-	Operate (forward)	12
		output signal		ic	Other than the above	0
30 (B)	Ground	Ground (power)	_	<u> </u>		0

LIFTING SENSOR CONTROL UNIT

LIFTING SENSOR CONTROL UNIT

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No.	Description				Voltage (V)
+	-	Signal name	Input/ Output	Condition		(Approx.)
33 (W)	Ground	sensor power supply	Output	_		Battery voltage
79 (R)	Ground	Aftor conversion of lifting sensor (front) signal	Output	Seat lifting (front)	Operate	10mSec/div 5V/div JMJIA3675ZZ
					Other than the above	0 or 12
80 (L/Y)	Ground	Before conversion of lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate	10mSec/div 5V/div JMJIA3674ZZ
					Other than the above	7 or 12
81 (BR/Y)	Ground	Before conversion of lifting sensor (front) signal	Input	Seat lifting (front)	Operate	10mSec/div 5V/div JMJIA3674ZZ
					Other than the above	7 or 12

Revision: 2013 September ADP-37 2012 M

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LIFTING SENSOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description		Condition		Voltage (V)	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
82 (Y)	Ground	Aftor conversion of lifting sensor (rear) signal	Output	Seat lifting (rear)	Operate Other than the above	10mSec/div 5V/div JMJIA3675ZZ	
83 (B)	Ground	Ground	_	_		0	

WIRING DIAGRAM

AUTOMATIC DRIVE POSITIONER SYSTEM

Wiring Diagram INFOID:0000000006885961

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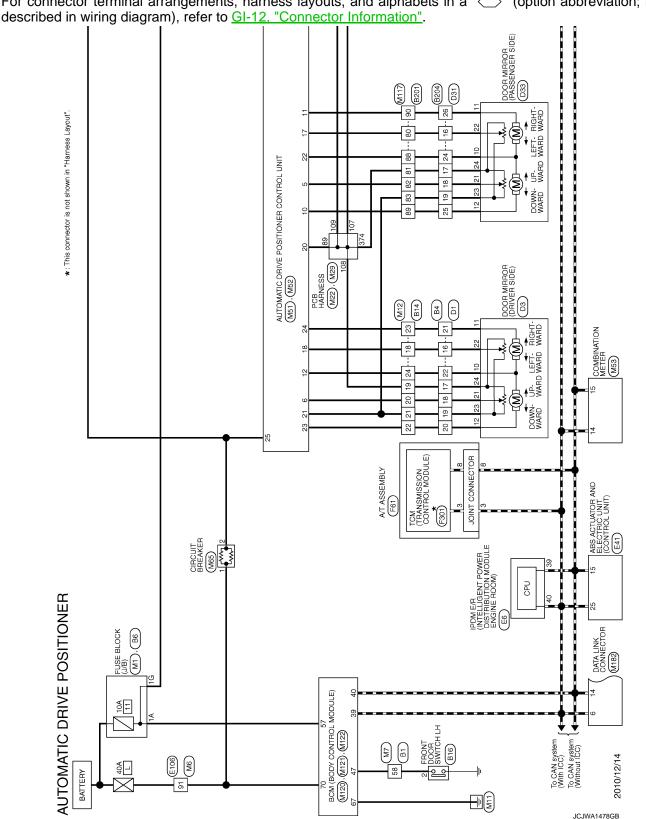
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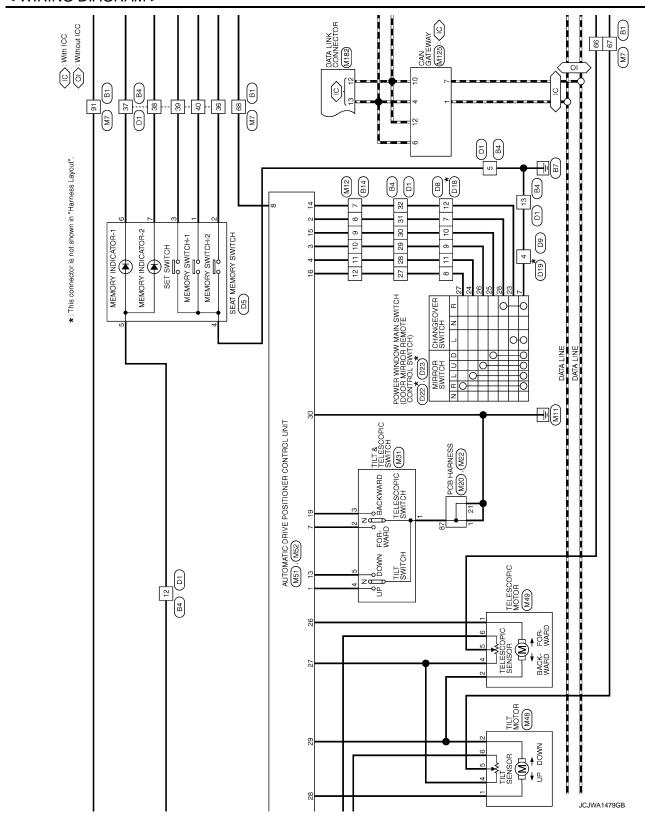
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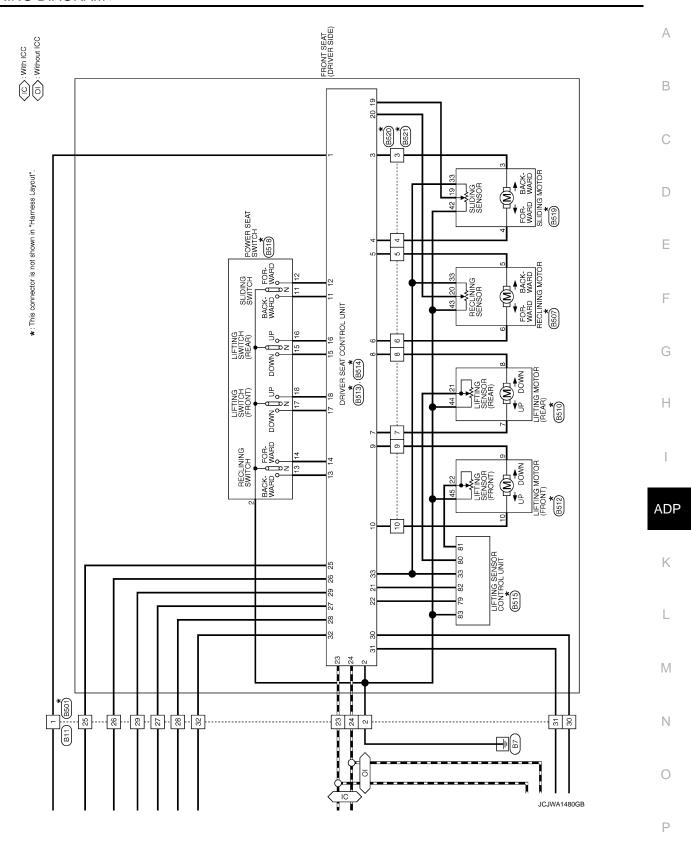
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For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not





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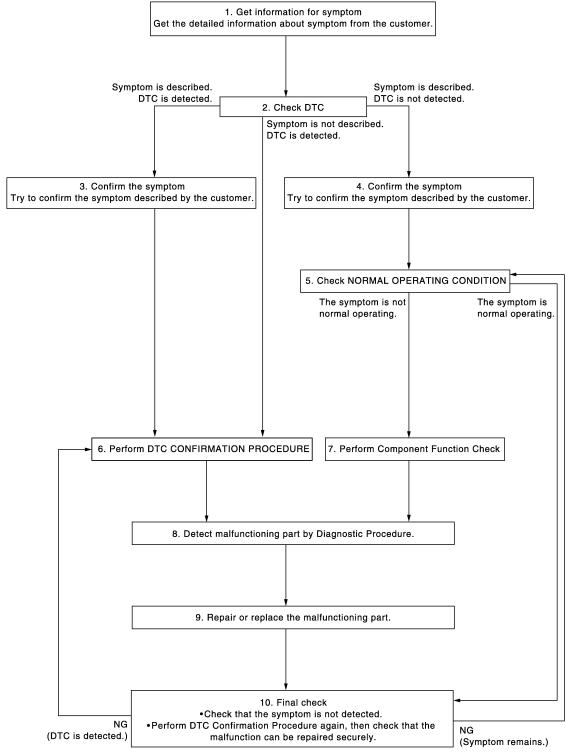


BASIC INSPECTION

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. Refer to ADP-33, "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-133, "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-44, "Intermittent Incident". 7.PERFORM COMPONENT FUNCTION CHECK

Perform the component function check for the isolated malfunctioning point.

