SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

EIS008TY

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 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 Work

EIS008P8

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their operation.
- Check the lubrication level, damage, and wear of each part. If necessary, grease or replace it.

Wiring Diagnosis and Trouble Diagnosis

EIS008P9

When you read wiring diagrams, refer to the following:

- GI-14, "How to Read Wiring Diagrams"
- PG-2, "POWER SUPPLY ROUTING"

When you perform trouble diagnosis, refer to the following:

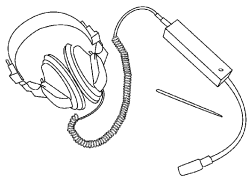
- GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- GI-23, "How to Perform Efficient Diagnosis for an Electrical Incident"
  Check for any Service bulletins before servicing the vehicle.

PREPARATION

PFP:00002

Commercial Service Tools

EIS008PQ

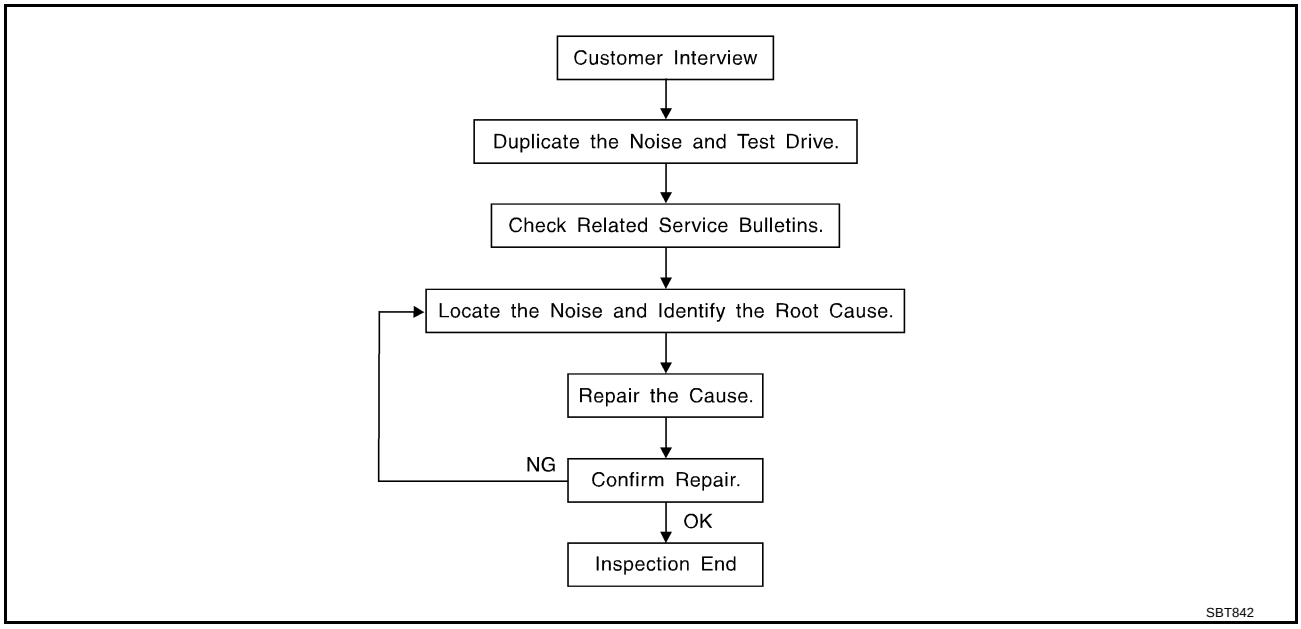
Tool name	Description
Engine ear  SIIA0995E	Location the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS008PR



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 BL-10, "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 (Engine Ear or 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 BL-8, "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 are 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.
Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60×85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact.Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) think, 50 × 50 mm (1.97 × 1.97 in)
INSULATOR (Light foam block)
80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)

FELT CLOTHTAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll
The following materials, not available through NISSAN Parts Department, 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

EIS008PS

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. 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 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. 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. Rear seatback 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

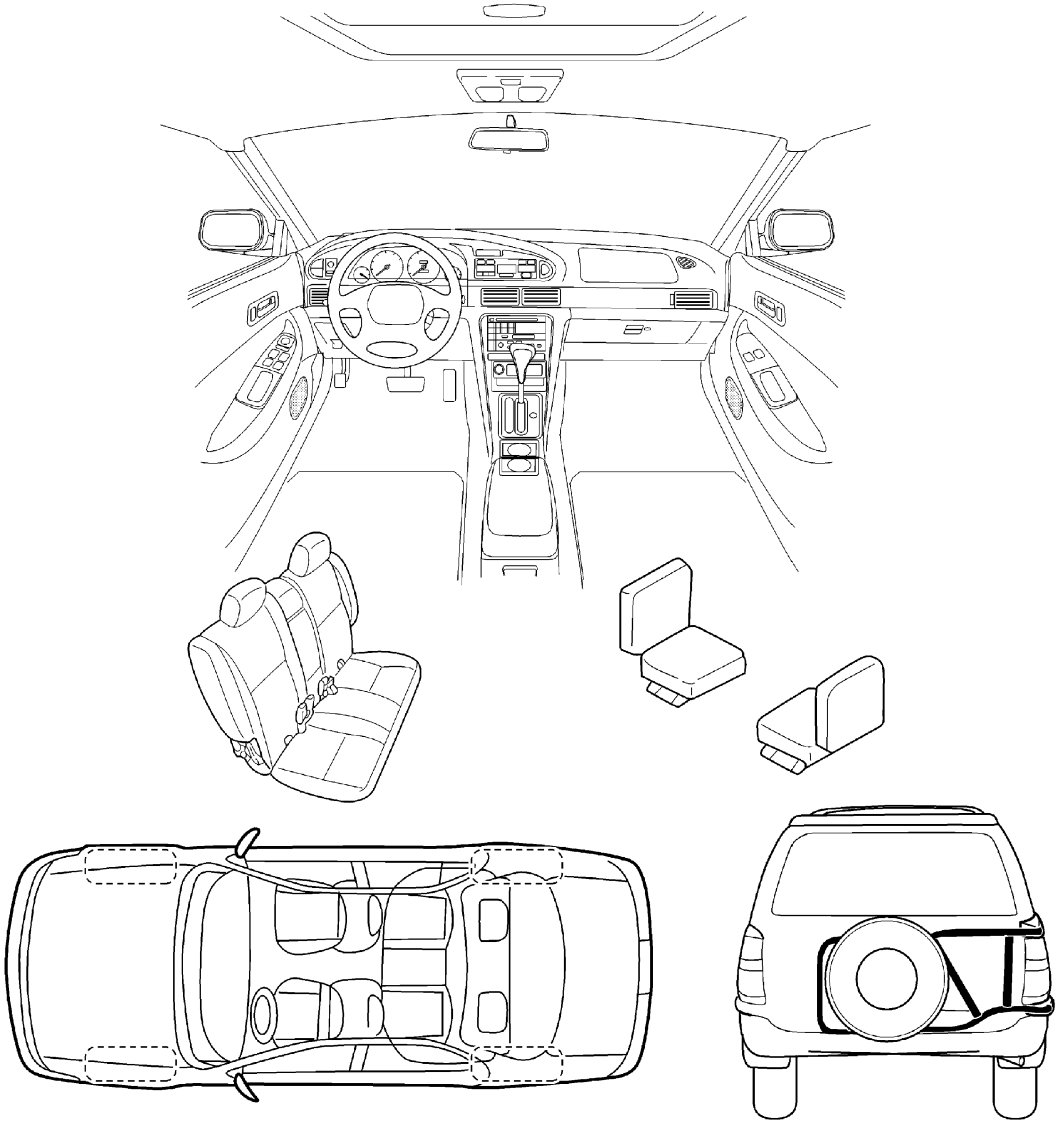
EIS008PT

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.

PIIB0723E

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: _____

This form must be attached to Work Order

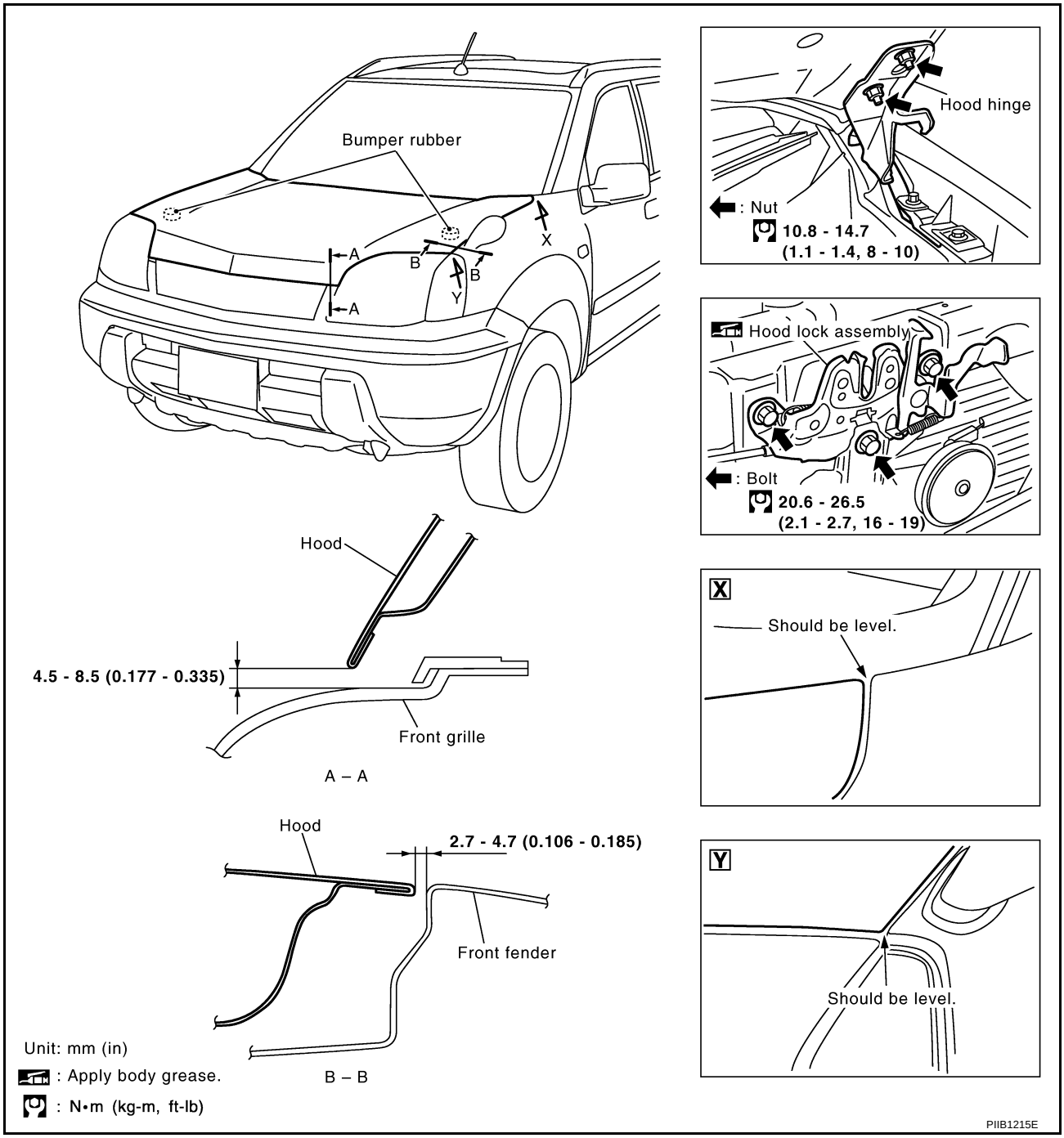
SBT844

HOOD

PFP:65100

Fitting Adjustment

EIS009QH



LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

1. Remove hood lock assembly, loosen the hood hinge nuts and close the hood.
2. Adjust the lateral and longitudinal clearance, and open the hood to tighten the hood hinge mounting bolts to the specified torque.
3. Install the hood lock temporarily, and align the hood striker and lock so that the centers of striker and lock become vertical viewed from the front, by moving the hood lock laterally.
4. Tighten hood lock mounting bolts to the specified torque.

FRONT END HEIGHT ADJUSTMENT

1. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to1.5 mm (0.04 to 0.059 in) lower than the fender.

2. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the hood lock mounting bolts to the specified torque.

CAUTION:

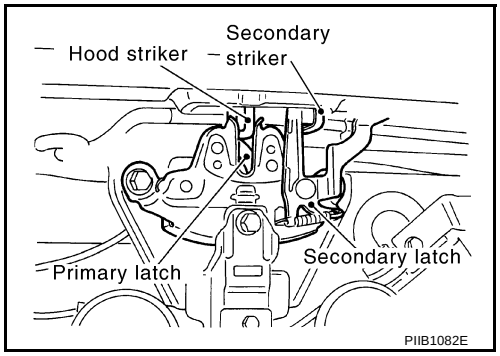
Adjust right/left clearance between hood and each part to the following specification.

Hood and front grille (A–A)	**: Less than 1.0 mm (0.04 in)**
Hood and fender (B–B)	**: Less than 1.0 mm (0.04 in)**

SURFACE HEIGHT ADJUSTMENT

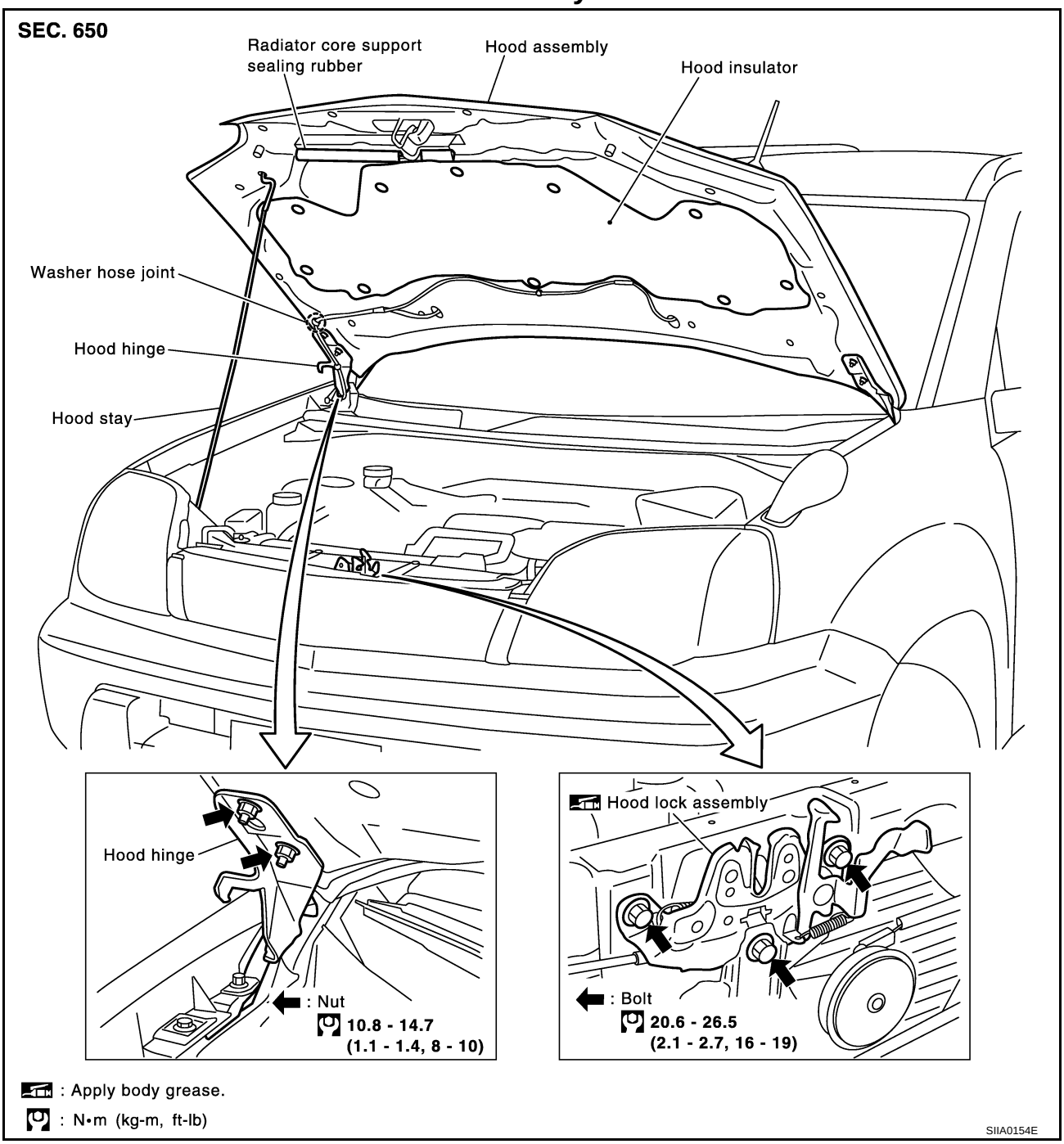
1. Remove hood lock, and adjust the surface height difference of hood, fender and headlamp according to the fitting standard dimension, by rotating RH and LH bumper rubbers.
2. Install hood lock temporarily, and move hood lock laterally until the centers of striker and lock become vertical when viewed from the front.
3. Make sure that the hood lock secondary latch is properly engaged with the secondary striker with hood's own weight.
4. Make sure that the hood lock primary latch is securely engaged with the hood striker with hood's own weight by dropping hood from approx. 200 mm(7.87 in) height.

   CAUTION:
   Do not drop hood from a height of 300 mm (11.81 in) or more.
5. Move hood lockup and down until striker smoothly engages the lock when the hood is closed.
6. When pulling the hood opener lever gently, make sure that front end of the hood rises by approximately 20 mm (0.79 in) and that hood striker and hood lock primary latch is disengaged. Also make sure that hood opener returns to the original position.
7. After adjustment, tighten lock bolts to the specified torque.



Removal and Installation of Hood Assembly

EIS009QI



REMOVAL

1. Disconnect washer hose at the connection.
2. Remove hood hinge mounting nuts on the hood and then the hood assembly.

CAUTION:

Operate with two workers, because of its heavy weight.

INSTALLATION

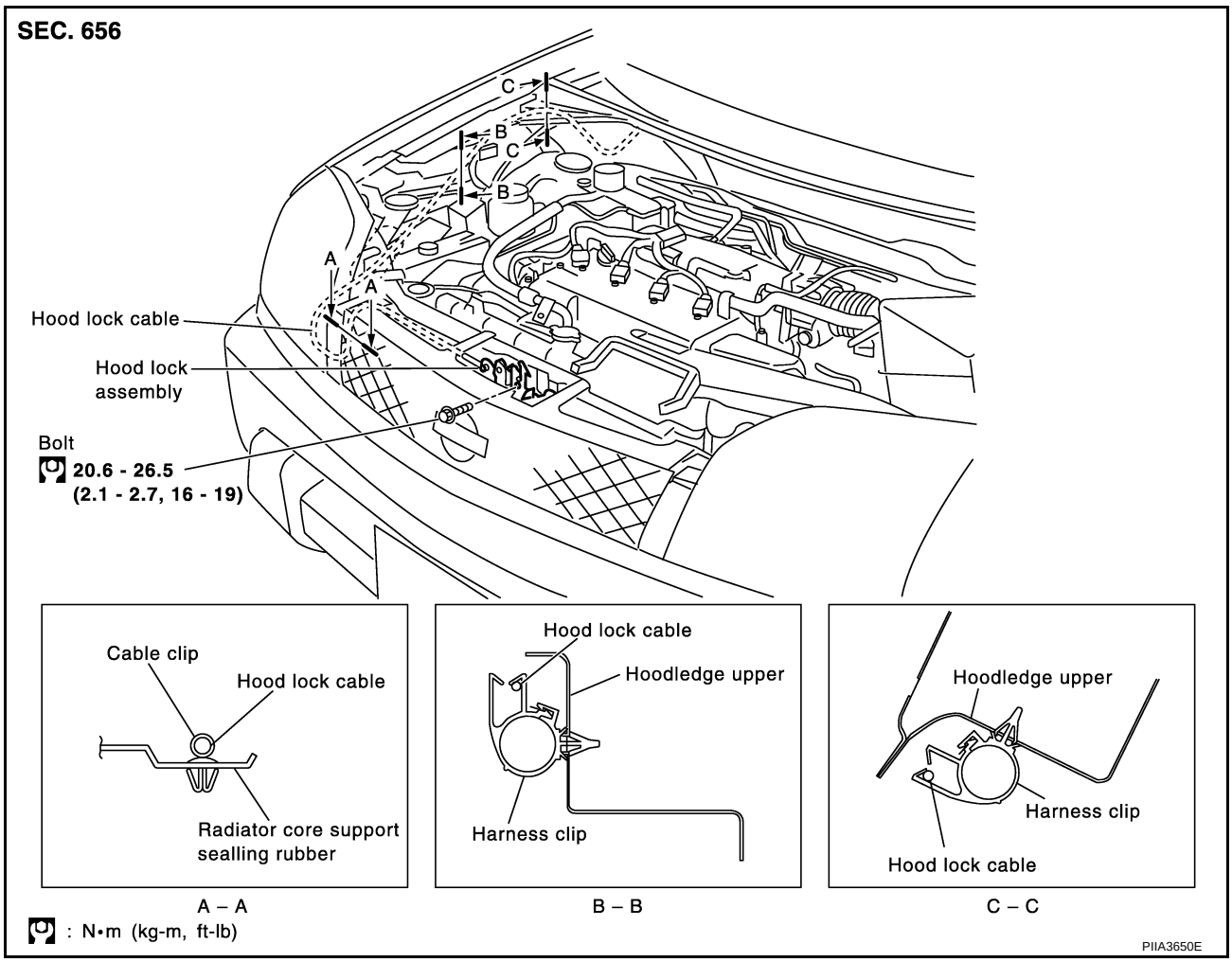
Install in the reverse order of removal.

CAUTION:

- **Before installing hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.**
- **After installing, perform hood fitting adjustment. Refer to BL-12, "Fitting Adjustment" .**

Removal and Installation of Hood Lock Control

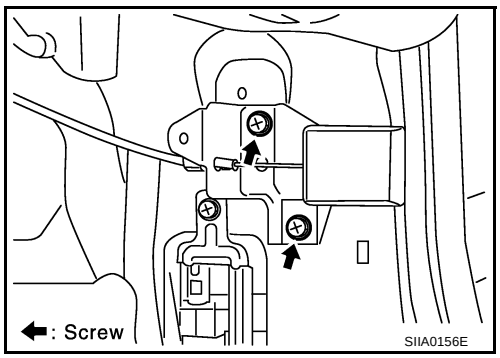
EIS009QJ



REMOVAL

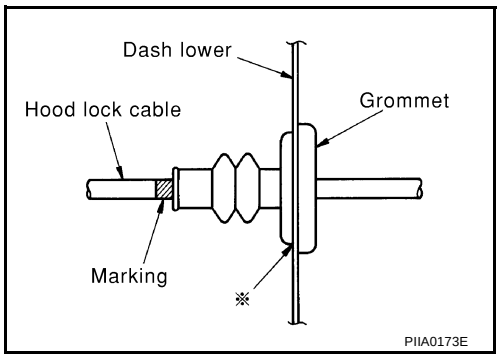
1. Remove hood lock cable from hood lock and clip of upper portion of radiator core support and hood ledge.
2. Remove dash side finisher. Refer to EI-35, "BODY SIDE TRIM" .
3. Remove attaching screw and then the hood opener.
4. Remove dash panel grommet and pull hood lock cable toward the passenger compartment.

   NOTE:
   When pulling the cable, be careful not to strip or scratch the outer surface.

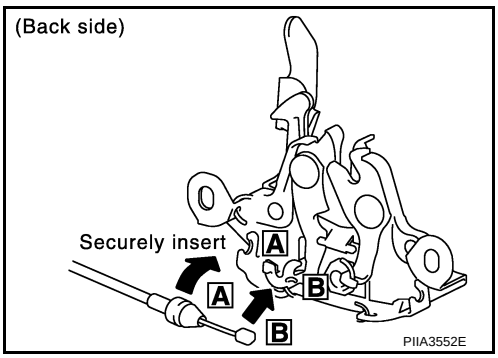


INSTALLATION

1. Pass hood lock cable through the opening while keeping the winding radius 100 mm (3.94 in) or larger.
2. After confirming that the grommet is properly positioned, push the grommet securely into the hole.
3. Apply sealant to the area on the grommet indicated with the * mark.



4. Connect cable securely to the lock.
5. After connection, confirm proper adjustment and operation for both hood lock and hood opener.



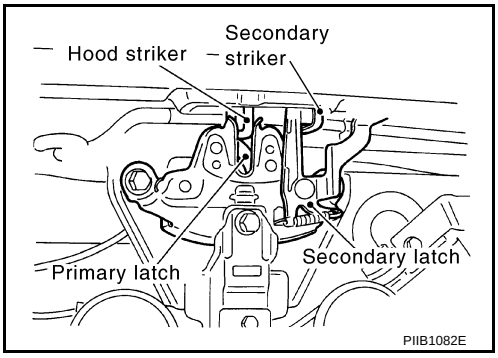
Hood Lock Control Inspection

EIS009QK

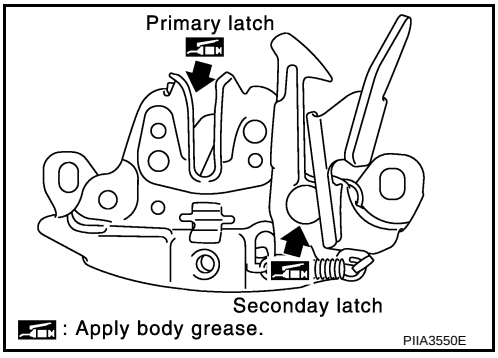
CAUTION:
If the hood lock cable is bent or deformed, replace it.

1. Make sure that the hood lock secondary latch is securely engaged with the secondary striker with hood's own weight.
2. Make sure that the hood lock primary latch is securely engaged with the hood striker with hood's own weight by dropping it from approx 200 mm (7.87 in) height.

   CAUTION:
   Do not drop hood from a height of 300 mm (11.81 in) or more.



3. When pulling hood opener lever gently, make sure that front end of the hood rises by approximately 20 mm (0.79 in) and that hood striker and hood lock primary latch are disengaged. Also make sure that hood opener returns to the original position.
4. Confirm hood lock is properly lubricated. If necessary, apply “body grease” at the point shown in the figure.

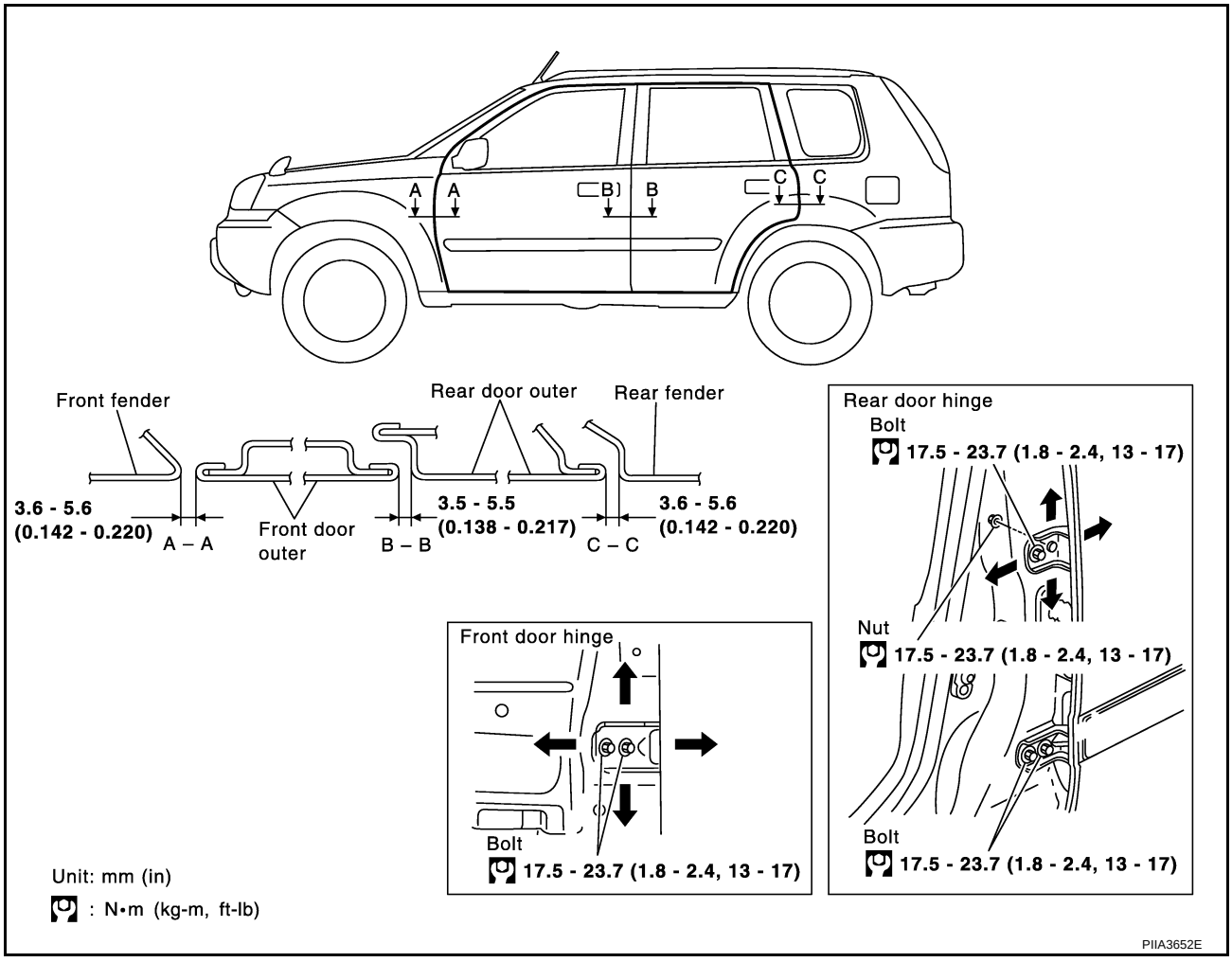


DOOR

PFP:80100

Fitting Adjustment

EIS00A67



FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove fender protector. Refer to EI-21, "FENDER PROTECTOR" .
2. Working from the inside the fender, loosen hinge mount bolts on the body. Lift rear end of the front door to adjust clearance and surface difference properly.

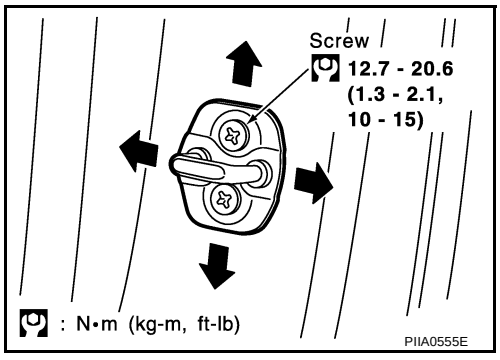
REAR DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove upper and lower garnishes on the center pillar. Refer to EI-35, "BODY SIDE TRIM" .
2. Loosen mounting bolts from outside of vehicle, mounting nuts from inside of vehicle. Open rear door. Raise rear end of it to adjust.

STRIKER ADJUSTMENT

Adjust striker until it is parallel to the lock engagement direction.



Removal and Installation of Front Door

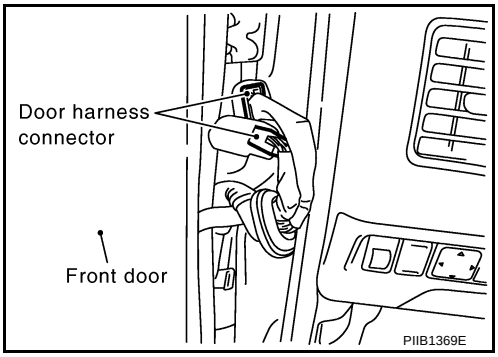
EIS00A68

CAUTION:

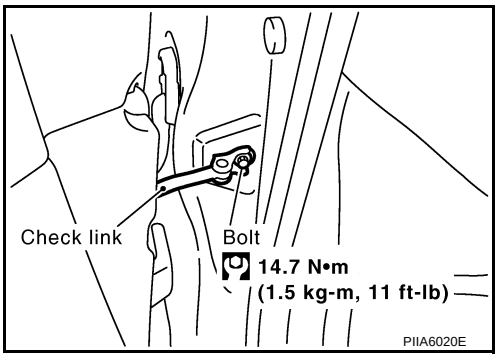
- **When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.**
- **When removing and installing front door assembly, be sure to carry out the fitting adjustment.**
- **Operate with two workers, because of its heavy weight.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **Check front door open/close operation after installation.**

REMOVAL

1. Grommet is pulled out, and the front door harness connector is detached.

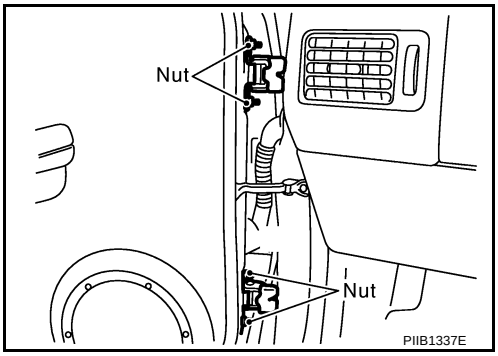


2. Remove the mounting bolts of the check link on the vehicle.



3. Remove the door-side hinge mounting nuts, and remove the door assembly.

: **20.6 N·m (2.1 kg-m, 15 ft-lb)**



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door

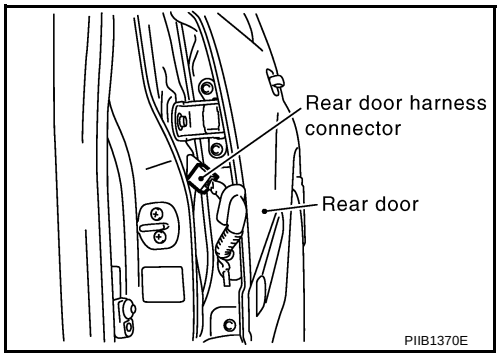
EIS00A69

CAUTION:

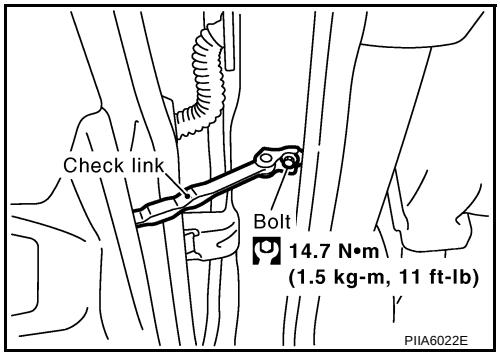
- **When removing and installing the rear door assembly, support the door with a jack and cloth to protect the door and body.**
- **When removing and installing rear door assembly, be sure to carry out the fitting adjustment.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **Operate with two workers, because of its heavy weight.**
- **Check rear door open/close operation after installation.**

REMOVAL

1. Grommet is pulled out, and the Rear door harness connector is detached.

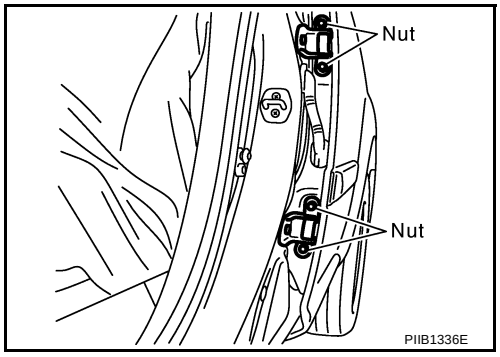


2. Remove the mounting bolts of the check link on the vehicle.



3. Remove the door-side hinge mounting nuts, and remove the door assembly.

   : 20.6 N·m (2.1 kg-m, 15 ft-lb)



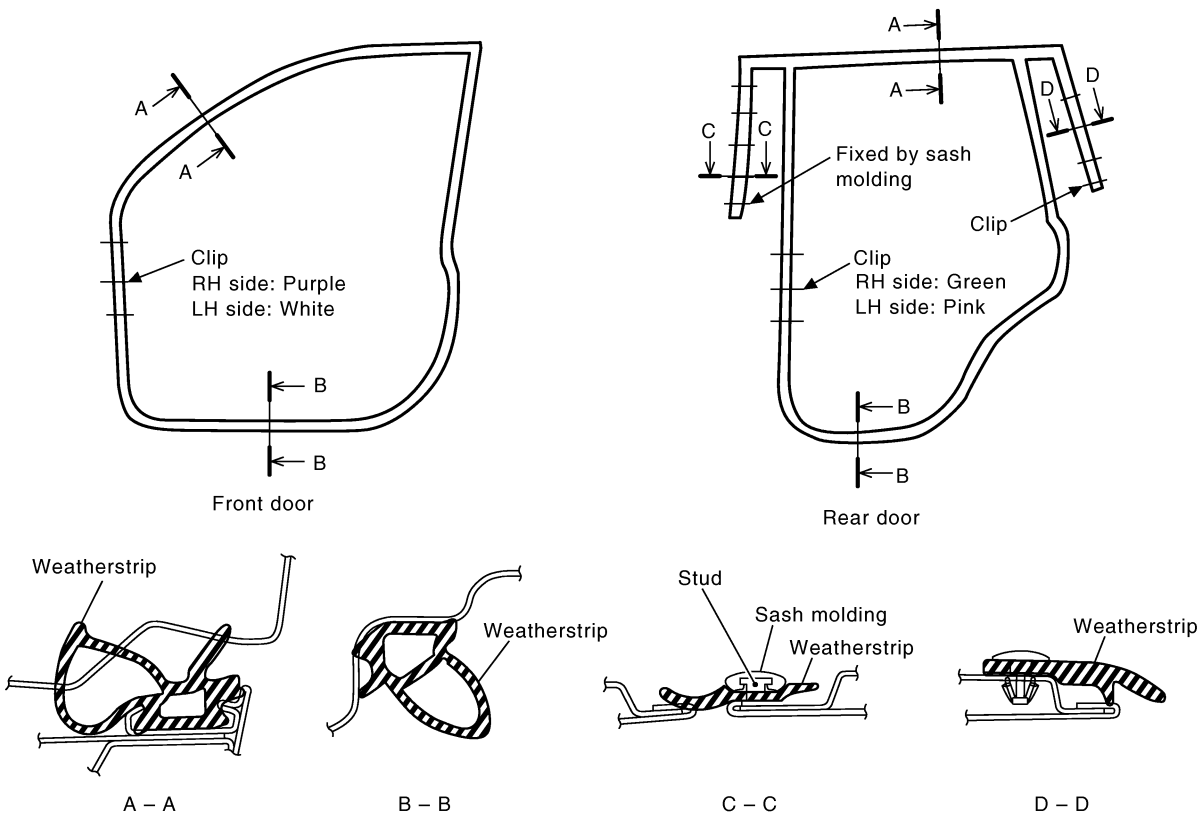
INSTALLATION

Install in the reverse order of removal.

Door Weatherstrip

EIS00A6A

SEC. 800•820



REMOVAL

1. Remove the mounting bolts of the check link on the vehicle. Refer to BL-19, "Removal and Installation of Front Door" or BL-19, "Removal and Installation of Rear Door" .
2. Remove the weatherstrip clips and remove weatherstrip.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

INSTALLATION

Install in the reverse order of removal.

POWER DOOR LOCK SYSTEM

PFP:24814

System Description

EIS001SE

OPERATION

Power door lock/unlock operation by door key cylinder

- With the key inserted into driver's door key cylinder, turning it to LOCK will lock all doors.
- With the key inserted into driver's door key cylinder, turning it to UNLOCK will unlock all doors.

Power door lock/unlock operation by lock/unlock switch

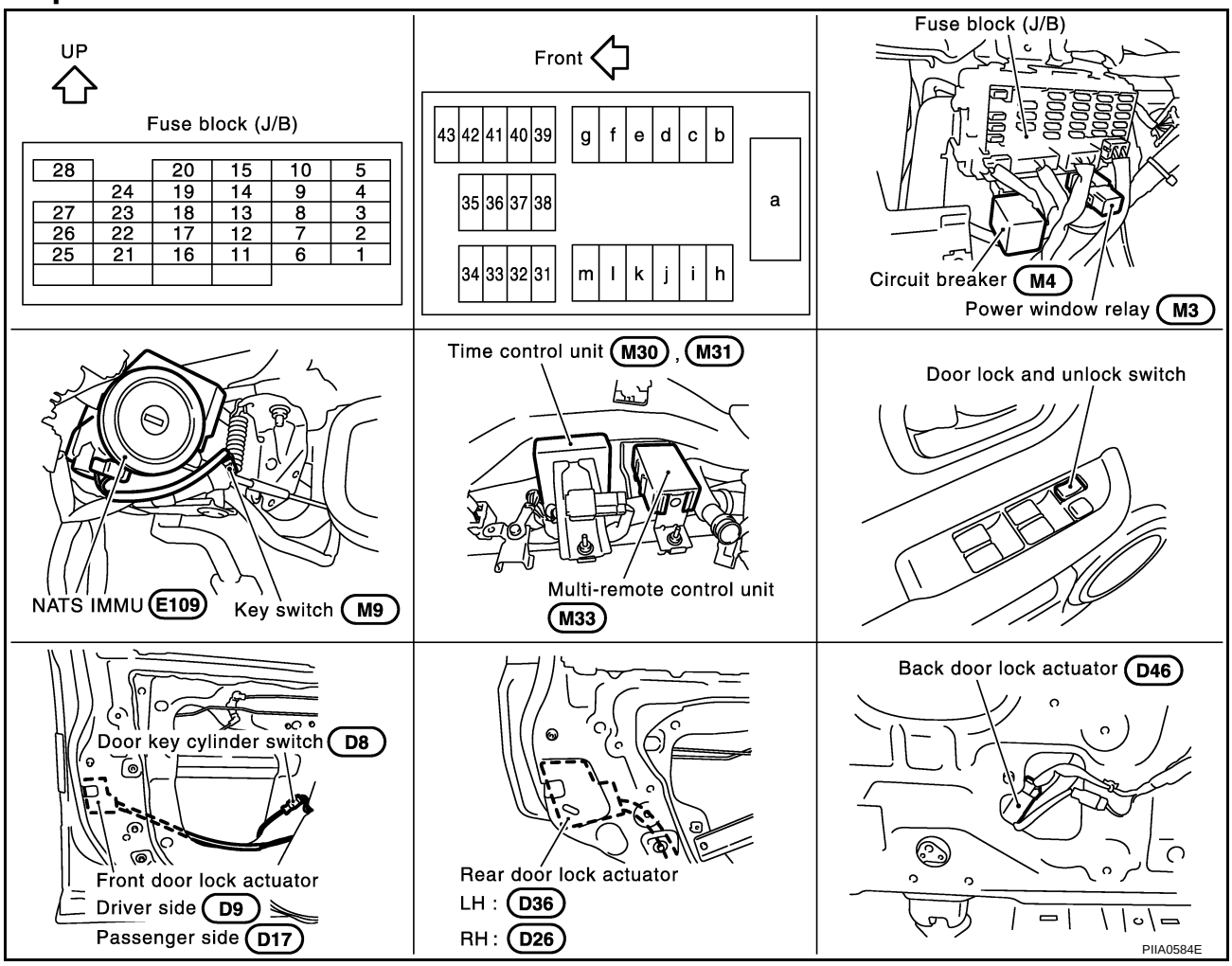
- With lock/unlock switch setting to LOCK will lock all doors.
- With lock/unlock switch setting to UNLOCK will unlock all doors.

