SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

EIS00DHW

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.

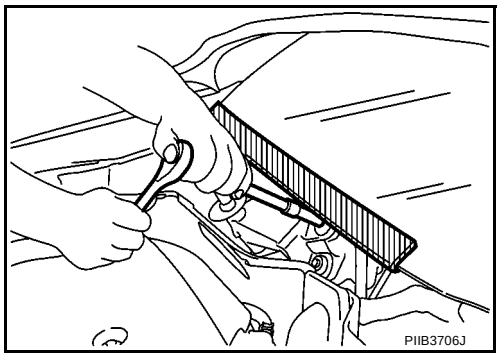
WARNING:

- **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 procedures with out cowl top cover

EIS00DHY

When performing the procedure after removing cowl top cover,cover the lower end of windshield with urethane,etc.



Precautions for Work

EIS00DHZ

- 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 Diagrams and Trouble Diagnosis

EIS00DI0

When you read wiring diagrams, refer to the following:

- GI-15, "How to Read Wiring Diagrams"
- PG-4, "POWER SUPPLY ROUTING CIRCUIT"

When you perform trouble diagnosis, refer to the following:

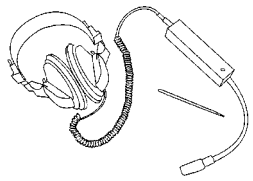
- GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- GI-24, "How to Perform Efficient Diagnosis for an Electrical Incident"
  Check for any Service bulletins before servicing the vehicle.

PREPARATION

PFP:00002

Commercial Service Tools

EIS00DI1

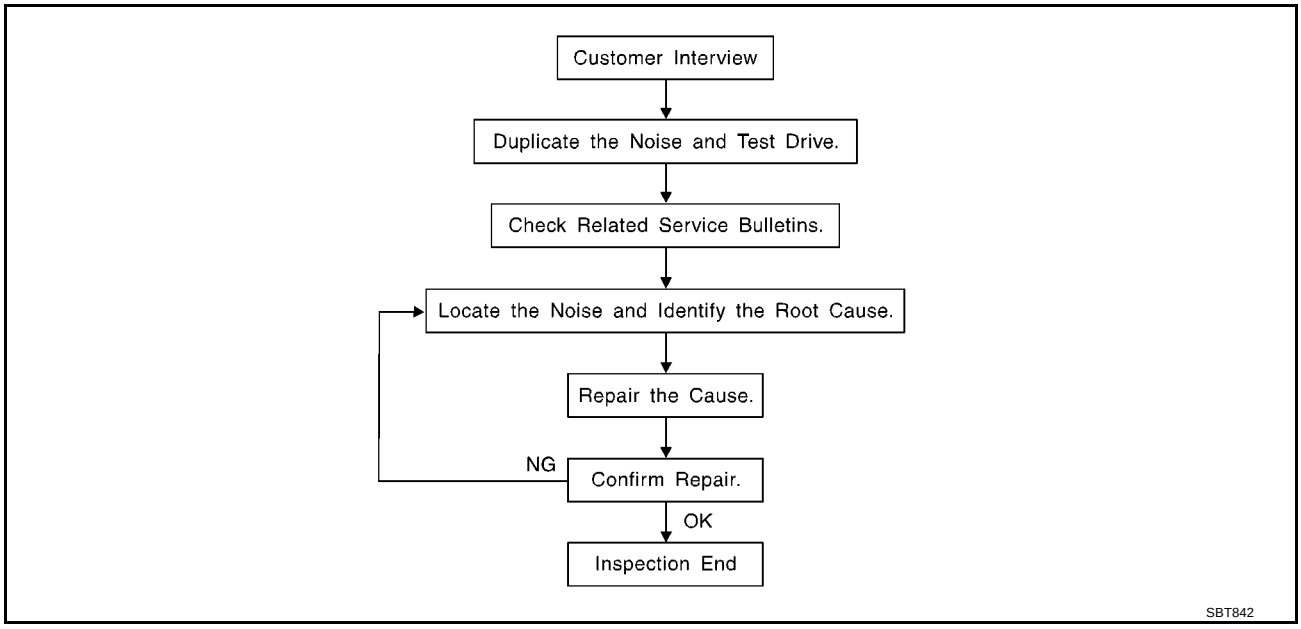
Tool name	Description
Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS00DI2



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 brought 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 models, drive position on A/T models).
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.

NOTE:
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) thick, 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 place 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

EIS00DI3

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 noises 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.

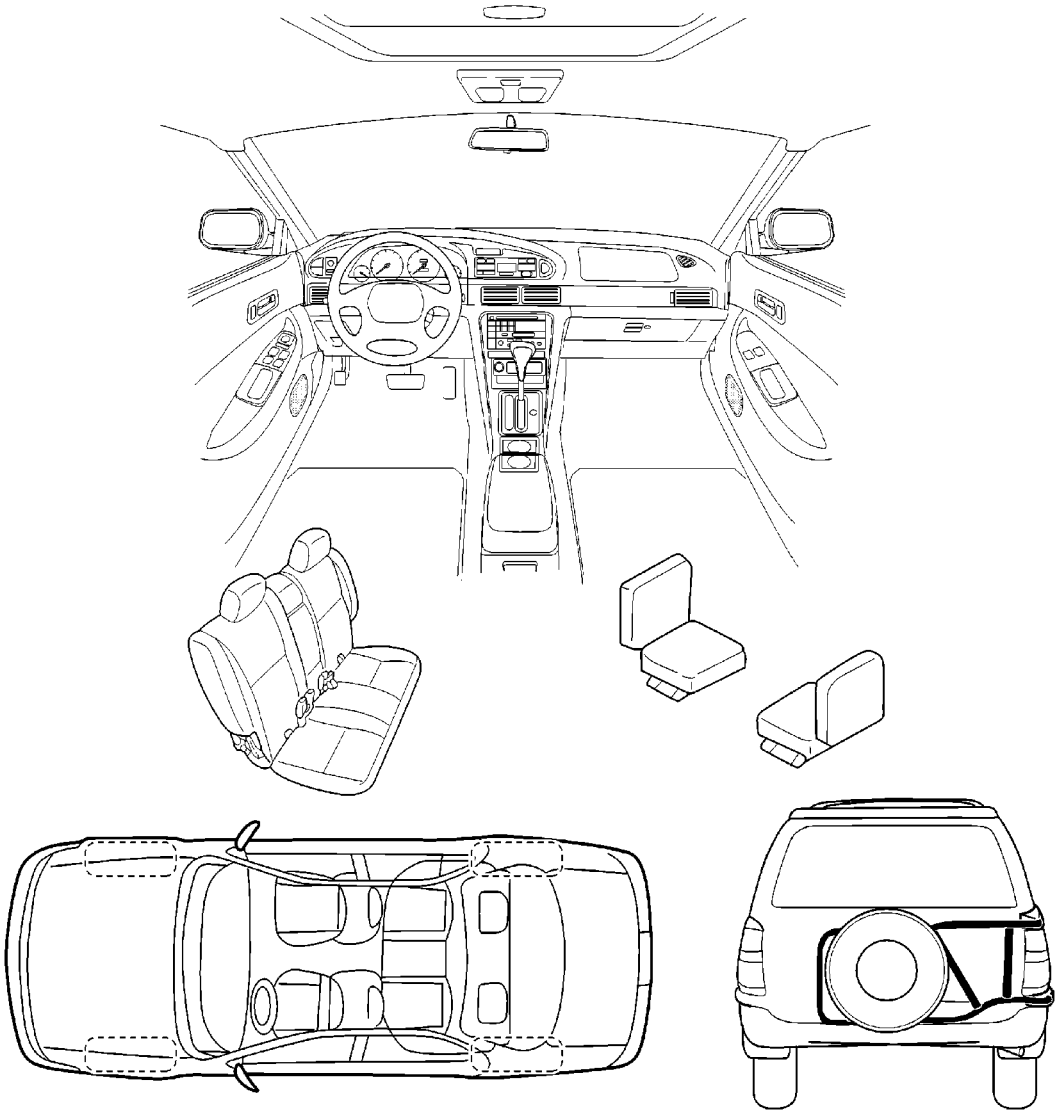
Diagnostic Worksheet

EIS00DI4

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

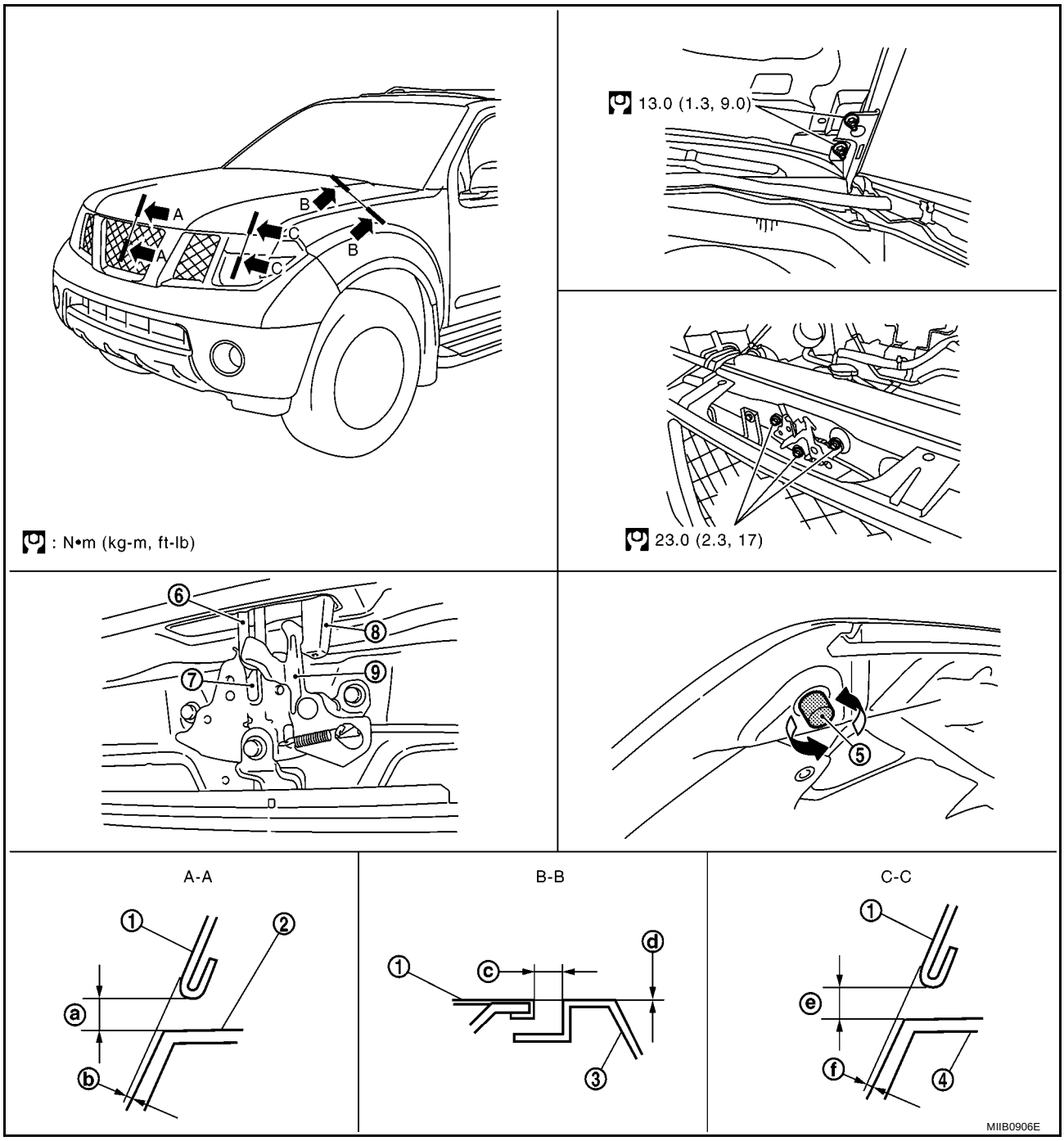
SBT844

HOOD

PFP:F5100

Fitting Adjustment

EIS00B4I



1. Hood
2. Front grille
3. Front fender
4. Headlamp assembly
5. Hood bumper rubber
6. Hood striker
7. Primary latch
8. Secondary striker
9. Secondary latch

LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

1. Remove the hood lock, loosen the hood hinge nuts and close the hood.
2. Adjust the lateral and longitudinal clearance, and open the hood to tighten the mounting bolts to the specified torque.

	Portion	Clearance
Hood - Front grille	A - A (a)	3.7 - 8.3 mm (0.146 - 0.327 in)
Hood - Front fender	B - B (c)	3.6 - 5.6 mm (0.142 - 0.220 in)
Hood - Headlamp	C - C (e)	6.0 - 8.0 mm (0.236 - 0.315 in)

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.

	Portion	R / L difference
Hood - Front grille	A - A (a)	Less than 2.2 mm (0.087 in)
Hood - Front fender	B - B (c)	Less than 1.0 mm (0.039 In)

SURFACE HEIGHT ADJUSTMENT

1. Remove the 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.

	Portion	Surface height
Hood - Front grille	A - A (b)	-1.7 - 3.1 mm (-0.067 - 0.122 in)
Hood - Front fender	B - B (d)	-1.0 - 1.0 mm (-0.039 - 0.039 in)
Hood - Headlamp	C - C (f)	-1.3 - 2.7 mm (-0.051 - 0.106 in)

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. Check that the hood lock secondary latch is properly engaged with the secondary striker with hood's own weight.
4. Check 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) height.

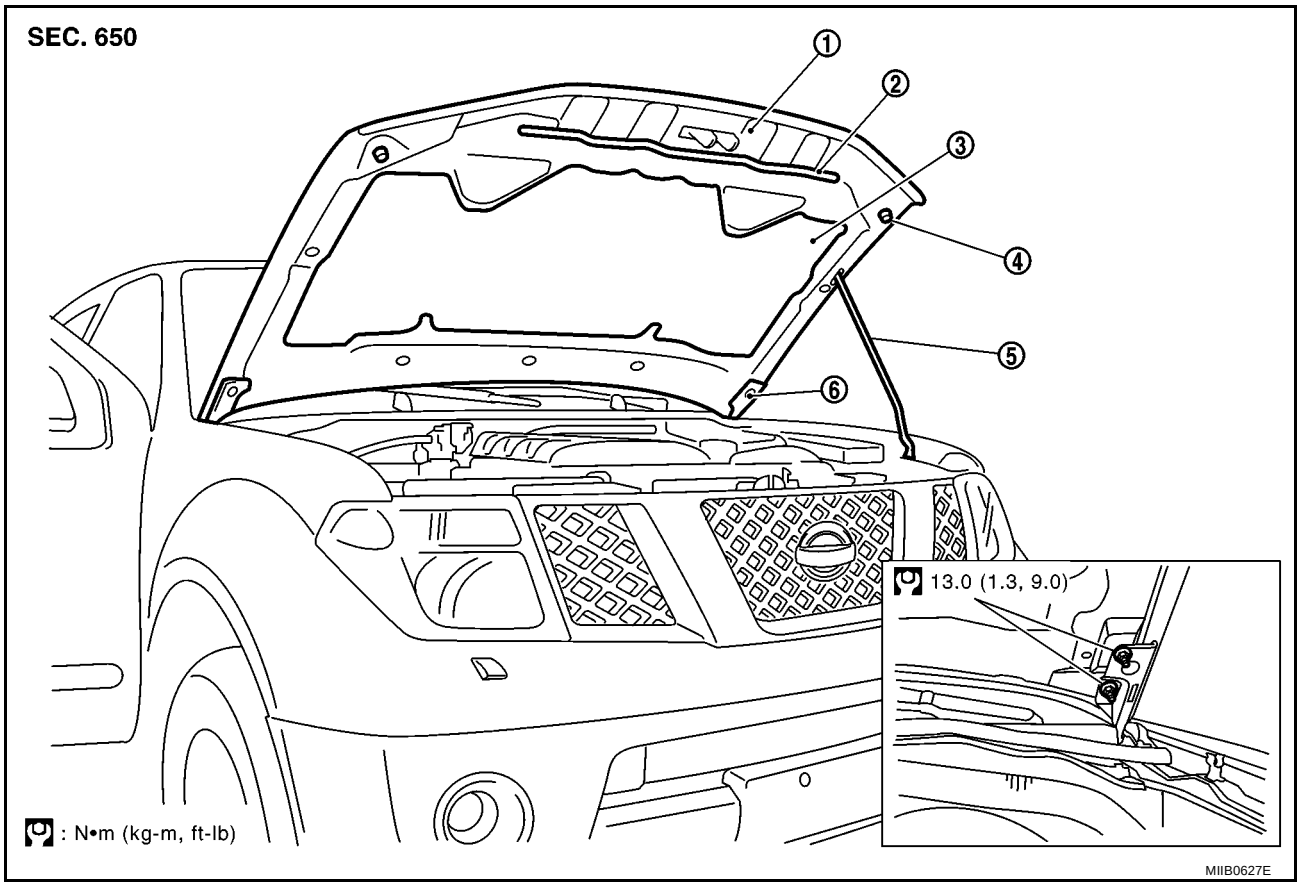
CAUTION:
Do not drop hood from a height of 300 mm (11.81 in) or more.

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) 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.

CAUTION:
- **After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.**
- **Adjust evenness between hood and each part to the following specification.**

Removal and Installation of Hood Assembly

EIS00B4J

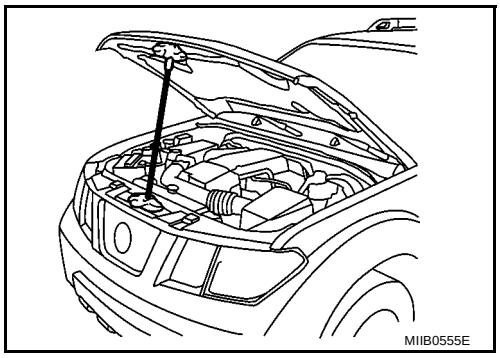


1. Hood assembly
2. Hood front sealing rubber
3. Hood insulator
4. Hood bumper rubber
5. Hood stay
6. Hood hinge

REMOVAL

1. Disconnect washer hose at the connecting point.
2. Support the hood striker with a proper material to prevent it from falling.

   WARNING:
   Body injury may occur if no supporting rod is holding the hood open when removing the food stay.



3. Remove the hinge nuts from the hood to remove the hood assembly.

   CAUTION:
   Operate with two workers, because of its heavy weight.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

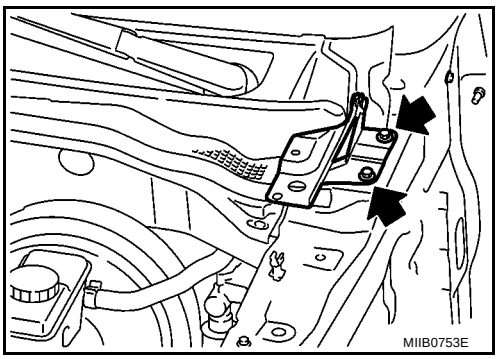
- **Before installing hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.**
- **After installing, perform hood fitting adjustment. Refer to BL-12, "Fitting Adjustment" .**
- **After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.**

Removal and Installation of Hood Hinge

EIS00C49

REMOVAL

1. Remove the hood assembly. Refer to BL-14, "Removal and Installation of Hood Assembly" .
2. Remove the front fender. Refer to BL-20, "Removal and Installation" .
3. Remove the hood hinge mounting bolts and remove the hood hinge.



INSTALLATION

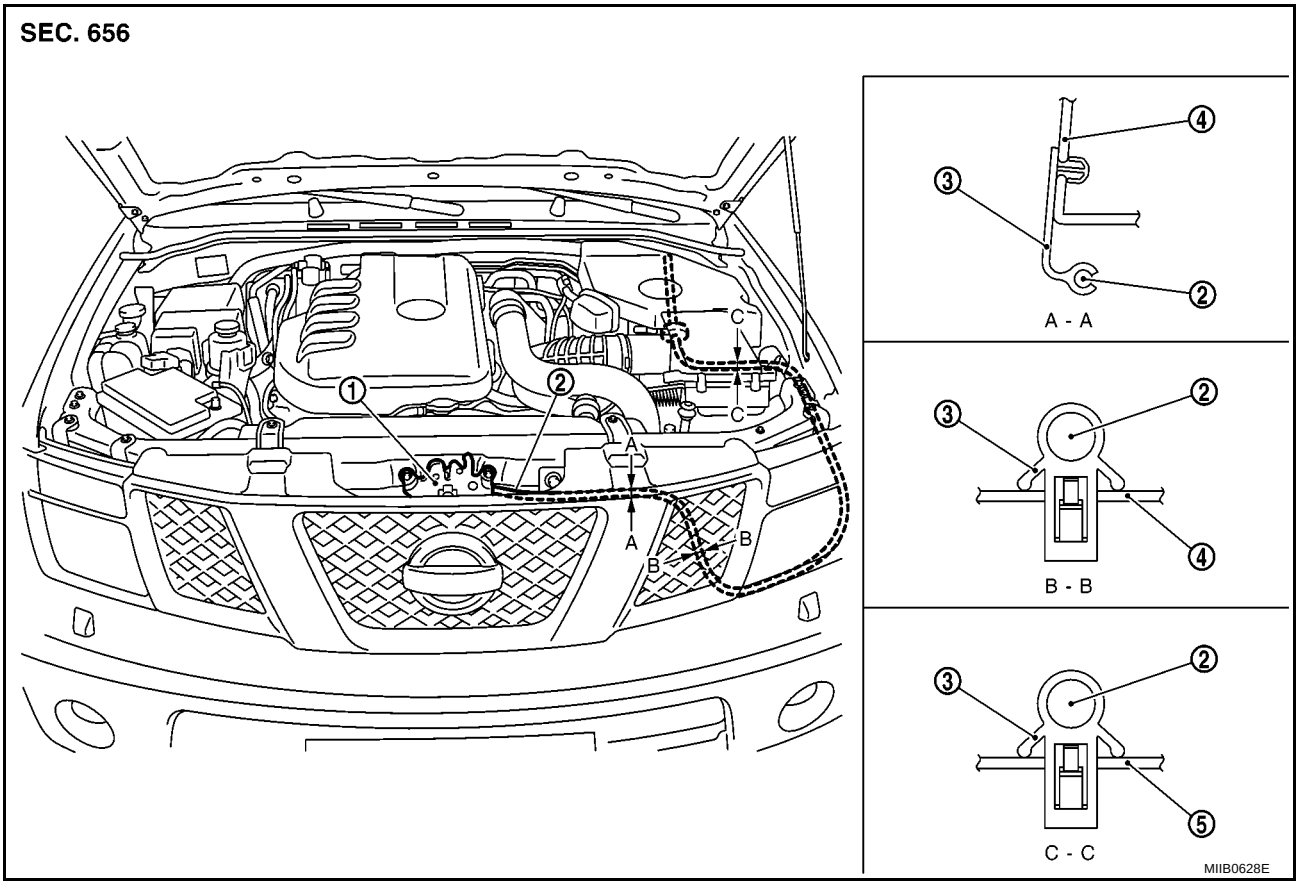
Install in the reverse order of removal.

CAUTION:

After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.

Removal and Installation of Hood Lock Control

EIS00B4K



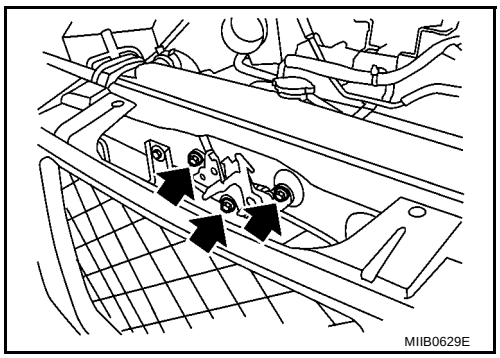
1. Hood lock assembly
2. Hood lock cable
3. Clip
4. Radiator core support
5. Hood ledge lower

REMOVAL

1. Remove the front grill. Refer to EI-19, "FRONT GRILLE" .
2. Remove the air cleaner and air duct. Refer to EM-15, "AIR CLEANER AND AIR DUCT" .

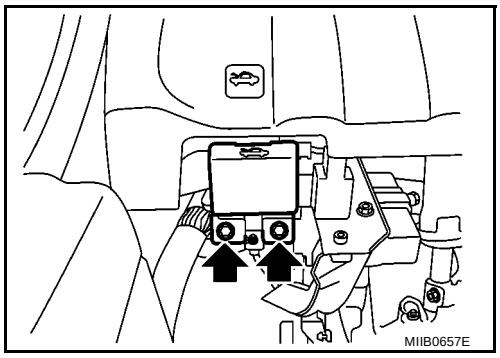
3. Remove the hood lock assembly.

: 23.0 N·m (2.3 kg-m, 17.0 ft-lb)



4. Disconnect the hood lock cable from the hood lock, and clip it from the radiator core support upper and hood ledge.
5. Remove the hood lock opener mounting bolts, and remove the hood lock opener.
6. Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.

CAUTION:
While pulling, be careful not to damage (peeling) the outside of the hood lock cable.

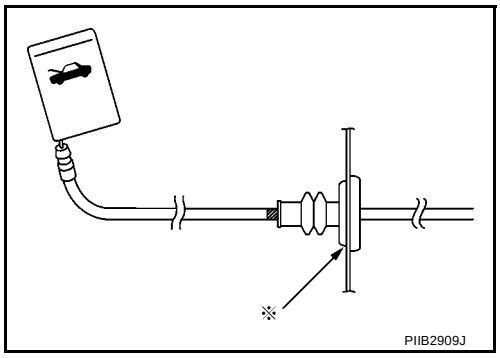


INSTALLATION

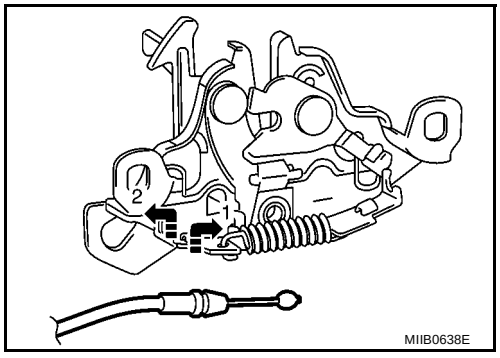
1. Pull the hood lock cable through the panel hole to the engine room.

CAUTION:
Be careful not to bend the cable too much, keeping the radius 100 mm (3.94 in) or more.

2. Make sure the cable is not offset from the positioning grommet, and push the grommet into the panel hole securely.
3. Apply the sealant to the grommet (at * mark) properly.



4. Install the cable securely to the lock in order of (1) and (2).
5. After installing, check the hood lock adjustment and hood opener operation.
6. After installing, perform hood fitting adjustment. Refer to BL-12, "Fitting Adjustment" .



Hood Lock Control Inspection

EIS00BQ1

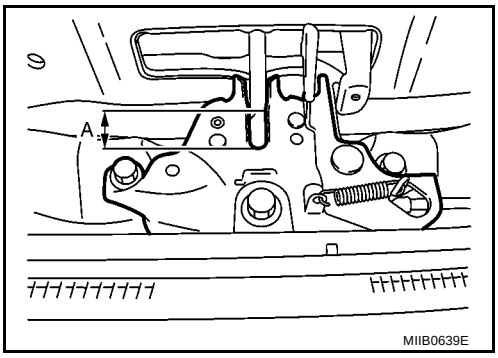
CAUTION:

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

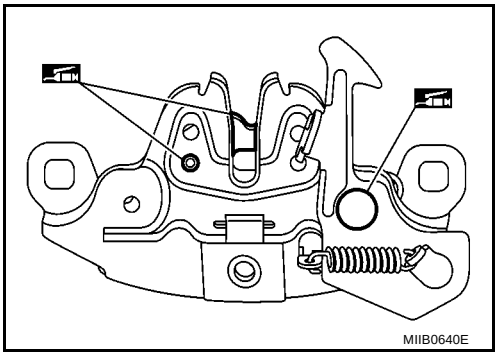
1. Make sure that the hood lock secondary latch is properly engaged with the secondary striker with hood's own weight.
2. Make sure that the hood lock primary latch is securely engaged with the hood striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.

   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. Install as static closing face of hood is 392 N·m (35 Kg-m, 253.0 ft-lb) ~ 441 N·m (45 Kg-m, 325.3 ft-lb).



5. Confirm hood lock is properly lubricated. If necessary, apply grease at the point shown in the figure.

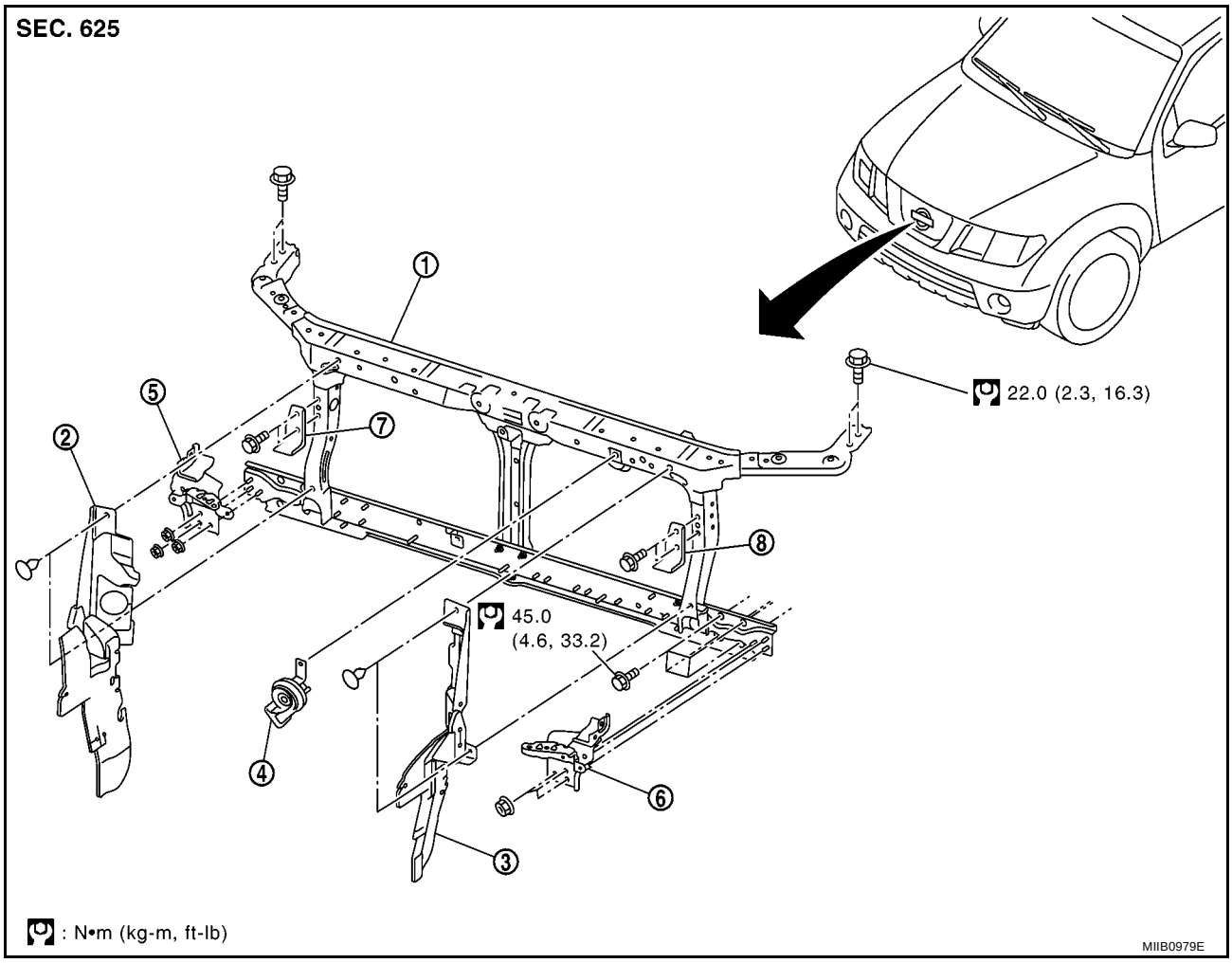


RADIATOR CORE SUPPORT

PFP:62500

Removal and Installation

EIS00DGJ



1. Radiator core support assembly
2. Air intake duct (Air guide) RH
3. Air intake duct (Air guide) LH
4. Horn (Low)
5. Headlamp lower bracket RH
6. Headlamp lower bracket LH
7. Headlamp side bracket RH
8. Headlamp side bracket LH

REMOVAL

1. Remove the hood assembly. Refer to BL-14, "Removal and Installation of Hood Assembly" .
2. Remove the front grille. Refer to EI-19, "FRONT GRILLE" .
3. Remove the front bumper, bumper reinforcement and bumper bracket. Refer to EI-15, "FRONT BUMPER" .
4. Remove the headlamp assembly (LH/RH). Refer to LT-30, "Removal and Installation" .
5. Remove the air intake duct (Air guide). Refer to EM-15, "AIR CLEANER AND AIR DUCT" .
6. Remove the charge air cooler. (for YD25 engine models only) Refer to EM-18, "CHARGE AIR COOLER" .
7. Remove the power steering oil cooler. Refer to PS-30, "HYDRAULIC LINE" .
8. Remove the A/T fluid cooler and A/T fluid cooler tube mounting nuts. Refer to AT-244, "A/T FLUID COOLER" .
9. Remove the hood lock assembly, and then remove the hood lock cable. Refer to BL-15, "Removal and Installation of Hood Lock Control" .
10. Remove the horn harness connector.
11. Disconnect the ambient sensor connector and remove the ambient sensor. Refer to ATC-117, "Removal and Installation" .
12. Remove the mounting harness clip on radiator core support assembly, the harness is separate.
13. Remove the upper radiator bracket. Refer to CO-11, "RADIATOR" .

14. Remove the radiator core support mounting bolts and remove the radiator core support assembly.

15. After removing the radiator core support assembly, the following parts are separate.
    - Horn (Low).
    - Headlamp side bracket (LH/RH).
    - Headlamp lower bracket (LH/RH).

INSTALLATION

Install in the reverse order of removal.

CAUTION:

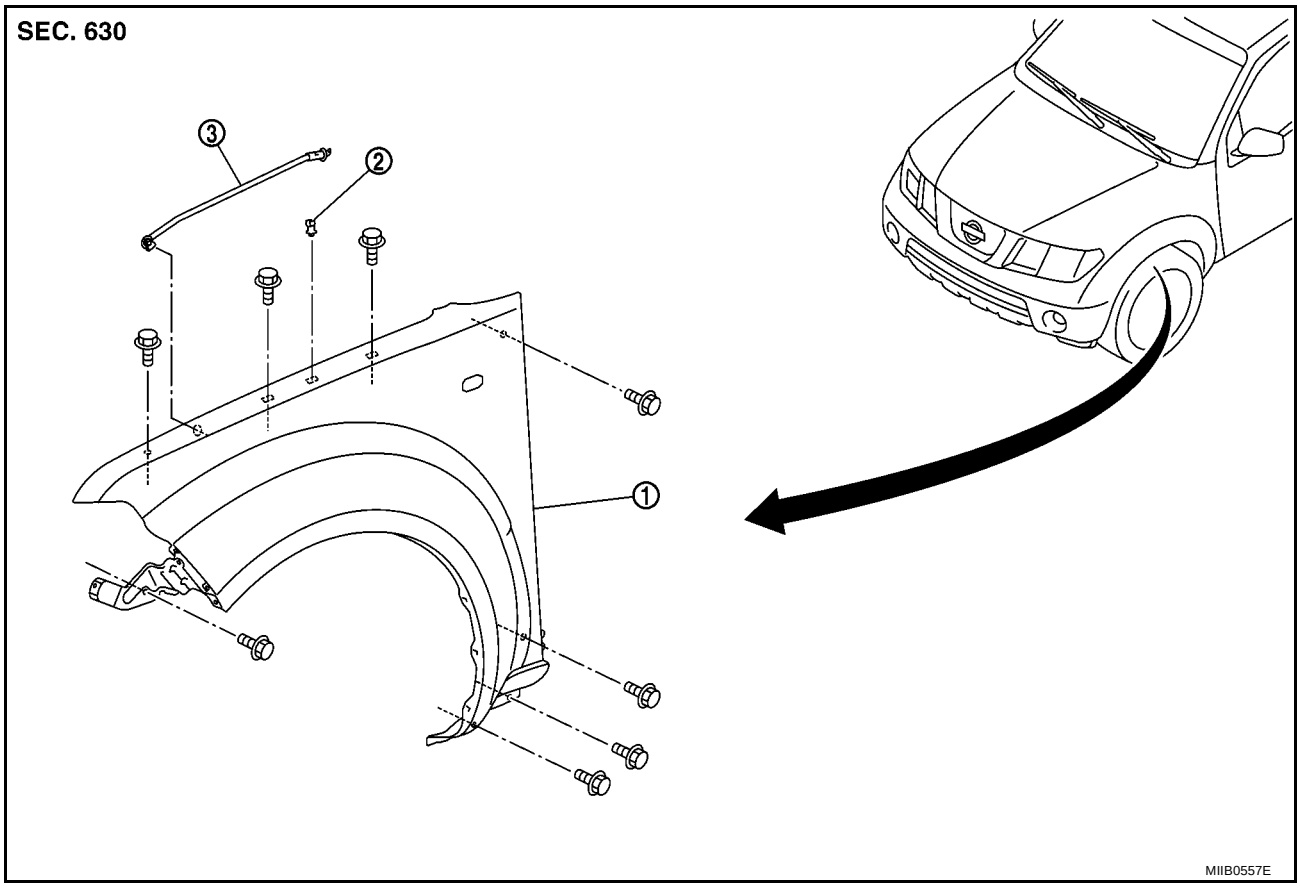
After installing, check the hood adjustment and hood opener operation. Refer to BL-12, "Fitting Adjustment" and BL-17, "Hood Lock Control Inspection" .

FRONT FENDER

PFP:63100

Removal and Installation

EIS00BK0



1. Front fender
2. Hood stay holder
3. Hood stay

REMOVAL

1. Remove the front bumper. Refer to EI-15, "FRONT BUMPER" .
2. Remove the headlamp. Refer to LT-30, "Removal and Installation" .
3. Remove the front fender protector. Refer to EI-22, "Removal and Installation of Front Fender Protector" .
4. Remove the front side turn signal lamp. Refer to LT-111, "Removal and Installation of Front Turn Signal Lamp" .
5. Remove the front fender mounting bolt and remove the front fender.

CAUTION:

While removing use a shop cloth to protect body from damaging.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- **After installing, apply touch-up paint (the body color) onto the head of the front fender mounting bolts.**
- **After installing, check front fender adjustment. Refer to BL-117, "Fitting Adjustment (King Cab)" and BL-12, "Fitting Adjustment" and BL-119, "Fitting Adjustment (Double Cab)" .**

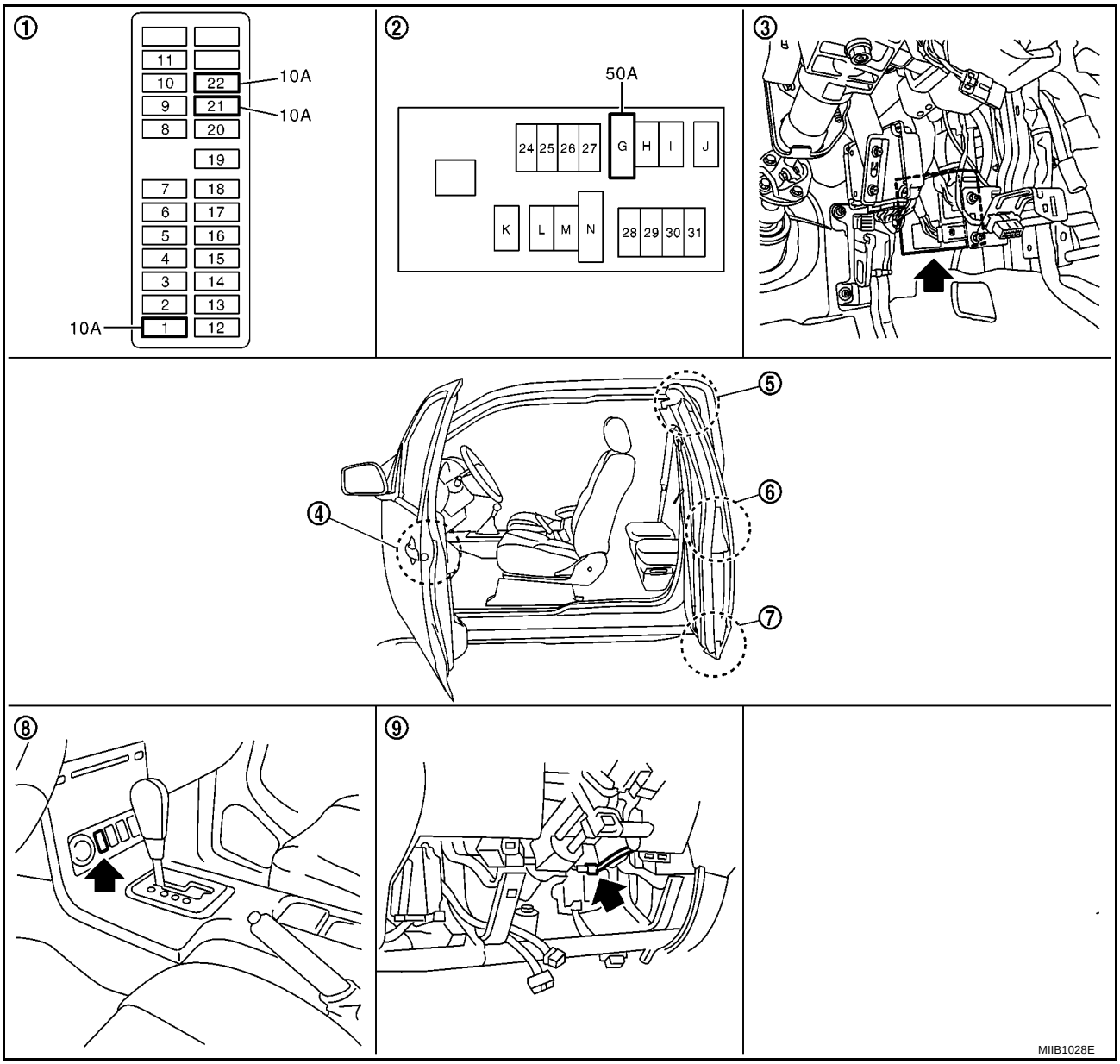
POWER DOOR LOCK SYSTEM

PFP:24814

Component Parts and Harness Connector Location

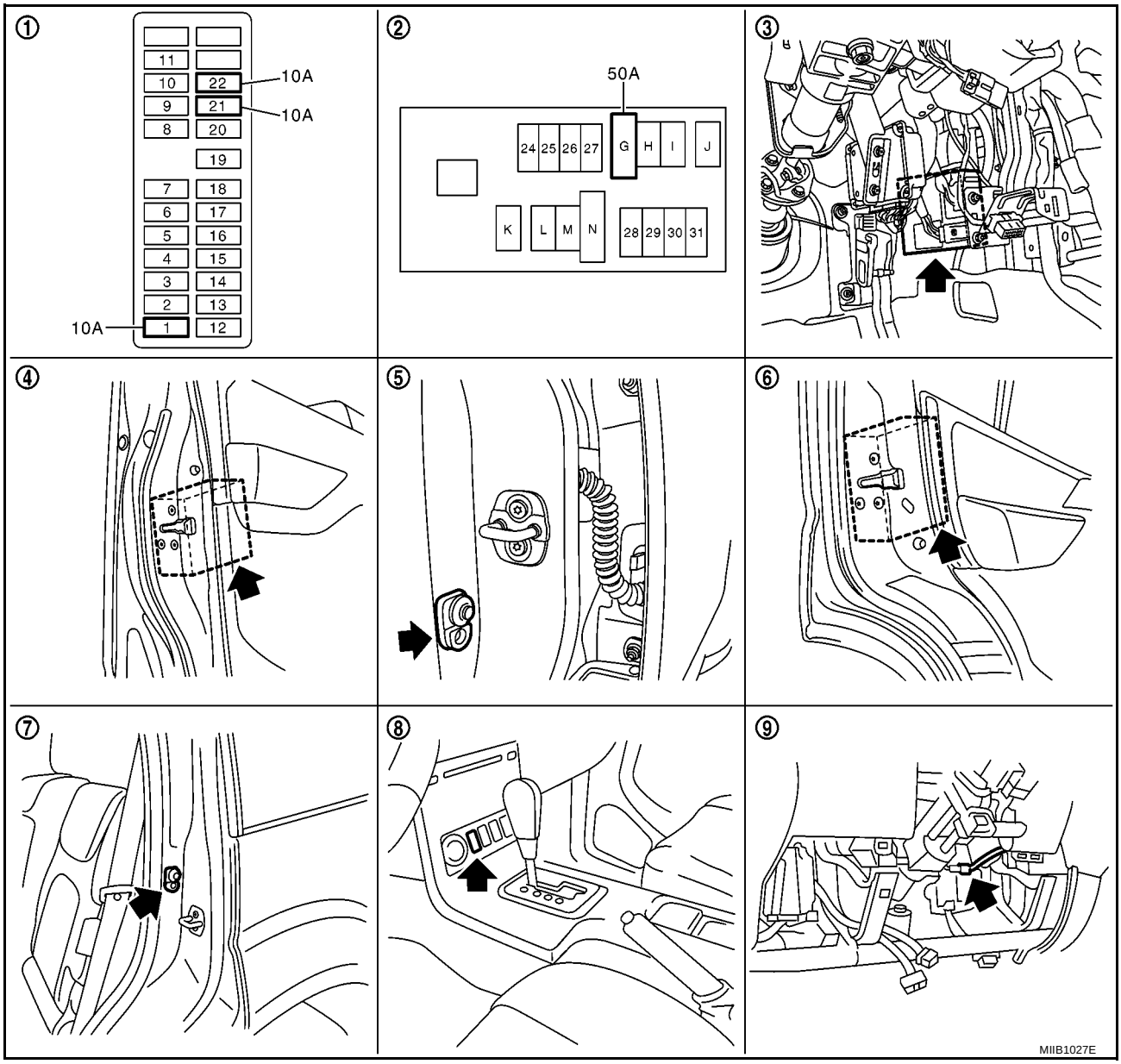
EIS00D7Q

KING CAB



1. Fuse block (J/B) fuse layout
2. Fuse and fusible link box
3. BCM M42, M43, M44 (View with instrument lower panel LH removed)
4. Front door lock actuator (Driver side) D10
5. Rear door switch NO.2 (LH) D72
6. Front door switch (Driver side) D74
7. Rear door switch NO.1 (LH) D71
8. Door lock/unlock switch M52
9. Key switch M35

DOUBLE CAB



1. Fuse block (J/B) fuse layout
2. Fuse and fusible link box
3. BCM M42, M43, M44 (View with instrument lower panel LH removed)
4. Front door lock actuator (Driver side) D10
5. Front door switch (Driver side) B19
6. Rear door lock actuator (LH) D65
7. Rear door switch (LH) B23
8. Door lock/unlock switch M52
9. Key switch M35

System Description

EIS00D7R

Power is supplied at all times
- through 50A fusible link (letter **G** , located in the fuse and fusible link box)
- to BCM terminal 57
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 41
- through 10A fuse [No. 22, located in the fuse block (J/B)]
- to key switch terminal 2.

When key switch is ON, power is supplied
- through key switch terminal 1
- to BCM terminal 5.

When ignition switch is in ON or START position
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 3.

Ground is supplied
- to BCM terminal 55
- through body grounds M21, M80 and M83.

Door switch operation

When front door switch (driver side) is ON (door is OPEN), ground is supplied
- to BCM terminal 15
- through front door switch (driver side) terminal 2
- through front door switch (driver side) case ground.

When front door switch (passenger side) is ON (door is OPEN), ground is supplied
- to BCM terminal 14
- through front door switch (passenger side) terminal 2
- through front door switch (passenger side) case ground.

When rear door switch LH is ON (door is OPEN), ground is supplied (Double cab model)
- to BCM terminal 16
- through rear door switch LH terminal 2
- through rear door switch LH case ground.

When rear door switch RH is ON (door is OPEN), ground is supplied (Double cab model)
- to BCM terminal 12
- through rear door switch RH terminal 2
- through rear door switch RH case ground.

Key cylinder switch operation (Without multi-remote control system)

When key cylinder is turned to lock position, ground is supplied
- through BCM terminal 34
- to key cylinder switch (driver and passenger side) terminals 4
- through key cylinder switch (driver and passenger side) terminals 5
- through body ground M21, M80 and M83

then all doors are locked.

When key cylinder is turned to unlock position, ground is supplied
- through BCM terminal 32
- to key cylinder switch (driver and passenger side) terminal 6
- through key cylinder switch (driver and passenger side) terminal 5
- through body ground M21, M80 and M83

then all doors are unlocked.

Power door lock operation with door lock/unlock switch

When doors are lock by door lock/unlock switch, ground is supplied

- to BCM terminal 34
- through door lock /unlock switch terminals 1 and 3
- through body grounds M21, M80 and M83.

then all doors are locked.
When door lock/unlock switch is locked, ground is supplied

- through BCM terminal 56
- through all door actuators terminal 3
- through all door lock actuators terminal 2
- through back door lock actuator terminals 1 and 3
- to BCM terminals 54 and 60.

then all doors actuators are locked

Power door unlock operation with door lock/unlock switch

When doors are unlock by door lock/unlock switch, ground is supplied

- to BCM terminal 32
- through door lock/unlock switch terminals 2 and 3
- through body grounds M21, M80 and M83.

then all doors are locked.
When door lock/unlock switch is unlocked, ground is supplied

- through BCM terminals 54 and 60
- through all door lock actuators terminal 2
- through all door lock actuators terminal 3
- then all door actuators are unlock
- to BCM terminal 56.

Door lock/unlock switch indicator operation

When door lock/unlock switch is locked, all doors are locked, door lock/unlock switch indicator is on, and ground is supplied

- to BCM terminal 17
- through door lock/unlock switch terminals 5 and 3
- through body grounds M21, M80 and M83.

OUTLINE

Function Available by Operating the Door Lock/Unlock Switch

- Operating the door lock/unlock switch to “LOCK” will lock all doors.
- Operating the door lock/unlock switch to “UNLOCK” will unlock all doors.

NOTE:
Unlock via the interior door handles and door lock/unlock switch is always possible.

Door Lock Warning Function

Under following conditions lock actuators will not respond and buzzer warning will beeps while pressing door lock/unlock switch in LOCK direction.

- Ignition switch is turned OFF
- Mechanical key is out of ignition key cylinder
- Door is opened (except driver side door)

Key Reminder Function

Under following conditions lock actuators will lock the door once, but then immediately unlock all doors and buzzer warning will beeps while pressing door lock/unlock switch in LOCK direction.

- Ignition switch is turned OFF
- Mechanical key is inserted in ignition key cylinder
- Driver side door is opened

Door Lock/Unlock Switch Indicator

The Door lock/unlock switch indicates door lock status. The indicator will illuminates when a lock operation is accomplish, during this state, if any door is open, the indicator will turn OFF.

Door lock indicator timer

Door lock indicator timer is designed to reacts and shut down the indicator. The default timer values are 1 minute and 30 minutes.

- When the lock operation is activated by keyfob or auto door lock (for further details, refer to BL-92, "Auto Re-lock Function"), then the illuminate time is set to 1 minute.
- When the lock operation is activated by door lock/unlock switch, then the timer is set to 30 minutes.

  NOTE:
  When the 30 minutes timer is active and ignition switch is turned ON, the indicator illuminate for permanently, unless ignition switch is turned OFF then timer will be reset back to 30 minutes.

CAN Communication System Description

EIS00D7T

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

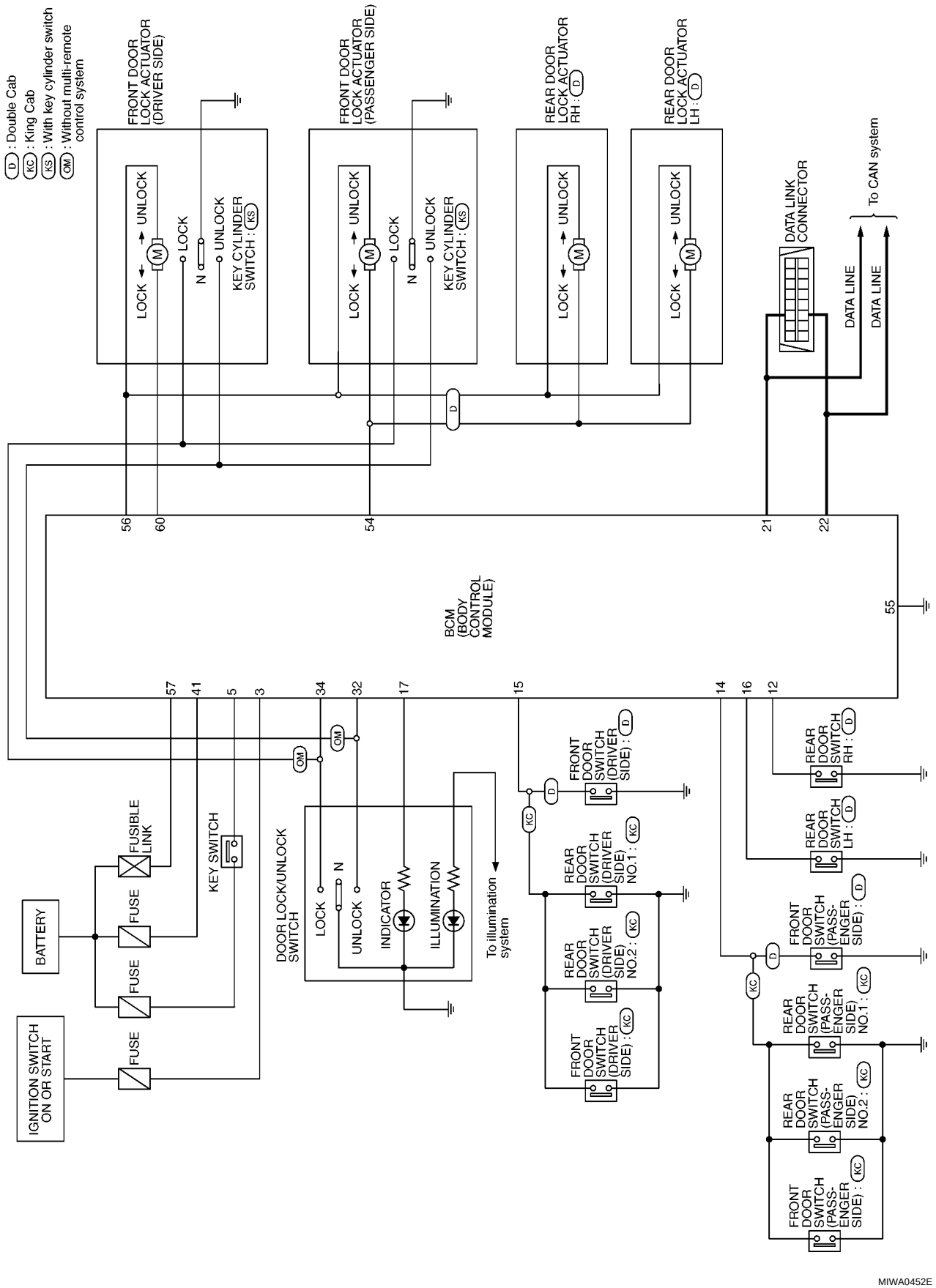
CAN Communication Unit

EIS00D7U

Refer to LAN-23, "CAN COMMUNICATION" .

Schematic

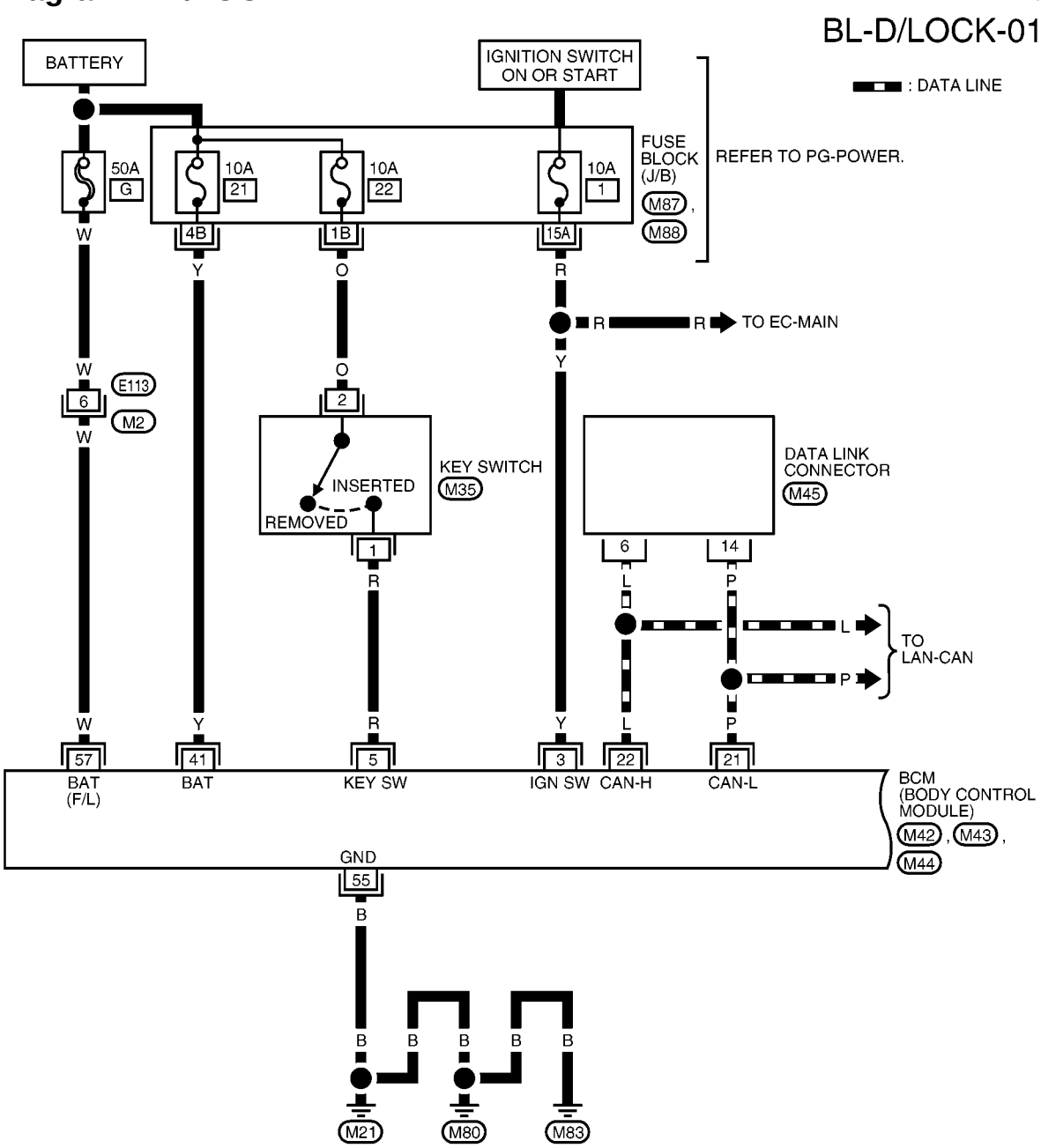
EIS00D7V

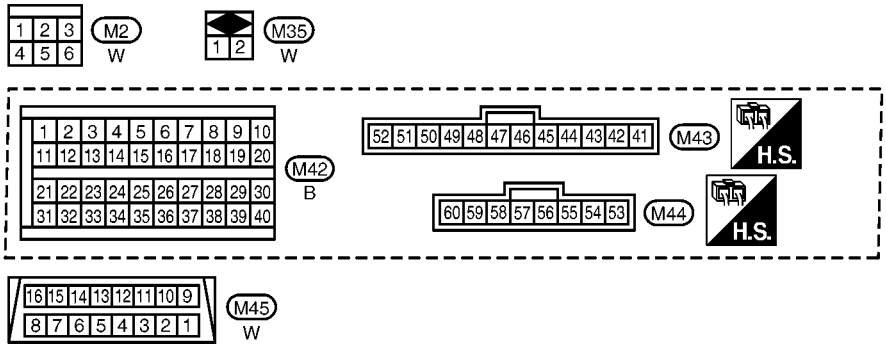


MIWA0452E

Wiring Diagram —D/LOCK—

EIS00D7W

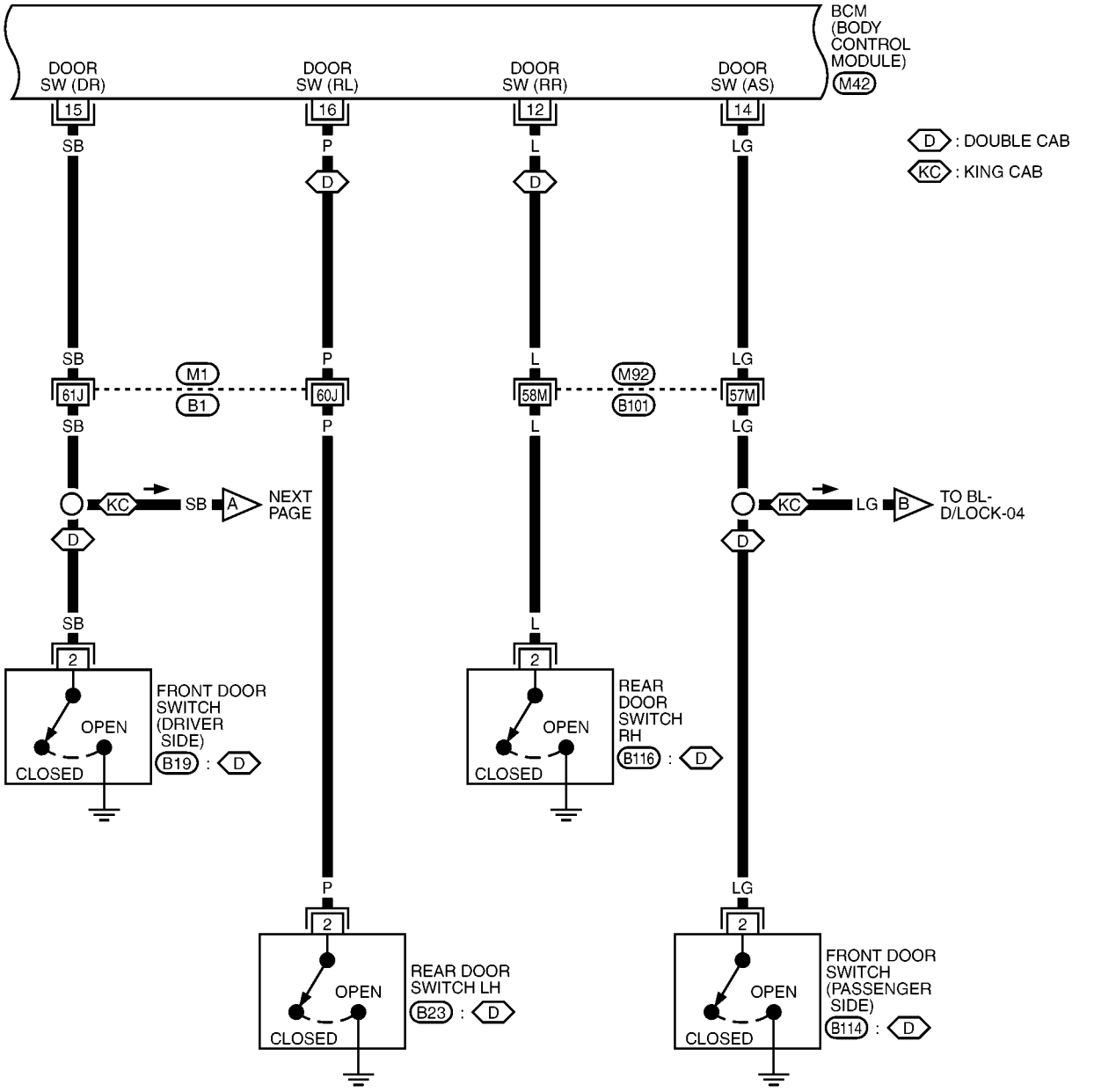


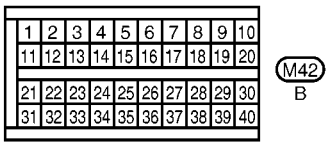


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

MIWA0188E

BL-D/LOCK-02





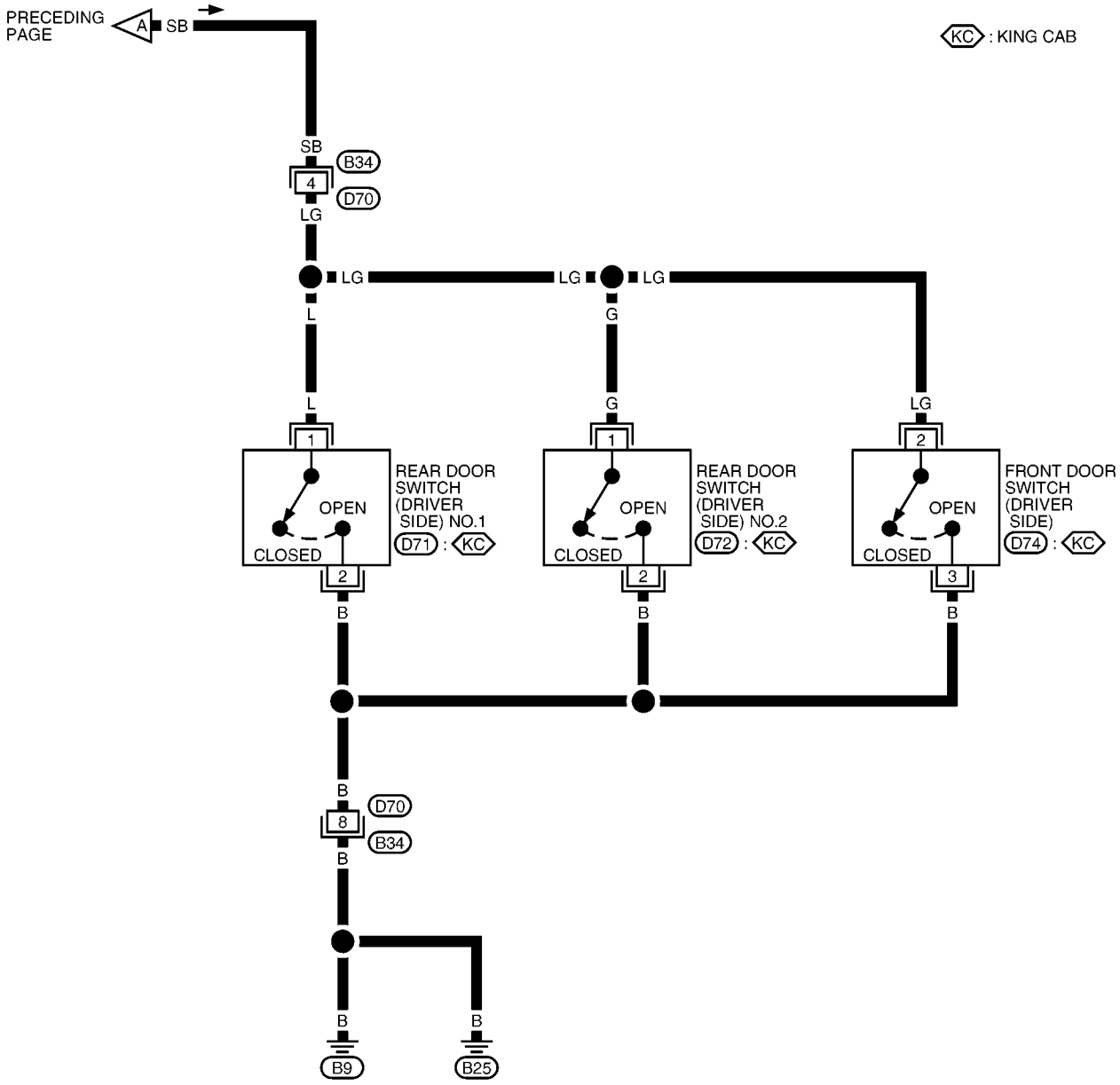
M42
B

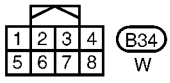
B19 , B23 , B114 , B116
W W W W

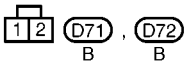
REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

