SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

BIS000HV

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.**

Maintenance Information

BIS000HW

If any of following part is replaced, always replace with new* one.
If it's not (or fail to do so), the electrical system may not be operated properly.
*: New one means a virgin control unit that has never been energized on-board.

RHD MODELS

- BCM (Models without Intelligent Key system)
- Intelligent Key unit (Models with Intelligent Key system)
- ECM
- IPDM E/R
- Combination meter
- EPS control unit

LHD MODELS

- BCM (Models without Intelligent Key system)
- Intelligent Key unit (Models with Intelligent Key system)
- ECM

Precautions

BIS000HX

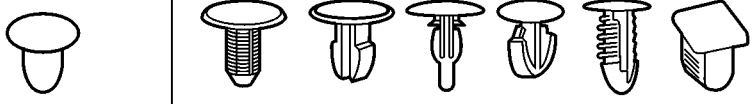
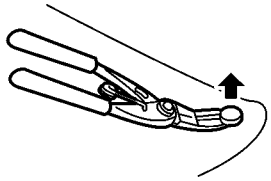
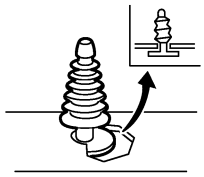
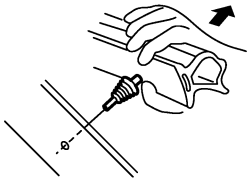
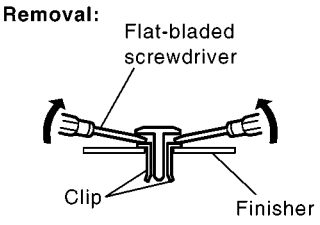
- After installing removed lids or doors, be sure to adjust hinges and mount points so that lids or doors can open and close properly.
- Confirm parts for proper lubrication, damage or wear. Lubricate, repair or replace as necessary.

CLIP AND FASTENER

PFP:76906

List of Table

BIS000HY

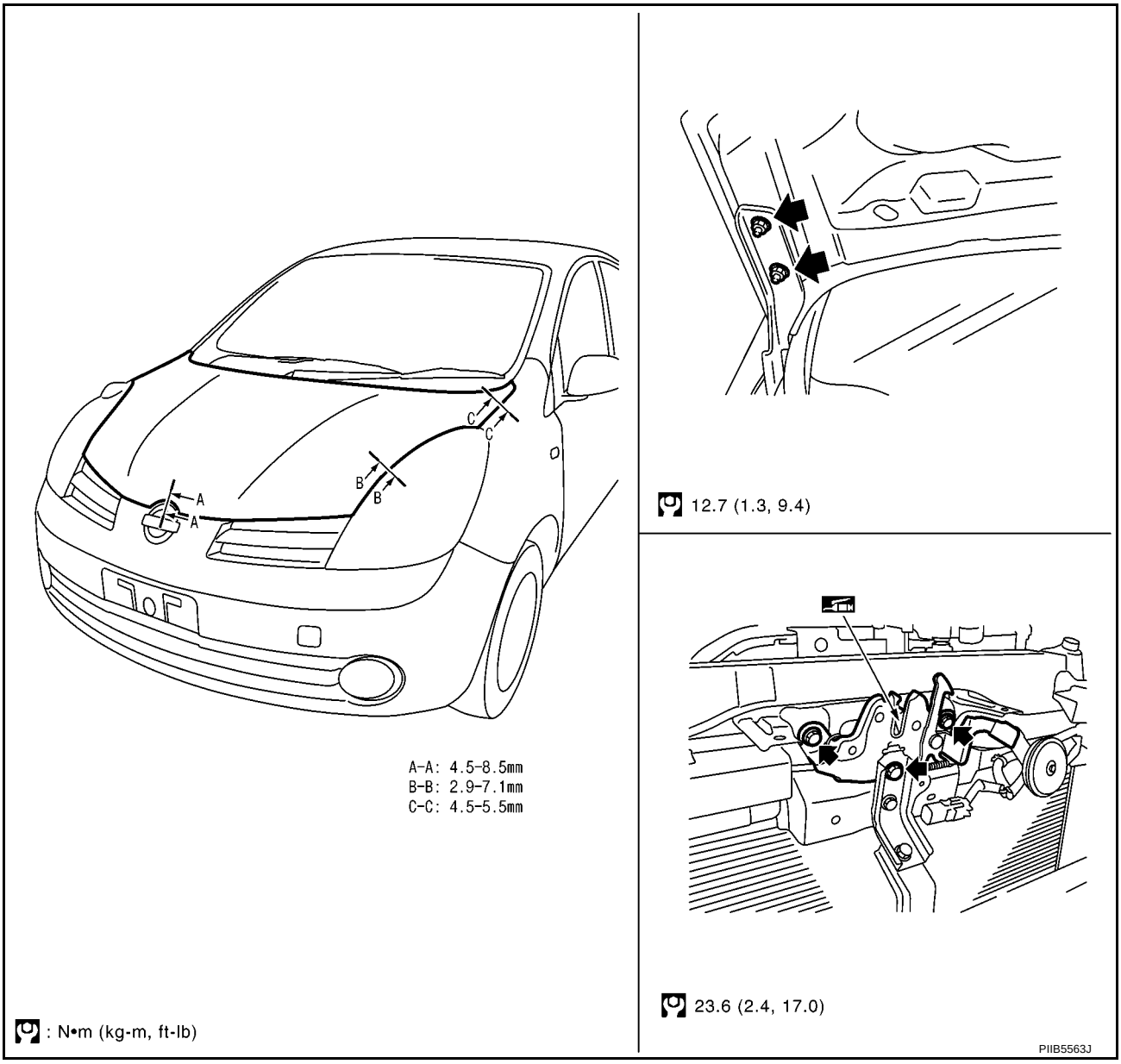
Symbol No.	Shape	Removal and installation
C103		 PIIA1350J
CE103		 PIIA1354J
C205		 MIIB0153E

HOOD

PFP:F5100

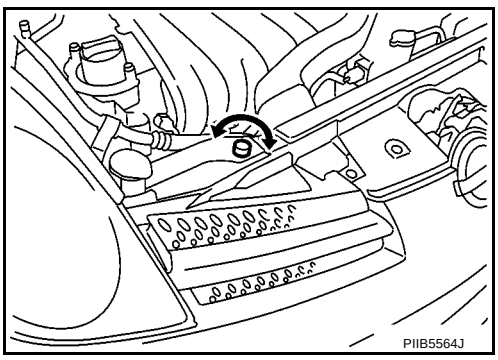
Fitting Adjustment

BIS000HZ



FRONT END HEIGHT ADJUSTMENT AND LATERAL/LONGITUDINAL CLEARANCE ADJUSTMENT

1. Remove hood lock. Rotate bumper rubber to adjust height until hood becomes 1 to 1.5 mm lower than the fender.
2. Position hood lock and engage striker. Check hood lock and striker for looseness. Tighten lock bolts to the specified torque.



CAUTION:

Adjust the clearance between hood and other parts so that the dimensional difference left and right is as follows.

Hood (B) - Headlamp (B) : 1.5 mm or less

Hood (C) - Headlamp (C) : 1.0 mm or less

SURFACE MISMATCH ADJUSTMENT

1. Release hood lock, and adjust surface level difference of hood, fender, and headlamp according to the fitting standard dimension, using RH and LH bumper rubbers.

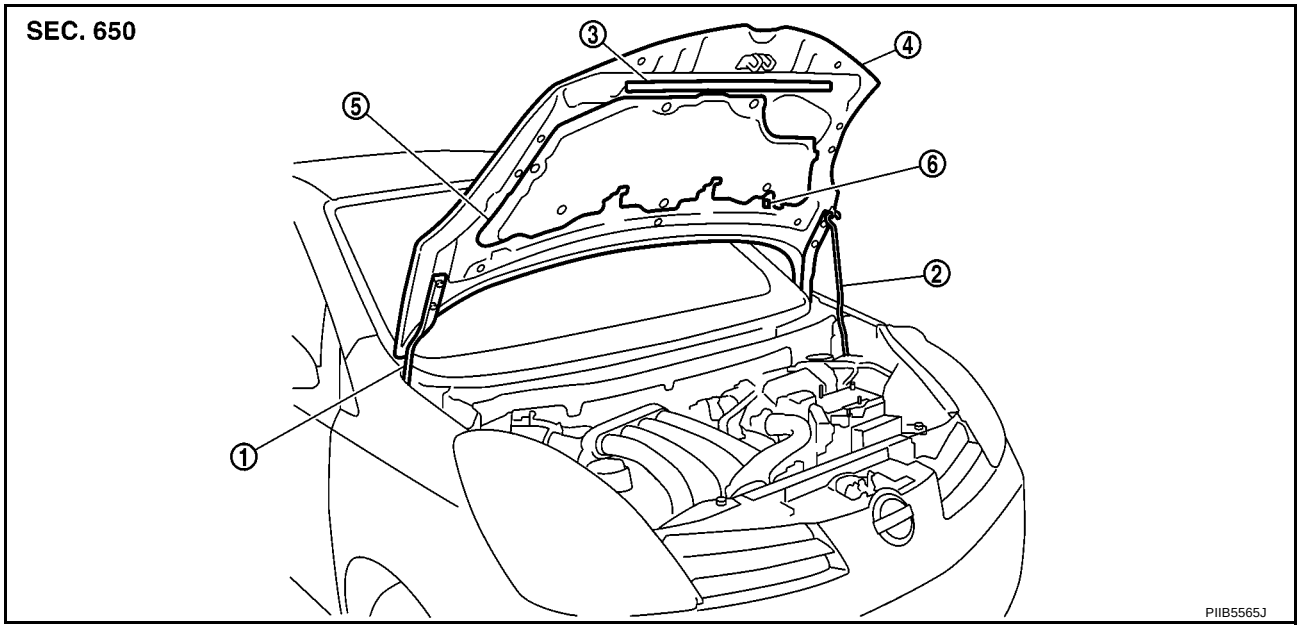
Hood (C) - Fender (C) : -1.0 - 1.0 mm

2. Install hood lock, and move hood lock laterally until the centers of striker and lock become vertical when viewed from the front.
3. Make sure the secondary latch is securely engaged with the secondary striker from either the dead weight of the hood (free-fall from approx. 200 mm height), or by applying light pressure (approx. 3 kg).

   CAUTION:
   Do not drop hood from a height of 300 mm or more.
4. Move hood lock-up and down until striker smoothly engages the lock when the hood is closed.
5. After adjustment, tighten lock bolts to the specified torque.

Removal and Installation

BIS000I0

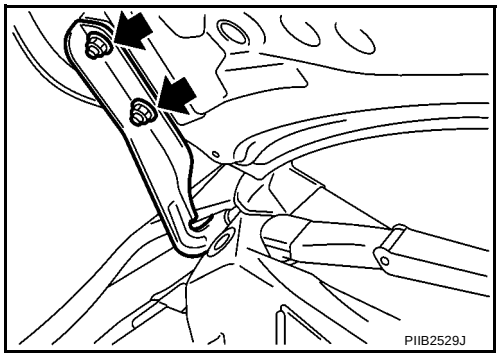


1. Hood hinge
2. Hood stay
3. Radiator core seal rubber
4. Hood assembly
5. Hood lock
6. Hood stay holder

REMOVAL

Hood Assembly

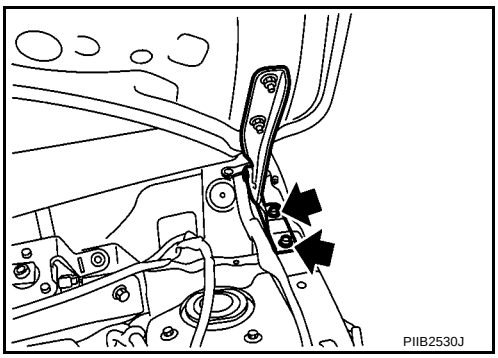
1. Disconnect washer hose at the connecting point.
2. Remove hinge nuts on hood and remove hood assembly.



Hood Hinge

1. Remove front fender. Refer to BL-15, "Removal and Installation" .
2. Remove cowl top cover.
3. Remove hood assembly.

4. Remove bolts and then remove hood hinge.

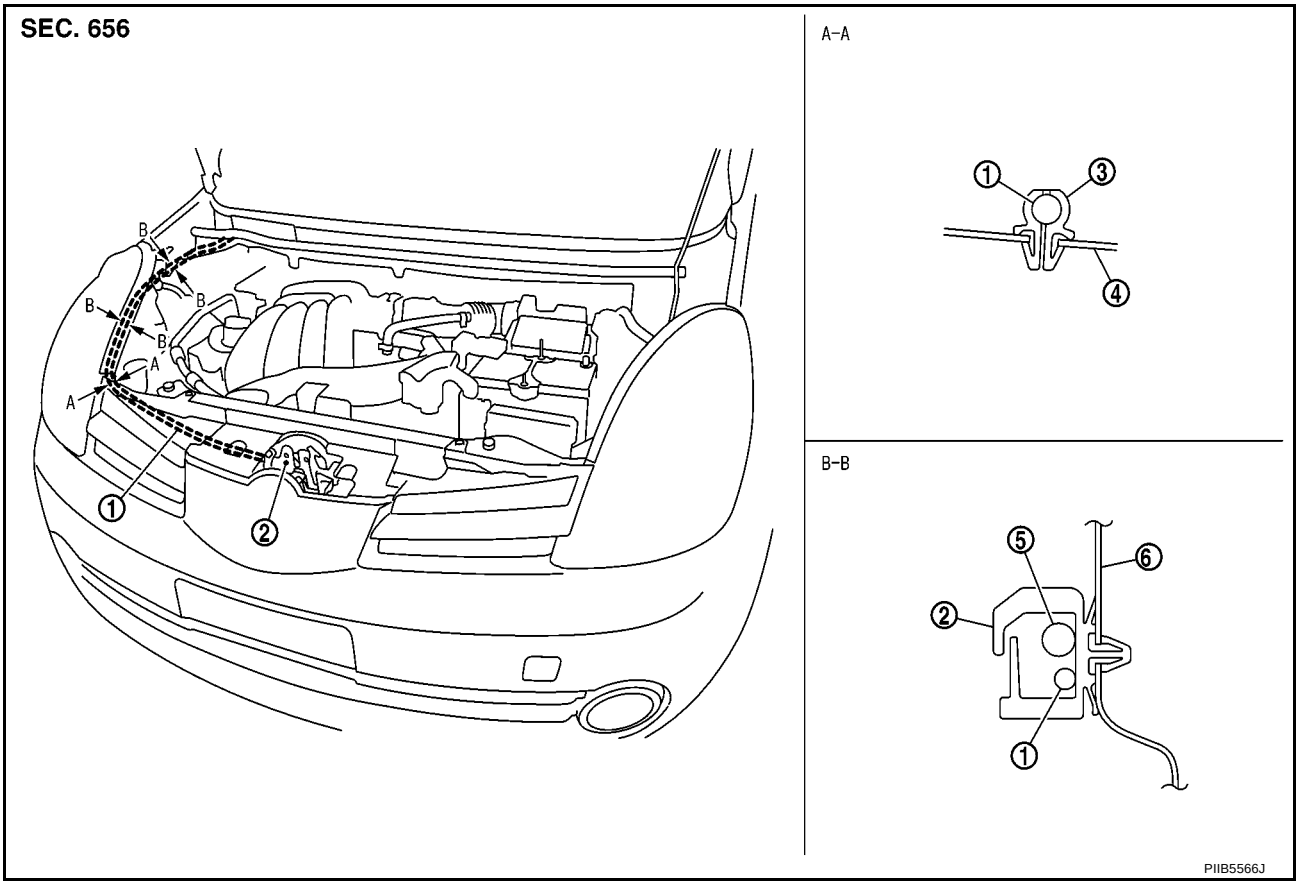


INSTALLATION

- Perform installation in the reverse order of removal while being careful of the following items while performing the work.
- Apply Anti-Corrosion Wax M-97 Super or comparable product to the hood hinge, hood ledge, and hood assembly.
- After installing, perform hood fitting adjustment. Refer to BL-7, "Fitting Adjustment" .

Removal and Installation of Hood Lock Control

BIS000I1



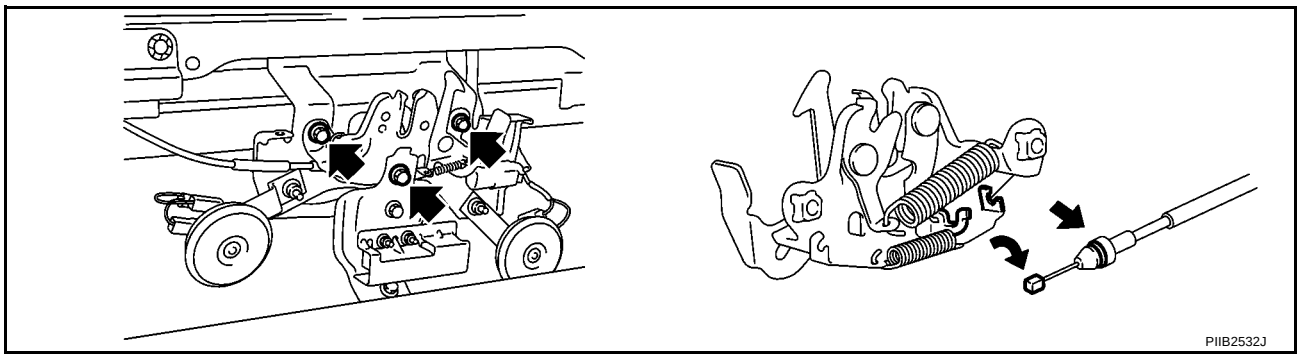
1. Hood lock cable
2. Clip
3. Clip
4. Radiator core support upper
5. Washer hose
6. Hood legge reinforcement

REMOVAL

Hood Lock

1. Remove front bumper. Refer to EI-10, "Removal and Installation" .

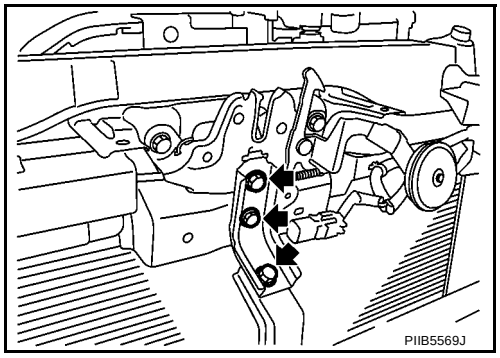
2. Remove hood lock bolts.



3. Remove hood lock cable from hood lock.

Hood Lock Mounting Reinforcement

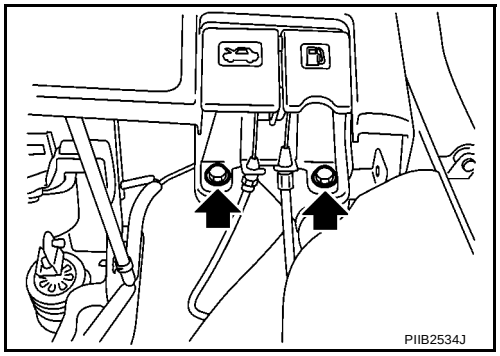
1. Remove front bumper. Refer to EI-4, "Removal and Installation" .
2. Remove crash zone censor.
3. Remove bolts, and then remove hood lock mounting reinforcement.



Hood Lock Cable

1. Remove front bumper. Refer to EI-10, "Removal and Installation" .
2. Remove fender protector. Refer to EI-14, "Removal and Installation" .
3. Remove hood lock, and remove hood lock cable from hood lock.
4. Remove radiator core upper support and hood ledge clips, and then remove hood lock cable.
5. Remove hood opener on bottom right or left of instrument panel, and then remove hood lock cable.
6. Remove grommet on lower dashboard, and pull out hood lock cable from passenger room side.

CAUTION:
While pulling the cable, be careful not to damage (peel) hood opener cable outer surface on edges of body through hole.



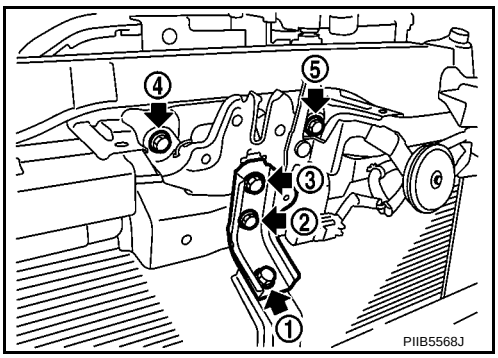
INSTALLATION

- Perform installation in the reverse order of removal while being careful of the following items while performing the work.
- After installing, perform hood fitting adjustment. Refer to BL-7, "Fitting Adjustment" .

Hood Lock Mounting Reinforcement

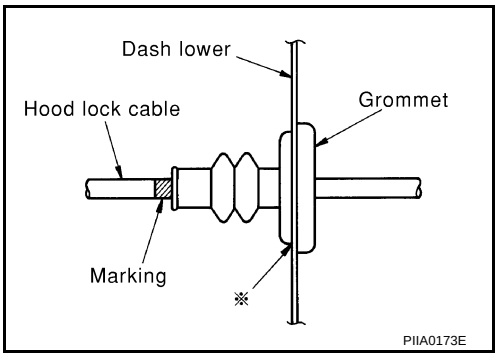
- When installing hood lock mounting reinforcement, loosen hood bolts, and then tighten bolts in the order shown in the figure.

Bolt No. 1 to 5.	Tightening torque (N·m, (kg-m)) : 20.6 - 26.5 (2.1 - 2.7)

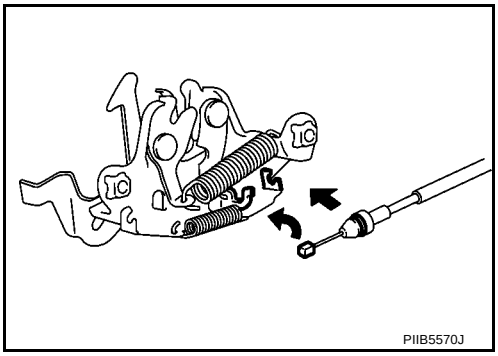


Hood Lock Cable

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



4. Install cable securely to lock.
5. After installing, check hood lock adjustment and hood opener operation.



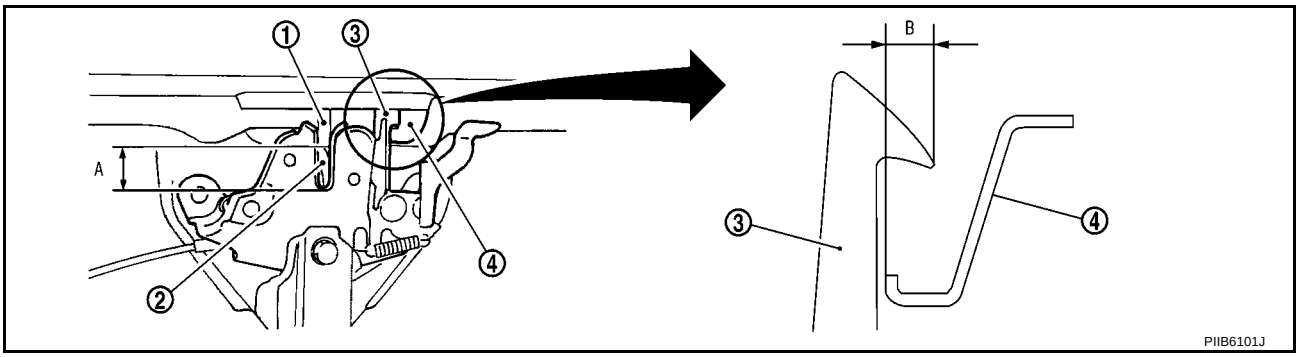
Hood Lock Control Inspection

BIS000I2

CAUTION:

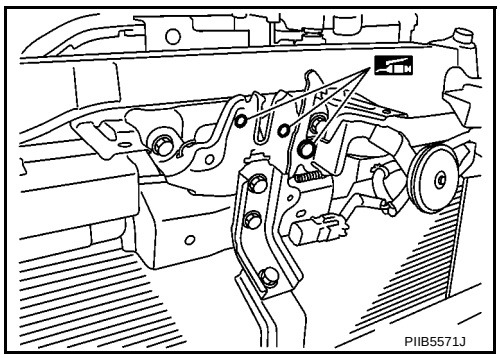
If hood lock cable is bent or deformed, replace it.

1. Confirm hood lock secondary latch securely engages secondary striker by releasing it from a height of approximately 200 mm.



2. While operating the hood opener carefully, make sure the front end of the hood is lifted by approximately 20 mm. Also, make sure the hood opener returns to the original position.

3. Inspect hood lock grease, and if insufficient, apply grease to the area shown in the figure.

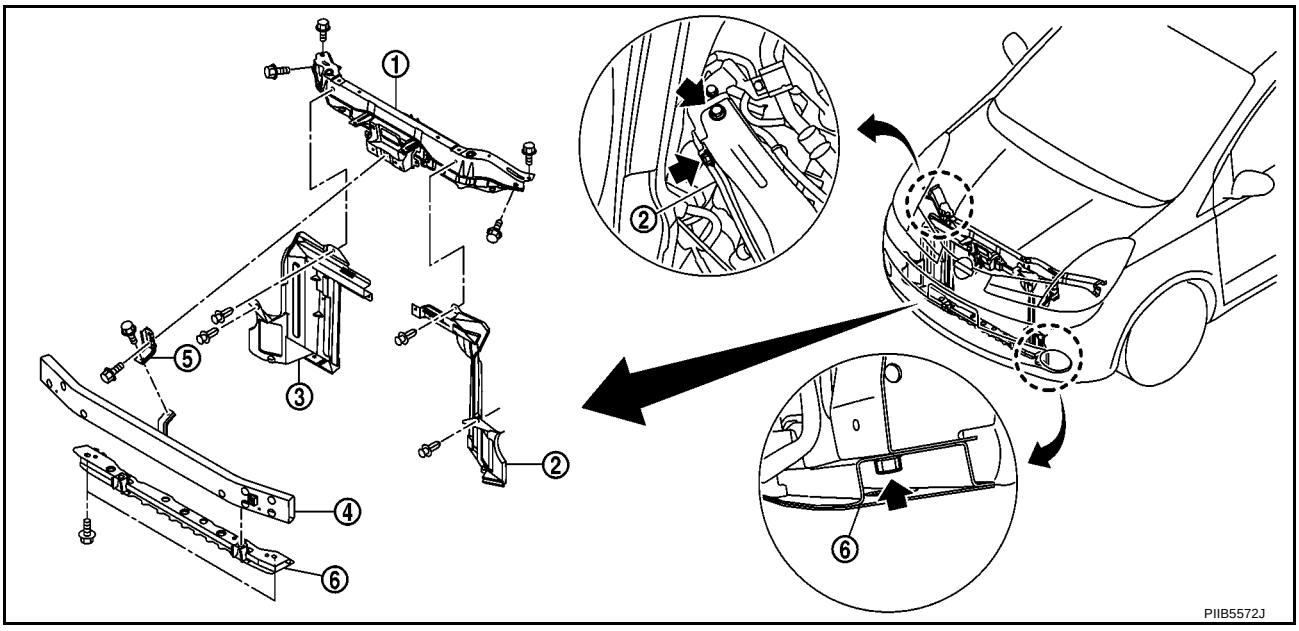


RADIATOR CORE SUPPORT

PFP:62500

Removal and Installation

BIS000I3



1. Radiator core support upper
2. Air guide (LH)
3. Air guide (RH)
4. bamper reinforcement
5. Food lock mounting reinforcement
6. Radiator core support upper

REMOVAL

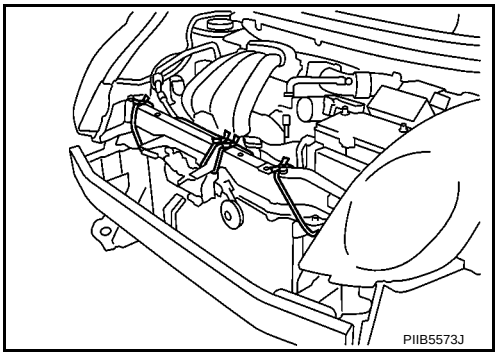
Radiator Core Upper Support

1. Remove crash zone sensor.
2. Remove air duct.
3. Remove bumper reinforcement.
4. Remove food lock assembly.
5. Remove air guide.
6. Remove clip from washer tunk inlet, and then remove washer tunk inlet.
7. Remove ambient sencor.
8. Riemove horn.
9. Remove bolts, and then remove radiator core upper support.

Radiator Core Lower Support

1. Remove front bamper reinforcement. Refer to EI-10, "Removal and Installation" .
2. Remove under cover.
3. Remove front bumper lower clip. Refer to EI-4, "Removal and Installation" .
4. Tie cord to all radiator core upper supports of the radiator and condenser.

   NOTE:
   To prevent the compressor and radiator from being dropped when the radiator core lower support is removed.
5. Remove bolts, and then remove radiator core lower supports.



6. Remove air guide (RH) bottom clips, and remove radiator core lower supports from passenger room.

INSTALLATION

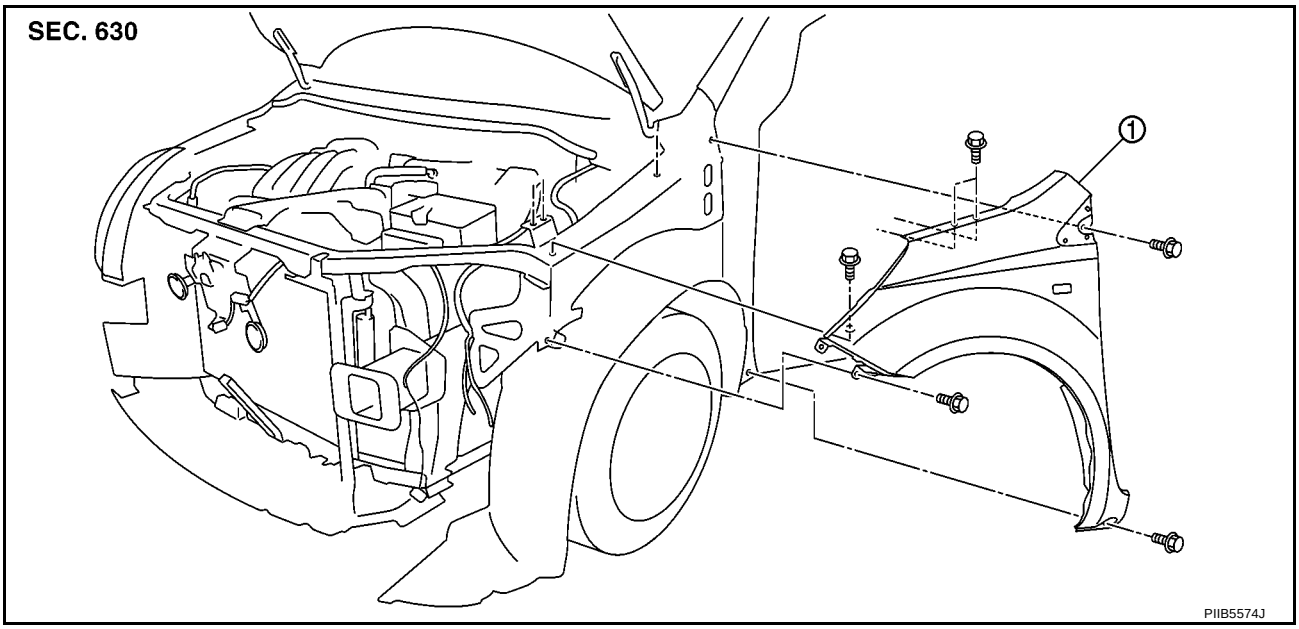
Install in the reverse order of removal.

FRONT FENDER

PFP:63100

Removal and Installation

BIS000I4



1. Front fender

REMOVAL

1. Remove side turn signal lamp. Refer to LT-111, "Removal and Installation of Side Turn Signal Lamp" .
2. Remove front bumper. Refer to LT-32, "Removal and Installation" .
3. Remove headlamps. Refer to LT-32, "Removal and Installation" .
4. Remove front fender finisher.
5. Remove fender protector front front side clip.
6. Remove bolts and then front fender.

INSTALLATION

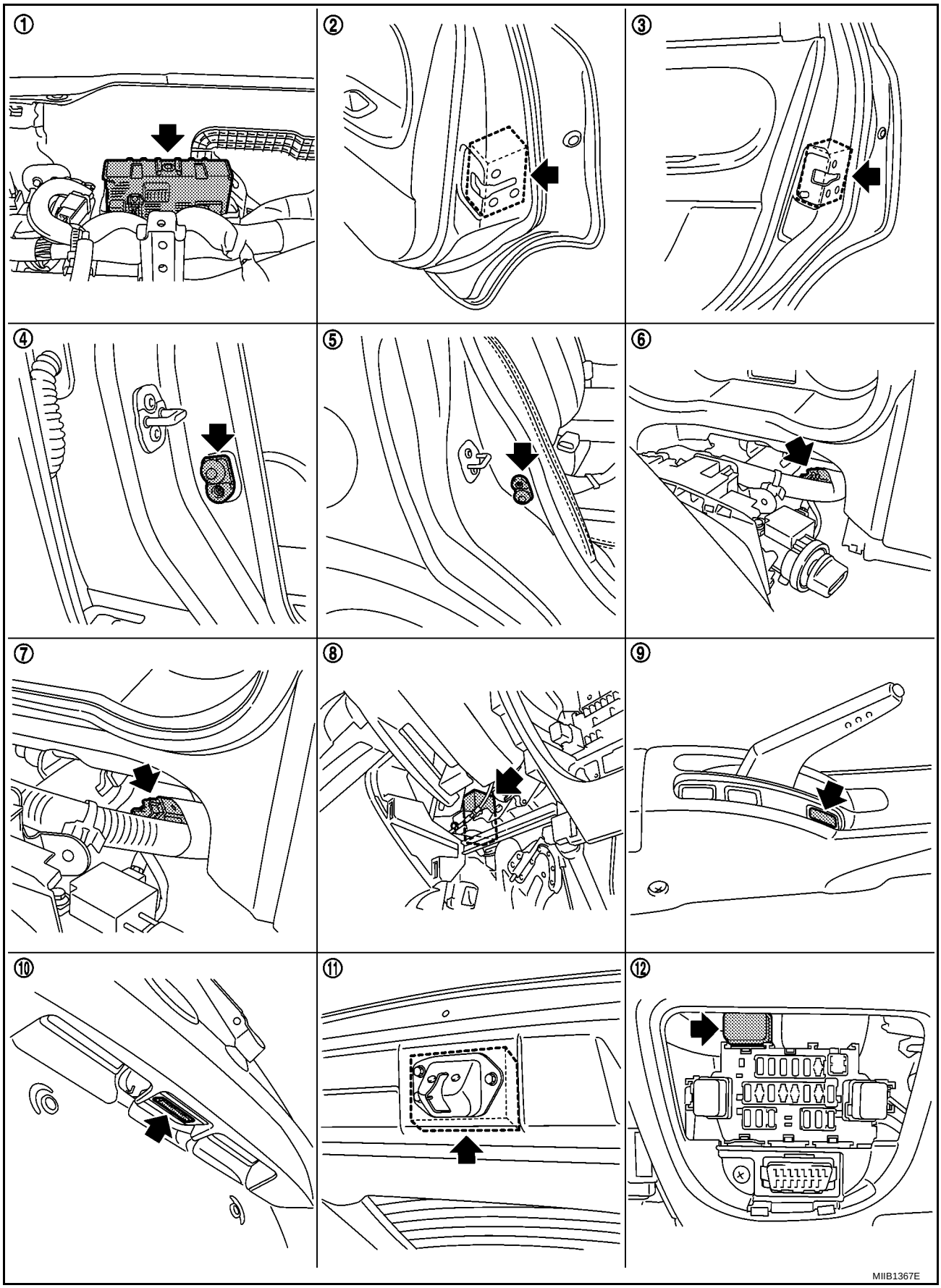
Install in the reverse order of removal.

POWER DOOR LOCK SYSTEM

PFP:24814

Component Parts and Harness Connector Location

BIS000I5



1. BCM (Body Control Module) M57, M58, M59
2. Front door lock actuator Driver side: D11 Passenger side: D28
3. Rear door lock actuator RH: D65 LH: D45
4. Front door switch RH: B29 LH: B14
5. Rear door switch RH: B42 LH: B19
6. Key switch and ignition knob switch connector M34 (With Intelligent Key system)
7. Key switch connector M33 (Without Intelligent Key system)
8. Intelligent Key unit M60 (With Intelligent Key system)
9. Door lock/unlock switch M54
10. Back door switch D104
11. Back door release actuator B46
12. Door lock relay M20 (With Intelligent Key system)

System Description

BIS000I7

OPERATION

Power is supplied (Without Intelligent Key System)

- through to 40A fusible link (letter **J** , located in the fusible link box)
- to BCM terminal 74 and 79.
- through 10A fuse [No.9, located in the fuse box (J/B)]
- to key switch terminal 2.

Power is supplied (With Intelligent Key System)

- through to 40A fusible link (letter **J** , located in the fusible link box)
- to BCM terminal 74 and 79.
- through 10A fuse [No.13, located in the fuse box (J/B)]
- to key switch and ignition knob switch terminal 1 and 3.

When the key switch is ON (Ignition key is inserted in ignition key cylinder), power is supplied (Without Intelligent Key system)

- through key switch terminal 1
- to BCM terminal 3.

When the key switch is ON (Ignition key is inserted in ignition key cylinder), power is supplied. (With Intelligent Key system)

- through key switch and ignition knob switch terminal 4
- to BCM terminal 3.
- to Intelligent Key unit terminal 7.

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

- through 10A fuse [No. 5, located in the fuse block (J/B)]
- to BCM terminal 24.

Ground is supplied

- through BCM terminals 2 and 70
- to body ground M21 and M66.

When the front door switch LH (LHD Models) or RH (RHD Models) is ON (door is open), ground is supplied

- through BCM terminal 29
- through front door switch LH (LHD Models) or RH (RHD Models) terminal 1
- to front door switch LH (LHD Models) or RH (RHD Models) case ground.

When the front door switch RH (LHD Models) or LH (RHD Models) is ON (door is open), ground is supplied

- through BCM terminal 30
- through front door switch RH (LHD Models) or LH (RHD Models) terminal 1
- to front door switch RH (LHD Models) or LH (RHD Models) case ground.

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

- through BCM terminal 59
- through rear door switch LH terminal 1
- to rear door switch LH case ground.

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

- through BCM terminal 60
- through rear door switch RH terminal 1
- to rear door switch RH case ground.

DOOR LOCK AND UNLOCK SWITCH OPERATION

When door lock/unlock switch is in LOCK position, ground is supplied

- through BCM terminal 6.
- through door lock/unlock switch terminal 1 and 3
- to body grounds M21 and M66

With power and ground supplied, doors are locked.
When door lock/unlock switch is in UNLOCK position, ground is supplied

- through BCM terminal 25
- through door lock/unlock switch terminal 2 and 3
- to body grounds M21 and M66

With power and ground supplied, all doors are unlocked.
Lock/unlock switch indicated by LED when key in switch is on or on with timer.

BACK DOOR SWITCH OPERATION

When the back door switch is turn on, back door is opened

Ground is supplied

- through BCM terminal 5
- through back door switch terminal 1 and 2
- to body ground B13, B28, B38 and B48.

BACK DOOR RELEASE ACTUATOR OPERATION

When the back door release actuator receives a release signal from BCM

Ground is supplied

- through BCM terminal 68
- through back door release actuator terminal 4 and 3
- to body ground B13, B28, B38 and B48.

BACK DOOR SWITCH OPERATION

When the back door switch is opened, ground is supplied

- through BCM terminal 10
- through back door switch terminal 2 and 1
- to body ground B13, B28, B38 and B48.

KEY REMINDER SYSTEM

If the ignition key is in the ignition key cylinder and driver door is open, setting door lock/unlock switch, key or remote controller to “LOCK” locks the door once but then immediately unlocks all doors.

UNLOCK LINK FUNCTION

When this function is activated, if the car is locked by door lock/unlock switch, opening the driver or passenger side door from the inside handle will override the lock state and unlock the whole car.
(This function will be deactivate if anti-hijack function is activated.)

