

SECTION **ADP**

AUTOMATIC DRIVE POSITIONER

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
- Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.

Precaution for Work

INFOID:0000000014391871

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
 - Water soluble dirt:
 - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
 - Then rub with a soft, dry cloth.
 - Oily dirt:
 - Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
 - Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
 - Then rub with a soft, dry cloth.
 - Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
 - For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

< PREPARATION >

PREPARATION

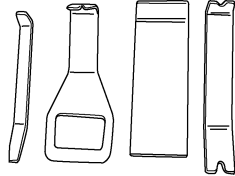
PREPARATION

Special Service Tool

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

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



AWJIA0483ZZ

Commercial Service Tools

INFOID:0000000014391873

| Tool name | Description |
|------------|----------------------------------|
| Power tool | Loosening nuts, screws and bolts |



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COMPONENT PARTS

< SYSTEM DESCRIPTION >

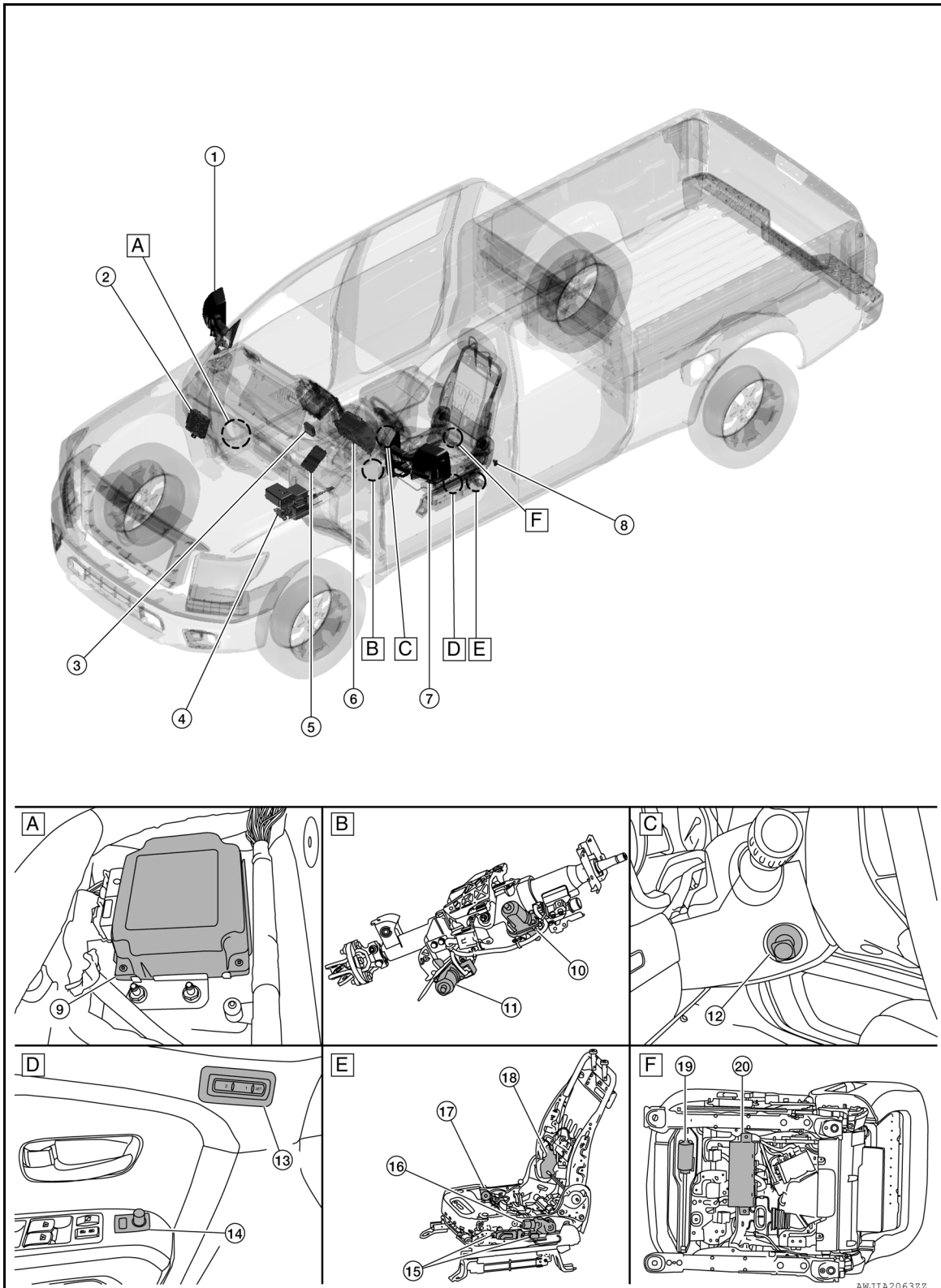
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

- A. RH front floor (view with carpet removed) B. Steering column (view with steering column removed) C. Left hand side of steering column
- D. View of left front door finisher E. LH side of driver seat (view with seat disassembled) F. Driver seat bottom (view with seat removed)

| No. | Component | | Function |
|-----|---|-------------------|--|
| 1. | Door mirror (LH) | Door mirror motor | <ul style="list-style-type: none"> Makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Mirror sensor | <ul style="list-style-type: none"> 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. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 2. | IPDM E/R | | <ul style="list-style-type: none"> Transmits the detention switch signal to driver seat control unit via CAN communication. Refer to PCS-5, "Component Parts Location" for detailed installation location. |
| 3. | Automatic drive positioner control unit | | <ul style="list-style-type: none"> Refer to ADP-13, "Automatic Drive Positioner Control Unit". |
| 4. | ABS actuator and electric unit (control unit) | | <ul style="list-style-type: none"> Transmits the vehicle speed signal to driver seat control unit via CAN communication. Refer to BRC-9, "Component Parts Location" for detailed installation location. |
| 5. | BCM | | <ul style="list-style-type: none"> Recognizes the following statuses and transmits them to driver seat control unit via CAN communication: Handle position: LHD Driver door: OPEN/CLOSE Ignition switch position: ACC/ON Door lock: UNLOCK (with Intelligent Key or driver side door request switch operation) Key ID Starter: CRANKING/OTHER Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 6. | Combination meter | | <ul style="list-style-type: none"> Transmits the vehicle speed signal to driver seat control unit via CAN communication. |
| 7. | Door mirror (RH) | Door mirror motor | <ul style="list-style-type: none"> Makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Mirror sensor | <ul style="list-style-type: none"> 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. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 8. | Front door switch (LH) | | <ul style="list-style-type: none"> Detects door open/close condition and transmits it to BCM. Refer to DLK-9, "POWER DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location. |
| 4. | A/T assembly | | <ul style="list-style-type: none"> Refer to TM-266, "A/T CONTROL SYSTEM : Component Parts Location". |

COMPONENT PARTS

< SYSTEM DESCRIPTION >

| No. | Component | | Function |
|-----|-----------------------------------|------------------|---|
| 10. | Telescopic motor | Tilt motor | <ul style="list-style-type: none"> Refer to ADP-14, "Tilt & Telescopic Motor". |
| | | Tilt sensor | |
| 11. | Tilt motor | Tilt motor | <ul style="list-style-type: none"> Refer to ADP-14, "Tilt & Telescopic Motor". |
| | | Tilt sensor | |
| 12. | ADP steering switch | | <ul style="list-style-type: none"> Refer to ADP-14, "ADP Steering Switch". |
| 13. | Seat memory switch | | <ul style="list-style-type: none"> Refer to ADP-13, "Seat Memory Switch". |
| 14. | Door mirror remote control switch | Mirror switch | <ul style="list-style-type: none"> Mirror switch is integrated in door mirror remote control switch. It operates angle of door mirror face. It transmits mirror face adjust operation to automatic drive positioner control unit. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Select switch | <ul style="list-style-type: none"> Select switch is integrated in door mirror remote control switch. Select switch has three positions (L, N and R). It changes operating door mirror motor by transmitting control signal to automatic drive positioner control unit. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 15. | Power seat switch LH | Sliding switch | <ul style="list-style-type: none"> Sliding switch is equipped to power seat switch on seat cushion side surface. The operation signal is input to driver seat control unit when sliding switch is operated. |
| 16. | Lifting motor LH (rear) | Lifting motor | <ul style="list-style-type: none"> Lifting motor (rear) is installed to seat frame assembly (driver side). Lifting motor (rear) is activated with driver seat control unit. Lifting motor (rear) is moved upward/downward by changing the rotation direction of lifting motor (rear). |
| | | Lifting sensor | <ul style="list-style-type: none"> 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. |
| 17. | Lifting motor LH (front) | Lifting motor | <ul style="list-style-type: none"> Lifting motor (front) is installed to seat frame assembly (driver side). Lifting motor is activated with driver seat control unit. Lifting motor (front) is moved upward/downward by changing the rotation direction of lifting motor (front). |
| | | Lifting sensor | <ul style="list-style-type: none"> Lifting sensor (front) is installed in lifting motor (front). When lifting motor (front) 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 (front) of the seat. |
| 18. | Reclining motor LH | Reclining motor | <ul style="list-style-type: none"> Reclining motor is installed to seat back frame. Reclining motor is activated with driver seat control unit. Seatback is reclined forward/backward by changing the rotation direction of reclining motor. |
| | | Reclining sensor | <ul style="list-style-type: none"> 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. |

COMPONENT PARTS

< SYSTEM DESCRIPTION >

| No. | Component | | Function |
|-----|--------------------------|----------------|--|
| 19. | Sliding motor LH | Sliding motor | <ul style="list-style-type: none">• Sliding motor is installed to the seat cushion frame.• Sliding motor is activated with driver seat control unit.• Slides the seat forward/backward by changing the rotation direction of sliding motor. |
| | | Sliding sensor | <ul style="list-style-type: none">• Sliding sensor is integrated in sliding motor.• The pulse signal is input to driver seat control unit when sliding is performed.• Driver seat control unit counts the pulse and calculates the sliding amount of the seat. |
| 20. | Driver seat control unit | | <ul style="list-style-type: none">• Refer to ADP-13, "Driver Seat Control Unit". |

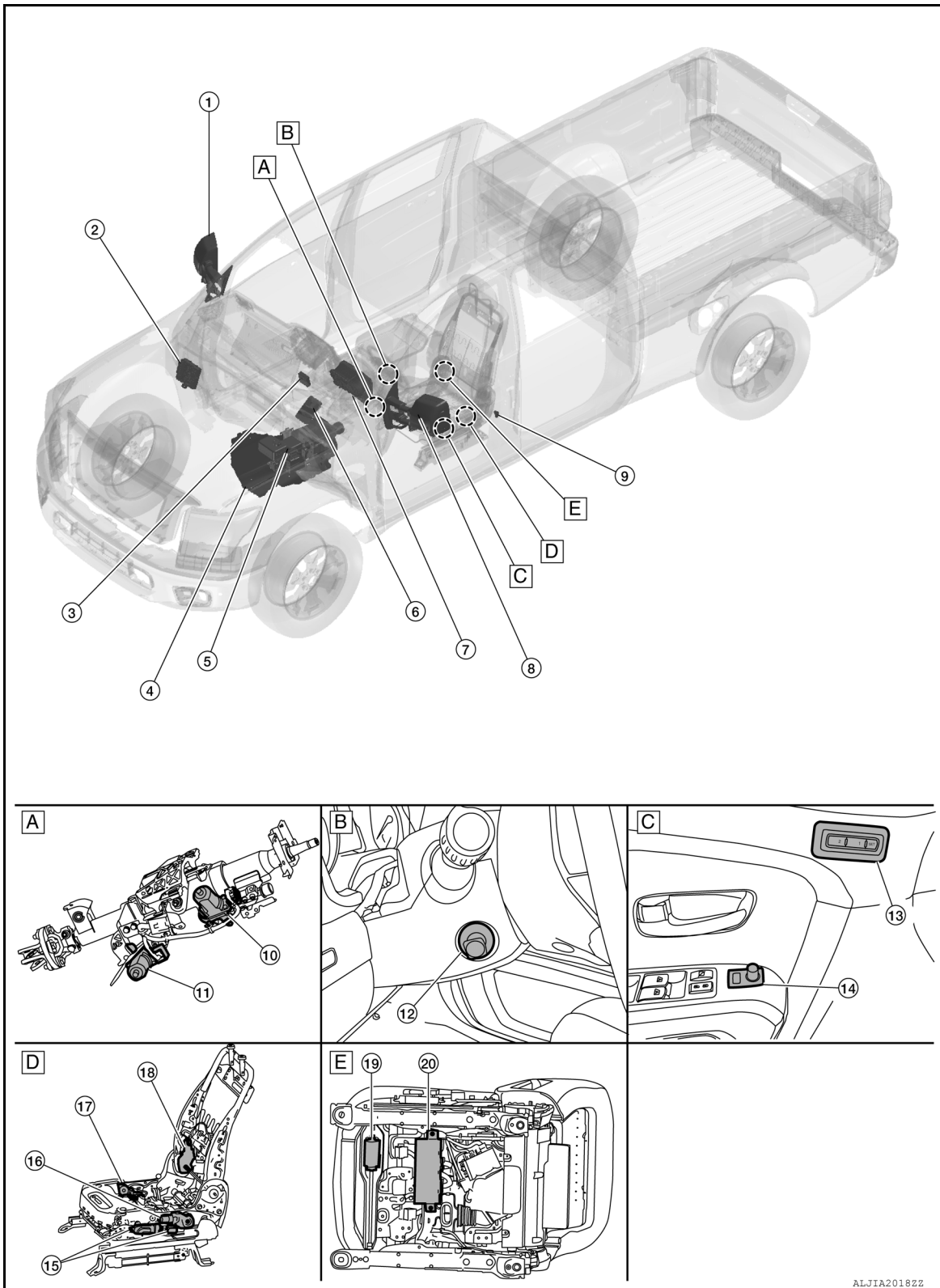
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ADP

COMPONENT PARTS

< SYSTEM DESCRIPTION >



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|---|--|-------------------------------------|
| A. Steering column (view with steering column removed) | B. Left hand side of steering column | C. View of left front door finisher |
| D. LH side of driver seat (view with seat disassembled) | E. Driver seat bottom (view with seat removed) | |

COMPONENT PARTS

< SYSTEM DESCRIPTION >

| No. | Component | | Function |
|-----|---|-------------------|--|
| 1. | Door mirror (LH) | Door mirror motor | <ul style="list-style-type: none"> Makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Mirror sensor | <ul style="list-style-type: none"> 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. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 2. | IPDM E/R | | <ul style="list-style-type: none"> Transmits the detention switch signal to driver seat control unit via CAN communication. Refer to PCS-5, "Component Parts Location" for detailed installation location. |
| 3. | Automatic drive positioner control unit | | <ul style="list-style-type: none"> Refer to ADP-13, "Automatic Drive Positioner Control Unit". |
| 4. | A/T assembly | | <ul style="list-style-type: none"> Refer to TM-266, "A/T CONTROL SYSTEM : Component Parts Location". |
| 5. | ABS actuator and electric unit (control unit) | | <ul style="list-style-type: none"> Transmits the vehicle speed signal to driver seat control unit via CAN communication. Refer to BRC-9, "Component Parts Location" for detailed installation location. |
| 6. | BCM | | <ul style="list-style-type: none"> Recognizes the following statuses and transmits them to driver seat control unit via CAN communication: Handle position: LHD Driver door: OPEN/CLOSE Ignition switch position: ACC/ON Door lock: UNLOCK (with Intelligent Key or driver side door request switch operation) Key ID Starter: CRANKING/OTHER Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 7. | Combination meter | | <ul style="list-style-type: none"> Transmits the vehicle speed signal to driver seat control unit via CAN communication. |
| 8. | Door mirror (RH) | Door mirror motor | <ul style="list-style-type: none"> Makes mirror face operate from side to side and up and down with the electric power that automatic drive positioner control unit supplies. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Mirror sensor | <ul style="list-style-type: none"> 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. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 9. | Front door switch (LH) | | <ul style="list-style-type: none"> Detects door open/close condition and transmits it to BCM. Refer to DLK-9, "POWER DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location. |
| 10. | Telescopic motor | Tilt motor | <ul style="list-style-type: none"> Refer to ADP-14, "Tilt & Telescopic Motor". |
| | | Tilt sensor | |
| 11. | Tilt motor | Tilt motor | <ul style="list-style-type: none"> Refer to ADP-14, "Tilt & Telescopic Motor". |
| | | Tilt sensor | |

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

| No. | Component | | Function |
|-----|-----------------------------------|------------------|---|
| 12. | ADP steering switch | | <ul style="list-style-type: none"> Refer to ADP-14, "ADP Steering Switch". |
| 13. | Seat memory switch | | <ul style="list-style-type: none"> Refer to ADP-13, "Seat Memory Switch". |
| 14. | Door mirror remote control switch | Mirror switch | <ul style="list-style-type: none"> Mirror switch is integrated in door mirror remote control switch. It operates angle of door mirror face. It transmits mirror face adjust operation to automatic drive positioner control unit. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| | | Select switch | <ul style="list-style-type: none"> Select switch is integrated in door mirror remote control switch. Select switch has three positions (L, N and R). It changes operating door mirror motor by transmitting control signal to automatic drive positioner control unit. Refer to MIR-5, "Component Parts Location" for detailed installation location. |
| 15. | Power seat switch LH | Sliding switch | <ul style="list-style-type: none"> Sliding switch is equipped to power seat switch on seat cushion side surface. The operation signal is input to driver seat control unit when sliding switch is operated. |
| 16. | Lifting motor LH (rear) | Lifting motor | <ul style="list-style-type: none"> Lifting motor (rear) is installed to seat frame assembly (driver side). Lifting motor (rear) is activated with driver seat control unit. Lifting motor (rear) is moved upward/downward by changing the rotation direction of lifting motor (rear). |
| | | Lifting sensor | <ul style="list-style-type: none"> 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. |
| 17. | Lifting motor LH (front) | Lifting motor | <ul style="list-style-type: none"> Lifting motor (front) is installed to seat frame assembly (driver side). Lifting motor is activated with driver seat control unit. Lifting motor (front) is moved upward/downward by changing the rotation direction of lifting motor (front). |
| | | Lifting sensor | <ul style="list-style-type: none"> Lifting sensor (front) is installed in lifting motor (front). When lifting motor (front) 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 (front) of the seat. |
| 18. | Reclining motor LH | Reclining motor | <ul style="list-style-type: none"> Reclining motor is installed to seat back frame. Reclining motor is activated with driver seat control unit. Seatback is reclined forward/backward by changing the rotation direction of reclining motor. |
| | | Reclining sensor | <ul style="list-style-type: none"> 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. |
| 19. | Sliding motor LH | Sliding motor | <ul style="list-style-type: none"> Sliding motor is installed to the seat cushion frame. Sliding motor is activated with driver seat control unit. Slides the seat forward/backward by changing the rotation direction of sliding motor. |
| | | Sliding sensor | <ul style="list-style-type: none"> Sliding sensor is integrated in sliding motor. The pulse signal is input to driver seat control unit when sliding is performed. Driver seat control unit counts the pulse and calculates the sliding amount of the seat. |
| 20. | Driver seat control unit | | <ul style="list-style-type: none"> Refer to ADP-13, "Driver Seat Control Unit". |

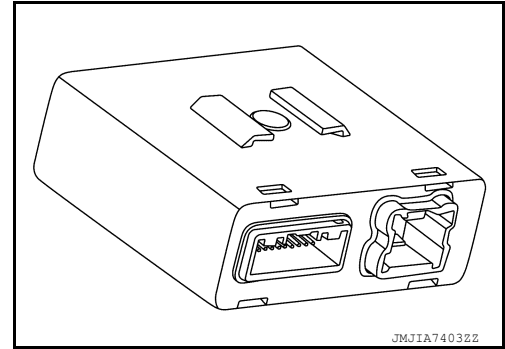
COMPONENT PARTS

< SYSTEM DESCRIPTION >

Automatic Drive Positioner Control Unit

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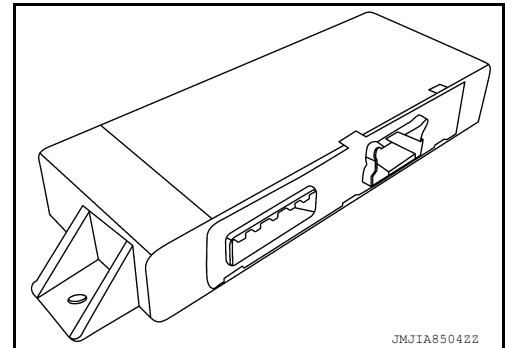
- It communicates with driver seat control unit via UART communication.
- Performs various controls with the instructions of driver seat control unit.
- Performs the controls of tilt & telescopic and door mirror.
- Operates steering column and door mirror with the signal from the driver seat control.



Driver Seat Control Unit

INFOID:0000000014391876

- Main unit of automatic drive positioner system.
- It is connected to the CAN communication system.
- It communicates with automatic drive positioner control unit via UART communication.
- 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.
- Performs the control of seat memory switch.
- Operates the specific seat motor with the signal from power seat switch.

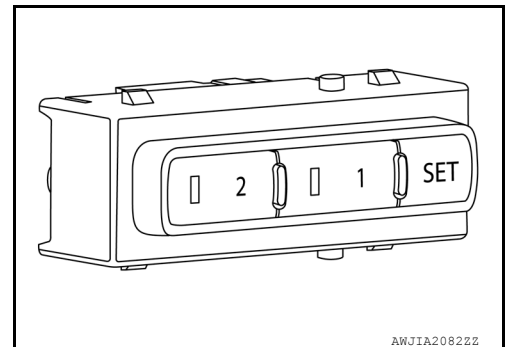


Seat Memory Switch

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SET SWITCH

It is used for registration and setting change of driving position.



SEAT MEMORY SWITCH

- The maximum 2 driving positions can be registered by memory switch 1 and 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.

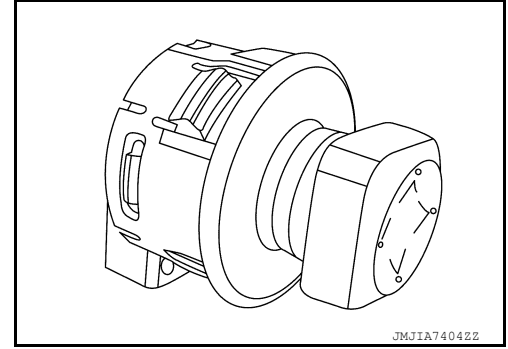
COMPONENT PARTS

< SYSTEM DESCRIPTION >

ADP Steering Switch

INFOID:0000000014391878

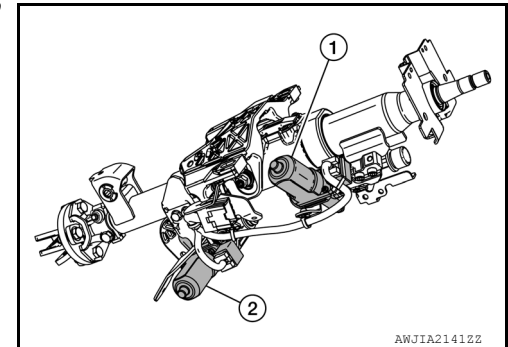
- ADP steering switch is equipped to steering column.
- The operation signal is input to automatic drive positioner control unit when switch is operated.



Tilt & Telescopic Motor

INFOID:0000000014391879

TILT MOTOR



- Tilt motor (2) 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 SENSOR

- Tilt sensor is integrated in tilt motor (2).
- 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 (1) is installed to steering column assembly.
- Telescopic motor is activated with automatic drive positioner control unit.
- Compresses steering column by changing the rotation direction of telescopic motor.

TELESCOPIC SENSOR

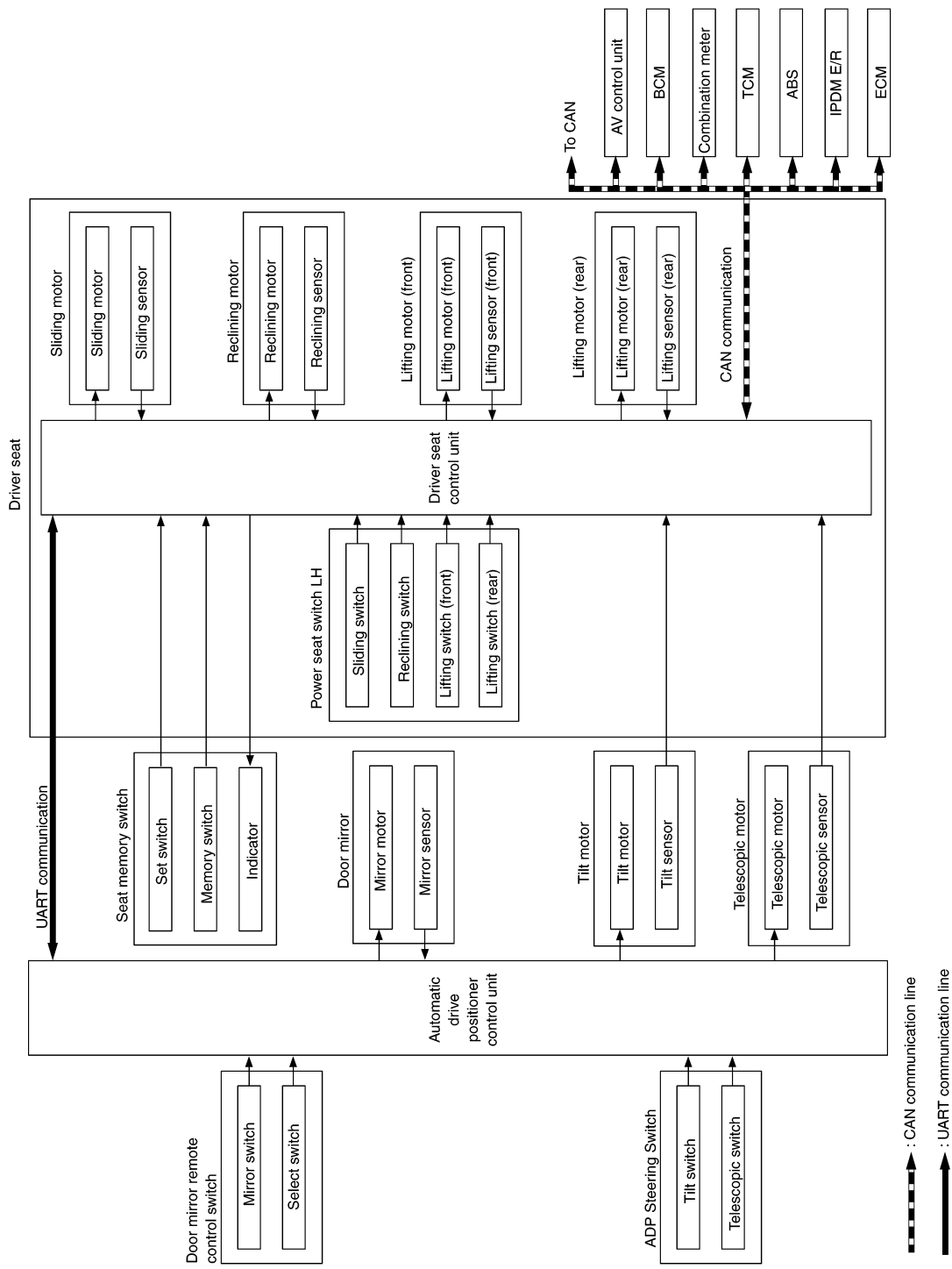
- Telescopic sensor is integrated in telescopic motor (1).
- The resistance of telescopic sensor is changed according to the forward/backward position of steering column.
- The terminal voltage of automatic drive positioner control unit will be changed according to a change of telescopic sensor resistance.
- Automatic drive positioner control unit calculates the telescopic position from the voltage.

