SECTION RF
ROOF

CONTENTS

PRECAUTIONS

PFP:00001

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

AIS003Y9

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SRS 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, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS 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 for Battery Service

AIS003YA

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precautions

AIS003YB

- Disconnect both battery cables in advance.
- Never tamper with or force air bag lid open, as this may adversely affect air bag performance.
- Be careful not to scratch pad and other parts.
- When removing or disassembling any part, be careful not to damage or deform it. Protect parts, which may get in the way with cloth.
- When removing parts with a screwdriver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If a clip is deformed or damaged, replace it.
- If an unreusable part is removed, replace it with a new one.
- Tighten bolts and nuts firmly to the specified torque.
- After re-assembly has been completed, make sure each part functions correctly.
- Remove stains in the following way.

Water-soluble stains:
Dip a soft cloth in warm water, and then squeeze it tightly. After wiping the stain, wipe with a soft dry cloth.
Oil stain:
Dissolve a synthetic detergent in warm water (density of 2 to 3% or less), dip the cloth, then clean off the stain with the cloth. Next, dip the cloth in fresh water and squeeze it tightly. Then clean off the detergent completely. Then wipe the area with a soft dry cloth.

- Do not use any organic solvent, such as thinner or benzine.

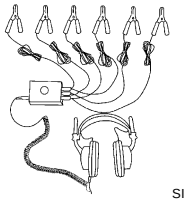
PREPARATION

PFP:00002

Special Service Tools

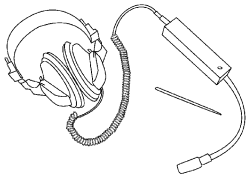
AIS003YC

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
(J39570) Chassis ear  SIIA0993E	Location the noise
(J43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise

Commercial Service Tools

AIS003YD

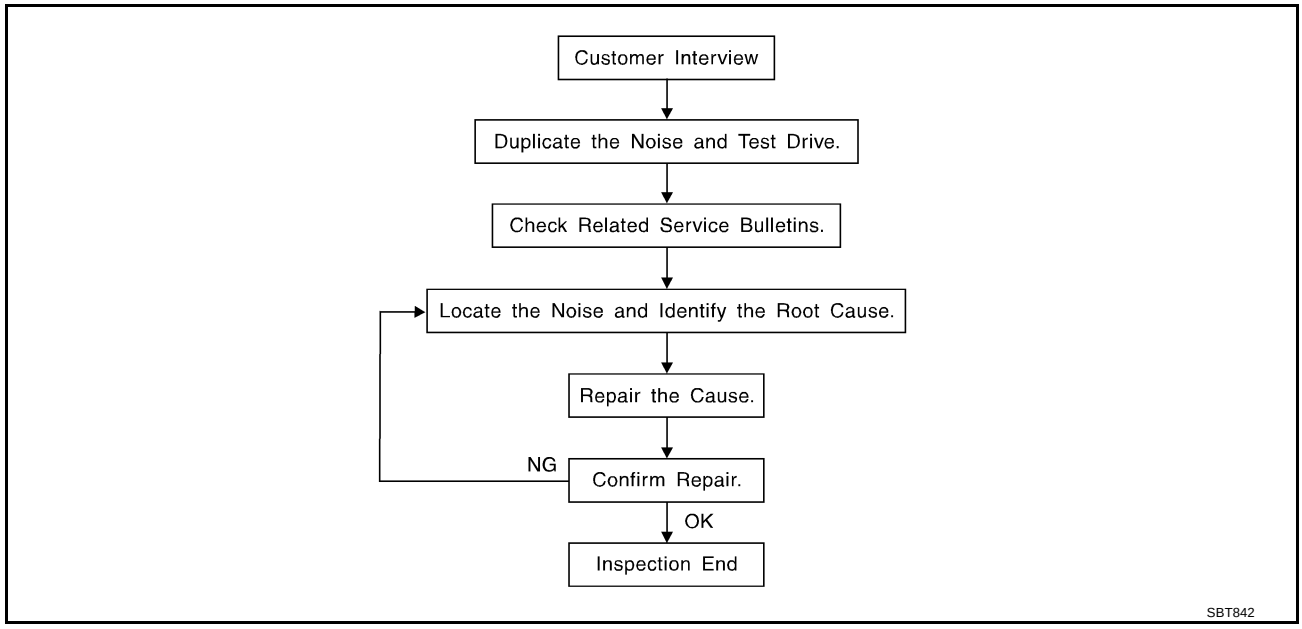
Tool name	Description
Engine ear  SIIA0995E	Location the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

AIS003YE



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs.Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to RF-9, "Diagnostic Worksheet" . This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics.The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak —(Like tennis shoes on a clean floor)
  Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces=higher pitch noise/softer surfaces=lower pitch noises/edge to surface=chirping
- Creak—(Like walking on an old wooden floor)
  Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle)
  Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock —(Like a knock on a door)
  Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand)
  Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise)
  Thump characteristics include softer knock/dead sound often drought on by activity.
- Buzz—(Like a bumble bee)
  Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.
If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle "twist".
5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.

- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.
If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area.To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J39570,Engine Ear mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to RF-7, "Generic Squeak and Rattle Troubleshooting" .

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
  - separate components by repositioning or loosening and retightening the component, if possible.
  - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J43980)is available through your authorized Nissan Parts Department.

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the Nissan Squeak and Rattle Kit (J43980).Each item can be ordered separately as needed.
URETHANE PADS [1.5mm(0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100×135mm(3.94×5.31 in)/76884-71L01: 60×85mm(2.36×3.35 in)/76884-71L02: 15×25mm(0.59×0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact.Can be used to fill space behind a panel.
73982-9E000: 45mm(1.77 in) thick, 50×50mm(1.97×1.97 in)/73982-50Y00: 10mm(0.39 in) think, 50×50mm(1.97×1.97 in)

INSULATOR (Light foam block)
80845-71L00: 30mm(1.18 in) thick, 30×50mm(1.18×1.97 in)
FELT CLOTHTAPE
Used to insulate where movement does not occur.Ideal for instrument panel applications.
68370-4B000: 15×25mm(0.59×0.98 in) pad/68239-13E00: 5mm(0.20 in) wide tape roll The following materials, not found in the kit, can also be used to repair squeaks and rattles.
UHMW(TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used in of UHMW tape that will be visible or not fit.
Note: Will only last a few months.
SILICONE SPRAY
Use when grease cannot be applied.
DUCT TAPE
Use to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Generic Squeak and Rattle Troubleshooting

AIS003YF

Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas).Urethane pads can be used to insulate wiring harness.

CAUTION:
Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J43980) to repair the noise.

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.
In addition look for:

1. Trunk lid dumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sunvisor shaft shaking in the holder
3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.
Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seat back lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.
Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noise can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting securing, or insulating the component causing the noise.