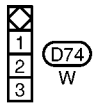
MIWA0454E

BL-D/LOCK-03



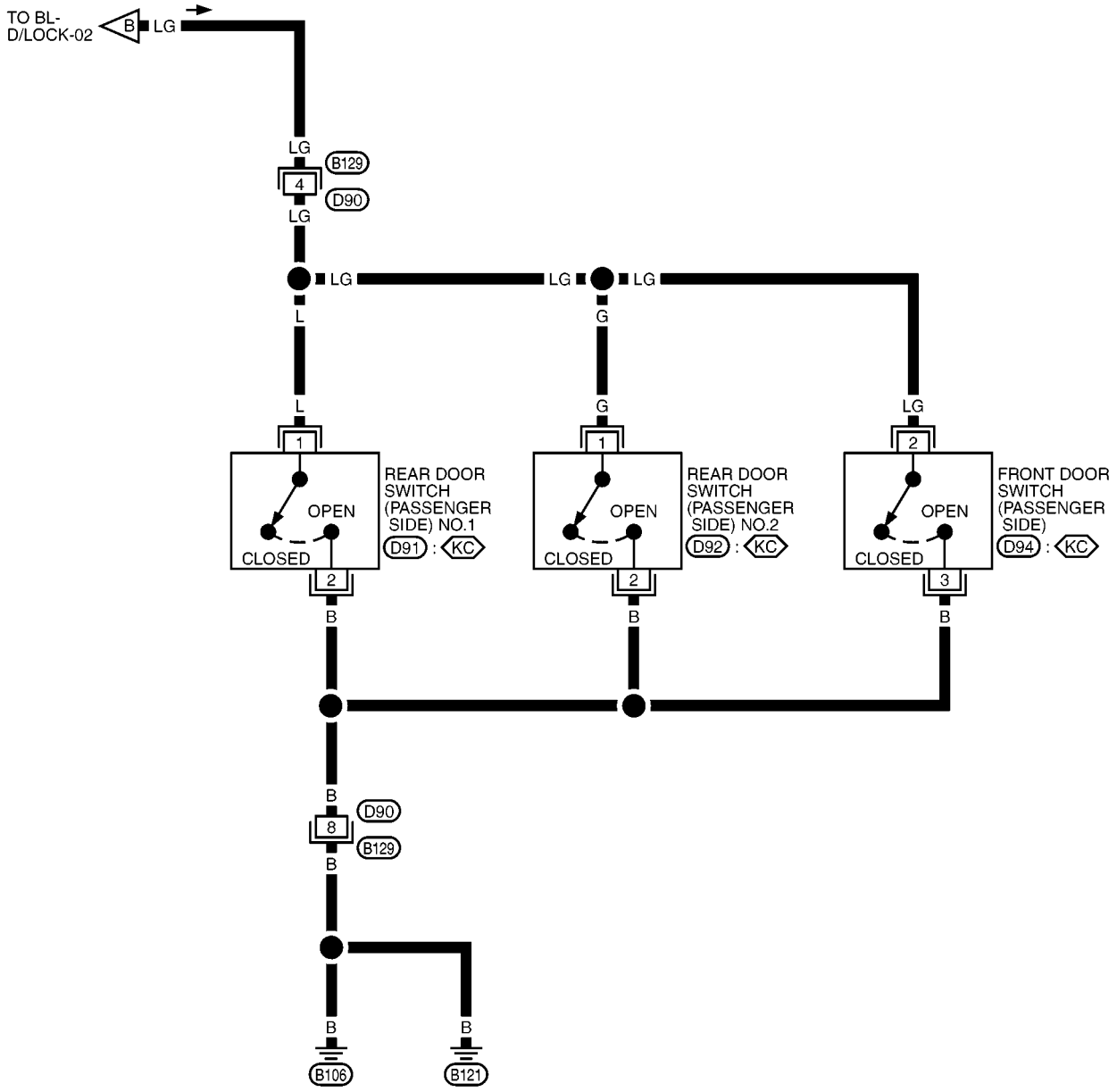


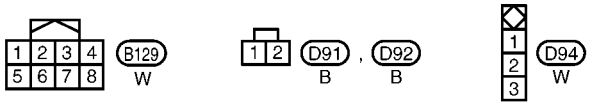




MIWA0524E

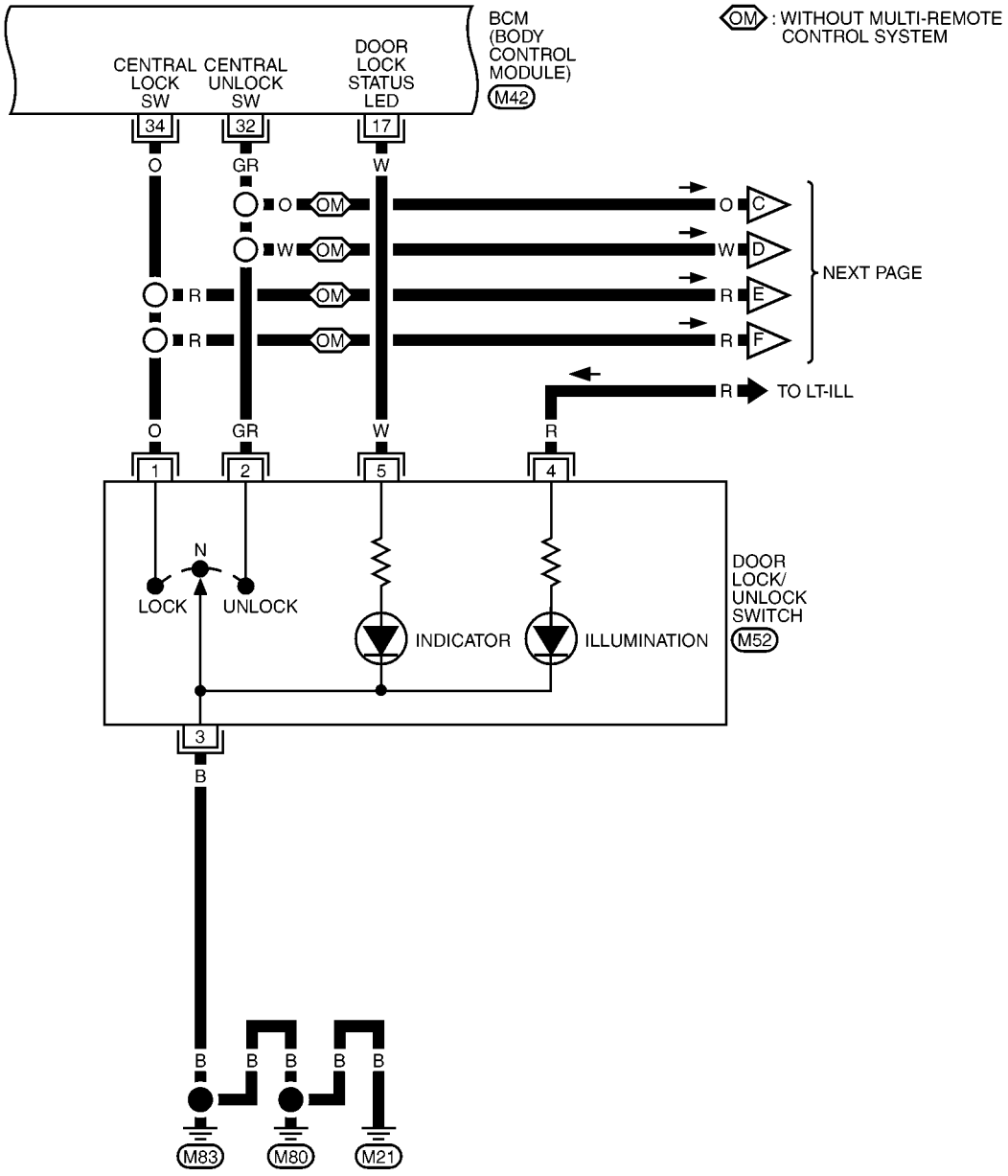
BL-D/LOCK-04

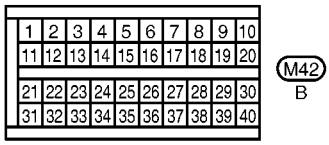


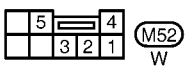


MIWA0525E

BL-D/LOCK-05

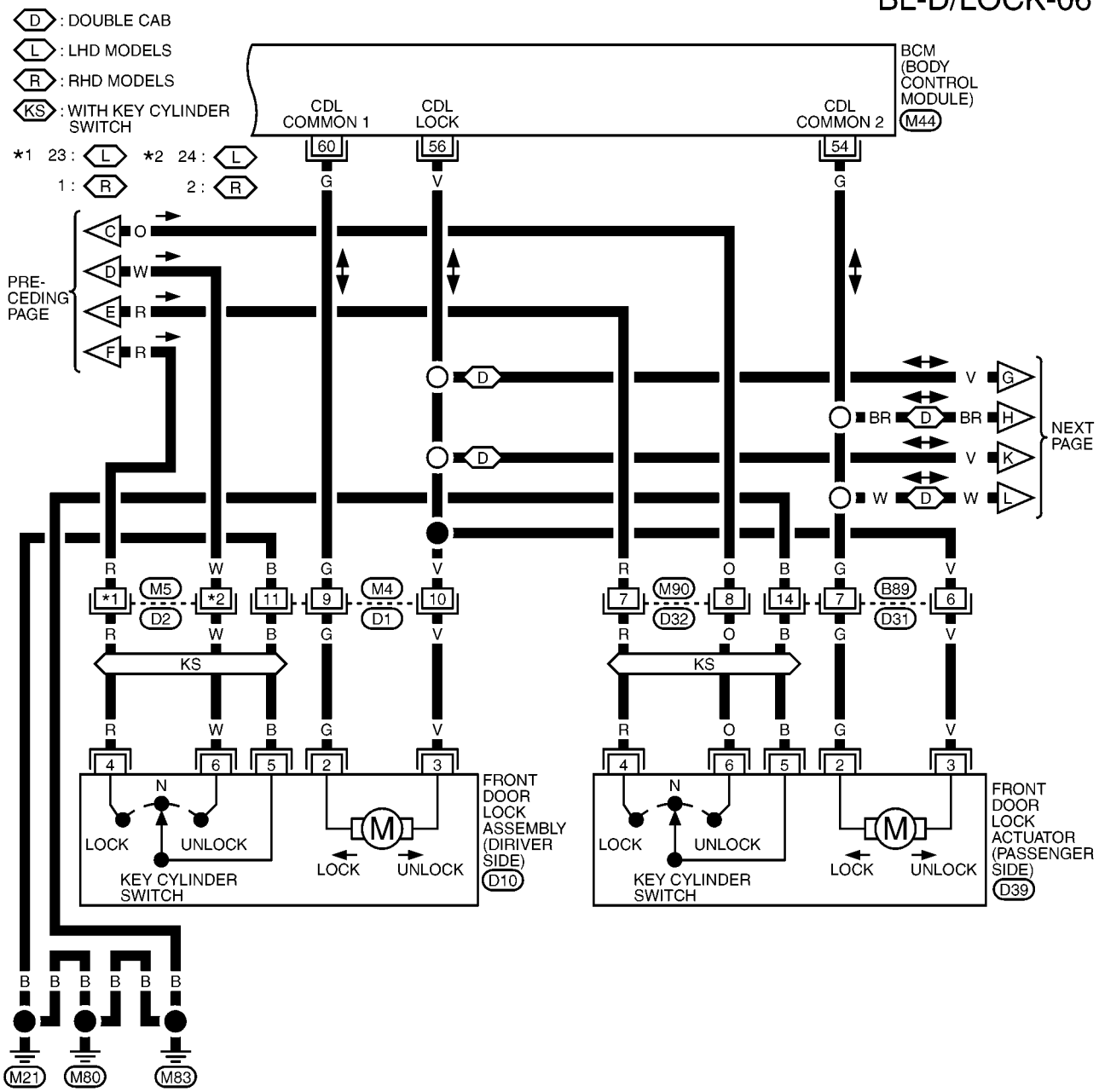


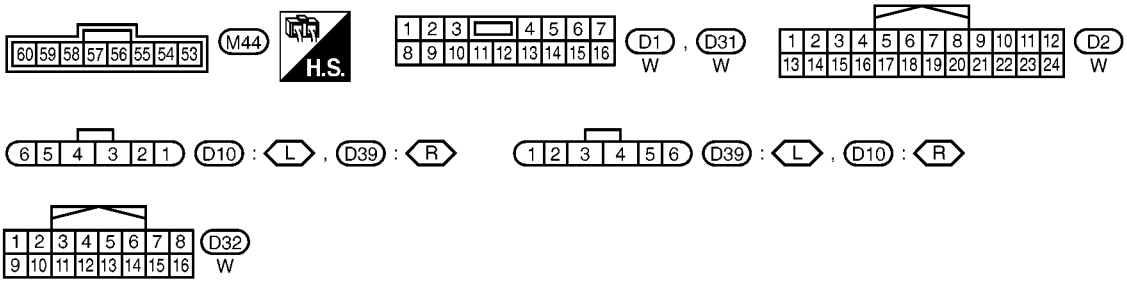




MIWA0455E

BL-D/LOCK-06

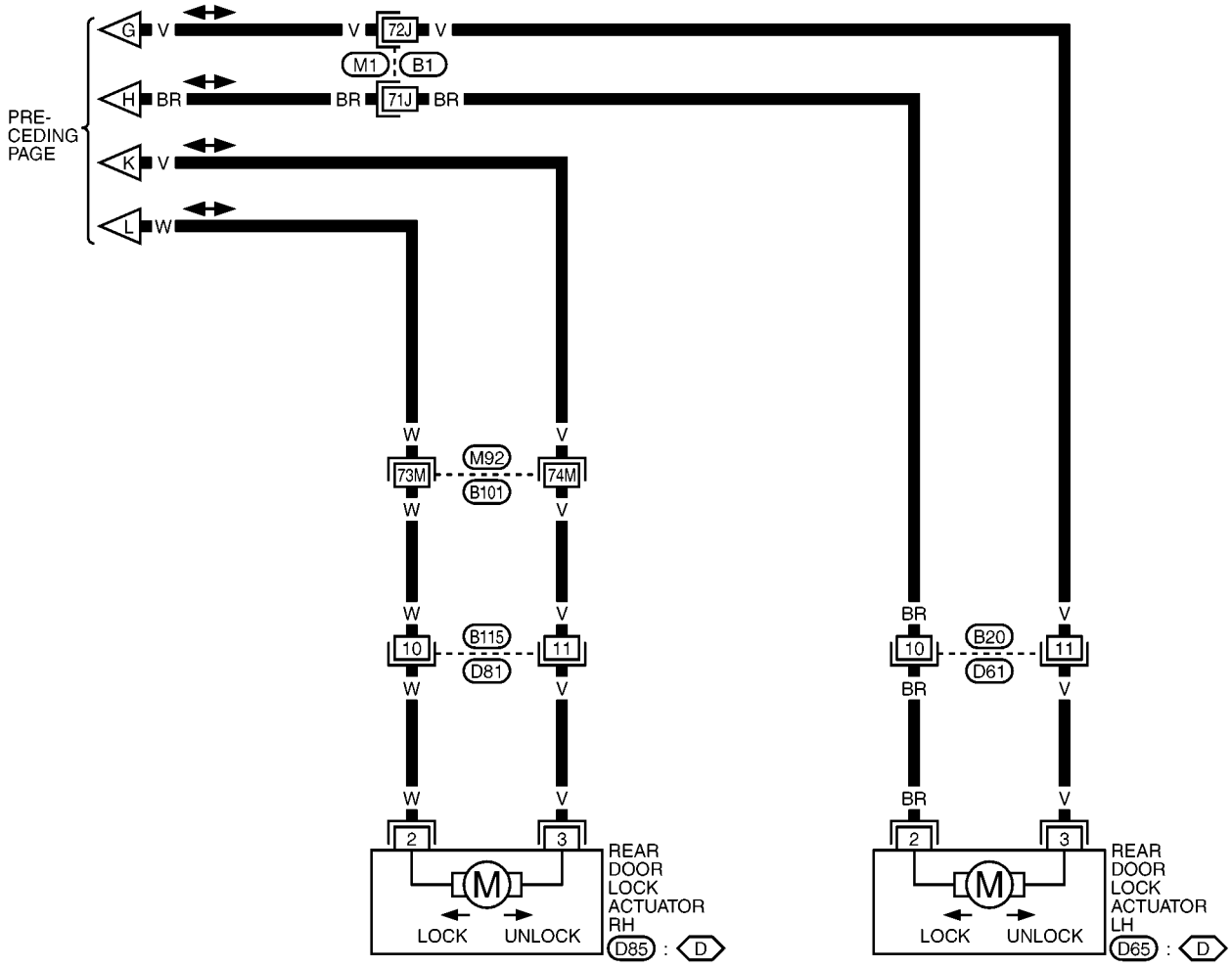


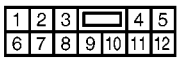


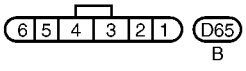
MIWA0456E

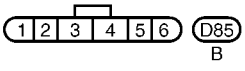
BL-D/LOCK-07

D : DOUBLE CAB




D61 W , D81 W


D65 B


D85 B

REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0457E

Terminals and Reference Value for BCM

EIS00D7Z

TERMINAL	WIRE COLOR	ITEM	CONDITION		VOLTAGE [V] (Approx.)
3	Y	Ignition switch	Ignition switch ON		Battery voltage
5	R	Key switch	Key switch ON		Battery voltage
			Key switch OFF		0
12	L	Rear door switch RH*	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
14	LG	Front door switch (Passenger side)	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
15	SB	Front door switch (Driver side)	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
16	P	Rear door switch LH*	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
17	W	Door lock/unlock switch indicator	All door closed	Lock operation (Illuminates)	Battery voltage
				Other than above	0
21	P	CAN-L	—		—
22	L	CAN-H	—		—
32	GR	Door lock/unlock switch	All door closed	Unlock	0
				Other than above	5
34	O	Door lock/unlock switch	All door closed	Lock	0
				Other than above	5
41	Y	Power switch (Fuse)	—		Battery voltage
54	G	Passenger and rear door lock actuators*1 (unlock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0
55	B	Ground	—		0
56	V	All door lock actuators (lock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0
57	W	Power source (Fusible link)	—		Battery voltage
60	G	Driver door lock actuator (unlock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0

*: Double cab model

CONSULT-II Function (BCM)

EIS00D80

CONSULT-II and display each diagnostic item using the diagnostic test modes shown following.

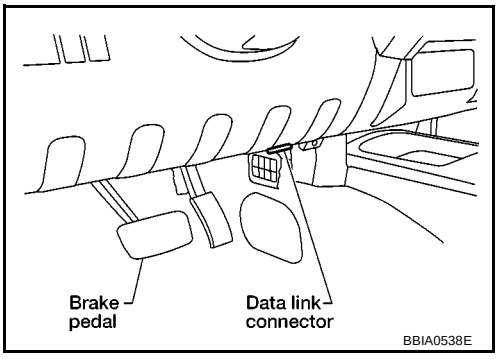
BCM diagnosis part	Inspection item, self-diagnosis mode	Content
DOOR LOCK	WORK SUPPORT	Changes the setting for each function.
	DATA MONITOR	Displays the input data of BCM in real time.
	ACTIVE TEST	Give a drive signals to load to check the operation.

CONSULT-II BASIC OPERATION PROCEDURE

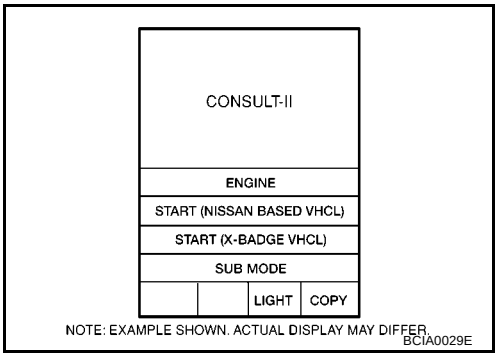
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

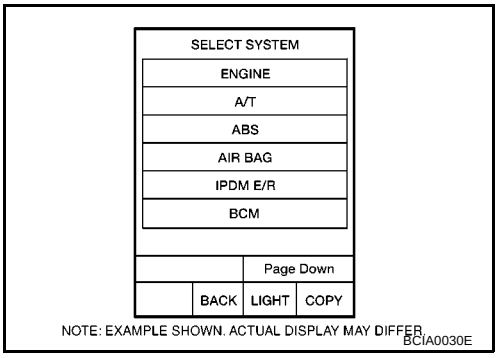
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” and “CONSULT-II CONVERTER” to data link connector.



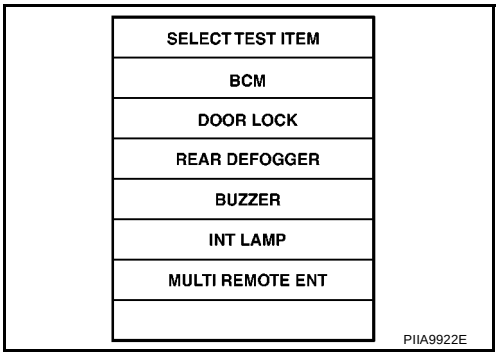
3. Turn ignition switch “ON”.
4. Touch “START (NISSAN BASED VHCL)”.



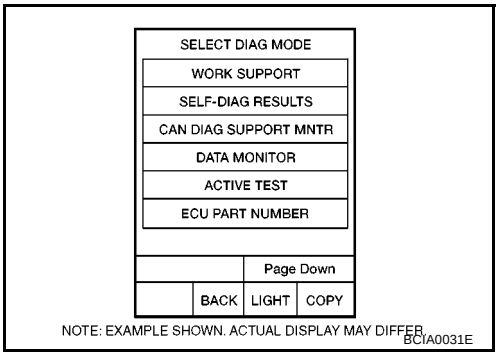
5. Touch “BCM” on “SELECT SYSTEM” screen.
   If “BCM” is not indicated, go to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “DOOR LOCK”.



7. Select diagnosis mode.
“WORK SUPPORT”, “DATA MONITOR” and “ACTIVE TEST” are available.



CONSULT-II APPLICATION ITEMS

Work Support

Work item	Description
SECURITY DOOR LOCK SET	Anti-hijack mode can be changed in this mode. Selects ON-OFF of anti-hijack mode.

Data Monitor

Monitor item	Content
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.
I-KEY LOCK	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.

Active Test

Test item in “DOOR LOCK”	Content
ALL LOCK	This test is able to check all door lock actuators lock operation. These actuators lock when “ALL LOCK” on CONSULT-II screen is touched.
ALL UNLOCK	This test is able to check all door lock actuators unlock operation. These actuators unlock when “ALL UNLOCK” on CONSULT-II screen is touched.

Test item in “DOOR LOCK”	Content
DR UNLOCK	This test is able to check door lock actuator (driver side) lock/unlock operation. This actuator unlock when “DR UNLOCK” on CONSULT-II screen is touched.
OTHER UNLOCK	This test is able to check all door lock actuators (except driver side) unlock operation. These actuators unlock when “OTHER UNLOCK” on CONSULT-II screen is touched.

Work Flow

EIS00D81

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-23, "System Description" .
3. According to the trouble diagnosis, repair or replace the cause of the malfunction. Refer to BL-37, "Trouble Diagnoses Chart by Symptom" .
4. Does power door lock system operate normally?
   YES: GO TO 5.
   NO: GO TO 2.
5. INSPECTION END.

Trouble Diagnoses Chart by Symptom

EIS00D82

NOTE:
Always check the “Work Flow” before troubleshooting. Refer to BL-37, "Work Flow" .

Symptom	Diagnosis service procedure	Refer to page
Power door lock does not operate at all.	1. Check power supply and ground circuit.	BL-37
	2. Replace BCM	BCS-17
Key reminder system does not operate.	1. Check key switch.	BL-43
	2. Check door switch (except back door switch).	BL-39
	3. Replace BCM.	BCS-17
Power door does not operate with door lock/unlock switch, when lock is pressed.	1. Check all door switch (except driver side)	BL-39
Power door lock does not operate with door lock/unlock switch.	1. Check door lock/unlock switch.	BL-52
Specific door does not operate.	1.Check front door lock actuator (driver side).	BL-48
	2.Check front door lock actuator (passenger side).	BL-49
	3.Check rear door lock actuator (LH).	BL-50
	3.Check rear door lock actuator (RH).	BL-51
Door lock/unlock switch indicator does not illuminate.	1. Check door lock/unlock switch indicator.	BL-53
	2. Replace BCM.	BCS-17
Power door lock does not operate with key cylinder switch (Without multi-remote control system)	1. Check door key cylinder switch.	BL-45
	2. Replace BCM	BCS-17

Check Power Supply and Ground Circuit

EIS00D84

1. FUSE INSPECTION

Check the following.

- 50A fusible link (letter **G** , located in the fuse and fusible link box)
- 10A fuse [No. 1, located in the fuse block (J/B)]
- 10A fuse [No.21, located in the fuse block (J/B)]

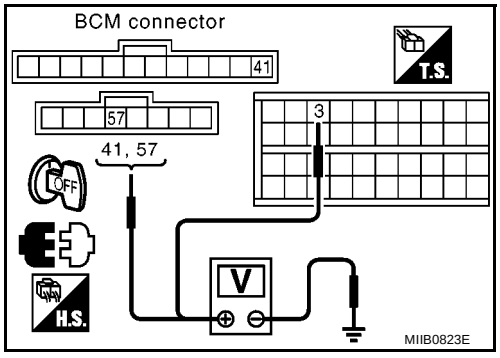
NOTE:
Refer to BL-21, "Component Parts and Harness Connector Location" .

OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM and ground.



Connector	Terminals		Ignition switch position		
	(+)	(-)	OFF	ACC	ON
M42	3	Ground	0V	0V	Battery voltage
M43	41		Battery voltage	Battery voltage	Battery voltage
M44	57				

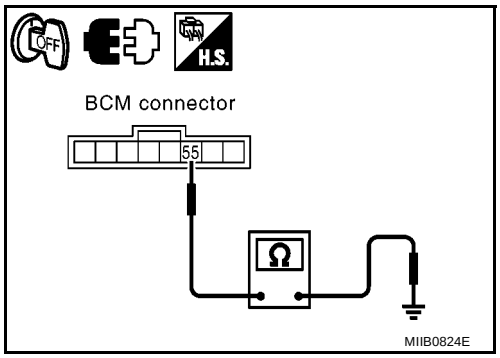
OK or NG

OK >> GO TO 3.
NG >> Repair or replace BCM power supply circuit.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M44 terminal 55 and ground.

55 – Ground : Continuity should exist.



OK or NG

OK >> BCM power supply and ground circuit is OK.
NG >> Repair or replace BCM ground circuit.

Check Door Switch

EIS00D85

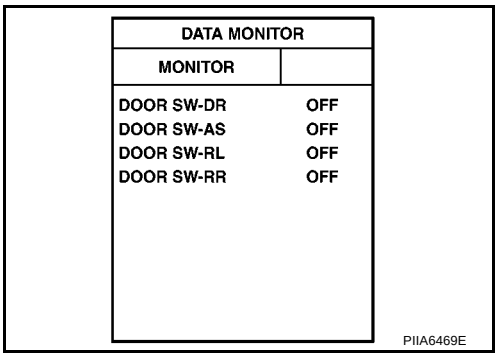
CHECK DOOR SWITCH (DOUBLE CAB)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition	DATA MONITOR
DOOR SW-DR	CLOSE ↓ OPEN	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		

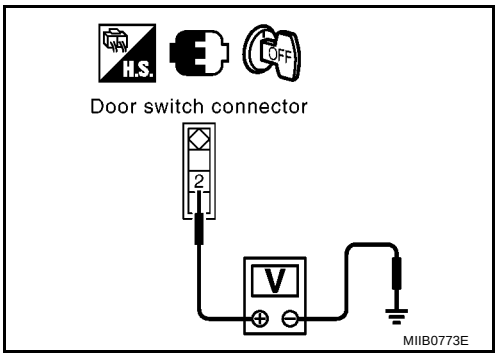


Without CONSULT-II

Check voltage between each door switch connector and ground.

Item	Connector	Terminals (+)	Terminals (-)	Door condition	Voltage [V] (Approx.)
Driver side	B19 (B114)	2	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

( ): RHD model



OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between door switch terminal 2 and ground part of door switch.

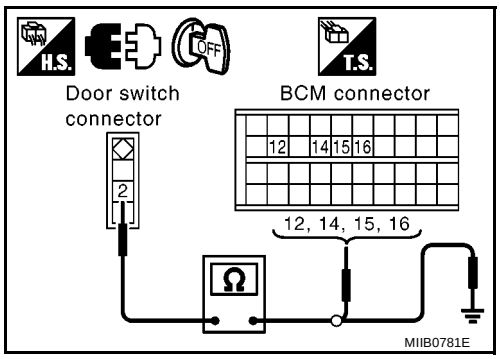
Terminal		Door switch condition	Continuity
2	Ground part of door switch	Pushed	No
		Released	Yes

OK or NG

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

3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch connector B19, B23, B114, B116 terminals 2 and BCM connector M42 terminals 12, 14, 15, 16.



Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	15	CLOSE to OPEN	Continuity should exist.
Rear LH	B23	2	16		
Passenger side	B114 (B19)	2	14		
Rear RH	B116	2	12		

(): RHD models

3. Check continuity between door switch connector B19, B23, B114, B116 terminal 2 and ground.

Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Continuity should not exist.
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

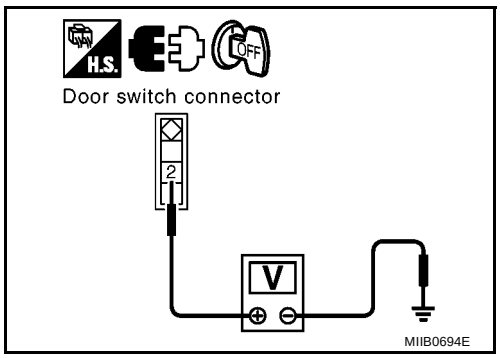
(): RHD models

OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between each door switch connector B19, B23, B114, B116 terminal 2 and ground.



Item	Connector	Terminals		Door condition	Voltage [V] (Approx.)
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Battery voltage
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

(): RHD models

OK or NG

OK >> Check harness condition or door switch installation condition.
NG >> Replace BCM.

CHECK DOOR SWITCH (KING CAB)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

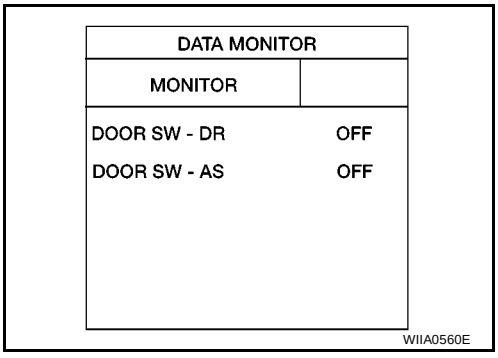
Check door switches (“DOOR SW-DR”, “DOOR SW-AS”) in DATA MONITOR mode with CONSULT-II. Refer to BL-36, "Data Monitor" .

- When any doors are open:

  DOOR SW-DR : OFF
  DOOR SW-AS : OFF

- When any doors are closed:

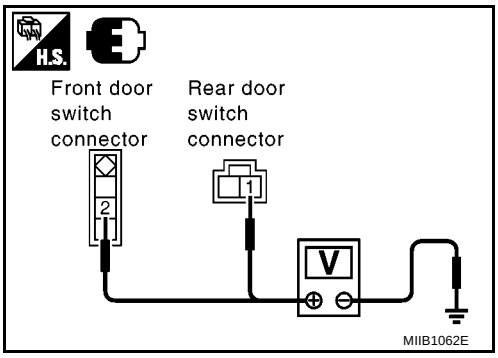
  DOOR SW-DR : OFF
  DOOR SW-AS : OFF



Without CONSULT-II

Check voltage between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminals 1, 2 and ground.

Item	Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
Front door switch LH	D74 (D94)	2	Ground	Open ↓ Closed	0 ↓ Battery voltage
Front door switch RH	D94 (D74)				
Rear door switch No.2 LH	D72 (D92)				
Rear door switch No.2 RH	D92 (D72)	1			
Rear door switch No.1 LH	D71 (D91)				
Rear door switch No.1 RH	D91 (D71)				



(): RHD MODELS

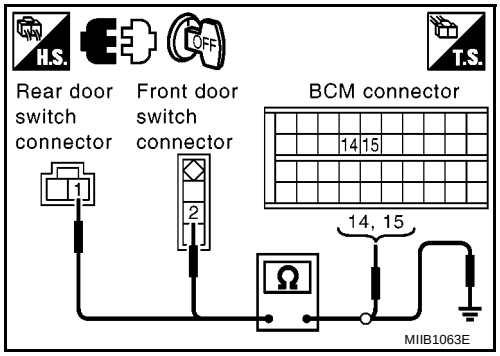
OK or NG

OK >> System is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and BCM connector M42 terminals 14, and 15.

Connector	Terminals	Item	Connector	Terminals	Condition
M42	15	Front door switch LH	D74 (D94)	2	Continuity should exist
	14	Front door switch RH	D94 (D74)	2	
	15	Rear door switch No. 2 LH	D72 (D92)	1	
	14	Rear door switch No. 2 RH	D92 (D72)	1	
	15	Rear door switch No. 1 LH	D71 (D91)	1	
	14	Rear door switch No. 1 RH	D91 (D71)	1	



(): RHD MODELS

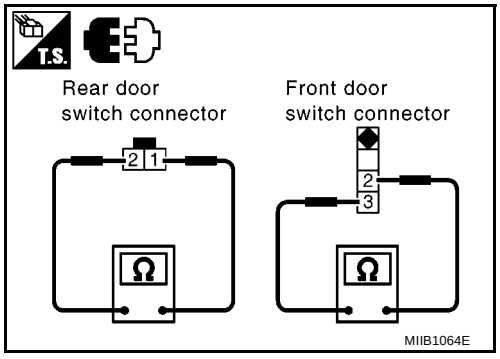
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch terminals.

Item	Terminals	Condition	Continuity
Door switches (front)	2 - 3	Open	Yes
		Closed	No
Door switches (rear upper and lower)	1 - 2	Open	Yes
		Closed	No



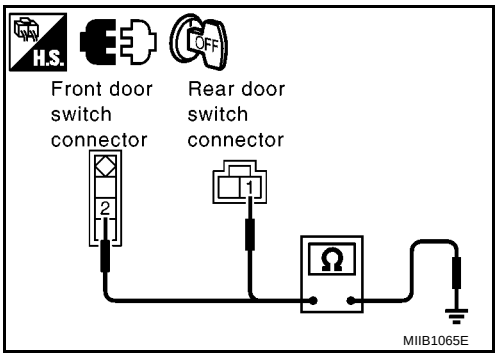
OK or NG

OK >> GO TO 4.
NG >> Replace door switch.

4. CHECK DOOR SWITCHES GROUND CIRCUIT

Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and ground.

Item	Connector	Terminals	Condition	
Front door switch LH	D74 (D94)	2	Ground	Continuity should not exist
Front door switch RH	D94 (D74)	2		
Rear door switch No. 2 LH	D72 (D92)	1		
Rear door switch No. 2 RH	D92 (D72)	1		
Rear door switch No. 1 LH	D71 (D91)	1		
Rear door switch No. 1 RH	D91 (D71)	1		



(): RHD MODELS

OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

Check Key Switch

EIS00D86

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

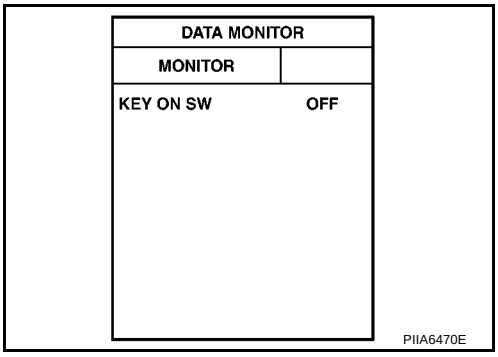
Check ignition key switch “KEY ON SW” in “DATA MONITOR” mode with CONSULT-II.

- When key is inserted in ignition key cylinder

  KEY ON SW : ON

- When key is removed from ignition key cylinder

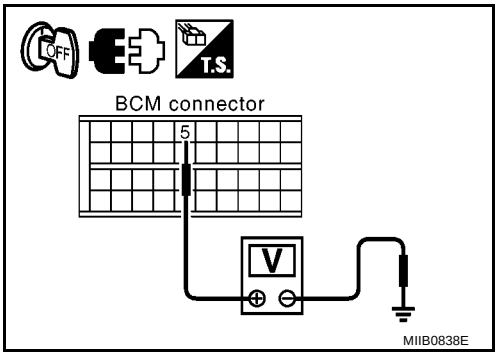
  KEY ON SW : OFF



Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition	Voltage [V] (Approx.)
M42	5	Ground	Key is removed from ignition key cylinder.	0
			Key is inserted in to ignition key cylinder.	Battery voltage



OK or NG

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

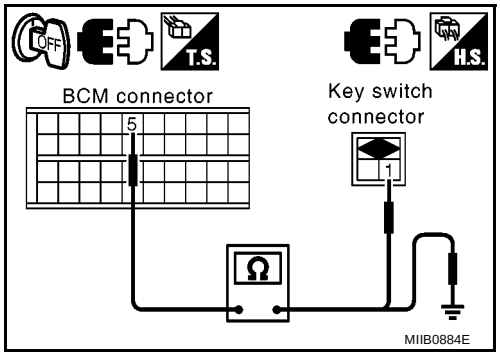
2. CHECK KEY SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and key switch connector.
3. Check continuity between BCM harness connector M42 terminal 5 and key switch harness connector M35 terminal 1.

5 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M42 terminal 5 and ground.

5 – Ground : Continuity should not exist.



OK or NG

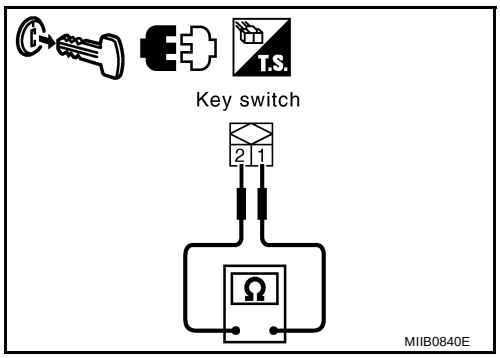
OK >> GO TO 3.

NG >> Repair or replace harness between key switch and BCM.

3. CHECK KEY SWITCH

Check continuity between key switch connector M35 terminals 1 and 2.

Terminal		Condition	Continuity
1	2	Key is removed from ignition key cylinder.	No
		Key is inserted in ignition key cylinder.	Yes



OK or NG

OK >> Check the following

- 10A fuse [No. 22, located in the fuse block (J/B)]
- Harness for open or short between key switch and fuse.

NG >> Replace key cylinder assembly.

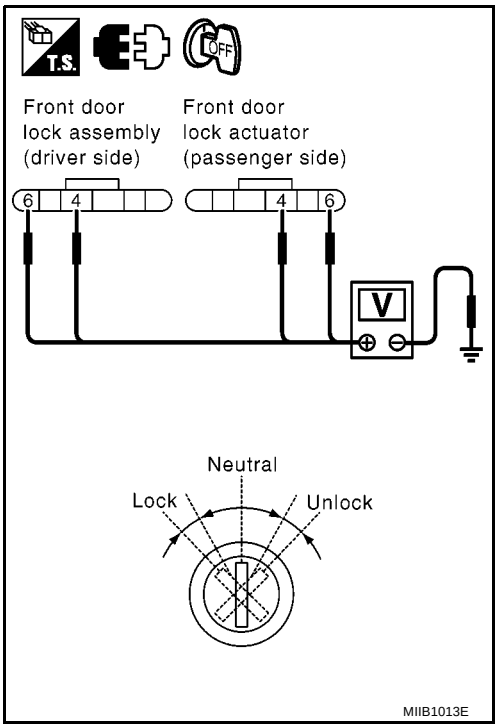
Check Door Key Cylinder Switch (LHD Model Only)

EIS00DGO

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

1. Connect BCM connector and key cylinder switch.
2. Check voltage between BCM and front door lock actuators D10 (driver side), D39 (passenger side) harness connector terminals 4, 6 and ground.

Terminals		Condition of door key cylinder switch	Voltage [V] (Approx.)
(+)	(–)		
4	Ground	Neutral or Lock	5
		Unlock	0
6		Neutral or Unlock	5
		Lock	0



OK or NG

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

2. CHECK DOOR KEY CYLINDER UNLOCK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and key cylinder switch connector.
3. Check continuity between BCM connector M42 terminal 32 and door key cylinder switch connector D10, D39 terminal 6.

Driver side

32 - 6 : Continuity should exist.

Passenger side

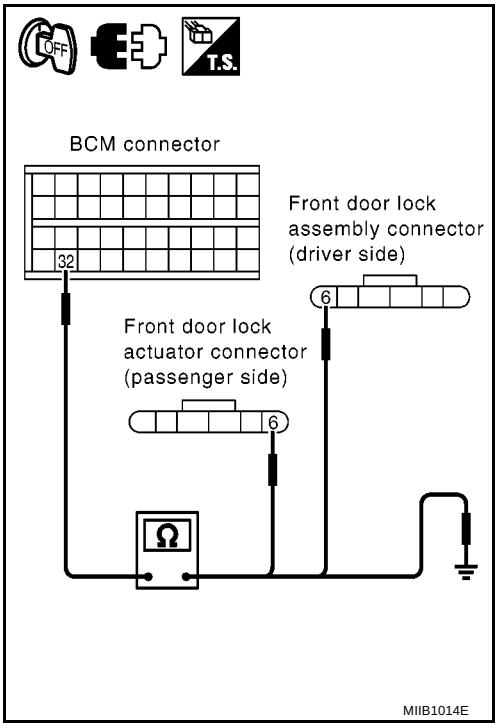
32 - 6 : Continuity should exist.

4. Check continuity between BCM connector M42 terminal 32 and ground.

32 - Ground : Continuity should not exist.

OK or NG

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



3. CHECK DOOR KEY CYLINDER LOCK CIRCUIT

1. Check continuity between BCM connector M42 terminal 34 and door key cylinder switch connector D10, D39 terminal 4.

Driver side

34 - 4 **: Continuity should exist.**

Passenger side

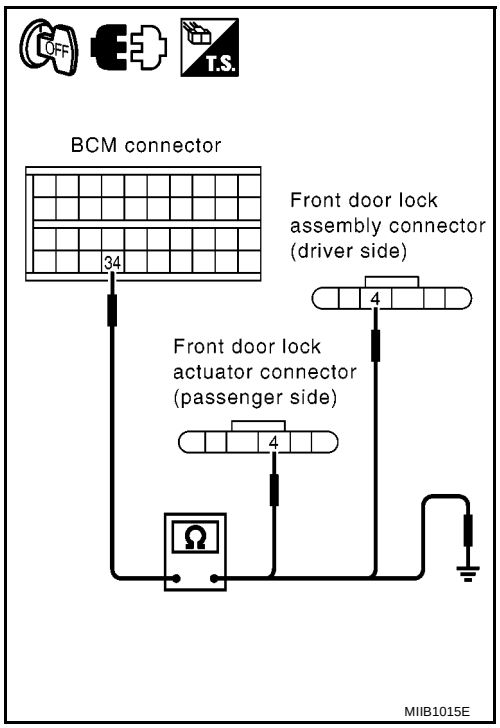
34 - 4 **: Continuity should exist.**

2. Check continuity between BCM connector M42 terminal 34 and ground.

34 - Ground **: Continuity should not exist.**

OK or NG

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



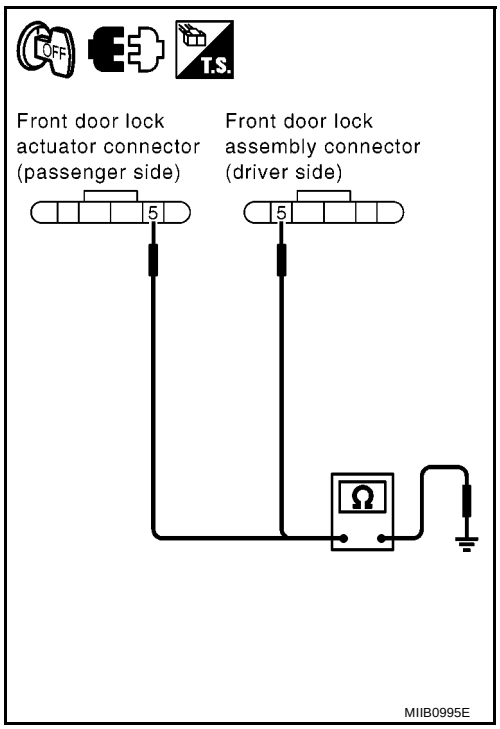
4. CHECK DOOR KEY CYLINDER LOCK GROUND HARNESS

Check continuity between key cylinder switch connector D10, D39 terminal 5 and ground.

5 - Ground **: Continuity should exist.**

OK or NG

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



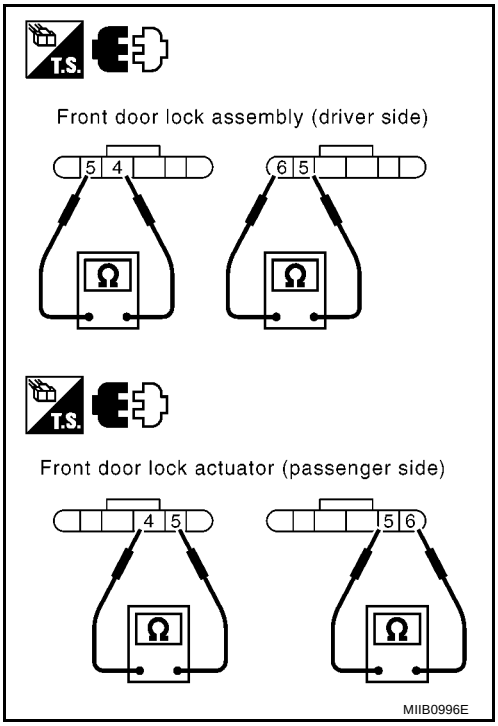
5. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door key cylinder switch connectors D10 and D39 driver and/or passenger side terminals 4, 5 and 6.

Terminals		Condition of door key cylinder switch	Continuity	
			Driver side	Passenger side
4	5	Neutral or Unlock	No	Yes
		Lock	Yes	No
6		Neutral or Lock	No	Yes
		Unlock	Yes	No

OK or NG

OK >> Check condition of harness and connector.
NG >> Replace door key cylinder switch.



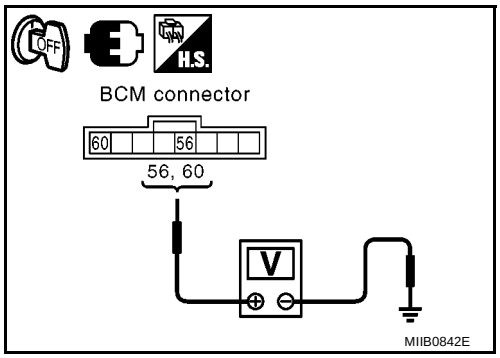
Check Front Door Lock Actuator (Driver Side)

EIS00D88

1. CHECK OUTPUT SIGNAL

1. turn ignition switch OFF.
2. Check voltage between BCM connector and ground.

Con-nector	Terminal (+)	Terminal (–)	Condition of door lock/ unlock switch	Voltage [V] (Approx.)
M44	56	Ground	Locked	0 → Battery voltage → 0
	60		Unlocked	0 → Battery voltage → 0



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

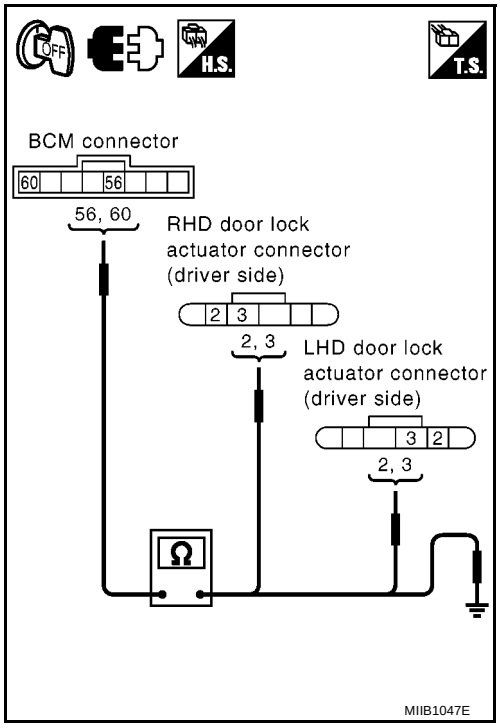
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect BCM connector and front door lock actuator (driver side) connector.
2. Check continuity between BCM connector M44 terminals 56, 60 and front door lock actuator (driver side) connector D10 for LHD model or D39 for RHD model terminals 2, 3.

56 – 3 : Continuity should exist.
60 – 2 : Continuity should exist.

3. Check continuity between BCM connector M44 terminals 56, 60 and ground.

56 – Ground : Continuity should not exist.
60 – Ground : Continuity should not exist.



OK or NG

OK >> Replace front door lock actuator (driver side).
NG >> Repair or replace harness.

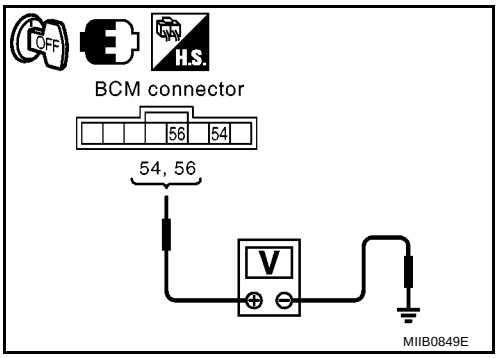
Check Front Door Lock Actuator (Passenger Side)

EIS00D8A

1. CHECK OUTPUT SIGNAL

1. Turn ignition OFF.
2. Check voltage between BCM connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition of door lock/ unlock switch	Voltage [V] (Approx.)
M44	54	Ground	Unlocked	0 → Battery voltage → 0
	56		Locked	0 → Battery voltage → 0



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect BCM connector and front door lock actuator (driver side) connector.
2. Check continuity between BCM connector M44 terminals 54, 56 and front door lock actuator (passenger side) connector D39 terminals 2, 3.

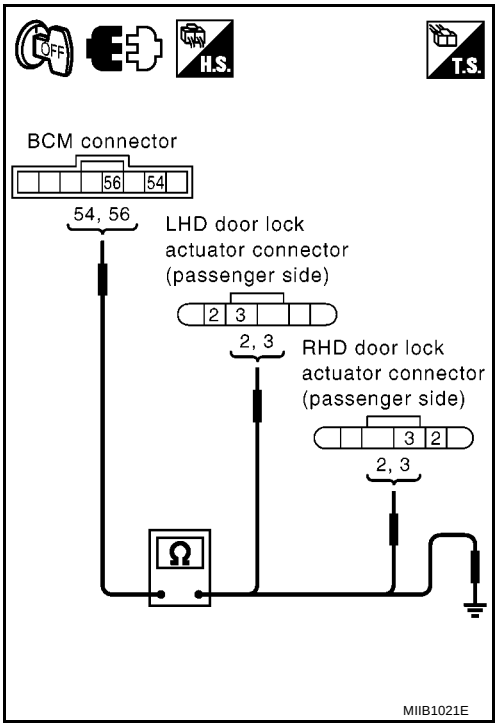
54 – 2 : Continuity should exist.
56 – 3 : Continuity should exist.

3. Check continuity between BCM connector M44 terminals 54, 56 and ground.

54 – Ground : Continuity should not exist.
56 – Ground : Continuity should not exist.

OK or NG

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



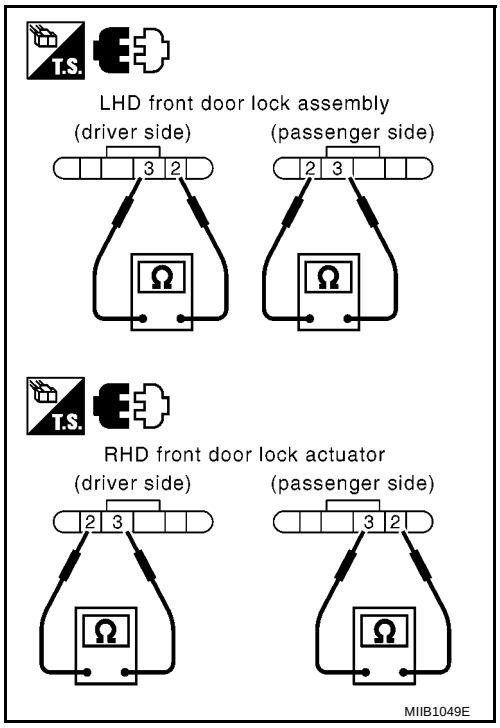
Check Front Door Lock Actuator Switch

EIS00DWW

1. CHECK FRONT DOOR LOCK ACTUATOR

Check continuity between front door lock actuator connectors D10 and D39 driver and/or passenger side terminals side terminals 2 and 3.

Terminals		Condition of front door lock actuators	Continuity	
			Driver side	Passenger side
4	5	Neutral or Unlock	No	Yes
		Lock	Yes	No
6		Neutral or Lock	No	Yes
		Unlock	Yes	No



OK or NG

OK >> Check condition of harness and connector.
NG >> Replace front door lock actuators.

Check Rear Door Lock Actuator LH (Double Cab Model)

EIS00D8B

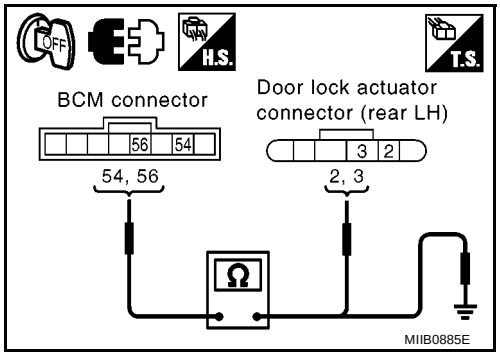
1. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator LH connector.
3. Check continuity between BCM connector M44 terminals 54, 56 and rear door lock actuator LH connector D65 terminals 2, 3.

   54 – 2 : Continuity should exist.
   56 – 3 : Continuity should exist.

4. Check continuity between BCM connector M44 terminals 54, 56 and ground.

   54 – Ground : Continuity should not exist.
   56 – Ground : Continuity should not exist.



OK or NG

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

Check Rear Door Lock Actuator RH (Double Cab Model)

EIS00D8D

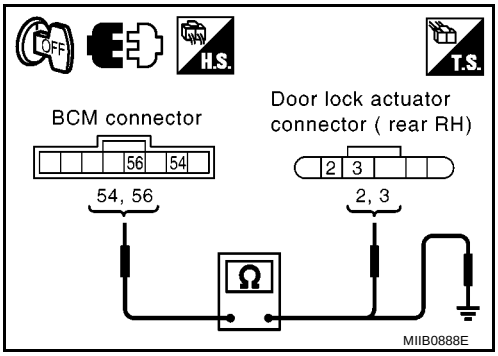
1. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator RH connector.
3. Check continuity between BCM connector M44 terminals 54, 56 and rear door lock actuator RH connector D85 terminals 2, 3.

54 – 2 : Continuity should exist.
56 – 3 : Continuity should exist.

4. Check continuity between BCM connector M44 terminals 54, 56 and ground.

54 – Ground : Continuity should not exist.
56 – Ground : Continuity should not exist.



OK or NG

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

Check RH and LH Rear Door Lock Actuator Switch

EIS00DWX

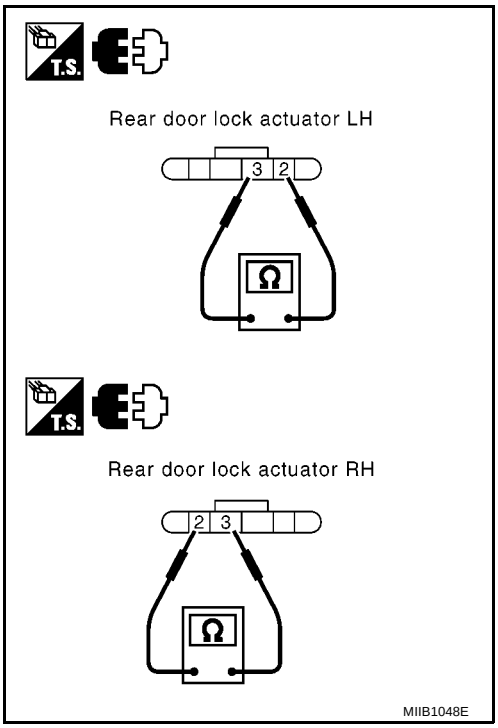
1. CHECK RH AND LH REAR DOOR LOCK ACTUATORS

Check continuity between rear door lock actuator RH connector D85 and rear door lock actuator LH connector D65, terminals 2 and 3.

Terminals		Condition of rear door lock actuators	Continuity	
			Driver side	Passenger side
2	3	Neutral or Unlock	No	Yes
		Lock	Yes	No
		Neutral or Lock	No	Yes
		Unlock	Yes	No

OK or NG

OK >> Check condition of harness and connector.
NG >> Replace rear door lock actuators.



Check Door Lock/Unlock Switch

EIS00D8J

1. CHECK DOOR LOCK/UNLOCK SWITCH SIGNAL

With CONSULT- II

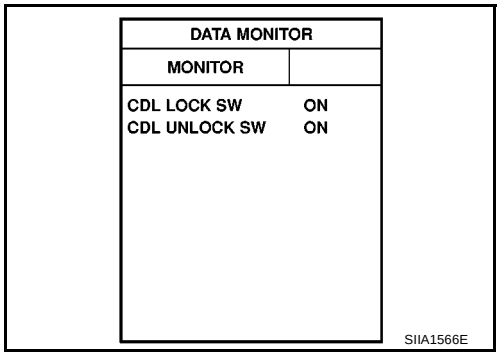
Check door lock/unlock switch input signal (“CDL LOCK SW” CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT-II

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

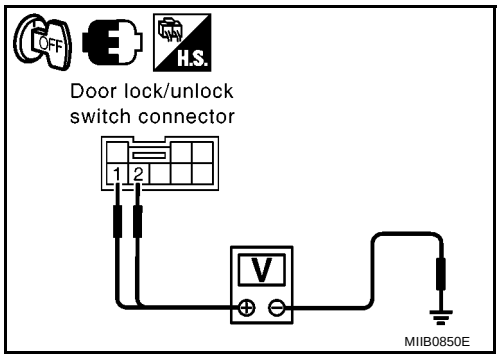
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

1. Turn ignition switch OFF.
2. Operate door lock/unlock switch, check voltage between BCM connector and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M52	1	Ground	Lock	0
			Neutral / Unlock	5
	2		Unlock	0
			Neutral / Lock	5



OK or NG

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

2. CHECK DOOR LOCK/UNLOCK SWITCH CIRCUIT

1. Disconnect BCM connector and door lock/unlock switch connector.
2. Check continuity between BCM connector M42 terminals 32, 34 and door lock/unlock switch connector M52 terminals 1, 2.

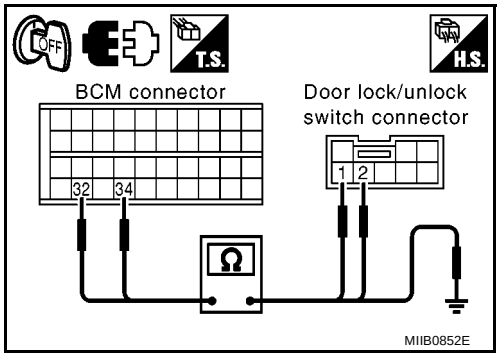
32 – 2 : Continuity should exist.

34 – 1 : Continuity should exist.

3. Check continuity between BCM connector M42 terminals 32, 34 and ground.

32 – Ground : Continuity should not exist.

34 – Ground : Continuity should not exist.



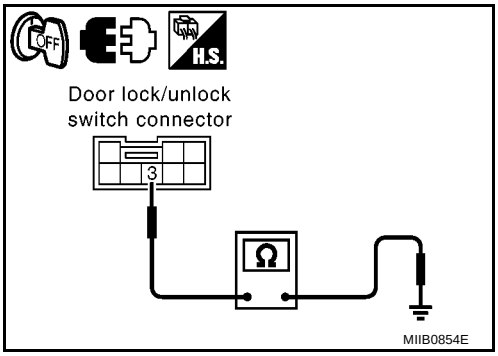
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between door lock/unlock switch connector M52 terminal 3 and ground.

3 – Ground : Continuity should exist.



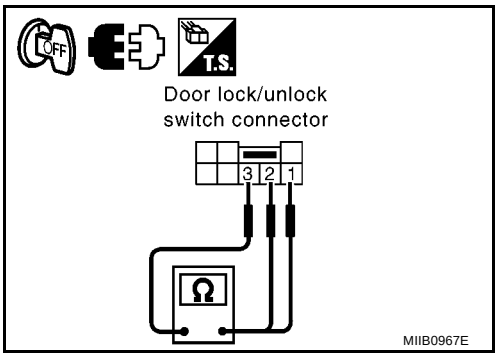
OK or NG

OK >> GO TO 4.
NG >> Replace harness.

4. CHECK DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Check continuity between door lock/unlock switch terminals 1, 2 and 3.

Terminals		Condition	Continuity
1	3	Lock	YES
		Neutral / Unlock	NO
2		Unlock	YES
		Neutral / Lock	NO



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace door lock/unlock switch.

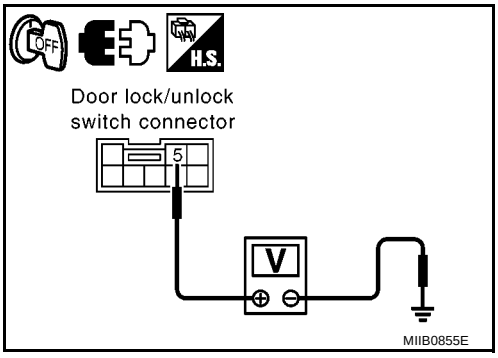
Check Door Lock/Unlock Switch Indicator

EIS00D8K

1. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR SIGNAL

Operate door lock/unlock switch, check voltage between door lock/unlock switch connector M52 terminal 5 and ground.

5 – Ground : Approx. 5V



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

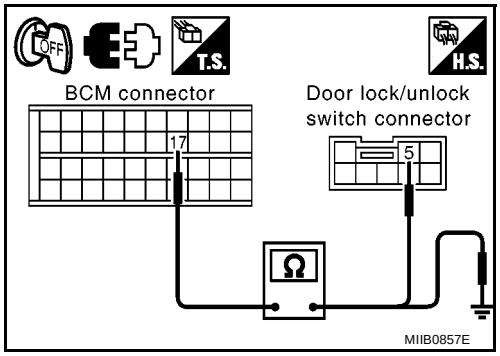
2. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR CIRCUIT

1. Turn ignition switch OFF
2. Disconnect BCM connector and door lock/unlock switch connector.
3. Check continuity between BCM connector M42 terminal 17 and door lock/unlock switch connector M52 terminal 5.

17 – 5 : Continuity should exist.

4. Check continuity between BCM connector M42 terminal 17 and ground.

17 – Ground : Continuity should not exist.



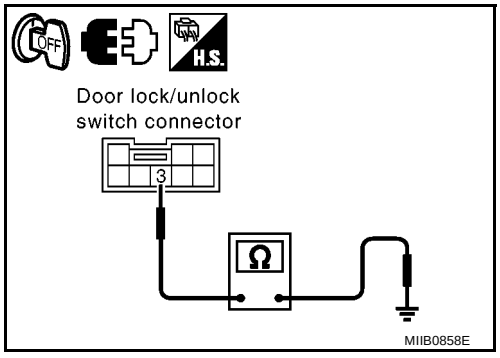
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between door lock/unlock switch connector M52 terminal 3 and ground.

3 – Ground : Continuity should exist.



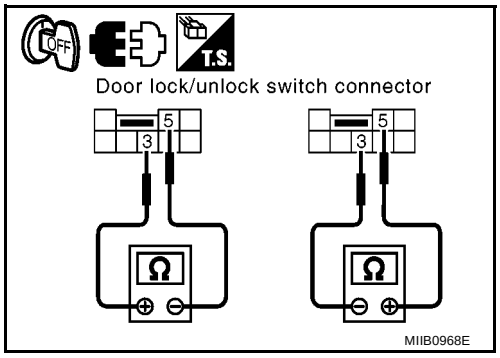
OK or NG

OK >> GO TO 4.
NG >> Replace harness.

4. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR

Check continuity between door lock/unlock switch indicator harness connector B52 terminal 3 and 5.

Terminals		Continuity
(+)	(-)	
3	5	Yes
5	3	No



OK or NG

OK >> Check condition of harness and connector.
NG >> Replace door lock/unlock switch.

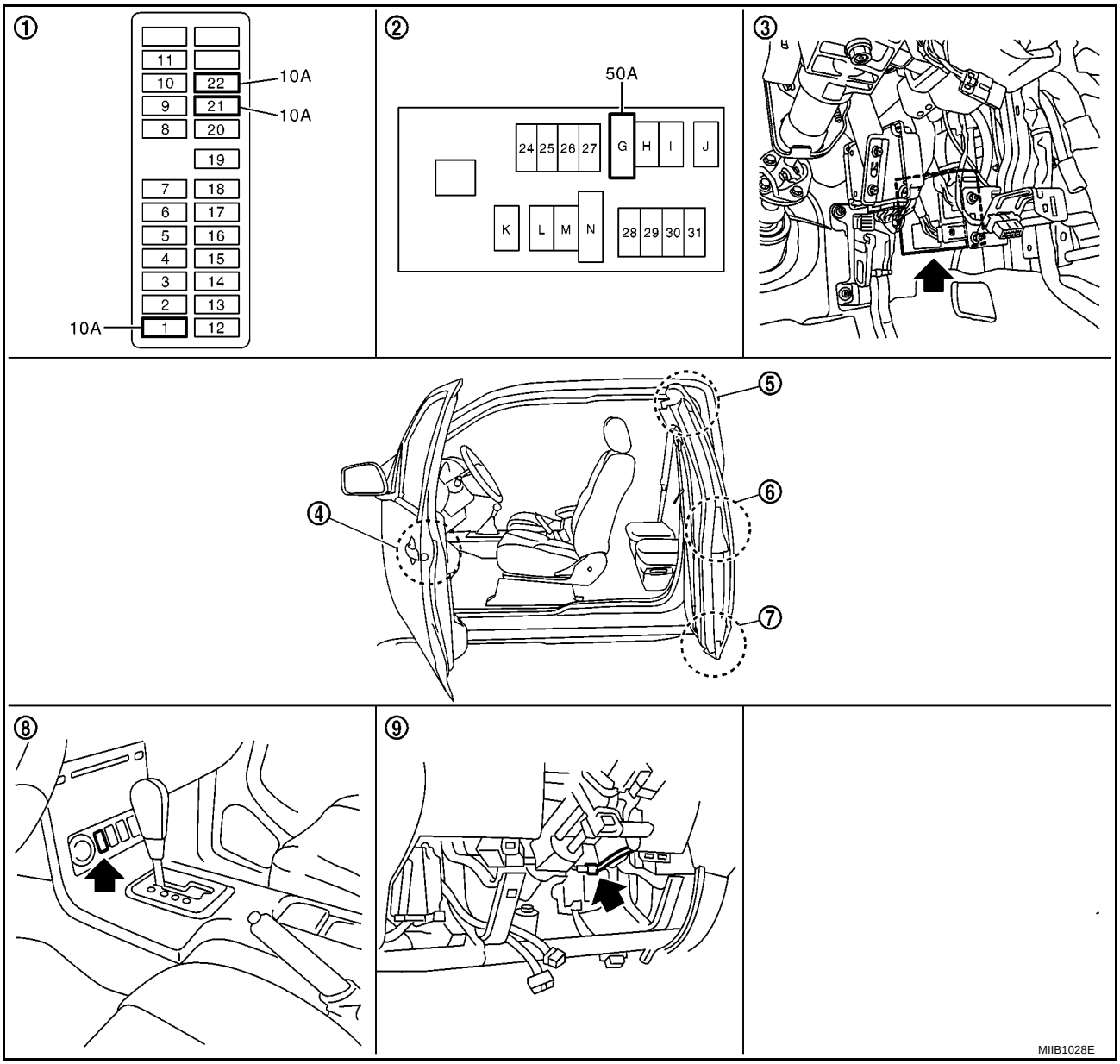
POWER DOOR LOCK — SUPER LOCK —

PFP:24814

Component Parts and Harness Connector Location

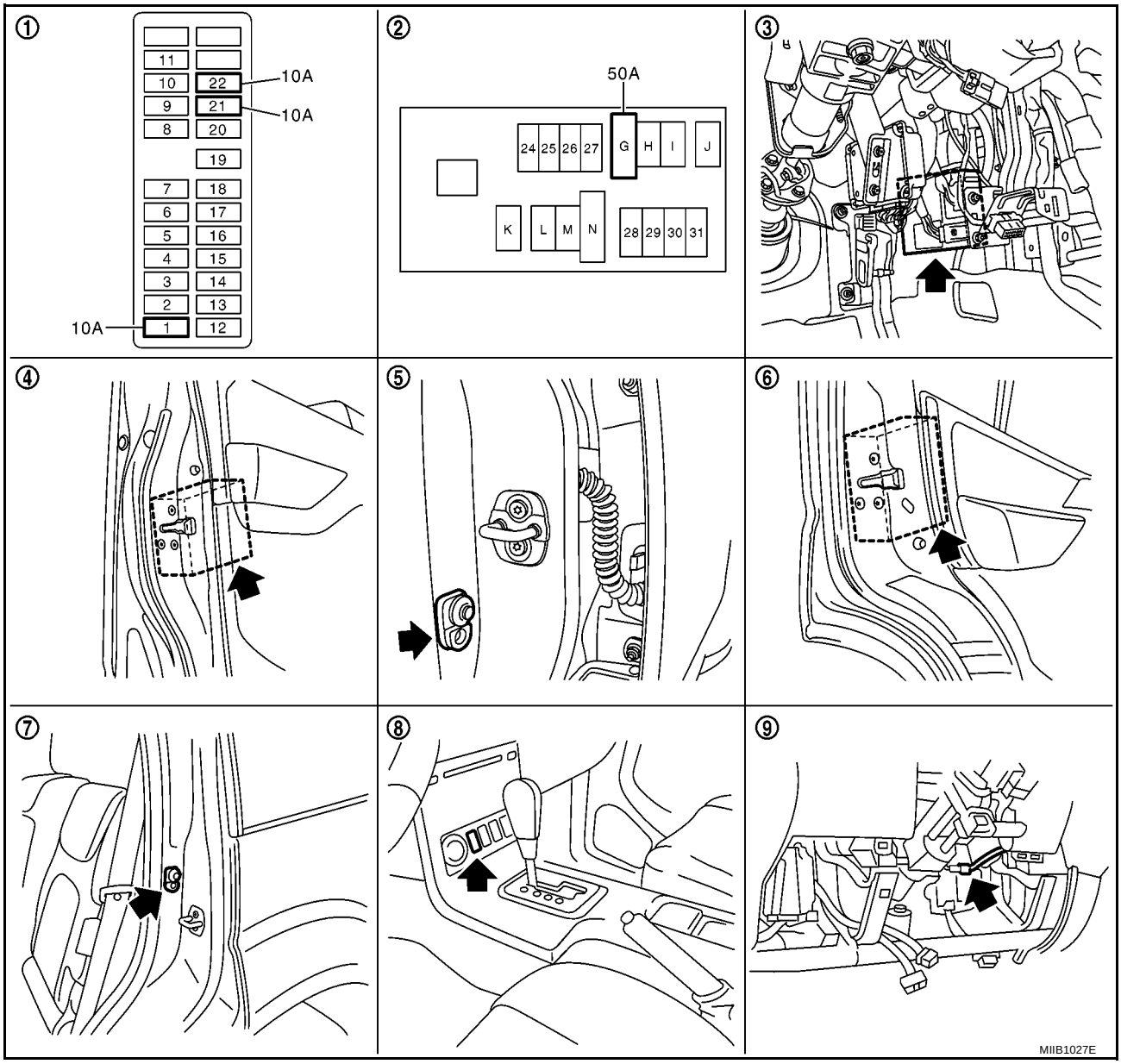
EIS00DWZ

KING CAB



1.	Fuse block (J/B) fuse layout	2.	Fuse and fusible link box	3.	BCM M42, M43, M44 (View with instrument lower panel LH removed)
4.	Front door lock actuator (Driver side) D10	5.	Rear door switch NO.2 (LH) D72	6.	Front door switch (Driver side) D74
7.	Rear door switch NO.1 (LH) D71	8.	Door lock/unlock switch M52	9.	Key switch M35

DOUBLE CAB



1. Fuse block (J/B) fuse layout
2. Fuse and fusible link box
3. BCM M42, M43, M44 (View with instrument lower panel LH removed)
4. Front door lock actuator (Driver side) D10
5. Front door switch (Driver side) B19
6. Rear door lock actuator (LH) D65
7. Rear door switch (LH) B23
8. Door lock/unlock switch M52
9. Key switch M35

System Description

EIS00DX0

Power is supplied at all times

- through 50A fusible link (letter **G** , located in the fuse and fusible link box)
- to BCM terminal 57
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 41
- through 10A fuse [No. 22, located in the fuse block (J/B)]
- to key switch terminal 2.

When key switch is ON, power is supplied

- through key switch terminal 1
- to BCM terminal 5.

When ignition switch is in ON or START position

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 3.

Ground is supplied

- to BCM terminal 55
- through body grounds M21, M80 and M83.

Door switch operation

When front door switch (driver side) is ON (door is OPEN), ground is supplied

- to BCM terminal 15
- through front door switch (driver side) terminal 2
- through front door switch (driver side) case ground.

When front door switch (passenger side) is ON (door is OPEN), ground is supplied

- to BCM terminal 14
- through front door switch (passenger side) terminal 2
- through front door switch (passenger side) case ground.

When rear door switch LH is ON (door is OPEN), ground is supplied (Double cab models)

- to BCM terminal 16
- through rear door switch LH terminal 2
- through rear door switch LH case ground.

When rear door switch RH is ON (door is OPEN), ground is supplied (Double cab models)

- to BCM terminal 12
- through rear door switch RH terminal 2
- through rear door switch RH case ground.

Super lock set/release operation

When super lock is set, ground is supplied

- Through BCM terminals 59
- Through each super lock actuators terminals 1 and 2
- To BCM terminal 60

When super lock is released, ground is supplied

- Through BCM terminal 60
- Through each super lock actuators terminals 2 and 1
- To BCM terminals 59

Power door lock operation with door lock/unlock switch

When doors are lock by door lock/unlock switch, ground is supplied

- to BCM terminal 34
- through door lock /unlock switch terminals 1 and 3
- through body grounds M21, M80 and M83.

then all doors are locked.