SYSTEM

< SYSTEM DESCRIPTION >

SYSTEM
AUTOMATIC DRIVE POSITIONER SYSTEM
AUTOMATIC DRIVE POSITIONER SYSTEM : System Description
SYSTEM DIAGRAM

INFOID:0000000014391880



ADP

OUTLINE

SYSTEM

< SYSTEM DESCRIPTION >

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

| Function | | Description |
|----------------------------------|-------|---|
| Manual function | | The driving position (seat, steering column and door mirror position) can be adjusted by using the power seat switch, ADP steering switch or door mirror remote control switch. |
| Memory function | | The seat, steering column and door mirror move to the stored driving position by pressing seat memory switch (1 or 2). |
| Entry/Exit assist function | Exit | On exit, the seat moves backward and the steering column moves upward. |
| | Entry | On entry, the seat and steering column return from exiting position to the previous driving position. |
| Linking key fob to meter display | | Performs memory operation, exiting operation and entry operation by Intelligent Key unlock operation or driver side door request switch unlock operation. |

NOTE:

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

MANUAL FUNCTION

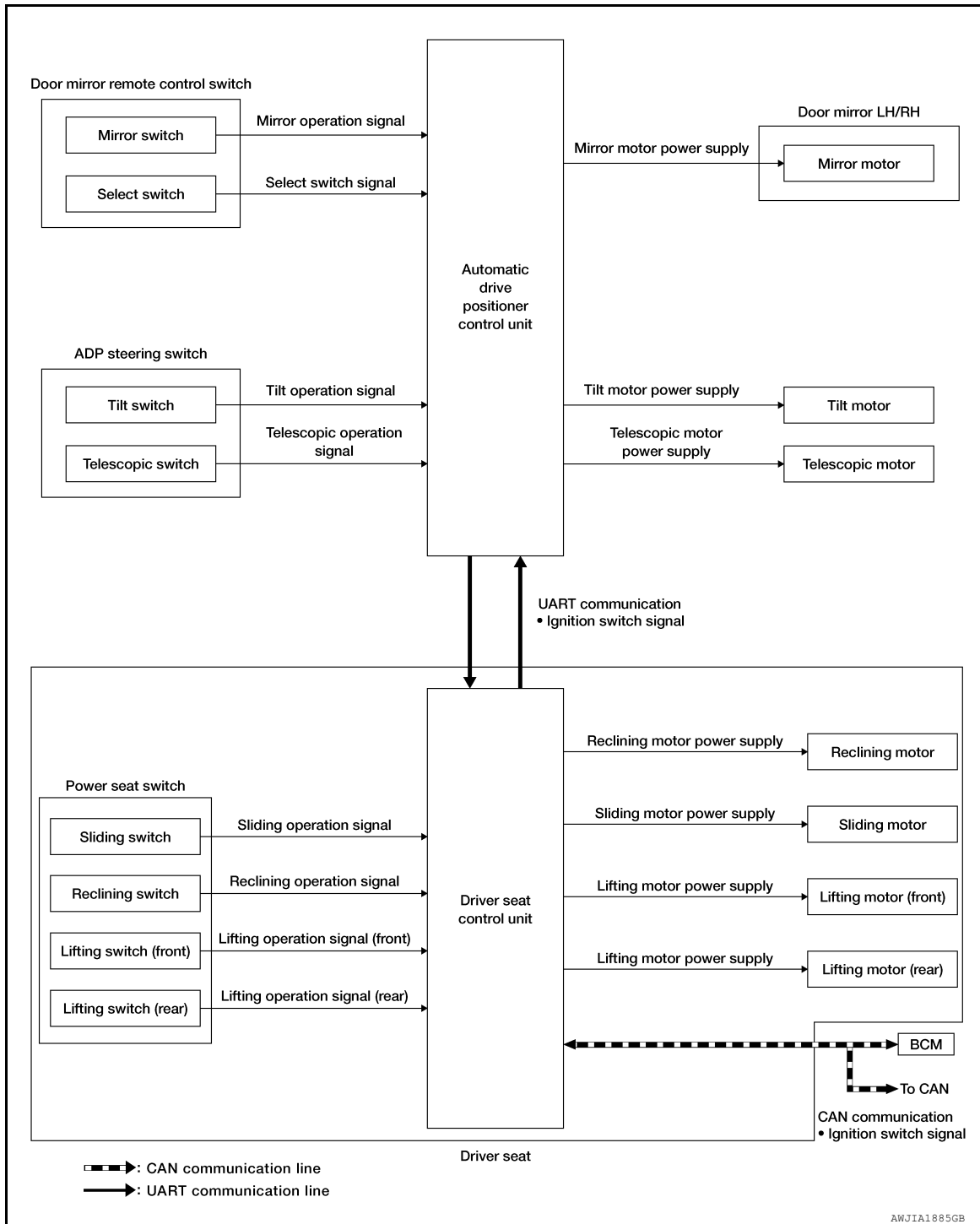
SYSTEM

< SYSTEM DESCRIPTION >

MANUAL FUNCTION : System Description

INFOID:000000014391881

SYSTEM DIAGRAM



DESCRIPTION

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

Operation procedure

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

DETAIL FLOW

SYSTEM

< SYSTEM DESCRIPTION >

Seat

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

Tilt and Telescopic

| Order | Input | Output | Control unit condition |
|-------|----------------------------|---------------------------|---|
| 1 | ADP steering switch | — | The ADP steering switch signal is inputted into the automatic drive positioner control unit when the ADP steering switch is operated. |
| 2 | — | Motors (tilt, telescopic) | The automatic drive positioner control unit actuates the motors according to the operation of the ADP steering switch signal. |
| 3 | Sensors (tilt, telescopic) | — | The automatic drive positioner control unit recognizes any operation limit of each actuator via each sensor and will not operate the motors anymore at that time. |

Door Mirror

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

NOTE:

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

MEMORY FUNCTION

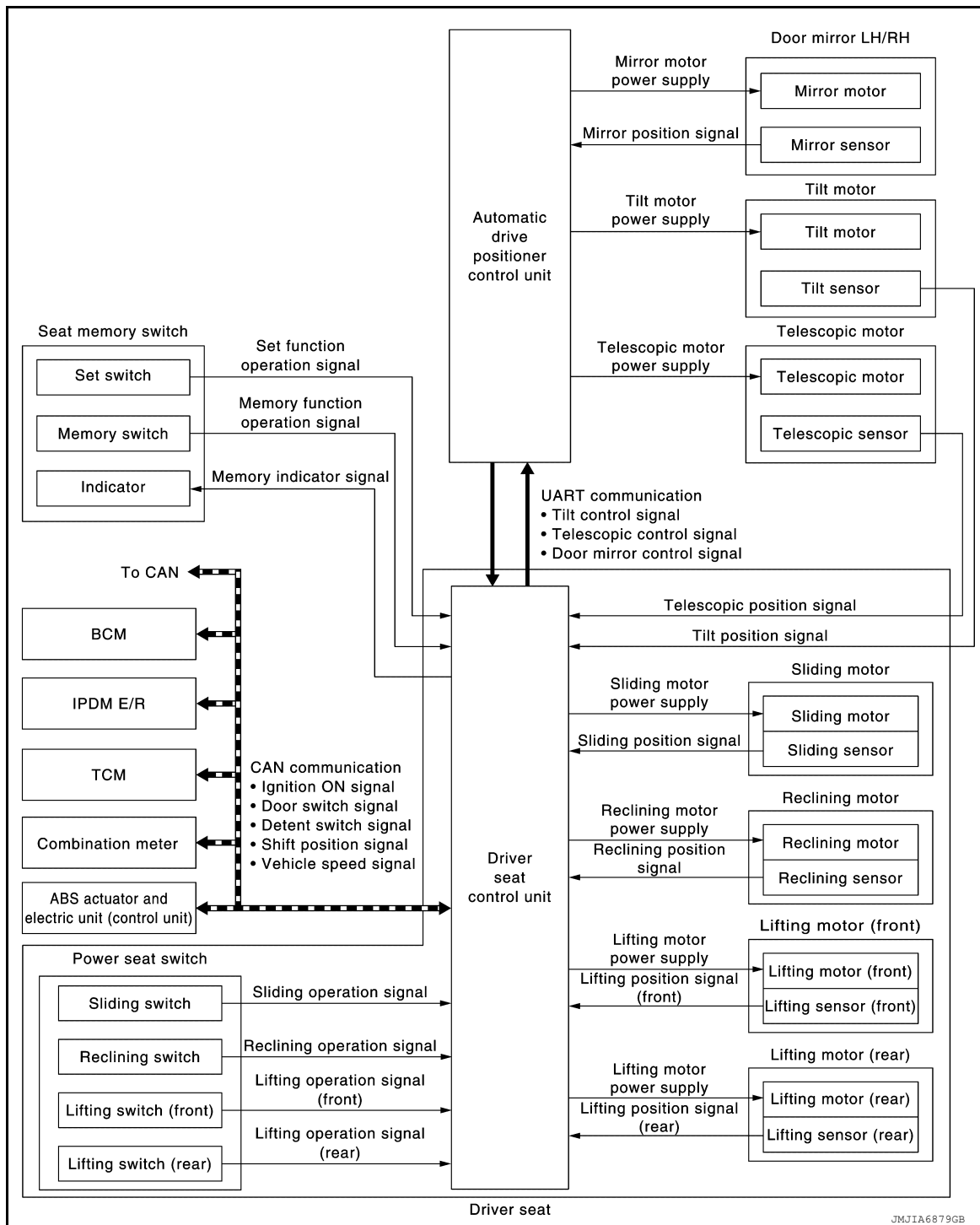
SYSTEM

< SYSTEM DESCRIPTION >

MEMORY FUNCTION : System Description

INFOID:0000000014391882

SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

Several types of signals are transmitted from the following units to the driver seat control unit via CAN communication.

| Component | Signal |
|---|-------------------------|
| ABS actuator and electric unit (control unit) | Vehicle speed signal |
| Combination meter | Vehicle speed signal |
| IPDM E/R | Detention switch signal |

SYSTEM

< SYSTEM DESCRIPTION >

| Component | Signal |
|-----------|------------------------|
| BCM | Ignition switch signal |
| ECM | Shift position signal |

DESCRIPTION

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

NOTE:

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

Operation Procedure

1. Turn ignition switch ON/ACC.
2. Press desired memory switch.
3. Front seat LH, steering column 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 |
|--|-----------------------|
| Switch inputs <ul style="list-style-type: none"> • Power seat switch • ADP steering switch • Door mirror control switch • Set switch • Seat memory switch | OFF (Not operated) |
| A/T shift selector | P position |

Detail Flow

| Order | Input | Output | Control unit condition |
|-------|--|---|--|
| 1 | Memory switch | — | The memory switch signal is inputted into the automatic drive positioner 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 that is pressed and requests each motor operation to automatic drive positioner control unit via UART communication. The automatic drive positioner control unit operates each motor. |
| | | Memory switch indicator | Driver seat control unit requests the flashing of memory indicator while either of the motors is operating. The automatic drive positioner control unit illuminates the memory indicator. |
| 3 | Sensors (seat, steering column, door mirrors) | — | Driver seat control unit judges the operating seat position with each seat sensor input. The positions of the steering column and outside mirrors are monitored with each sensor signal that is input from automatic drive positioner control unit via UART communication. Driver seat control unit stops the operation of each motor when each part reaches the recorded address. |
| 4 | — | Memory switch indicator | Driver seat control unit requests the illumination of memory indicator after all motors stop. The automatic drive positioner control unit illuminates the memory indicator for 5 seconds. |

EXIT ASSIST FUNCTION

SYSTEM

< SYSTEM DESCRIPTION >

| Item | Request status |
|---|-----------------------|
| Ignition switch | OFF |
| System setting [entry/exit assist function] | ON |
| Initialization | Done |
| Switch inputs <ul style="list-style-type: none"> • Power seat switch • ADP steering switch • Door mirror remote control switch • Set switch • Seat memory switch | OFF (Not operated) |
| A/T shift selector | P position |

Detail Flow

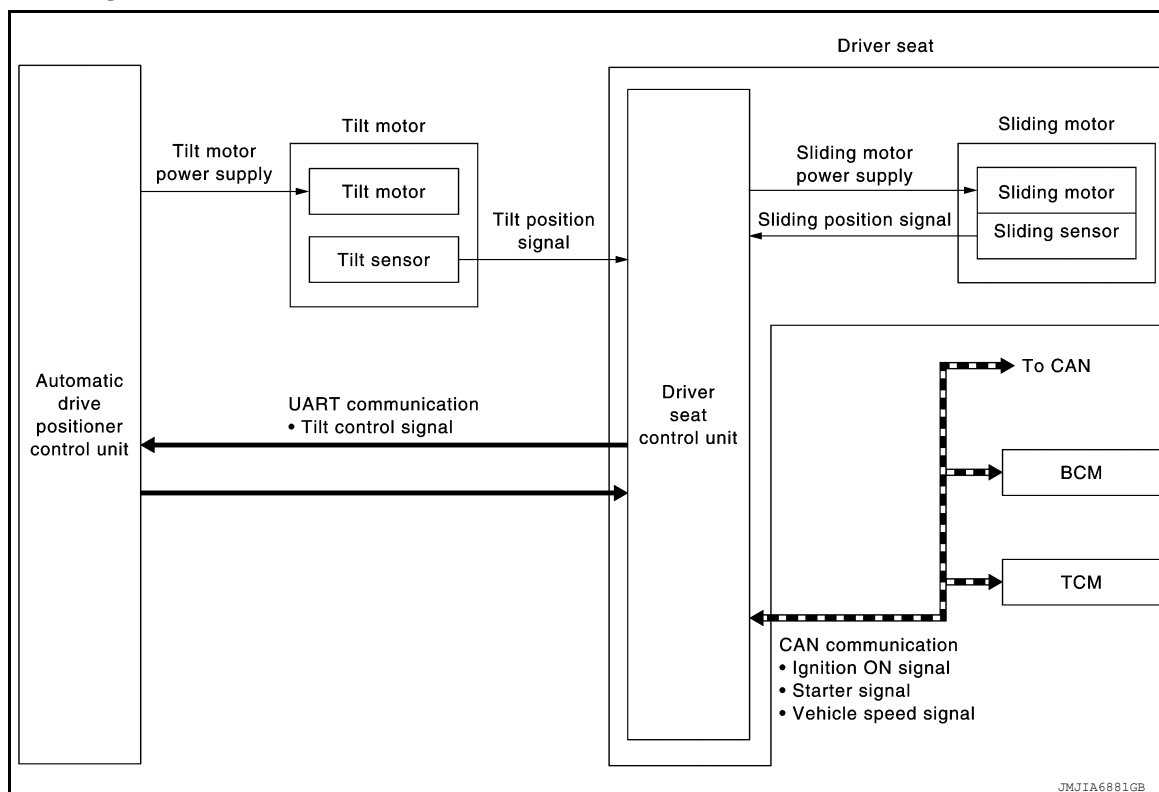
| Order | Input | Output | Control unit condition |
|-------|----------------------|--------------------------------|---|
| 1 | Front door switch LH | — | Driver seat control unit receives front door switch LH signal (open) from BCM via CAN communication. |
| 2 | — | Motors (seat sliding LH, tilt) |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

ENTRY ASSIST FUNCTION

ENTRY ASSIST FUNCTION : System Description

INFOID:0000000014391884

SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

Several types of signals are transmitted from the following units to the driver seat control unit via CAN communication.

SYSTEM

< SYSTEM DESCRIPTION >

| Component | Signal |
|---|---|
| ABS actuator and electric unit (control unit) | Vehicle speed signal |
| Combination meter | Vehicle speed signal |
| BCM | <ul style="list-style-type: none"> Ignition switch signal Key ID signal |
| IPDM E/R | Detention switch signal |

DESCRIPTION

The seat is in the exiting position when either of the following conditions are satisfied; the seat returns from exiting position to the previous driving position.

NOTE:

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

Operation Procedure

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

Operation Condition

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

| Item | Request status |
|---|---|
| Seat, steering column | The vehicle is not moved after performing the exit assist function. |
| Switch inputs <ul style="list-style-type: none"> Power seat switch ADP steering switch Door mirror control switch Set switch Memory switch | OFF (Not operated) |
| A/T shift selector | P position |

Detail Flow

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

LINKING KEY FOB TO THE METER DISPLAY

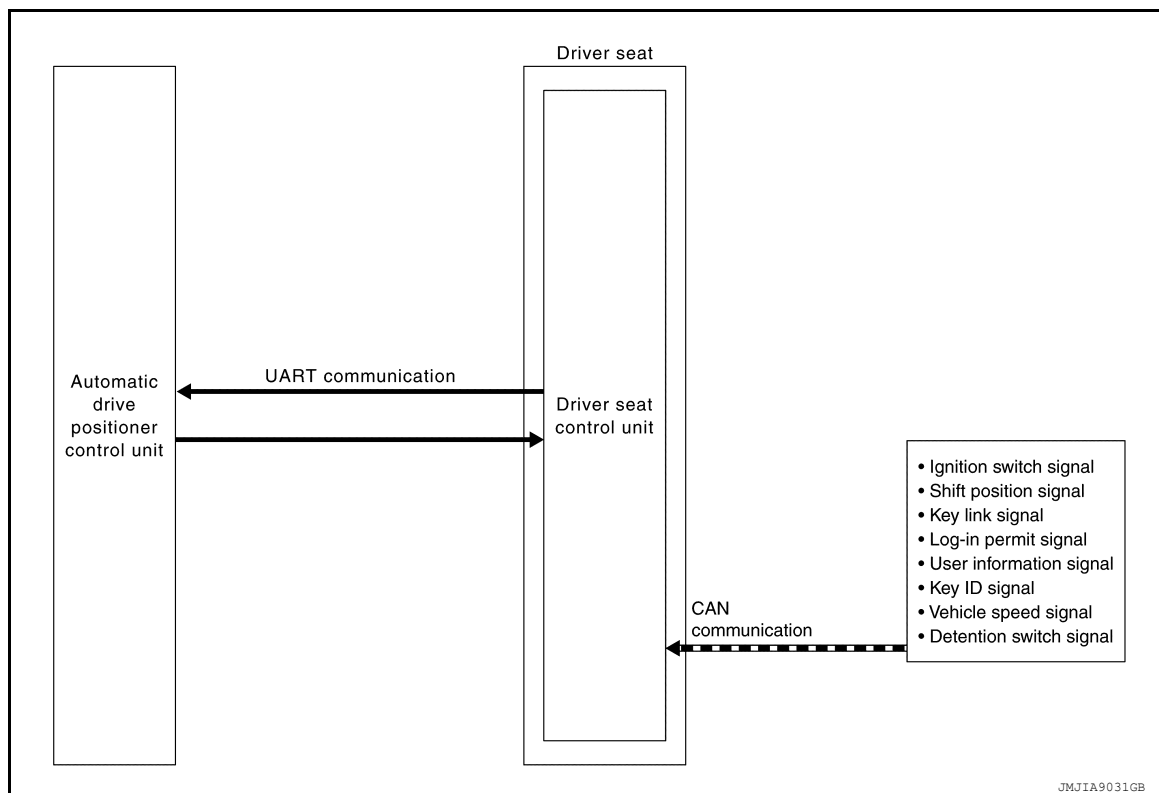
SYSTEM

< SYSTEM DESCRIPTION >

LINKING KEY FOB TO THE METER DISPLAY : System Description

INFOID:000000014391885

SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

Several types of signals are transmitted from the following units to the driver seat control unit via CAN communication.

| Component | Signal |
|---|---|
| ABS actuator and electric unit (control unit) | Vehicle speed signal |
| Combination meter | Vehicle speed signal |
| BCM | <ul style="list-style-type: none"> Ignition switch signal Key ID signal |
| ECM | Shift position signal |
| Chassis control module | <ul style="list-style-type: none"> Key link signal Log-in permit signal |
| Display control unit | User information signal |
| IPDM E/R | Detention switch signal |

DESCRIPTION

Log-in function is the function that registers the setting status of various systems and retrieves the status for each Intelligent Key as desired.

Registered information is automatically adjusted to the driving position (seat, steering column, and door mirror position) registered by unlocking the driver side door with the Intelligent Key or by operating the user selection function on the display.

When user selection is performed by display operation, the user information registered with another Intelligent Key can also be retrieved.

NOTE:

For the registration of the log-in function, the status is automatically registered as one of the following vehicle statuses when the ignition switch is turned to OFF. For details on registration, refer to [ADP-60, "INTELLIGENT KEY INTERLOCK STORING : Description"](#).

SYSTEM

< SYSTEM DESCRIPTION >

| Item | Request status |
|-------------------|----------------|
| Ignition position | ON |
| Driver side door | Closed |
| Navigation system | Activated |
| CONSULT | Not connected |

Operation Procedure

1. Turn ignition switch ON.
2. Push desired user change switch on display.
3. Driver seat, steering column and door mirror will move to the memorized position.

Operation Condition

All of the following conditions must be satisfied in order to retrieve the registration information of the log-in function.

If one of the following conditions is not satisfied, the interlocked operation of the driving position for log-in function is interrupted.

| Item | Request status |
|---|-----------------------|
| Ignition position | ON |
| Navigation system | Activated |
| Initialization | Done |
| Switch inputs <ul style="list-style-type: none"> • Power seat switch • Tilt & telescopic switch • Door mirror remote control switch • Set switch • Memory switch | OFF (Not operated) |
| A/T shift selector | P position |
| Log-in function memory | Registered |
| Vehicle speed | 0 km/h (0 MPH) |
| CONSULT | Not connected |

Detail Flow

| Order | Input | Output | Control unit condition |
|-------|---|--------|--|
| 1 | <ul style="list-style-type: none"> • Door unlock signal (CAN) • Key ID signal (CAN) | — | <p>When the following function is performed, the driver seat control unit transmits the unlock signal from BCM via CAN communication and receives the Key ID signal.</p> <ul style="list-style-type: none"> • Unlock door: Intelligent Key • Unlock door: front request switch (driver side) • Unlock door: one touch unlock sensor |
| 2 | — | — | Driver seat control unit performs the seat slide and steering tilt directly to the exit assist function. Other loads move to the exit assist function after performing log-in function. |
| 3 | — | — | Driver seat control unit performs the entry assist function. |

Fail Safe

INFOID:0000000014391886

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

| Operating in fail-safe mode | Malfunction Item | Related DTC | Diagnosis |
|---|-------------------|-------------|------------------------|
| Only manual functions operate normally. | CAN communication | U1000 | ADP-65 |
| | CONTROL UNIT | U1010 | ADP-66 |
| | EEPROM | B2130 | ADP-75 |

SYSTEM

< SYSTEM DESCRIPTION >

| Operating in fail-safe mode | Malfunction Item | Related DTC | Diagnosis |
|---|-----------------------------|-------------|------------------------|
| Only manual functions, except door mirror, operate normally. | UART communication | B2128 | ADP-73 |
| Only manual functions, except seat sliding, operate normally. | Seat sliding output | B2112 | ADP-67 |
| Only manual functions, except seat reclining, operate normally. | Seat reclining output | B2113 | ADP-69 |
| Only manual functions, except steering tilt, operate normally. | Steering column tilt output | B2116 | ADP-71 |

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

CONSULT Function (AUTO DRIVE POS)

INFOID:0000000014391887

CAUTION:

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

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

APPLICATION ITEMS

| Diagnostic mode | Description |
|------------------------|--|
| ECU IDENTIFICATION | Displays part numbers of driver seat control unit parts. |
| SELF DIAGNOSTIC RESULT | Performs self-diagnosis for the auto drive positioner system and displays the results. |
| ACTIVE TEST | Drive each output device. |
| DATA MONITOR | Displays input signals transmitted from various switches and sensors to driver seat control unit in real time. |
| WORK SUPPORT | Changes the setting of each function. |

SELF-DIAGNOSIS RESULTS

Refer to [ADP-25. "Fail Safe"](#).

ACTIVE TEST

CAUTION:

When driving vehicle, do not perform active test.