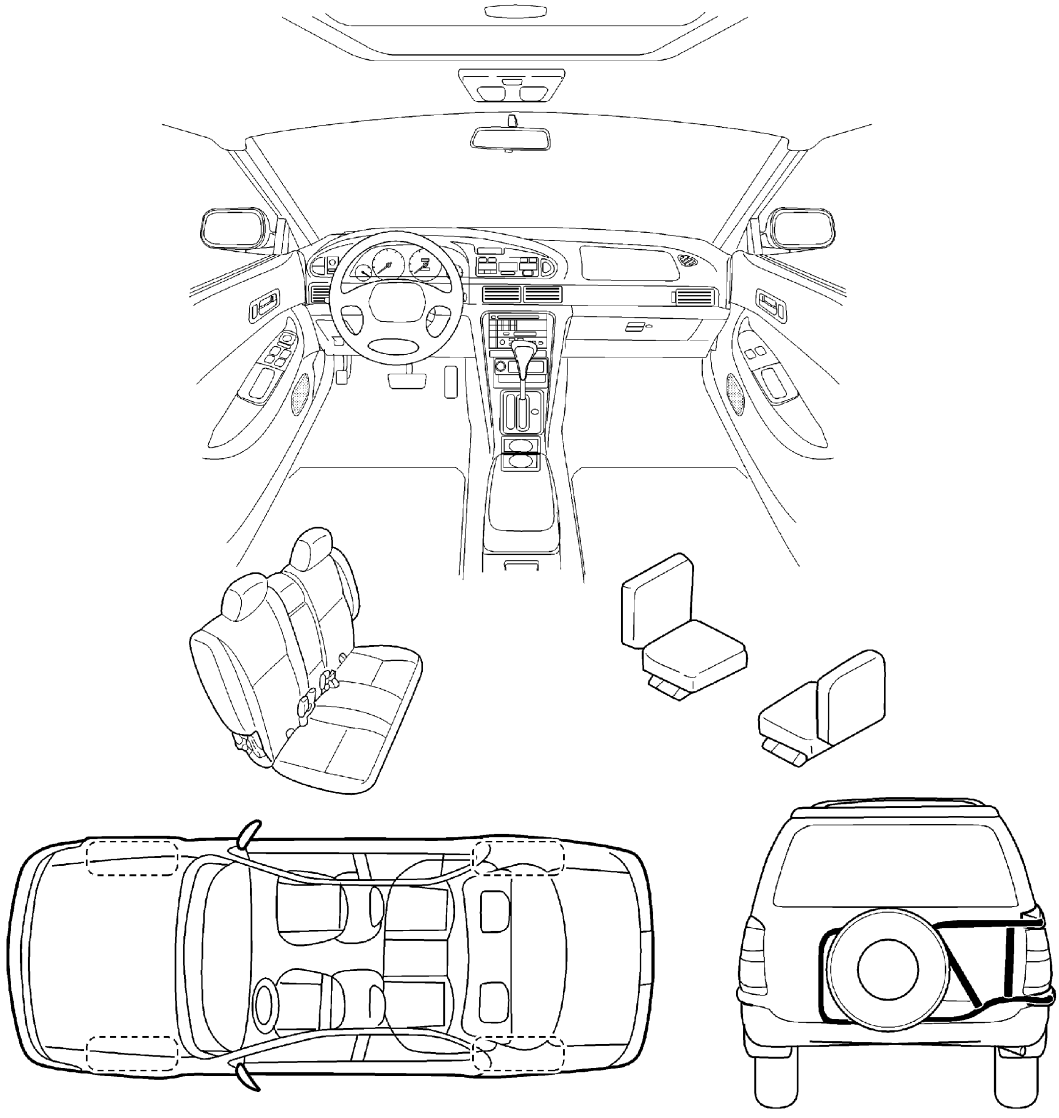
Diagnostic Worksheet

AIS003YG

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:
We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)
The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to the back of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

SBT843

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

II. WHEN DOES IT OCCUR? (check the boxes that apply)

❑ anytime
❑ 1st time in the morning
❑ only when it is cold outside
❑ only when it is hot outside
❑ after sitting out in the sun
❑ when it is raining or wet
❑ dry or dusty conditions
❑ other: _____

III. WHEN DRIVING:

❑ through driveways
❑ over rough roads
❑ over speed bumps
❑ only at about ____ mph
❑ on acceleration
❑ coming to a stop
❑ on turns : left, right or either (circle)
❑ with passengers or cargo
❑ other: _____
❑ after driving ____ miles or ____ minutes

IV. WHAT TYPE OF NOISE?

❑ squeak (like tennis shoes on a clean floor)
❑ creak (like walking on an old wooden floor)
❑ rattle (like shaking a baby rattle)
❑ knock (like a knock on a door)
❑ tick (like a clock second hand)
❑ thump (heavy, muffled knock noise)
❑ buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL
Test Drive Notes:

_____

_____

	YES	NO	Initials of person performing
Vehicle test driven with customer	❑	❑	_____
- Noise verified on test drive	❑	❑	
- Noise source located and repaired	❑	❑	_____
- Follow up test drive performed to confirm repair	❑	❑	_____

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

SBT844

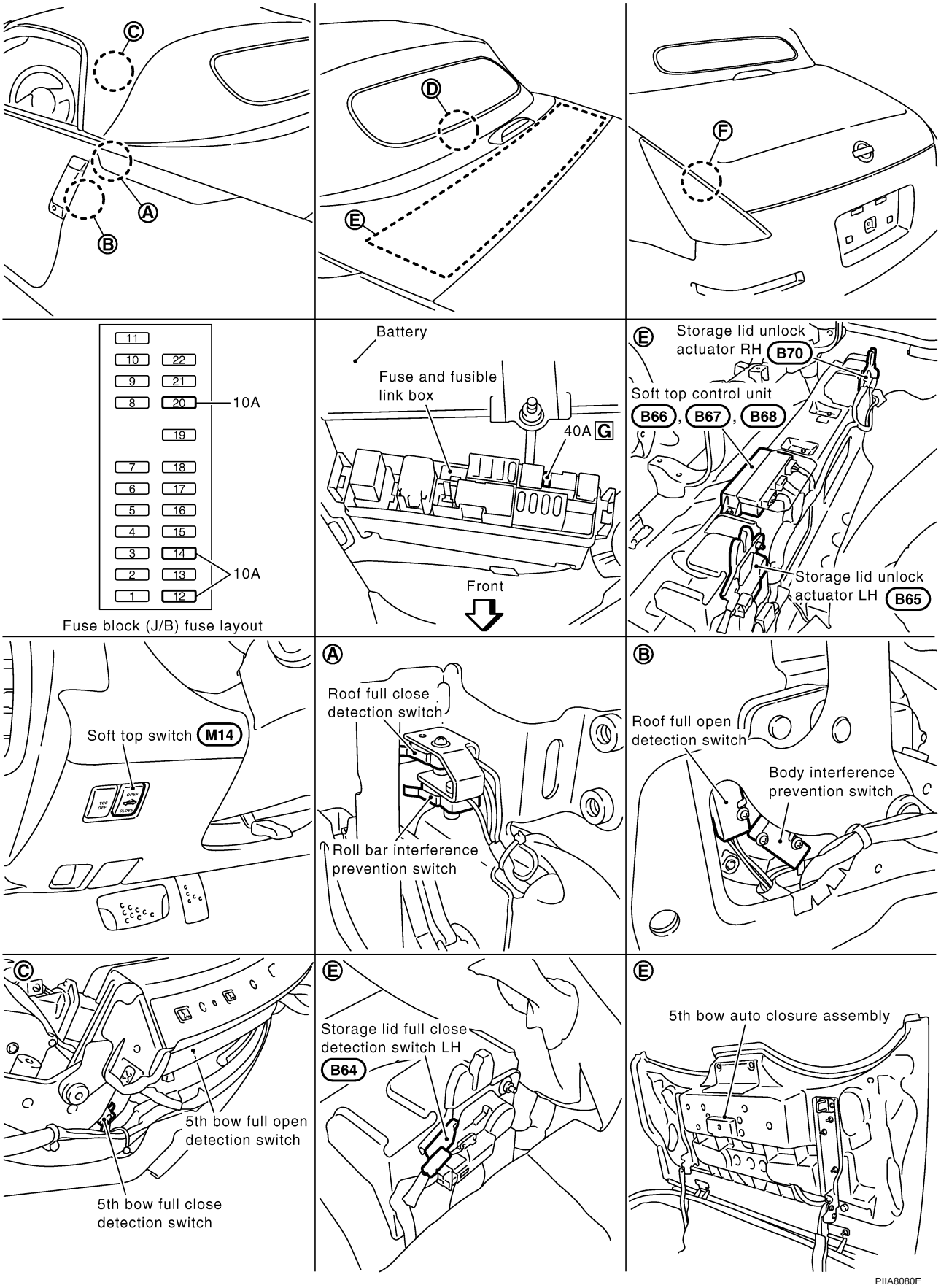
This form must be attached to Work Order