When door lock/unlock switch is locked, ground is supplied

- through BCM terminal 56
- through all door actuators terminal 3
- through all door lock actuators terminal 2
- through back door lock actuator terminals 1 and 3
- to BCM terminals 54 and 60.

then all doors actuators are locked

Power door unlock operation with door lock/unlock switch

When doors are unlock by door lock/unlock switch, ground is supplied

- to BCM terminal 32
- through door lock/unlock switch terminals 2 and 3
- through body grounds M21, M80 and M83.

then all doors are locked.

When door lock/unlock switch is unlocked, ground is supplied

- through BCM terminals 54 and 60
- through all door lock actuators terminal 2
- through all door lock actuators terminal 3
- then all door actuators are unlock
- to BCM terminal 56.

Door lock/unlock switch indicator operation

When door lock/unlock switch is locked, all doors are locked, door lock/unlock switch indicator is on, and ground is supplied

- to BCM terminal 17
- through door lock/unlock switch terminals 5 and 3
- through body grounds M21, M80 and M83.

OUTLINE

Power door lock systems with super lock function provides a higher anti-theft performance than conventional power door lock systems. The super lock system is controlled by BCM (Body Control Module).

Pressing LOCK button on key fob once will lock all doors and activate super lock simultaneously.

When super lock is set, all doors cannot be opened from inside.

Pressing UNLOCK button once on key fob will unlock driver side door (unlock all doors if anti-hijack system is disabled and during this state, super lock is still active). Second press on the UNLOCK button within 5 second from the first will unlock all doors and release super lock simultaneously.

Functions Available By Operating the Door Lock/Unlock Switch

- Operating the door lock/unlock switch in the control panel will activate all doors actuator to lock or unlock. If any doors are opened (except the driver side) during operating the door lock/unlock switch in lock direction, the door lock actuators will not response. Unlock via the interior door handles and door lock/unlock switch is always possible.
- Operating the door lock/unlock switch to “LOCK” will lock the vehicle even while driver side door is opened.

OPERATION

Set Super Lock Conditions

- When all these following conditions are met, BCM receives lock signal from key fob.
  - All doors are closed.
  - Key is out of the ignition key cylinder.

Release Super Lock Conditions

- BCM unit receives a valid unlock signal from key fob.
- Ignition switch is turned ON (door lock/unlock switch will remain its state, super lock is released).

NOTE:

Door lock/unlock switch is incapable of overriding super lock.

Door Lock Warning Function

Under following conditions lock actuators will not response and buzzer warning will beeps while pressing door lock/unlock switch in LOCK direction.

- Ignition switch is turned OFF
- Mechanical key is out of ignition key cylinder
- Any door is opened (except driver side door)

Key Reminder Function

Under following conditions lock actuators will lock the door once, but then immediately unlock all doors and buzzer warning will beeps while pressing door lock/unlock switch in LOCK direction.

- Ignition switch is turned OFF
- Mechanical key is inserted in ignition key cylinder
- Driver side door is opened

Door Lock/Unlock Switch Indicator

The Door lock/unlock switch indicates door lock status. The indicator will illuminate when a lock operation is accomplish, during this state, if any door is open, the indicator will turn OFF.

Door Lock Indicator Timer

Door lock indicator timer is designed to reacts and shut down the indicator. The default timer values are 1 minute and 30 minutes.

- When the lock operation is activated by keyfob or auto door lock (for further details refer to BL-92, "Auto Re-lock Function"), then the illuminate time is set to 1 minute.
- When the lock operation is activated by door lock/unlock switch, then the timer is set to 30 minutes.

  NOTE:
  When the 30 minutes timer is active and ignition switch is turned ON, then the indicator illuminate for permanently unless ignition switch is turned OFF then timer will be reset back to 30 minutes.

CAN Communication System Description

EIS00DX1

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

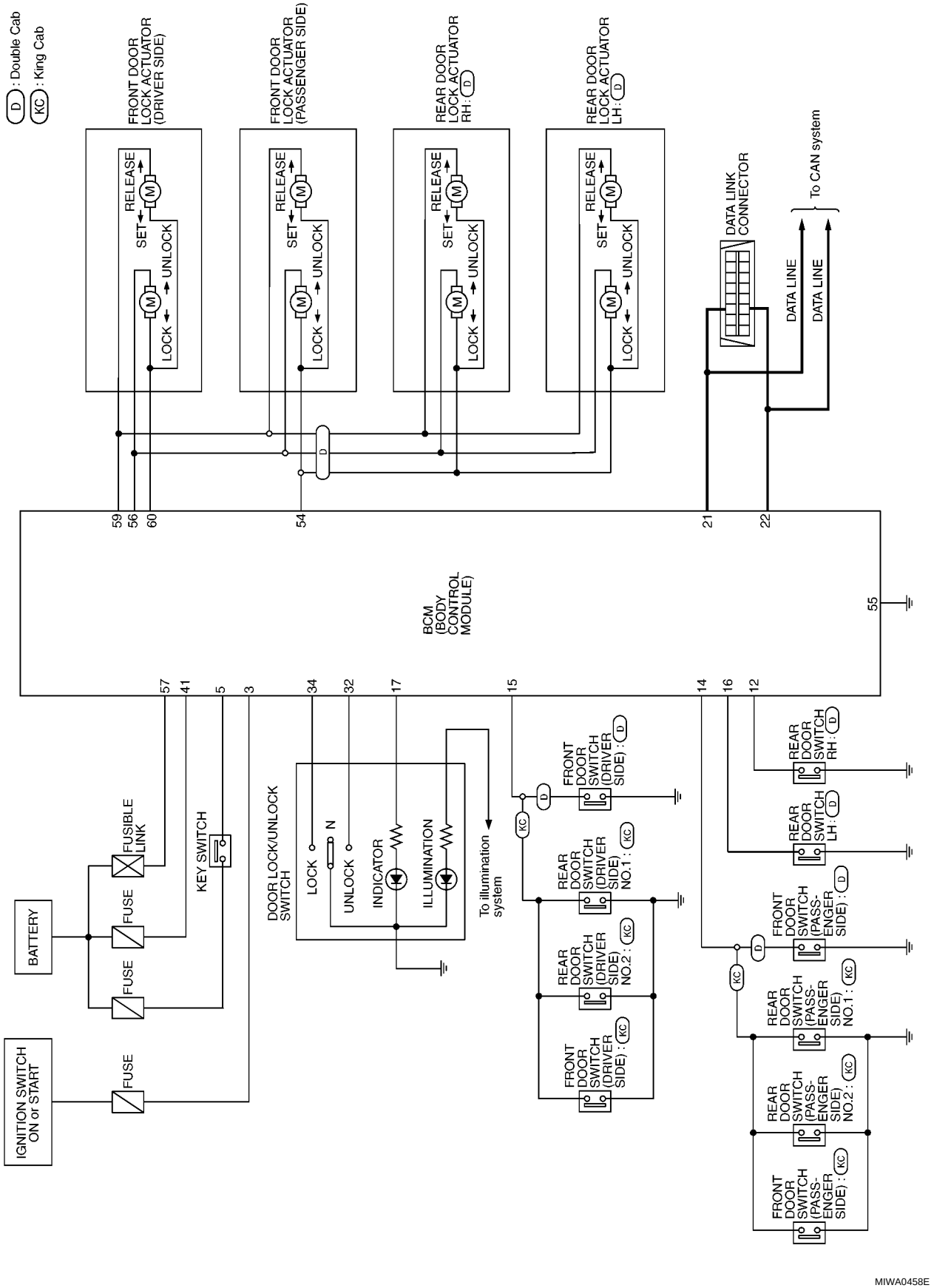
CAN Communication Unit

EIS00DX2

Refer to LAN-23, "CAN COMMUNICATION" .

Schematic

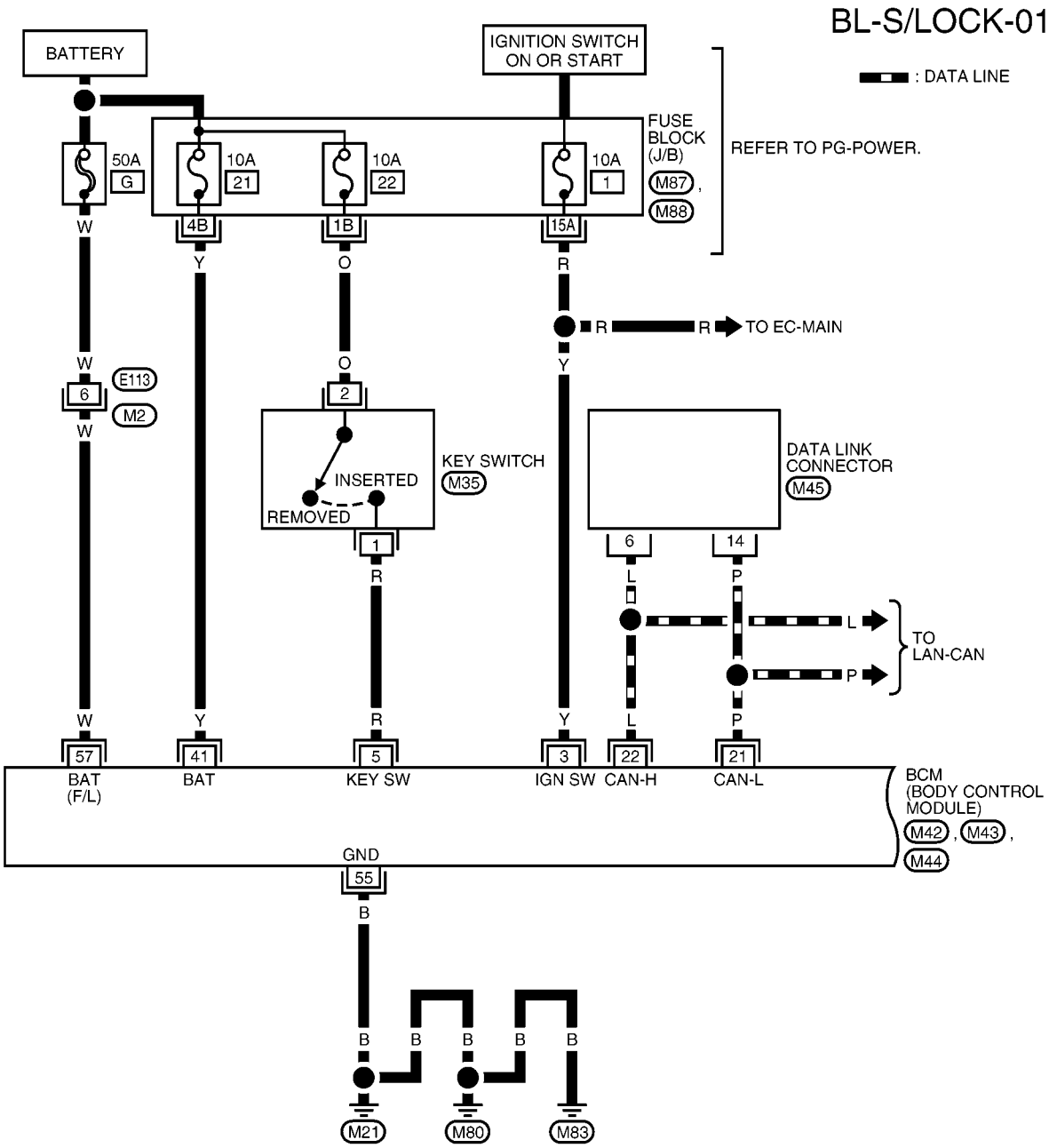
EIS00DX3

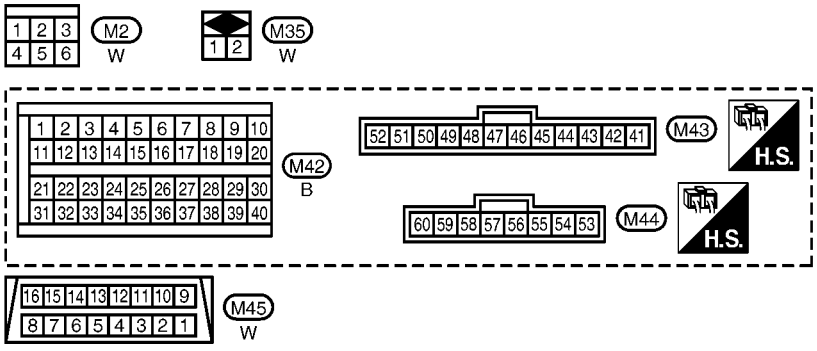


MIWA0458E

Wiring Diagram —D/LOCK—

EIS00DX4

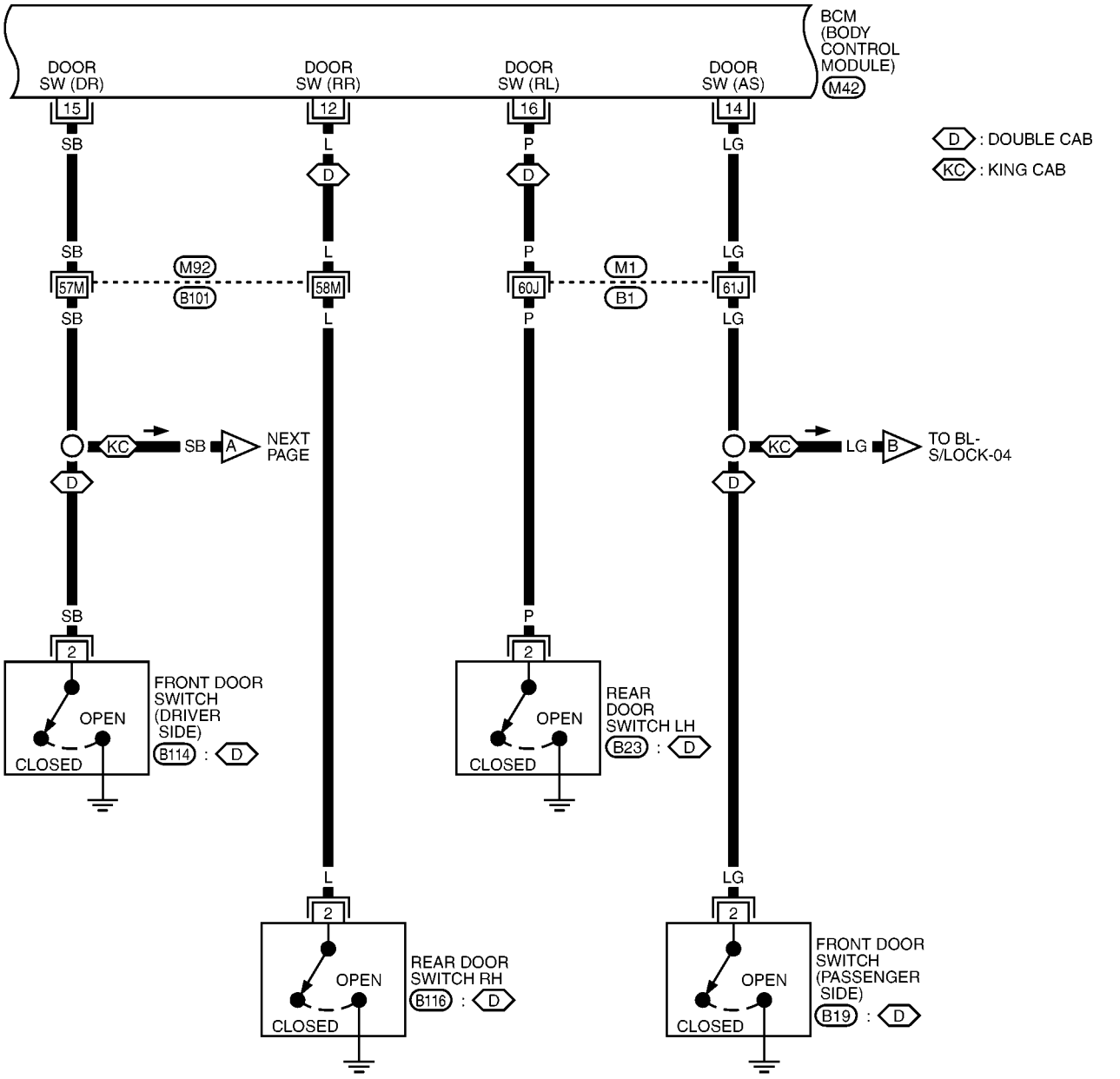


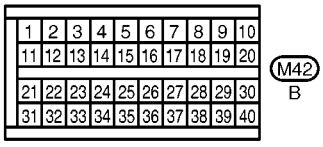


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

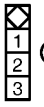
MIWA0459E

BL-S/LOCK-02





M42 B

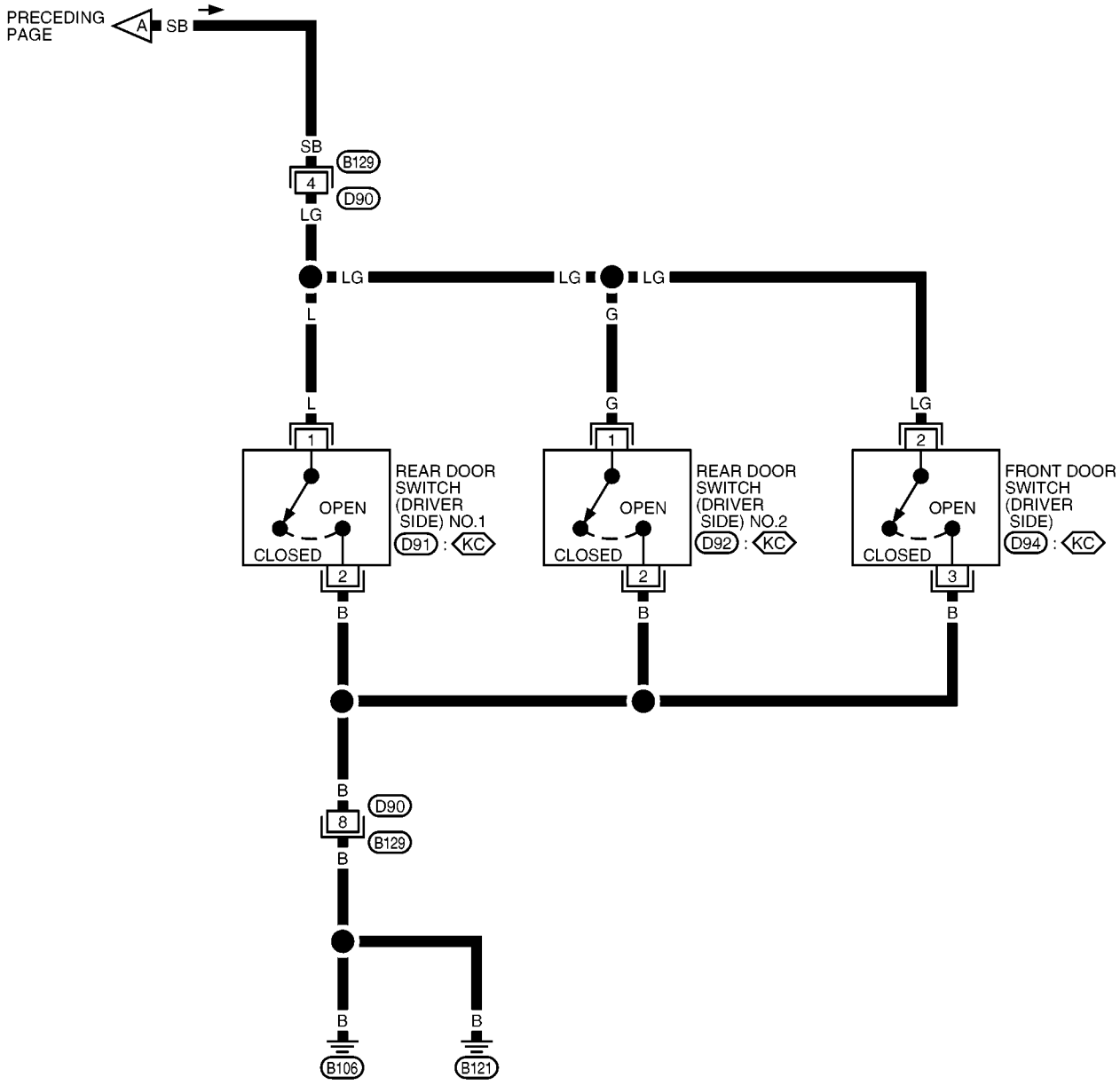


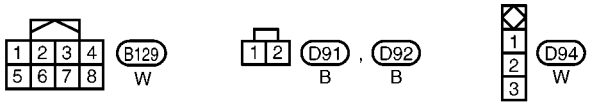
B19 W, B23 W, B114 W, B116 W

REFER TO THE FOLLOWING.
M1, M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0460E

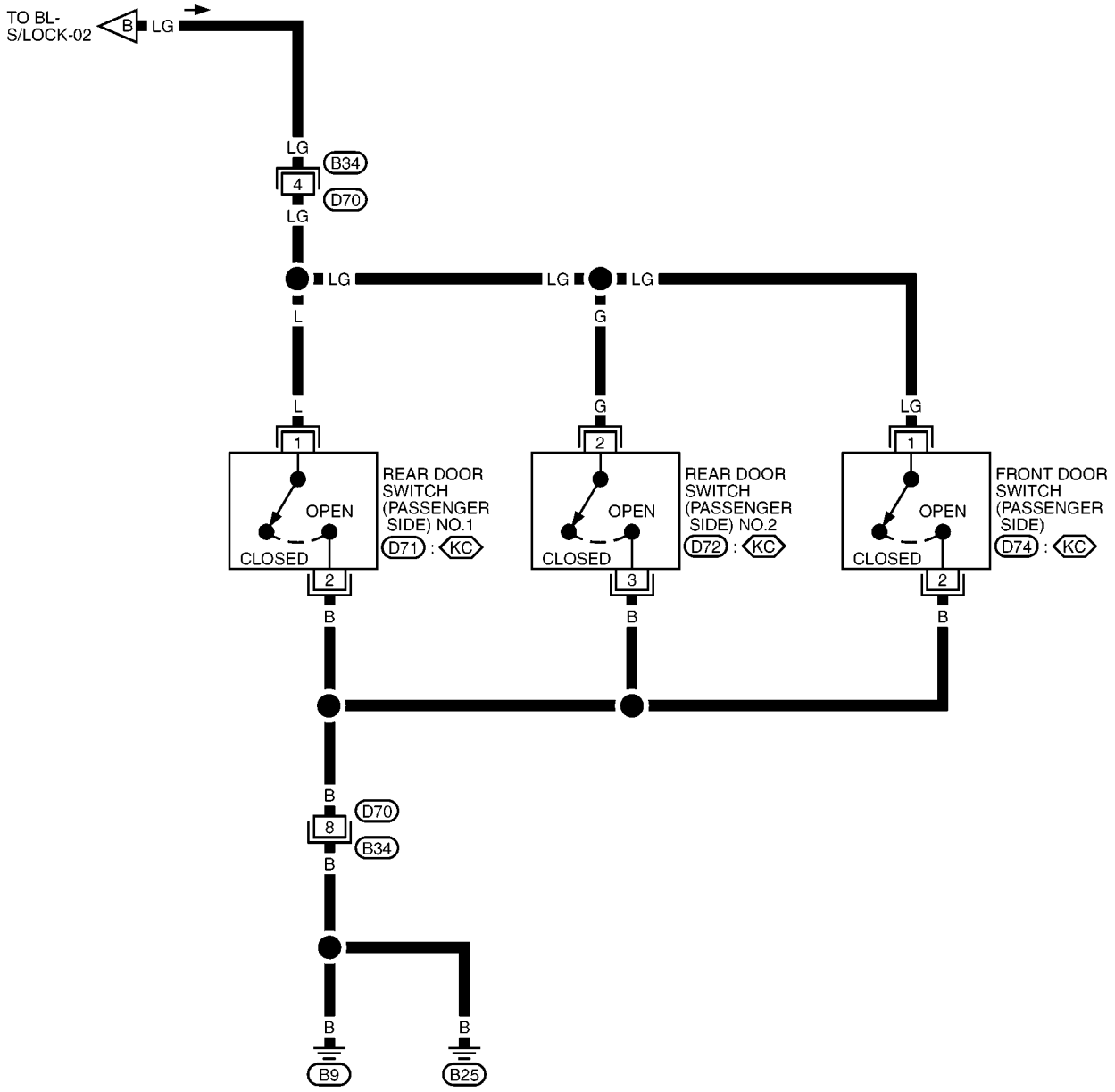
BL-S/LOCK-03

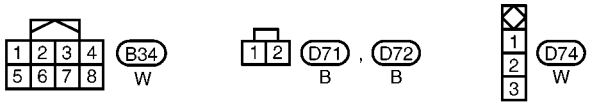




MIWA0526E

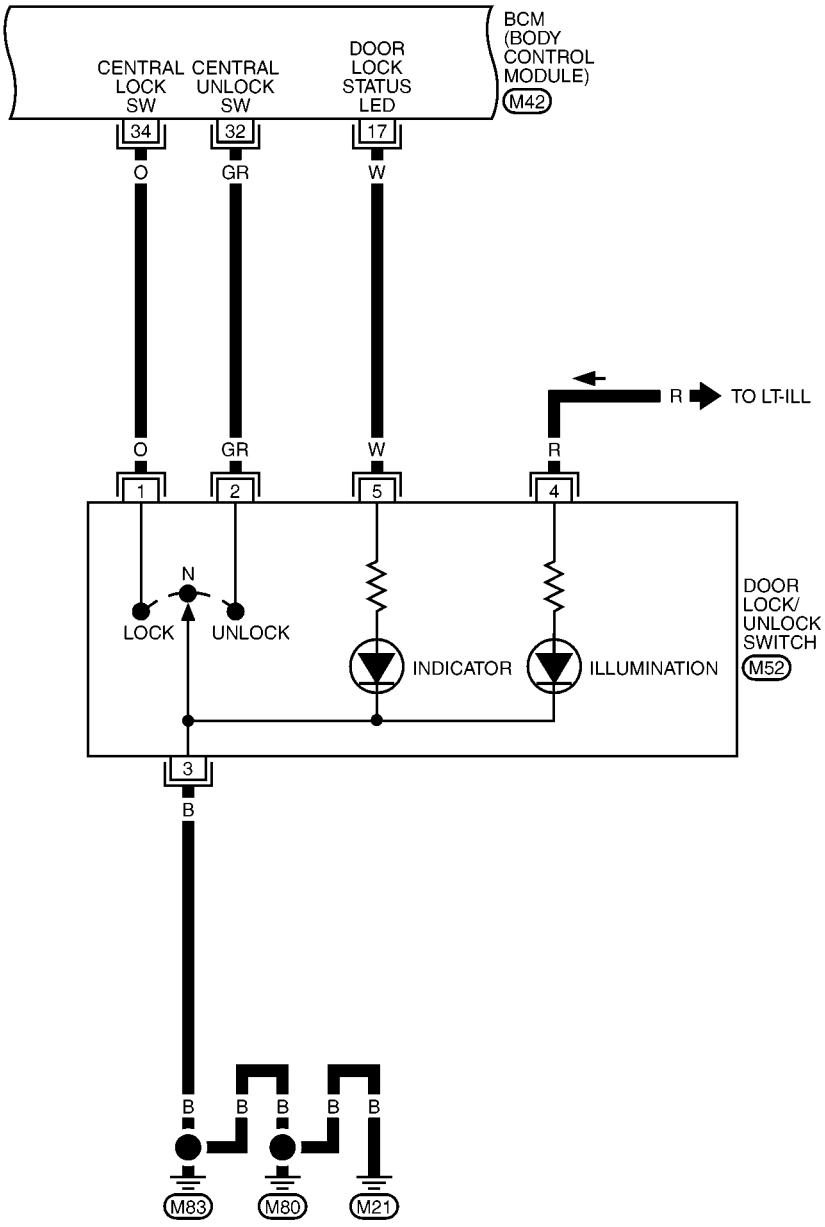
BL-S/LOCK-04

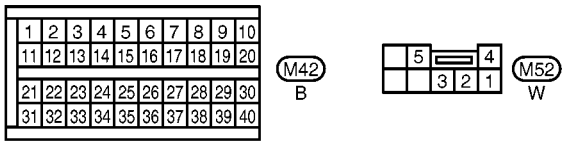




MIWA0527E

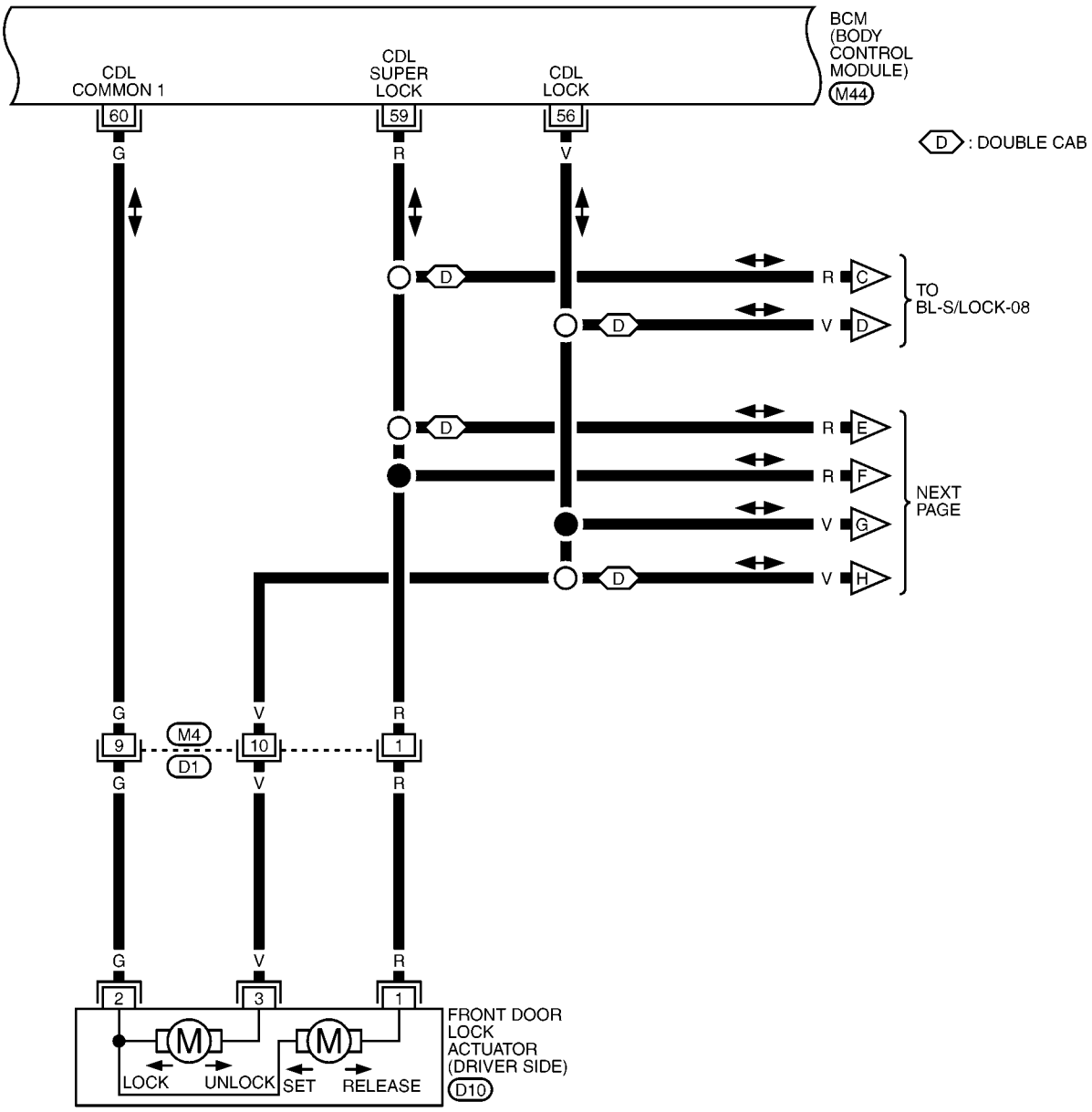
BL-S/LOCK-05

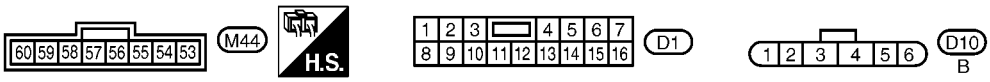




MIWA0528E

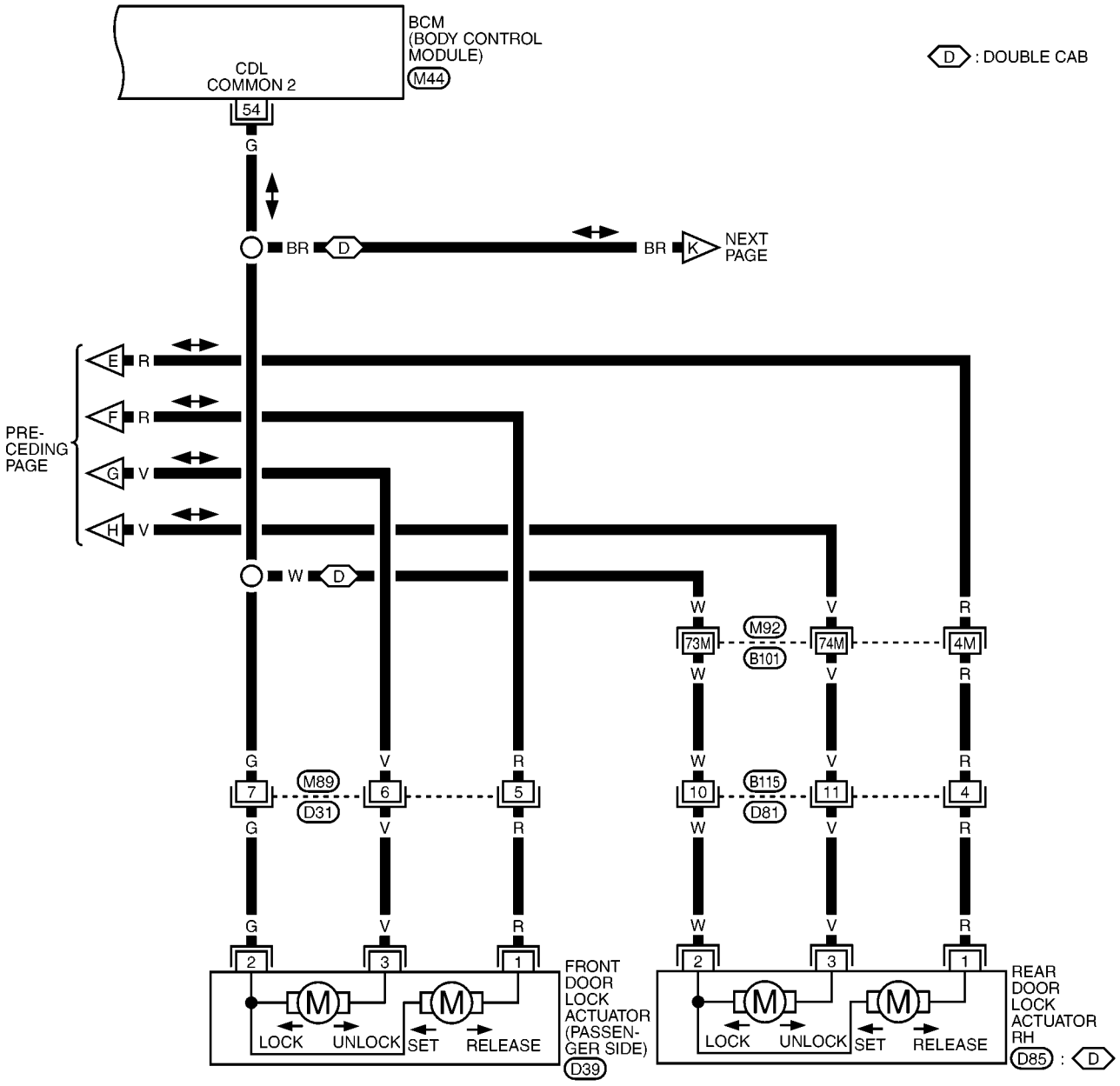
BL-S/LOCK-06

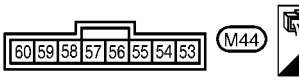


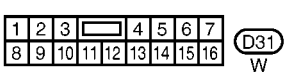


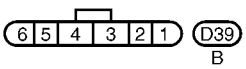
MIWA0462E

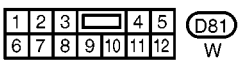
BL-S/LOCK-07

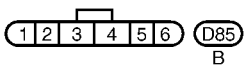








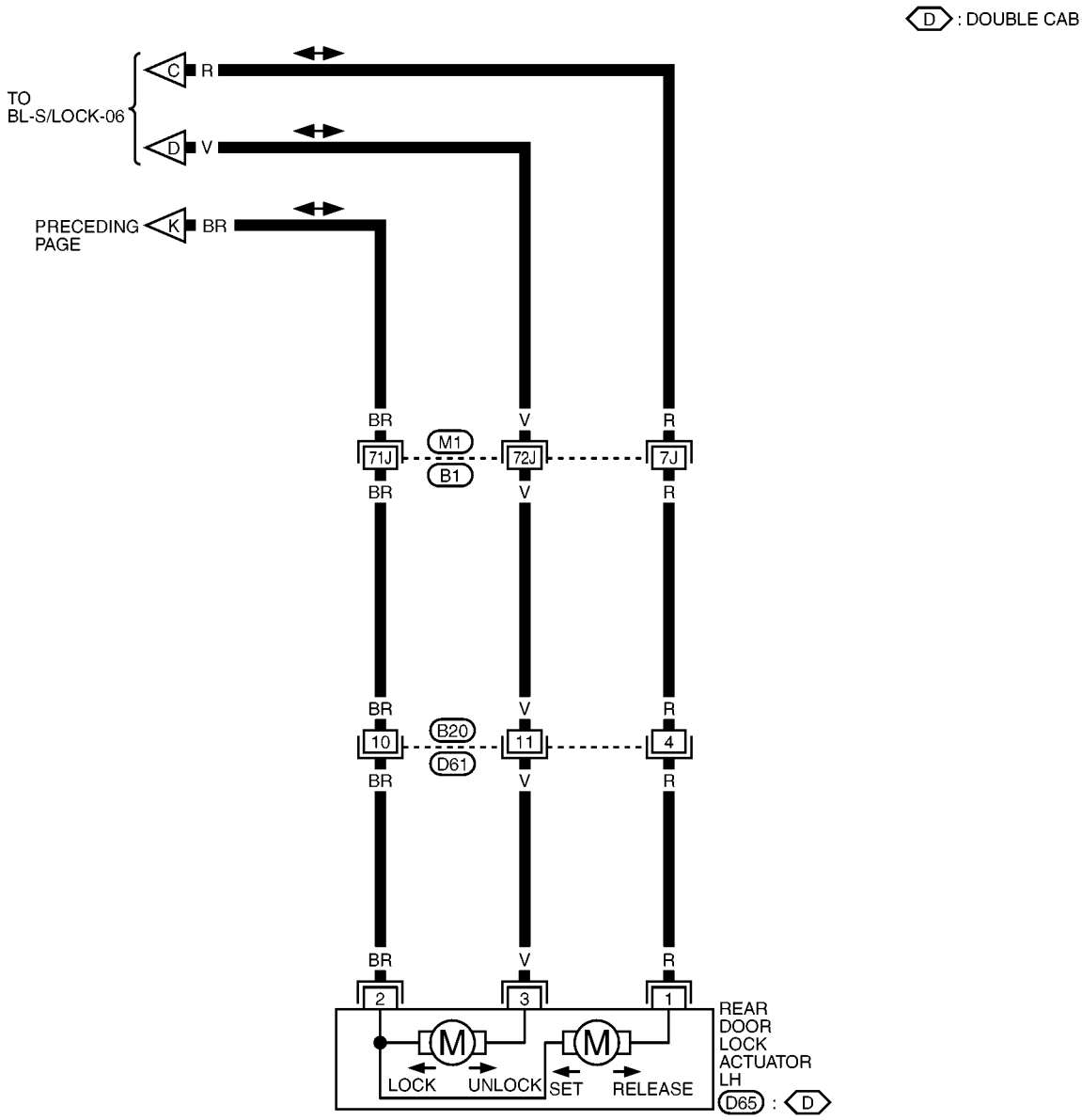


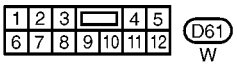


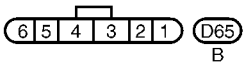
REFER TO THE FOLLOWING.
M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0463E

BL-S/LOCK-08







REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0464E

Terminals and Reference Value for BCM

EIS00DX5

TERMINAL	WIRE COLOR	ITEM	CONDITION		VOLTAGE [V] (Approx.)
3	Y	Ignition switch	Ignition switch ON		Battery voltage
5	R	Key switch	Key switch ON		Battery voltage
			Key switch OFF		0
12	L	Rear door switch RH*	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
14	LG	Front door switch (Passenger side)	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
15	SB	Front door switch (Driver side)	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
16	P	Rear door switch LH*	ON (Door is opened) → OFF (Door is closed)		0 → Battery voltage
17	W	Door lock/unlock switch indicator	All door closed	Lock operation (Illuminates)	Battery voltage
				Other than above	0
21	P	CAN-L	—		—
22	L	CAN-H	—		—
32	GR	Door lock/unlock switch	All door closed	Unlock	0
				Other than above	5
34	O	Door lock/unlock switch	All door closed	Lock	0
				Other than above	5
41	Y	Power switch (Fuse)	—		Battery voltage
54	G	Passenger and rear door lock actuators*1 (unlock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0
55	B	Ground	—		0
56	V	All door lock actuators (lock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0
57	W	Power source (Fusible link)	—		Battery voltage
59	R	Super lock actuator (set)	Lock button of key fob or Intelligent Key is pressed		0 → Battery voltage → 0
60	G	Driver door lock actuator (unlock)	Door lock/unlock switch (Free → Lock)		0 → Battery voltage → 0

*: Double cab models

CONSULT-II Function (BCM)

EIS00DX6

CONSULT-II and display each diagnostic item using the diagnostic test modes shown following.

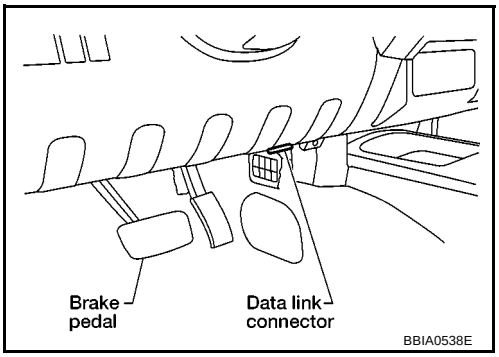
BCM diagnosis part	Inspection item, self-diagnosis mode	Content
DOOR LOCK	WORK SUPPORT	Changes the setting for each function.
	DATA MONITOR	Displays the input data of BCM in real time.
	ACTIVE TEST	Give a drive signals to load to check the operation.

CONSULT-II BASIC OPERATION PROCEDURE

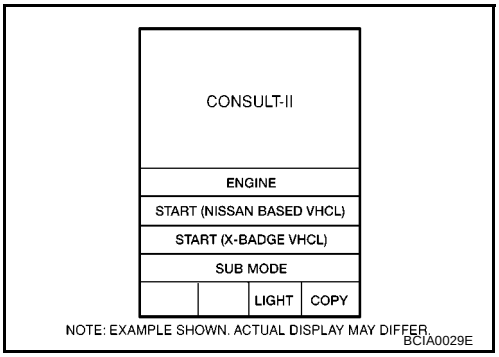
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

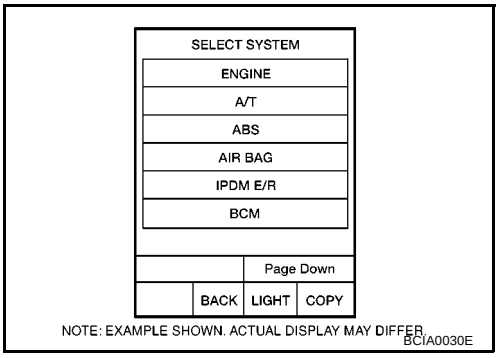
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” and “CONSULT-II CONVERTER” to data link connector.



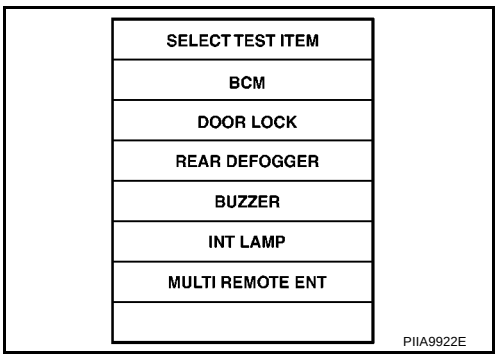
3. Turn ignition switch “ON”.
4. Touch “START (NISSAN BASED VHCL)”.



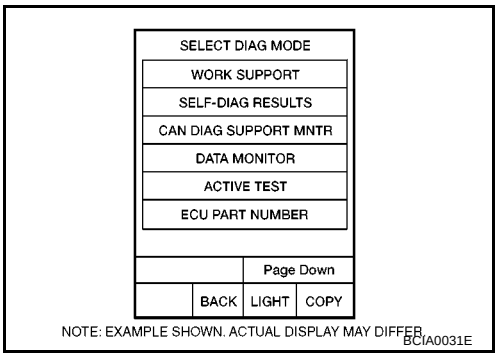
5. Touch “BCM” on “SELECT SYSTEM” screen.
   If “BCM” is not indicated, go to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “DOOR LOCK”.



7. Select diagnosis mode.
“WORK SUPPORT”, “DATA MONITOR” and “ACTIVE TEST” are available.



CONSULT-II APPLICATION ITEMS

Work Support

Work item	Description
SECURITY DOOR LOCK SET	Anti-hijack mode can be changed in this mode. Selects ON-OFF of anti-hijack mode.

Data Monitor

Monitor item	Content
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.
I-KEY LOCK	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.

Active Test

Test item in “DOOR LOCK”	Content
ALL LOCK	This test is able to check all door lock actuators lock operation. These actuators lock when “ALL LOCK” on CONSULT-II screen is touched.
ALL UNLOCK	This test is able to check all door lock actuators unlock operation. These actuators unlock when “ALL UNLOCK” on CONSULT-II screen is touched.

Test item in “DOOR LOCK”	Content
DR UNLOCK	This test is able to check door lock actuator (driver side) lock/unlock operation. This actuator unlock when “DR UNLOCK” on CONSULT-II screen is touched.
OTHER UNLOCK	This test is able to check all door lock actuators (except driver side) unlock operation. These actuators unlock when “OTHER UNLOCK” on CONSULT-II screen is touched.

Work Flow

EIS00DX7

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-57, "System Description" .
3. According to the trouble diagnosis, repair or replace the cause of the malfunction. Refer to BL-72, "Trouble Diagnoses Chart by Symptom" .
4. Does power door lock system operate normally?
   YES: GO TO 5.
   NO: GO TO 2.
5. INSPECTION END.

Trouble Diagnoses Chart by Symptom

EIS00DX8

NOTE:
Always check the “Work Flow” before troubleshooting. Refer to BL-72, "Work Flow" .

Symptom	Diagnosis/service procedure	Reference page
SYMPTOM 1 Power door lock does not operate by using door lock/unlock switch.	1. Power supply and ground circuit check	BL-73
	2. Door lock/unlock switch check	BL-86
	3. Door switch check	BL-74
	4. Front door lock actuator (driver side) check	BL-80
SYMPTOM 2 All door lock actuators except driver side does not operate using door lock/unlock switch.	1.Front door lock actuator (passenger side) check	BL-81
SYMPTOM 3 Specific door lock actuator does not operate using door lock/unlock switch.	1.Front door lock actuator (driver side) check	BL-80
	2.Front door lock actuator (passenger side) check	BL-81
	3.Rear door lock actuator LH check*	BL-82
	4.Rear door lock actuator RH check*	BL-82
SYMPTOM 4 Super lock does not operate by using Key fob.	1. Key switch check	BL-78
	2. Super lock actuator (driver side) check	BL-83
SYMPTOM 5 Specific super lock actuator does not operate.	1.Super lock actuator (driver side) check	BL-83
	2.Super lock actuator (passenger side) check	BL-84
	3.Super lock actuator (rear LH) check*	BL-84
	4.Super lock actuator (rear RH) check*	BL-85
SYMPTOM 6 Super lock cannot be released by ignition switch.	1.Ignition switch ON circuit check	BL-73
SYMPTOM 7 Key reminder system does not operate.	1. Key switch check	BL-78
	2. If above systems are OK, replace BCM.	BCS-17
SYMPTOM 8 Door lock indicator does not illuminate.	1. Door lock/unlock switch indicator lamp check	BL-87
	2. If above systems are OK, replace BCM.	BCS-17

*: Double cab models

Check Power Supply and Ground Circuit

EIS00DX9

1. FUSE INSPECTION

Check the following.

- 50A fusible link (letter **G** , located in the fuse and fusible link box)
- 10A fuse [No. 1, located in the fuse block (J/B)]
- 10A fuse [No.21, located in the fuse block (J/B)]

NOTE:

Refer to BL-55, "Component Parts and Harness Connector Location" .

OK or NG

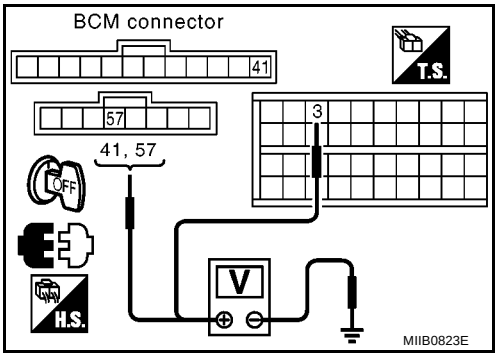
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM and ground.

Connector	Terminals		Ignition switch position		
	(+)	(-)	OFF	ACC	ON
M42	3	Ground	0V	0V	Battery voltage
M43	41		Battery voltage	Battery voltage	Battery voltage
M44	57				



OK or NG

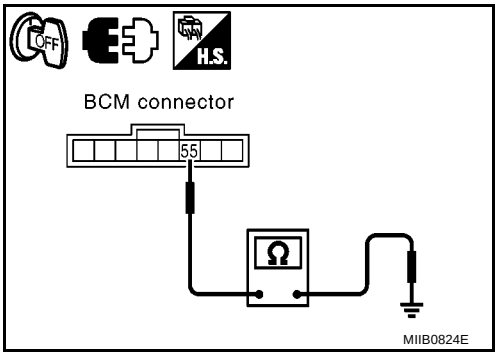
OK >> GO TO 3.

NG >> Repair or replace BCM power supply circuit.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M44 terminal 55 and ground.

55 – Ground : Continuity should exist.



OK or NG

OK >> BCM power supply and ground circuit is OK.

NG >> Repair or replace BCM ground circuit.

Check Door Switch

EIS00DXB

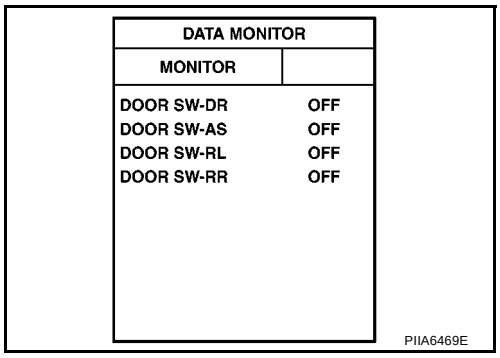
CHECK DOOR SWITCH (DOUBLE CAB)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition	DATA MONITOR
DOOR SW-DR	CLOSE ↓ OPEN	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		

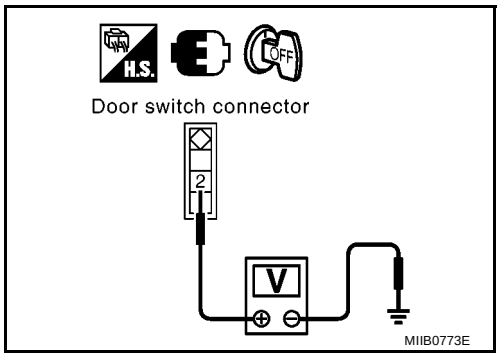


Without CONSULT-II

Check voltage between each door switch connector and ground.

Item	Connector	Terminals (+)	Terminals (-)	Door condition	Voltage [V] (Approx.)
Driver side	B19 (B114)	2	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

( ): RHD model



OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between door switch terminal 2 and ground part of door switch.

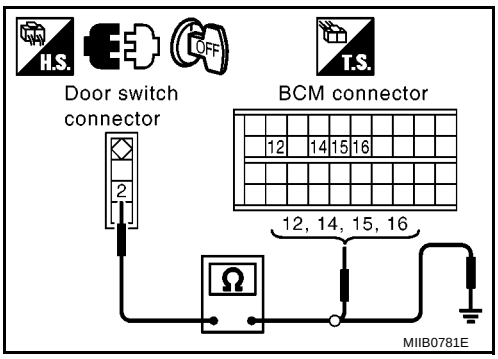
Terminal		Door switch condition	Continuity
2	Ground part of door switch	Pushed	No
		Released	Yes

OK or NG

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

3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch connector B19, B23, B114, B116 terminals 2 and BCM connector M42 terminals 12, 14, 15, 16.



Item	Connector	Terminals (+)	Terminals (–)	Door condition	Continuity
Driver side	B19 (B114)	2	15	CLOSE to OPEN	Continuity should exist.
Rear LH	B23	2	16		
Passenger side	B114 (B19)	2	14		
Rear RH	B116	2	12		

(): RHD models

3. Check continuity between door switch connector B19, B23, B114, B116 terminal 2 and ground.

Item	Connector	Terminals (+)	Terminals (–)	Door condition	Continuity
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Continuity should not exist.
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

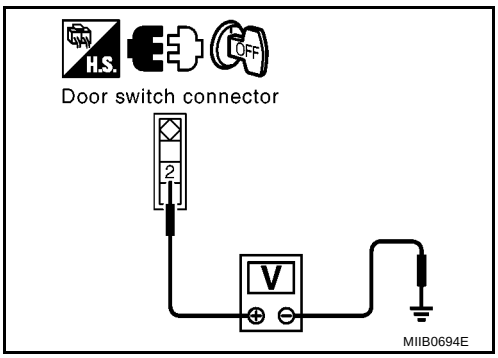
(): RHD models

OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between each door switch connector B19, B23, B114, B116 terminal 2 and ground.



Item	Connector	Terminals (+)	Terminals (–)	Door condition	Voltage [V] (Approx.)
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Battery voltage
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

(): RHD models

OK or NG

OK >> Check harness condition or door switch installation condition.
NG >> Replace BCM.

CHECK DOOR SWITCH (KING CAB)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

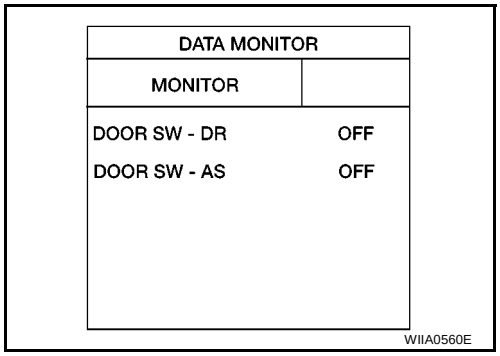
Check door switches (“DOOR SW-DR”, “DOOR SW-AS”) in DATA MONITOR mode with CONSULT-II. Refer to BL-71, "Data Monitor" .

- When any doors are open:

  DOOR SW-DR : OFF
  DOOR SW-AS : OFF

- When any doors are closed:

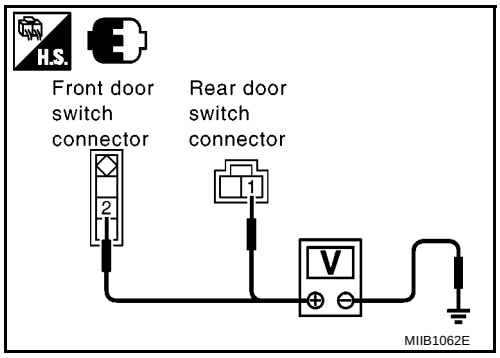
  DOOR SW-DR : OFF
  DOOR SW-AS : OFF



Without CONSULT-II

Check voltage between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminals 1, 2 and ground.

Item	Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
Front door switch LH	D74 (D94)	2	Ground	Open ↓ Closed	0 ↓ Battery voltage
Front door switch RH	D94 (D74)				
Rear door switch No.2 LH	D72 (D92)				
Rear door switch No.2 RH	D92 (D72)	1			
Rear door switch No.1 LH	D71 (D91)				
Rear door switch No.1 RH	D91 (D71)				



(): RHD MODELS

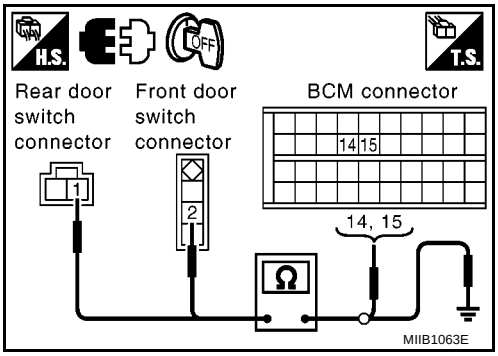
OK or NG

OK >> System is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and BCM connector M42 terminals 14, and 15.

Connector	Terminals	Item	Connector	Terminals	Condition
M42	15	Front door switch LH	D74 (D94)	2	Continuity should exist
	14	Front door switch RH	D94 (D74)	2	
	15	Rear door switch No. 2 LH	D72 (D92)	1	
	14	Rear door switch No. 2 RH	D92 (D72)	1	
	15	Rear door switch No. 1 LH	D71 (D91)	1	
	14	Rear door switch No. 1 RH	D91 (D71)	1	



(): RHD MODELS

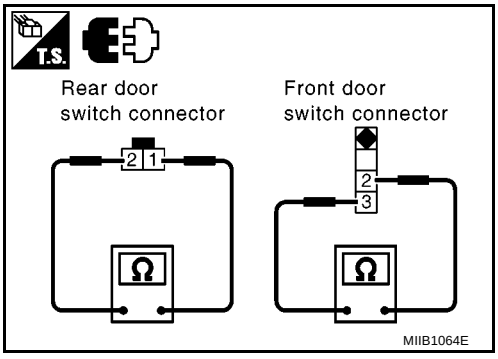
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch terminals.

Item	Terminals	Condition	Continuity
Door switches (front)	2 - 3	Open	Yes
		Closed	No
Door switches (rear upper and lower)	1 - 2	Open	Yes
		Closed	No



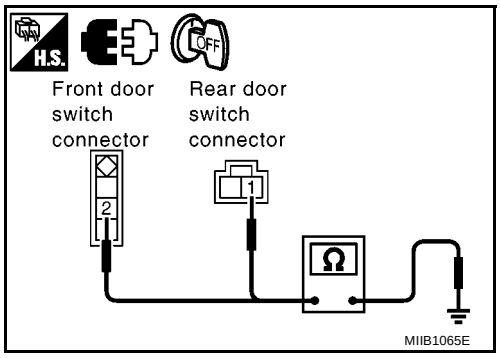
OK or NG

OK >> GO TO 4.
NG >> Replace door switch.

4. CHECK DOOR SWITCHES GROUND CIRCUIT

Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and ground.

Item	Connector	Terminals	Condition	
Front door switch LH	D74 (D94)	2	Ground	Continuity should not exist
Front door switch RH	D94 (D74)	2		
Rear door switch No. 2 LH	D72 (D92)	1		
Rear door switch No. 2 RH	D92 (D72)	1		
Rear door switch No. 1 LH	D71 (D91)	1		
Rear door switch No. 1 RH	D91 (D71)	1		



(): RHD MODELS

OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

Check Key Switch

EIS00DXC

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

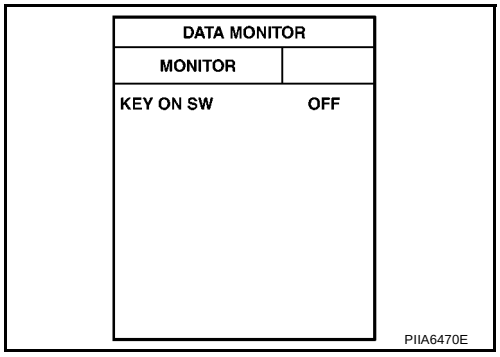
Check ignition key switch “KEY ON SW” in “DATA MONITOR” mode with CONSULT-II.

- When key is inserted in ignition key cylinder

  KEY ON SW : ON

- When key is removed from ignition key cylinder

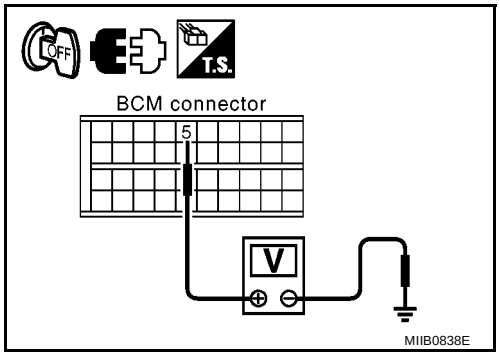
  KEY ON SW : OFF



Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition	Voltage [V] (Approx.)
M42	5	Ground	Key is removed from ignition key cylinder.	0
			Key is inserted in to ignition key cylinder.	Battery voltage



OK or NG

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

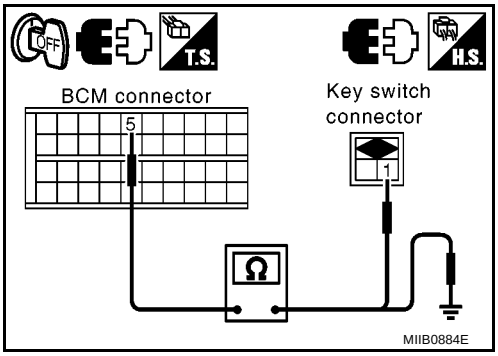
2. CHECK KEY SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and key switch connector.
3. Check continuity between BCM harness connector M42 terminal 5 and key switch harness connector M35 terminal 1.

5 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M42 terminal 5 and ground.

5 – Ground : Continuity should not exist.



OK or NG

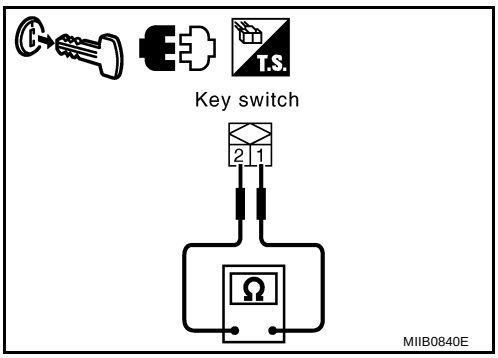
OK >> GO TO 3.

NG >> Repair or replace harness between key switch and BCM.

3. CHECK KEY SWITCH

Check continuity between key switch connector M35 terminals 1 and 2.

Terminals		Condition	Continuity
1	2	Key is removed from ignition key cylinder.	No
		Key is inserted in ignition key cylinder.	Yes



OK or NG

OK >> Check the following
- 10A fuse [No. 22, located in the fuse block (J/B)]
- Harness for open or short between key switch and fuse.

NG >> Replace key cylinder assembly.

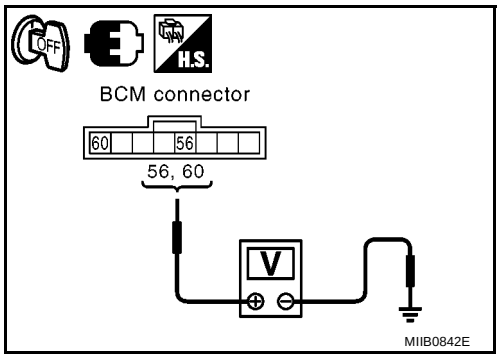
Check Front Door Lock Actuator (Driver Side)

EIS00DXE

1. CHECK OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition of door lock/unlock switch	Voltage [V] (Approx.)
M44	56	Ground	Locked	0 → Battery voltage → 0
	60		Unlocked	0 → Battery voltage → 0



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

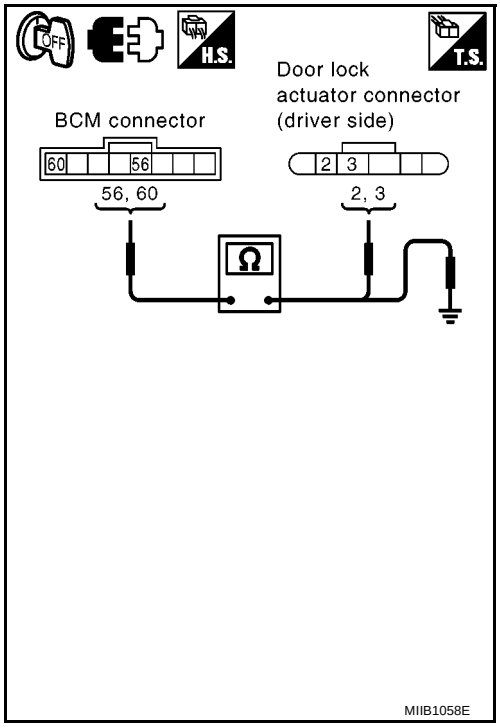
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect BCM connector and front door lock actuator (driver side) connector.
2. Check continuity between BCM connector M44 terminals 56, 60 and front door lock actuator (driver side) connector D10 terminals 2, 3.

56 – 3 : Continuity should exist.
60 – 2 : Continuity should exist.

3. Check continuity between BCM connector M44 terminals 56, 60 and ground.

56 – Ground : Continuity should not exist.
60 – Ground : Continuity should not exist.



OK or NG

OK >> Replace front door lock actuator (driver side).
NG >> Repair or replace harness.

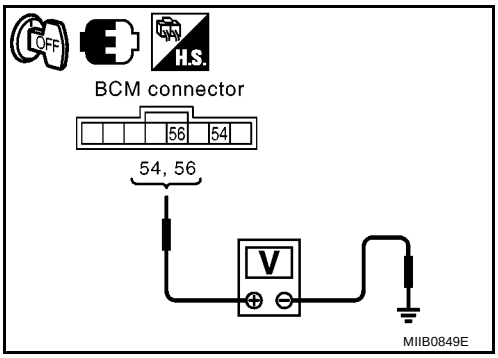
Check Front Door Lock Actuator (Passenger Side)

EIS00DXF

1. CHECK OUTPUT SIGNAL

1. Turn ignition OFF.
2. Check voltage between BCM connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition of door lock/unlock switch	Voltage [V] (Approx.)
M44	54	Ground	Unlocked	0 → Battery voltage → 0
	56		Locked	0 → Battery voltage → 0



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

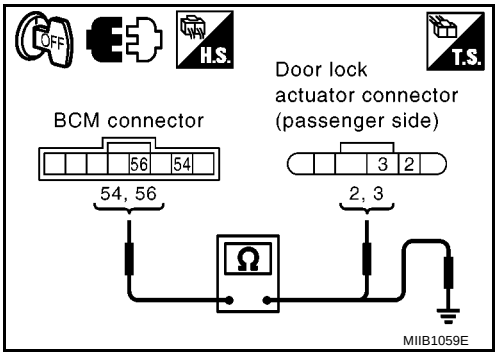
2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect BCM connector and front door lock actuator (driver side) connector.
2. Check continuity between BCM connector M44 terminals 54, 56 and front door lock actuator (passenger side) connector D39 terminals 2, 3.

54 – 2 : Continuity should exist.
56 – 3 : Continuity should exist.

3. Check continuity between BCM connector M44 terminals 54, 56 and ground.

54 – Ground : Continuity should not exist.
56 – Ground : Continuity should not exist.



OK or NG

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

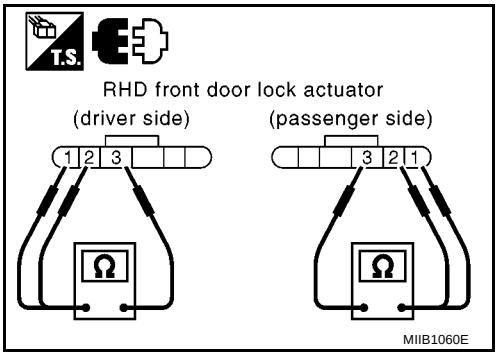
Check Front Door Lock Actuator Switch

EIS00DXG

1. CHECK FRONT DOOR LOCK ACTUATOR

Check continuity between front door lock actuator connectors D10 and D39 driver and/or passenger side terminals 1, 2 and 3.

Terminals		Condition of front door lock actuators	Continuity	
			Driver side	Passenger side
1	2	Neutral or Unlock	No	Yes
		Lock	Yes	No
3		Neutral or Lock	No	Yes
		Unlock	Yes	No



OK or NG

OK >> Check condition of harness and connector.
NG >> Replace front door lock actuators.

Check Rear Door Lock Actuator LH (Double Cab Models)

EIS00DXH

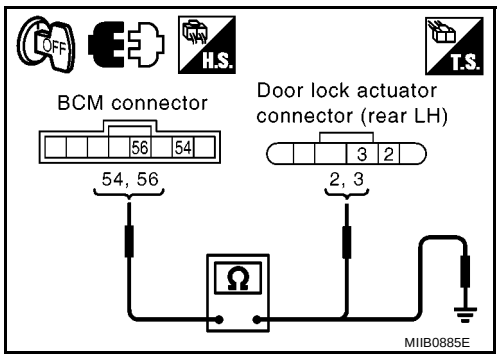
1. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator LH connector.
3. Check continuity between BCM connector M44 terminals 54, 56 and rear door lock actuator LH connector D65 terminals 2, 3.

   54 – 2 : Continuity should exist.
   56 – 3 : Continuity should exist.

4. Check continuity between BCM connector M44 terminals 54, 56 and ground.

   54 – Ground : Continuity should not exist.
   56 – Ground : Continuity should not exist.



OK or NG

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

Check Rear Door Lock Actuator RH (Double Cab Models)

EIS00DXI

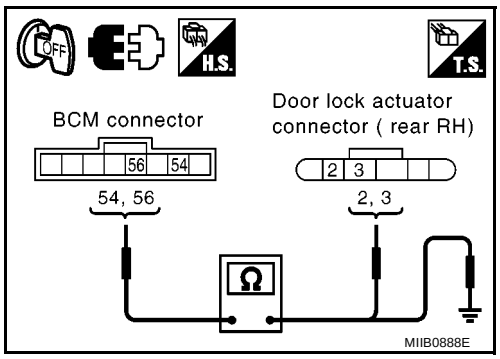
1. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator RH connector.
3. Check continuity between BCM connector M44 terminals 54, 56 and rear door lock actuator RH connector D85 terminals 2, 3.

   54 – 2 : Continuity should exist.
   56 – 3 : Continuity should exist.

4. Check continuity between BCM connector M44 terminals 54, 56 and ground.

   54 – Ground : Continuity should not exist.
   56 – Ground : Continuity should not exist.