>> GO TO 8.

8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

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

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>> GO TO 9.

$\mathbf{9}.$ 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.

Are all malfunctions corrected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

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

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-

scription INFOID:0000000006885963

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

Function	Condition	Procedure
Memory (Seat, steering, mirror)	Erased	Perform storing
Futurita ida a a int	ON	Perform initialization
Entry/exit assist	ON	Set slide amount*1
Intelligent Vey interlegic	Erased	Perform initialization
Intelligent Key interlock	Eraseu	Perform storing
Seat synchronization	OFF	_

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

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:0000000006885964

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to ADP-46, "SYSTEM INITIALIZATION: Description".

>> GO TO 2.

2.MEMORY STORAGE

Perform memory storage. Refer to ADP-47, "MEMORY STORING: Description".

>> GO TO 3.

3. $\!$ INTELLIGENT KEY INTERLOCK STORAGE

Perform memory storage. Refer to ADP-48, "INTELLIGENT KEY INTERLOCK STORING: Description".

>> GO TO 4.

f 4.system setting

Perform system setting. Refer to ADP-48, "SYSTEM SETTING: Description".

>> 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.

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

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INFOID:0000000006885965

< BASIC INSPECTION >

Function	Condition	Procedure
Intelligent Key interlock	Erased	Perform initialization
intelligent key interlock	Elaseu	Perform storing
Seat synchronization	OFF	_

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

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-46, "SYSTEM INITIALIZATION: Description".

>> GO TO 2.

MEMORY STORAGE

Perform memory storage. Refer to ADP-47, "MEMORY STORING: Description".

>> GO TO 3.

3.INTELLIGENT KEY INTERLOCK STORAGE

Perform memory storage. Refer to ADP-48, "INTELLIGENT KEY INTERLOCK STORING: Description".

>> GO TO 4.

4. SYSTEM SETTING

Perform system setting. Refer to ADP-48, "SYSTEM SETTING: Description".

>> END SYSTEM INITIALIZATION

SYSTEM INITIALIZATION: Description

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

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

SYSTEM INITIALIZATION: Special Repair Requirement

INFOID:0000000006885968

INFOID:0000000006885967

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).

Revision: 2013 September ADP-46 2012 M

< 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:0000000006885969 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 selector lever : 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. Р >> END

Revision: 2013 September ADP-47 2012 M

INTELLIGENT KEY INTERLOCK STORING

< BASIC INSPECTION >

INTELLIGENT KEY INTERLOCK STORING: Description

INFOID:0000000006885971

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-0000000008885972

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:0000000006885973

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

Setting Change

x: Applicable

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

< BASIC INSPECTION > SYSTEM SETTING: Special Repair Requirement INFOID:0000000006885974 Α 1. CHOOSE METHOD There are three way of setting method. В Which method do you choose? With CONSULT>>GO TO 2. With set switch>>GO TO 4. 2. WITH CONSULT - STEP 1 Select "Work support". D >> GO TO 3. 3. WITH CONSULT - 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. Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indicator. Entry/exit assist (seat/steering column) are ON: Memory switch indicator blink two times. Entry/exit assist (seat/steering column) are OFF: Memory switch indicator blink once. ADP >> GO TO 5. 5. WITH SET SWITCH - STEP 2 Turm ignition switch ACC Push setting button and hold for more than 10 seconds, then confirm blinking of the memory switch indi-• Seat synchronization are ON: Memory switch indicator blink two times. L Seat synchronization are OFF: Memory switch indicator blink once. >> END Ν

Revision: 2013 September ADP-49 2012 M

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:00000000008885975

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 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.

Is the DTC detected?

YES >> Perform diagnosis procedure. Refer to ADP-50, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885977

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result".

Is DTC "U1000" displayed?

YES >> Refer to LAN-25, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-41, "How to Check Terminal".

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic INFOID:0000000006885978

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:0000000006885979

1. REPLACE DRIVER SEAT CONTROL UNIT

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

>> Replace driver seat control unit.Refer to ADP-134, "Removal and Installation".

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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.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885981

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

2.CHECK SLIDING MOTOR CIRCUIT (POWER SHORT)

- 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.)	
Sliding	g motor			
Connector	Terminals		, , ,	
B519	3	Ground	0	
5319	4	Giodila	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 >

	+) control unit	(-)	Voltage (V) (Approx.)	
Connector	Connector Terminals		(44.5)	
B513	3	Ground	0	
D313	4	Giouna	U	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to <u>ADP-134</u>, "Removal and Installation"

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "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.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885983

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT.
- Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-54, "DTC Logic".

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-44, "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		(11 - 7	
B507	5	Ground	0	
D307	6	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 sea	(+) Driver seat control unit		Voltage (V) (Approx.)
Connector	Terminals		(приох.)
B513	5	Ground	0
D313	6	Ground	U

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

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ADP-55 Revision: 2013 September 2012 M

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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 unit Tilt 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.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885985

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- Erase the DTC.
- Perform DTC confirmation procedure. Refer to <u>ADP-56, "DTC Logic"</u>.

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

2.CHECK TILT MOTOR CIRCUIT (POWER SHORT)

- 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.

(+)		(-)	Voltage (V) (Approx.)
Tilt motor			
Connector	Terminals		, , ,
	1	Cround	0
IVI40	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	Terminals		(44)
M52	28	Ground	0
IVIOZ	29	Ground	U

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit. Refer to ADP-135. "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

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B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

B2128 UART COMMUNICATION LINE

Description

Driver seat control unit performs UART communication with the automatic drive positioner control unit using 1 communication 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.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885988

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Erase the DTC.
- 4. Perform DTC confirmation procedure. Refer to ADP-58, "DTC Logic".

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

2. CHECK UART COMMUNICATION LINE CONTINUITY

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

Driver seaf	Driver seat control unit		Automatic drive positioner control unit	
Connector	Terminal	Connector	Terminal	Continuity
B514	32	M51	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	Terminal	Ground	Continuity
B514	32		Not existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Repair or replace harness or connector.

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< 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.

Is the DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006885990

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is the DTC displayed again?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

2. REPLACE DRIVER SEAT CONTROL UNIT

Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT DRIVER SEAT CONTROL UNIT

INFOID:000000000688599:

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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	L (40 A)

Is the inspection result normal?

YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

- 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		(11 - 7
B513	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B513	2		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT: Special Repair Requirement

INFOID:0000000006885992

1.PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to ADP-45, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-NAL: Special Repair Requirement".

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Diagnosis Procedure

INFOID:0000000006885993

NOTE:

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

1.CHECK FUSE

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

ADP-61 Revision: 2013 September 2012 M

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Signal name	Fuse No.
Battery power supply	L (40 A)

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK POWER SUPPLY CIRCUIT

- 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 Connector Terminals		(-)	Voltage (V) (Approx.)	
M52	25	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK 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
M52	30		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT: Special Repair Requirement

INFOID:0000000006885994

1. PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to <u>ADP-45</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"</u>.

LIFTING SENSOR CONTROL UNIT

LIFTING SENSOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006885995

1. CHECK LIFTING SENSOR POWER SUPPLY

- Turn ignition switch ON.
- Check voltage between lifting sensor control unit harness connector and ground.

(+) Lifting sensor control unit		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(11, 31, 31)	
B515	33	Ground	12	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

$\overline{2}$.check power supply circuit

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

Lifting sense	or control unit	Driver seat control unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B515	33	B514	33	Existed

4. Check continuity between lifting sensor control unit harness connector and ground.

Lifting sensor control unit			Continuity
Connector	Connector Terminal		Continuity
B515	33		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between the lifting sensor control unit harness connector and ground.

Lifting sensor control unit			Continuity
Connector	Connector Terminal		Continuity
B515	83		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

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< DTC/CIRCUIT DIAGNOSIS >

SLIDING SWITCH

Component Function Check

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006885997

INFOID:0000000006885996

1. CHECK SLIDING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 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		(, , , , , , , , , , , , , , , , , , ,	
B518	11	Ground	12	
D310	12	- Ground	12	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SLIDING SWITCH CIRCUIT

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

Driver seat	control unit	Power seat switch		ol unit Power seat switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
B514	11	B518	11	Existed		
D314	12	B310	12	LXISIEU		

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

Driver seat control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B514	11	Giodila	Not existed	
	12		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.

SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK SLIDING SWITCH

Refer to ADP-65, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch. Refer to ADP-138, "Removal and Installation"

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

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
2		Release	Not existed	
2	12	Sliding switch (forward)	Operate	Existed
	12		Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-138</u>, "Removal and Installation".

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< DTC/CIRCUIT DIAGNOSIS >

RECLINING SWITCH

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Status
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-66, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000006886000

INFOID:0000000006885999

1. CHECK RECLINING SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 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		(дриох.)	
B518	13	Ground	12	
D310	14	Ground	12	

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
B514	13	B518	13	Existed
D314	14	B310	14	LXISIEU

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

Driver seat control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B514	13	Ground	Not existed	
D314	14		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK RECLINING SWITCH

Refer to ADP-67, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch. Refer to ADP-138, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006886001

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				
	13 F	Reclining switch (backward)	Operate	Existed
2	13		Release	Not existed
2	14	Reclining switch (forward)	Operate	Existed
	14		Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-138</u>. "Removal and Installation".

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LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (FRONT)

Component Function Check

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006886003

INFOID:0000000006886002

1. CHECK LIFTING SWITCH (FRONT) SIGNAL

- 1. Turn ignition switch OFF.
- 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.)
B518	17	Ground	12
D310	18	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.
- 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		
B514	17	P519	17	Existed		
18	18	B518	18	Existed		

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

Driver seat control unit			Continuity	
Connector	Terminal	Ground	Continuity	
B514	17	Giodila	Not existed	
	18		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3.CHECK LIFTING SWITCH (FRONT)

Refer to ADP-69, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch. Refer to <u>ADP-138</u>, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

onent inspection

1. CHECK LIFTING SWITCH (FRONT)

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

Power seat switch	Power seat switch (lifting switch front)		Condition	
Terr	Terminal			
	17	Lifting switch front (down)	Operate	Existed
2	11		Release	Not existed
2	18	Lifting switch front (up)	Operate	Existed
	10	Lifting switch front (up)	Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-138</u>, "Removal and Installation".

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LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (REAR)

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Status
LIFT RR SW-UP Lifting switch rear (up)	Operate	ON	
	Litting switch rear (up)	Release	OFF
LIET DD GW DN	LIFT RR SW-DN Lifting switch rear (down)	Operate	ON
LIFT KK 5W-DN		Release	OFF

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006886006

INFOID:0000000006886005

1. CHECK LIFTING SWITCH (REAR) SIGNAL

- 1. Turn ignition switch OFF.
- 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.)	
B518	15	Ground	12	
D310	16	Ground	12	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK LIFTING SWITCH (REAR) CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect driver seat control unit connector.
- 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		
B514	15	B518	15	Existed		
	16		16	LXISIEU		

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B514	15	Giodila	Not existed
	16		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3.CHECK LIFTING SWITCH (REAR)

Refer to ADP-71, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power seat switch. Refer to ADP-138, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

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	Terminal			
	15	Lifting switch rear (down)	Operate	Existed
2			Release	Not existed
2	16	Lifting switch rear (up)	Operate	Existed
			Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power seat switch. Refer to <u>ADP-138</u>, "Removal and Installation".

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TILT SWITCH

Component Function Check

INFOID:00000000006886008

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006886009

1. CHECK TILT SWITCH SIGNAL

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

(+) Tilt & telescopic switch		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(· 'PP' 5/11)	
M31	4	Ground	5	
	5			

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 positioner control unit		Tilt & telescopic switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	1	M31	4	Existed
	13		5	LXISteu

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M51	1	Giodila	Not existed
	13		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

TILT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK TILT SWITCH

Refer to ADP-73, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace tilt & telescopic switch. Refer to ADP-139, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

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		Condition		Continuity
Terr	ninal	0011	dition	Continuity
	4	Tilt switch (upward)	Operate	Existed
1	4	Till Switch (upward)	Release	Not existed
	5	Tilt switch (downward)	Operate	Existed
	5	Till Switch (downward)	Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace tilt & telescopic switch. Refer to ADP-139, "Removal and Installation".

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TELESCOPIC SWITCH

Component Function Check

1. CHECK FUNCTION

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

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

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006886012

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1. CHECK TELESCOPIC SWITCH SIGNAL

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

(+)			Voltage (V) (Approx.)	
Tilt & telescopic switch		(-)		
Connector	Terminals		(11 - /	
M31	2	Ground	5	
IVIST	3	Ground	5	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK TELESCOPIC SWITCH CIRCUIT

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

Automatic drive po	sitioner control unit	Tilt & telescopic switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
M51	7	M31	2	Existed
IVIOT	19	IVIST	3	LXISIEU

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

Automatic drive positioner control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M51	7	Giodila	Not existed	
IVIO I	19		TVOL EXISTED	

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

TELESCOPIC SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

3. CHECK TELESCOPIC SWITCH

Refer to ADP-75, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace tilt & telescopic switch. Refer to ADP-139, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006886013

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
1	2	relescopic switch (lorward)	Release	Not existed
1	3	Telescopic switch (backward)	Operate	Existed
	3		Release	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace tilt & telescopic switch. Refer to ADP-139, "Removal and Installation".

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SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY SWITCH

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Status
MEMORY SW 1	Memory switch 1	Push	ON
WEWORT SW T		Release	OFF
MEMORY SW 2	Memory switch 2	Push	ON
		Release	OFF
SET SW S	Set switch	Push	ON
	Set Switch	Release	OFF

Is the indication normal?

YES >> INSPECTION END

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

Diagnosis Procedure

INFOID:0000000006886015

INFOID:0000000006886014

1. CHECK SEAT MEMORY SWITCH SIGNAL

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

(+) Driver seat control unit		(-)	Voltage (V) (Approx.)
Connector			
	1		
D5	2	Ground	5
	3		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK MEMORY SWITCH CIRCUIT

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

Driver seaf	control unit	Seat memory switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
	27		1	
B514	28	D5	2	Existed
	29		3	

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

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	Driver seat control unit		Continuity
Connector	Terminal		Continuity
	27	Ground	
B514	28		Not existed
	29		

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

3.check memory switch ground circuit

Check continuity between seat memory switch harness connector and ground.

Seat memory switch			Continuity
Connector	Terminal	Ground	Continuity
D5	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-77, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace seat memory switch. Refer to ADP-137, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1. CHECK SEAT MEMORY SWITCH

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

Seat men	Seat memory switch Terminal		Condition		
Terr					
	1	Momony switch 1	Push	Existed	
	I	Memory switch 1	Release	Not existed	
4	2	2 Memory switch 2 3 Set switch	Push	Existed	
4	2		Release	Not existed	
	2		Push	Push	Existed
	3		Release	Not existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat memory switch. Refer to <u>ADP-137, "Removal and Installation"</u>.

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< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MAIN SWITCH CHANGEOVER SWITCH

CHANGEOVER SWITCH: Component Function Check

INFOID:0000000006886017

1. CHECK CHANGEOVER SWITCH FUNCTION

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

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

Is the inspection result normal?

YES >> Changeover switch function is OK.

NO >> Refer to ADP-78, "CHANGEOVER SWITCH: Diagnosis Procedure".

CHANGEOVER SWITCH: Diagnosis Procedure

INFOID:0000000006886018

1. CHECK CHANGEOVER SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect power window main switch (door mirror remote control switch) connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power window main switch (door mirror remote control switch) harness connector and ground.

(+)			Voltage (V) (Approx.)	
Power window main switch (door mirror remote control switch)		(-)		
Connector	Terminal			
D23	23	Ground	5	
D23	28	Giodila	5	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK CHANGEOVER 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 power window main switch (door mirror remote control switch) harness connector.

Automatic drive po	ositioner control unit		vitch (door mirror remote switch)	Continuity
Connector	Terminal	Connector Terminal		
M51	2	D33	28	Existed
IVIOI	14	D23	23	EXISTEC

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

Automatic drive positioner control unit			Continuity
Connector	Terminal		Continuity
M51	2	Ground	Not existed
	14		Not existed

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

NO >> Repair or replace harness.

3.check power window main switch (door mirror remote control switch) ground **CIRCUIT**

Turn ignition switch OFF.