Selectable Function

	Door Lock/unlock switch
How to change setting	Press unlock for more than 4 seconds
Contents	Unlock link activate/deactivate
How to confirm	Buzzer should sound for 0.2 seconds

BACK DOOR OPENER OPERTION

Back door can be opened with back door switch: When all door are unlocked, or When back door request switch is pushed (With Intelligent Key system).

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 2 minutes timer of auto re-lock will be reset if unlock button from the key fob is pressed. The auto re-lock function will not be activated under the following states.

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

NOTE:
For the Intelligent Key system models, this function will be deactivated.

ANTI-HIJACK FUNCTION

With the anti-hijack function enabled, the first unlock request send from key fob will partially unlock only the driver side door (released super lock if equipped). Then if a second unlock signal is send, then all remaining doors will be unlocked.

CAN Communication

BIS000I8

SYSTEM DESCRIPTION

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.

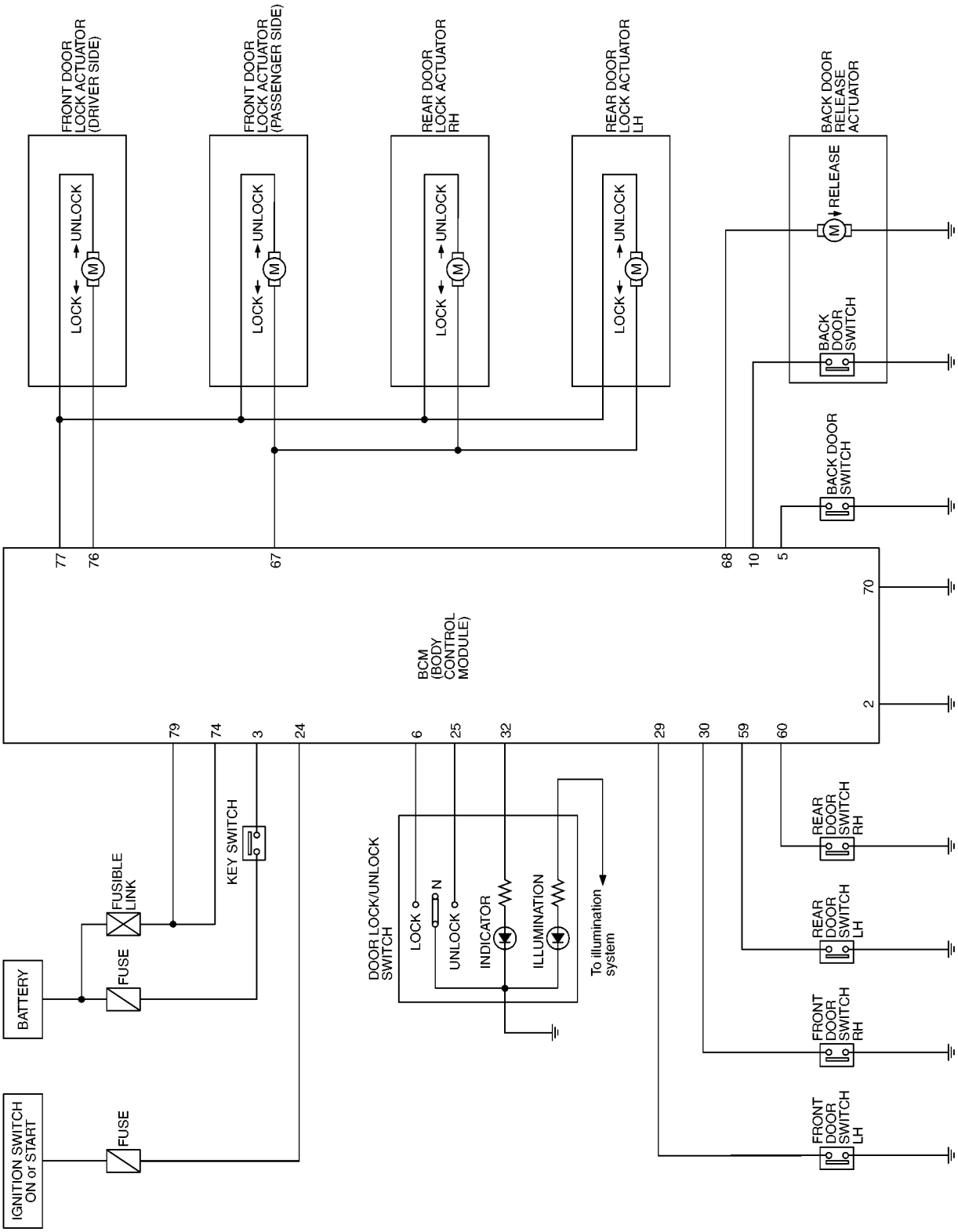
CAN Communication Unit

BIS000I9

Refer to LAN-27, "CAN Communication Unit" .

Schematic (Without Intelligent Key System)

BIS000IA

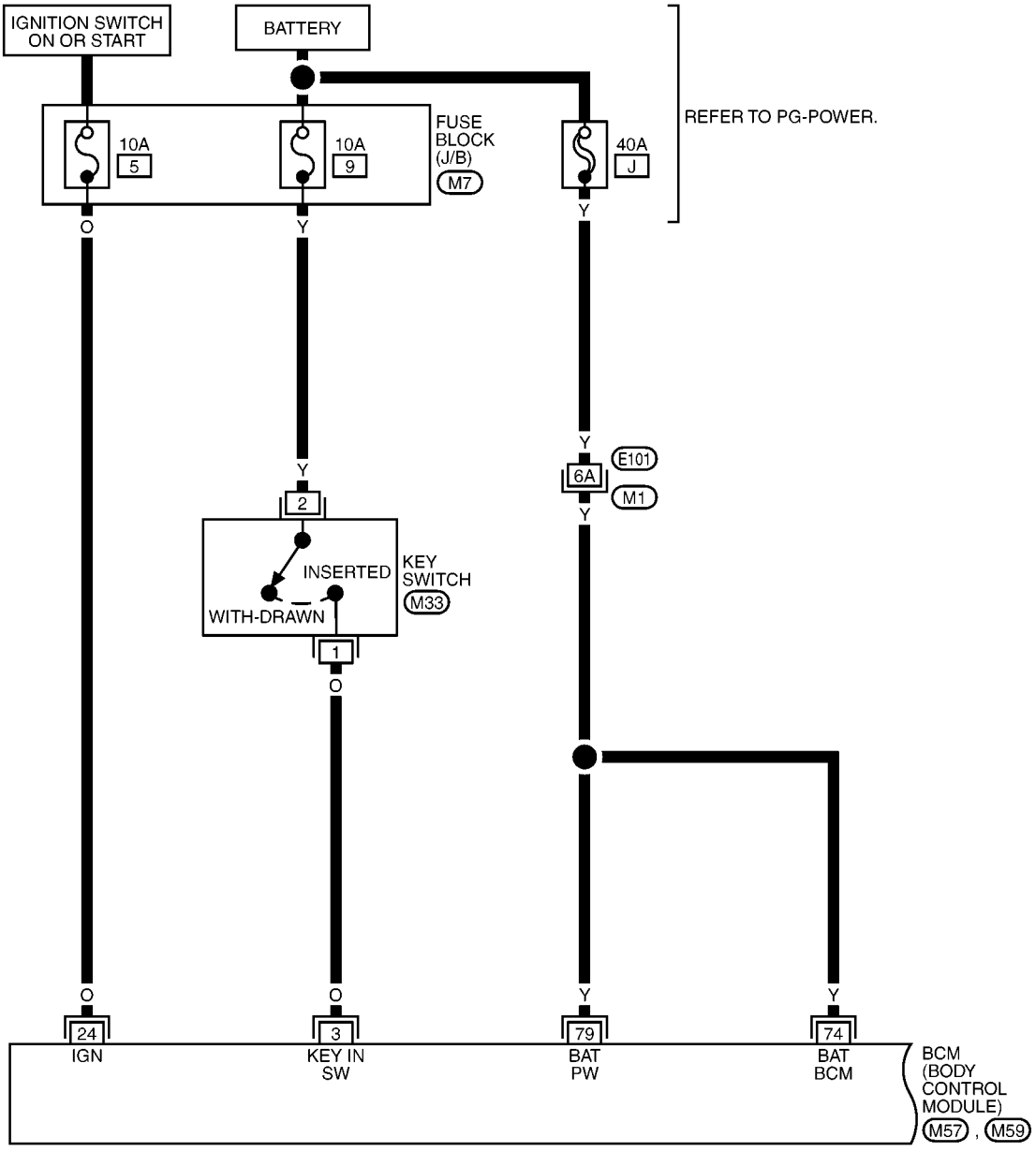


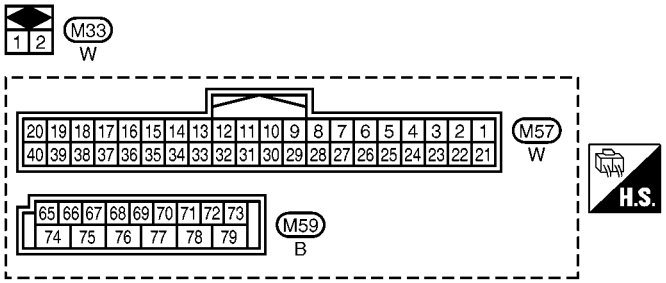
MIWA0688E

Wiring Diagram — D/LOCK — (Without Intelligent Key System)

BIS000IB

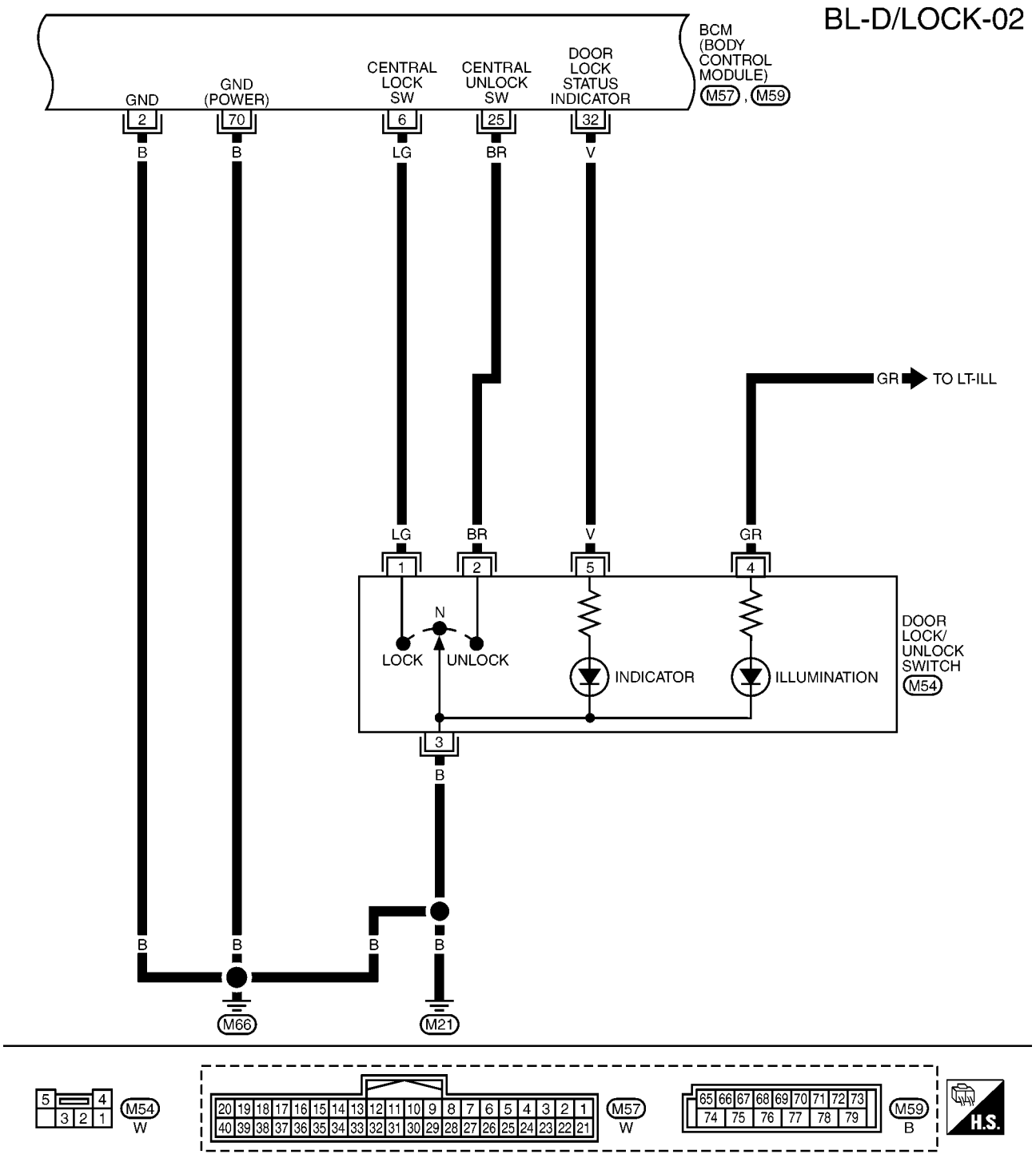
BL-D/LOCK-01





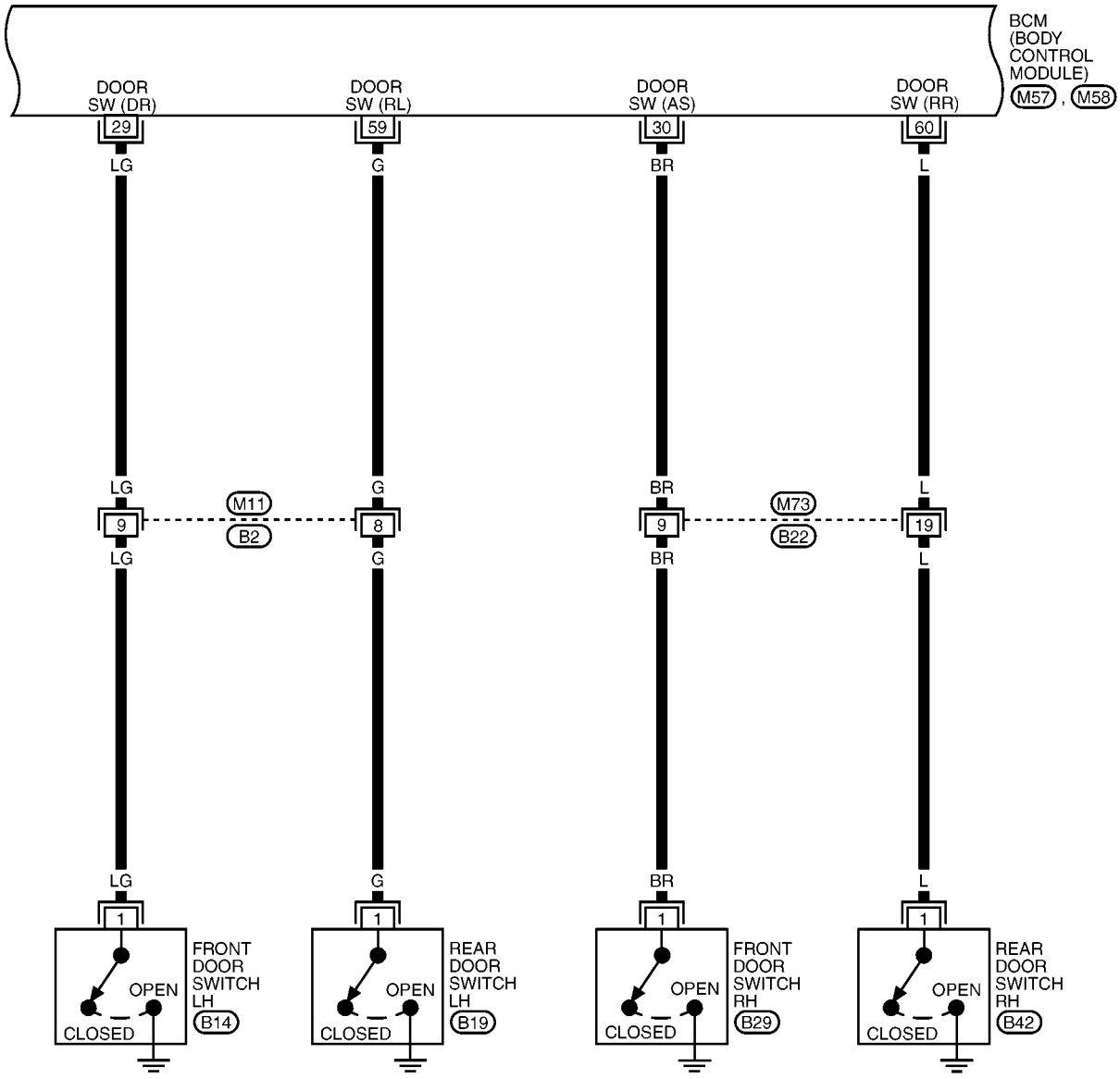
REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0689E


BL-D/LOCK-02
BCM (BODY CONTROL MODULE)
M57, M59
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
V
GR
TO LT-ILL
LG
BR
V
GR
1
2
5
4
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M54
3
B
B
B
B
B
M66
M21
5 4 3 2 1
M54
W
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M57
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M59
B
H.S.

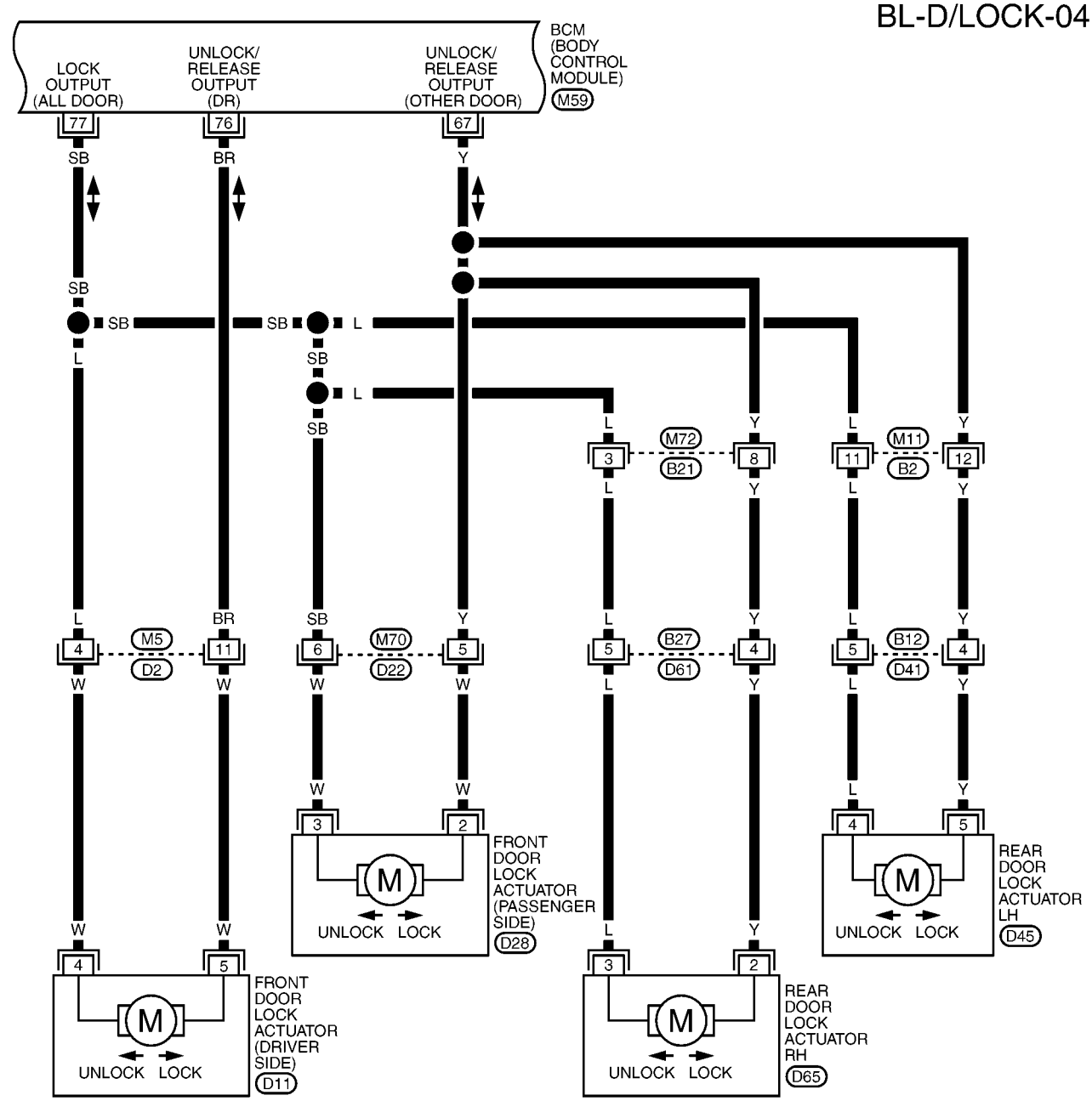
MIWA0690E

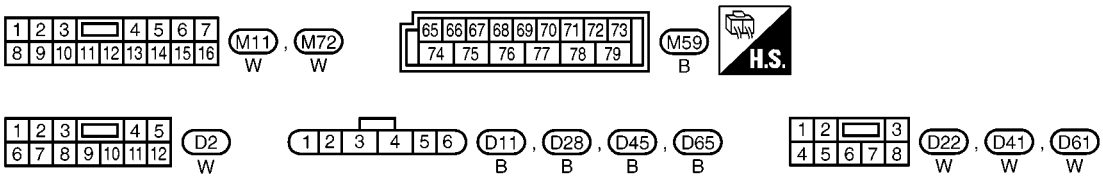
BL-D/LOCK-03



MIWA0691E

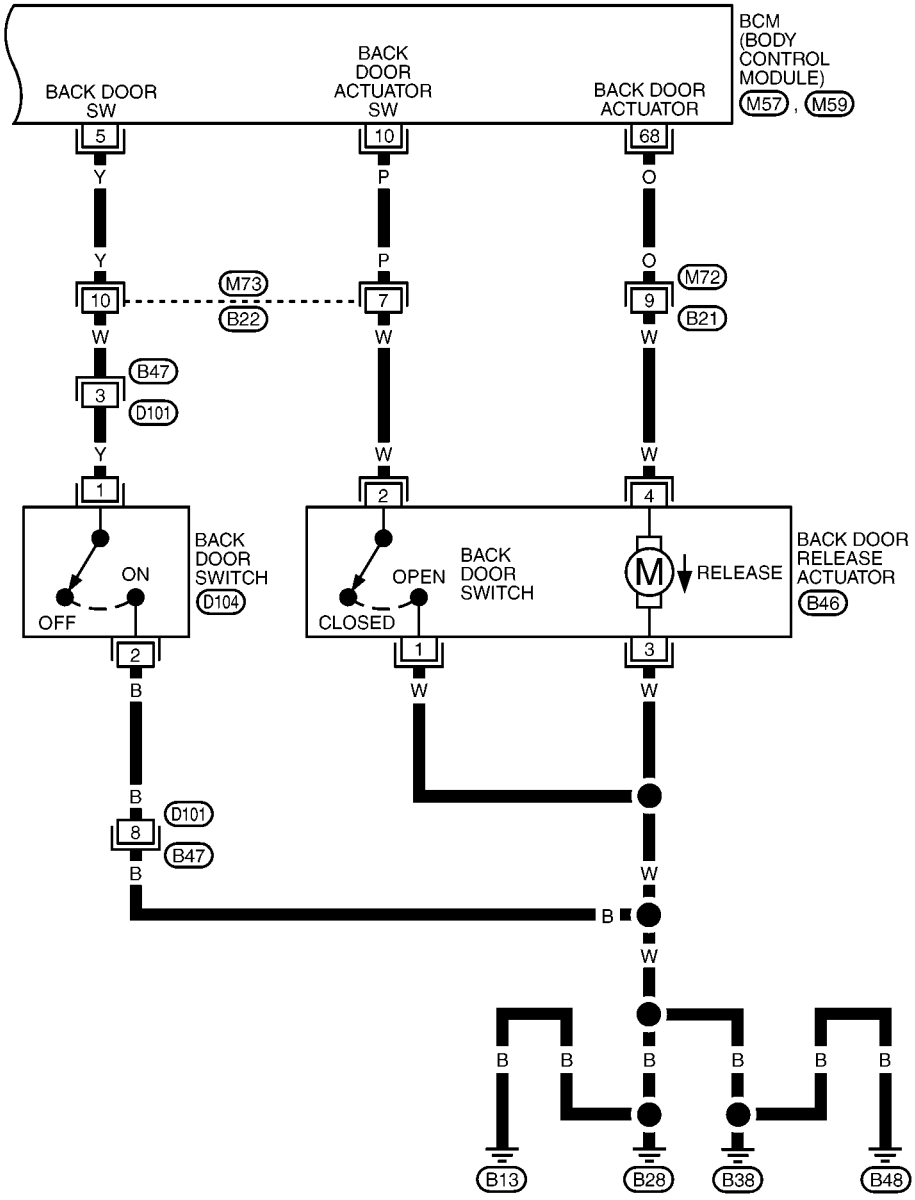
BL-D/LOCK-04

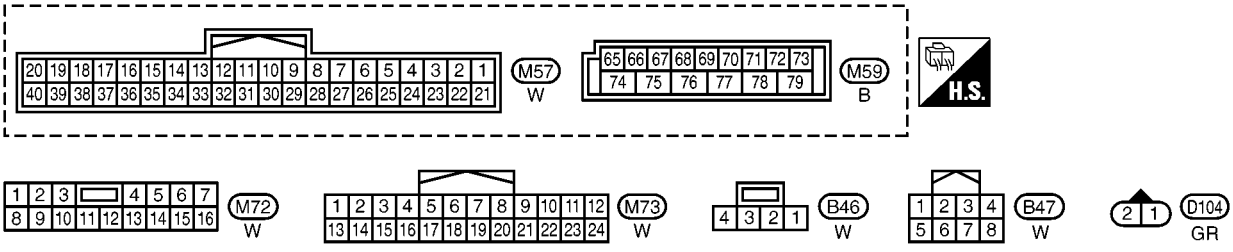




MIWA0692E

BL-D/LOCK-05

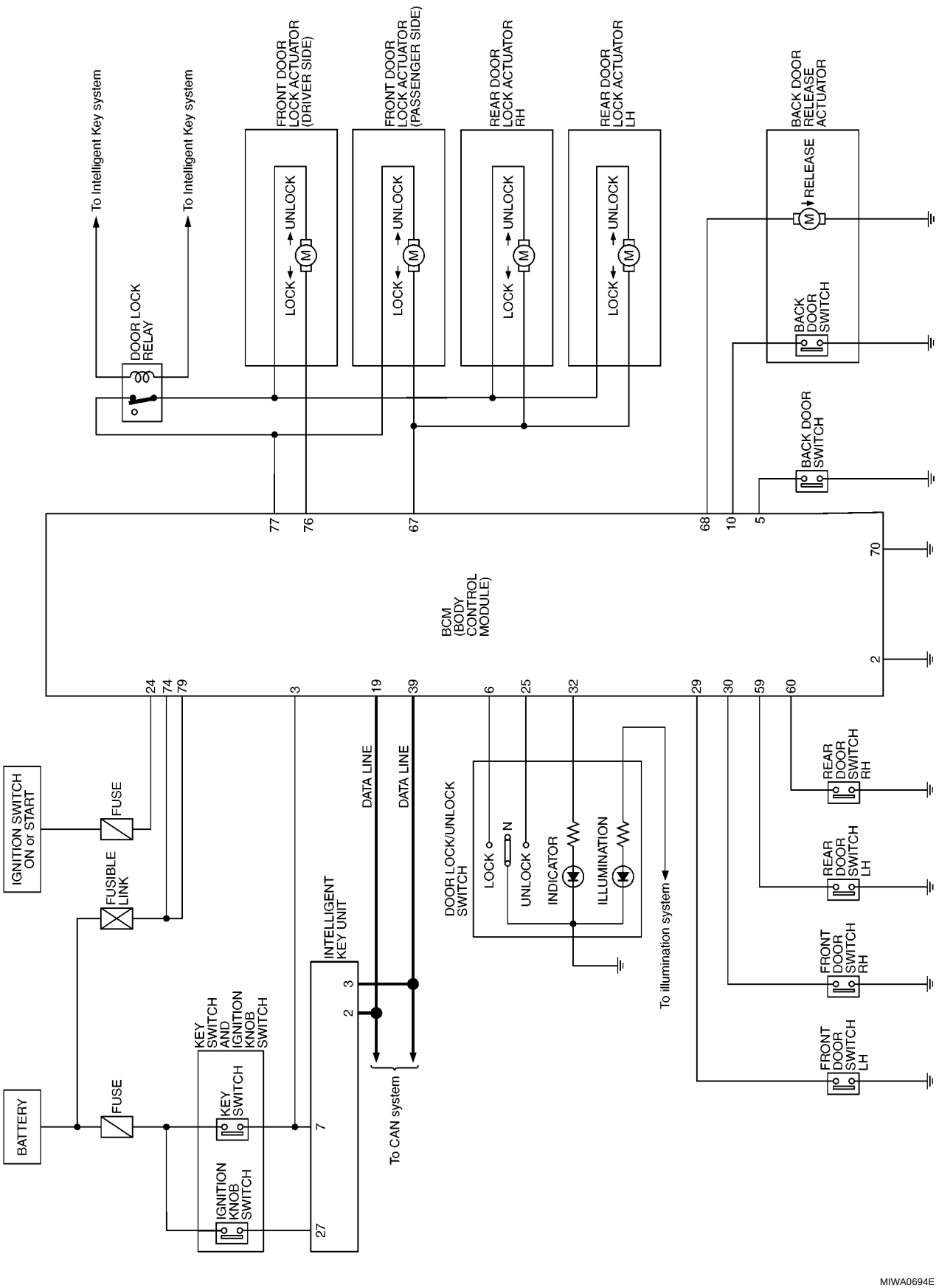




MIWA0693E

Schematic (With Intelligent Key System)

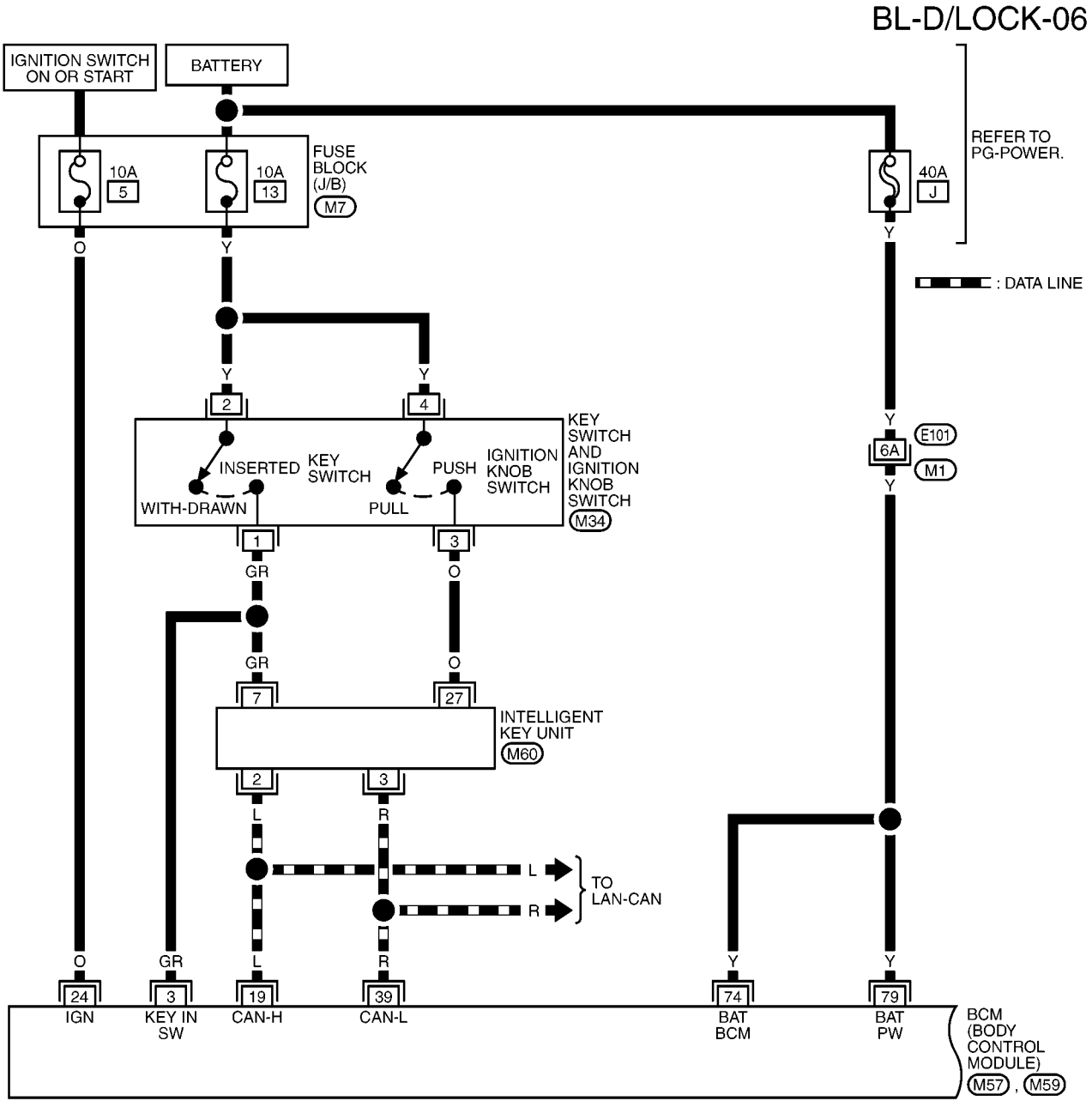
BIS000IC

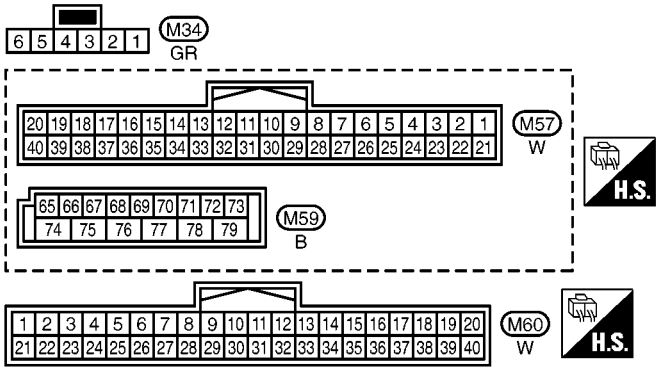


MIWA0694E

Wiring Diagram — D/LOCK — (With Intelligent Key System)

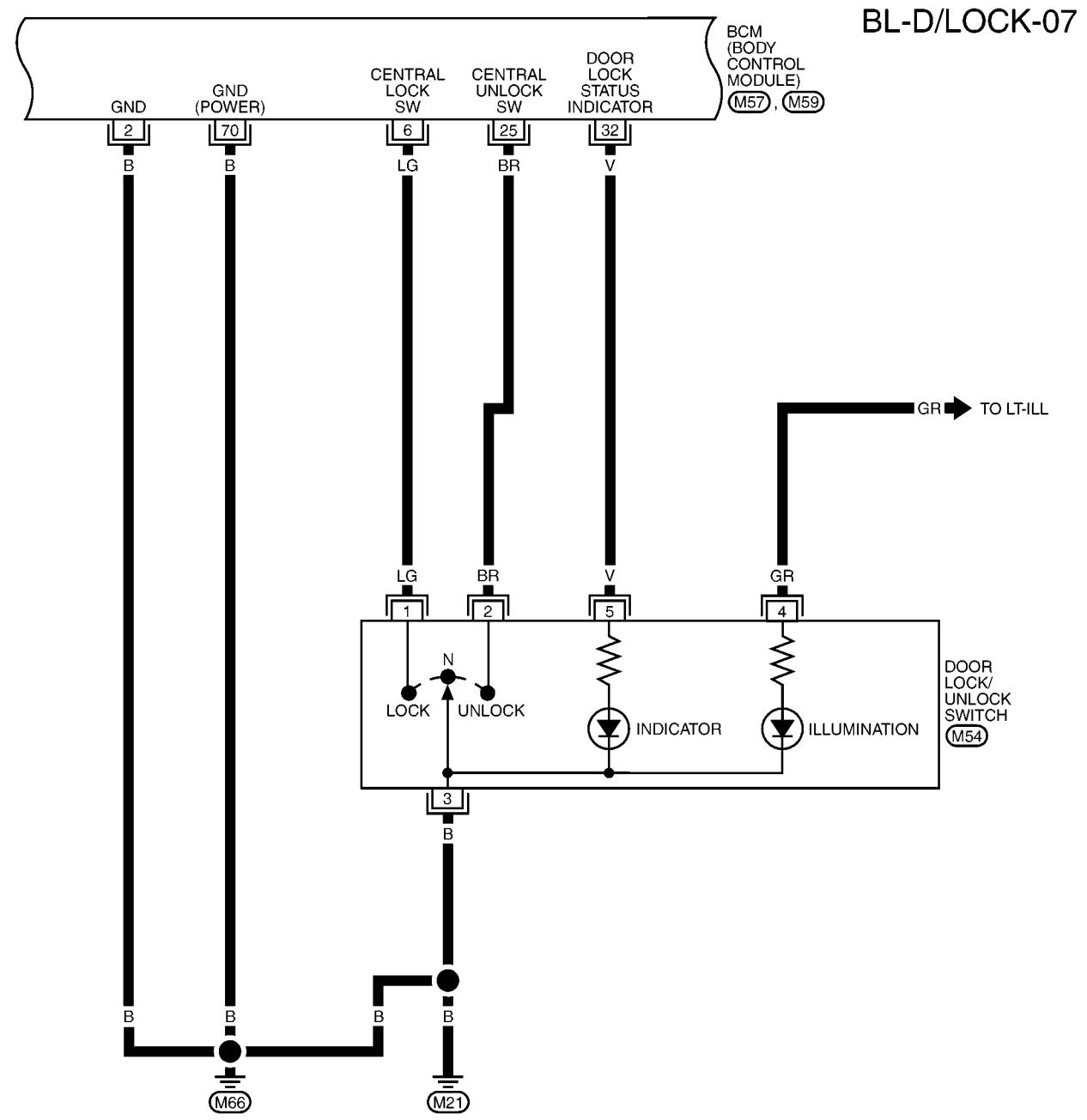
BIS000ID

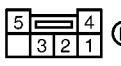


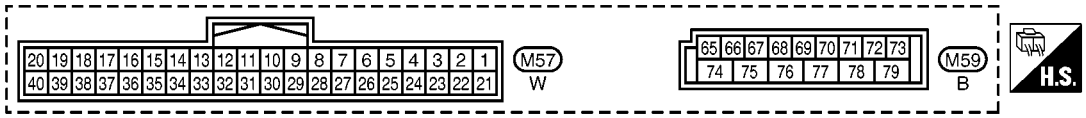


REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0695E

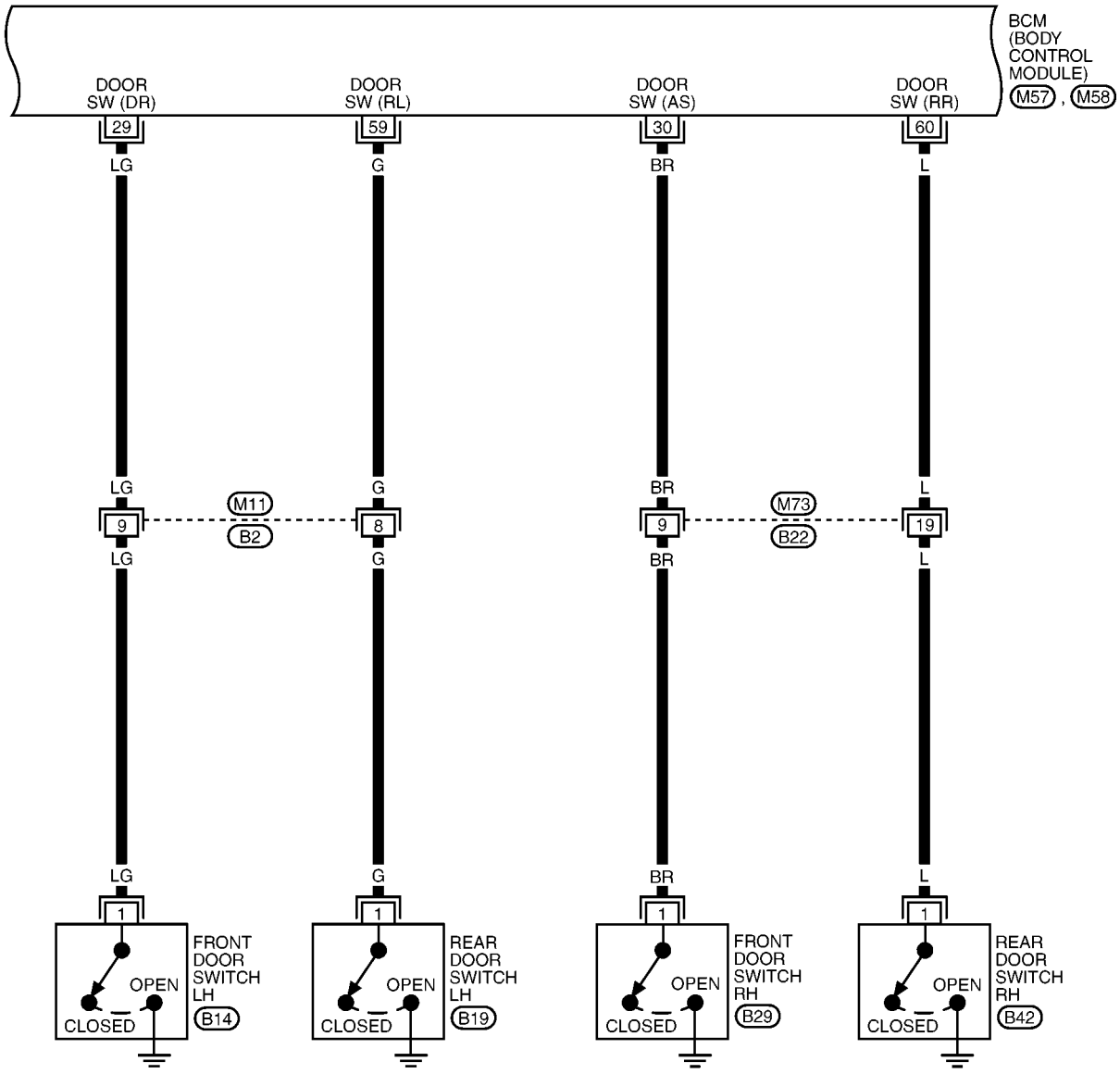

BL-D/LOCK-07
BCM (BODY CONTROL MODULE)
M57, M59
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
V
GR
TO LT-ILL
LG
BR
V
GR
1
2
5
4
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M54
3
B
B
B
B
B
M66
M21

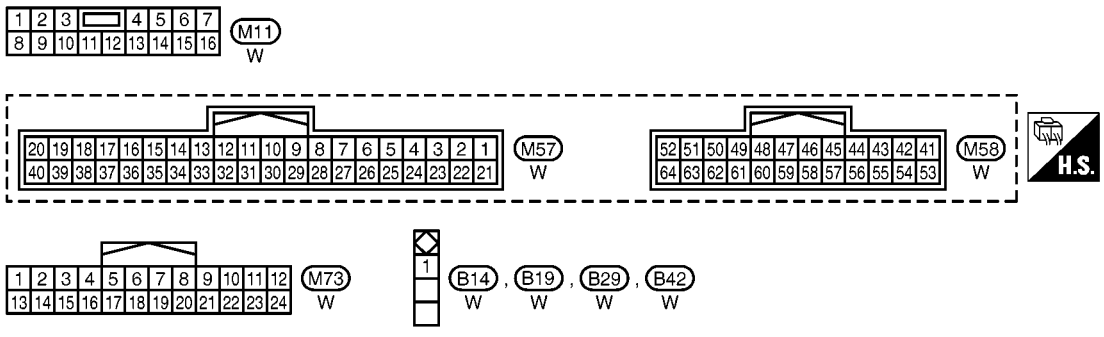

5 4
3 2 1
M54
W


20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M57
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M59
B
H.S.