OK or NG

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

Check RH and LH Rear Door Lock Actuator Switch (Double Cab Models)

EIS00DXJ

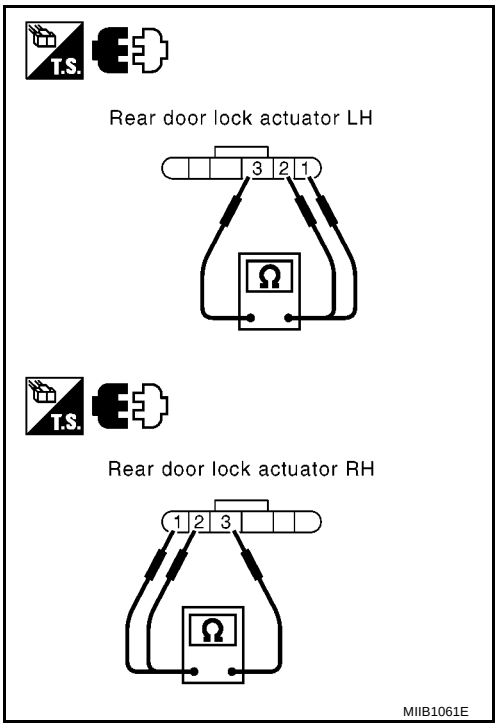
1. CHECK RH AND LH REAR DOOR LOCK ACTUATORS

Check continuity between rear door lock actuator RH connector D85 and rear door lock actuator LH connector D65, terminals 1, 2 and 3.

Terminals		Condition of rear door lock actuators	Continuity	
			Driver side	Passenger side
1	2	Neutral or Unlock	No	Yes
		Lock	Yes	No
3		Neutral or Lock	No	Yes
		Unlock	Yes	No

OK or NG

OK >> Check condition of harness and connector.
NG >> Replace rear door lock actuators.



Check Super Lock Actuator (Driver Side)

EIS00DXM

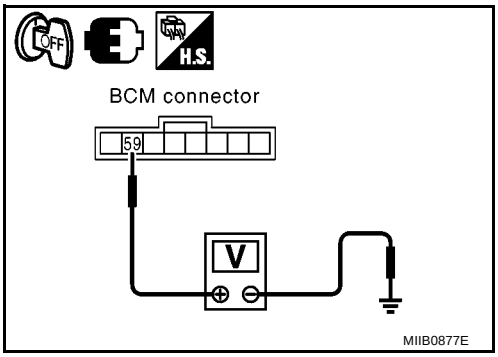
1. CHECK BCM OUTPUT SIGNAL

Check voltage between BCM harness connector and ground.

Connector	Terminal		Condition of keyfob	Voltage [V] (Approx.)
	(+)	(-)		
M44	59	Ground	Locked (set)	0 → Battery voltage → 0

OK or NG

OK >> GO TO 2.
NG >> Replace BCM.



2. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door lock actuator (driver side) connector.
3. Check continuity between BCM harness connector M44 terminal 59 and front door lock actuator (driver side) harness connector D10 terminal 1.

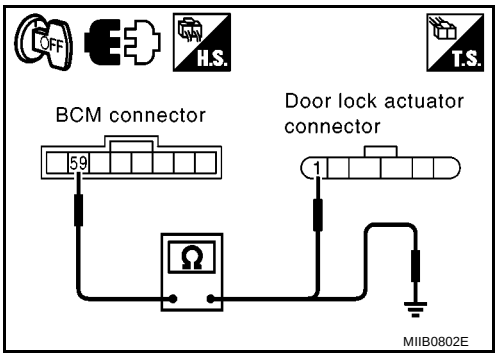
59 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M44 terminal 59 and ground.

59 – Ground : Continuity should not exist.

OK or NG

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



3. CHECK SUPER LOCK ACTUATOR

1. Reconnect BCM connector and front door lock actuator (driver side) connector.
2. Switch with a known-good front door lock actuator (driver side), and check if it operates normally.

OK or NG

OK >> Replace front door lock actuator (driver side).
NG >> Check the condition of the harness and the connector.

Check Super Lock Actuator (Passenger Side)

EIS00DXN

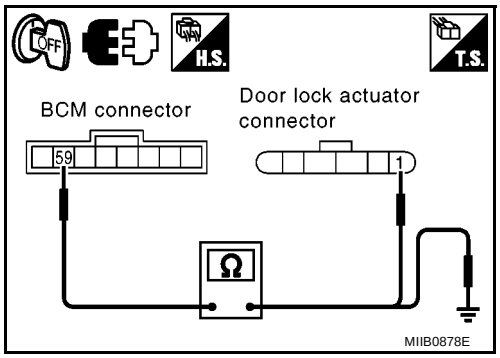
1. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door lock actuator (passenger side) connector.
3. Check continuity between BCM harness connector M44 terminal 59 and front door lock actuator (passenger side) harness connector D85 terminal 1.

59 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M44 terminal 59 and ground.

59 – Ground : Continuity should not exist.



OK or NG

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

2. CHECK SUPER LOCK ACTUATOR

1. Reconnect BCM connector and front door lock actuator (passenger side) connector.
2. Switch with a known-good front door lock actuator (passenger side), and check if it operates normally.

OK or NG

OK >> Replace front door lock actuator (passenger side).
NG >> Check the condition of the harness and the connector.

Check Super Lock Actuator (Rear LH)

EIS00DXO

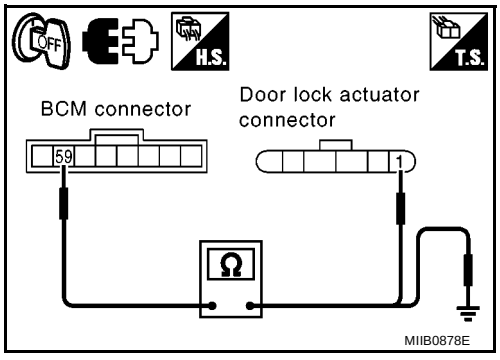
1. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator LH connector.
3. Check continuity between BCM harness connector M44 terminal 59 and rear door lock actuator LH harness connector D65 terminal 1.

59 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M44 terminal 6 and ground.

59 – Ground : Continuity should not exist.



OK or NG

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

2. CHECK SUPER LOCK ACTUATOR

1. Reconnect BCM connector and rear door lock actuator LH connector.
2. Switch with a known-good rear door lock actuator LH, and check if it operates normally.

OK or NG

OK >> Replace rear door lock actuator LH.
NG >> Check the condition of the harness and the connector.

Check Super Lock Actuator (Rear RH)

EIS00DXP

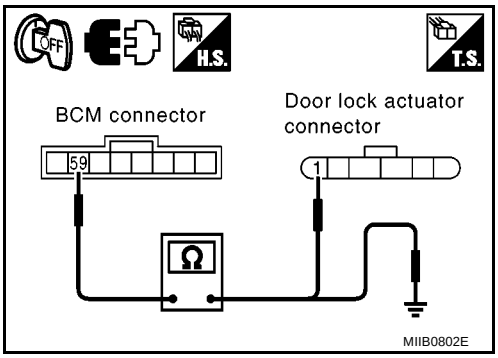
1. CHECK SUPER LOCK SET SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and rear door lock actuator RH connector.
3. Check continuity between BCM harness connector M44 terminal 59 and rear door lock actuator RH harness connector D85 terminal 1.

59 – 1 : Continuity should exist.

4. Check continuity between BCM harness connector M44 terminal 59 and ground.

59 – Ground : Continuity should not exist.



OK or NG

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

2. CHECK SUPER LOCK ACTUATOR

1. Reconnect BCM and rear door lock actuator RH connector.
2. Switch with a known-good rear door lock actuator RH, and check if it operates normally.

OK or NG

OK >> Replace rear door lock actuator RH.
NG >> Check the condition of the harness and the connector.

Check Door Lock/Unlock Switch

EIS00DXK

1. CHECK DOOR LOCK/UNLOCK SWITCH SIGNAL

With CONSULT- II

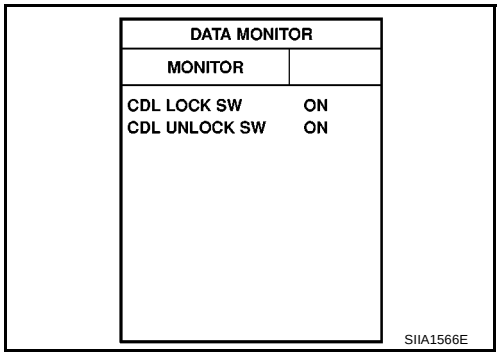
Check door lock/unlock switch input signal (“CDL LOCK SW” CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT-II

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

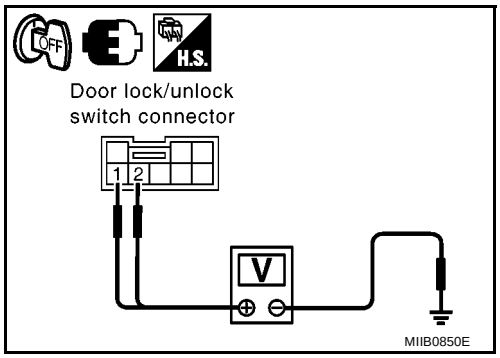
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

1. Turn ignition switch OFF.
2. Operate door lock/unlock switch, check voltage between BCM connector and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M52	1	Ground	Lock	0
			Neutral / Unlock	5
	2		Unlock	0
			Neutral / Lock	5



OK or NG

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

2. CHECK DOOR LOCK/UNLOCK SWITCH CIRCUIT

1. Disconnect BCM connector and door lock/unlock switch connector.
2. Check continuity between BCM connector M42 terminals 32, 34 and door lock/unlock switch connector M52 terminals 1, 2.

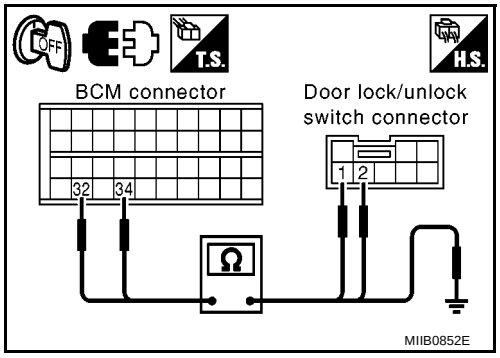
32 – 2 : Continuity should exist.

34 – 1 : Continuity should exist.

3. Check continuity between BCM connector M42 terminals 32, 34 and ground.

32 – Ground : Continuity should not exist.

34 – Ground : Continuity should not exist.



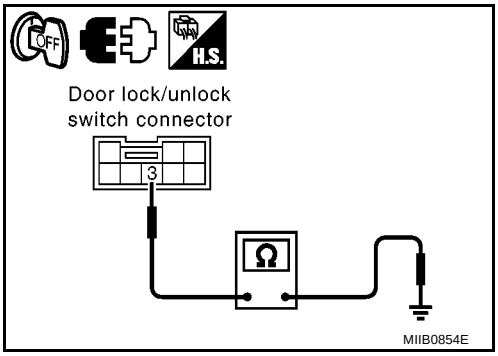
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between door lock/unlock switch connector M52 terminal 3 and ground.

3 – Ground : Continuity should exist.



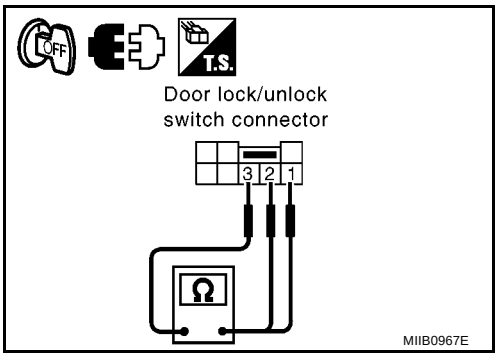
OK or NG

OK >> GO TO 4.
NG >> Replace harness.

4. CHECK DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Check continuity between door lock/unlock switch terminals 1, 2 and 3.

Terminals		Condition	Continuity
1	3	Lock	YES
		Neutral / Unlock	NO
2		Unlock	YES
		Neutral / Lock	NO



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace door lock/unlock switch.

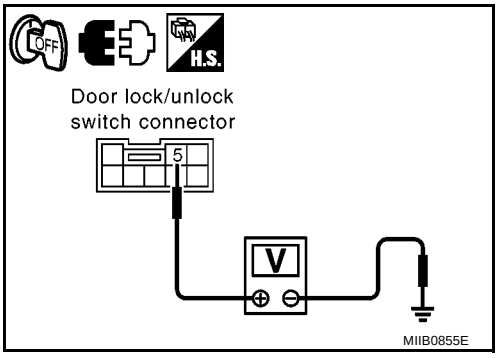
Check Door Lock/Unlock Switch Indicator

EIS00DXL

1. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR SIGNAL

Operate door lock/unlock switch, check voltage between door lock/unlock switch connector M52 terminal 5 and ground.

5 – Ground : Approx. 5V



OK or NG

OK >> GO TO 2.
NG >> Replace BCM.

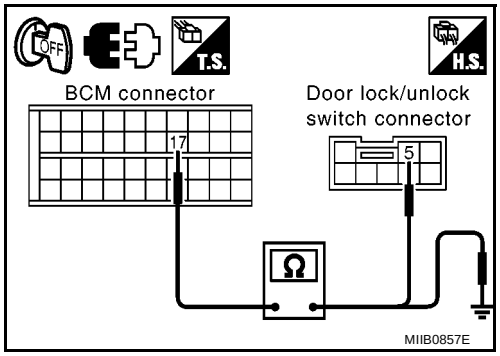
2. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR CIRCUIT

1. Turn ignition switch OFF
2. Disconnect BCM connector and door lock/unlock switch connector.
3. Check continuity between BCM connector M42 terminal 17 and door lock/unlock switch connector M52 terminal 5.

17 – 5 : Continuity should exist.

4. Check continuity between BCM connector M42 terminal 17 and ground.

17 – Ground : Continuity should not exist.



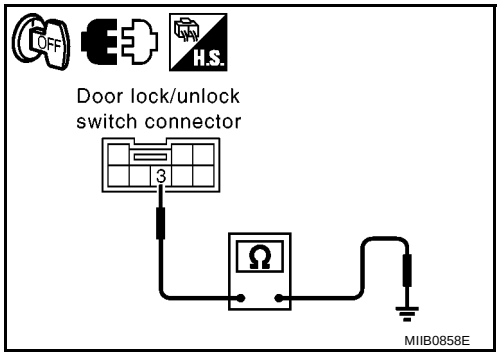
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between door lock/unlock switch connector M52 terminal 3 and ground.

3 – Ground : Continuity should exist.



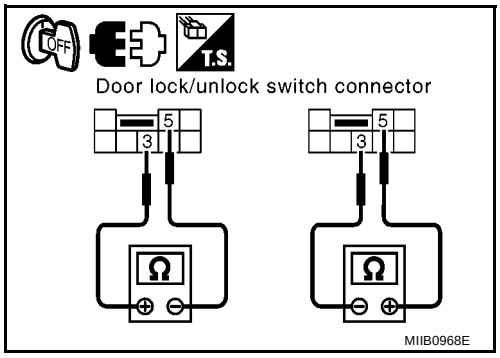
OK or NG

OK >> GO TO 4.
NG >> Replace harness.

4. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR

Check continuity between door lock/unlock switch indicator harness connector B52 terminal 3 and 5.

Terminals		Continuity
(+)	(-)	
3	5	Yes
5	3	No



OK or NG

OK >> Check condition of harness and connector.
NG >> Replace door lock/unlock switch.

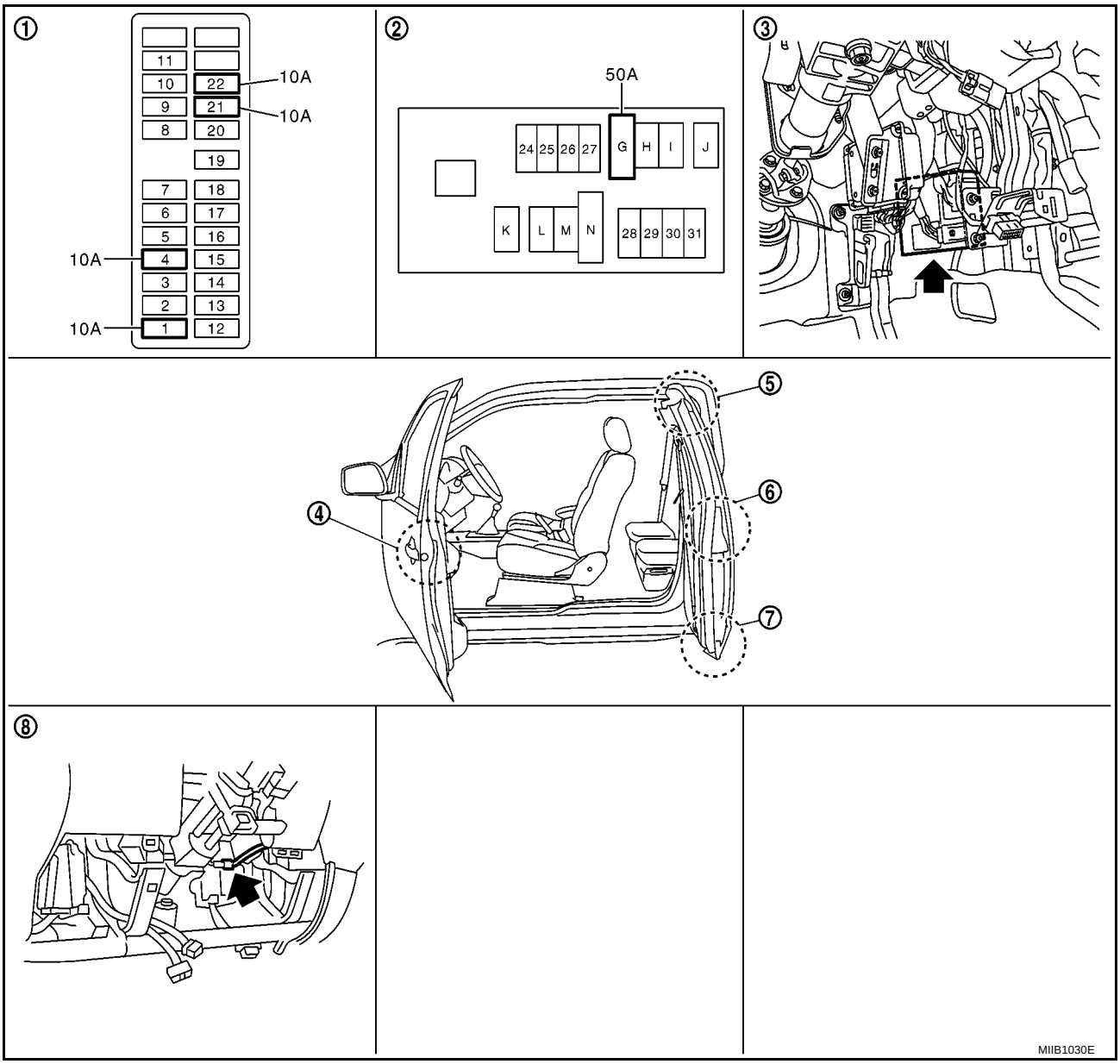
MULTI-REMOTE CONTROL SYSTEM

PFP:25362

Component Parts and Harness Connector Location

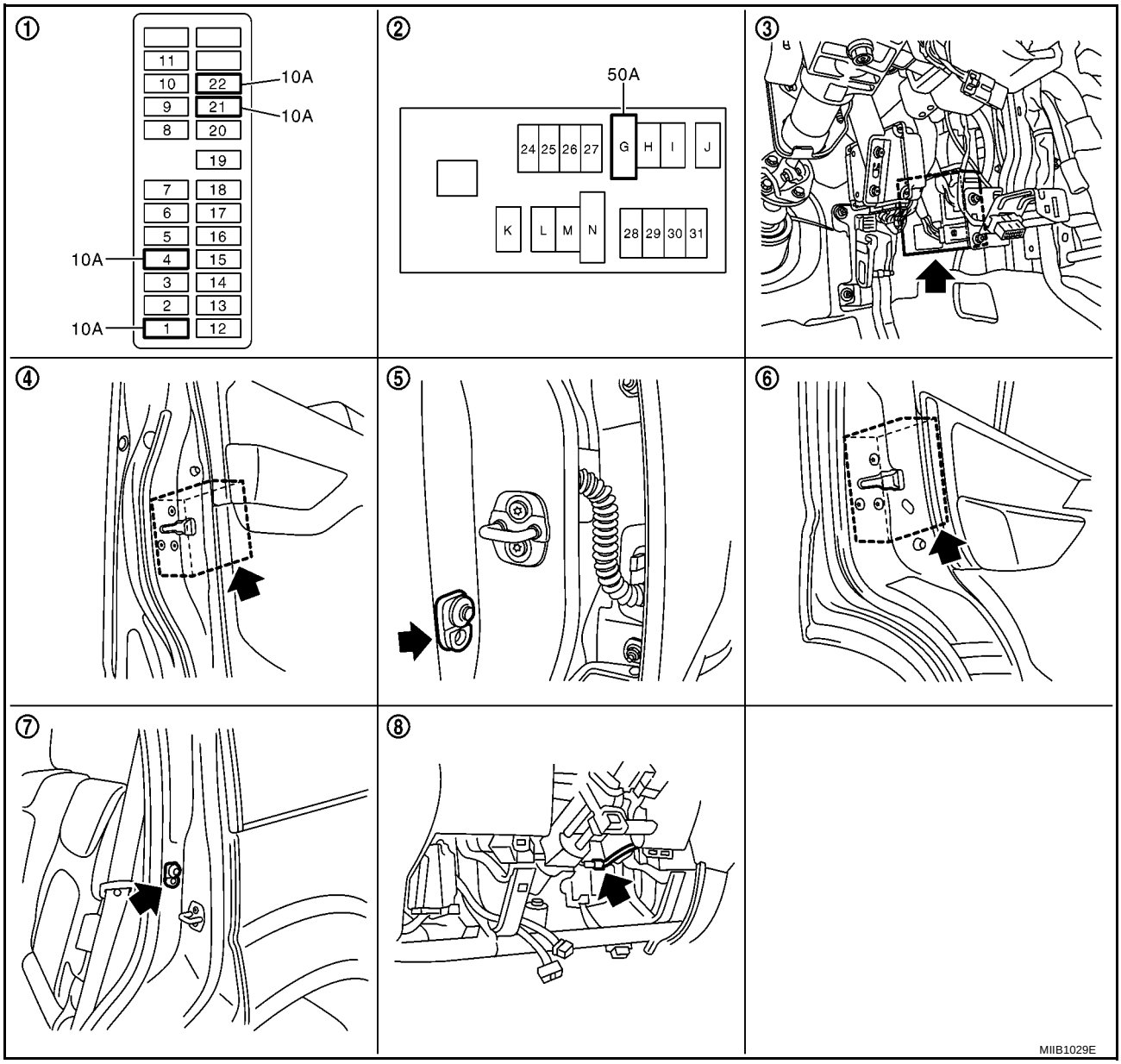
EIS00DBD

KING CAB



1. Fuse block (J / B) fuse layout
2. Fuse and fusible link box
3. BCM M42, M43, M44 (View with instrument lower panel LH removed)
4. Front door lock actuator (Driver side) D74
5. Rear door switch NO.2 (LH) D72
6. Front door switch (Driver side) D94
7. Rear door switch NO.1 (LH) D71
8. Key switch M35

DOUBLE CAB



1. Fuse block (J / B) fuse layout
2. Fuse and fusible link box
3. BCM M42, M43, M44 (View with instrument lower panel LH removed)
4. Front door lock actuator (Driver side) D10
5. Front door switch (Driver side) B19
6. Rear door lock actuator (LH) D65
7. Rear door switch (LH) B23
8. Key switch M35

System Description

EIS00DBE

INPUTS

Power is supplied at all times

- to BCM terminal 57
- through 50A fusible link (letter **G** , located in the fuse and fusible link box).
- to BCM terminal 41
- through 10A fuse [No. 21, located in the fuse block (J/B)].

When the key switch is ON (key is inserted in ignition key cylinder), power is supplied

- to BCM terminal 5
- through key switch terminals 2 and 1
- through 10A fuse [No. 22, located in the fuse block (J/B)].

When the ignition switch is ACC or ON, power is supplied

- to BCM terminal 4
- through 10A fuse [No. 4, located in the fuse block (J/B)].

When the ignition switch is ON or START, power is supplied

- to BCM terminal 3
- through 10A fuse [No. 1, located in the fuse block (J/B)].

When the front door switch (driver side) is ON (door is OPEN), ground is supplied

- to BCM terminal 15
- through front door switch (driver side) terminal 2
- to front door switch (driver side) case ground.

When the front door switch (passenger side) is ON (door is OPEN), ground is supplied

- to BCM terminal 14
- through front door switch (passenger side) terminal 2
- to front door switch (passenger side) case ground.

When the rear door switch LH is ON (door is OPEN), ground is supplied

- to BCM terminal 16
- through rear door switch LH terminal 2
- to rear door switch LH case ground.

When the rear door switch RH is ON (door is OPEN), ground is supplied

- to BCM terminal 12
- through rear door switch RH terminal 2
- to rear door switch RH case ground.

The multi-remote control system controls operation of the

- power door lock
- interior lamp and ignition keyhole illumination
- hazard reminder
- auto door lock operation

OPERATING PROCEDURE

Power Door Lock Operation

BCM receives a LOCK signal from keyfob. BCM locks all doors with input of LOCK signal from keyfob.
When an UNLOCK signal is sent from keyfob once, driver's door is unlocked.
Then, if an UNLOCK signal is sent from keyfob again within 5 seconds, all doors are unlocked.

Hazard Reminder

When the doors are locked or unlocked by keyfob, power is supplied to hazard warning lamp.
Hazard reminder does not operate if any door switches are ON (any doors are OPEN).

How to change hazard and horn reminder mode

Hazard and horn reminder can be changed using “WORK SUPPORT” mode in “MULTI ANSWER BACK SET”.
Refer to BL-102, "CONSULT-II Function (BCM)" .

Auto Re-lock Function

The BCM is equipped with an auto re-lock function, when no further user action occurs after an full or partial unlock, the doors will automatically re-lock after 2 minutes (default value).
The auto re-lock function will not be activated under the following state.

- Key switch is On
- Mechanical key is inserted
- Any door is opened

NOTE:
The 2 minutes timer of auto re-lock will be reset if unlock button from the key fob is pressed.
Auto relock function can be changed using “WORK SUPPORT” mode in “AUTO LOCK SET”.
Refer to BL-104, "Work Support" .

Room Lamp Operation

When the following conditions are met:

- condition of room lamp switch is DOOR position;
- door switch OFF (when all the doors are closed);

With input of UNLOCK signal from keyfob multi-remote control system turns on interior lamp (for 30 seconds).

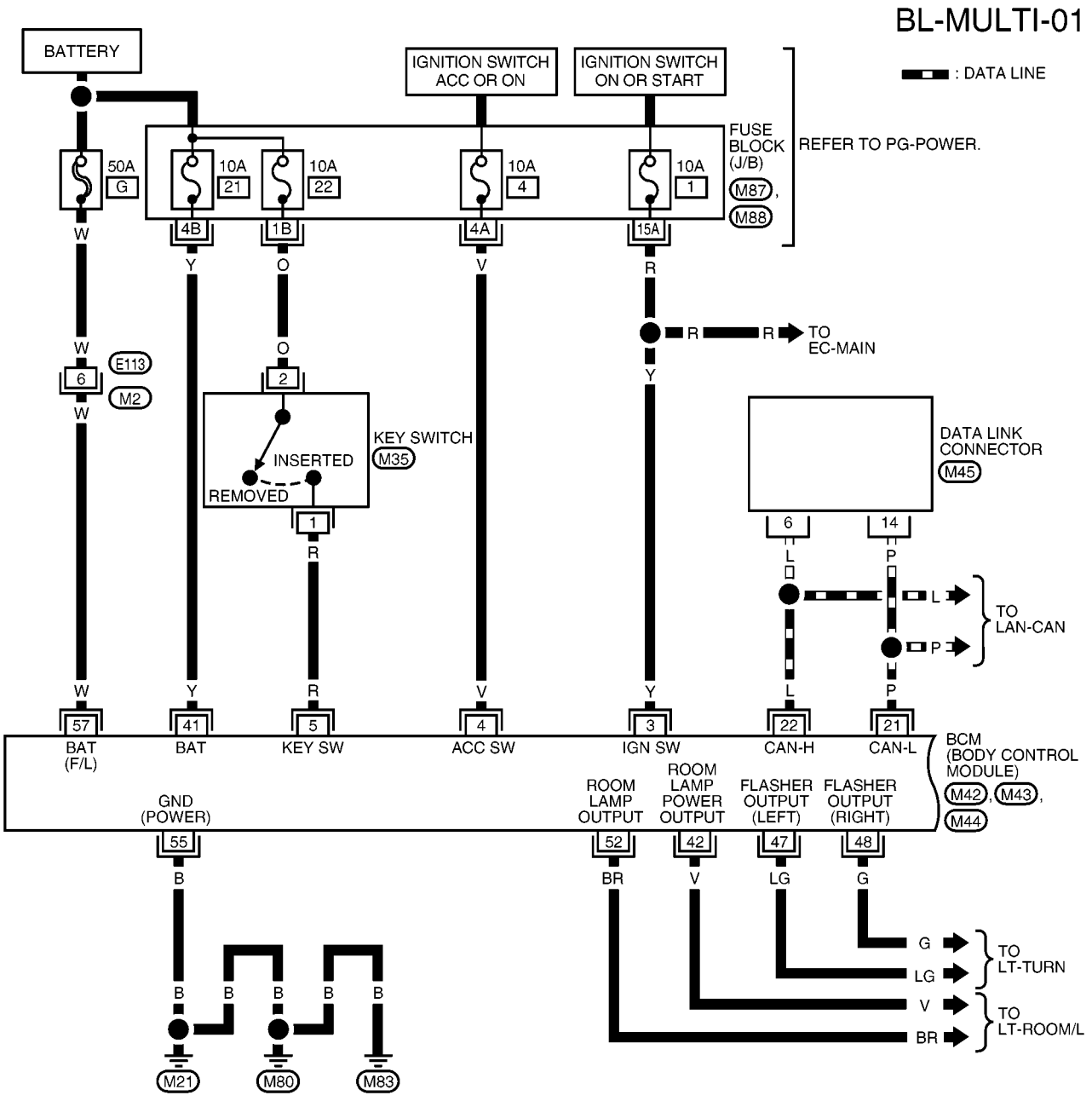
CAN Communication System Description

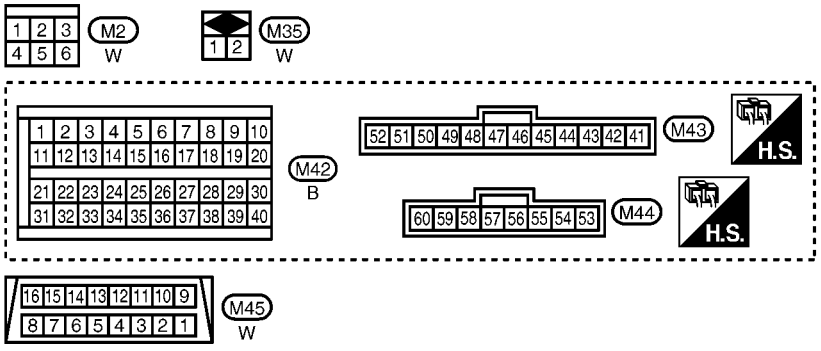
EIS00DBF

Refer to LAN-23, "CAN COMMUNICATION" .

Wiring Diagram — MULTI — For LHD Models

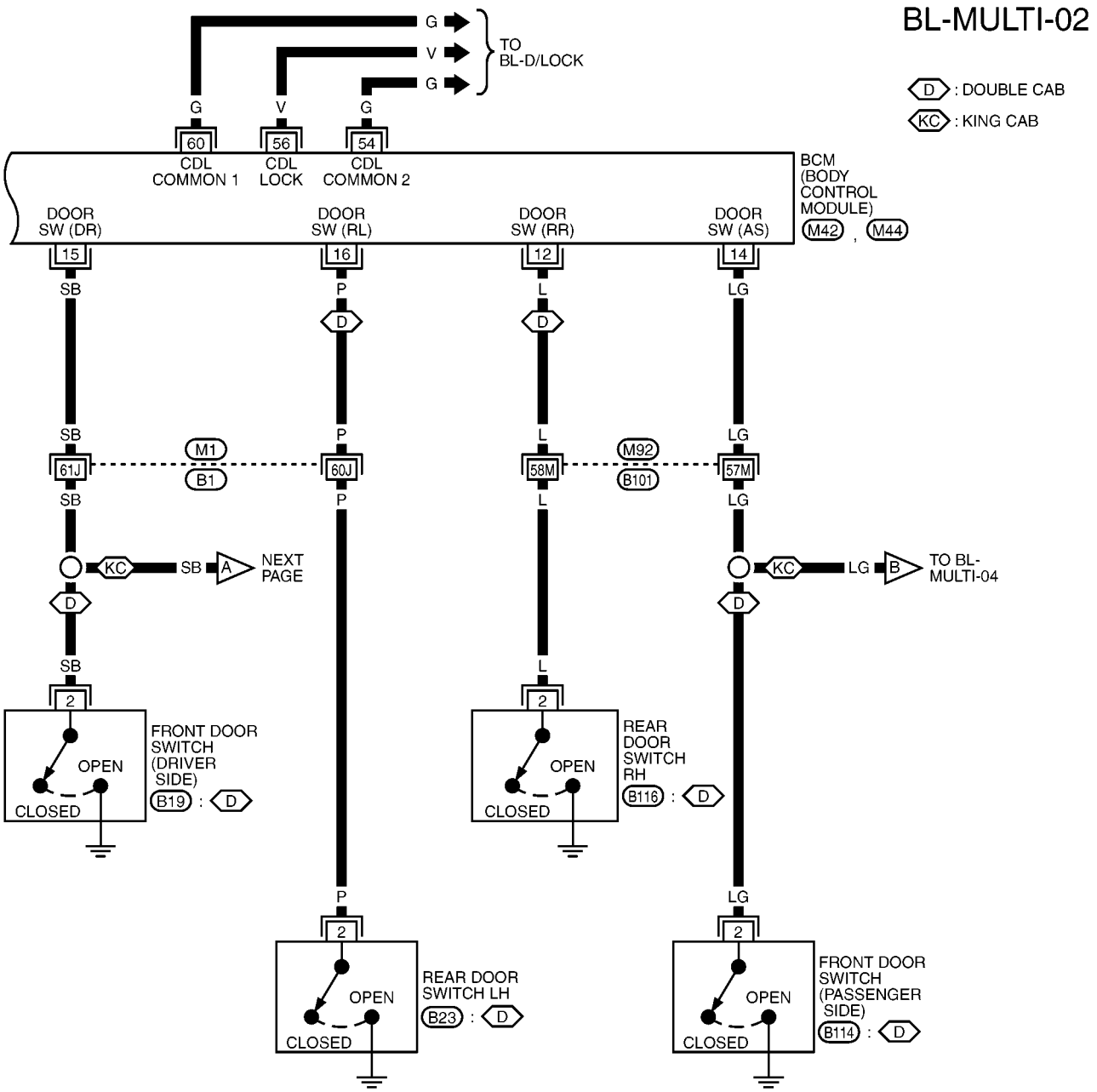
EIS00DBG

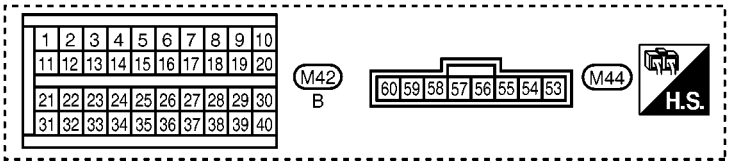


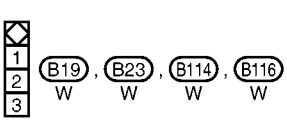


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

MIWA0214E



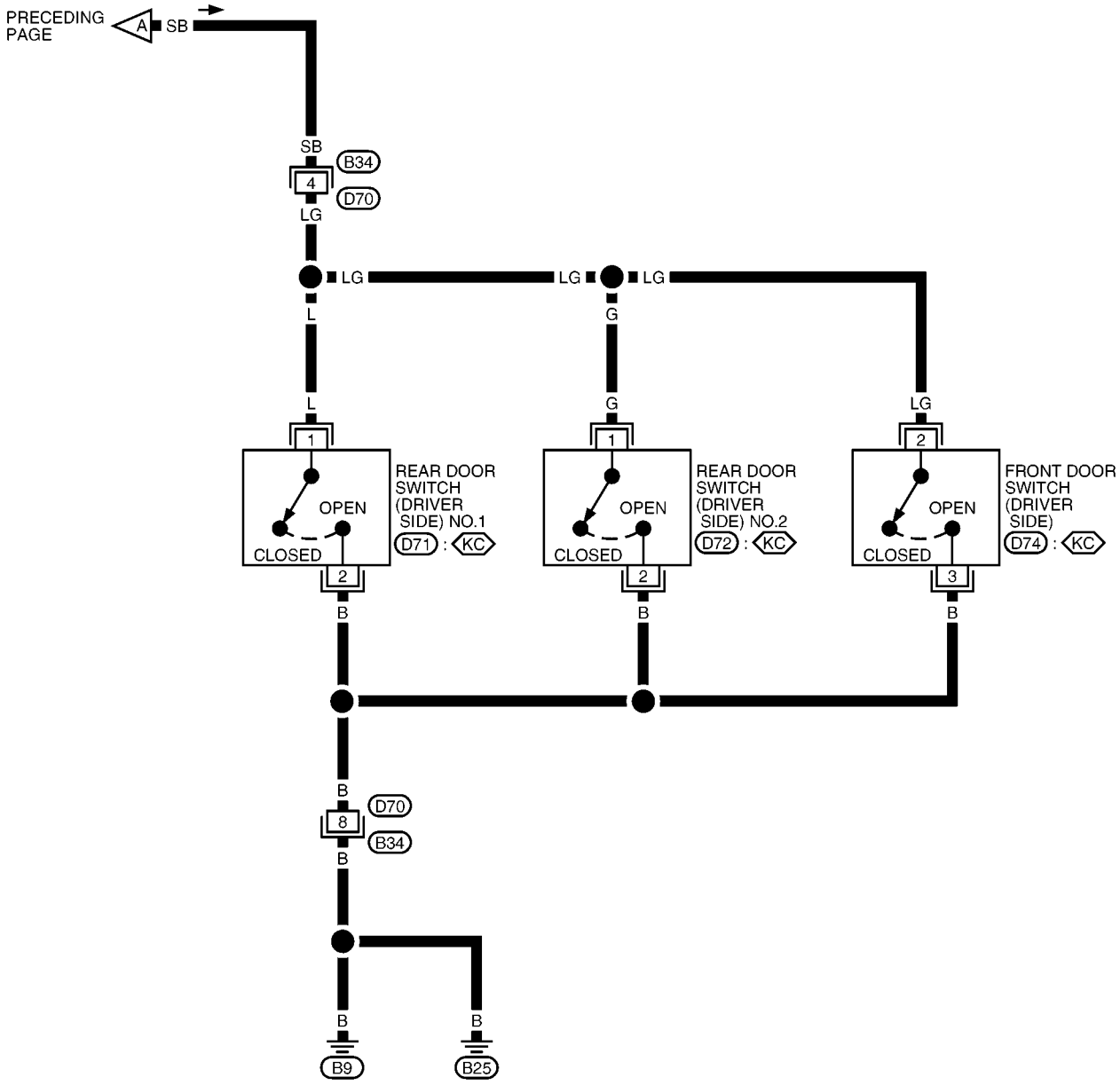


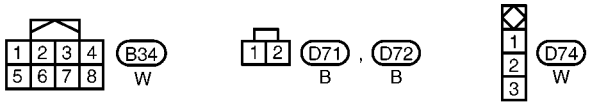


REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0466E

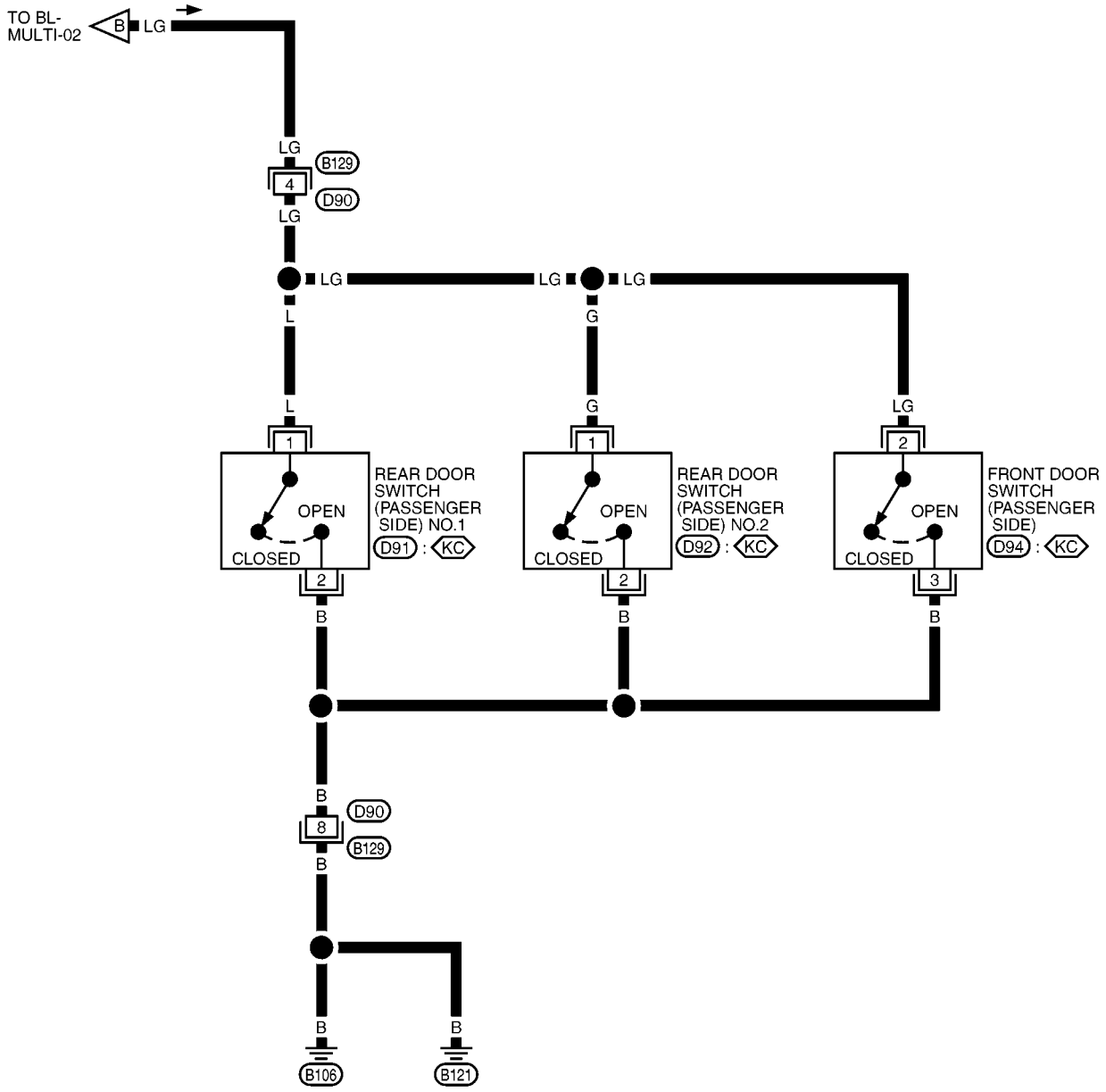
BL-MULTI-03

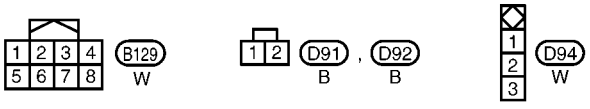




MIWA0529E

BL-MULTI-04

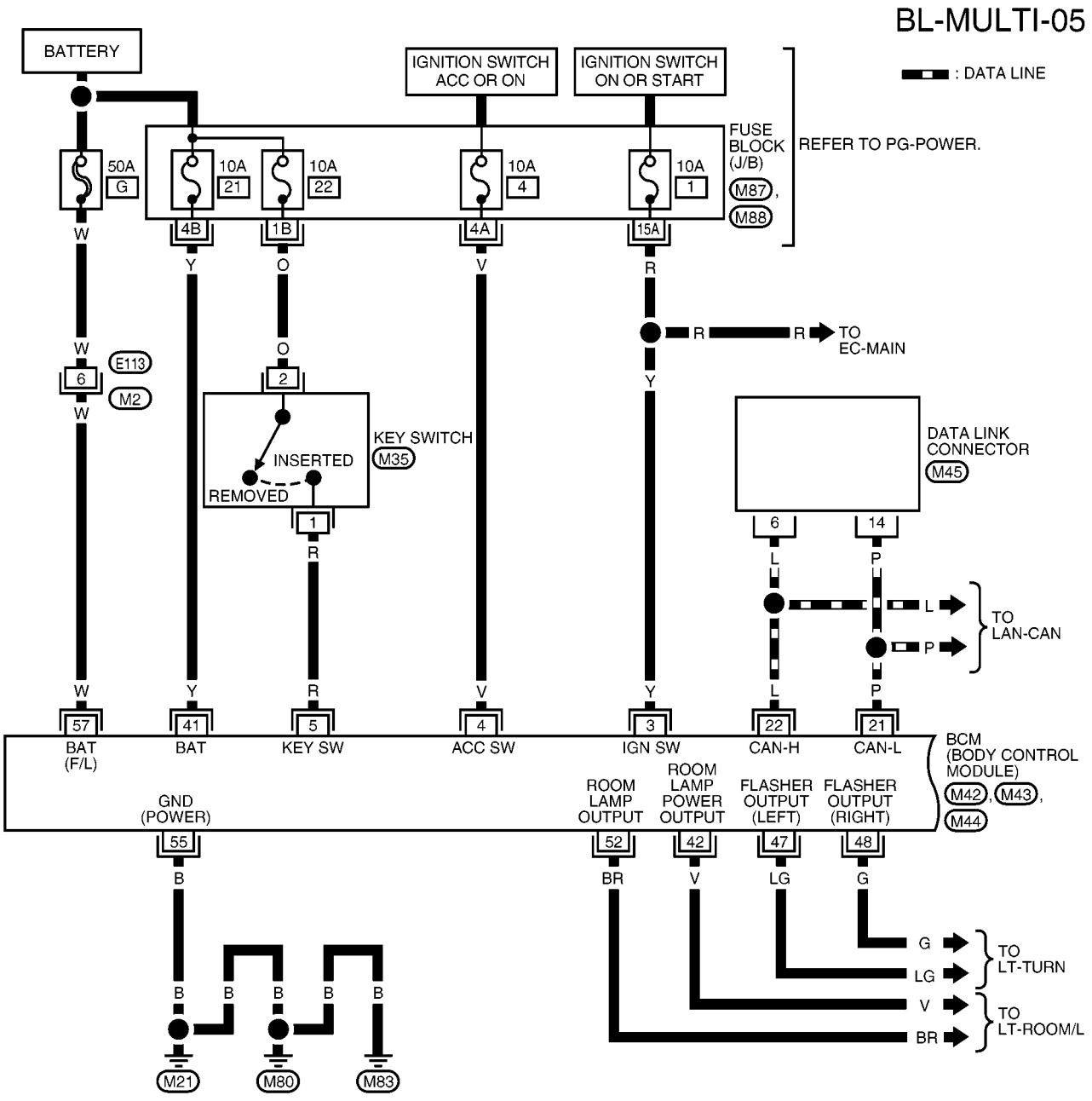


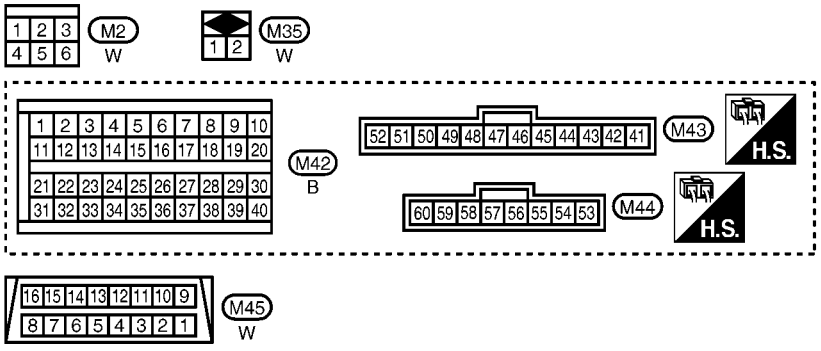


MIWA0530E

Wiring Diagram — MULTI — For RHD Models

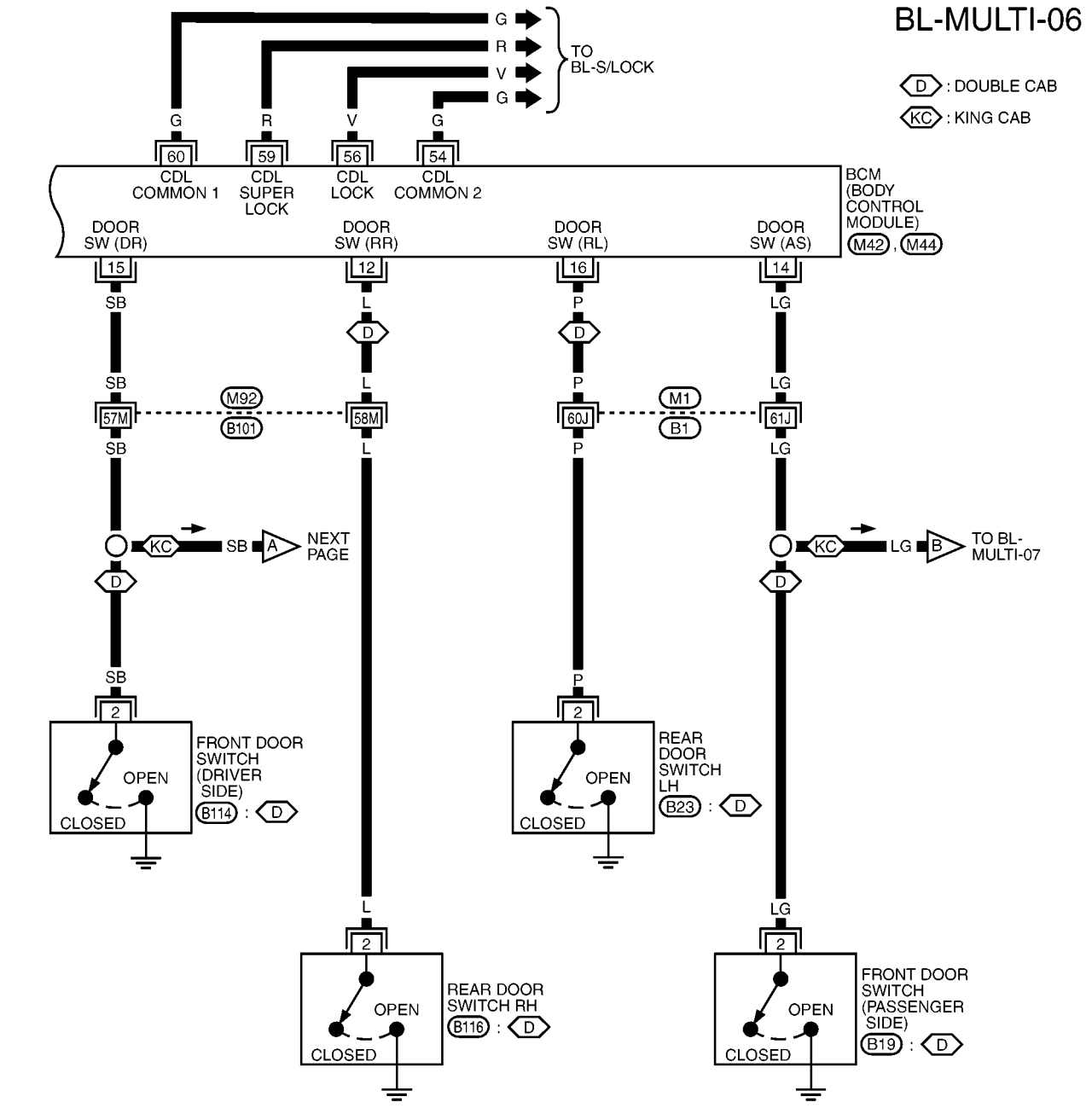
EIS00DBH

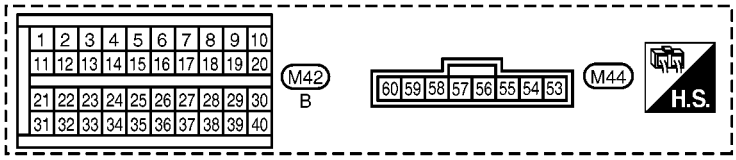


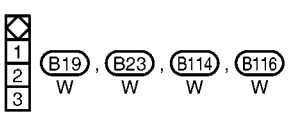


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

MIWA0537E



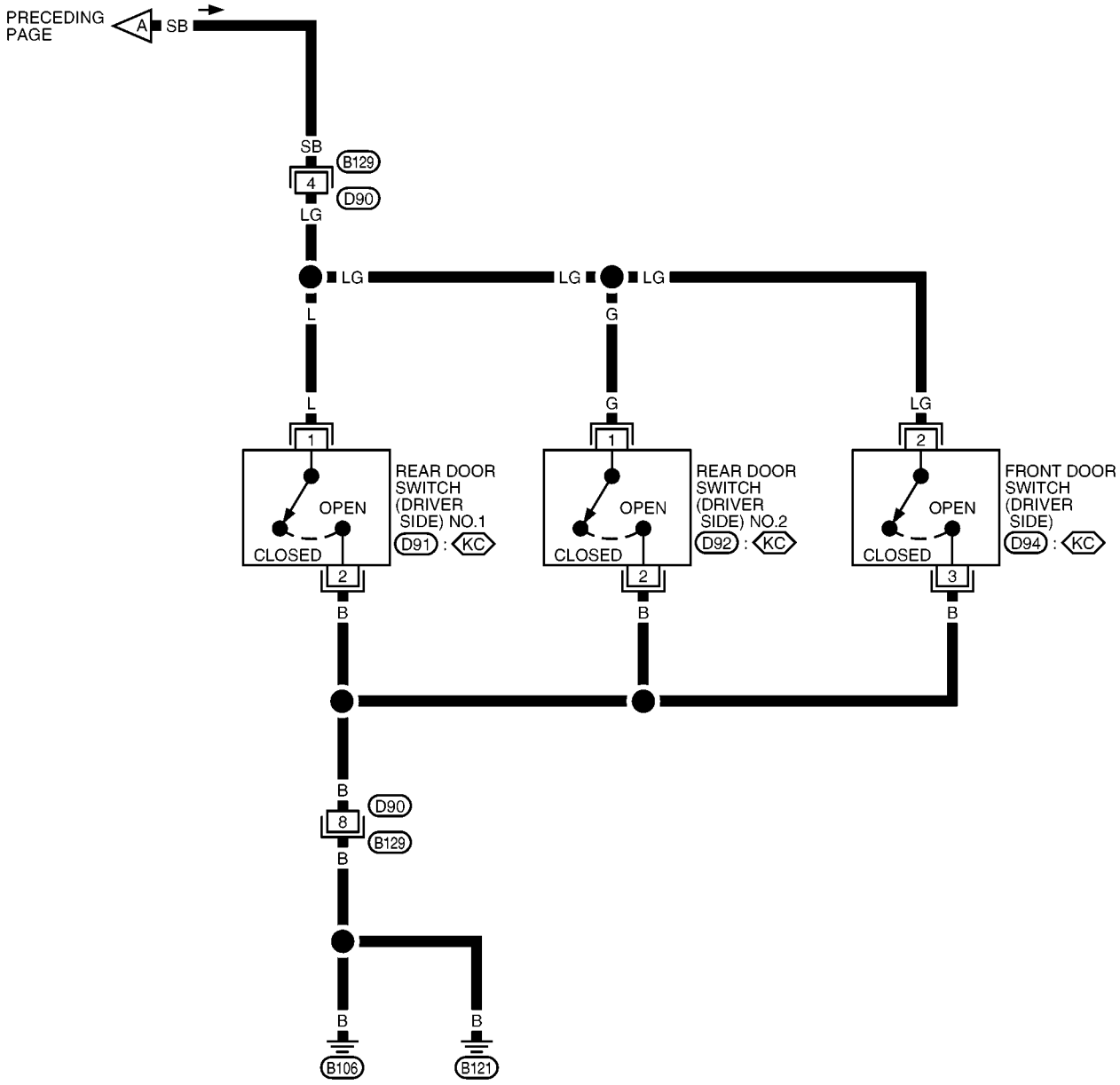


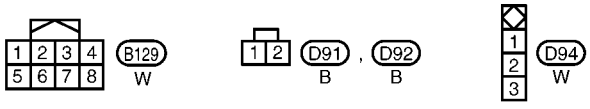


REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0468E

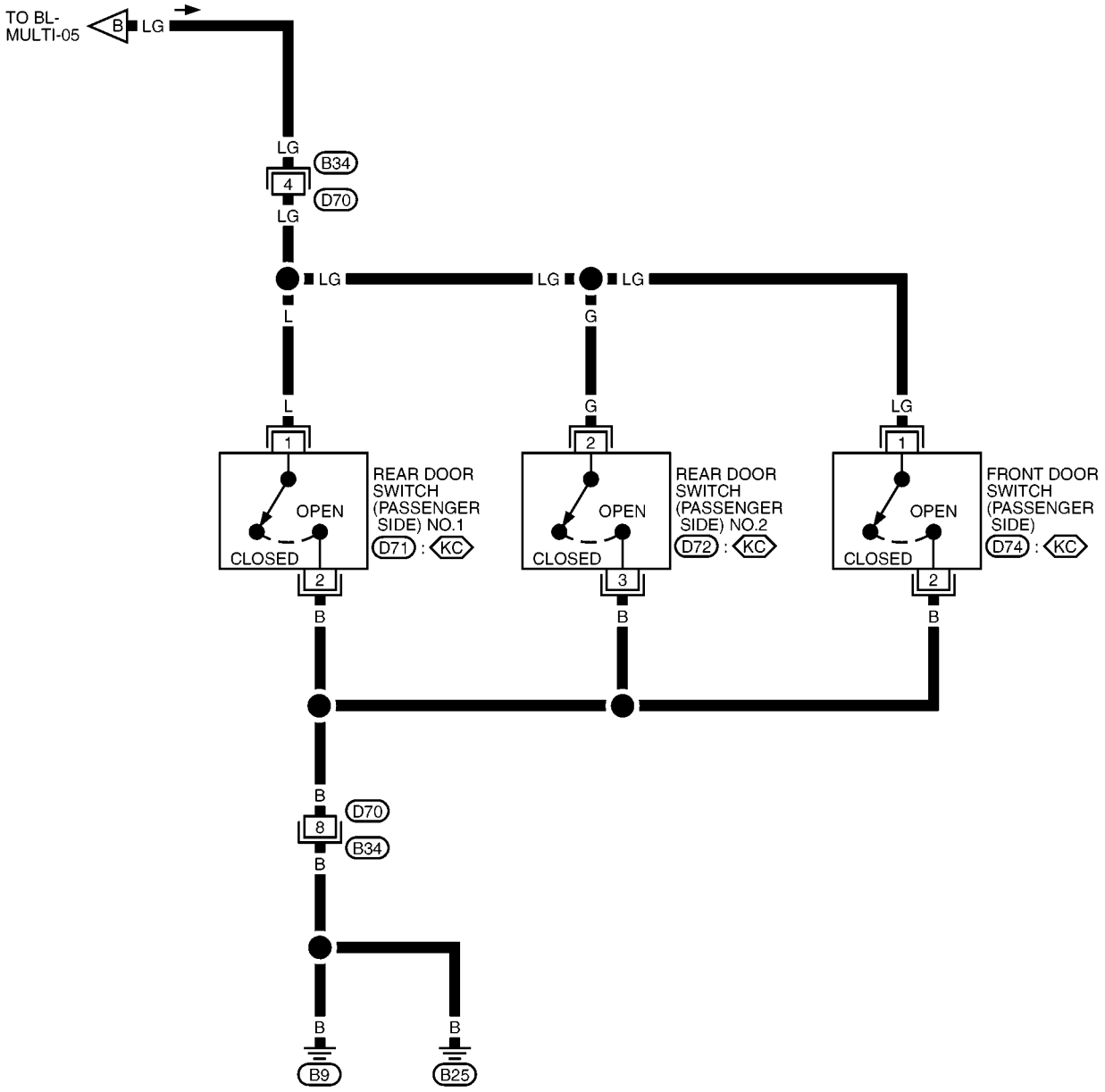
BL-MULTI-07

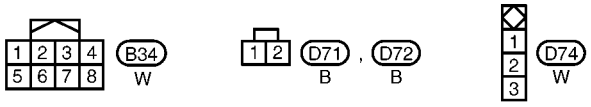




MIWA0531E

BL-MULTI-08





MIWA0532E

Terminals and Reference Value for BCM

EIS00DBI

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
3	Y	Ignition switch ON or START	Ignition switch ON or START	Battery voltage
4	V	Ignition switch ACC or ON	Ignition switch ACC or ON	Battery voltage
5	R	Key switch	ON (Key is inserted in key cylinder)	Battery voltage
			OFF (Key is removed from key cylinder)	0
12*	L	Rear door switch RH	ON (door open)	0
			OFF (door closed)	Battery voltage
14	LG	Front door switch (Passenger side)	ON (door open)	0
			OFF (door closed)	Battery voltage
15	SB	Front door switch (Driver side)	ON (door open)	0
			OFF (door closed)	Battery voltage
16*	P	Rear door switch LH	ON (door open)	0
			OFF (door closed)	Battery voltage
21	P	CAN L	—	—
22	L	CAN H	—	—
41	Y	Power source (Fuse)	—	Battery voltage
55	B	Ground	—	0
57	W	Power source (Fusible link)	—	Battery voltage

*: Double cab models

CONSULT-II Function (BCM)

EIS00DBJ

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

BCM diagnostic test item	Diagnostic mode	Description
MULTI REMOTE ENT	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II Inspection Procedure

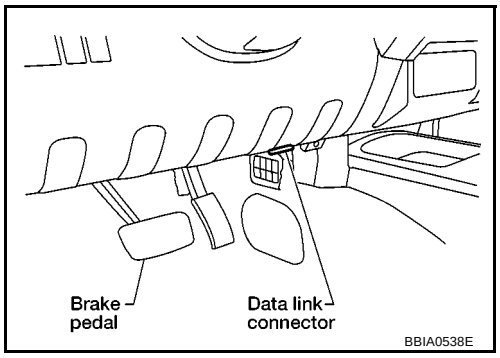
EIS00DBK

"MULTI REMOTE ENT"

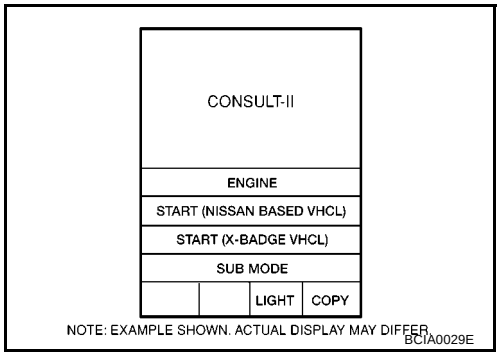
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

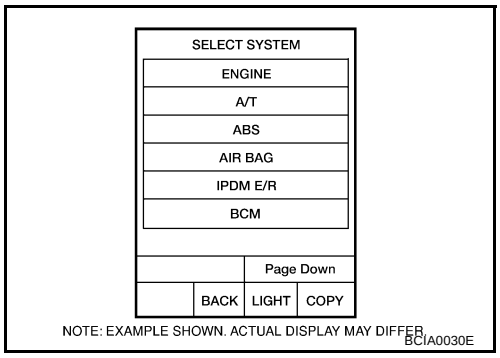
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



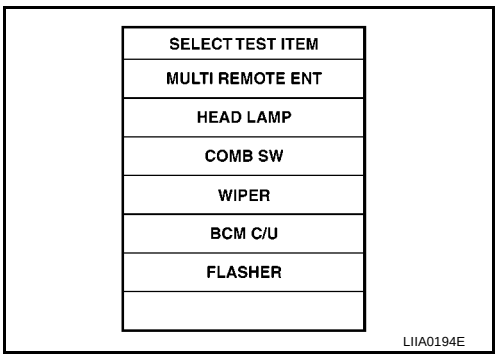
3. Turn ignition switch ON.
4. Touch "START (NISSAN BASED VHCL)".



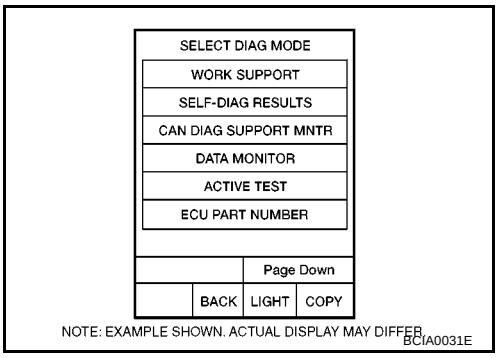
5. Touch "BCM".
   If "BCM" is not indicated, refer to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “MULTI REMOTE ENT”.



7. Select diagnosis mode.
“DATA MONITOR”, “ACTIVE TEST” and “WORK SUPPORT” are available.



CONSULT-II Application Items
“MULTI REMOTE ENT”

EIS00DBL

Data Monitor

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEYLESS PANIC	This is display even when it is not equipped.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
RKE LCK-UNLCK	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock signal from keyfob.
TRNK OPEN MNTR	This is display even when it is not equipped.

Active Test

Test Item	Description
FLASHER	This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when “RH” on CONSULT-II screen is touched and the left hazard lamp turns on when "LH" on CONSULT-II screen is touched.
DOOR LOCK	This test is able to check door lock operation. The doors lock and unlock based on the item on CONSULT-II screen is touched.

Work Support

Test Item	Description
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
HAZARD LAMP SET	Hazard lamp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
HAZARD LAMP SET	Hazard reminder mode can be changed in this mode. The hazard reminder mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.

HORN CHIRP SET

Horn chirp function	ON	OFF

HAZARD LAMP SET

	MODE1	MODE2	MODE3	MODE4
Hazard lamp operation mode	Nothing	Unlock only	Lock only	Lock and Unlock

AUTO LOCK SET

	MODE 1	MODE 2	MODE 3
Auto locking function	1 minutes	Nothing	5 minutes

Trouble Diagnosis Procedure

EIS00DBM

1. Check the trouble symptom and customer's requests.
2. Understand outline of system. Refer to BL-91, "System Description" .
3. Confirm the power door lock system operates normally.
   Refer to BL-21, "POWER DOOR LOCK SYSTEM" .
4. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-105, "Trouble Diagnosis Chart by Symptom" .
5. Inspection End.

Trouble Diagnosis Chart by Symptom

EIS00DBN

NOTE:

- Always check the “Trouble Diagnosis Procedure” before troubleshooting. Refer to BL-104, "Trouble Diagnosis Procedure" .
- Always check keyfob battery before replacing keyfob. Refer to BL-116, "Remote Controller Battery Replacement" .

Symptom	Diagnoses/service procedure	Reference page
All function of remote multi-remote control system do not operate.	1. Check keyfob battery and function.	BL-106
	2. Replace keyfob. Refer to ID Code Entry Procedure. **NOTE:** If the result of keyfob function with CONSULT-II is OK, keyfob is not malfunctioning.	BL-115
	3. Replace BCM.	BCS-17
The new ID of keyfob cannot be registered.	1. Check keyfob battery and function.	BL-106
	2. Check key switch.	BL-113
	3. Check door switch.	BL-108
	4. Check ACC switch.	BL-107
	5. Replace keyfob. Refer to ID Code Entry Procedure. **NOTE:** If the result of keyfob function with CONSULT-II is OK, keyfob is not malfunctioning.	BL-115
	6. Replace BCM.	BCS-17
Door lock or unlock does not function with keyfob. (Power door lock system is “OK”.)	1. Check keyfob battery and function.	BL-106
	2. Replace keyfob. Refer to ID Code Entry Procedure. **NOTE:** If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-115
	3. Replace BCM.	BCS-17
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder is “OK”.)	1. Check hazard reminder mode.* *: Hazard reminder mode can be changed. First check the hazard reminder setting.	BL-102
	2. Check hazard function.	BL-114
	3. Replace BCM.	BCS-17
Auto door lock operation does not activate properly. (All other remote multi-remote control system function is OK.)	1. Check auto door lock operation mode.* *: Auto door lock operation mode can be changed. First check the auto door lock operation setting.	BL-102
	2. Replace BCM.	BCS-17
Map lamp and ignition keyhole illumination operation does not activate properly.	1. Check map lamp and ignition keyhole illumination operation.	BL-114
	2. Check door switch.	BL-108
	3. Replace BCM.	BCS-17

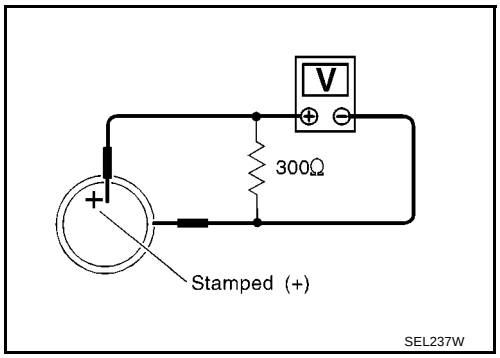
Check Keyfob Battery and Function

EIS00DBO

1. CHECK KEYFOB BATTERY

1. Remove keyfob battery. Refer to BL-116, "Remote Controller Battery Replacement" .
2. Measure voltage between battery positive and negative terminals, (+) and (–).

Voltage : 2.5 – 3.0V



NOTE:
Keyfob does not function if battery is not set correctly.

OK or NG

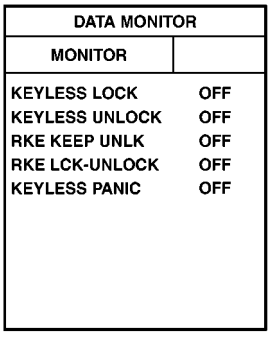
OK >> GO TO 2.
NG >> Replace battery.

2. CHECK KEYFOB FUNCTION

With CONSULT-II

Check keyfob function in “DATA MONITOR” mode with CONSULT-II. When pushing each button of keyfob, the corresponding monitor item should be turned as follows.

Condition	Monitor item	
Pushing LOCK	KEYLESS LOCK	: ON
Pushing UNLOCK	KEYLESS UNLOCK	: ON
Press and hold UNLOCK	RKE KEEP UNLK*	: ON
	*: Press and hold the unlock button for 3 seconds.	
Pushing LOCK and UNLOCK at the same time	RKE LCK-UNLOCK	: ON



OK or NG

OK >> Keyfob is OK.
NG >> Replace keyfob.

Check ACC Switch

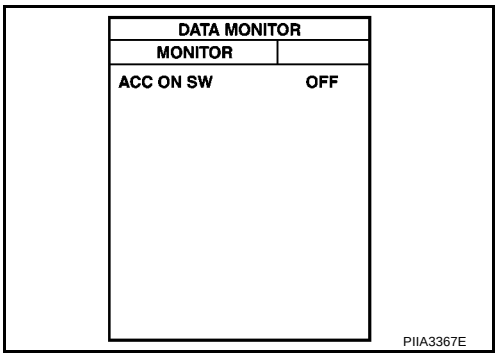
EIS00DBP

1. CHECK ACC SWITCH

With CONSULT-II

Check ACC switch (“ACC ON SW”) in “DATA MONITOR” mode with CONSULT-II.

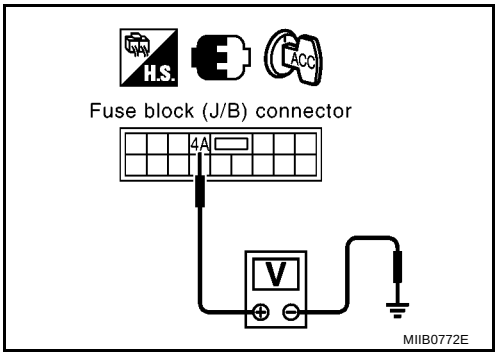
Monitor item	Condition	
ACC ON SW	Ignition switch position is ACC or ON	: ON
	Ignition switch position is OFF	: OFF



Without CONSULT-II

Check voltage between fuse block (J/B) connector and ground.