Check continuity between power window main switch (door mirror remote control switch) harness connector and ground.

Power window main switch (door mirror remote control switch)			Continuity
Connector Terminal		Ground	Continuity
D22	7		Existed

Is the inspection result normal?

>> GO TO 4. YES

NO >> Repair or replace harness.

4. CHECK CHANGEOVER SWITCH

Check changeover switch on power window main switch (door mirror remote control switch).

Refer to ADP-79, "CHANGEOVER SWITCH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power window main switch (door mirror remote control switch). Refer to PWC-63, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

CHANGEOVER SWITCH: Component Inspection

1. CHECK CHANGEOVER SWITCH

Turn ignition switch OFF.

Disconnect power window main switch (door mirror remote control switch) connector.

Check continuity between power window main switch (door mirror remote control switch) terminals.

Power window main switch (door mirror remote control switch) Terminal		Condition		Continuity
23		Changeover switch	LEFT	Existed
23	7		Other than the above	Not existed
28	,		RIGHT	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power window main switch (door mirror remote control switch). Refer to PWC-63. "Removal and Installation".

MIRROR SWITCH

MIRROR SWITCH: Component Function Check

1. CHECK MIRROR SWITCH FUNCTION

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

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< DTC/CIRCUIT DIAGNOSIS >

Monitor item	Condition			
MIR CON SW-UP/DN	When operating the mirror switch toward the up or down side.	: ON		
MIR CON SW-OP/DIN	Other than the above.	: OFF		
MIR CON SW-RH/I H	When operating the mirror switch toward the right or left side.	: ON		
WIR CON SW-RH/LH	Other than the above.	: OFF		

Is the inspection result normal?

YES >> Mirror switch function is OK.

NO >> Refer to ADP-80, "MIRROR SWITCH: Diagnosis Procedure".

MIRROR SWITCH: Diagnosis Procedure

INFOID:0000000006886021

1. CHECK MIRROR SWITCH INPUT SIGNAL

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

(+)		(-)	V 1. 0.0	
Power window main switch (door mirror remote control switch)			Voltage (V) (Approx.)	
Connector	Terminal		(11 - 7	
	24		5	
D23	25	Ground		
D23	26	Giouna		
	27	-		

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 power window main switch (door mirror remote control switch) harness connector.

Automatic drive positioner control unit		Power window main switch (door mirror remote control switch)		Continuity
Connector	Terminal	Connector	Terminal	
	3	D23	26	
M51	4		24	Existed
I CIVI	15		25	Existed
	16		27	

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

Automatic drive positioner control unit			Continuity
Connector	Terminal		Continuity
	3	Ground	
M51	4		Not existed
	15		
	16		

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-135, "Removal and Installation"</u>.

NO >> Repair or replace harness.

3.check power window main switch (door mirror remote control switch) ground circuit

Turn ignition switch OFF.

2. Check continuity between power window main switch (door mirror remote control switch) harness connector and ground.

Power window main switch (do	oor mirror remote control switch)		Continuity
Connector	Terminal	Ground	Continuity
D22 7			Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK MIRROR SWITCH

Check mirror swtich on power window main switch (door mirror remote control switch).

Refer to ADP-81, "MIRROR SWITCH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power window main switch (door mirror remote control switch). Refer to PWC-63, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

MIRROR SWITCH: Component Inspection

1.CHECK MIRROR SWITCH

1. Turn ignition switch OFF.

- 2. Disconnect power window main switch (door mirror remote control switch) connector.
- Check continuity between power window main switch (door mirror remote control switch) terminals.

Power window main switch (door mirror remote control switch)		Condition		Continuity
Teri	Terminal			
24			LEFT	Existed
24			Other than the above	Not existed
25	0.5		DOWN	Existed
25	7		Other than the above	Not existed
20		Mirror switch	UP	Existed
26			Other than the above	Not existed
27			RIGHT	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power window main switch (door mirror remote control switch). Refer to <u>PWC-63</u>. "Removal and Installation".

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POWER SEAT SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SEAT SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006886023

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 se	eat switch		Continuity
Connector	Terminal	Ground	Continuity
B518	2		Existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Repair or replace harness or connector.

TILT &TELESCOPIC SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TILT &TELESCOPIC SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006886024

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 & teles	copic switch		Continuity	
Connector	Terminal	Ground	Continuity	
M31	1		Existed	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Repair or replace harness.

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Revision: 2013 September

SLIDING SENSOR

Component Function Check

INFOID:0000000006886025

1. CHECK FUNCTION

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

Monitor item	Con	Value	
SLIDE PULSE Seat sliding	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 ADP-84, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006886026

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 (Reference value)
Connector	Terminals				
B514	19	Ground	Seat sliding	Operate Other than the	10mSec/div 2V/div JMJIA0119ZZ
				above	0 or 5

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> GO TO 2.

2.CHECK SLIDING SENSOR CIRCUIT

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

Driver seat control unit		Sliding motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
B514	19	B519	19	Existed

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

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver sea	control unit		Continuity
Connector	Terminal	Ground	Continuity
B514	19		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.check sliding sensor power supply

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

	(+)		Voltage (V) (Approx.)	
Slidin	g motor	(-)		
Connector	Terminals		(11 - 7	
B519	33	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK SLIDING SENSOR POWER SUPPLY CIRCUIT

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

Driver seat	control unit	Slidin	g motor	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B514	33	B519	33	Existed	

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

Driver seat	control unit		Continuity
Connector Terminal		Ground	Continuity
B514	33		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

5.CHECK SLIDING SENSOR GROUND

Turn ignition switch OFF.

2. Check continuity between sliding sensor harness connector and ground.

Sliding	g motor		Continuity
Connector	Terminal	Ground	Continuity
B519	42		Existed

Is the inspection result normal?

YES >> Replace sliding motor.

NO >> Repair or replace harness or connector.

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RECLINING SENSOR

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Con	Value	
RECLN PULSE Seat reclining		Operate (forward)	Change (increase)*1
	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 ADP-86, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006886028

INFOID:0000000006886027

1. CHECK RECLINING SENSOR SIGNAL

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

	(+) Driver seat control unit		(-) Condition		Signal (Reference value)
Connector	Terminals				(1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
B514	20	Ground	Seat reclining	Operate Other than the above	10mSec/div 2V/div JMJIA0119ZZ

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> GO TO 2.

2. CHECK RECLINING SENSOR CIRCUIT

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

Driver seat	Driver seat control unit		Reclining motor	
Connector	Terminal	Connector Terminal		Continuity
B514	20	B507	20	Existed

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

RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B514	20		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK RECLINING SENSOR POWER SUPPLY

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

	+)		Voltage (V) (Approx.)	
Reclini	ng motor	(-)		
Connector	Connector Terminals		(11.5)	
B507	33	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK RECLINING SENSOR POWER SUPPLY CIRCUIT

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

Driver seat	Driver seat control unit		Reclining motor		
Connector	Terminal	Connector Terminal		Continuity	
B514	33	B507	33	Existed	

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

Driver seaf	t control unit		Continuity	
Connector	Connector Terminal		Continuity	
B514	33		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

5. CHECK RECLINING SENSOR GROUND

Turn ignition switch OFF.

Check continuity between reclining motor harness connector and ground.

 Reclini	ng motor		Continuity
Connector	Terminal	Ground	Continuity
 B507	43		Existed

Is the inspection result normal?

YES >> Replace reclining motor.

NO >> Repair or replace harness or connector. ADP

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

Monitor item	Con	Value	
LIFT FR PULSE	Seat lifting (front)	Operate (up)	Change (increase)*1
		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-88, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006886030

INFOID:0000000006886029

1. CHECK LIFTING SENSOR CONTROL UNIT OUTPUT SIGNAL

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

	(+) ting senseor control unit nnector Terminals (-) Condition		Voltage (V) (Approx.)		
B515	79	Ground	Seat Lifting (front)	Operate Other than the above	10mSec/div 5V/div JMJIA3675ZZ

Is the inspection result normal?

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

2. CHECK LIFTING SENSOR CONTROL UNIT CIRCUIT

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

Driver sea	Driver seat control unit Li		or control unit	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B514	22	B515	79	Existed	

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

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driver seaf	t control unit		Continuity
Connector	Terminal	Ground	Continuity
B514	22		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

${f 3.}$ CHECK LIFTING SENSOR CONTROL UNIT INPUT SIGNAL

Read the voltage signal lifting sensor control unit harness connector and ground with an oscilloscope.