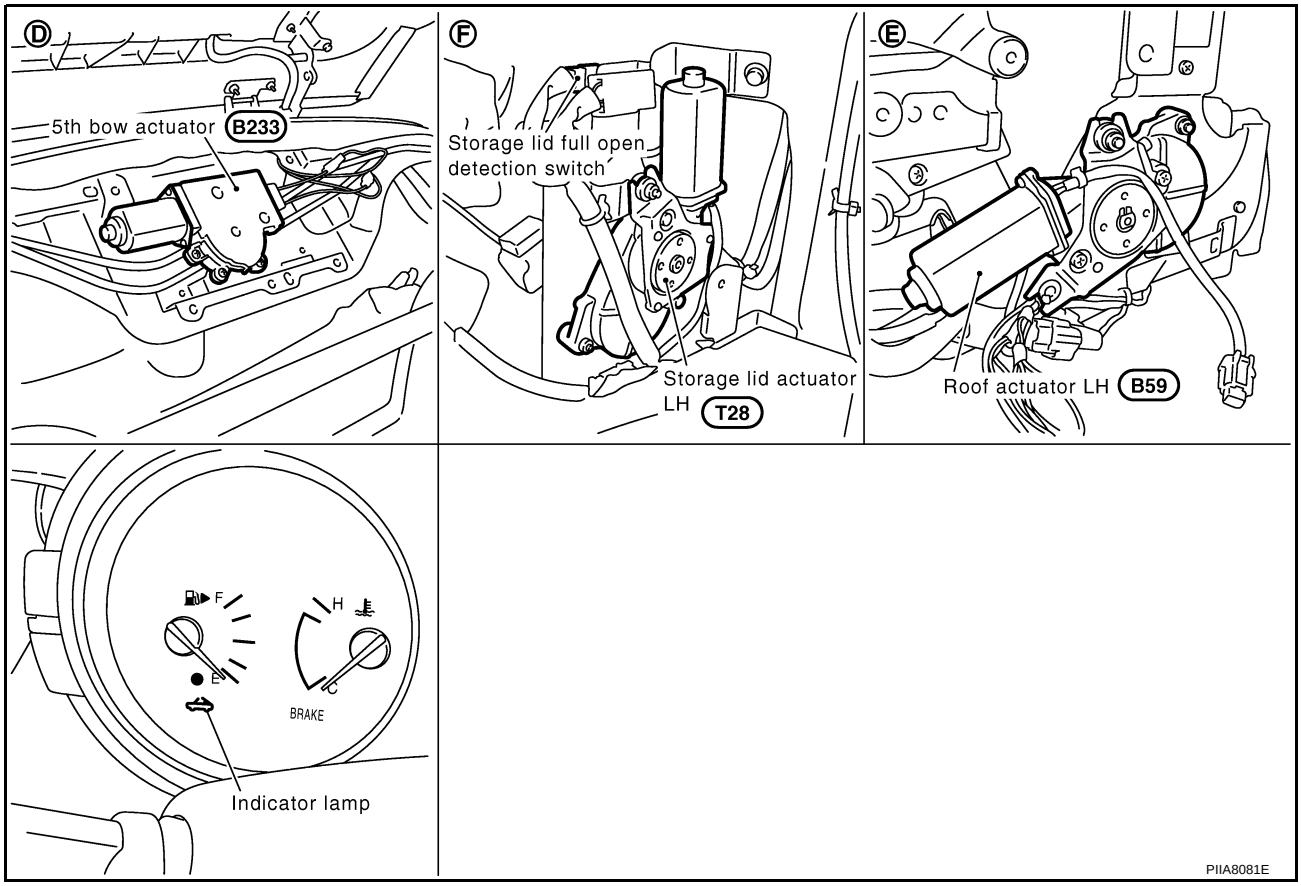
SOFT TOP

PFP:97002

Component Parts and Harness Connector Location

AIS005TM





Following Parts Are Built Into 5th Bow Auto Closure Assembly.

- 5th bow half-latch switch built in 5th bow lock assembly in storage lid.
- 5th bow full-latch switch built in 5th bow lock assembly in storage lid.
- 5th bow ending switch built in 5th bow lock assembly in storage lid.
- 5th bow unlock actuator.
- 5th bow closure motor.

NOTE:
Always replace following switches as a 5th bow lock assembly.

- 5th bow half-latch switch
- 5th bow full-latch switch
- 5th bow ending switch.

5th bow full open detection switch and 5th bow full close detection switch are built into 5th bow switch assembly located at plate rail RR. Replace above switches as a plate rail RR.

System Description

AIS005TN

An electronic soft top open/close system has been adopted that allows the soft top to be opened or closed using the soft top switch.
The following parts operate, linked with the operation of the soft top.

- When the soft top begins to operate, the passenger seat tilts forward. When operation is completed, it returns to its original position.
  (It does not move when the seat cancel switch is ON.)
- When the soft top begins to operate, both power windows activate to the fully-open position.
  (They do not activate to the fully-closed position after operation is completed.)
  Moreover, power window cannot be operated while soft top is operating.

When the soft top switch is released, soft top operation stops.

CONDITIONS FOR OPERATION

Operation is avairable when all of the conditions below are satisfied.