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

DATA MONITOR

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

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

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

DIAGNOSIS SYSTEM (DRIVER SEAT CONTROL UNIT)

< SYSTEM DESCRIPTION >

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

WORK SUPPORT

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

DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

DRIVER SEAT CONTROL UNIT

Reference Value

INFOID:0000000014391888

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

| Monitor Item | Condition | | Value/Status |
|------------------|--|--------------------|-----------------|
| DETENT SW | A/T shift selector | P position | OFF |
| | | Other than above | ON |
| P RANG SW CAN | A/T shift selector | P position | ON |
| | | Other than above | OFF |
| STARTER SW | Ignition position | Cranking | ON |
| | | Other than above | OFF |
| R RANGE (CAN) | A/T shift selector | R position | ON |
| | | Other than above | OFF |
| VEHICLE SPEED | The condition of vehicle speed is displayed | | km/h |
| DOOR SW-FL | Driver door | Open | OPEN |
| | | Close | CLOSED |
| DOOR SW-FR | Passenger door | Open | OPEN |
| | | Close | CLOSED |
| IGN ON SW | Ignition switch | ON position | ON |
| | | Other than above | OFF |
| ACC ON SW | Ignition switch | ACC or ON position | ON |
| | | Other than above | OFF |
| KYL5 DR UNLK | Intelligent Key or driver side door request switch | ON | ON |
| | | OFF | OFF |
| KEYLESS ID | UNLOCK button of Intelligent Key is pressed | | 1, 2, 3, 4 or 5 |
| VHCL SPEED (ABS) | CAN signal from ABS | Received | ON |
| | | Not received | OFF |
| HANDLE | Driving position | | LHD |
| | | | RHD |
| TRANSMISSION | Transmission type | | A/T |
| SET SW | Set switch | Push | ON |
| | | Release | OFF |
| MEMORY SW1 | Memory switch 1 | Push | ON |
| | | Release | OFF |
| MEMORY SW2 | Memory switch 2 | Push | ON |
| | | Release | OFF |
| SLIDE SW-FR | Sliding switch (forward) | Operate | ON |
| | | Release | OFF |
| SLIDE SW-RR | Sliding switch (backward) | Operate | ON |
| | | Release | OFF |
| RECLN SW-FR | Reclining switch (forward) | Operate | ON |
| | | Release | OFF |

DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | | Value/Status |
|---------------|-----------------------------|------------------|-------------------------------|
| RECLN SW-RR | Reclining switch (backward) | Operate | ON |
| | | Release | OFF |
| LIFT FR SW-UP | Lifting switch front (up) | Operate | ON |
| | | Release | OFF |
| LIFT FR SW-DN | Lifting switch front (down) | Operate | ON |
| | | Release | OFF |
| LIFT RR SW-UP | Lifting switch rear (up) | Operate | ON |
| | | Release | OFF |
| LIFT RR SW-DN | Lifting switch rear (down) | Operate | ON |
| | | Release | OFF |
| MIR CON SW-UP | Mirror switch | Up | ON |
| | | Other than above | OFF |
| MIR CON SW-DN | Mirror switch | Down | ON |
| | | Other than above | OFF |
| MIR CON SW-RH | Mirror switch | Right | ON |
| | | Other than above | OFF |
| MIR CON SW-LH | Mirror switch | Left | ON |
| | | Other than above | OFF |
| MIR CHNG SW-R | Changeover switch | Right | ON |
| | | Other than above | OFF |
| MIR CHNG SW-L | Changeover switch | Left | ON |
| | | Other than above | OFF |
| TILT SW-UP | Tilt switch | Upward | ON |
| | | Other than above | OFF |
| TILT SW-DOWN | Tilt switch | Downward | ON |
| | | Other than above | OFF |
| TELESCO SW-FR | Telescopic switch | Forward | ON |
| | | Other than above | OFF |
| TELESCO SW-RR | Telescopic switch | Backward | ON |
| | | Other than above | OFF |
| SLIDE PULSE | Seat sliding | Forward | The numeral value decreases * |
| | | Backward | The numeral value increases* |
| | | Other than above | No change to numeral value* |
| RECLN PULSE | Seat reclining | Forward | The numeral value decreases* |
| | | Backward | The numeral value increases * |
| | | Other than above | No change to numeral value * |
| LIFT FR PULSE | Seat lifter (front) | Up | The numeral value decreases * |
| | | Down | The numeral value increases * |
| | | Other than above | No change to numeral value* |
| LIFT RR PULSE | Seat lifter (rear) | Up | The numeral value decreases * |
| | | Down | The numeral value increases * |
| | | Other than above | No change to numeral value* |

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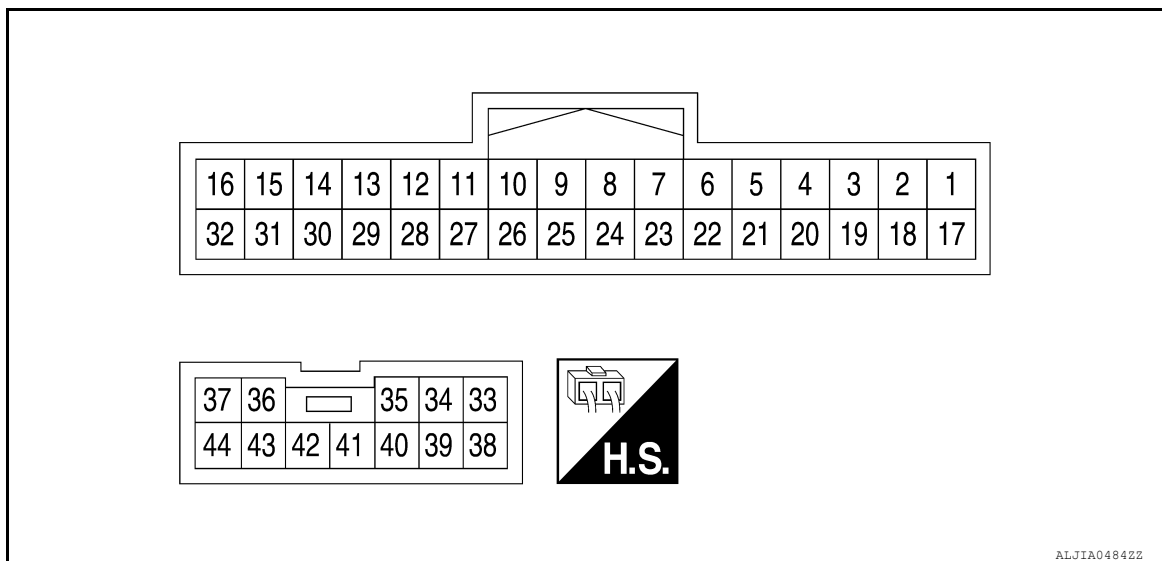
DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | | Value/Status |
|----------------|------------------------------|------------------|--|
| MIR/SEN RH U-D | Door mirror (passenger side) | | Change between 3.4 (close to peak) 0.6 (close to valley) |
| MIR/SEN RH R-L | Door mirror (passenger side) | | Change between 3.4 (close to left edge) 0.6 (close to right edge) |
| MIR/SEN LH U-D | Door mirror (driver side) | | Change between 3.4 (close to peak) 0.6 (close to valley) |
| MIR/SEN LH R-L | Door mirror (driver side) | | Change between 0.6 (close to left edge) 3.4 (close to right edge) |
| TILT PULSE | Tilt position | Upward | The numeral value decreases * |
| | | Downward | The numeral value increases * |
| | | Other than above | No change to numeral value * |
| TELESCO PULSE | Telescopic position | Forward | The numeral value decreases * |
| | | Backward | The numeral value increases * |
| | | Other than above | No change to numeral value * |

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

TERMINAL LAYOUT

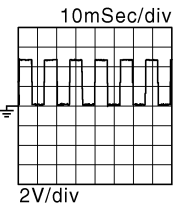
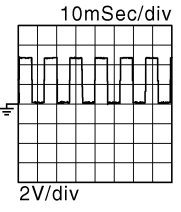
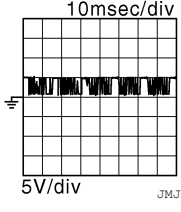


PHYSICAL VALUES

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx) |
|------------------------------|--------|---------------------------------------|------------------|---------------------------|-----------------------|---------------------|
| + | - | Signal name | Input/ Output | | | |
| 5 (W) | Ground | Sensor power supply | Output | — | | Battery voltage |
| 6 (R) | Ground | Lifting switch (rear) down signal | Input | Lifting switch (rear) | Operate (down) | 0 V |
| | | | | | Release | Battery voltage |
| 7 (Y) | Ground | Lifting switch (front) down signal | Input | Lifting switch (front) | Operate (down) | 0 V |
| | | | | | Release | Battery voltage |
| 8 (BR) | Ground | Reclining switch backward signal | Input | Reclining switch | Operate (backward) | 0 V |
| | | | | | Release | Battery voltage |

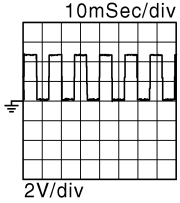
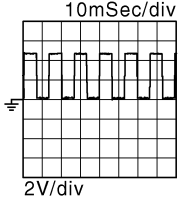
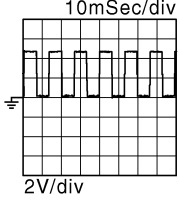
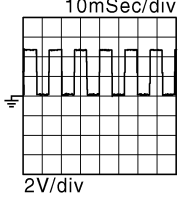
DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx) |
|------------------------------|--------|---------------------------------------|------------------|--------------------------------|-----------------------|---|
| + | - | Signal name | Input/ Output | | | |
| 9 (SB) | Ground | Sliding switch backward signal | Input | Sliding switch | Operate (backward) | 0 V |
| | | | | | Release | Battery voltage |
| 10 (G) | Ground | Memory indicator 2 signal | Output | Memory indicator 2 | Illuminate | 1 V |
| | | | | | Other than above | Battery voltage |
| 11 (GR) | Ground | Memory switch 2 signal | Input | Memory switch 2 | Press | 0 V |
| | | | | | Other than above | 5 V |
| 12 (W) | Ground | Telescopic sensor signal | Input | Telescopic | Operate |  JMJA01192Z |
| | | | | | Other than above | 0 V or 5 V |
| 13 (G) | Ground | Reclining sensor signal | Input | Seat reclining | Operate |  JMJA01192Z |
| | | | | | Stop | 0 V or 5 V |
| 15 (SB) | Ground | UART communication (TX/RX) | Input | Ignition switch ON | |  JMJA13912Z |
| 16 (P) | — | CAN high | — | — | | — |
| 21 (L) | Ground | Set switch signal | Input | Set switch | Press | 0 V |
| | | | | | Other than above | 5 V |
| 22 (V) | Ground | Lifting switch (rear) up sig- nal | Input | Seat lifting switch (rear) | Operate (up) | 0 V |
| | | | | | Release | Battery voltage |
| 23 (G) | Ground | Lifting switch (front) up sig- nal | Input | Seat lifting switch (front) | Operate (up) | 0 V |
| | | | | | Release | Battery voltage |
| 24 (P) | Ground | Reclining switch forward signal | Input | Reclining switch | Operate (forward) | 0 V |
| | | | | | Release | Battery voltage |
| 25 (L) | Ground | Sliding switch forward sig- nal | Input | Sliding switch | Operate (forward) | 0 V |
| | | | | | Release | Battery voltage |

DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx) |
|------------------------------|--------|---|------------------|----------------------|--------------------|---|
| + | - | Signal name | Input/ Output | | | |
| 26 (Y) | Ground | Memory indicator 1 signal | Output | Memory indicator 1 | Illuminate | 1 V |
| | | | | | Other than above | Battery voltage |
| 27 (V) | Ground | Memory switch 1 signal | Input | Memory switch 1 | Press | 0 V |
| | | | | | Other than above | 5 V |
| 28 (BR) | Ground | Tilt sensor signal | Input | Tilt | Operate |  <small>JMJIA0119ZZ</small> |
| | | | | | Other than above | 0 V or 5 V |
| 29 (R) | Ground | Lifting sensor (rear) signal | Input | Seat lifting (rear) | Operate |  <small>JMJIA0119ZZ</small> |
| | | | | | Stop | 0 V or 5 V |
| 30 (Y) | Ground | Lifting sensor (front) signal | Input | Seat lifting (front) | Operate |  <small>JMJIA0119ZZ</small> |
| | | | | | Stop | 0 V or 5 V |
| 31 (LG) | Ground | Sliding sensor signal | Input | Seat sliding | Operate |  <small>JMJIA0119ZZ</small> |
| | | | | | Stop | 0 V or 5 V |
| 32 (W) | — | CAN low | — | — | — | — |
| 34 (SB) | Ground | Lifting motor LH (front) up output signal | Output | Seat lifting (front) | Operate (up) | Battery voltage |
| | | | | | Stop | 0 V |
| 35 (V) | Ground | Reclining motor LH forward output signal | Output | Seat reclining | Operate (forward) | Battery voltage |
| | | | | | Release | 0 V |
| 36 (W) | Ground | Sliding motor LH backward output signal | Output | Seat sliding | Operate (backward) | Battery voltage |
| | | | | | Stop | 0 V |

DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx) |
|------------------------------|--------|--|------------------|----------------------|-----------------------|---------------------|
| + | - | Signal name | Input/ Output | | | |
| 37 (R) | Ground | Power source | Input | — | | Battery voltage |
| 39 (B) | Ground | Ground (power) | — | — | | 0 V |
| 40 (L) | Ground | Lifting motor LH (rear) down output signal | Output | Seat lifting (rear) | Operate (down) | Battery voltage |
| | | | | | Stop | 0 V |
| 41 (Y) | Ground | Lifting motor LH (rear) up output signal | Output | Seat lifting (rear) | Operate (up) | Battery voltage |
| | | | | | Stop | 0 V |
| 42 (GR) | Ground | Lifting motor LH (front) down signal | Output | Seat lifting (front) | Operate (down) | Battery voltage |
| | | | | | Stop | 0 V |
| 43 (BR) | Ground | Reclining motor LH back- ward output signal | Output | Seat reclining | Operate (backward) | Battery voltage |
| | | | | | Stop | 0 V |
| 44 (G) | Ground | Sliding motor LH forward output signal | Output | Seat sliding | Operate (forward) | Battery voltage |
| | | | | | Release | 0 V |

Fail Safe

INFOID:0000000014391889

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

| Operating in fail-safe mode | Malfunction Item | Related DTC | Diagnosis |
|---|-----------------------------|----------------|------------------------|
| Only manual functions operate normally. | CAN communication | U1000 | ADP-65 |
| | CONTROL UNIT | U1010 | ADP-66 |
| | EEPROM | B2130 | ADP-75 |
| Only manual functions, except door mirror, operate normally. | UART communication | B2128 | ADP-73 |
| Only manual functions, except seat sliding, operate normally. | Seat sliding output | B2112 | ADP-67 |
| Only manual functions, except seat reclining, operate normally. | Seat reclining output | B2113 | ADP-69 |
| Only manual functions, except steering tilt, operate normally. | Steering column tilt output | B2116 | ADP-71 |

DTC Index

INFOID:0000000014391890

| CONSULT display | Timing*1 | | Item | Reference page |
|-----------------------------|--------------------------|---------------------------|-----------------------------|------------------------|
| | Current mal- function | Previous mal- function | | |
| CAN COMM CIRCUIT [U1000] | 0 | 1-39 | CAN communication | ADP-65 |
| CONTROL UNIT [U1010] | 0 | 1-39 | Control unit | ADP-66 |
| SEAT SLIDE [B2112] | 0 | 1-39 | Seat slide motor output | ADP-67 |
| SEAT RECLINING [B2113] | 0 | 1-39 | Seat reclining motor output | ADP-69 |

DRIVER SEAT CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| CONSULT display | Timing ^{*1} | | Item | Reference page |
|-----------------------|----------------------|-----------------------|--------------------|------------------------|
| | Current mal-function | Previous mal-function | | |
| STEERING TILT [B2116] | 0 | 1-39 | Tilt motor output | ADP-71 |
| UART COMM [B2128] | 0 | 1-39 | UART communication | ADP-73 |
| EEPROM [B2130] | 0 | 1-39 | EEPROM | ADP-75 |

*1.

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

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

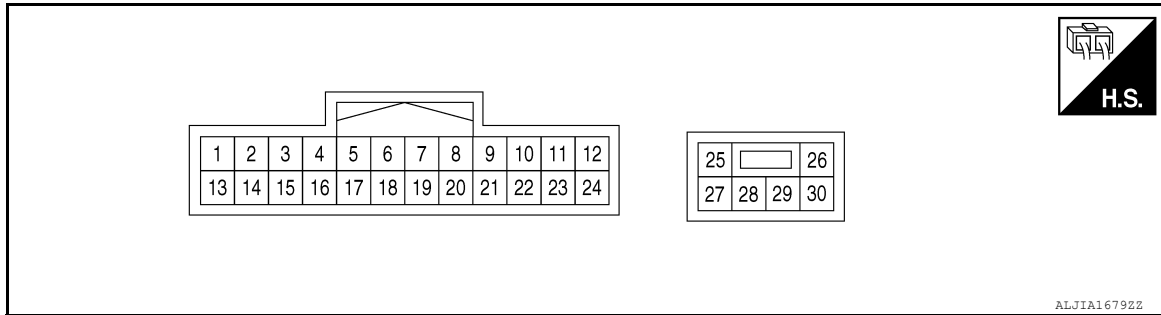
< ECU DIAGNOSIS INFORMATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

INFOID:0000000014391891

TERMINAL LAYOUT



PHYSICAL VALUES

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx.) |
|------------------------------|--------|--|------------------|-------------------------------|----------------------|---|
| + | - | Signal name | Input/ Output | | | |
| 1 (LG) | Ground | Tilt switch up signal | Input | Tilt switch | Operate (up) | 0 V |
| | | | | | Other than above | 5 V |
| 2 (GR) | Ground | Changeover switch RH signal | Input | Changeover switch position | RH | 0 V |
| | | | | | Neutral or LH | 5 V |
| 3 (G) | Ground | Mirror switch up signal | Input | Mirror switch | Operated (up) | 0 V |
| | | | | | Other than above | 5 V |
| 4 (P) | Ground | Mirror switch left signal | Input | Mirror switch | Operated (left) | 0 V |
| | | | | | Other than above | 5 V |
| 5 (BR) | Ground | Door mirror sensor (pas- senger side) up/down signal | Input | Door mirror RH position | | Change between 3.4 V (close to peak) 0.6 V (close to valley) |
| 6 (B) | Ground | Door mirror sensor (driv- er side) up/down signal | Input | Door mirror LH position | | Change between 3.4 V (close to peak) 0.6 V (close to valley) |
| 7 (BR) | Ground | Telescopic switch for- ward signal | Input | Telescopic switch | Operate (forward) | 0 V |
| | | | | | Other than above | 5 V |
| 8 (O) | Ground | UART communication (TX/RX) | Output | Ignition switch ON | | |

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx.) |
|------------------------------|--------|---|------------------|-------------------------------|----------------------------|--|
| + | - | Signal name | Input/ Output | | | |
| 10 (BR) | Ground | Door mirror motor (pas- senger side) up output signal | Output | Door mirror RH | Operate (up) | Battery voltage |
| | | | | | Other than above | 0 V |
| 11 (G) | Ground | Door mirror motor (pas- senger side) left output signal | Output | Door mirror RH | Operate (left) | Battery voltage |
| | | | | | Other than above | 0 V |
| 12 (O) | Ground | Door mirror motor (driv- er side) down output sig- nal | Output | Door mirror (LH) | Operate (down) | Battery voltage |
| | | | | | Other than above | 0 V |
| | | Door mirror motor (driv- er side) right output sig- nal | | | Operate (right) | Battery voltage |
| | | | | | Other than above | 0 V |
| 13 (Y) | Ground | Tilt switch down signal | Input | Tilt switch | Operate (down) | 0 V |
| | | | | | Other than above | 5 V |
| 14 (P) | Ground | Changeover switch LH signal | Input | Changeover switch position | LH | 0 V |
| | | | | | Neutral or RH | 5 V |
| 15 (R) | Ground | Mirror switch down sig- nal | Input | Mirror switch | Operate (down) | 0 V |
| | | | | | Other than above | 5 V |
| 16 (W) | Ground | Mirror switch right signal | Input | Mirror switch | Operate (right) | 0 V |
| | | | | | Other than above | 5 V |
| 17 (Y) | Ground | Door mirror sensor (pas- senger side) left/right signal | Input | Door mirror RH position | | Change between 3.4 V (close to left edge) 0.6 V (close to right edge) |
| 18 (BG) | Ground | Door mirror sensor (driv- er side) left/right signal | Input | Door mirror LH position | | Change between 0.6 (close to left edge) 3.4 (close to right edge) |
| 19 (L) | Ground | Telescopic switch back- ward signal | Input | Telescopic switch | Operate (back- ward) | 0 V |
| | | | | | Other than above | 5 V |
| 20 (Y) | Ground | Ground | — | — | | 0 V |
| 21 (SB) | Ground | Door mirror motor sen- sor power supply | Input | — | | 5 V |

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) | | Description | | Condition | | Voltage (Approx.) |
|------------------------------|--------|---|------------------|--------------------------|----------------------------|----------------------|
| + | - | Signal name | Input/ Output | | | |
| 22 (SB) | Ground | Door mirror motor (pas- senger side) down out- put signal | Output | Door mirror (RH) | Operate (down) | Battery voltage |
| | | | | | Other than above | 0 V |
| | | Door mirror motor (pas- senger side) right output signal | | | Operate (right) | Battery voltage |
| | | | | | Other than above | 0 V |
| 23 (LG) | Ground | Door mirror motor (driv- er side) up output signal | Output | Door mirror (LH) | Operate (up) | Battery voltage |
| | | | | | Other than above | 0 V |
| 24 (L) | Ground | Door mirror motor (driv- er side) left output signal | Output | Door mirror (LH) | Operate (left) | Battery voltage |
| | | | | | Other than above | 0 V |
| 25 (L/B) | Ground | Power source | Input | — | | Battery voltage |
| 26 (V) | Ground | Telescopic motor back- ward output signal | Output | Steering tele- scopic | Operate (back- ward) | Battery voltage |
| | | | | | Other than above | 0 V |
| 27 (LG) | Ground | Tilt and telescopic motor power source | | — | | Battery voltage |
| 28 (SB) | Ground | Tilt motor down output signal | Output | Steering tilt | Operate (down) | Battery voltage |
| | | | | | Other than above | 0 V |
| 29 (BR) | Ground | Tilt motor up output sig- nal | Output | Steering tilt | Operate (up) | Battery voltage |
| | | | | | Other than above | 0 V |
| | | Telescopic motor for- ward output signal | | Steering tele- scopic | Operate (forward) | Battery voltage |
| | | | | | Other than above | 0 V |
| 30 (B) | Ground | Ground | — | — | | 0 V |

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ADP

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000014391892

| ECU | Reference |
|-----|---|
| BCM | BCS-32. "Reference Value" |
| | BCS-51. "Fail Safe" |
| | BCS-51. "DTC Inspection Priority Chart" |
| | BCS-52. "DTC Index" |

AUTOMATIC DRIVE POSITIONER

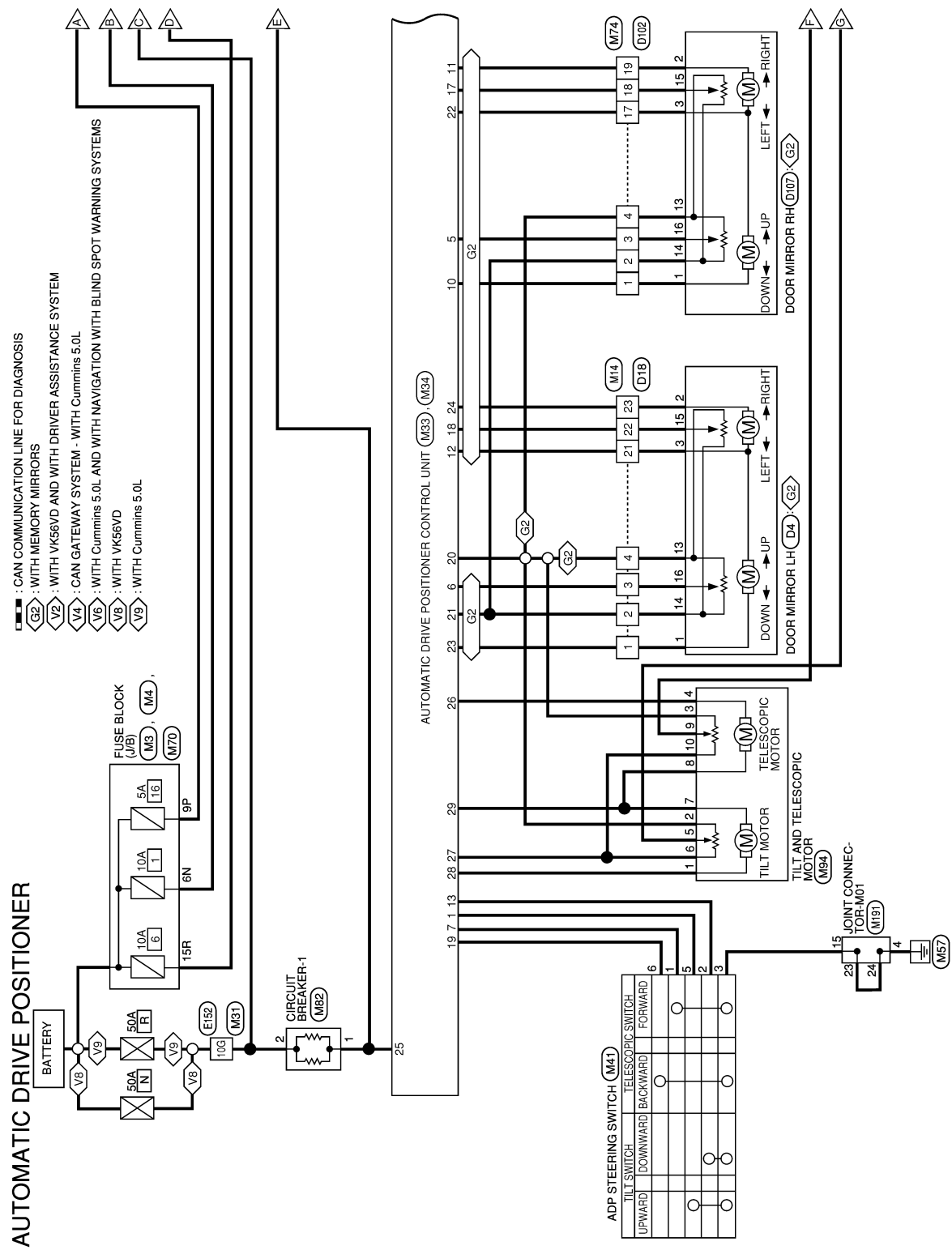
< WIRING DIAGRAM >

WIRING DIAGRAM

AUTOMATIC DRIVE POSITIONER

Wiring Diagram

INFOID:0000000014391893



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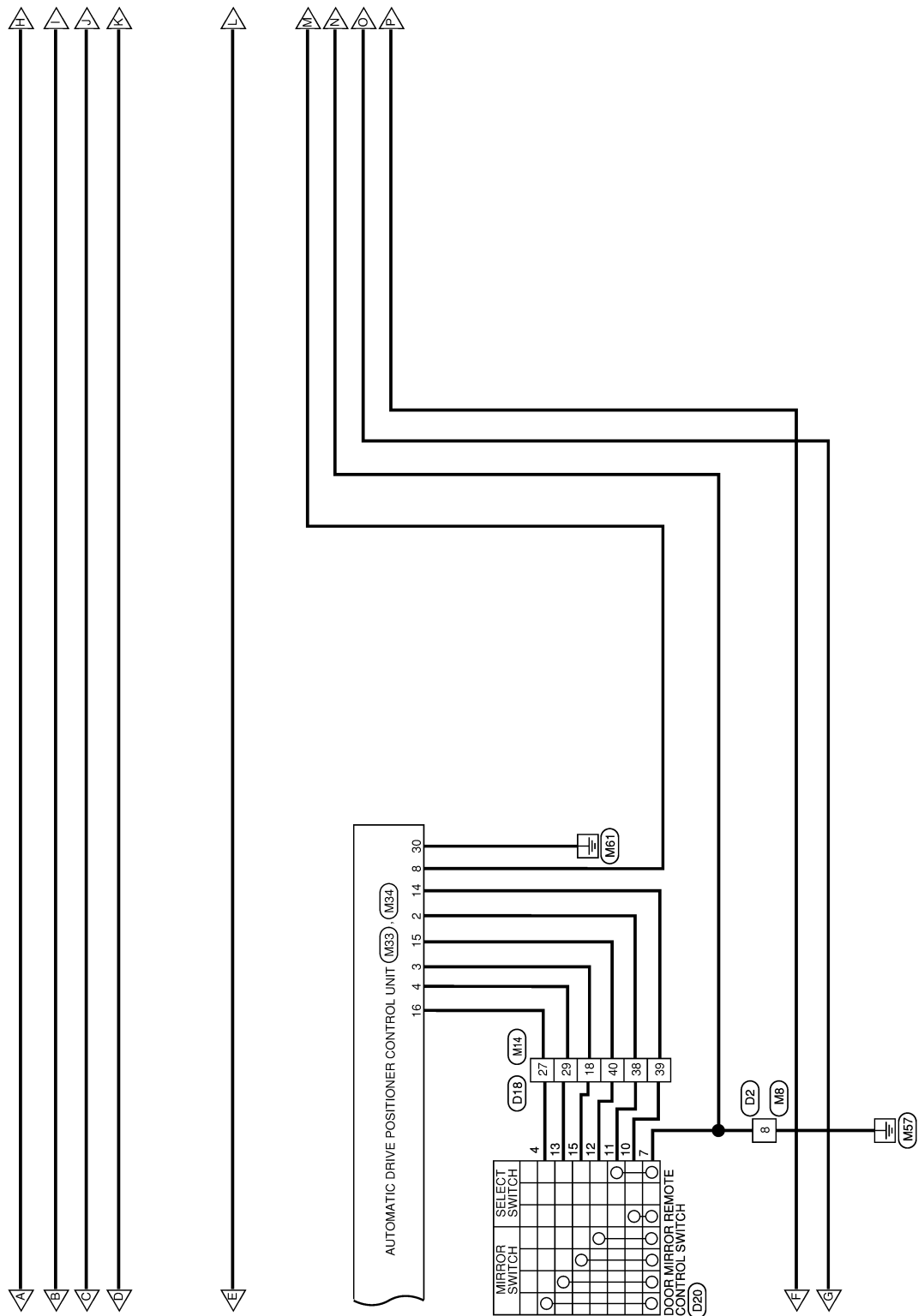
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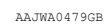
AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >



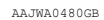
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< WIRING DIAGRAM >



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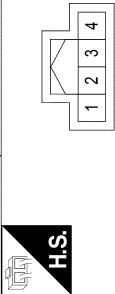


AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

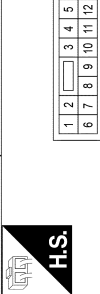
AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|----------------------|
| Connector No. | B8 |
| Connector Name | FRONT DOOR SWITCH LH |
| Connector Type | TH04FW-NH |
| Connector Color | WHITE |

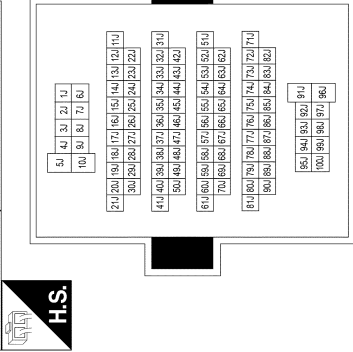


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1 | - | - |
| 2 | - | - |
| 3 | L | DR DOOR SW |
| 4 | - | - |

| | |
|-----------------|--------------|
| Connector No. | B54 |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS12FBR-CS |
| Connector Color | BROWN |



| | |
|-----------------|-----------------|
| Connector No. | B69 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |
| Connector Color | WHITE |



| | | |
|-----|--------|-----------------|
| 28J | L | TO MAIN HARNESS |
| 29J | G/O | TO MAIN HARNESS |
| 30J | SB | TO MAIN HARNESS |
| 31J | LG | TO MAIN HARNESS |
| 32J | R | TO MAIN HARNESS |
| 33J | L | TO MAIN HARNESS |
| 34J | Y | TO MAIN HARNESS |
| 35J | P | TO MAIN HARNESS |
| 36J | GR | TO MAIN HARNESS |
| 37J | LG/B | TO MAIN HARNESS |
| 38J | SB | TO MAIN HARNESS |
| 39J | Y/L | TO MAIN HARNESS |
| 40J | BR | TO MAIN HARNESS |
| 41J | L | TO MAIN HARNESS |
| 42J | L | TO MAIN HARNESS |
| 43J | SB | TO MAIN HARNESS |
| 44J | BR | TO MAIN HARNESS |
| 45J | BG | TO MAIN HARNESS |
| 46J | P/Y | TO MAIN HARNESS |
| 47J | Y/GR | TO MAIN HARNESS |
| 48J | V | TO MAIN HARNESS |
| 49J | BR/Y | TO MAIN HARNESS |
| 50J | GW | TO MAIN HARNESS |
| 51J | - | TO MAIN HARNESS |
| 52J | SHIELD | TO MAIN HARNESS |
| 53J | R | TO MAIN HARNESS |
| 54J | L | TO MAIN HARNESS |
| 55J | R | TO MAIN HARNESS |
| 56J | W | TO MAIN HARNESS |
| 57J | L/G | TO MAIN HARNESS |
| 58J | O | TO MAIN HARNESS |
| 59J | - | TO MAIN HARNESS |
| 60J | SHIELD | TO MAIN HARNESS |
| 61J | G | TO MAIN HARNESS |
| 62J | - | TO MAIN HARNESS |
| 63J | R/W | TO MAIN HARNESS |
| 64J | L/W | TO MAIN HARNESS |
| 65J | SHIELD | TO MAIN HARNESS |
| 66J | B | TO MAIN HARNESS |
| 67J | SHIELD | TO MAIN HARNESS |
| 68J | O/L | TO MAIN HARNESS |
| 69J | SH | TO MAIN HARNESS |
| 70J | SB | TO MAIN HARNESS |
| 71J | L/W | TO MAIN HARNESS |
| 72J | - | TO MAIN HARNESS |
| 73J | - | TO MAIN HARNESS |
| 74J | SHIELD | TO MAIN HARNESS |
| 75J | LG/B | TO MAIN HARNESS |
| 76J | R | TO MAIN HARNESS |
| 77J | SHIELD | TO MAIN HARNESS |
| 78J | GR/B | TO MAIN HARNESS |
| 79J | B | TO MAIN HARNESS |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------|
| 1J | P | TO MAIN HARNESS |
| 2J | R/Y | TO MAIN HARNESS |
| 3J | L | TO MAIN HARNESS |
| 4J | L/B | TO MAIN HARNESS |
| 5J | GW | TO MAIN HARNESS |
| 6J | LG/Y | TO MAIN HARNESS |
| 7J | BR/LG | TO MAIN HARNESS |
| 8J | SB/BR | TO MAIN HARNESS |
| 9J | BR | TO MAIN HARNESS |
| 10J | BR | TO MAIN HARNESS |
| 11J | O/B | TO MAIN HARNESS |
| 12J | L | TO MAIN HARNESS |
| 13J | SB/O | TO MAIN HARNESS |
| 14J | Y | TO MAIN HARNESS |
| 15J | - | TO MAIN HARNESS |
| 16J | R | TO MAIN HARNESS |
| 17J | G | TO MAIN HARNESS |
| 18J | SB | TO MAIN HARNESS |
| 19J | O | TO MAIN HARNESS |
| 20J | O/B | TO MAIN HARNESS |
| 21J | Y/R | TO MAIN HARNESS |
| 22J | P | TO MAIN HARNESS |
| 23J | W | TO MAIN HARNESS |
| 24J | W/R | TO MAIN HARNESS |
| 25J | V | TO MAIN HARNESS |
| 26J | L | TO MAIN HARNESS |
| 27J | R | TO MAIN HARNESS |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------|
| 1 | L | TO FRONT SEAT LH HARNESS |
| 2 | BR | TO FRONT SEAT LH HARNESS |
| 3 | B | TO FRONT SEAT LH HARNESS |
| 4 | P | TO FRONT SEAT LH HARNESS |
| 5 | L | TO FRONT SEAT LH HARNESS |
| 6 | L/B | TO FRONT SEAT LH HARNESS |
| 7 | Y/L | TO FRONT SEAT LH HARNESS |
| 8 | BR/Y | TO FRONT SEAT LH HARNESS |
| 9 | V | TO FRONT SEAT LH HARNESS |
| 10 | LG/B | TO FRONT SEAT LH HARNESS |
| 11 | SB | TO FRONT SEAT LH HARNESS |
| 12 | Y/GR | TO FRONT SEAT LH HARNESS |

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A B C D E F G H I K L M N O P

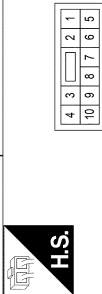
ADP

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

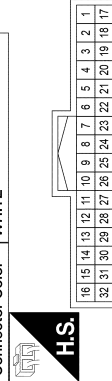
AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|--|
| Connector No. | B213 |
| Connector Name | POWER SEAT SWITCH LH (WITH AUTOMATIC DRIVE POSITIONER) |
| Connector Type | NS10FW-CS |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------------------|
| 1 | V | REAR LIFTER (UPWARD) |
| 2 | R | REAR LIFTER (DOWNWARD) |
| 3 | B | GND |
| 4 | - | - |
| 5 | G | FRONT LIFTER (UPWARD) |
| 6 | Y | FRONT LIFTER (DOWNWARD) |
| 7 | L | SLIDE (FORWARD) |
| 8 | SB | SLIDE (BACKWARD) |
| 9 | P | RECL (FORWARD) |
| 10 | BR | RECL (BACKWARD) |

| | |
|-----------------|--------------------------|
| Connector No. | B222 |
| Connector Name | DRIVER SEAT CONTROL UNIT |
| Connector Type | TH32FW-NH |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|----------------------------|
| 1 | - | - |
| 2 | - | - |
| 3 | - | - |
| 4 | - | - |
| 5 | W | POWER SUPPLY (ENCODER) |
| 6 | R | REAR LIFTER SW (DOWNWARD) |
| 7 | Y | FRONT LIFTER SW (DOWNWARD) |
| 8 | BR | RECLINER SW (BACKWARD) |
| 9 | SB | SLIDE SW (BACKWARD) |
| 10 | G | IND 2 |

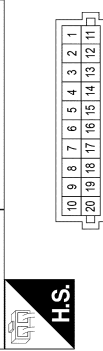
| | | |
|----|----|--------------------------|
| 11 | GR | ADDRESS 2 |
| 12 | W | PULSE (TELESCOPIC) |
| 13 | G | PULSE (RECLINER) |
| 14 | - | - |
| 15 | SB | UART (TX/RX) |
| 16 | P | CAN-H |
| 17 | - | - |
| 18 | - | - |
| 19 | - | - |
| 20 | - | - |
| 21 | L | SET SW |
| 22 | V | REAR LIFTER SW (UPWARD) |
| 23 | G | FRONT LIFTER SW (UPWARD) |
| 24 | P | RECLINER SW (FORWARD) |
| 25 | L | SLIDE SW (FORWARD) |
| 26 | Y | IND 1 |
| 27 | V | ADDRESS 1 |
| 28 | BR | PULSE(TILT) |
| 29 | R | PULSE (REAR LIFTER) |
| 30 | Y | PULSE (FRONT LIFTER) |
| 31 | LG | PULSE (SLIDE) |
| 32 | W | CAN-L |

| | |
|-----------------|--------------------------|
| Connector No. | B223 |
| Connector Name | DRIVER SEAT CONTROL UNIT |
| Connector Type | NS12FW-CS |
| Connector Color | WHITE |



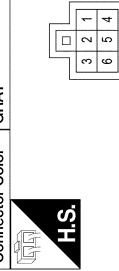
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------------------------|
| 33 | - | - |
| 34 | SB | FRONT LIFTER MOTOR (DOWNWARD) |
| 35 | V | RECLINER MOTOR (FORWARD) |
| 36 | W | SLIDE MOTOR (BACKWARD) |
| 37 | R | BAT (PTC) |
| 38 | - | - |
| 39 | B | GND |
| 40 | L | REAR LIFTER MOTOR (DOWNWARD) |
| 41 | Y | REAR LIFTER MOTOR (UPWARD) |
| 42 | GR | FRONT LIFTER MOTOR (UPWARD) |
| 43 | BR | RECLINER MOTOR (BACKWARD) |
| 44 | G | SLIDING MOTOR (FORWARD) |

| | |
|-----------------|---------------------|
| Connector No. | B224 |
| Connector Name | JOINT CONNECTOR-B22 |
| Connector Type | - |
| Connector Color | PINK |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------|
| 1 | - | - |
| 2 | - | - |
| 3 | B | GROUND |
| 4 | B | GROUND |
| 5 | B | GROUND |
| 6 | B | GROUND |
| 7 | B | GROUND |
| 8 | B | GROUND |
| 9 | B | GROUND |
| 10 | B | GROUND |
| 11 | - | - |
| 12 | - | - |
| 13 | R | BATTERY |
| 14 | - | - |
| 15 | R | BATTERY |
| 16 | W | POWER SUPPLY |
| 17 | W | POWER SUPPLY |
| 18 | W | POWER SUPPLY |
| 19 | W | POWER SUPPLY |
| 20 | W | POWER SUPPLY |

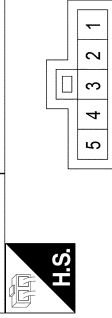
| | |
|-----------------|--|
| Connector No. | B225 |
| Connector Name | RECLINING MOTOR LH (WITH AUTOMATIC DRIVE POSITIONER) |
| Connector Type | 6242-5061 |
| Connector Color | GRAY |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1 | G | PULSE |

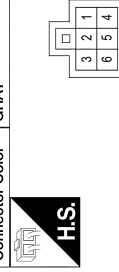
| | | |
|---|----|----------------------------|
| 2 | B | GROUND |
| 3 | W | POWER SUPPLY |
| 4 | BR | RECLINING MOTOR (FORWARD) |
| 5 | - | - |
| 6 | V | RECLINING MOTOR (BACKWARD) |

| | |
|-----------------|---|
| Connector No. | B226 |
| Connector Name | SLIDING MOTOR LHW (WITH AUTOMATIC DRIVE POSITIONER) |
| Connector Type | 6098-0344 |
| Connector Color | GRAY |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------|
| 1 | W | SLIDING MOTOR (FORWARD) |
| 2 | LG | PULSE |
| 3 | B | GROUND |
| 4 | W | POWER SUPPLY |
| 5 | G | SLIDING MOTOR (BACKWARD) |

| | |
|-----------------|--|
| Connector No. | B227 |
| Connector Name | LIFTING MOTOR LH (FRONT) (WITH AUTOMATIC DRIVE POSITIONER) |
| Connector Type | 6242-5061 |
| Connector Color | GRAY |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------------|
| 1 | Y | PULSE |
| 2 | B | GROUND |
| 3 | W | POWER SUPPLY |
| 4 | GR | FRONT LIFTING MOTOR (UPWARD) |
| 5 | - | - |
| 6 | SB | FRONT LIFTING MOTOR (DOWNWARD) |

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|--|
| Connector No. | B228 |
| Connector Name | LIFTING MOTOR LH (REAR) (WITH AUTOMATIC DRIVE POSITIONER) |
| Connector Type | 6242-5061 |
| Connector Color | GRAY |



| | | |
|---|---|---|
| 3 | 2 | 1 |
| 6 | 5 | 4 |

| | | |
|----|----|-----------------|
| 16 | LG | TO MAIN HARNESS |
|----|----|-----------------|

| | |
|-----------------|----------------|
| Connector No. | D4 |
| Connector Name | DOOR MIRROR LH |
| Connector Type | TH24MW-NH |
| Connector Color | WHITE |



| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------------------------|
| 1 | R | PULSE |
| 2 | B | GROUND |
| 3 | W | POWER SUPPLY |
| 4 | L | REAR LIFTING MOTOR (UPWARD) |
| 5 | - | - |
| 6 | Y | REAR LIFTING MOTOR (DOWNWARD) |



| | | | | | | |
|----|----|----|----|----|----|----|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 16 | 15 | 14 | 13 | 12 | 11 | 10 |
| 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| 2 | 1 | 0 | 9 | 8 | 7 | 6 |

| | |
|-----------------|--------------|
| Connector No. | D2 |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS16FW-CS |
| Connector Color | WHITE |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------|
| 1 | B/W | TO MAIN HARNESS |
| 2 | G/B | TO MAIN HARNESS |
| 3 | L | TO MAIN HARNESS |
| 4 | R | TO MAIN HARNESS |
| 5 | W/R | TO MAIN HARNESS |
| 6 | W/L | TO MAIN HARNESS |
| 7 | V | TO MAIN HARNESS |
| 8 | B | TO MAIN HARNESS |
| 9 | L/W | TO MAIN HARNESS |
| 10 | L/R | TO MAIN HARNESS |
| 11 | L/W | TO MAIN HARNESS |
| 12 | L | TO MAIN HARNESS |
| 13 | Y | TO MAIN HARNESS |
| 14 | SB | TO MAIN HARNESS |
| 15 | V | TO MAIN HARNESS |

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| | |
|-----------------|--------------------|
| Connector No. | D10 |
| Connector Name | SEAT MEMORY SWITCH |
| Connector Type | TH16FW-NH |
| Connector Color | WHITE |



| | | | | | | | |
|----|----|----|----|----|----|----|---|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------------|
| 1 | - | - |
| 2 | SB | MEMORY SW (SET) |
| 3 | - | - |
| 4 | - | - |
| 5 | - | - |
| 6 | - | - |
| 7 | - | - |
| 8 | - | - |
| 9 | B | GROUND |
| 10 | BR | MEMORY SW (ADDRESS 1) |
| 11 | - | - |
| 12 | - | - |
| 13 | LG | MEMORY SW (IND 2) |
| 14 | Y | MEMORY SW (IND 1) |
| 15 | V | BATTERY |
| 16 | L | MEMORY SW (ADDRESS 2) |



| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 |

| | |
|-----------------|--------------|
| Connector No. | D18 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH40FW-NH |
| Connector Color | WHITE |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--|
| 1 | SB | TO MAIN HARNESS (WITHOUT MEMORY MIRRORS) |
| 1 | LG | TO MAIN HARNESS (WITH AROUND VIEW MONITOR) |
| 2 | SB | TO MAIN HARNESS |
| 3 | BG | TO MAIN HARNESS |
| 4 | Y | TO MAIN HARNESS |
| 5 | BR | TO MAIN HARNESS |

| | | |
|----|--------|--|
| 6 | SB | TO MAIN HARNESS |
| 7 | V | TO MAIN HARNESS |
| 8 | GR | TO MAIN HARNESS |
| 9 | L | TO MAIN HARNESS |
| 10 | W | TO MAIN HARNESS |
| 11 | B | TO MAIN HARNESS |
| 12 | R/G | TO MAIN HARNESS |
| 13 | Y | TO MAIN HARNESS |
| 14 | LG | TO MAIN HARNESS |
| 15 | L | TO MAIN HARNESS |
| 16 | V | TO MAIN HARNESS |
| 17 | LG | TO MAIN HARNESS |
| 18 | BR | TO MAIN HARNESS |
| 19 | LG/B | TO MAIN HARNESS |
| 20 | YW | TO MAIN HARNESS |
| 21 | BR | TO MAIN HARNESS (WITHOUT MEMORY MIRRORS) |
| 21 | BG | TO MAIN HARNESS (WITH MEMORY MIRRORS) |
| 22 | V | TO MAIN HARNESS |
| 23 | G | TO MAIN HARNESS (WITHOUT MEMORY MIRRORS) |
| 23 | L | TO MAIN HARNESS (WITH MEMORY MIRRORS) |
| 24 | LG | TO MAIN HARNESS |
| 25 | Y | TO MAIN HARNESS |
| 26 | L | TO MAIN HARNESS |
| 27 | Y | TO MAIN HARNESS |
| 28 | L | TO MAIN HARNESS |
| 29 | V | TO MAIN HARNESS |
| 30 | R | TO MAIN HARNESS |
| 31 | SHIELD | TO MAIN HARNESS |
| 32 | R | TO MAIN HARNESS |
| 33 | BR | TO MAIN HARNESS |
| 34 | - | TO MAIN HARNESS |
| 35 | W | TO MAIN HARNESS |
| 36 | L | TO MAIN HARNESS |
| 37 | L/R | TO MAIN HARNESS |
| 38 | LG | TO MAIN HARNESS |
| 39 | SB | TO MAIN HARNESS |
| 40 | L | TO MAIN HARNESS |

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|---|
| Connector No. | D20 |
| Connector Name | DOOR MIRROR REMOTE CONTROL SWITCH (WITH MEMORY MIRRORS) |
| Connector Type | TK16FBR |
| Connector Color | BROWN |



| | | | | | | | | |
|---|---|----|----|-------------|----|----|----|----|
| 1 | 2 | 3 | 4 | <div></div> | | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|---------------------|
| 1 | - | - |
| 2 | L/R | POWERFOLD UNFOLD+ |
| 3 | G/L | POWERFOLD UNFOLD+ |
| 4 | Y | MIRROR SW RIGHTWARD |
| 5 | L | POWERFOLD FOLD+ |
| 6 | GR | POWERFOLD FOLD+ |
| 7 | B | GROUND |
| 8 | GR | ILLUMINATION - |
| 9 | L | ILLUMINATION + |
| 10 | SB | MIRROR SELECT SW LH |
| 11 | LG | MIRROR SELECT SW RH |
| 12 | L | MIRROR SW DOWNWARD |
| 13 | V | MIRROR SW LEFTWARD |
| 14 | - | - |
| 15 | BR | MIRROR SW UPWARD |
| 16 | - | - |

| | |
|-----------------|--------------|
| Connector No. | D102 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH32FW-NH |
| Connector Color | WHITE |



| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------|
| 1 | BR | TO MAIN HARNESS |
| 2 | V | TO MAIN HARNESS |
| 3 | BR | TO MAIN HARNESS |
| 4 | L | TO MAIN HARNESS |
| 5 | L/R | TO MAIN HARNESS |

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| | | |
|----|--------|--|
| 6 | L | TO MAIN HARNESS |
| 7 | R/G | TO MAIN HARNESS |
| 8 | B | TO MAIN HARNESS |
| 9 | W | TO MAIN HARNESS |
| 10 | Y | TO MAIN HARNESS |
| 11 | LG | TO MAIN HARNESS |
| 12 | L | TO MAIN HARNESS |
| 13 | Y/V | TO MAIN HARNESS |
| 14 | W/L | TO MAIN HARNESS |
| 15 | V/R | TO MAIN HARNESS |
| 16 | L/W | TO MAIN HARNESS |
| 17 | SB | TO MAIN HARNESS |
| 18 | Y | TO MAIN HARNESS |
| 19 | G | TO MAIN HARNESS |
| 20 | V/W | TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER) |
| 20 | GR/R | TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER) |
| 21 | - | TO MAIN HARNESS |
| 22 | - | TO MAIN HARNESS |
| 23 | R | TO MAIN HARNESS |
| 24 | R | TO MAIN HARNESS |
| 25 | SHIELD | TO MAIN HARNESS |
| 26 | LG | TO MAIN HARNESS |
| 27 | Y | TO MAIN HARNESS |
| 28 | BR | TO MAIN HARNESS |
| 29 | LG/B | TO MAIN HARNESS |
| 30 | - | TO MAIN HARNESS |
| 31 | - | TO MAIN HARNESS |
| 32 | - | TO MAIN HARNESS |

| | |
|-----------------|----------------|
| Connector No. | D107 |
| Connector Name | DOOR MIRROR RH |
| Connector Type | TH24MM-NH |
| Connector Color | WHITE |



| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------------|
| 1 | BR | SWITCH MTR UP |
| 2 | G | SWITCH MTR LT |
| 3 | SB | MTR COMMON |
| 4 | L/R | POWERFOLD UNFOLD+ |
| 5 | L | POWERFOLD FOLD+ |
| 6 | B/W | HEATED MIRROR + |
| 7 | B | VCC |
| 8 | R | VIDEO + |

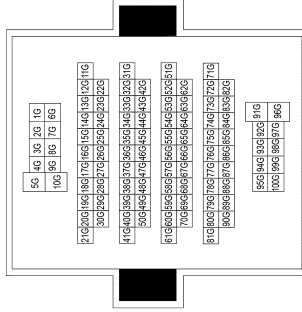
| | | |
|----|--------|-----------------|
| 9 | G/Y | FR TURN RH |
| 10 | B | END |
| 11 | LG/B | EC FEED |
| 12 | Y/V | EC RETURN |
| 13 | L | MEMORY FEED |
| 14 | V | MEMORY FEED |
| 15 | Y | HOR SENSOR |
| 16 | BR | VER SENSOR |
| 17 | - | - |
| 18 | B | HEATED MIRROR - |
| 19 | W | END |
| 20 | SHIELD | VIDEO - |
| 21 | R/G | BAT SAVER OUT |
| 22 | L | ROOM LAMP COUNT |
| 23 | B | LED RH |
| 24 | B | END |

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|-----------------|
| Connector No. | E152 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CST6-TM4 |
| Connector Color | WHITE |

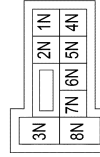


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|---------------------------------------|
| 1G | G | TO MAIN HARNESS |
| 2G | B/R | TO MAIN HARNESS |
| 3G | W/B | TO MAIN HARNESS |
| 4G | B/W | TO MAIN HARNESS |
| 5G | BR | TO MAIN HARNESS |
| 6G | P | TO MAIN HARNESS - (WITH V650D) |
| 6G | R/W | TO MAIN HARNESS - (WITH CUMMINS 5.0L) |
| 7G | Y | TO MAIN HARNESS |
| 8G | G | TO MAIN HARNESS |
| 9G | R | TO MAIN HARNESS |
| 10G | W | TO MAIN HARNESS |
| 11G | R/G | TO MAIN HARNESS |
| 12G | W/B | TO MAIN HARNESS |
| 13G | BR | TO MAIN HARNESS |
| 14G | Y/B | TO MAIN HARNESS |
| 15G | G/W | TO MAIN HARNESS |
| 16G | G | TO MAIN HARNESS |
| 17G | G/Y | TO MAIN HARNESS |
| 18G | G/Y | TO MAIN HARNESS |
| 19G | Y/V | TO MAIN HARNESS |
| 20G | G/Y | TO MAIN HARNESS |
| 21G | B/Y | TO MAIN HARNESS |
| 22G | G/R | TO MAIN HARNESS |
| 23G | Y/R | TO MAIN HARNESS |

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| | | |
|------|--------|-----------------|
| 72G | L/W | TO MAIN HARNESS |
| 73G | SHIELD | TO MAIN HARNESS |
| 74G | W | TO MAIN HARNESS |
| 75G | R | TO MAIN HARNESS |
| 76G | R/G | TO MAIN HARNESS |
| 77G | G | TO MAIN HARNESS |
| 78G | W | TO MAIN HARNESS |
| 79G | - | TO MAIN HARNESS |
| 80G | R | TO MAIN HARNESS |
| 81G | L | TO MAIN HARNESS |
| 82G | R | TO MAIN HARNESS |
| 83G | L | TO MAIN HARNESS |
| 84G | L | TO MAIN HARNESS |
| 85G | W/B | TO MAIN HARNESS |
| 86G | B/R | TO MAIN HARNESS |
| 87G | W/B | TO MAIN HARNESS |
| 88G | P | TO MAIN HARNESS |
| 89G | L | TO MAIN HARNESS |
| 90G | G | TO MAIN HARNESS |
| 91G | G | TO MAIN HARNESS |
| 92G | V/W | TO MAIN HARNESS |
| 93G | BR | TO MAIN HARNESS |
| 94G | G | TO MAIN HARNESS |
| 95G | G | TO MAIN HARNESS |
| 96G | W | TO MAIN HARNESS |
| 97G | R | TO MAIN HARNESS |
| 98G | W/B | TO MAIN HARNESS |
| 99G | BR | TO MAIN HARNESS |
| 100G | GR/W | TO MAIN HARNESS |

| | |
|-----------------|------------------|
| Connector No. | M3 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | CS06FW-M2 |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|----------------------|
| 1N | - | - |
| 2N | W | BATTERY |
| 3N | W | BLOWER FAN RELAY OUT |
| 4N | V | BATTERY |
| 5N | Y | BATTERY |
| 6N | W | BATTERY |
| 7N | L | ACC RELAY OUT |
| 8N | W | IGNITION |

| | |
|-----------------|------------------|
| Connector No. | M4 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FW-CS |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|----------------------|
| 1P | R | IGNITION |
| 2P | Y | IGNITION |
| 3P | G | IGNITION RELAY OUT |
| 4P | B/W | RR DEF RLY |
| 5P | B/W | RR DEF RLY |
| 6P | O | RR DEF RLY OUT |
| 7P | G | IGNITION |
| 8P | W | IGNITION |
| 9P | L | BATTERY |
| 10P | - | - |
| 11P | - | - |
| 12P | - | - |
| 13P | R | BATTERY |
| 14P | Y | BATTERY |
| 15P | Y/LG | BATTERY |
| 16P | W | BLOWER FAN RELAY OUT |