(+) Lifting senseor control unit		(-) Co		dition	Voltage (V) (Approx.)	
Connector	Terminals				(, pp. 6.4.)	
B515	81	Ground	Seat Lifting (front)	Operate Other than the above	10mSec/div 5V/div JMJIA3674ZZ	

Is the inspection result normal?

YES >> Replace lifting sensor control unit. Refer to <u>ADP-136, "Removal and Installation"</u>.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (FRONT) CIRCUIT

Turn ignition switch OFF.

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

Lifting sense	or control unit	Lifting motor (front)		Continuity
Connector	Terminal	Connector Terminal		Continuity
B515	81	B512	22	Existed

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

Lifting sensor	or control unit		Continuity	
Connector Terminal		Ground	Continuity	
B515	81		Not existed	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

5.CHECK LIFTING SENSOR (FRONT) GROUND

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

Lifting mo	otor (front)		Continuity
Connector	Terminal	Ground	Continuity
B512	45		Existed

Is the inspection result normal?

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LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace lifting motor (front). .

NO >> Repair or replace harness or connector.

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (REAR)

Component Function Check

1. CHECK FUNCTION

- 1. Select "LIFT RR PULSE" in "Data monitor" mode with CONSULT.
- 2. 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
		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

1. CHECK LIFTING SENSOR CONTROL UNIT OUTPUT SIGNAL

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

	+) or control unit	(-)	Condition		Voltage (V) (Approx.)
Connector	Terminals				
B515	82	Ground	Seat Lifting (rear)	Operate Other than the above	10mSec/div 5V/div JMJIA3675ZZ

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.check lifting sensor control unit circuit

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

Driver seat	control unit	Lifting sense	or control unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
B514	21	B515	82	Existed

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

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LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	control unit		Continuity
Connector	Terminal	Ground	Continuity
B514	21		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

3.CHECK LIFTING SENSOR CONTROL UNIT INPUT SIGNAL

Read the voltage signal lifting sensor control unit harness connector and ground with an oscilloscope.

	or control unit Terminals	(-)	Condition		Voltage (V) (Approx.)
B515	80	Ground	Seat Lifting (rear)	Operate Other than the above	10mSec/div 5V/div JMJIA3674ZZ

Is the inspection result normal?

YES >> Replace lifting sensor control unit. Refer to <u>ADP-136, "Removal and Installation"</u>.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (REAR) CIRCUIT

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

Lifting sense	or control unit	Lifting m	Continuity	
Connector	Terminal	Connector Terminal		Continuity
B515	80	B510	21	Existed

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

Lifting senso	or control unit		Continuity
Connector	Terminal	Ground	Continuity
B515	80		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

5. CHECK LIFTING SENSOR (REAR) GROUND

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

Lifting me	otor (rear)		Continuity
Connector	Terminal	Ground	Continuity
B510	44		Existed

Is the inspection result normal?

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace lifting motor (rear).
NO >> Repair or replace harness or connector.

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TILT SENSOR

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Value
		Operate (up)	Change (increase)*1
TILT PULSE	Steering column	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-94, "Diagnosis Procedure".

Diagnosis Procedure

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INFOID:0000000006886033

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.)
B514	30	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. Refer to ADP-134, "Removal and Installation".

NO >> GO TO 2.

2.CHECK TILT SENSOR CIRCUIT

- 1. 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
B514	30	M48	5	Existed

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B514	30		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.

(+)			Voltage (V) (Approx.)
Tilt motor		(-)	
Connector	Terminals		(11 /
M48	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	ositioner control unit	Tilt motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M52	27	M48	4	Existed

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

Automatic drive positioner control unit			Continuity
Connector Terminal		Ground	Continuity
M52	27		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

NO >> Repair or replace harness or connector.

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	rive positioner control unit Til		Tilt motor	
Connector	Terminal	Connector	Terminal	Continuity
M51	20	M48	6	Existed

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

Automatic drive positioner control unit			Continuity
Connector Terminal		Ground	Continuity
M51	20		Not existed

Is the inspection result normal?

YES >> Replace tilt motor.

NO >> Repair or replace harness or connector.

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TELESCOPIC SENSOR

Component Function Check

1. CHECK FUNCTION

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

Monitor item	Condition		Value
TELESCO PULSE		Operate (forward)	Change (increase)*1
	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-96, "Diagnosis Procedure"</u>.

Diagnosis Procedure

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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				(/ (ppiox.)
B514	31	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. Refer to ADP-134, "Removal and Installation".

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	Driver seat control unit		Telescopic motor	
Connector	Terminal	Connector	Terminal	Continuity
B514	31	M49	5	Existed

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

Driver seat control unit			Continuity
Connector	Terminal	Ground	Continuity
B514	31		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. Connect driver seat control unit connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between telescopic motor harness connector and ground.

(+) Telescopic motor		(-)	Voltage (V) (Approx.)
Connector	Terminals		(*)
M49	4	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK TELESCOPIC SENSOR POWER SUPPLY CIRCUIT

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

Automatic drive po	Automatic drive positioner control unit		Telescopic motor	
Connector	Terminal	Connector	Terminal	Continuity
M52	27	M49	4	Existed

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M52	27		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

NO >> Repair or replace harness or connecter.

5. CHECK TELESCOPIC SENSOR GROUND CIRCUIT

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

Automatic drive po	sitioner control unit	Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	20	M49	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
M51	20		Not existed

Revision: 2013 September ADP-97 2012 M

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TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace telescopic motor.

NO >> Repair or replace harness or connecter.

DRIVER SIDE

DRIVER SIDE : Component Function Check

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1. CHECK FUNCTION

- 1. Select "MIR/SEN LH U-D", "MIR/SEN LH R-L" in "Data monitor" with CONSULT.
- 2. 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 millor (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-99, "DRIVER SIDE : Diagnosis Procedure"</u>.

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000006886038

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.

(+)			V-16 0.0
Door mirror (driver side)		(-)	Voltage (V) (Approx.)
Connector	Terminals		,
D3	23	Ground	5

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Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

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2.CHECK DOOR MIRROR (DRIVER 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 (driver side) harness connector.

Automatic drive po	sitioner control unit	Door mirror (driver side)		(driver side) Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M51	21	D3	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
M51	21		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to <u>ADP-135</u>. "Removal and Installation".

NO >> Repair or replace harness or connector.

< DTC/CIRCUIT DIAGNOSIS >

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

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

Automatic drive po	sitioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	20	D3	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
M51	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 po	sitioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	6	D3	21	Existed
IVIOT	18	D3	22	LXISIEU

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
ME 4	6	Ground	Not existed
M51	18	Not exi	NOI existed

Is the inspection result normal?

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

NO >> Repair or replace harness or connector.

PASSENGER SIDE

PASSENGER SIDE: Component Function Check

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1. CHECK FUNCTION

- 1. Select "MIR/SEN RH U-D", "MIR/SEN RH R-L" in "Data monitor" with CONSULT.
- 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?

YES >> INSPECTION END

< DTC/CIRCUIT DIAGNOSIS >

NO >> Perform diagnosis procedure. Refer to ADP-101, "PASSENGER SIDE: Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

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

- 1. 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.

(+) Door mirror (passenger side)			V 16 (V 0	
		(-)	Voltage (V) (Approx.)	
Connector	Terminals		(11 -)	
D33	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

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

Automatic drive positioner control unit		Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	21	D33	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
M51	21		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

NO >> Repair or replace harness or connector.

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

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

Automatic drive po	Automatic drive positioner control unit		Door mirror (passenger side)	
Connector	Terminal	Connector	Terminal	Continuity
M51	20	D33	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
M51	20		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

Revision: 2013 September ADP-101 2012 M

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< DTC/CIRCUIT DIAGNOSIS >

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) Connector Terminal		Continuity
Connector	Terminal			Continuity
M51	5	D33	21	Existed
I CIVI	17	D33	22	LAISIEU

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

Automatic drive positioner control unit			Continuity
Connector	Terminal	Ground	Continuity
M51	5	Ground	Not existed
I GIVI	17		NOI EXISIEU

Is the inspection result normal?

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

NO >> Repair or replace harness or connector.