Key reminder system

- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock knob, key or multi-remote controller to “LOCK” locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

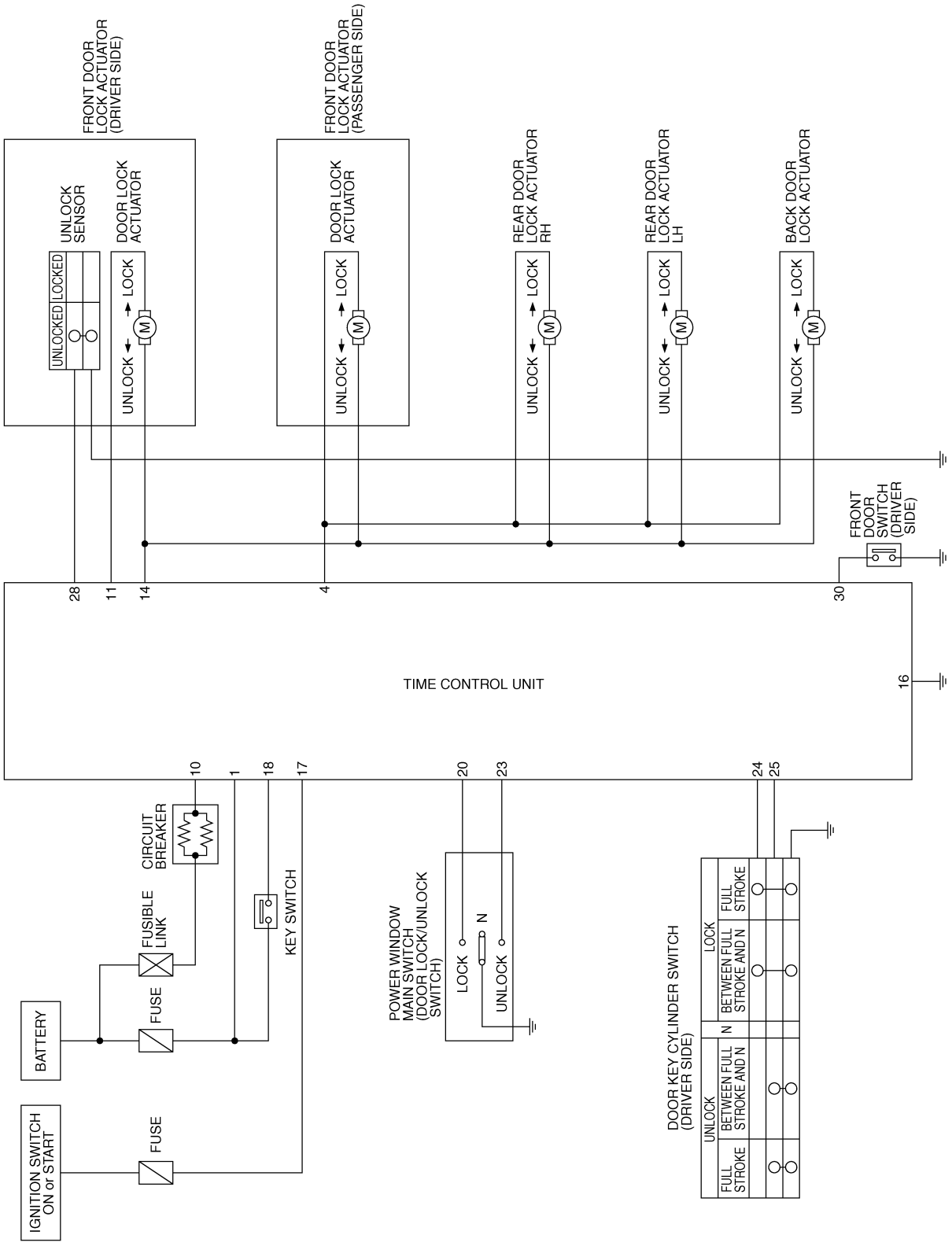
Component Parts and Harness Connector Location

EIS004DC



Schematic

EIS004DD

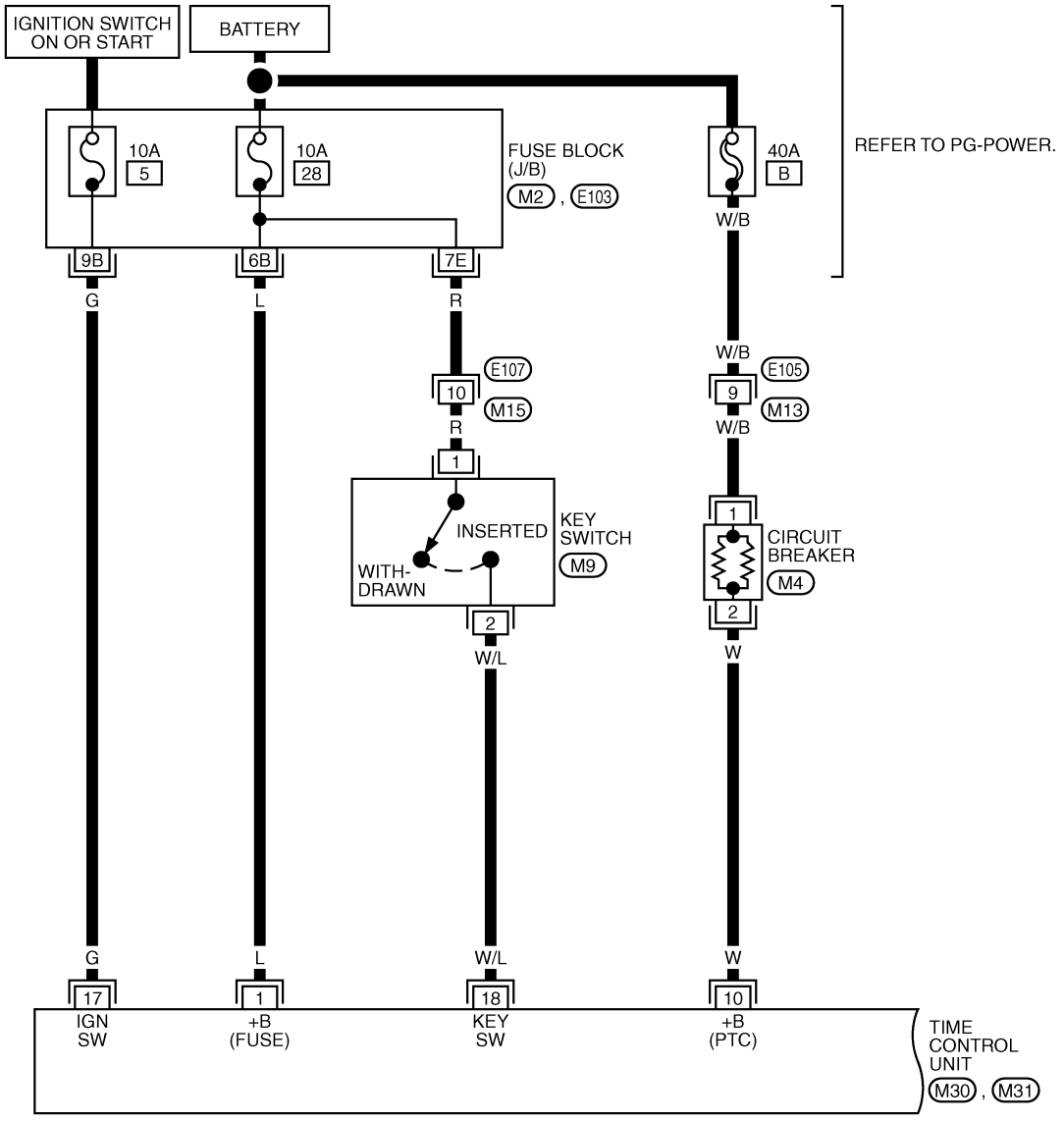


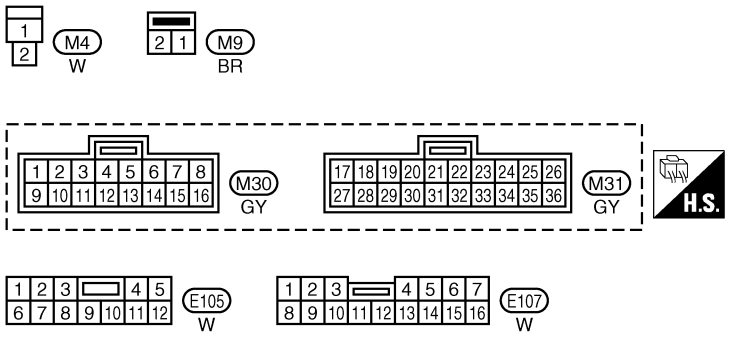
TIWA0003E

Wiring Diagram — D/LOCK —

EIS004DE

BL-D/LOCK-01

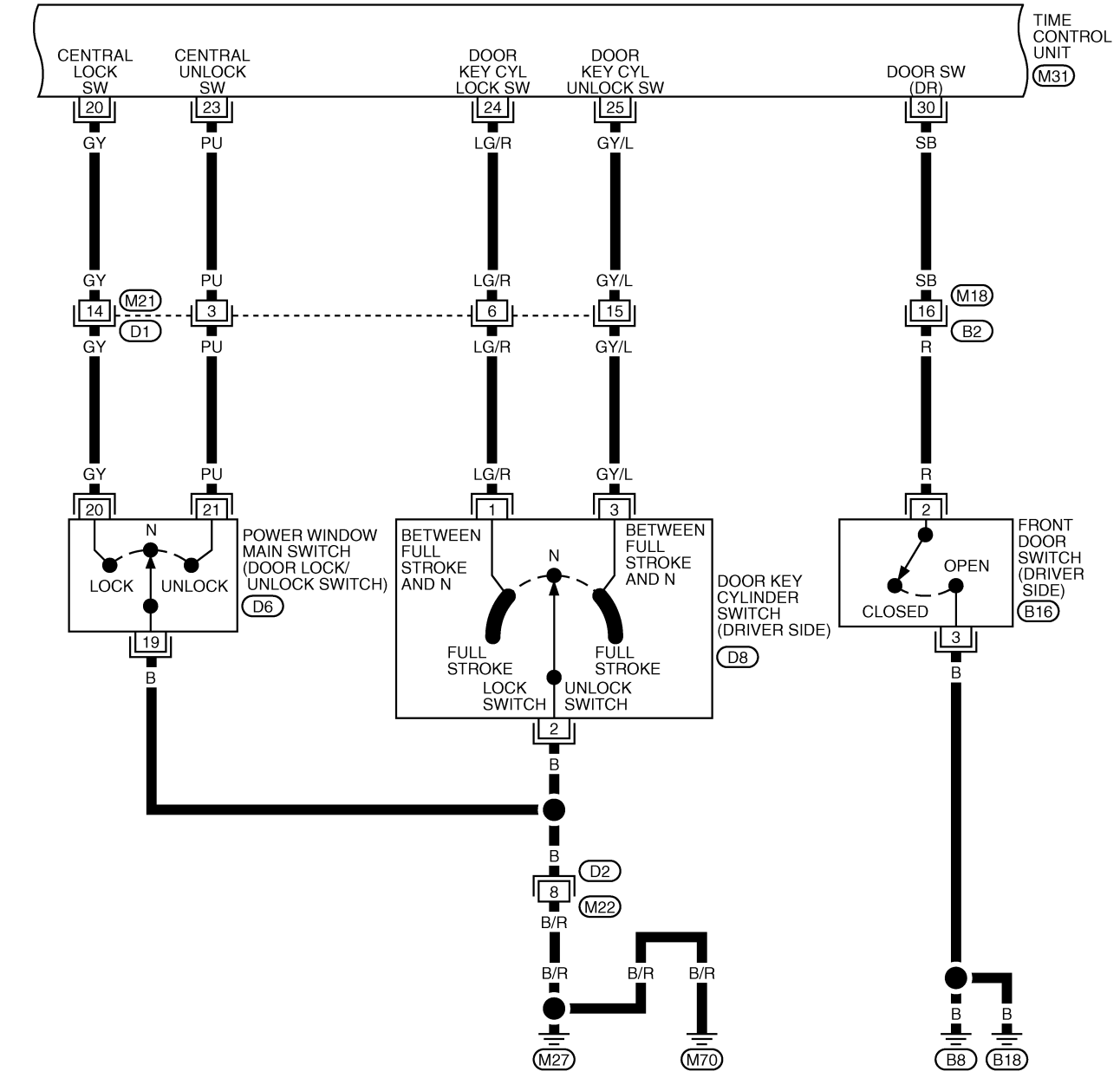


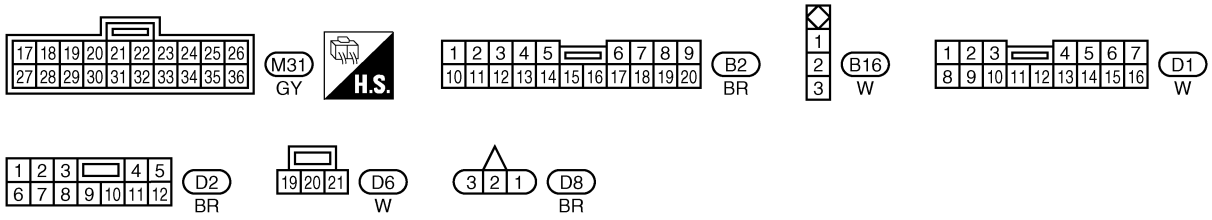


REFER TO THE FOLLOWING.
M2 , E103 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWA0465E

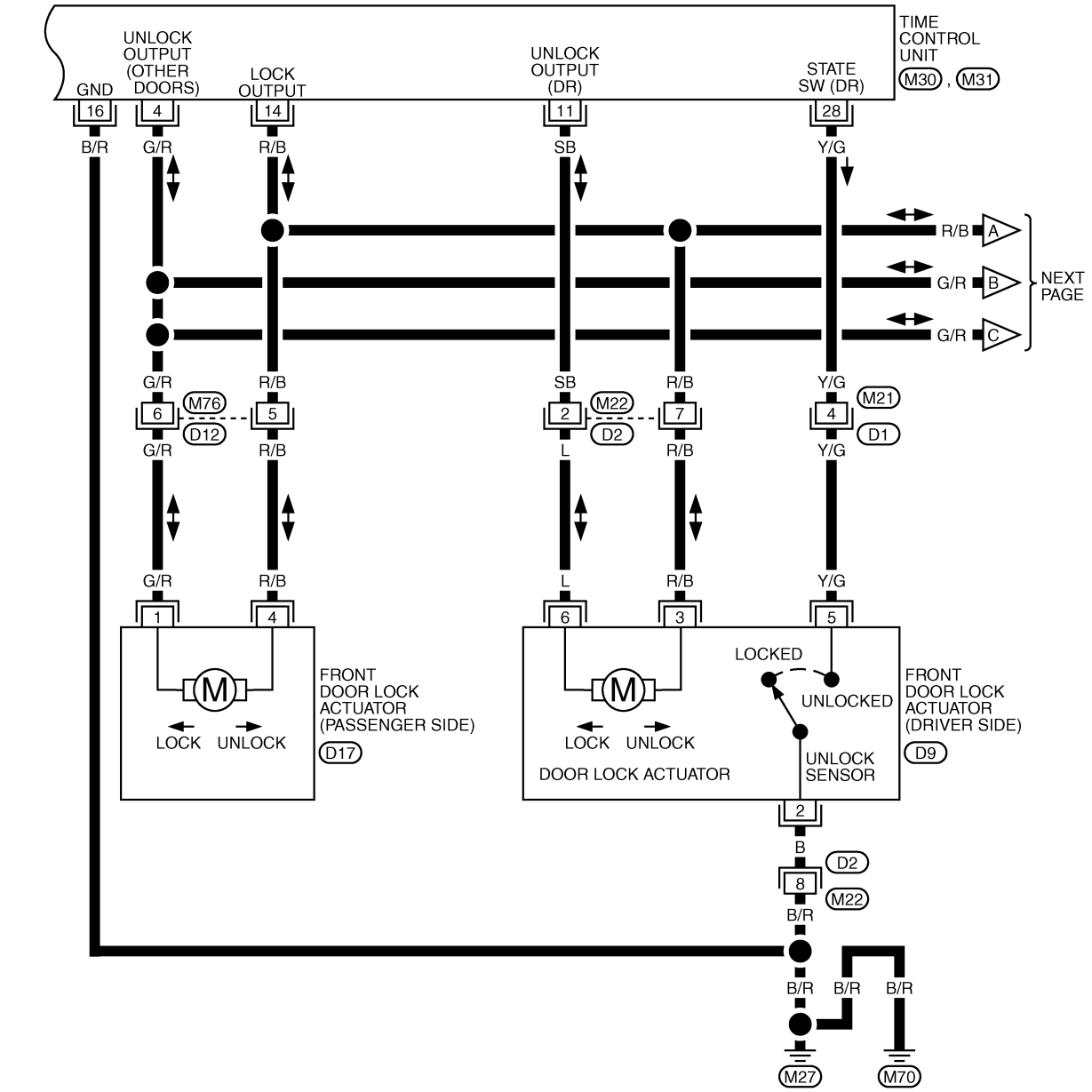
BL-D/LOCK-02

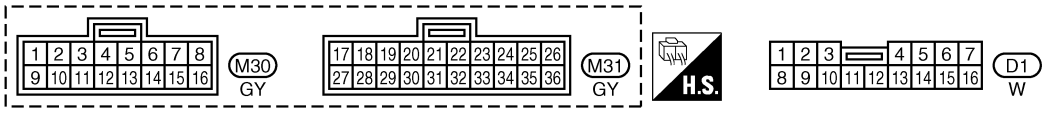


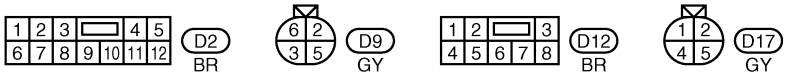


TIWA0466E

BL-D/LOCK-03

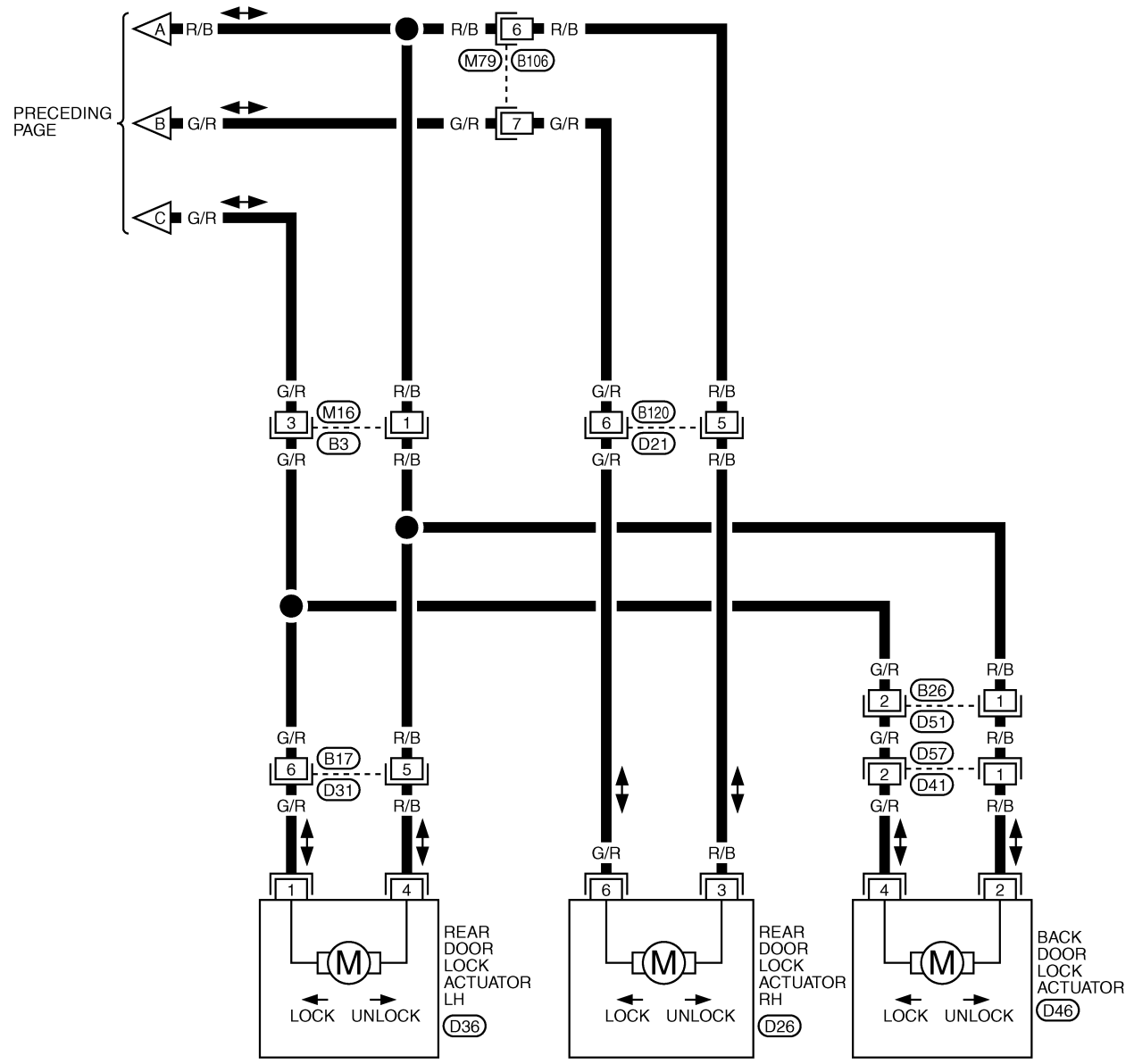


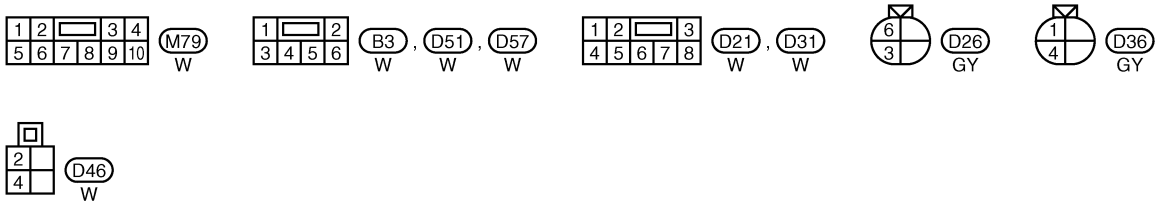




TIWA0467E

BL-D/LOCK-04

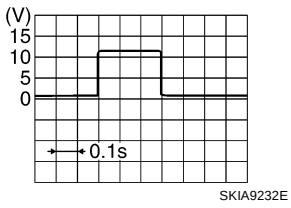
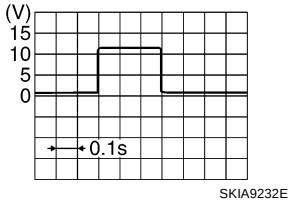
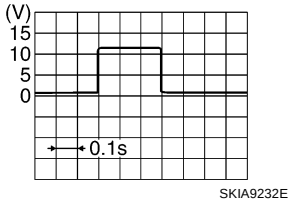




TIWA0468E

Terminal and Reference Value for Time Control Unit

EIS000KP

Terminal	Wire Color	Item	Condition		Voltage [V] (Approximate values)
1	L	Power source (Fuse)	—		Battery voltage
4	G/R	Passenger and rear door lock actuator unlock	Door lock/unlock switch	Free	0
				Unlock	 SKIA9232E
10	W	Power source (C/B)	—		Battery voltage
11	SB	Driver door lock actuator unlock	Door lock/unlock switch	Free	0
				Lock	 SKIA9232E
14	R/B	All door lock actuator lock	Door lock/unlock switch Unlock operation	Free	0
				Lock	 SKIA9232E
16	B/R	Ground	—		0
17	G	Ignition switch (ON)	—		Battery voltage
18	W/L	Key switch	Key inserted (ON) → key removed from ignition key cylinder (OFF)		Battery voltage → 0
20	GY	Door lock/unlock switch lock signal	Lock operation (ON)		0
			Other than above (OFF)		5
23	PU	Door lock/unlock switch unlock signal	Unlock operation (ON)		0
			Other than above (OFF)		5
24	LG/R	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)		5 → 0
25	GY/L	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)		5 → 0
28	Y/G	Door unlock sensor (driver side)	Driver door: Locked → Unlocked		10 → 0
30	SB	Front door switch (driver side)	Door open (ON) → close (OFF)		0 →5

Symptom Chart

EIS001R5

Symptom	Malfunctioning system	Reference page
Power door lock does not operate using any switch	Power supply and ground circuit check	BL-29
	Front door lock actuator check (Driver side)	BL-34
	Front door lock actuator check (Passenger side)	BL-35
	Rear door lock actuator check LH	BL-36
	Rear door lock actuator check RH	BL-37
	Back door lock actuator check	BL-38
	If above systems are OK, replace time control unit.	—
Power door lock does not operate with lock/unlock switch.	Door lock/unlock switch check	BL-30
	If above system is OK, replace time control unit.	—
Power door lock does not operate with door key cylinder switch.	Door key cylinder switch check	BL-32
	If above system is OK, replace time control unit.	—
Specific door lock actuator does not operate.	Front door lock actuator check (Driver side)	BL-34
	Front door lock actuator check (Passenger side)	BL-35
	Rear door lock actuator LH	BL-36
	Rear door lock actuator RH	BL-37
	Back door lock actuator	BL-38
	If above system is OK, replace time control unit.	—
*Key reminder system does not operate.	Door switch check	BL-39
	Door unlock sensor check	BL-40
	Key switch check	BL-41
	If above system is OK, replace time control unit.	—

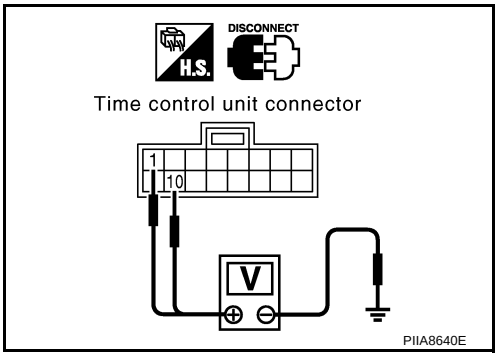
*:Make sure the power door lock system operates properly.

Power Supply and Ground Circuit Check

EIS004DF

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector.
3. Check voltage between time control unit connector and ground.



Connector	Terminal (wire color)		Ignition switch position		
	(+)	(–)	OFF	ACC	ON
M30	1 (L)	Ground	Battery voltage	Battery voltage	Battery voltage
	10 (W)		Battery voltage	Battery voltage	Battery voltage

OK or NG

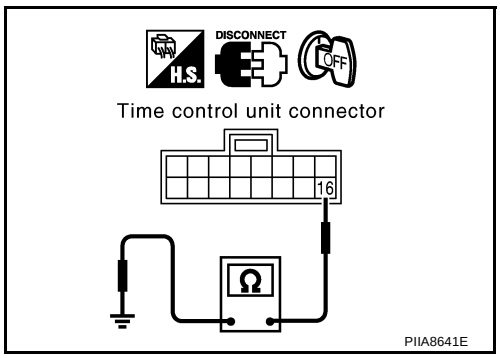
OK >> GO TO 2.
NG >> Check the following.

- 10A fuse [No.5, located in fuse block (J/B)]
- 40A fusible link (letter **B** , located in fuse and fusible link box.)
- Harness for open or short between time control unit and fuse
- Harness for open or short between time control unit circuit breaker

2. CHECK GROUND CIRCUIT

Check continuity between time control unit harness connector M30 terminal 16 (B/R) and ground.

16 (B/R) – Ground : Continuity should exist.



OK or NG

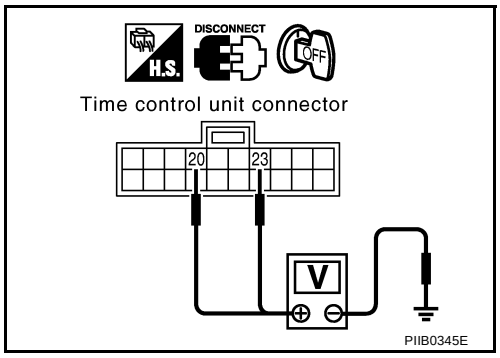
OK >> Power supply and ground circuit is OK.
NG >> Replace harness or connector.

Door Lock/Unlock Switch Check

EIS004DG

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector M31 terminal 20 (GY), 23 (PU) and ground.



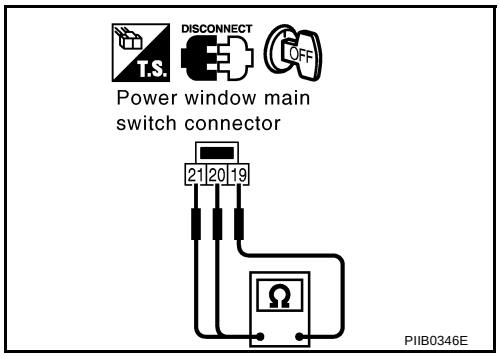
Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(-)		
M31	20 (GY)	Ground	Lock	0
			Neutral or Unlock	5
	23 (PU)		Unlock	0
			Neutral or Lock	5

OK or NG

OK >> Door lock/unlock switch is OK.
NG >> GO TO 2.

2. CHECK DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch.



Connector	Terminals		Condition of door lock/unlock switch	Continuity
D6	20	19	Locked	Yes
			Neutral or Unlocked	No
	21		Unlocked	Yes
			Neutral or Locked	No

OK or NG

OK >> GO TO 3.
NG >> Replace power window main switch.

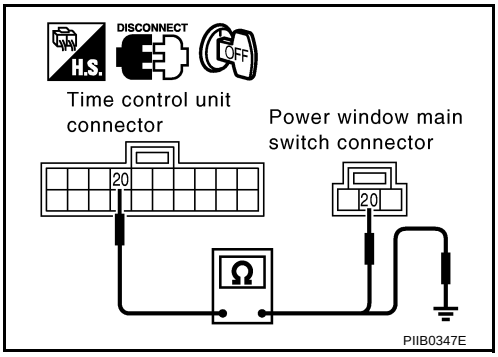
3. CHECK DOOR LOCK/UNLOCK SWITCH (LOCK) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 20 (GY) and power window main switch harness connector D6 terminal 20 (GY).

20 (GY) – 20 (GY) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 20 (GY) and ground.

20 (GY) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

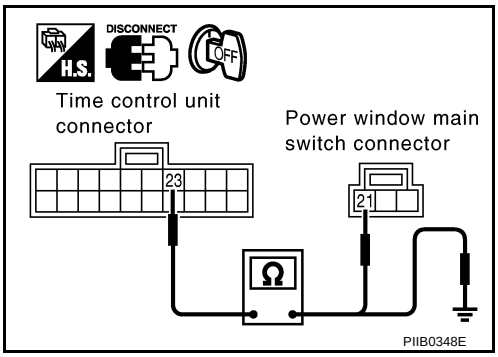
4. CHECK DOOR LOCK/UNLOCK SWITCH (UNLOCK) CIRCUIT

1. Check continuity between time control unit harness connector M31 terminal 23 (PU) and power window main switch harness connector D6 terminal 21 (PU).

23 (PU) – 21 (PU) : Continuity should exist.

2. Check continuity between time control unit harness connector M31 terminal 23 (PU) and ground.

23 (PU) – Ground : Continuity should not exist.



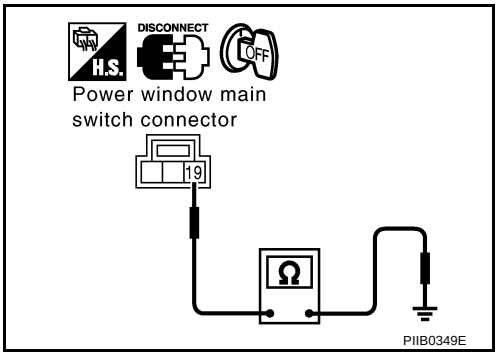
OK or NG

OK >> GO TO 5.
NG >> Repair harness or connector.

5. CHECK DOOR LOCK/UNLOCK SWITCH GROUND CIRCUIT

1. Check continuity between power window main switch harness connector D6 terminal 19 (B) and ground.

19 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace power window main switch.
NG >> Repair harness or connector.

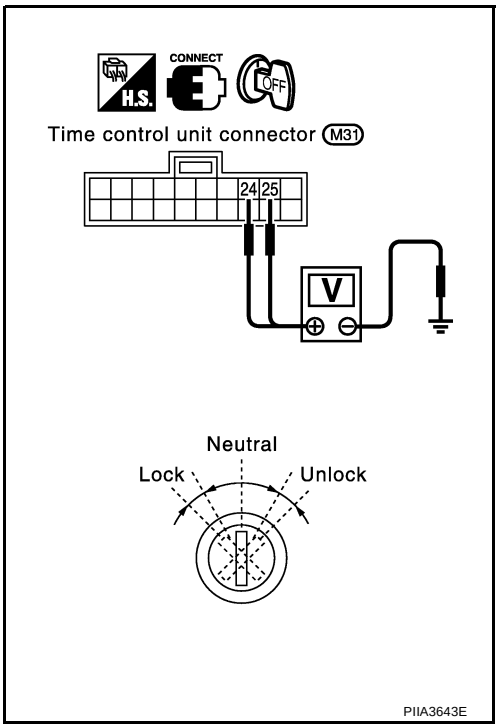
Door Key Cylinder Switch Check

EIS004DH

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit and ground.

Connector	Terminals (wire color)		Condition of door key cylinder switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	24 (LG/R)	Ground	Locked	0
			Neutral or Unlocked	5
	25 (GY/L)		Unlocked	0
			Neutral or Locked	5



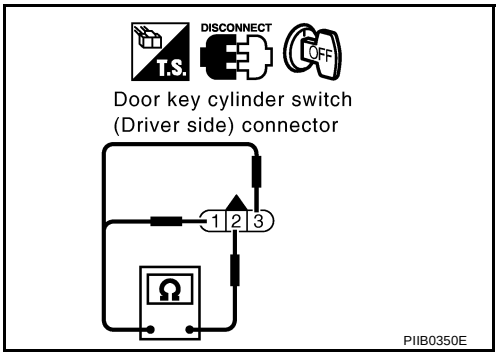
OK or NG

OK >> Door key cylinder switch is OK.
NG >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH

1. Disconnect door key cylinder switch connector.
2. Check continuity between door key cylinder switch.

Connector	Terminals		Condition of door key cylinder switch	Continuity
D8	1	2	Neutral	No
			Lock	Yes
	2	3	Neutral	No
			Unlock	Yes



OK or NG

OK >> GO TO 3.
NG >> Replace door key cylinder switch.

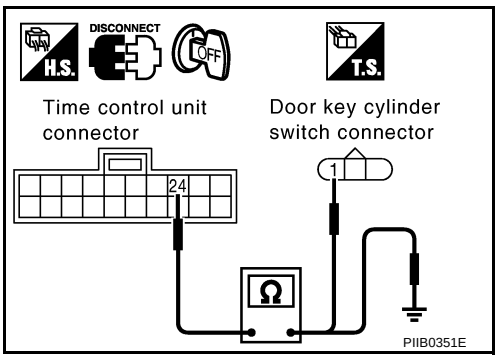
3. CHECK DOOR KEY CYLINDER SWITCH (LOCK) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 24 (LG/R) and door key cylinder switch (driver side) harness connector D8 terminal 1 (LG/R).

24 (LG/R) – 1 (LG/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 24 (LG/R) and ground.

24 (LG/R) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

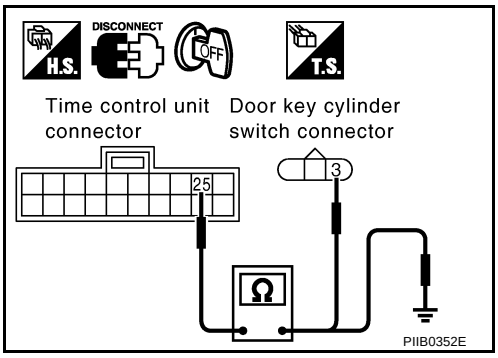
4. CHECK DOOR KEY CYLINDER SWITCH (UNLOCK) CIRCUIT

1. Check continuity between time control unit harness connector M31 terminal 25 (GY/L) and door key cylinder switch (driver side) harness connector D8 terminal 3 (GY/L).

25 (GY/L) – 3 (GY/L) : Continuity should exist.

2. Check continuity between time control unit harness connector M31 terminal 25 (GY/L) and ground.

25 (GY/L) – Ground : Continuity should not exist.



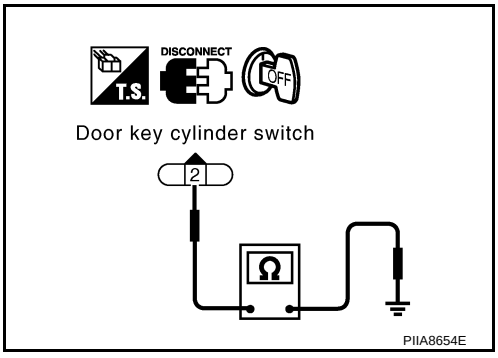
OK or NG

OK >> GO TO 5.
NG >> Repair harness or connector.

5. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

1. Check continuity between door key cylinder switch (driver side) harness connector D8 terminal 2 (B) and ground.

2 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace power window main switch.
NG >> Repair harness or connector.

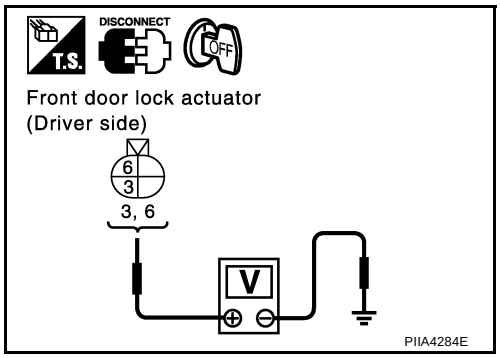
Front Door Lock Actuator (Driver Side) Check

EIS004DI

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect door lock actuator (driver side) connector.
3. Check voltage between front door lock actuator (driver side) connector and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D9	3 (R/B)	Ground	Locked	Battery voltage
	6 (L)		Unlocked	



OK or NG

OK >> Replace front door lock actuator (Driver side).
NG >> GO TO 2.

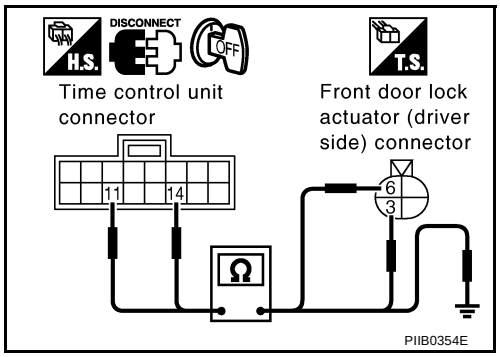
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 11(SB), 14(R/B) and door lock actuator (driver side) harness connector D9 terminal 3(R/B), 6(L).

11 (SB) – 6 (L) : Continuity should exist.
14 (R/B) – 3 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 11 (SB), 14 (R/B) and ground.

11 (SB) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

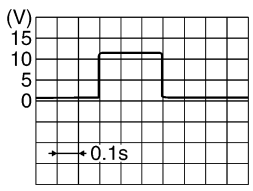


OK or NG

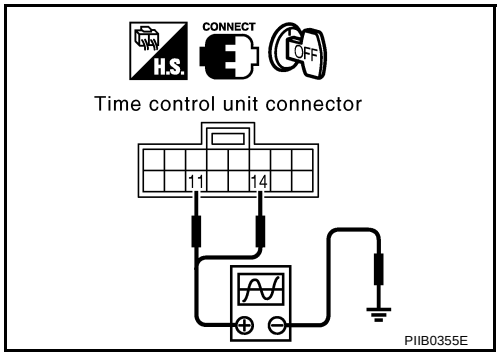
OK >> GO TO 3.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Con-nector	Terminals (wire color)		Condition of door lock/unlock switch	Signal (Reference value)
	(+)	(–)		
M30	11 (SB)	Ground	Unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

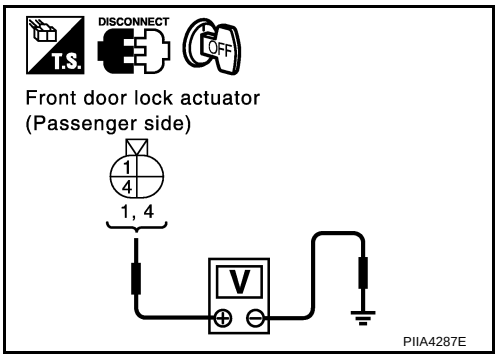
Front Door Lock Actuator (Passenger Side) Check

EIS004DJ

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect door lock actuator (passenger side) connector.
3. Check voltage between front door lock actuator (passenger side) connector and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D17	4 (R/B)	Ground	Locked	Battery voltage
	1 (G/R)		Unlocked	



OK or NG

OK >> Replace front door lock actuator (passenger side).
NG >> GO TO 2.

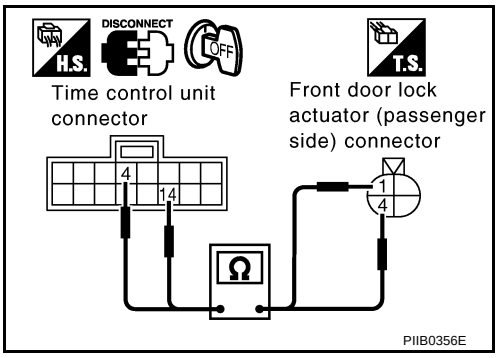
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and door lock actuator (passenger side) harness connector D17 terminal 1(G/R), 4(R/B).

14 (R/B) – 4 (R/B) : Continuity should exist.
4 (G/R) – 1 (G/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

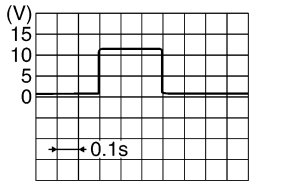


OK or NG

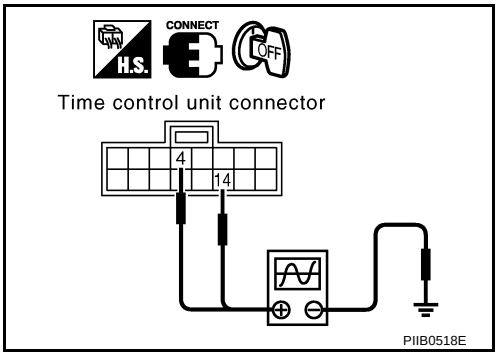
OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Con-nector	Terminals (wire color)		Condition of door lock/ unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

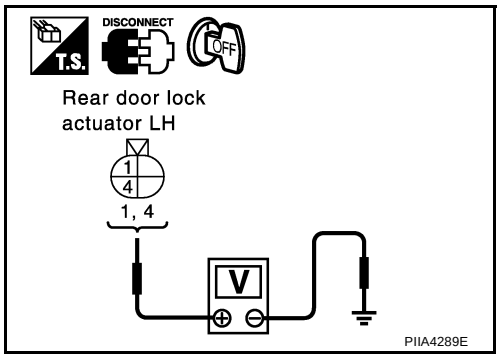
OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

Rear Door Lock Actuator LH Check

EIS004DK

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Check voltage between door lock actuator connector and ground.



Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D36	4 (R/B)	Ground	Locked	Battery voltage
	1 (G/R)		Unlocked	

OK or NG

OK >> Replace rear door lock actuator LH.
NG >> GO TO 2.

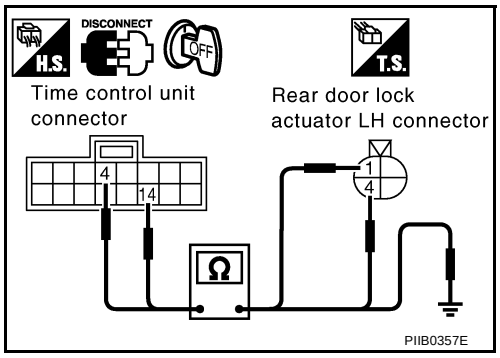
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and rear door lock actuator LH harness connector D36 terminal 1(G/R), 4(R/B).

4 (G/R) – 1 (G/R) : Continuity should exist.
14 (R/B) – 4 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

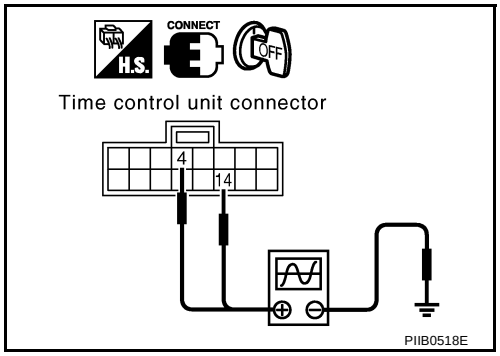


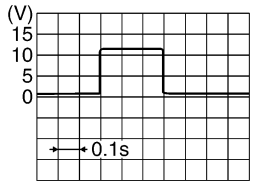
OK or NG

OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.



Con-nector	Terminals (wire color)		Condition of door lock/ unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	Unlocked	
	14 (R/B)		locked	

SKIA9232E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

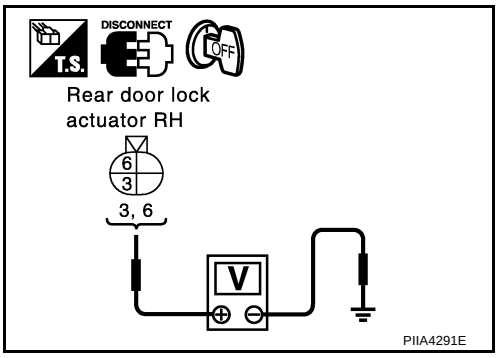
Rear Door Lock Actuator RH Check

EIS004DL

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Check voltage between door lock actuator connector and ground.

Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D26	3 (R/B)	Ground	Locked	Battery voltage
	6 (G/R)		Unlocked	



OK or NG

OK >> Replace rear door lock actuator RH.
NG >> GO TO 2.

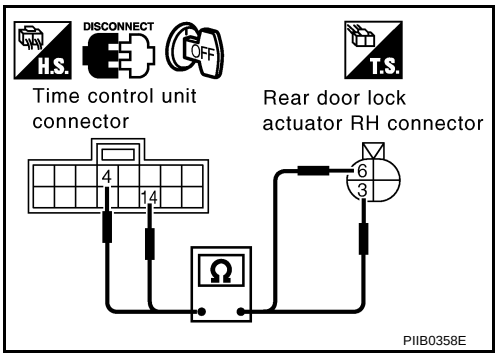
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and rear door lock actuator RH harness connector D26 terminal 3 (R/B), 6 (G/R).

4 (G/R) – 6 (G/R) : Continuity should exist.
14 (R/B) – 3 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

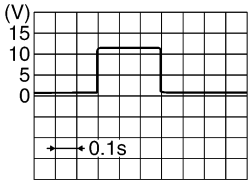


OK or NG

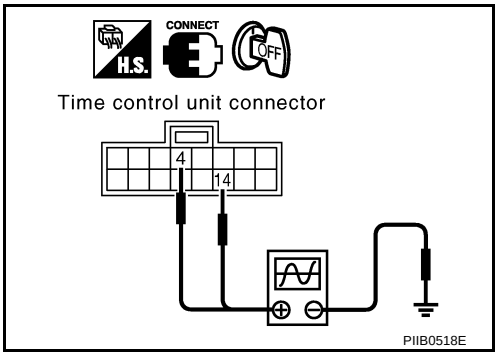
OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

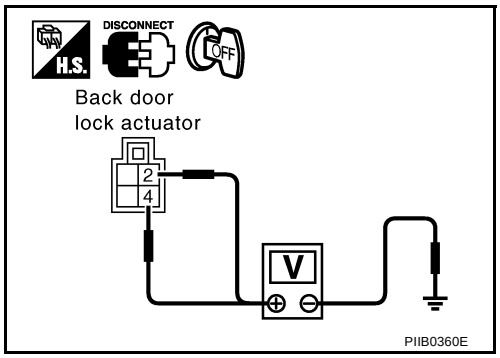
OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

Back Door Lock Actuator Check

EIS004DM

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect back door lock actuator connector.
3. Check voltage between door lock actuator connector and ground.



Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D46	2 (R/B)	Ground	Locked	Battery voltage
	4 (G/R)		Unlocked	

OK or NG

OK >> Replace back door lock actuator.
NG >> GO TO 2.

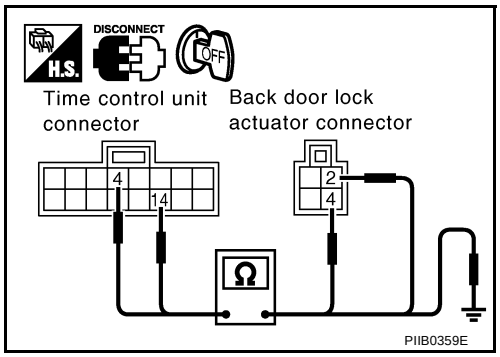
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and back door lock actuator harness connector D46 terminal 2(R/B), 4(G/R).

4 (G/R) – 4 (G/R) : Continuity should exist.
14 (R/B) – 2 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

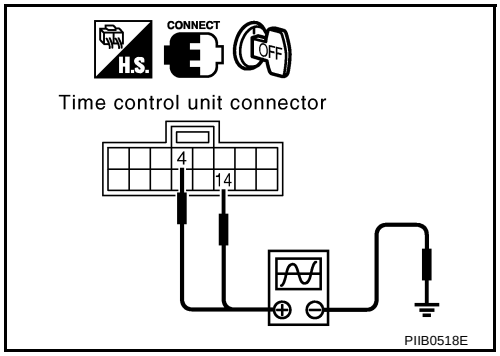


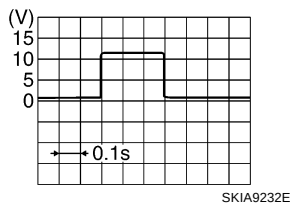
OK or NG

OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.