MIWA0696E

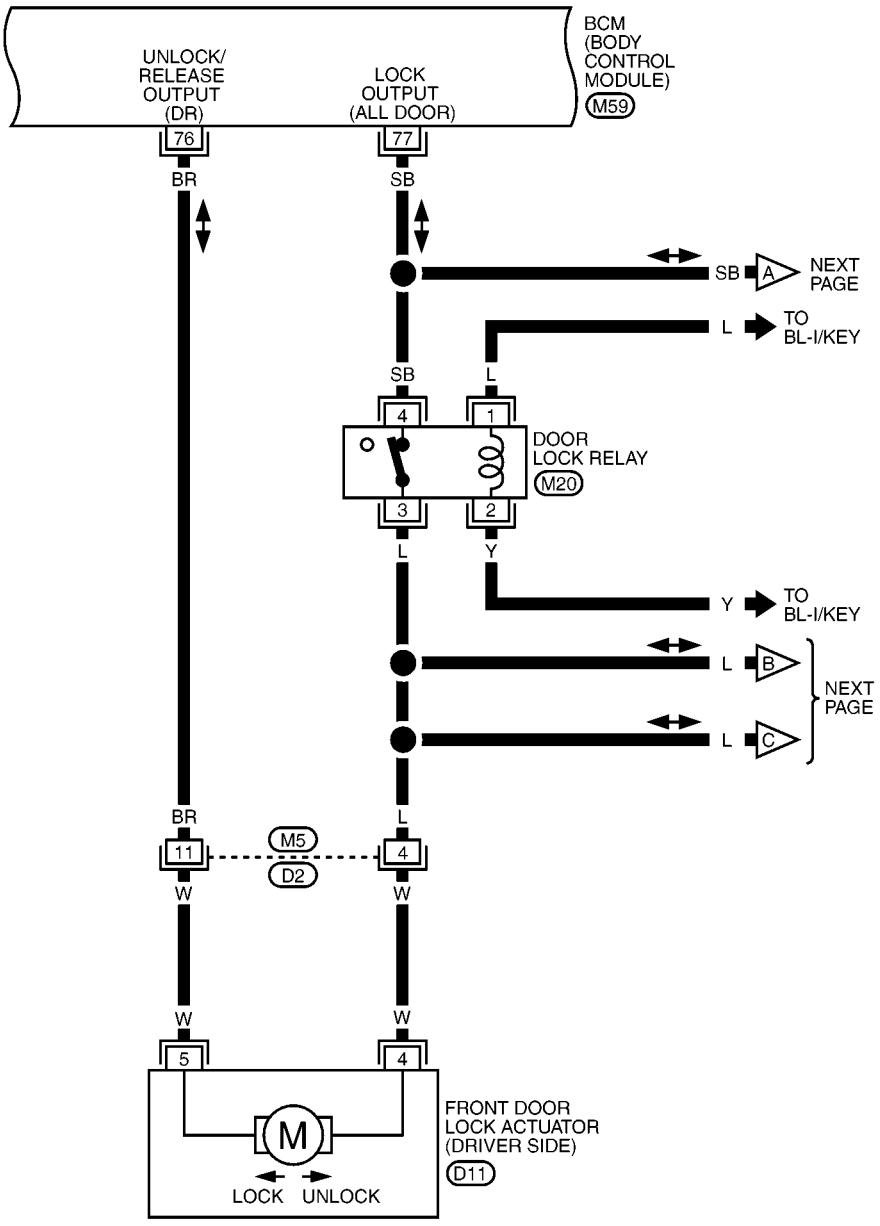
BL-D/LOCK-08





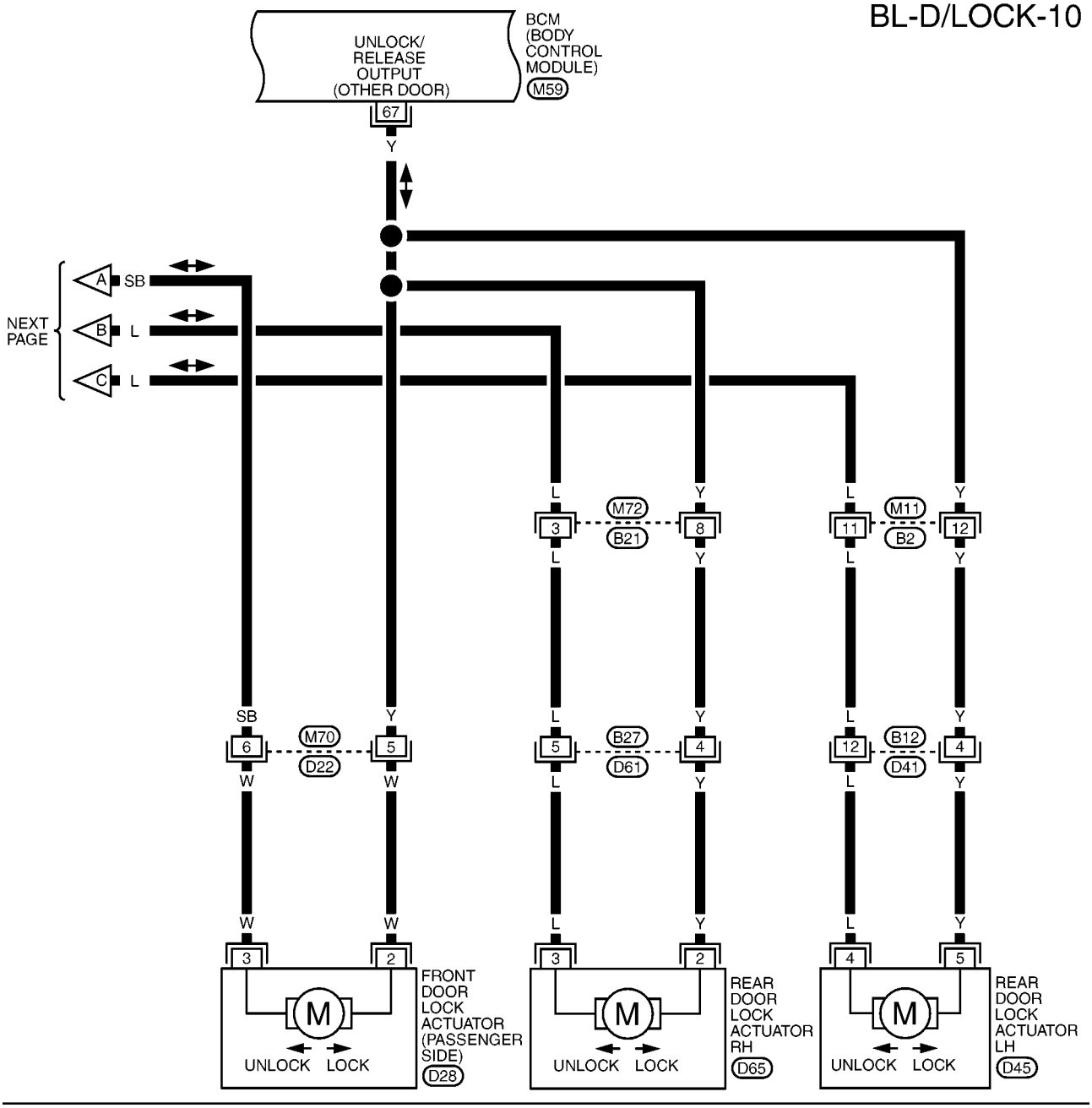
MIWA0697E

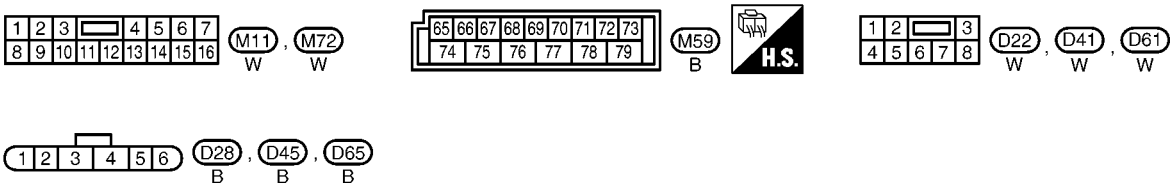
BL-D/LOCK-09



MIWA0698E

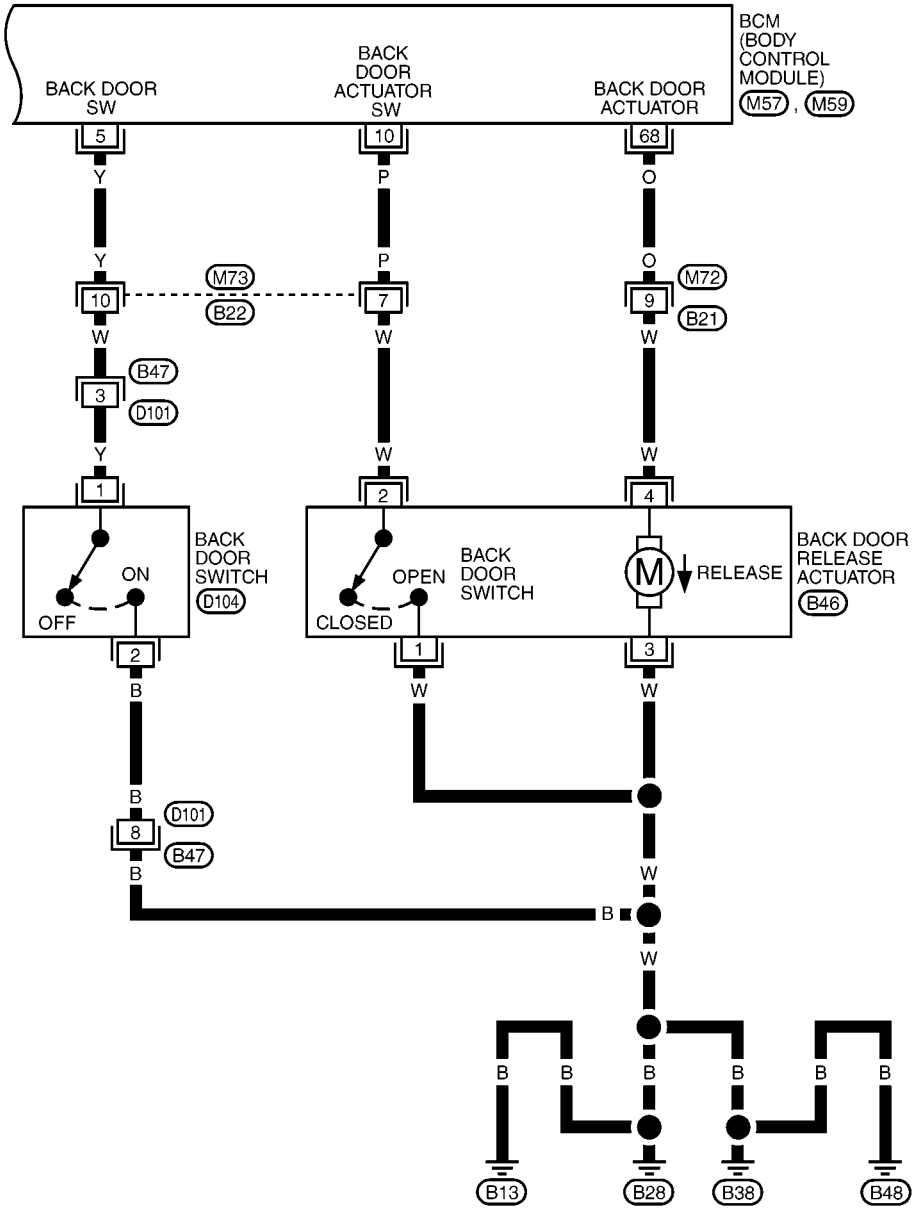
BL-D/LOCK-10

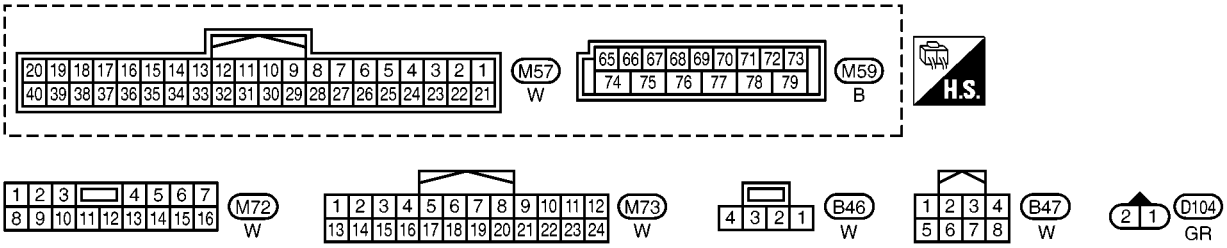




MIWA0699E

BL-D/LOCK-11





MIWA0700E

Terminal and Reference Value for BCM

BIS000IE

Terminal	Wire color	Item	Signal Input/ Output	Condition	Voltage (V) (Approx.)
2	B	Ground	—	—	0
3	O GR*	Key switch	Input	Key inserted (ON) → key removed from Ignition key cylinder (OFF)	Battery voltage → 0
5	Y	Back door switch	Input	Back door switch open operation	5 → 0
6	LG	Door lock / unlock switch (Lock signal)	Input	Lock operation (ON)	0
				Other than above (OFF)	5
10	P	Back door switch	Input	Open (ON) → Close (OFF)	0 → 5
19*	L	CAN-H	Input/ Output	—	—
24	O	Ignition power supply	Input	Ignition switch (ON or START position)	Battery voltage
25	BR	Door lock/unlock switch (Unlock signal)	Input	Unlock operation (ON)	0
				Other than above (OFF)	5
29	LG	Front door switch LH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
30	BR	Front door switch RH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
32	V	Door lock status indicator	Output	Goes OFF→ Illuminates (Ignition switch ON and all door closed)	0 → Battery voltage
39*	R	CAN-L	Input/ Output	—	—
59	G	Rear door switch LH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
60	L	Rear door switch RH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
67	Y	Door lock actuator unlock (Passenger and rear LH, RH doors)	Output	Door lock / unlock switch Unlock operation	0 → Battery voltage
68	O	Back door release actuator	Output	Door lock/unlock switch (Back door release switch) Open operation	Battery voltage → 0
70	B	Ground (Power)	—	—	0
74	Y	Battery power supply (BCM)	Input	—	Battery voltage
76	BR	Door lock actuator unlock (DR side door)	Output	Door lock / unlock switch Unlock operation	0 → Battery voltage
77	SB	Door lock actuator lock signal (All doors)	Output	Door lock/unlock switch & remote controller lock operation	0 → Battery voltage
79	Y	Battery power supply (Power)	Input	—	Battery voltage

*: With Intelligent Key system

CONSULT- II Inspection Procedure

BIS000IF

Refer to GI-36, "CONSULT-II Start Procedure" .

CONSULT- II Application Items

BIS000IG

WORK SUPPORT

Supported Item	Description
SECURITY DOOR LOCK SET	Anti-hijack function mode can be changed in this mode.
AUTO LOCK SET	Auto locking function mode can be changed in this mode.

Security Door Lock Set

	ON	OFF
Anti hijack function	Activation	Deactivation

Auto Lock Set

	MODE1	MODE2	MODE3	MODE4	MODE5	MODE6*	MODE7*	MODE8*
Auto locking function	1 minute	2 minutes	3 minutes	4 minutes	5 minutes	–	–	–

*: These mode are not supported.

DATA MONITOR

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
PUSH SW (*1)	Indicates [ON/OFF] condition of ignition knob switch.
KEY IN SW (*2)	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 LH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch RH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
TRNK OPNR SW	Indicates [ON/OFF] condition of back door switch.

*1: Models with Intelligent Key System.
*2: Models without Intelligent Key System.

ACTIVE TEST

Monitored Item	Description
DOOR LOCK	This test is able to check all door lock actuator (except for back door) lock / unlock operation. These actuator lock / unlock when “LOCK” or “UNLOCK” on CONSULT-II screen is touched.
DOOR LOCK IND	This test is able to check door lock / unlock switch's indicator illumination.
TRUNK / BACK DOOR	This test is able to check back door release actuator open operation. These actuator open when “OPEN” on CONSUT-II screen is touched.

Work Flow

BIS000IH

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-17, "System Description" .
3. According to the trouble diagnosis, repair or replace the cause of the malfunction. Refer to BL-35, "TROUBLE DIAGNOSES CHART BY SYMPTOM/WITHOUT INTELLIGENT KEY SYSTEM" or BL-36, "TROUBLE DIAGNOSES CHART BY SYMPTOM/WITH INTELLIGENT KEY SYSTEM" .
4. Does power door lock system operate normally?
   YES: GO TO 5.
   NO: GO TO 2.
5. INSPECTION END.

TROUBLE DIAGNOSES CHART BY SYMPTOM/WITHOUT INTELLIGENT KEY SYSTEM

NOTE:
Always check the “Work Flow” before troubleshooting. Refer to BL-35, "Work Flow" .

Symptom	Malfunctioning system	Refer to page
Power door lock does not operate with door lock / unlock switch.	1. Check power supply and ground circuit of BCM.	BL-37
	2. Check door lock / unlock switch.	BL-38
	3. Check front door lock actuator (driver side).	BL-42
	4. Replace BCM.	BCS-17
Specific door lock actuator does not operate.	1. Check door lock actuator.	BL-42
Front door lock actuator (driver side) does not operate. (All other door lock actuators operate properly)	1. Check front door lock actuator (driver side).	BL-42
All door lock actuator (except driver side) does not operate.	1. Check door lock actuator circuit.	BL-41
	2. Replace BCM.	BCS-17
Key reminder system does not operate.	1. Check key switch.	BL-39
	2. Check door switch.	BL-46
	3. Replace BCM.	BCS-17
Back door does not open. But power door lock operates properly.	1. Check back door switch.	BL-55
	2. Check back door release actuator.	BL-57
	3. Replace BCM.	BCS-17
Door lock/unlock switch indicator does not illuminate. (All other door lock system is “OK”)	1. Check door lock/unlock switch indicator.	BL-58
	2. Replace BCM.	BCS-17

TROUBLE DIAGNOSES CHART BY SYMPTOM/WITH INTELLIGENT KEY SYSTEM

NOTE:

Always check the “Work Flow” before troubleshooting. Refer to BL-35, "Work Flow" .

Symptom	Malfunctioning system	Refer to page
Power door lock does not operate with door lock / unlock switch.	1. Check power supply and ground circuit of BCM.	BL-37
	2. Check door lock / unlock switch.	BL-38
	3. Check door lock actuator (driver side).	BL-42
	4. Replace BCM.	BCS-17
Specific door lock actuator does not operate.	1. Check door lock actuator.	BL-42
Front door lock actuator (driver side) does not operate. (All other door lock actuators operate properly)	1. Check front door lock actuator (driver side).	BL-42
All door lock actuator (except driver side) does not operate.	1. Check door lock actuator circuit.	BL-41
	2. Replace BCM.	BCS-17
Key reminder system does not operate.	1. Check key switch.	BL-40
	2. Check door switch.	BL-46
	3. Replace BCM.	BCS-17
Back door does not open. But power door lock operates properly.	1. Check back door switch.	BL-55
	2. Check back door release actuator.	BL-57
	3. Replace BCM.	BCS-17
Door lock/unlock switch indicator does not illuminate. (All other door lock system is “OK”)	1. Check door lock/unlock switch indicator.	BL-58
	2. Replace BCM.	BCS-17

Check Power Supply and Ground Circuit of BCM

BIS000II

First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated "SELF-DIAG RESULTS" of "BCM", Refer toBCS-9, "CONSULT-II Function (BCM)".

1. FUSE INSPECTION

- Check 10A fuse [No.5, located in fuse block (J/B)]
- Check 40A fusible link (letter **J** located in the fuse and fusible link box).
- Check 10A fuse [No.9, located in fuse block (J/B)] (Without Intelligent Key system)
- Check 10A fuse [No.13, located in fuse block (J/B)] (With Intelligent Key system)

NOTE:
Refer to BL-16, "Component Parts and Harness Connector Location" .

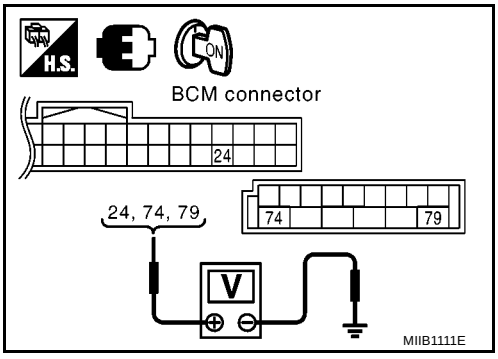
OK or NG

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between BCM connector M57, M59 terminals 24, 74, 79 and ground.

24 – Ground : Battery voltage
74 – Ground : Battery voltage
79 – Ground : Battery voltage



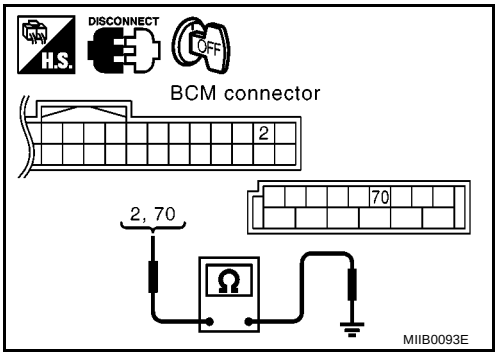
OK or NG

OK >> GO TO 3.
NG >> Check BCM power supply circuit for open or short.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M57, M59 terminals 2, 70 and ground.

2 – Ground :Continuity should exist.
70 – Ground :Continuity should exist.



OK or NG

OK >> Power supply and ground circuit is OK.
NG >> Check BCM ground circuit for open or short.

Check Door Lock / Unlock Switch

BIS000IJ

1. CHECK DOOR LOCK / UNLOCK SWITCH SIGNAL

With CONSULT- II

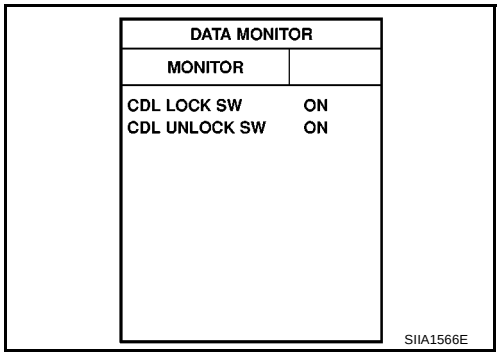
Check door lock / unlock switch input signal (“CDL LOCK SW” “CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT- II.

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

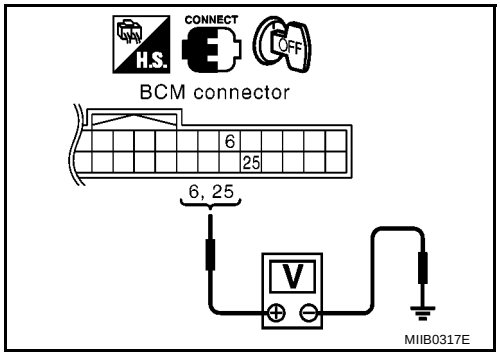
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

Operate door lock / unlock switch, check voltage between BCM connector M57 terminal 6, 25 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	6	Ground	Lock	0
			Neutral / Unlock	5
	25		Unlock	0
			Neutral / Lock	5



OK or NG

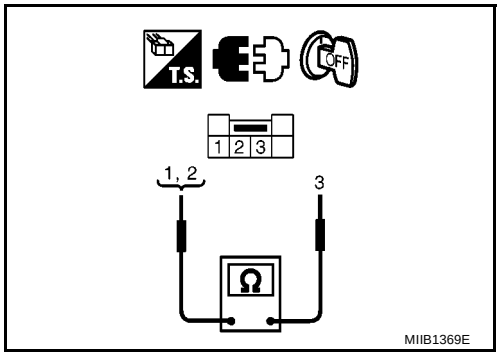
OK >> Door lock / unlock switch is OK.

NG >> GO TO 2.

2. CHECK DOOR LOCK/UNLOCK SWITCH

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

	Terminals		Condition	Continuity
Door lock/ unlock switch	2	3	Unlock	Yes
			Neutral / Lock	No
	1		Lock	Yes
			Neutral / Unlock	No



OK or NG

OK >> Check the following.

- Ground circuit for door lock / unlock switch
- Harness for open or short between BCM and door lock / unlock switch.

NG >> Replace door lock / unlock switch.

Check Key Switch /Without Intelligent Key System

BIS000IK

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

Check key switch input signal “KEY IN SW” in “DATA MONITOR” mode with CONSULT- II.

When key is inserted in ignition key cylinder:

KEY IN SW ⇒ ON

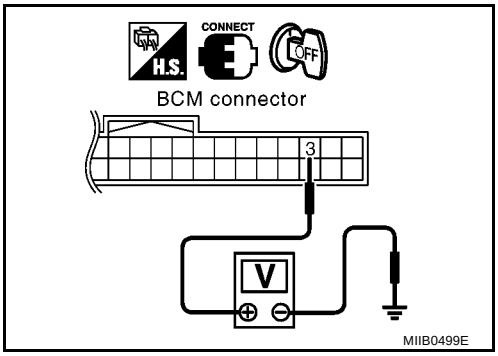
When key is removed from ignition key cylinder:

KEY IN SW ⇒ OFF

Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	3	Ground	Key is inserted	Battery voltage
			Key is removed	0



OK or NG

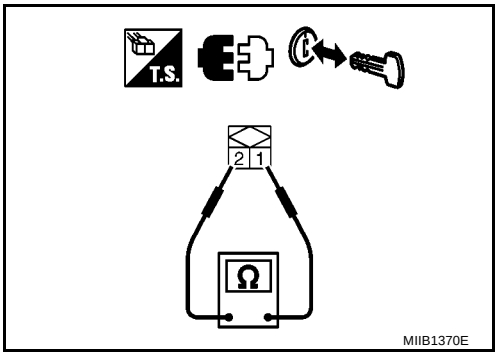
OK >> Key switch is OK.

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.

Key switch	Terminals		Condition	Continuity
	1	2	Key is inserted	YES
			Key is removed	NO



OK or NG?

OK >> Check the following.

- 10A fuse [No. 9, 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 Key Switch and Ignition Knob Switch/With Intelligent Key System

BIS000IL

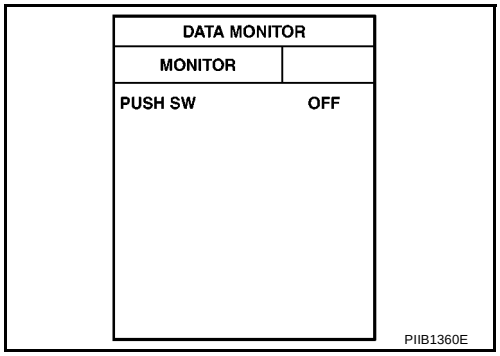
1. KEY SWITCH AND IGNITION KNOB SWITCH INSPECTION

With CONSULT-II

Display “PUSH SW” on DATA MONITOR screen, and check if ON-OFF display is linked to ignition knob switch operation.

When ignition knob is pushed : PUSH SW ON

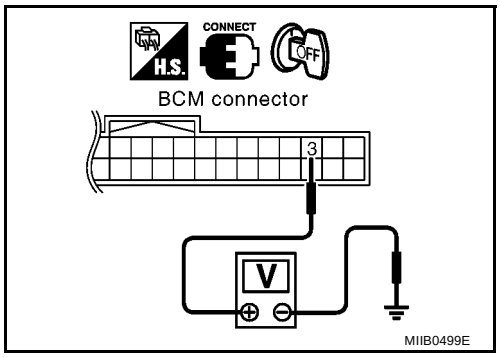
When ignition knob is released : PUSH SW OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	3	Ground	Key is inserted	Battery voltage
			Key is removed	0



OK or NG

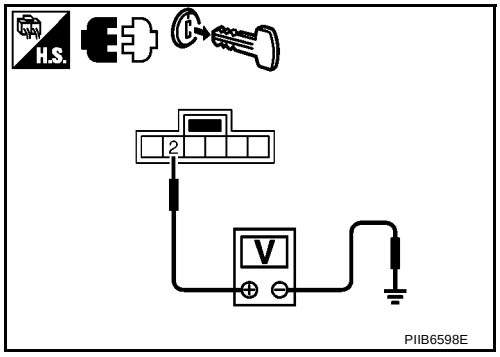
OK >> Key switch is OK.

NG >> GO TO 2.

2. KEY SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Remove mechanical key from ignition knob.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch connector and ground.

Key switch and ignition knob switch connector	Terminal	Ground	Voltage (V) (Approx.)
M34	2		Battery voltage



OK or NG

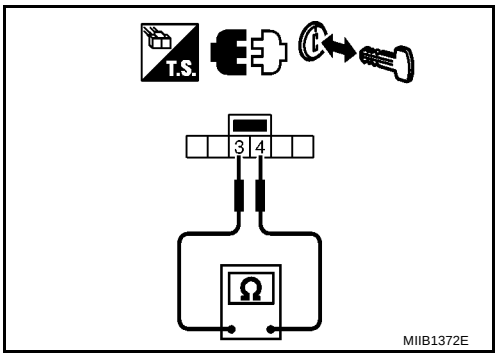
OK >> GO TO 3.

NG >> Repair or replace key switch power supply circuit.

3. KEY SWITCH OPERATION INSPECTION

1. Insert mechanical key into ignition knob.
2. Check continuity between key switch and ignition knob switch connector M34 terminal.

	Terminal		Condition	Continuity
Key switch and ignition knob switch	3	4	Key is inserted	Yes
			Key is removed	No



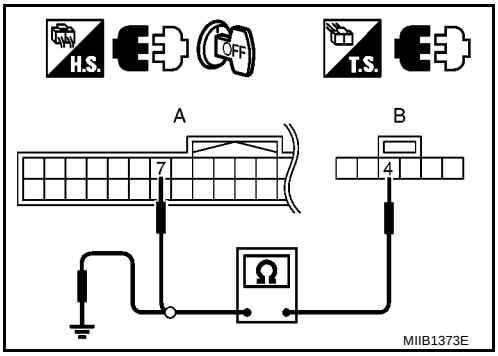
OK or NG

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

4. KEY SWITCH CIRCUIT INSPECTION

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit connector and key switch and ignition knob switch connector.

A		B		Continuity
Intelligent Key unit connector	Terminal	Key switch and ignition knob switch connector	Terminal	
M60	7	M34	4	Yes



3. Check continuity between key switch connector and ground.

B		Ground	Continuity
Key switch and ignition knob switch connector	Terminal		
M34	4		No

OK or NG

OK >> Key switch is OK.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

Check Door Lock Actuator Circuit

BIS000IM

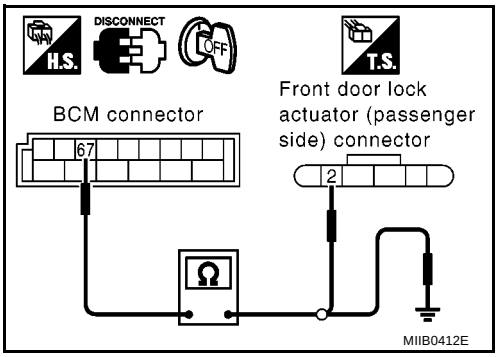
1. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminal 67 and front door lock actuator (passenger side) connector D28 terminal 2.

67 – 2 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 67 and ground.

67 – Ground : Continuity should not exist.



OK or NG

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

Check Door Lock Actuator

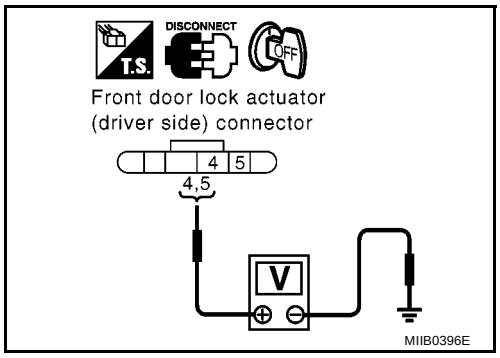
BIS000IN

DRIVER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (driver side) connector.
3. Operate door lock / unlock switch, check voltage between front door lock actuator (driver side) connector D11 terminal 4, 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D11	5	Ground	Unlock	0 → Battery voltage → 0
	4		Lock	0 → Battery voltage → 0



OK or NG

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

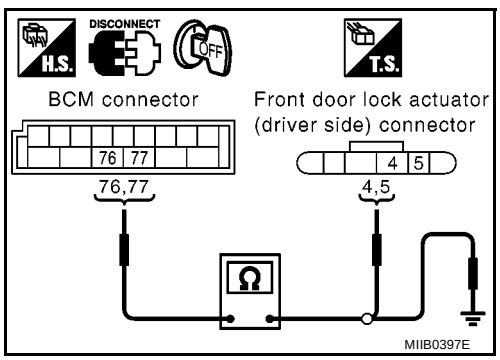
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 76, 77 and front door lock actuator (driver side) connector D11 terminals 4, 5.

76 – 5 : Continuity should exist.
77 – 4 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 76, 77 and ground.

76 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

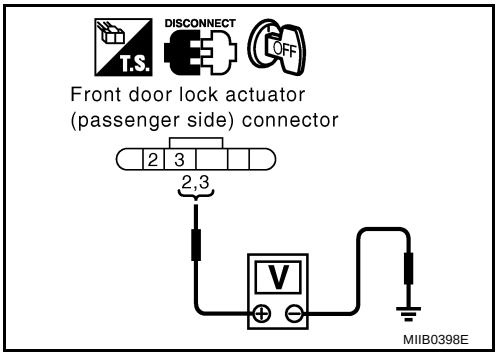
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

PASSENGER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (passenger side) connector.
3. Operate door lock / unlock switch, check voltage between front door lock actuator (passenger side) connector D28 terminal 2, 3 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D28	3	Ground	Lock	0 → Battery voltage → 0
	2		Unlock	0 → Battery voltage → 0



OK or NG

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

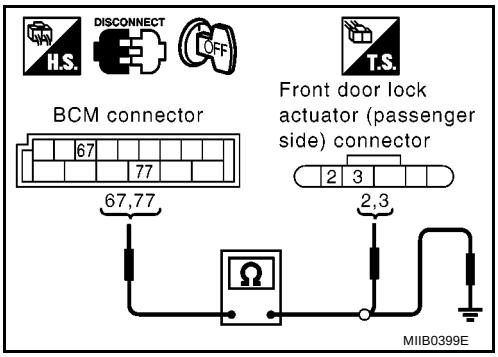
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and front door lock actuator (passenger side) connector D28 terminals 2, 3.

67 – 2 : Continuity should exist.
77 – 3 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

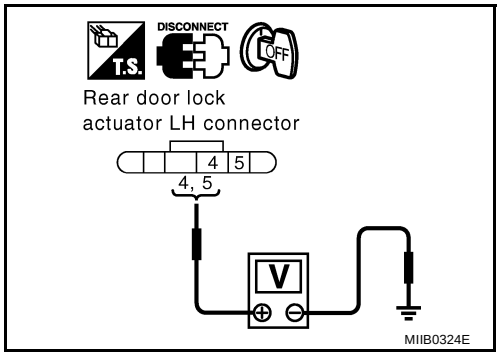
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR LH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Operate door lock / unlock switch, check voltage between rear door lock actuator LH connector D45 terminal 4, 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D45	4	Ground	Lock	0 → Battery voltage → 0
	5		Unlock	0 → Battery voltage → 0



OK or NG

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

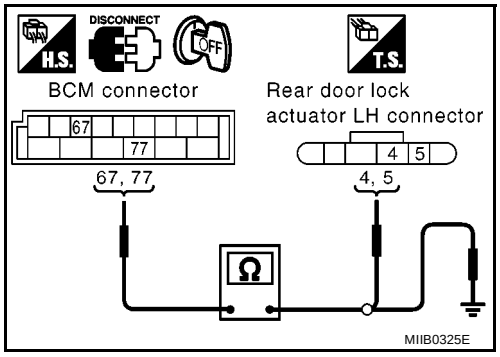
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and rear door lock actuator LH connector D45 terminals 4, 5.