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

SLIDING MOTOR

Component Function Check

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

>> Perform diagnosis procedure. Refer to ADP-103, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK SLIDING MOTOR POWER SUPPLY

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

(+) Sliding motor		(-)		Condition		
Connector	Terminals				(Approx.)	
				OFF	0	
	3			FR (forward)	12	
B519		SEAT SLIDE	RR (backward)	0		
D019		Ground	Giouna	SEAT SLIDE	OFF	0
	4			FR (forward)	0	
				RR (backward)	12	

Is the inspection result normal?

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

NO >> GO TO 2.

2.CHECK SLIDING MOTOR CIRCUIT

- 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 sea	t control unit	Sliding motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B513	3	B519	3	Existed
D313	4	5519	4	Existed

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

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ADP-103 Revision: 2013 September 2012 M

SLIDING MOTOR

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Driver se	Driver seat control unit		Continuity
Connector	Terminal	Ground	Continuity
B513	3	Ground	Not existed
5010	4		140t CAISted

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING MOTOR

Component Function Check

1. CHECK FUNCTION

- 1. Select "SEAT RECLINING" in "Active test" mode with CONSULT.
- 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 <u>ADP-105, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1. CHECK RECLINING MOTOR POWER SUPPLY

- 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		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminals				(
				OFF	0
	B507	- Ground	SEAT RECLINING	FR (forward)	12
DE07				RR (backward)	0
D307				OFF	0
	6			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	Terminal	Continuity
B513	5 B507		5	Existed
	6	B307	6	LXISIEU

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

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RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity	
Connector	Terminal	Ground Not exis	Continuity	
B513	5		Not existed	
DOIO	6		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to ADP-134, "Removal and Installation".

NO >> Repair or replace harness or connector.

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.
- 2. Check the lifting motor (front) operation.

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

1.CHECK LIFTING MOTOR (FRONT) POWER SUPPLY

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

(+) Lifting motor (front)		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminals				
	9 B512 Ground		SEAT LIFTER FR	OFF	0
		- Ground		UP	12
DE40				DWN (DOWN)	0
D312				OFF	0
				UP	0
				DWN (DOWN)	12

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	Driver seat control unit		Lifting motor (front)	
Connector	Terminal	Connector	Terminal	Continuity
B513	9	- B512	9	Existed
D313	10	6312	10	Existed

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

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LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat control unit			Continuity	
Connector	Terminal	Ground Not exist	Continuity	
B513	9		Not existed	
	10		Not existed	

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING MOTOR (REAR)

Component Function Check

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

1.CHECK LIFTING MOTOR (REAR) POWER SUPPLY

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

	(+) Lifting motor (rear)		(-) Condi		Voltage (V) (Approx.)	
Connector	Terminals				(44.5)	
				OFF	0	
	7				UP	0
B510		Ground	SEAT LIFTER RR	DWN (DOWN)	12	
D310		Giouna	SEAT LIFTER KK	OFF	0	
	8			UP	12	
				DWN (DOWN)	0	

Is the inspection result normal?

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

NO >> GO TO 2.

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

- 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 seat	control unit	Lifting motor (rear)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B513	7	B510	7	Existed
	8	D310	8	LAISIEU

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

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LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Driver seat	Driver seat control unit		Continuity
Connector	Terminal	- Ground	Continuity
B513	7	Ground	Not existed
טוטם	8		NOT EXISTED

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

TILT MOTOR

Component Function Check

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

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

Diagnosis Procedure

1. CHECK TILT MOTOR POWER SUPPLY

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

	(+) Tilt motor		Condition		Voltage (V) (Approx.)	
Connector	Terminals				() ()	
-				OFF	0	
	1	Ground	THE MOTOR	UP	0	
M48				DWN (down)	12	
IVI40			— Glound TIET WOR	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

- 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	sitioner control unit	Tilt motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M52	28	M48	1	Existed
	29	IVIAO	2	LXISIEU

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

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TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner control unit			Continuity
Connector	Terminal	- Ground	Continuity
M52	28	Ground	Not existed
IVIOZ	29		Not existed

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135. "Removal and Installation".

NO >> Repair or replace harness or connector.

TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC MOTOR

Component Function Check

1. CHECK FUNCTION

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

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

Is the operation of relevant parts normal?

YES >> INSPECTION END

NO >> Perform diagnosis procedure. Refer to <u>ADP-113, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1. CHECK TELESCOPIC MOTOR POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. 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.

	+) pic motor	(-)	Cond	dition	Voltage (V) (Approx.)
Connector	Terminals				()
				OFF	0
	1		TELESCOPIC MO-	FR (forward)	0
M49		Ground TELESCOPIC MO- TOR		RR (backward)	12
10149			TOR	OFF	0
	2			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	sitioner control unit	Telescopic motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M51	26	M49	1	Existed
I CIVI	29	IVI49	2	Existed

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

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Revision: 2013 September

TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Automatic drive positioner control unit			Continuity	
Connector	Terminal	Ground	Continuity	
M51	26	Ground	Not existed	
I GIVI	29		inot existed	

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135. "Removal and Installation".

NO >> Repair or replace harness or connector.

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

Refer to ADP-23, "CONSULT Function".

Is the inspection result normal?

>> Door mirror motor function is OK.

>> Refer to ADP-115, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

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

(+) Door mirro	,	(-) Cond		dition	Voltage (V)		
Connector	Terminals	(-)	Con	allon	(Approx.)		
				DOWN / RIGHT	12		
D3 (Driver side) D33 (Passenger side) 11 G	10		Do-consistence of the control of the	Other than the above	0		
				LEFT	12		
	Ground	Door mirror remote control switch	Other than the above 0	0			
						UP	12
12	12			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]

Automatic drive po	ositioner control unit	Door mirror (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	12		10	
M51	23	D3	12	Existed
	24		11	

ADP-115 Revision: 2013 September 2012 M

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DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[passenger side]				
Automatic drive p	ositioner control unit	Door mirror (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	22		10	
M51	10	D33	12	Existed
	11		11	

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

[driver side]

[unverside]			
Automatic drive p	positioner control unit		Continuity
Connector	Terminal		Continuity
	12	Ground	Not existed
M51	23		
	24		
[passenger side]			
Automatic drive p	positioner control unit		Continuity
Connector	Terminal		Continuity
	22	Ground	
M51	10		Not existed
	11		

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to ADP-135, "Removal and Installation".

NO >> Repair or replace harness or connector.

3.CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to ADP-116, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident.Refer to GI-44, "Intermittent Incident".

NO >> Replace door mirror. Refer to MIR-24, "DOOR MIRROR ASSEMBLY: Removal and Installation".

Component Inspection

INFOID:0000000006886055

1. CHECK DOOR MIRROR MOTOR-I

Check that door mirror motor does not trap foreign objects and does not have any damage. Refer to MIR-25, "DOOR MIRROR ASSEMBLY: Disassembly and Assembly".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace door mirror.Refer to MIR-24, "DOOR MIRROR ASSEMBLY: Removal and Installation".

2.CHECK DOOR MIRROR MOTOR-II

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

Door mirror			
Connector	Terminal		Operational direction
Connector	(+)	(-)	
D3 (Driver side)	10	11	RIGHT
	11	10	LEFT
D33 (Passenger side)	12	10	UP
	10	12	DOWN

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

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YES >> INSPECTION END

NO >> Replace door mirror. Refer to MIR-24, "DOOR MIRROR ASSEMBLY: Removal and Installation".

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SEAT MEMORY INDICATOR

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INFOID:0000000006886057

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY INDICATOR

Component Function Check

1. CHECK FUNCTION

- Select "MEMORY SW INDCTR" in "Active test" mode with CONSULT.
- 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-118, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1. CHECK SEAT MEMORY INDICATOR OPERATION

Check seat memory 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	11 (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 MEMORY INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector and ground.

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

Is the inspection result normal?

YES >> Replace seat memory switch.Refer to <u>ADP-137</u>, "Removal and Installation".

NO >> Repair or replace harness or connector.

4. CHECK MEMORY INDICATOR CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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	t control unit	Seat memory switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
B514	25	D5	6	Existed	
D314	26	D3	7	LXISIGU	

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

Driver seat	control unit	Continu	
Connector	Terminal	Ground	Continuity
B514	25	Not existe	Not existed
D314	26		Not existed

Is the inspection result normal?

YES >> Replace driver seat control unit.Refer to <u>ADP-134, "Removal and Installation"</u>.

NO >> Repair or replace harness or connector.