Connector	Terminals (wire color)		Condition of door lock/unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

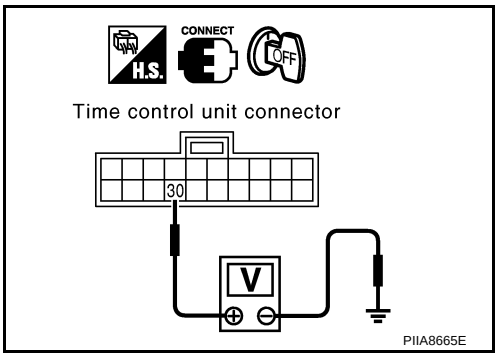
Door Switch Check

EIS004DN

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit connector and ground.

Connector	Terminal (wire color)		Condition of driver's door	Voltage [V] (Approx.)
	(+)	(-)		
M31	30 (SB)	Ground	Closed	Battery voltage
			Open	0



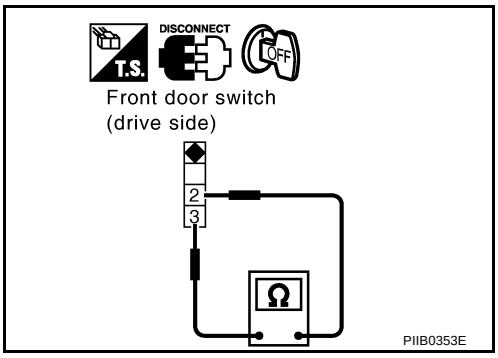
OK or NG

OK >> Door switch is OK.
NG >> GO TO 2.

2. CHECK FRONT DOOR SWITCH

1. Disconnect door switch (driver side) connector.
2. Check continuity between door switch (driver side) terminals.

Connector	Terminal	Condition of door switch (driver side)	Continuity
B16	2 – 3	Pushed	No
		Released	Yes



OK or NG

OK >> GO TO 3.
NG >> Replace front door switch (driver side).

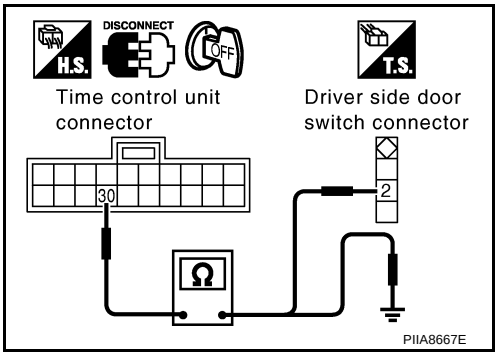
3. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 30 (R) and front door switch (driver side) harness connector B16 terminal 2 (R).

30 (R) – 2 (R) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 30 (R) and ground.

30 (R) – Ground : Continuity should not exist.



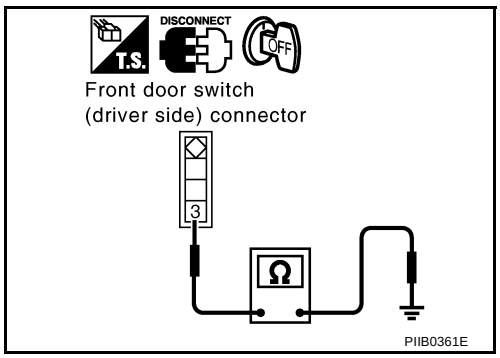
OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

4. CHECK DOOR SWITCH (DRIVER SIDE) GROUND CIRCUIT

1. Check continuity between front door switch (driver side) harness connector B16 terminal 3 (B) and ground.

3 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace time control unit.
NG >> Repair harness or connector.

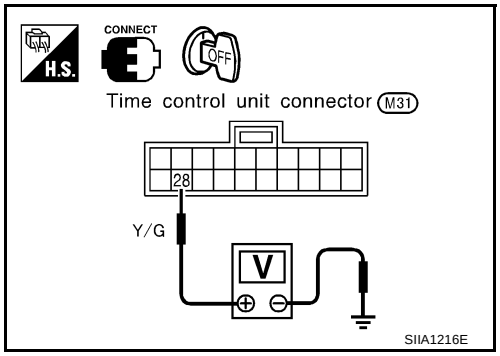
Door Unlock Sensor Check

EIS004DO

1. CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit connector and ground.

Connector	Terminals (wire color)		Driver's door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	28 (Y/G)	Ground	Locked	10
			Unlocked	0



OK or NG

OK >> Door unlock sensor is OK.
NG >> GO TO 2.

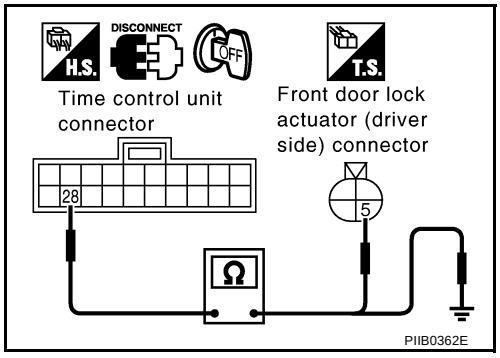
2. CHECK UNLOCK SENSOR CIRCUIT

1. Disconnect time control unit connector and front door lock actuator (driver side) connector.
2. Check continuity between time control unit harness connector M31 terminal 28 (Y/G) and front door lock actuator (driver side) harness connector D9 terminal 5 (Y/G).

28 (Y/G) – 5 (Y/G) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 28 (Y/G) and ground.

28 (Y/G) – Ground : Continuity should not exist.



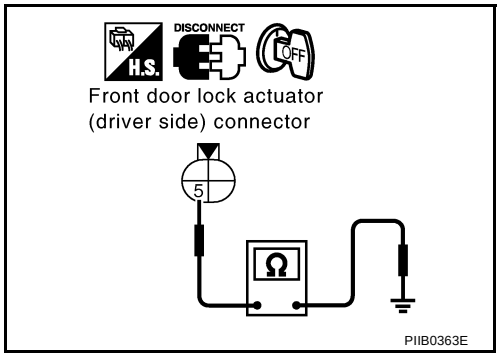
OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

3. CHECK DOOR SWITCH (DRIVER SIDE) GROUND CIRCUIT

Check continuity between front door lock actuator (driver side) harness connector D9 terminal 5 (B) and ground.

5 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace time control unit.
NG >> Repair harness or connector.

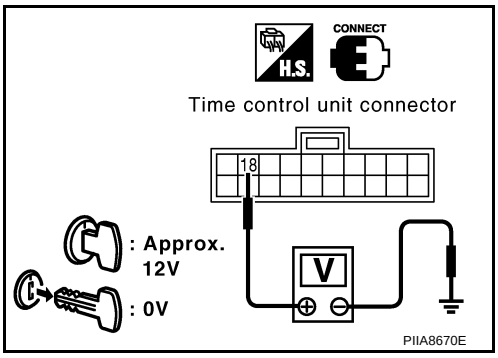
Key Switch Check

EIS004DP

1. CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit connector and ground.

Connector	Terminals		Condition of key switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	18 (W/L)	Ground	inserted	Battery voltage
			removed	0



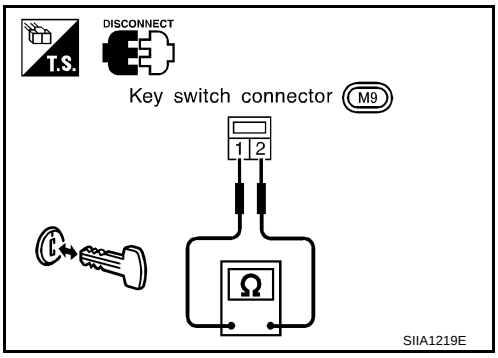
OK or NG

OK >> Key switch is OK.
NG >> GO TO 2.

2. CHECK KEY SWITCH (INSERT)

1. Disconnect key switch connector.
2. Check continuity between key switch terminals 1 and 2.

Connector	Terminals		Condition of key switch	Continuity
M9	1	2	inserted	Yes
			removed	No



OK or NG

OK >> GO TO 3.
NG >> Replace key switch.

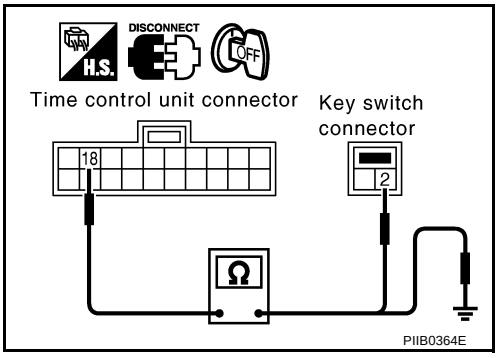
3. CHECK KEY SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector.
3. Check continuity between time control unit harness connector M31 terminal 18 (W/L) and key switch harness connector M9 terminal 2 (W/L).

18 (W/L) – 2 (W/L) : Continuity should exist.

4. Check continuity between time control unit harness connector M31 terminal 18 (W/L) and ground.

18 (W/L) – Ground : Continuity should not exist.



OK or NG

OK >> Check the following.
- 10A fuse [No.28, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse

NG >> Repair harness or connector.

POWER DOOR LOCK — SUPER LOCK —

PFP:24814

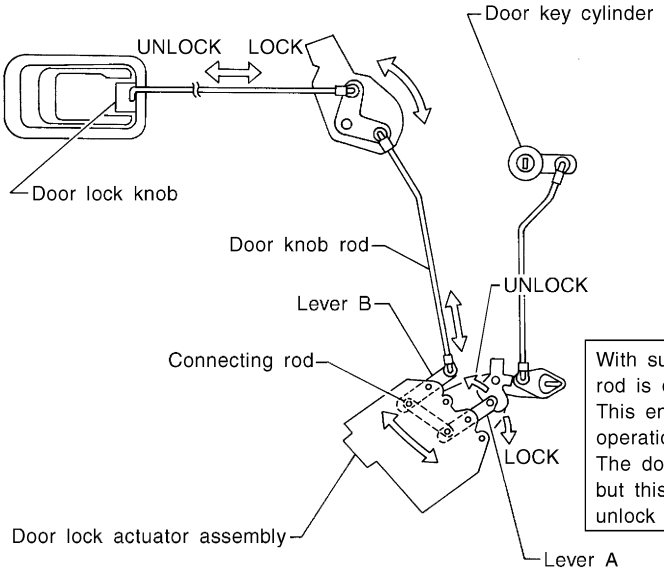
System Description

EIS001R6

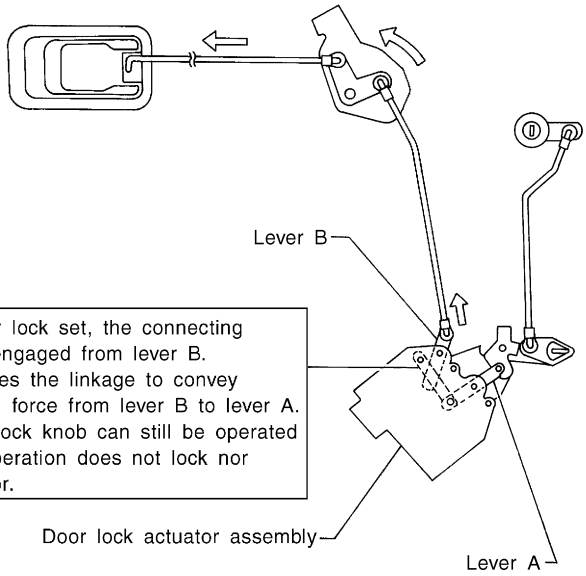
OUTLINE

Power door lock system with super lock and key reminder is controlled by time control unit. Super lock has a higher anti-theft performance than conventional power door lock systems.
When super lock is in released condition, lock knob operation locks or unlocks door.
When super lock is in set condition, lock knob operation cannot lock nor unlock door.

With super lock released



With super lock set



SEL831U

OPERATION

Power door lock/unlock and super lock set/release operation by door key cylinder

- With the key inserted into driver door key cylinder, turning it to LOCK will lock all doors and set super lock. (Super lock will not be set while key is inserted in the ignition key cylinder.)
- With the key inserted into driver door key cylinder, turning it to UNLOCK will unlock all doors and release super lock.

Power door lock/unlock and super lock set/release operation by multi-remote controller (If equipped)

- Pressing multi-remote controller LOCK button will lock all doors and set super lock. (Super lock will not be set while key is inserted in the ignition key cylinder.)
- Pressing multi-remote controller UNLOCK button once will unlock driver door and release super lock. Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

Power door lock and super lock release operation (by NATS IMMU signal)

- When the super lock is set, turning the ignition key switch to ON will release the super lock. All doors will unlock once, but then immediately lock again.

Power door lock/unlock operation by lock/unlock switch

- With lock/unlock switch on driver door trim setting to LOCK will lock all doors.
- With lock/unlock switch on driver door trim setting to UNLOCK will unlock all doors.

Lock/unlock switch operation cannot control super lock

Key reminder system

- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock knob, key or multi-remote controller to “LOCK” locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

System initialization

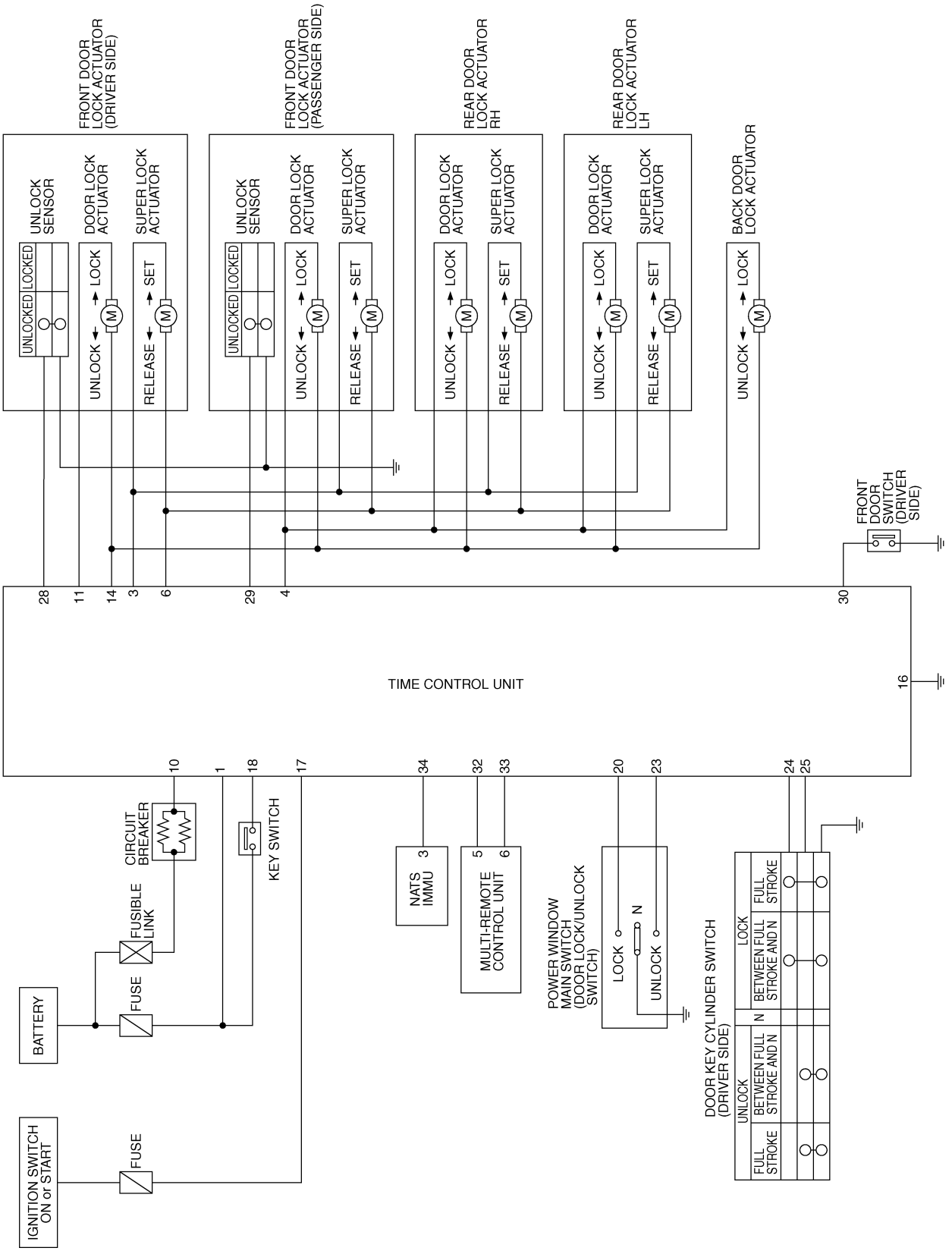
- System initialization is required when battery cables are reconnected. Conduct the following to release super lock once;

– insert the key into the ignition key cylinder and turn it to ON.

– LOCK/UNLOCK operation using door key cylinder or multi-remote controller.

Schematic

EIS001R7

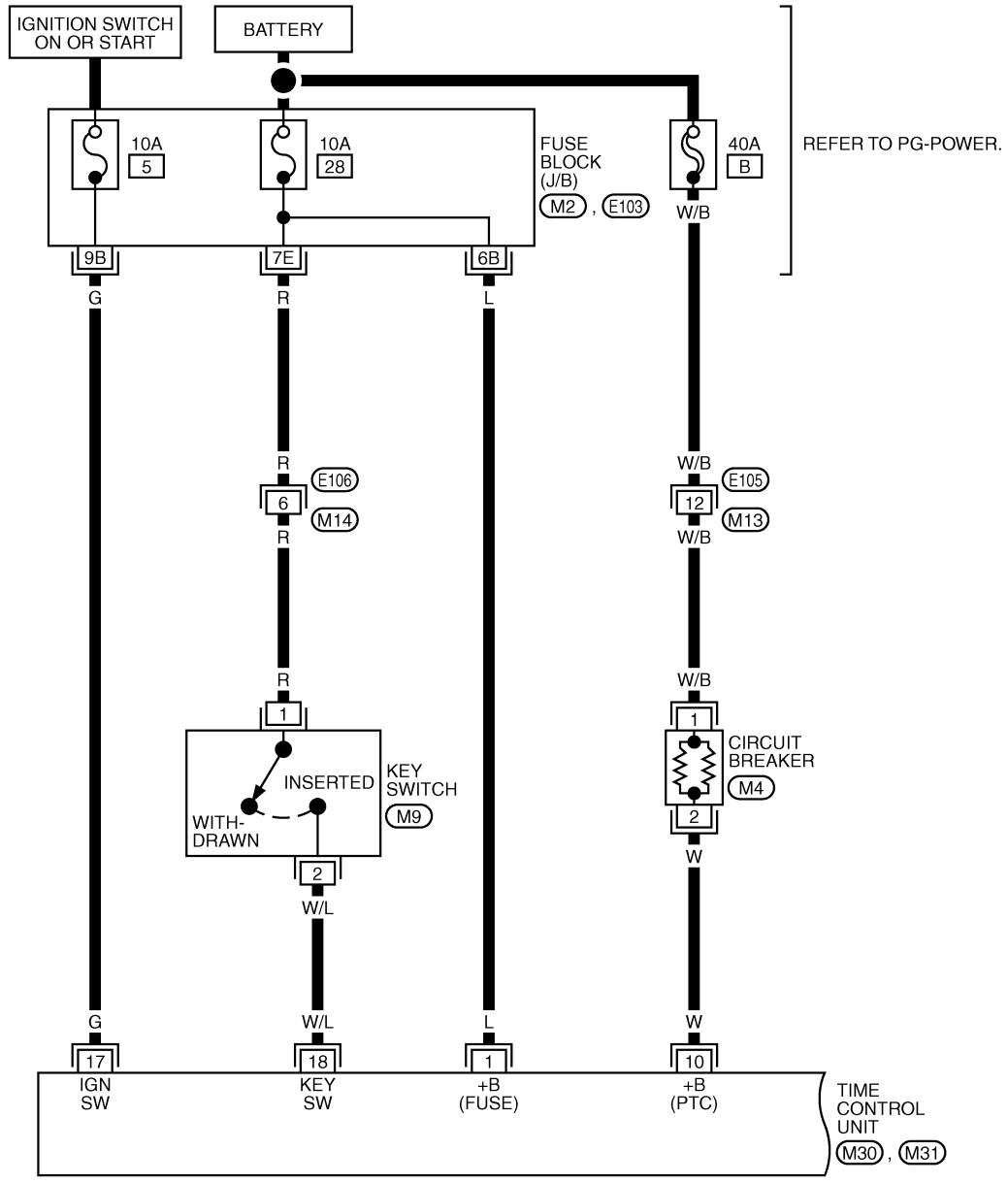


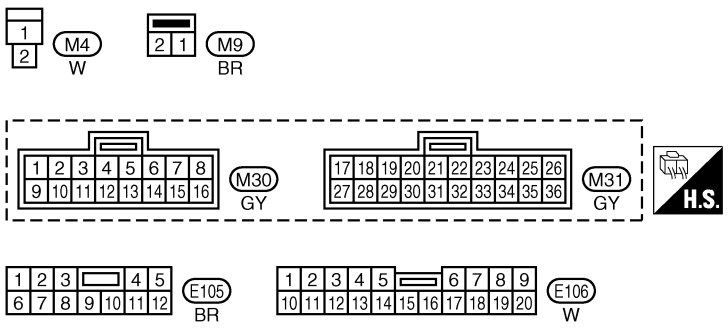
TIWA0012E

Wiring Diagram — S/LOCK —

EIS001R8

BL-S/LOCK-01

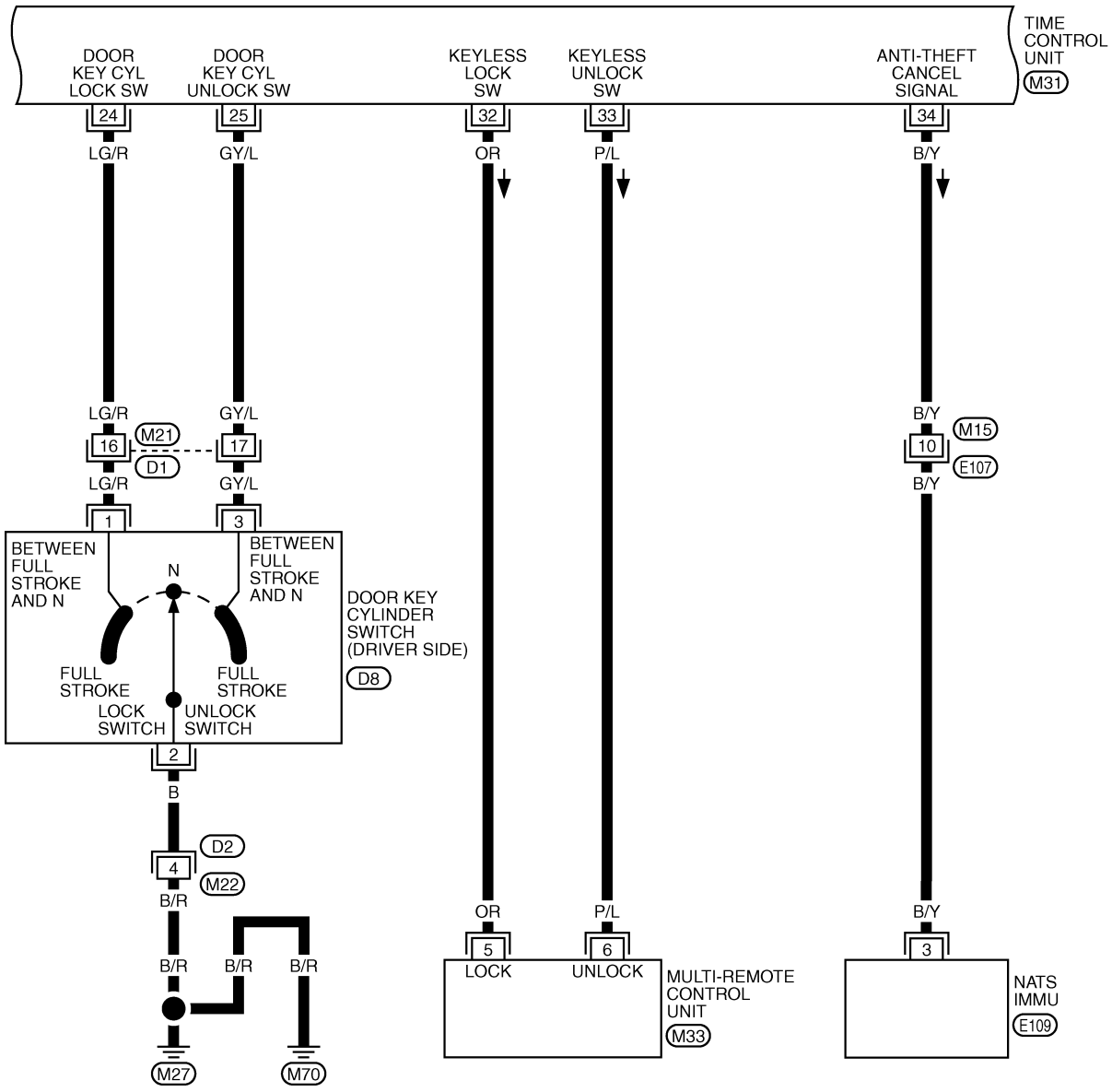


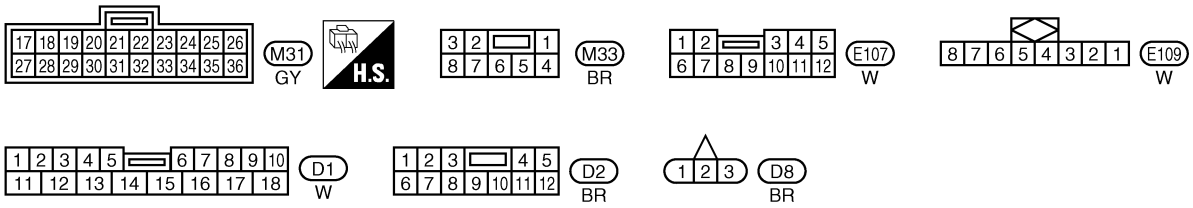


REFER TO THE FOLLOWING.
M2 , E103 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWA0469E

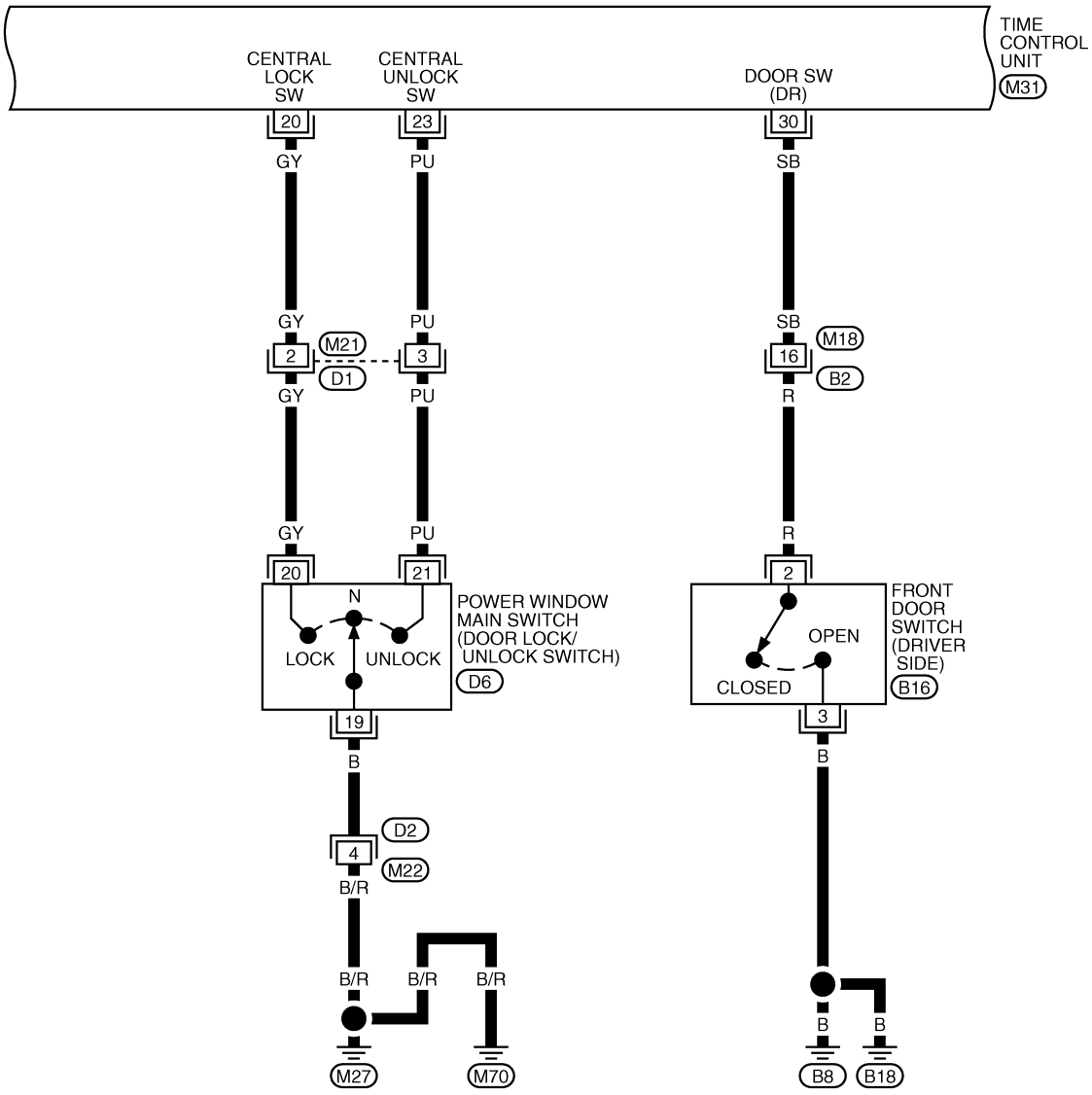
BL-S/LOCK-02

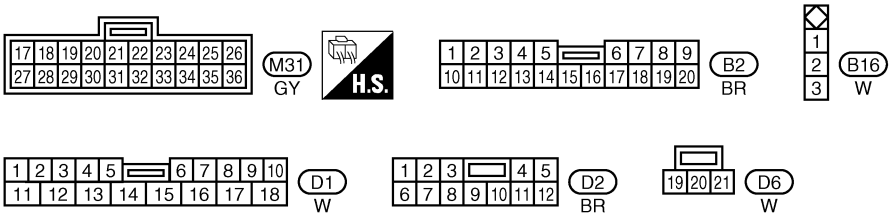




TIWA0470E

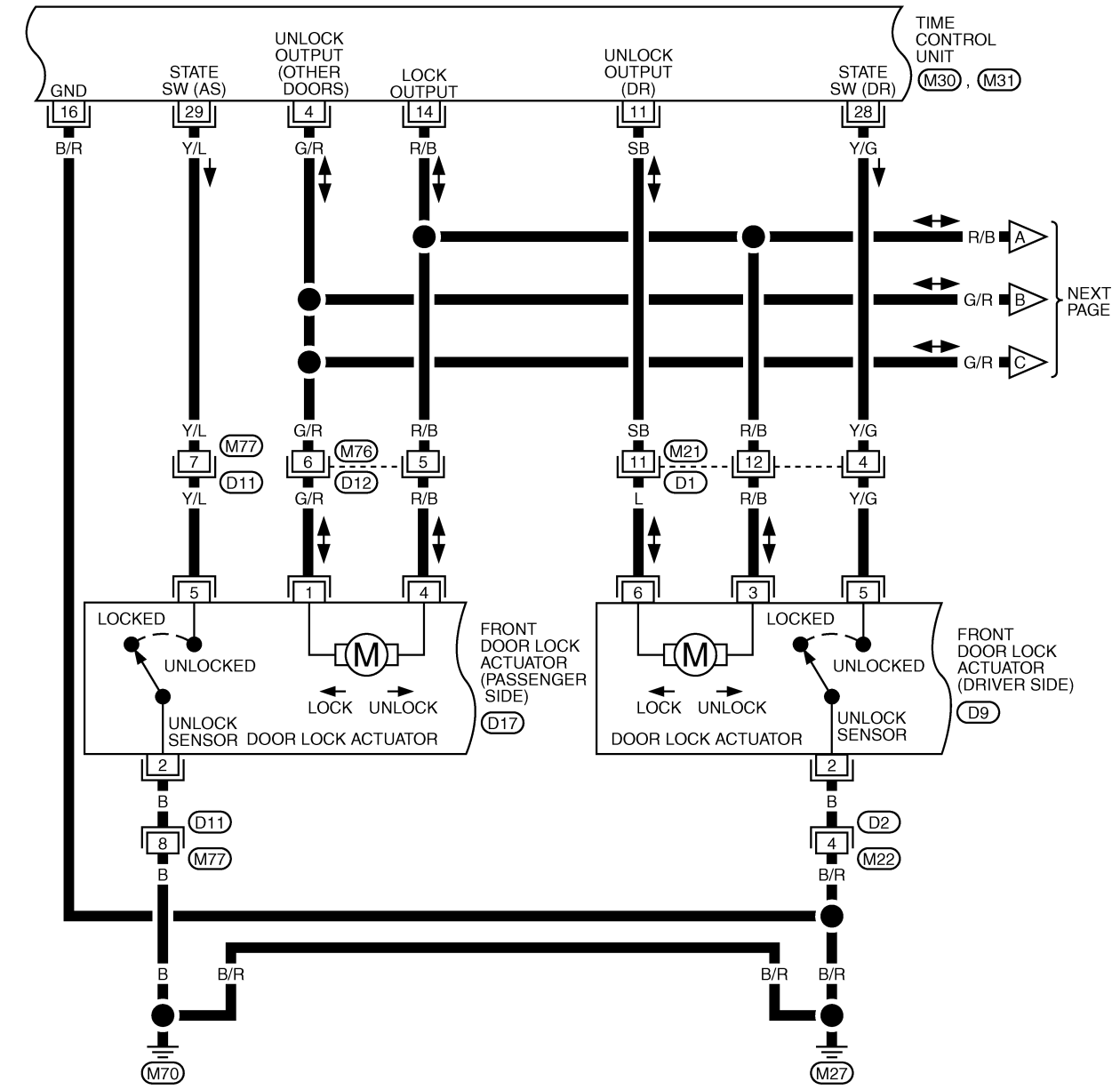
BL-S/LOCK-03

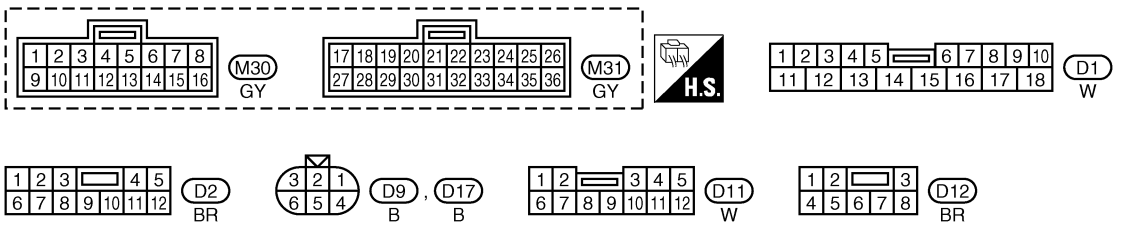




TIWA0471E

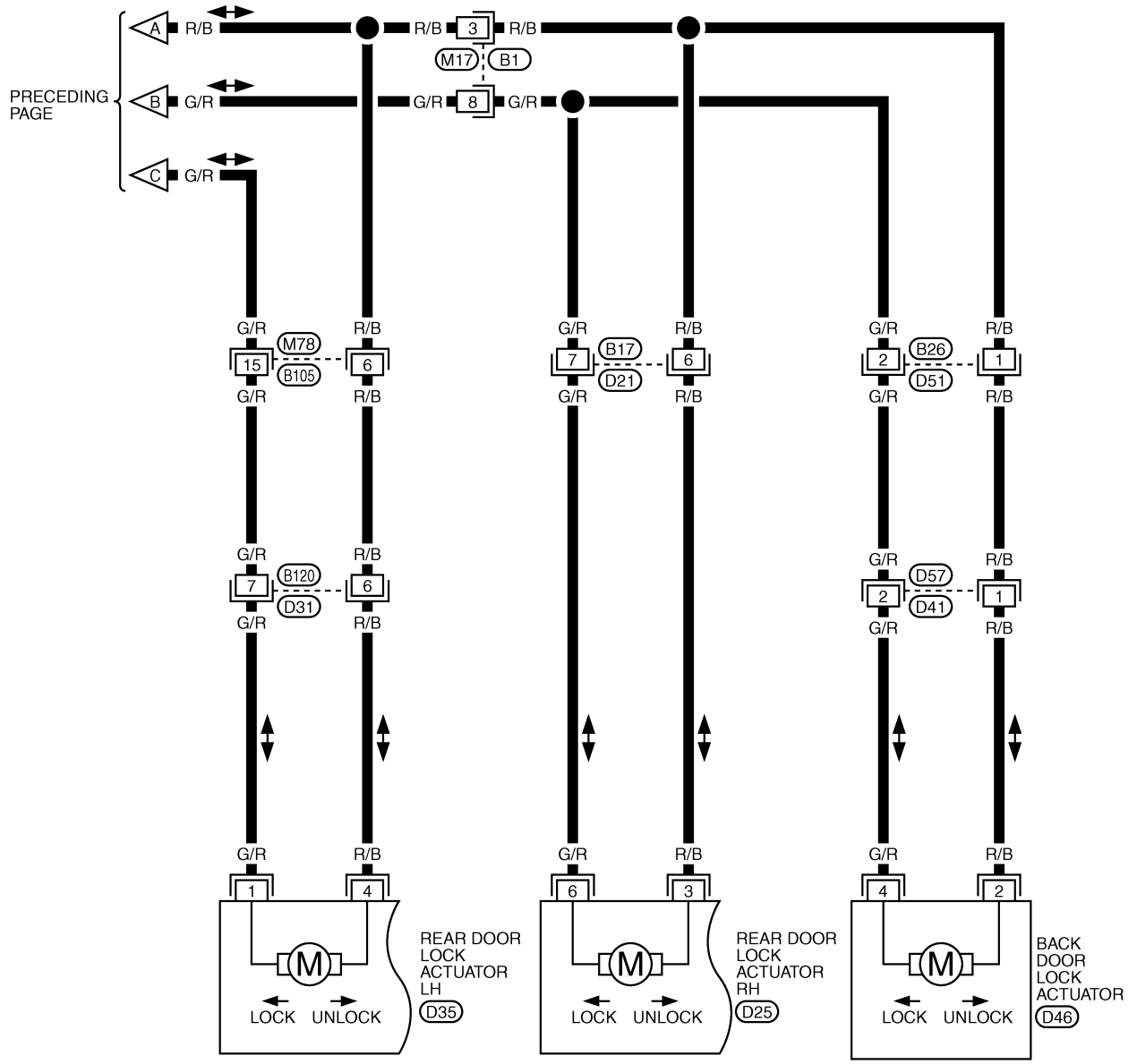
BL-S/LOCK-04

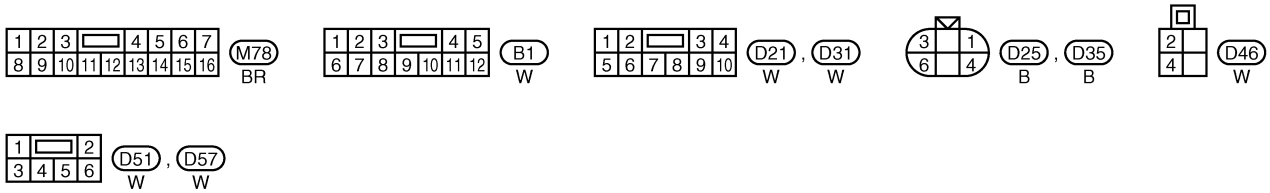




TIWA0472E

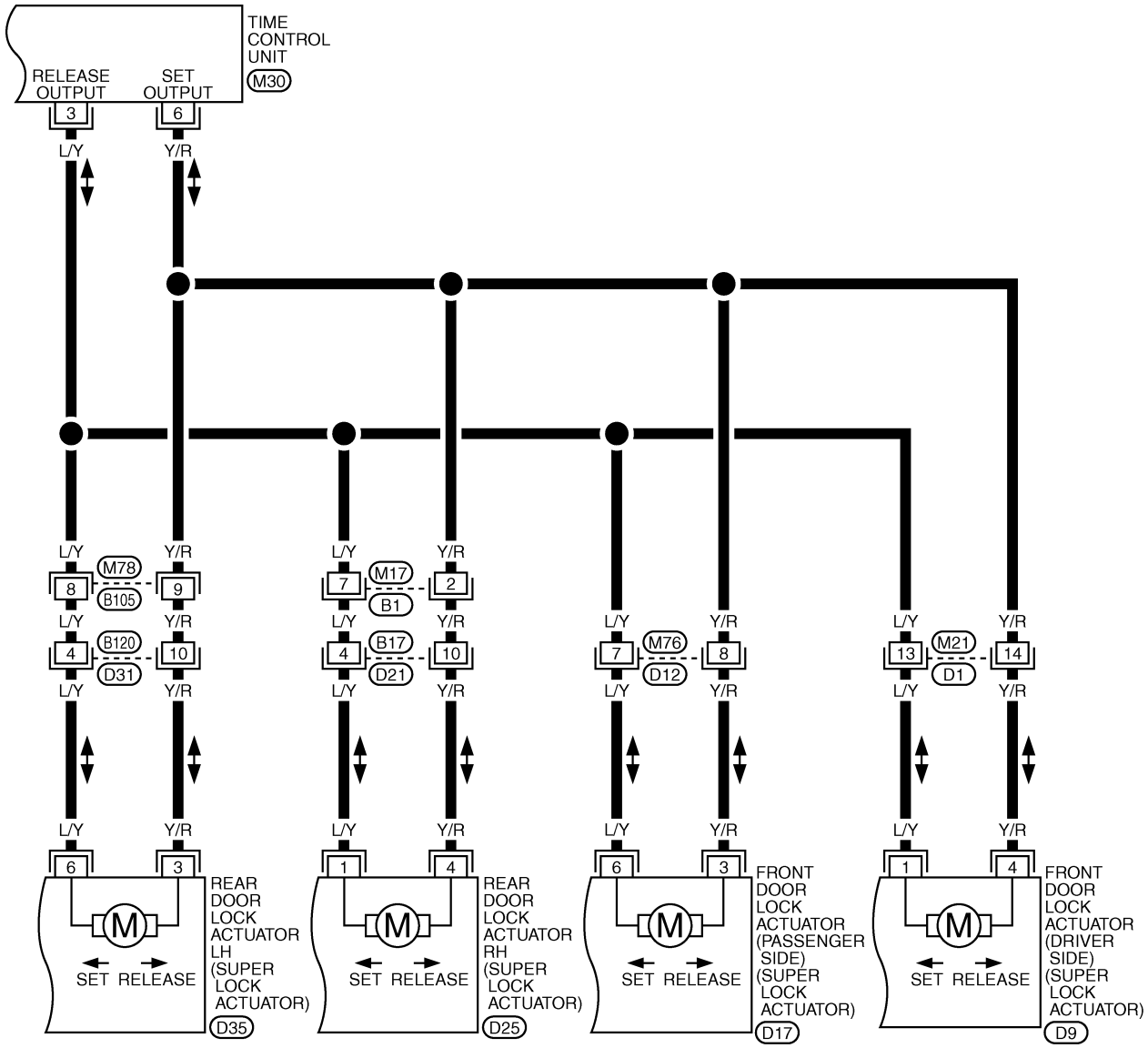
BL-S/LOCK-05

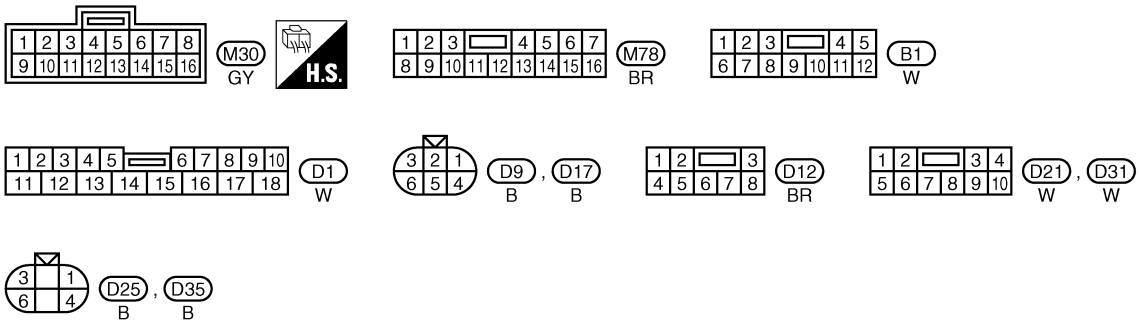




TIWA0473E

BL-S/LOCK-06

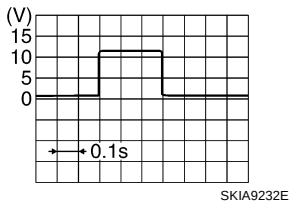
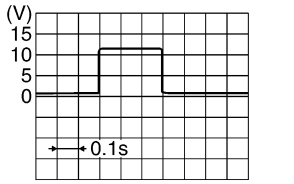
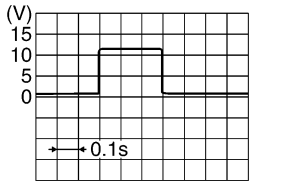
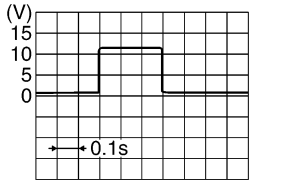
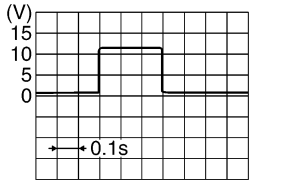




TIWA0474E

Terminal and Reference Value for Time Control Unit

EIS001SR

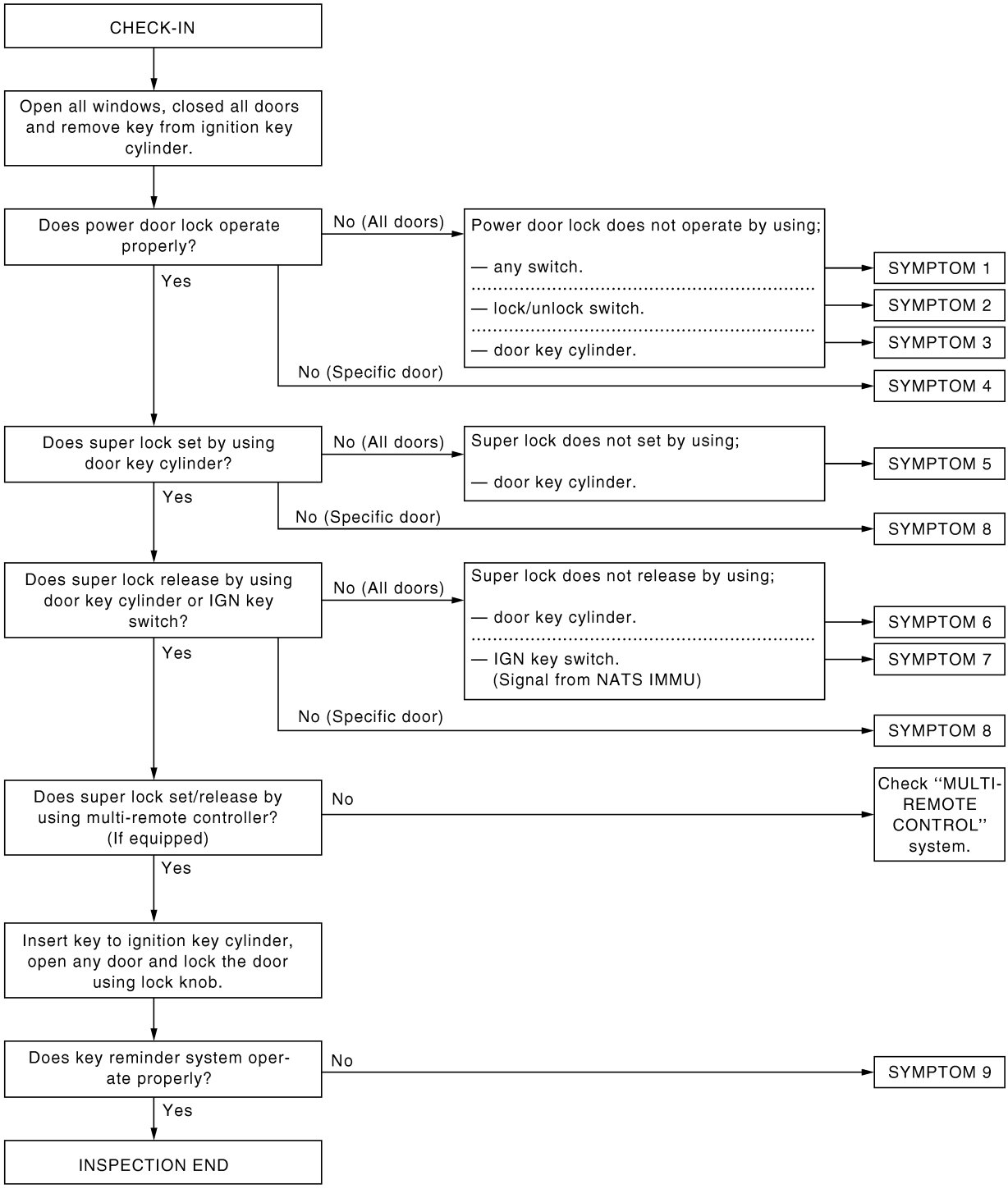
Terminal	Wire Color	Item	Condition		Voltage [V] (Approx.)
1	L	Power source (Fuse)	—		Battery voltage
3	L/Y	Super lock actuator release	Door key cylinder switch	Free	0
				Released	 SKIA9232E
4	G/R	Passenger door and rear door (LH/RH) lock actuator unlock	Door lock/unlock switch	Free	0
				Unlocked	 SKIA9232E
6	Y/R	Super lock actuator set	Door key cylinder switch	Free	0
				Set	 SKIA9232E
10	W	Power source (C/B)	—		Battery voltage
11	SB	Front door lock actuator (driver side)	Door lock/unlock switch	Free	0
				Locked	 SKIA9232E
14	R/B	All door lock actuator lock	Door lock/unlock switch	Free	0
				Locked	 SKIA9232E
16	B/R	Ground	—		0
17	G	Ignition switch (ON)	Ignition switch is in ON position		Battery voltage
18	W/L	Key switch	Key inserted (ON) → key removed from Ignition key cylinder (OFF)		Battery voltage → 0
20	GY	Power door lock switch lock signal	OFF (Neutral) → ON (Locked)		5 → 0
23	PU	Power door lock switch unlock signal	OFF (Neutral) → ON (Unlocked)		5 → 0
24	LG/R	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)		5 → 0

Terminal	Wire Color	Item	Condition	Voltage [V] (Approx.)
25	OR/L	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5 → 0
28	Y/G	Door unlock sensor (driver side)	Driver door: Locked → Unlocked	10 → 0
29	Y/L	Door unlock sensor (passenger side)	Passenger door: Locked → Unlocked	5 → 0
30	SB	Front door switch (driver side)	Door open (ON) → close (OFF)	0 →5
32	OR	Key less lock signal	Remote controller button Lock pressed (Ignition switch is not at “ON” position.)	0 → 5 (For 0.5 seconds)
33	P/L	Key less unlock signal	Remote controller button Unlock pressed (Ignition switch is not at “ON” position.)	0 → 5 (For 0.5 seconds)
34	B/Y	NATS release signal	—	0 → 5

Trouble Diagnoses

EIS001R9

PRELIMINARY CHECK



SIIA2239E

After performing preliminary check, go to SYMPTOM CHART.