Connector	Terminal (+)	Terminal (–)	Ignition switch position	Voltage [V] (Approx.)
M88	4A	Ground	ACC	Battery voltage
			OFF	0



OK or NG

OK >> ACC switch is OK.

NG >> Check the following.

- 10A fuse [No. 4, located in the fuse block (J/B)]
- Harness for open or short between BCM and fuse block (J/B)

Check Door Switch

EIS00DBQ

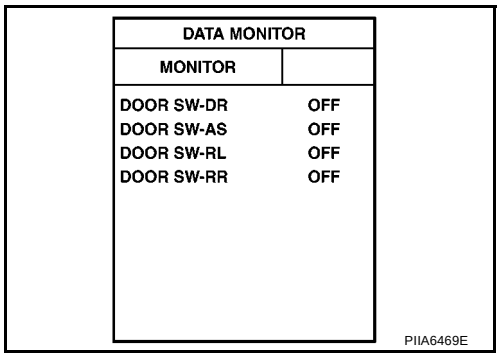
CHECK DOOR SWITCH (DOUBLE CAB)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition	DATA MONITOR
DOOR SW-DR	CLOSE ↓ OPEN	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		

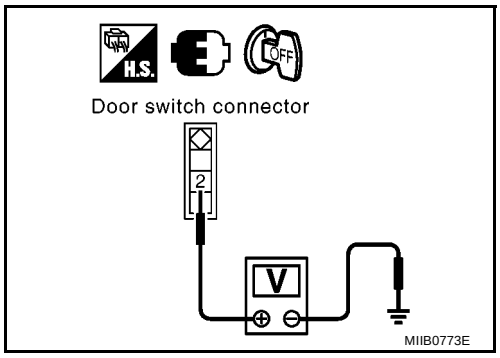


Without CONSULT-II

Check voltage between each door switch connector and ground.

Item	Connector	Terminals (+)	Terminals (-)	Door condition	Voltage [V] (Approx.)
Driver side	B19 (B114)	2	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

( ): RHD model



OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between door switch terminal 2 and ground part of door switch.

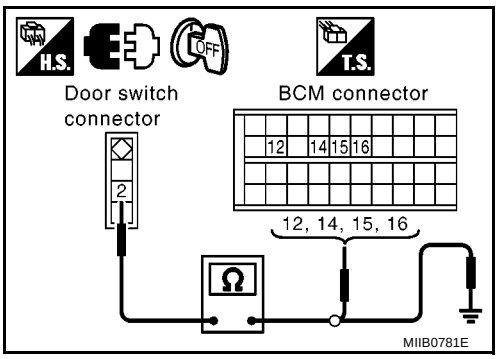
Terminal		Door switch condition	Continuity
2	Ground part of door switch	Pushed	No
		Released	Yes

OK or NG

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

3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch connector B19, B23, B114, B116 terminals 2 and BCM connector M42 terminals 12, 14, 15, 16.



Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	15	CLOSE to OPEN	Continuity should exist.
Rear LH	B23	2	16		
Passenger side	B114 (B19)	2	14		
Rear RH	B116	2	12		

(): RHD models

3. Check continuity between door switch connector B19, B23, B114, B116 terminal 2 and ground.

Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Continuity should not exist.
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

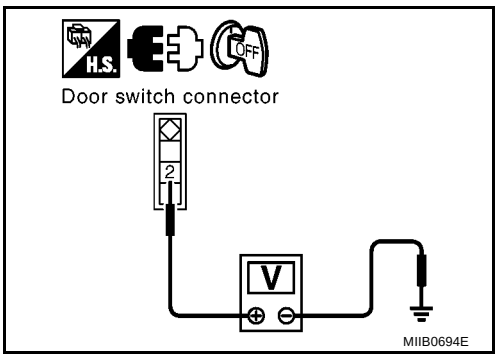
(): RHD models

OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between each door switch connector B19, B23, B114, B116 terminal 2 and ground.



Item	Connector	Terminals		Door condition	Voltage [V] (Approx.)
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Battery voltage
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

(): RHD models

OK or NG

OK >> Check harness condition or door switch installation condition.
NG >> Replace BCM.

CHECK DOOR SWITCH (KING CAB)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

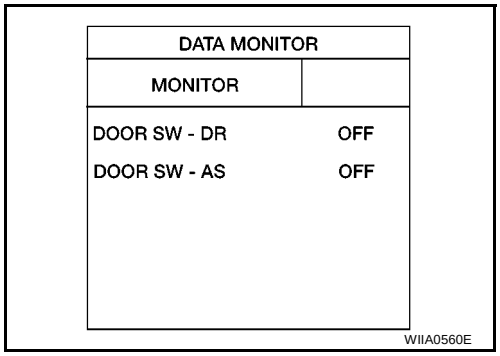
Check door switches (“DOOR SW-DR”, “DOOR SW-AS”) in DATA MONITOR mode with CONSULT-II. Refer to BL-103, "Data Monitor" .

- When any doors are open:

  DOOR SW-DR : OFF
  DOOR SW-AS : OFF

- When any doors are closed:

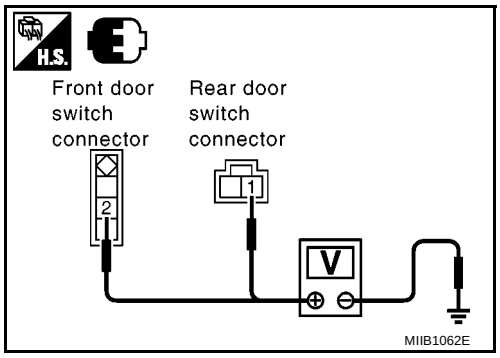
  DOOR SW-DR : OFF
  DOOR SW-AS : OFF



Without CONSULT-II

Check voltage between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminals 1, 2 and ground.

Item	Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
Front door switch LH	D74 (D94)	2	Ground	Open ↓ Closed	0 ↓ Battery voltage
Front door switch RH	D94 (D74)				
Rear door switch No.2 LH	D72 (D92)				
Rear door switch No.2 RH	D92 (D72)	1			
Rear door switch No.1 LH	D71 (D91)				
Rear door switch No.1 RH	D91 (D71)				



(): RHD MODELS

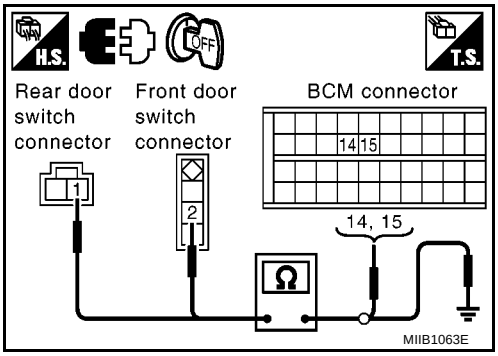
OK or NG

OK >> System is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and BCM connector M42 terminals 14, and 15.

Connector	Terminals	Item	Connector	Terminals	Condition
M42	15	Front door switch LH	D74 (D94)	2	Continuity should exist
	14	Front door switch RH	D94 (D74)	2	
	15	Rear door switch No. 2 LH	D72 (D92)	1	
	14	Rear door switch No. 2 RH	D92 (D72)	1	
	15	Rear door switch No. 1 LH	D71 (D91)	1	
	14	Rear door switch No. 1 RH	D91 (D71)	1	



(): RHD MODELS

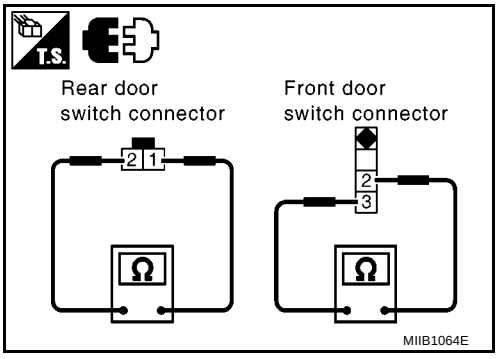
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch terminals.

Item	Terminals	Condition	Continuity
Door switches (front)	2 - 3	Open	Yes
		Closed	No
Door switches (rear upper and lower)	1 - 2	Open	Yes
		Closed	No



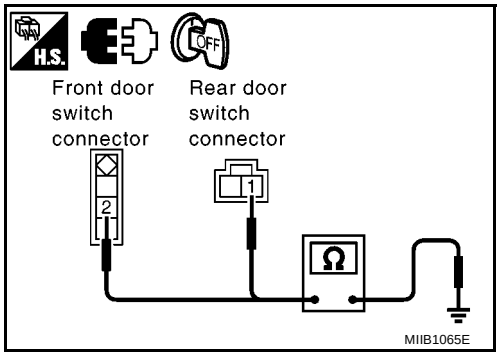
OK or NG

OK >> GO TO 4.
NG >> Replace door switch.

4. CHECK DOOR SWITCHES GROUND CIRCUIT

Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and ground.

Item	Connector	Terminals	Condition	
Front door switch LH	D74 (D94)	2	Ground	Continuity should not exist
Front door switch RH	D94 (D74)	2		
Rear door switch No. 2 LH	D72 (D92)	1		
Rear door switch No. 2 RH	D92 (D72)	1		
Rear door switch No. 1 LH	D71 (D91)	1		
Rear door switch No. 1 RH	D91 (D71)	1		



(): RHD MODELS

OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

Check Key Switch

EIS00DBR

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

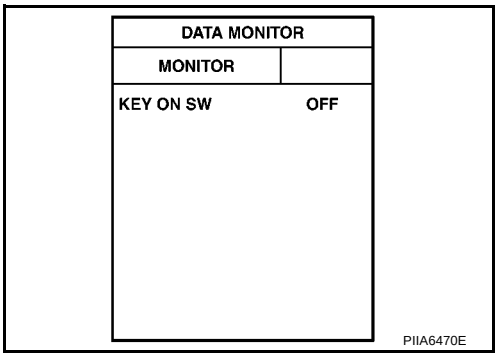
Check ignition key switch “KEY ON SW” in “DATA MONITOR” mode with CONSULT-II.

- When key is inserted in ignition key cylinder

  KEY ON SW : ON

- When key is removed from ignition key cylinder

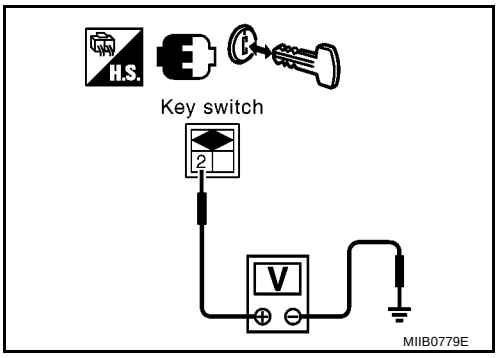
  KEY ON SW : OFF



Without CONSULT-II

Check voltage between key switch connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition of key switch	Voltage [V] (Approx.)
M35	2	Ground	Key is inserted in ignition key cylinder.	Battery voltage
			Key is removed from ignition key cylinder.	0



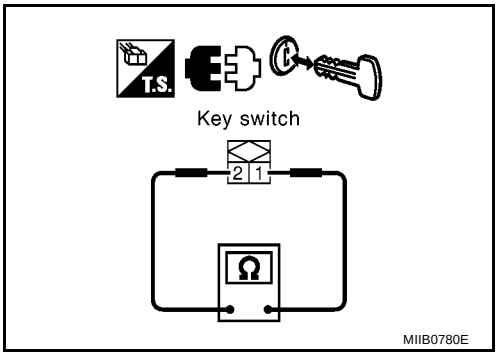
OK or NG

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

2. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch connector.
3. Check continuity between key switch terminals 1 and 2.

Key switch condition	Continuity
Key switch is “ON”. (Key is inserted in IGN key cylinder.)	Yes
Key switch is “OFF”. (Key is removed from IGN key cylinder.)	No



OK or NG

OK >> Check the following.
- 10A fuse [No. 22, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between BCM and key switch

NG >> Replace key switch.

Check Hazard Function

EIS00DBS

1. CHECK HAZARD WARNING LAMP

Does hazard warning lamp flash while hazard switch is pressed?

YES or NO

YES >> Hazard warning lamp circuit is OK.
NO >> Check hazard circuit. Refer to LT-97, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Map Lamp and Ignition Keyhole Illumination Function

EIS00DBT

1. CHECK MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

When map lamp switch is in “DOOR” position, open the front door (LH or RH).

Map lamp and ignition keyhole illumination should illuminate.

OK or NG

OK >> Map lamp and ignition switch key hole illumination circuit is OK.
NG >> Check ignition illumination circuit. Refer to LT-145, "INTERIOR ROOM LAMP" .

ID Code Entry Procedure

EIS00DBU

KEYFOB ID SET UP

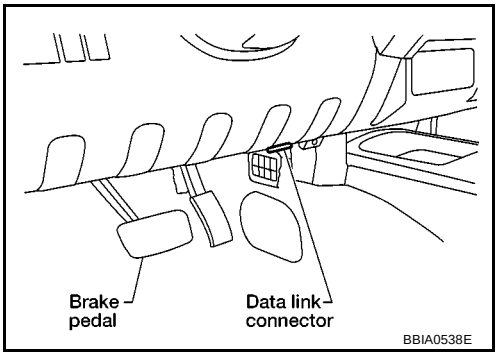
NOTE:
Keyfob ID setup procedure is same as ignition key registration (NATS initialization) procedure.
When the registration of the ignition key (NATS initialization) is performed with a NATS program card, the registration of keyfob ID is done at the same time.
Regarding the procedures of NATS initialization and ignition key ID registration, refer to CONSULT-II operation manual, NATS.
If additional key or key replacement is demanded, request all registed key fobs to be brought to the dealer.
During the NATS initialization process, all registered key IDs will be deleted, thus, it is necessary to re-register all keys.

CONSULT-II INSPECTION PROCEDURE

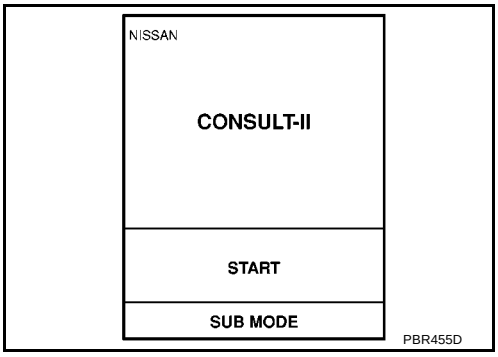
1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.

   Program card : NATS (AEN04A-1)

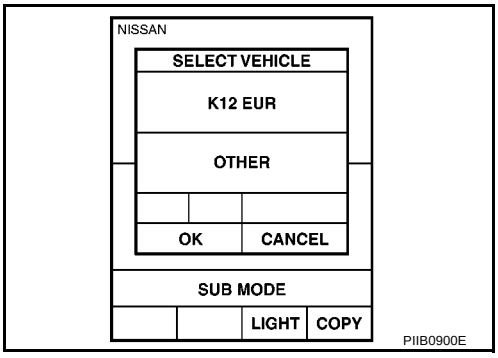
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



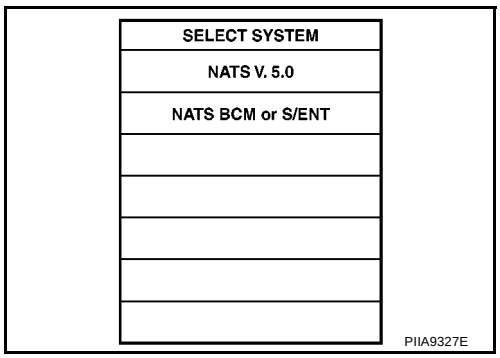
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch “OTHER”.

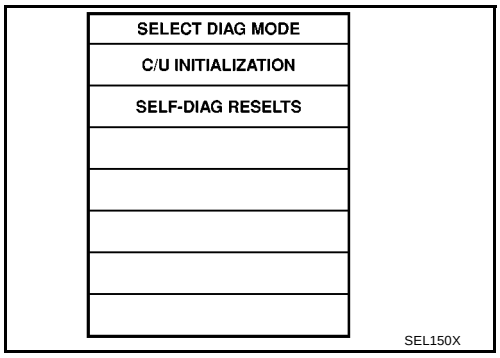


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



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

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



Remote Controller Battery Replacement

EIS00DBV

1. Remove installation screw(5) on the rear of remote controller.
2. Place the key with the lower housing(4) facing up. Set a screwdriver A wrapped with tape into illustration of the lower housing (4) and separate the lower housing(4) from the upper housing(1).

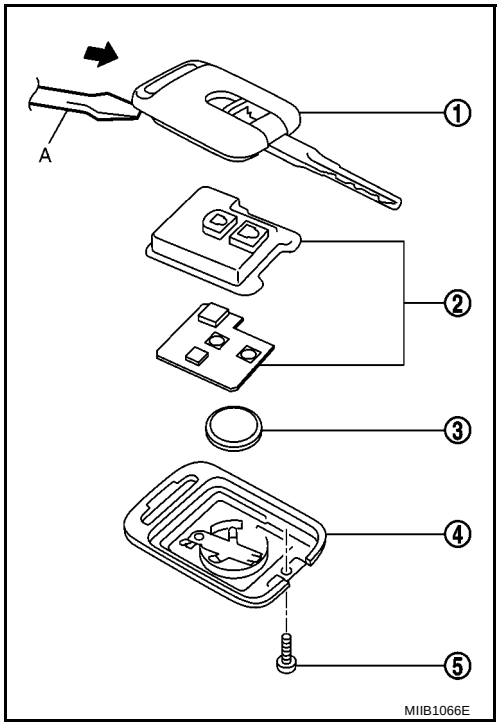
   CAUTION:
   Please use only a small slotted screwdriver A for opening the key housing.
3. When replacing the circuit board assembly, remove circuit board assembly(2) from the upper housing(1).
   (Circuit board assembly(2): Switch rubber + Board surface)

   CAUTION:
   Be careful not to touch the printed circuits directly.
4. When replacing the battery.
   Remove battery(3) from the lower housing(4) and replace it.

   Battery replacement : Coin-type lithium battery (CR2016)

   CAUTION:
   When replacing battery, be sure to keep dirt, grease and other foreign materials off the electrode contact area.
5. After replacement, fit the lower and upper housing together, part and tighten with the screw(5).

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

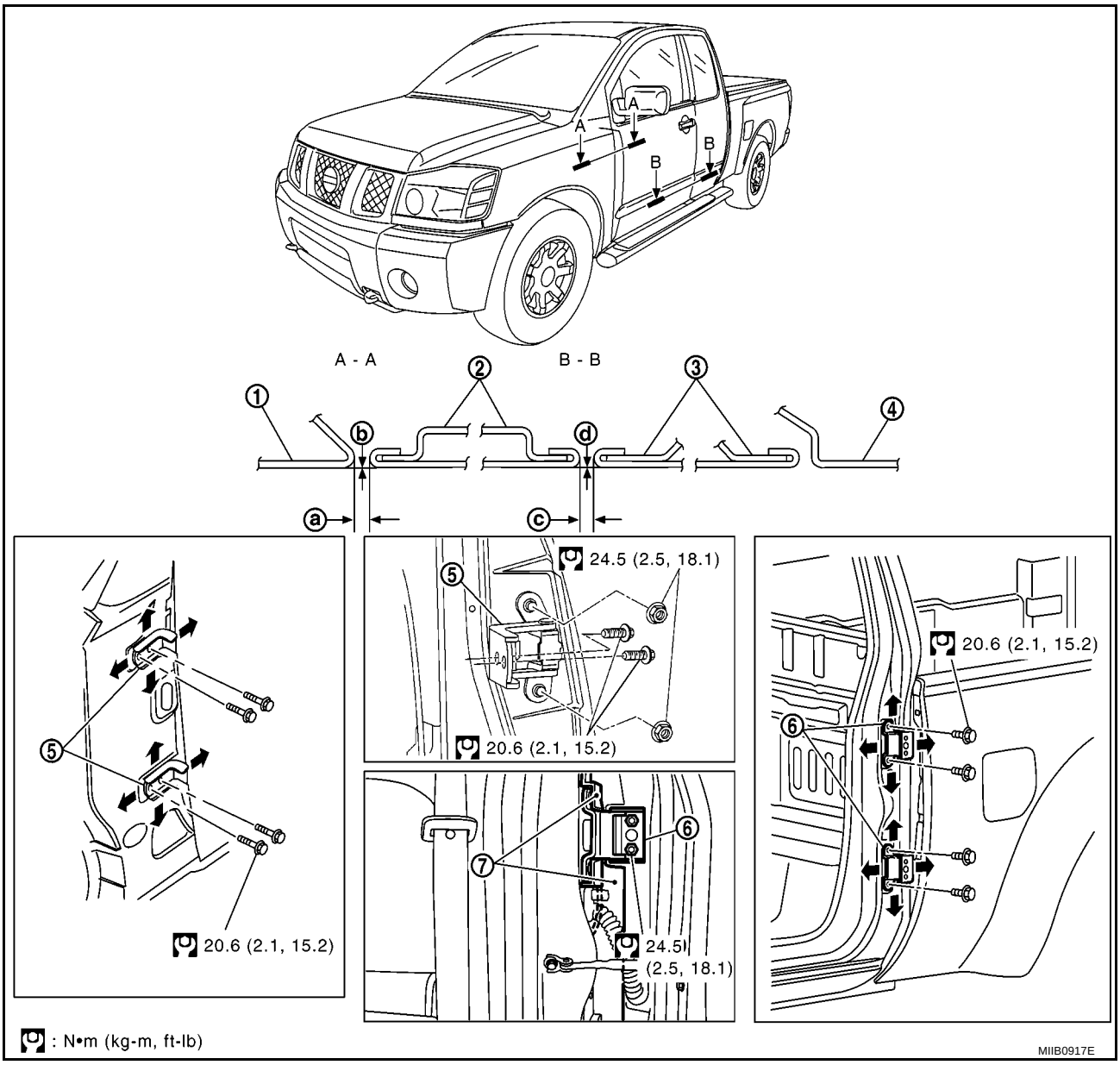


DOOR

PFP:80100

Fitting Adjustment (King Cab)

EIS00B69



1. Front fender
2. Front door
3. Rear door
4. Body side outer
5. Front door hinge
6. Rear door hinge
7. Rear door hinge cover

FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the front fender. Refer to BL-20, "Removal and Installation" .
2. Loosen the hinge mounting bolts. Raise or lower the front door at rear end to adjust.

REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the rear door hinge cover mounting clips, and remove the rear door hinge cover.
2. Loosen the rear door hinge mounting bolts.
3. Open the door, and raise or lower the rear end of the door to adjust.

	Portion	Clearance
Front fender- Front door outer	A - A (a)	3.5 - 5.5 mm (0.138 - 0.217 in)
Front door outer - Rear door outer	B - B (c)	3.5 - 5.5 mm (0.138 - 0.217 in)

	Portion	Surface height
Front fender- Front door outer	A - A (b)	- 1.0 - 1.0 mm (- 0.039 - 0.039 in)
Front door outer - Rear door outer	B - B (d)	- 1.0 - 1.0 mm (- 0.039 - 0.039 in)

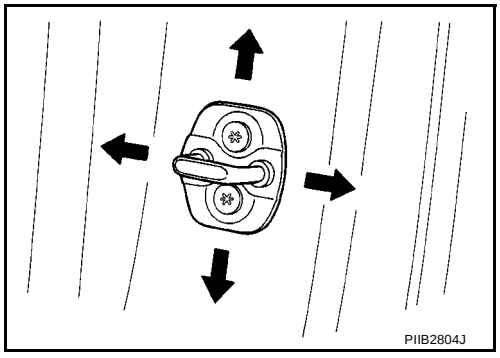
CAUTION:

After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts and mounting bolts.

STRIKER ADJUSTMENT

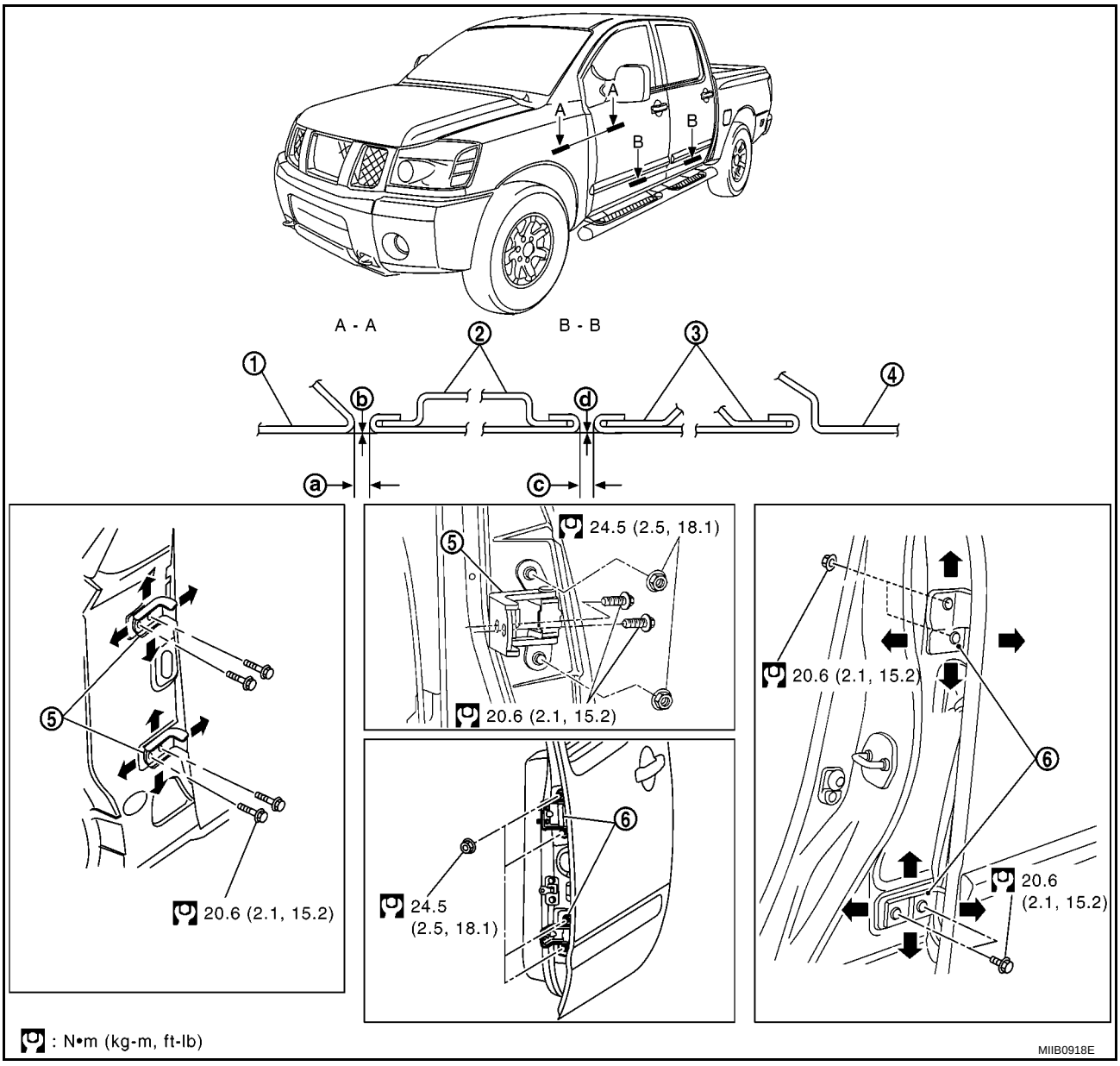
Adjust the striker so that it becomes parallel with the lock insertion direction.

: 16.7 N·m (1.7 kg-m, 12.4 ft-lb)



Fitting Adjustment (Double Cab)

EIS00DWT



1. Front fender
2. Front door
3. Rear door
4. Body side outer
5. Front door hinge
6. Rear door hinge

FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the front fender. Refer to BL-20, "Removal and Installation" .
2. Loosen the hinge mounting bolts. Raise or lower the front door at rear end to adjust.

REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the center pillar upper finisher. Refer to EI-35, "CENTER PILLAR UPPER FINISHER" .
2. Loosen the lower hinge mounting bolts.
3. From inside the vehicle, loosen the upper hinge mounting nuts. Open the door, and raise or lower the rear end of the door to adjust.

	Portion	Clearance
Front fender- Front door outer	A - A (a)	3.5 - 5.5 mm (0.138 - 0.217 in)
Front door outer - Rear door outer	B - B (c)	3.5 - 5.5 mm (0.138 - 0.217 in)

	Portion	Surface height
Front fender- Front door outer	A - A (b)	- 1.0 - 1.0 mm (- 0.039 - 0.039 in)
Front door outer - Rear door outer	B - B (d)	- 1.0 - 1.0 mm (- 0.039 - 0.039 in)

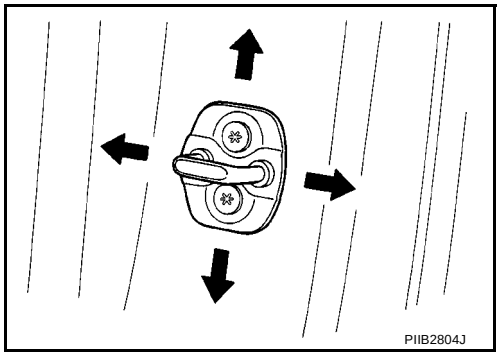
CAUTION:

After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts and mounting bolts.

STRIKER ADJUSTMENT

Adjust the striker so that it becomes parallel with the lock insertion direction.

: 16.7 N·m (1.7 kg-m, 12.4 ft-lb)



Removal and Installation of Front Door

EIS00B6A

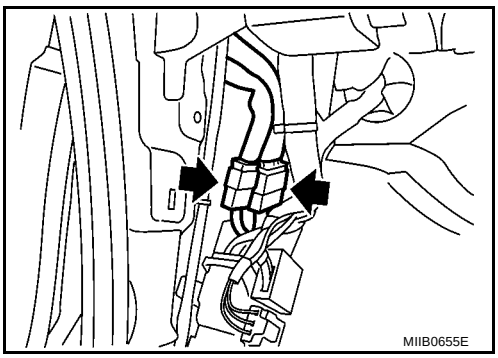
CAUTION:

- **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 Refer to BL-117, "Fitting Adjustment (King Cab)" and BL-119, "Fitting Adjustment (Double Cab)" .**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.**
- **Operate with two workers, because of its heavy weight.**
- **After installing, check operation.**

REMOVAL

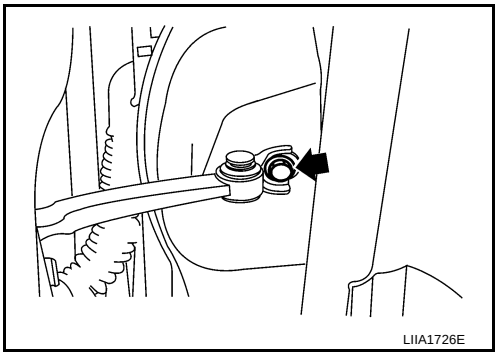
1. Remove the front kicking plate and the dash side finisher. Refer to EI-33, "BODY SIDE TRIM" .

2. Disconnect the front door harness connector.



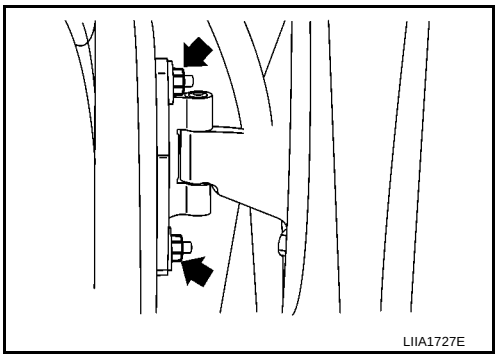
3. Grommet is pulled out, and the front door harness is pulled out.
4. Remove the mounting bolts of the check link on the vehicle.

: 14.7 N·m (1.5 kg-m, 11 ft-lb)



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

: 24.5 N·m (2.5 kg-m, 18 ft-lb)



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door (King Cab)

EIS00BQ2

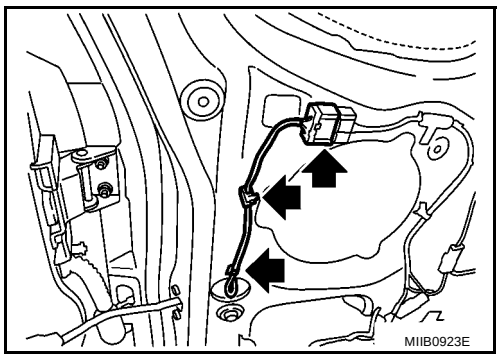
CAUTION:

- **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 REfer to BL-117, "Fitting Adjustment (King Cab)" .**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.**
- **Operate with two workers, because of its heavy weight.**
- **After installing, check operation.**

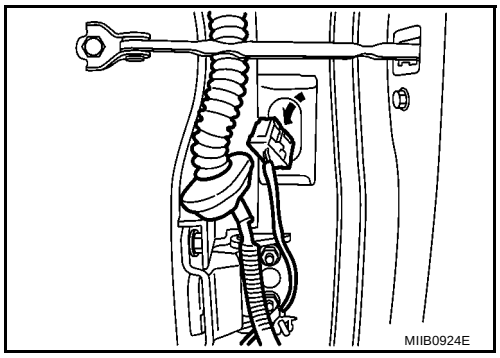
REMOVAL

1. Fully open the rear door.
2. Remove the rear door finisher. Refer to EI-32, "REAR DOOR - KING CAB" .
3. Remove the rear door screen. Refer to GW-38, "Removal and Installation" .

4. Disconnect the rear door harness connector.

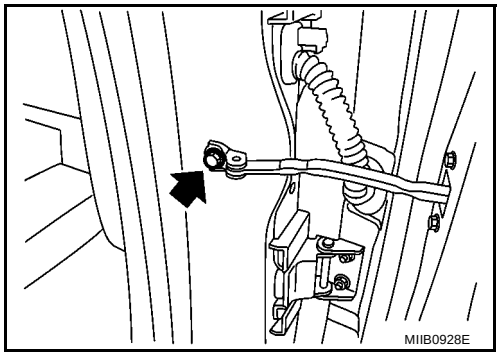


5. Grommet is pulled out, and the rear door harness connector is pulled out.



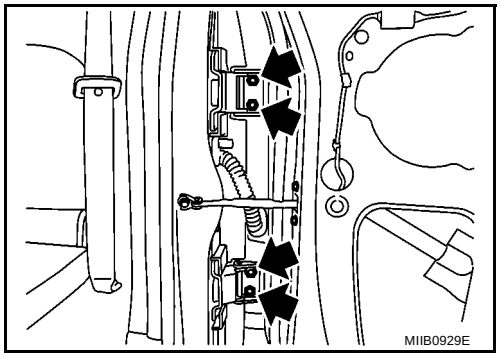
6. Remove the mounting bolts of the rear door check link of the vehicle.

   : 14.7 N·m (1.5 kg-m, 11 ft-lb)



7. Remove the rear door hinge mounting nuts, and remove the rear door assembly.

   : 24.5 N·m (2.5 kg-m, 18 ft-lb)



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door (Double Cab)

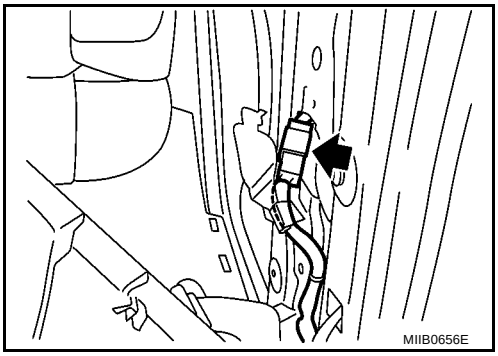
EIS00DUN

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 REfer to BL-119, "Fitting Adjustment (Double Cab)" .**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.**
- **Operate with two workers, because of its heavy weight.**
- **After installing, check operation.**

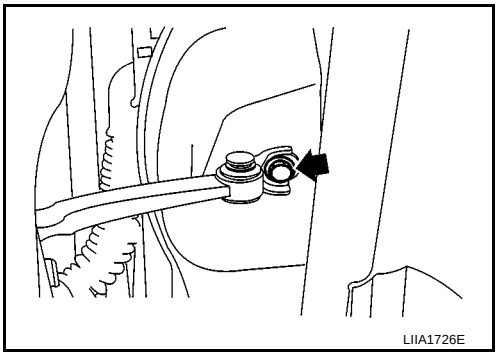
REMOVAL

1. Remove the center pillar lower finisher. Refer to EI-33, "BODY SIDE TRIM" .
2. Disconnect the rear door harness connector.


MIIB0656E

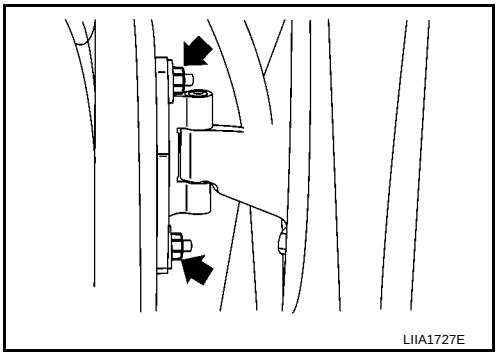
3. Grommet is pulled out, and the rear door harness is pulled out.
4. Remove the mounting bolts of the check link on the vehicle.

: 14.7 N·m (1.5 kg-m, 11 ft-lb)


LIIA1726E

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

: 24.5 N·m (2.5 kg-m, 18 ft-lb)

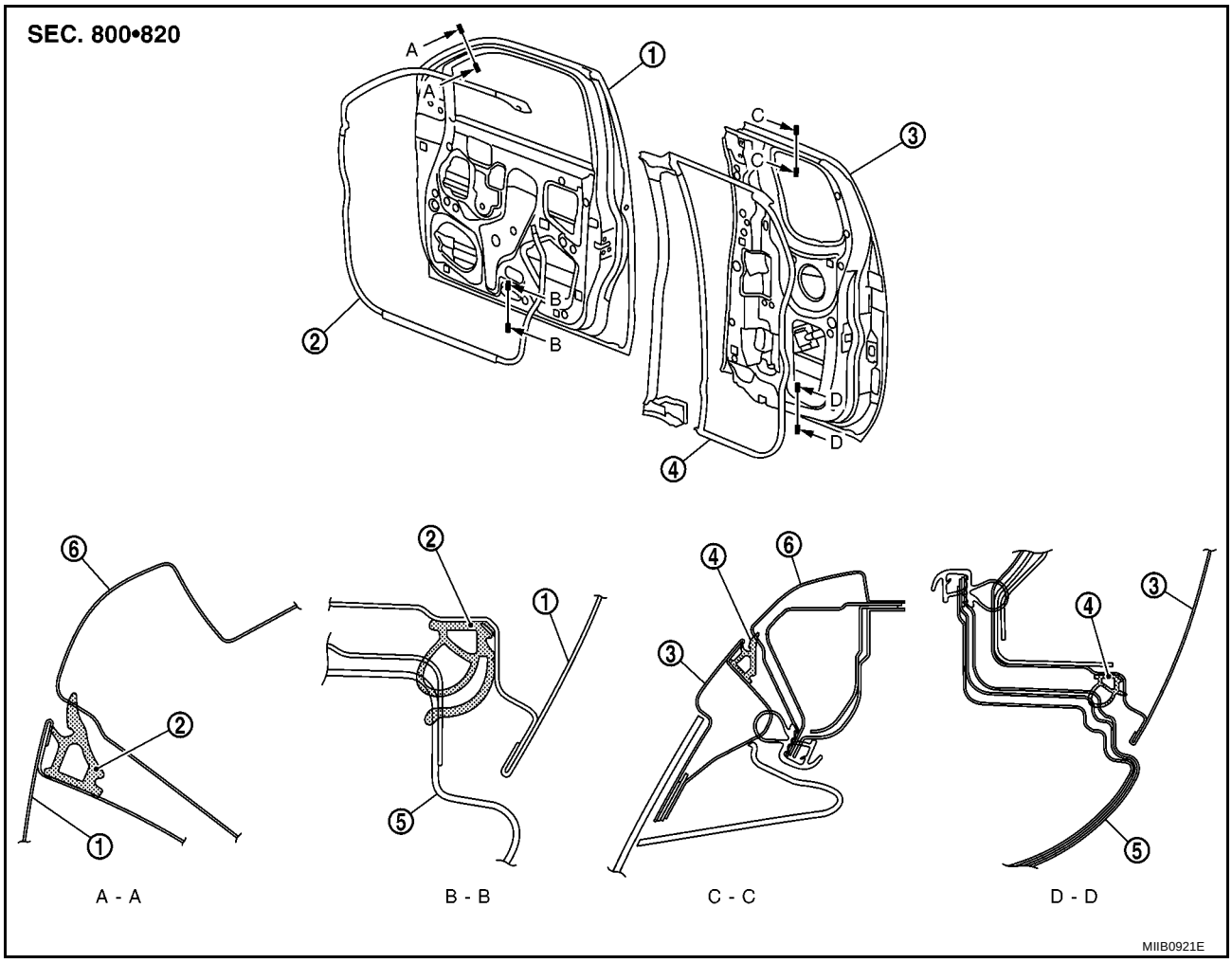

LIIA1727E

INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Door Weather-strip (King Cab)

EIS00BQ6



1. Front door outer
2. Front door weather-strip
3. Rear door outer
4. Rear door weather-strip
5. Sill outer
6. Body side outer

REMOVAL

CAUTION:

After removal, do not pull strongly on the weather-strip.

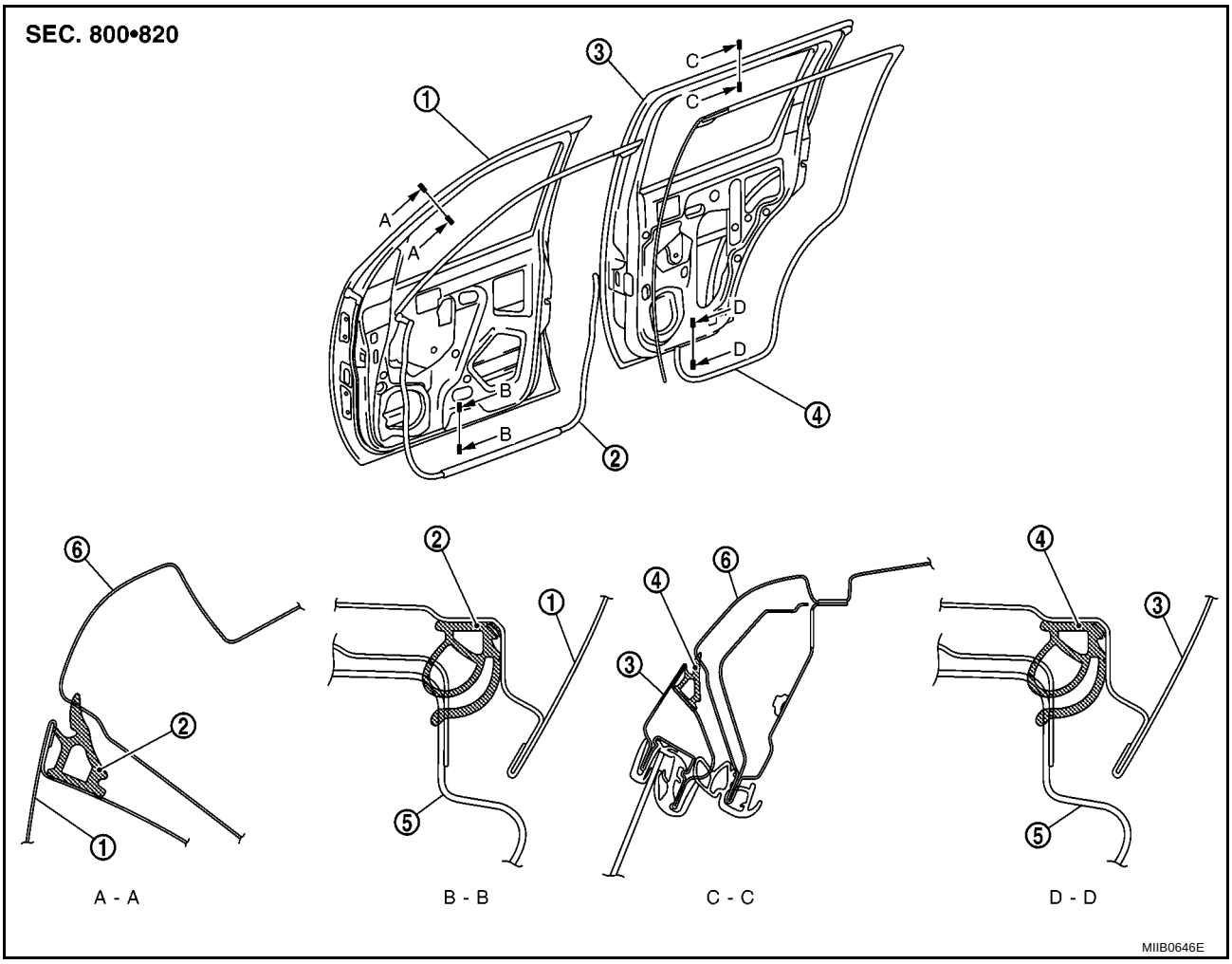
Remove the weather-strip clips, and remove weather strip.

INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Door Weather-strip (Double Cab)

EIS00DWU



1. Front door outer
2. Front door weather-strip
3. Rear door outer
4. Rear door weather-strip
5. Sill outer
6. Body side outer

REMOVAL

CAUTION:

After removal, do not pull strongly on the weather-strip.

Remove the weather-strip clips, and remove weather-strip.

INSTALLATION

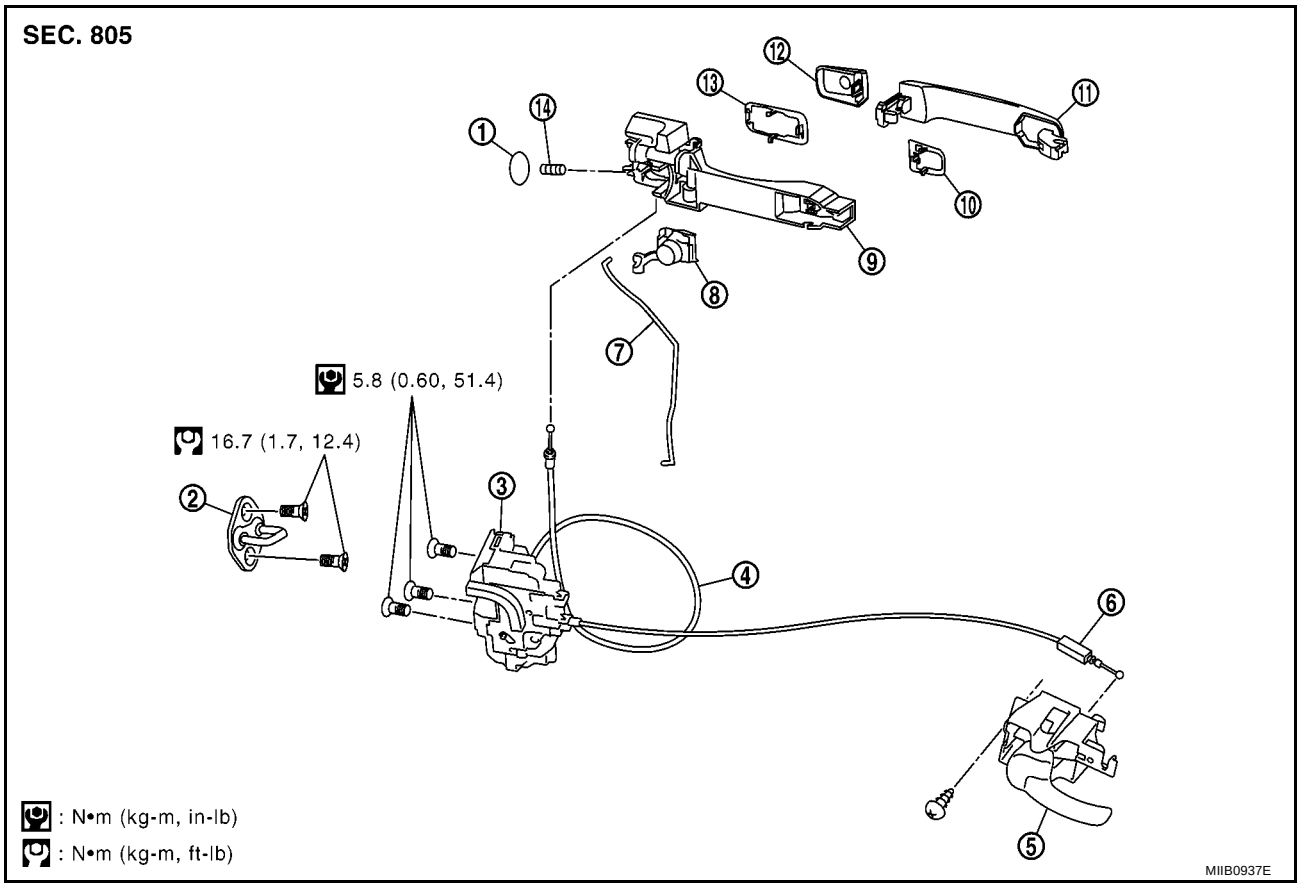
Install in the reverse order of removal.

FRONT DOOR LOCK

PFP:80502

Removal and Installation

EIS00B6B



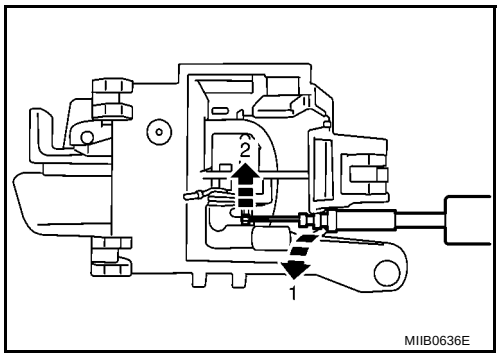
1. Grommet	2. Front door striker	3. Door lock assembly
4. Outside handle cable	5. Inside handle assembly	6. Inside handle cable
7. Key cylinder rod (Driver side only)	8. Door key cylinder	9. Outside handle bracket
10. Front gasket	11. Outside handle	12. Outside handle escutcheon
13. Rear gasket	14. TORX bolt	

REMOVAL

1. Remove the front door finisher. Refer to EI-30, "FRONT DOOR" .
2. Fully close the front door window.
3. Remove the front door sealing screen.

   NOTE:
   If sealing screen is reused, cut butyl-tape in a way that leaves it on the sealing screen.
4. Remove the lower sash (rear). Refer to GW-35, "Removal and Installation" .
5. Remove the inside handle assembly.
6. Disconnect the inside handle knob cable from the back side of the inside handle in order of (1) and (2).

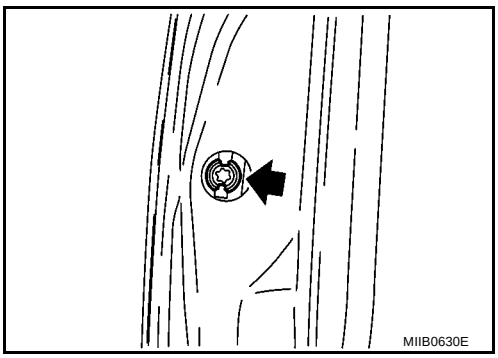
   CAUTION:
   During removal and installation, work so as not to bend the ends of the inside handle.



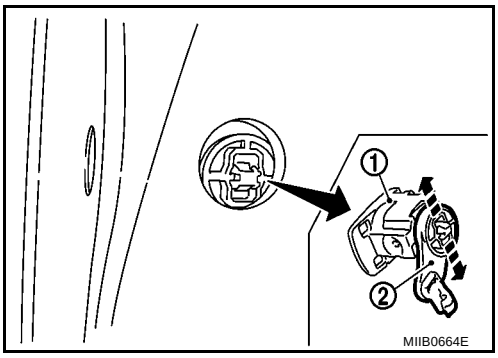
7. Remove the door side grommet, and remove the outside handle bracket bolt from grommet hole.

CAUTION:
Do not forcibly remove the TORX bolt.

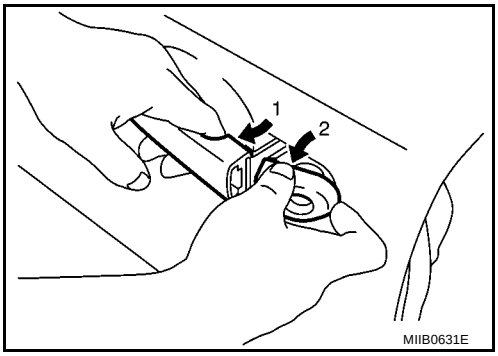
: 6.1 N·m (0.63 kg-m, 54.0 in-lb)



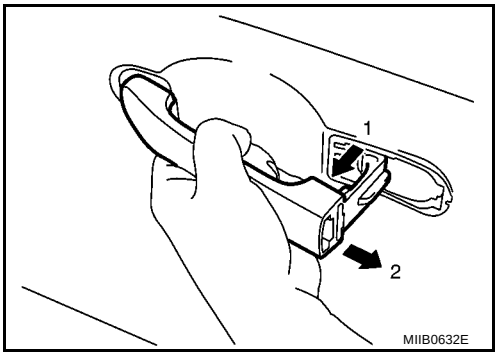
8. Reach to separate the key cylinder rod and outside handle rod connection (on the handle). If no door key cylinder is found, go to 10.
9. Remove the door side grommet, and door key cylinder is decomposed into (1) and (2).



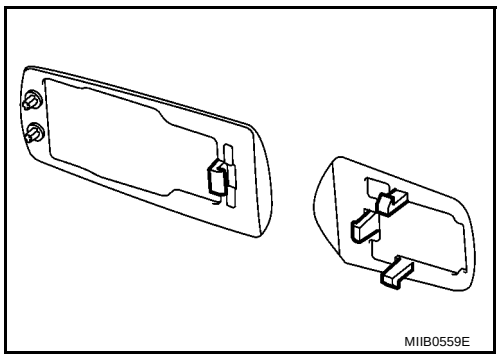
10. While pulling the outside handle, remove the door key cylinder assembly in order of (1) and (2).



11. While pulling outside handle, slide toward rear of vehicle to remove the outside handle in order of (1) and (2).

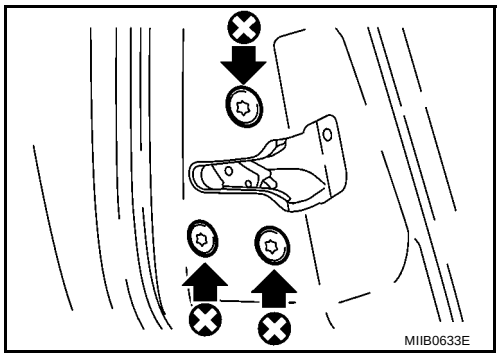


12. Remove the front gasket and rear gasket.

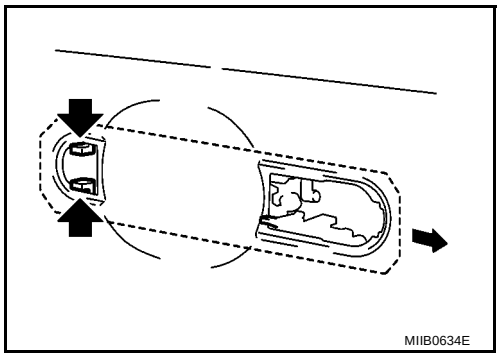


13. Remove the TORX bolts (T30), remove the door lock assembly.

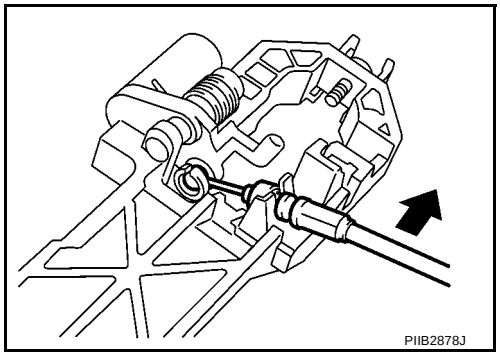
: **5.8 N·m (0.60 kg-m, 51.4 in-lb)**



14. While pulling outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket and door lock assembly.



15. Disconnect the door lock actuator connector.
16. Reach in to separate the key cylinder rod and outside handle cable connection.

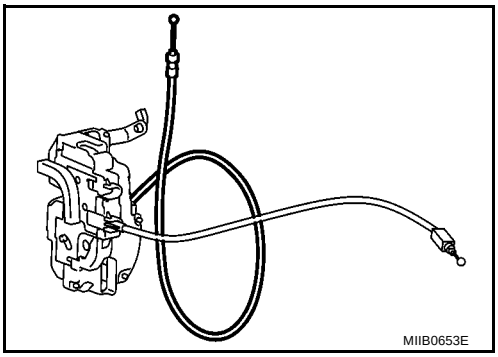


INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

- **Install each rod by rotating the rod holder until it engages with a tactile feel.**
- **When installing door lock assembly, be careful so that the outside handle cable bends as shown in the figure.**
- **Place the outside handle cable on the front of door lock assembly before installing.**

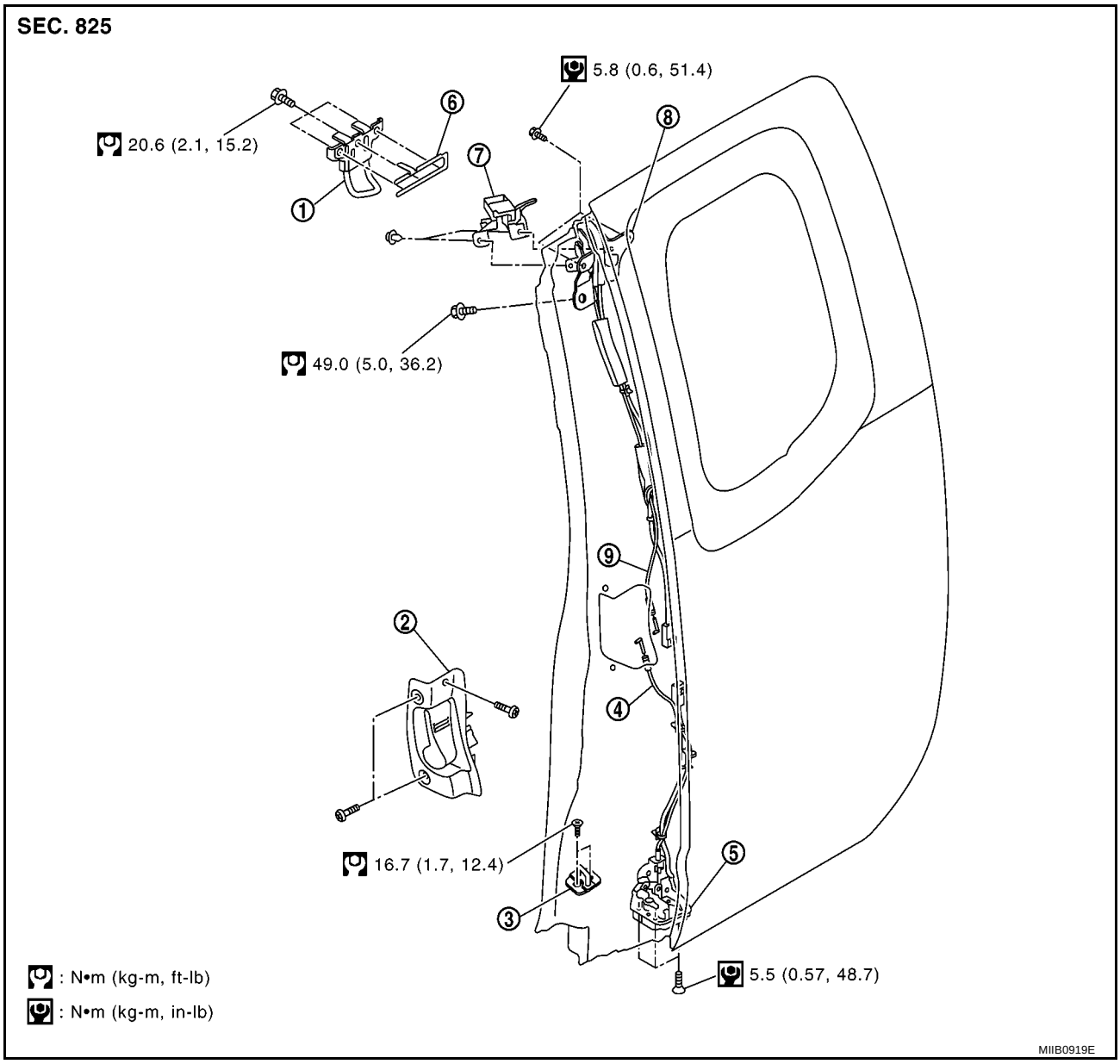


REAR DOOR LOCK

PFP:82502

Removal and Installation of Rear Door Lock (King Cab)

EIS00B6E



1. Rear door striker (upper)
2. Rear door outside handle assembly
3. Rear door striker (lower)
4. Door lock cable (lower)
5. Rear door lock assembly (lower)
6. Striker shim
7. Rear door lock cover
8. Rear door lock assembly (upper)
9. Door lock cable (upper)

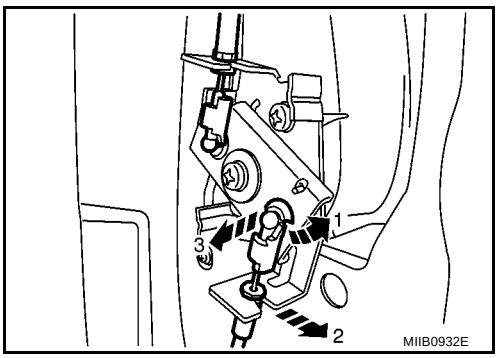
REMOVAL

1. Remove the rear door finisher. Refer to EI-32, "REAR DOOR - KING CAB" .
2. Remove the rear door sealing screen.

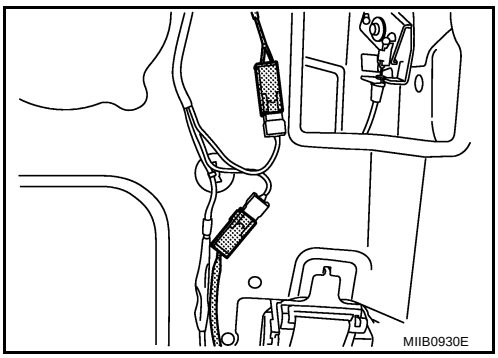
   NOTE:
   If sealing screen is reused, cut butyl-tape in a way that leaves it on the sealing screen.

3. Disconnect the door lock cable (upper/lower) installed on rear door outside handle assembly in order of (1) to (3).

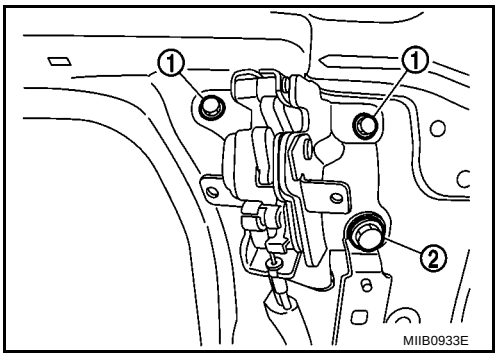
CAUTION:
During removal and installation, work so as not to bend the ends of the door lock cable.



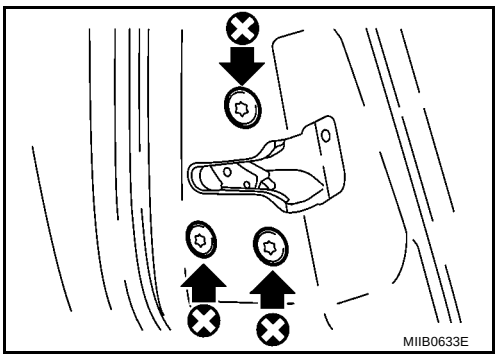
4. Remove rear door outside handle mounting bolts, and remove the rear door outside handle assembly.
5. Disconnect the rear door lock switch harness connector (upper/lower), and remove harness connector clips.



6. Remove the clips of the rear door lock cover, and remove the rear door lock cover.
7. Remove the rear seat belt bracket mounting bolt (2).
8. Remove the rear door lock (upper) mounting bolts(1), and remove the rear door lock assembly (upper).



9. Remove the rear door lock (lower) mounting bolts, and remove the rear door lock assembly (lower).



INSTALLATION

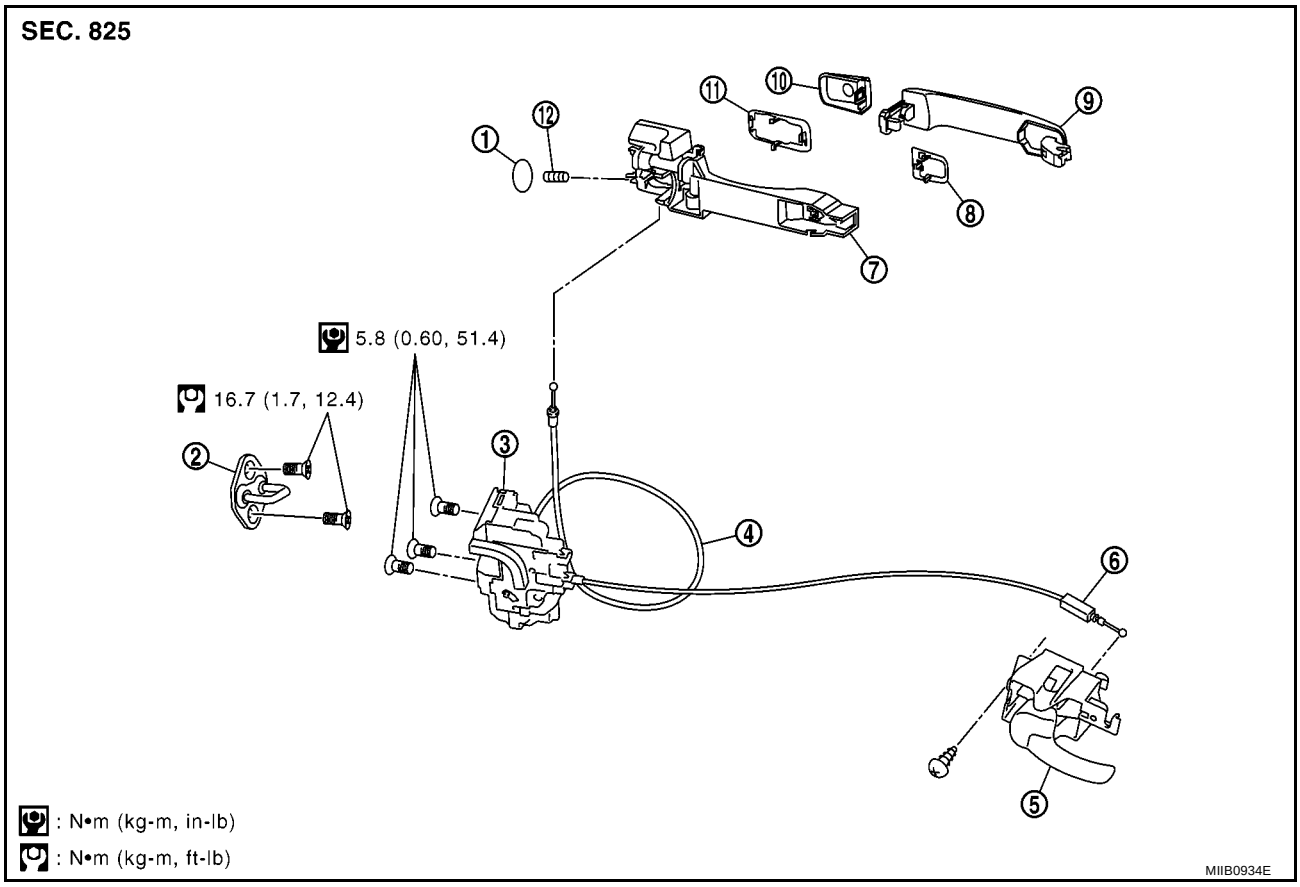
Note the following, and install in the reverse order of removal.

CAUTION:

- **To install each rod, be sure to rotate the rod holder until a click is felt.**
- **Place the outside handle bracket cable on the rear of door lock assembly before installing.**

Removal and Installation of Rear Door Lock (Double Cab)

EIS00DUO



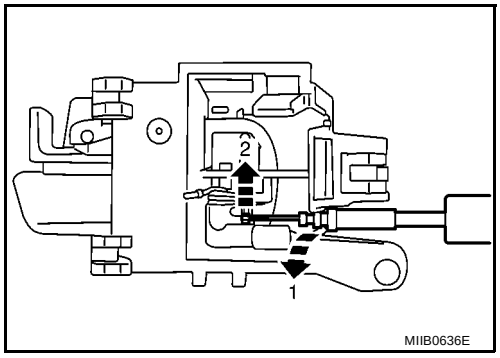
1.	Grommet	2.	Rear door striker	3.	Rear door lock assembly
4.	Outside door handle cable	5.	Inside door handle assembly	6.	Inside door handle cable
7.	Outside handle bracket	8.	Front gasket	9.	Outside handle
10.	Outside handle escutcheon	11.	Rear gasket	12.	TORX bolt

REMOVAL

1. Remove the rear door finisher. Refer to EI-31, "REAR DOOR - DOUBLE CAB" .
2. Fully close the rear door window.
3. Remove the rear door sealing screen.

   NOTE:
   If searing screen is reused, cut butyl-tape in a way that leaves it on the sealing screen.
4. Remove the inside door handle.
5. Disconnect the door lock and inside door handle cables from the inside door handle in order of (1) and (2).

   CAUTION:
   During removal and installation, work so as not to bend the ends of the inside handle cable.

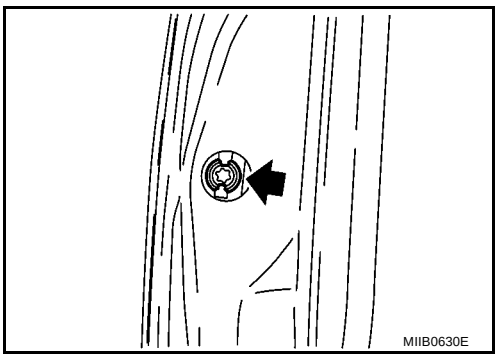


6. Remove the rear door sealing screen.

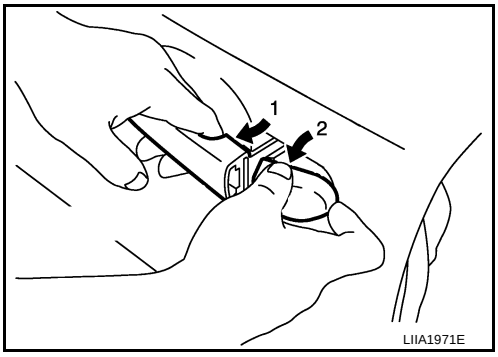
7. Remove the door side grommet, and remove the outside handle bracket bolt from grommet hole.

CAUTION:
Do not forcibly remove the TORX bolt.