- Ignition switch is ON.
- The brake pedal is ON.
- Vehicle speed is 4 km/h (2 MPH) or less.
- Battery voltage is approximately 10 V or more.

CAUTION:
Run the engine when operating or inspecting the soft top to prevent battery dies.

CONDITIONS FOR STOPPING OPERATION

Operation of the soft top stops when the conditions below are satisfied while the soft top is operating.

- Any of the above operation conditions is no longer satisfied.
- The passenger side power seat is operated. (It does not move when seat cancel switch is ON.)

OUTLINE OF OPERATION

Refer to the illustrations for the positions of the soft top, and the conditions of switch and actuator operation.

OPERATION: FULL CLOSE → FULL OPEN

Refer to RF-19, "State Chart" .

- CONDITION: FULL CLOSE

Item	Condition
5th bow half-latch switch	: OFF
5th bow full-latch switch	: OFF
5th bow ending switch	: OFF
5th bow full open detection switch	: OFF
5th bow full close detection switch	: OFF
Storage lid full open detection switch	: OFF
Storage lid full close detection switch LH	: OFF
Storage lid full close detection switch RH	: OFF
Roof full open detection switch	: OFF
Roof full close detection switch	: OFF
Body interference prevention switch	: OFF
Roll bar interference prevention switch	: OFF

- CONDITION: OP 1
  When the soft top switch is pushed to OPEN, the indicator lamp illuminates, windows activate to the fully-open position and the passenger seat tilts forward by approximately 6 degrees by power window down request signal. When passenger seat tilts forward by approximately 6 degrees, seat back position signal is turned ON.

Item	Condition
Soft top switch (OPEN)	: ON (Until the operation ends)
Indicator lamp	: ON
Power window down request signal	: ON
Seat back position signal	: OFF → ON

- CONDITION: OP 2
  The 5th bow unlock actuator operates, releasing the 5th bow lock.

Item	Condition
5th bow unlock actuator	: ON

- CONDITION: OP 3
  The 5th bow actuator moves the 5th bow up.

Item	Condition
5th bow half-latch switch	: OFF → ON
5th bow actuator	: UP
5th bow unlock actuator	: ON → OFF

- CONDITION: OP 4
  The 5th bow is rising.

Item	Condition
5th bow actuator	: UP
5th bow full close detection switch	: OFF → ON
5th bow closure motor	: OPEN → STOP
5th bow full-latch switch	: OFF → ON
5th bow ending switch	: OFF → ON

- CONDITION: OP 5
  The 5th bow stops in the fully-open position. The storage lid unlock actuator operates, releasing the storage lid lock.

Item	Condition
5th bow full open detection switch	: OFF → ON
5th bow actuator	: UP → STOP
Storage lid unlock actuator (LH and RH)	: ON
Storage lid full close detection switch (RH)	: OFF → ON

- CONDITION: OP 6
  The storage lid actuator operates, raising the storage lid.

Item	Condition
Storage lid full close detection switch (LH)	: OFF → ON
Storage lid actuator (LH and RH)	: OPEN
Storage lid unlock actuator (LH and RH)	: ON → OFF

- CONDITION: OP 7
  The storage lid stops in the fully-open position. The 5th bow actuator moves the 5th bow down.

Item	Condition
Storage lid full open detection switch	: OFF → ON
Storage lid actuator (LH and RH)	: OPEN → STOP
5th bow actuator	: DOWN
5th bow full open detection switch	: ON → OFF

- CONDITION: OP 8
  The 5th bow actuator stops in the fully-closed position. The roof actuator operates (OPEN operation), opening the roof.

Item	Condition
5th bow full close detection switch	: ON → OFF
5th bow actuator	: DOWN → STOP
Roof actuator (LH and RH)	: OPEN
Roof full close detection switch	: OFF → ON

- CONDITION: OP 9
  While the roof is opening, the 5th bow actuator moves the 5th bow up.

Item	Condition
Roof actuator (LH and RH)	: OPEN
5th bow actuator	: UP
5th bow full close detection switch	: OFF → ON
Roll bar interference prevention switch	: OFF → ON

- CONDITION: OP 10
  While the roof is opening, the 5th bow stops in the fully-open position.

Item	Condition
Roof actuator (LH and RH)	: OPEN
5th bow full open detection switch	: OFF → ON
5th bow actuator	: UP → STOP
Body interference prevention switch	: OFF → ON

- CONDITION: OP 11
  The roof is stored and stops motion. The storage lid actuator operates (DOWN operation) to lower the storage lid.
  The passenger seat also returns to its original position.

Item	Condition
Roof full open detection switch	: OFF → ON
Roof actuator (LH and RH)	: OPEN → STOP
Storage lid actuator (LH and RH)	: CLOSE
Storage lid full open detection switch	: ON → OFF
Storage lid full close detection switch (LH)	: ON → OFF

- CONDITION: OP 12
  At the fully-closed position, the storage lid inverts and stops. The passenger seat tilts back. Opening operation is completed, and the indicator lamp turns OFF.

Item	Condition
Storage lid full close detection switch (RH)	: ON → OFF
Storage lid actuator (LH and RH)	: CLOSE → OPEN → STOP
Indicator lamp	: ON → OFF

OPERATION: FULL OPEN → FULL CLOSE

Refer to RF-21, "State Chart" .

- CONDITION: FULL OPEN

Item	Condition
5th bow half-latch switch	: ON
5th bow full-latch switch	: ON
5th bow ending switch	: ON
5th bow full open detection switch	: ON
5th bow full close detection switch	: ON
Storage lid full open detection switch	: OFF
Storage lid full close detection switch LH	: OFF
Storage lid full close detection switch RH	: OFF
Roof full open detection switch	: ON
Roof full close detection switch	: ON
Body interference prevention switch	: ON
Roll bar interference prevention switch	: ON

- CONDITION: CL 1
  When the soft top switch is pressed to the CLOSE side, the indicator lamp illuminates, storage lid unlock actuator also operates, releasing the storage lid lock.

Item	Condition
Soft top switch (CLOSE)	: ON (Until the operation ends)
Indicator lamp	: ON
Storage lid unlock actuator	: ON
Storage lid full close detection switch (RH)	: OFF → ON

- CONDITION: CL 2
  Windows activate to the fully-open position and the passenger seat tilts forward by approximately 6 degrees by power window down request signal. Storage lid actuator operates to raise the storage lid. When passenger seat tilts forward by approximately 6 degrees, seat back position signal is turned ON.

Item	Condition
Storage lid full close detection switch (LH)	: OFF → ON
Storage lid actuator (LH and RH)	: UP
Power window down request signal	: ON
Storage lid unlock actuator	: ON → OFF
Seat back position signal	: OFF → ON

- CONDITION: CL 3
  The storage lid stops at the fully-open position. The roof actuator operates (CLOSE operation) to close the roof.

Item	Condition
Storage lid full open detection switch	: OFF → ON
Storage lid actuator (LH and RH)	: OPEN → STOP
Roof actuator (LH and RH)	: CLOSE
Roof full open detection switch	: ON → OFF
Body interference prevention switch	: ON → OFF

- CONDITION: CL 4
  While the roof is closing, the 5th bow actuator operates (DOWN operation) to lower the 5th bow.