A B C D E F G H I K L M N O P


ADP

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|--------------|
| Connector No. | M8 |
| Connector Name | WIRE TO WIRE |
| Connector Type | NTS16MW-CS |
| Connector Color | WHITE |



| | | | | | | | | |
|---|---|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------|
| 1 | B/W | TO FRONT DOOR LH HARNESS |
| 2 | G/B | TO FRONT DOOR LH HARNESS |
| 3 | L | TO FRONT DOOR LH HARNESS |
| 4 | R | TO FRONT DOOR LH HARNESS |
| 5 | W/R | TO FRONT DOOR LH HARNESS |
| 6 | W/L | TO FRONT DOOR LH HARNESS |
| 7 | V | TO FRONT DOOR LH HARNESS |
| 8 | B | TO FRONT DOOR LH HARNESS |
| 9 | L/W | TO FRONT DOOR LH HARNESS |
| 10 | L/R | TO FRONT DOOR LH HARNESS |
| 11 | L/W | TO FRONT DOOR LH HARNESS |
| 12 | L | TO FRONT DOOR LH HARNESS |
| 13 | Y | TO FRONT DOOR LH HARNESS |
| 14 | SB | TO FRONT DOOR LH HARNESS |
| 15 | V | TO FRONT DOOR LH HARNESS |
| 16 | L/G | TO FRONT DOOR LH HARNESS |

| | |
|-----------------|--------------|
| Connector No. | M14 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH40MW-NH |
| Connector Color | WHITE |

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|---|
| 1 | LG | TO FRONT DOOR LH HARNESS - (WITH MEMORY MIRRORS) |
| 1 | SB | TO FRONT DOOR LH HARNESS - (WITHOUT MEMORY MIRRORS) |
| 2 | SB | TO FRONT DOOR LH HARNESS |
| 3 | B | TO FRONT DOOR LH HARNESS |
| 4 | Y | TO FRONT DOOR LH HARNESS |
| 5 | V | TO FRONT DOOR LH HARNESS |

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| | | |
|----|--------|---|
| 6 | SB | TO FRONT DOOR LH HARNESS |
| 7 | Y | TO FRONT DOOR LH HARNESS |
| 8 | GR | TO FRONT DOOR LH HARNESS |
| 9 | L | TO FRONT DOOR LH HARNESS |
| 10 | W | TO FRONT DOOR LH HARNESS |
| 11 | B | TO FRONT DOOR LH HARNESS |
| 12 | R/G | TO FRONT DOOR LH HARNESS |
| 13 | G | TO FRONT DOOR LH HARNESS |
| 14 | R | TO FRONT DOOR LH HARNESS |
| 15 | O | TO FRONT DOOR LH HARNESS |
| 16 | V | TO FRONT DOOR LH HARNESS |
| 17 | P | TO FRONT DOOR LH HARNESS |
| 18 | G | TO FRONT DOOR LH HARNESS |
| 19 | LG/B | TO FRONT DOOR LH HARNESS |
| 20 | Y/V | TO FRONT DOOR LH HARNESS |
| 21 | O | TO FRONT DOOR LH HARNESS - (WITH MEMORY MIRRORS) |
| 21 | BR | TO FRONT DOOR LH HARNESS - (WITHOUT MEMORY MIRRORS) |
| 22 | B/G | TO FRONT DOOR LH HARNESS |
| 23 | L | TO FRONT DOOR LH HARNESS - (WITH MEMORY MIRRORS) |
| 23 | G | TO FRONT DOOR LH HARNESS - (WITHOUT MEMORY MIRRORS) |
| 24 | BR | TO FRONT DOOR LH HARNESS |
| 25 | Y | TO FRONT DOOR LH HARNESS |
| 26 | LG | TO FRONT DOOR LH HARNESS |
| 27 | W | TO FRONT DOOR LH HARNESS |
| 28 | L | TO FRONT DOOR LH HARNESS |
| 29 | P | TO FRONT DOOR LH HARNESS |
| 30 | R | TO FRONT DOOR LH HARNESS |
| 31 | SHIELD | TO FRONT DOOR LH HARNESS |
| 32 | R | TO FRONT DOOR LH HARNESS |
| 33 | O | TO FRONT DOOR LH HARNESS |
| 34 | - | TO FRONT DOOR LH HARNESS |
| 35 | W | TO FRONT DOOR LH HARNESS |
| 36 | L | TO FRONT DOOR LH HARNESS |
| 37 | L/R | TO FRONT DOOR LH HARNESS |
| 38 | GR | TO FRONT DOOR LH HARNESS |
| 39 | P | TO FRONT DOOR LH HARNESS |
| 40 | R | TO FRONT DOOR LH HARNESS |

| | |
|-----------------|---------------------------|
| Connector No. | M18 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FG-NH |
| Connector Color | GREEN |

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|----------------------|
| 1 | G | ENG START SW NO ESCL |
| 2 | - | - |
| 3 | R | A/L POWER SUPPLY 5V |
| 4 | W/R | A/L SIGNAL |
| 5 | - | - |
| 6 | - | - |
| 7 | - | - |
| 8 | - | - |
| 9 | - | - |
| 10 | SB | COMBI SW IN 5 |
| 11 | G/Y | COMBI SW IN 4 |
| 12 | Y | COMBI SW IN 3 |
| 13 | G/B | COMBI SW IN 2 |
| 14 | V | COMBI SW IN 1 |
| 15 | - | - |
| 16 | - | - |
| 17 | P | GND RF A/L |
| 18 | V | SECURITY INDICATOR |
| 19 | - | - |
| 20 | R | SHIFT P |
| 21 | R/W | STEP LAMP CONT |
| 22 | - | - |
| 23 | Y | AIRCON SW |
| 24 | - | - |
| 25 | W | BRAKE SW FUSE |
| 26 | L | SHORT IN PIN INPUT |
| 27 | R/G | BRAKE SW LAMP |
| 28 | - | - |
| 29 | W | BLOWER FAN SW |
| 30 | P | DR DOOR LOCK STATUS |
| 31 | - | - |
| 32 | Y | REAR DEFOGGER SW |
| 33 | - | - |
| 34 | - | - |
| 35 | R/G | REVERSE SW |
| 36 | W/B | HAZARD SW |
| 37 | - | - |
| 38 | - | - |

| | | |
|----|-----|-----------|
| 39 | B/R | SHIFT N/P |
| 40 | - | - |

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | | | |
|-----------------|---------------------------|-----|----------------|
| Connector No. | M19 | O/B | COMBI SW OUT 2 |
| Connector Name | BCM (BODY CONTROL MODULE) | R/W | COMBI SW OUT 1 |
| Connector Type | TH40FB-NH | - | - |
| Connector Color | BLACK | - | - |

| | | | |
|-----------------|---------------------------|-----|----------------|
| Connector No. | M20 | O/B | COMBI SW OUT 2 |
| Connector Name | BCM (BODY CONTROL MODULE) | R/W | COMBI SW OUT 1 |
| Connector Type | TH24FGY-NH | - | - |
| Connector Color | GRAY | - | - |

| | | |
|--------------|---------------|-------------------------------|
| Terminal No. | Color of Wire | Signal Name |
| 41 | YL | TRAILER LIGHT CHECK RELAY OUT |
| 42 | RY | CARGO LAMP OUT |
| 43 | - | - |
| 44 | - | - |
| 45 | - | - |
| 46 | - | - |
| 47 | - | - |
| 48 | R | HIGH SIDE START SW LED |
| 49 | - | - |
| 50 | - | - |
| 51 | - | - |
| 52 | W | AUDIO DONGLE |
| 53 | - | - |
| 54 | W/L | PW UART |
| 55 | W/B | L&R SENSOR K-LINE |
| 56 | - | - |
| 57 | - | - |
| 58 | - | - |
| 59 | P | CAN-L |
| 60 | L | CAN-H |
| 61 | O | REAR DEFROGGER RELAY OUT |
| 62 | W | STARTER RELAY OUT |
| 63 | - | - |
| 64 | P | BUZZER OUT |
| 65 | - | - |
| 66 | W | BLOWER FAN RELAY OUT |
| 67 | G | IGN ELEC RELAY OUT 2 |
| 68 | L | MR OUTPUT |
| 69 | R/B | AT DEVICE OUT |
| 70 | P | IGN LSM OUT 1 |
| 71 | O | DR REQUEST SW |
| 72 | G | AS REQUEST SW |
| 73 | - | - |
| 74 | - | - |
| 75 | L/W | COMBI SW OUT 5 |
| 76 | P | COMBI SW OUT 4 |
| 77 | L | COMBI SW OUT 3 |

| | | |
|--------------|---------------|--------------------|
| Terminal No. | Color of Wire | Signal Name |
| 81 | - | - |
| 82 | W | RL DOOR SW |
| 83 | - | - |
| 84 | - | - |
| 85 | - | - |
| 86 | G/B | TRAILER FLASHER RL |
| 87 | Y/B | TRAILER FLASHER RR |
| 88 | - | - |
| 89 | - | - |
| 90 | - | - |
| 91 | - | - |
| 92 | O | RR FLASHER |
| 93 | R | RR DOOR SW |
| 94 | G | AS DOOR SW |
| 95 | - | - |
| 96 | B/G | DR DOOR SW |
| 97 | P/L | CARGO LAMP SW |
| 98 | - | - |
| 99 | - | - |
| 100 | - | - |
| 101 | - | - |
| 102 | - | - |
| 103 | G/B | RL FLASHER |
| 104 | - | - |

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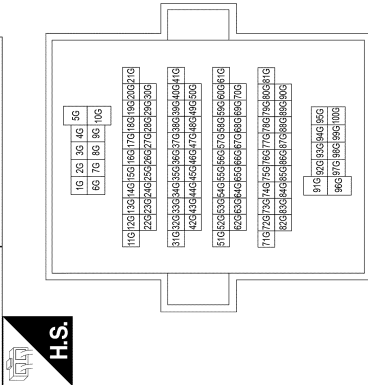
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AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|-----------------|
| Connector No. | M31 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80FW-CS16-TM4 |
| Connector Color | WHITE |

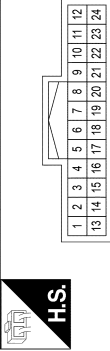


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|------------------------|
| 1G | G | TO ENGINE ROOM HARNESS |
| 2G | B/R | TO ENGINE ROOM HARNESS |
| 3G | W | TO ENGINE ROOM HARNESS |
| 4G | B/W | TO ENGINE ROOM HARNESS |
| 5G | - | TO ENGINE ROOM HARNESS |
| 6G | R/W | TO ENGINE ROOM HARNESS |
| 7G | Y | TO ENGINE ROOM HARNESS |
| 8G | G | TO ENGINE ROOM HARNESS |
| 9G | R | TO ENGINE ROOM HARNESS |
| 10G | W | TO ENGINE ROOM HARNESS |
| 11G | R/G | TO ENGINE ROOM HARNESS |
| 12G | W/B | TO ENGINE ROOM HARNESS |
| 13G | BR | TO ENGINE ROOM HARNESS |
| 14G | Y/B | TO ENGINE ROOM HARNESS |
| 15G | G/W | TO ENGINE ROOM HARNESS |
| 16G | G | TO ENGINE ROOM HARNESS |
| 17G | O | TO ENGINE ROOM HARNESS |
| 18G | G/Y | TO ENGINE ROOM HARNESS |
| 19G | Y/V | TO ENGINE ROOM HARNESS |
| 20G | G/Y | TO ENGINE ROOM HARNESS |
| 21G | B/Y | TO ENGINE ROOM HARNESS |
| 22G | G/R | TO ENGINE ROOM HARNESS |
| 23G | Y/R | TO ENGINE ROOM HARNESS |
| 24G | G/B | TO ENGINE ROOM HARNESS |
| 25G | R/W | TO ENGINE ROOM HARNESS |
| 26G | R | TO ENGINE ROOM HARNESS |

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| | | |
|------|------|------------------------|
| 80G | R | TO ENGINE ROOM HARNESS |
| 81G | L | TO ENGINE ROOM HARNESS |
| 82G | R | TO ENGINE ROOM HARNESS |
| 83G | L | TO ENGINE ROOM HARNESS |
| 84G | L | TO ENGINE ROOM HARNESS |
| 85G | W | TO ENGINE ROOM HARNESS |
| 86G | B/R | TO ENGINE ROOM HARNESS |
| 87G | W | TO ENGINE ROOM HARNESS |
| 88G | G | TO ENGINE ROOM HARNESS |
| 89G | P | TO ENGINE ROOM HARNESS |
| 90G | G | TO ENGINE ROOM HARNESS |
| 91G | P | TO ENGINE ROOM HARNESS |
| 92G | V/W | TO ENGINE ROOM HARNESS |
| 93G | BR | TO ENGINE ROOM HARNESS |
| 94G | B | TO ENGINE ROOM HARNESS |
| 95G | G | TO ENGINE ROOM HARNESS |
| 96G | R | TO ENGINE ROOM HARNESS |
| 97G | R | TO ENGINE ROOM HARNESS |
| 98G | W/B | TO ENGINE ROOM HARNESS |
| 99G | R | TO ENGINE ROOM HARNESS |
| 100G | GR/W | TO ENGINE ROOM HARNESS |

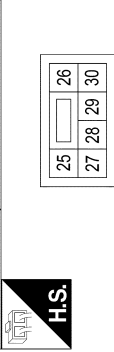
| | |
|-----------------|---|
| Connector No. | M33 |
| Connector Name | AUTOMATIC DRIVE POSITIONER CONTROL UNIT |
| Connector Type | TH24FW-NH |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------------------------------|
| 1 | LG | TLT SW (UPWARD) |
| 2 | GR | MIRROR SELECTOR SW (RH) |
| 3 | G | MIRROR SW (UPWARD) |
| 4 | P | MIRROR SW (LEFTWARD) |
| 5 | BR | MIRROR SENSOR (RH VERTICAL) |
| 6 | B | MIRROR SENSOR (LH VERTICAL) |
| 7 | BR | TELESCOPIC SW (FRONTWARD) |
| 8 | O | UART (TX/RX) |
| 9 | - | - |
| 10 | BR | MIRROR MOTOR RH (VERTICAL UP) |
| 11 | G | MIRROR MOTOR RH (HORIZONTAL LEFT) |
| 12 | O | MIRROR MOTOR LH COMMON (DOWN&RIGHT) |
| 13 | Y | TLT SW (DOWNWARD) |

| | | |
|----|----|-------------------------------------|
| 14 | P | MIRROR SELECT SW (LH) |
| 15 | R | MIRROR SW (DOWNWARD) |
| 16 | W | MIRROR SW (RIGHTWARD) |
| 17 | Y | MIRROR SENSOR RH (HORIZONTAL) |
| 18 | BG | MIRROR SENSOR (LH HORIZONTAL) |
| 19 | L | TELESCOPIC SW (BACKWARD) |
| 20 | Y | GND (SENSOR GND) |
| 21 | SB | POWER SUPPLY (SENSOR FOR 5V) |
| 22 | SB | MIRROR MOTOR RH COMMON (DOWN&RIGHT) |
| 23 | LG | MIRROR MOTOR LH (VERTICAL UP) |
| 24 | L | MIRROR MOTOR LH (HORIZONTAL LEFT) |

| | |
|-----------------|---|
| Connector No. | M34 |
| Connector Name | AUTOMATIC DRIVE POSITIONER CONTROL UNIT |
| Connector Type | NS06FW-CS |
| Connector Color | WHITE |



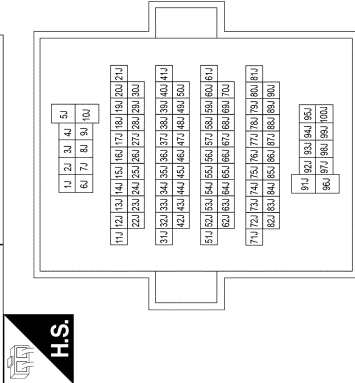
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|------------------------------------|
| 25 | L/B | BAT (PTC) |
| 26 | V | TELESCOPIC MOTOR (BACKWARD) |
| 27 | LG | POWER SUPPLY (SENSOR FOR 16V) |
| 28 | SB | TLT MOTOR (DOWNWARD) |
| 29 | BR | STRG MOTOR COMMON (UPWARD/FORWARD) |
| 30 | B | GND (POWER) |

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

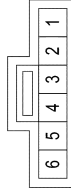
AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|-----------------|
| Connector No. | M40 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80FW-CS16-TM4 |
| Connector Color | WHITE |



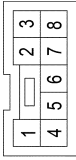
| | | |
|------|--------|-----------------|
| 81J | SHIELD | TO BODY HARNESS |
| 82J | L/R | TO BODY HARNESS |
| 83J | - | TO BODY HARNESS |
| 84J | - | TO BODY HARNESS |
| 85J | W | TO BODY HARNESS |
| 86J | G | TO BODY HARNESS |
| 87J | W | TO BODY HARNESS |
| 88J | SHIELD | TO BODY HARNESS |
| 89J | R | TO BODY HARNESS |
| 90J | L | TO BODY HARNESS |
| 91J | L/B | TO BODY HARNESS |
| 92J | S/B | TO BODY HARNESS |
| 93J | B | TO BODY HARNESS |
| 94J | L/G | TO BODY HARNESS |
| 95J | L | TO BODY HARNESS |
| 96J | G | TO BODY HARNESS |
| 97J | B/Y | TO BODY HARNESS |
| 98J | L/B | TO BODY HARNESS |
| 99J | W/L | TO BODY HARNESS |
| 100J | Y | TO BODY HARNESS |

| | |
|-----------------|---------------------|
| Connector No. | M41 |
| Connector Name | ADP STEERING SWITCH |
| Connector Type | TK08FGY |
| Connector Color | GRAY |



| | | |
|--------------|---------------|-------------------------|
| Terminal No. | Color of Wire | Signal Name |
| 1 | BR | TELESCOPIC SW FRONTWARD |
| 2 | Y | TILT SW DOWNWARD |
| 3 | B | GND |
| 4 | - | - |
| 5 | LG | TILT SW UPWARD |
| 6 | L | TELESCOPIC SW BACKWARD |

| | |
|-----------------|--------------------|
| Connector No. | M68 |
| Connector Name | A/T SHIFT SELECTOR |
| Connector Type | TK08FW |
| Connector Color | WHITE |



| | | |
|--------------|---------------|--------------------|
| Terminal No. | Color of Wire | Signal Name |
| 1 | B | GND |
| 2 | B | GND |
| 3 | L/R | SHIFT LOCK SOL OUT |
| 4 | R | SHIFT P |
| 5 | R/B | AT DEVICE OUT |
| 6 | LG | TOW MODE SW |
| 7 | BR | SHIFT UP |
| 8 | V/W | SHIFT DOWN |

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ADP

A B C D E F G H I K L M N O P

AUTOMATIC DRIVE POSITIONER

< WIRING DIAGRAM >

AUTOMATIC DRIVE POSITIONER CONNECTORS

| | |
|-----------------|------------------|
| Connector No. | M70 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FBR-CS |
| Connector Color | BROWN |



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| 7R | 6R | 5R | 4R | 3R | 2R | 1R |
| 16R | 15R | 14R | 13R | 12R | 11R | 10R |
| 9R | 8R | | | | | |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1R | L | TAIL LAMP 2 |
| 2R | G/R | IGNITION |
| 3R | Y/R | BATTERY |
| 4R | - | - |
| 5R | W | BATTERY |
| 6R | G/W | ACCESSORY |
| 7R | - | - |
| 8R | - | - |
| 9R | W | BATTERY |
| 10R | B | BATTERY |
| 11R | BG | BATTERY |
| 12R | B | ACCESSORY |
| 13R | G/Y | BATTERY |
| 14R | Y | BATTERY |
| 15R | G/R | ACCESSORY |
| 16R | | |

| | |
|-----------------|--------------|
| Connector No. | M74 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH32MW-NH |
| Connector Color | WHITE |



| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------|
| 1 | BR | TO FRONT DOOR RH HARNESS |
| 2 | V | TO FRONT DOOR RH HARNESS |
| 3 | BR | TO FRONT DOOR RH HARNESS |
| 4 | L | TO FRONT DOOR RH HARNESS |
| 5 | L/R | TO FRONT DOOR RH HARNESS |
| 6 | L | TO FRONT DOOR RH HARNESS |
| 7 | R/G | TO FRONT DOOR RH HARNESS |

| | | |
|----|--------|---|
| 8 | B | TO FRONT DOOR RH HARNESS |
| 9 | W | TO FRONT DOOR RH HARNESS |
| 10 | Y | TO FRONT DOOR RH HARNESS |
| 11 | LG | TO FRONT DOOR RH HARNESS |
| 12 | L | TO FRONT DOOR RH HARNESS |
| 13 | Y/V | TO FRONT DOOR RH HARNESS |
| 14 | W/L | TO FRONT DOOR RH HARNESS |
| 15 | V/R | TO FRONT DOOR RH HARNESS |
| 16 | L/W | TO FRONT DOOR RH HARNESS |
| 17 | SB | TO FRONT DOOR RH HARNESS |
| 18 | Y | TO FRONT DOOR RH HARNESS |
| 19 | G | TO FRONT DOOR RH HARNESS |
| 20 | V/W | TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER) |
| 20 | GR/R | TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER) |
| 21 | - | TO FRONT DOOR RH HARNESS |
| 22 | - | TO FRONT DOOR RH HARNESS |
| 23 | O | TO FRONT DOOR RH HARNESS |
| 24 | R | TO FRONT DOOR RH HARNESS |
| 25 | SHIELD | TO FRONT DOOR RH HARNESS |
| 26 | W | TO FRONT DOOR RH HARNESS |
| 27 | BG | TO FRONT DOOR RH HARNESS |
| 28 | G | TO FRONT DOOR RH HARNESS |
| 29 | LG/B | TO FRONT DOOR RH HARNESS |
| 30 | - | TO FRONT DOOR RH HARNESS |
| 31 | - | TO FRONT DOOR RH HARNESS |
| 32 | - | TO FRONT DOOR RH HARNESS |

| | |
|-----------------|---------------------------|
| Connector No. | M81 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | FEA09FW-FHA6-SA |
| Connector Color | WHITE |



| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 137 | 136 | 135 | 134 | 133 | 132 | 131 | 130 | 129 |
| 143 | 142 | 141 | 140 | 139 | 138 | | | |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|---------------------------|
| 129 | R/G | BATTERY SAVER OUT |
| 130 | LG | SUPER LOCK/DOOR UNLOCK AS |
| 131 | W | BAT BCM FUSE |
| 132 | Y | DOOR LOCK AS/RR/L |
| 133 | BR | DOOR UNLOCK AS/RR/L |
| 134 | B | GND2 |
| 135 | O | DOOR LOCK DR/AS/FL |
| 136 | L | ROOM LAMP CONT |

| | | |
|-----|----|----------------------|
| 137 | V | DOOR UNLOCK DR/AS/FL |
| 138 | V | BAT REAR DOOR |
| 139 | W | BAT-POWER F/L |
| 140 | LG | P/W POWER SUPPLY IGN |
| 141 | V | P/W POWER SUPPLY BAT |
| 142 | Y | BAT FRONT DOOR |
| 143 | B | GND1 |

| | |
|-----------------|-------------------|
| Connector No. | M82 |
| Connector Name | CIRCUIT BREAKER-1 |
| Connector Type | M02FW-LC |
| Connector Color | WHITE |



| | |
|---|---|
| 1 | 2 |
|---|---|

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1 | L/B | BATTERY |
| 2 | W | BATTERY |

| | |
|-----------------|---------------------------|
| Connector No. | M84 |
| Connector Name | TILT AND TELESCOPIC MOTOR |
| Connector Type | NS10FW-CS |
| Connector Color | WHITE |



| | | | |
|----|---|---|---|
| 4 | 3 | 2 | 1 |
| 10 | 9 | 8 | 7 |
| 6 | 5 | | |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|--------------------------|
| 1 | SB | TILT MTR DOWNWARD |
| 2 | Y | SENSOR GND |
| 3 | Y | SENSOR GND |
| 4 | V | TELESCOPIC MTR BACKWARD |
| 5 | L | STRG TILT SENSOR |
| 6 | LG | POWER SUPPLY SENSOR 16V+ |
| 7 | BR | UPWARD |
| 8 | BR | FORWARD |
| 9 | SB | STRG TELESCOPIC SENSOR |
| 10 | LG | POWER SUPPLY SENSOR 16V+ |

| | |
|-----------------|---------------------|
| Connector No. | M191 |
| Connector Name | JOINT CONNECTOR-M01 |
| Connector Type | NH24FW-J |
| Connector Color | WHITE |



| | | | |
|----|----|----|----|
| 4 | 3 | 2 | 1 |
| 8 | 7 | 6 | 5 |
| 12 | 11 | 10 | 9 |
| 16 | 15 | 14 | 13 |
| 20 | 19 | 18 | 17 |
| 24 | 23 | 22 | 21 |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1 | - | - |
| 2 | B | GND |
| 3 | B | GND |
| 4 | B | GND |
| 5 | - | - |
| 6 | B | GND |
| 7 | B | GND |
| 8 | B | GND |
| 9 | - | - |
| 10 | B | GND |
| 11 | B | GND |
| 12 | B | GND |
| 13 | B | GND |
| 14 | B | GND |
| 15 | B | GND |
| 16 | - | - |
| 17 | B | GND |
| 18 | B | GND |
| 19 | SHIELD | GND |
| 20 | B | GND |
| 21 | B | GND |
| 22 | B | GND |
| 23 | B | GND |
| 24 | B | GND |

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

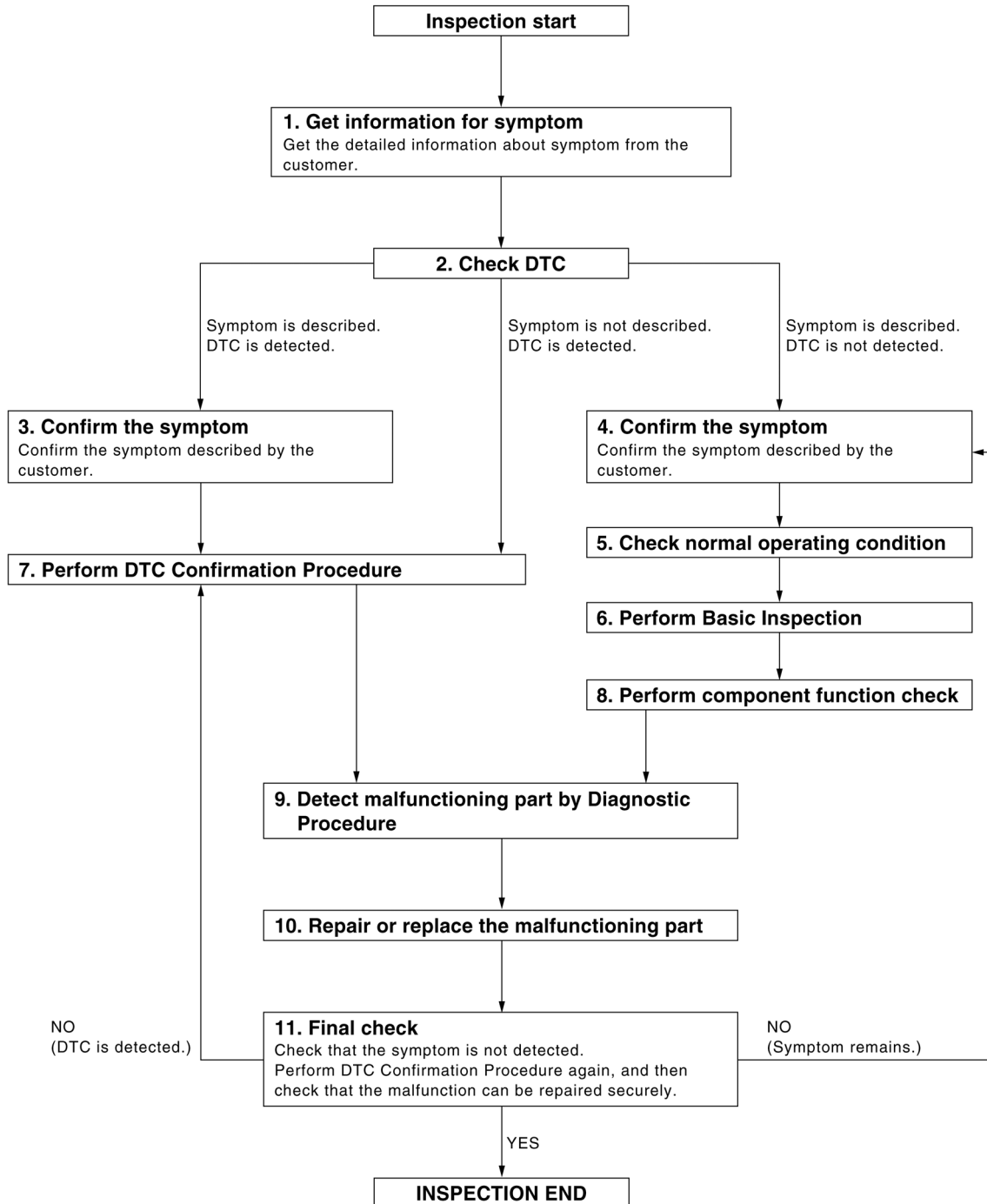
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000014391894

WORK FLOW



DETAILED FLOW

Revision: August 2016

ADP-55

ALKIA2788GB

2017 Titan NAM

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

1. GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2. CHECK DTC WITH AUTOMATIC DRIVE POSITIONER SYSTEM

CONSULT

Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."