SYMPTOM CHART

NOTE:
Before starting trouble diagnoses below, perform preliminary check.
Symptom numbers in the symptom chart correspond with those of Preliminary check.

Symptom	Malfunctioning system	Reference page
SYMPTOM 1 Power door lock does not operate using any switch	Power supply and ground circuit check	BL-55
	Front door lock actuator check (Driver side)	BL-60
	Front door lock actuator check (Passenger side)	BL-61
	Rear door lock actuator check LH	BL-62
	Rear door lock actuator check RH	BL-63
	Back door lock actuator check	BL-64
	If above systems are OK, replace time control unit.	—
SYMPTOM 2 Power door lock does not operate with lock/unlock switch.	Door lock/unlock switch check	BL-56
	If above system is OK, replace time control unit.	—
SYMPTOM 3 Power door lock does not operate with door key cylinder switch.	Door key cylinder switch check	BL-58
	If above system is OK, replace time control unit.	—
SYMPTOM 4 Specific door lock actuator does not operate.	Front door lock actuator check (Driver side)	BL-60
	Front door lock actuator check (Passenger side)	BL-61
	Rear door lock actuator check LH	BL-62
	Rear door lock actuator check RH	BL-63
	Back door lock actuator check	BL-64
	If above system is OK, replace time control unit.	—
SYMPTOM 5 Super lock cannot be set by door key cylinder.	Door key cylinder switch check	BL-58
	Super lock actuator check (Driver side)	BL-68
	Super lock actuator check (Passenger side)	BL-69
	Super lock actuator check rear LH	BL-70
	Super lock actuator check rear RH	BL-71
	Key switch check	BL-67
	Ignition switch “ON” circuit check	BL-73
	If above systems are OK, replace time control unit.	—
SYMPTOM 6 *Super lock cannot be released by door key cylinder.	Door key cylinder switch check	BL-58
	Super lock actuator check (Driver side)	BL-68
	Super lock actuator check (Passenger side)	BL-69
	Super lock actuator check rear LH	BL-70
	Super lock actuator check rear RH	BL-71
	If above systems are OK, replace time control unit.	—
SYMPTOM 7 *Super lock cannot be released by ignition key switch. (Signal from NATS IMMU)	Super lock actuator check (Driver side)	BL-68
	Super lock actuator check (Passenger side)	BL-69
	Super lock actuator check rear LH	BL-70
	Super lock actuator check rear RH	BL-71
	NATS release signal check	BL-72
	Ignition switch “ON” circuit check	BL-73
	If above systems are “OK”, replace time control unit.	—

Symptom	Malfunctioning system	Reference page
SYMPTOM 8 Specific super lock actuator does not operate.	Super lock actuator check (Driver side)	BL-68
	Super lock actuator check (Passenger side)	BL-69
	Super lock actuator check rear LH	BL-70
	Super lock actuator check rear RH	BL-71
	If above system is OK, replace time control unit.	—
SYMPTOM 9 *Key reminder system does not operate.	Door switch check	BL-65
	Door unlock sensor check	BL-66
	Key switch check	BL-67
	If above system is OK, replace time control unit.	—

*:Make sure the power door lock system operates properly.

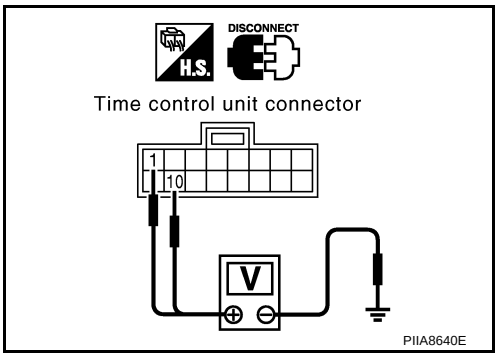
Power Supply and Ground Circuit Check

EIS008EF

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector.
3. Check voltage between time control unit and ground.

Connector	Terminal (wire color)		Ignition switch position		
	(+)	(–)	OFF	ACC	ON
M31	1 (L)	Ground	Battery voltage	Battery voltage	Battery voltage
	10 (W)		Battery voltage	Battery voltage	Battery voltage



OK or NG

OK >> GO TO 2.
NG >> Check the following.

- 10A fuse [No.5, located in fuse block (J/B)]
- 40A fusible link (letter **B** , located in fuse and fusible link box.)
- Harness for open or short between time control unit and fuse
- Harness for open or short between time control unit circuit breaker

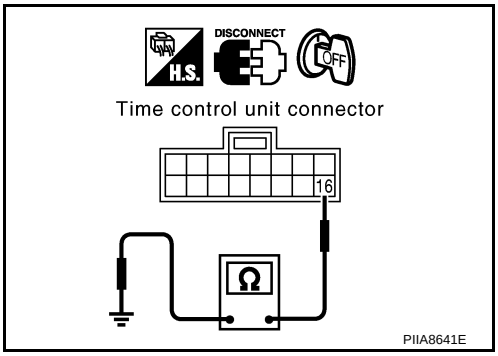
2. CHECK GROUND CIRCUIT

Check continuity between time control unit harness connector M30 terminal 16 (B/R) and ground.

16 (B/R) – Ground : Continuity should exist.

OK or NG

OK >> Power supply and ground circuit is OK.
NG >> Replace harness or connector.



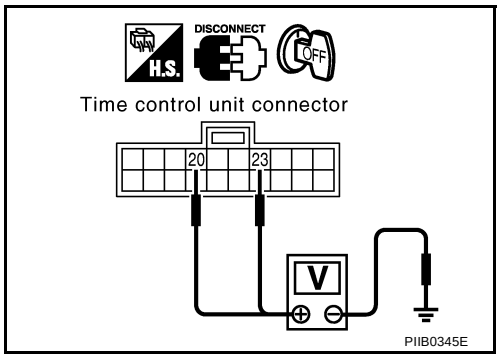
Door Lock/Unlock Switch Check

EIS008EG

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit harness connector M31 terminal 20 (GY), 23 (PU) and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(-)		
M31	20 (GY)	Ground	Lock	0
			Neutral or Unlock	5
	23 (PU)		Unlock	0
			Neutral or Lock	5



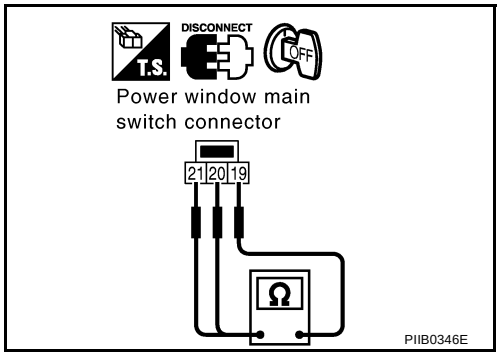
OK or NG

OK >> Door lock/unlock switch is OK.
NG >> GO TO 2.

2. CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch.

Connector	Terminals		Condition of door lock/unlock switch	Continuity
D6	20	19	Locked	Yes
			Neutral or Unlocked	No
	21	19	Unlocked	Yes
			Neutral or Locked	No



OK or NG

OK >> GO TO 3.
NG >> Replace power window main switch.

3. CHECK DOOR LOCK/UNLOCK SWITCH (LOCK) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 20 (GY) and power window main switch harness connector D6 terminal 20 (GY).

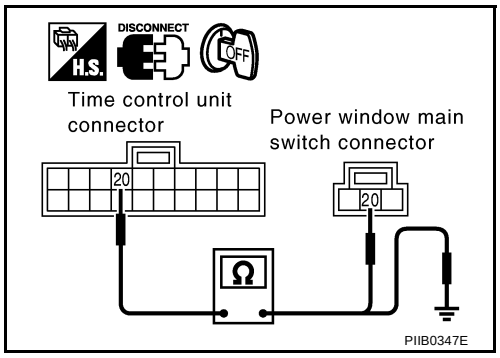
20 (GY) – 20 (GY) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 20 (GY) and ground.

20 (GY) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.



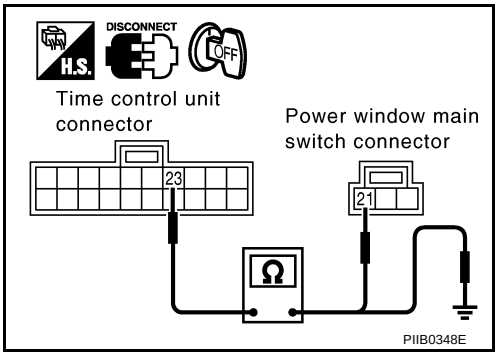
4. CHECK DOOR LOCK/UNLOCK SWITCH (UNLOCK) CIRCUIT

1. Check continuity between time control unit harness connector M31 terminal 23 (PU) and power window main switch harness connector D6 terminal 21 (PU).

23 (PU) – 21 (PU) : Continuity should exist.

2. Check continuity between time control unit harness connector M31 terminal 23 (PU) and ground.

23 (PU) – Ground : Continuity should not exist.



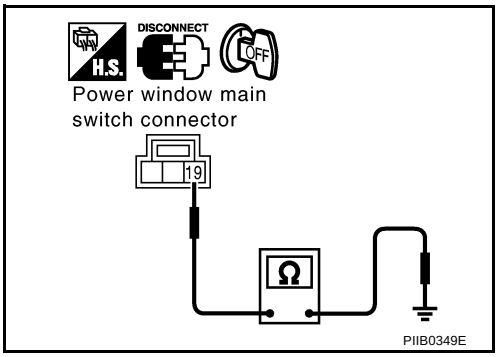
OK or NG

OK >> GO TO 5.
NG >> Repair harness or connector.

5. CHECK DOOR LOCK/UNLOCK SWITCH GROUND CIRCUIT

1. Check continuity between power window main switch harness connector D6 terminal 19 (B) and ground.

19 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace power window main switch.
NG >> Repair harness or connector.

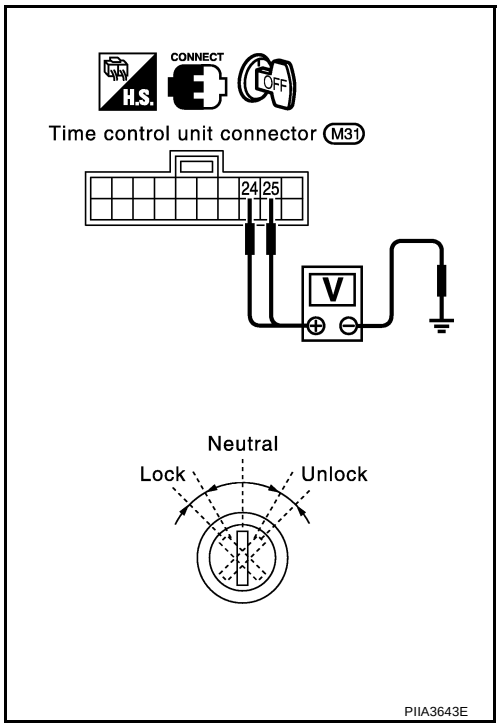
Door Key Cylinder Switch Check

EIS008EH

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check voltage between time control unit and ground.

Connector	Terminals (wire color)		Condition of door key cylinder switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	24 (LG/R)	Ground	Locked	0
			Neutral or Unlocked	5
	25 (GY/L)		Unlocked	0
			Neutral or Locked	5



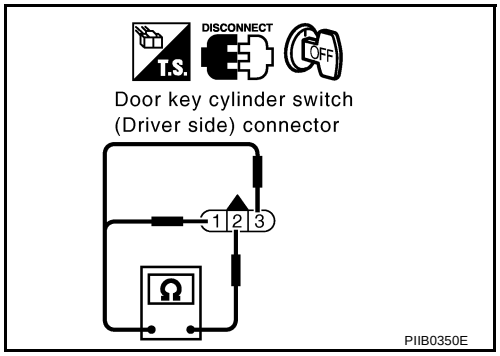
OK or NG

OK >> Door key cylinder switch is OK.
NG >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect door key cylinder switch connector.
3. Check continuity between door key cylinder switch.

Connector	Terminals		Condition of door key cylinder switch	Continuity
D8	1	2	Neutral	No
			Lock	Yes
	2	3	Neutral	No
			Unlock	Yes



OK or NG

OK >> GO TO 3.
NG >> Replace door key cylinder switch.

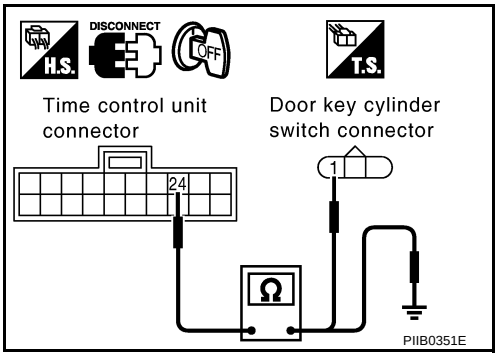
3. CHECK DOOR KEY CYLINDER SWITCH (LOCK) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 24 (LG/R) and door key cylinder switch (driver side) harness connector D8 terminal 1 (LG/R).

24 (LG/R) – 1 (LG/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 24 (LG/R) and ground.

24 (LG/R) -Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

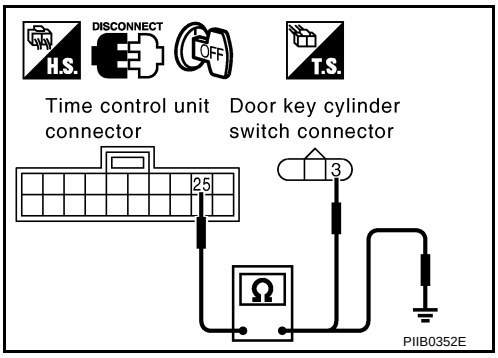
4. CHECK DOOR KEY CYLINDER SWITCH (UNLOCK) CIRCUIT

1. Check continuity between time control unit harness connector M31 terminal 25 (GY/L) and door key cylinder switch (driver side) harness connector D8 terminal 3 (GY/L).

25 (GY/L) - 3 (GY/L) : Continuity should exist.

2. Check continuity between time control unit harness connector M31 terminal 25 (GY/L) and ground.

25 (GY/L) -Ground : Continuity should not exist.



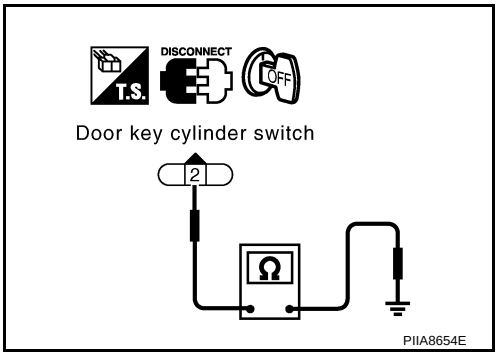
OK or NG

OK >> GO TO 5.
NG >> Repair harness or connector.

5. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

1. Check continuity between door key cylinder switch (driver side) harness connector D8 terminal 2 (B) and ground.

2 (B) - Ground : Continuity should exist.



OK or NG

OK >> Replace power window main switch.
NG >> Repair harness or connector.

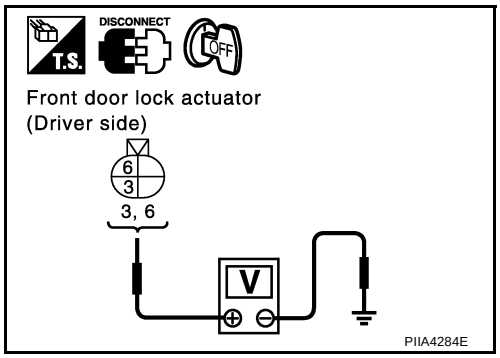
Front Door Lock Actuator (Driver Side) Check

EIS008EI

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect door lock actuator (driver side) connector.
3. Check voltage between front door lock actuator connector and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D9	3 (R/B)	Ground	Locked	Battery voltage
	6 (L)		Unlocked	



OK or NG

OK >> Replace front door lock actuator (Driver side).
NG >> GO TO 2.

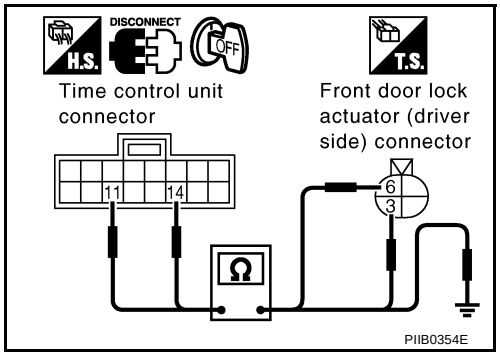
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 11(SB), 14(R/B) and door lock actuator (driver side) harness connector D9 terminal 3(R/B), 6(L).

14 (R/B) – 3 (R/B) : Continuity should exist.
11 (SB) – 6 (L) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 11 (SB), 14 (R/B) and ground.

11 (SB) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

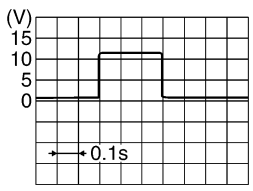


OK or NG

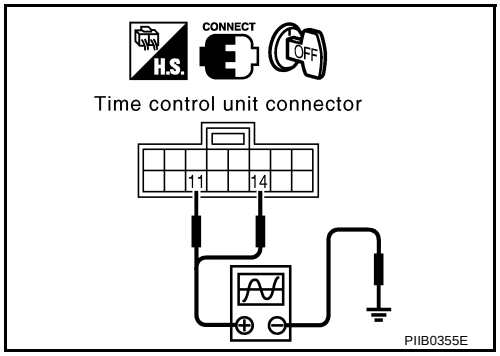
OK >> GO TO 3.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Con-nector	Terminals (wire color)		Condition of door lock/unlock switch	Signal (Reference value)
	(+)	(–)		
M30	11 (SB)	Ground	Unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

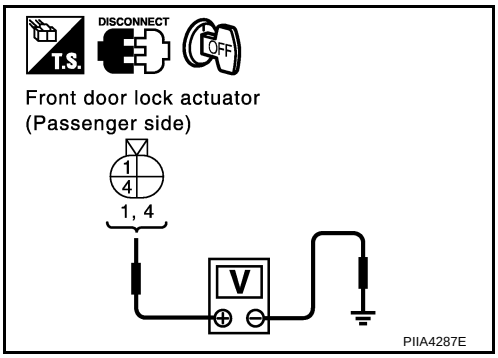
Front Door Lock Actuator (Passenger Side) Check

EIS008EJ

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect door lock actuator (passenger side) connector.
3. Check voltage between front door lock actuator connector and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D17	4 (R/B)	Ground	Locked	Battery voltage
	1 (G/R)		Unlocked	



OK or NG

OK >> Replace front door lock actuator (passenger side).
NG >> GO TO 2.

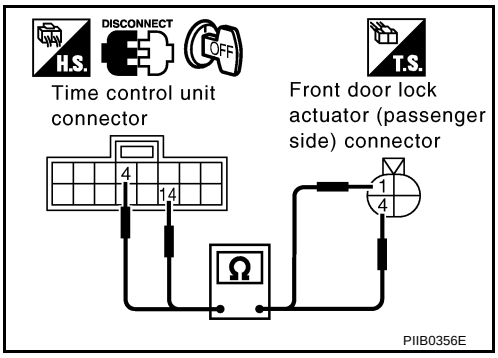
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and door lock actuator (passenger side) harness connector D17 terminal 1(G/R), 4(R/B).

14 (R/B) – 4 (R/B) : Continuity should exist.
4 (G/R) – 1 (G/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

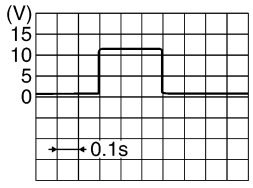


OK or NG

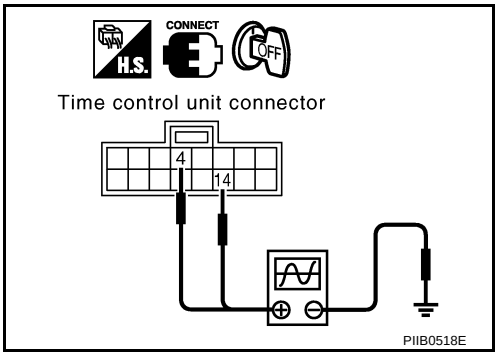
OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Connector	Terminals (wire color)		Condition of door lock/unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

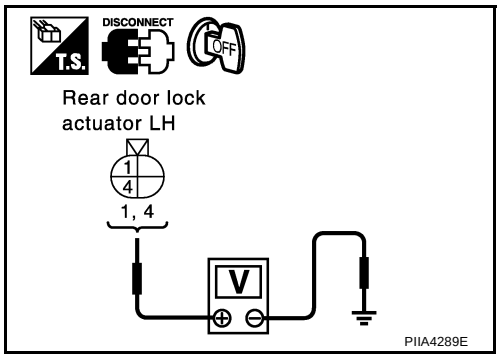
OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

Rear Door Lock Actuator LH Check

EIS008EK

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Check voltage between door lock actuator connector and ground.



Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D36	4 (R/B)	Ground	Locked	Battery voltage
	1 (G/R)		Unlocked	

OK or NG

OK >> Replace rear door lock actuator LH.
NG >> GO TO 2.

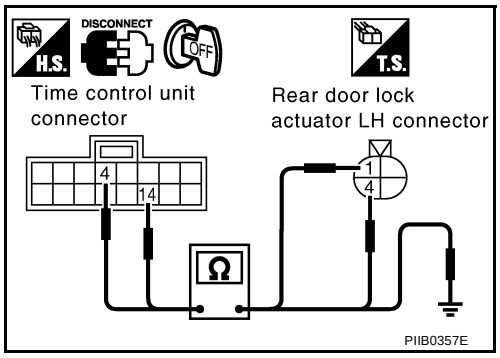
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and rear door lock actuator LH harness connector D36 terminal 1(G/R), 4(R/B).

4 (G/R) – 1 (G/R) : Continuity should exist.
14 (R/B) – 4 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

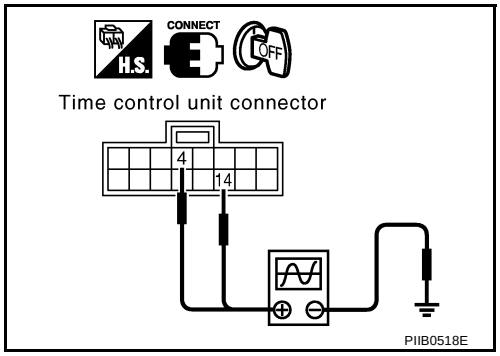


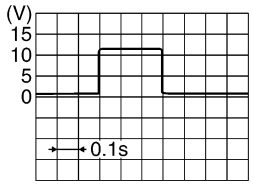
OK or NG

OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.



Con-nector	Terminals (wire color)		Condition of door lock/ unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	Unlocked	
	14 (R/B)		locked	

SKIA9232E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

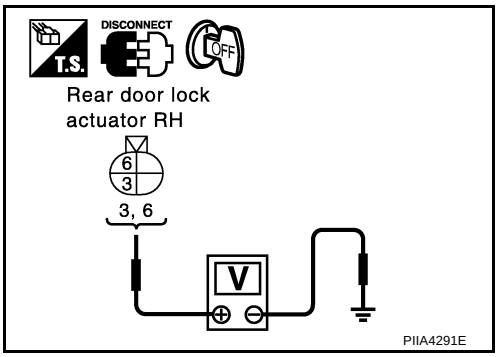
Rear Door Lock Actuator RH Check

EIS008EL

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Check voltage between door lock actuator connector and ground.

Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D26	3 (R/B)	Ground	Locked	Battery voltage
	6 (G/R)		Unlocked	



OK or NG

OK >> Replace rear door lock actuator RH.
NG >> GO TO 2.

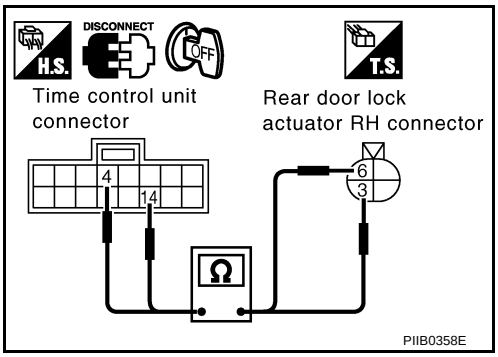
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and rear door lock actuator RH harness connector D26 terminal 3 (R/B), 6 (G/R).

4 (G/R) – 6 (G/R) : Continuity should exist.
14 (R/B) – 3 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

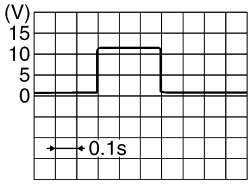


OK or NG

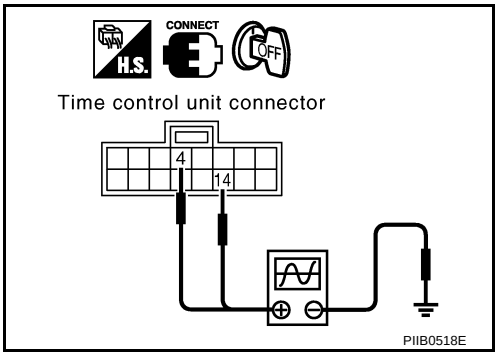
OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.

Connector	Terminals (wire color)		Condition of door lock/ unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E



OK or NG

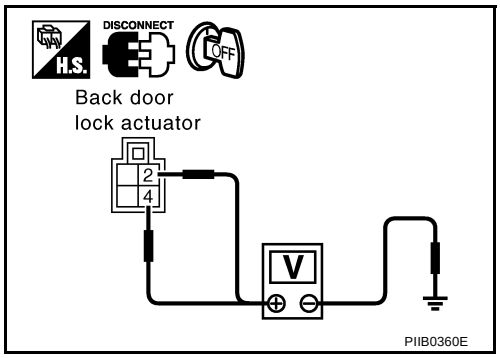
OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

Back Door Lock Actuator Check

EIS008EM

1. CHECK DOOR LOCK SIGNAL

1. Turn ignition switch OFF.
2. Disconnect back door lock actuator connector.
3. Check voltage between door lock actuator connector and ground.



Connector	Terminals (wire color)		Condition of door lock/unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
D46	2 (R/B)	Ground	Locked	Battery voltage
	4 (G/R)		Unlocked	

OK or NG

OK >> Replace back door lock actuator.
NG >> GO TO 2.

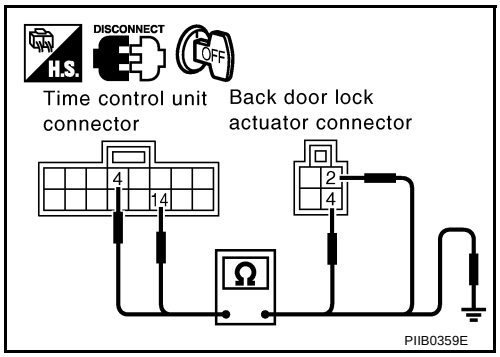
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14(R/B) and back door lock actuator harness connector D46 terminal 2(R/B), 4(G/R).

4 (G/R) – 4 (G/R) : Continuity should exist.
14 (R/B) – 2 (R/B) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 4 (G/R), 14 (R/B) and ground.

4 (G/R) – Ground : Continuity should not exist.
14 (R/B) – Ground : Continuity should not exist.

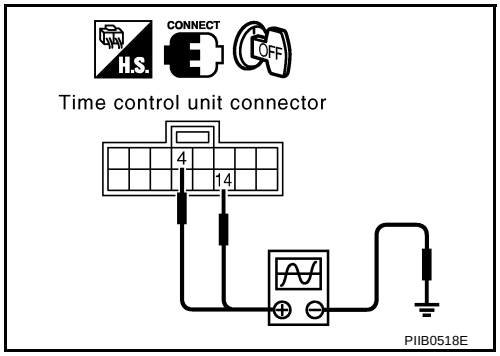


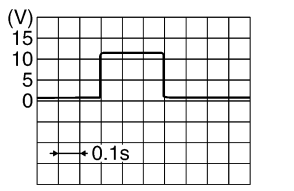
OK or NG

OK >> Replace time control unit.
NG >> Replace harness or connector.

3. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

1. Connect time control unit connector.
2. Check signal between time control unit connector and ground.



Connector	Terminals (wire color)		Condition of door lock/unlock switch	Signal (Reference value)
	(+)	(–)		
M30	4 (G/R)	Ground	unlocked	
	14 (R/B)		locked	

SKIA9232E

OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace time control unit.

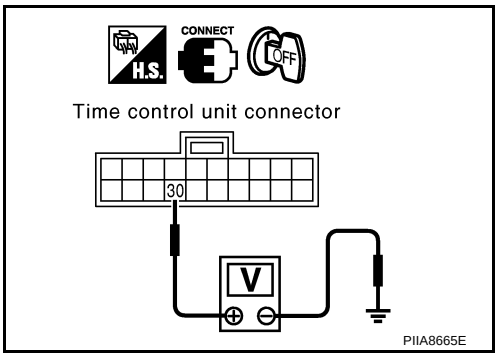
Door Switch Check

EIS008EN

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit connector and ground.

Connector	Terminal (wire color)		Condition of driver's door	Voltage [V] (Approx.)
	(+)	(-)		
M31	30 (SB)	Ground	Closed	Battery voltage
			Open	0



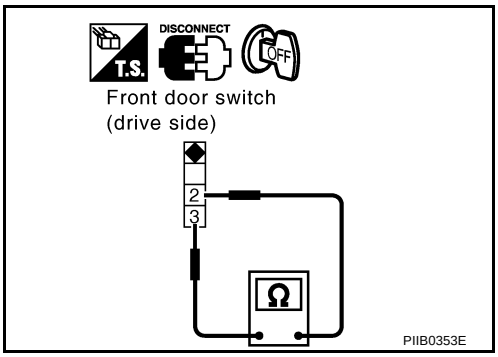
OK or NG

OK >> Door switch is OK.
NG >> GO TO 2.

2. CHECK FRONT DOOR SWITCH

1. Disconnect door switch (driver side) connector.
2. Check continuity between door switch (driver side) terminals.

Connector	Terminal	Condition of door switch (driver side)	Continuity
B16	2 – 3	Pushed	No
		Released	Yes



OK or NG

OK >> GO TO 3.
NG >> Replace front door switch (driver side).

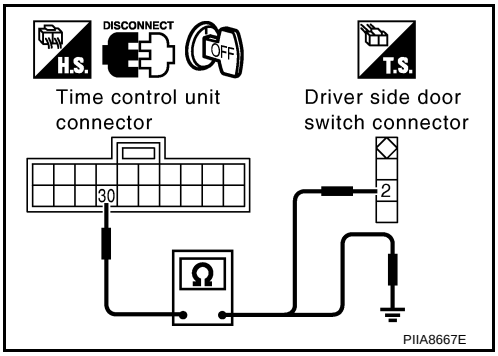
3. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M31 terminal 30 (R) and front door switch (driver side) harness connector B16 terminal 2 (R).

30 (R) – 2 (R) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 30 (R) and ground.

30 (R) – Ground : Continuity should not exist.



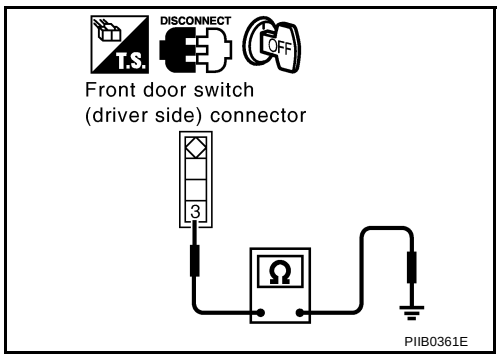
OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

4. CHECK DOOR SWITCH (DRIVER SIDE) GROUND CIRCUIT

1. Check continuity between front door switch (driver side) harness connector B16 terminal 3 (B) and ground.

3 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace time control unit.
NG >> Repair harness or connector.

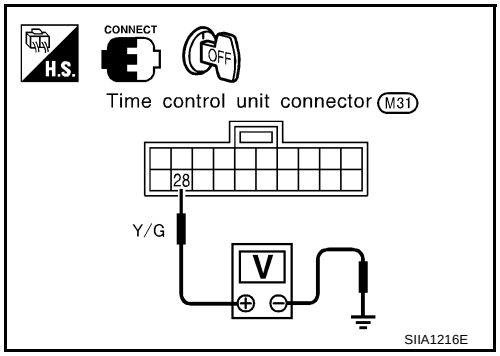
Door Unlock Sensor Check

EIS008EO

1. CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between time control unit connector and ground.

Connector	Terminals		Driver's door lock/ unlock switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	28 (Y/G)	Ground	Locked	10
			Unlocked	0



OK or NG

OK >> Door unlock sensor is OK.
NG >> GO TO 2.

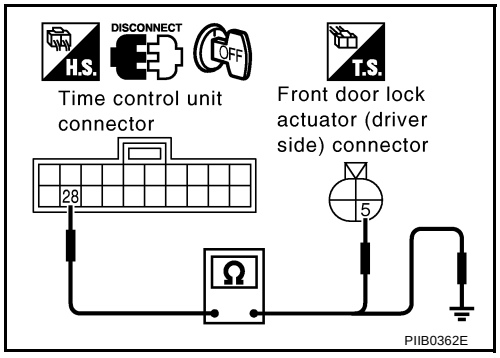
2. CHECK UNLOCK SENSOR CIRCUIT

1. Disconnect time control unit connector and front door lock actuator (driver side) connector.
2. Check continuity between time control unit harness connector M31 terminal 28 (Y/G) and front door lock actuator (driver side) harness connector D9 terminal 5 (Y/G).

28 (Y/G) – 5 (Y/G) : Continuity should exist.

3. Check continuity between time control unit harness connector M31 terminal 28 (Y/G) and ground.

28 (Y/G) – Ground : Continuity should not exist.



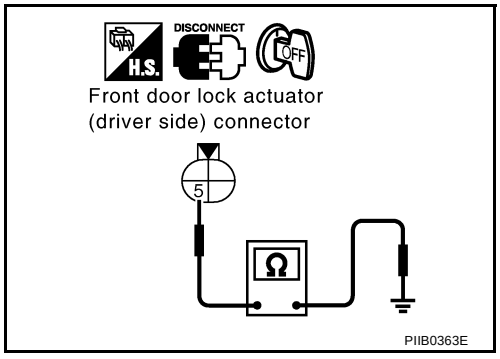
OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

3. CHECK DOOR SWITCH (DRIVER SIDE) GROUND CIRCUIT

Check continuity between front door lock actuator (driver side) harness connector D9 terminal 5 (B) and ground.

5 (B) – Ground : Continuity should exist.



OK or NG

OK >> Replace time control unit.
NG >> Repair harness or connector.

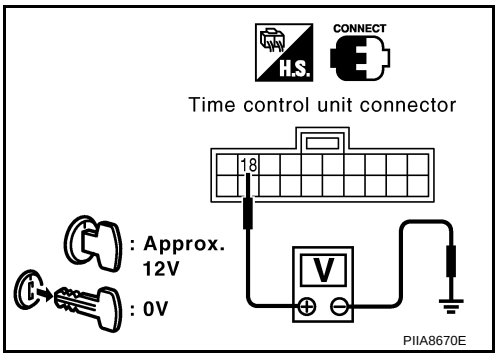
Key Switch Check

EIS008EP

1. CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit connector and ground.

Connector	Terminals (Wire color)		Condition of key switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	18 (W/L)	Ground	inserted	Battery voltage
			removed	0



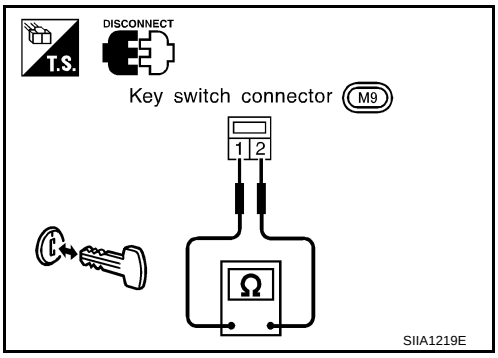
OK or NG

OK >> Key switch is OK.
NG >> GO TO 2.

2. CHECK KEY SWITCH (INSERT)

1. Disconnect key switch connector.
2. Check continuity between key switch terminals 1 and 2.

Connector	Terminals		Condition of key switch	Continuity
M9	1	2	inserted	Yes
			removed	No



OK or NG

OK >> GO TO 3.
NG >> Replace key switch.

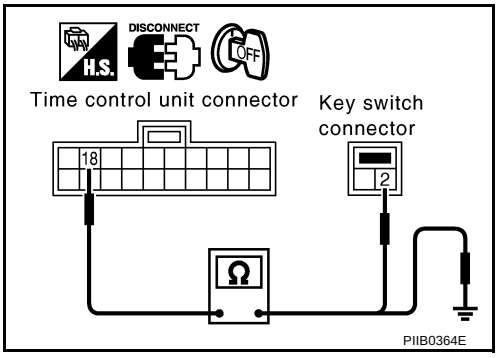
3. CHECK KEY SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector.
3. Check continuity between time control unit harness connector M31 terminal 18 (W/L) and key switch harness connector M9 terminal 2 (W/L).

18 (W/L) – 2 (W/L) : Continuity should exist.

4. Check continuity between time control unit harness connector M31 terminal 18 (W/L) and ground.

18 (W/L) – Ground : Continuity should not exist.



OK or NG

OK >> Check the following.
- 10A fuse [No.28, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse

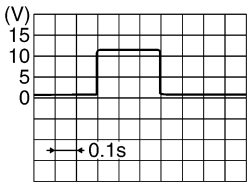
NG >> Repair harness or connector.

Super Lock Actuator (Driver Side) Check

EIS001SK

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (driver side) connector.
3. Check voltage for super lock actuator.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (-)	Condition of door key cylinder switch	Signal (Reference value)
M30	6 (Y/R)	Ground	Locked (Set)	
	3 (L/Y)		Unlocked (Released)	

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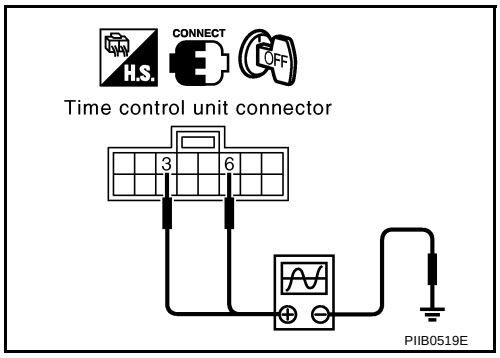


PIIB0519E

OK or NG

OK >> GO TO 2.
NG >> Check other malfunctioning system, refer to BL-54, "SYMPTOM CHART" .

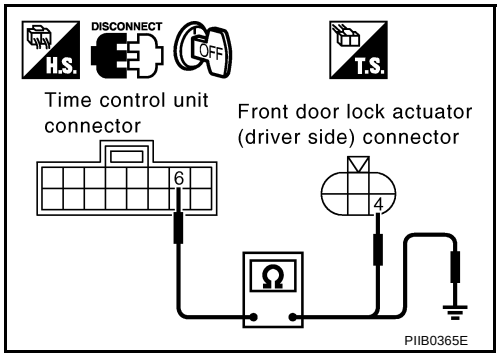
2. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and front door lock actuator (driver side) harness connector D9 terminal 4 (Y/R)

6 (Y/R) – 4 (Y/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and ground

6 (Y/R) – Ground : Continuity should not exist.



PIIB0365E

OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

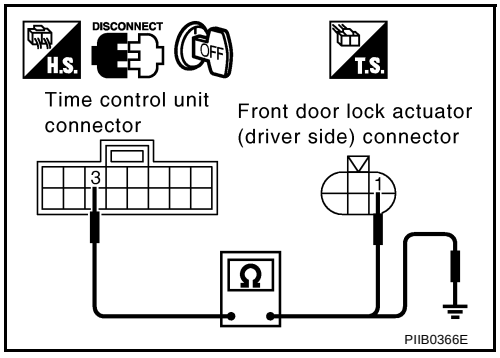
3. CHECK SUPER LOCK RELEASE SIGNAL CIRCUIT

1. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and front door lock actuator (driver side) harness connector D9 terminal 1 (L/Y)

3 (L/Y) - 1 (L/Y) : Continuity should exist.

2. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and ground

3 (L/Y) - Ground : Continuity should not exist.



PIIB0366E

OK or NG

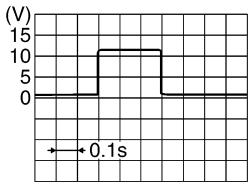
OK >> Replace driver side door lock actuator.
NG >> Repair harness or connector.