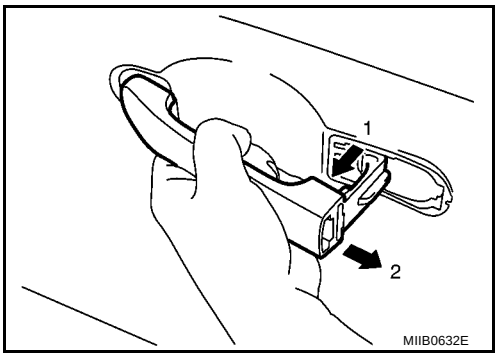
: 6.1 N·m (0.63 kg-m, 54.0 in-lb)



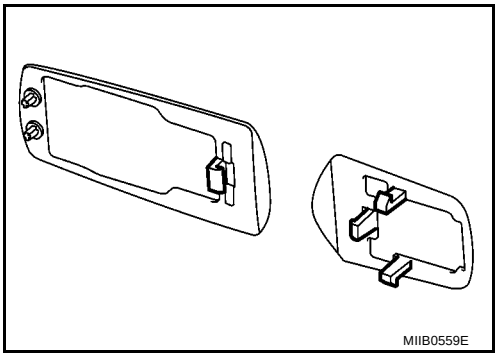
8. While pulling the outside handle, remove outside handle escutcheon in order of (1) and (2).



9. While pulling outside handle, slide toward rear of vehicle to remove the outside handle in order of (1) and (2).

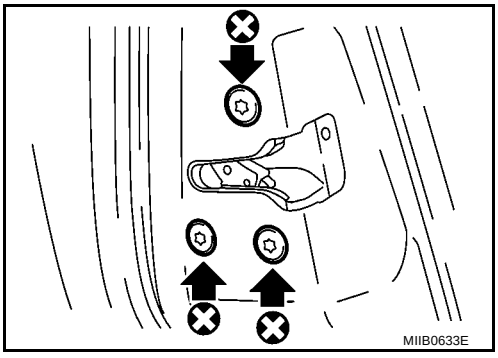


10. Remove the front gasket and rear gasket.

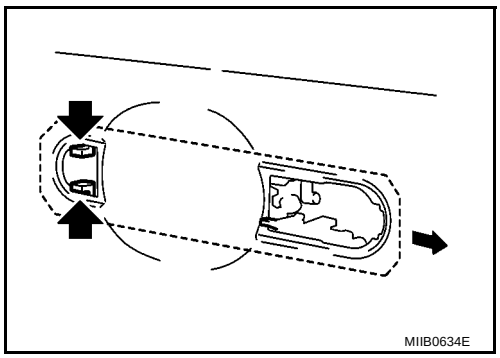


11. Remove the TORX bolts (T30), remove the door lock assembly.

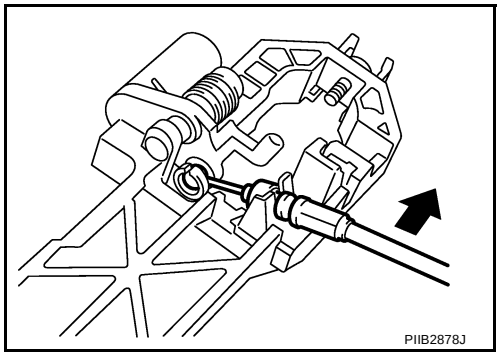
: 5.8 N·m (0.60 kg-m, 51.4 in-lb)



12. While pulling outside handle bracket, slide toward rear of vehicle to remove the outside handle bracket and door lock assembly.



13. Disconnect the door lock actuator connector.
14. Reach in to separate the key cylinder rod and outside handle cable connection.



INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

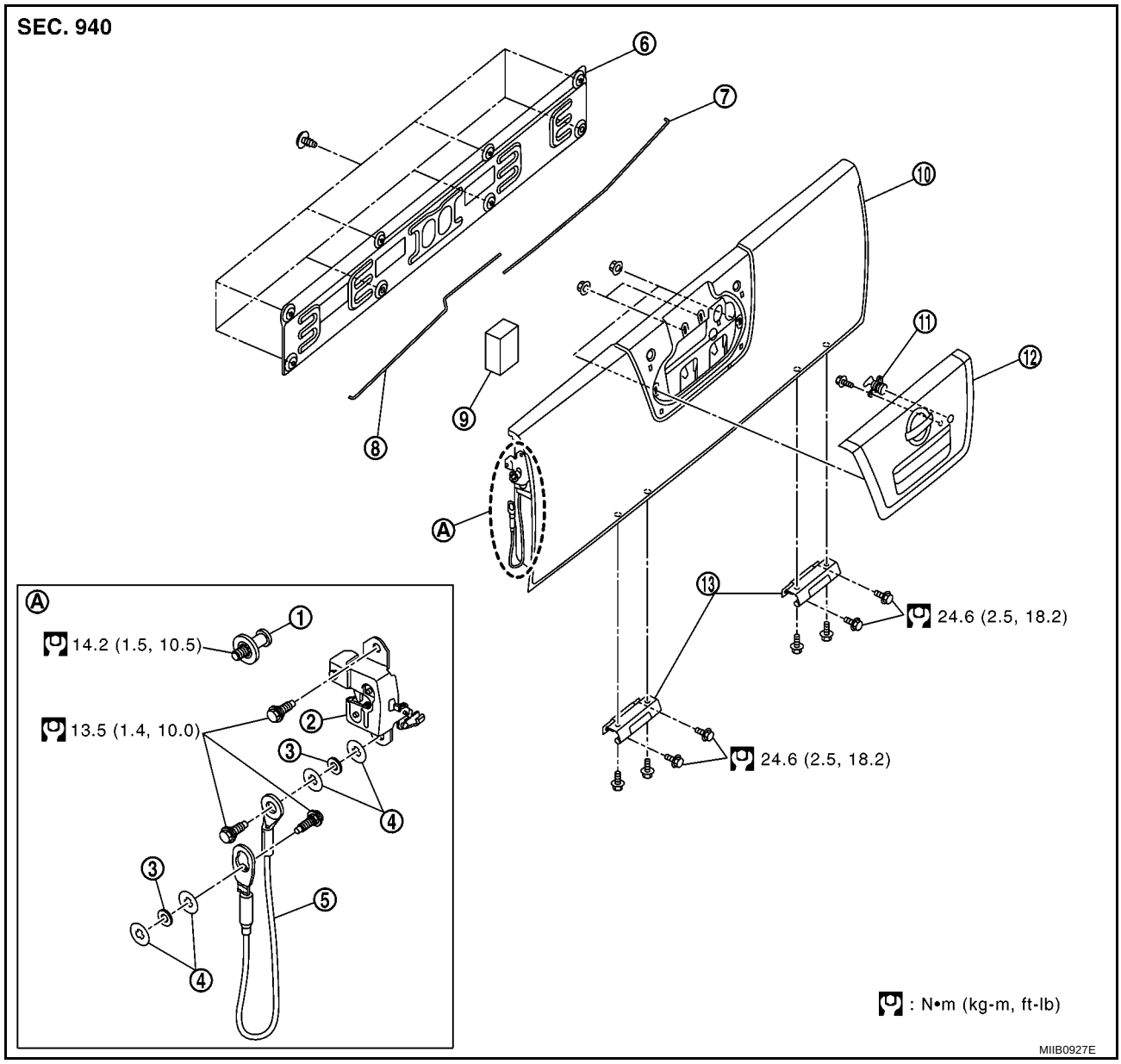
- **To install each rod, be sure to rotate the rod holder until a click is felt.**
- **Place the outside handle bracket cable on the rear of door lock assembly before installing.**

TAIL GATE

PFP:93400

Component Parts Location

EIS00DI7



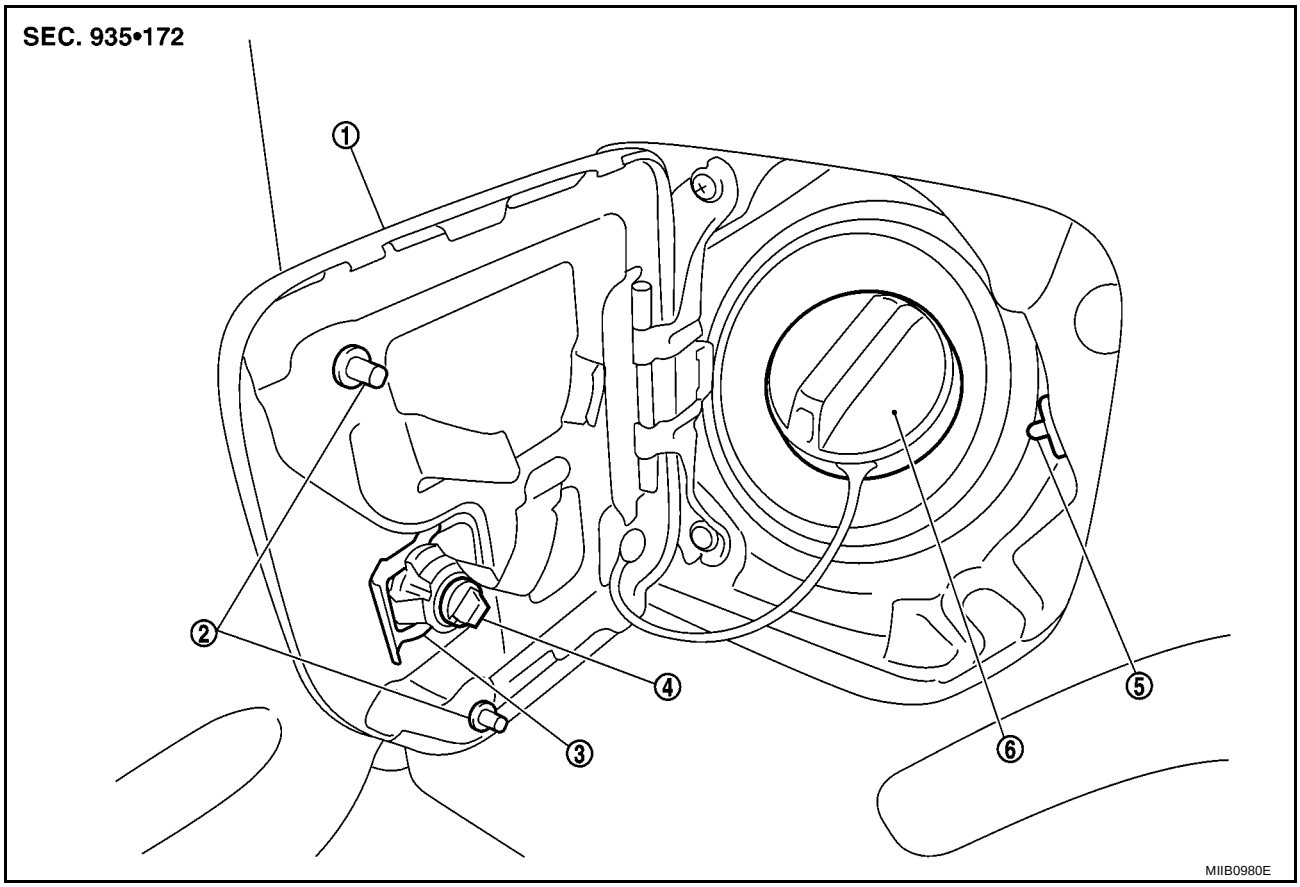
1. Rear gate striker
2. Rear gate lock assembly
3. Steel washer
4. Plastic washer
5. Rear gate stay assembly
6. Rear gate inner cover
7. Rear gate lock connecting lod (RH)
8. Rear gate lock connecting lod (LH)
9. Lock lod protector
10. Rear gate assembly
11. Rear gate lock cylinder
12. Rear gate finisher assembly
13. Rear gate hinge assembly (RH/LH)

FUEL FILLER LID OPENER

PFP:78820

Removal and Installation of Fuel Filler Lid

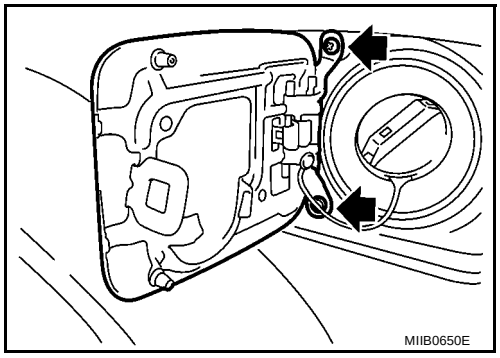
EIS00BLA



1. Fuel filler lid
2. Fuel filler lid bumper
3. Cylinder lock clip
4. Fuel filler lid key cylinder
5. Fuel filler lid lock striker
6. Fuel cap assembly

REMOVAL

1. Fully open fuel filler lid.
2. Remove the fuel filler lid mounting screws, and then remove the fuel filler lid.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

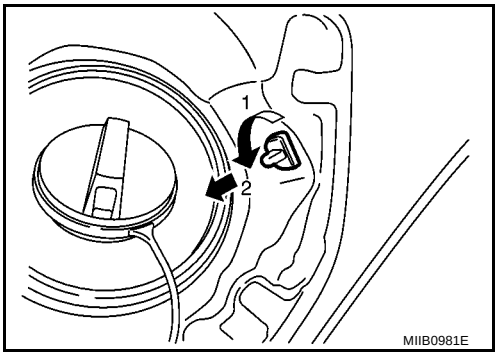
After installing, apply touch-up paint (the body color) onto the head of the mounting screws.

Removal and Installation of Fuel Lid Lock Striker

EIS00BQ0

REMOVAL

1. Fully open the fuel filler lid.
2. Turn and pull to detach fuel lid lock striker in order of (1) and (2).



INSTALLATION

Install in the reverse order of removal.

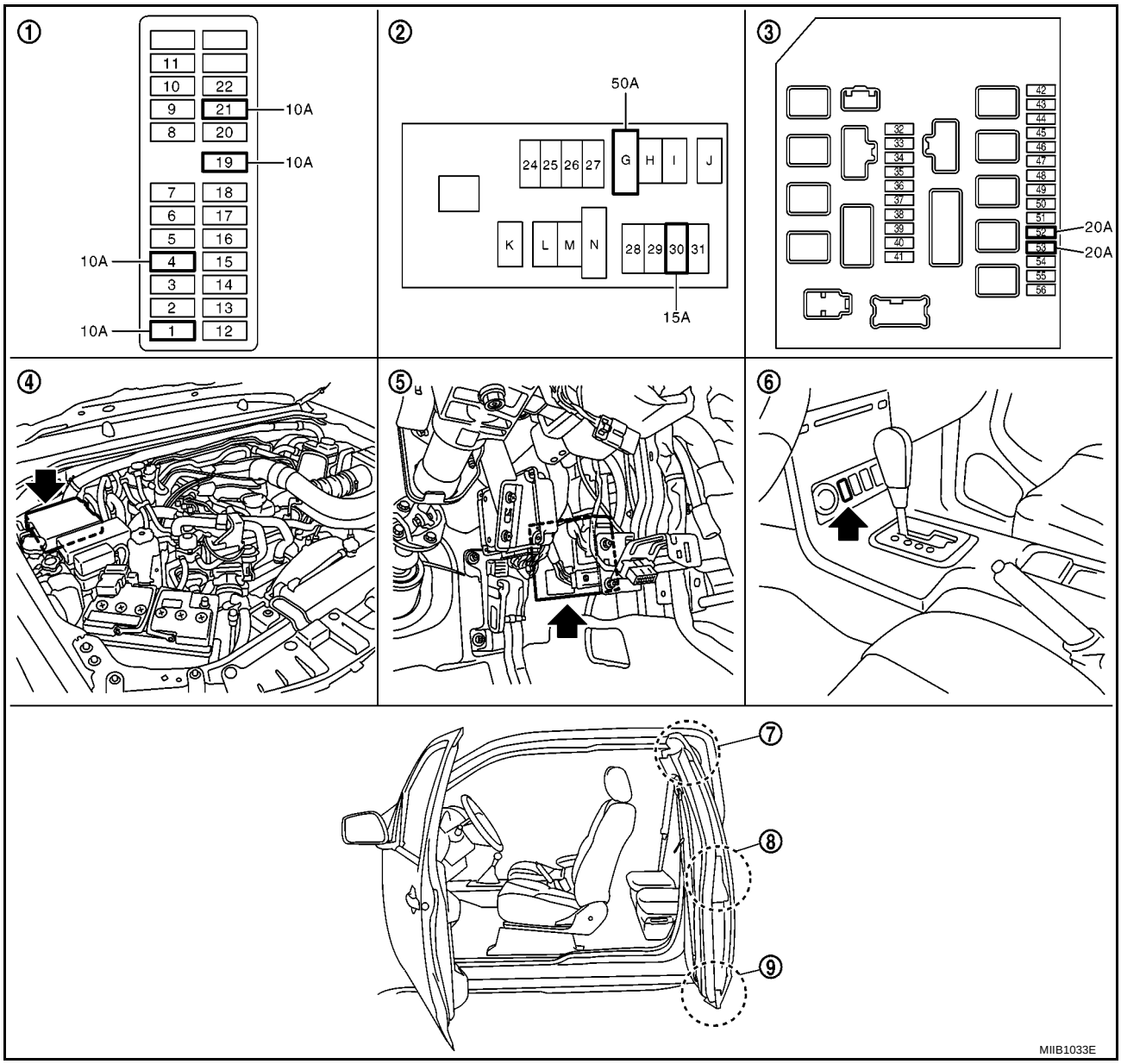
THEFT WARNING SYSTEM

PFP:28590

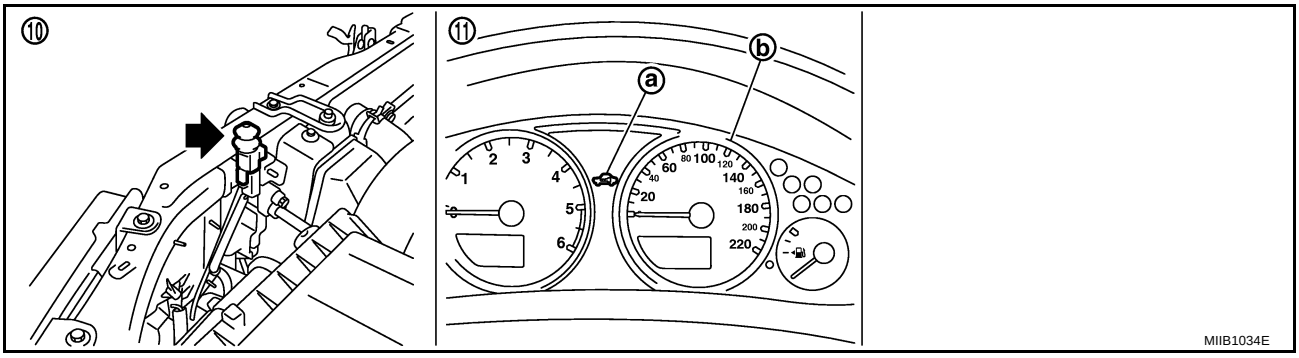
Component Parts and Harness Connector Location

EIS00DBW

KING CAB

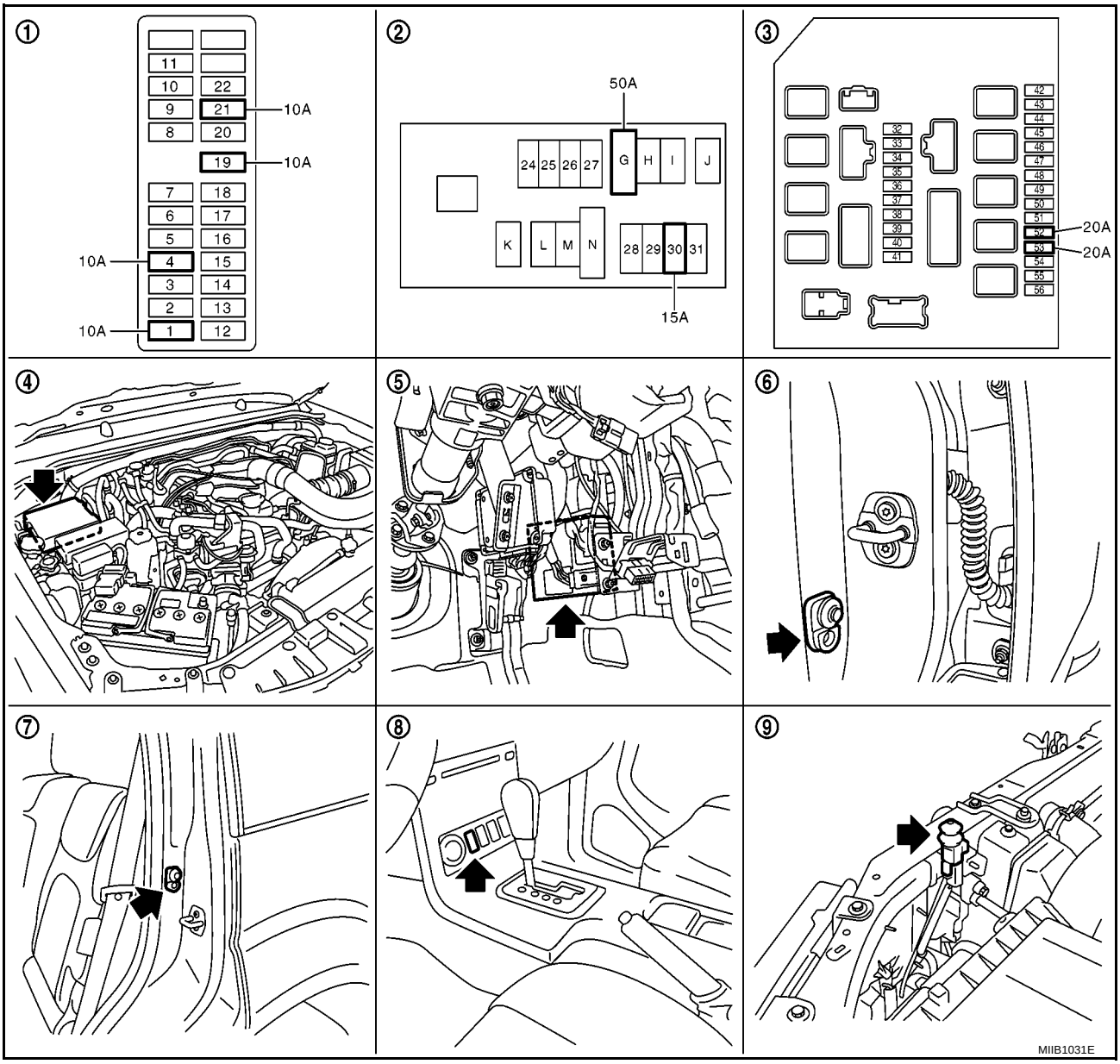


1. Fuse block (J/B) fuse layout	2. Fuse and fusible link box	3. IPDM E/R fuse layout
4. IPDM E/R E17, E18	5. BCM M42, M43, M44 (View with instrument lower panel LH removed)	6. Door lock/unlock switch M52
7. Rear door switch NO.2 (LH) D72	8. Front door switch (Driver side) D74	9. Rear door switch NO.1 (LH) D71

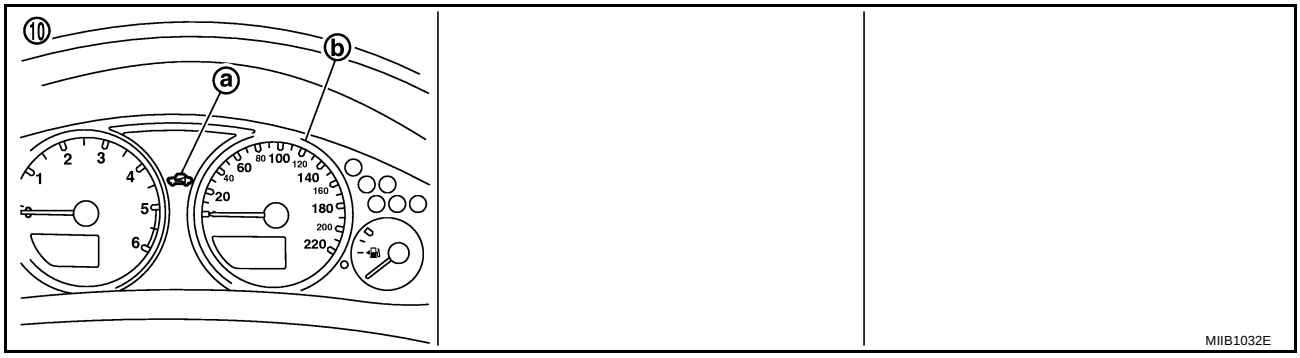


10. Hood switch E51
11. a: Security indicator
    b: Combination meter M23

DOUBLE CAB



1. Fuse block (J/B) fuse layout
2. Fuse and fusible link box
3. IPDM E/R fuse layout
4. IPDM E/R E17, E18
5. BCM M42, M43, M44 (View with Instrument lower panel LH removed)
6. Front door switch (Driver side) B19
7. Rear door switch (LH) B23
8. Door lock/unlock switch M52
9. Hood switch E51



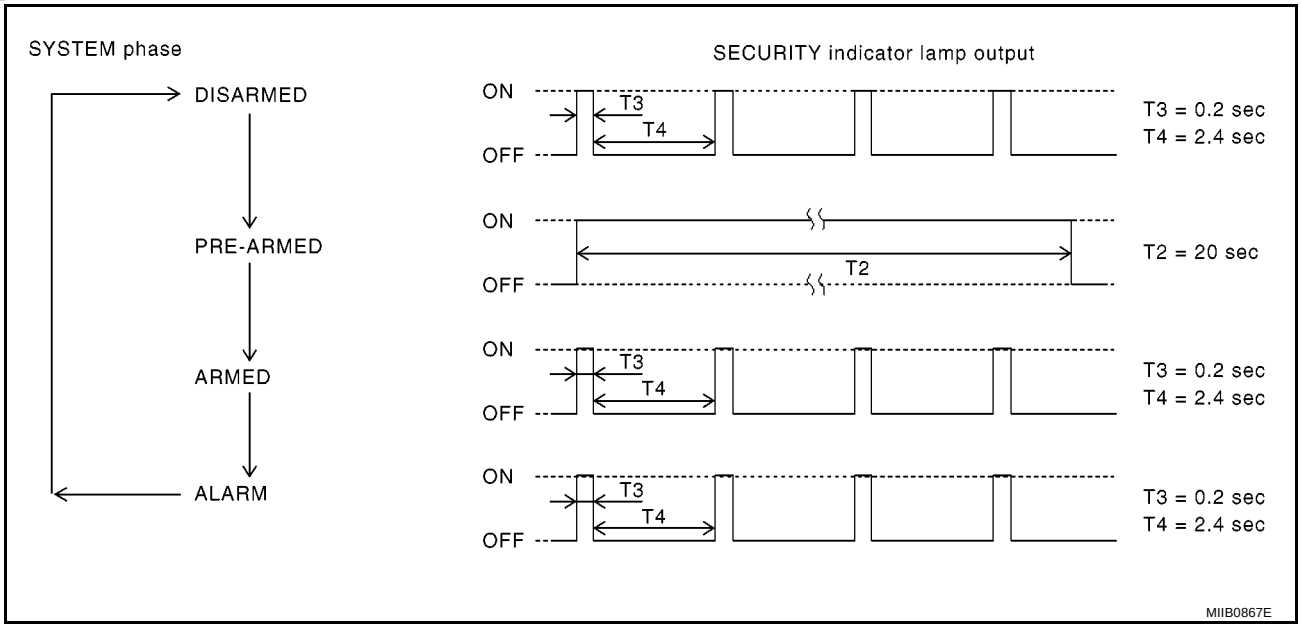
10. a: Security indicator lamp
    b: Combination meter M23

System Description

EIS00DBX

DESCRIPTION

Operation Flow



Setting the theft warning system

Initial condition

- Ignition switch is in OFF position.

Disarmed phase

- When the vehicle is being driven or when doors are open, the theft warning system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

Pre-armed phase and armed phase

- The theft warning system turns into the “pre-armed” phase when all doors are closed and locked. The security indicator lamp illuminates for 20 seconds. Then, the system automatically shifts into the “armed” phase.

Canceling the set theft warning system

When one of the following operations is performed, the armed phase is canceled.

1. Unlock the doors with the keyfob.
2. Unlock the doors with the ignition key.

Activating the alarm operation of the theft warning system

Make sure the system is in the armed phase.
When any of the following operation 1, 2 or 3 is performed, the system sounds the siren control unit or horn and flashes the turn signal lamps for about 30 seconds.

1. Engine hood or any doors is opened before unlocking door with keyfob.

2. A door is unlocked without using the keyfob.
3. Disconnect and connecting the battery connector before canceling armed phase.

POWER SUPPLY AND GROUND CIRCUIT

Power is supplied at all times

- through 10A fuse [No.19, located in the fuse block (J/B)]
- to combination meter (security indicator lamp) terminal 3
- through 50A fusible link (letter **G** , located in the fuse and fusible link box)
- to BCM terminal 57
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 41
- through 15A fuse (No. 30, located in the fuse and fusible link box)
- to horn relay terminal 2
- through 20A fuse (No. 52, located in the IPDM E/R)
- through 20A fuse (No. 53, located in the IPDM E/R),
- to IPDM E/R internal CPU.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to BCM terminal 4.

Ground is supplied

- to BCM terminal 55
- through body grounds M21, M80 and M83
- to IPDM E/R terminals 38 and 59
- through body ground E21, E41 and E61.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the theft warning system is controlled by the engine hood and doors.
To activate the theft warning system, BCM must receive signals indicating the doors are closed and locked.
When a door is open, BCM terminal 12, 14, 15 or 16 receives a ground signal from each door switch.
When the engine hood is open, IPDM E/R terminal 41 receives a ground signal

THEFT WARNING SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- opening the hood
- detecting battery disconnect/connection.

The vehicle security system will be triggered once the system is in armed phase,
when BCM receives a ground signal at terminals 12, 14, 15, 16 (door switch) or IPDM E/R receives a ground signal at terminal 41 (hood switch).
When the vehicle security system is triggered, siren control unit or horn is activate.
The alarm automatically turns off after 30 seconds, but will reactivate if the vehicle is tampered with again.

THEFT WARNING SYSTEM DEACTIVATION

To deactivate the theft warning system, a door must be unlocked with keyfob.
When the BCM receives either one of these signals or unlock signal from keyfob the theft warning system is deactivated. (Disarmed phase)

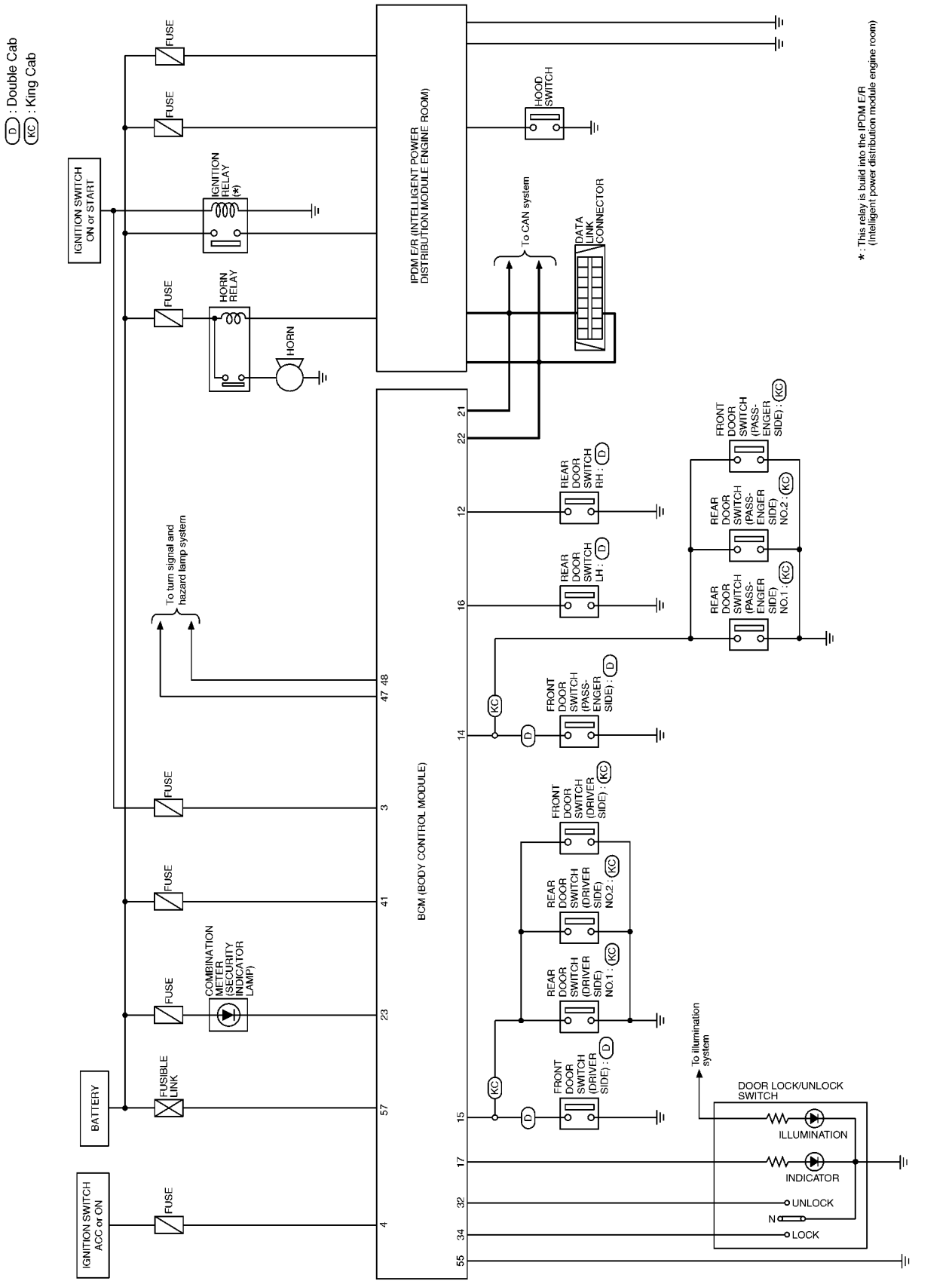
CAN Communication System Description

EIS00DBY

Refer to LAN-23, "CAN COMMUNICATION" .

Schematic

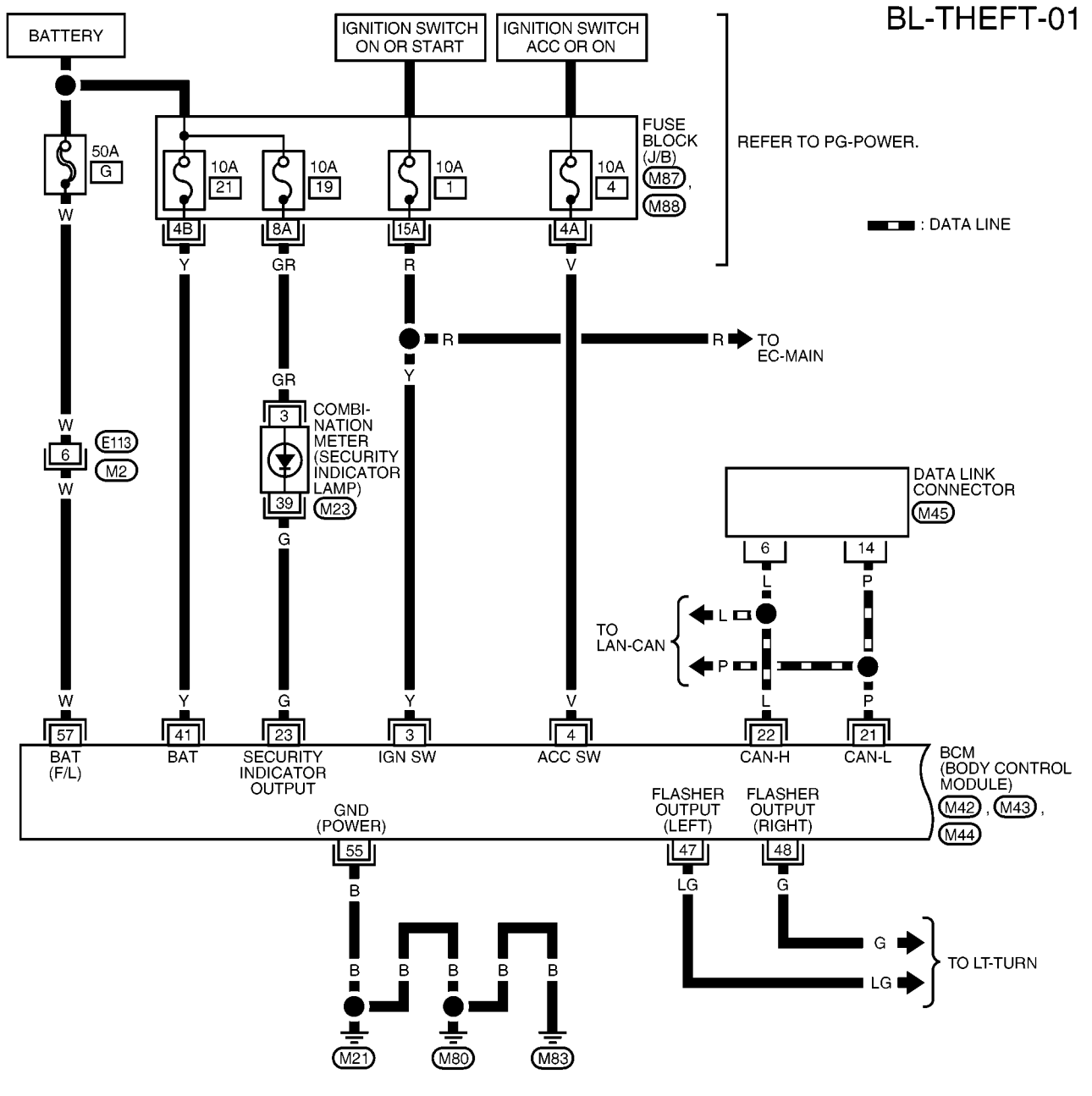
EIS00DBZ

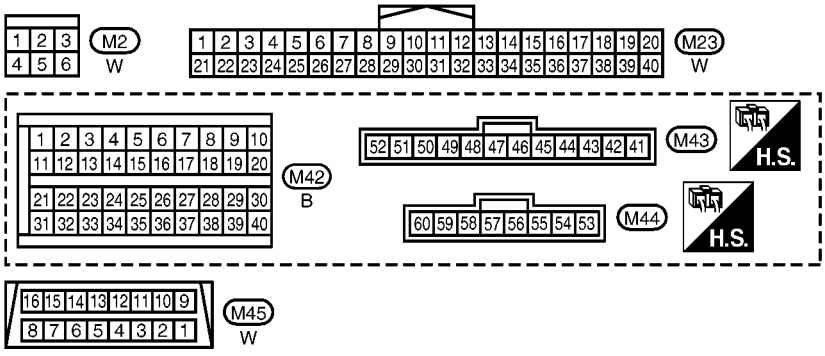


MIWA0469E

Wiring Diagram — VEHSEC — for LHD Models

EIS00DC0

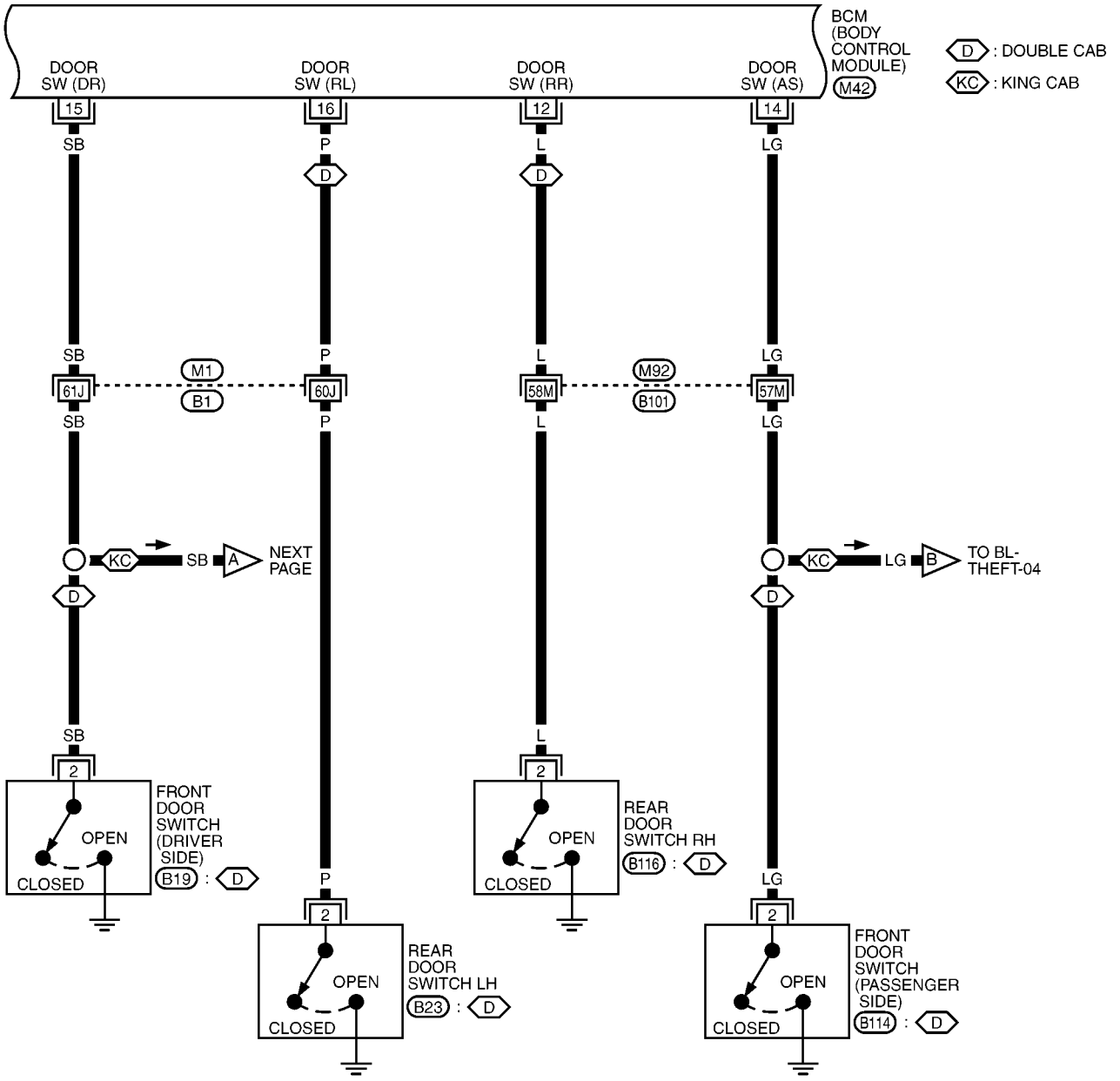


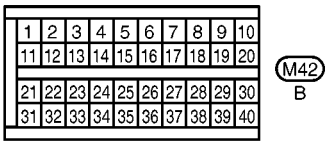


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

MIWA0470E

BL-THEFT-02





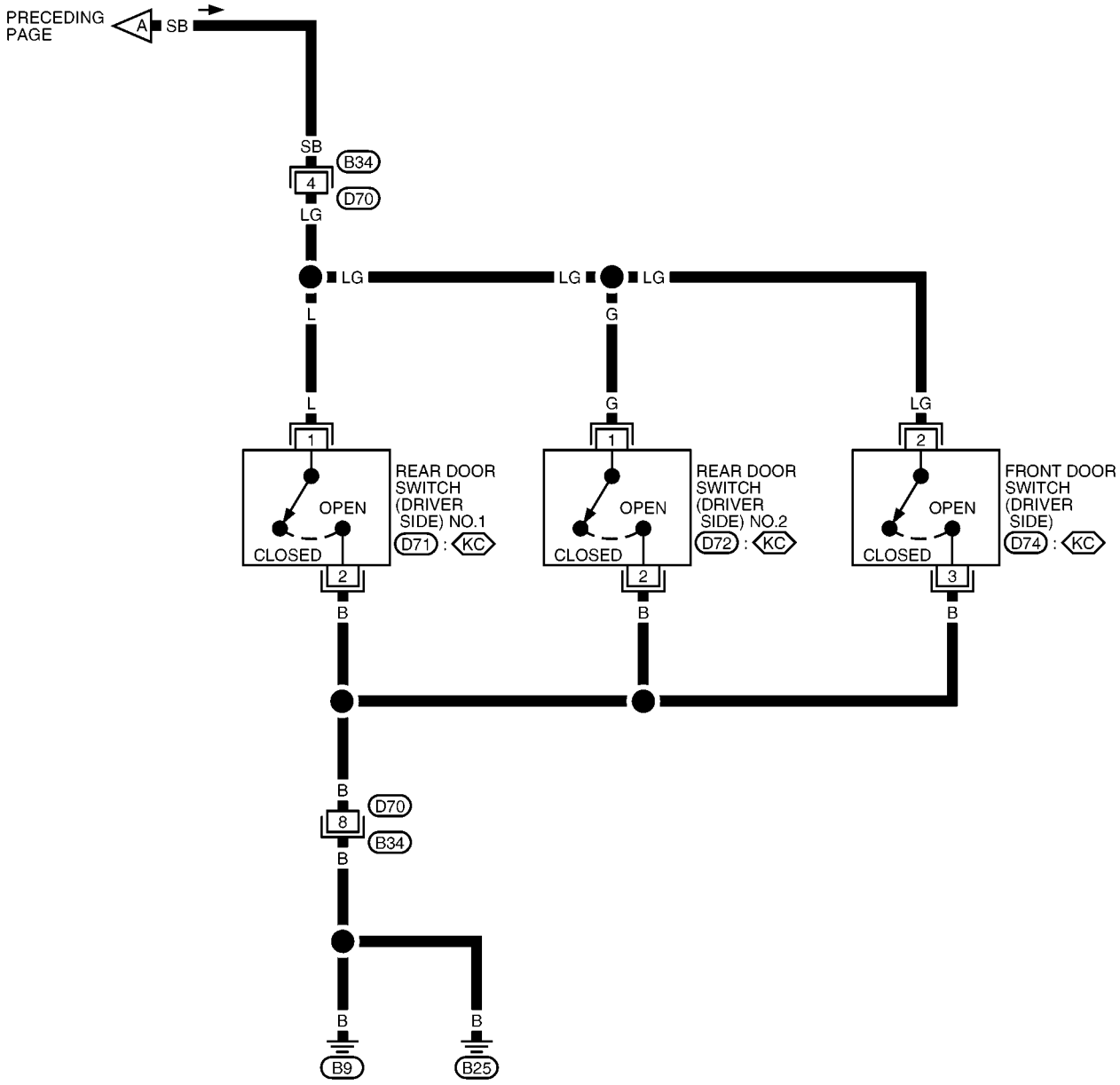
M42
B

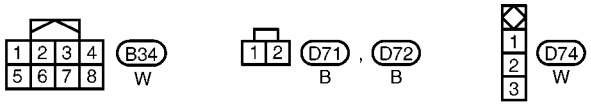
B19 , B23 , B114 , B116
W W W W

REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0471E

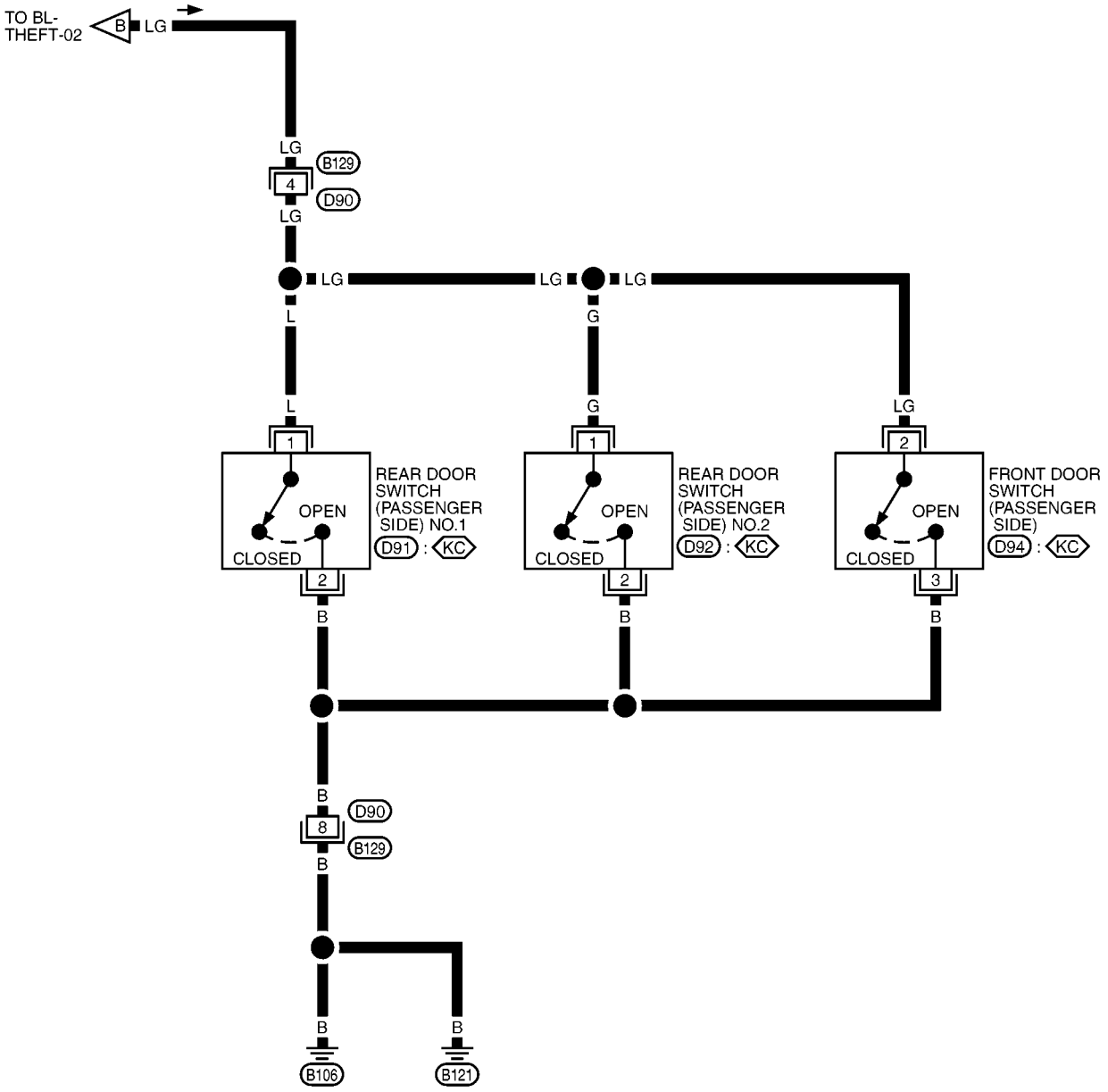
BL-THEFT-03

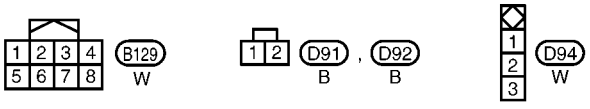




MIWA0533E

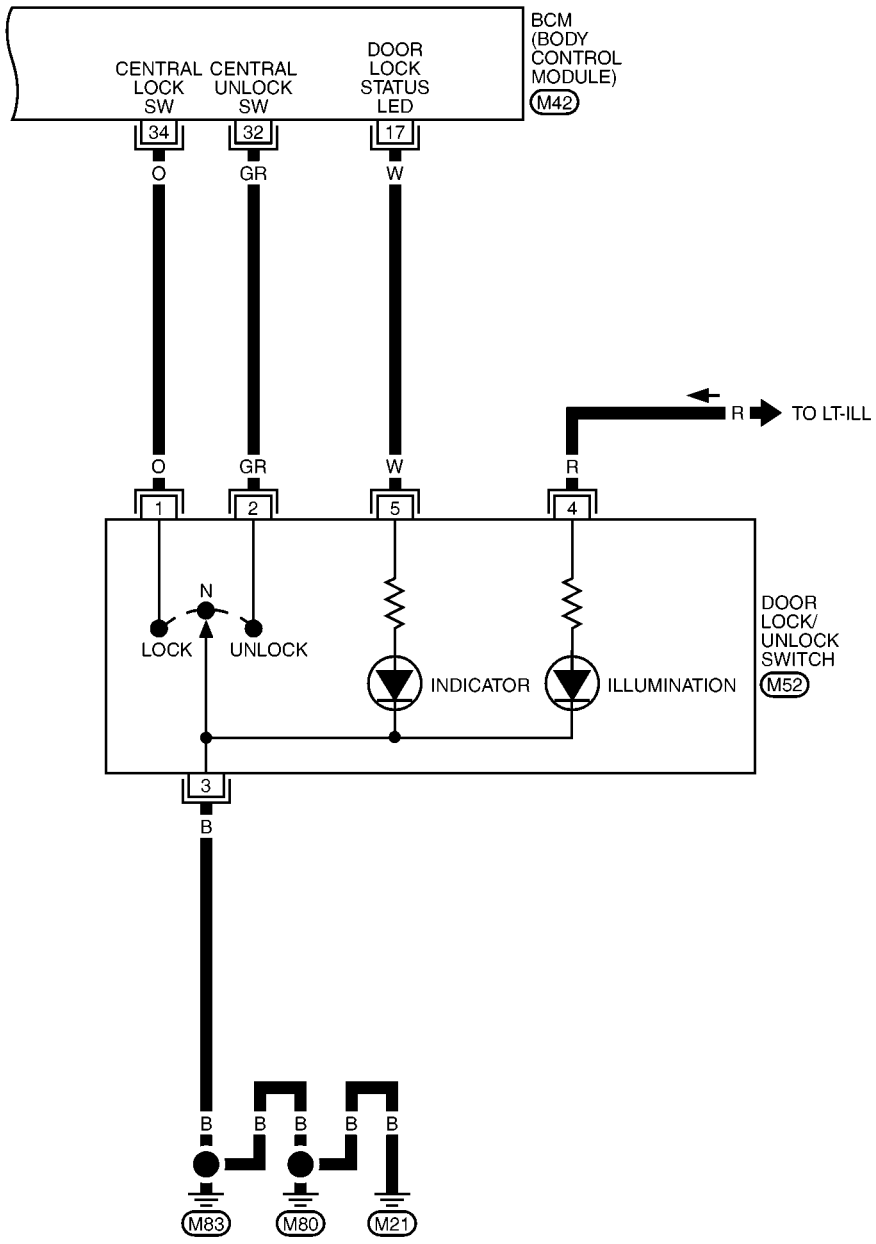
BL-THEFT-04

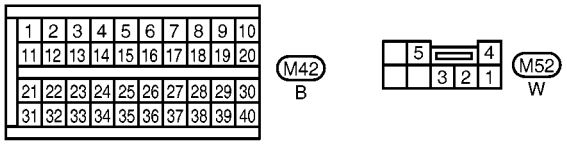




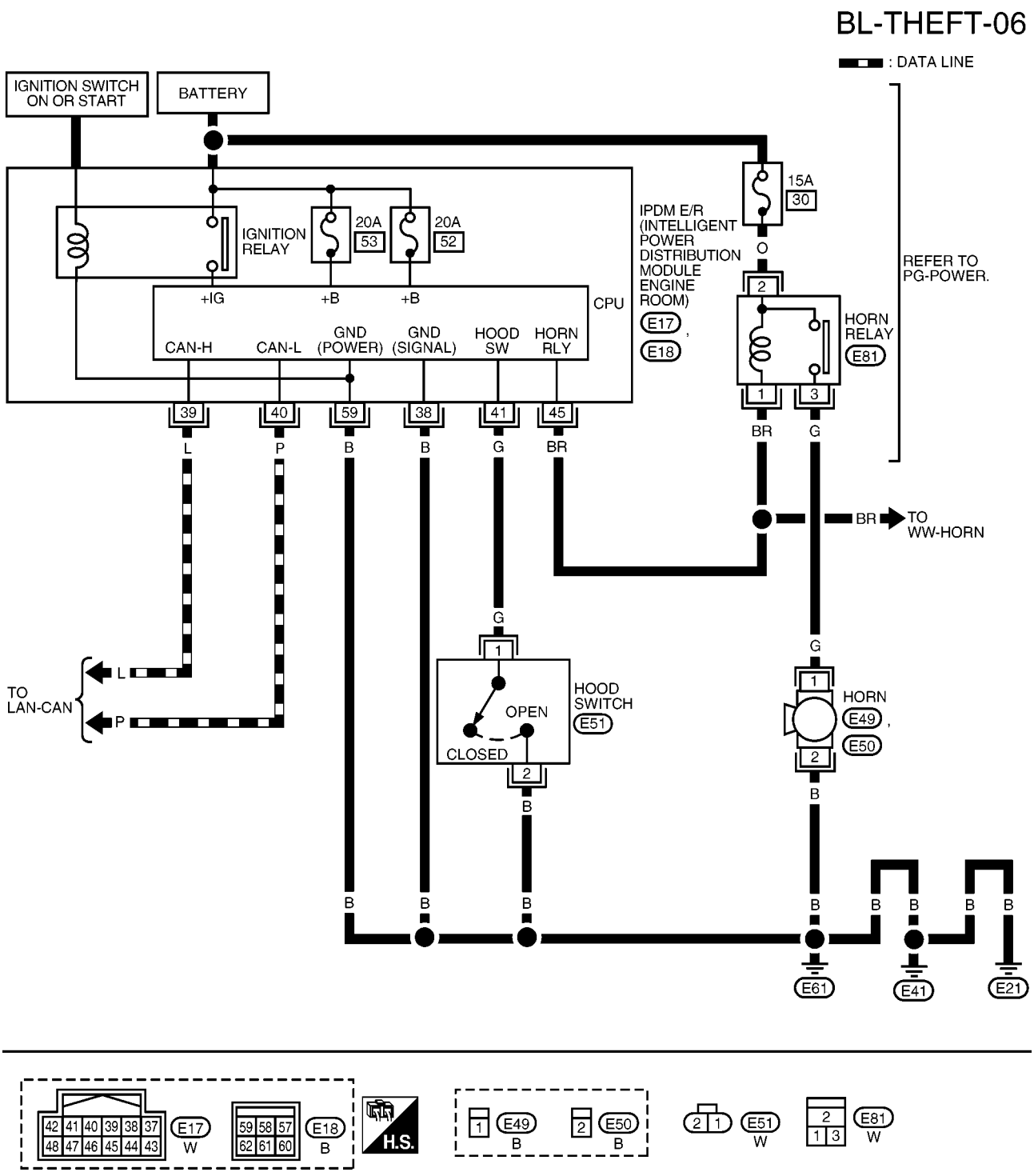
MIWA0534E

BL-THEFT-05





MIWA0522E

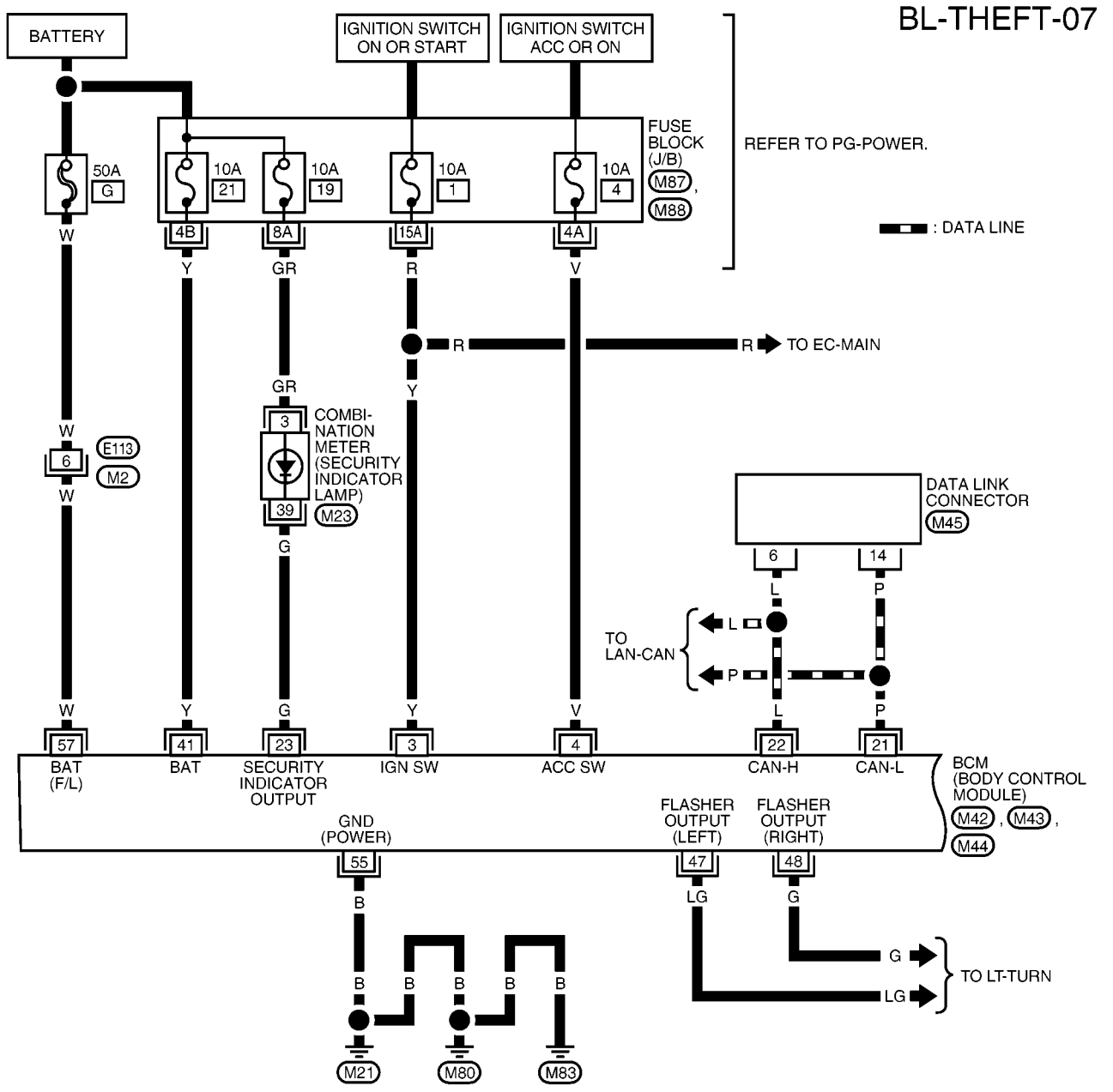

BL-THEFT-06
: DATA LINE
IGNITION SWITCH ON OR START
BATTERY
IGNITION RELAY
20A 53
20A 52
+IG
+B
+B
CPU
CAN-H
CAN-L
GND (POWER)
GND (SIGNAL)
HOOD SW
HORN RLY
39
40
59
38
41
45
L
P
B
B
G
BR
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E17
E18
15A 30
O
2
1
3
BR
G
HORN RELAY E81
REFER TO PG-POWER.
BR
TO WW-HORN
TO LAN-CAN
L
P
G
1
OPEN
CLOSED
2
HOOD SWITCH E51
B
G
1
2
HORN E49 E50
B
B
B
B
B
B
B
B
B
E61
E41
E21

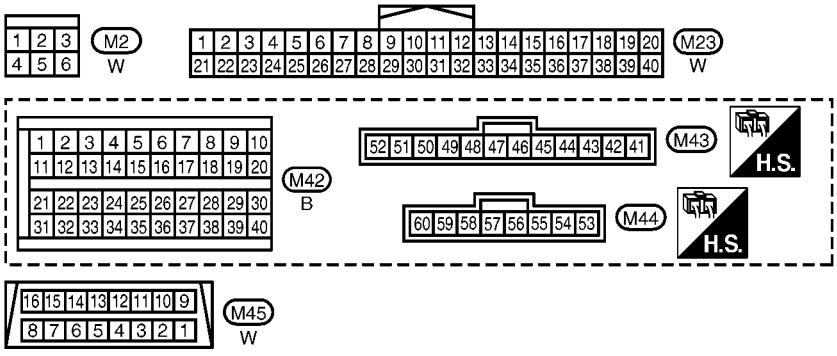
42 41 40 39 38 37
48 47 46 45 44 43
E17
W
59 58 57
62 61 60
E18
B
H.S.
1 E49 B
2 E50 B
2 1 E51 W
2
1 3
E81
W

MIWA0474E

Wiring Diagram — VEHSEC — for RHD Models

EIS00DC1

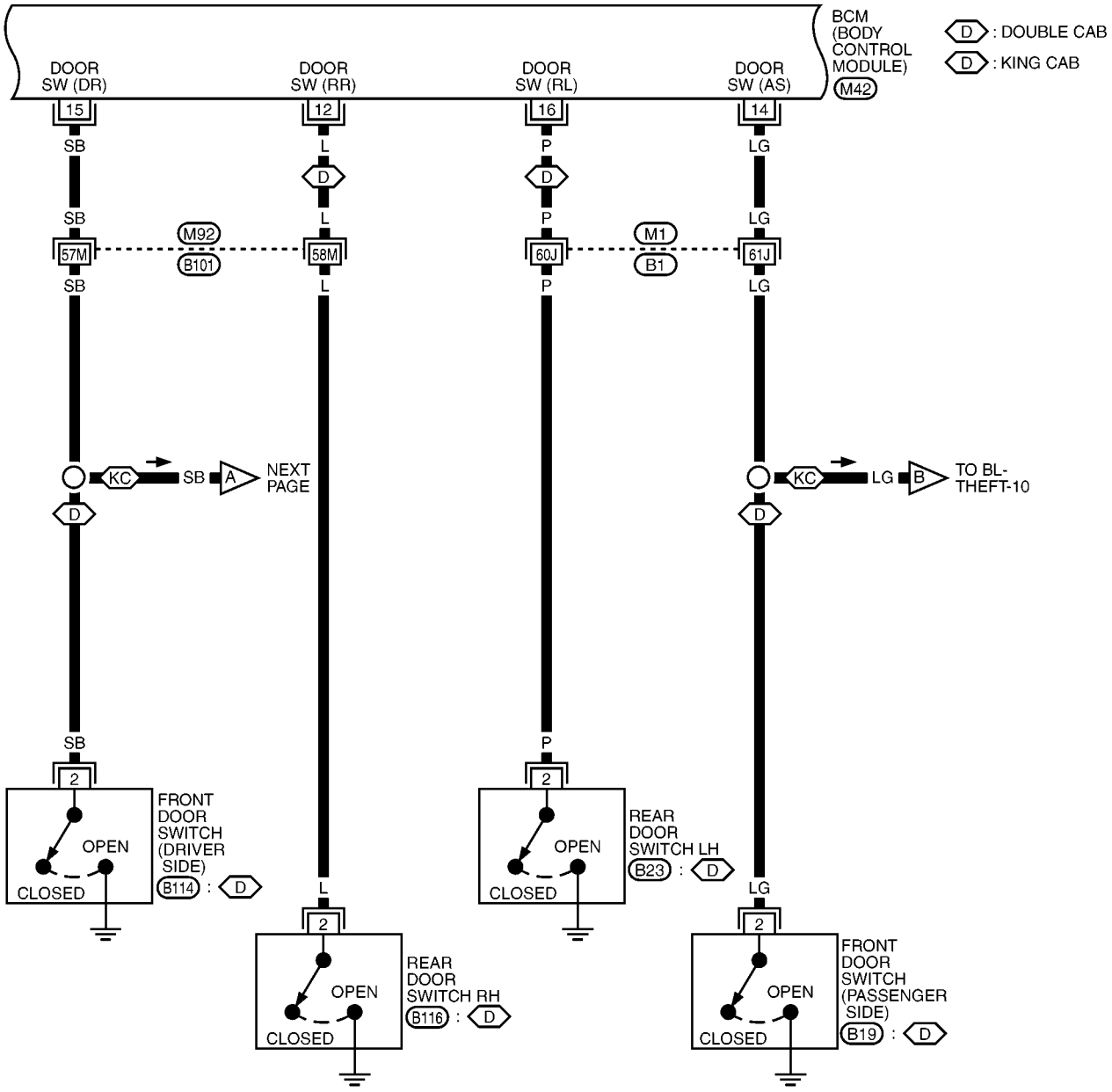


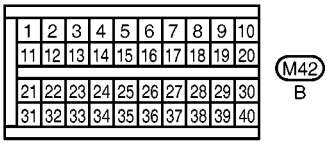


REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK JUNCTION BOX (J/B)

MIWA0475E

BL-THEFT-08





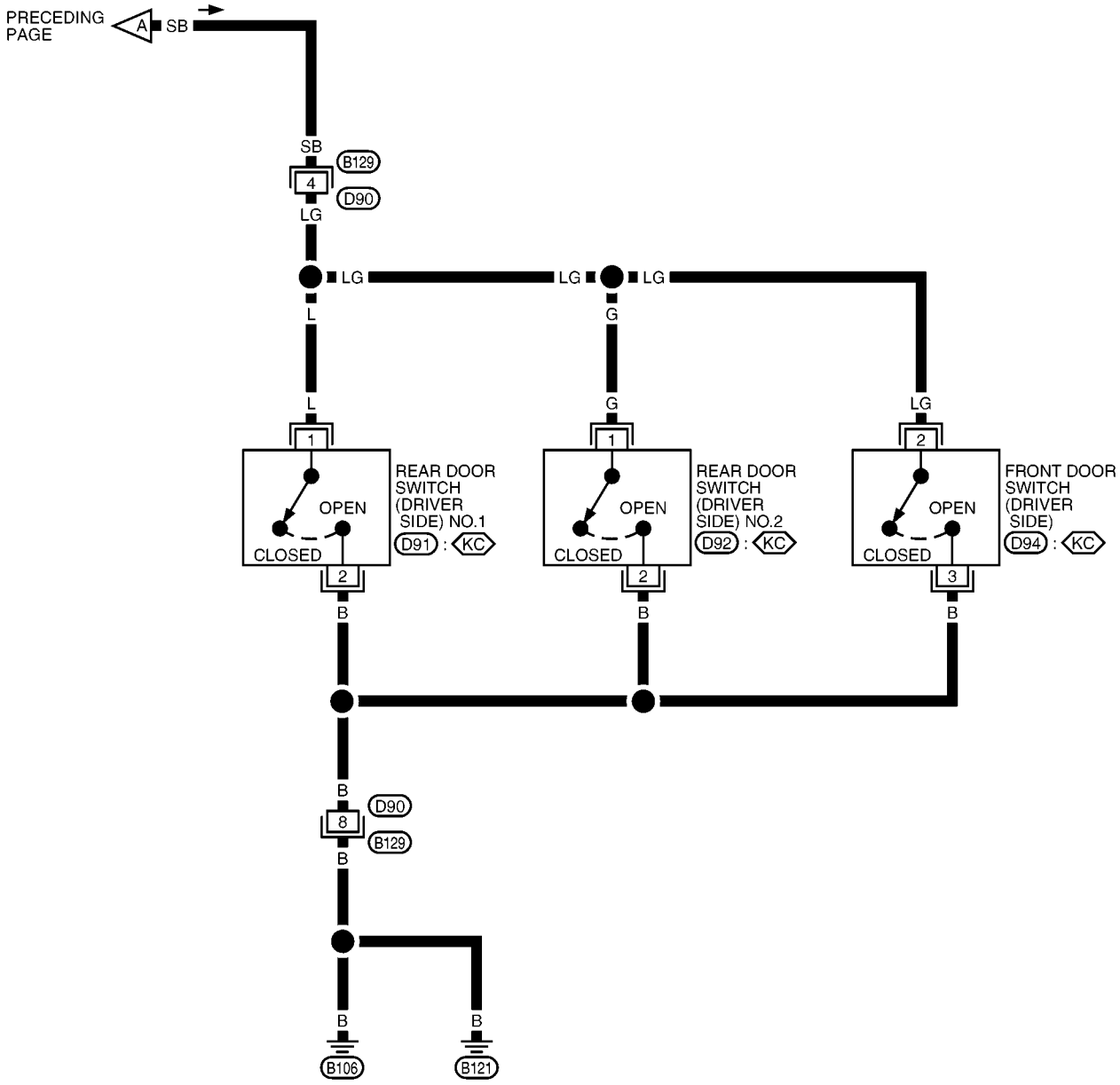
M42
B

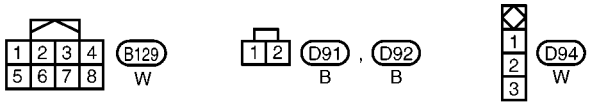
B19 , B23 , B114 , B116
W W W W

REFER TO THE FOLLOWING.
M1 , M92 -SUPER MULTIPLE JUNCTION (SMJ)