Is any symptom described and any DTC is displayed?

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

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

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

3. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 7.

4. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

>> GO TO 5.

5. CHECK NORMAL OPERATING CONDITION

Check normal operating condition. Refer to [ADP-139, "Description"](#).

Is the incident normal operation?

YES >> Inspection End.

NO >> GO TO 6.

6. PERFORM BASIC INSPECTION

Isolate the malfunctioning point with the basic inspection. Refer to [ADP-63, "Basic Inspection"](#).

>> GO TO 8.

7. PERFORM DTC CONFIRMATION PROCEDURE

Perform the confirmation procedure for the detected DTC.

Is the DTC displayed?

YES >> GO TO 9.

NO >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

8. PERFORM COMPONENT FUNCTION CHECK

Perform the component function check for the isolated malfunctioning point.

>> GO TO 9.

9. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

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

>> GO TO 10.

10. REPAIR OR REPLACE

Repair or replace the malfunctioning part.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

>> GO TO 11.

11. FINAL CHECK

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

Are all malfunctions corrected?

YES >> Inspection End.

Symptom is detected.>> GO TO 4.

DTC is detected.>> GO TO 7.

A

B

C

D

E

F

G

H

I

ADP

K

L

M

N

O

P

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000014391895

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

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

*1: Default value is 40 mm.

NOTE:

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Work Procedure

INFOID:0000000014391896

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to [ADP-59. "SYSTEM INITIALIZATION : Work Procedure"](#).

>> GO TO 2.

2.MEMORY STORAGE

Perform memory storage. Refer to [ADP-60. "MEMORY STORING : Work Procedure"](#).

>> GO TO 3.

3.INTELLIGENT KEY INTERLOCK STORAGE

Perform Intelligent Key interlock storage. Refer to [ADP-61. "INTELLIGENT KEY INTERLOCK STORING : Work Procedure"](#).

>> GO TO 4.

4.SYSTEM SETTING

Perform system setting. Refer to [ADP-61. "SYSTEM SETTING : Work Procedure"](#).

>> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000014391897

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

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

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

| Function | Condition | Procedure |
|---------------------------|-----------|------------------------|
| Intelligent Key interlock | Erased | Perform initialization |
| | | Perform storing |

*1: Default value is 40 mm.

NOTE:

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Work Procedure

INFOID:0000000014391898

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to [ADP-59, "SYSTEM INITIALIZATION : Work Procedure"](#).

>> GO TO 2.

2.MEMORY STORAGE

Perform memory storage. Refer to [ADP-60, "MEMORY STORING : Work Procedure"](#).

>> GO TO 3.

3.INTELLIGENT KEY INTERLOCK STORAGE

Perform Intelligent Key interlock storage. Refer to [ADP-61, "INTELLIGENT KEY INTERLOCK STORING : Work Procedure"](#).

>> GO TO 4.

4.SYSTEM SETTING

Perform system setting. Refer to [ADP-61, "SYSTEM SETTING : Work Procedure"](#).

>> Inspection End.

SYSTEM INITIALIZATION

SYSTEM INITIALIZATION : Description

INFOID:0000000014391899

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 : Work Procedure

INFOID:0000000014391900

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) → OFF (close) → ON (open).

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

>> Inspection End.

4. STEP B-1

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

>> Inspection End.

MEMORY STORING

MEMORY STORING : Description

INFOID:0000000014391901

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

MEMORY STORING : Work Procedure

INFOID:0000000014391902

Memory Storage Procedure

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

1. STEP 1

Check the following conditions.

- Ignition switch: ON
- A/T shift selector: P (Park) position

>> GO TO 2.

2. STEP 2

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

>> GO TO 3.

3. STEP 3

1. Push set switch.

NOTE:

- Memory indicator for which driver seat position is already retained in memory is illuminated for 5 seconds.
- Memory indicator for which driver seat position is not retained in memory is illuminated for 0.5 seconds.

2. Push the memory switch (1 or 2) for at least 1 second within 5 seconds after pushing the set switch.

NOTE:

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

NOTE:

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

>> GO TO 4.

4. STEP 4

Confirm the operation of each part with memory operation.

>> Inspection End.

INTELLIGENT KEY INTERLOCK STORING

INTELLIGENT KEY INTERLOCK STORING : Description

INFOID:0000000014391903

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.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INTELLIGENT KEY INTERLOCK STORING : Work Procedure

INFOID:0000000014391904

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: OFF
- Initialization: done
- Driving position: registered

>> GO TO 2.

2.STEP 2

1. Push set switch.

NOTE:

Memory indicator for which driver seat position is already retained in memory is illuminated for 5 seconds.

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

NOTE:

From the time registration is performed, the applicable memory indicator blinks for 5 seconds.

>> GO TO 3.

3.STEP 3

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

>> Inspection End.

SYSTEM SETTING

ADP

SYSTEM SETTING : Description

INFOID:0000000014391905

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 | CONSULT | Set switch | Factory setting |
|--|--|---------|------------|-----------------|
| Amount of seat sliding for entry/exit assist | The amount of seat sliding for entry/exit assist can be selected from 3 items. [40 mm/80 mm/150 mm] | x | — | 40 mm |
| Entry/exit assist (seat) | Entry/exit assist (seat) can be selected: ON (operated) – OFF (not operated) | x | x | ON |
| Entry/exit assist (steering column) | Entry/exit assist (steering column) can be selected: ON (operated) – OFF (not operated) | x | | ON |

SYSTEM SETTING : Work Procedure

INFOID:0000000014391906

1. CHOOSE METHOD

There are three setting methods.

Which method do you choose?

With CONSULT>>GO TO 2.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

With set switch>>GO TO 4.

2. WITH CONSULT - STEP 1

Select "Work support".

>> GO TO 3.

3. WITH CONSULT - STEP 2

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

>> Inspection End.

4. WITH SET SWITCH - STEP 1

Turn ignition switch OFF.

>> GO TO 5.

5. WITH SET SWITCH - STEP 2

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

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

>> Inspection End.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000014391907

1. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and ground circuit as shown below.

- Driver seat control unit: Refer to [ADP-76, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure"](#).
- Automatic drive positioner control unit: Refer to [ADP-77, "AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2. CHECK MANUAL FUNCTION

Check the manual function operations by operating the relevant switches as shown below.

- Seat (slide, reclining, lifting front, lifting rear)
- Pedal assembly (forward, backward)
- Door mirror

Do all manual functions operate normally?

YES >> GO TO 3.

NO (Seat, pedal, door mirror)>>Go to SYMPTOM 1, refer to [ADP-138, "Symptom Table"](#). And, GO TO 4 if the result of SYMPTOM 1 is OK.

3. CHECK MEMORY FUNCTION 1

Register the seat positions (refer to Owner's Manual) and check that all parts of the seat, pedals, steering wheel and door mirrors move to their memory positions correctly.

Are the operations normal?

YES >> Check each malfunction according to the instruction of the SYMPTOM 4, refer to [ADP-138, "Symptom Table"](#).

No (memory indicator operates normally)>> Go to SYMPTOM 2, refer to [ADP-138, "Symptom Table"](#).

No (memory indicator does not operate normally either)>> GO TO 5.

4. CHECK MEMORY FUNCTION 2

Register the seat positions (refer to Owner's Manual) and check that all parts of the seat, pedals and door mirrors move to their memory positions correctly.

Are the operations normal?

YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

NO >> GO TO 7.

5. CHECK SEAT MEMORY SWITCH/MEMORY INDICATOR

Check the seat memory switch/memory switch indicator of the SYMPTOM 5, refer to [ADP-138, "Symptom Table"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning part.

6. CHECK OPERATION CONDITION

Check the memory operation conditions (refer to [ADP-19, "MEMORY FUNCTION : System Description"](#)).

Are all operation conditions fulfilled?

YES >> Go to SYMPTOM 6, refer to [ADP-138, "Symptom Table"](#).

NO >> Fulfill the operation conditions. Refer to [ADP-19, "MEMORY FUNCTION : System Description"](#).

7. CHECK MECHANISM

Check for the following.

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

Is any malfunction present in the relevant parts?

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

YES >> Go to SYMPTOM 3, refer to [ADP-138. "Symptom Table"](#).
NO >> Repair or replace the malfunctioning part.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Description

INFOID:0000000014391908

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|-----------------------------|
| | | Diagnosis condition | When ignition switch is ON. |
| U1000 | CAN COMM CIRCUIT (CAN communication circuit) | Signal (terminal) | — |
| | | Threshold | — |
| | | Diagnosis delay time | 2 seconds or more |
| | | | |

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1. STEP 1

Turn ignition switch ON and wait at least 2 seconds.

>> GO TO 2.

2. STEP 2

CONSULT

Check "Self Diagnostic Result" mode of "AUTO DRIVE POS.".

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-65, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391909

1. SELF DIAGNOSTIC RESULT

CONSULT

- Turn ignition switch ON and wait for 2 seconds or more.
- Check "Self Diagnostic Result" mode of "AUTO DRIVE POS.".
- Check DTC.

Is DTC "U1000" displayed?

- YES >> Refer to [LAN-53, "Trouble Diagnosis Flow Chart"](#).
- NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000014391910

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|-----------------------------|
| | | Diagnosis condition | When ignition switch is ON. |
| U1010 | CONTROL UNIT (Control unit) | Signal (terminal) | — |
| | | Threshold | — |
| | | Diagnosis delay time | 2 seconds or more |
| | | | |

POSSIBLE CAUSE

Driver seat control unit

FAIL-SAFE

—

Diagnosis Procedure

INFOID:0000000014391911

1. REPLACE DRIVER SEAT CONTROL UNIT

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

>> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2112 SLIDING MOTOR

DTC Description

INFOID:0000000014391912

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|--|
| B2112 | SEAT SLIDE (Seat slide) | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | Sliding motor LH circuit (terminals 1 and 5) |
| | | Threshold | Approx. 0 V |
| | | Diagnosis delay time | 0.1 seconds or more |

POSSIBLE CAUSE

- Driver seat control unit
- Slide motor harness is shorted

FAIL-SAFE

Only manual functions, except seat sliding, operate normally.

DTC CONFIRMATION PROCEDURE

1.SELF-DIAGNOSIS WITH AUTOMATIC DRIVE POSITIONER CONTROL UNIT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Check DTC.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-67, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391913

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1.SELF DIAGNOSTIC RESULT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" of "AUTO DRIVE POS."
3. Erase the DTC.
4. Perform DTC confirmation procedure. Refer to [ADP-67, "DTC Description"](#).

Is the DTC displayed again?

- YES >> GO TO 2.
NO >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

2.CHECK SLIDING MOTOR LH CIRCUIT (POWER SHORT)

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

B2112 SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| (+) | | (-) | Voltage (Approx.) |
|------------------|-----------|--------|----------------------|
| Sliding motor LH | | | |
| Connector | Terminals | | |
| B226 | 1 | Ground | 0 V |
| | 5 | | |

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

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|-----------|--------|----------------------|
| Driver seat control unit | | | |
| Connector | Terminals | | |
| B223 | 36 | Ground | 0 V |
| | 44 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2113 RECLINING MOTOR

DTC Description

INFOID:0000000014391914

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|--|
| B2113 | SEAT RECLINING (Seat reclining) | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | Reclining motor LH circuit (terminals 4 and 6) |
| | | Threshold | Approx. 0V |
| | | Diagnosis delay time | 0.1 seconds or more |

POSSIBLE CAUSE

- Driver seat control unit
- Reclining motor harness is shorted

FAIL-SAFE

Only manual functions, except seat reclining, operate normally.

DTC CONFIRMATION PROCEDURE

1.SELF-DIAGNOSIS WITH AUTOMATIC DRIVE POSITIONER CONTROL UNIT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Check DTC.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-69, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391915

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Erase the DTC.
4. Perform DTC confirmation procedure. Refer to [ADP-69, "DTC Description"](#).

Is the DTC displayed again?

- YES >> GO TO 2.
NO >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

2.CHECK RECLINING MOTOR LH CIRCUIT (POWER SHORT)

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

B2113 RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| (+) Reclining motor LH | | (-) | Voltage (Approx.) |
|------------------------|-----------|--------|-------------------|
| Connector | Terminals | | |
| B225 | 4 | Ground | 0 V |
| | 6 | | |

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

| (+) Driver seat control unit | | (-) | Voltage (Approx.) |
|------------------------------|-----------|--------|-------------------|
| Connector | Terminals | | |
| B223 | 35 | Ground | 0 V |
| | 43 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

B2116 TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

B2116 TILT MOTOR

DTC Description

INFOID:0000000014391916

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|---|
| B2116 | STEERING TILT (Steering tilt) | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | Steering tilt motor circuit (terminals 1 and 7) |
| | | Threshold | Approx. 0V |
| | | Diagnosis delay time | 0.1 seconds or more |

POSSIBLE CAUSE

- Automatic drive positioner control unit
- Tilt motor harness is shorted

FAIL-SAFE

Only manual functions, except steering tilt, operate normally.

DTC CONFIRMATION PROCEDURE

1.SELF DIAGNOSIS WITH AUTOMATIC DRIVE POSITIONER CONTROL UNIT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Check DTC.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-71, "Diagnosis Procedure"](#).
NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391917

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Erase the DTC.
4. Perform DTC confirmation procedure. Refer to [ADP-71, "DTC Description"](#).

Is the DTC displayed again?

- YES >> GO TO 2.
NO >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

2.CHECK TILT MOTOR CIRCUIT (POWER SHORT)

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and tilt motor connector.
3. Check voltage between tilt motor harness connector M94 and ground.

B2116 TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| (+) Tilt motor | | (-) | Voltage (Approx.) |
|----------------|-----------|--------|-------------------|
| Connector | Terminals | | |
| M94 | 1 | Ground | 0 V |
| | 7 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

1. Connect automatic drive positioner control unit connector.
2. Check voltage between automatic drive positioner control unit harness connector M34 and ground.

| (+) Automatic drive positioner control unit | | (-) | Voltage (Approx.) |
|---|-----------|--------|-------------------|
| Connector | Terminals | | |
| M34 | 28 | Ground | 0 V |
| | 29 | | |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

B2128 UART COMMUNICATION LINE

DTC Description

INFOID:0000000014391918

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|--|-------------------------|-----------------------------|
| | | Diagnosis condition | When ignition switch is ON. |
| B2128 | UART COMM (Universal asynchronous receiver transmitter communication) | Signal (terminal) | — |
| | | Threshold | — |
| | | Diagnosis delay time | — |
| | | | |

POSSIBLE CAUSE

- UART communication line
(UART communication line is open or shorted)
- Driver seat control unit
- Automatic drive positioner control unit

FAIL-SAFE

Only manual functions, except door mirror, operate normally.

DTC CONFIRMATION PROCEDURE

1. SELF-DIAGNOSIS WITH AUTOMATIC DRIVE POSITIONER CONTROL UNIT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Check DTC.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-73, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391919

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Erase the DTC.
4. Perform DTC confirmation procedure. Refer to [ADP-73, "DTC Description"](#).

Is the DTC displayed again?

- YES >> GO TO 2.
- NO >> Check intermittent incident. Refer to [GI-47, "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.
3. Check continuity between driver seat control unit harness connector B222 and automatic drive positioner control unit harness connector M33.

B2128 UART COMMUNICATION LINE

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Automatic drive positioner control unit | | Continuity |
|--------------------------|----------|---|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 15 | M33 | 8 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 15 | | No |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-47. "Intermittent Incident"](#).
NO >> Repair or replace harness.

B2130 EEPROM

< DTC/CIRCUIT DIAGNOSIS >

B2130 EEPROM

DTC Description

INFOID:0000000014391920

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC Detection Condition | |
|---------|---|-------------------------|-----------------------------|
| | | Diagnosis condition | When ignition switch is ON. |
| B2130 | EEPROM (EEPROM malfunction) | Signal (terminal) | — |
| | | Threshold | — |
| | | Diagnosis delay time | — |
| | | | |

POSSIBLE CAUSE

Driver seat control unit

FAIL-SAFE

Only manual functions operate normally.

DTC CONFIRMATION PROCEDURE

1.SELF-DIAGNOSIS WITH AUTOMATIC DRIVE POSITIONER CONTROL UNIT

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Check DTC.

Is the DTC detected?

- YES >> Perform diagnosis procedure. Refer to [ADP-75, "Diagnosis Procedure"](#).
- NO-1 >> To check malfunction symptom before repair: Refer to [GI-47, "Intermittent Incident"](#).
- NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000014391921

ADP

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Check "Self Diagnostic Result" mode of "AUTO DRIVE POS."
3. Erase the DTC.
4. Perform DTC confirmation procedure. Refer to [ADP-75, "DTC Description"](#).

Is the DTC displayed again?

- YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).
- NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000014666076

Regarding Wiring Diagram information, refer to [BCS-54. "Wiring Diagram"](#).

1. CHECK FUSE AND FUSIBLE LINK

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

| Signal name | Fuse and fusible link No. | |
|----------------------------|---------------------------|---------|
| | Cummins 5.0L | VK56VD |
| Fusible link battery power | R (50A) | N (50A) |
| BCM battery fuse | 1 (10A) | 1 (10A) |

Is the fuse or fusible link blown?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

| BCM | | Ground | Voltage (Approx.) |
|-----------|----------|--------|----------------------|
| Connector | Terminal | | |
| M81 | 131 | (—) | Battery voltage |
| | 139 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

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

| BCM | | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal | | |
| M81 | 134 | — | Yes |
| | 143 | | |

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

DRIVER SEAT CONTROL UNIT

DRIVER SEAT CONTROL UNIT : Diagnosis Procedure

INFOID:0000000014391923

NOTE:

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

Regarding Wiring Diagram information, refer to [ADP-41. "Wiring Diagram"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

1. CHECK FUSE

Check that the following fusible link is not blown:

| Signal name | Fusible link No. |
|----------------------|------------------|
| Battery power supply | R (50 A) |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fusible link after repairing the affected circuit.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit.
3. Check voltage between driver seat control unit harness connector B223 and ground.

| (+) Driver seat control unit | | (-) | Power source | Condition | Voltage (Approx.) |
|------------------------------|----------|--------|----------------------|---------------------|-------------------|
| Connector | Terminal | | | | |
| B223 | 37 | Ground | Battery power supply | Ignition switch OFF | Battery voltage |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the following:

- Repair or replace harness.
- Circuit breaker.

3. CHECK GROUND CIRCUIT

Check continuity between the driver seat control unit harness connector B223 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B223 | 39 | | Yes |

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness.

DRIVER SEAT CONTROL UNIT : Special Repair Requirement

INFOID:0000000014391924

1. PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to [PG-178. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Diagnosis Procedure

INFOID:0000000014391925

NOTE:

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

Regarding Wiring Diagram information, refer to [ADP-41. "Wiring Diagram"](#).

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

1. CHECK FUSE

Check that the following fusible link is not blown:

| Signal name | Fusible link No. |
|--|------------------|
| Battery power supply (with Cummins 5.0L) | R (50 A) |
| Battery power supply (with VK56VD) | N (50 A) |

Is the inspection result normal?

YES >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check voltage between automatic drive positioner control unit harness connector M34 and ground.

| (+) Automatic drive positioner control unit | | (-) | Voltage (Approx.) |
|---|----------|--------|-------------------|
| Connector | Terminal | | |
| M34 | 25 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the following:

- Repair or replace harness.
- Circuit breaker.

3. CHECK GROUND CIRCUIT

Check continuity between the automatic drive positioner control unit harness connector M34 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M34 | 30 | | Yes |

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT : Special Repair Requirement

INFOID:0000000014391926

1. PERFORM ADDITIONAL SERVICE

Perform additional service when removing battery negative terminal.

>> Refer to [PG-178. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

SLIDING SWITCH

Component Function Check

INFOID:0000000014391927

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "SLIDE SW-FR", "SLIDE SW-RR".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-79, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391928

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK SLIDING SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|-----------|--------|----------------|--------------------|-------------------|
| Connector | Terminals | | | | |
| B222 | 9 | Ground | Sliding switch | Operate (backward) | 0 V |
| | | | | Release | Battery voltage |
| | 25 | | | Operate (forward) | 0 V |
| | | | | Release | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK SLIDING SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and power seat switch LH.
3. Check continuity between driver seat control unit harness connector B222 and power seat switch LH harness connector B213.

| Driver seat control unit | | Power seat switch LH | | Continuity |
|--------------------------|----------|----------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 9 | B213 | 8 | Yes |
| | 25 | | 7 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

SLIDING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | No |
| B222 | 9 | | |
| | 25 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|----------|--------|----------------------|
| Driver seat control unit | | | |
| Connector | Terminal | | |
| B222 | 9 | Ground | Battery voltage |
| | 25 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4. CHECK SLIDING SWITCH

Refer to [ADP-80, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning part.

Component Inspection

INFOID:0000000014391929

1. CHECK SLIDING SWITCH

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

| Power seat switch LH | | Condition | | Continuity |
|----------------------|---|---------------------------|---------|------------|
| Terminals | | | | |
| 3 | 8 | Sliding switch (backward) | Operate | Yes |
| | | | Release | No |
| | 7 | Sliding switch (forward) | Operate | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

RECLINING SWITCH

Component Function Check

INFOID:0000000014391930

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS".
2. Select "RECLN SW-FR", "RECLN SW-RR".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-81, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391931

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK RECLINING SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|----------|--------|------------------|---------------------|-------------------|
| Connector | Terminal | | | | |
| B222 | 24 | Ground | Reclining switch | Operate (forward) | 0 V |
| | | | | Release | Battery voltage |
| | 8 | | | Operate (back-ward) | 0 V |
| | | | | Release | Battery voltage |

Is the inspection result normal?

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

2. CHECK RECLINING SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and power seat switch LH.
3. Check continuity between driver seat control unit harness connector B222 and power seat switch LH harness connector B213.

| Driver seat control unit | | Power seat switch LH | | Continuity |
|--------------------------|----------|----------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 24 | B213 | 9 | Yes |
| | 8 | | 10 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

RECLINING SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 24 | | No |
| | 8 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|----------|--------|----------------------|
| Driver seat control unit | | | |
| Connector | Terminal | | |
| B222 | 8 | Ground | Battery voltage |
| | 24 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4. CHECK RECLINING SWITCH

Refer to [ADP-82, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

Component Inspection

INFOID:0000000014391932

1. CHECK RECLINING SWITCH

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

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (FRONT)

Component Function Check

INFOID:0000000014391933

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "LIFT FR SW-UP", "LIFT FR SW-DN".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-83, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391934

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|----------|--------|------------------------|----------------|-------------------|
| Connector | Terminal | | | | |
| B222 | 7 | Ground | Lifting switch (front) | Operate (down) | 0 V |
| | | | | Release | Battery voltage |
| | 23 | | | Operate (up) | 0 V |
| | | | | Release | Battery voltage |

Is the inspection result normal?

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

2. CHECK LIFTING SWITCH (FRONT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and power seat switch LH.
3. Check continuity between driver seat control unit harness connector B222 and power seat switch LH harness connector B213.

| Driver seat control unit | | Power seat switch LH | | Continuity |
|--------------------------|----------|----------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 7 | B213 | 6 | Yes |
| | 23 | | 5 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

LIFTING SWITCH (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 7 | | No |
| | 23 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|----------|--------|----------------------|
| Driver seat control unit | | | |
| Connector | Terminal | | |
| B222 | 7 | Ground | Battery voltage |
| | 23 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4. CHECK LIFTING SWITCH (FRONT)

Refer to [ADP-84, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-41, "Wiring Diagram"](#).

NO >> Repair or replace the malfunctioning part.

Component Inspection

INFOID:0000000014391935

1. CHECK LIFTING SWITCH (FRONT)

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

| Power seat switch LH | | Condition | | Continuity |
|----------------------|---|-----------------------------|---------|------------|
| Terminals | | | | |
| 3 | 6 | Lifting switch front (down) | Operate | Yes |
| | | | Release | No |
| | 5 | Lifting switch front (up) | Operate | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SWITCH (REAR)

Component Function Check

INFOID:0000000014391936

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "LIFT RR SW-UP", "LIFT RR SW-DN".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-85, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391937

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING SWITCH (REAR) SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|----------|--------|-----------------------|----------------|-------------------|
| Connector | Terminal | | | | |
| B222 | 6 | Ground | Lifting switch (rear) | Operate (down) | 0 V |
| | | | | Release | Battery voltage |
| | 22 | | | Operate (up) | 0 V |
| | | | | Release | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK LIFTING SWITCH (REAR) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and power seat switch LH.
3. Check continuity between driver seat control unit harness connector B222 and power seat switch LH harness connector B213.

| Driver seat control unit | | Power seat switch LH | | Continuity |
|--------------------------|----------|----------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 6 | B213 | 2 | Yes |
| | 22 | | 1 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

LIFTING SWITCH (REAR)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 6 | | No |
| | 22 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DRIVER SEAT CONTROL UNIT OUTPUT

1. Connect the driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between driver seat control unit harness connector B222 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|----------|--------|----------------------|
| Driver seat control unit | | | |
| Connector | Terminal | | |
| B222 | 6 | Ground | Battery voltage |
| | 22 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

4. CHECK LIFTING SWITCH (REAR)

Refer to [ADP-86, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

Component Inspection

INFOID:0000000014391938

1. CHECK LIFTING SWITCH (REAR)

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

| Power seat switch LH | | Condition | | Continuity |
|----------------------|---|----------------------------|---------|------------|
| Terminals | | | | |
| 3 | 1 | Lifting switch rear (up) | Operate | Yes |
| | | | Release | No |
| | 2 | Lifting switch rear (down) | Operate | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power seat switch LH. Refer to [ADP-143, "Removal and Installation"](#).

TILT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

TILT SWITCH

Component Function Check

INFOID:0000000014391939

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "TILT SW-UP", "TILT SW-DOWN".
3. Check that the function operates normally according to 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 inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-87, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391940

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TILT SWITCH SIGNAL

1. Disconnect ADP steering switch (tilt switch).
2. Check voltage between ADP steering switch harness connector M41 and ground.

| (+) ADP steering switch (tilt switch) | | (-) | Voltage (Approx.) |
|---------------------------------------|----------|--------|-------------------|
| Connector | Terminal | | |
| M41 | 2 | Ground | Battery voltage |
| | 5 | | |

Is the inspection result normal?