67– 5 : Continuity should exist.
77– 4 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

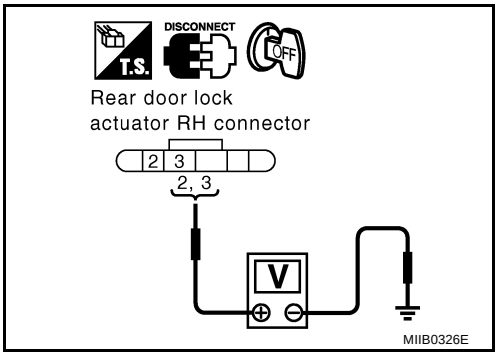
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR RH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Operate door lock / unlock switch, check voltage between rear door lock actuator RH connector D65 terminal 2, 3 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D65	2	Ground	Unlock	0 → Battery voltage → 0
	3		Lock	0 → Battery voltage → 0



OK or NG

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

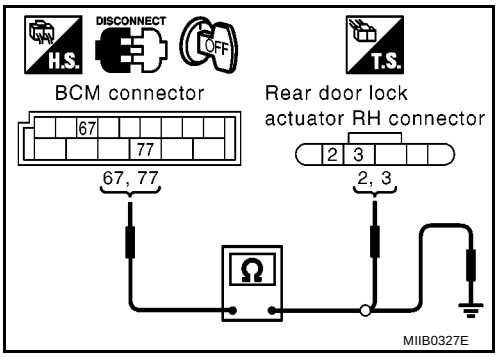
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and rear door lock actuator RH connector D65 terminals 2, 3.

67 – 2 : Continuity should exist.
77 – 3 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

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

Check Door Switch

BIS000IO

DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

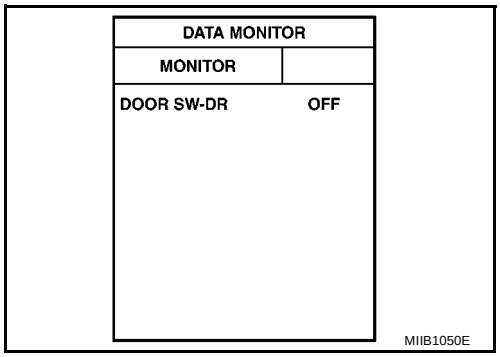
Check door switch “DOOR SW-DR” in “DATA MONITOR” mode with CONSULT- II.

When front door (driver side) is opened:

DOOR SW-DR ⇒ ON

When front door (driver side) is close:

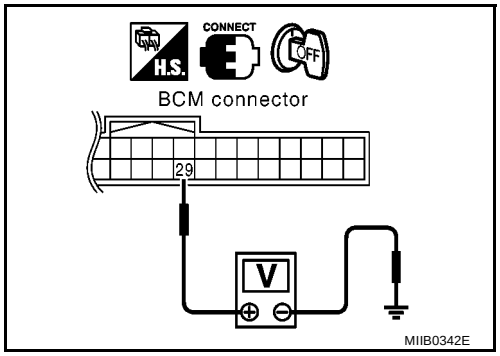
DOOR SW-DR ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	29	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Front door switch LH is OK.

NG >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch LH connector.
3. Check continuity between BCM connector M57 terminal 29 and front door switch LH connector B14 terminal 1.

29 – 1 : Continuity should exist.

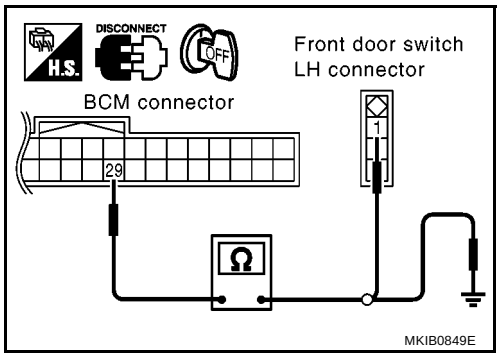
4. Check continuity between BCM connector M57 terminal 29 and ground.

29 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

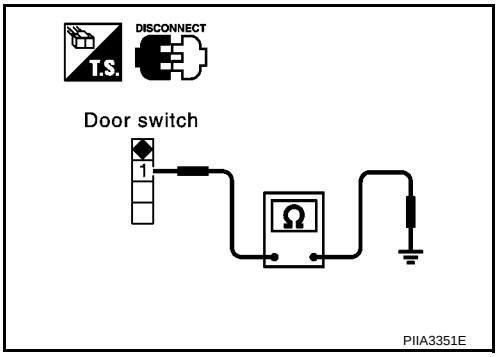
NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground part of door switch.

Terminal		Condition	Continuity
1	Body ground part of door switch	Pushed	No
		Released	Yes



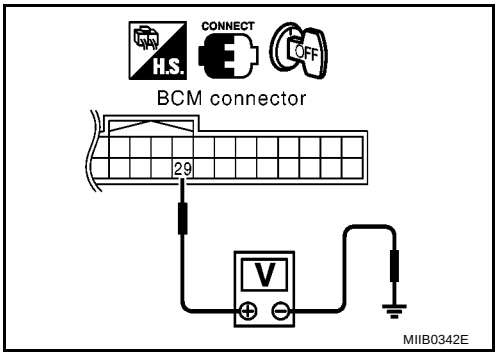
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 29 and ground.

29 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

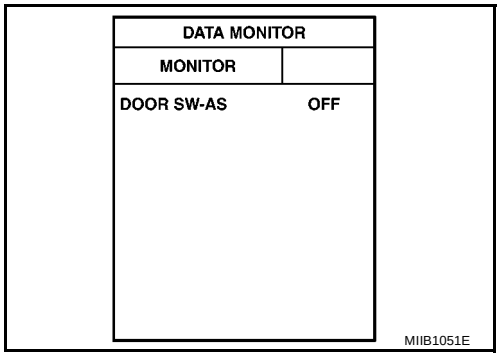
Check door switch “DOOR SW-AS” in “DATA MONITOR” mode with CONSULT- II.

When front door (passenger side) is opened:

DOOR SW-AS ⇒ ON

When front door (passenger side) is close:

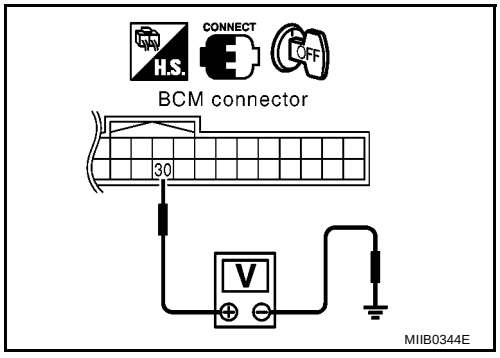
DOOR SW-AS ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector M57 terminal 30 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M48	30	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Front door switch RH is OK.

NG >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch RH connector.
3. Check continuity between BCM connector M57 terminal 30 and front door switch RH connector B29 terminal 1.

30 – 1 : Continuity should exist.

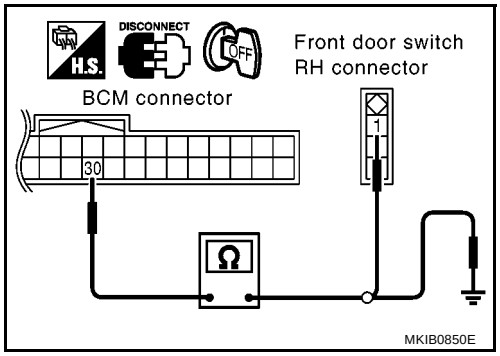
4. Check continuity between BCM connector M57 terminal 30 and ground.

30 – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

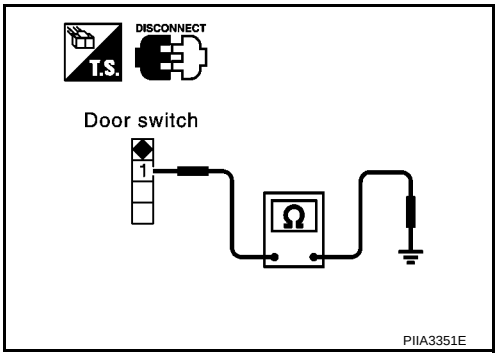
NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminal		Condition	Continuity
1	Ground	Pushed	No
		Released	Yes



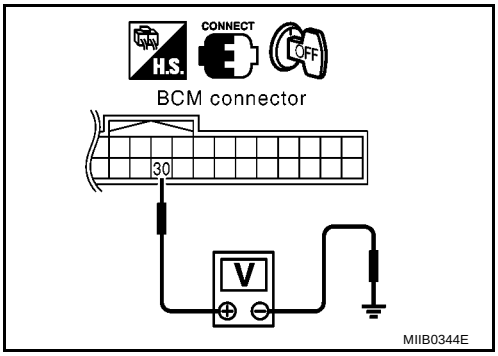
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 30 and ground.

30 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

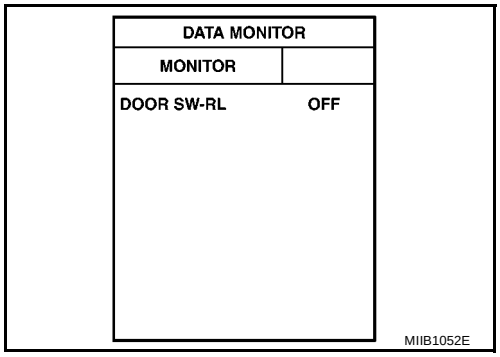
Check door switch “DOOR SW-RL” in “DATA MONITOR” mode with CONSULT- II.

When rear door (LH side) is opened:

DOOR SW-RL ⇒ ON

When rear door (LH side) is close:

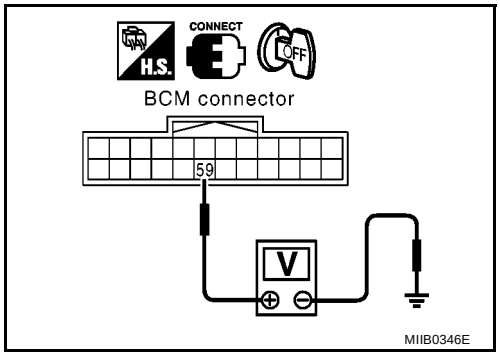
DOOR SW-RL ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector M58 terminal 59 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	59	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Rear door switch LH is OK.

NG >> GO TO 2.

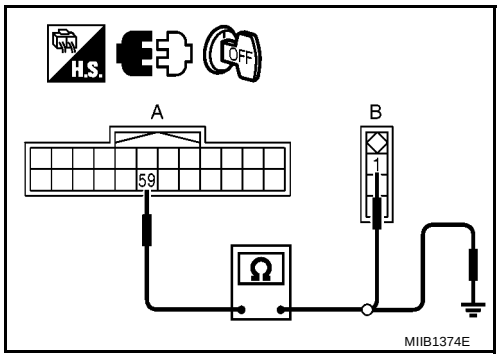
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch LH connector.
3. Check continuity between BCM connector and rear door switch LH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch LH	Terminal	
M58	59	B19	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	59		No



OK or NG

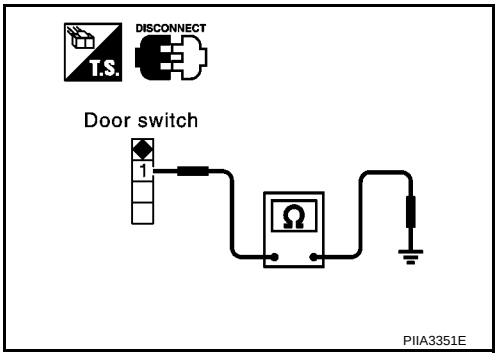
OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminals		Condition	Continuity
1	Ground	Pushed	NO
		Released	YES



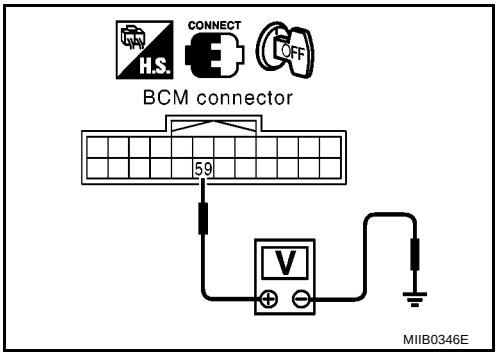
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 59 and ground.

59 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

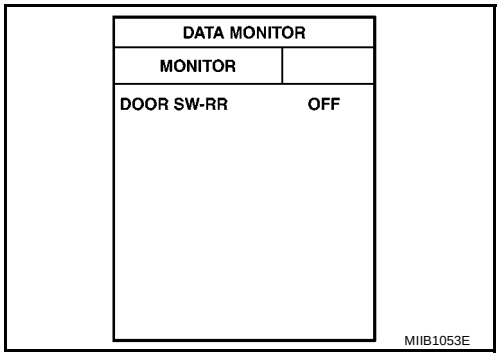
Check door switch “DOOR SW-RR” in “DATA MONITOR” mode with CONSULT- II.

When rear door (RH side) is opened:

DOOR SW-RR ⇒ ON

When rear door (RH side) is close:

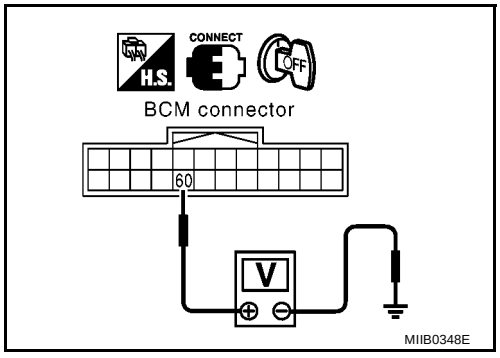
DOOR SW-RR ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	60	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Rear door switch RH is OK.

NG >> GO TO 2.

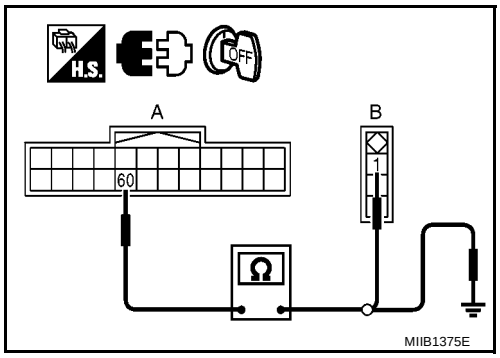
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch RH connector.
3. Check continuity between BCM connector and rear door switch RH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch RH	Terminal	
M58	60	B42	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	60		No



OK or NG

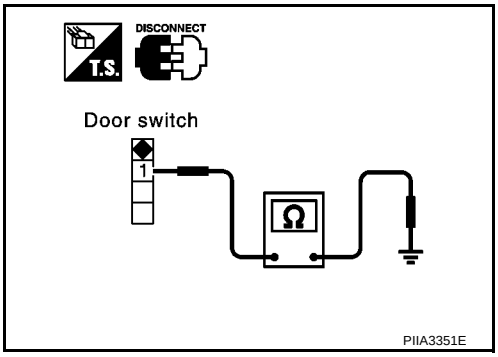
OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminal		Condition	Continuity
1	Ground	Pushed	NO
		Released	YES



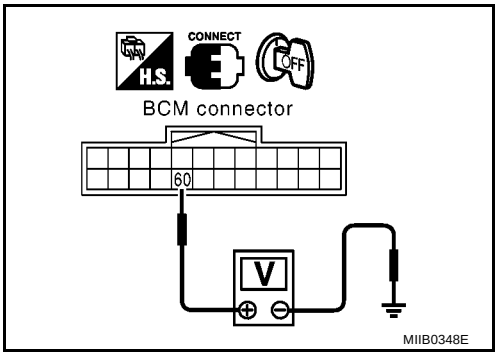
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 60 and ground.

60 – Ground : Battery voltage



OK or NG

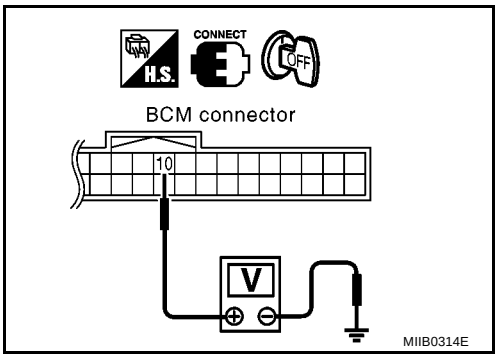
OK >> Check door switch ground condition.
NG >> Replace BCM.

BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M57 terminal 10 and ground.

Terminal		Back door condition	Voltage (V) Approx.
(+)	(–)		
10	Ground	Closed	5
		Open	0



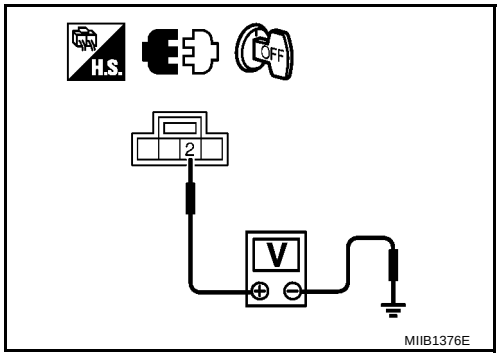
OK or NG

OK >> Back door switch circuit is OK.
NG >> GO TO 2

2. CHECK BACK DOOR SWITCH HARNESS

1. Disconnect back door switch connector.
2. Check voltage between back door switch connector and ground. (Check harness for open.)

Back door switch connector	Terminal	Ground	Voltage (V) (Approx.)
B46	2		Battery voltage

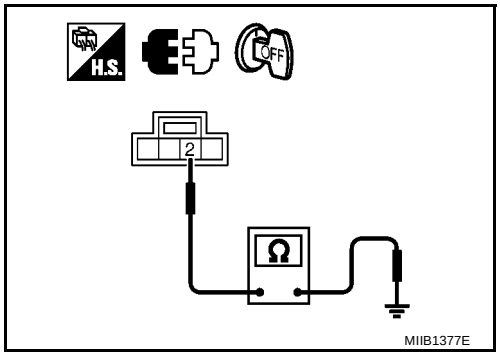


3. Disconnect BCM connector.
4. Check continuity between back door switch connector and ground. (Check harness for short.)

Back door switch connector	Terminal	Ground	Continuity
B46	2		No

OK or NG

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



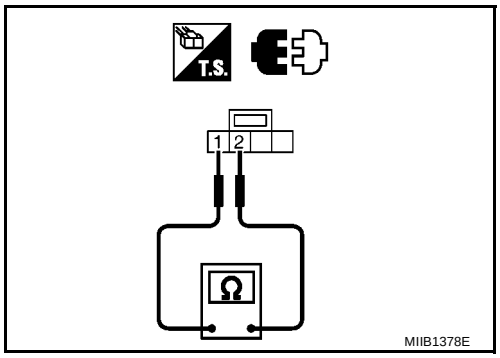
3. CHECK BACK DOOR SWITCH

Check continuity between back door switch terminal.

Back door switch	Terminal		Rear door condition	Continuity
	1	2	Closed	No
			Opened	Yes

OK or NG

OK >> GO TO 4.
NG >> Replace back door release actuator (back door switch).



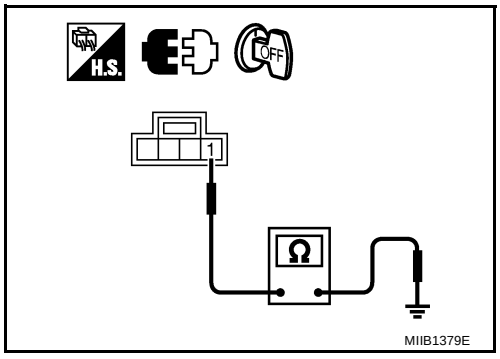
4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door switch connector and ground.

Back door switch connector	Terminal	Ground	Continuity
B46	1		Yes

OK or NG

OK >> Check harness connection.
NG >> Replace back door switch.



Check Back Door Switch

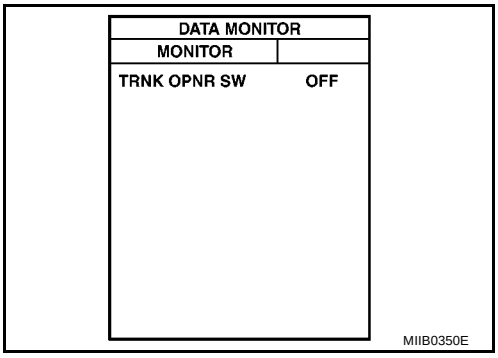
BIS000IP

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

Check back door switch “TRNK OPNR SW” in “DATA MONITOR” mode with CONSULT- II.

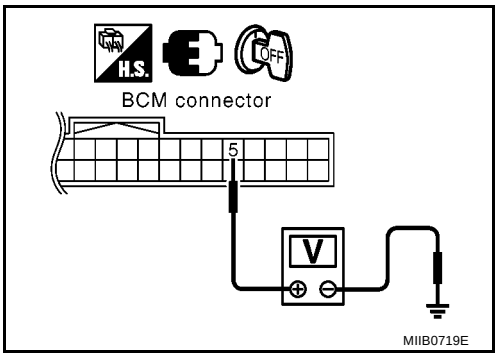
Back door switch is pushed
TRNK OPNR SW : ON
Back door switch is released
TRNK OPNR SW : OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	5	Ground	Pushed	0
			Released	5



OK or NG

OK >> Back door switch is OK.
NG >> GO TO 2.

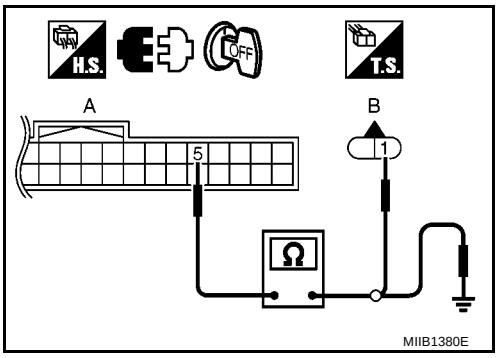
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and back door switch connector.
3. Check continuity between BCM connector and back door switch connector.

A		B		Continuity
BCM connector	Terminal	Back door switch connector	Terminal	
M57	5	D104	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M57	5		No



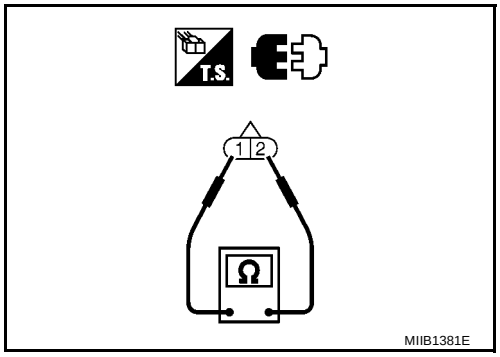
OK or NG

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

3. CHECK BACK DOOR SWITCH

Check continuity between back door switch terminals.

	Terminals		Condition	Continuity
Back door switch	1	2	Pushed	Yes
			Released	No



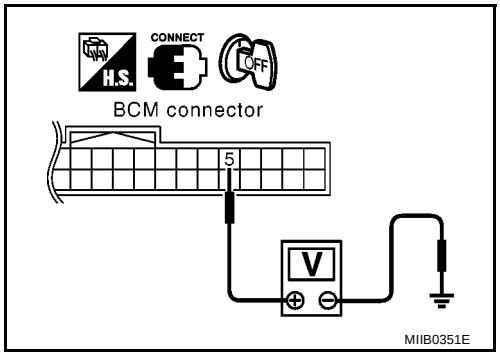
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 5 and ground.

5 – Ground : Approx. 5V



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace BCM.

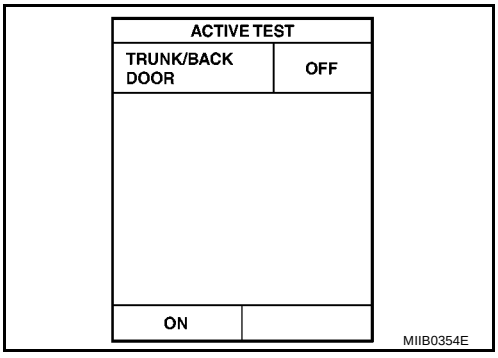
Check Back Door Release Actuator

BIS000IQ

1. CHECK BCM OUTPUT SIGNAL

Check back door release output signal
Perform (“TRUNK/BACK DOOR”) in “ACTIVE TEST” mode with CONSULT-II.

When “ACTIVE TEST” is executed, does the back door open?



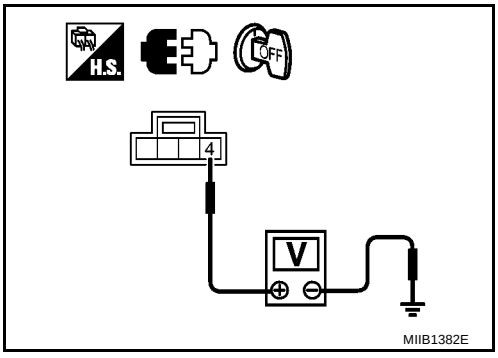
OK or NG

OK >> Back door release output is OK.
NG >> GO TO 2.

2. CHECK BACK DOOR RELEASE ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect back door release actuator connector.
3. Operate back door switch, check voltage between back door release actuator connector B46 terminal 4 and ground.

back door switch connector	Connector	Terminal (+)	Terminal (-)	Condition	Voltage (V) (Approx.)
	B46	4	Ground	Pushed	0 → Battery voltage → 0



OK or NG

OK >> GO TO 4.
NG >> GO TO 3.

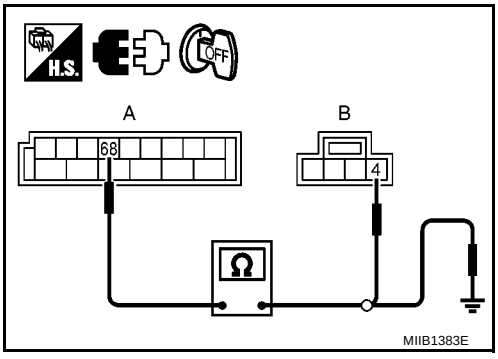
3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector and back door release actuator connector.

A		B		Continuity
BCM connector	Terminal	Back door release actuator connector	Terminal	
M59	68	B46	4	Yes

3. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M59	68		No



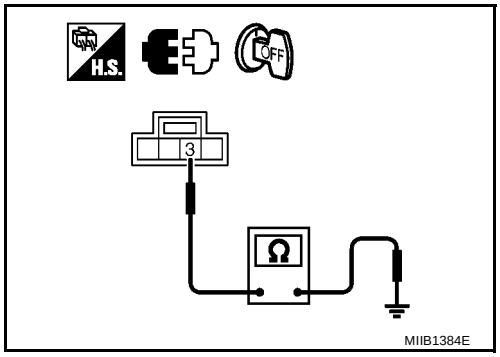
OK or NG

OK >> Replace BCM.
NG >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

Check continuity between back door release actuator connector and ground.

Back door release actuator connector	Terminal	Ground	Continuity
B46	3		Yes



OK or NG

OK >> Replace back door release actuator.
NG >> Repair or replace harness.

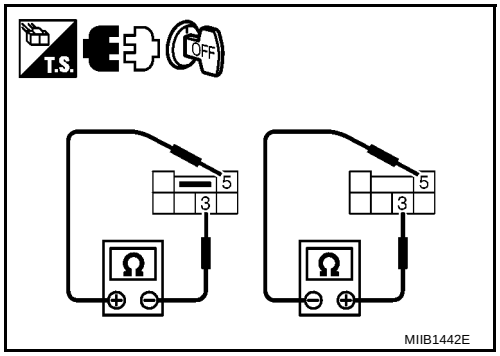
Check Door Lock/Unlock Switch Indicator

BIS00160

1. CHECK DOOR LOCK/UNLOCK SWITCH INDICATOR

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

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



OK or NG

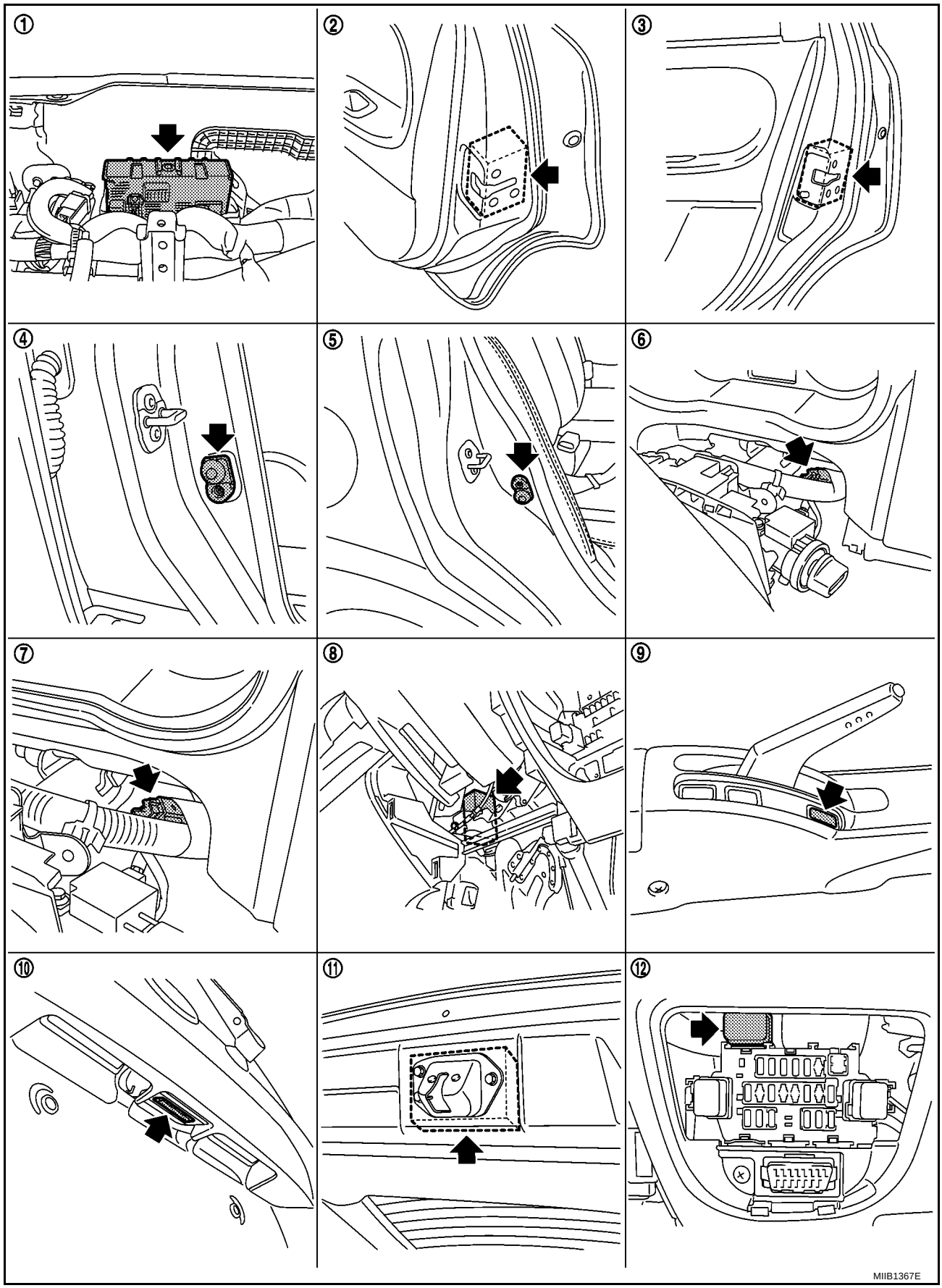
OK >> Check harness for open or short between BCM and door lock/unlock switch.
NG >> replace door lock/unlock switch.

POWER DOOR LOCK — SUPER LOCK —

PFP:24814

Component Parts and Harness Connector Location

BIS000IW



1. BCM (Body control Module) M57,M58, M59
2. Front door lock actuator Driver side: D11 Passenger side: D28
3. Rear door lock actuator RH: D65 LH: D45
4. Front door switch RH: B29 LH: B14
5. Rear door switch RH: B42 LH: B19
6. Key switch and ignition knob switch connector M34 (With Intelligent Key system)
7. Key switch connector M33 (without Intelligent Key system)
8. Intelligent Key unit M60 (With Intelligent Key system)
9. Door lock/unlock switch M54
10. back door switch D104
11. Back door release actuator B46
12. Door lock relay M20 (With Intelligent Key system)

System Description

BIS000IY

OPERATION

Power is supplied (Without Intelligent Key System)

- through to 40A fusible link (letter **J** , located in the fusible link box)
- to BCM terminal 74 and 79.
- through 10A fuse [No.9, located in the fuse box (J/B)]
- to key switch terminal 2.

Power is supplied (With Intelligent Key System)

- through to 40A fusible link (letter **J** , located in the fusible link box)
- to BCM terminal 74 and 79.
- through 10A fuse [No.13, located in the fuse box (J/B)]
- to key switch and ignition knob switch terminal 1 and 3.

When the key switch is ON (Ignition key is inserted in ignition key cylinder), power is supplied (Without Intelligent Key system)

- through key switch terminal 1
- to BCM terminal 3.

When the key switch is ON (Ignition key inserted key cylinder), power is supplied (With Intelligent Key system)

- through key switch and ignition knob switch terminal 4
- to BCM terminal 3.
- to Intelligent Key unit terminal 7.

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

- through 10A fuse [No. 5, located in the fuse block (J/B)]
- to BCM terminal 24.

Ground is supplied

- through BCM terminals 2 and 70
- to body ground M21 and M66.

When the front door switch LH (LHD Models) or RH (RHD Models) is ON (door is open), ground is supplied

- through BCM terminal 29
- through front door switch LH (LHD Models) or RH (RHD Models) terminal 1
- to front door switch LH (LHD Models) or RH (RHD Models) case ground.

When the front door switch RH (LHD Models) or LH (RHD Models) is ON (door is open), ground is supplied

- through BCM terminal 30
- through front door switch RH (LHD Models) or LH (RHD Models) terminal 1
- to front door switch RH (LHD Models) or LH (RHD Models) case ground.

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

- through BCM terminal 59
- through rear door switch LH terminal 1
- to rear door switch LH case ground.

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

- through BCM terminal 60

- through rear door switch RH terminal 1
- to rear door switch RH case ground.

DOOR LOCK AND UNLOCK SWITCH OPERATION

When door lock/unlock switch is in LOCK position, ground is supplied

- through BCM terminal 6.
- through door lock/unlock switch terminal 2 and 3
- to body grounds M21 and M66

With power and ground supplied, doors are locked.
When door lock/unlock switch is in UNLOCK position, ground is supplied

- through BCM terminal 25
- through door lock/unlock switch terminal 2 and 3
- to body grounds M21and M66

With power and ground supplied, all doors are unlocked.
Lock/unlock switch indicated by LED when key in switch is on or on with timer.

BACK DOOR SWITCH OPERATION

When the back door switch is turn on, back door is opened

Ground is supplied

- through BCM terminal 5
- through back door switch terminal 1 and 2
- to body ground B13, B28, B38 and B48.

BACK DOOR RELEASE ACTUATOR OPERATION

When the back door release actuator receives a release signal from BCM

Ground is supplied

- through BCM terminal 68
- through back door release actuator terminal 4 and 3
- to body ground B13, B28, B38 and B48.

BACK DOOR SWITCH OPERATION

When the back door switch is opened, ground is supplied

- through BCM terminal 10
- through back door switch terminal 2 and 1
- to body ground B13, B28, B38 and B48.

KEY REMINDER SYSTEM

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

UNLOCK LINK FUNCTION

When this function is activated, if the car is locked by door lock/unlock switch, opening the driver or passenger side door from the inside handle will override the lock state and unlock the whole car.
(This function will be deactivate if anti-hijack function is activated.)

Selectable Function

	Door Lock/unlock switch
How to change setting	Press unlock for more than 4 seconds
Contents	Unlock link activate/deactivate
How to confirm	Buzzer should sound for 0.2 seconds

BACK DOOR OPENER OPERTION

Back door can be opened with back door switch: When all door are unlocked, or When back door request switch is pushed (With Intelligent Key system).

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 2 minutes timer of auto re-lock will be reset if unlock button from the key fob is pressed. The auto re-lock function will not be activated under the following states.

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

NOTE:
For the Intelligent Key system models, this function will be deactivated.

ANTI-HIJACK FUNCTION

With the anti-hijack function enabled, the first unlock request send from key fob will partially unlock only the driver side door (released super lock if equipped). Then if a second unlock signal is send, then all remaining doors will be unlocked.

SUPER LOCK OPERATION

When super lock is set, ground is supplied

- through BCM terminals 75
- through each super lock actuators terminals 1 and 2
- to BCM terminal 76

When super lock is released, ground is supplied

- through BCM terminal 76
- through each super lock actuators terminals 2 and 1
- to BCM terminals 75

Door lock and unlock switch operation
When door lock/unlock switch is in LOCK position, ground is supplied

OUTLINE

Power door lock system with super lock and key reminder is controlled by BCM (Body Control Module). Super lock has a higher anti-theft performance than conventional power door lock systems.
When super lock is in released condition, lock/unlock switch operation locks or unlocks door.
When super lock is in set condition, door operation cannot lock nor unlock door.

OPERATION

Power Door Lock / Unlock and Super Lock Set / Release Operation by Remote Controller or Intelligent Key

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

Power Door Lock / Unlock and Super Lock Release Operation by Door Key Cylinder

With the key inserted into driver door key cylinder, turning it to UNLOCK will unlock the door and release super lock.

Power Door Lock and Super Lock Release Operation

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

CAN Communication

BIS000IZ

SYSTEM DESCRIPTION

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.

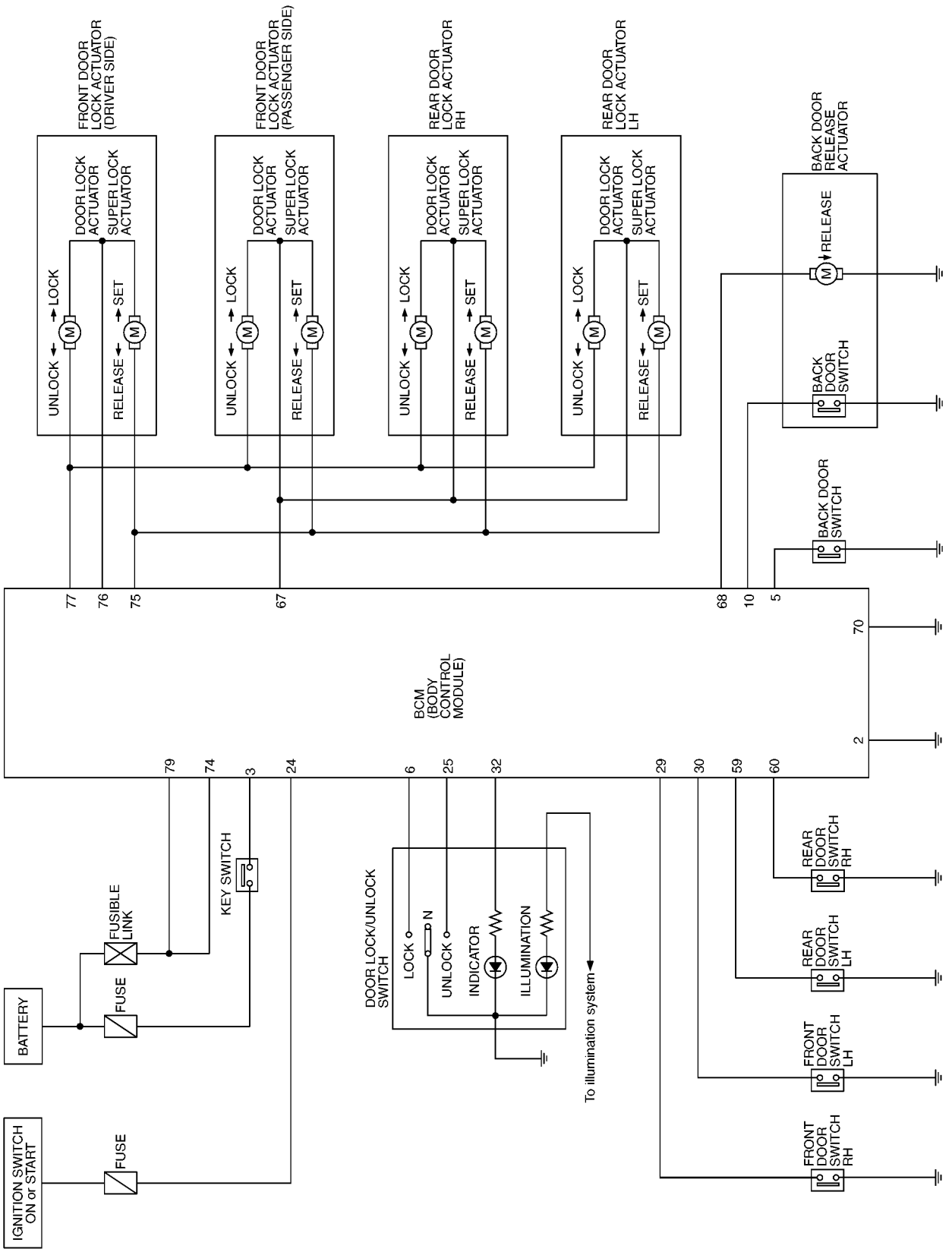
CAN Communication Unit

BIS000J0

Refer to LAN-27, "CAN Communication Unit" .