MIWA0476E

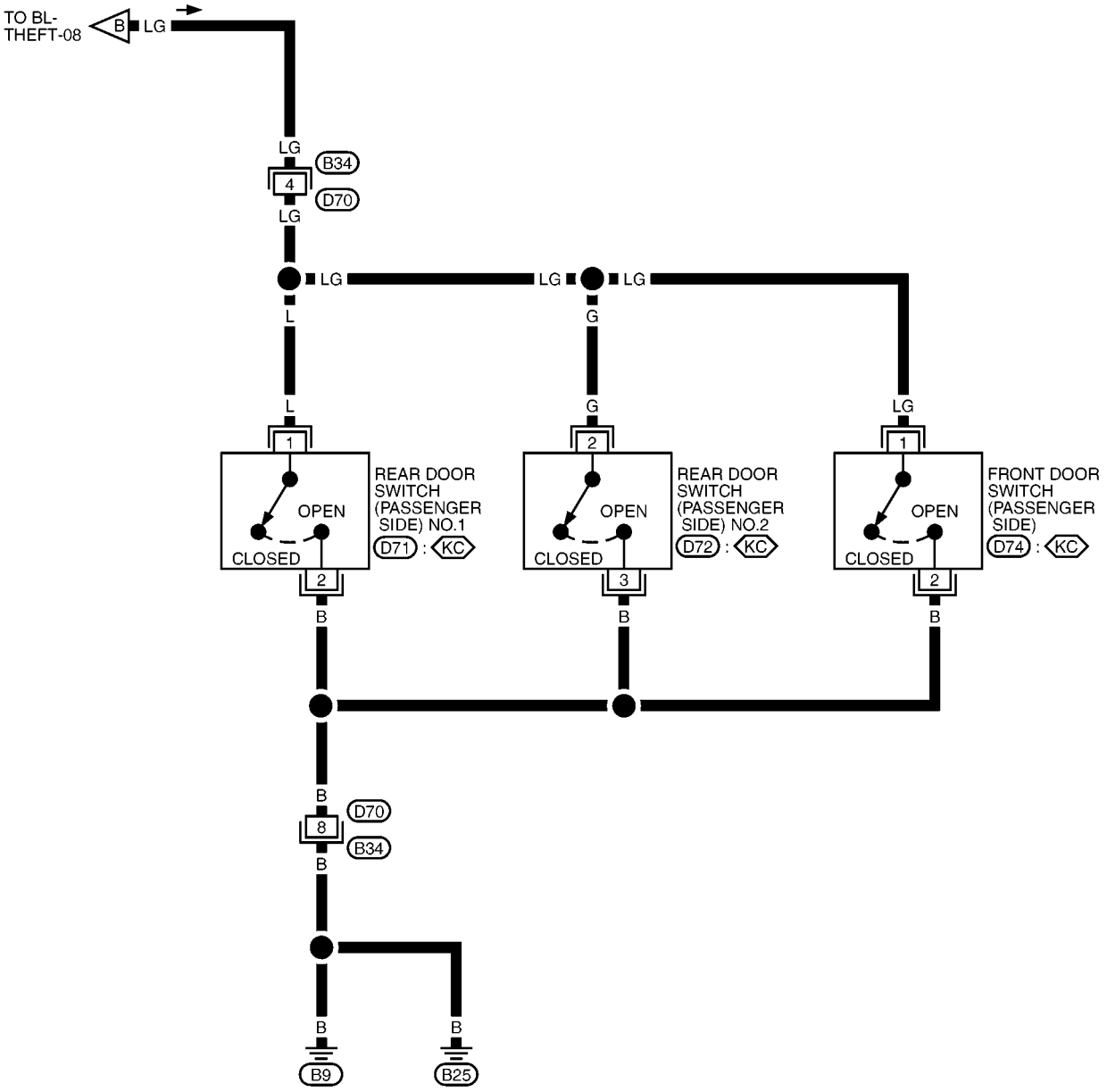
BL-THEFT-09

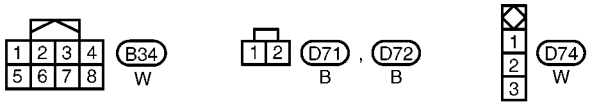




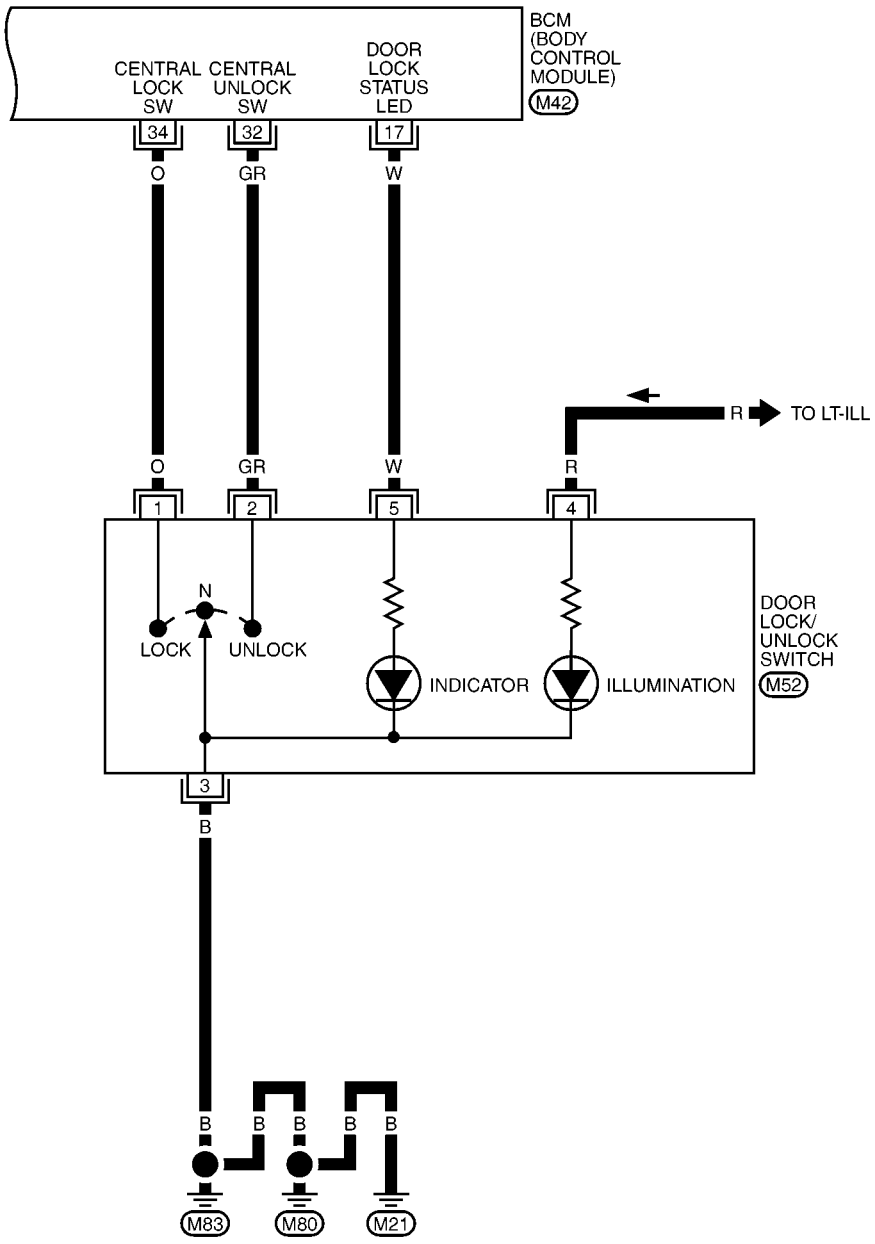
MIWA0535E

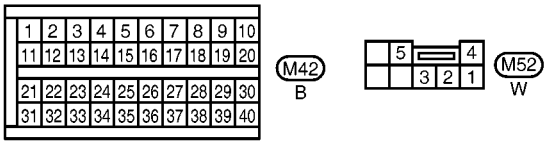
BL-THEFT-10



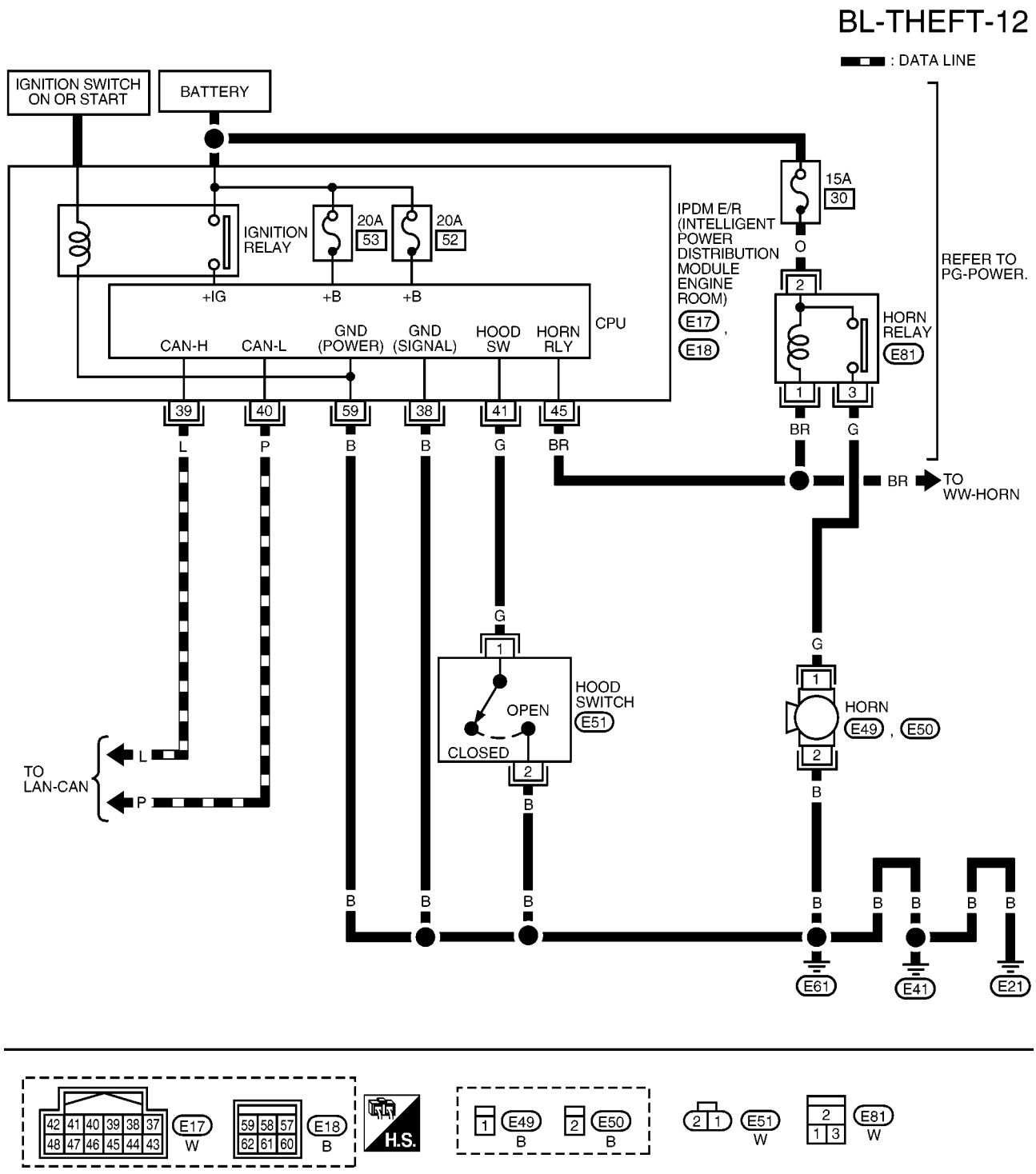


MIWA0536E


BCM
(BODY
CONTROL
MODULE)
M42
CENTRAL
LOCK
SW
CENTRAL
UNLOCK
SW
DOOR
LOCK
STATUS
LED
34
32
17
O
GR
W
R
TO LT-ILL
1
2
5
4
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR
LOCK/
UNLOCK
SWITCH
M52
3
B
M83
M80
M21


1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
31 32 33 34 35 36 37 38 39 40
M42
B
5 4
3 2 1
M52
W

MIWA0523E


BL-THEFT-12
: DATA LINE
IGNITION SWITCH ON OR START
BATTERY
IGNITION RELAY
20A 53
20A 52
+IG
+B
+B
CPU
CAN-H
CAN-L
GND (POWER)
GND (SIGNAL)
HOOD SW
HORN RLY
39
40
59
38
41
45
L
P
B
B
G
BR
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E17
E18
15A 30
O
2
1
3
HORN RELAY E81
BR
G
REFER TO PG-POWER.
BR
TO WW-HORN
G
1
OPEN
CLOSED
2
HOOD SWITCH E51
B
G
1
2
HORN E49 , E50
B
TO LAN-CAN
L
P
B
B
B
B
B
B
B
B
E61
E41
E21

42 41 40 39 38 37
48 47 46 45 44 43
E17
W
59 58 57
62 61 60
E18
B
H.S.
1 E49 B
2 E50 B
2 1 E51 W
2
1 3
E81
W

MIWA0479E

Terminals and Reference Value for BCM

EIS00DC2

Terminal	Wire Color	Item	Condition		Voltage (V) (Approx.)
3	Y	IGN ON	Ignition switch ON or START		Battery voltage
4	V	IGN ACC	Ignition switch ACC or ON		Battery voltage
12*	L	Rear door switch RH	ON (door open)		0
			OFF (door closed)		Battery voltage
14	LG	Front door switch (Passenger side)	ON (door open)		0
			OFF (door closed)		Battery voltage
15	SB	Front door switch (Driver side)	ON (door open)		0
			OFF (door closed)		Battery voltage
16*	P	Rear door switch LH	ON (door open)		0
			OFF (door closed)		Battery voltage
17	W	Door lock/unlock indicator	All door closed	Lock operation (illuminates)	Battery voltage
				Other than above	0
21	P	CAN L	—		—
22	L	CAN H	—		—
23	G	Security indicator lamp	Goes OFF → illuminates (Every 2.6 seconds)		Battery voltage → 0
31	B	Ground	—		0
32	GR	Door lock/unlock switch	All door closed	Unlock	0
				Other than above	5
34	O	Door lock/unlock switch	All door closed	Lock	0
				Other than above	5
41	Y	Power source (Fuse)	—		Battery voltage
55	B	Ground	—		0
57	W	Power source (Fusible link)	—		Battery voltage

*: Double cab

Terminals and Reference Value for IPDM E/R

EIS00DC3

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
38	B	Ground	—	0
39	L	CAN-H	—	—
40	P	CAN-L	—	—
41	G	Engine hood switch	ON (hood open)	0
			OFF (hood close)	Battery voltage
45	BR	Horn relay	When doors locks are operated using keyfob (OFF → ON) *	Battery voltage → 0
59	B	Ground	—	0

*: When horn reminder is ON.

CONSULT-II Function (BCM)

EIS00DC4

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

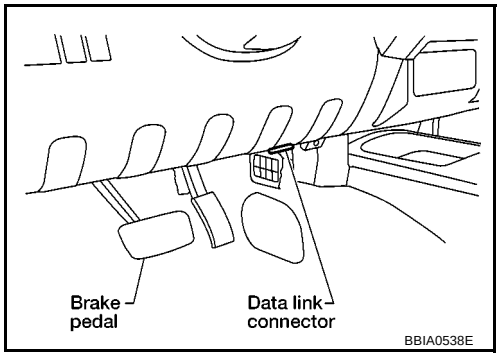
BCM diagnosis part	Diagnostic mode	Description
THEFT ALM	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II INSPECTION PROCEDURE

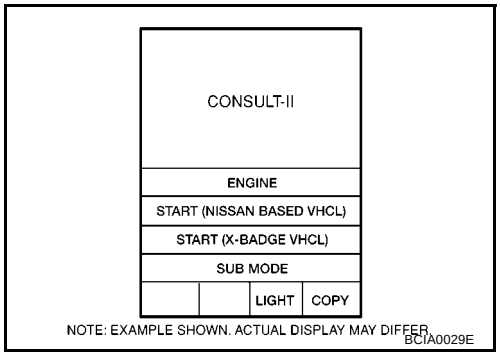
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

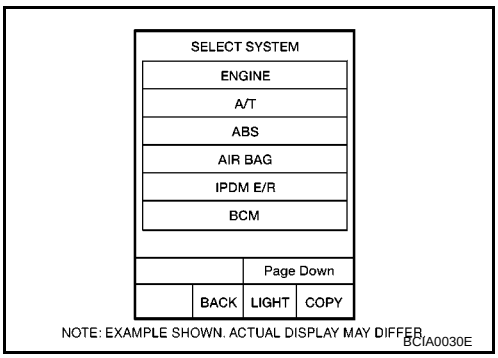
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.

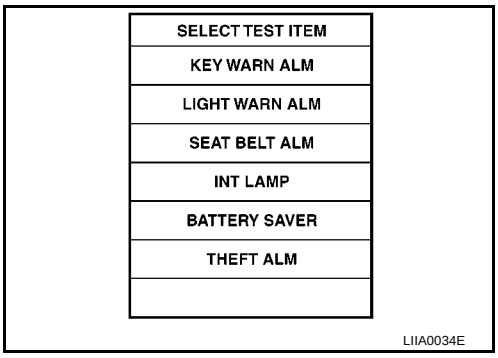


5. Touch “BCM”.
If “BCM” is not indicated, refer to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



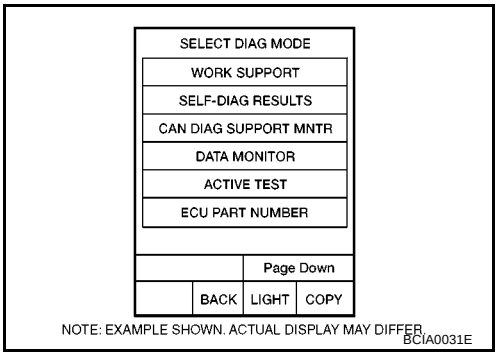
NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.
BCIA0030E

6. Touch “THEFT ALM” on the “SELECT TEST ITEM” screen.



LIIA0034E

7. Select diagnosis mode.
“DATA MONITOR”, “ACTIVE TEST” and “WORK SUPPORT” are available.



NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.
BCIA0031E

CONSULT-II APPLICATION ITEM

Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.
KEYLESS TRUNK	This is displayed even when it is not equipped.
TRUNK OPNR SW	This is displayed even when it is not equipped.
TRUNK CYL SW	This is displayed even when it is not equipped.
TRUNK OPN MNTR	This is displayed even when it is not equipped.
HOOD SW	Indicates [ON/OFF] condition of hood switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	This is displayed even when it is not equipped.

Monitored Item	Description
KEY CYL LK-SW	This is displayed even when it is not equipped.
KEY CYL UN-SW	This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
AUTO RELOCK	This is displayed even when it is not equipped.
GLS BREAK SEN	This is displayed even when it is not equipped.

Active Test

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-II screen is touched.
FLASHER	This test is able to check theft warning turn signal lamp operation. The turn signal lamp will be activated on when “ON” on CONSULT-II screen is touched.
VEHICLE SECURITY HORN	This test is able to check theft warning alarm operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.

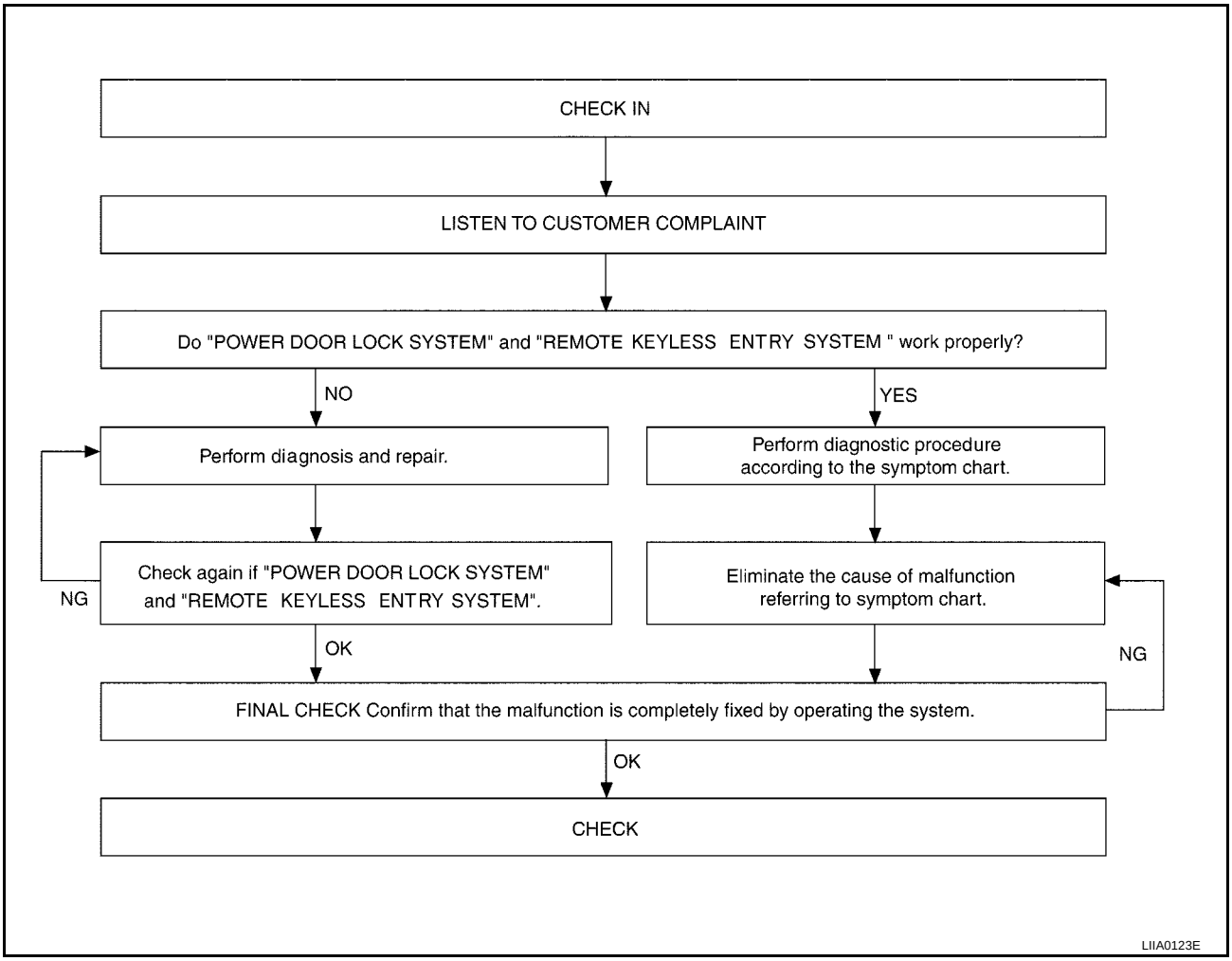
Work Support

Test Item	Description
SECURITY ALARM SET	This mode can confirm and change theft warning alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered theft warning alarm is recorded. This mode is able to confirm and erase the record of theft warning alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-II screen.

Trouble Diagnosis

EIS00DC5

WORK FLOW

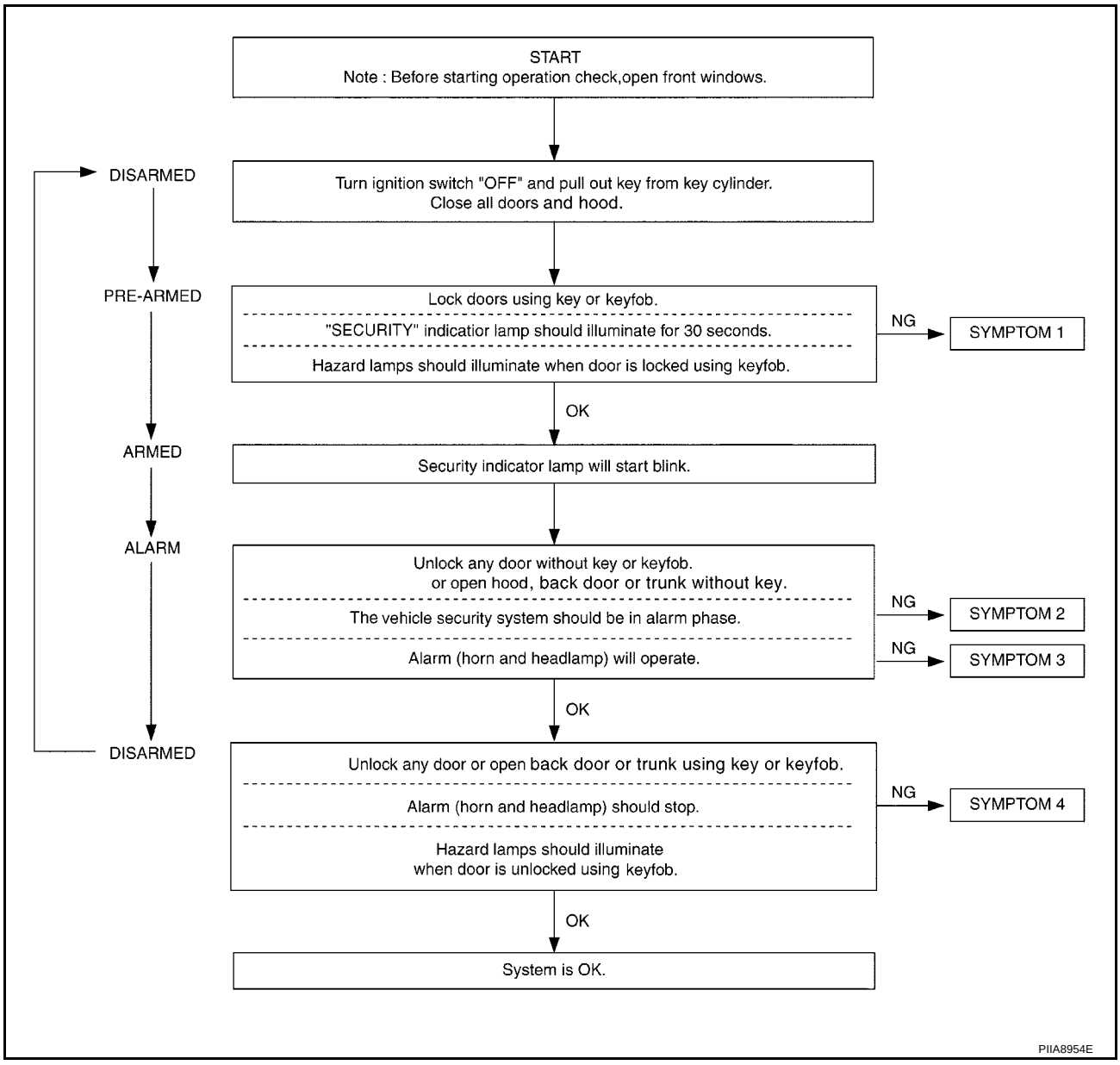


- “POWER DOOR LOCK SYSTEM” diagnosis refer to BL-21, "POWER DOOR LOCK SYSTEM" .
- “MULTI-REMOTE CONTROL SYSTEM” diagnosis refer to BL-89, "MULTI-REMOTE CONTROL SYSTEM" .

Preliminary Check

EIS00DC6

The system operation is canceled by turning ignition switch to ACC at any step between START and ARMED in the following flow chart.



After performing preliminary check, go to symptom chart. Refer to BL-161, "Symptom Chart" .

Symptom Chart

EIS00DC7

PROCEDURE / SYMPTOM			Diagnostic procedure	Reference page
1	Vehicle security system cannot be set by …..	Door switch	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check)	BL-162
		Key fob	Check remote keyless entry system function.	BL-89
		BCM	If the above systems are “OK”, replace BCM.	BCS-17
	Security indicator does not turn “ON”.		Diagnostic Procedure 2 (Security indicator lamp check)	BL-168
			If the above systems are “OK”, replace BCM.	BCS-17
2	*1 Vehicle security system does not alarm when ….	Any door is opened.	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check)	BL-162
			If the above systems are “OK”, replace BCM.	BCS-17
3	Vehicle security alarm does not activate.	Horn alarm	Diagnostic Procedure 3 (Vehicle security horn alarm check)	BL-169
			If the above systems are “OK”, replace BCM.	BCS-17
		Turn signal lamp alarm	Diagnostic Procedure 4 (Turn signal lamp alarm check)	BL-169
			If the above systems are “OK”, replace BCM.	BCS-17
4	Vehicle security system cannot be canceled by ….	Key fob	Check remote keyless entry system function.	BL-89
			If the above systems are “OK”, replace BCM.	BCS-17

*1: Make sure the system is in the armed phase.

Diagnostic Procedure 1

EIS00DC8

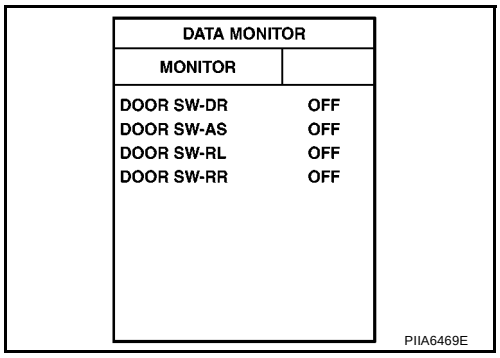
CHECK DOOR SWITCH (DOUBLE CAB)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition	DATA MONITOR
DOOR SW-DR	CLOSE ↓ OPEN	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		

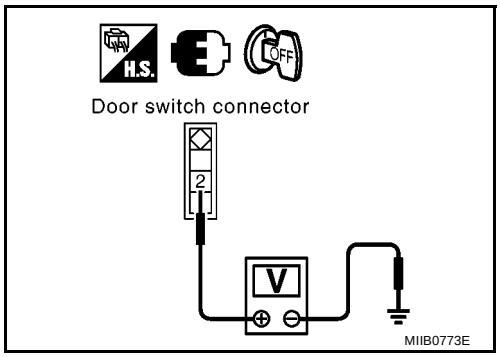


Without CONSULT-II

Check voltage between each door switch connector and ground.

Item	Connector	Terminals (+)	Terminals (-)	Door condition	Voltage [V] (Approx.)
Driver side	B19 (B114)	2	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

( ): RHD model



OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between door switch terminal 2 and ground part of door switch.

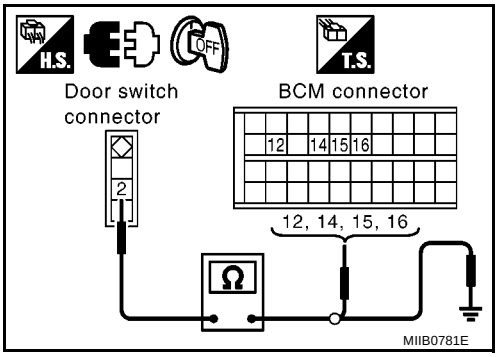
Terminal		Door switch condition	Continuity
2	Ground part of door switch	Pushed	No
		Released	Yes

OK or NG

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

3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch connector B19, B23, B114, B116 terminals 2 and BCM connector M42 terminals 12, 14, 15, 16.



Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	15	CLOSE to OPEN	Continuity should exist.
Rear LH	B23	2	16		
Passenger side	B114 (B19)	2	14		
Rear RH	B116	2	12		

(): RHD models

3. Check continuity between door switch connector B19, B23, B114, B116 terminal 2 and ground.

Item	Connector	Terminals		Door condition	Continuity
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Continuity should not exist.
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

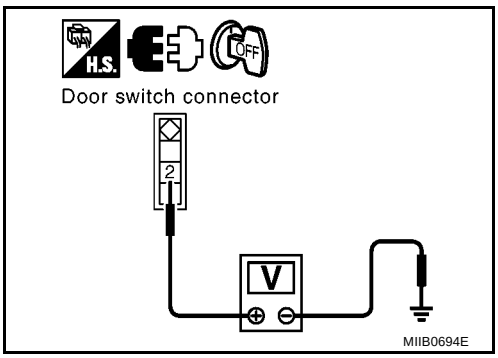
(): RHD models

OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between each door switch connector B19, B23, B114, B116 terminal 2 and ground.



Item	Connector	Terminals		Door condition	Voltage [V] (Approx.)
		(+)	(–)		
Driver side	B19 (B114)	2	Ground	CLOSE to OPEN	Battery voltage
Rear LH	B23	2			
Passenger side	B114 (B19)	2			
Rear RH	B116	2			

(): RHD models

OK or NG

OK >> Check harness condition or door switch installation condition.
NG >> Replace BCM.

CHECK DOOR SWITCH (KING CAB)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”) in DATA MONITOR mode with CONSULT-II.

- When any doors are open:

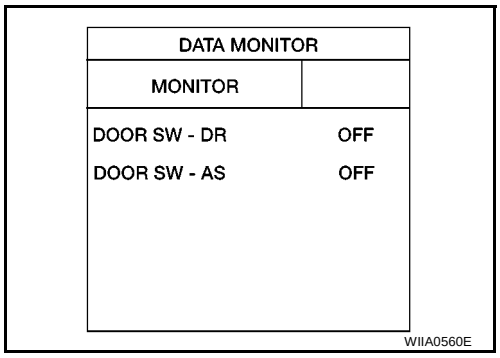
  DOOR SW-DR : OFF

  DOOR SW-AS : OFF

- When any doors are closed:

  DOOR SW-DR : OFF

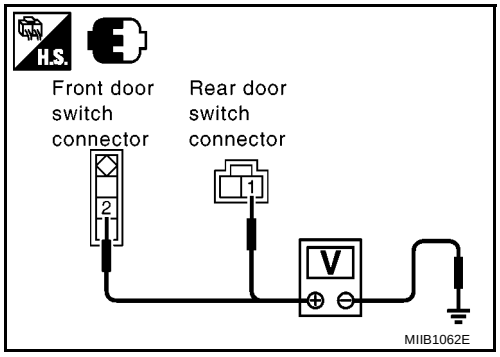
  DOOR SW-AS : OFF



Without CONSULT-II

Check voltage between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminals 1, 2 and ground.

Item	Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
Front door switch LH	D74 (D94)	2	Ground	Open ↓ Closed	0 ↓ Battery voltage
Front door switch RH	D94 (D74)				
Rear door switch No.2 LH	D72 (D92)				
Rear door switch No.2 RH	D92 (D72)	1			
Rear door switch No.1 LH	D71 (D91)				
Rear door switch No.1 RH	D91 (D71)				



(): RHD MODELS

OK or NG

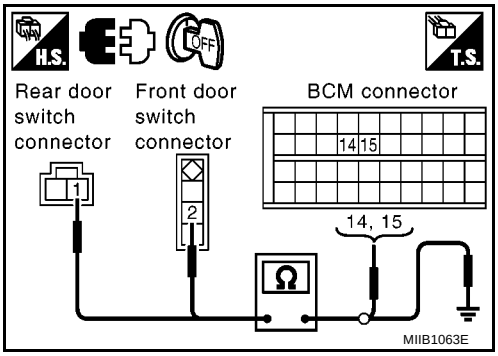
OK >> System is OK.

NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and BCM connector M42 terminals 14, and 15.

Connector	Terminals	Item	Connector	Terminals	Condition
M42	15	Front door switch LH	D74 (D94)	2	Continuity should exist
	14	Front door switch RH	D94 (D74)	2	
	15	Rear door switch No. 2 LH	D72 (D92)	1	
	14	Rear door switch No. 2 RH	D92 (D72)	1	
	15	Rear door switch No. 1 LH	D71 (D91)	1	
	14	Rear door switch No. 1 RH	D91 (D71)	1	



(): RHD MODELS

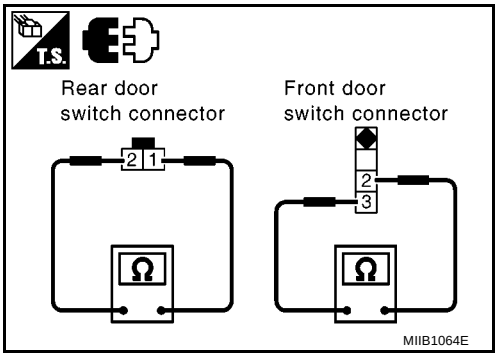
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch terminals.

Item	Terminals	Condition	Continuity
Door switches (front)	2 - 3	Open	Yes
		Closed	No
Door switches (rear upper and lower)	1 - 2	Open	Yes
		Closed	No



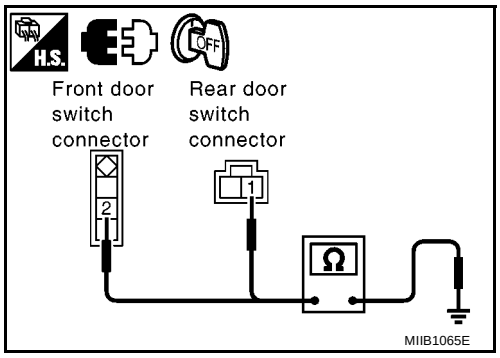
OK or NG

OK >> GO TO 4.
NG >> Replace door switch.

4. CHECK DOOR SWITCHES GROUND CIRCUIT

Check continuity between door switch connector D74 (Front LH), D94 (Front RH) terminal 2, D72 (Rear upper LH), D92 (Rear upper RH), D71 (Rear lower LH), D91 (Rear lower RH) terminal 1 and ground.

Item	Connector	Terminals	Condition	
Front door switch LH	D74 (D94)	2	Ground	Continuity should not exist
Front door switch RH	D94 (D74)	2		
Rear door switch No. 2 LH	D72 (D92)	1		
Rear door switch No. 2 RH	D92 (D72)	1		
Rear door switch No. 1 LH	D71 (D91)	1		
Rear door switch No. 1 RH	D91 (D71)	1		



(): RHD MODELS

OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

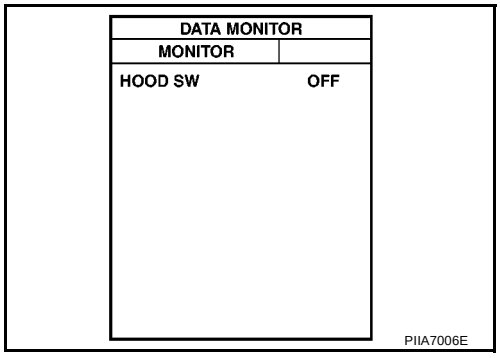
CHECK HOOD SWITCH

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check “HOOD SW” in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Hood condition	DATA MONITOR
HOOD SW	CLOSE → OPEN	OFF → ON



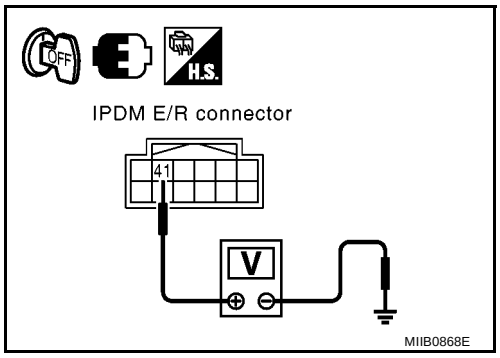
Without CONSULT-II

Check voltage between IPDM E/R connector and ground.

Item	Connector	Terminals (+)	Terminals (-)	Door condition	Voltage [V] (Approx.)
IPDM E/R	E17	41	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0

OK or NG

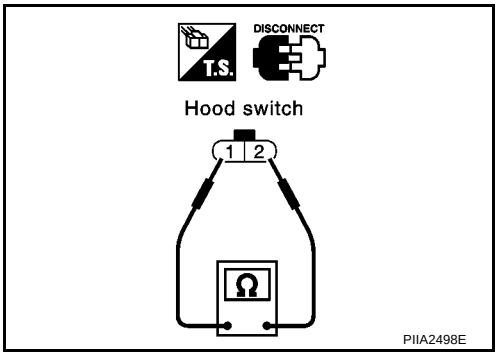
OK >> Hood switch circuit is OK.
NG >> GO TO 2.



2. CHECK HOOD SWITCH

1. Turn ignition switch OFF.
2. Disconnect hood switch connector.
3. Check continuity between hood switch terminal 1 and 2.

Terminals		Hood switch condition	Continuity
1	2	Pressed	No
		Released	Yes



OK or NG

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

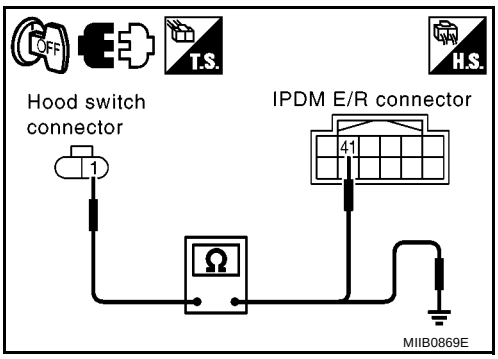
3. CHECK HOOD SWITCH CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between hood switch connector E51 terminals 1 and IPDM E/R connector E17 terminals 41.

1 – 41 : Continuity should exist.

3. Check continuity between hood switch connector E51 terminal 1 and ground.

1 – Ground : Continuity should not exist.



OK or NG

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

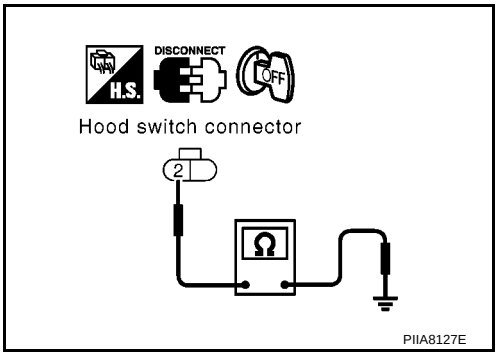
4. CHECK GROUND CIRCUIT

Check continuity between hood switch connector E51 terminal 2 and ground.

2 – Ground : Continuity should exist.

OK or NG

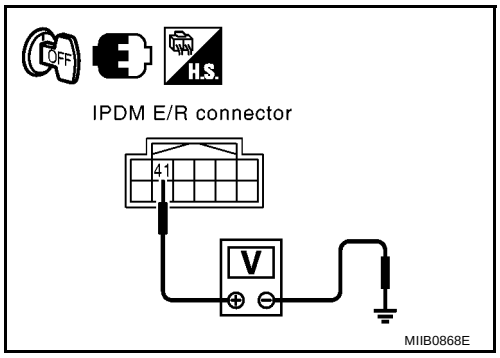
OK >> GO TO 5.
NG >> Repair or replace harness.



5. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector.
2. Check voltage between IPDM E/R terminal 41 and ground.

41 – Ground : Battery voltage



OK or NG

OK >> Check harness condition.
NG >> Replace IPDM E/R.

Diagnostic Procedure 2

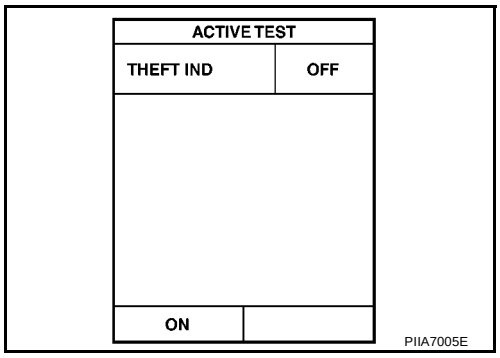
EIS00DC9

SECURITY INDICATOR LAMP CHECK

1. SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT-II

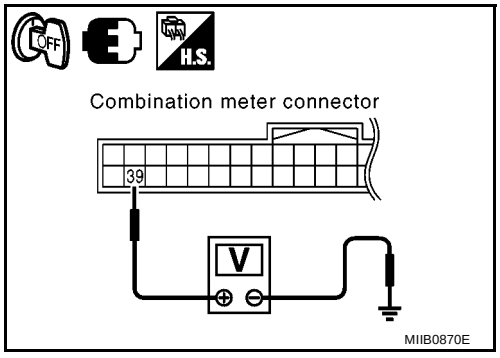
Check "THEFT IND" in "ACTIVE TEST" mode with CONSULT-II.



Without CONSULT-II

1. Turn ignition switch OFF.
2. Check voltage between combination meter (security indicator lamp) connector M23 terminal 39 and ground.

Connector	Terminal		Security indicator lamp condition	Voltage (V) (Approx.)
	(+)	(-)		
M23	39	Ground	Illuminated	0
			Not illuminated	Battery voltage



OK or NG

OK >> Security indicator lamp is OK.
NG >> GO TO 2.

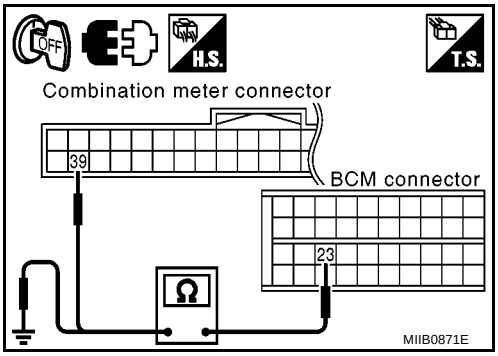
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and combination meter connector.
3. Check continuity between BCM connector M42 terminal 23 and combination meter connector M23 terminal 39.

23 – 39 : Continuity should exist.

4. Check continuity between BCM connector M42 terminal 23 and ground.

23 – Ground : Continuity should not exist.



OK or NG

OK >> Check the following.
- 10A fuse [No. 19, located in fuse block (J/B)]
- Harness for open or short between combination meter and fuse

NG >> Repair or replace harness.

Diagnostic Procedure 3

EIS00DCB

THEFT WARNING HORN ALARM CHECK

1. CHECK HORN OPERATION

Check if horn sounds with horn switch.

Does horn operate?

Yes >> Check harness for open or short between IPDM E/R and horn relay.
No >> Check horn circuit. Refer to WW-59, "HORN" .

Diagnostic Procedure 4

EIS00DCC

THEFT WARNING TURN SINGAL LAMP ALARM CHECK

1. CHECK THEFT WARNING TURN SIGNAL LAMP ALARM OPERATION

Check if turn signal lamps operate with combination switch and hazard switch.

Do turn signal lamps come on when turning switch ON?

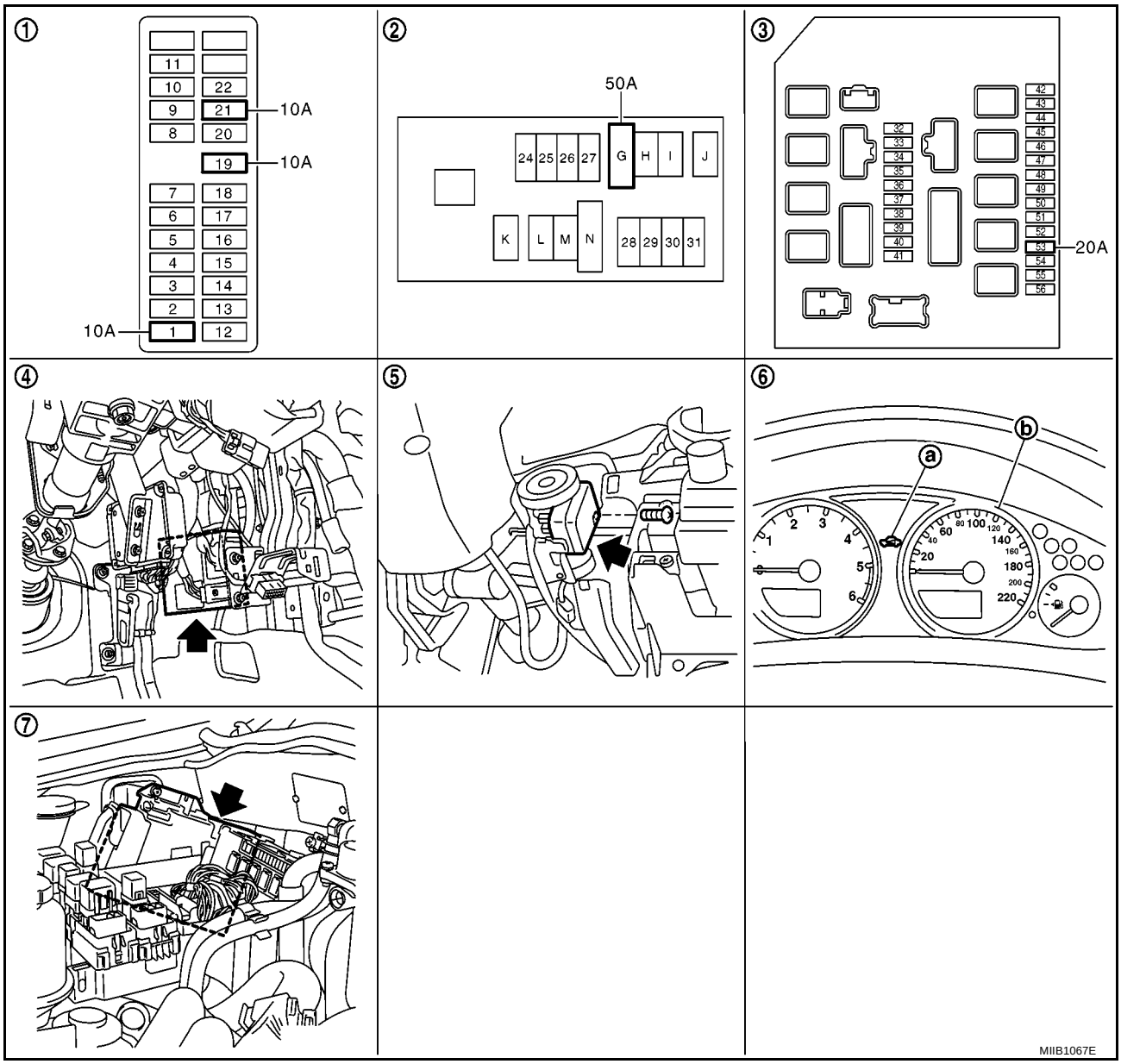
Yes >> Turn signal lamps alarm is OK.
No >> Check turn signal lamps system. Refer to LT-97, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

NATS(NISSAN ANTI-THEFT SYSTEM)

PFP:28591

Component Parts and Harness Connector Location

EIS00DAO



1. Fuse block (J/B) fuse layout
2. Fuse and fusible link box
3. IPDM fuse layout
4. BCM M42, M43, M44 (View with instrument lower panel LH removed)
5. NATS antenna amp M37
6. a: Security indicator lamp b: Combination meter M23
7. ECM E20 (Engine room)

NOTE:
If customer reports a “No start” condition, request ALL KEYS to be brought to an NISSAN dealer in case of a NATS malfunction.

System Description

EIS00DAP

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

- Since only NATS ignition keys, whose ID No. s have been registered into the ECM and IMMU of NATS, allow the engine to run, a vehicle operation without a 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 performed.
- 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 cannot 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 NATS registered in NATS.
  If the vehicle owner requests, a maximum of four 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 malfunction, 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 performed using CONSULT-II hardware and CONSULT-II NATS software.
  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.**

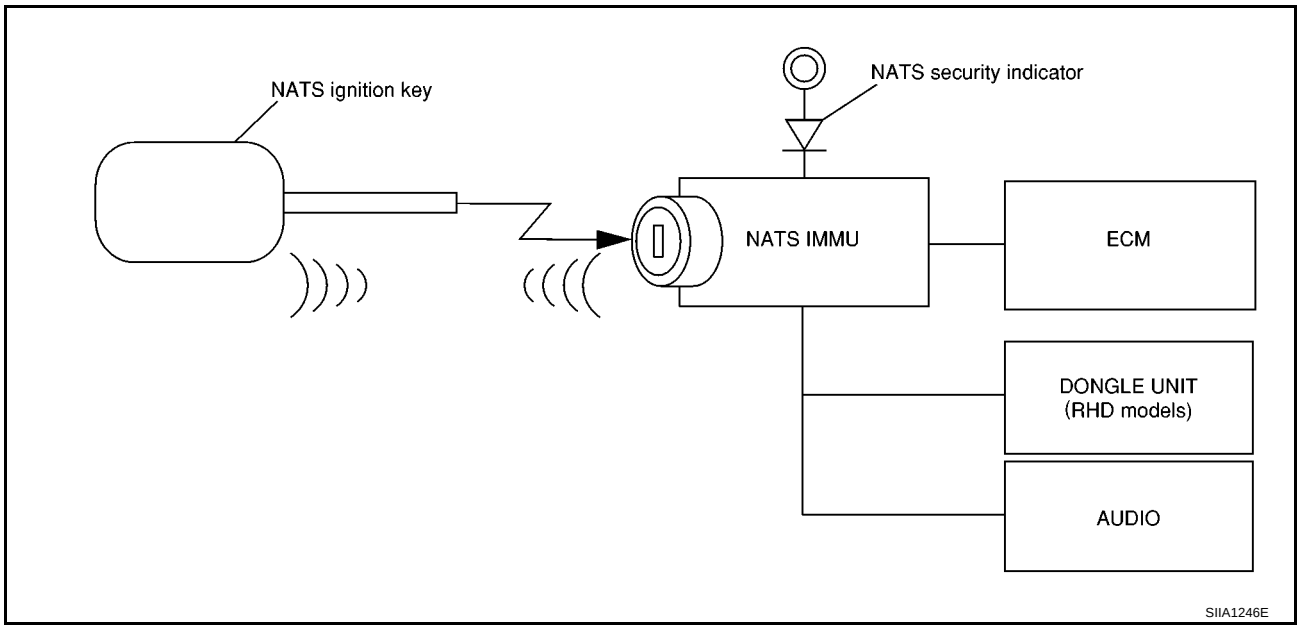
System Composition

EIS00DAQ

The immobilizer function of the NATS consists of the following:

- NATS ignition key
- Mechanical key (with Intelligent Key system)
- NATS antenna amp. located in the ignition key cylinder
- BCM
- Engine control module (ECM)
- Dongle unit (RHD models)
- Security indicator

NOTE:
The communication between ECM, BCM and/or Intelligent Key unit uses the CAN communication system.



ECM Re-communicating Function

EIS00DAR

Performing following procedure can automatically perform re-communication of ECM and BCM or Intelligent Key unit, 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)

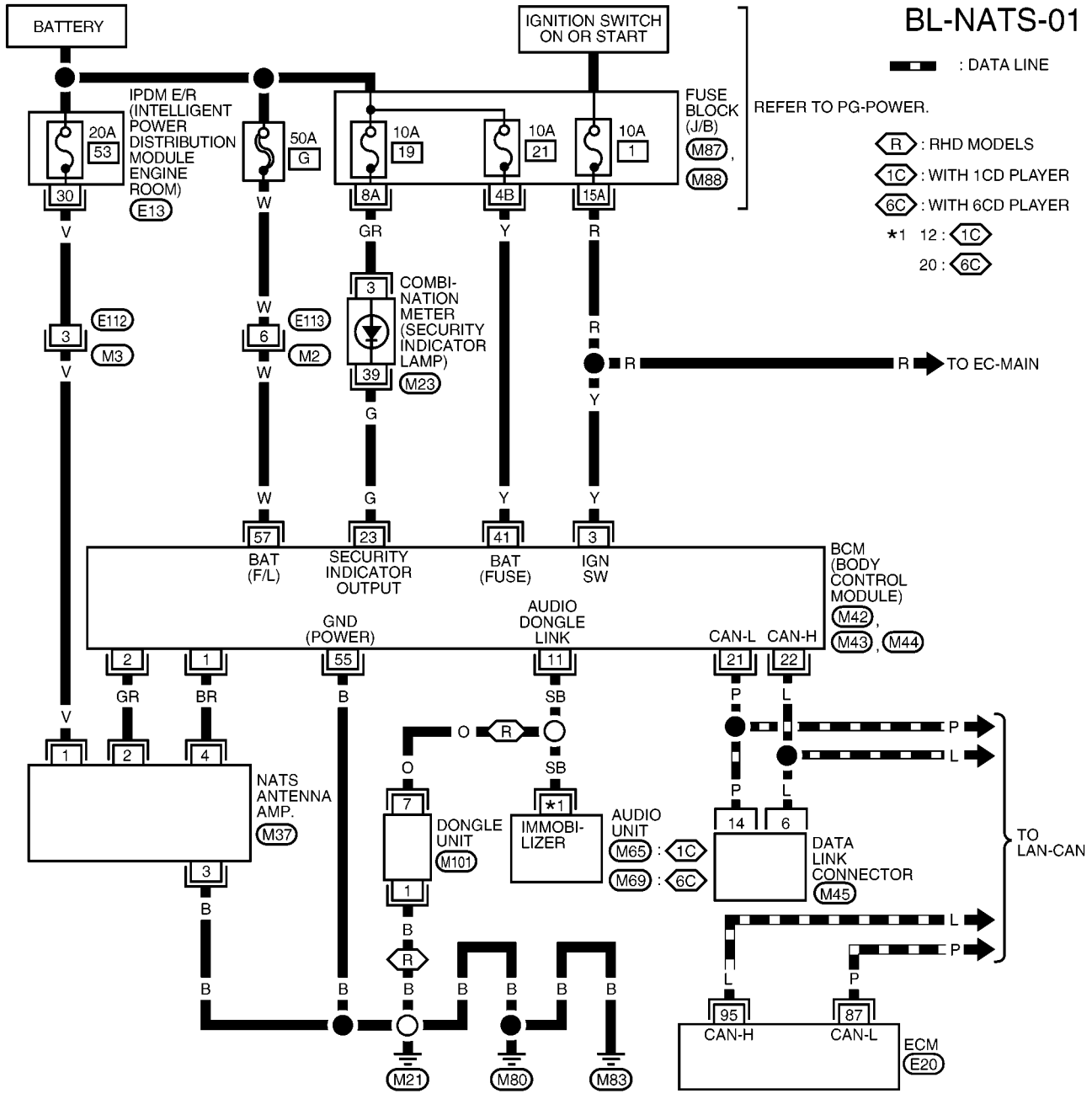
NOTE:

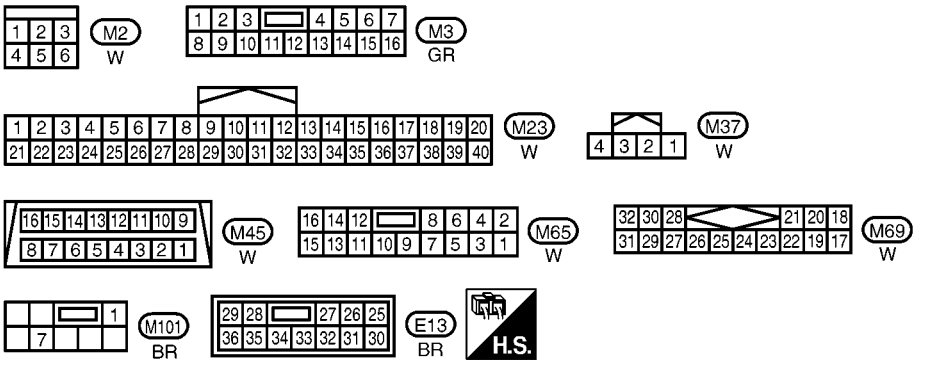
- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

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 —

EIS00DAS





REFER TO THE FOLLOWING.
M87, M88 -FUSE BLOCK-JUNCTION BOX (J/B)
M42, M43, M44, E20 -ELECTRICAL UNITS

MIWA0480E

Terminals and Reference Value for BCM

EIS00DAW

Terminal	Wire Color	Item	Condition	Voltage [V] (Approx.)
1	BR	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch “ON”: Pointer of tester should move.
2	GR	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch “ON”: Pointer of tester should move.
3	Y	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
21	P	CAN-L	—	—
22	L	CAN-H	—	—
23	G	Security indicator lamp	Goes OFF → illuminates (Every 2.6 seconds)	Battery voltage → 0
41	Y	Power source (Fuse)	—	Battery voltage
55	B	Ground	—	0
57	W	Power source (Fusible link)	—	Battery voltage

CONSULT-II Function

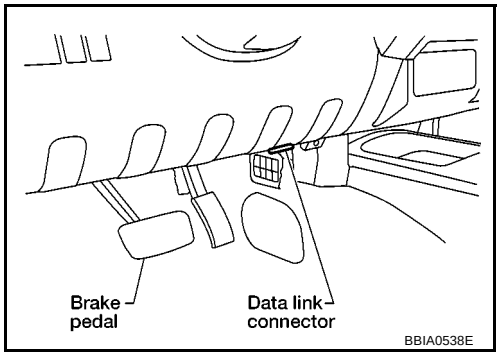
EIS00DAX

CONSULT-II INSPECTION PROCEDURE

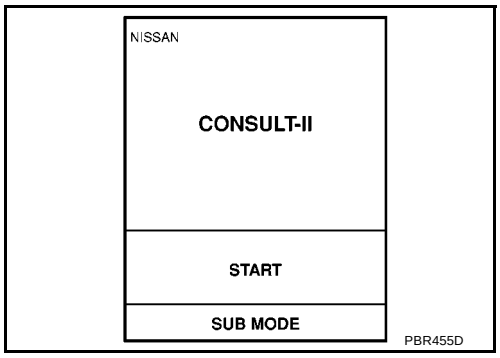
1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.

Program card : NATS (AEN04A-1)

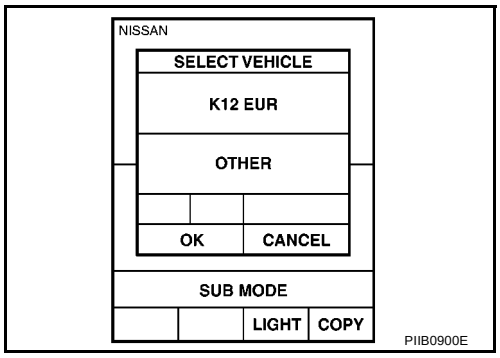
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



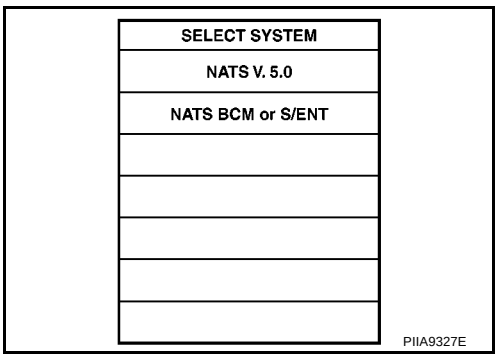
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch “OTHER”.

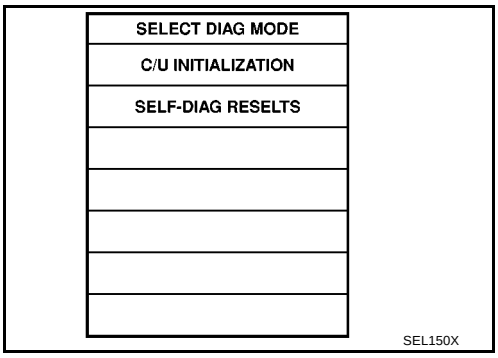


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-50, "CONSULT-II Data Link Connector (DLC) Circuit" .



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

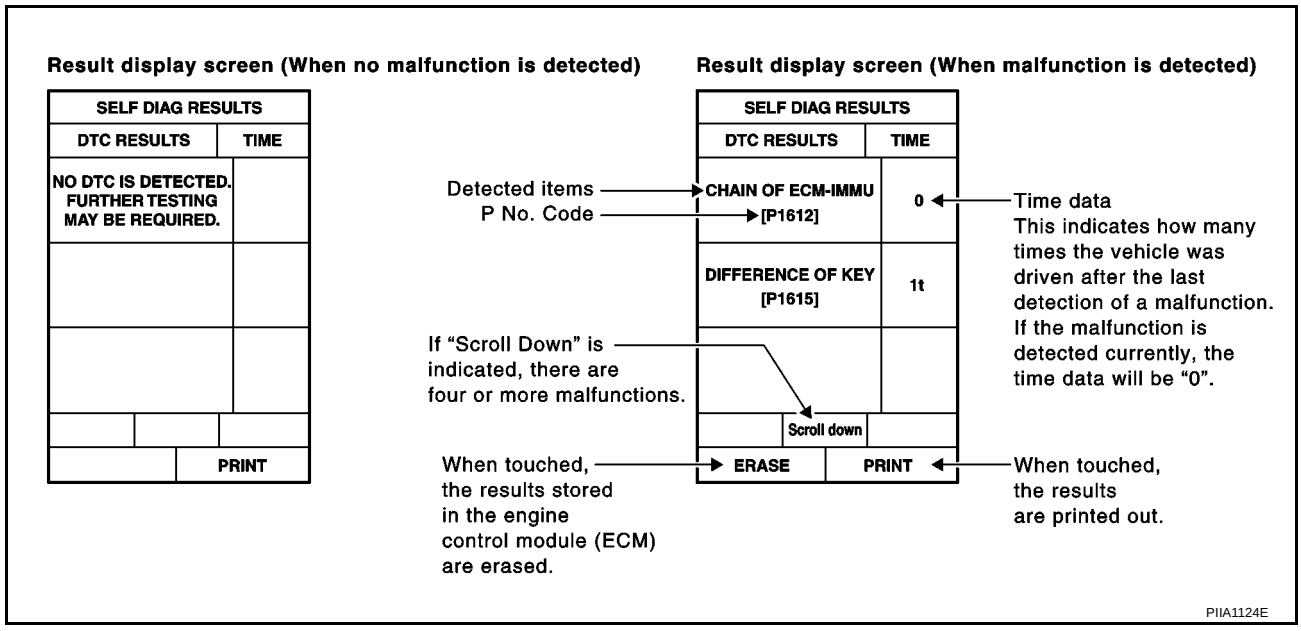
CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [NATS ignition key/ BCM/ ECM*]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to BL-176, "NATS SELF-DIAGNOSTIC RESULTS ITEM CHART" .

*: When replace ECM, refer to BL-172, "ECM Re-communicating Function" .

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 will show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.
- 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



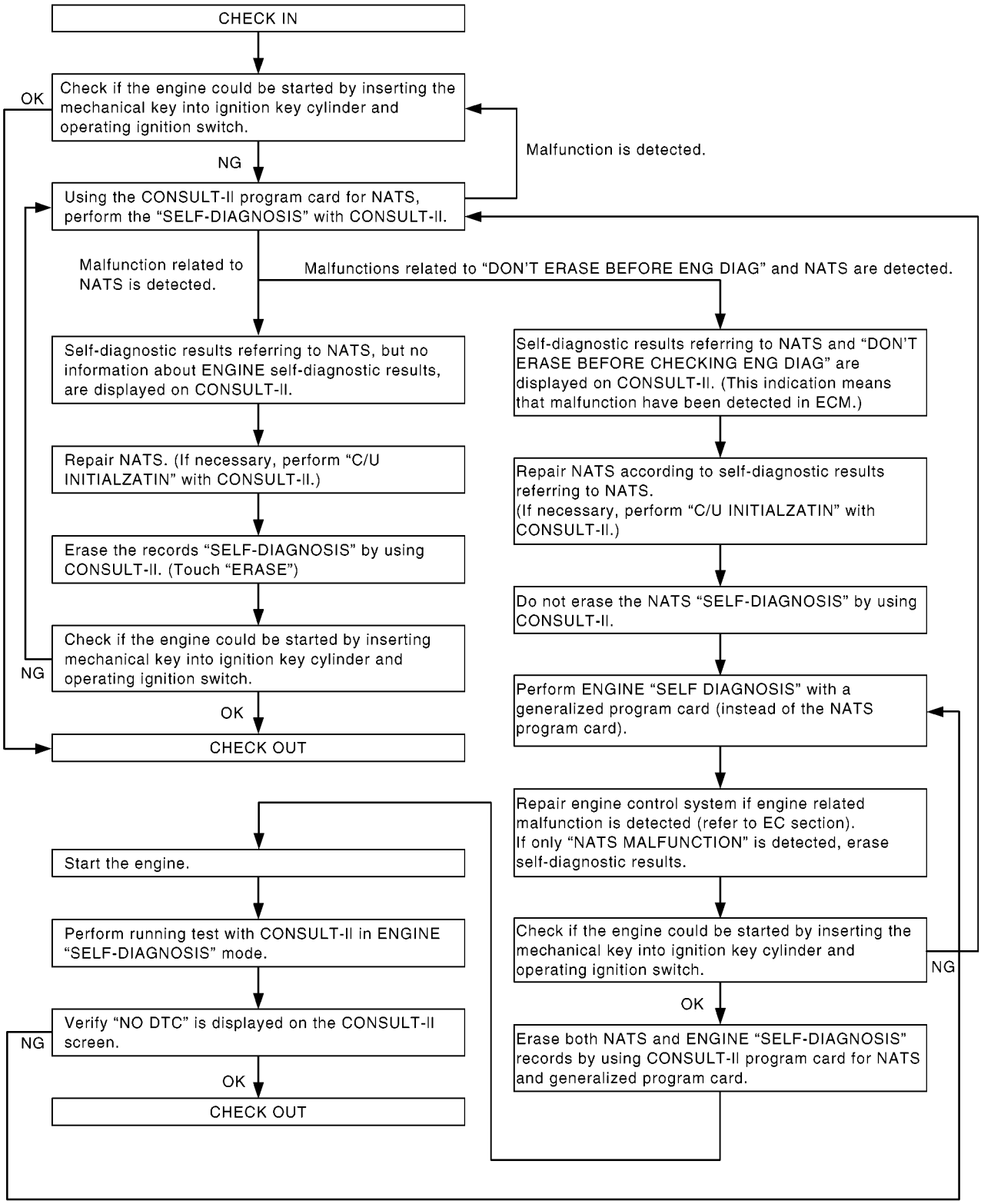
NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items [NATS program card screen terms]	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when.....	Reference page
CHAIN OF ECM-IMMU [P1612]	NATS MAL-FUNCTION P1612	Communication impossible between ECM and BCM In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.	BL-179
DIFFERENCE OF KEY [P1615]	NATS MAL-FUNCTION P1615	BCM can receive the key ID signal but the result of ID verification between key ID and BCM is NG.	BL-181
CHAIN OF IMMU-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM cannot receive the key ID signal.	BL-181
ID DISCORD, IMM-ECM [P1611]	NATS MAL-FUNCTION P1611	The result of ID verification between BCM and ECM is NG. System initialization is required.	BL-184
LOCK MODE [P1610]	NATS MAL-FUNCTION 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. ● BCM or ECM's malfunctioning.	BL-187
ECM [P1616]	ECM P1616	ECM ROM is malfunctioning.	EC-269
DON'T ERASE BEFORE CHECK-ING ENG DIAG	—	All engine trouble codes except NATS trouble code has been detected in ECM.	BL-177

Trouble Diagnosis Procedure

EIS00DAZ

WORK FLOW



MIIB0944E

Trouble Diagnoses

EIS00DB0

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)
● Security indicator lighting up*1 ● Engine cannot be started	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 (BL-179)	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 BCM circuit
			Open circuit in ignition line of BCM circuit
			Open circuit in ground line of BCM circuit
			Open or short circuit between BCM and ECM communication line
			ECM
			BCM
	DIFFERENCE OF KEY [P1615]	PROCEDURE 2 (BL-181)	Unregistered key
			BCM
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 3 (BL-181)	Malfunction of key ID chip
			Communication line between ANT/ AMP and BCM: Open circuit or short circuit of battery voltage line or ground line
			Open circuit in power source line of ANT/ AMP circuit
			Open circuit in ground line of ANT/ AMP circuit
			NATS antenna amp.
			BCM
	ID DISCORD, IMM-ECM [P1611]	PROCEDURE 4 (BL-184)	System initialization has not yet been completed.
			ECM
	ECM [P1616]	EC-269, "DTC P1616 ECM"	ECM
● Security indicator lighting up*1 ● Engine cannot be started	LOCK MODE [P1610]	PROCEDURE 6 (BL-187)	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. ● BCM or ECM's malfunctioning.
Security indicator lighting up*1	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-177)	Engine trouble data and NATS trouble data have been detected in ECM

*1: When NATS detects trouble, the security indicator lights up while 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)
Security indicator does not light up*.	PROCEDURE 5 (BL-185)	Security indictor.
		Open circuit between Fuse and BCM
		BCM

*: CONSULT-II self-diagnostic results display screen "no malfunction is detected".