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

2. CHECK TILT SWITCH CIRCUIT

1. Disconnect automatic drive positioner control unit.
2. Check continuity between automatic drive positioner control unit harness connector M33 and ADP steering switch harness connector M41.

| Automatic drive positioner control unit | | ADP steering switch (tilt switch) | | Continuity |
|---|----------|-----------------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 1 | M39 | 5 | Yes |
| | 13 | | 2 | |

3. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

TILT SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 1 | | No |
| | 13 | | |

Is the inspection result normal?

YES >> Replace automatic drive positioner unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace harness.

3. CHECK TILT SWITCH

Refer to [ADP-88, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace ADP steering switch (tilt switch). Refer to [ADP-144, "Removal and Installation"](#).

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

Component Inspection

INFOID:0000000014391941

1. CHECK TILT SWITCH

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

| ADP steering switch (tilt switch) | | Condition | | Continuity |
|-----------------------------------|---|--------------------|---------|------------|
| Terminals | | | | |
| 1 | 5 | Tilt switch (up) | Operate | Yes |
| | | | Release | No |
| | 2 | Tilt switch (down) | Operate | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace ADP steering switch (tilt switch). Refer to [ADP-144, "Removal and Installation"](#).

TELESCOPIC SWITCH

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC SWITCH

Component Function Check

INFOID:0000000014391942

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS".
2. Select "TELESCO SW-FR", "TELESCO SW-RR".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-89, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391943

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TELESCOPIC SWITCH SIGNAL

1. Disconnect ADP steering switch (telescopic switch).
2. Check voltage between ADP steering switch harness connector M41 and ground.

| (+) | | (-) | Voltage (Approx.) |
|---|----------|--------|----------------------|
| ADP steering switch (telescopic switch) | | | |
| Connector | Terminal | | |
| M41 | 1 | Ground | Battery voltage |
| | 6 | | |

Is the inspection result normal?

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

2. CHECK TELESCOPIC SWITCH CIRCUIT

1. Disconnect automatic drive positioner control unit.
2. Check continuity between automatic drive positioner control unit harness connector M33 and ADP steering switch harness connector M41.

| Automatic drive positioner control unit | | ADP steering switch (telescopic switch) | | Continuity |
|---|----------|---|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 7 | M41 | 1 | Yes |
| | 19 | | 6 | |

3. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

TELESCOPIC SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

YES >> Replace automatic drive positioner unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace harness.

3. CHECK TELESCOPIC SWITCH

Refer to [ADP-90, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace ADP steering switch (telescopic switch). Refer to [ADP-144, "Removal and Installation"](#).

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

>> Inspection End.

Component Inspection

INFOID:0000000014391944

1. CHECK TELESCOPIC SWITCH

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

| ADP steering switch (telescopic switch) | | Condition | | Continuity |
|---|---|------------------------------|---------|------------|
| Terminals | | | | |
| 1 | 1 | Telescopic switch (forward) | Operate | Yes |
| | | | Release | No |
| | 6 | Telescopic switch (backward) | Operate | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace ADP steering switch (telescopic switch). Refer to [ADP-144, "Removal and Installation"](#).

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY SWITCH

Component Function Check

INFOID:0000000014391945

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS".
2. Select "MEMORY SW 1", "MEMORY SW 2", "SET SW".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Status |
|--------------|-----------------|---------|--------|
| MEMORY SW 1 | Memory switch 1 | Push | ON |
| | | Release | OFF |
| MEMORY SW 2 | Memory switch 2 | Push | ON |
| | | Release | OFF |
| SET SW | Set switch | Push | ON |
| | | Release | OFF |

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-91, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391946

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK SEAT MEMORY SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect seat memory switch.
3. Turn ignition switch ON.
4. Check voltage between seat memory switch harness connector D10 and ground.

| (+) Seat memory switch | | (-) | Voltage (Approx.) |
|---------------------------|----------|--------|----------------------|
| Connector | Terminal | | |
| D10 | 2 | Ground | 5 V |
| | 10 | | |
| | 16 | | |

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 driver seat control unit.
3. Check continuity between driver seat control unit harness connector B222 and seat memory switch harness connector D10.

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Seat memory switch | | Continuity |
|--------------------------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 11 | D10 | 16 | Yes |
| | 21 | | 2 | |
| | 27 | | 10 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | No |
| B222 | 11 | | |
| | 21 | | |
| | 27 | | |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace harness.

3. CHECK MEMORY SWITCH GROUND CIRCUIT

Check continuity between seat memory switch harness connector D10 and ground.

| Seat memory switch | | Ground | Continuity |
|--------------------|----------|--------|------------|
| Connector | Terminal | | Yes |
| D10 | 9 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK SEAT MEMORY SWITCH

Refer to [ADP-92, "Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace seat memory switch. Refer to [ADP-142, "Removal and Installation"](#).

Component Inspection

INFOID:0000000014391947

1. CHECK SEAT MEMORY SWITCH

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

| Seat memory switch | | Condition | | Continuity |
|--------------------|----|-----------------|---------|------------|
| Terminals | | | | |
| 9 | 10 | Memory switch 1 | Push | Yes |
| | | | Release | No |
| | 16 | Memory switch 2 | Push | Yes |
| | | | Release | No |
| | 2 | Set switch | Push | Yes |
| | | | Release | No |

Is the inspection result normal?

YES >> Inspection End.

SEAT MEMORY SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> Replace seat memory switch. Refer to [ADP-142. "Removal and Installation"](#).

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DOOR MIRROR REMOTE CONTROL SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR REMOTE CONTROL SWITCH SELECT SWITCH

SELECT SWITCH : Component Function Check

INFOID:0000000014391948

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "MIR CHNG SW-R", "MIR CHNG SW-L".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-94, "SELECT SWITCH : Diagnosis Procedure"](#).

SELECT SWITCH : Diagnosis Procedure

INFOID:0000000014391949

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK SELECT SWITCH SIGNAL

1. Turn ignition switch ON.
2. Check voltage between automatic drive positioner control unit connector M33 and ground.

| (+) Automatic drive positioner control unit | | (-) | Select switch condition | Voltage (Approx.) |
|---|----------|--------|-------------------------|-------------------|
| Connector | Terminal | | | |
| M33 | 2 | Ground | RIGHT | 0 V |
| | | | Other than above | 5 V |
| | 14 | | LEFT | 0 V |
| | | | Other than above | 5 V |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and door mirror remote control switch.
3. Check continuity between automatic drive positioner control unit connector M33 and door mirror remote control switch connector D20.

| Automatic drive positioner control unit | | Door mirror remote control switch | | Continuity |
|---|----------|-----------------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 2 | D20 | 11 | Yes |
| | 14 | | 10 | |

DOOR MIRROR REMOTE CONTROL SWITCH

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between automatic drive positioner control unit connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 2 | | No |
| | 14 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

Check continuity between door mirror remote control switch connector D20 and ground.

| Door mirror remote control switch | | Ground | Continuity |
|-----------------------------------|----------|--------|------------|
| Connector | Terminal | | |
| D20 | 7 | | Yes |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK SELECT SWITCH

Check select switch.

Refer to [ADP-95, "SELECT SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace door mirror remote control switch. Refer to [MIR-38, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning parts.

SELECT SWITCH : Component Inspection

INFOID:0000000014391950

1. CHECK SELECT SWITCH

Check door mirror remote control switch.

| Door mirror remote control switch | | Select switch condition | Continuity |
|-----------------------------------|---|-------------------------|------------|
| Terminals | | | |
| 10 | 7 | LEFT | Yes |
| | | Other than above | No |
| 11 | | RIGHT | Yes |
| | | Other than above | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to [MIR-38, "Removal and Installation"](#).

MIRROR SWITCH

DOOR MIRROR REMOTE CONTROL SWITCH

< DTC/CIRCUIT DIAGNOSIS >

MIRROR SWITCH : Component Function Check

INFOID:0000000014391951

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "MIR CON SW-UP/DN", "MIR CON SW-RH/LH".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-96, "MIRROR SWITCH : Diagnosis Procedure"](#).

MIRROR SWITCH : Diagnosis Procedure

INFOID:0000000014391952

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK MIRROR SWITCH FUNCTION

1. Turn ignition switch ON.
2. Check voltage between automatic drive positioner control unit connector M33 and ground.

| (+) Automatic drive positioner control unit | | (−) | Mirror switch condition | Voltage (Approx.) |
|---|----------|--------|-------------------------|-------------------|
| Connector | Terminal | | | |
| M33 | 3 | Ground | UP | 0 V |
| | | | Other than above | 5 V |
| | 4 | | LEFT | 0 V |
| | | | Other than above | 5 V |
| | 15 | | DOWN | 0 V |
| | | | Other than above | 5 V |
| | 16 | | RIGHT | 0 V |
| | | | Other than above | 5 V |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and door mirror remote control switch.
3. Check continuity between automatic drive positioner control unit connector M33 and door mirror remote control switch connector D19.

DOOR MIRROR REMOTE CONTROL SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Automatic drive positioner control unit | | Door mirror remote control switch | | Continuity |
|---|----------|-----------------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 3 | D19 | 15 | Yes |
| | 4 | | 13 | |
| | 15 | | 12 | |
| | 16 | | 4 | |

4. Check continuity between automatic drive positioner control unit connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | No |
| M33 | 3 | | |
| | 4 | | |
| | 15 | | |
| | 16 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

Check continuity between door mirror remote control switch connector D20 and ground.

| Door mirror remote control switch | | Ground | Continuity |
|-----------------------------------|----------|--------|------------|
| Connector | Terminal | | Yes |
| D20 | 7 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK MIRROR SWITCH

Check mirror switch.

Refer to [ADP-97, "MIRROR SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace door mirror remote control switch. Refer to [MIR-38, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Check intermittent incident.

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning parts.

MIRROR SWITCH : Component Inspection

INFOID:0000000014391953

1. CHECK MIRROR SWITCH

Check door mirror remote control switch.

| Door mirror remote control switch | Mirror switch condition | Continuity |
|-----------------------------------|-------------------------|------------|
| Terminals | | |

DOOR MIRROR REMOTE CONTROL SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| | | | |
|----|---|------------------|-----|
| 4 | 7 | RIGHT | Yes |
| | | Other than above | No |
| 13 | | LEFT | Yes |
| | | Other than above | No |
| 15 | | UP | Yes |
| | | Other than above | No |
| 12 | | DOWN | Yes |
| | | Other than above | No |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror remote control switch. Refer to [MIR-38, "Removal and Installation"](#).

POWER SEAT SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SEAT SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000014391954

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK POWER SEAT SWITCH LH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power seat switch LH.
3. Check continuity between power seat switch LH connector B213 and ground.

| Power seat switch LH | | Ground | Continuity |
|----------------------|----------|--------|------------|
| Connector | Terminal | | |
| B213 | 3 | | Yes |

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).
NO >> Repair or replace harness.

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TILT & TELESCOPIC SWITCH GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TILT & TELESCOPIC SWITCH GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000014391955

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect ADP steering switch (tilt & telescopic switch).
3. Check continuity between ADP steering switch (tilt & telescopic switch) connector M41 and ground.

| ADP steering switch (tilt & telescopic switch) | | Ground | Continuity |
|--|----------|--------|------------|
| Connector | Terminal | | |
| M41 | 7 | | Yes |

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-47, "Intermittent Incident"](#).
NO >> Repair or replace harness.

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

SLIDING SENSOR

Component Function Check

INFOID:0000000014391956

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "SLIDE PULSE".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Value |
|--------------|--------------|--------------------|-------------------|
| SLIDE PULSE | Seat sliding | Operate (forward) | Change (decrease) |
| | | Operate (backward) | Change (increase) |
| | | Release | No change |

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-101. "Diagnosis Procedure"](#).

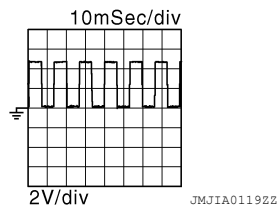
Diagnosis Procedure

INFOID:0000000014391957

Regarding Wiring Diagram information, refer to [ADP-41. "Wiring Diagram"](#).

1. CHECK SLIDING SENSOR SIGNAL

1. Turn ignition switch ON.
2. Read voltage signal between driver seat control unit harness connector B222 and ground with oscilloscope.

| (+) Driver's seat control unit | | (-) | Condition | | Voltage signal |
|--------------------------------|----------|--------|--------------|------------------|---|
| Connector | Terminal | | | | |
| B222 | 31 | Ground | Seat sliding | Operate |  |
| | | | | Other than above | 0 V or 5 V |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140. "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 motor LH.
3. Check continuity between driver seat control unit harness connector B222 and sliding motor LH harness connector B226.

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Sliding motor LH | | Continuity |
|--------------------------|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 31 | B226 | 2 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 31 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK SLIDING SENSOR POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between sliding motor LH harness connector B226 and ground.

| (+) | | (-) | Voltage (Approx.) |
|------------------|----------|--------|----------------------|
| Sliding motor LH | | | |
| Connector | Terminal | | |
| B226 | 4 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK SLIDING SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit.
3. Check continuity between driver seat control unit harness connector B222 and sliding motor LH harness connector B226.

| Driver seat control unit | | Sliding motor LH | | Continuity |
|--------------------------|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 5 | B226 | 4 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 5 | | No |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace harness.

5. CHECK SLIDING SENSOR GROUND

1. Turn ignition switch OFF.
2. Check continuity between sliding motor LH harness connector B226 and ground.

| Sliding motor LH | | Ground | Continuity |
|------------------|----------|--------|------------|
| Connector | Terminal | | |
| B226 | 3 | | Yes |

SLIDING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace sliding motor LH. Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).
- NO >> Repair or replace harness.

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RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING SENSOR

Component Function Check

INFOID:0000000014391958

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "RECLN PULSE".
3. Check that the function operates normally according to the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-104, "Diagnosis Procedure"](#).

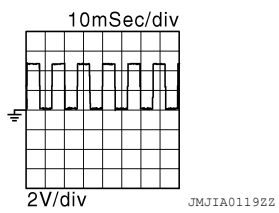
Diagnosis Procedure

INFOID:0000000014391959

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK RECLINING SENSOR SIGNAL

1. Turn ignition switch ON.
2. Read voltage signal between driver seat control unit harness connector B222 and ground with oscilloscope.

| (+) Driver seat control unit | | (-) | Condition | | Voltage signal |
|------------------------------|----------|--------|----------------|------------------|---|
| Connector | Terminal | | | | |
| B222 | 13 | Ground | Seat reclining | Operate |  |
| | | | | Other than above | 0 V or 5 V |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> GO TO 2.

2. CHECK RECLINING SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and reclining motor LH.
3. Check continuity between driver seat control unit harness connector B222 and reclining motor LH harness connector B225.

RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Reclining motor LH | | Continuity |
|--------------------------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 13 | B225 | 1 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 13 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK RECLINING SENSOR POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between reclining motor LH harness connector B225 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------|----------|--------|----------------------|
| Reclining motor LH | | | |
| Connector | Terminal | | |
| B225 | 3 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK RECLINING SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit.
3. Check continuity between driver seat control unit harness connector B222 and reclining motor LH harness connector B225.

| Driver seat control unit | | Reclining motor LH | | Continuity |
|--------------------------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 5 | B225 | 3 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 5 | | No |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140. "Removal and Installation"](#).

NO >> Repair or replace harness.

5. CHECK RECLINING SENSOR GROUND

1. Turn ignition switch OFF.
2. Check continuity between reclining motor LH harness connector B225 and ground.

| Reclining motor LH | | Ground | Continuity |
|--------------------|----------|--------|------------|
| Connector | Terminal | | |
| B225 | 2 | | Yes |

RECLINING SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace reclining motor LH. Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).
- NO >> Repair or replace harness.

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (FRONT)

Component Function Check

INFOID:0000000014391960

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "LIFT FR PULSE".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Value |
|---------------|----------------------|----------------|-------------------|
| LIFT FR PULSE | Seat lifting (front) | Operate (up) | Change (decrease) |
| | | Operate (down) | Change (increase) |
| | | Release | No change |

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-107, "Diagnosis Procedure"](#).

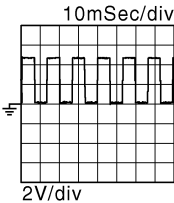
Diagnosis Procedure

INFOID:0000000014391961

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING SENSOR (FRONT) SIGNAL

1. Turn ignition switch ON.
2. Read the voltage signal between driver seat control unit harness connector B222 and ground with an oscilloscope.

| (+) | | (-) | Condition | | Voltage signal |
|--------------------------|----------|--------|----------------------|------------------|---|
| Driver seat control unit | | | | | |
| Connector | Terminal | | | | |
| B222 | 30 | Ground | Seat lifting (front) | Operate |  |
| | | | | Other than above | 0 V or 5 V |

Is the inspection result normal?

- YES >> GO TO 4.
NO >> GO TO 2.

2. CHECK LIFTING SENSOR (FRONT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and lifting motor LH (front).
3. Check continuity between driver seat control unit harness connector B222 and lifting motor LH (front) harness connector B227.

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Lifting motor LH (front) | | Continuity |
|--------------------------|----------|--------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 30 | B227 | 1 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 30 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK LIFTING SENSOR (FRONT) POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between lifting motor LH (front) harness connector B227 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------------|----------|--------|----------------------|
| Lifting motor LH (front) | | | |
| Connector | Terminal | | |
| B227 | 3 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (FRONT) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit.
3. Check continuity between driver seat control unit harness connector B222 and lifting motor LH (front) harness connector B227.

| Driver seat control unit | | Lifting motor LH (front) | | Continuity |
|--------------------------|----------|--------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 5 | B227 | 3 | Yes |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 5 | | No |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace harness.

5. CHECK LIFTING SENSOR (FRONT) GROUND

1. Turn ignition switch OFF.
2. Check continuity between lifting motor LH (front) harness connector B227 and ground.

| Lifting motor LH (front) | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B227 | 2 | | Yes |

LIFTING SENSOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace lifting motor LH (front). Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).
- NO >> Repair or replace harness.

A

B

C

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LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING SENSOR (REAR)

Component Function Check

INFOID:0000000014391962

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "LIFT RR PULSE".
3. Check lifting sensor (rear) signal under the following conditions:

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-110, "Diagnosis Procedure"](#).

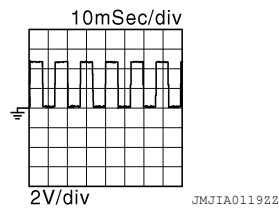
Diagnosis Procedure

INFOID:0000000014391963

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING SENSOR (REAR) SIGNAL

1. Turn ignition switch ON.
2. Read voltage signal between driver seat control unit harness connector B222 and ground with oscilloscope.

| (+) Driver seat control unit | | (-) | Condition | | Voltage signal |
|------------------------------|----------|--------|---------------------|------------------|---|
| Connector | Terminal | | | | |
| B222 | 29 | Ground | Seat lifting (rear) | Operate |  |
| | | | Seat lifting (rear) | Other than above | 0 V or 5 V |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> GO TO 2.

2. CHECK LIFTING SENSOR (REAR) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and lifting motor LH (rear).
3. Check the continuity between driver seat control unit harness connector B222 and lifting motor LH (rear) harness connector B228.

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Lifting motor LH (rear) | | Continuity |
|--------------------------|----------|-------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 29 | B228 | 1 | Yes |

4. Check the continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 29 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK LIFTING SENSOR (REAR) POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check the voltage between lifting motor LH (rear) harness connector B228 and ground.

| (+) | | (-) | Voltage (Approx.) |
|-------------------------|----------|--------|----------------------|
| Lifting motor LH (rear) | | | |
| Connector | Terminal | | |
| B228 | 3 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK LIFTING SENSOR (REAR) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit.
3. Check the continuity between driver seat control unit harness connector B222 and lifting motor LH (rear) harness connector B228.

| Driver seat control unit | | Lifting motor LH (rear) | | Continuity |
|--------------------------|----------|-------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 5 | B228 | 3 | Yes |

4. Check the continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 5 | | No |

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-41, "Wiring Diagram"](#).

NO >> Repair or replace harness.

5. CHECK LIFTING SENSOR (REAR) GROUND

1. Turn ignition switch OFF.
2. Check the continuity between lifting motor LH (rear) harness connector B228 and ground.

| Lifting motor LH (rear) | | Ground | Continuity |
|-------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B228 | 2 | | Yes |

LIFTING SENSOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace lifting motor LH (rear). Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).
- NO >> Repair or replace harness.

TILT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

TILT SENSOR

Component Function Check

INFOID:0000000014391964

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "TILT PULSE".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Value |
|--------------|-----------------|---------------------|-------------------|
| TILT PULSE | Steering column | Operate (UP-WARD) | Change (decrease) |
| | | Operate (DOWN-WARD) | Change (increase) |
| | | Release | No change |

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-113, "Diagnosis Procedure"](#).

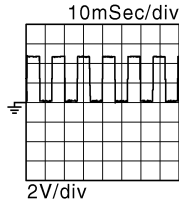
Diagnosis Procedure

INFOID:0000000014391965

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TILT SENSOR SIGNAL

1. Turn ignition switch ON.
2. Check voltage signal between driver seat control unit connector B222 and ground with oscilloscope.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|----------|--------|-----------------|------------------|---|
| Connector | Terminal | | | | |
| B222 | 28 | Ground | Steering column | Operate |  |
| | | | | Other than above | 0 V or 5 V |

Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).
NO >> GO TO 2.

2. CHECK TILT SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and tilt motor.
3. Check continuity between driver seat control unit harness connector B222 and tilt motor harness connector M94.

| Driver seat control unit | | Tilt motor | | Continuity |
|--------------------------|----------|------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 28 | M94 | 5 | Yes |

TILT SENSOR

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 28 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK TILT SENSOR POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between tilt motor harness connector M94 and ground.

| (+) Tilt motor | | (-) | Voltage (V) (Approx.) |
|----------------|----------|-----|--------------------------|
| Connector | Terminal | | |
| M94 | 6 | | Battery voltage |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK TILT SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check continuity between automatic drive positioner control unit harness connector M34 and tilt motor harness connector M94.

| Automatic drive positioner control unit | | Tilt motor | | Continuity |
|---|----------|------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M34 | 27 | M94 | 6 | Yes |

4. Check continuity between automatic drive positioner control unit harness connector M34 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M34 | 27 | | No |

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141. "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

5. CHECK TILT SENSOR GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check continuity between automatic drive positioner control unit harness connector M33 and tilt motor harness connector M94.

| Automatic drive positioner control unit | | Tilt motor | | Continuity |
|---|----------|------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 20 | M94 | 2 | Yes |

Is the inspection result normal?

YES >> Replace tilt motor. Refer to [ST-39. "Removal and Installation"](#).

NO >> Repair or replace harness.

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC SENSOR

Component Function Check

INFOID:0000000014391966

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "TELESCO PULSE".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Value |
|---------------|-----------------|--------------------|-------------------|
| TELESCO PULSE | Steering column | Operate (forward) | Change (decrease) |
| | | Operate (backward) | Change (increase) |
| | | Release | No change |

Is the inspection result normal?

- YES >> Inspection End.
NO >> Perform diagnosis procedure. Refer to [ADP-115, "Diagnosis Procedure"](#).

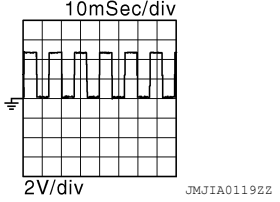
Diagnosis Procedure

INFOID:0000000014391967

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TELESCOPIC SENSOR SIGNAL

1. Turn ignition switch ON.
2. Check voltage signal between driver seat control unit connector B222 and ground with oscilloscope.

| (+) | | (-) | Condition | | Voltage (Approx.) |
|---------------------------------------|----------|--------|-----------------|------------------|---|
| Driver seat control unit Connector | Terminal | | | | |
| B222 | 12 | Ground | Steering column | Operate |  |
| | | | | Other than above | 0 V or 5 V |

Is the inspection result normal?

- YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).
NO >> GO TO 2.

2. CHECK TELESCOPIC SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and telescopic motor.
3. Check continuity between driver seat control unit harness connector B222 and telescopic motor harness connector M94.

| Driver seat control unit | | Telescopic motor | | Continuity |
|--------------------------|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 12 | M94 | 9 | Yes |

TELESCOPIC SENSOR

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 12 | | No |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK TELESCOPIC SENSOR POWER SUPPLY

1. Connect driver seat control unit.
2. Turn ignition switch ON.
3. Check voltage between telescopic motor harness connector M94 and ground.

| (+) | | (-) | Voltage (Approx.) |
|------------------|----------|--------|----------------------|
| Telescopic motor | | | |
| Connector | Terminal | | |
| M94 | 5 | Ground | Battery voltage |

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.
3. Check continuity between automatic drive positioner control unit harness connector M34 and telescopic motor harness connector M94.

| Automatic drive positioner control unit | | Telescopic motor | | Continuity |
|---|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M34 | 27 | M94 | 10 | Yes |

4. Check continuity between automatic drive positioner control unit harness connector M34 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M34 | 27 | | No |

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace harness.

5. CHECK TELESCOPIC SENSOR GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check continuity between automatic drive positioner control unit harness connector M33 and telescopic motor harness connector M94.

| Automatic drive positioner control unit | | Telescopic motor | | Continuity |
|---|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 20 | M94 | 3 | Yes |

Is the inspection result normal?

YES >> Replace telescopic motor. Refer to [ST-38, "Exploded View"](#).

NO >> Repair or replace harness.

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

MIRROR SENSOR

DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000014391968

1. DATA MONITOR

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "MIR/SEN LH U-D", "MIR/SEN LH R-L".
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | | Value |
|----------------|----------------|---------------------|-------|
| MIR/SEN LH U-D | Door mirror LH | Close to peak | 3.4 V |
| | | Close to valley | 0.6 V |
| MIR/SEN LH R-L | | Close to right edge | 3.4 V |
| | | Close to left edge | 0.6 V |

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-117, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000014391969

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK DOOR MIRROR LH SENSOR SIGNAL

1. Turn ignition switch to ACC.
2. Check voltage between door mirror LH harness connector and ground.

| (+) | | (−) | Condition | | Voltage (Approx.) |
|----------------|----------|--------|-------------------|---------------------|----------------------|
| Door mirror LH | | | | | |
| Connector | Terminal | | | | |
| D4 | 16 | Ground | Door mirror LH | Close to peak | 3.4 V |
| | | | | Close to valley | 0.6 V |
| | 15 | | | Close to right edge | 3.4 V |
| | | | | Close to left edge | 0.6 V |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK DOOR MIRROR LH SENSOR CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and door mirror LH connector D4.
3. Check continuity between automatic drive positioner control unit harness connector M33 and door mirror LH harness connector D4.

| Automatic drive positioner control unit | | Door mirror LH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 6 | D4 | 16 | Yes |
| | 18 | | 15 | |

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 6 | | No |
| | 18 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DOOR MIRROR LH SENSOR CIRCUIT 2

1. Check continuity between automatic drive positioner control unit harness connector M33 and door mirror LH harness connector D4.

| Automatic drive positioner control unit | | Door mirror LH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 20 | D4 | 13 | Yes |
| | 21 | | 14 | |

2. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 20 | | No |
| | 21 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK TILT MOTOR ADJUSTING OPERATION

1. Connect automatic drive positioner control unit and door mirror LH.
2. Turn ignition switch ON.
3. Check tilt motor adjusting operation with memory function.

Is the operation normal?