Super Lock Actuator (Passenger Side) Check

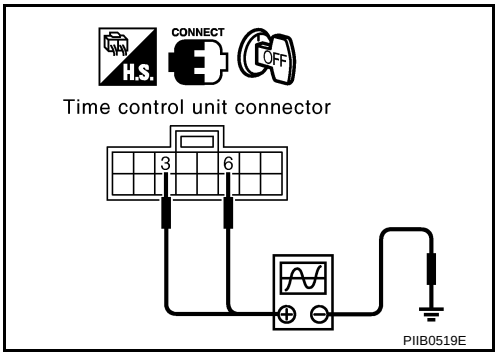
EIS008EQ

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (passenger side) connector.
3. Check voltage for super lock actuator.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (-)	Condition of door key cylinder switch	Signal (Reference value)
M30	6 (Y/R)	Ground	Locked (Set)	
	3 (L/Y)		Unlocked (Released)	

SKIA9232E



PIIB0519E

OK or NG

OK >> GO TO 2.
NG >> Check other malfunctioning system, refer to BL-54, "SYMPTOM CHART" .

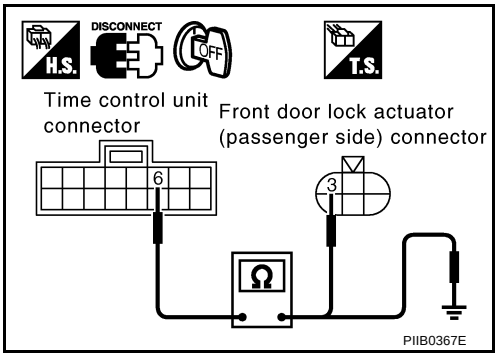
2. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Disconnect time control unit and front door lock actuator (passenger side) connector.
2. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and front door lock actuator (passenger side) harness connector D17 terminal 3 (Y/R)

6 (Y/R) – 3 (Y/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and ground

6 (Y/R) – Ground : Continuity should not exist.



PIIB0367E

OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

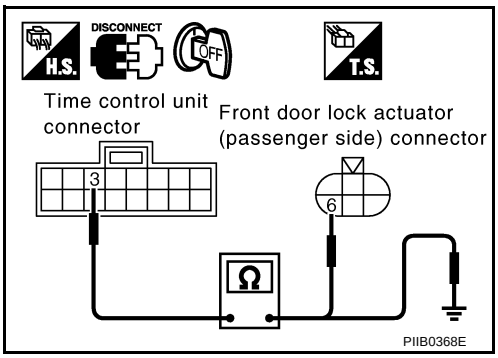
3. CHECK SUPER LOCK RELEASE SIGNAL CIRCUIT

1. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and front door lock actuator (passenger side) harness connector D17 terminal 6 (L/Y)

3 (L/Y) – 6 (L/Y) : Continuity should exist.

2. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and ground

3 (L/Y) – Ground : Continuity should not exist.



PIIB0368E

OK or NG

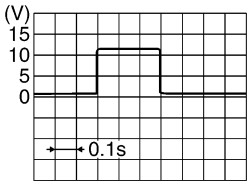
OK >> Replace front door lock actuator (passenger side).
NG >> Repair harness or connector.

Super Lock Actuator Check / Rear LH

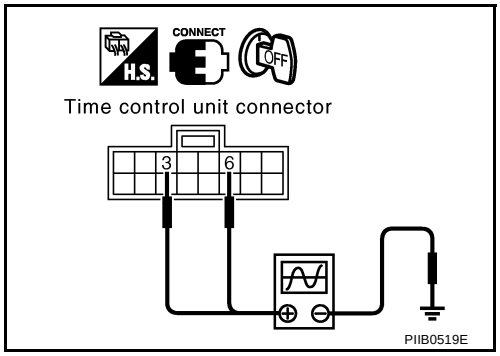
EIS008ER

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Check voltage for super lock actuator.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (-)	Condition of door key cylinder switch	Signal (Reference value)
M82	6 (Y/R)	Ground	Locked (Set)	
	3 (L/Y)		Unlocked (Released)	

SKIA9232E



PIIB0519E

OK or NG

OK >> GO TO 2.
NG >> Check other malfunctioning system, refer to BL-54, "SYMPTOM CHART" .

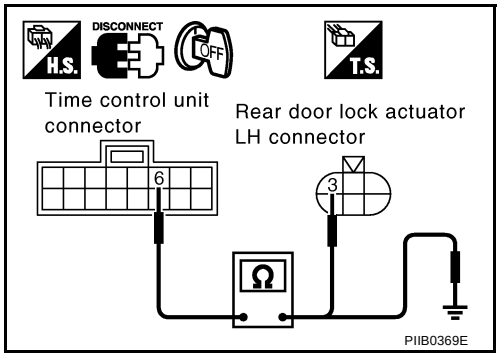
2. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Disconnect time control unit connector.
2. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and rear door lock actuator LH harness connector D35 terminal 3 (Y/R)

6 (Y/R) – 3 (Y/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and ground

6 (Y/R) – Ground : Continuity should not exist.



PIIB0369E

OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

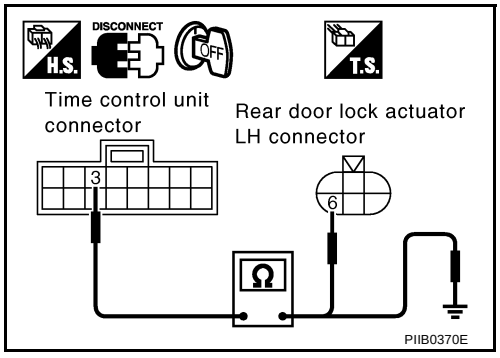
3. CHECK SUPER LOCK RELEASE SIGNAL CIRCUIT

1. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and rear door lock actuator LH harness connector D35 terminal 3 (L/Y)

3 (L/Y) – 6 (L/Y) : Continuity should exist.

2. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and ground

3 (L/Y) – Ground : Continuity should not exist.



PIIB0370E

OK or NG

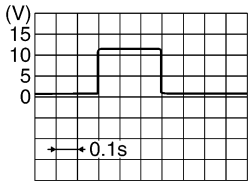
OK >> Replace rear door lock actuator LH.
NG >> Repair harness or connector.

Super Lock Actuator Check / Rear RH

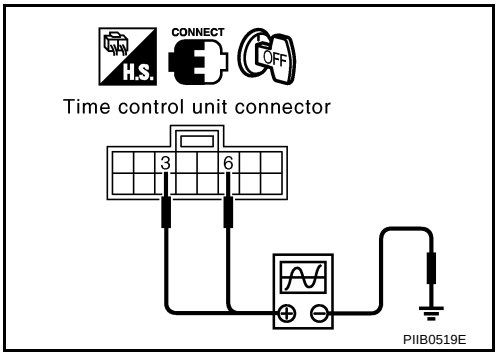
EIS008ES

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Check voltage for super lock actuator.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (-)	Condition of door key cylinder switch	Signal (Reference value)
M82	6 (Y/R)	Ground	Locked (Set)	
	3 (L/Y)		Unlocked (Released)	

SKIA9232E



PIIB0519E

OK or NG

OK >> GO TO 2.
NG >> Check other malfunctioning system, refer to BL-54, "SYMPTOM CHART" .

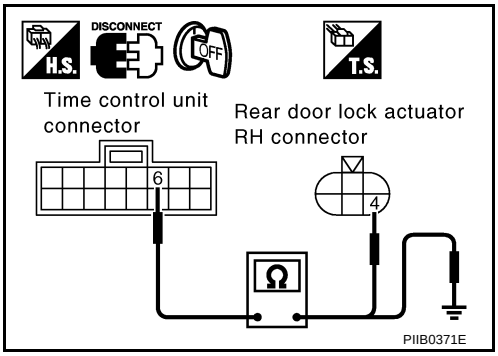
2. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Disconnect time control unit and rear door lock actuator RH connector.
2. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and rear door lock actuator RH harness connector D25 terminal 4 (Y/R)

6 (Y/R) – 4 (Y/R) : Continuity should exist.

3. Check continuity between time control unit harness connector M30 terminal 6 (Y/R) and ground

6 (Y/R) - Ground : Continuity should not exist.



PIIB0371E

OK or NG

OK >> GO TO 3.
NG >> Repair harness or connector.

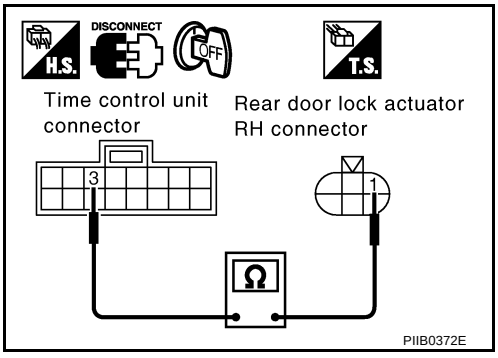
3. CHECK SUPER LOCK RELEASE SIGNAL CIRCUIT

1. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and rear door lock actuator RH harness connector D25 terminal 1 (L/Y)

3 (L/Y) – 1 (L/Y) : Continuity should exist.

2. Check continuity between time control unit harness connector M30 terminal 3 (L/Y) and ground

3 (L/Y) – Ground : Continuity should not exist.



PIIB0372E

OK or NG

OK >> Replace rear door lock actuator RH.
NG >> Repair harness or connector.

NATS Release Signal Check

EIS008FG

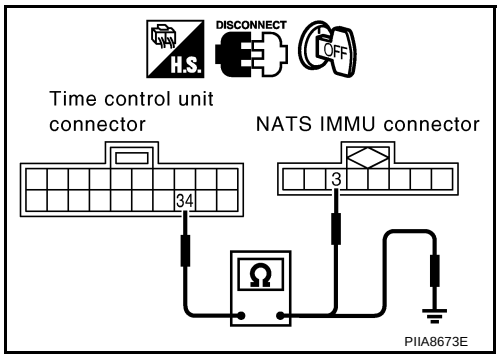
1. CHECK NATS SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector and NATS IMMU connector.
3. Check continuity between time control unit harness connector M31 terminal 34 (B/Y) and NATS IMMU harness connector E109 terminal 3 (B/Y).

34 (B/Y) – 3 (B/Y) : Continuity should exist.

4. Check continuity between time control unit harness connector M31 terminal 34 (B/Y) and ground.

34 (B/Y) – Ground : Continuity should not exist.



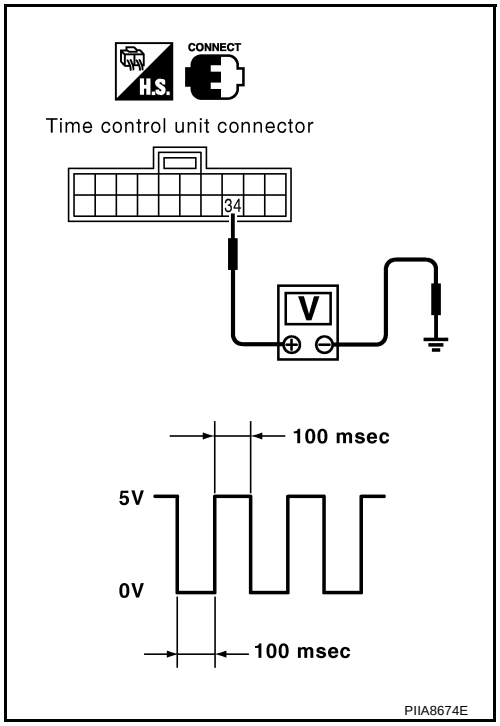
OK or NG

OK >> GO TO 2.
NG >> Repair harness.

2. CHECK NATS RELEASE SIGNAL

1. Connect time control unit connector and NATS IMMU connector.
2. Check voltage between time control unit connector and ground.

Connector	Terminal (wire color)		Condition of ignition switch	Voltage [V] (Approx.)
	(+)	(–)		
M31	34 (R)	Ground	OFF	5
			More than 17 seconds after ignition switch is turned to ON	
			For 17 seconds after ignition switch is turned to ON	Pulse



OK or NG

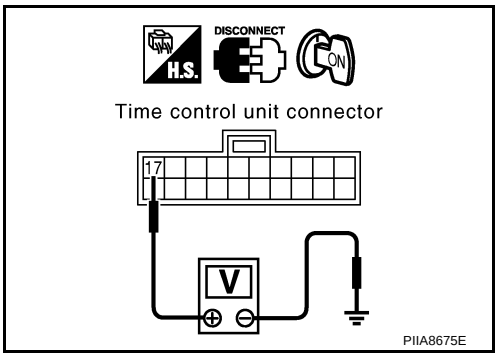
OK >> Replace time control unit.
NG >> Check NATS system.

Ignition Switch “ON” Circuit Check

EIS008FH

1. CHECK IGNITION ON SIGNAL

1. Disconnect time control unit connector.
2. Check voltage between time control unit connector and ground.



Connector	Terminal (wire color)		Ignition switch position		
	(+)	(–)	OFF	ACC	ON
M31	17 (Y/G)	Ground	0V	0V	Battery voltage

OK or NG

OK >> Ignition ON signal is OK.

NG >> Check the following.

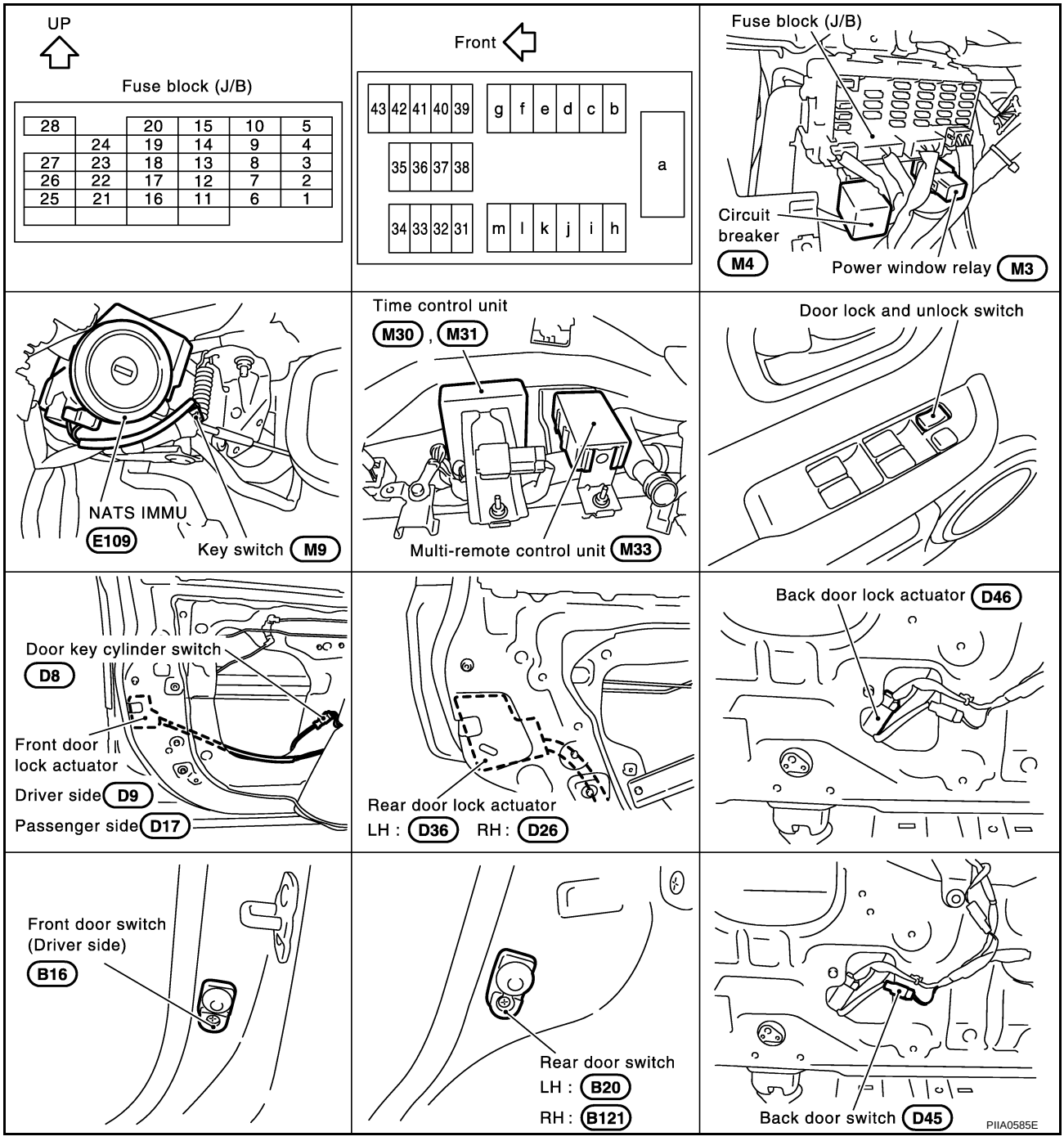
- 10A fuse [No. 5, located in fuse block (J/B)]
- Harness for open or short between time control unit and fuse

MULTI-REMOTE CONTROL SYSTEM

PFP:28596

Component Parts and Harness Connector Location

EIS001RD



System Description

EIS001RE

FUNCTION

Multi-remote control system has the following function.

- Door lock (and set super lock)
- Door unlock (and release super lock)
- Hazard reminder

LOCK OPERATION

To lock door by multi-remote controller, the ignition switch must be at OFF.
When the LOCK signal is input to multi-remote control unit (the antenna of the system is combined with multi-remote control unit), ground is supplied

- through multi-remote control unit terminal 5
- to time control unit terminal 32.

Then time control unit operates to lock doors and set super lock (models with super lock).

UNLOCK OPERATION

When the UNLOCK signal is input to multi-remote control unit (the antenna of the system is combined with multi-remote control unit), ground is supplied

- through multi-remote control unit terminal 6
- to time control unit terminal 33.

Time control unit operates to unlock driver's door and release super lock (models with super lock).
Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

HAZARD REMINDER

When the doors are locked or unlocked by multi-remote controller (signal from driver side unlock sensor), supply power to hazard warning lamp flashes as follows

- Lock operation: Flash once
- Unlock operation: Flash twice

MULTI-REMOTE CONTROLLER ID CODE ENTRY

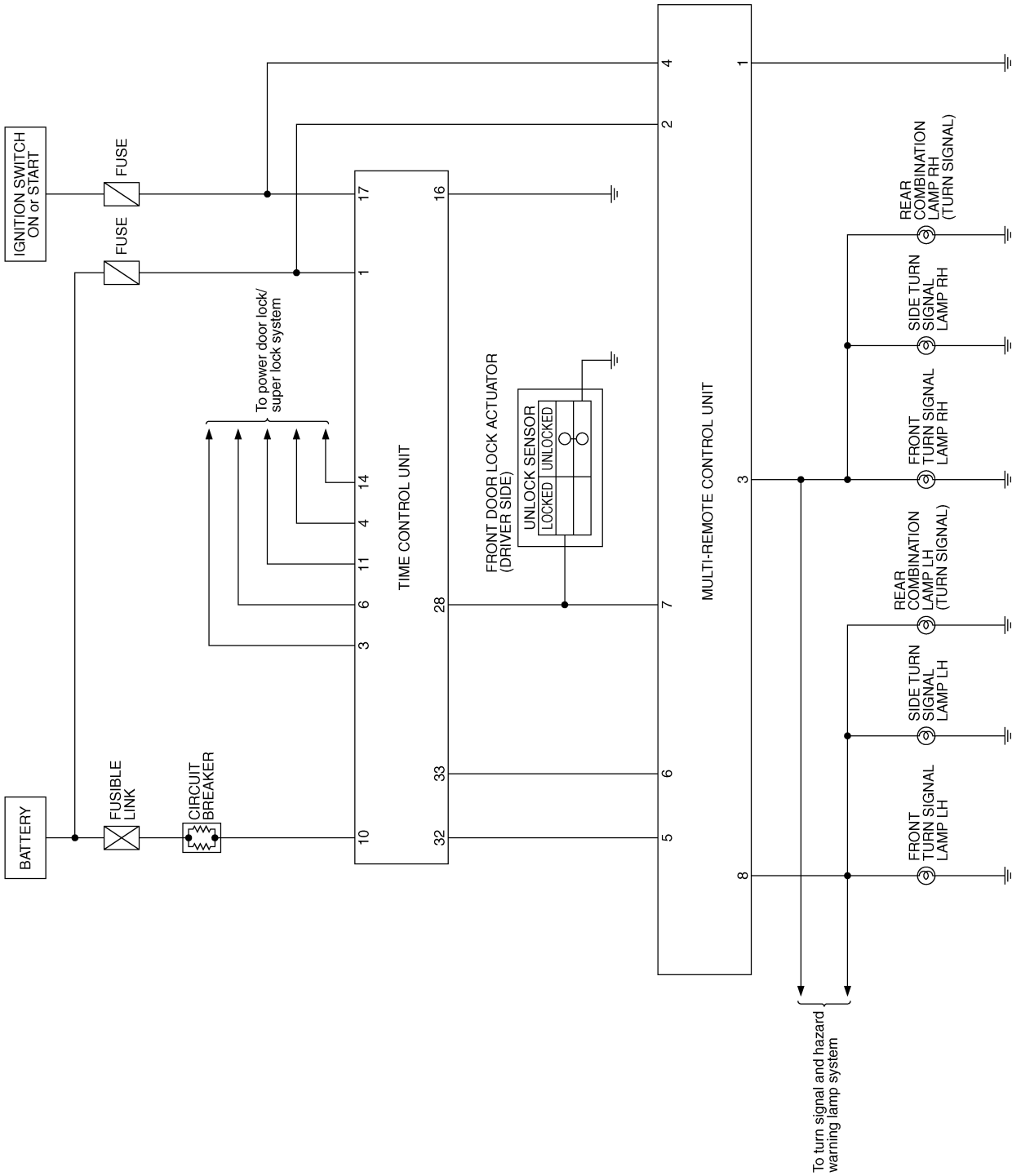
A maximum of four remote controllers can be entered.
To enter ID code entry, the following signals must be input to the multi-remote control unit.

- Ignition switch (ON)
- Signal from remote controller

For detailed procedure, refer to BL-89, "ID Code Entry Procedure" .

Schematic

EIS008NF

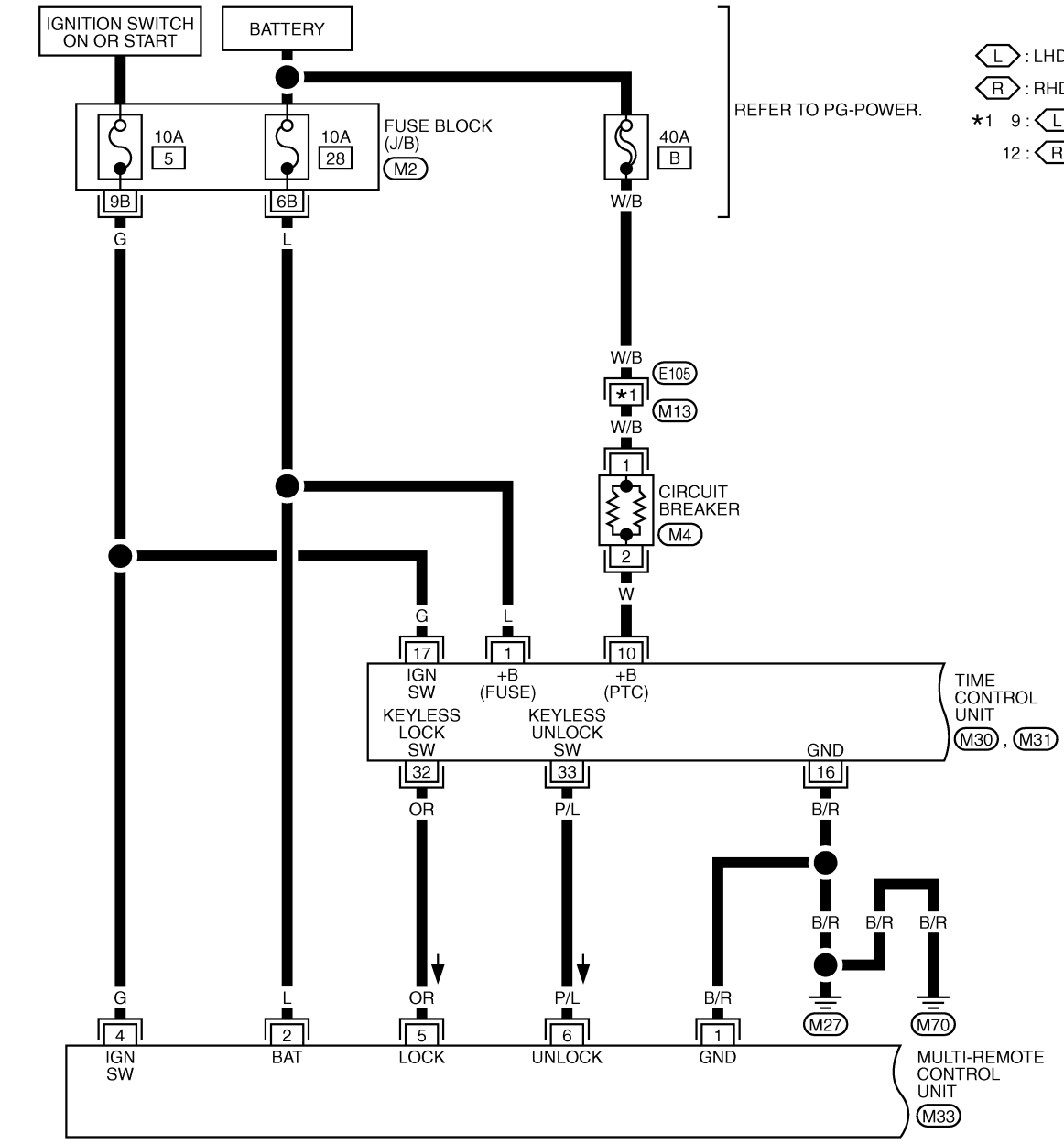


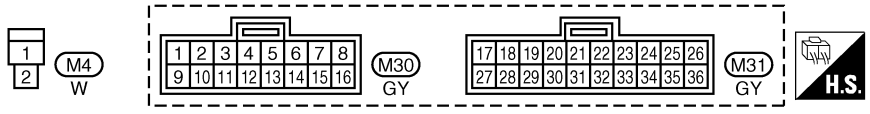
TIWB0029E

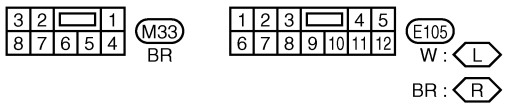
Wiring Diagram — MULTI —

EIS001RF

BL-MULTI-01





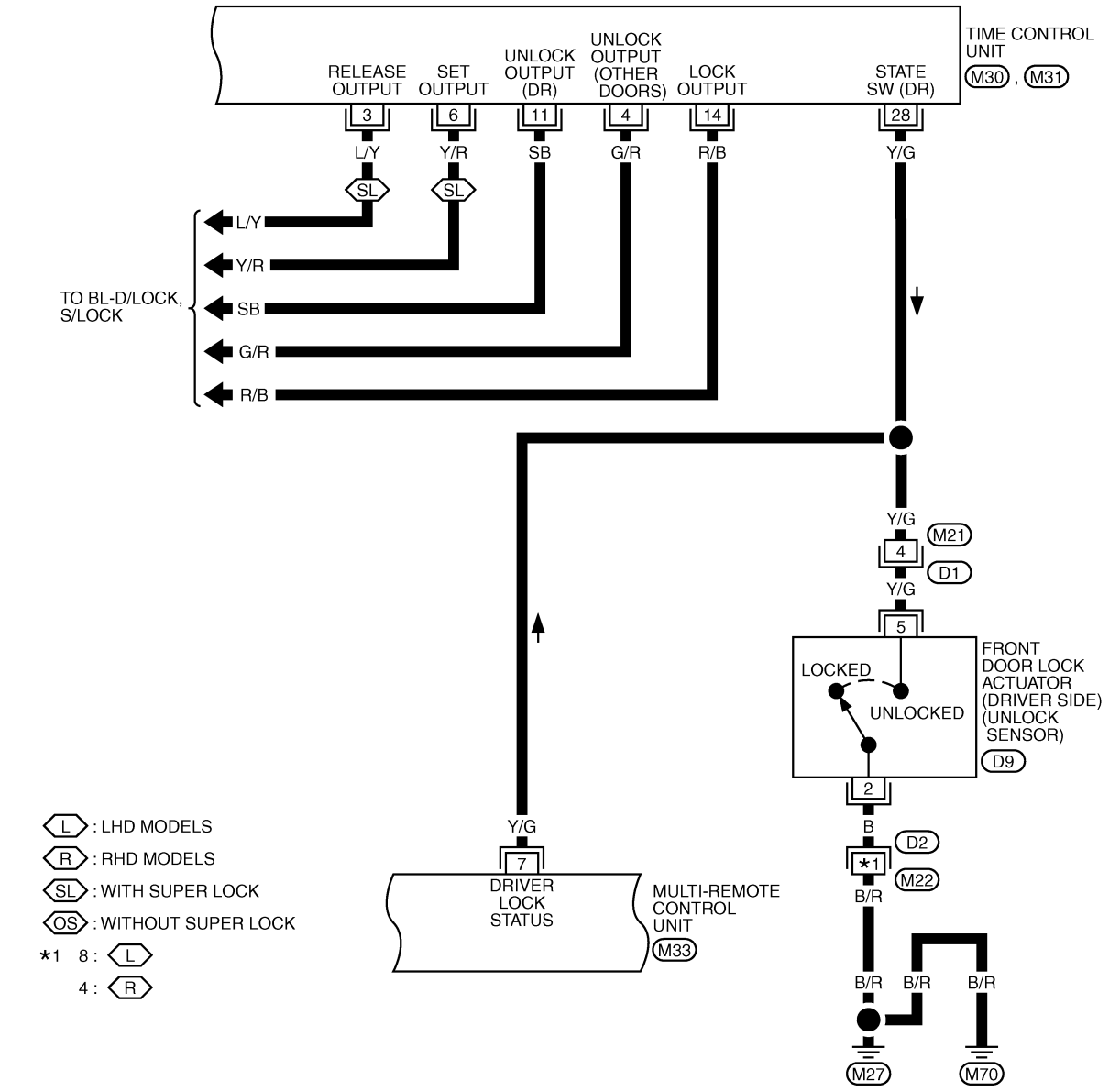


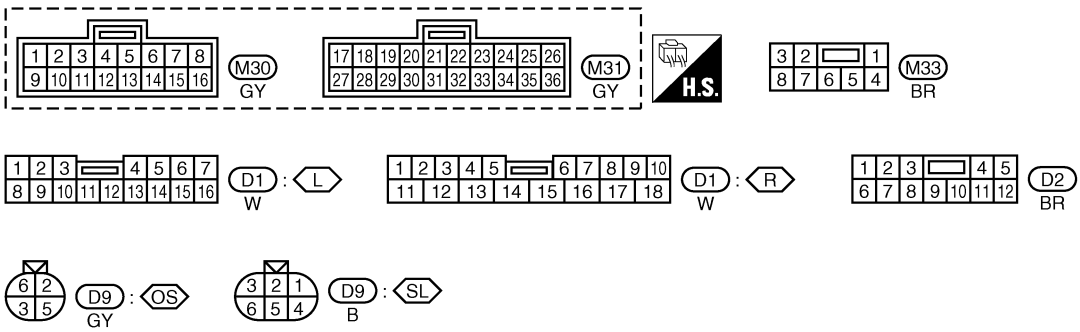
REFER TO THE FOLLOWING.

M2 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWA0475E

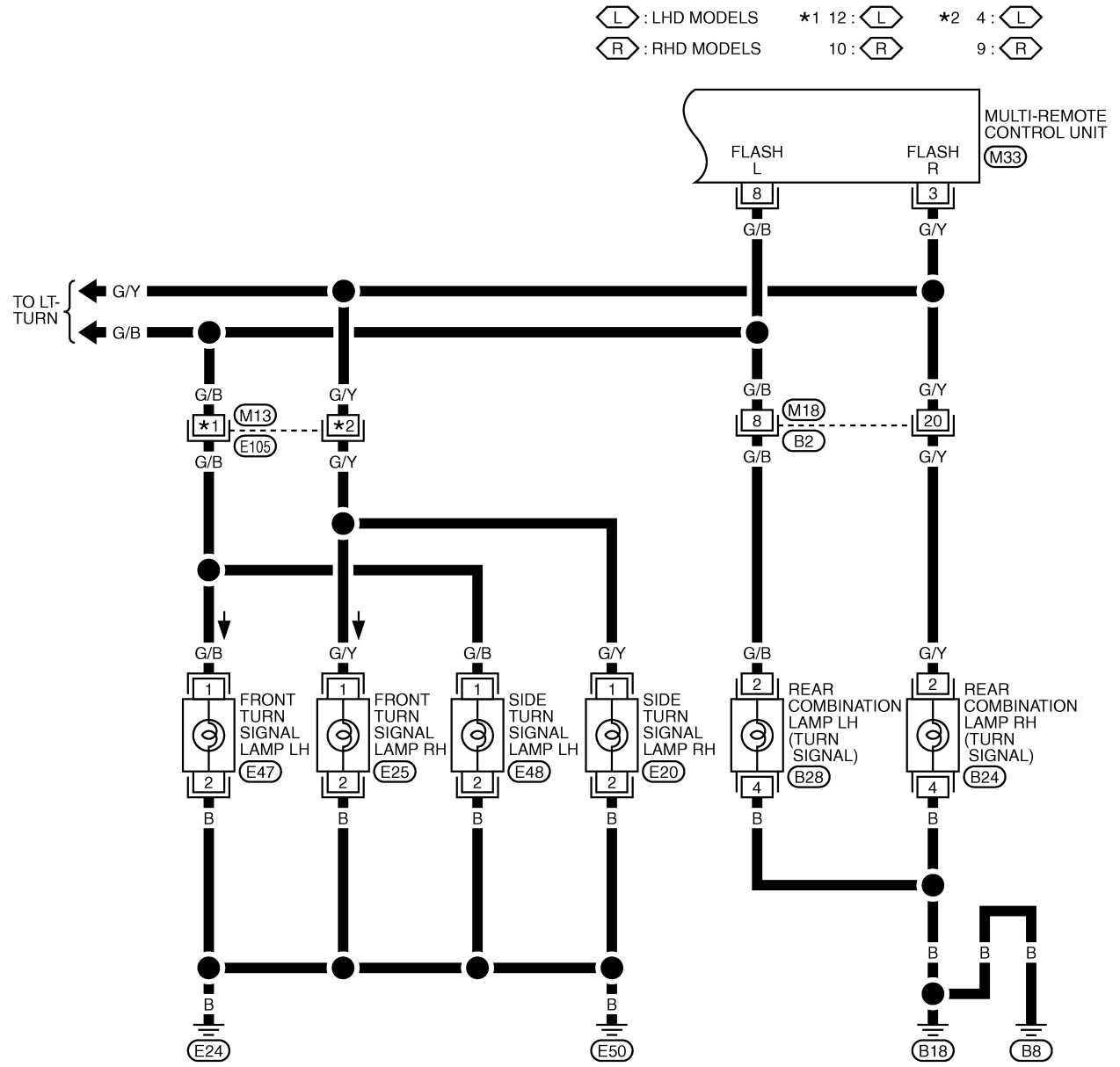
BL-MULTI-02

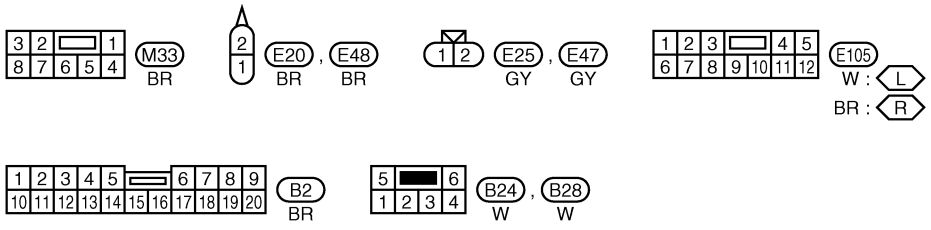




TIWA0476E

BL-MULTI-03





TIWB0030E

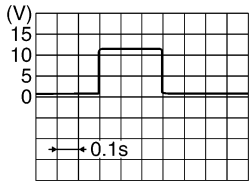
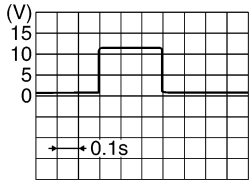
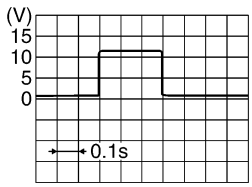
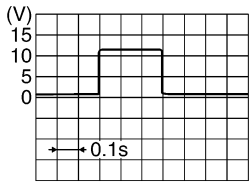
Terminal and Reference Value for Multi-remote Control Unit

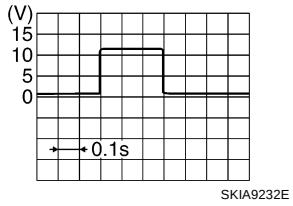
EIS001TQ

Terminal	Wire Color	Item	Condition	Voltage [V] (Approx.)
1	B	Ground	—	0
2	L	Power source (Fuse)	—	Battey voltage
3	G/Y	Hazard reminder (Flasher RH)	Remote controller button pressed	0 → Battey voltage
4	G	Ignition switch (ON)	—	Battey voltage
5	OR	Key less lock signal	Remote controller lock button pressed	0 → 5
6	P/L	Key less unlock signal	Remote controller unlock button pressed	0 → 5
7	Y/G	Driver door lock switch signal	Unlock (ON)	0
			Lock (OFF)	5
8	G/B	Hazard reminder (Flasher LH)	Remote controller button pressed	0 → Battey voltage

Terminal and Reference Value for Time Control Unit

EIS008ET

Terminal No.	Wire color	Connections	Operation condition		Voltage [V] (Approx.)
1	L	Power source (Fuse)	—		Battery voltage
3 *	L/Y	Super lock actuator	Door key cylinder switch	Free	0
				Released	 SKIA9232E
4	G/R	Passenger and rear doors lock actuator	Door lock/unlock switch	Free	0
				Unlocked	 SKIA9232E
6 *	Y/R	Super lock actuator	Door key cylinder switch	Free	0
				Set	 SKIA9232E
10	W	Power source (C/B)	—		Battery voltage
11	SB	Front door lock actuator (driver side)	Door lock/unlock switch	Free	0
				Unlocked	 SKIA9232E

Terminal No.	Wire color	Connections	Operation condition		Voltage [V] (Approx.)
14	R/B	Door lock actuator	Door lock/unlock switch	Free	0
				Locked	 SKIA9232E
16	B/R	Ground	—		0
17	G	Ignition switch (ON)	—		Battery voltage
28	Y/G	Door unlock sensor (driver side)	Driver door: Locked → Unlocked		10 → 0
32	OR	Multi-remote control unit	Remote controller lock button is pushed. (Ignition switch is not at “ON” position)		0 → 5 (For 0.5 seconds)
33	P/L	Multi-remote control unit	Remote controller unlock button is pushed. (Ignition switch is not at “ON” position)		0 → 5 (For 0.5 seconds)

NOTE:
*: With super lock system.

Symptom Chart

EIS001RG

NOTE:
Always check remote controller battery before replacing remote controller.

Symptom	Diagnoses/service procedure	Reference page
All function of multi-remote control system do not operate.	1.Remote controller battery check	BL-82
	2.Power supply and ground circuit check for time control unit	BL-82
	3.Power supply and ground circuit check for multi-remote control unit	BL-83
	4.Replace remote controller.	BL-90
The new ID of remote controller cannot be entered.	1.Remote controller battery check	BL-82
	2.Power supply and ground circuit check for time control unit	BL-82
	3.Power supply and ground circuit check for multi-remote control unit	BL-83
	3.Replace remote controller.	BL-90
Door lock and unlock does not function. (If the power door lock system does not operate manually, check power door lock system.)	1.Remote controller battery check	BL-82
	2.Replace remote controller.	BL-90
Door lock function does not operate with remote controller.	Time control unit lock circuit check	BL-84
Door unlock function does not operate with remote controller.	Time control unit unlock circuit check	BL-85
Hazard reminder does not activate properly when pressing lock or unlock button of remote controller.	1.Remote controller battery check	BL-82
	2.Hazard reminder check	BL-86
	3.Replace remote controller.	BL-90

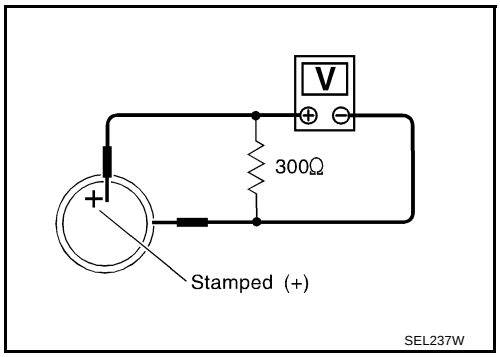
Remote Controller Battery Check

EIS001T3

1. CHECK REMOTE CONTROLLER BATTERY

Remove battery and measure voltage across battery positive and negative terminals, (+) and (–).

Voltage : 2.5V – 3.0V



NOTE:
Remote controller does not function if battery is not set correctly.

OK or NG

OK >> Check remote controller battery terminals for corrosion or damage.
NG >> Replace battery.

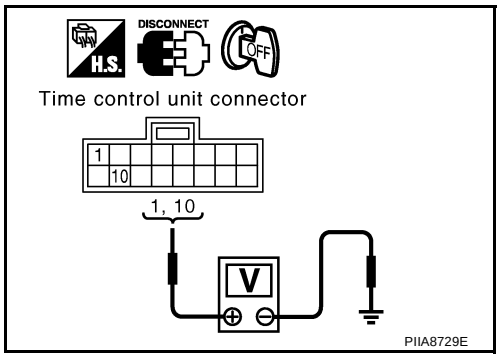
Power Supply and Ground Circuit Check for Time Control Unit

EIS001T4

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit harness connector.
3. Check voltage between time control unit connector M30 terminal 1 (L), 10 (W) and ground.

1 (L) – Ground : Battery voltage
10 (W) – Ground : Battery voltage



OK or NG

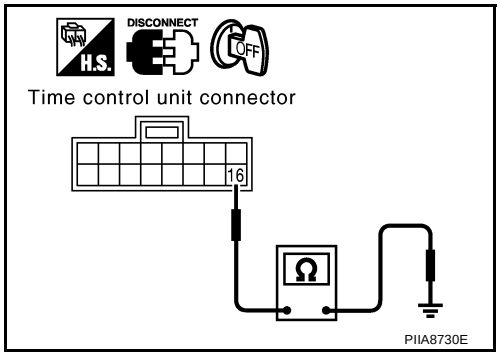
OK >> GO TO 2.
NG >> Check the following.

- 40A fusible link (letter **B** , located in the fuse and fusible link box)
- 10A fuse [No. 28, located in the fuse block (J/B)]
- Harness for open or short between time control unit and fuse
- Harness for open or short between time control unit and fusible link

2. CHECK GROUND CIRCUIT

Check continuity between time control unit connector M30 terminal 16 (B/R) and ground.

16 (B/R) – Ground : Continuity should exist.



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Check ground harness.

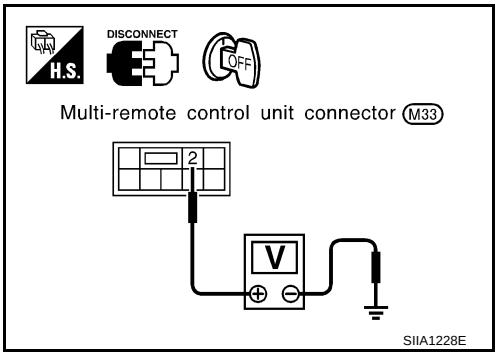
Power Supply and Ground Circuit Check for Multi-Remote Control Unit

EIS008EU

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect multi-remote control unit connector.
3. Check voltage between multi-remote control unit connector M33 terminal 2 (L) and ground.

2 (L) – Ground : Battery voltage



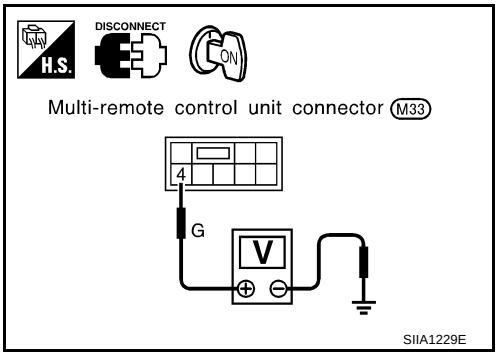
OK or NG

OK >> GO TO 2.
NG >> Check the following.
- 10A fuse [No. 28, located in the fuse block (J/B)]
- Harness for open or short between multi-remote control unit and fuse

2. CHECK IGNITION SWITCH "ON" CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between multi-remote control unit connector M33 terminal 4 (G) and ground.

4 (G) – Ground : Battery voltage



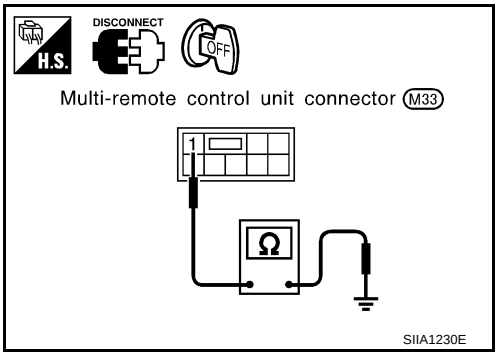
OK or NG

OK >> GO TO 3.
NG >> Check the following.
- 10A fuse [No. 5, located in the fuse block (J/B)]
- Harness for open or short between multi-remote control unit and fuse

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between multi-remote control unit connector M33 terminal 1 (B) and ground.

1 (B) – Ground : Continuity should exist.



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Check ground harness.

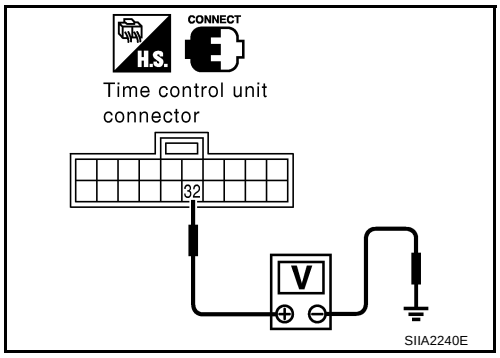
Time Control Unit Lock Signal Circuit Check

EIS008EV

1. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

Check voltage between time control unit and ground.

Connector	Terminal (Wire color)		Condition of remote controller	Voltage [V] (Approximate values)
	(+)	(-)		
M31	32 (OR)	Ground	Lock switch pressed	5 → 0
			Unlock switch pressed	5



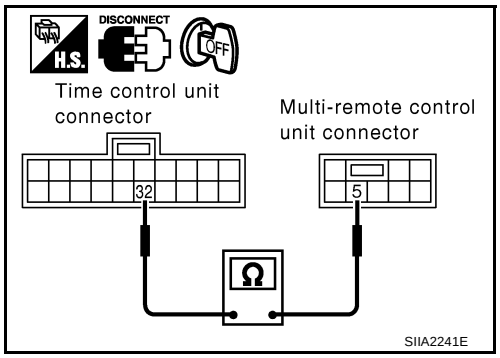
OK or NG

OK >> Replace time control unit.
NG >> GO TO 2.