Item	Condition
Roof actuator (LH and RH)	: CLOSE
5th bow actuator	: DOWN
5th bow full open detection switch	: ON → OFF

- CONDITOIN: CL 5
  The roof is closing, and 5th bow is lowering.

Item	Condition
Roof actuator (LH and RH)	: CLOSE
5th bow full close detection switch	: ON → OFF
5th bow actuator	: DOWN → STOP
Roll bar interference prevention switch	: ON → OFF

- CONDITION: CL 6
  The roof stops at the fully-closed position. The 5th bow actuator inverts, raising the 5th bow.

Item	Condition
Roof full close detection switch	: ON → OFF
Roof actuator (LH and RH)	: CLOSE → STOP
5th bow actuator	: UP
5th bow full close detection switch	: OFF → ON

- CONDITON: CL 7
  The 5th bow stops in the fully-open position. The storage lid actuator operates (DOWN operation) lower the storage lid.

Item	Condition
5th bow full open detection switch	: OFF → ON
5th bow actuator	: UP → STOP
Storage lid actuator (LH and RH)	: CLOSE
Storage lid full open detection switch	: ON → OFF
Storage lid full close detection switch (LH)	: ON → OFF

- CONDITION: CL 8
  The storage lid inverts and stops at the fully-closed position. The 5th bow actuator operates (DOWN operation) to lower the 5th bow.

Item	Condition
Storage lid full close detection switch (RH)	: ON → OFF
Storage lid actuator	: CLOSE → OPEN → STOP
5th bow actuator	: DOWN
5th bow full open detection switch	: ON → OFF

- CONDITION: CL 9
  The 5th bow is lowering.

Item	Condition
5th bow actuator	: DOWN
5th bow full close detection switch	: ON → OFF

- CONDITION: CL 10
  5th bow auto closure operates. The passenger seat tilts back. Closing operation is completed, and the indicator lamp turns OFF. The passenger seat also returns to its original position.

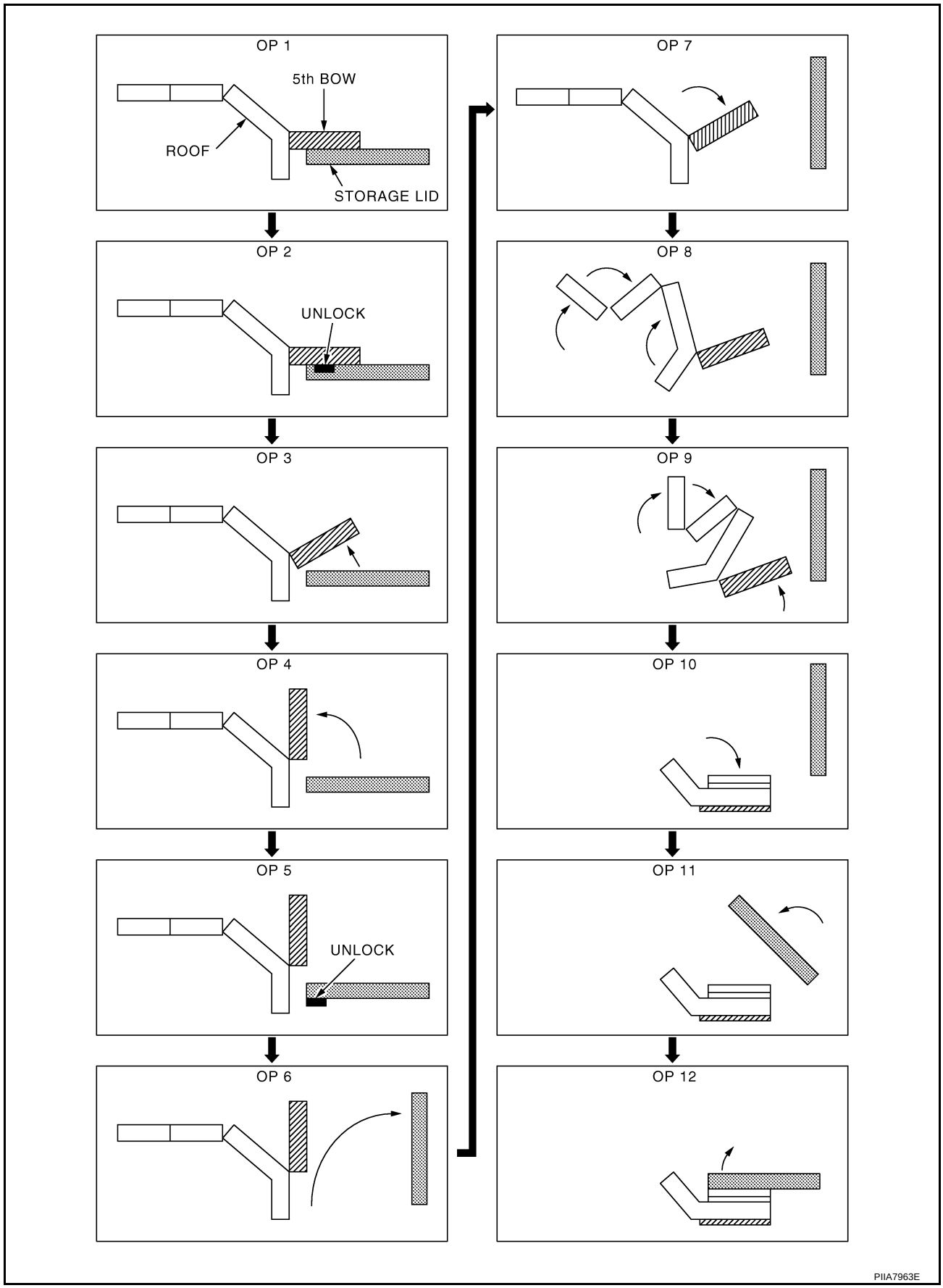
Item	Condition
5th bow actuator	: DOWN → STOP
5th bow half-latch switch	: ON → OFF
5th bow full-latch switch	: ON → OFF
5th bow ending switch	: ON → OFF
5th bow closure motor	: CLOSE → STOP
Indicator lamp	: ON → OFF