YES >> Replace door mirror actuator (built into door mirror LH). Refer to [MIR-36, "Removal and Installation"](#).

NO >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

PASSENGER SIDE

PASSENGER SIDE : Component Function Check

INFOID:0000000014391970

1. CHECK FUNCTION

CONSULT

1. Select "Data Monitor" mode of "AUTO DRIVE POS."
2. Select "MIR/SEN RH U-D", "MIR/SEN RH R-L".
3. Check that the function operates normally according to the following conditions:

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

| Monitor item | Condition | | Value |
|----------------|----------------|---------------------|-------|
| MIR/SEN RH U-D | Door mirror RH | Close to peak | 3.4 V |
| | | Close to valley | 0.6 V |
| MIR/SEN RH R-L | | Close to right edge | 3.4 V |
| | | Close to left edge | 0.6 V |

Is the inspection result normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-119. "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000014391971

Regarding Wiring Diagram information, refer to [ADP-41. "Wiring Diagram"](#).

1. CHECK DOOR MIRROR RH SENSOR SIGNAL

1. Turn ignition switch to ACC.
2. Check voltage between door mirror RH harness connector D107 and ground.

| (+) | | (-) | Condition | | Voltage (Approx.) |
|----------------|----------|--------|----------------|---------------------|-------------------|
| Door mirror RH | | | | | |
| Connector | Terminal | | | | |
| D107 | 16 | Ground | Door mirror RH | Close to peak | 3.4 V |
| | | | | Close to valley | 0.6 V |
| | 15 | | | Close to right edge | 3.4 V |
| | | | | Close to left edge | 0.6 V |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2. CHECK DOOR MIRROR RH SENSOR CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and door mirror RH.
3. Check continuity between automatic drive positioner control unit harness connector M33 and door mirror RH harness connector D107.

| Automatic drive positioner control unit | | Door mirror RH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 5 | D107 | 16 | Yes |
| | 17 | | 15 | |

4. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 5 | | No |
| | 17 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

MIRROR SENSOR

< DTC/CIRCUIT DIAGNOSIS >

3. CHECK DOOR MIRROR RH SENSOR CIRCUIT 2

1. Check continuity between automatic drive positioner control unit harness connector M33 and door mirror RH harness connector D107.

| Automatic drive positioner control unit | | Door mirror LH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 20 | D107 | 13 | Yes |
| | 21 | | 14 | |

2. Check continuity between automatic drive positioner control unit harness connector M33 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | No |
| M33 | 20 | | |
| | 21 | | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK TILT MOTOR ADJUSTING OPERATION

1. Connect automatic drive positioner control unit and door mirror RH.
2. Turn ignition switch ON.
3. Check tilt motor adjusting operation with memory function.

Is the operation normal?

YES >> Replace door mirror actuator (built into door mirror RH). Refer to [MIR-36, "Removal and Installation"](#).

NO >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

5. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

SLIDING MOTOR

Component Function Check

INFOID:0000000014391972

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "SEAT SLIDE".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-121, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391973

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK SLIDING MOTOR LH POWER SUPPLY

CONSULT

1. Turn the ignition switch to ACC.
2. Perform "SEAT SLIDE" in "Active Test" mode of "AUTO DRIVE POS."
3. Check voltage between driver seat control unit harness connector B223 and ground.

| (+) Driver seat control unit | | (-) | Condition | | Voltage (Approx.) |
|------------------------------|----------|--------|------------|---------------|-------------------|
| Connector | Terminal | | | | |
| B223 | 36 | Ground | SEAT SLIDE | OFF | 0 V |
| | | | | FR (forward) | 0 V |
| | | | | RR (backward) | Battery voltage |
| | 44 | | | OFF | 0 V |
| | | | | FR (forward) | Battery voltage |
| | | | | RR (backward) | 0 V |

Is the inspection result normal?

YES >> Replace sliding motor LH. Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).

NO >> GO TO 2.

2. CHECK SLIDING MOTOR LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and sliding motor LH.
3. Check continuity between driver seat control unit harness connector B223 and sliding motor LH harness connector B226.

SLIDING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Sliding motor LH | | Continuity |
|--------------------------|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B223 | 36 | B226 | 1 | Yes |
| | 44 | | 5 | |

4. Check continuity between driver seat control unit harness connector B223 and ground.

| Driver seat control unit connector | | Ground | Continuity |
|------------------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B223 | 36 | | No |
| | 44 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

RECLINING MOTOR

Component Function Check

INFOID:0000000014391974

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "SEAT RECLINING".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-123, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391975

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK RECLINING MOTOR LH POWER SUPPLY

CONSULT

1. Turn the ignition switch to ACC.
2. Perform "SEAT RECLINING" in "Active Test" mode of "AUTO DRIVE POS."
3. Check voltage between driver seat control unit harness connector B223 and ground.

ADP

| (+) | | (-) | Condition | | Voltage (Approx.) |
|--------------------------|----------|--------|----------------|---------------|----------------------|
| Driver seat control unit | | | | | |
| Connector | Terminal | | | | |
| B223 | 35 | Ground | SEAT RECLINING | OFF | 0 V |
| | | | | FR (forward) | 0 V |
| | | | | RR (backward) | Battery voltage |
| | 43 | | | OFF | 0 V |
| | | | | FR (forward) | Battery voltage |
| | | | | RR (backward) | 0 V |

Is the inspection result normal?

YES >> Replace reclining motor LH. Refer to [SE-100, "Removal and Installation - Captain Seats"](#), or [SE-101, "Removal and Installation - Center Seat"](#).

NO >> GO TO 2.

2. CHECK RECLINING MOTOR LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and reclining motor LH.
3. Check continuity between driver seat control unit harness connector B223 and reclining motor LH harness connector B225.

RECLINING MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Reclining motor LH | | Continuity |
|--------------------------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B223 | 35 | B225 | 6 | Yes |
| | 43 | | 4 | |

4. Check continuity between driver seat control unit harness connector B223 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B223 | 35 | | No |
| | 43 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING MOTOR (FRONT)

Component Function Check

INFOID:0000000014391976

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS".
2. Select "SEAT LIFTER FR".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-125, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391977

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING MOTOR LH (FRONT) POWER SUPPLY

CONSULT

1. Turn the ignition switch to ACC.
2. Perform "SEAT LIFTER FR" in "Active Test" mode of "AUTO DRIVE POS".
3. Check voltage between driver seat control unit harness connector B223 and ground.

ADP

| (+) | | (-) | Condition | | Voltage (Approx.) |
|--------------------------|----------|--------|-------------------|------------|----------------------|
| Driver seat control unit | | | | | |
| Connector | Terminal | | | | |
| B223 | 34 | Ground | SEAT LIFTER FR | OFF | 0 V |
| | | | | UP | 0 V |
| | | | | DWN (down) | Battery voltage |
| | 42 | | | OFF | 0 V |
| | | | | UP | Battery voltage |
| | | | | DWN (down) | 0 V |

Is the inspection result normal?

YES >> Replace lifting motor LH (front). Refer to [SE-100, "Removal and Installation - Captain Seats"](#), [SE-101, "Removal and Installation - Center Seat"](#).

NO >> GO TO 2.

2. CHECK LIFTING MOTOR LH (FRONT) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and lifting motor LH (front).
3. Check continuity between driver seat control unit harness connector B223 and lifting motor LH (front) harness connector B227.

LIFTING MOTOR (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Lifting motor LH (front) | | Continuity |
|--------------------------|----------|--------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B223 | 34 | B227 | 6 | Yes |
| | 42 | | 4 | |

4. Check continuity between driver seat control unit harness connector B223 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B223 | 34 | | No |
| | 42 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

LIFTING MOTOR (REAR)

Component Function Check

INFOID:0000000014391978

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "SEAT LIFTER RR".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-127, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391979

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK LIFTING MOTOR LH (REAR) POWER SUPPLY

CONSULT

1. Turn the ignition switch to ACC.
2. Perform "SEAT LIFTER RR" in "Active Test" mode of "AUTO DRIVE POS."
3. Check voltage between driver seat control unit harness connector B223 and ground.

ADP

| (+) | | (-) | Condition | | Voltage (Approx.) |
|--------------------------|----------|--------|-------------------|------------|----------------------|
| Driver seat control unit | | | | | |
| Connector | Terminal | | | | |
| B223 | 40 | Ground | SEAT LIFTER RR | OFF | 0 V |
| | | | | UP | 0 V |
| | | | | DWN (down) | Battery voltage |
| | 41 | | | OFF | 0 V |
| | | | | UP | Battery voltage |
| | | | | DWN (down) | 0 V |

Is the inspection result normal?

YES >> Replace lifting motor LH (rear). Refer to [SE-100, "Removal and Installation - Captain Seats"](#), [SE-101, "Removal and Installation - Center Seat"](#).

NO >> GO TO 2.

2. CHECK LIFTING MOTOR (REAR) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and lifting motor LH (rear).
3. Check continuity between driver seat control unit harness connector B223 and lifting motor LH (rear) harness connector B228.

LIFTING MOTOR (REAR)

< DTC/CIRCUIT DIAGNOSIS >

| Driver seat control unit | | Lifting motor LH (rear) | | Continuity |
|--------------------------|----------|-------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B223 | 41 | B228 | 6 | Yes |
| | 40 | | 4 | |

4. Check continuity between driver seat control unit harness connector B223 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B223 | 41 | | No |
| | 40 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-47, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140, "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

TILT MOTOR

Component Function Check

INFOID:0000000014391980

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS".
2. Select "TILT MOTOR".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-129, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391981

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TILT MOTOR POWER SUPPLY

CONSULT

1. Turn ignition switch OFF.
2. Disconnect tilt motor.
3. Turn the ignition switch ON.
4. Select "TILT MOTOR" in "Active Test" mode of "AUTO DRIVE POS".
5. Check voltage between tilt motor harness connector M94 and ground.

| (+) | | (-) | Condition | | Voltage (Approx.) |
|------------|----------|--------|------------|------------|----------------------|
| Tilt motor | | | | | |
| Connector | Terminal | | | | |
| M94 | 1 | Ground | TILT MOTOR | OFF | 0 V |
| | | | | UP | 0 V |
| | | | | DWN (down) | Battery voltage |
| | 7 | | | OFF | 0 V |
| | | | | UP | Battery voltage |
| | | | | DWN (down) | 0 V |

Is the inspection result normal?

YES >> Replace tilt motor. Refer to [ST-38, "Exploded View"](#).

NO >> GO TO 2.

2. CHECK TILT MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check continuity between automatic drive positioner control unit harness connector M34 and tilt motor harness connector M94.

TILT MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Automatic drive positioner control unit | | Tilt motor | | Continuity |
|---|----------|------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M34 | 28 | M94 | 1 | Yes |
| | 29 | | 7 | |

4. Check continuity between automatic drive positioner control unit harness connector M34 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M34 | 28 | | No |
| | 29 | | |

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

NO >> Repair or replace harness.

TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

TELESCOPIC MOTOR

Component Function Check

INFOID:0000000014391982

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "TELESCO MOTOR".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-131, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391983

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK TELESCOPIC MOTOR POWER SUPPLY

CONSULT

1. Turn ignition switch OFF.
2. Disconnect telescopic motor.
3. Turn the ignition switch ON.
4. Perform "TELESCO MOTOR" in "Active Test" mode of "AUTO DRIVE POS".
5. Check voltage between telescopic motor harness connector M94 and ground.

| (+) | | (-) | Condition | | Voltage (Approx.) |
|------------------|----------|--------|---------------------|---------------|----------------------|
| Telescopic motor | | | | | |
| Connector | Terminal | | | | |
| M94 | 4 | Ground | TELESCOPIC MOTOR | OFF | 0 V |
| | | | | FR (forward) | 0 V |
| | | | | RR (backward) | Battery voltage |
| | 8 | | | OFF | 0 V |
| | | | | FR (forward) | Battery voltage |
| | | | | RR (backward) | 0 V |

Is the inspection result normal?

YES >> Replace telescopic motor. Refer to [ST-38, "Exploded View"](#).

NO >> GO TO 2.

2. CHECK TELESCOPIC MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit.
3. Check continuity between automatic drive positioner control unit harness connector M34 and telescopic motor harness connector M94.

TELESCOPIC MOTOR

< DTC/CIRCUIT DIAGNOSIS >

| Automatic drive positioner control unit | | Telescopic motor | | Continuity |
|---|----------|------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M34 | 29 | M94 | 8 | Yes |
| | 26 | | 4 | |

4. Check continuity between automatic drive positioner control unit harness connector M34 and ground.

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M34 | 29 | | No |
| | 26 | | |

Is the inspection result normal?

YES >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).
 NO >> Repair or replace harness.

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

DOOR MIRROR MOTOR

Component Function Check

INFOID:0000000014391984

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "MIRROR MOTOR RH" and "MIRROR MOTOR LH".
3. Check that the function operates normally.

| Test item | | Description | |
|-----------------|-----|------------------------------|-----------|
| MIRROR MOTOR LH | UP | Door mirror (driver side) | Upward |
| | DN | | Downward |
| | LH | | Leftward |
| | RH | | Rightward |
| | OFF | | Stop |
| MIRROR MOTOR RH | UP | Door mirror (passenger side) | Upward |
| | DN | | Downward |
| | LH | | Leftward |
| | RH | | Rightward |
| | OFF | | Stop |

Is the inspection result normal?

YES >> Door mirror motor function is OK.

NO >> Refer to [ADP-133, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391985

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between door mirror connector D4, D107, and ground.

| (+) | | (−) | Door mirror remote control switch condition | Voltage (Approx.) |
|----------------------|----------|--------|---|-------------------|
| Door mirror | | | | |
| Connector | Terminal | | | |
| D4 (LH) D107 (RH) | 1 | Ground | UP | Battery voltage |
| | | | Other than above | 0 V |
| | 3 | | LEFT | Battery voltage |
| | | | Other than above | 0 V |
| | 2 | | DOWN / RIGHT | Battery voltage |
| | | | Other than above | 0 V |

Is the inspection result normal?

YES >> Refer to [ADP-135, "Component Inspection"](#).

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect automatic drive positioner control unit and door mirror.

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between automatic drive positioner control unit connector M33 and door mirror connector D4, or D107.

Door mirror LH

| Automatic drive positioner control unit | | Door mirror LH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 12 | D4 | 3 | Yes |
| | 23 | | 1 | |
| | 24 | | 2 | |

Door mirror RH

| Automatic drive positioner control unit | | Door mirror RH | | Continuity |
|---|----------|----------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| M33 | 10 | D107 | 1 | Yes |
| | 11 | | 2 | |
| | 22 | | 3 | |

4. Check continuity between automatic drive positioner control unit connector M33 and ground.

Door mirror LH

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 12 | | No |
| | 23 | | |
| | 24 | | |

Door mirror RH

| Automatic drive positioner control unit | | Ground | Continuity |
|---|----------|--------|------------|
| Connector | Terminal | | |
| M33 | 10 | | No |
| | 11 | | |
| | 22 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK AUTOMATIC DRIVE POSITIONER CONTROL UNIT OUTPUT SIGNAL

1. Connect automatic drive positioner control unit.
2. Turn ignition switch ON.
3. Check voltage between automatic drive positioner control unit connector M33 and ground.

Door mirror LH

| (+) Automatic drive positioner control unit | | (-) | Mirror switch condition | Voltage (Approx.) |
|---|----------|--------|-------------------------|-------------------|
| Connector | Terminal | | | |
| M33 | 12 | Ground | DOWN / RIGHT | Battery voltage |
| | | | Other than above | 0 V |
| | 23 | | UP | Battery voltage |
| | | | Other than above | 0 V |
| | 24 | | LEFT | Battery voltage |
| | | | Other than above | 0 V |

DOOR MIRROR MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Door mirror RH

| (+) Automatic drive positioner control unit | | (-) | Mirror switch condition | Voltage (Approx.) |
|---|----------|--------|-------------------------|-------------------|
| Connector | Terminal | | | |
| M33 | 10 | Ground | UP | Battery voltage |
| | | | Other than above | 0 V |
| | 11 | | LEFT | Battery voltage |
| | | | Other than above | 0 V |
| | 22 | | DOWN / RIGHT | Battery voltage |
| | | | Other than above | 0 V |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace automatic drive positioner control unit. Refer to [ADP-141, "Removal and Installation"](#).

4. CHECK DOOR MIRROR MOTOR

Check door mirror motor.

Refer to [ADP-135, "Component Inspection"](#).

Is the inspection result normal?

YES >> Refer to [GI-47, "Intermittent Incident"](#).

NO >> Replace door mirror actuator. Refer to [MIR-36, "Removal and Installation"](#).

Component Inspection

INFOID:0000000014391986

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-30, "Exploded View"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace door mirror actuator. Refer to [MIR-36, "Removal and Installation"](#).

2. CHECK DOOR MIRROR MOTOR-II

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

| Door mirror connector | Terminal | | Operational direction |
|-----------------------|----------|-----|-----------------------|
| | (+) | (-) | |
| D4 (LH) D107 (RH) | 3 | 2 | RIGHT |
| | 2 | 3 | LEFT |
| | 1 | 3 | UP |
| | 3 | 1 | DOWN |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace door mirror actuator. Refer to [MIR-36, "Removal and Installation"](#).

SEAT MEMORY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

SEAT MEMORY INDICATOR

Component Function Check

INFOID:0000000014391987

1. ACTIVE TEST

CONSULT

1. Select "Active Test" mode of "AUTO DRIVE POS."
2. Select "MEMORY SW INDCTR".
3. Check that the function operates normally.

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

Is the operation of relevant parts normal?

YES >> Inspection End.

NO >> Perform diagnosis procedure. Refer to [ADP-136, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000014391988

Regarding Wiring Diagram information, refer to [ADP-41, "Wiring Diagram"](#).

1. CHECK SEAT MEMORY INDICATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver seat control unit and seat memory switch.
3. Check continuity between driver seat control unit harness connector B222 and seat memory switch harness connector D10.

| Driver seat control unit | | Seat memory switch | | Continuity |
|--------------------------|----------|--------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| B222 | 10 | D10 | 13 | Yes |
| | 26 | | 14 | |

4. Check continuity between driver seat control unit harness connector B222 and ground.

| Driver seat control unit | | Ground | Continuity |
|--------------------------|----------|--------|------------|
| Connector | Terminal | | |
| B222 | 10 | | No |
| | 26 | | |

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2. CHECK MEMORY INDICATOR POWER SUPPLY

Check voltage between seat memory switch harness connector D10 and ground.

| (+) | | (-) | Voltage (Approx.) |
|--------------------|----------|--------|----------------------|
| Seat memory switch | | | |
| Connector | Terminal | | |
| D10 | 15 | Ground | Battery voltage |

SEAT MEMORY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the following:

- 10A fuse No.9.
- Harness for open or short between memory indicator and fuse.

3. CHECK MEMORY INDICATOR

Refer to [ADP-137. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace seat memory switch. Refer to [ADP-142. "Removal and Installation"](#).

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-47. "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace driver seat control unit. Refer to [ADP-140. "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning part.

Component Inspection

INFOID:0000000014391989

1. CHECK SEAT MEMORY INDICATOR

1. Disconnect seat memory switch.
2. Check continuity between seat memory switch terminals.

| Seat memory switch | | Continuity |
|--------------------|-----|------------|
| Terminal | | |
| (+) | (-) | |
| 15 | 13 | Yes |
| | 14 | |

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace seat memory switch. Refer to [ADP-142. "Removal and Installation"](#).

ADP SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

ADP SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000014391990

NOTE:

Always perform the "Basic Inspection" before performing diagnosis in the following table. Refer to [ADP-55](#), "[Work Flow](#)".

| Symptom | | Diagnosis procedure | Reference page |
|---|---------------------------|---|---|
| Manual functions (for specific part) do not operate. | Sliding operation | Check sliding switch. | ADP-79 |
| | Reclining operation | Check reclining switch. | ADP-81 |
| | Lifting operation (front) | Check lifting switch (front). | ADP-83 |
| | Lifting operation (rear) | Check lifting switch (rear). | ADP-85 |
| | Tilt operation | Check tilt switch. | ADP-87 |
| | Telescopic sensor | Check telescopic switch. | ADP-89 |
| | Door mirror operation | 1. Select switch | ADP-94 |
| | | 2. Mirror switch | ADP-96 |
| | All parts of seat | Check power seat switch ground circuit. | ADP-99 |
| Memory functions (for specific part) do not operate. | Sliding operation | Check sliding sensor. | ADP-101 |
| | Reclining operation | Check reclining sensor. | ADP-104 |
| | Lifting operation (front) | Check lifting sensor (front). | ADP-107 |
| | Lifting operation (rear) | Check lifting sensor (rear). | ADP-110 |
| | Tilt operation | Check tilt sensor. | ADP-113 |
| | Telescopic operation | Check telescopic sensor. | ADP-115 |
| | Door mirror operation | Check door mirror sensor. | Driver side: ADP-117 Passenger side: ADP-119 |
| Memory functions and manual functions (for specific part) do not operate. | Sliding operation | Check sliding motor LH. | ADP-121 |
| | Reclining operation | Check reclining motor LH. | ADP-123 |
| | Lifting operation (front) | Check lifting motor LH (front). | ADP-125 |
| | Lifting operation (rear) | Check lifting motor LH (rear). | ADP-127 |
| | Tilt operation | Check tilt motor. | ADP-129 |
| | Telescopic operation | Check telescopic motor. | ADP-131 |
| | Door mirror operation | Check door mirror motor. | ADP-133 |
| Entry/Exit assist function does not operate. | | 1. Check system setting. | ADP-15 |
| | | 2. Perform initialization. | ADP-59 |
| | | 3. Check front door switch (driver side). | DLK-98 |
| Linking key fob to meter display. | | 1. Check door lock function. | DLK-102 |
| | | 2. Perform memory storing. | ADP-19 |

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

INFOID:0000000014391991

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

| Symptom | Cause | Action to take | Reference page |
|--|---|------------------------------------|--|
| Entry/exit assist function does not operate. | No initialization has been performed. | Perform initialization. | ADP-59 |
| | Entry/exit assist function is disabled. NOTE: Entry/exit assist function is set to ON before delivery (initial setting). | Change the settings. | ADP-60 |
| Entry assist function does not operate. | Manual operation with power seat switch was performed after exit assist function execution. | Perform the entry assist function. | ADP-22 |
| Memory function, entry/exit assist function or linking a key fob to meter display function does not operate. | The operating conditions are not fulfilled. | Fulfill the operation conditions. | Memory function: ADP-19 |
| | | | Entry assist function: ADP-22 |
| | | | Exit assist function: ADP-21 |
| | | | Linking a key fob to meter display: ADP-24 |

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DRIVER SEAT CONTROL UNIT

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

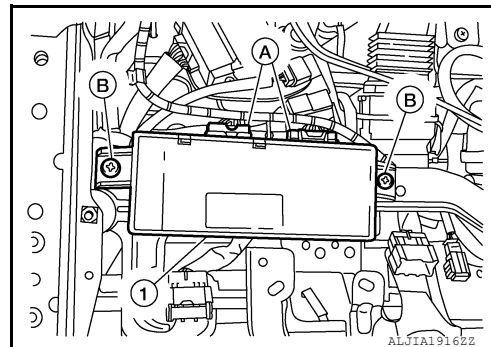
DRIVER SEAT CONTROL UNIT

Removal and Installation

INFOID:0000000014391992

REMOVAL

1. Remove front seat (LH). Refer to [SE-100. "Removal and Installation - Captain Seats"](#).
2. Disconnect harness connectors (A) from driver seat control unit (1).
3. Remove screws (B) and driver seat control unit.



INSTALLATION

Installation is in the reverse order of removal.

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< REMOVAL AND INSTALLATION >

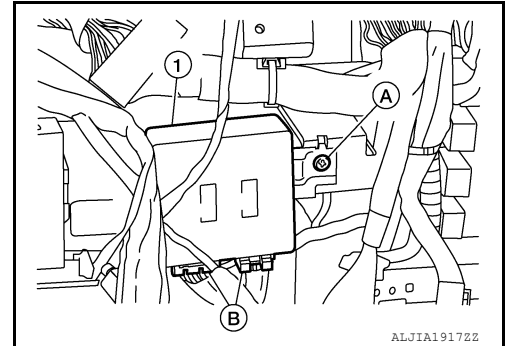
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Removal and Installation

INFOID:000000014391993

REMOVAL

1. Remove audio unit or AV control unit. Refer to [AV-66, "Removal and Installation"](#) (DISPLAY AUDIO), [AV-157, "Removal and Installation"](#) (NAVIGATION WITHOUT AMPLIFIER), [AV-277, "Removal and Installation"](#) (NAVIGATION WITH AMPLIFIER), [AV-359, "Removal and Installation"](#) (AROUND VIEW MONITOR SYSTEM), [AV-390, "Removal and Installation"](#) (REAR VIEW MONITOR SYSTEM), [AV-438, "Removal and Installation"](#) (TELEMATICS SYSTEM), or [AV-461, "Removal and Installation"](#) [REAR SEAT ENTERTAINMENT (RSE) SYSTEM].
2. Disconnect harness connectors (B) from automatic drive positioner control unit.
3. Remove automatic drive positioner control unit screw (A) and automatic drive positioner control unit (1).



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Perform additional services when replacing control unit. Refer to [ADP-58, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

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ADP

SEAT MEMORY SWITCH

< REMOVAL AND INSTALLATION >


SEAT MEMORY SWITCH

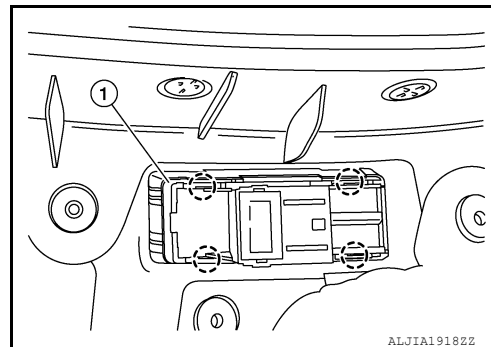
Removal and Installation

INFOID:0000000014391994

REMOVAL

1. Using suitable tool, remove seat memory switch finisher.
2. Disconnect the harness connector from the seat memory switch.
3. Release pawls using suitable tool and remove seat memory switch (1).

 : Pawl



INSTALLATION

Installation is in the reverse order of removal.

POWER SEAT SWITCH

< REMOVAL AND INSTALLATION >

POWER SEAT SWITCH

Removal and Installation

INFOID:0000000014391995

REMOVAL

For the removal and installation of the power seat switch (LH), refer to [SE-109. "Removal and Installation"](#).

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ADP STEERING SWITCH

< REMOVAL AND INSTALLATION >


ADP STEERING SWITCH

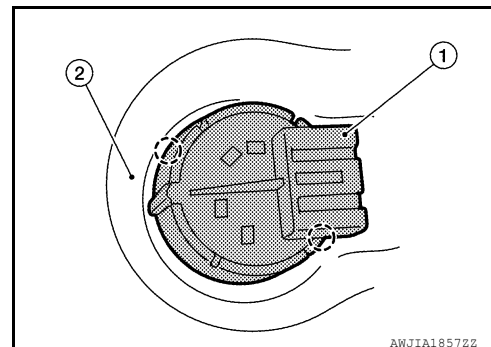
Removal and Installation

INFOID:0000000014391996

REMOVAL

1. Remove steering column covers. Refer to [IP-18. "Removal and Installation"](#).
2. Release pawls using suitable tool and remove ADP steering switch (1) from the steering column lower cover (2).

 : Pawl



INSTALLATION

Installation is in the reverse order of removal.