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SYMPTOM DIAGNOSIS

MANUAL FUNCTION DOES NOT OPERATE

ALL COMPONENT

ALL COMPONENT : Diagnosis Procedure

INFOID:0000000006886058

1. CHECK DRIVER SEAT CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check driver seat control unit power supply and ground circuit.

Refer to ADP-61, "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-61, "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-44, "Intermittent Incident".

NO >> GO TO 1.

POWER SEAT

POWER SEAT : Diagnosis Procedure

INFOID:0000000006886059

1. CHECK POWER SEAT SWITCH GROUND CIRCUIT

Check power seat switch ground circuit.

Refer to ADP-82, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connector.

$2.\mathsf{CONFIRM}$ THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

TILT & TELESCOPIC

TILT & TELESCOPIC : Diagnosis Procedure

INFOID:0000000006886060

1. CHECK TILT & TELESCOPIC SWITCH GROUND CIRCUIT

Check tilt & telescopic switch ground circuit.

Refer to ADP-83. "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.

Revision: 2013 September ADP-120 2012 M

< SYMPTOM DIAGNOSIS >
Is the result normal? YES >> Check intermittent incident. Refer to GI-44. "Intermittent Incident".
YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident". NO >> GO TO 1.
SEAT SLIDING
SEAT SLIDING : Diagnosis Procedure
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-64, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 3.
NO >> Repair of replace the mailunction parts.
3.CHECK SLIDING MOTOR
Check sliding motor. Refer to ADP-103, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 4. NO >> Repair or replace the malfunction parts.
NO >> Repair or replace the malfunction parts. 4.CONFIRM THE OPERATION
And the second s
Check the operation again. Is the result normal?
VES >> Check intermittent incident. Refer to GI-44. "Intermittent Incident"
NO >> GO TO 1.
SEAT RECLINING
SEAT RECLINING : Diagnosis Procedure
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-66, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 3.
NO >> Repair or replace the malfunction parts. 3 CHECK RECLINING MOTOR
3. CHECK RECLINING MOTOR
Check reclining motor. Refer to ADP-105, "Component Function Check".

Revision: 2013 September ADP-121 2012 M

< 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-44, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (FRONT)

SEAT LIFTING (FRONT): Diagnosis Procedure

INFOID:0000000006886063

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-68, "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-107, "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-44, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (REAR)

SEAT LIFTING (REAR): Diagnosis Procedure

INFOID:0000000006886064

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-70, "Component Function Check".

Is the inspection result normal?

< SYMPTOM DIAGNOSIS >	
YES >> GO TO 3. NO >> Repair or replace the malfunction parts.	A
3. CHECK LIFTING MOTOR (REAR)	A
Check lifting motor (rear). Refer to ADP-109, "Component Function Check".	В
Is the inspection result normal?	
YES >> GO TO 4.	С
NO >> Repair or replace the malfunction parts. 4.CONFIRM THE OPERATION	
Check the operation again.	
Is the result normal?	D
YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident". NO >> GO TO 1. STEERING TILT	Е
STEERING TILT : Diagnosis Procedure	INFOID:000000006886065
1.CHECK STEERING TILT MECHANISM	
 Check for the following. Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. 	G
Is the inspection result normal?	Н
YES >> GO TO 2. NO >> Repair or replace the malfunction parts.	
2.CHECK TILT SWITCH	1
Check tilt switch.	
Refer to ADP-72, "Component Function Check".	ADP
Is the inspection result normal? YES >> GO TO 3.	
NO >> Repair or replace the malfunction parts.	IZ.
3.CHECK TILT MOTOR	K
Check tilt motor.	
Refer to ADP-111, "Component Function Check". Is the inspection result normal?	L
YES >> GO TO 4.	
NO >> Repair or replace the malfunction parts.	M
4.CONFIRM THE OPERATION	
Check the operation again. Is the result normal?	N
YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".	
NO >> GO TO 1.	0
STEERING TELESCOPIC	
STEERING TELESCOPIC : Diagnosis Procedure	INFOID:0000000006886066
1. CHECK STEERING TELESCOPIC MECHANISM	
 Check for the following. Mechanism deformation or pinched foreign materials. Interference with other parts because of poor installation. Is the inspection result normal? 	

Revision: 2013 September ADP-123

2012 M

YES >> GO TO 2.

< SYMPTOM DIAGNOSIS >

NO >> Repair or replace the malfunction parts.

2. CHECK TELESCOPIC SWITCH

Check telescopic switch.

Refer to ADP-72, "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-111, "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-44, "Intermittent Incident".

NO >> GO TO 1.

DOOR MIRROR

DOOR MIRROR: Diagnosis Procedure

INFOID:0000000006886067

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 power window main switch (door mirror remote control switch)

Check mirror switch and change over switch.

Refer to <u>ADP-79</u>, "MIRROR <u>SWITCH</u>: <u>Component Function Check"</u> (mirror switch), <u>ADP-78</u>, "<u>CHANGEOVER SWITCH</u>: <u>Component Function Check"</u> (change over switch).

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-115, "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-44, "Intermittent Incident".

NO >> GO TO 1.

< SYMPTOM DIAGNOSIS > MEMORY FUNCTION DOES NOT OPERATE Α ALL COMPONENT ALL COMPONENT : Diagnosis Procedure INFOID:0000000006886068 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-46, "SYSTEM INITIALIZATION: Special Repair Requirement". Е Perform memory storing procedure. Refer to ADP-47, "MEMORY STORING: Special Repair Requirement". 3. Check memory function. F Refer to ADP-16, "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 v. Is the inspection result normal? >> 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-44, "Intermittent Incident". YES NO >> GO TO 1. SEAT SLIDING SEAT SLIDING: Diagnosis Procedure INFOID:0000000006886069 1. CHECK MANUAL OPERATION Check manual operation. Is the inspection result normal? YES >> GO TO 2. Ν NO >> Refer to ADP-121, "SEAT SLIDING: Diagnosis Procedure" 2.CHECK SLIDING SENSOR Check sliding sensor. Refer to ADP-84, "Component Function Check". Is the inspection result normal? Р YFS >> GO TO 3. NO >> Repair or replace the malfunction parts. 3.CONFIRM THE OPERATION Check the operation again. Is the result normal? >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

Revision: 2013 September ADP-125 2012 M

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

SEAT RECLINING

SEAT RECLINING : Diagnosis Procedure

INFOID:0000000006886070

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-121, "SEAT RECLINING: Diagnosis Procedure"

2.CHECK RECLINING SENSOR

Check reclining sensor.

Refer to ADP-84, "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-44, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (FRONT)

SEAT LIFTING (FRONT): Diagnosis Procedure

INFOID:0000000006886071

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-122, "SEAT LIFTING (FRONT): Diagnosis Procedure"

2.CHECK LIFTING SENSOR CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Check lifting sensor control unit power supply and ground circuit.

Refer to ADP-62, "LIFTING SENSOR CONTROL UNIT: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunction parts.

3. CHECK LIFTING SENSOR (FRONT)

Check lifting sensor (front).

Refer to ADP-88, "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-44, "Intermittent Incident".

NO >> GO TO 1.

SEAT LIFTING (REAR)

< SYMPTOM DIAGNOSIS >		
SEAT LIFTING (REAR) : Diagnosis Procedure	INFOID:0000000006886072	
1. CHECK MANUAL OPERATION		
Check manual operation.		
Is the inspection result normal?		
YES >> GO TO 2. NO >> Refer to ADP-122, "SEAT LIFTING (REAR) : Diagnosis Procedure"		
2. CHECK LIFTING SENSOR CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT		
Check lifting sensor control unit power supply and ground circuit. Refer to ADP-62, "LIFTING SENSOR CONTROL UNIT: Diagnosis Procedure".		
Is the inspection result normal?		
YES >> GO TO 3.		
NO >> Repair or replace the malfunction parts.		
3.CHECK LIFTING SENSOR (REAR)		
Check lifting sensor (rear). Refer to ADP-91, "Component Function Check".		
Is the inspection result normal?		
YES >> GO TO 4.		
NO >> Repair or replace the malfunction parts.		
4.CONFIRM THE OPERATION		
Check the operation again.		
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".		
NO >> GO TO 1.		
STEERING TILT		
STEERING TILT : Diagnosis Procedure	INFOID:0000000006886073	Α
1. CHECK MANUAL OPERATION		
Check manual operation.		
Is the inspection result normal?		
YES >> GO TO 2.		
NO >> Refer to ADP-123, "STEERING TILT : Diagnosis Procedure"		
2.CHECK TILT SENSOR		
Check steering tilt sensor. Refer to ADP-94, "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-44. "Intermittent Incident".		
YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident". NO >> GO TO 1.		
STEERING TELESCOPIC		
STEERING TELESCOPIC : Diagnosis Procedure	INFOID:0000000006886074	
STEENING TEEESCOTIO : Diagnosis i Tocedure		
1. CHECK MANUAL OPERATION		

Revision: 2013 September ADP-127 2012 M

< SYMPTOM DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-123, "STEERING TELESCOPIC : Diagnosis Procedure"

2. CHECK TELESCOPIC SENSOR

Check steering telescopic sensor.