Operation Chart

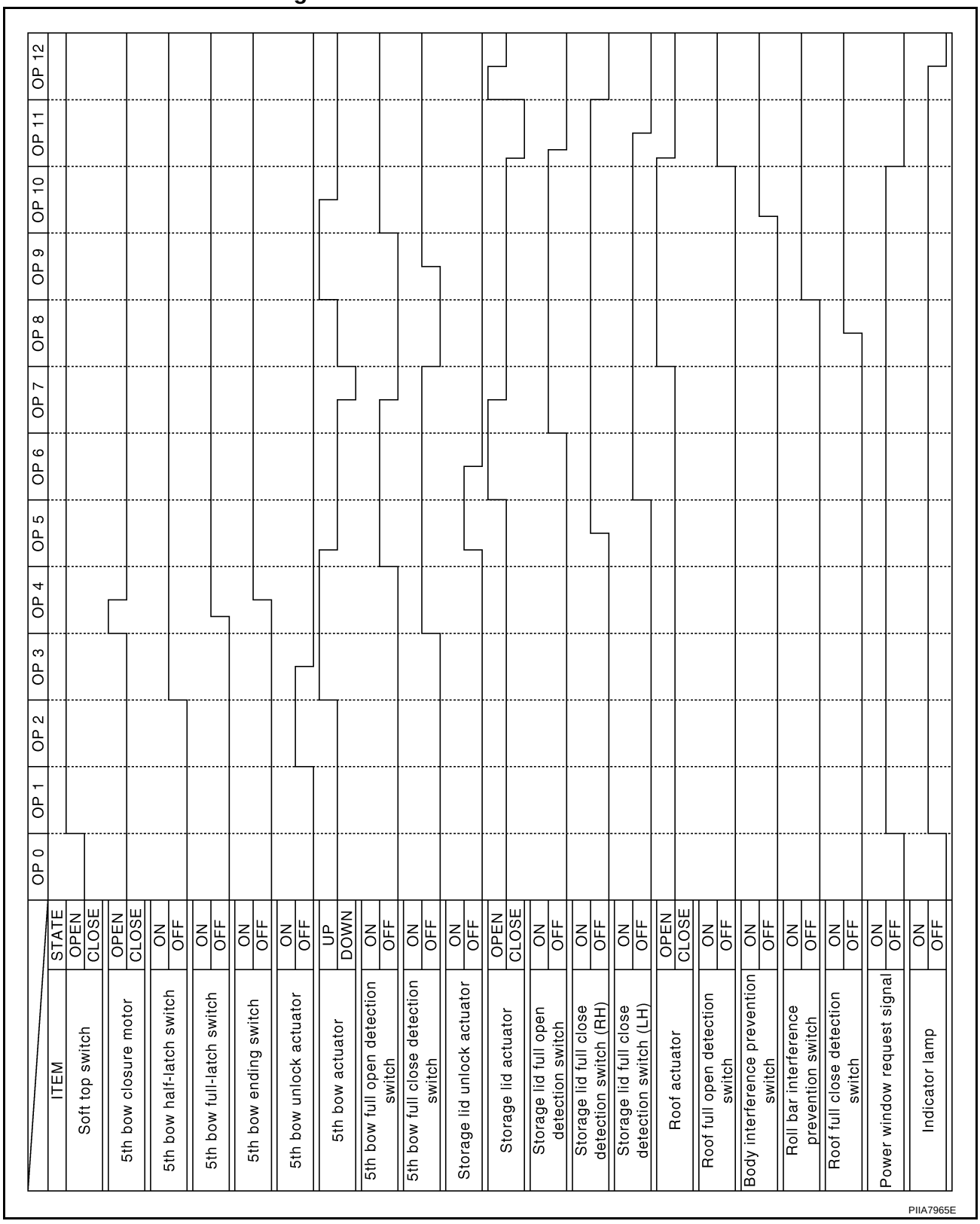
AIS005TO

CLOSE → OPEN

State Chart

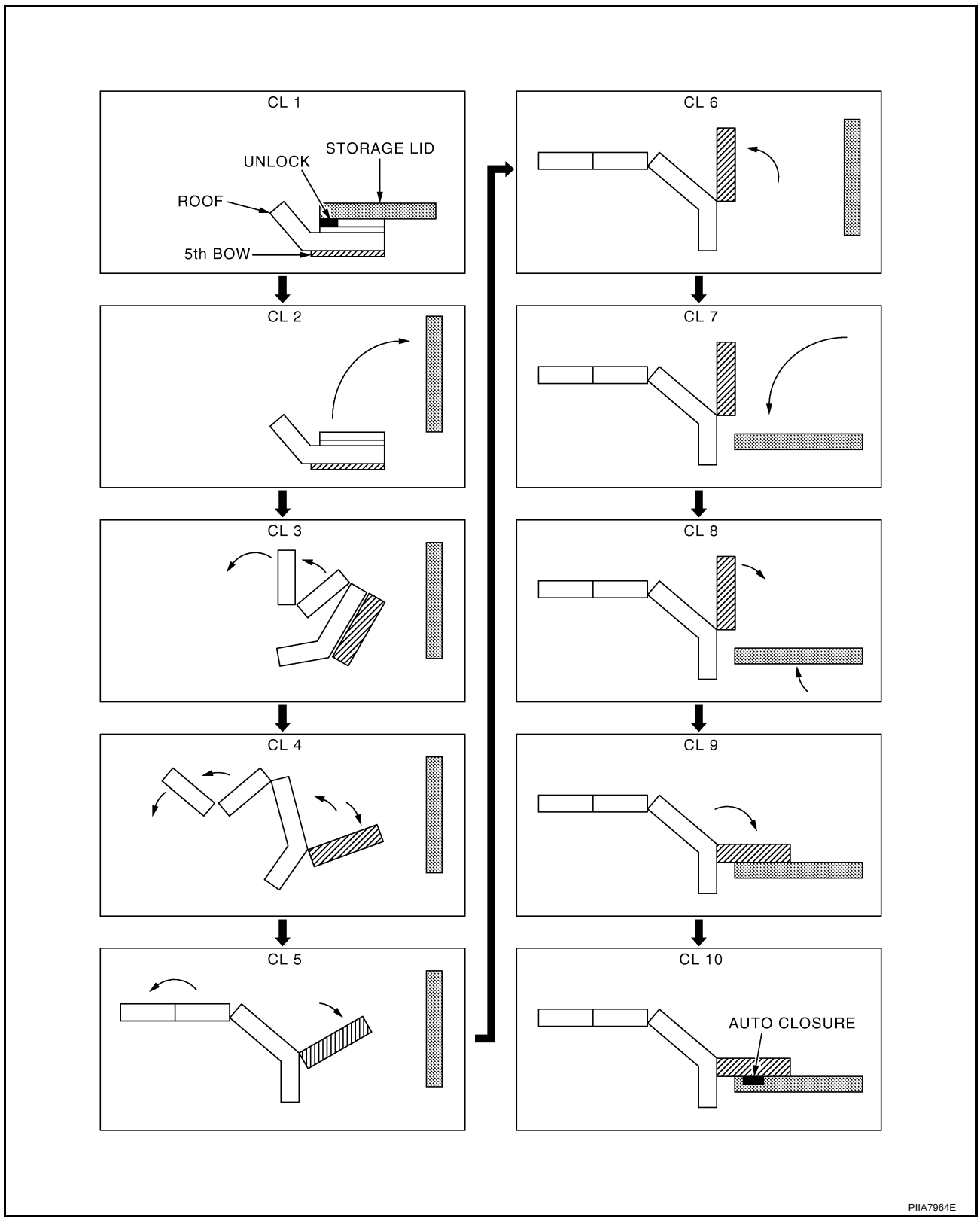


Each Switch and Actuator Signal Chart

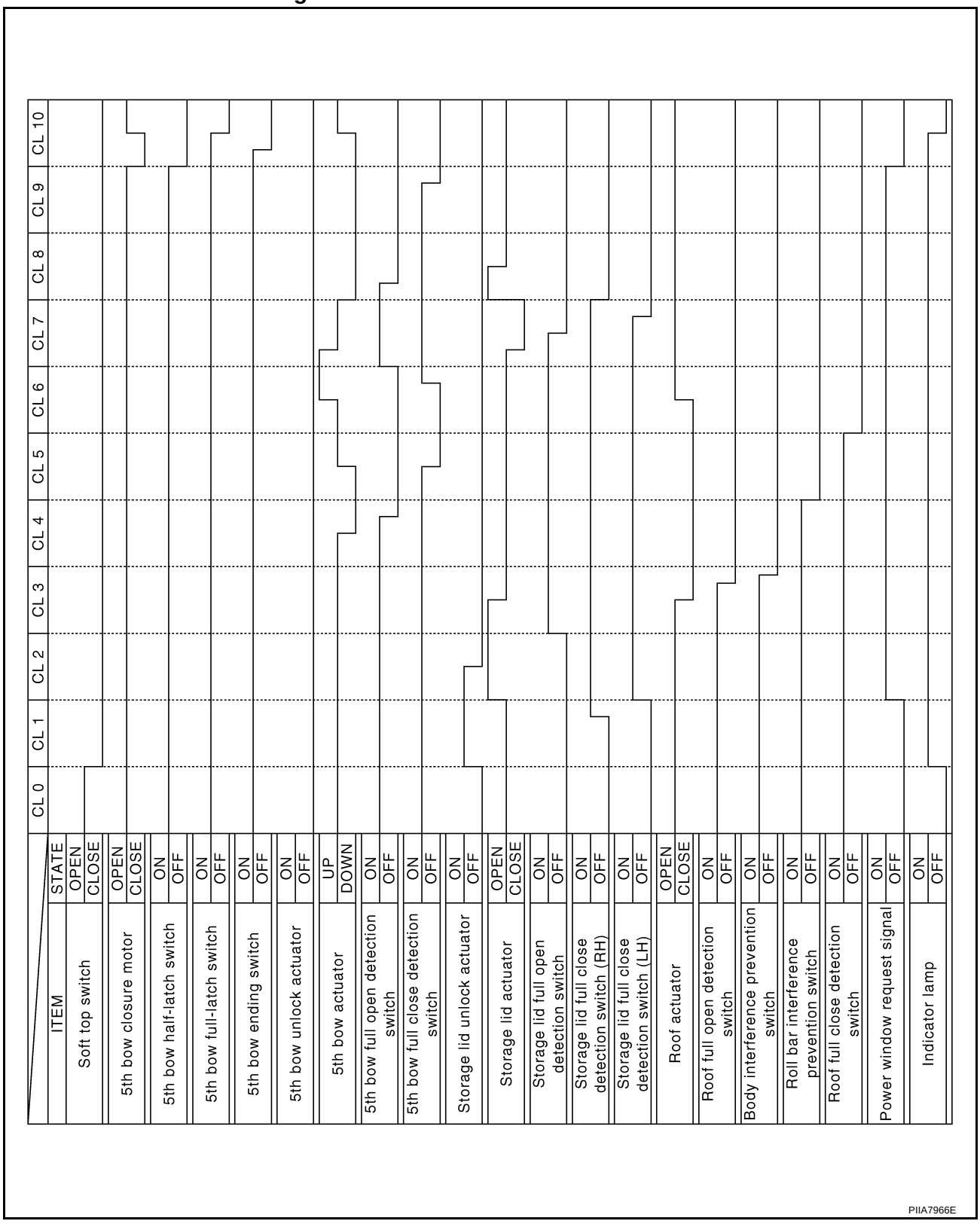


OPEN → CLOSE

State Chart



Each Switch and Actuator Signal Chart



Indicator Lamp

AIS005TP