2. CHECK TIME CONTROL UNIT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector and multi-remote control unit connector.
3. Check continuity between time control unit harness connector M31 terminal 32 (OR) and multi-remote control unit harness connector M33 terminal 5 (OR)

32 (OR) – 5 (OR) : Continuity should exist.



OK or NG

OK >> Replace multi-remote control unit.
NG >> Repair harness or connector.

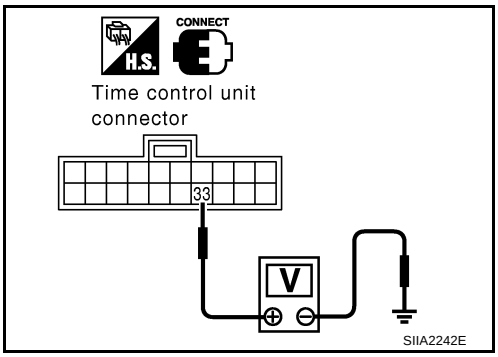
Time Control Unit Unlock Signal Circuit Check

EIS008EW

1. CHECK TIME CONTROL UNIT OUTPUT SIGNAL

Check voltage between time control unit and ground.

Connector	Terminal (Wire color)		Condition of remote controller	Voltage [V] (Approximate values)
	(+)	(-)		
M31	33 (P/L)	Ground	Lock switch pressed	5
			Unlock switch pressed	5 → 0



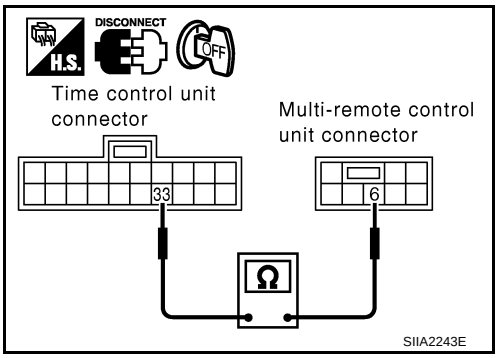
OK or NG

OK >> Replace time control unit.
NG >> GO TO 2.

2. CHECK TIME CONTROL UNIT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector and multi-remote control unit connector.
3. Check continuity between time control unit harness connector M31 terminal 33 (P/L) and multi-remote control unit harness connector M33 terminal 6 (P/L)

33 (P/L) – 6 (P/L) : Continuity should exist.



OK or NG

OK >> Replace multi-remote control unit.
NG >> Repair harness or connector.

Hazard Reminder Check

EIS008EX

1. CHECK HAZARD WARNING LAMP

Check if hazard warning lamp flashes with hazard switch.

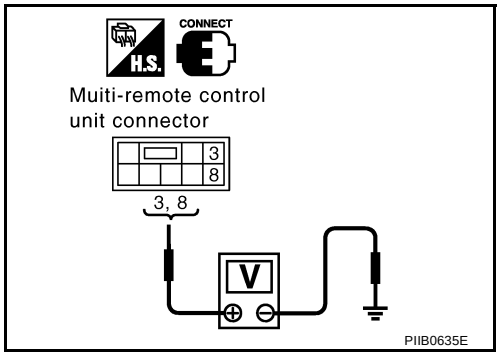
Does hazard warning lamp operate?

Yes >> GO TO 2.
No >> Check hazard warning lamp circuit. Refer to LT-33, "Wiring Diagram — TURN —" .

2. CHECK HAZARD REMINDER OPERATION

Check the following at when push the multi-remote control switch.
Check voltage between multi-remote control unit terminal 3 (G/Y), 8 (G/B) and ground.

3 (G/Y) – Ground : Battery voltage.
8 (G/B) – Ground : Battery voltage.



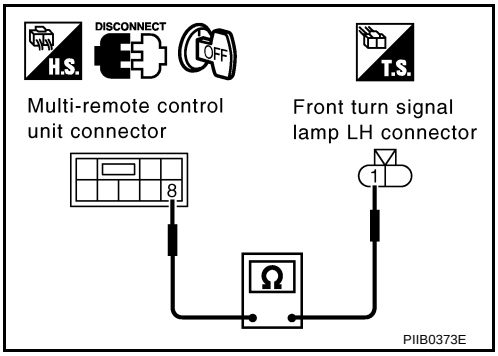
OK or NG

OK >> GO TO 3.
NG >> Replace multi-remote control unit.

3. CHECK HAZARD LAMP LH CIRCUIT

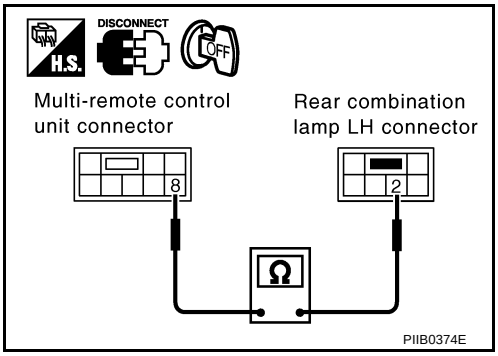
1. Turn ignition switch OFF.
2. Disconnect multi-remote control unit, side turn signal lamp LH and front and rear combination lamp LH connector.
3. Check continuity between multi-remote control unit connector M33 terminal 8 (G/B) and front turn signal lamp LH connector E47 terminal 1 (G/B).

8 (G/B) – 1 (G/B) : Continuity should exist.



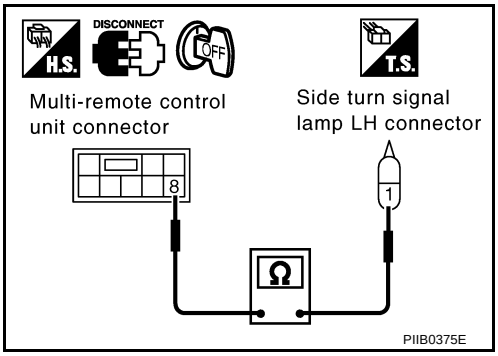
4. Check continuity between multi-remote control unit connector M33 terminal 8 (G/B) and rear combination lamp LH connector B28 terminal 2 (G/B).

8 (G/B) – 2 (G/B) : Continuity should exist.



5. Check continuity between multi-remote control unit connector M33 terminal 8 (G/B) and side turn signal lamp LH connector E48 terminal 1 (G/B).

8 (G/B) – 1 (G/B) : Continuity should exist.



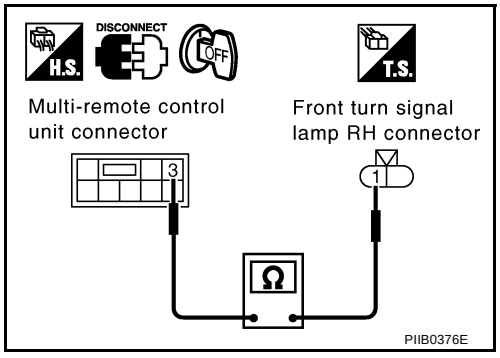
OK or NG

OK >> GO TO 4.
NG >> Repair harness or connector.

4. CHECK HAZARD LAMP RH CIRCUIT

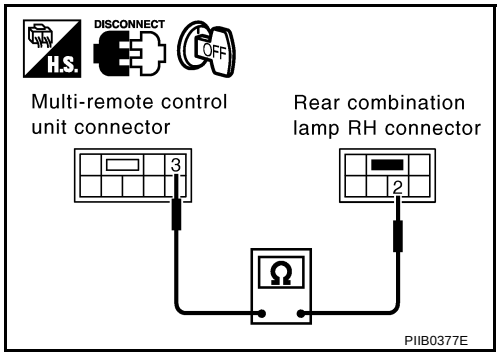
1. Turn ignition switch OFF.
2. Disconnect side turn signal lamp RH and front and rear combination lamp RH connector.
3. Check continuity between multi-remote control unit connector M33 terminal 3 (G/Y) and front turn signal lamp RH connector E25 terminal 1 (G/Y).

   3 (G/Y) – 1 (G/Y) : Continuity should exist.



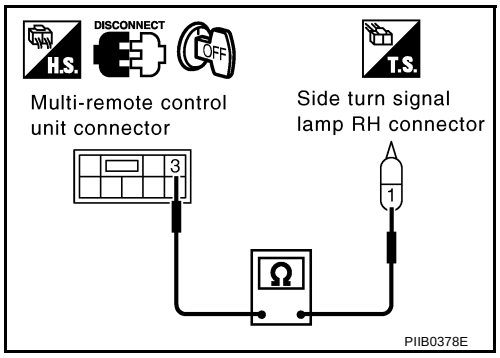
4. Check continuity between multi-remote control unit connector M33 terminal 3 (G/Y) and rear combination lamp RH connector B24 terminal 2 (G/Y).

   3 (G/Y) – 2 (G/Y) : Continuity should exist.



5. Check continuity between multi-remote control unit connector M33 terminal 3 (G/Y) and side turn signal lamp RH connector E20 terminal 1 (G/Y).

   3 (G/Y) – 1 (G/Y) : Continuity should exist.



OK or NG

OK >> Hazard lamp circuit is OK.
NG >> Repair harness or connector.

ID Code Entry Procedure

EIS008F0

Activation of the registration mode:

The vehicle must have been unlocked by either the key fob or a transponder OK signal (TPOK) from the vehicle's immobilizer.

Preparation:
- Make sure all doors unlock.
- Make sure all key fob to be registered are available.
- Make sure the batteries of all key fob are in a good condition.
- Make sure all transmitting sources are out of the neighbourhood of the vehicle.
- Make sure the battery of the vehicle is in a good condition.

↓

Turn ignition-switch exactly six times from the "LOCK" to the "ON" position within 10 seconds and return the ignition switch to the "LOCK" position (leaving the key in the ignition switch).

↓

After 2 seconds the registration mode is activated. The turn signal lamps will flash twice. — NG → (Turn ignition-switch exactly six times from the "LOCK" to the "ON" position within 10 seconds and return the ignition switch to the "LOCK" position (leaving the key in the ignition switch).)

↓ OK

Proceed with the registration mode.

NOTE
The registration mode is exited when:
- The ignition-switch is turned to the "ON" position.
- A key fob ID code had registered after 4 ID codes have been registered (then, all of the registered ID codes are erased).
- No key fob or ignition switch input is received within 120 seconds.

↓

Registration mode

Press and hold the "UNLOCK" button of the key fob.

↓

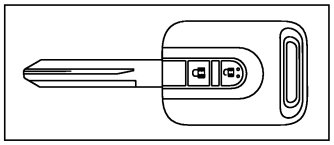
Press the "LOCK" button 3 times.

↓

Release the "UNLOCK" button.
(At this time, the original (previous) ID code(s) are erased.)

→ If the key fob code is registered correctly, the turn signal lamp will flash once.
(If 4 ID codes have been registered, the turn signal lamp will flash 3 times.)

NG → (Press and hold the "UNLOCK" button of the key fob.)



↓

Do you want to register another key fob? (max. 4)
(If 4 key fob have been registered, you should turn the ignition switch to the ON position.)

OK ← (If the key fob code is registered correctly, the turn signal lamp will flash once. (If 4 ID codes have been registered, the turn signal lamp will flash 3 times.))

No ↓

Yes → (Press and hold the "UNLOCK" button of the key fob.)

Turn the ignition switch to the ON position.

→ If the key fob registration is performed correctly, the turn signal lamp will flash twice.
(If 4 ID codes have been registered, the turn signal lamp will not flash.)

OK → Take the ignition key out of the ignition switch and confirm the functioning of all key fob by locking and unlocking the vehicle with each of the key fob.

NG → (Press and hold the "UNLOCK" button of the key fob.)

↓

End

PIIA8773E

Remote Controller Battery Replacement

EIS008EZ

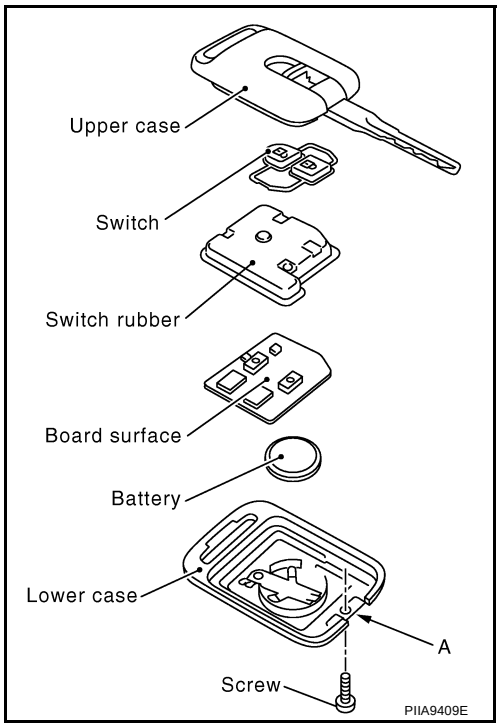
1. Remove screw on the rear of keyfob.
2. Place the key with the lower case facing up. Insert a screwdriver wrapped with tape into “A” of the lower case and separate the lower case from the upper case.
3. When replacing the circuit board assembly, remove circuit board assembly from the upper case.
   (Circuit board assembly: Switch rubber + Board surface)

   CAUTION:
   Be careful not to touch the printed circuits directly.
4. When replacing the battery
   Remove battery from the lower case and replace it.

   Battery replacement : Coin-type lithium battery (CR2016)

   CAUTION:
   When replacing battery, be sure to keep the electrode contact area from dirt, grease or other foreign materials.
5. After replacement, fit the lower and upper cases together, tighten with the screw.

   CAUTION:
   After replacing the battery, be sure to check that door locking operates normally using the keyfob.

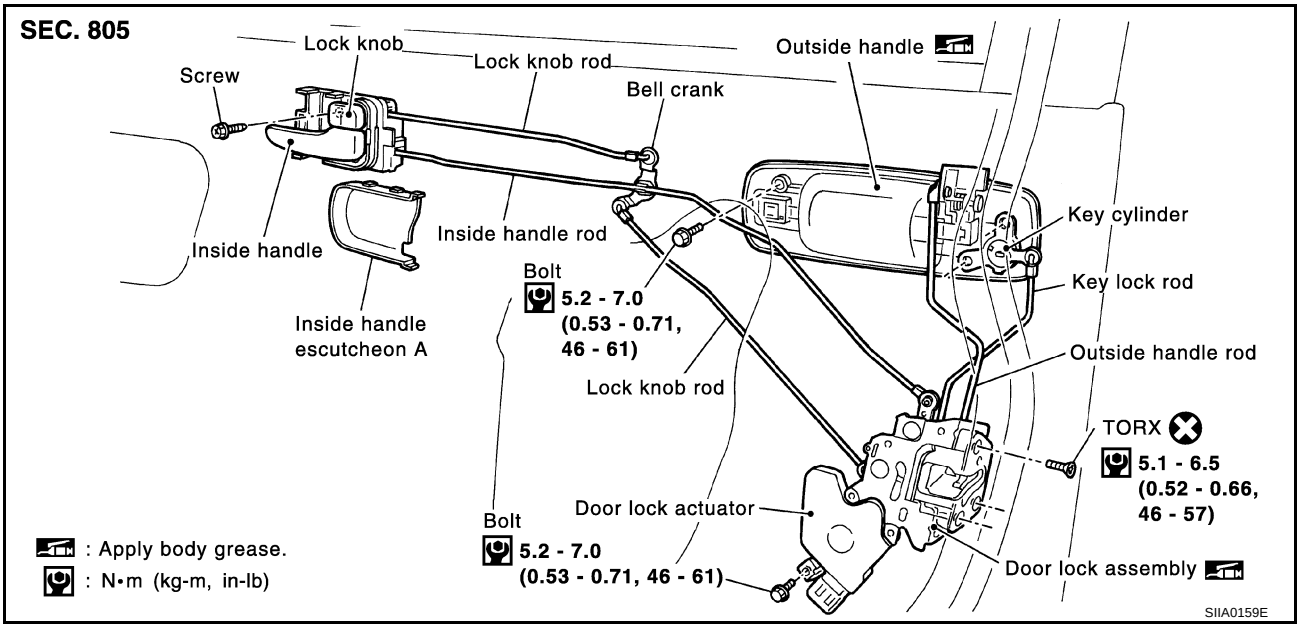


FRONT DOOR LOCK

PFP:80502

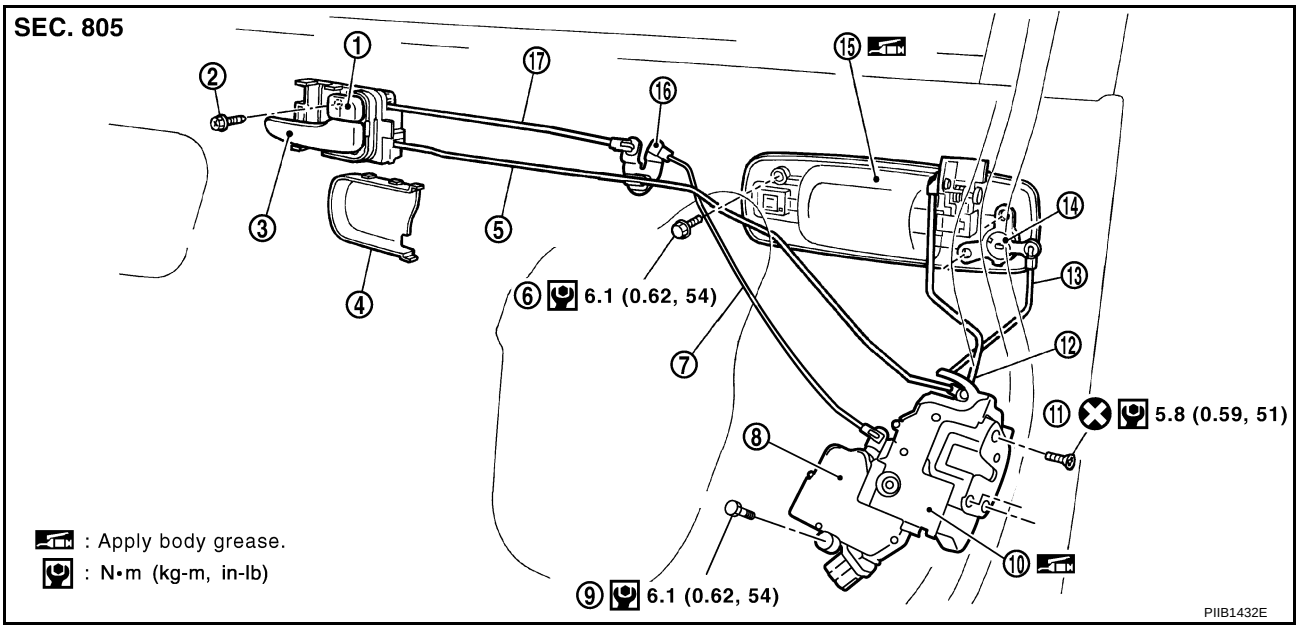
Component Parts Location

EIS009QL



Component Parts Location (Super Lock)

EIS009QM



1. Lock knob	2. Screw	3. Inside handle
4. Inside handle escutcheon A	5. Inside handle rod	6. Bolt
7. Lock knob rod	8. Door lock actuator	9. Bolt
10. Door lock assembly	11. TORX bolt (T30)	12. Outside handle rod
13. Key lock rod	14. Key cylinder	15. Outside handle
16. Bell crank	17. Lock knob rod	

Inspection and Adjustment

EIS009QN

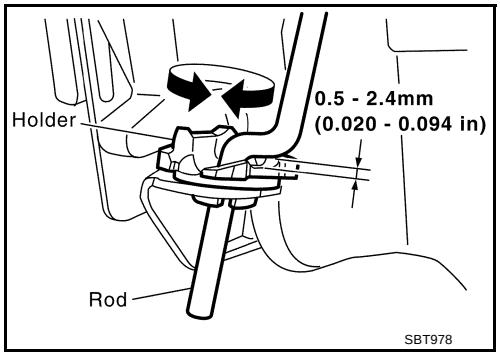
1. Remove door finisher. Refer to EI-32, "DOOR FINISHER" .
2. Remove sealing screen.

NOTE:
If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.

OUT SIDE HANDLE ROD ADJUSTMENT

- Rotate bushing to obtain the gap between bushing and rod (as shown in the figure).

NOTE:
The gap must not be 0 mm (0 in). The rod must not be held pressed against the bushing.



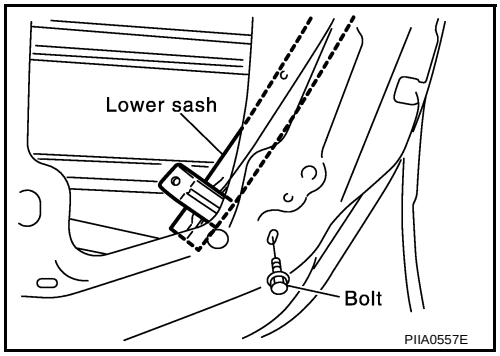
Removal and Installation

EIS009QO

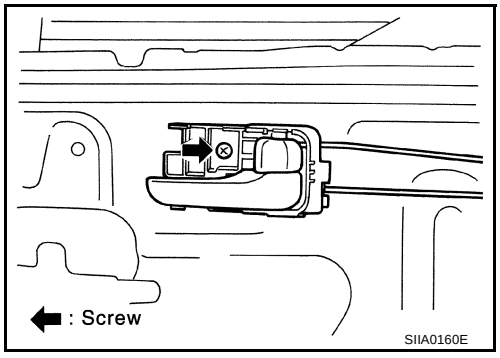
REMOVAL

1. Remove door finisher. Refer to EI-32, "DOOR FINISHER" .
2. Remove sealing screen.

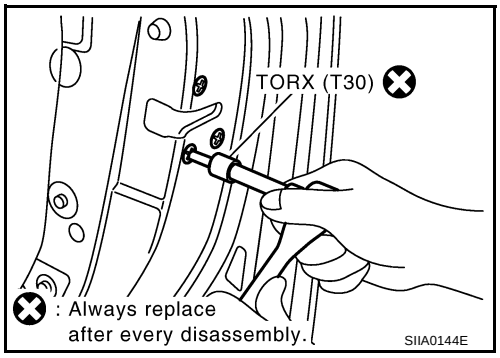
   NOTE:
   If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.
3. Remove front door glass. Refer to GW-80, "FRONT DOOR GLASS AND REGULATOR" .
4. Remove mount bolts and pull upper portion of the rear lower sash out of the sash.
5. Remove inside handle escutcheon A.



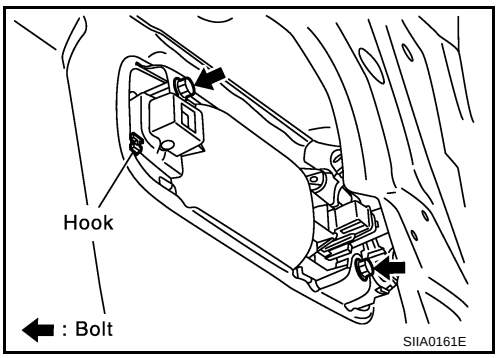
6. Remove inside handle mount screws.
7. Disconnect bell crank lock knob rod at the joints.
8. Disconnect inside handle rod (on the door lock assembly).
9. Slide inside handle rearward and remove it through the hole in the door panel.
10. Remove rod from the inside handle.
11. Working through the access hole, disconnect key cylinder rod and outside handle rod (on the handle) at the joint.



12. Disconnect door lock actuator connector.
13. Remove mount screw (TORX T30) and remove door lock assembly through the access hole.



14. Remove outside handle mount bolts and slide the outside handle rearward to pull the front end of the outside handle escutcheon from the outer panel. Remove outside handle.



INSTALLATION

Install in the reverse order of removal.

NOTE:

- Install the outside handle by pressing it forward and downward while tightening the bolts.
- Install each rod by rotating the rod holder until it engages with a tactile feel.

Disassembly and Assembly

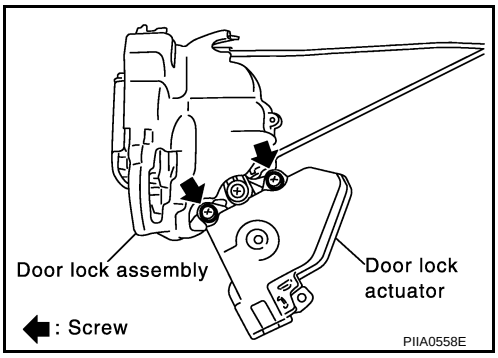
EIS009QP

DISASSEMBLY

NOTE:

The door lock actuator must be removed and installed with the door lock assembly off the vehicle.

1. Remove mount screws and door lock actuator from door lock assembly.
2. Pull the door lock actuator straight down to separate it from door lock assembly.



ASSEMBLY

1. Align door lock actuator pivot with the door lock assembly knob lever cutout.
2. Move the knob lever and door lock actuator pivot toward the LOCK position to ensure that they are securely engaged.

Disassembly and Assembly

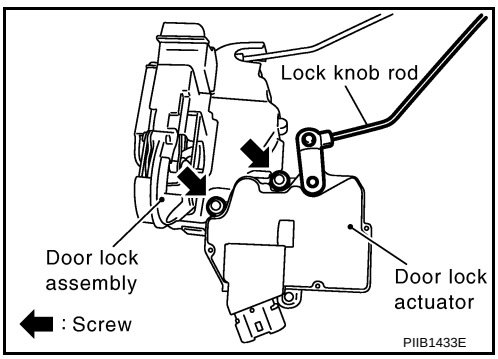
EIS009QQ

DISASSEMBLY (SUPER LOCK)

NOTE:

The door lock actuator must be removed and installed with the door lock assembly off the vehicle.

1. Disconnect lock knob rod.
2. Remove mount screws and door lock actuator from door lock assembly.
3. Pull the door lock actuator straight down to separate it from door lock assembly.



ASSEMBLY

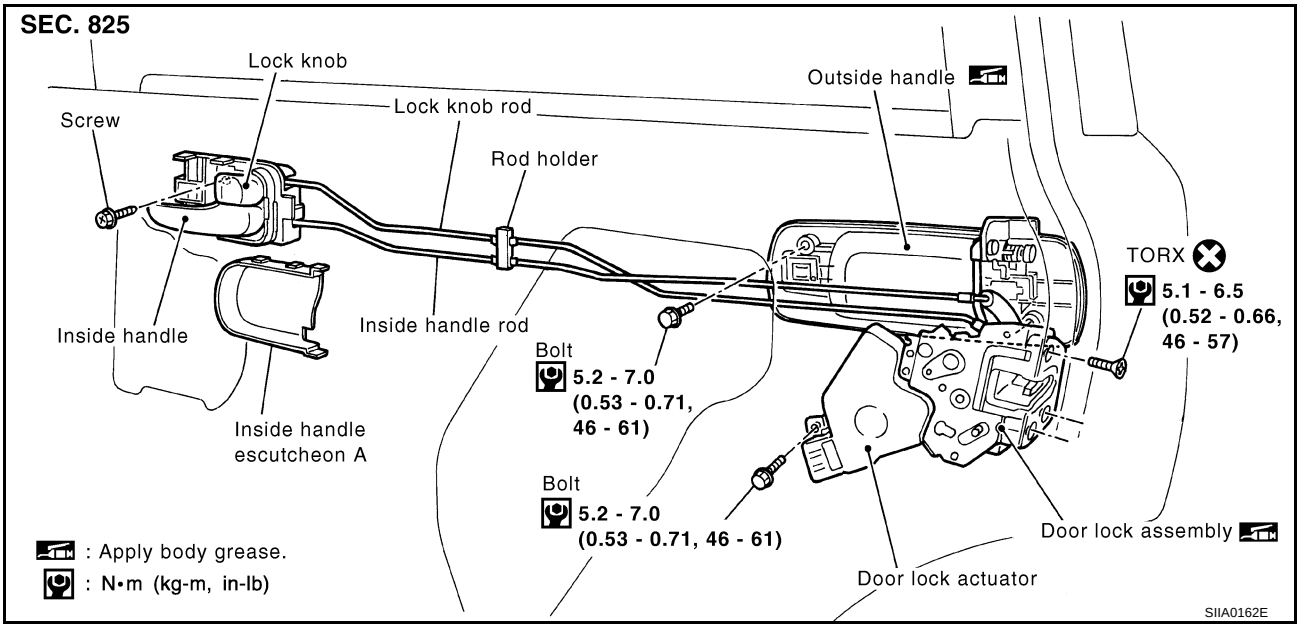
1. Align door lock actuator pivot with the door lock assembly knob lever cutout.
2. Move the knob lever and door lock actuator pivot toward the LOCK position to ensure that they are securely engaged.

REAR DOOR LOCK

PFP:82502

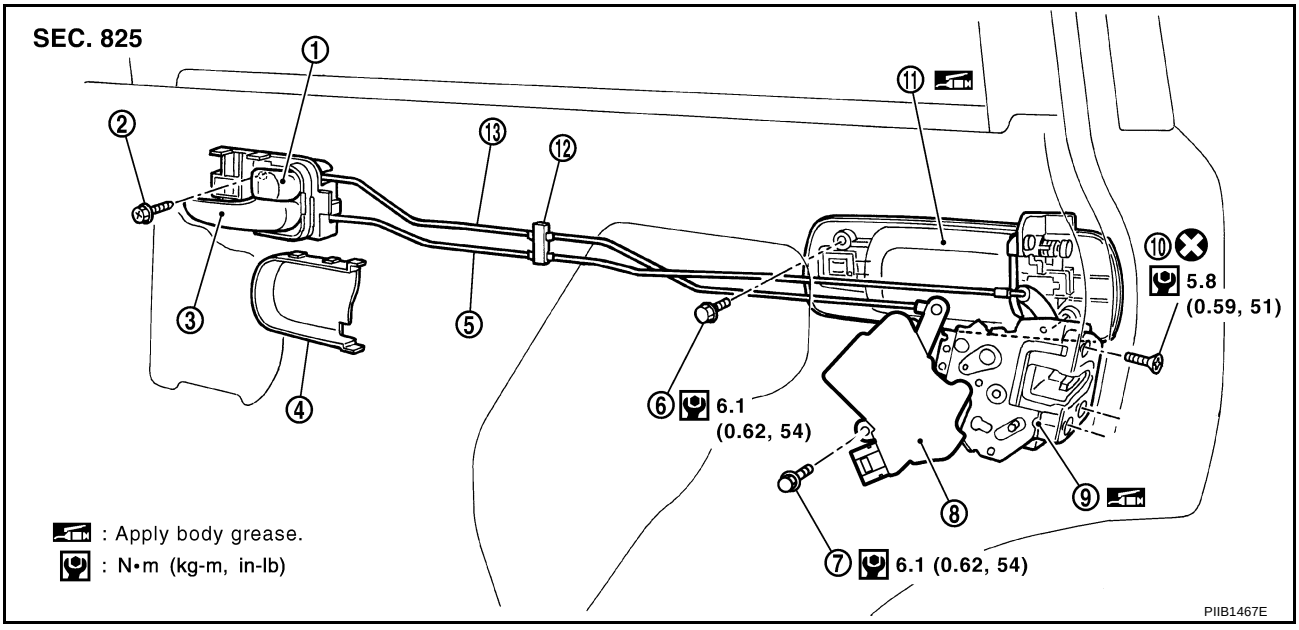
Component Parts Location

EIS009QR



Component Parts Location (Super Lock)

EIS009QS



1. Lock knob	2. Screw	3. Inside handle
4. Inside handle escutcheon A	5. Inside handle rod	6. Bolt
7. Bolt	8. Door lock actuator	9. Door lock assembly
10. TORX bolt (T30)	11. Outside handle	12. Rod holder
13. Lock knob rod		

Inspection and Adjustment

EIS009QT

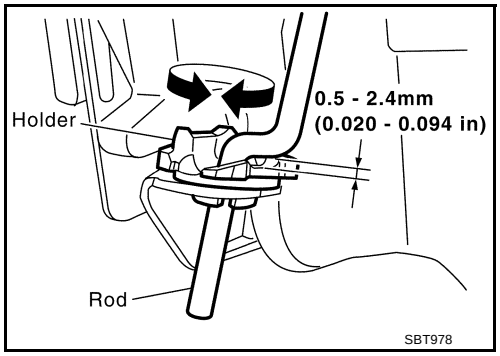
1. Remove rear door finisher. Refer to EI-32, "DOOR FINISHER" .
2. Remove sealing screen.

NOTE:
If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.

OUT SIDE HANDLE ROD ADJUSTMENT

Rotate bushing to obtain the gap between bushing and rod (as shown in the figure).

NOTE:
The gap must not be 0 mm (0 in). The rod must not be held pressed against the bushing.



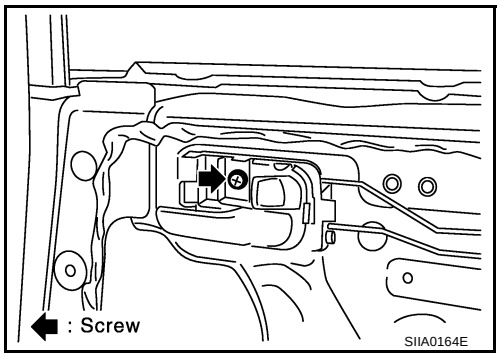
Removal and Installation

EIS009QU

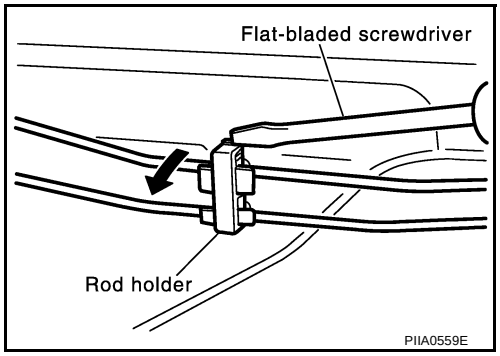
REMOVAL

1. Remove rear door finisher. Refer to EI-32, "DOOR FINISHER" .
2. Remove sealing screen.

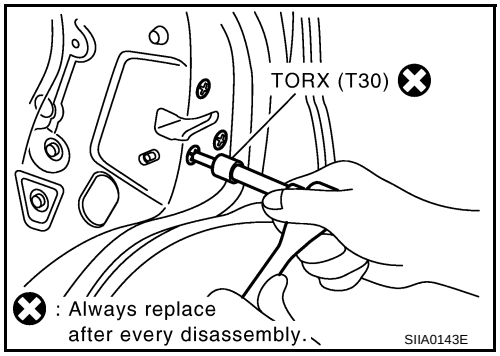
   NOTE:
   If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.
3. Remove rear lower sash. Refer to GW-83, "REAR DOOR GLASS AND REGULATOR" .
4. Remove rear door glass. Refer to GW-83, "REAR DOOR GLASS AND REGULATOR" .
5. Remove inside handle escutcheon A.
6. Remove inside handle mount screws.
7. Disconnect inside handle rod (on the door lock assembly).
8. Disconnect lock knob rod (on the door lock assembly).



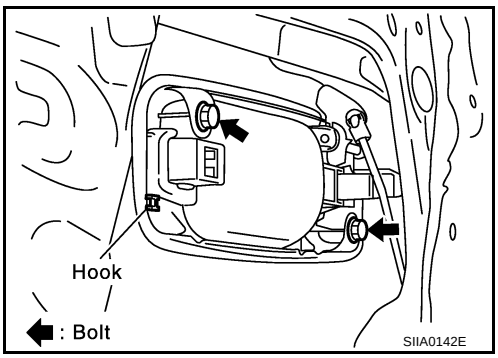
9. Pry rod holder off with a slotted screwdriver to remove rod.
10. Slide inside handle rearward and remove it through the hole in the door panel.
11. Remove rod from the inside handle.
12. Disconnect door lock actuator connector.



13. Remove mount screw (TORX T30) and remove door lock assembly through the access hole.



14. Remove outside handle mount bolts. Slide outside handle rearward to pull front end of the outside handle escutcheon from the outer panel. Remove outside handle.



INSTALLATION

Install in the reverse order of removal.

NOTE:

- Install the outside handle by pressing it forward and downward while tightening the bolts.
- Install each rod by rotating the rod holder until it engages with a tactile feel.

Disassembly and Assembly

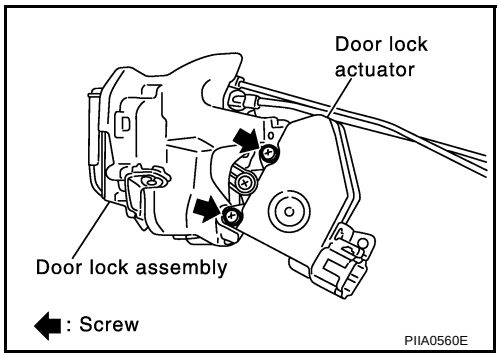
EIS009QV

DISASSEMBLY

NOTE:

The door lock actuator must be removed and installed with the door lock assembly off the vehicle.

1. Remove mount screws and door lock actuator from door lock assembly.
2. Pull the door lock actuator straight down to separate it from door lock assembly.



ASSEMBLY

1. Align door lock actuator pivot with the door lock assembly knob lever cutout.
2. Move the knob lever and door lock actuator pivot toward the LOCK position to ensure that they are securely engaged.

Disassembly and Assembly

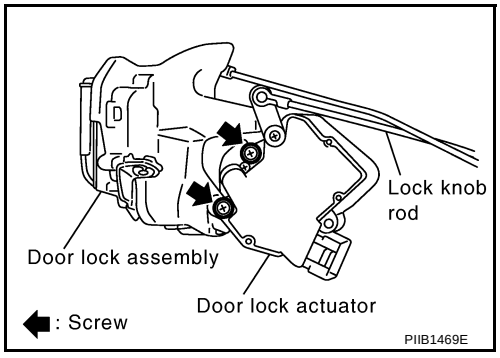
EIS009QW

DISASSEMBLY (SUPER LOCK)

NOTE:

The door lock actuator must be removed and installed with the door lock assembly off the vehicle.

1. Disconnect lock knob rod.
2. Remove mount screws and door lock actuator from door lock assembly.
3. Pull the door lock actuator straight down to separate it from door lock assembly.



ASSEMBLY

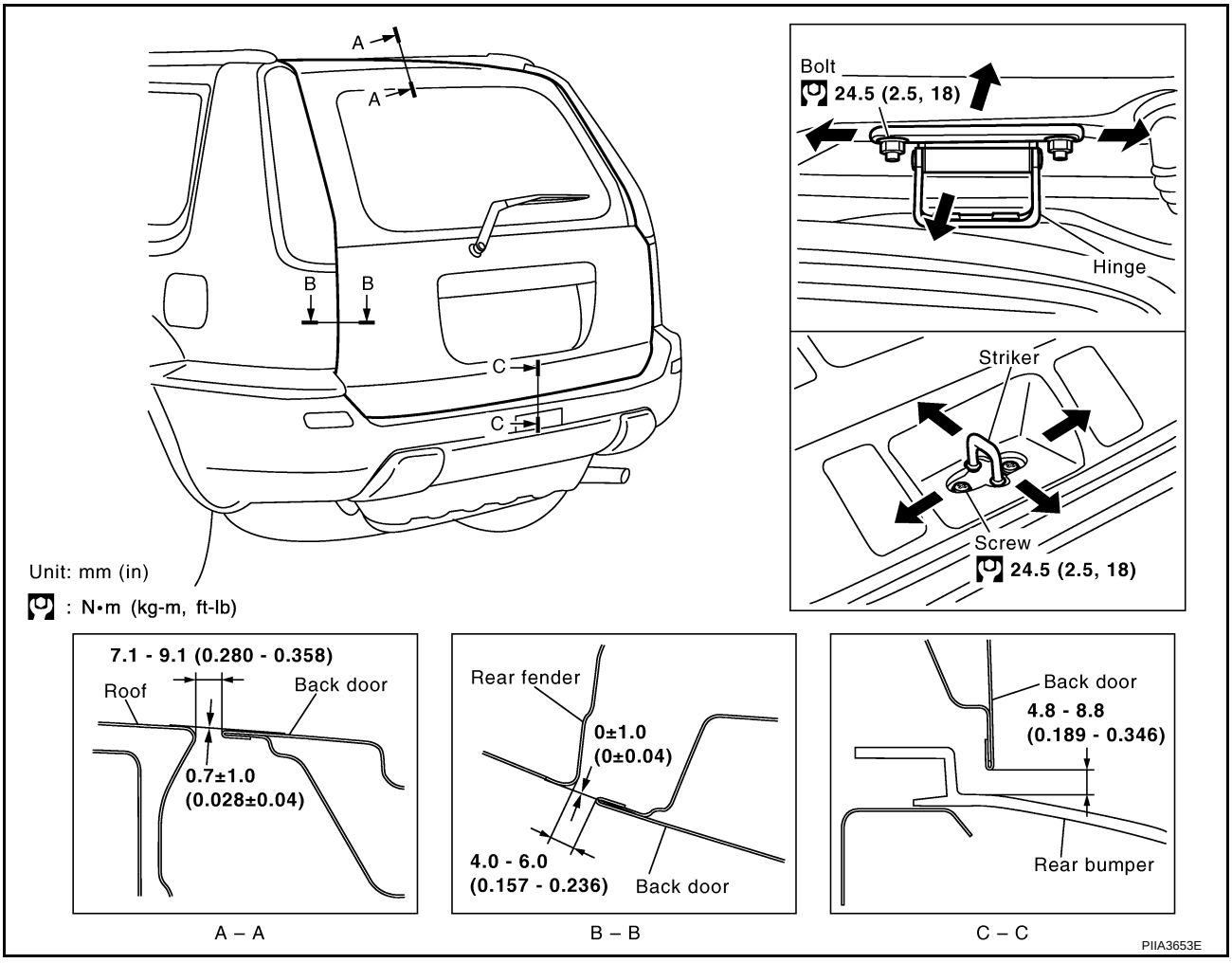
1. Align door lock actuator pivot with the door lock assembly knob lever cutout.
2. Move the knob lever and door lock actuator pivot toward the LOCK position to ensure that they are securely engaged.

BACK DOOR

PFP:90100

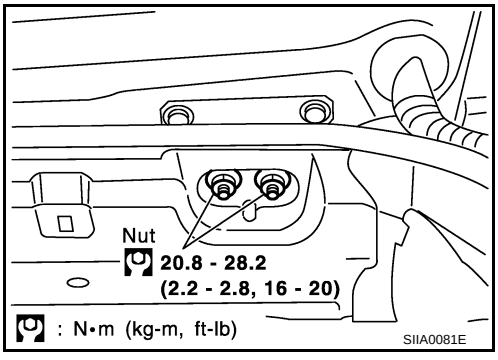
Fitting Adjustment

EIS000LF



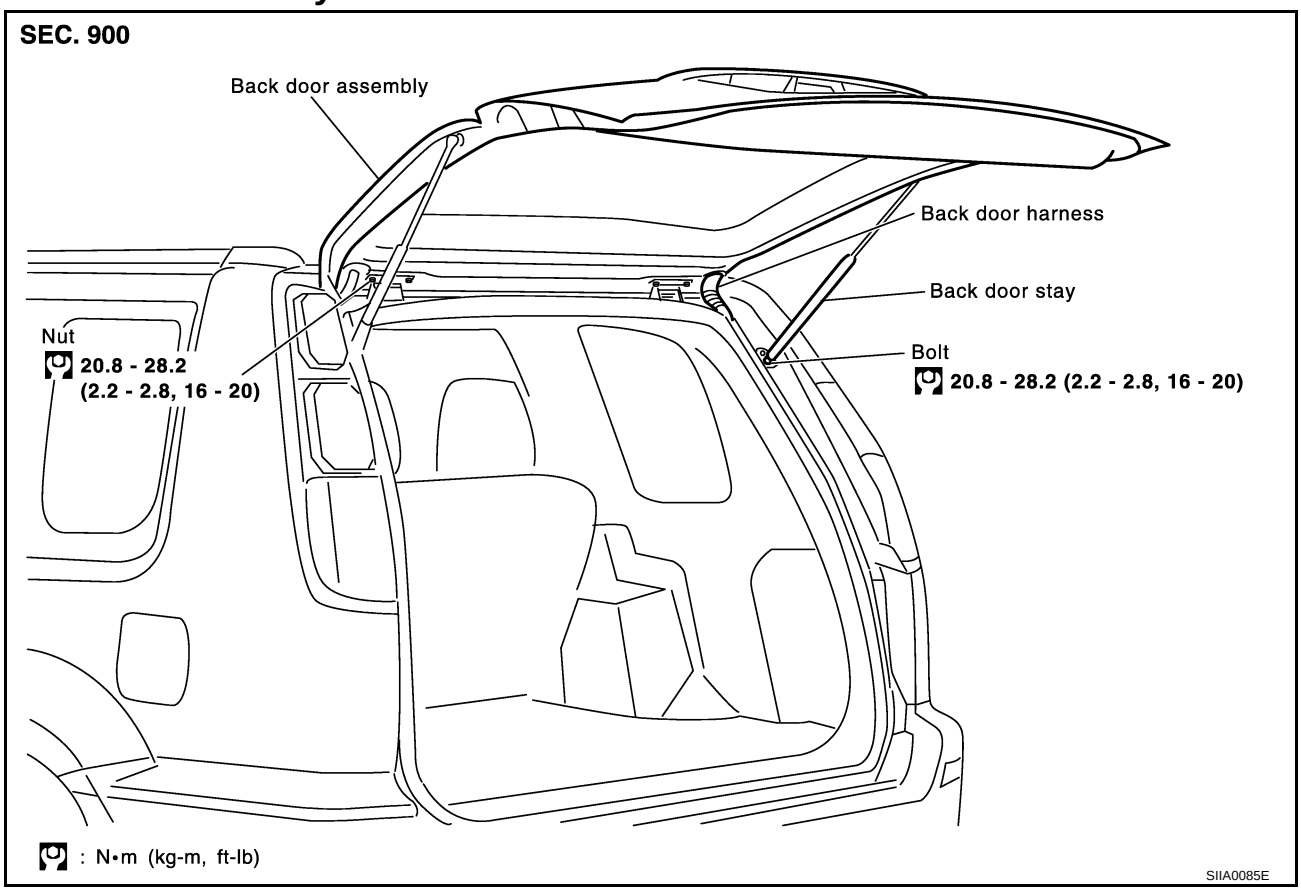
VERTICAL/LATERAL CLEARANCE ADJUSTMENT

1. With striker removed, loosen hinge mount nuts on the back door and close it.
2. Make lateral clearance and clearance to rear window glass equal. Open back door to tighten mounting bolts to specified torque.
3. If taking the steps above does not result in fine adjustment, remove headliner and loosen the hinge mount nuts on the vehicle for further adjustment.