Refer to ADP-96, "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-44, "Intermittent Incident".

NO >> GO TO 1.

DOOR MIRROR

DOOR MIRROR: Diagnosis Procedure

INFOID:0000000006886075

1. CHECK MANUAL OPERATION

Check manual operation.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to ADP-124, "DOOR MIRROR : Diagnosis Procedure"

2. CHECK MIRROR SENSOR

Check mirror sensor.

Refer to ADP-99, "DRIVER SIDE: Component Function Check". (Driver side)

Refer to ADP-99, "DRIVER SIDE: Component Function Check" (Passenger side)

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-44, "Intermittent Incident".

NO >> GO TO 1.

ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS > ENTRY/EXIT ASSIST FUNCTION DOES NOT OPERATE	i
Diagnosis Procedure	A
1. CHECK SYSTEM SETTING	В
Check system setting. Refer to ADP-49, "SYSTEM SETTING: Special Repair Requirement".	
Check the operation. Is the inspection result normal?	С
YES >> Entry/Exit function is OK. NO >> GO TO 2.	D
2. PERFORM SYSTEM INITIALIZATION	
 Perform system initialization. Refer to <u>ADP-46, "SYSTEM INITIALIZATION: Special Repair Requirement"</u>. Check the operation. 	Е
Is the inspection result normal? YES >> Entry/Exit function is OK.	F
NO >> GO TO 3. 3. CHECK FRONT DOOR SWITCH (DRIVER SIDE)	
Check front door switch (driver side).	G
Refer to DLK-60, "Component Function Check". Is the inspection result normal?	Н
YES >> GO TO 4. 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-44, "Intermittent Incident". NO >> GO TO 1.	ADP
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Revision: 2013 September ADP-129 2012 M

SEAT SYNCHRONIZATION FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

SEAT SYNCHRONIZATION FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000006886077

1. CHECK SYSTEM SETTING

Check system setting.

Refer to ADP-49, "SYSTEM SETTING: Special Repair Requirement".

Is the inspection result normal?

YES >> Synchronization function is normal.

NO >> GO TO 2.

2.CONFIRM THE OPERATION

Check the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS > INTELLIGENT KEY INTERLOCK FUNCTION DOES NOT OPERATE Α **Diagnosis Procedure** INFOID:0000000006886078 1. PERFORM INTELLIGENT KEY INTERLOCK STORING PROCEDURE В Perform Intelligent Key interlock storing procedure. Refer to ADP-48, "INTELLIGENT KEY INTERLOCK STORING: Special Repair Requirement". 2. Check the operation. Is the inspection result normal? >> Intelligent Key interlock function is normal. NO >> GO TO 2. D 2. CHECK DOOR LOCK FUNCTION Check door lock function. Е Refer to DLK-44, "Work Flow". Is the inspection result normal? YES >> GO TO 3. F 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-44, "Intermittent Incident". Н NO >> GO TO 1. ADP K L M

Revision: 2013 September ADP-131 2012 M

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MEMORY INDICATE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

MEMORY INDICATE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000006886079

1. CHECK MEMORY INDICATOR

Check memory indicator.

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunction parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

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

Symptom	Cause	Action to take	Reference page
	No initialization has been performed.	Perform initialization.	<u>ADP-46</u>
Entry/exit assist function and seat synchronization do not operate.	Entry/exit assist function is disabled. NOTE: The entry/exit assist function and seat synchronization function are disabled before delivery (initial setting).	Change the settings.	ADP-48
Telescopic does not operate by entry/exit assist function.	Telescopic is not interlocked with entry/ exit assist function.	_	Exit assist function: <u>ADP-18</u>
			Entry assist function: <u>ADP-19</u>
Entry assist function does not operate.	Manual operation with power seat switch was performed after exit assist function execution.	Perform the memory function.	ADP-14
Seat synchronization function does not operate.	Either the entry/exit assist function (seat) or the entry/exit assist function (steering) is disabled.	Enable both functions.	ADP-48
	The synchronization function will not operate if the steering (tilt, telescopic) or the door mirror moves to the operating end while the seat synchronization function is operating.	Perform the memory function or drive the vehicle at more than 7 km/h (4 MPH).	ADP-14
	Seat adjustment load has exceed any of the volumes below. • Seat sliding: 76 mm • Seat reclining: 9.1 degrees • Seat lifting (rear): 20 mm	_	_
Lumbar support does not perform memory operation.	The lumbar support system are controlled independently with no link to the automatic drive positioner system.	_	Lumbar support system: SE-13
Memory function, entry/exit assist function, seat synchronization function, or Intelligent Key interlock function does not operate.	The operating conditions are not fulfilled.	Fulfill the operation conditions.	Seat synchronization function: <u>ADP-14</u>
			Memory function: ADP-16
			Exit assist function: <u>ADP-18</u>
			Entry assist function: <u>ADP-19</u>
			Seat synchronization function: <u>ADP-14</u>
			Intelligent Key interlock function: ADP-21

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DRIVER SEAT CONTROL UNIT

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

DRIVER SEAT CONTROL UNIT

Removal and Installation

INFOID:0000000006886081

REMOVAL

CAUTION:

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

- 1. Remove the driver seat. Refer to SE-84, "Removal and Installation".
- 2. Remove the screws.
- 3. Remove driver seat control unit.

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-45, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description"</u>.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< REMOVAL AND INSTALLATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Removal and Installation

INFOID:0000000006886082

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REMOVAL

CAUTION:

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

- 1. Remove the instrument lower panel LH. Refer to IP-13, "Removal and Installation".
- 2. Remove the screws.
- 3. Remove automatic drive positioner control unit.

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-45</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description".
- After installing the driver seat, perform additional service when removing battery negative terminal. Refer to <u>ADP-45, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description"</u>.

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Revision: 2013 September ADP-135 2012 M

LIFTING SENSOR CONTROL UNIT

< REMOVAL AND INSTALLATION >

LIFTING SENSOR CONTROL UNIT

Removal and Installation

INFOID:0000000006886083

REMOVAL

CAUTION:

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

- Remove driver seat control unit. Refer to <u>ADP-134, "Removal and Installation"</u>.
- 2. Slide lifting sensor control unit and remove it from bracket.

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-45</u>.
 "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description".
- After installing the driver seat, perform additional service when removing battery negative terminal. Refer to ADP-45, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

SEAT MEMORY SWITCH

< REMOVAL AND INSTALLATION >

SEAT MEMORY SWITCH

Removal and Installation

INFOID:0000000006886084

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REMOVAL

CAUTION:

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

- 1. Remove the front door finisher. Refer to INT-25, "FRONT DOOR FINISHER: Removal and Installation".
- 2. Press pawls and remove seat memory switch from front door finisher, with flat-bladed screw driver.

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-45</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

INFOID:0000000006886085

REMOVAL

CAUTION:

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

- 1. Remove the front seat (driver side). Refer to SE-84, "Removal and Installation".
- 2. Remove the seat cushion outer finisher. Refer to SE-87, "SEAT CUSHION: Disassembly and Assembly".
- 3. Remove the screws.
- 4. Remove power seat switch from the seat cushion outer finisher.

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-45, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

TILT&TELESCOPIC SWITCH

< REMOVAL AND INSTALLATION >

TILT&TELESCOPIC SWITCH

Removal and Installation

INFOID:0000000006886086

REMOVAL

CAUTION:

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

- Remove the steering column lower cover. Refer to <u>IP-13</u>, "Removal and Installation".
- 2. Press pawls and remove tilt & telescopic switch from the steering column lower cover.

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-45</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".

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