Schematic – S/LOCK – (Without Intelligent Key System)

BIS000J1

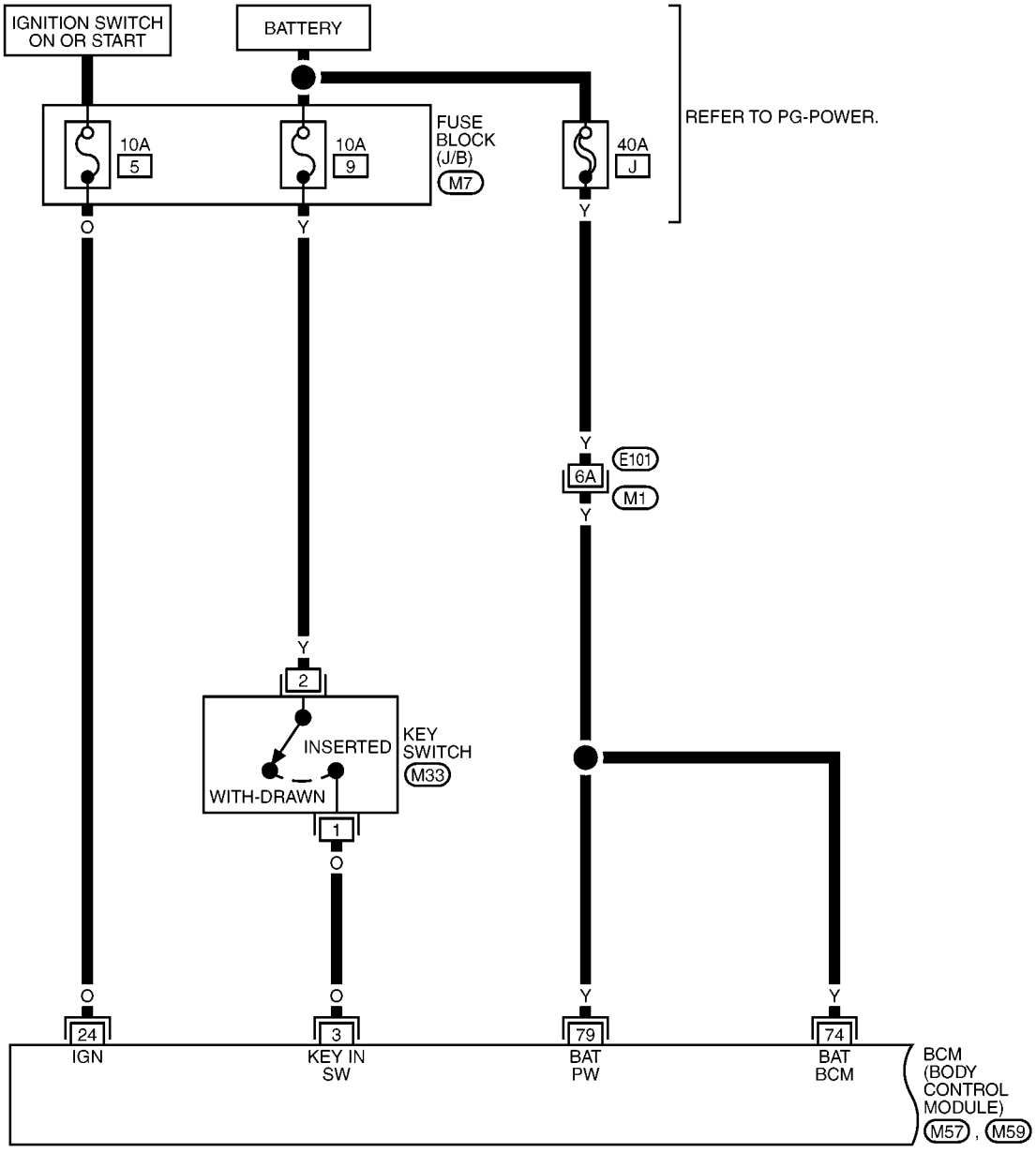


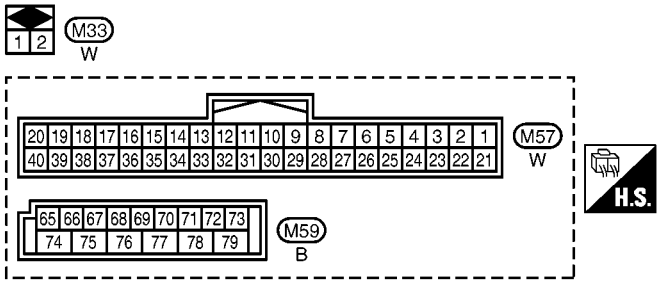
MIWA0701E

Wiring Diagram — S/LOCK — (Without Intelligent Key System)

BIS000J2

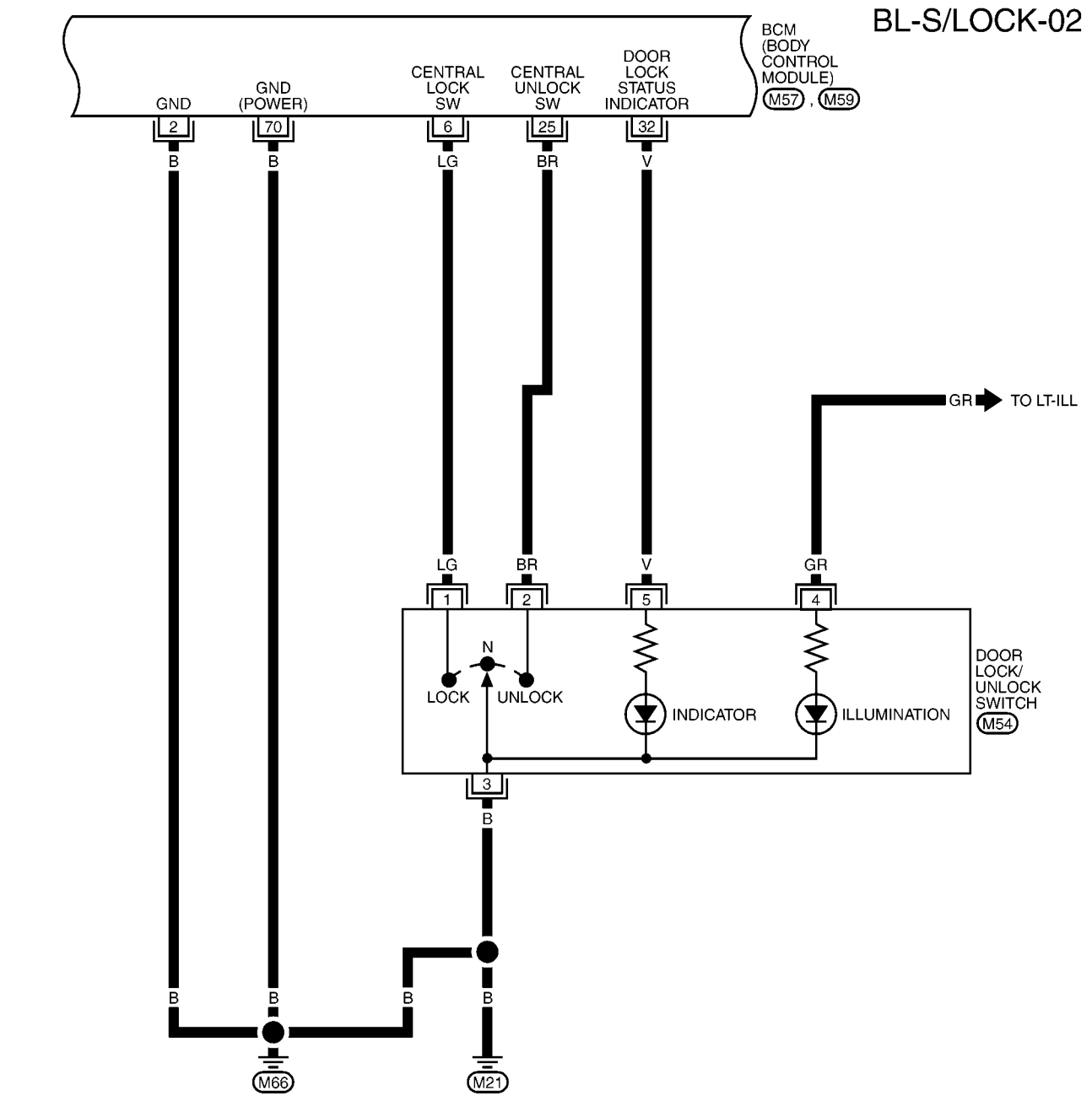
BL-S/LOCK-01

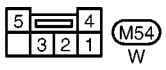


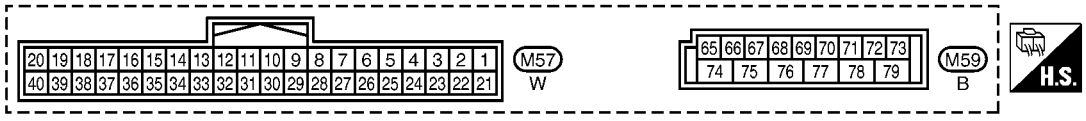


REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0702E

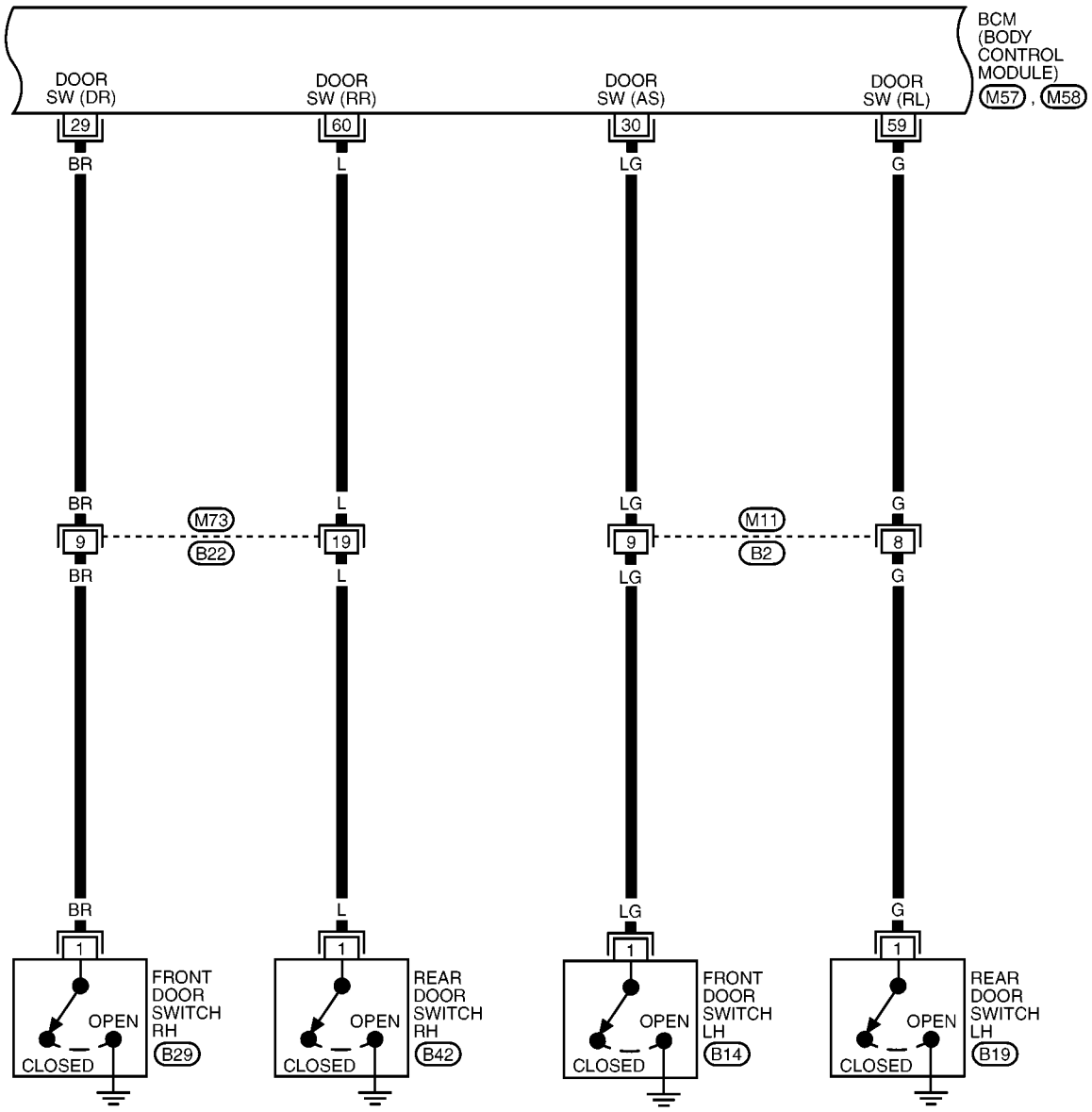

BL-S/LOCK-02
BCM (BODY CONTROL MODULE)
M57 , M59
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
V
GR
TO LT-ILL
LG
BR
V
GR
1
2
5
4
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M54
3
B
B
B
B
B
M66
M21

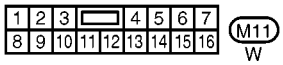

5
4
3
2
1
M54
W

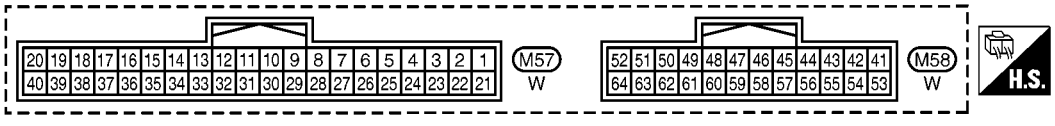

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M57
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M59
B
H.S.

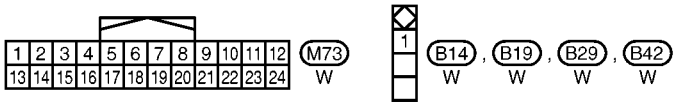
MIWA0703E

BL-S/LOCK-03



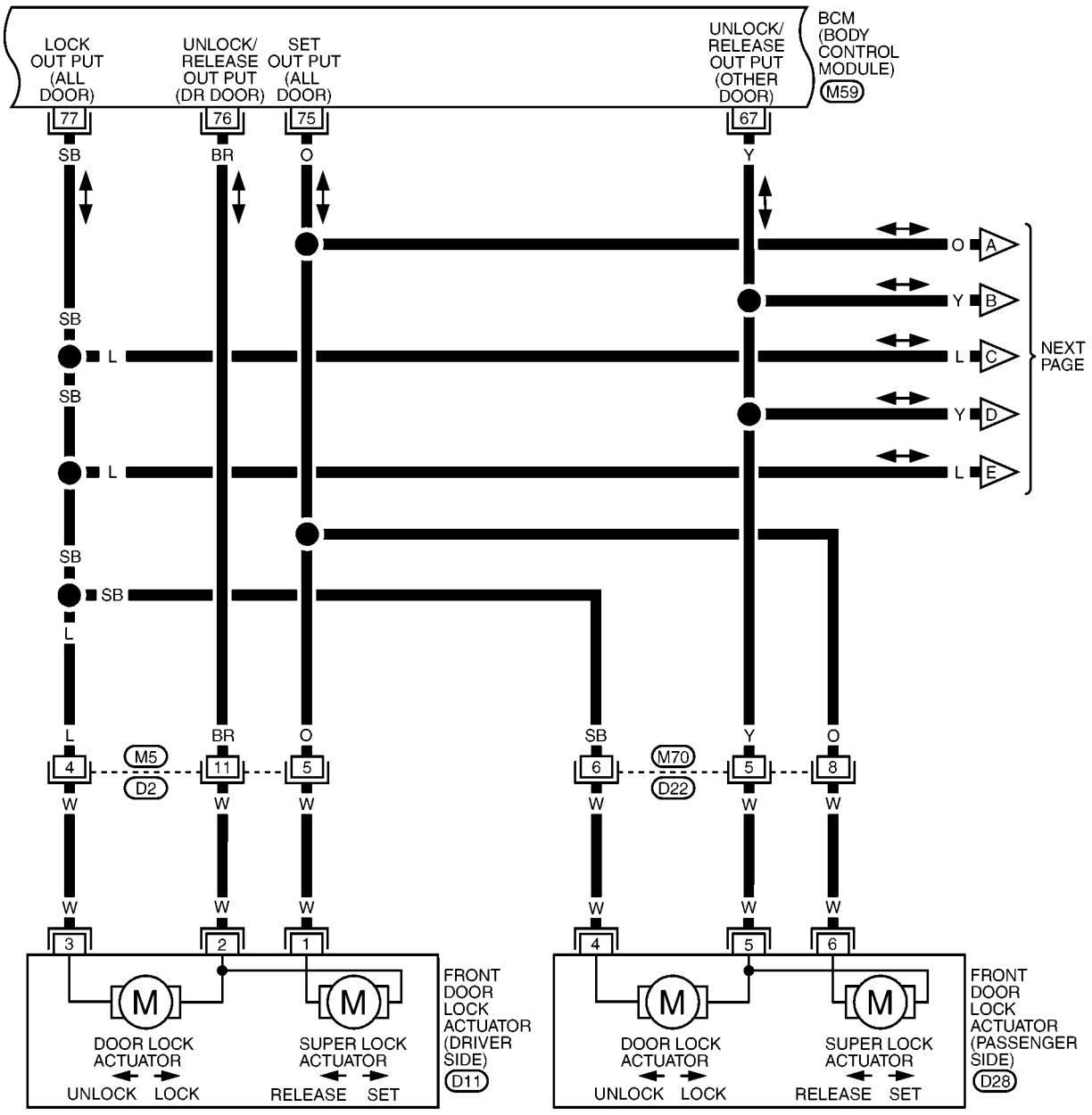


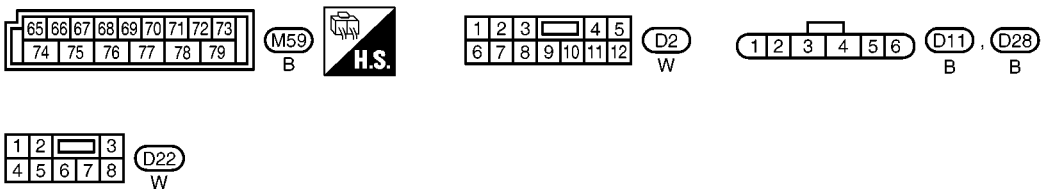




MIWA0704E

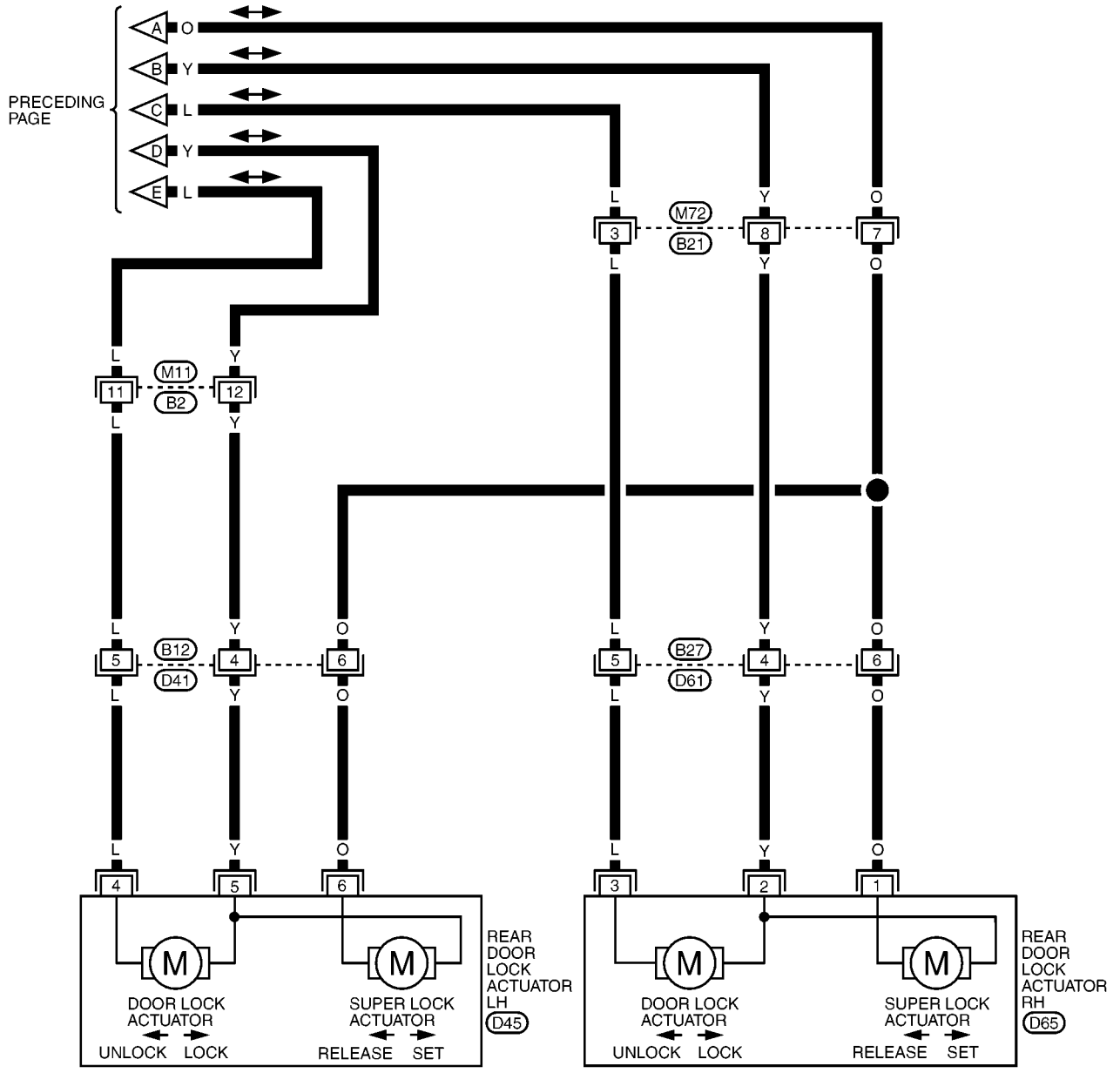
BL-S/LOCK-04

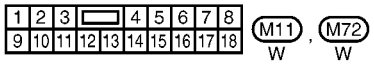


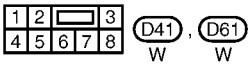


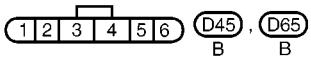
MIWA0705E

BL-S/LOCK-05



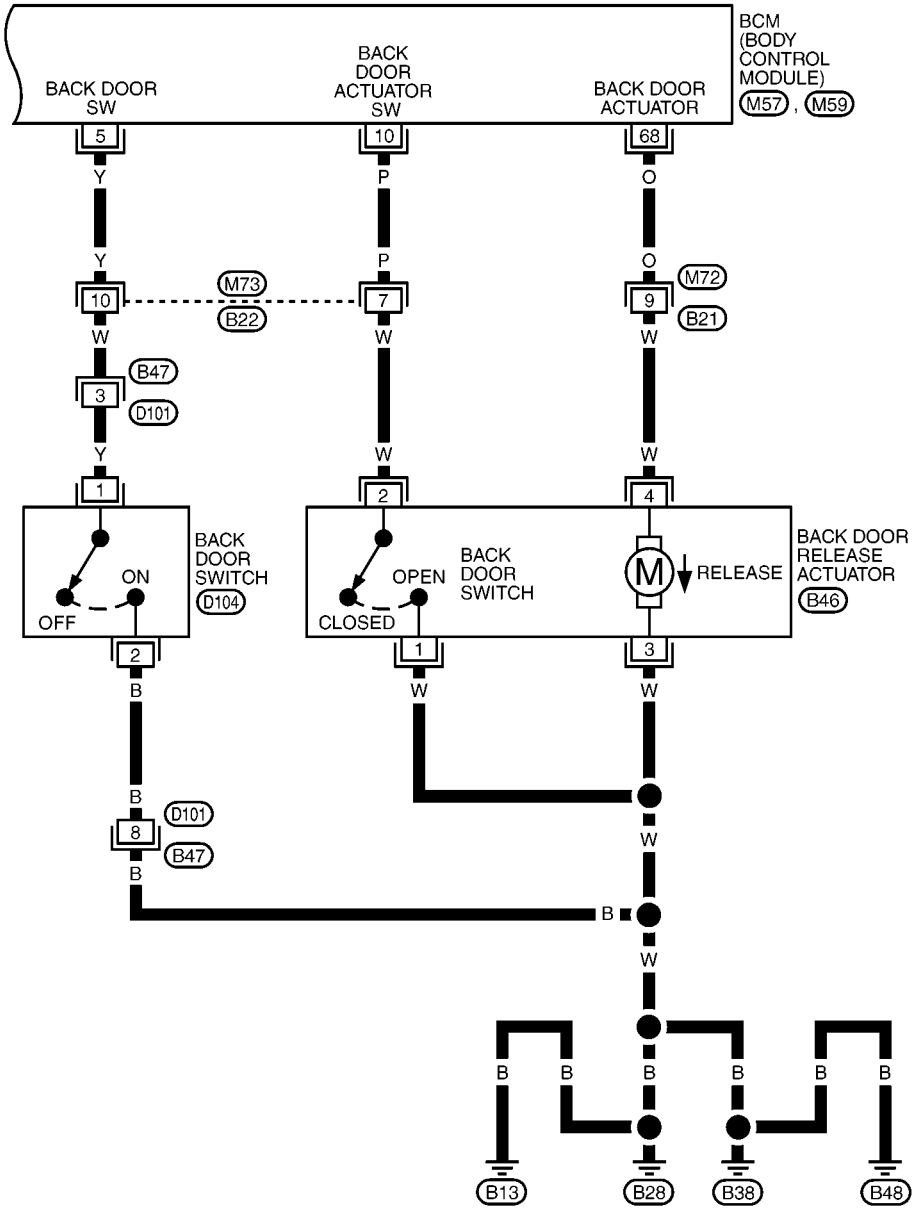


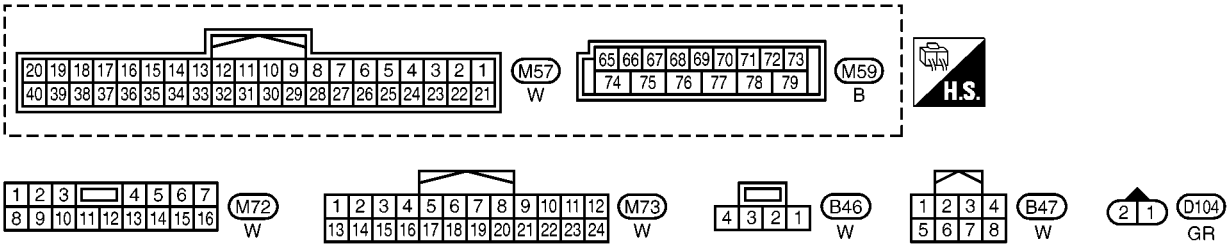




MIWA0706E

BL-S/LOCK-06

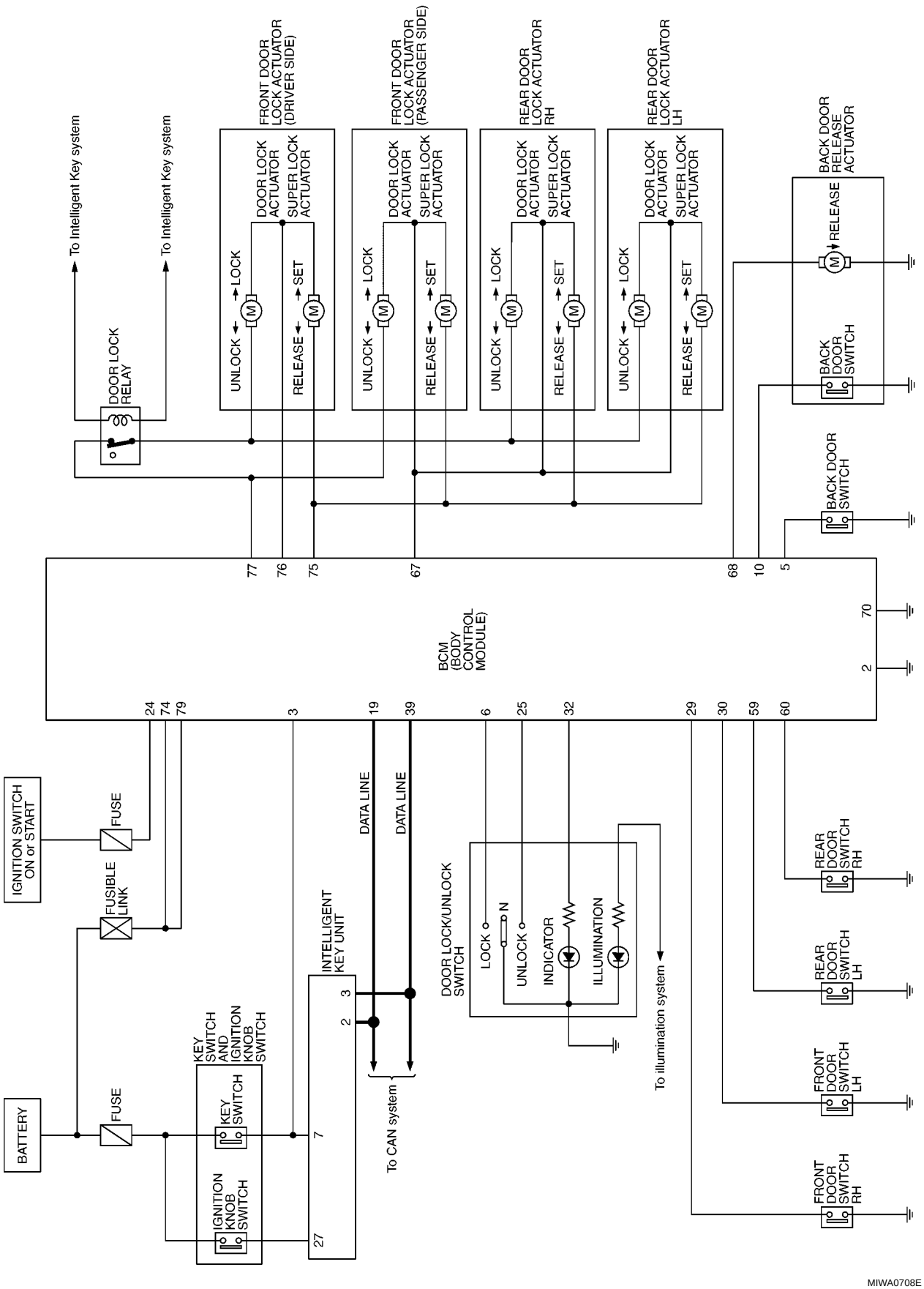




MIWA0707E

Schematic – S/LOCK – (With Intelligent Key System)

BIS000J3

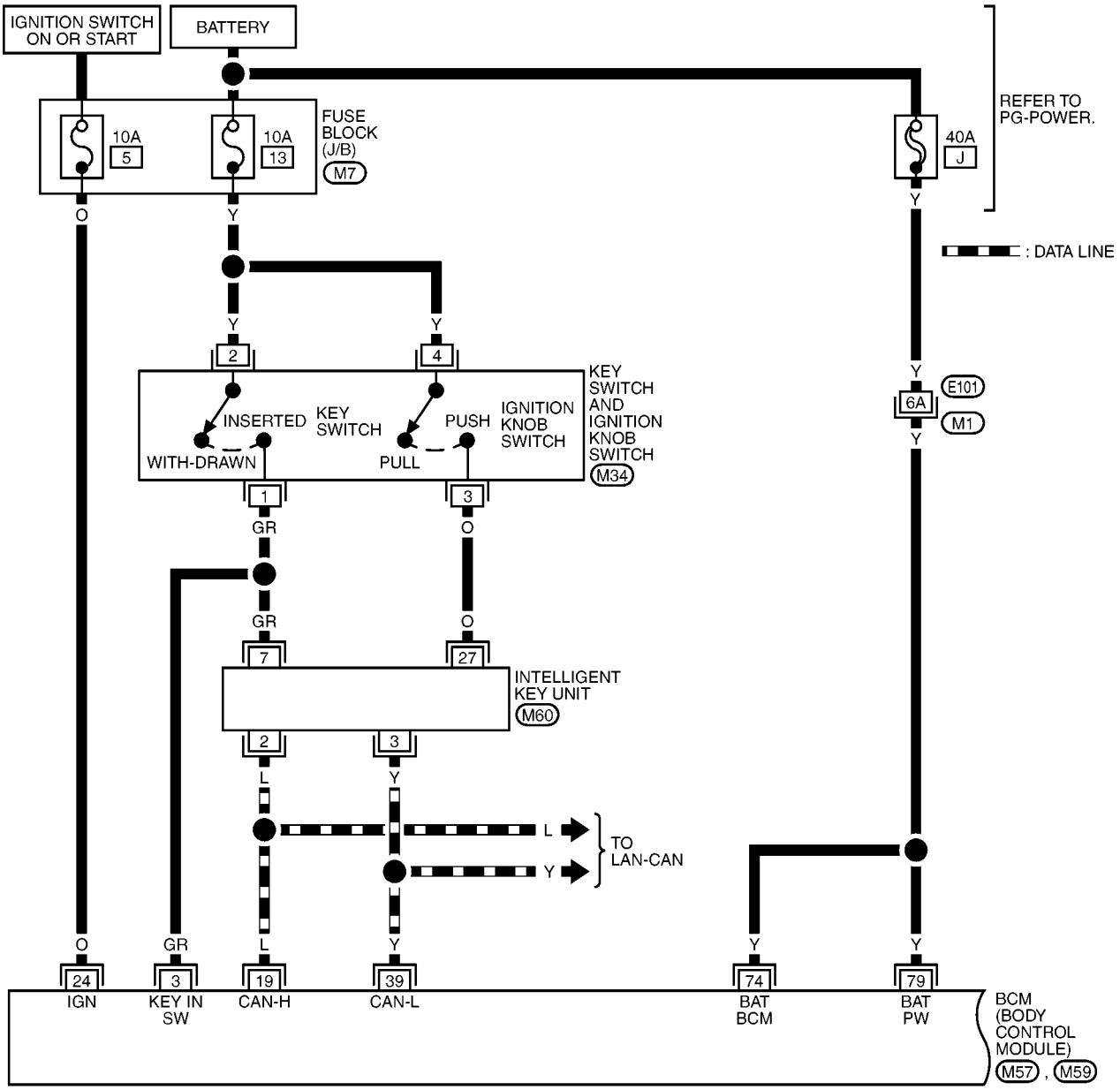


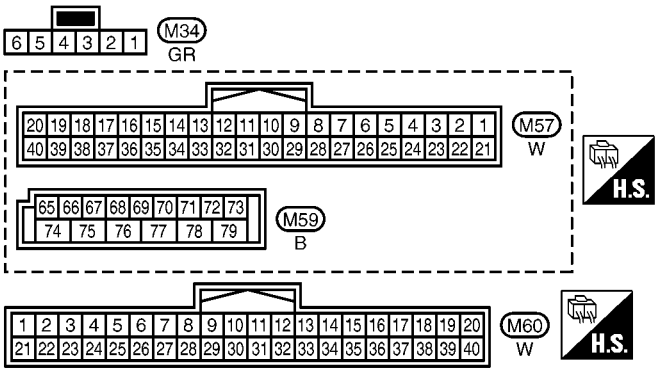
MIWA0708E

Wiring Diagram — S/LOCK — (With Intelligent Key System)

BIS000J4

BL-S/LOCK-07

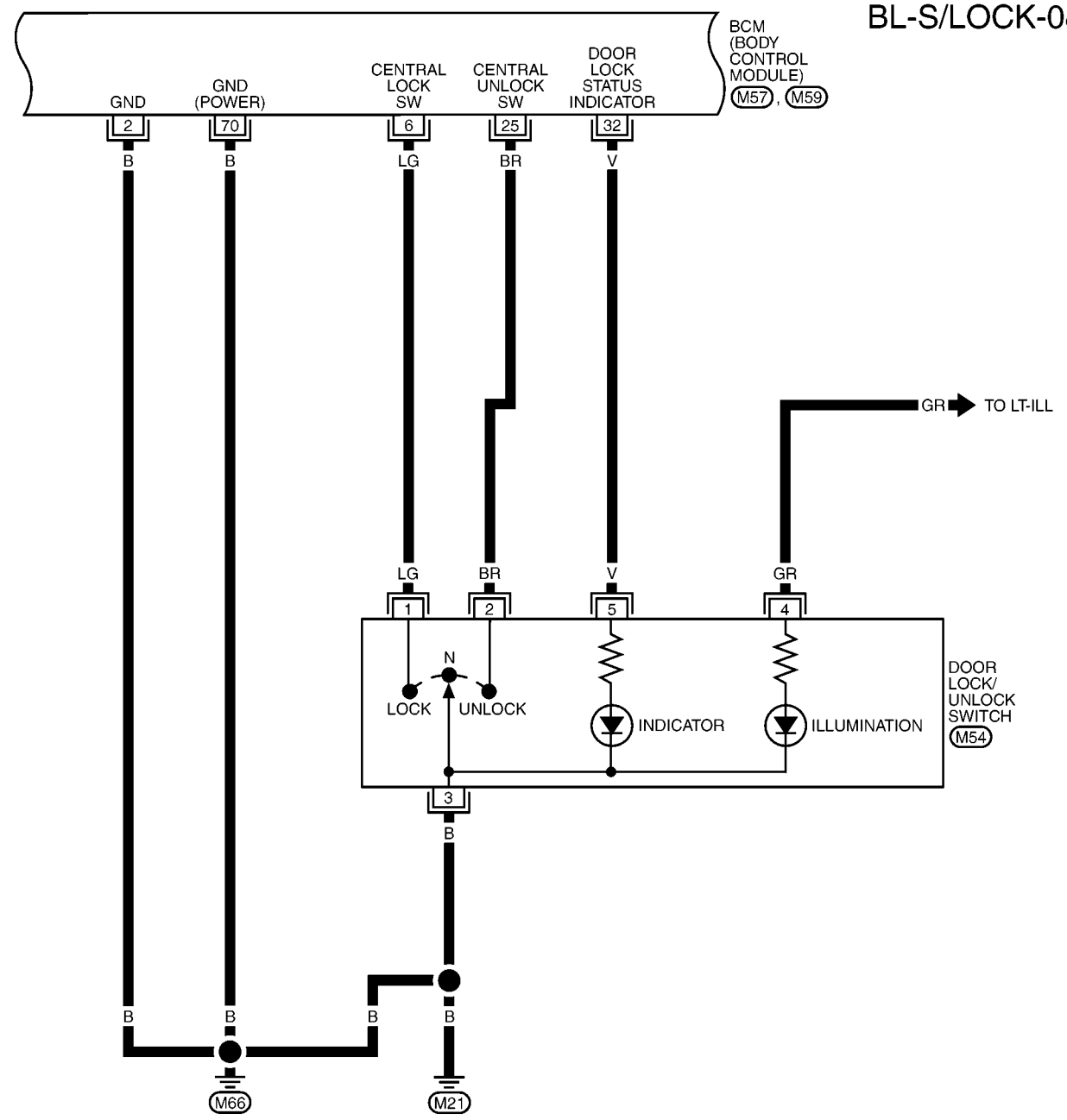


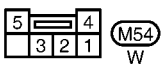


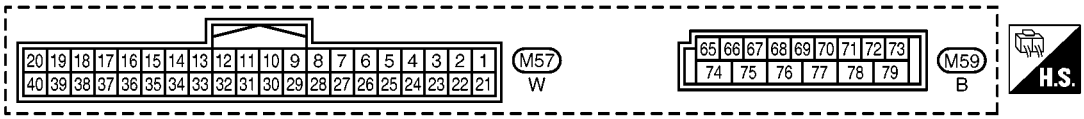
REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0709E