Back Door Assembly

EIS000LG



REMOVAL AND INSTALLATION

Removal

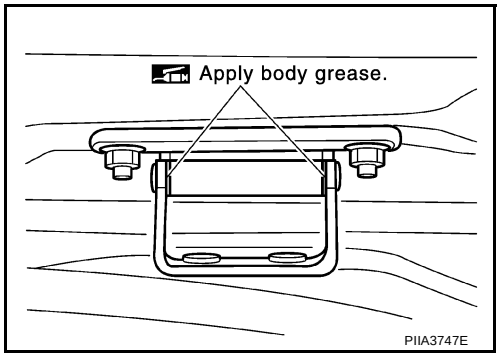
1. Disconnect connectors in the back door and encamp the harness. Pull the harness out of the back door.
2. Support the back door lock with a proper material to prevent it from falling and remove back door stay (gas stay).
3. Remove hinge mount nuts on the back door and remove back door assembly.

Installation

Install in the reverse order of removal.

INSPECTION

1. Check hinges for the following items
   - Abnormal noise or door closing and opening effort
   - Component wear or damage
2. Apply Body Grease to the rotating part of the hinge.



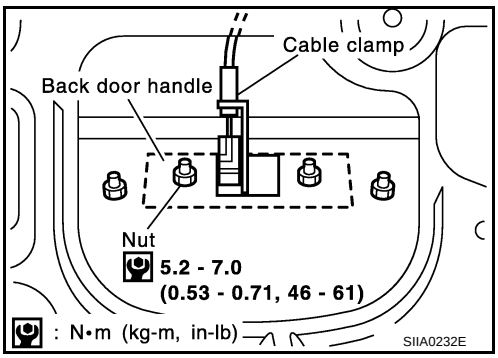
Removal and Installation of Back Door Handle

EIS0015D

REMOVAL

1. Remove back door trim. Refer to EI-34, "BACK DOOR TRIM" .

2. Remove license lamp finisher. Refer to EI-31, "LICENSE LAMP FINISHER" .
3. Remove cable clamp and remove cable from the back door handle.
4. Remove mount nuts and back door handle.



INSTALLATION

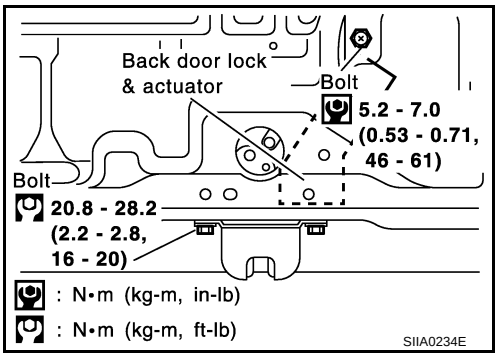
Install in the reverse order of removal.

Removal and Installation of Back Door Lock and Actuator

EIS000LI

REMOVAL

1. Remove back door trim. Refer to EI-34, "BACK DOOR TRIM" .
2. Disconnect back door lock & actuator connector.
3. Remove bolts from the back door lock and actuator and remove back door lock & actuator.

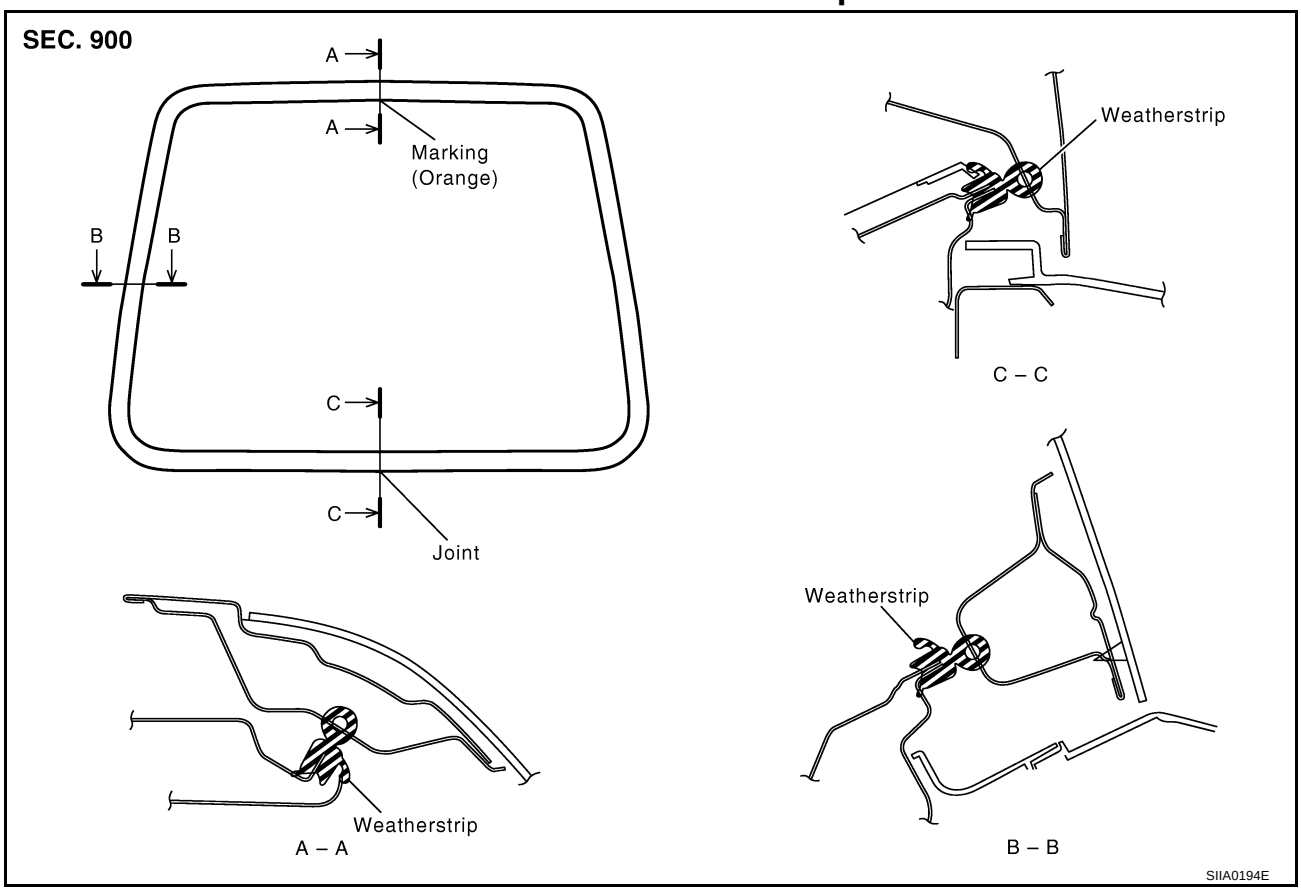


INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Back Door Weatherstrip

EIS000LJ



REMOVAL

Pull up and remove engagement with body from weatherstrip joint.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

INSTALLATION

1. Working from the upper section, align weatherstrip mark with vehicle center position mark and install weatherstrip onto the vehicle.
2. For the lower section, align the weatherstrip seam with center of the striker.
3. After installation, pull the weatherstrip gently to ensure that there is no loose section.

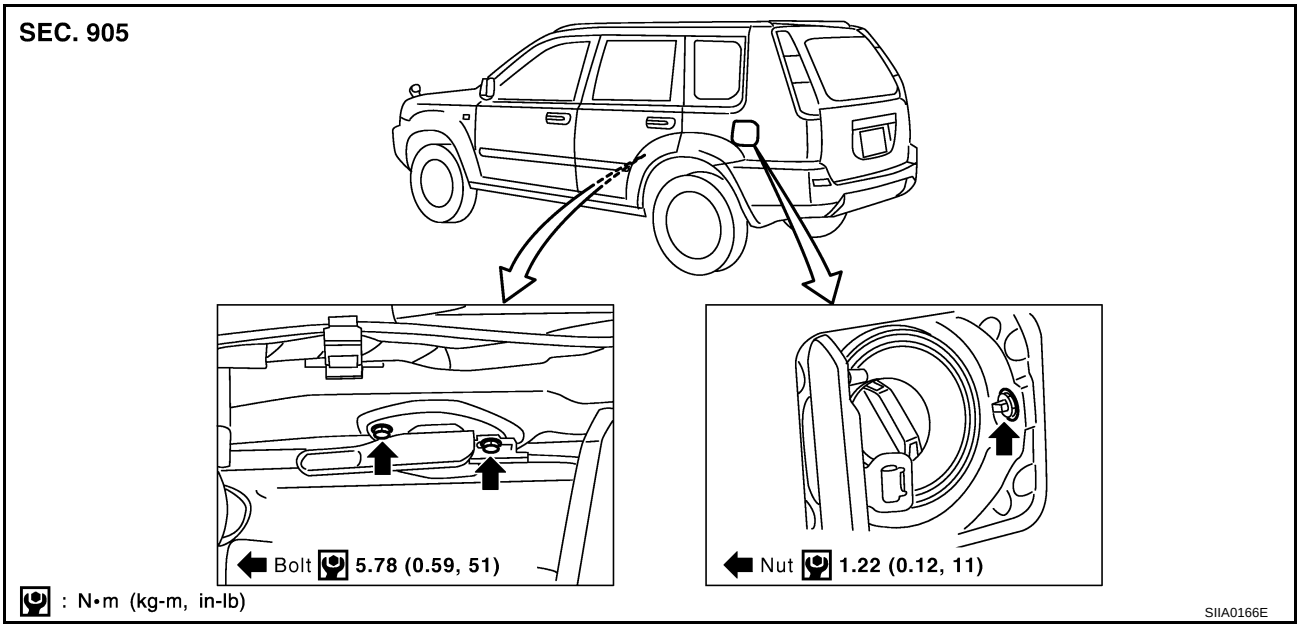
   NOTE:
   Make sure the weatherstrip is fit fightly at each corner and back door rear plate.

FUEL FILLER LID OPENER

PFP:78820

Component Parts Location

EIS000LK



THEFT WARNING SYSTEM

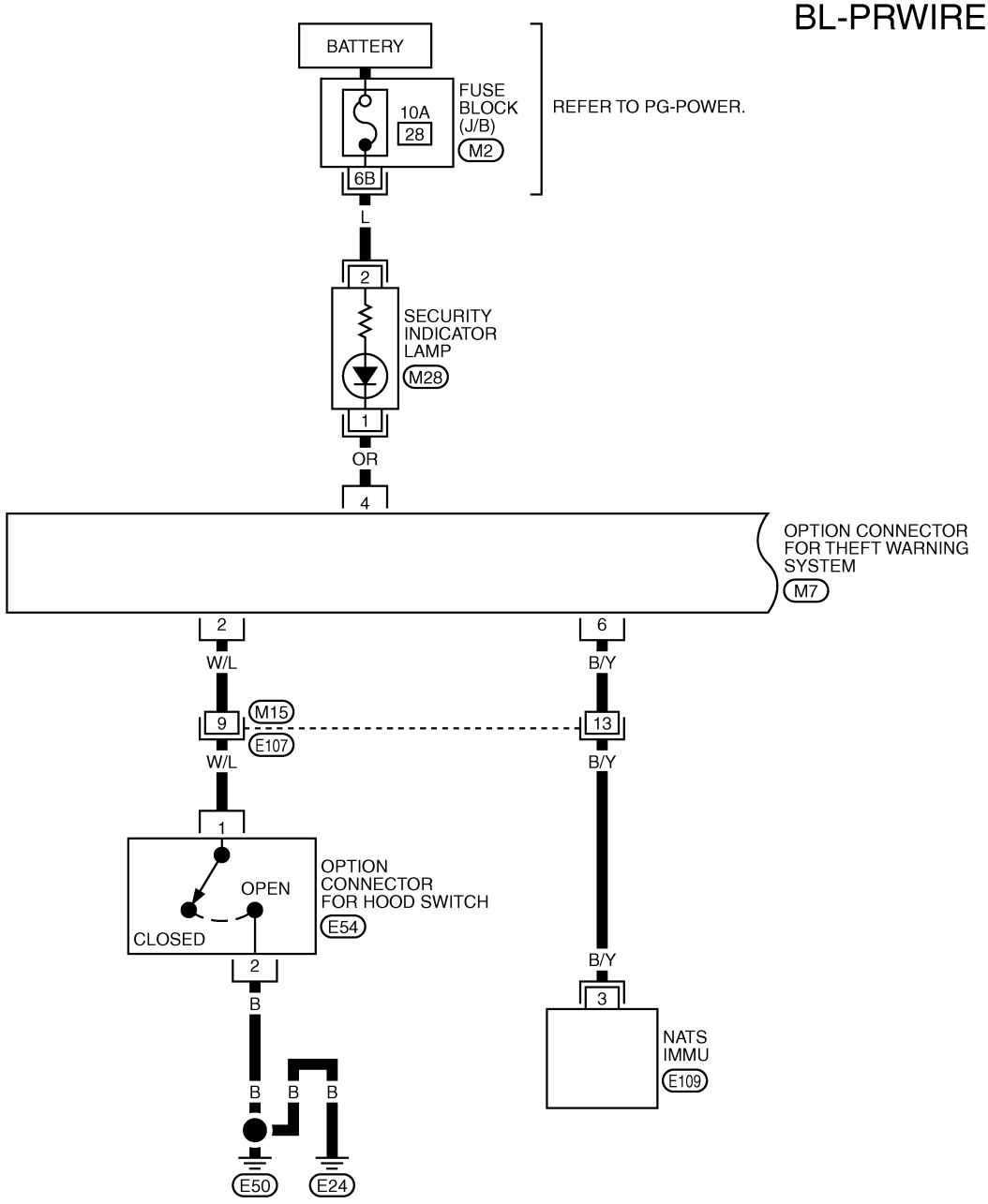
PFP:25362

Wiring Diagram — THEFT —/PRI-WIRE

EIS001RM

LHD MODELS

BL-PRWIRE-01

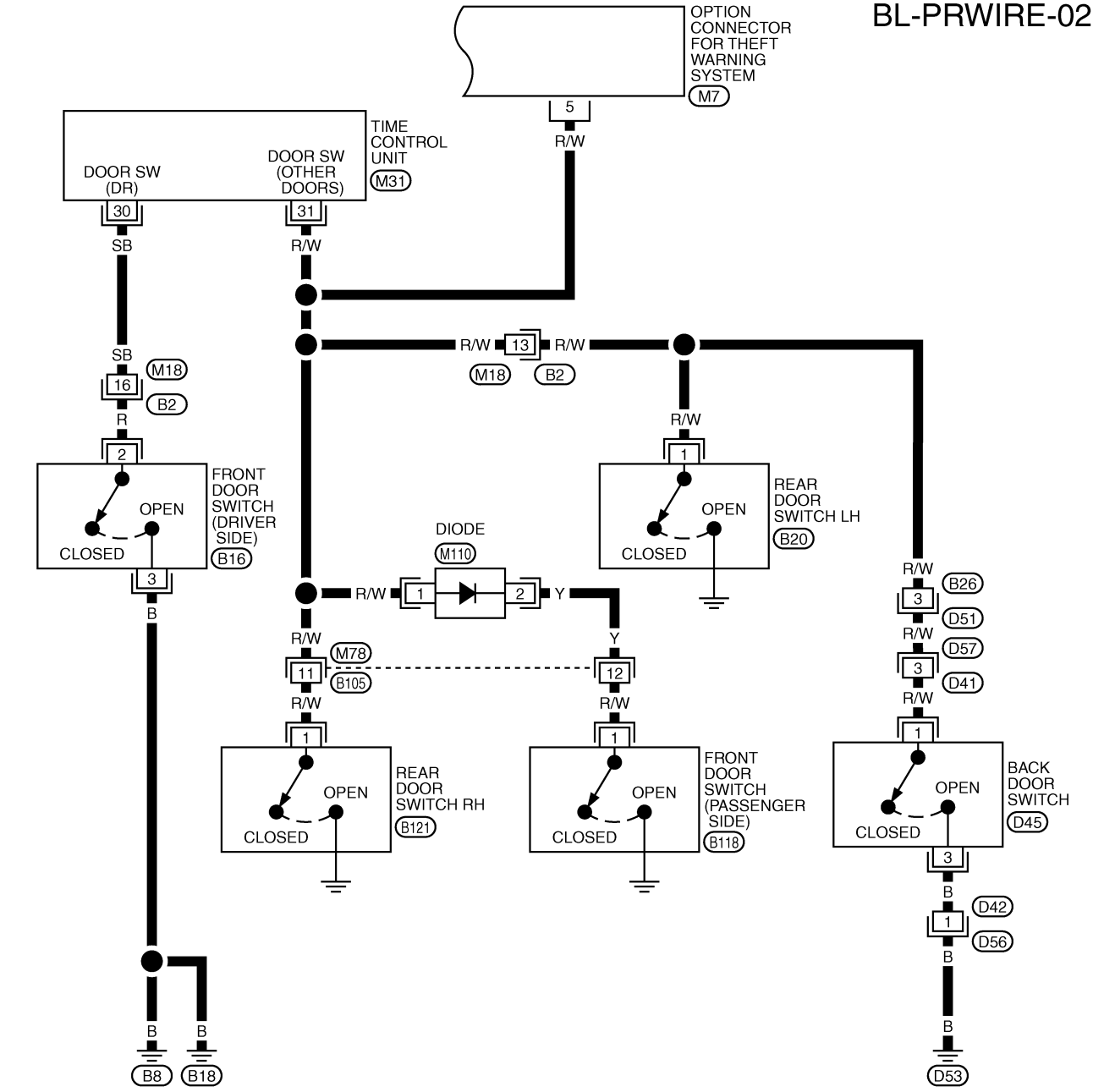


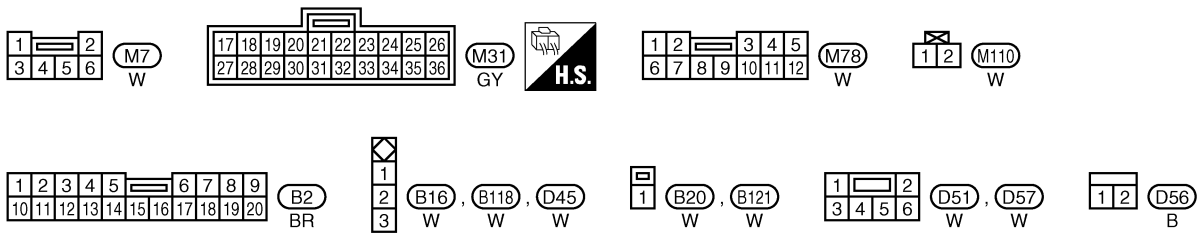
REFER TO THE FOLLOWING.

M2 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWA0477E

BL-PRWIRE-02

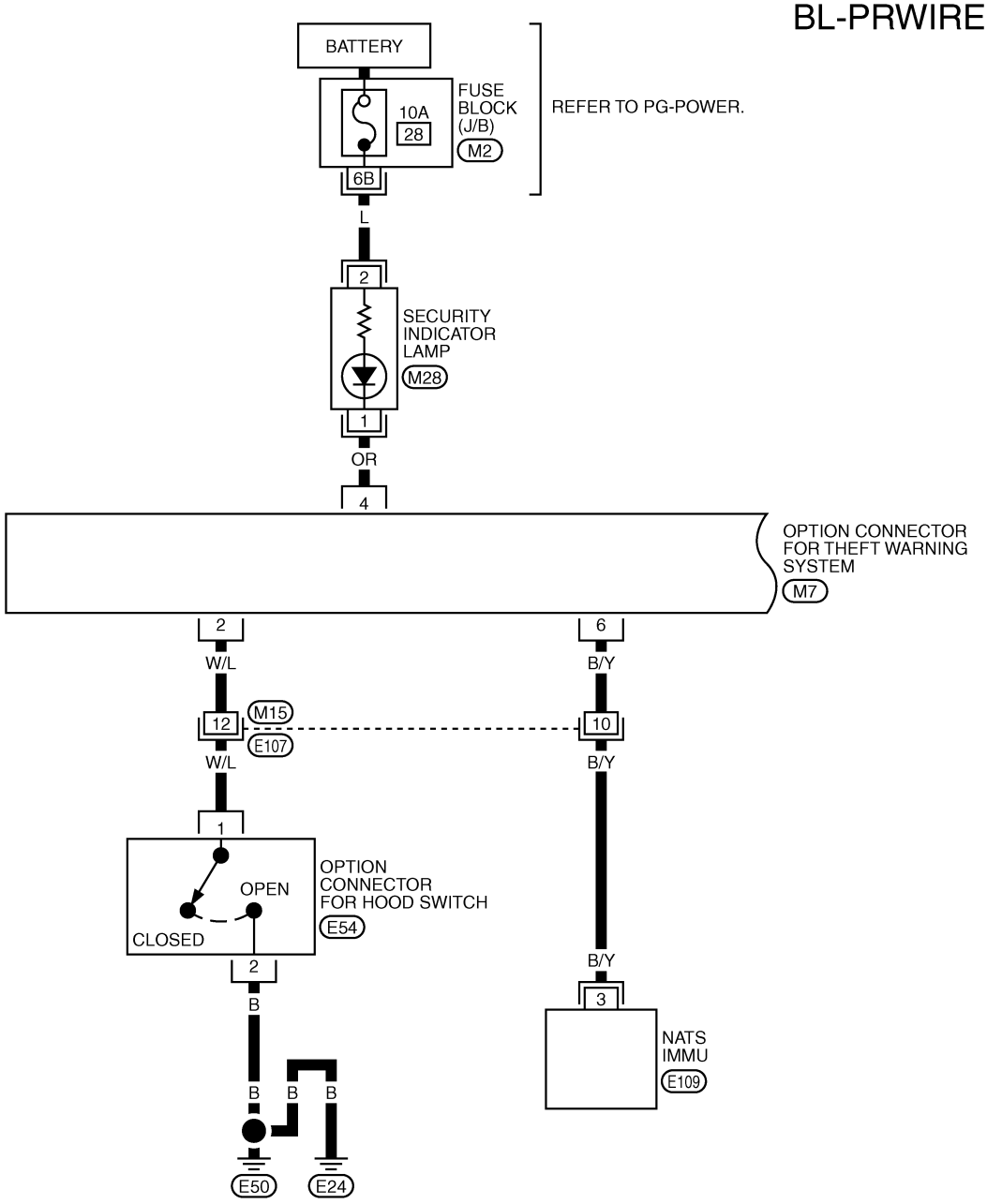


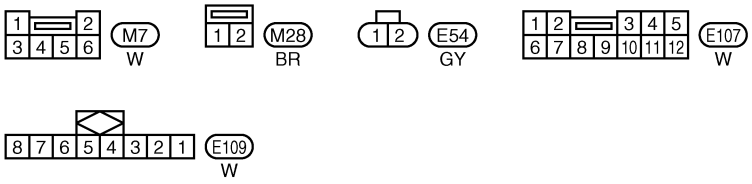


TIWA0478E

RHD MODELS

BL-PRWIRE-03



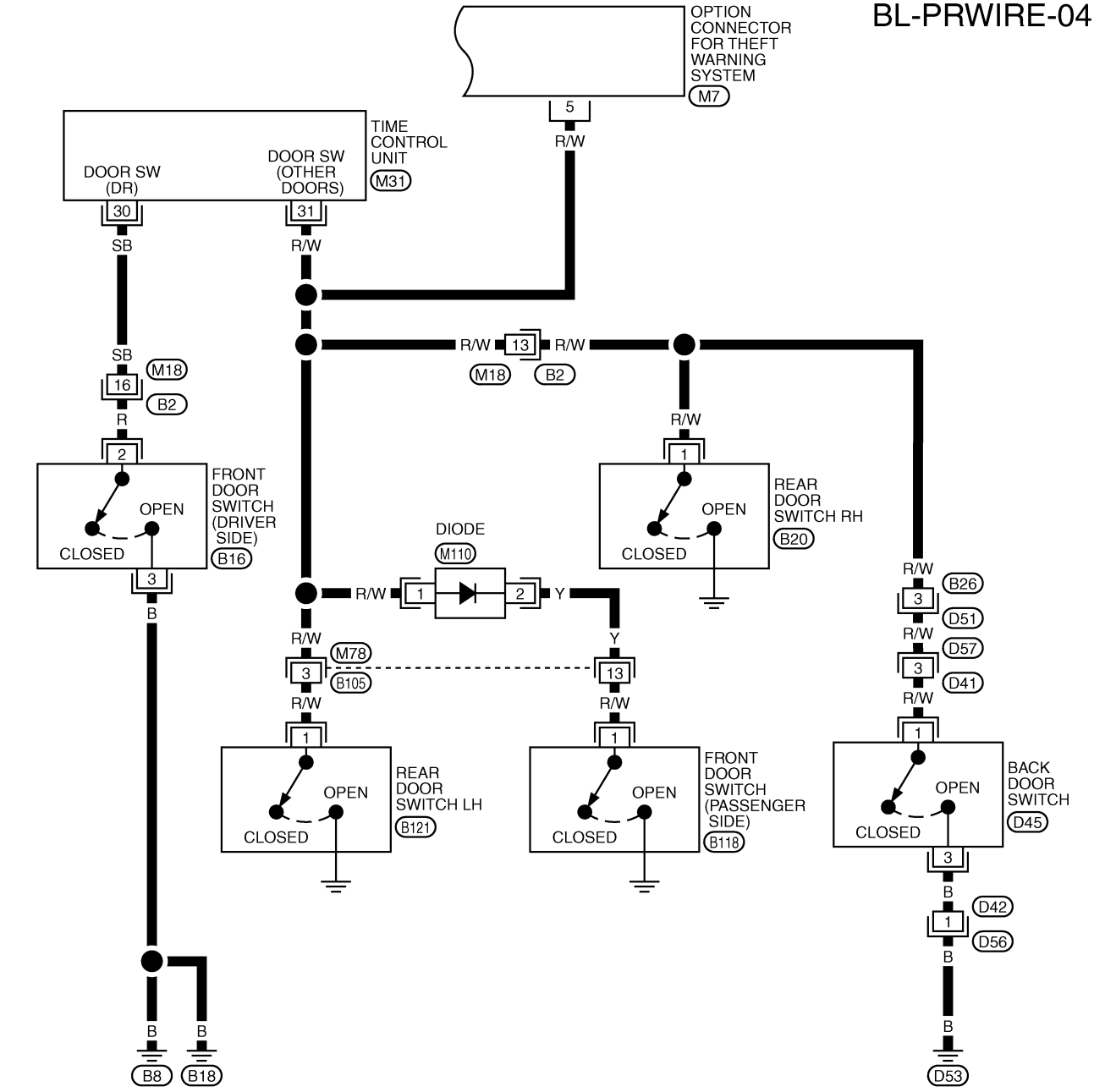


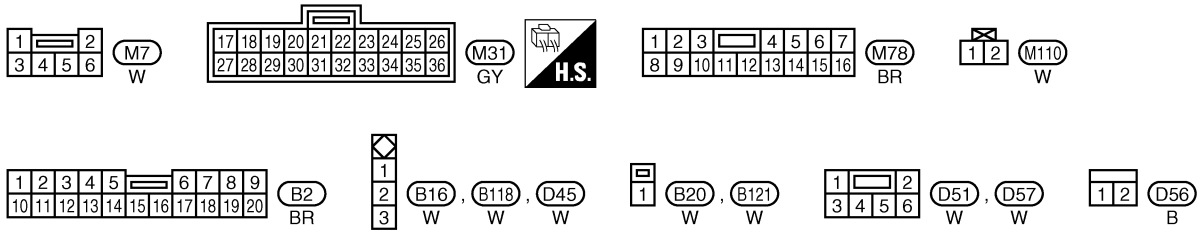
REFER TO THE FOLLOWING.

M2 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWA0479E

BL-PRWIRE-04





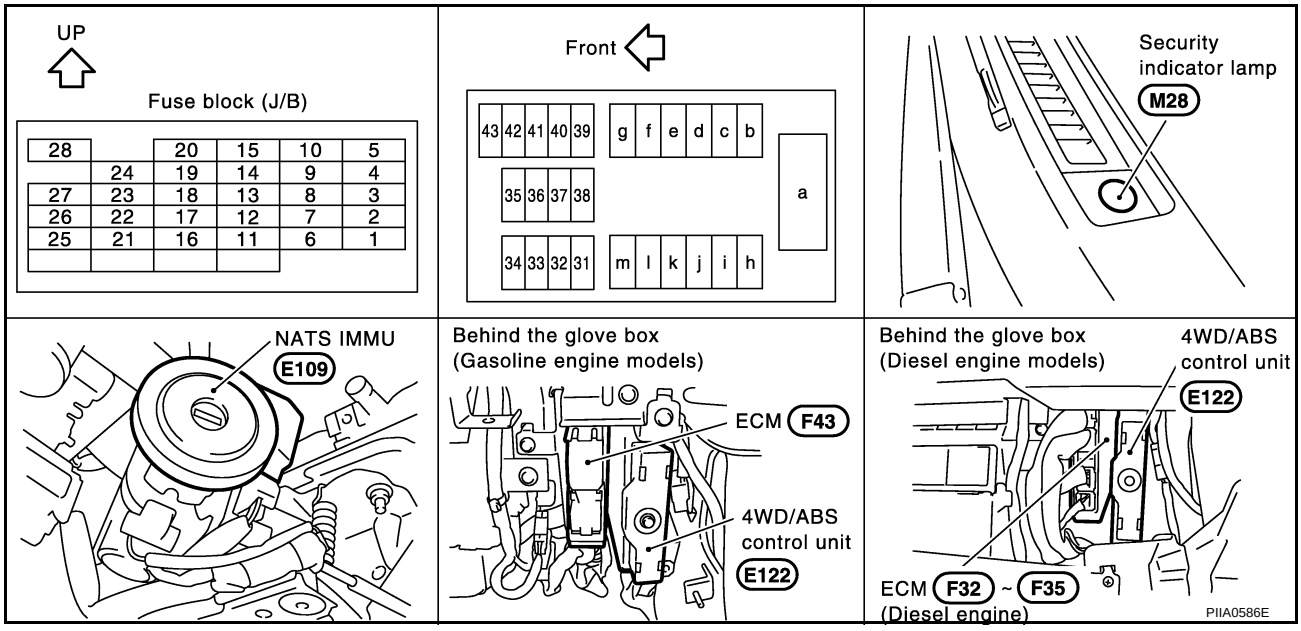
TIWA0480E

NATS (NISSAN ANTI-THEFT SYSTEM)

PFP:25386

Component Parts and Harness Connector Location

EIS001RQ



System Description

EIS001RR

NATS (Nissan Anti-Theft System) has the following immobilizer functions:

- Since only NATS ignition keys, whose ID Nos. have been registered into the ECM and IMMU of NATS, allow the engine to run, a vehicle operation without registered key in NATS is prevented by NATS.
  That is to say, NATS will immobilize the engine if someone tries to start it without the registered key of NATS.
- This version of NATS has dongle unit to improve its anti-theft performance (RHD models). Dongle unit has its own ID which is registered into NATS IMMU. So if dongle unit is replaced, initialization must be carried out.
- When malfunction of dongle unit is detected:
  The security indicator lamp illuminates for about 15 minutes after ignition switch is turned to ON.
  - When dongle unit has a malfunction and the indicator lamp is illuminated, engine can not be started. However engine can be started only one time when security indicator lamp turns off in about 15 minutes after ignition switch is turned to ON.
- All of the originally supplied ignition key IDs have been registered in NATS.
  If requested by the vehicle owner, a maximum of five key IDs can be registered into the NATS components.
- The security indicator blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, NATS warns outsiders that the vehicle is equipped with the anti-theft system.
- When NATS detects trouble, the security indicator lamp lights up as follows.

Condition IGN ON and	With dongle	Without dongle
	Security indicator	Security indicator
NATS malfunction (except dongle unit) is detected	1. 6 times blinking 2. Staying ON after ignition switch is turned ON	Staying ON
Only malfunction of dongle unit is detected.	Staying ON for about 15 minutes after ignition switch is turned ON	—
Malfunction of NATS and engine related parts are detected.	1. 6 times blinking 2. Staying ON after ignition switch is turned ON	Staying ON
Only engine related part malfunction is detected.	—	—
Just after initialization of NATS	6 times blinking	—

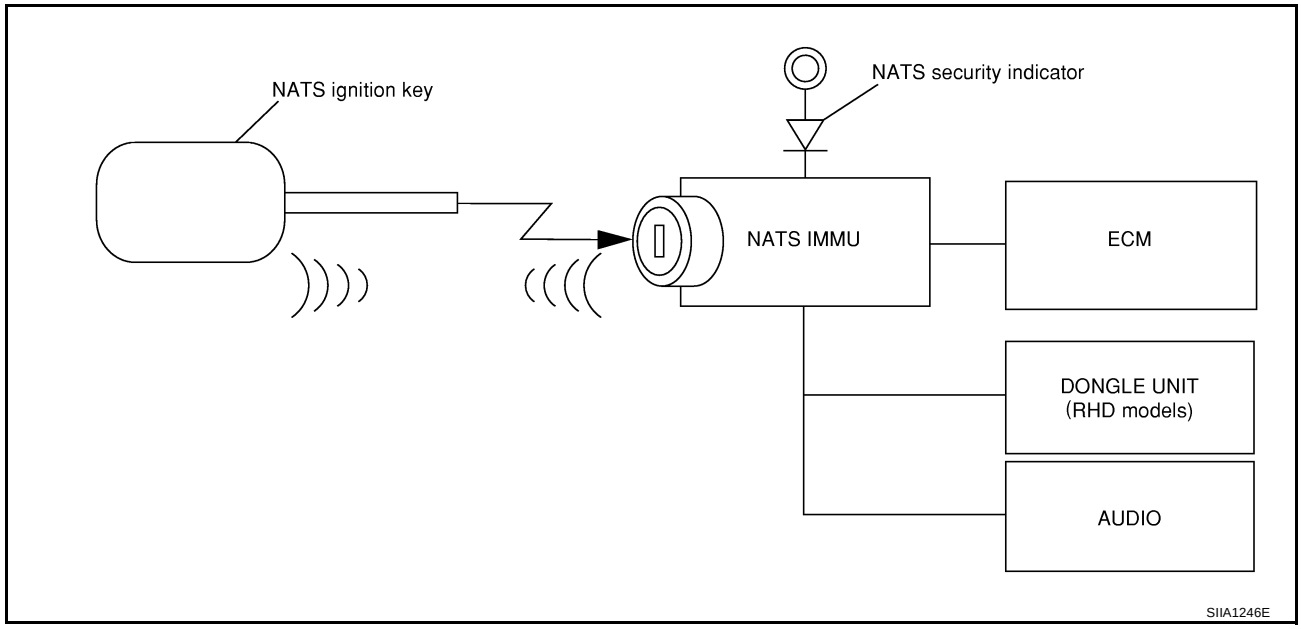
- NATS trouble diagnoses, system initialization and additional registration of other NATS ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NATS software.
  When NATS initialzation has been completed, the ID of the inserted ignition key is auto matically registerd in NATS. Then, if necessary, additional registration of other NATS ignition key IDs can be carried out.
  Regarding the procedures of NATS initialization and NATS ignition key ID registration, refer to CONSULT-II operation manual, NATS.
- **When servicing a malfunction of the NATS (indicated by lighting up of Security Indicator Lamp) or registering another NATS ignition key ID No., it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

System Composition

EIS001RS

The immobilizer function of the NATS consists of the following:

- NATS ignition key
- NATS immobilizer control unit (IMMU) located in the ignition key cylinder
- Engine control module (ECM)
- Dongle unit (RHD models)
- Security indicator



ECM Re-communicating Function

EIS008F1

Performing following procedure can automatically perform re-communication of ECM and NATS IMMU, but only when the ECM has been replaced with a new one (*1).
*1: New one means a virgin ECM which has never been energized on-board.
(In this step, initialization procedure by CONSULT-II is not necessary)

NOTE:

- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual, NATS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

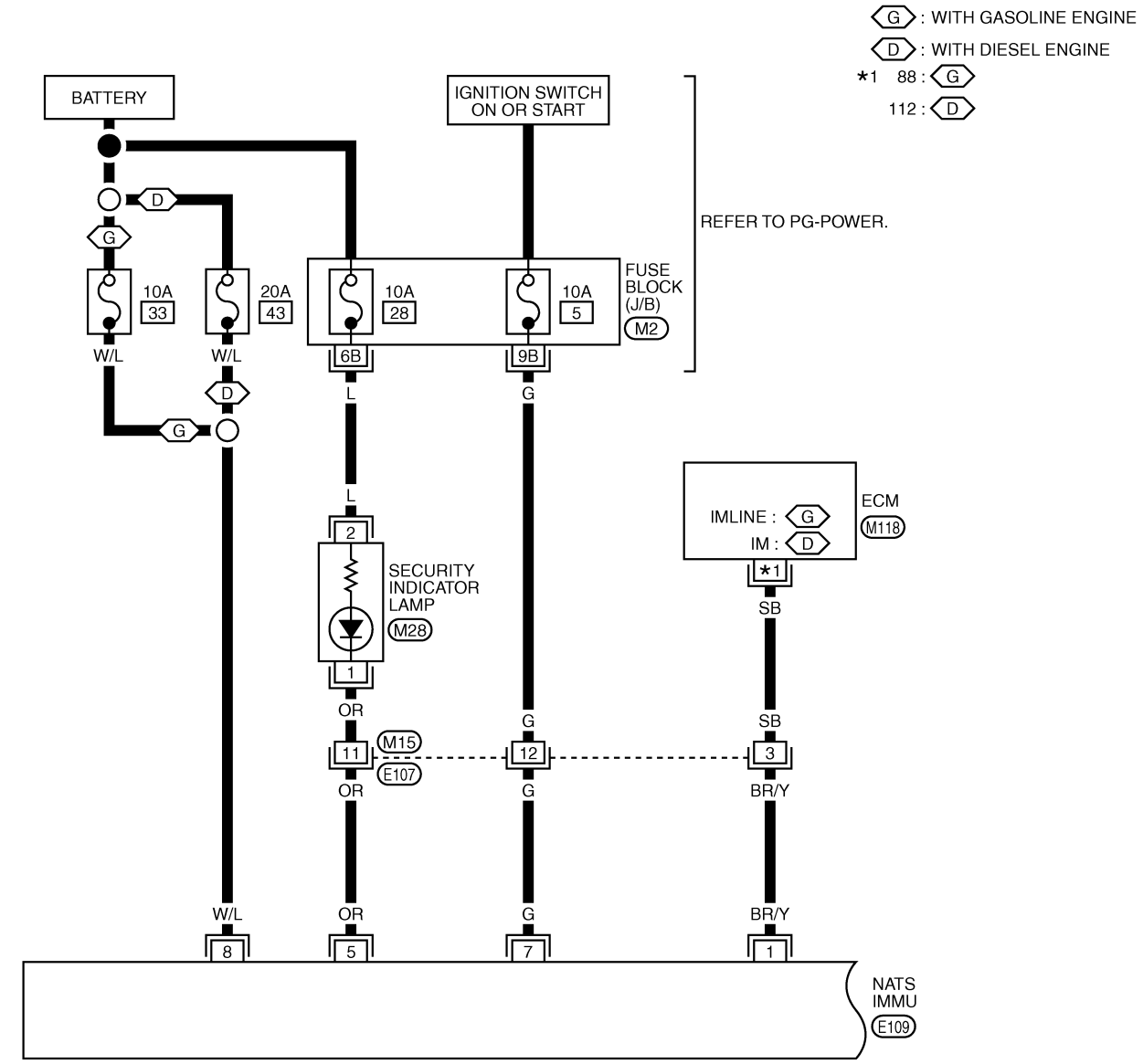
1. Install ECM.
2. Using a registered key (*2), turn ignition switch to “ON”.
   *2: To perform this step, use the key (except for card plate key) that has been used before performing ECM replacement.
3. Maintain ignition switch in “ON” position for at least 5 seconds.
4. Turn ignition switch to “OFF”.
5. Start engine.
   If engine can be started, procedure is completed.
   If engine cannot be started, refer to CONSULT-II Operation Manual NATS and initialize control unit.