The indicator lights, turns off or blinks according to the operating state.

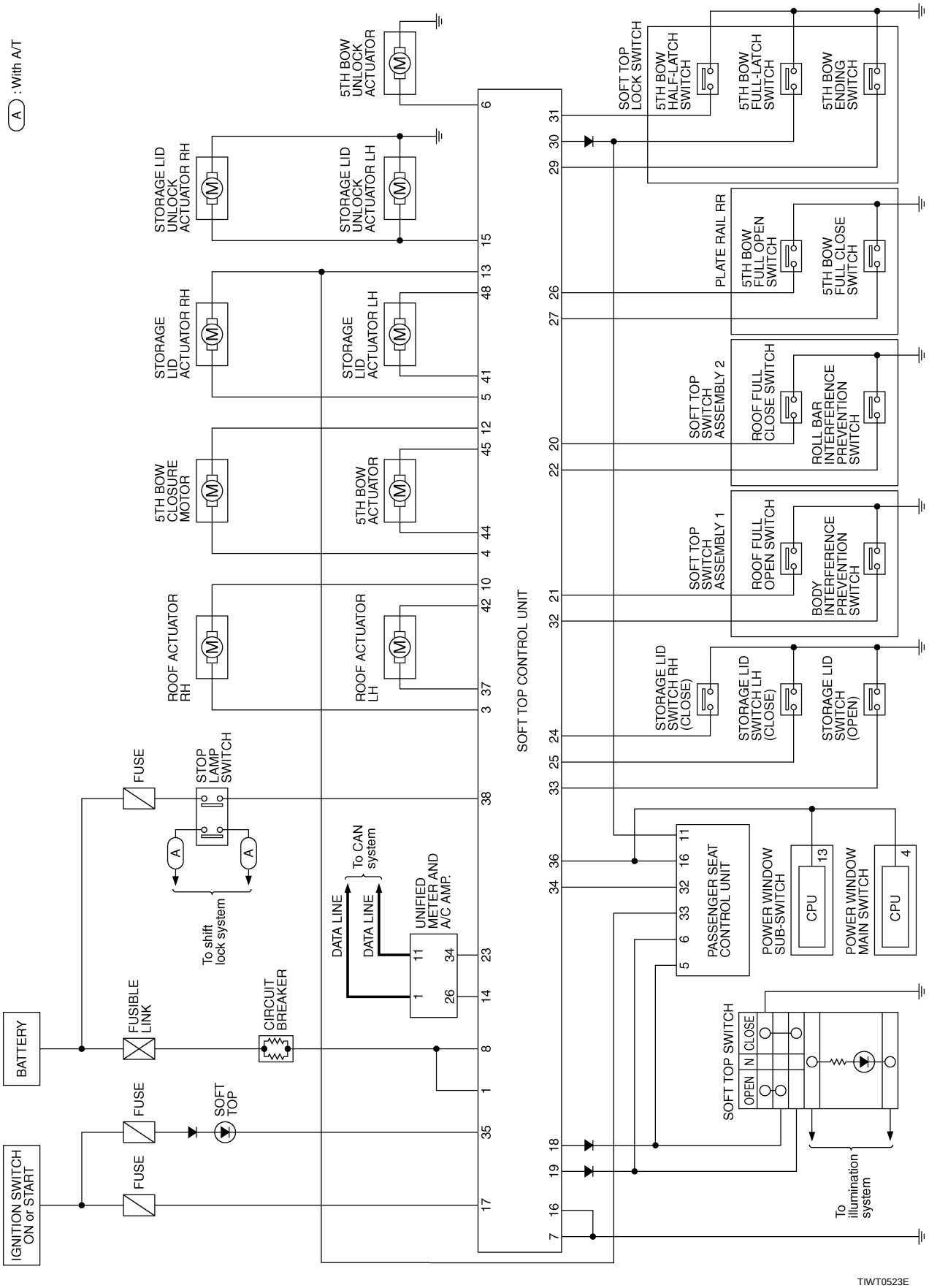
Turns OFF : The operation stops or completes or any switch is malfunctioning
Lights : The soft top is operating or the operation stops on the way
Blinks : The soft top can not operate or stops operation by malfunction