Diagnostic Procedure 1

EIS00DB1

Self-diagnostic results:
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen
First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”. Refer to BCS-16, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

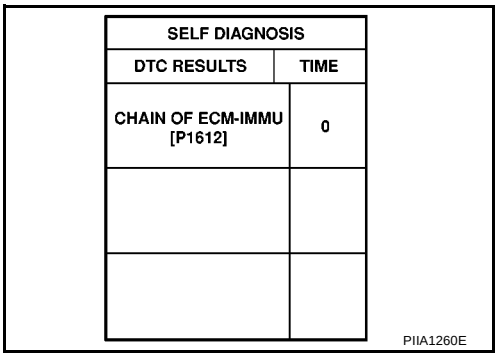
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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-178, "SYMPTOM MATRIX CHART 1" .



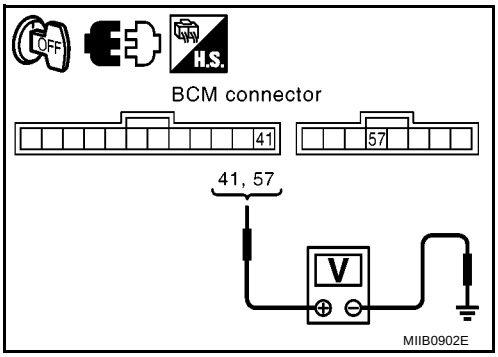
2. CHECK POWER SUPPLY CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM and ground.

Connector	Terminals		Voltage [V] (Approx.)
	(+)	(-)	
M42	41	Ground	Battery voltage
M44	57		

OK or NG

OK >> GO TO 3.
NG >> Check the following.
- 50A fusible link (letter **G** , located in the fuse and fusible link box)
- 10A fuse [No.21, located in the fuse block (J/B)]
- Harness for open or short between fusible link and BCM
- Harness for open or short between fuse and BCM



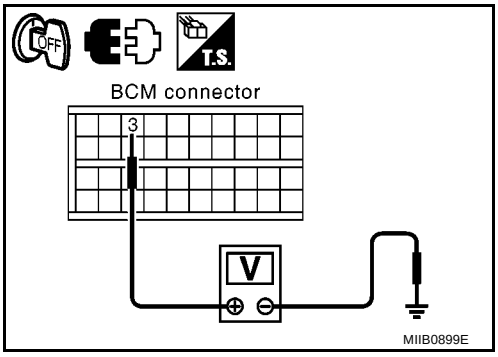
3. CHECK IGNITION SWITCH ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between BCM connector M42 terminal 3 and ground.

3 – Ground : Battery voltage

OK or NG

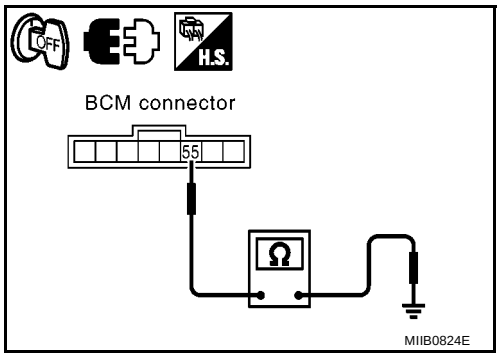
OK >> GO TO 4.
NG >> Check the following.
- 10A fuse [No. 1, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM



4. CHECK GROUND CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Check continuity between BCM connector M44 terminal 55 and ground.

55 – Ground : Continuity should exist.



OK or NG

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

5. REPLACE BCM

1. Replace BCM
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS”.

Does the engine start?

Yes >> BCM is malfunctioning.
- Replace BCM.
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II Operation Manual NATS”

No >> ECM is malfunctioning.
- Replace ECM.
- Perform initialization or re-communicating function
- For initialization, refer to “CONSULT-II Operation Manual NATS”
- For re-communicating function, refer to BL-172, "ECM Re-communicating Function"

Diagnostic Procedure 2

EIS00DB2

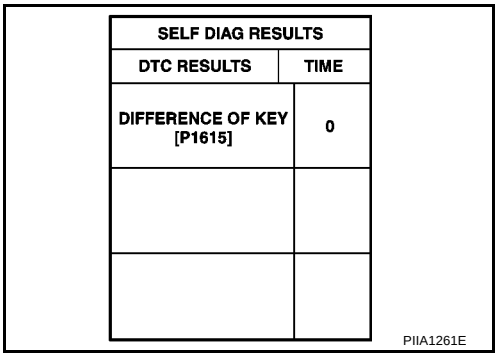
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

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 figure?

Yes >> GO TO 2.
No >> GO TO BL-178, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

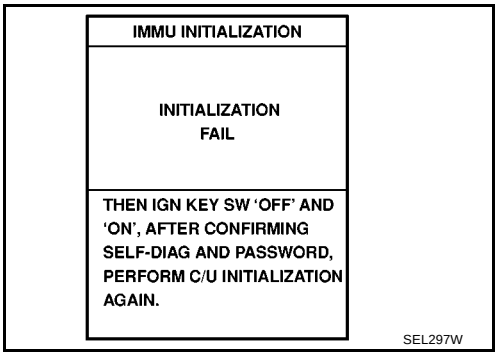
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS”.

NOTE:
If the initialization is not completed or malfunctions, CONSULT-II shows 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.
No >> BCM is malfunctioning.

- Replace BCM.
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II Operation Manual NATS”



Diagnostic Procedure 3

EIS00DB3

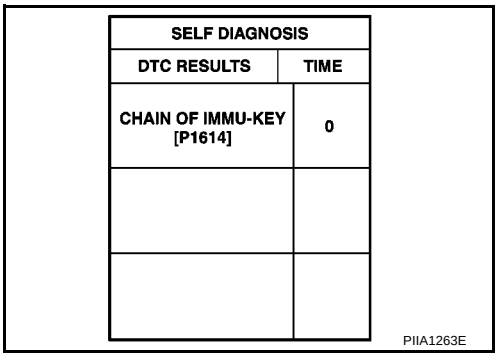
Self-diagnostic results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

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-178, "SYMPTOM MATRIX CHART 1" .



2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-188, "Removal and Installation of NATS Antenna Amp" .

OK or NG

OK >> GO TO 3.
NG >> Reinstall NATS antenna amp. correctly.

3. CHECK NATS IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

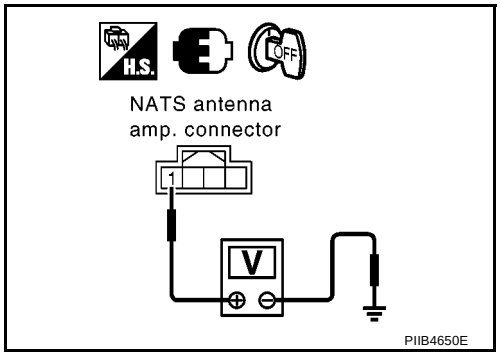
Yes >> Ignition key ID chip is malfunctioning.
- Replace the ignition key
- Perform initialization with CONSULT-II
  For initialization, refer to “CONSULT-II Operation Manual NATS”

No >> GO TO 4.

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch “OFF”.
2. Check voltage between NATS antenna amp. connector M37 terminal 1 and ground.

1 – Ground : Battery voltage.



OK or NG

OK >> GO TO 5.

NG >> Check the following.
- 20A fuse [No. 53, located in IPDM E/R]
- Harness for open or short between fuse and NATS antenna amp.

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

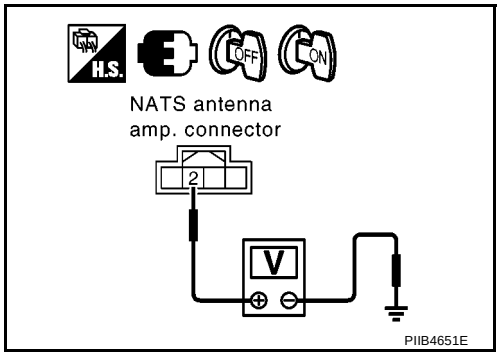
Check voltage between NATS antenna amp. connector M37 terminal 2 and ground with analogue tester.

Before turning ignition switch “ON”

Voltage: Approx. 0V

Just after turning ignition switch “ON”

: Pointer of tester should move.



OK or NG

OK >> GO TO 6.

NG >>
- Check harness for open or short between NATS antenna amp. and BCM.

NOTE:
If harness is OK, replace BCM, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

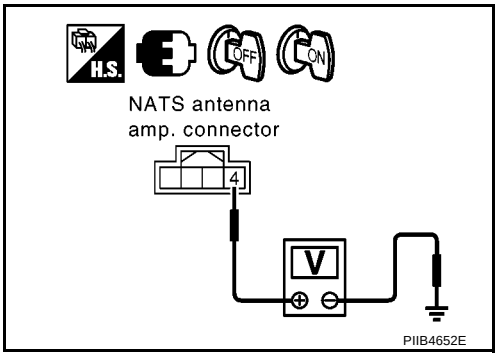
Check voltage between NATS antenna amp. connector M37 terminal 4 and ground with analogue tester.

Before turning ignition switch “ON”

Voltage: Approx. 0V

Just after turning ignition switch “ON”

: Pointer of tester should move.



OK or NG

OK >> GO TO 7.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM.

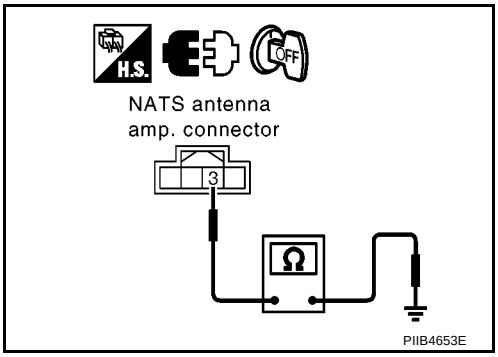
NOTE:

If harness is OK, replace BCM, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.

7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch “OFF”.
2. Disconnect NATS antenna amp. connector.
3. Check continuity between NATS antenna amp. connector M37 terminal 3 and ground.

3 – Ground : Continuity should exist.



OK or NG

OK >> NATS antenna amp. is malfunctioning.

NG >> Repair or replace NATS antenna amp. ground circuit.

Diagnostic Procedure 4

EIS00DB4

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

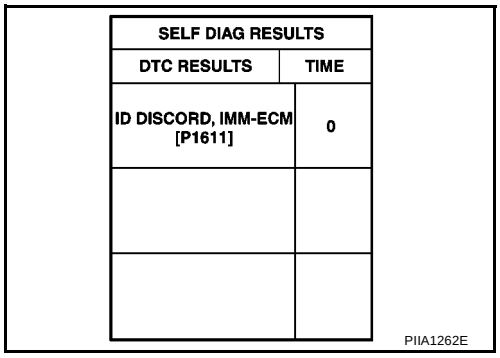
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

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

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-178, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

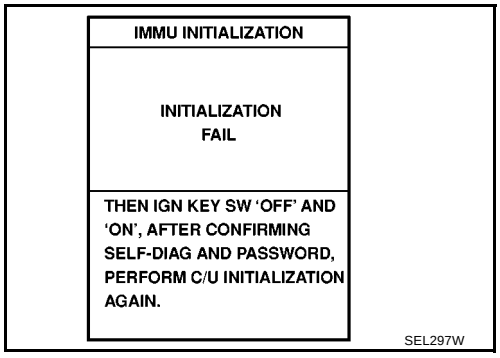
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization, refer to “CONSULT-II Operation Manual NATS”.

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

Can the system be initialized?

Yes >> ● Start engine. (END)
● (System initialization had not been completed.)

No >> ECM is malfunctioning.
● Replace ECM.
● Perform initialization with CONSULT-II
For initialization, refer to “CONSULT-II Operation Manual NATS”



Diagnostic Procedure 5

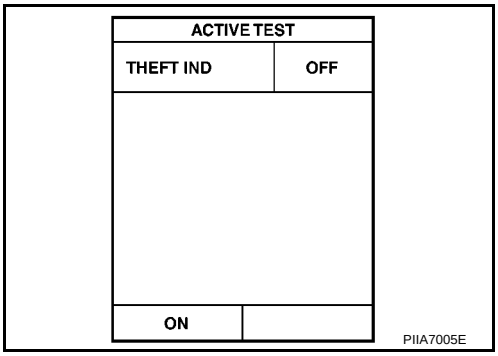
EIS00DB5

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT-II

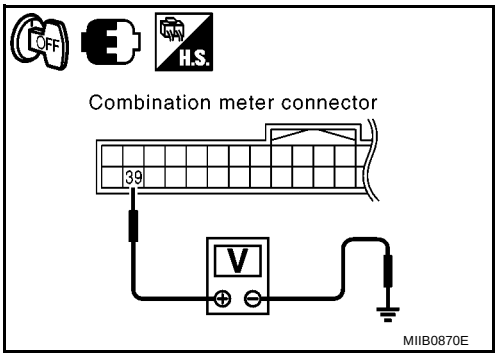
Check “THEFT IND” in “ACTIVE TEST” mode with CONSULT-II.



Without CONSULT-II

1. Turn ignition switch OFF.
2. Check voltage between combination meter (security indicator lamp) connector M23 terminal 39 and ground.

Connector	Terminal		Security indicator lamp condition	Voltage (V) (Approx.)
	(+)	(-)		
M23	39	Ground	Illuminated	0
			Not illuminated	Battery voltage



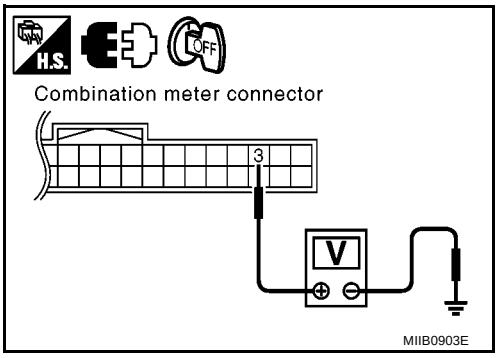
OK or NG

OK >> Security indicator lamp is OK.
NG >> GO TO 2.

2. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter connector M23 terminal 3 and ground.

3 – Ground : Battery voltage



OK or NG

OK >> GO TO 3.
NG >> Check harness for open or short between fuse and combination meter.

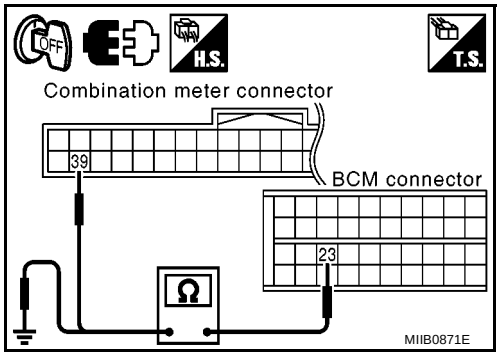
3. CHECK SECURITY INDICATOR OPERATION

1. Turn ignition switch OFF.
2. Disconnect BCM and combination meter connector.
3. Check continuity between BCM connector M42 terminal 23 and combination meter connector M23 terminal 39.

   23 – 39 : Continuity should exist.

4. Check continuity between BCM connector M42 terminal 23 and ground.

   23 – Ground : Continuity should not exist.



OK or NG

OK >> Check the following.

- 10A fuse [No. 19, located in fuse block (J/B)]
- Harness for open or short between combination meter and fuse

NG >> Repair or replace harness.

Diagnostic Procedure 6

EIS00DB6

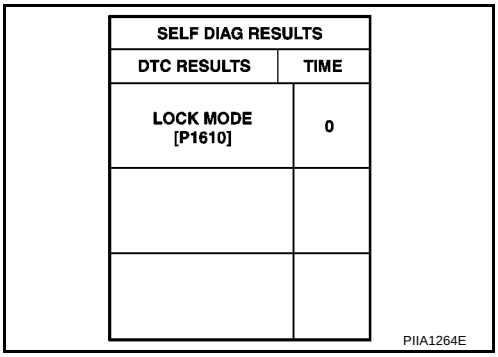
Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

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-178, "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. Wait 5 seconds.
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.

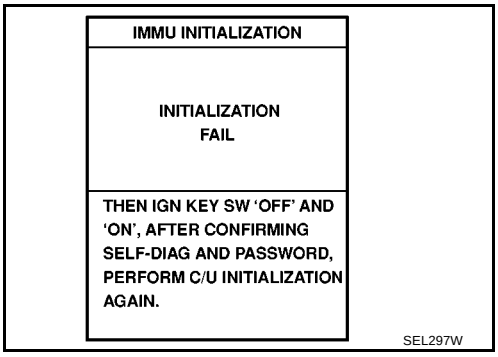
3. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II Operation Manual NATS”.

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

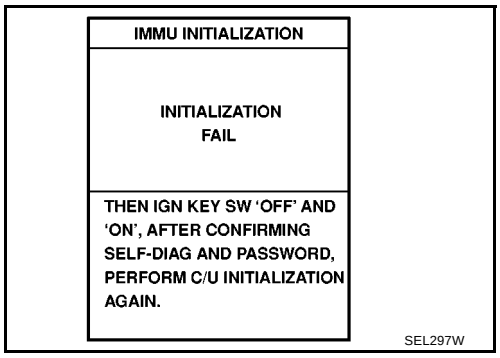
Can the system be initialized?

Yes >> System is OK.
No >> GO TO 4.



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

1. Replace BCM.
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS”.



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

Can the system be initialized?

Yes >> System is OK. (BCM is malfunctioning.)
No >> ECM is malfunctioning.

- Replace ECM.
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II Operation Manual NATS”

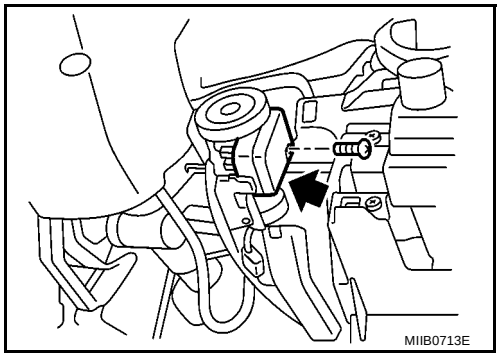
Removal and Installation of NATS Antenna Amp

EIS00DB7

REMOVAL

CAUTION:
Before servicing SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.

1. Remove the cluster lid A. Refer to IP-10, "INSTRUMENT PANEL ASSEMBLY" .
2. Disconnect the NATS antenna amp connector, remove the screw and antenna amp.



INSTALLATION

Install in the reverse order of removal.

NOTE:

- **If NATS antenna amp. is not installed correctly, NATS system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show “LOCK MODE” or “CHAIN OF IMMU-KEY”.**
- **Initialization is not necessary only when NATS antenna amp. is replaced with a new one.**

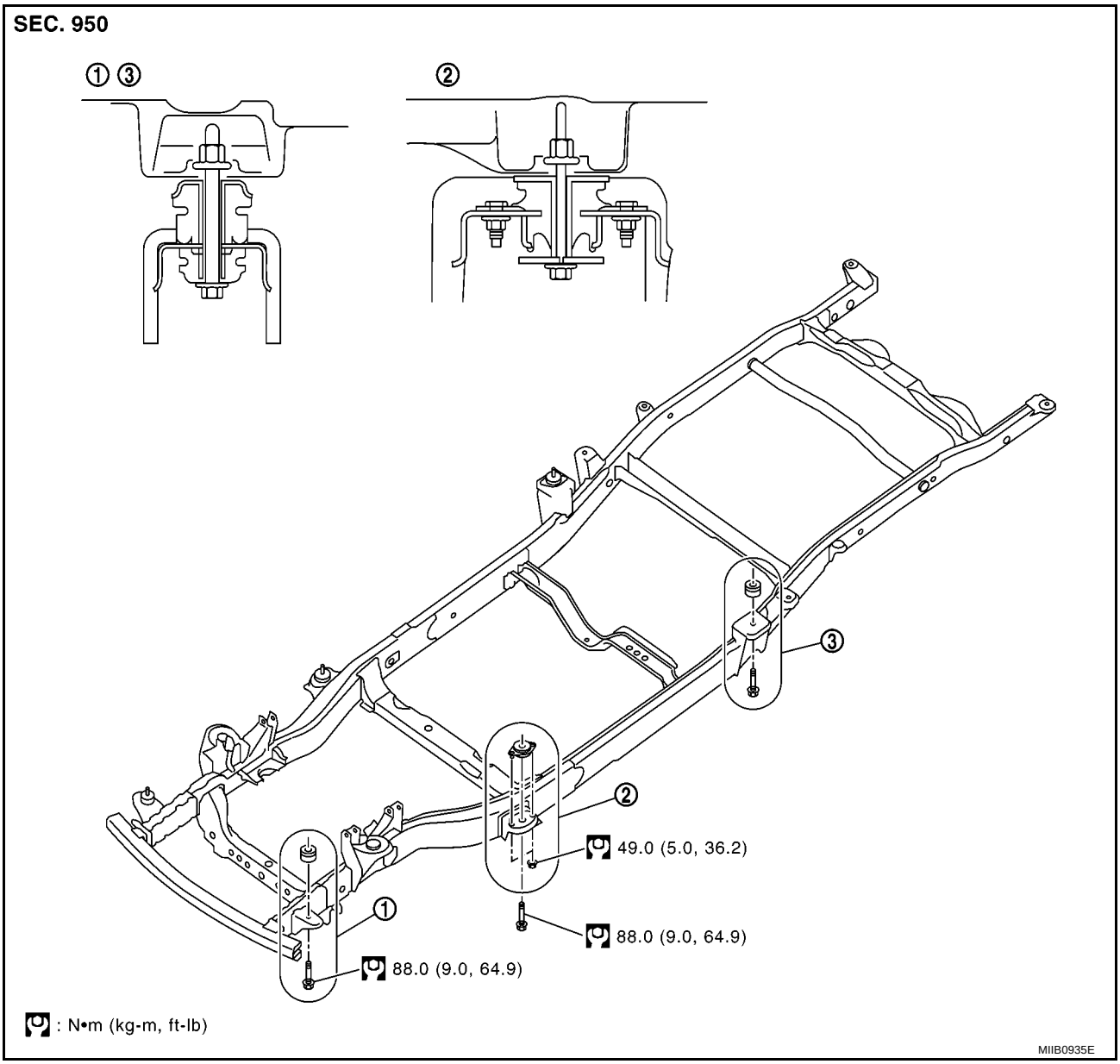
CAB AND REAR BODY

PFP:93020

Body Mounting (King Cab)

EIS00DI6

- When removing, be sure to replace bolts and nuts (sealant applied bolts or self-lock nuts are used for all mounting).
- Unless otherwise noted, the bushings and insulators have paint marks that are to be installed facing outward.

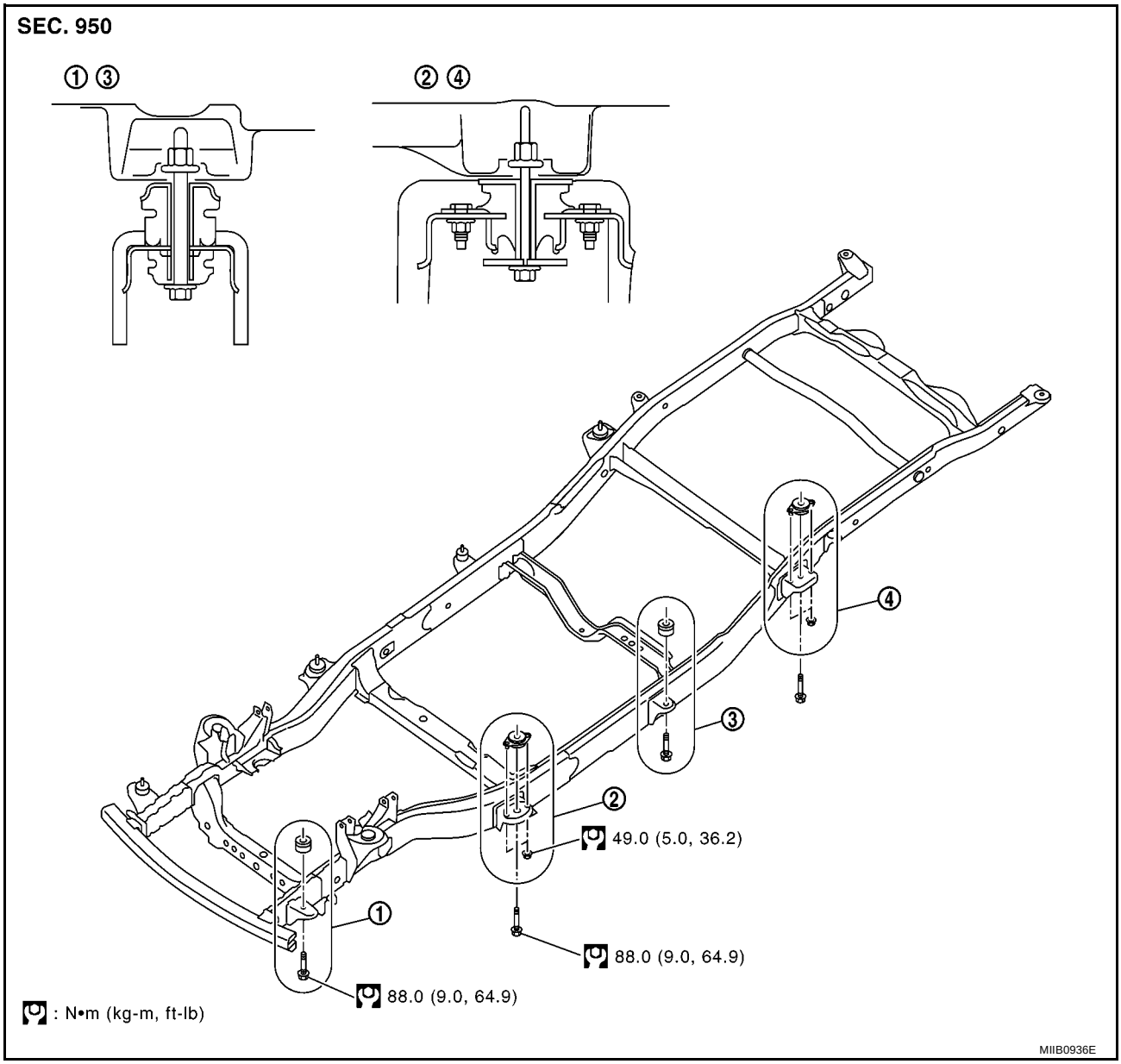


1. Cab mounting insulator (1st)
2. Cab mounting insulator (2nd)
3. Cab mounting insulator (3rd)

Body Mounting (Double Cab)

EIS00DWV

- When removing, be sure to replace bolts and nuts (sealant applied bolts or self-lock nuts are used for all mounting).
- Unless otherwise noted, the bushings and insulators have paint marks that are to be installed facing outward.



1. Cab mounting insulator (1st)
2. Cab mounting insulator (2nd)
3. Cab mounting insulator (3rd)
4. Cab mounting insulator (4th)

BODY REPAIR

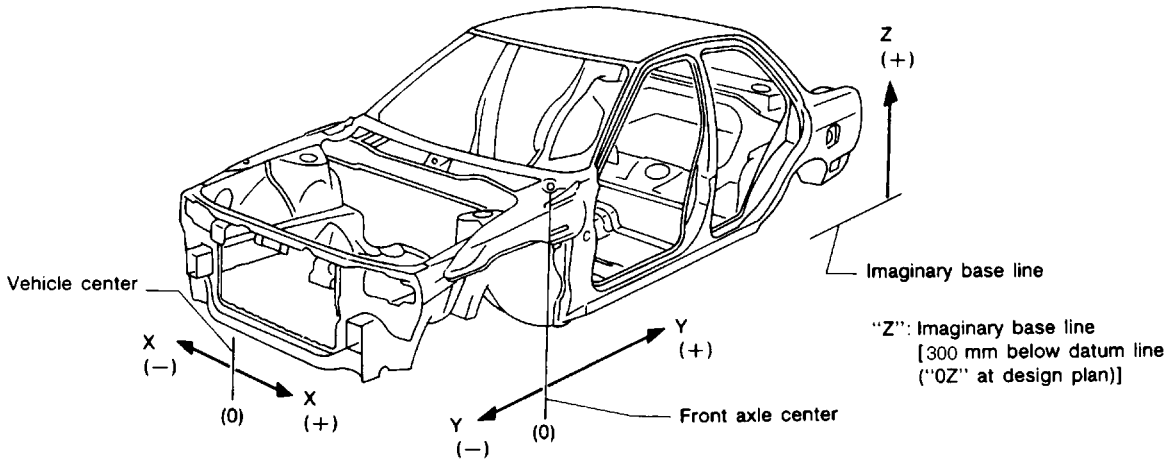
PFP:60100

Body Alignment

EIS00DGG

DESCRIPTION

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of ″X″, ″Y″ and ″Z″.

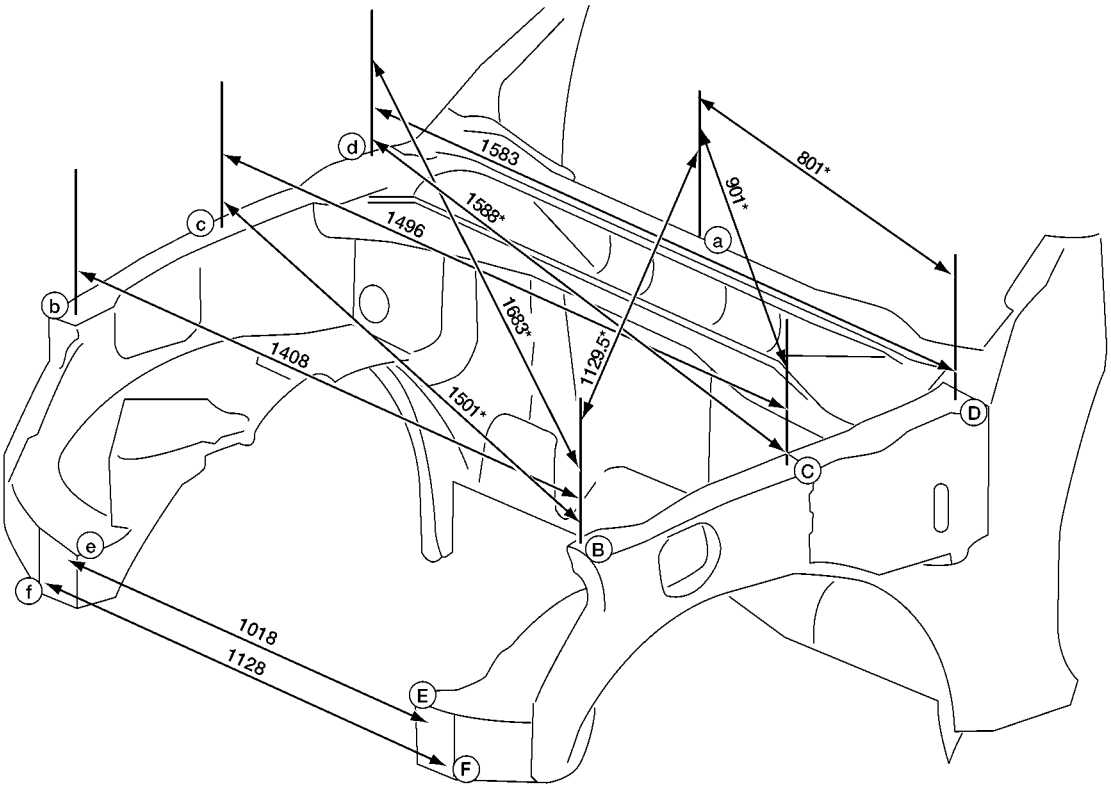


LIIA1506E

ENGINE COMPARTMENT
Measurement

All dimensions indicated in this figure are actual.

Figures marked with an (*) indicate symmetrically identical dimensions on both right and left hand sides of the vehicle.

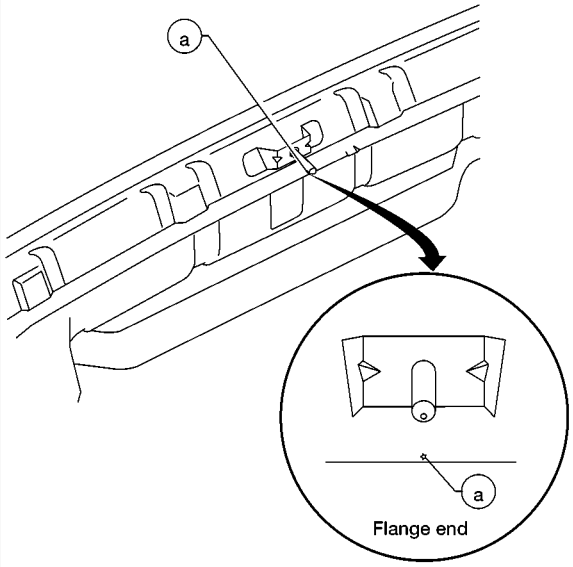


Unit: mm

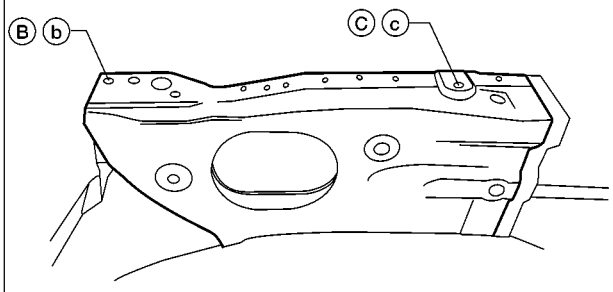
LIIA1792E

Measurement Points

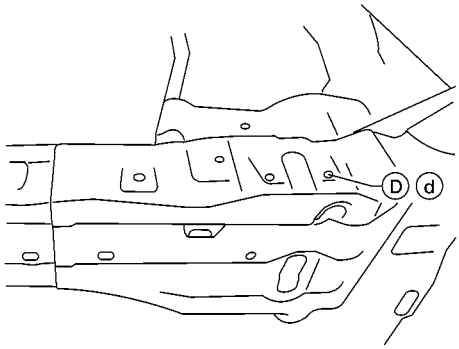
(a) Center of flange end of upper dash crossmember assembly.



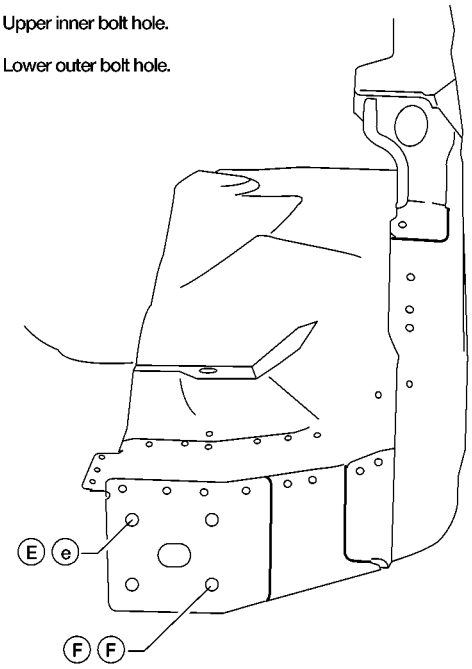
(B) (b) Front fender bolt hole.
(C) (c) Center fender bolt hole.



(D) (d) Rear hinge bolt hole.



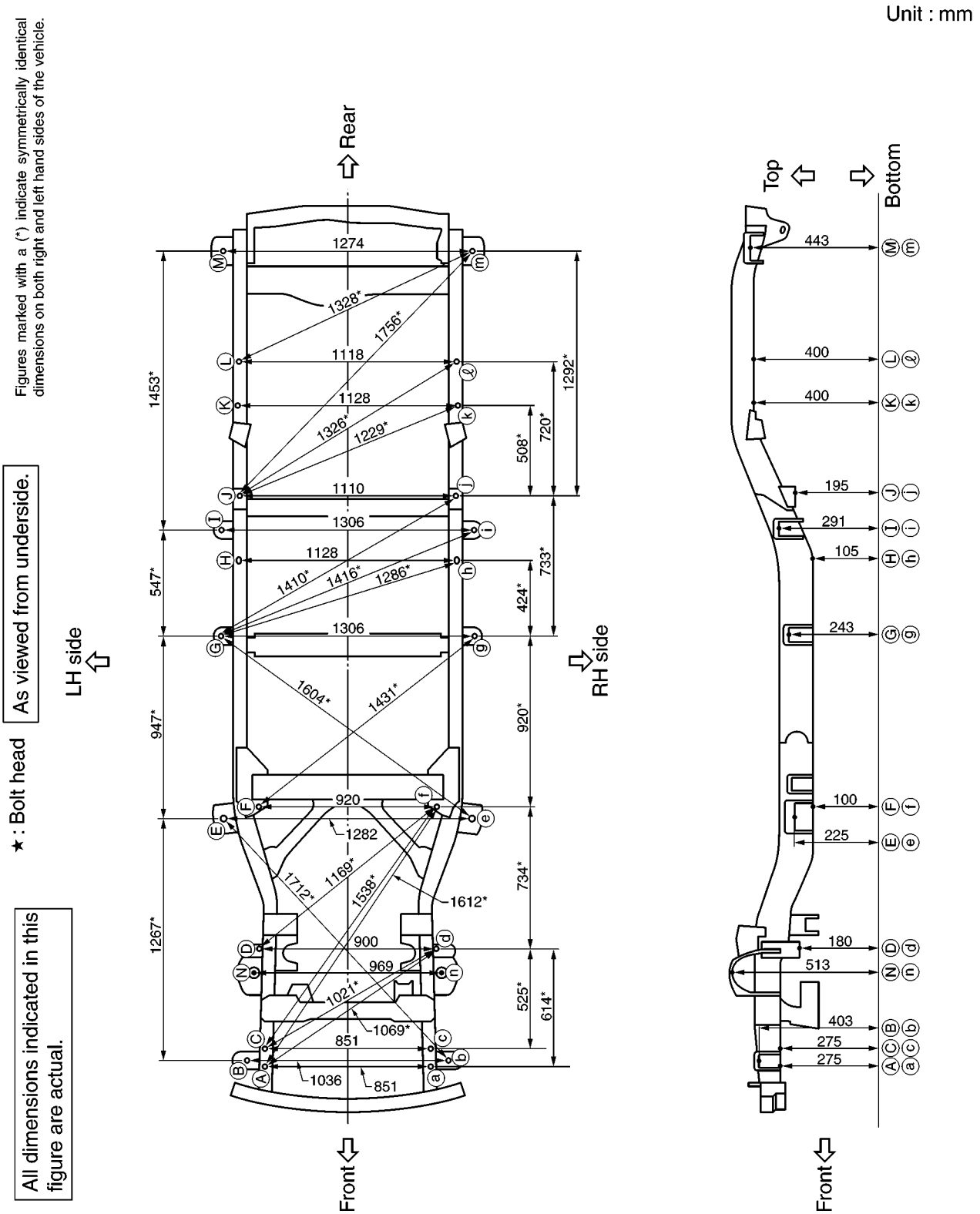
(E) (e) Upper inner bolt hole.
(F) (F) Lower outer bolt hole.



LIIA1793E

UNDERBODY
Measurement

Unit : mm

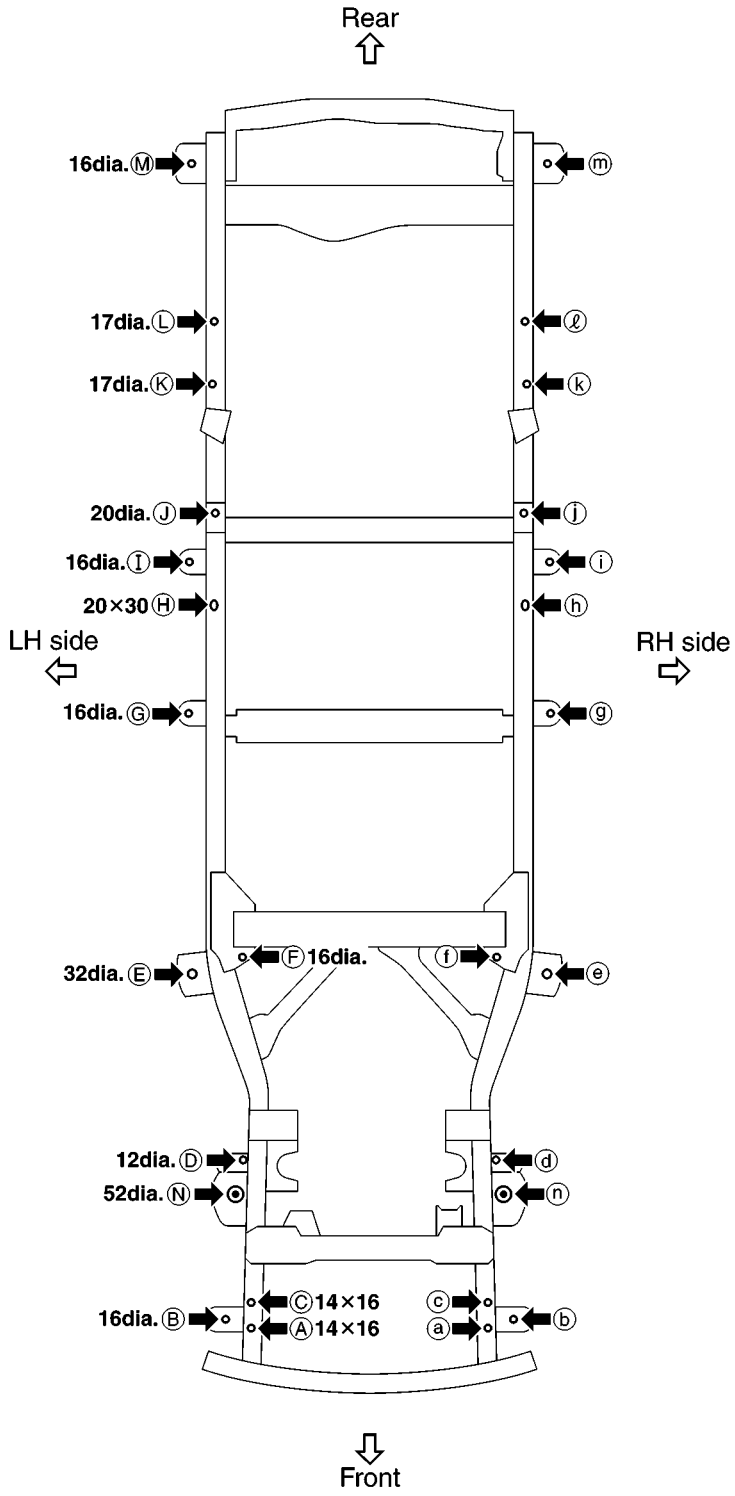


SIIA2508E

Measurement Points

As viewed from underside.

Unit : mm



Coordinates:

Ⓐ,ⓐ	Ⓘ,ⓘ
X:±426	X:±653
Y:-528	Y:2240
Z:275	Z:291
Ⓑ,ⓑ	Ⓙ,ⓙ
X:±518	X:±555
Y:-500	Y:2420
Z:403	Z:195
Ⓒ,ⓒ	Ⓚ,ⓚ
X:±426	X:±564
Y:-438	Y:2885
Z:275	Z:400
Ⓓ,ⓓ	Ⓛ,ⓛ
X:±450	X:±559
Y:78	Y:3110
Z:180	Z:400
Ⓔ,ⓔ	Ⓜ,ⓜ
X:±641	X:±637
Y:748	Y:3685
Z:225	Z:443
Ⓕ,ⓕ	
X:±460	
Y:807	
Z:100	
Ⓖ,ⓖ	
X:±653	
Y:1695	
Z:243	
Ⓗ,ⓗ	
X:±564	
Y:2086	
Z:105	

Strut tower centers

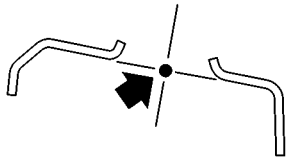
Coordinates:

Ⓝ,ⓝ

X:±484

Y:-47

Z:513

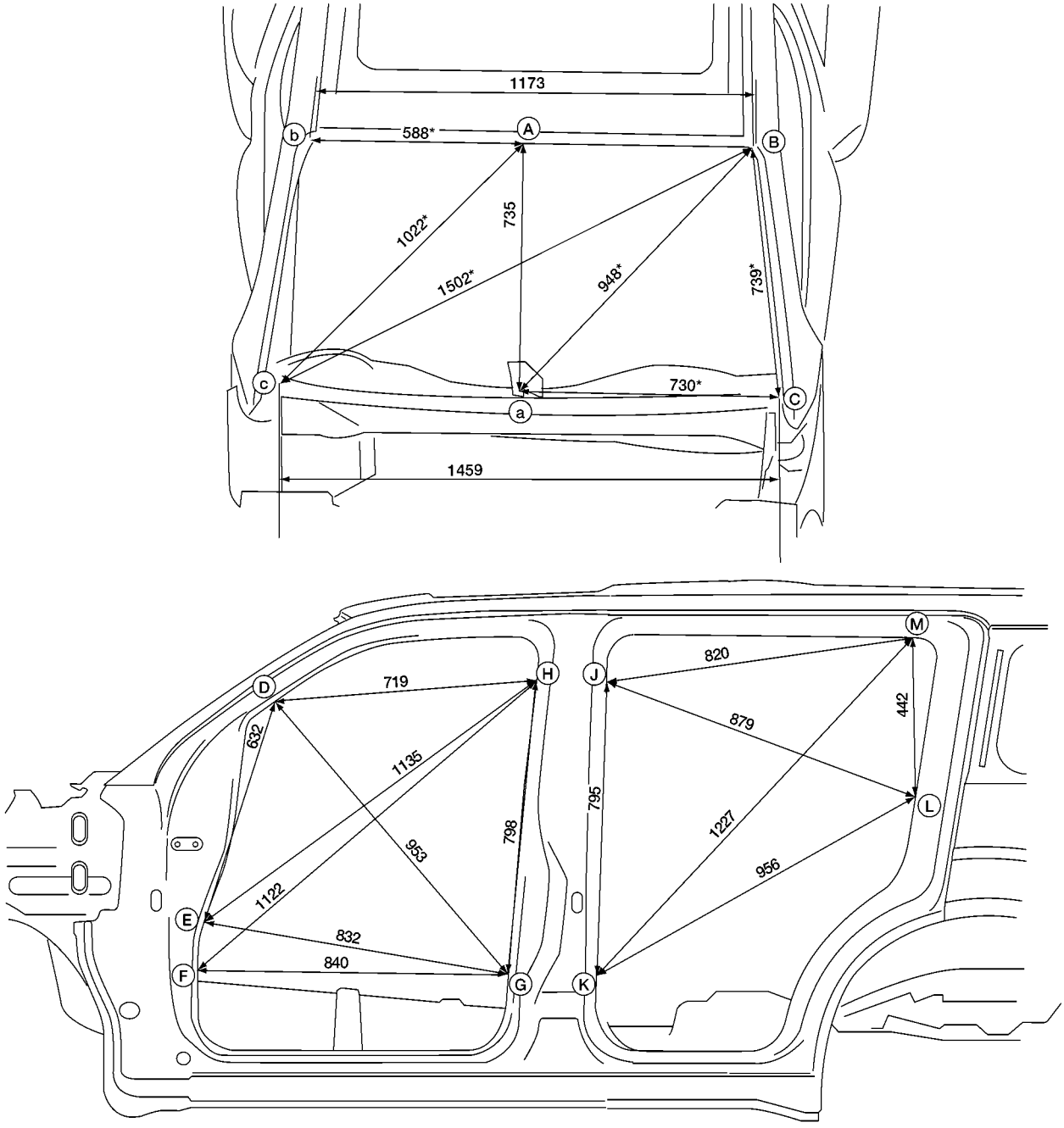


Front: Ⓝ, ⓝ 52dia.

SIIA2509E

PASSENGER COMPARTMENT
Measurement

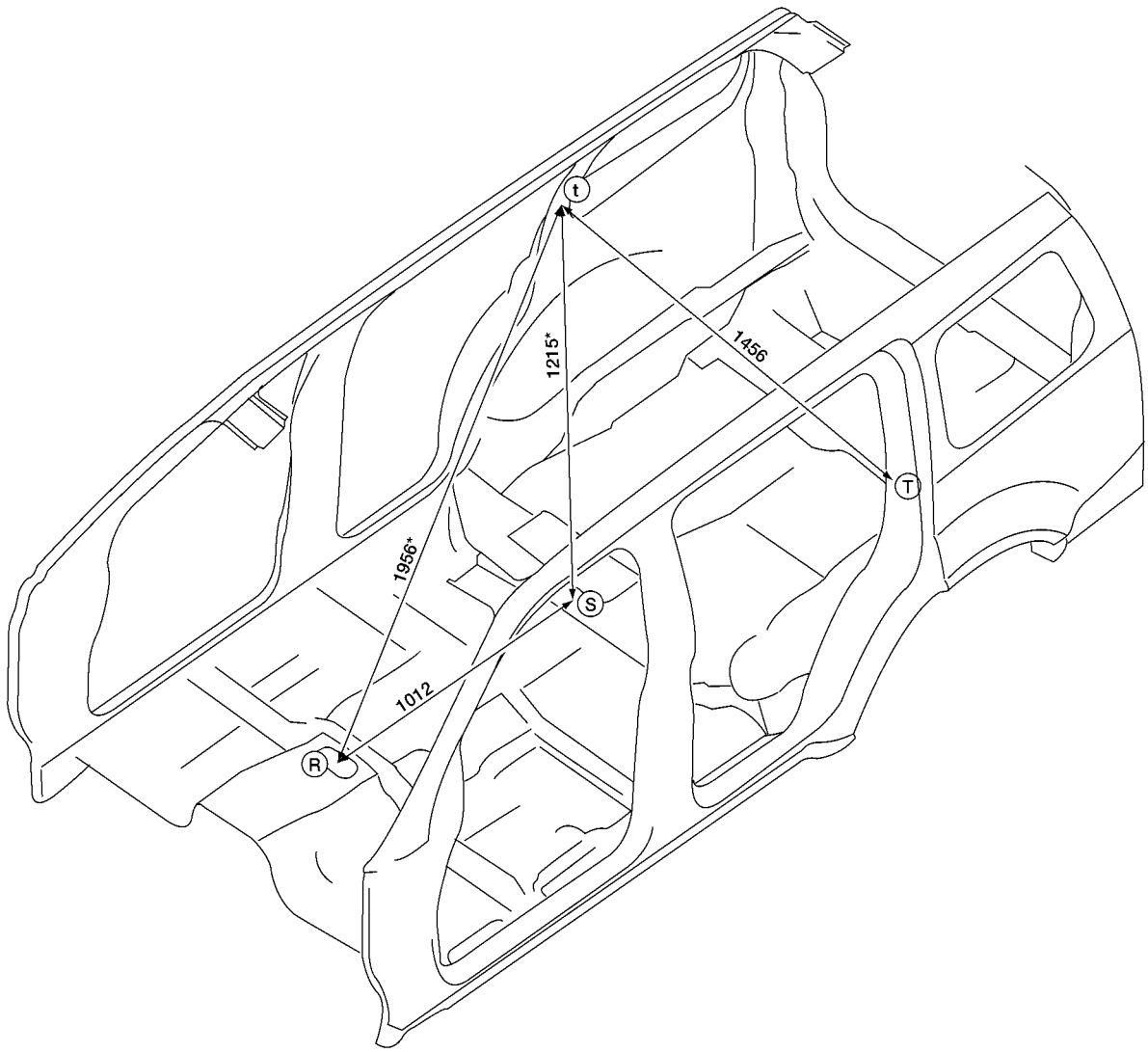
Figures marked with a (*) indicate symmeterically identical dimensions on both right and left hand sides of the vehicle.



Unit: mm

LIIA1798E

Figures marked with a (*) indicate symmeterically identical dimensions on both right and left hand sides of the vehicle.

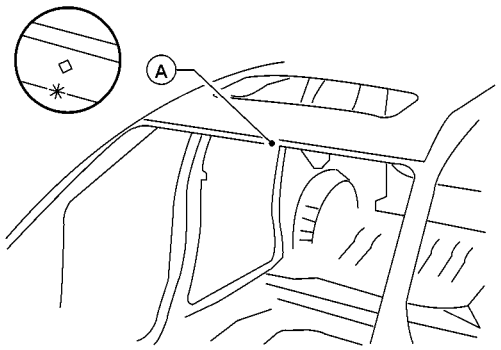


Unit: mm

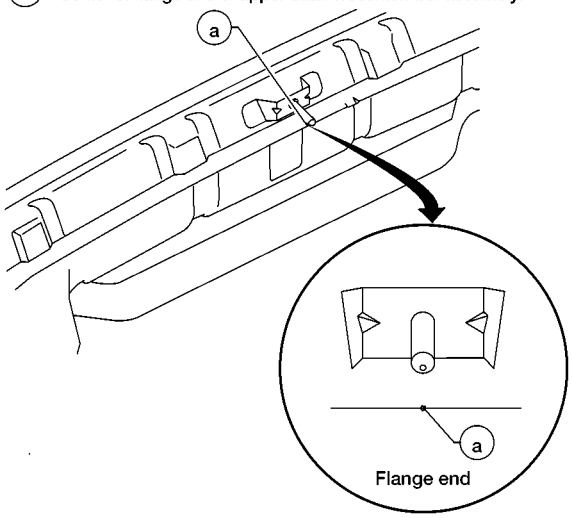
LIIA1799E

Measurement Points

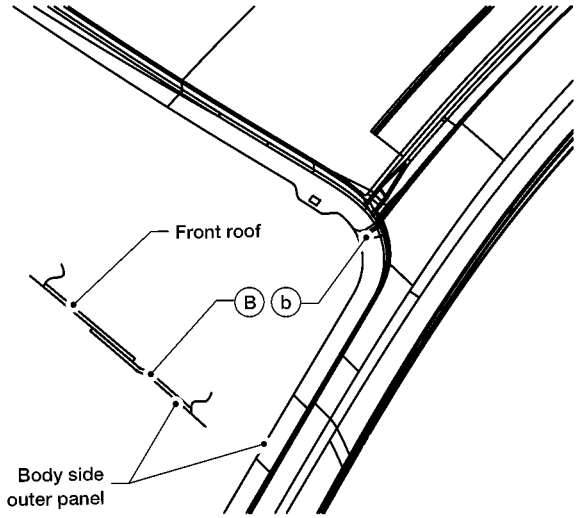
Ⓐ Front roof flange end of center position mark



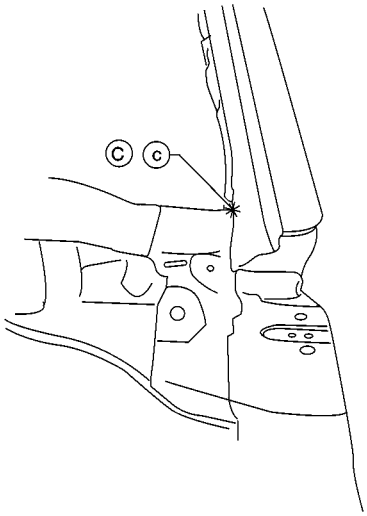
ⓐ Center of flange end of upper dash crossmember assembly.



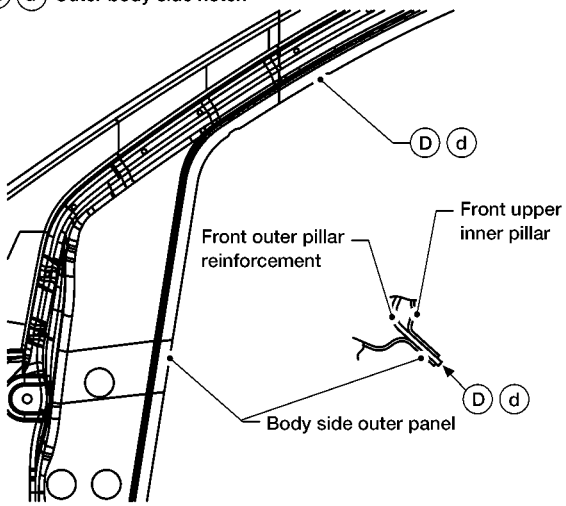
Ⓑ ⓑ Outer body side corner joggle



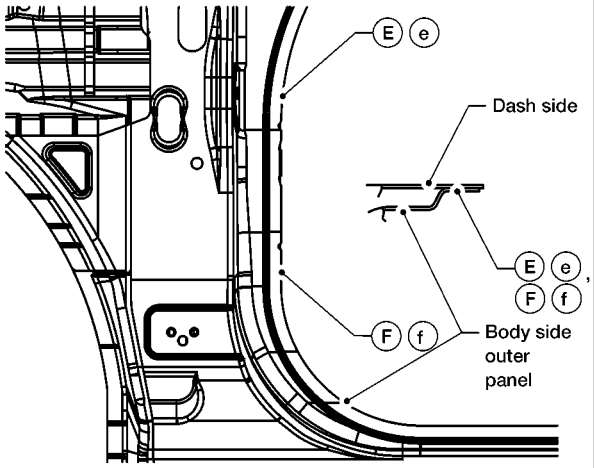
Ⓒ ⓒ Corner cowl top crossmember assembly and front pillar



Ⓓ ⓓ Outer body side notch



Ⓔ ⓔ, Ⓕ ⓕ Outer body side notch



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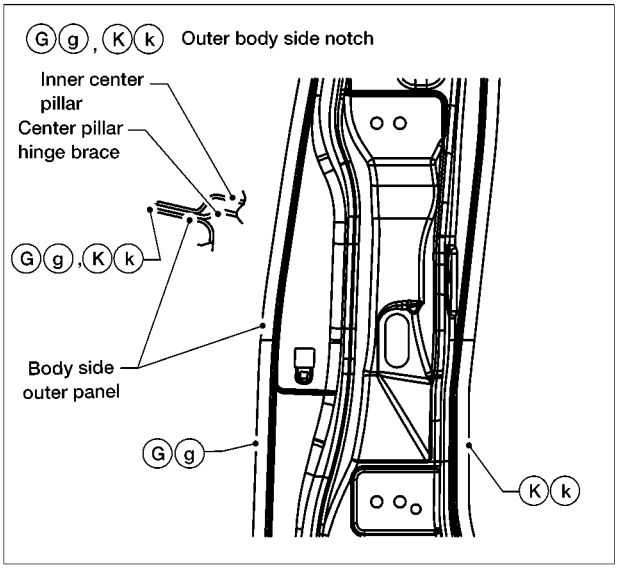
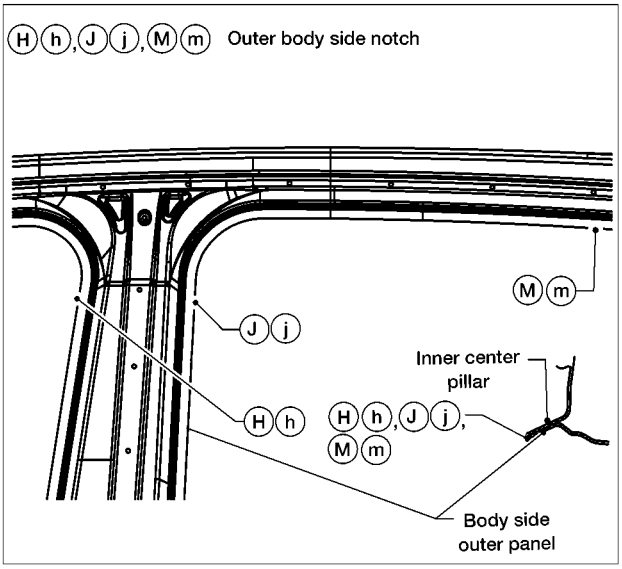
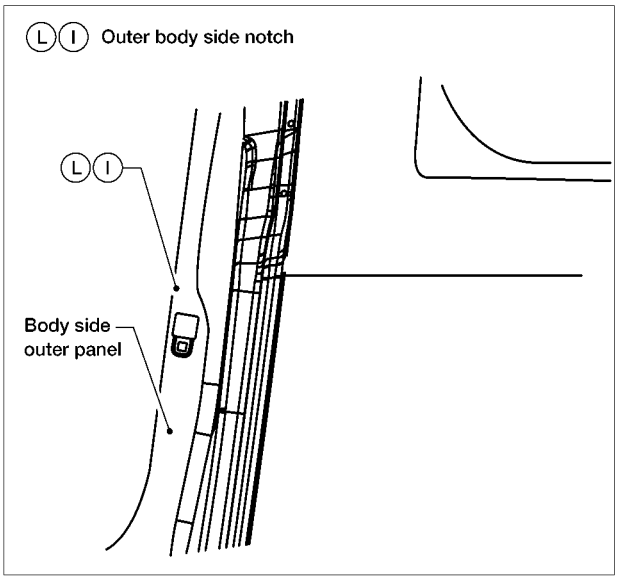
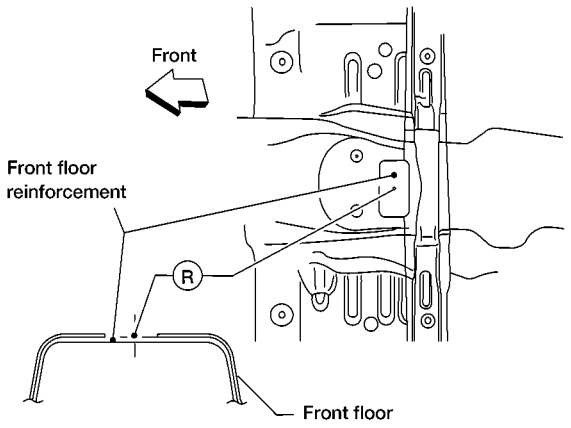

G g , K k Outer body side notch
Inner center pillar
Center pillar hinge brace
G g , K k
Body side outer panel
G g
K k


H h , J j , M m Outer body side notch
M m
J j
Inner center pillar
H h
H h , J j , M m
Body side outer panel

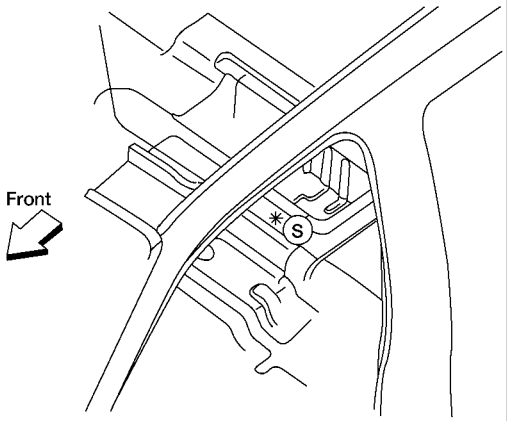

L l Outer body side notch
L l
Body side outer panel

LIIA1801E

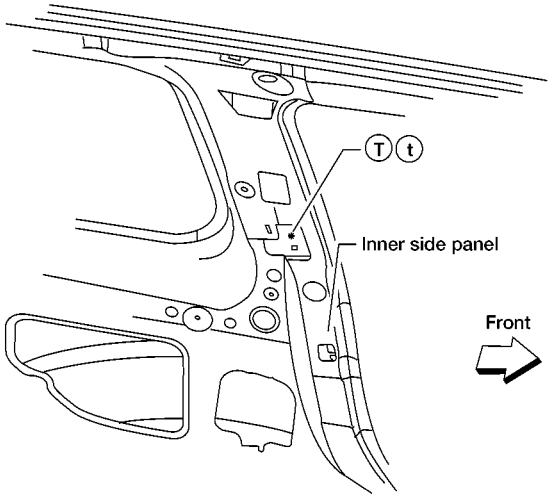
Ⓡ Front floor reinforcement



Ⓢ 2nd seat mounting front crossmember assembly



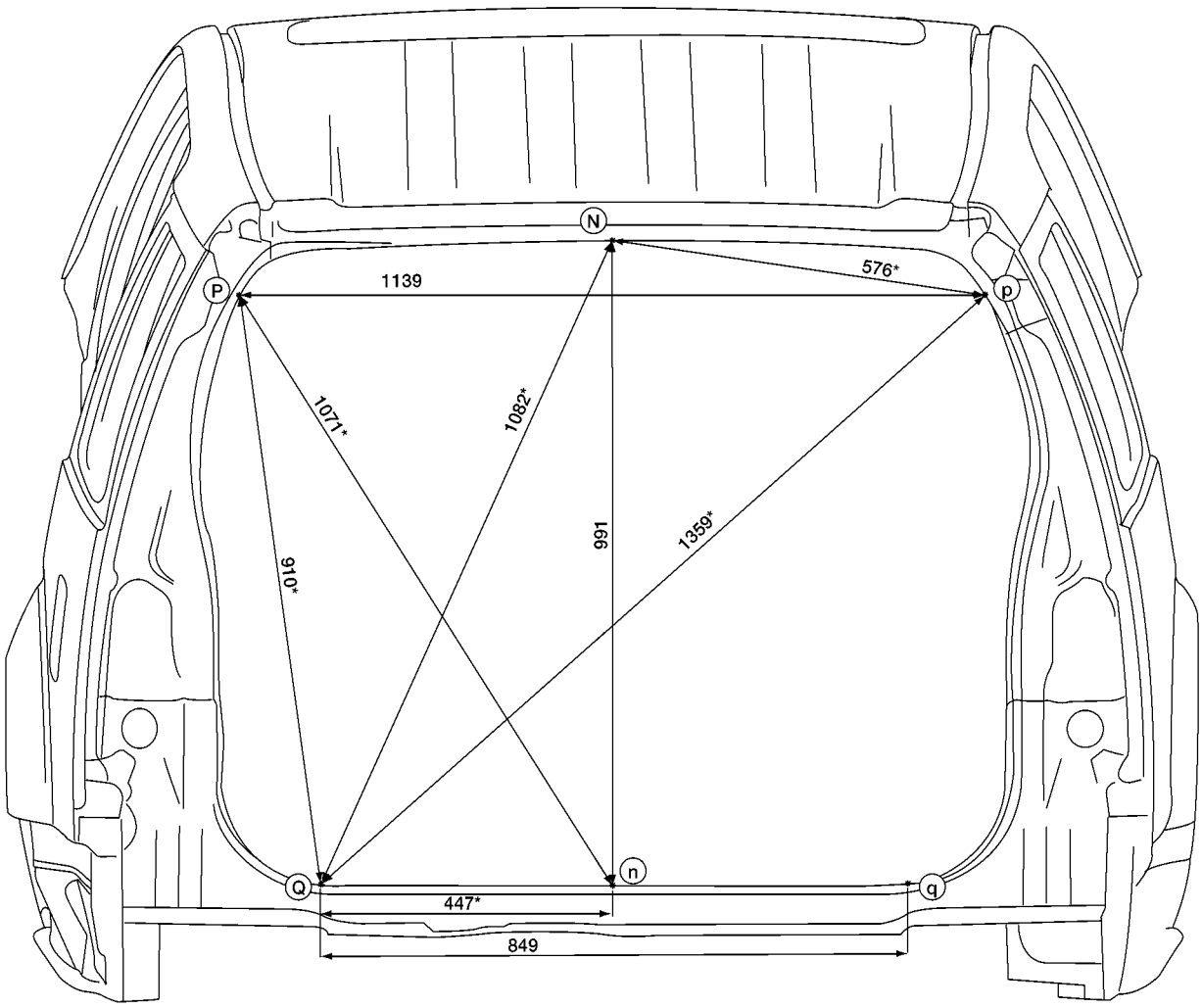
ⓉⓉ Lower seat belt shoulder height adjuster bolt hole



LIIA1802E

REAR BODY
Measurement

Figures marked with a (*) indicate symmeterically identical dimensions on both right and left sides of vehicle.

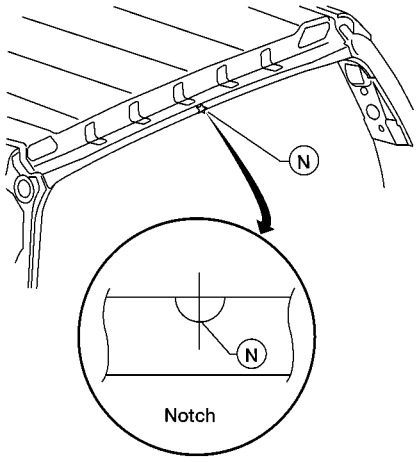


Unit: mm

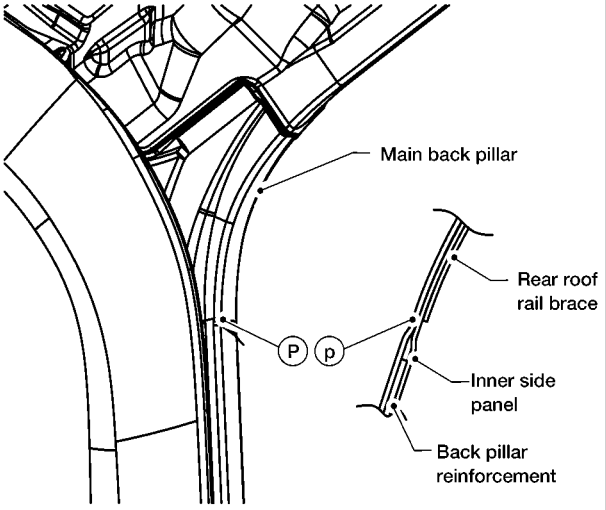
LIIA1803E

Measurement Points

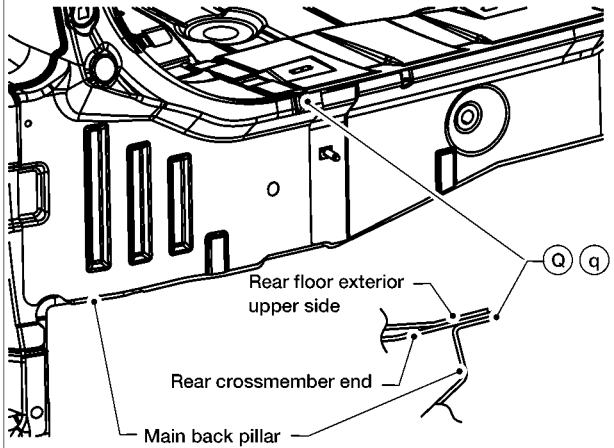
(N) Rear roof alignment notch



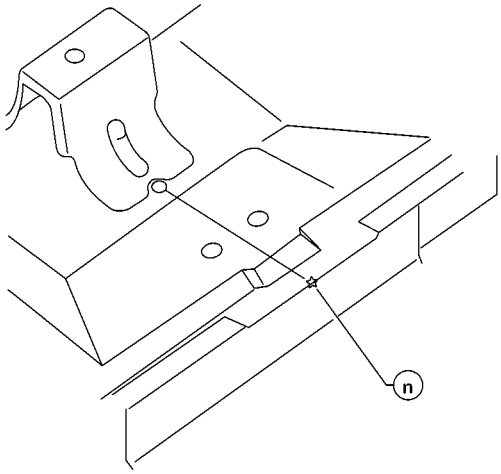
(P) (p) Main back pillar corner joggle



(Q) (q) Main back pillar flange edge



(n) Rear end crossmember flange end



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