BL-S/LOCK-08

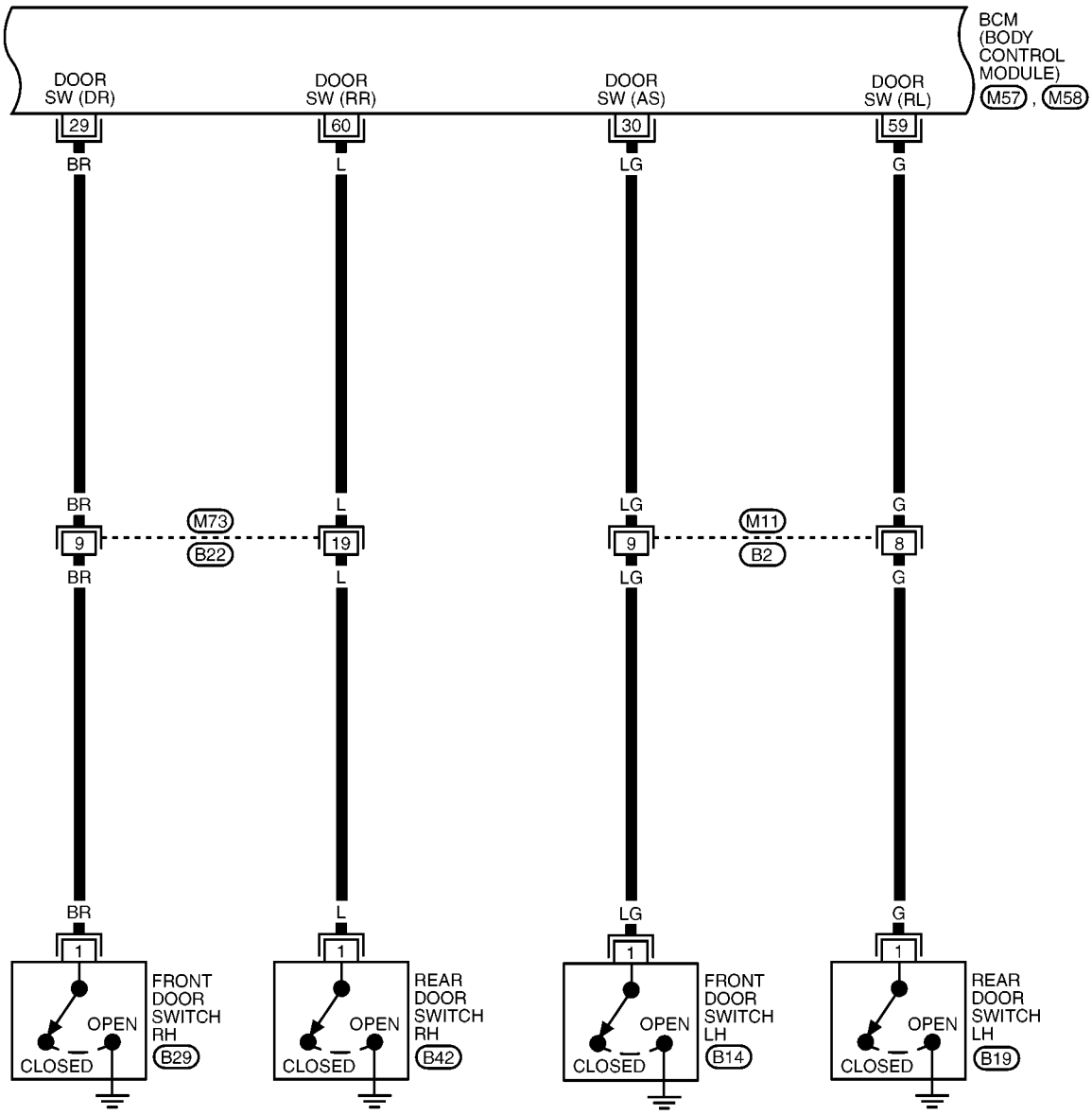


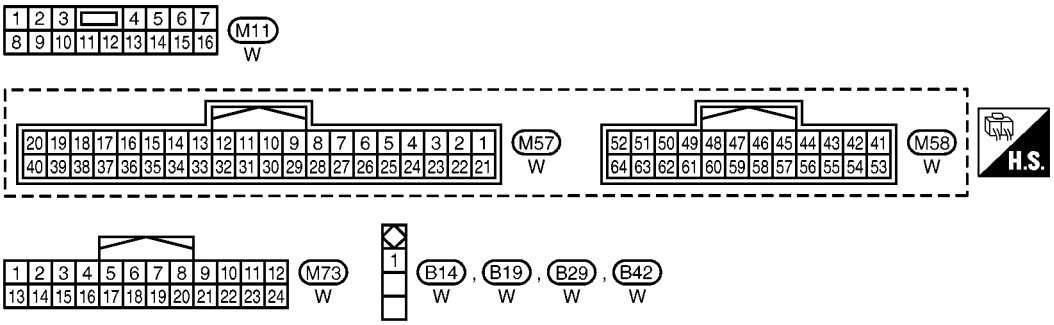




MIWA0710E

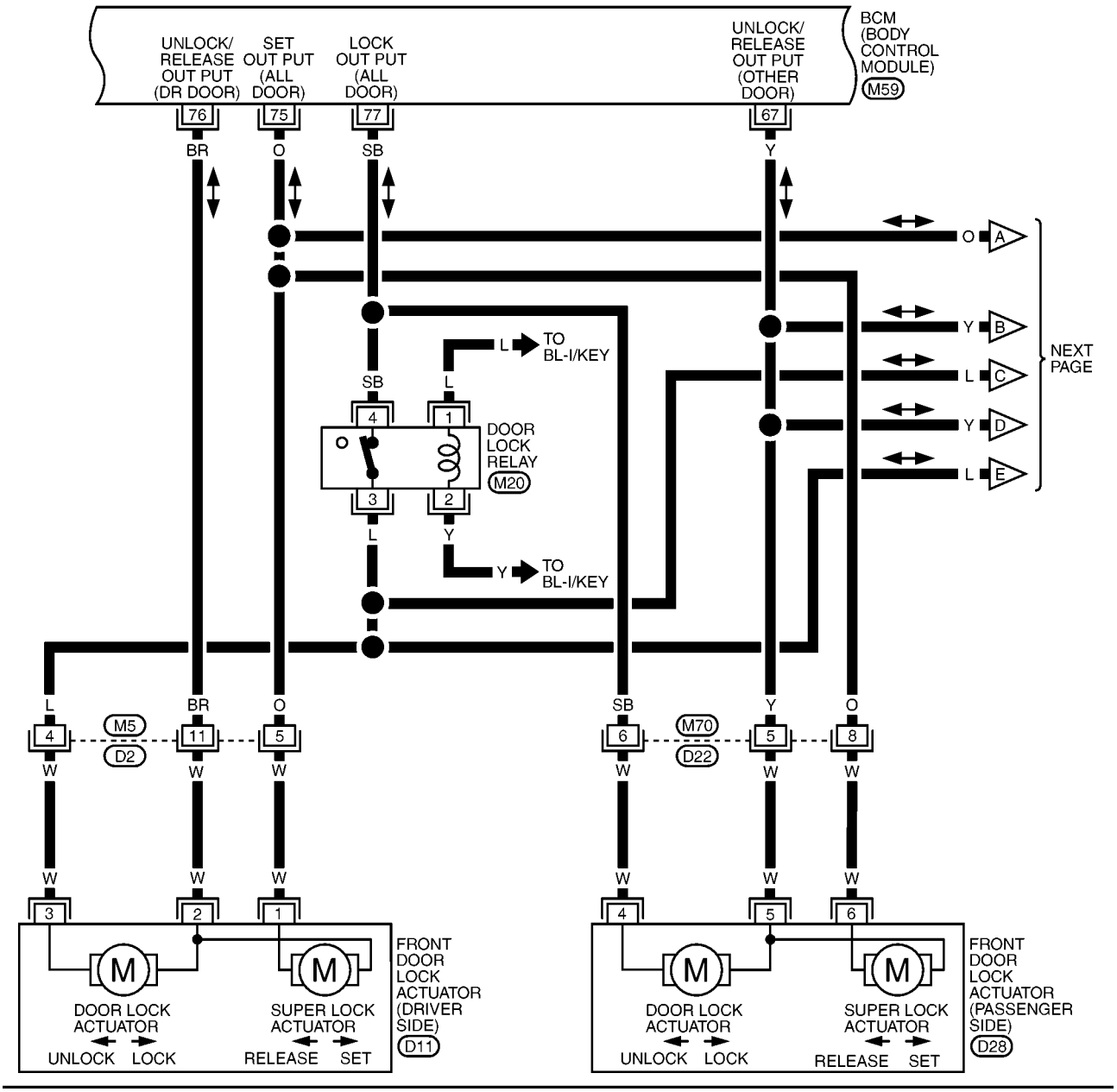
BL-S/LOCK-09

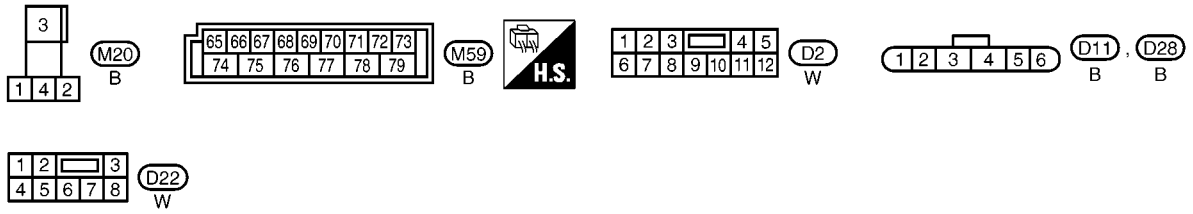




MIWA0711E

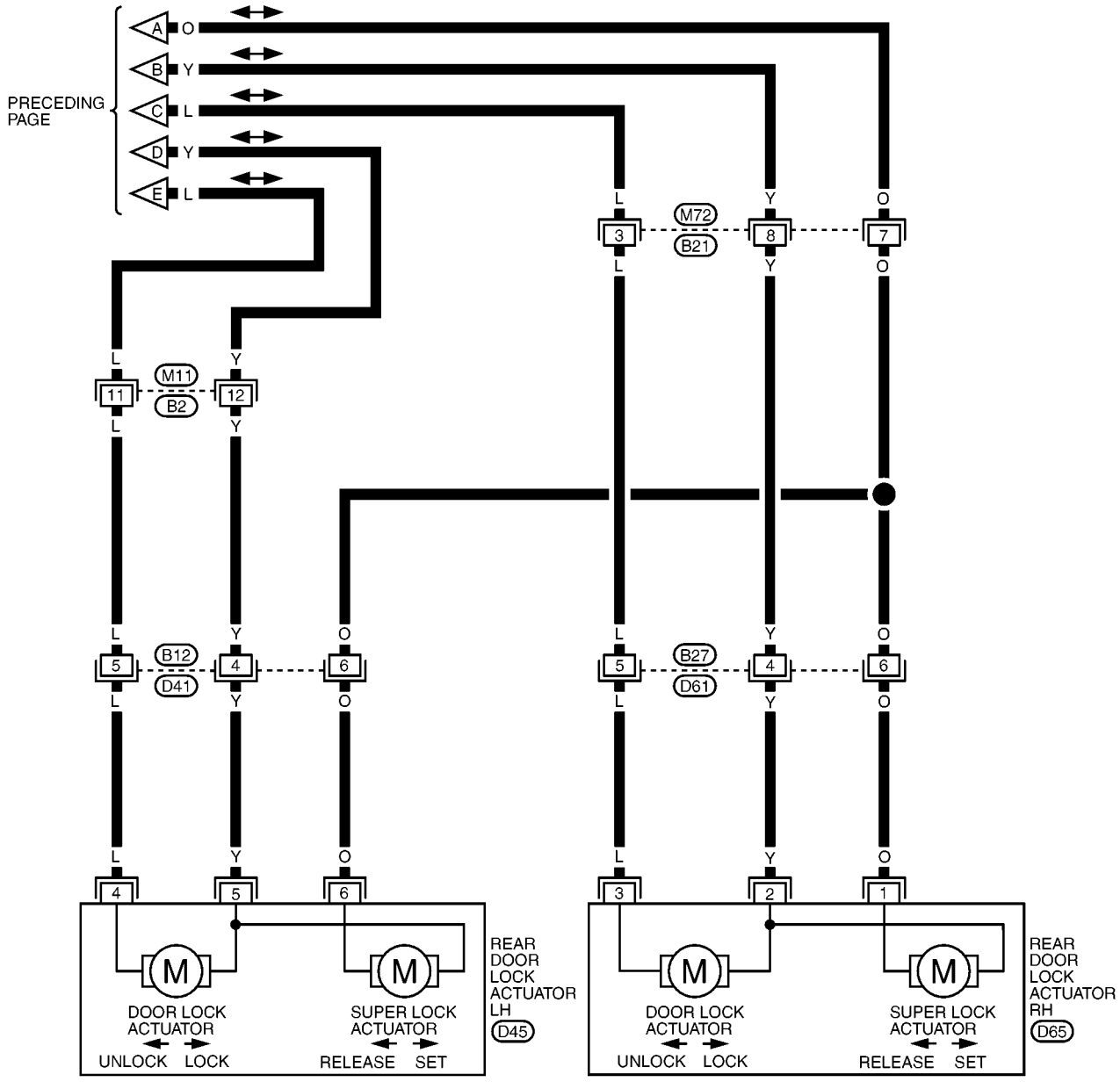
BL-S/LOCK-10

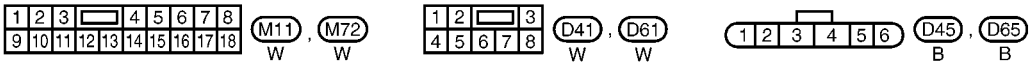




MIWA0712E

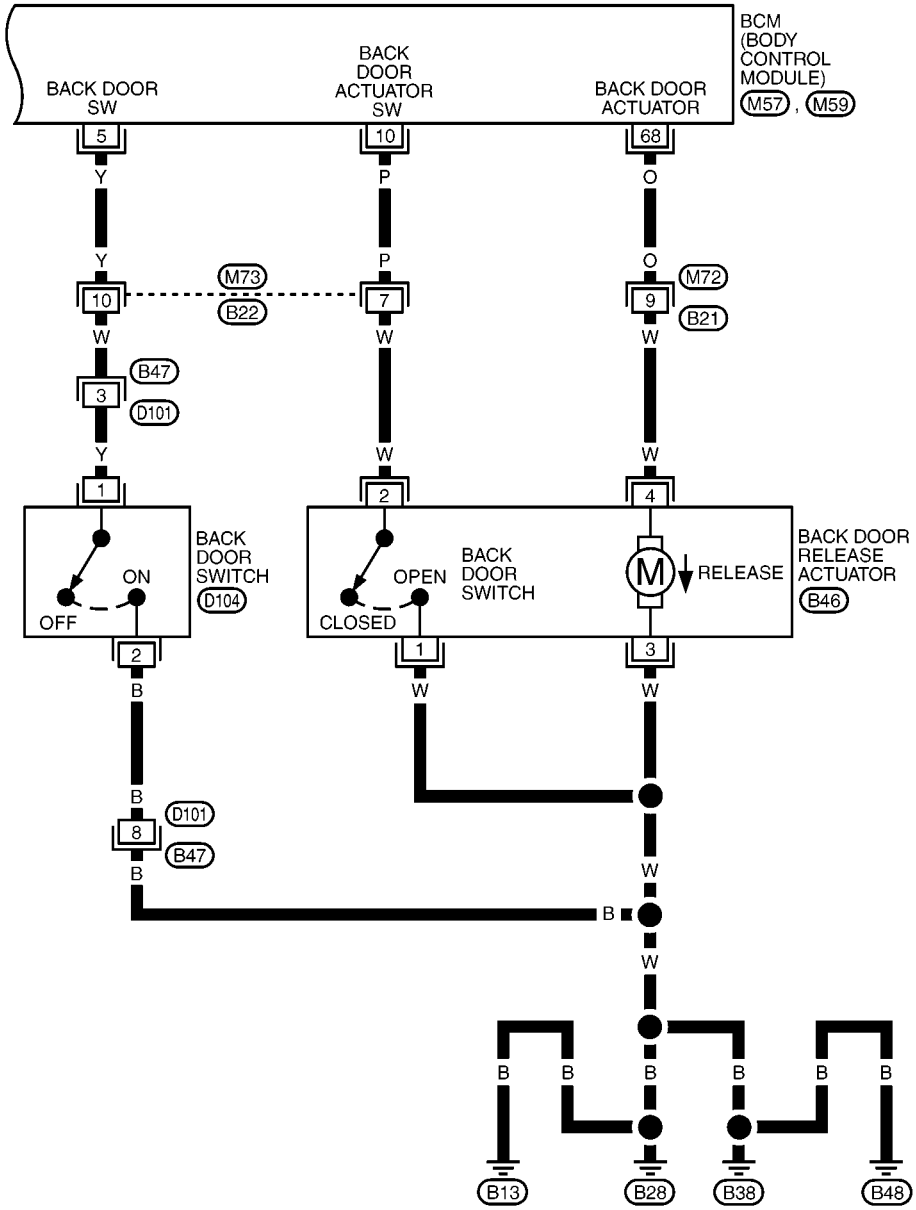
BL-S/LOCK-11

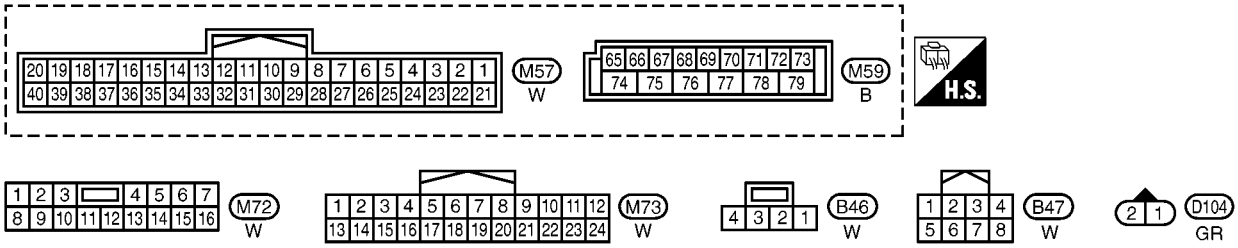




MIWA0713E

BL-S/LOCK-12





MIWA0714E

Terminal and Reference Value for BCM

BIS000J5

Terminal	Wire color	Item	Signal Input/ Output	Condition	Voltage (V) (Approx.)
2	B	Ground	—	—	0
3	O (GR)	Key switch	Input	Key inserted (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0
5	Y	Back door switch	Input	Release switch open operation	5 → 0
6	LG	Door lock / unlock switch (Lock signal)	Input	Lock operation (ON)	0
				Other than above (OFF)	5
10	P	Back door switch	Input	Open (ON) → Close (OFF)	0 → 5
(19)	L	CAN-H	Input/ Output	—	—
24	O	IGN power supply	Input	Ignition switch (ON or START position)	Battery voltage
25	BR	Door lock/unlock switch (Unlock signal)	Input	Unlock operation (ON)	0
				Other than above (OFF)	5
29	BR	Front door switch RH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
30	LG	Front door switch LH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
32	V	Door lock status indicator	Output	Goes OFF→ Illuminates (Ignition switch ON and all door closed)	0 → Battery voltage
(39)	Y	CAN-L	Input/ Output	—	—
59	G	Rear door switch LH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
60	L	Rear door switch RH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
67	Y	Door lock actuator & super lock actuator unlock signal (Passenger and rear LH, RH doors)	Output	Door lock / unlock switch & remote controller unlock operation *	0 → Battery voltage
68	O	Back door release actuator	Output	Door lock/unlock switch (Back door release switch) Open operation	Battery voltage → 0
70	B	Ground (Power)	—	—	0
74	Y	BAT power supply (BCM)	Input	—	Battery voltage
75	O	Super lock actuator lock signal (All doors)	Output	Remote controller lock operation	0 → Battery voltage
76	BR	Door lock actuator & super lock actuator unlock signal (Driver side)	Output	Door lock / unlock switch & remote controller unlock operation *	0 → Battery voltage
77	SB	Door lock actuator lock signal (All doors)	Output	Door lock/unlock switch & remote controller lock operation	0 → Battery voltage
79	Y	BAT power supply (PW)	Input	—	Battery voltage

(): With Intelligent Key system models

*: Door lock actuator operation activated by door lock/unlock switch.

CONSULT- II Inspection Procedure

BIS000J6

Refer to GI-36, "CONSULT-II Start Procedure" .

CONSULT- II Application Items

BIS000J7

WORK SUPPORT

Supported Item	Description
SECURITY DOOR LOCK SET	Anti-hijack function mode can be changed in this mode.
AUTO LOCK SET	Auto re-locking function mode can be changed in this mode.

Security Door Lock Set

	ON	OFF
Anti hijack function	Activation	Deactivation

Auto Lock Set

	MODE1	MODE2	MODE3	MODE4	MODE5	MODE6*	MODE7*	MODE8*
Auto locking function	1 minute	2 minutes	3 minutes	4 minutes	5 minutes	–	–	–

*: These mode are not supported.

DATA MONITOR

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
PUSH SW (*1)	Indicates [ON/OFF] condition ignition knob switch.
KEY IN SW (*2)	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.
TRNK OPNR SW	Indicates [ON/OFF] condition of back door switch.

*1: Models with Intelligent Key system.
*2: Models without Intelligent Key system.

ACTIVE TEST

Monitored Item	Description
DOOR LOCK	This test is able to check all door lock actuator (except for back door) lock / unlock operation. Actuators lock / unlock when “LOCK” or “UNLOCK” on CONSULT-II screen is touched.
SUPER LOCK	This test is able to check super lock actuator lock / unlock operation. Actuators lock / unlock when “LOCK” or “UNLOCK” on CONSULT-II screen is touched.
DOOR LOCK IND	This test is able to check door lock / unlock switch's illumination.
TRUNK / BACK DOOR	This test is able to check back door release actuator open operation. These actuator open when “OPEN” on CONSUT-II screen is touched.

Work Flow

BIS000J8

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-17, "System Description" .
3. According to the trouble diagnosis, repair or replace the cause of the malfunction. Refer to BL-35, "TROUBLE DIAGNOSES CHART BY SYMPTOM/WITHOUT INTELLIGENT KEY SYSTEM" or BL-36, "TROUBLE DIAGNOSES CHART BY SYMPTOM/WITH INTELLIGENT KEY SYSTEM" .
4. Does power door lock system operate normally?

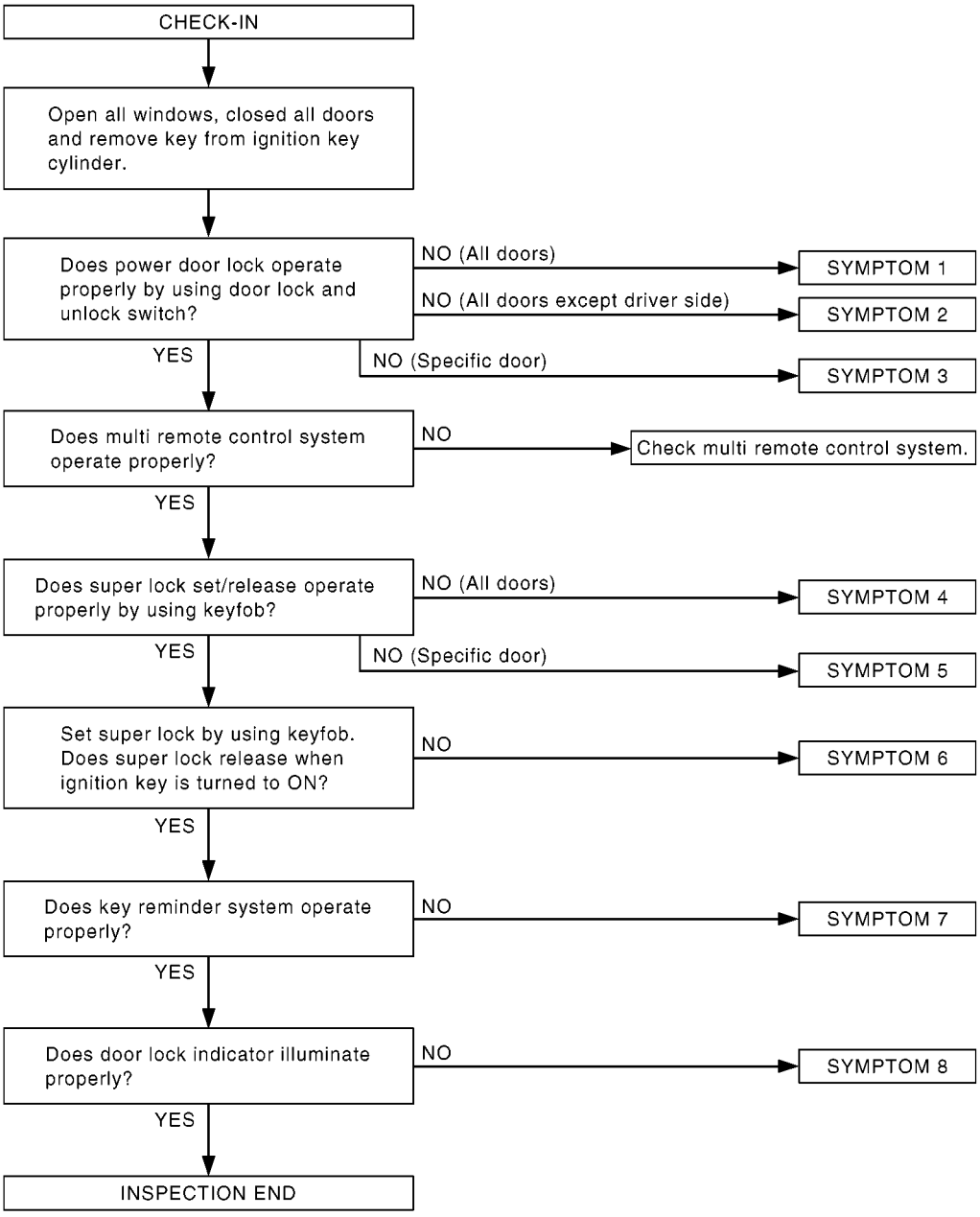
YES: GO TO 5.
NO: GO TO 2.

5. INSPECTION END.

Trouble Diagnoses

BIS000J9

PRELIMINARY CHECK/WITHOUT INTELLIGENT KEY SYSTEM



SYMPTOM CHART/WITHOUT INTELLIGENT KEY SYSTEM

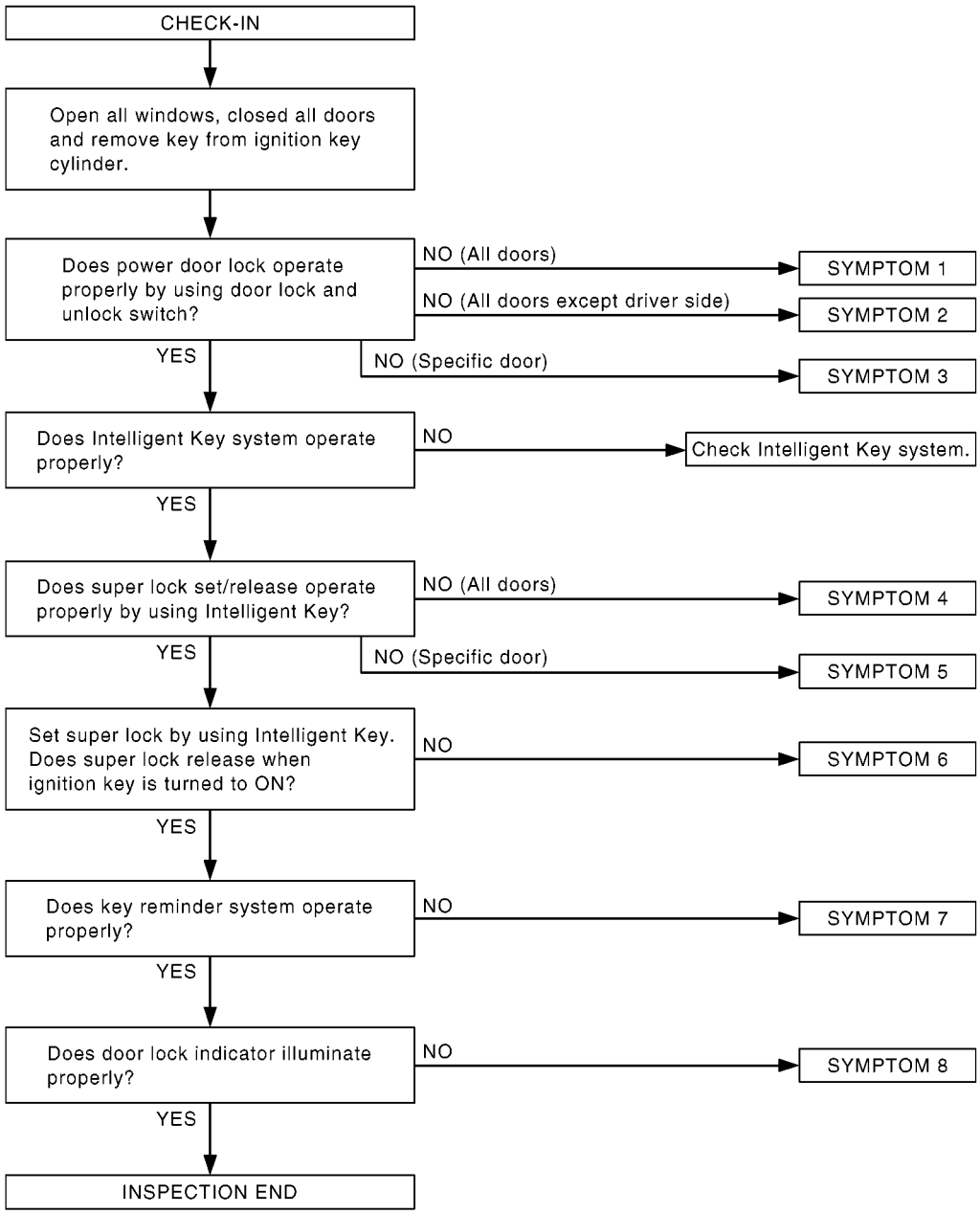
NOTE:

Before starting trouble diagnosis below, perform Preliminary Check BL-81, "PRELIMINARY CHECK/ WITHOUT INTELLIGENT KEY SYSTEM" .

Symptom numbers in the symptom chart correspond with those of Preliminary check.

Symptom	Diagnosis/service procedure	Reference page
SYMPTOM 1 Power door lock does not operate by using door lock/ unlock switch.	1. Check power supply and ground circuit	BL-85
	2. Check door lock/unlock switch	BL-86
	3. Check door switch (except back door switch)	BL-99
	4. Check front door lock actuator (driver side)	BL-91
SYMPTOM 2 All door lock actuators except driver side does not operate using door lock/unlock switch.	1. Check front door lock actuator (driver side)	BL-92
SYMPTOM 3 Specific door lock actuator does not operate using door lock/unlock switch.	1. Check front door lock actuator (driver side)	BL-91
	2. Check front door lock actuator (passenger side)	BL-92
	3. Check rear door lock actuator LH	BL-93
	4. Check rear door lock actuator RH	BL-94
SYMPTOM 4 Super lock does not operate by using Key fob.	1. Check key switch	BL-87
	2. Check super lock actuator (driver side)	BL-95
SYMPTOM 5 Specific super lock actuator does not operate.	1. Check super lock actuator (driver side)	BL-95
	2. Check super lock actuator (passenger side)	BL-96
	3. Check super lock actuator (rear LH)	BL-97
	4. Check super lock actuator (rear RH)	BL-98
SYMPTOM 6 Super lock cannot be released by ignition switch.	1.Check ignition switch ON circuit	BL-85
SYMPTOM 7 Key reminder system does not operate.	1. Check key switch	BL-87
	2. If above systems are OK, replace BCM.	BCS-17
SYMPTOM 8 Door lock indicator does not illuminate.	1. Check door lock/unlock switch indicator lamp	BL-58
	2. If above systems are OK, replace BCM.	BCS-17

PRELIMINARY CHECK/WITH INTELLIGENT KEY SYSTEM



SYMPTOM CHART/WITH INTELLIGENT KEY SYSTEM

NOTE:

Before starting trouble diagnosis below, perform Preliminary Check BL-83, "PRELIMINARY CHECK/ WITH INTELLIGENT KEY SYSTEM" .

Symptom numbers in the symptom chart correspond with those of Preliminary check.

Symptom	Diagnosis/service procedure	Reference page
SYMPTOM 1 Power door lock does not operate by using door lock/ unlock switch.	1. Check power supply and ground circuit	BL-85
	2. Check door lock/unlock switch	BL-86
	3. Check door switch (except back door switch)	BL-99
	4. Check front door lock actuator (driver side)	BL-95
SYMPTOM 2 All door lock actuators except driver side does not operate using door lock/unlock switch.	1. Check front door lock actuator (driver side)	BL-96
SYMPTOM 3 Specific door lock actuator does not operate using door lock/unlock switch.	1. Check front door lock actuator (driver side)	BL-95
	2. Check front door lock actuator (passenger side)	BL-96
	3. Check rear door lock actuator LH	BL-97
	4. Check rear door lock actuator RH	BL-98
SYMPTOM 4 Super lock does not operate by using Intelligent Key.	1. Check key switch and ignition knob switch	BL-88
	2. Check super lock actuator (driver side)	BL-95
SYMPTOM 5 Specific super lock actuator does not operate.	1. Check super lock actuator (driver side)	BL-95
	2. Check super lock actuator (passenger side)	BL-96
	3. Check super lock actuator (rear LH)	BL-97
	4. Check super lock actuator (rear RH)	BL-98
SYMPTOM 6 Super lock cannot be released by ignition switch.	1. Check ignition switch ON circuit	BL-85
SYMPTOM 7 Key reminder system does not operate.	1. Check key switch and ignition switch	BL-88
	2. If above systems are OK, replace BCM.	BCS-17
SYMPTOM 8 Door lock indicator does not illuminate.	1. Check door lock/unlock switch indicator lamp	BL-58
	2. If above systems are OK, replace BCM.	BCS-17

Check Power Supply and Ground Circuit

BIS000JA

First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”, Refer to BCS-9, "CONSULT-II Function (BCM)" .

1. FUSE INSPECTION

- Check 10A fuse [No.5, located in fuse block (J/B)]
- Check 40A fusible link (letter **J** located in the fuse and fusible link box).
- Check 10A fuse [No.9, located in fuse block (J/B)] (Without Intelligent Key system)
- Check 10A fuse [No.13, located in fuse block (J/B)] (With Intelligent Key system)

NOTE:
Refer to BL-59, "Component Parts and Harness Connector Location" .

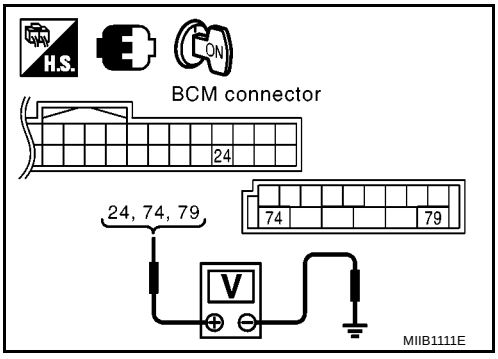
OK or NG

OK >> GO TO 2
NG >> If fuse is blown out, 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 ON.
2. Check voltage between BCM connector M57, M59 terminals 24, 79 and ground.

24 – Ground :Battery voltage.
74 – Ground :Battery voltage.
79 – Ground :Battery voltage.



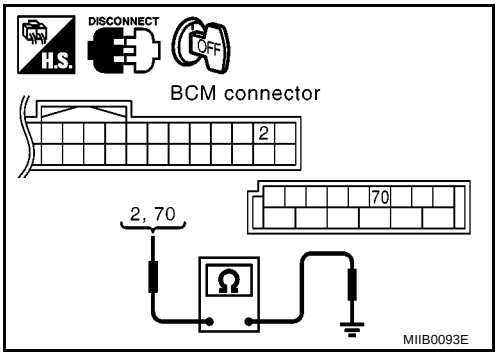
OK or NG

OK >> GO TO 3
NG >> Check BCM power supply circuit for open or short.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M57, M59 terminals 2, 70 and ground.

2 – Ground :Continuity should exist.
70 – Ground :Continuity should exist.



OK or NG

OK >> Power supply and ground circuit is OK.
NG >> Check BCM ground circuit for open or short.

Check Door Lock / Unlock Switch

BIS000JB

1. CHECK DOOR LOCK / UNLOCK SWITCH SIGNAL

With CONSULT- II

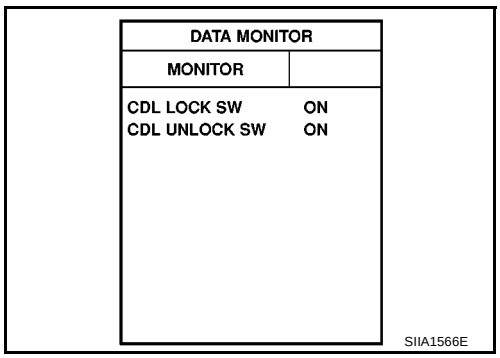
Check door lock / unlock switch input signal (“CDL LOCK SW” “CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT- II.

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

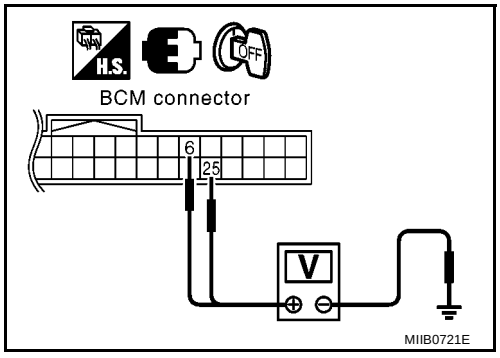
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

Operate door lock / unlock switch, check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	6	Ground	Lock	0
			Neutral / Unlock	5
	25		Unlock	0
			Neutral / Lock	5



OK or NG

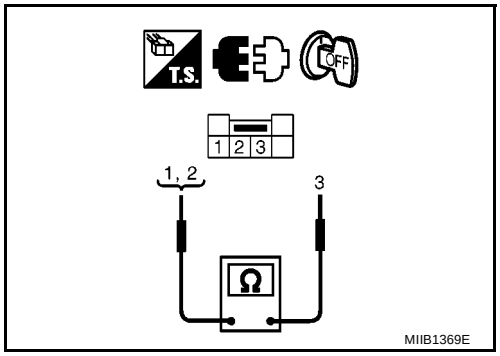
OK >> Door lock / unlock switch is OK.

NG >> GO TO 2.

2. CHECK DOOR LOCK/UNLOCK SWITCH

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

	Terminals		Condition	Continuity
Door lock/ unlock switch	2	3	Unlock	YES
			Neutral / Lock	NO
	1		Lock	YES
			Neutral / Unlock	NO



OK or NG

OK >> Check the following.

- Ground circuit for door lock / unlock switch
- Harness for open or short between BCM and door lock / unlock switch.

NG >> Replace door lock / unlock switch.