State of roof		The operation stops when the soft top is;		Operation
		full open or full close	in position on the way	
Operational condition		Turning off	Lighting	Lighting
Out of operational condition	When battery voltage decreases remarkably	Turning off	Lighting	Lighting
	Brake pedal is not depressed	Turning off	Lighting	Lighting
	Vehicle speed is 5 km/h (3 MPH) or more	Turning off	Lighting	Lighting
	Ignition switch: OFF	Turning off	Turning off*	Turning off*
Malfunction of	any switch of the system	Turning off	Lighting	Blinking
	soft top control unit	Blinking	Blinking	Blinking
	vehicle speed signal	Blinking	Blinking	Blinking

*: The soft top operates for approximately 30 seconds after turn ignition switch OFF.

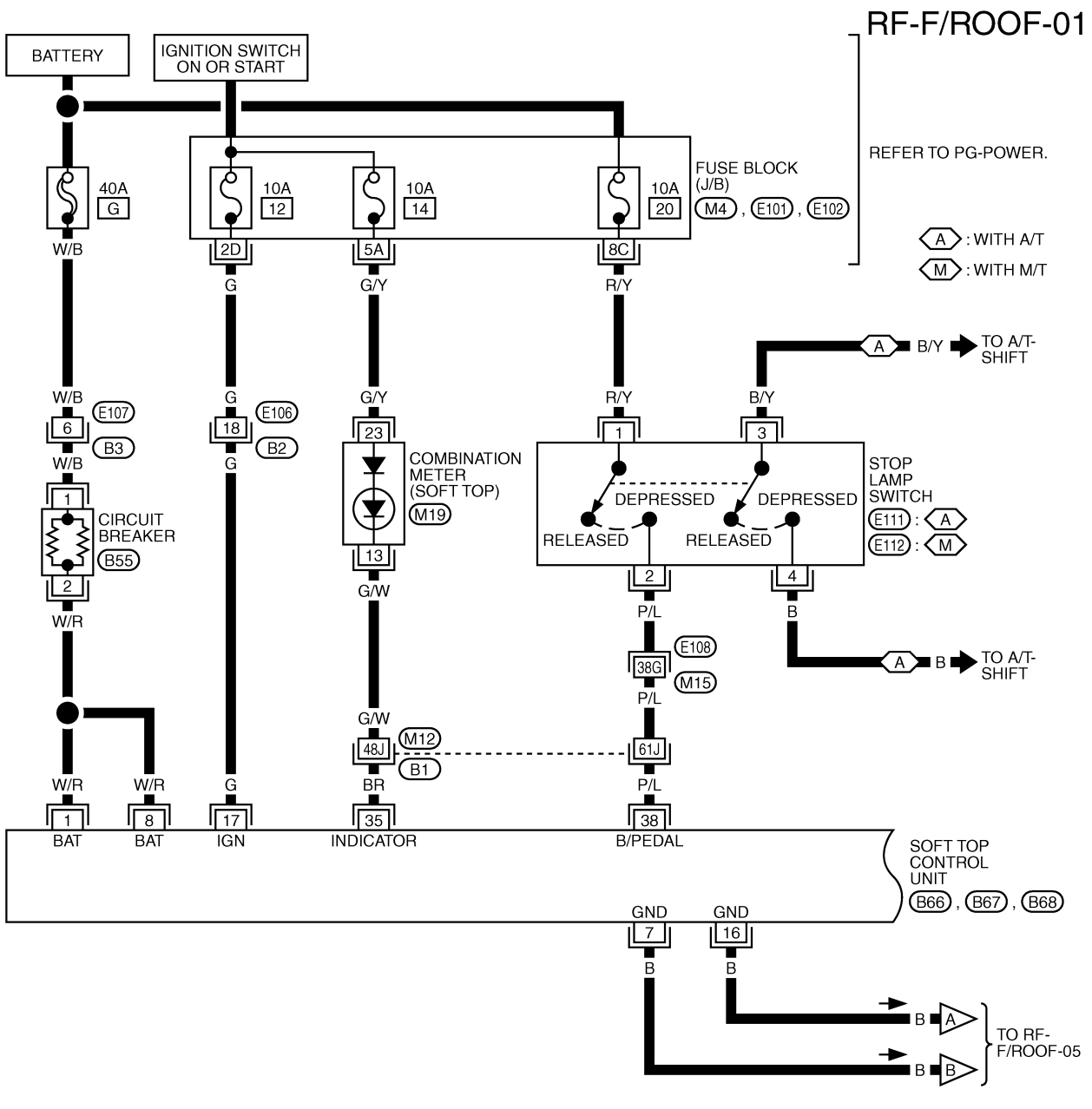
Schematic

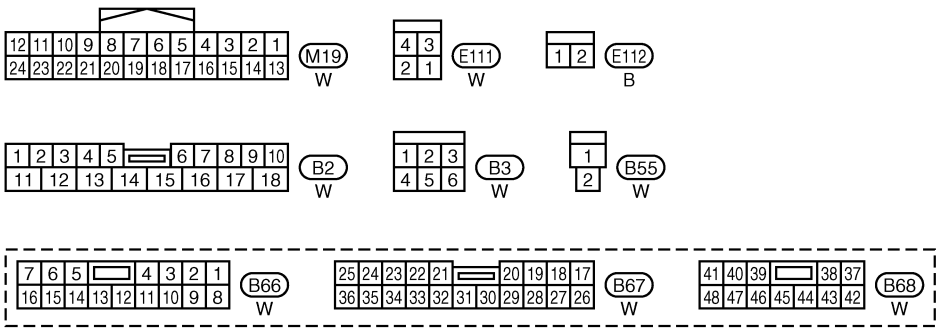
AIS005TQ



Wiring Diagram

AIS005TR





REFER TO THE FOLLOWING.
E108 , B1 -SUPER MULTIPLE JUNCTION (SMJ)
M4 , E101 , E102 -FUSE BLOCK- JUNCTION BOX (J/B)

TIWT0765E