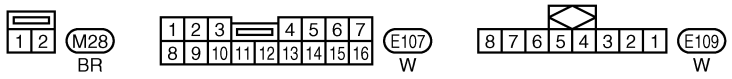
Wiring Diagram — NATS —

EIS008F2

LHD MODELS

BL-NATS-01

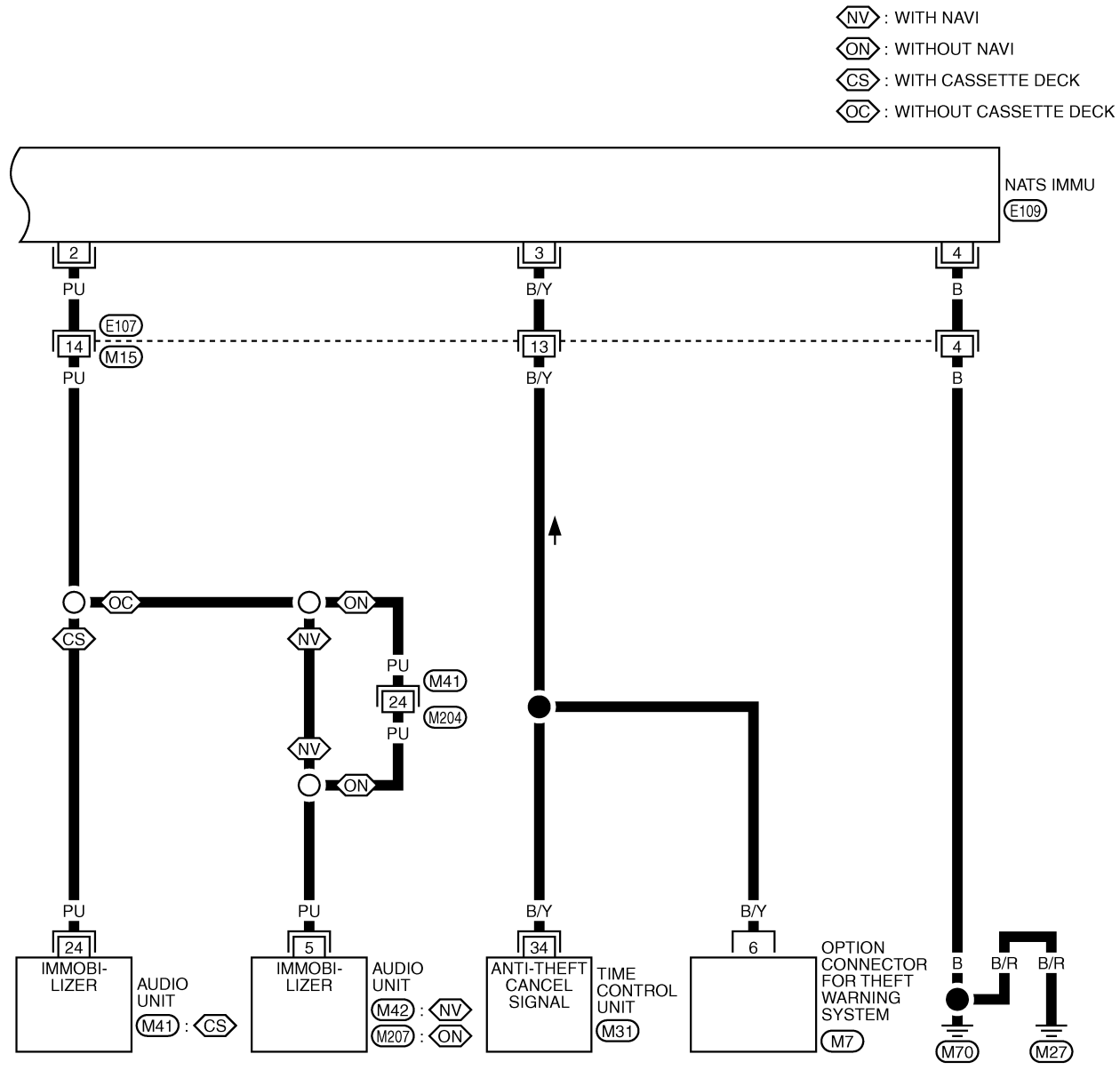


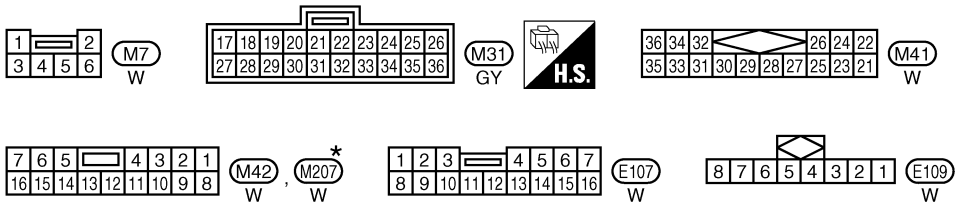


REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M118 -ELECTRICAL UNITS

TIWA0481E

BL-NATS-02



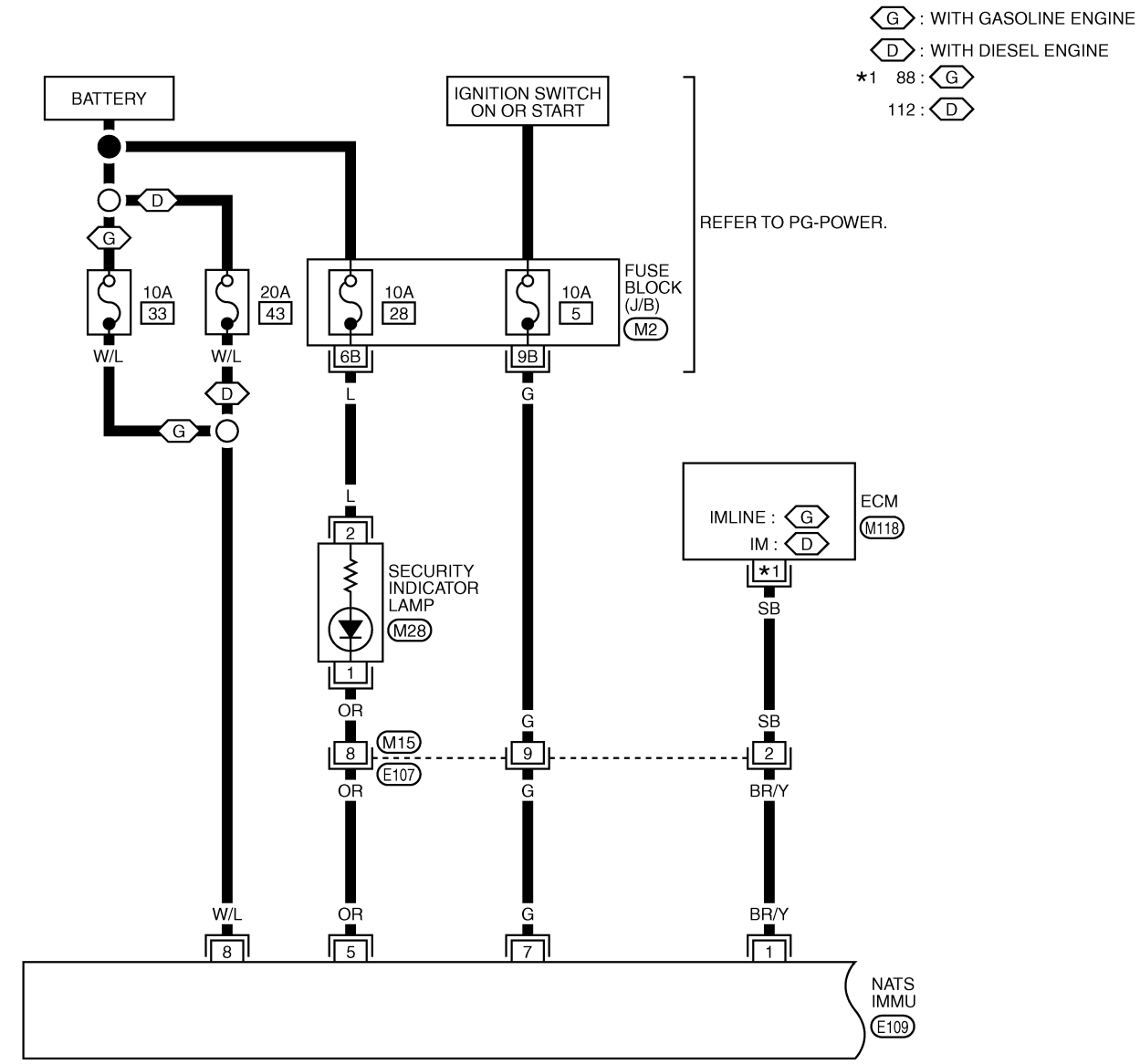


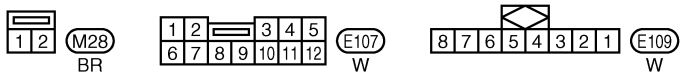
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TIWB0025E

RHD MODELS

BL-NATS-03





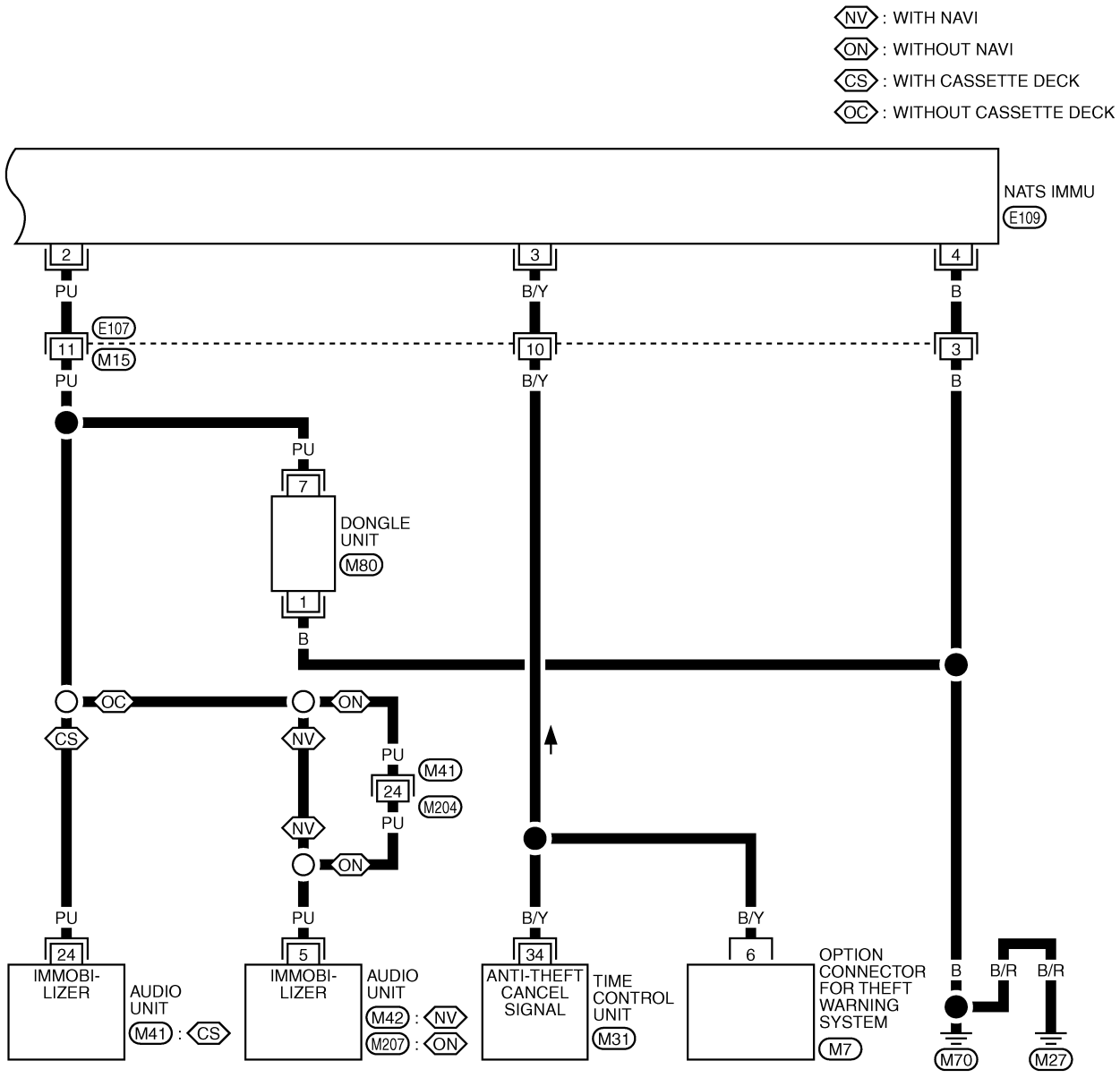
REFER TO THE FOLLOWING.

M2 -FUSE BLOCK-JUNCTION BOX (J/B)

M118 -ELECTRICAL UNITS

TIWA0482E

BL-NATS-04



*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TIWB0026E

CONSULT-II

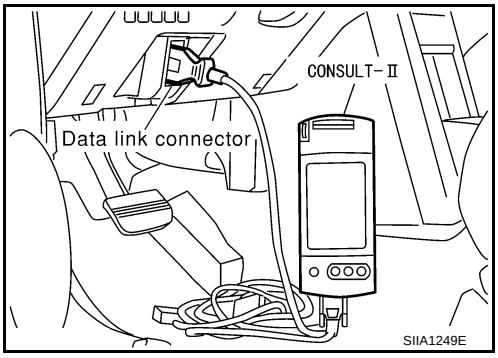
EIS008F3

CONSULT-II INSPECTION PROCEDURE

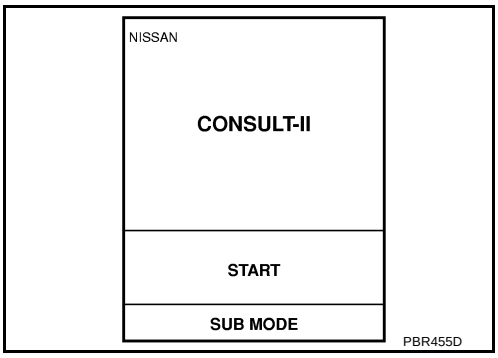
1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.

   Program card : NATS (AEN00B)

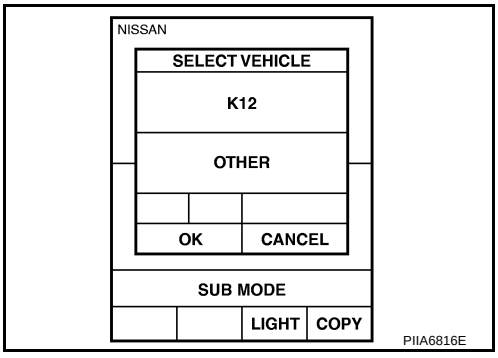
3. Connect CONSULT-II to data link connector.



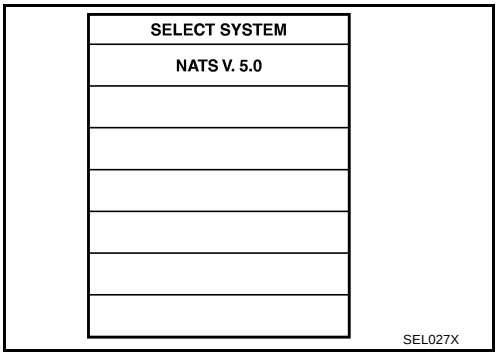
4. Turn ignition switch ON.
5. Touch “START”.



6. Torch “OTHER”.

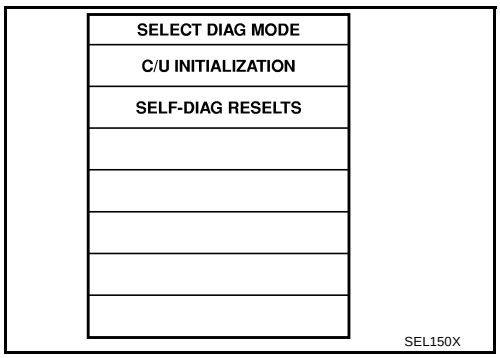


7. Select “NATS V.5.0”.
   If "NATS V5.0" is not indicated go to GI-35, "CONSULT-II Data Link Connector (DLC) Circuit" .



8. Perform each diagnostic test mode according to each service procedure.

For further information, see the CONSULT-II Operation Manual, NATS.



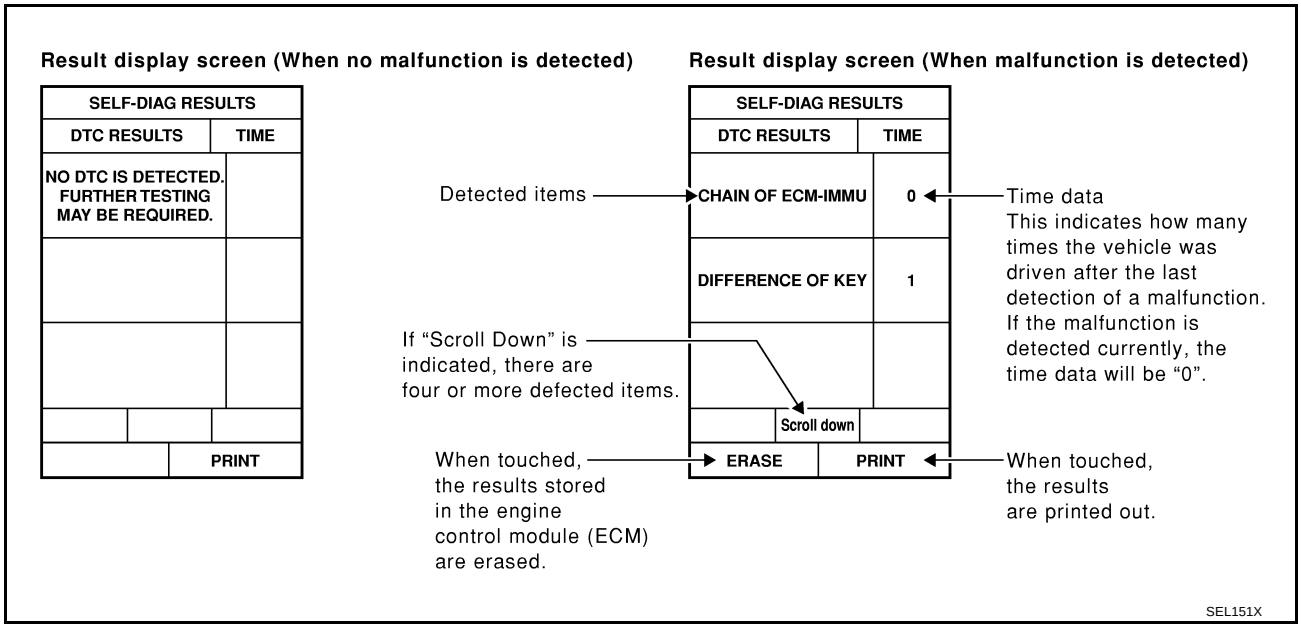
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [NATS ignition key/IMMU/ECM/Dongle unit]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. BL-117, "NATS SELF-DIAGNOSTIC RESULTS ITEM CHART"

NOTE:

- **When any initialization is performed, all ID previously registered will be erased and all NATS ignition keys must be registered again.**
- The engine cannot be started with an unregistered key. In this case, the system may show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.
- When initialization is performed for RHD models, security indicator will flash six times to demonstrate recognition of the dongle unit ID.
- In rare case, “CHAIN OF ECM-IMMU” might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

HOW TO READ SELF-DIAGNOSTIC RESULTS

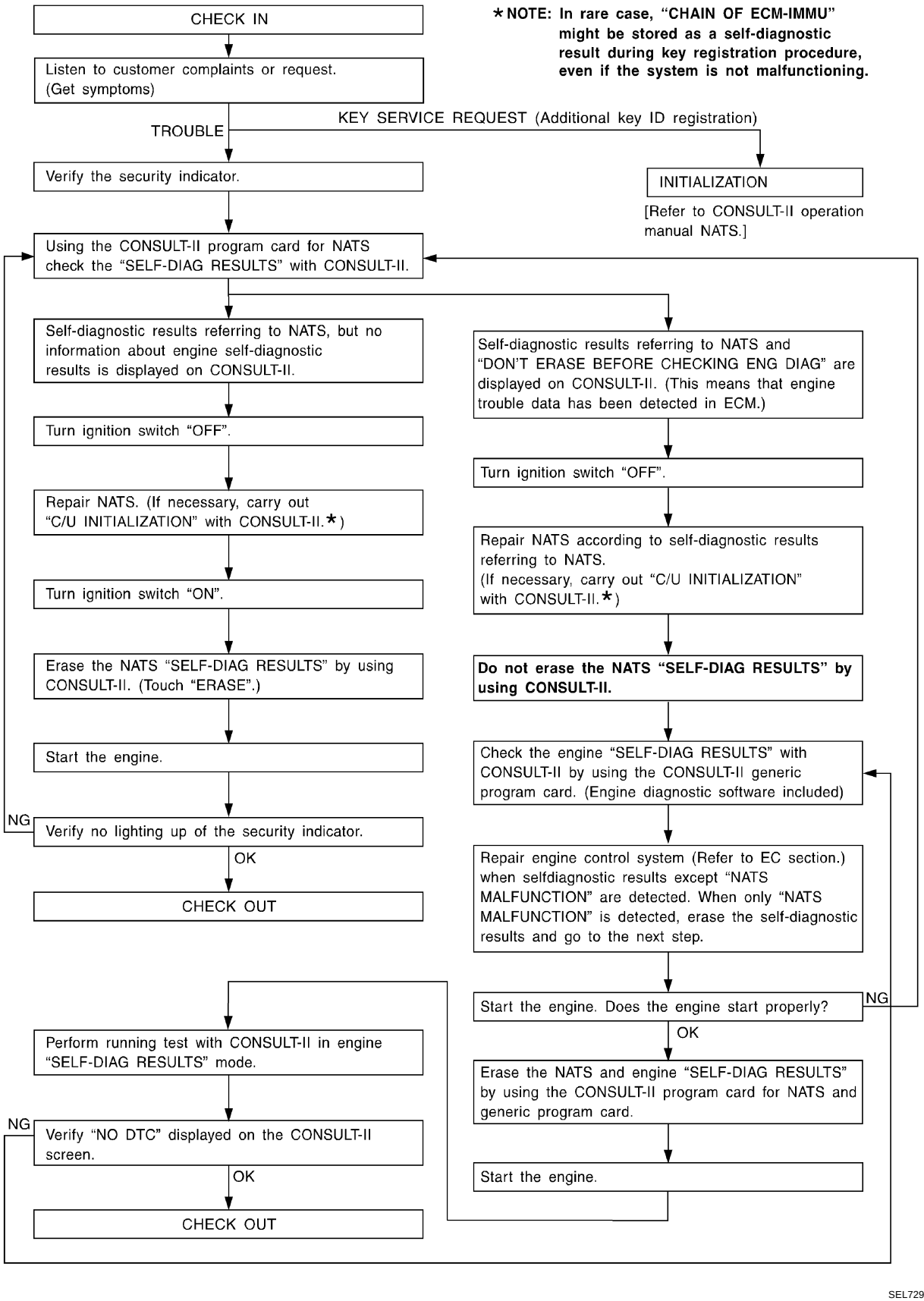


NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE"	Malfunction is detected when.....	Reference page
ECM INT CIRC-IMMU	NATS MALFUNCTION P1613	The malfunction of ECM internal circuit of IMMU communication line is detected.	BL-121
CHAIN OF ECM-IMMU	NATS MALFUNCTION P1612	Communication impossible between ECM and IMMU (In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.)	BL-122
DIFFERENCE OF KEY	NATS MALFUNCTION P1615	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	BL-125
CHAIN OF IMMU-KEY	NATS MALFUNCTION P1614	IMMU cannot receive the key ID signal.	BL-126
ID DISCORD, IMM-ECM	NATS MALFUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	BL-127
LOCK MODE	NATS MALFUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. ● Unregistered ignition key is used. ● IMMU or ECM's malfunctioning.	BL-129
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NATS trouble code has been detected in ECM.	BL-118

Work Flow

EIS008F4



SEL729WE

Trouble Diagnoses

EIS008F5

SYMPTOM MATRIX CHART 1

Self-diagnosis related item

SYMPTOM	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
● Security indicator lighting up* ● Engine cannot be started	ECM INT CIRC-IMMU	PROCEDURE 1 (BL-121)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (BL-122)	In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of IMMU circuit	C1
			Open circuit in ignition line of IMMU circuit	C2
			Open circuit in ground line of IMMU circuit	C3
			Open circuit in communication line between IMMU and ECM	C4
			Short circuit between IMMU and ECM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM communication line and ground line	C4
			ECM	B
			IMMU	A
	DIFFERENCE OF KEY	PROCEDURE 3 (BL-125)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (BL-126)	Malfunction of key ID chip	E
			IMMU	A
			Open circuit in ground line of dongle unit circuit	C6
			Open or short circuit in line between IMMU and dongle unit	C5
			Dongle unit	G
	ID DISCORD, IMM-ECM	PROCEDURE 5 (BL-127)	System initialization has not yet been completed.	F
			ECM	B

SYMPTOM	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
● Security indicator lighting up* ● Engine cannot be started	LOCK MODE	PROCEDURE 7 (BL-129)	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. ●Unregistered ignition key is used. ●IMMU or ECM's malfunctioning.
● MIL staying ON ● Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-118)	Engine trouble data and NATS trouble data have been detected in ECM	—

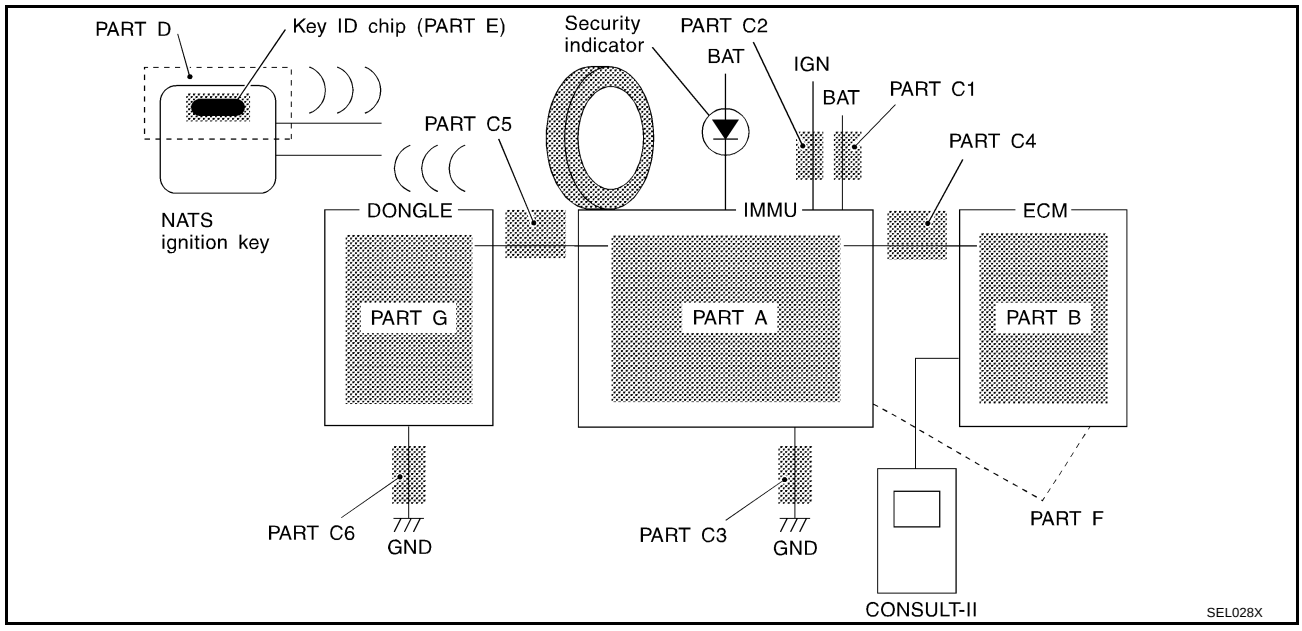
*: When NATS detects trouble, the security indicator lights up while ignition key is in the “ON” position.
*: When the vehicle is equipped with a dongle unit (RHD models), the security indicator blinks 6 times just after the ignition switch is turned to ON. Then the security indicator lights up while the ignition key is in the “ON” position.

SYMPTOM MATRIX CHART 2

Non self-diagnosis related item

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security Ind. does not light up.	PROCEDURE 6 (BL-128)	Security Ind.	—
		Open circuit between Fuse and IMMU	—
		Continuation of initialization mode	—
		IMMU	A
Security Ind. does not blink just after initialization even if the vehicle is equipped with dongle unit.	PROCEDURE 8 (BL-130)	NATS might be initialized without connecting dongle unit properly.	—
		Open circuit in ground line of dongle unit circuit	C6
Security Ind. does not blink just after ignition switch is turned to ON when some malfunction related to NATS is detected even if the vehicle is equipped with dongle unit.		Open or short circuit in communication line between IMMU and dongle unit	C5
		Dongle unit	G

DIAGNOSTIC SYSTEM DIAGRAM

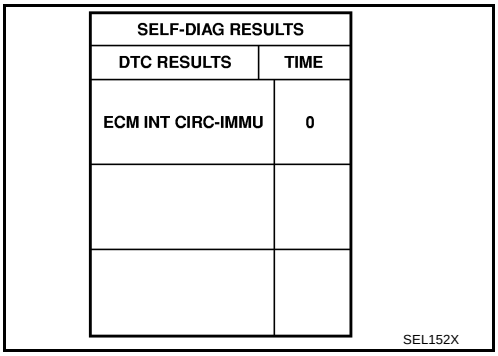


Diagnostic Procedure 1

EIS008F6

Self-diagnostic results:
"ECM INT CIRC-IMMU" displayed on CONSULT-II screen

1. Confirm SELF-DIAGNOSTIC RESULTS "ECM INT CIRC-IMMU" displayed on CONSULT-II screen. **Ref. part No. B.**
2. Replace ECM.
3. Perform initialization with CONSULT-II.
   For initialization, refer to "CONSULT-II operation manual NATS".



Diagnostic Procedure 2

EIS008F7

Self-diagnostic results:
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen

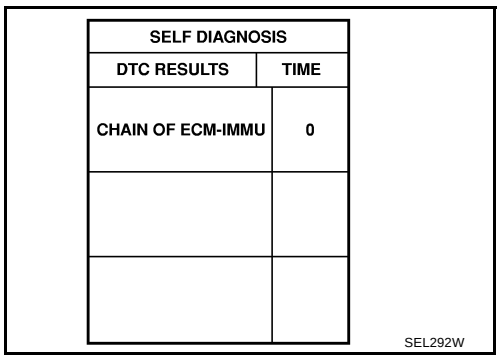
1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.

NOTE:
In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2
No >> GO TO BL-119, "SYMPTOM MATRIX CHART 1" .



2. CHECK POWER SUPPLY CIRCUIT FOR IMMU

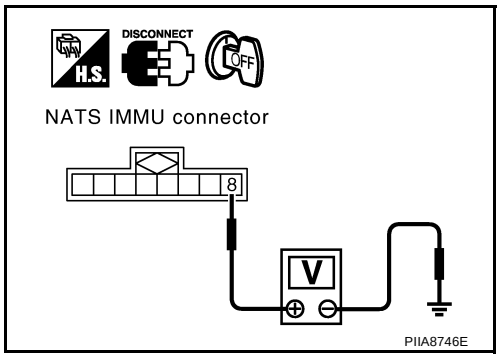
1. Turn ignition switch OFF.
2. Disconnect NATS IMMU connector.
3. Check voltage between NATS IMMU harness connector E109 terminal 8 (W/L) and ground with CONSULT-II or tester.

8 (W/L) – Ground : Battery voltage.

OK or NG

OK >> GO TO 3.
NG >> Check the following.

- 10A fuse (No. 33, located in the fusible link and fuse box) – (Gasoline engine)
- 20A fuse (No. 43, located in the fusible link and fuse box) – (Diesel engine)
- Harness for open or short between fuse and NATS IMMU connector. **Ref. Part No. C1**



3. CHECK IGN SW. ON SIGNAL

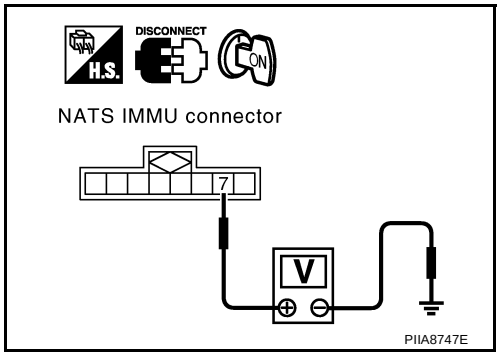
1. Turn ignition switch ON.
2. Check voltage between NATS IMMU harness connector E109 terminal 7 (G) and ground with CONSULT-II or tester.

7 (G) – Ground : Battery voltage.

OK or NG

OK >> GO TO 4.
NG >> Check the following.

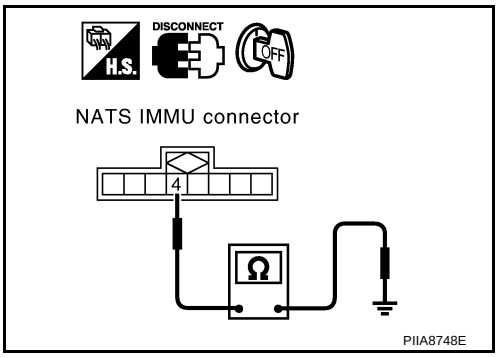
- 10A fuse [No. 5, located in the fuse block (J/B)]
- Harness for open or short between fuse and NATS IMMU connector. **Ref. part No. C2**



4. CHECK GROUND CIRCUIT FOR IMMU

1. Turn ignition OFF.
2. Check harness continuity between NATS IMMU harness connector E109 terminal 4 (B) and ground.

4 (B) – Ground : Continuity should exist.



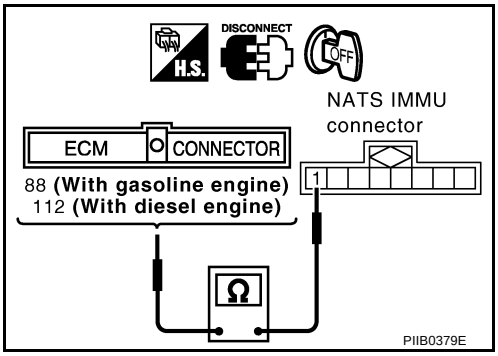
OK or NG

OK >> GO TO 5.
NG >> Repair harness. **Ref. part No. C3**

5. CHECK COMMUNICATION LINE OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check harness continuity between ECM harness connector M118 terminal 88 (Gasoline engine) or 112 (Diesel engine) and NATS IMMU harness connector E109 terminal 1.

88 (SB) – 1 (BR/Y) : Continuity should exist.
112 (SB) – 1 (BR/Y) : Continuity should exist.



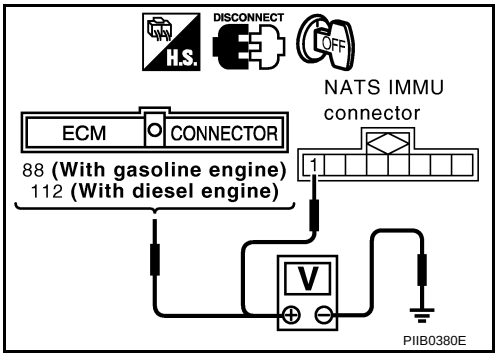
OK or NG

OK >> GO TO 6.
NG >> Repair harness or connector. **Ref. part No. C4**

6. CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT

1. Turn ignition ON.
2. Check voltage between ECM terminal 88 (Gasoline engine), 112 (Diesel engine) or NATS IMMU h terminal 1 and ground.

88 (SB) – Ground : Approx. 0V
112 (SB) – Ground : Approx. 0V
1 (BR/Y) – Ground : Approx. 0V



OK or NG

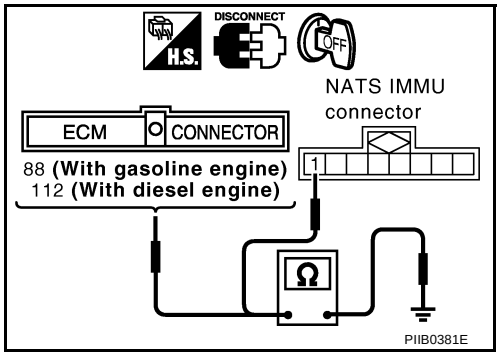
OK >> GO TO 7.
NG >> Check the following.

- Communication line is short-circuited with battery voltage line or ignition switch ON line
- Repair harness or connectors **Ref. part No. C4**

7. CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between ECM terminal 88 (Gasoline engine), 112 (Diesel engine) or NATS IMMU terminal 1 and ground.

88 (SB) – Ground : Continuity should exist.
112 (SB) – Ground : Continuity should exist.
1 (BR/Y) – Ground : Continuity should exist.



OK or NG

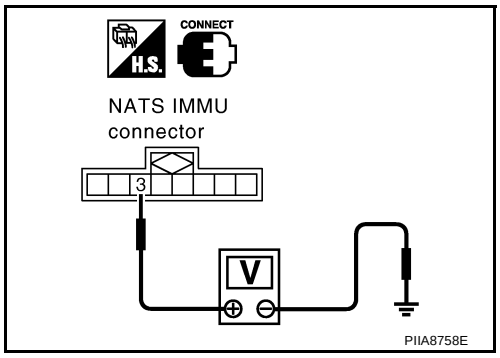
OK >> GO TO 8.
NG >> Check the following.

- Communication line is short-circuited with ground line
- Repair harness or connectors **Ref. part No. C4**

8. SIGNAL FROM ECM TO IMMU CHECK

1. Connect NATS IMMU connector.
2. Check voltage between NATS IMMU harness connector E109 terminal 3 (B/Y) and ground with analogue tester.

3 (B/Y) - Ground:
Before turning ignition switch “ON”
: Voltage: Battery voltage
Just after turning ignition switch “ON”
: Pointer of tester should move.



OK or NG

OK >> NATS IMMU is malfunctioning.

- Replace NATS IMMU. **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For the operation of initialization, refer to “CONSULT-II Operation Manual NATS”.

NG >> ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
- For the operation of initialization, refer to “CONSULT-II Operation Manual NATS”.

Diagnostic Procedure 3

EIS008F8

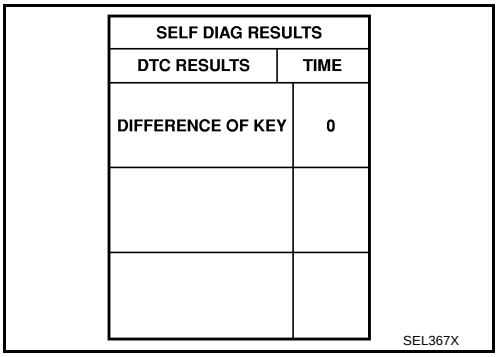
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown in the figure?

Yes >> GO TO 2.
No >> GO TO BL-119, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

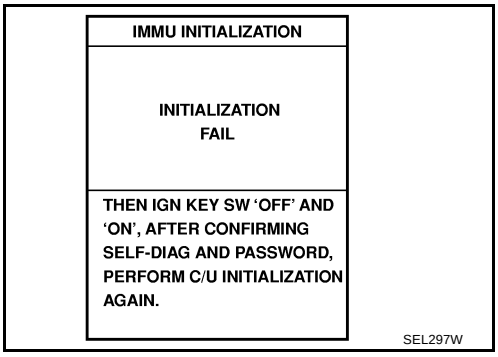
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II operation manual NATS”.

NOTE:
If the initialization is not completed or fails, CONSULT-II shows above message on the screen.

Can the system be initialized and can the engine be started with re-registered NATS ignition key?

Yes >> Ignition key ID was unregistered. **Ref. part No. D**
No >> NATS IMMU is malfunctioning.

- Replace IMMU. **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II operation manual NATS”.



Diagnostic Procedure 4

EIS008F9

Self-diagnostic results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-119, "SYMPTOM MATRIX CHART 1" .

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU	0

SEL292W

2. CHECK NATS IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

Yes >> Ignition key ID chip is malfunctioning.
- Replace the ignition key. **Ref. part No. E**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS”.

No >>
- **Models without dongle unit**
  NATS IMMU is malfunctioning.
  - Replace NATS IMMU. **Ref. part No. A**
  - For initialization, refer to “CONSULT-II Operation Manual NATS”.
  - Perform initialization with CONSULT-II.
- **Models with dongle unit**
  GO TO 3.

3. CHECK HARNESS CONNECTOR CONNECTION

Check harness connector connection between E109 and M80.

Does the engine start?

Yes >> System is OK. (The malfunction is caused by improper connector connection.)
No >> GO TO 4.

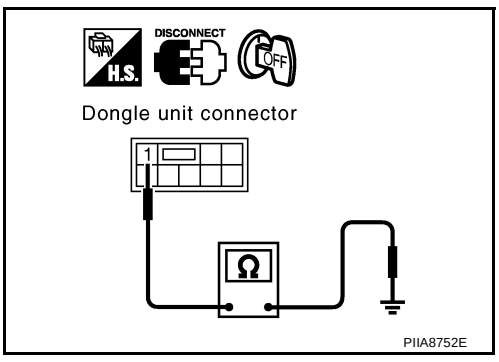
4. CHECK GROUND CIRCUIT FOR DONGLE UNIT

1. Turn ignition switch OFF.
2. Check continuity between dongle unit harness connector M80 terminal 1 (B) and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.
NG >> Repair harness.



PIIA8752E

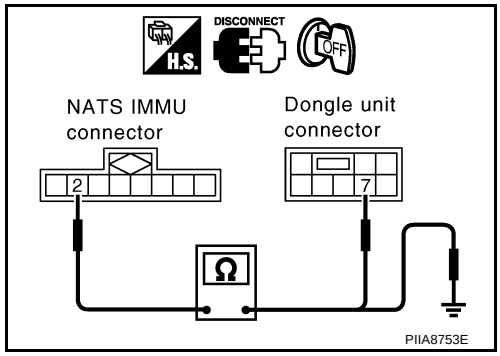
5. CHECK INTERFACE CIRCUIT

1. Check continuity between NATS IMMU harness connector E109 terminal 2 (PU) and dongle unit harness connector M80 terminal 7 (PU).

   2 (PU) – 7 (PU) : Continuity should exist.

2. Check continuity between NATS IMMU harness connector terminal 2 (PU) and ground.

   2 (PU) – Ground : Continuity should not exist.



OK or NG

OK >> Dongle unit is malfunctioning.
1. Replace dongle unit **Ref. Part No. G**
2. Perform initialization with CONSULT-II. For the initialization procedure, refer to “CONSULT-II operation manual NATS.

NG >> Repair harness.

Diagnostic Procedure 5

EIS008FA

Self-diagnostic results:
“ID DISCORD, IMM-ECM” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.

NOTE:
“ID DISCORD IMMU-ECM”:
Registered ID of IMMU is in discord with that of ECM.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-119, "SYMPTOM MATRIX CHART 1" .

SELF-DIAG RESULTS	
DTC RESULTS	TIME
ID DISCORD, IMM-ECM	0

SEL958W

2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization, refer to “CONSULT-II operation manual NATS”.

NOTE:
If the initialization is not completed or fails, CONSULT-II shows above message on the screen.

Can the system be initialized?

Yes >>
- Start engine. (END)
- (System initialization had not been completed. **Ref. part No. B**)

No >> ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II operation manual NATS”.

IMMU INITIALIZATION
INITIALIZATION FAIL
THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.

SEL297W

Diagnostic Procedure 6

EIS008FB

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. CHECK FUSE

Check 10A fuse [No. 28, located in the fuse block (J/B)].

Is 10A fuse OK?

Yes >> GO TO 2.
No >> Replace fuse.

2. CHECK SECURITY INDICATOR LAMP

1. Install 10A fuse.
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS”.
3. Turn ignition switch OFF.
4. Start engine and turn ignition switch OFF.
5. Check the security indicator lamp lighting.

Security indicator lamp should be light up.

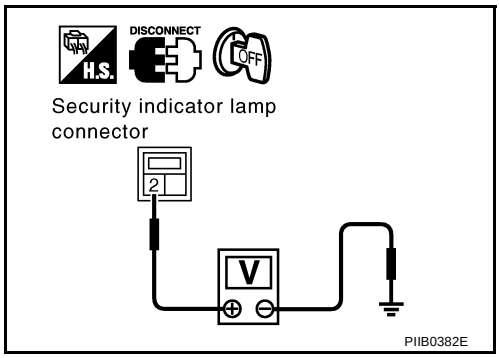
OK or NG

OK >> INSPECTION END.
NG >> GO TO 3.

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect security indicator lamp connector.
3. Check voltage between security indicator lamp harness connector M28 terminal 2 (L) and ground.

2 (L) – Ground : Battery voltage.



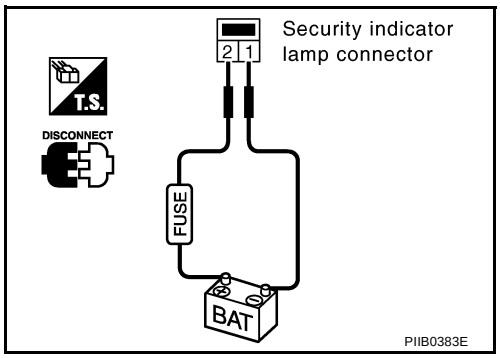
OK or NG

OK >> GO TO 4.
NG >> Check harness for open or short between fuse and security indicator lamp.

4. CHECK SECURITY INDICATOR LAMP

Apply 12V direct current to security indicator lamp harness connector M34 terminals 1 and 2.

Security indicator lamp should illuminate.



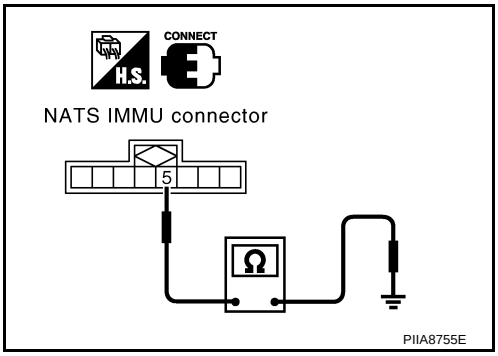
OK or NG

OK >> GO TO 5.
NG >> Replace security indicator lamp.

5. CHECK IMMU FUNCTION

1. Connect NATS IMMU connector.
2. Disconnect security indicator lamp connector.
3. Check continuity between NATS IMMU harness connector E109 terminal 5 (OR) and ground.

5 (OR) – Ground : Continuity should exist intermittently.



OK or NG

OK >> Check harness for open or short between security indicator lamp and NATS IMMU.

NG >> NATS IMMU is malfunctioning.

- Replace NATS IMMU. **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II operation manual NATS”.

Diagnostic Procedure 7

EIS008FC

Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

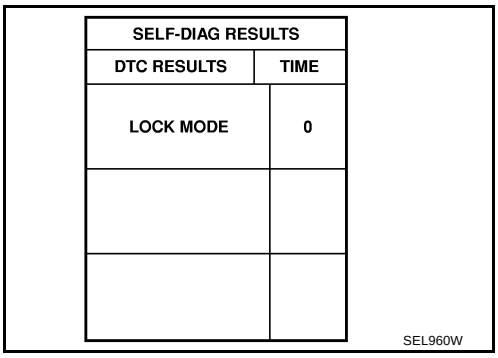
1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.

No >> GO TO BL-119, "SYMPTOM MATRIX CHART 1" .



2. ESCAPE FROM LOCK MODE

1. Turn ignition switch OFF.
2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds.
3. Return the key to OFF position.
4. Repeat steps 2 and 3 twice (total of three cycles).
5. Start the engine.

Does engine start?

Yes >> System is OK. (Now system is escaped from “LOCK MODE”.)

No >> GO TO 3.

3. CHECK IMMU ILLUSTRATION

Check NATS IMMU installation. Refer to BL-131, "How to Replace NATS IMMU" .

OK or NG

OK >> GO TO 4.

NG >> Reinstall NATS IMMU correctly.

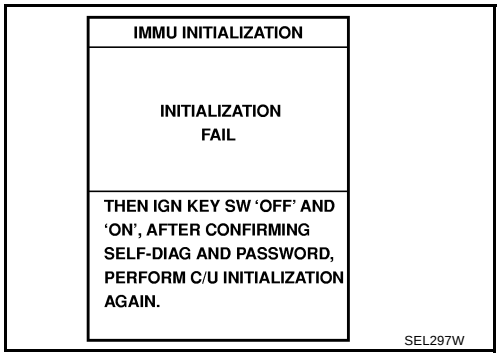
4. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II operation manual NATS”.

NOTE:
If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.

Can the system be initialized?

Yes >> System is OK.
No >> GO TO 5



5. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

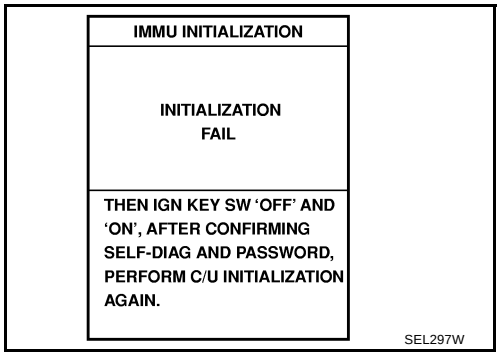
1. Replace NATS IMMU.
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II operation manual NATS”.

NOTE:
If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.

Can the system be initialized?

Yes >> System is OK. (NATS IMMU is malfunctioning. **Ref. part No. A**)
No >> ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II operation manual NATS”.



Diagnostic Procedure 8

EIS008FD

1. CHECK HARNESS CONNECTOR CONNECTION

Perform initialization with CONSULT-II.
Check harness connector connection between E109 and M80.
Then initialize NATS. For the initialization operation, refer to “CONSULT-II operation NATS”.

Does the security indicator blink just after initialization?

Yes >> System is OK. (The malfunction is caused by improper connector connection.)
No >> GO TO 2.

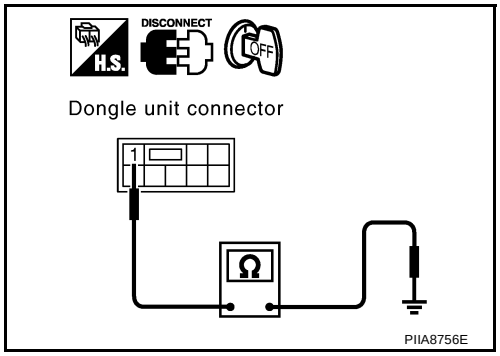
2. CHECK GROUND CIRCUIT FOR DONGLE UNIT

Check continuity between dongle unit harness connector M80 terminal 1 (B) and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 3.
NG >> Repair harness.



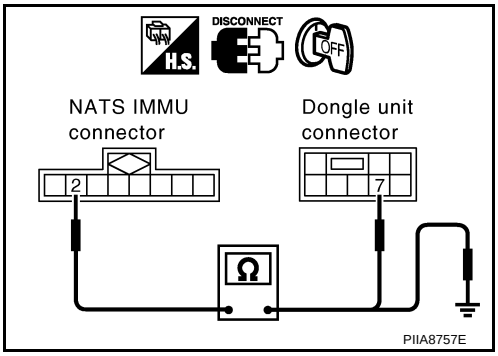
3. CHECK INTERFACE CIRCUIT

1. Check continuity between NATS IMMU harness connector E109 terminal 2 (PU) and dongle unit harness connector M80 terminal 7 (PU).

2 (PU) – 7 (PU) : Continuity should exist.

2. Check continuity between NATS IMMU harness connector E109 terminal 2 (PU) and ground.

2 (PU) – Ground : Continuity should not exist.



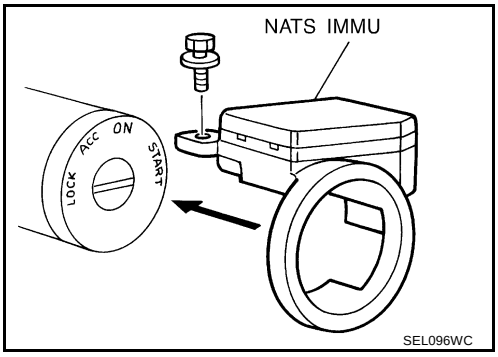
OK or NG

OK >> Dongle unit is malfunctioning.
1. Replace dongle unit.
2. Perform initialization with CONSULT-II. For the initialization procedure, refer to “CONSULT-II Operation Manual NATS”.

NG >> Repair harness.

How to Replace NATS IMMU

EIS008FE



NOTE:

- **If NATS IMMU is not installed correctly, NATS system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show “LOCK MODE”.**