Check Key Switch /Without Intelligent Key System

BIS000JC

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

When key is inserted in ignition key cylinder:

KEY IN SW ⇒ ON

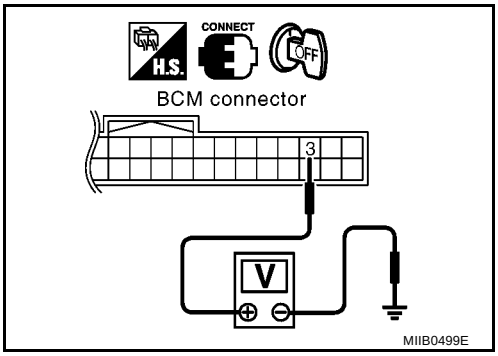
When key is removed from ignition key cylinder:

KEY IN SW ⇒ OFF

Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	3	Ground	Key is inserted	Battery voltage
			Key is removed	0



OK or NG

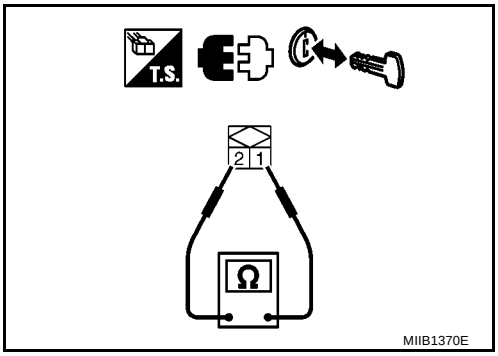
OK >> Key switch is OK.

NG >> GO TO 2.

2. CHECK KEY SWITCH (INSERT)

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

Key switch	Terminals		Condition	Continuity
	1	2	Key is inserted	YES
			Key is removed	NO



OK or NG?

OK >> Check the following.

- 10A fuse [No. 9, 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 Key Switch And Ignition Knob Switch/With Intelligent Key System

BIS000JD

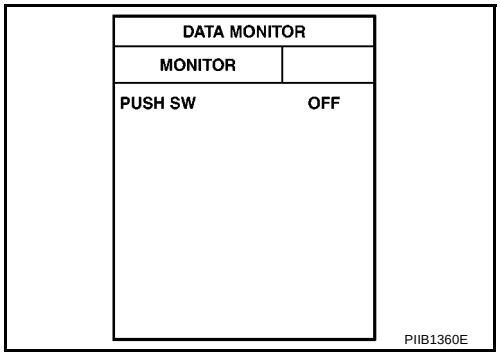
1. KEY SWITCH AND IGNITION KNOB SWITCH INSPECTION

With CONSULT-II

Display “PUSH SW” on DATA MONITOR screen, and check if ON-OFF display is linked to ignition knob switch operation.

When ignition knob is pushed : PUSH SW ON

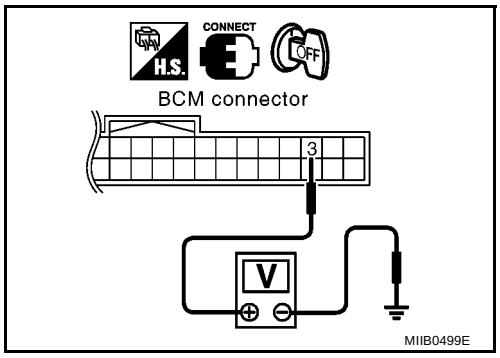
When ignition knob is released : PUSH SW OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	3	Ground	Key is inserted	Battery voltage
			Key is removed	0



OK or NG

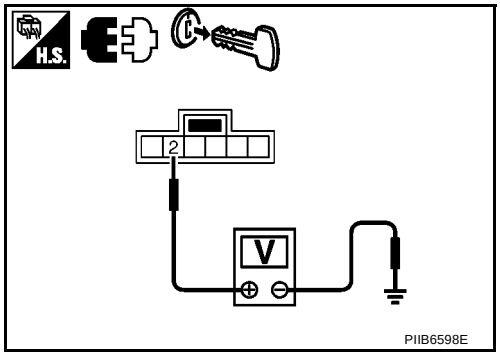
OK >> Key switch is OK.

NG >> GO TO 2.

2. KEY SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Remove mechanical key from ignition knob.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch connector and ground.

Key switch and ignition knob switch connector	Terminal	Ground	Voltage (V) (Approx.)
M34	2		Battery voltage



OK or NG

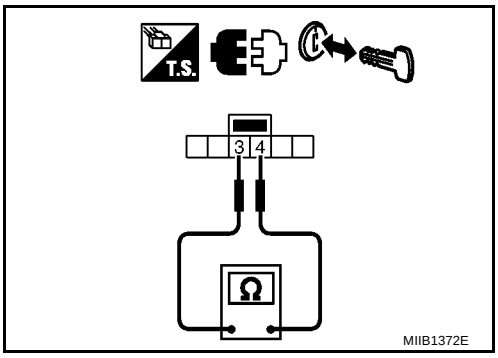
OK >> GO TO 3.

NG >> Repair or replace key switch power supply circuit.

3. KEY SWITCH OPERATION INSPECTION

1. Insert mechanical key into ignition knob.
2. Check continuity between key switch and ignition knob switch connector M34 terminal.

Key switch and ignition knob switch	Terminal		Condition	Continuity
	3	4	Key is inserted	Yes
			Key is removed	No



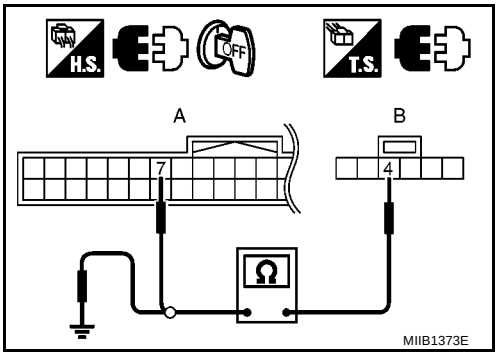
OK or NG

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

4. KEY SWITCH CIRCUIT INSPECTION

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit connector and key switch and ignition knob switch connector.

A		B		Continuity
Intelligent Key unit connector	Terminal	Key switch and ignition knob switch connector	Terminal	
M60	7	M34	4	Yes



3. Check continuity between key switch connector and ground.

B		Ground	Continuity
Key switch and ignition knob switch connector	Terminal		
M34	4		No

OK or NG

OK >> Key switch is OK.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

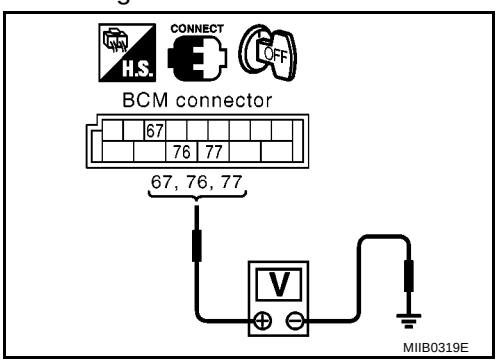
Check Power Door Lock / Unlock Output Signal

BIS000JE

1. CHECK POWER DOOR LOCK OUTPUT SIGNAL

Operate door lock / unlock switch, check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M59	67	Ground	Unlock	0 → Battery voltage→ 0
	76		Unlock	0 → Battery voltage→ 0
	77		Lock	0 → Battery voltage→ 0



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace BCM.

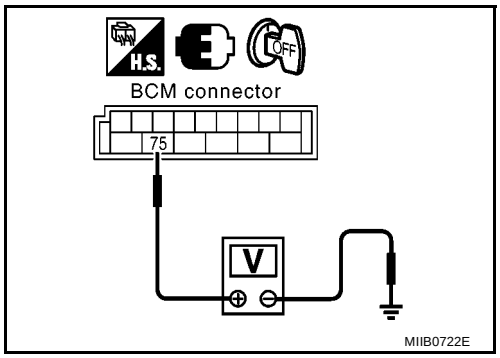
Check Super Lock Output Signal

BIS000JF

1. CHECK SUPER LOCK OUTPUT SIGNAL

Operate remote controller, check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M59	75	Ground	Lock button is pressed.	0 → Battery voltage→ 0



OK or NG

OK >> Check the condition of the harness and connector.
NG >> Replace BCM.

Check Door Lock Actuator

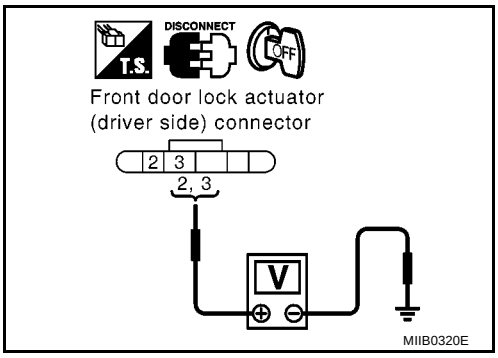
BIS000JG

DRIVER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (driver side) connector.
3. Operate door lock / unlock switch, check voltage between front door lock actuator (driver side) connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D11	2	Ground	Unlock	0 → Battery voltage → 0
	3		Lock	0 → Battery voltage → 0



OK or NG

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

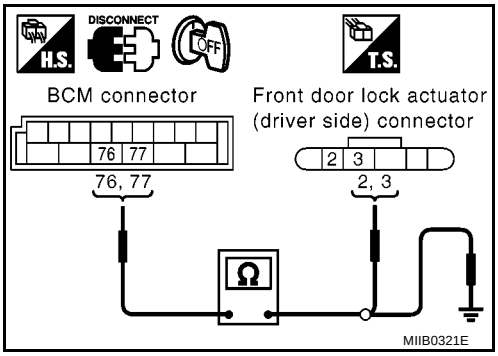
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 76, 77 and front door lock actuator (driver side) connector D11 terminals 2, 3.

76 – 2 : Continuity should exist.
77 – 3 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 76, 77 and ground.

76 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

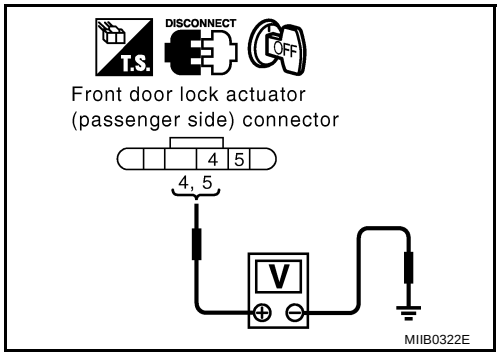
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

PASSENGER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (passenger side) connector.
3. Operate door lock / unlock switch, check voltage between front door lock actuator (passenger side) connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D28	4	Ground	Lock	0 → Battery voltage → 0
	5		Unlock	0 → Battery voltage → 0



OK or NG

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

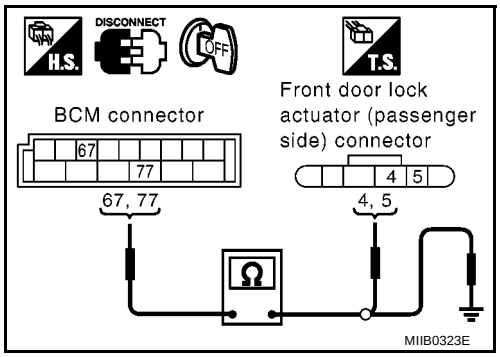
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and front door lock actuator (passenger side) connector D28 terminals 4, 5.

67 – 5 : Continuity should exist.
77 – 4 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

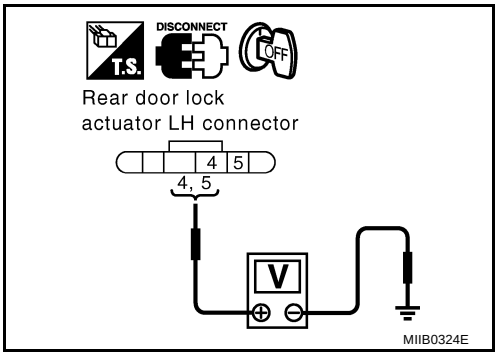
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR LH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Operate door lock / unlock switch, check voltage between rear door lock actuator LH connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D45	4	Ground	Lock	0 → Battery voltage → 0
	5		Unlock	0 → Battery voltage → 0



OK or NG

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

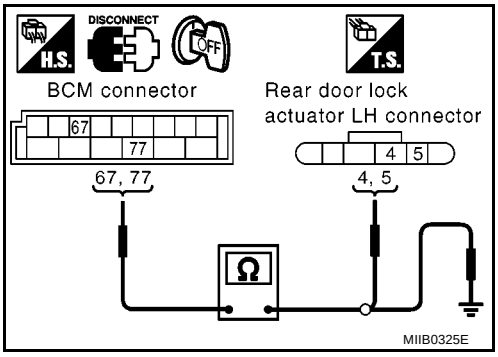
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and rear door lock actuator LH connector D45 terminals 4, 5.

67 – 5 : Continuity should exist.
77 – 4 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

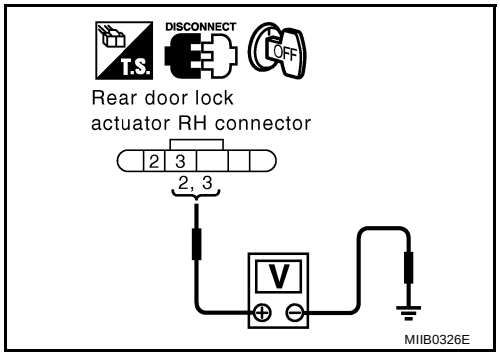
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR RH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Operate door lock / unlock switch, check voltage between rear door lock actuator RH connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D65	2	Ground	Unlock	0 → Battery voltage → 0
	3		Lock	0 → Battery voltage → 0



OK or NG

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

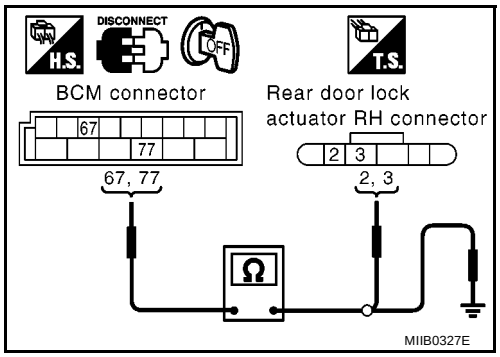
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminals 67, 77 and rear door lock actuator RH connector D65 terminals 2, 3.

67 – 2 : Continuity should exist.
77 – 3 : Continuity should exist.

3. Check continuity between BCM connector M59 terminals 67, 77 and ground.

67 – Ground : Continuity should not exist.
77 – Ground : Continuity should not exist.



OK or NG

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

Check Super Lock Actuator

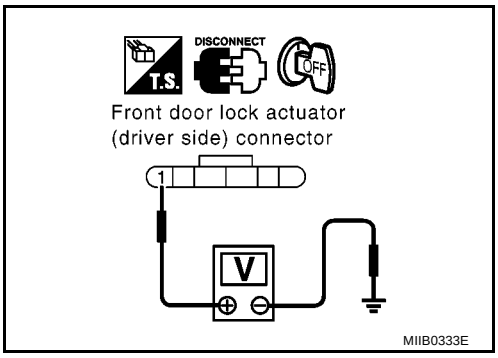
BIS000JH

DRIVER SIDE

1. CHECK SUPER LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (driver side) connector.
3. Operate door lock / unlock switch, check voltage between front door lock actuator (driver side) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D11	1	Ground	Lock button is pressed.	0 → Battery voltage → 0



OK or NG

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

2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminal 75 and front door lock actuator (driver side) connector D11 terminal 1.

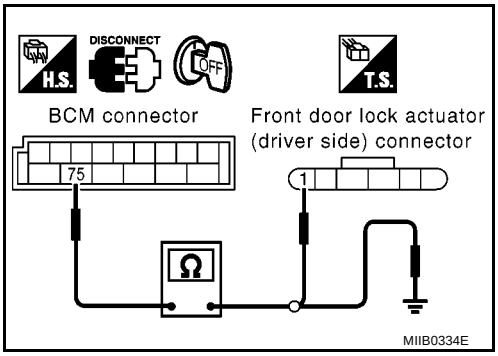
75 – 1 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 75 and ground.

75 – Ground : Continuity should not exist.

OK or NG

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

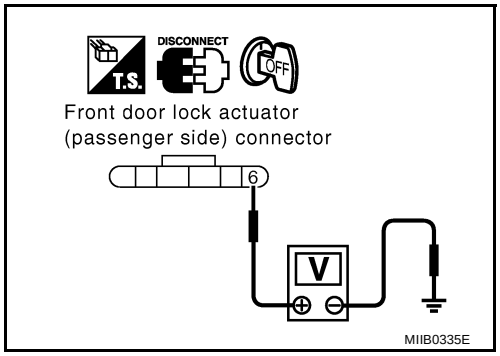


PASSENGER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (passenger side) connector.
3. Operate remote controller, check voltage between front door lock actuator (passenger side) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D28	6	Ground	Lock button is pressed.	0 → Battery voltage → 0



OK or NG

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

2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminal 75 and front door lock actuator (passenger side) connector D45 terminal 6.

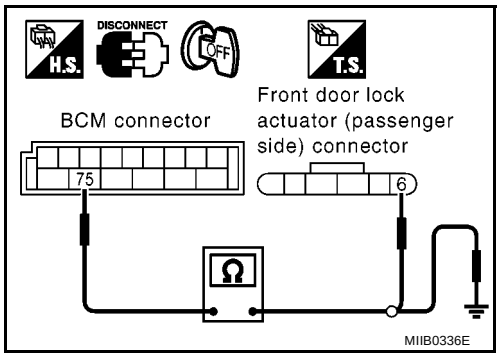
75 – 6 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 75 and ground.

75 – Ground : Continuity should not exist.

OK or NG

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

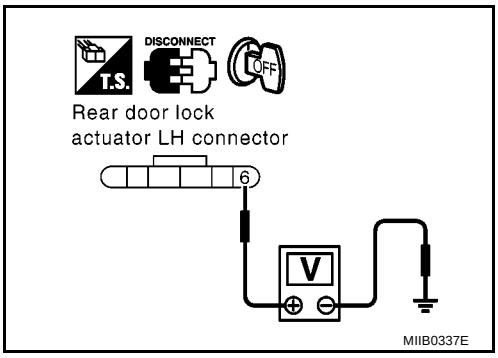


REAR LH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Operate remote controller, check voltage between rear door lock actuator LH connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D45	6	Ground	Lock button is pressed.	0 → Battery voltage → 0



OK or NG

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

2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminal 75 and rear door lock actuator LH connector D45 terminal 6.

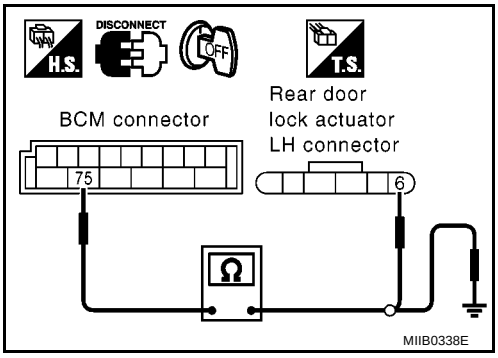
75 – 6 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 75 and ground.

75 – Ground : Continuity should not exist.

OK or NG

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

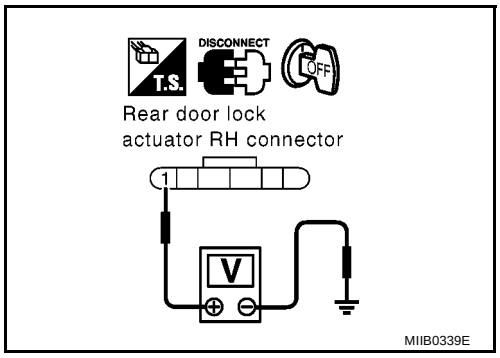


REAR RH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Operate remote controller, check voltage between rear door lock actuator RH connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D65	1	Ground	Lock button is pressed.	0 → Battery voltage → 0



OK or NG

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

2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M59 terminal 75 and rear door lock actuator RH connector D65 terminal 1.

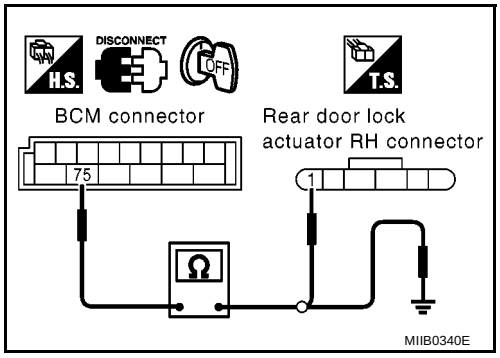
75 – 1 : Continuity should exist.

3. Check continuity between BCM connector M59 terminal 75 and ground.

75 – Ground : Continuity should not exist.

OK or NG

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



Check Door Switch

BIS000JI

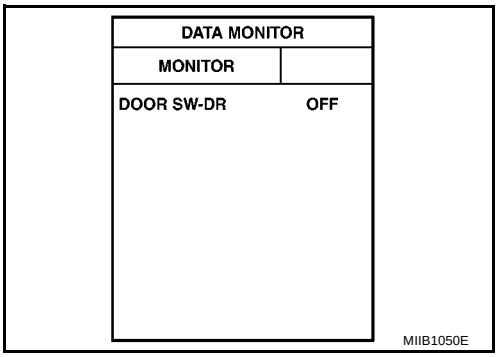
DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

Check door switch “DOOR SW-DR” in “DATA MONITOR” mode with CONSULT- II.

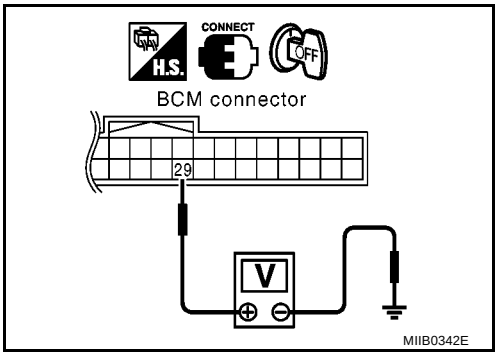
Monitor item	Condition	
DOOR SW-DR	OPEN	: ON
	CLOSE	:OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	29	Ground	OPEN	0
			CLOSE	Battery voltage



OK or NG

OK >> Front door switch RH is OK.
NG >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch RH connector.
3. Check continuity between BCM connector M57 terminal 29 and front door switch RH connector B29 terminal 1.

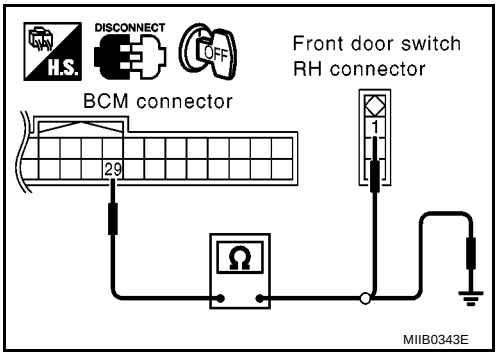
29 – 1 : Continuity should exist.

4. Check continuity between BCM connector M57 terminal 29 and ground.

29 – Ground : Continuity should not exist.

OK or NG

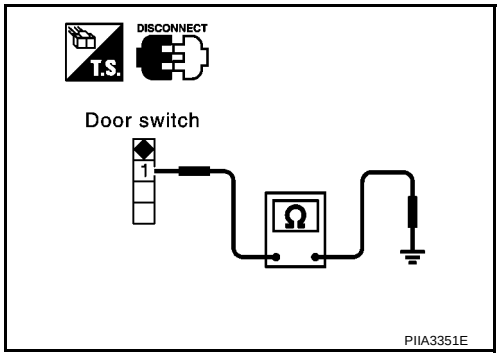
OK >> GO TO 3.
NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground part of door switch.

Connector	Terminal		Condition	Continuity
B29	1	Body ground part of door switch	Pushed	NO
			Released	YES



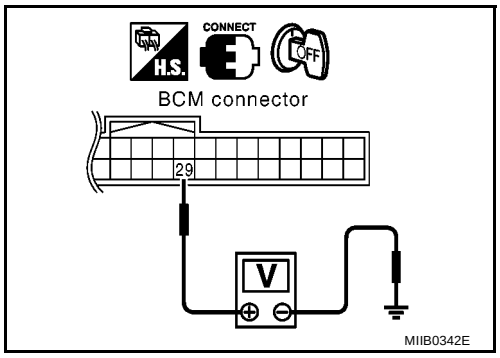
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 29 and ground.

29 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

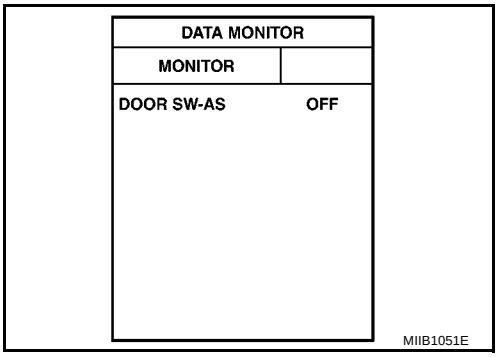
PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

Check door switch “DOOR SW-AS” in “DATA MONITOR” mode with CONSULT- II.

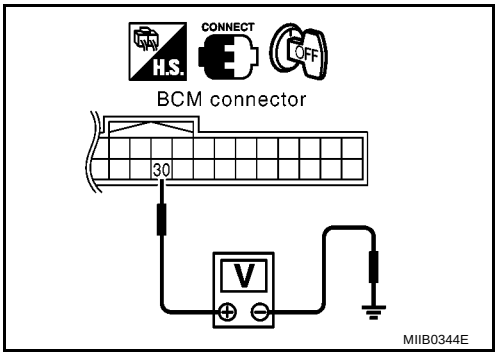
Monitor item	Condition	
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	30	Ground	OPEN	0
			CLOSE	Battery voltage



OK or NG

OK >> Front door switch LH is OK.
NG >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch LH connector.
3. Check continuity between BCM connector M57 terminal 30 and front door switch LH connector B14 terminal 1.

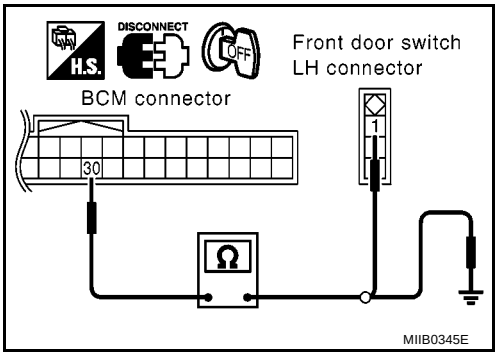
30 – 1 : Continuity should exist.

4. Check continuity between BCM connector M57 terminal 30 and ground.

30 – Ground : Continuity should not exist.

OK or NG

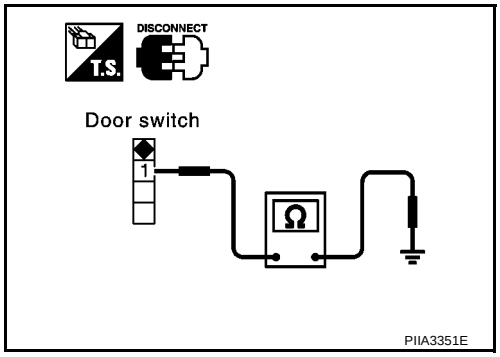
OK >> GO TO 3.
NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground part of door switch.

Connector	Terminal		Condition	Continuity
B14	1	Body ground part of door switch	Pushed	NO
			Released	YES



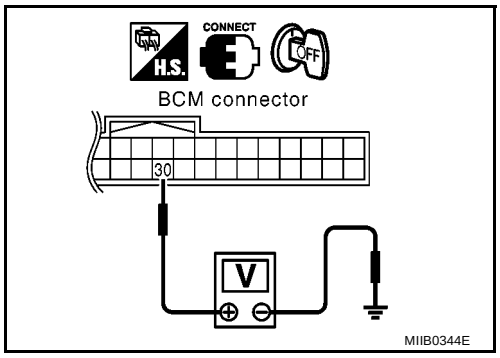
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 30 and ground.

30 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

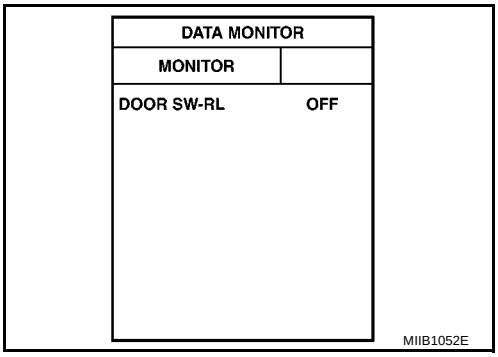
REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

Check door switch “DOOR SW-RL” in “DATA MONITOR” mode with CONSULT- II.

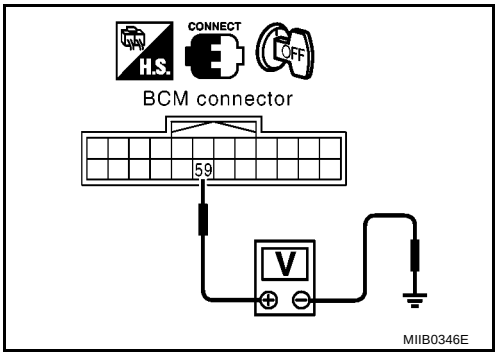
Monitor item	Condition	
DOOR SW-RL	OPEN	ON
	CLOSE	OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	59	Ground	OPEN	0
			CLOSE	Battery voltage



OK or NG

OK >> Rear door switch LH is OK.
NG >> GO TO 2.

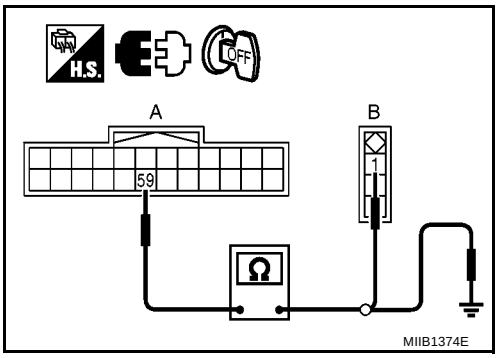
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch LH connector.
3. Check continuity between BCM connector and rear door switch LH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch LH	Terminal	
M58	59	B19	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	59		No



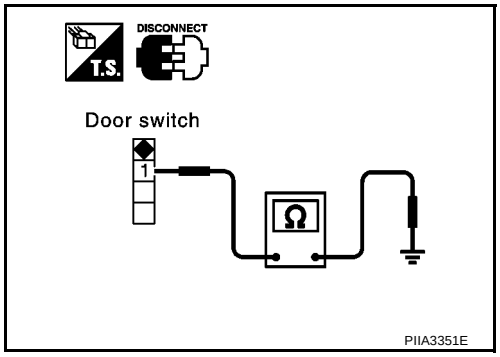
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Connector	Terminal		Condition	Continuity
B19	1	Body ground part of door switch	Pushed	NO
			Released	YES



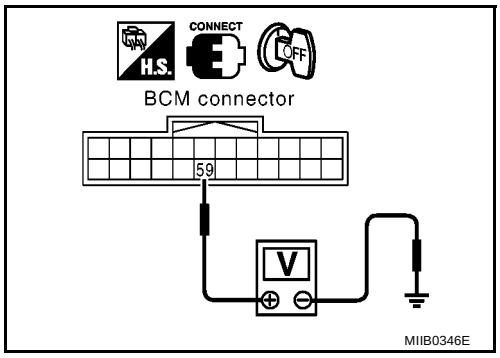
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 59 and ground.

59 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

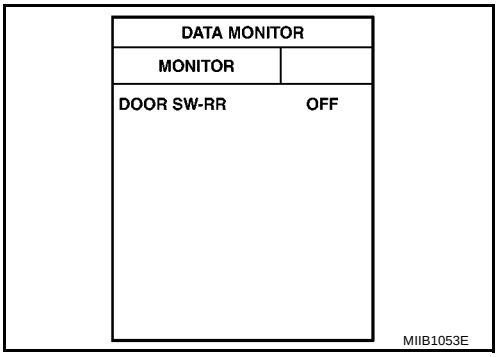
REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

Check door switch “DOOR SW-RR” in “DATA MONITOR” mode with CONSULT- II.

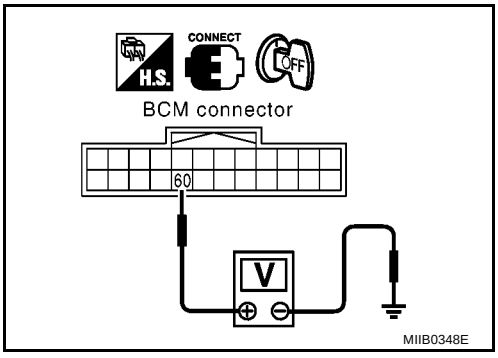
Monitor item	Condition	
DOOR SW-RR	OPEN	ON
	CLOSE	OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	60	Ground	OPEN	0
			CLOSE	Battery voltage



OK or NG

OK >> Rear door switch RH is OK.
NG >> GO TO 2.

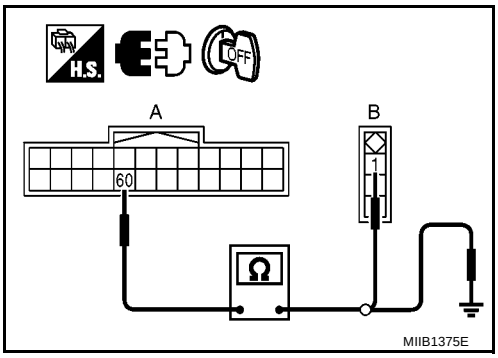
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch RH connector.
3. Check continuity between BCM connector and rear door switch RH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch RH	Terminal	
M58	60	B42	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	60		No



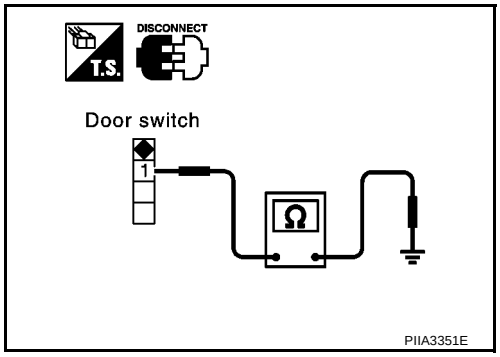
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Connector	Terminal		Condition	Continuity
B42	1	Body ground part of door switch	Pushed	NO
			Released	YES



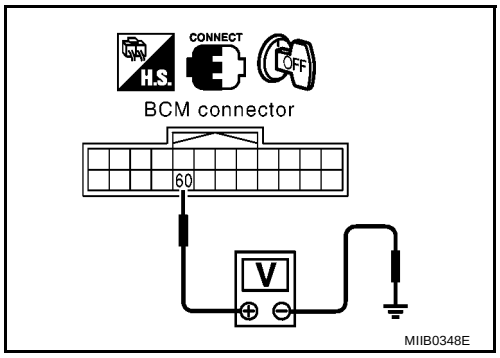
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 60 and ground.

60 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

Check Back Door Switch

BIS000JJ

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

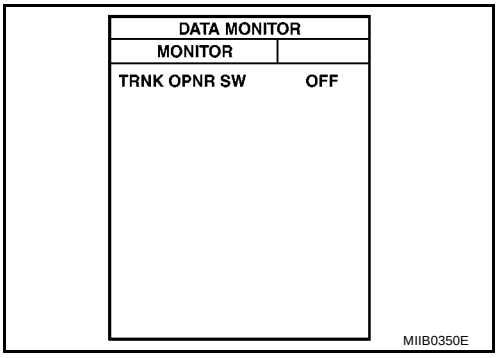
Check back door switch “TRNK OPNR SW” in “DATA MONITOR” mode with CONSULT- II.

Back door switch is pushed

TRNK OPNR SW : ON

Back door switch is released

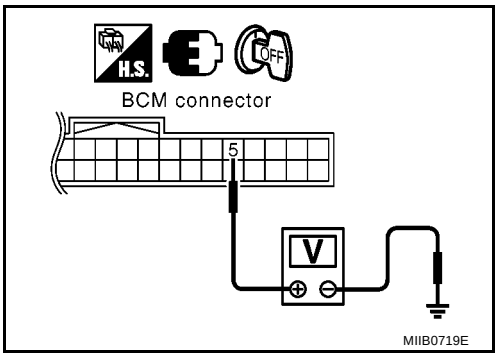
TRNK OPNR SW : OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	5	Ground	Pushed	0
			Released	5



OK or NG

OK >> Back door switch is OK.

NG >> GO TO 2.

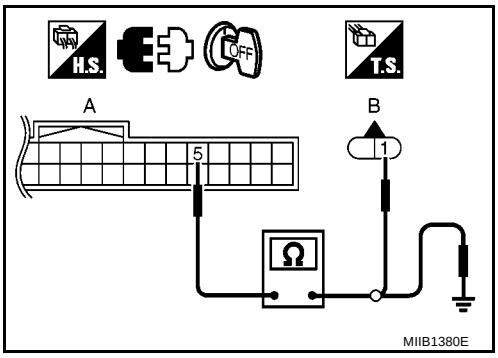
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and back door switch connector.
3. Check continuity between BCM connector and back door switch connector.

A		B		Continuity
BCM connector	Terminal	Back door switch connector	Terminal	
M57	5	D104	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M57	5		No



OK or NG

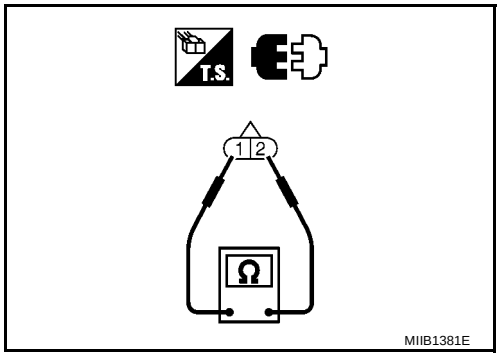
OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK BACK DOOR SWITCH

Check continuity between back door switch terminals.

	Terminals		Condition	Continuity
Back door switch	1	2	Pushed	YES
			Released	NO



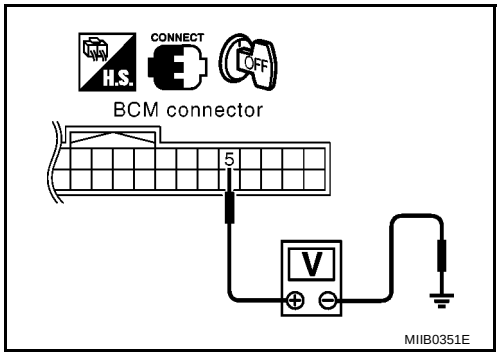
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 5 and ground.

5 – Ground : Approx. 5V



OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Replace BCM.

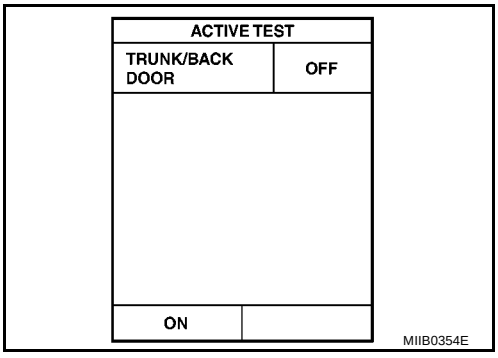
Check Back Door Release Actuator

BIS000JK

1. CHECK BCM OUTPUT SIGNAL

Check back door release output signal
Perform (“TRUNK/BACK DOOR”) in “ACTIVE TEST” mode with CONSULT-II.

When “ACTIVE TEST” is executed, does the back door open?



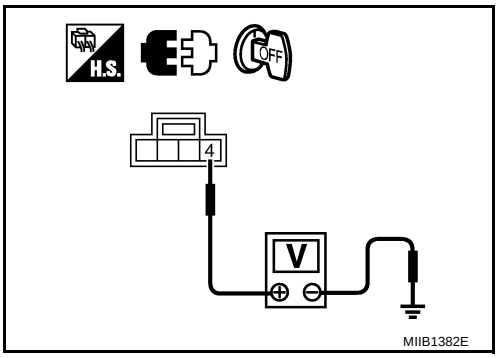
OK or NG

OK >> Back door release output is OK.
NG >> GO TO 2.

2. CHECK BACK DOOR RELEASE ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect back door release actuator connector.
3. Operate back door switch, check voltage between back door release actuator connector and ground.

Back door switch connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B46	4	Ground	Pushed	0 → Battery voltage → 0



OK or NG

OK >> GO TO 4.
NG >> GO TO 3.

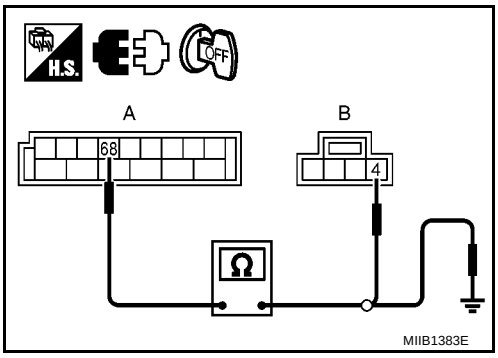
3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector and back door release actuator connector.

A		B		Continuity
BCM connector	Terminal	Back door release actuator connector	Terminal	
M59	68	B46	4	Yes

3. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M59	68		No



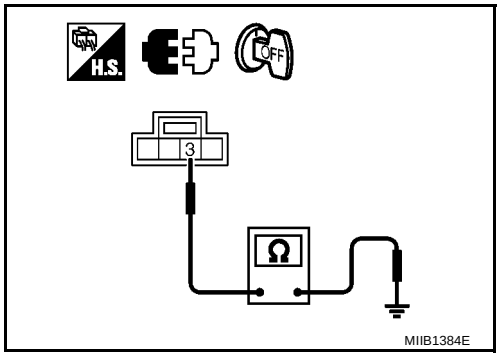
OK or NG

OK >> Replace BCM.
NG >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

Check continuity between back door release actuator connector and ground.

Back door release actuator connector	Terminal	Ground	Continuity
B46	3		Yes



OK or NG

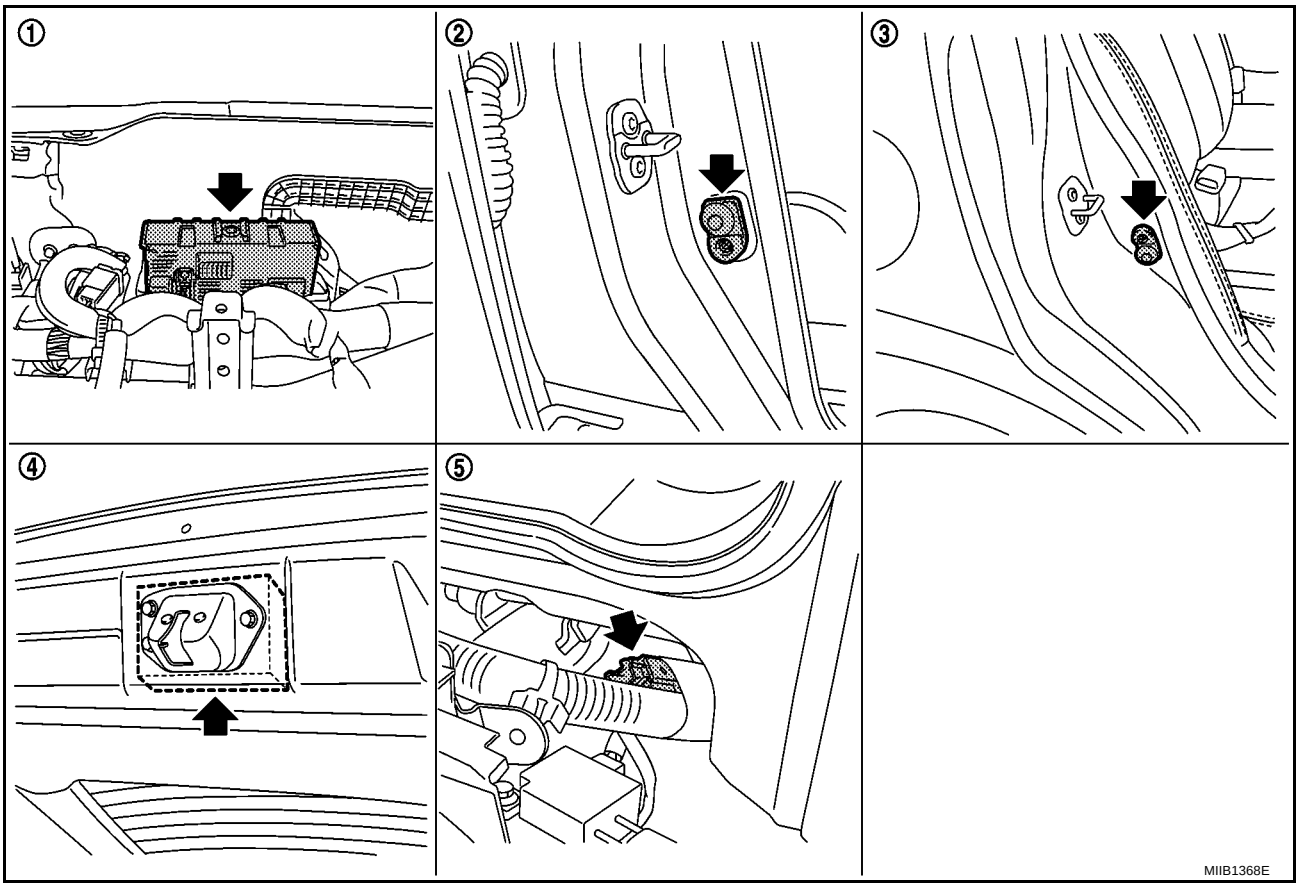
OK >> Replace back door release actuator.
NG >> Repair or replace harness.

MULTI-REMOTE CONTROL SYSTEM

PFP:28596

Component Parts and Harness Connector Location

BIS000JP



1. BCM (Body Control Module)
   M57, M58, M59
2. Front door switch
   RH: B29 (RHD/LHD models)
   LH: B14 (RHD/LHD models)
3. Rear door switch
   RH: B42
   LH: B19
4. Back door release actuator B46
5. Key switch connector M33
   (Without Intelligent Key system)

System Description

BIS000JR

INPUTS

Power is supplied at all times

- through 40A fusible link (letter **J** , located in the fusible link box)
- to BCM terminals 74 and 79.
- through 10A fuse [No. 9, located in the fuse block (J/B)]
- to key switch terminal 2.

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

- through key switch terminal 1
- to BCM terminal 3.

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

- through 10A fuse [No. 5, located in the fuse block (J/B)]
- to BCM terminal 24.

Ground is supplied

- through BCM terminals 2 and 70
- to body grounds M21 and M66.

When the front door switch LH (LHD Models) or RH (RHD Models) is ON (door is open), ground supplied

- through BCM terminal 29
- through front door switch LH (LHD Models) or RH (RHD Models) terminal 1
- to front door switch LH (LHD Models) or RH (RHD Models) case ground.

When the front door switch RH (LHD Models) or LH (RHD Models) is ON (door is open), ground supplied

- through BCM terminal 30
- through front door switch RH (LHD Models) or LH (RHD Models) terminal 1
- to front door switch RH (LHD Models) or LH (RHD Models) case ground.

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

- through BCM terminal 59
- through rear door switch LH terminal 1
- to rear door switch LH case ground.

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

- through BCM terminal 60
- through rear door switch RH terminal 1
- to rear door switch RH case ground.

When the back door release actuator (back door switch) is ON (back door is open), ground is supplied

- through BCM terminal 10
- through back door release actuator (back door switch) terminals 2 and 1
- to body grounds B13, B28, B38 and B48.

Remote controller signal is inputted to BCM (The antenna of the system is combined with BCM).

OUTLINE

Power Door Lock Operation

UNLOCK LINK FUNCTION

When this function is activated, if the car is locked by door lock/unlock switch, opening the driver or passenger side door from the inside handle will override the lock state and unlock the whole car.
(This function will be deactivate if anti-hijack function is activated.)

Selectable Function

	Door Lock/unlock switch
How to change setting	Press unlock for more than 4 seconds
Contents	Unlock link activate/deactivate
How to confirm	Buzzer should sound for 0.2 seconds

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 states.

- 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.

ANTI-HIJACK FUNCTION

With the anti-hijack function enabled, the first unlock request send from key fob will partially unlock only the driver side door (released super lock if equipped). Then if a second unlock signal is send from the first, then all remaining doors will be unlocked.

HOW TO CHANGE DOOR LOCK FUNCTION MODE

With CONSULT-II

Door lock function can be changed using “SECURITY DOOR LOCK SET” mode in “WORK SUPPORT” of “DOOR LOCK”.

Refer to BL-34, "WORK SUPPORT" .

Without CONSULT-II

Press and hold the UNLOCK and LOCK button on remote controller for more than 4 second will switch the Anti-Hijack mode to ON or OFF.

Answer Back

When the doors are locked or unlocked by remote controller, supply power to hazard warning lamp flashes as follows

- LOCK operation: Flash once
- UNLOCK operation: Flash twice

Answer back mode can be changed using “HAZARD LAMP SET” mode in “WORK SUPPORT” of “FLASHER”.

Refer to LT-106, "WORK SUPPORT" .

Remote Controller ID Code Entry

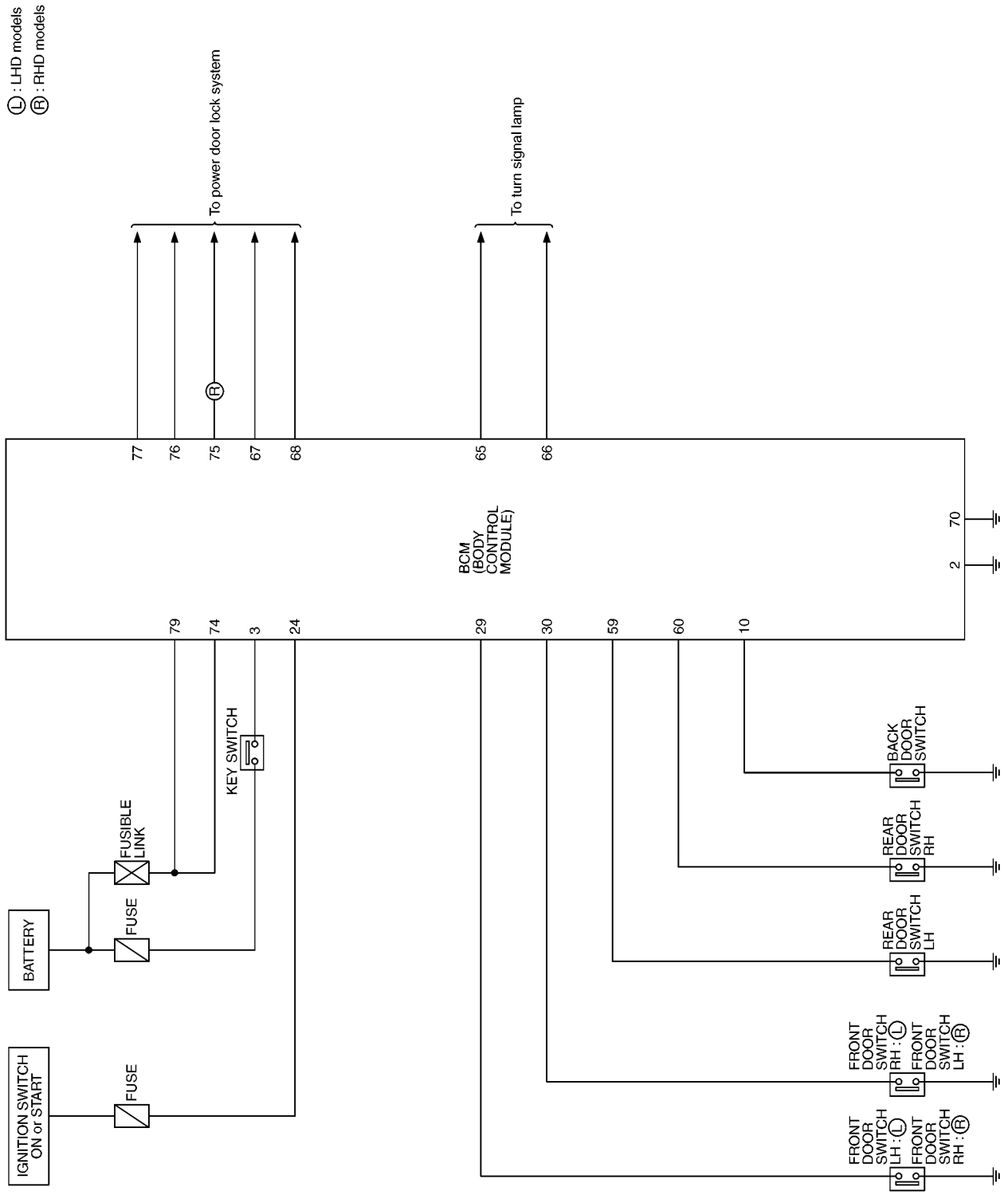
A maximum of four remote controller can be entered.

Dedicated remote controller ID registration procedure is not required.

Remote controller ID registration must be completed in conjunction with immobilizer transponder ID registration.

Schematic

BIS000JS

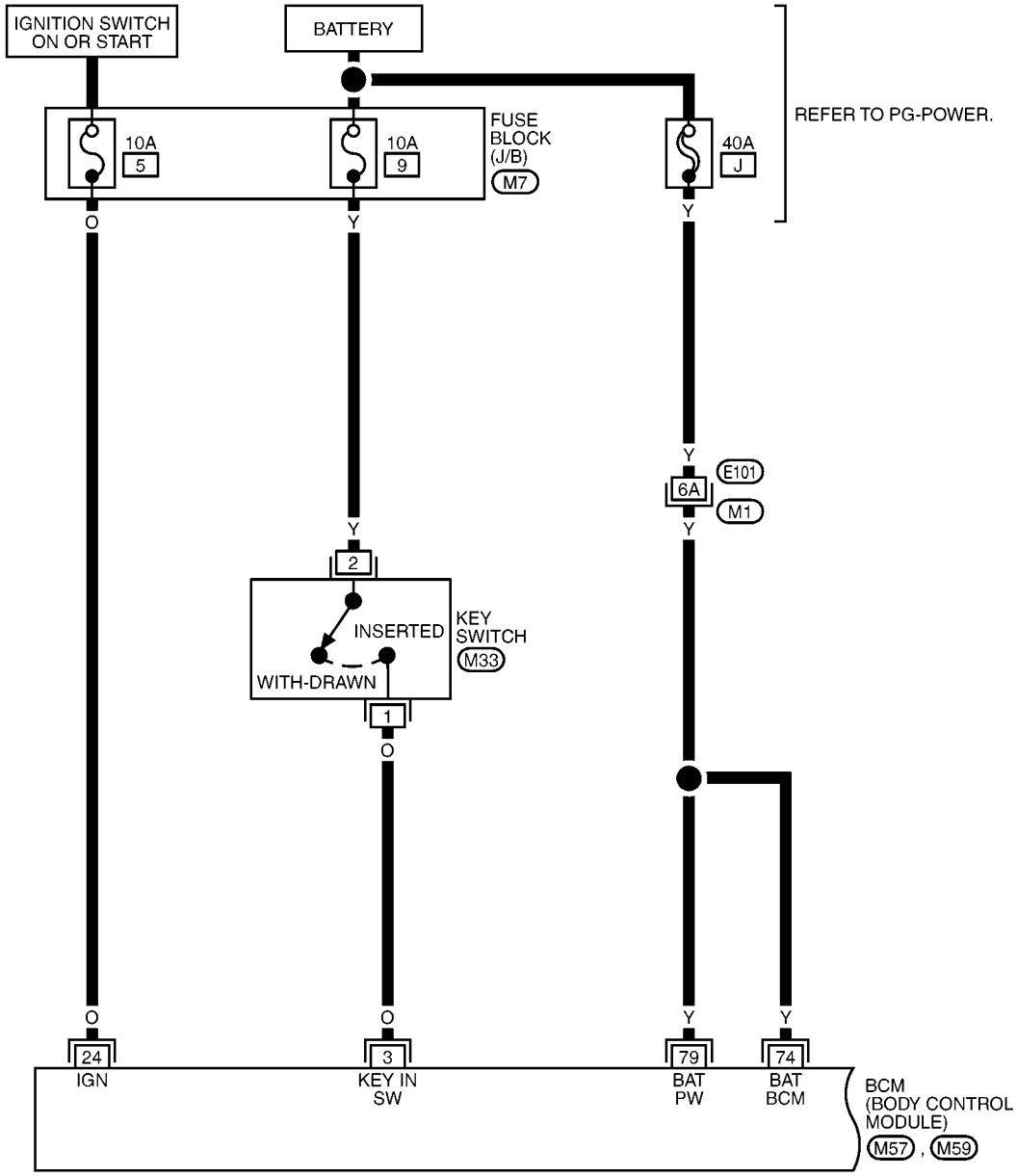


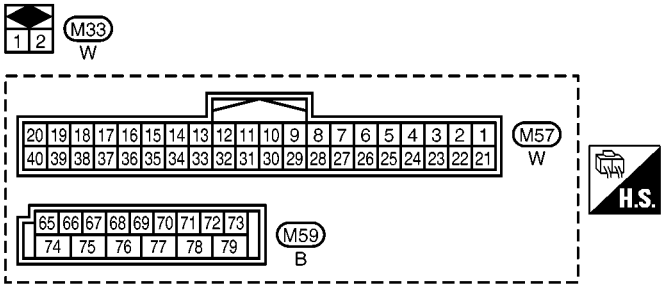
MIWA0715E

Wiring Diagram — MULTI —

BIS000JT

BL-MULTI-01

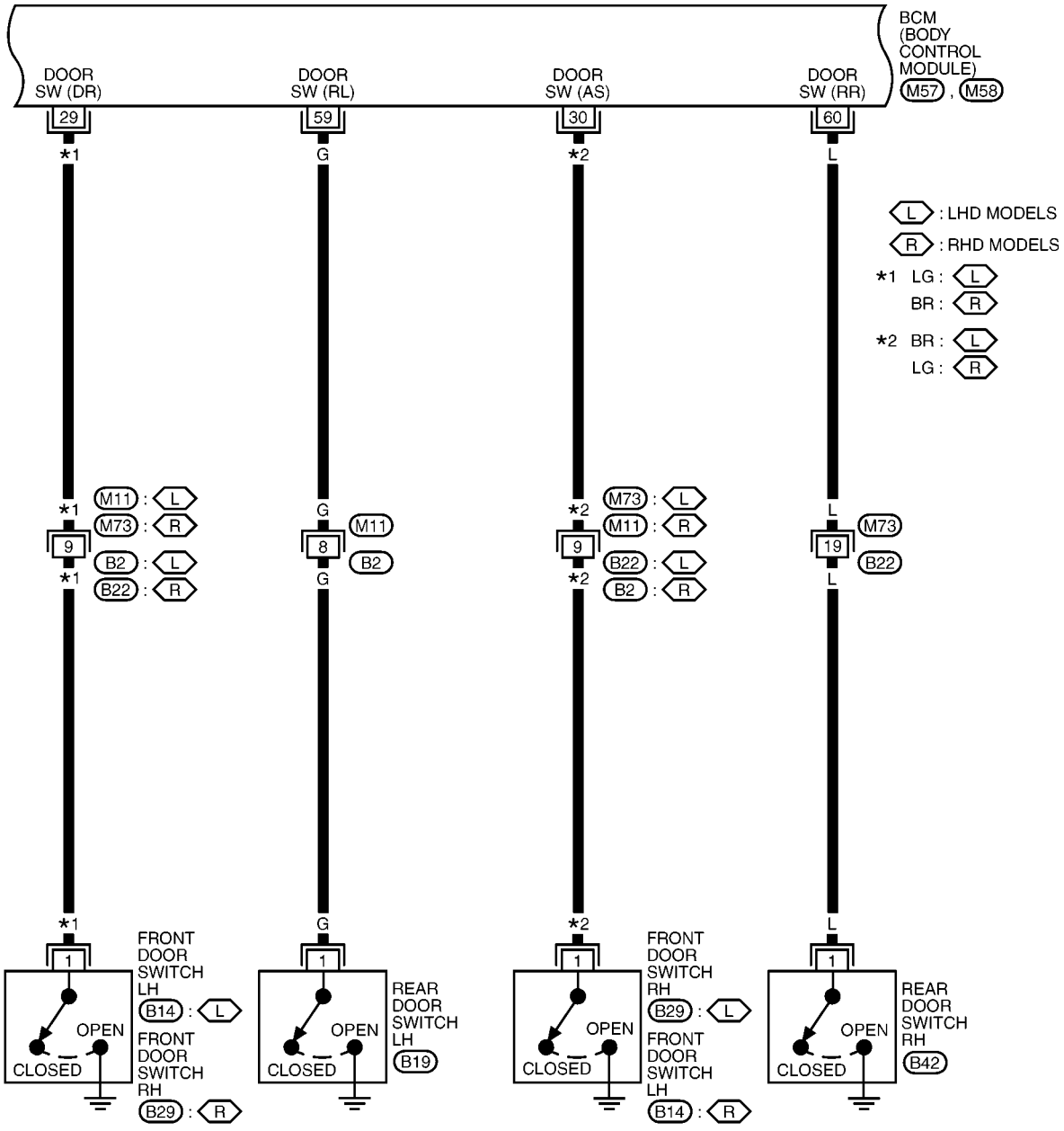


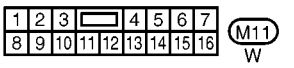


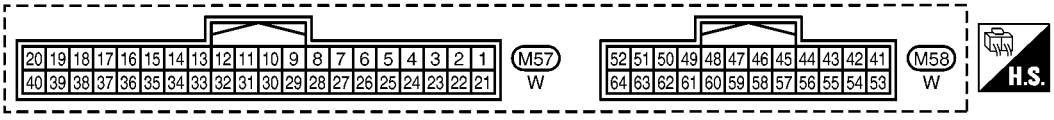
REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

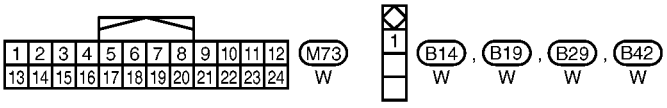
MIWA0716E

BL-MULTI-02



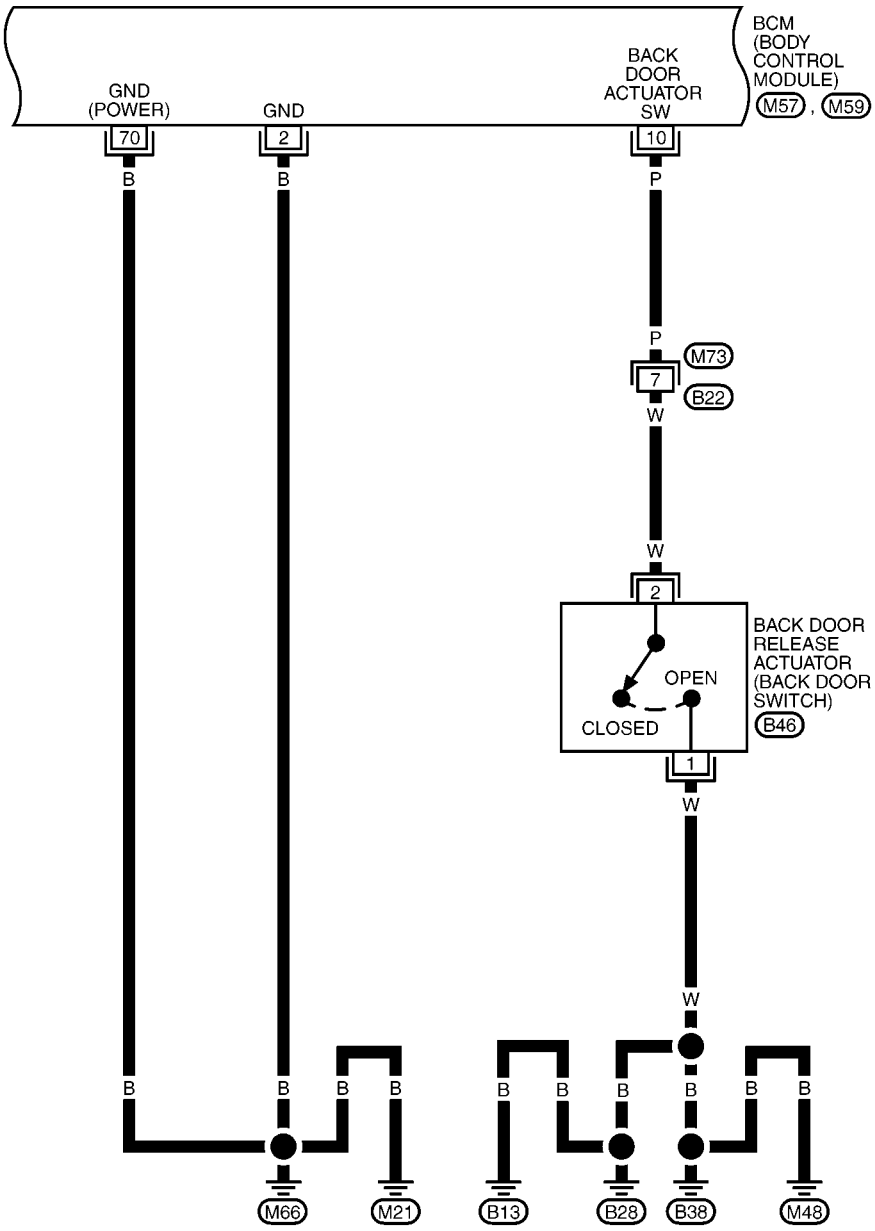


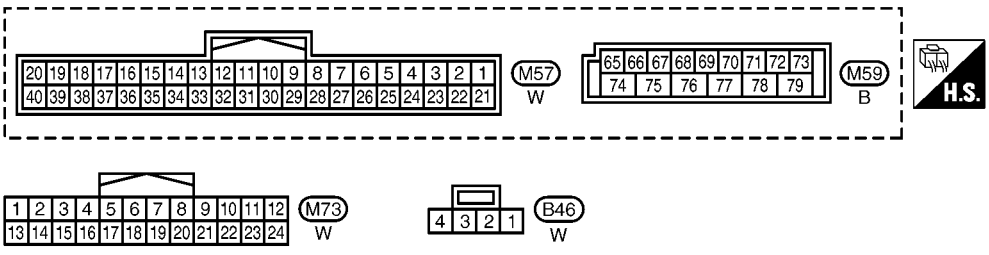




MIWA0717E

BL-MULTI-03

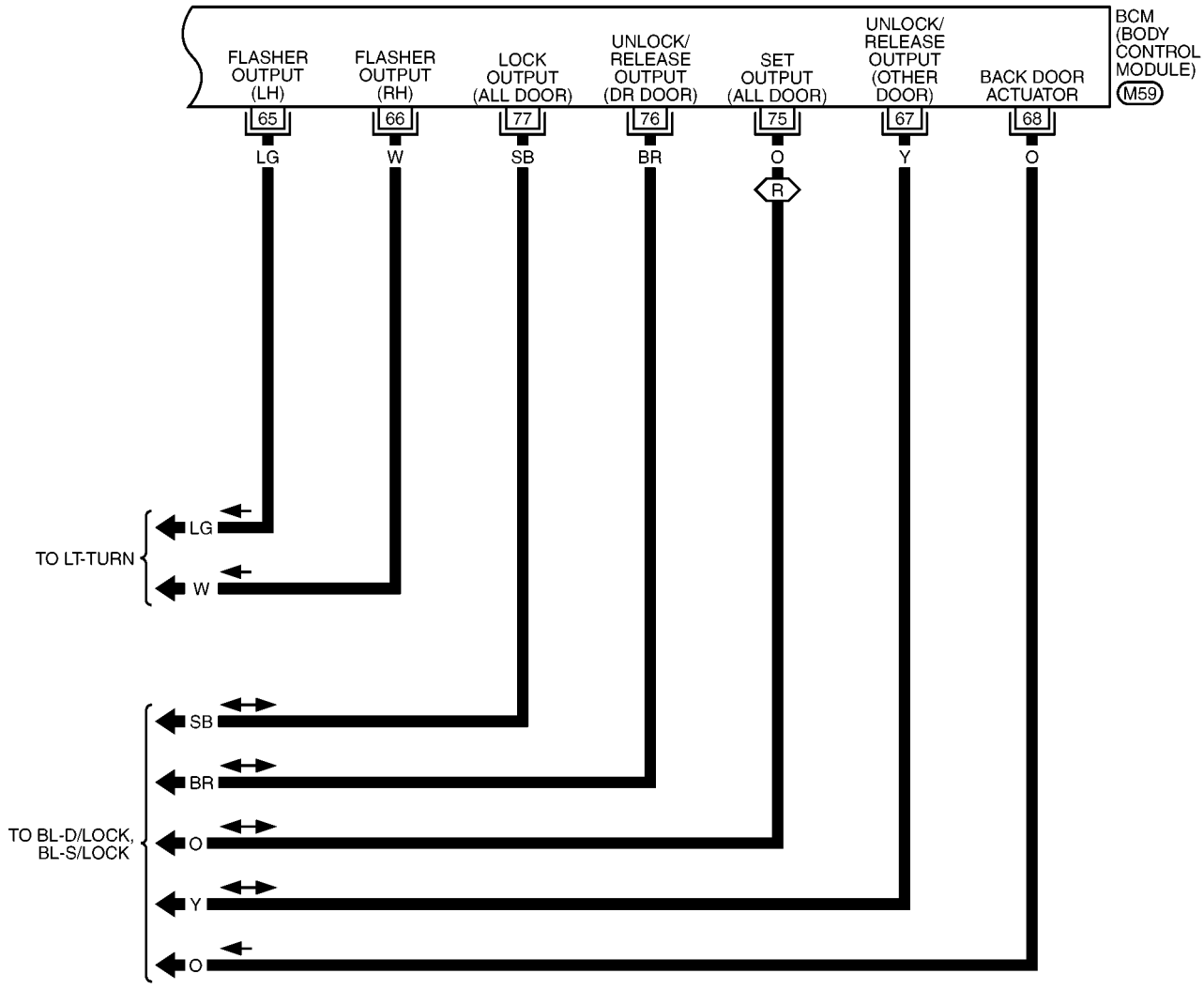


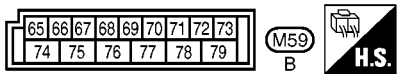


MIWA0718E

BL-MULTI-04

R : RHD MODELS

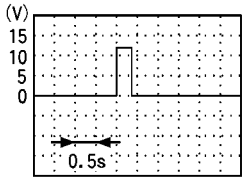
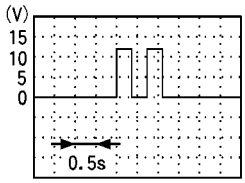
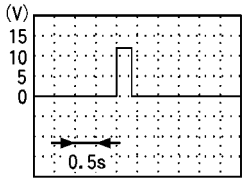
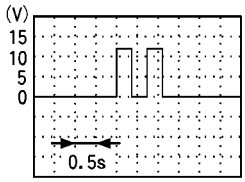




MIWA0719E

Terminal and Reference Value for BCM

BIS000JU

Terminal	Wire color	Item	Signal Input/ Output	Condition	Voltage [V] (Approx.)
2	B	Ground	—	—	0
3	O	Key switch	Input	Key is removed from IGN key cylinder (OFF) → Key is inserted in IGN key cylinder (ON)	0 → Battery voltage
10	P	Back door actuator switch	Input	Back door or trunk lid open (ON) → Back door or trunk lid close (OFF)	0 → Battery voltage
24	O	IGN power supply	Input	Ignition switch is in ON or START position	Battery voltage
29	LG (BR)	Front door switch LH (LHD models) Front door switch RH (RHD models)	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
30	BR (LG)	Front door switch RH (LHD models) Front door switch LH (RHD models)	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
59	G	Rear door switch LH	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
60	L	Rear door switch RH	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
65	LG	Answer back (Turn signal lamp LH)	Output	When door lock operated using remote controller*1	 PIIA2486J
				When door unlock operated using remote controller*1	 PIIA2487J
66	W	Answer back (Turn signal lamp RH)	Output	When door lock operated using remote controller*1	 PIIA2486J
				When door unlock operated using remote controller*1	 PIIA2487J
67	Y	All door lock actuator unlock (Except driver side)	Output	Door lock/unlock switch UNLOCK operation	0 → Battery voltage
68	O	Back door or trunk lid opener actuator	Output	Power window main switch (Back door or trunk lid release switch) OPEN operation	Battery voltage → 0

Termi-nal	Wire color	Item	Signal Input/ Output	Condition	Voltage [V] (Approx.)
70	B	Ground	—	—	0
74	Y	BAT power supply (fusible link) (BCM)	Input	—	Battery voltage
75*2	O	Super lock set output (All door)	Output	Super lock operation (Set)	0 → Battery voltage
76	BR	Door lock actuator unlock (Driver side)	Output	Door lock/unlock switch Unlock operation	0 → Battery voltage
77	SB	Door lock actuator lock (ALL Door)	Output	Door lock/unlock switch LOCK operation	0 → Battery voltage
79	Y	BAT power supply (fusible link) (Power window)	Input	—	Battery voltage

*1 : In the state that answer back operates

*2 : Only the model equipped with super lock system (RHD Models)

(): RHD models

CONSULT- II Inspection Procedure

BIS000JV

Refer to GI-36, "CONSULT-II Start Procedure" .

CONSULT- II Application Items

BIS000JW

DATA MONITOR

Monitored Item	Description
MEMORY 1	Indicates [ON/OFF] condition of remote controller ID code registration.
MEMORY 2	Indicates [ON/OFF] condition of remote controller ID code registration.
MEMORY 3	Indicates [ON/OFF] condition of remote controller ID code registration.
MEMORY 4	Indicates [ON/OFF] condition of remote controller ID code registration.

Work Flow

BIS000JX

1. Check the trouble symptom and customer's requests.
2. Understand outline of system. Refer to BL-112, "System Description" .
3. Confirm that power door lock system operates normally.
   Refer to BL-16, "POWER DOOR LOCK SYSTEM" .
4. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts.
5. INSPECTION END

Trouble Diagnosis Chart by Symptom

BIS000JY

First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-9, "CONSULT-II Function (BCM)" .

NOTE:

- Always check “Work Flow” before troubleshooting. Refer to BL-120, "Work Flow" .
- Always check remote controller battery before replacing remote controller.

Symptom	Diagnoses/service procedure	Reference page
All function of multi-remote control system do not operate.	1. Check remote controller (Reproduce the malfunction using a specific remote controller.)	BL-122
	2. Replace remote controller.	BL-113
	3. Replace BCM.	BCS-17
Door lock or unlock does not function with remote controller. (Power door lock system is “OK”)	1. Check remote controller	BL-122
	2. Check key switch	BL-127
	3. Replace remote controller. **NOTE:** If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	BL-113
	4. Replace BCM.	BCS-17
Answer back does not activate properly when pressing lock or unlock button of remote controller.	1. Check answer back mode.* *: Answer back mode can be changed. First check the hazard reminder setting.	LT-106
	2. Check hazard reminder	BL-128
	3. Replace BCM.	BCS-17
Auto door lock operation does not activate properly. (All other remote keyless entry system function is “OK”.)	1. Check auto door lock operation mode.* *: Auto door lock operation can be changed. First check the auto door lock operation setting.	BL-34
	2. Check door switch	BL-122
	3. Replace BCM.	BCS-17

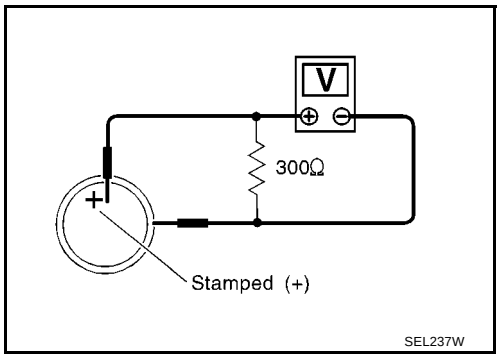
Check Remote controller

BIS000JZ

1. CHECK REMOTE CONTROLLER BATTERY

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

Battery voltage : 2.5V – 3.0V



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

OK or NG

OK >> Replace remote controller.
NG >> Replace battery. Refer to BL-129, "Remote Controller Battery Replacement" .

Check Door Switch

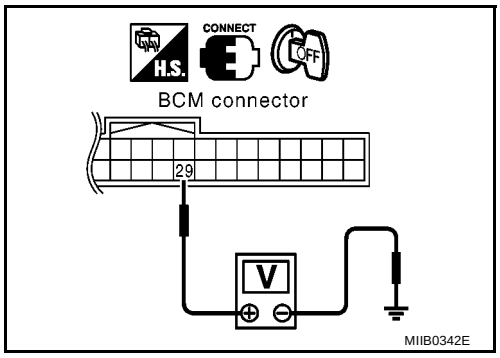
BIS000K0

DOOR SWITCH DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M57 terminal 29 and ground.

Terminal			Driver door condition	Voltage (V) Approx.
(+)		(–)		
LHD Models	29	Ground	Closed	5
RHD Models			Open	0



OK or NG

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

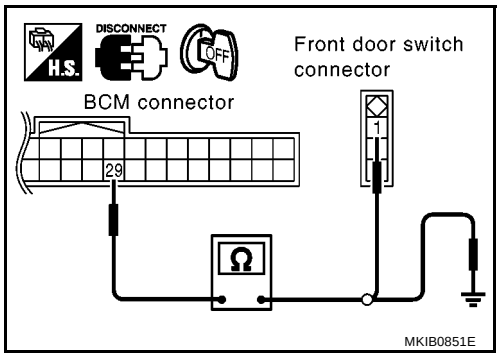
2. CHECK DOOR SWITCH HARNESS

1. Check continuity between BCM connector M57 terminal 29 and driver door switch connector B14 (LHD Models) or B29 (RHD Models) terminal 1.

Terminal		Continuity
LHD Models	29 - 1	Yes
RHD Models		Yes

2. Check continuity between BCM connector M57 terminal 29 and ground.

Terminal			Continuity
LHD Models	29	Ground	Continuity should not exist.
RHD Models			



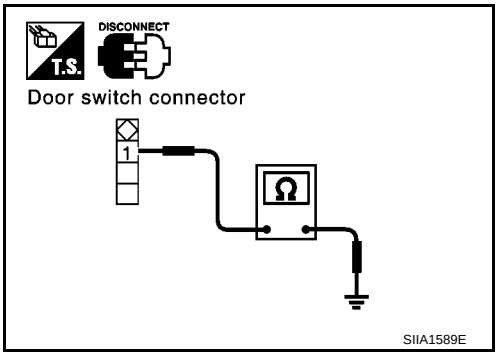
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between driver door switch terminal 1 and ground part of door switch.

Terminal	Driver door switch condition	Continuity
1 - Ground part of door switch	Pushed	No
	Released	Yes



OK or NG

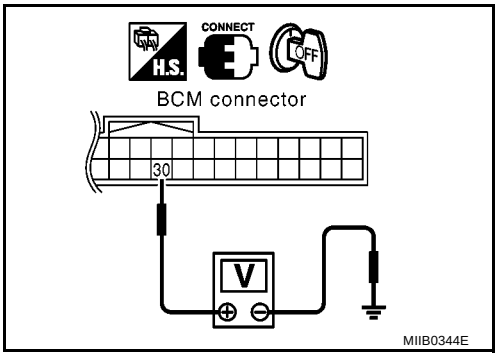
OK >> Check driver door switch ground condition.
NG >> Replace driver door switch.

DOOR SWITCH PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M57 terminal 30 and ground.

Terminal (+)		Terminal (–)	Passenger door condition	Voltage (V) Approx.
LHD Models	30	Ground	Closed	5
RHD Models			Open	0



OK or NG

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

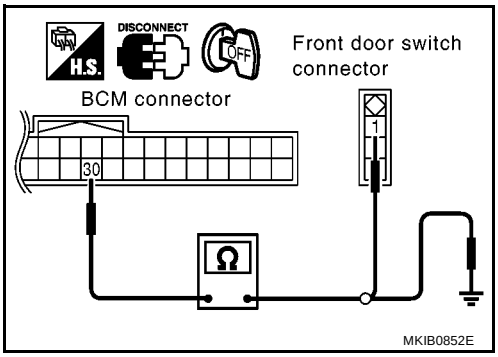
2. CHECK DOOR SWITCH HARNESS

1. Check continuity between BCM connector M57 terminal 30 and passenger door switch connector B29 (LHD Models) or B14 (RHD Models) terminal 1.

Terminal		Continuity
LHD Models	30 - 1	Yes
RHD Models		Yes

2. Check continuity between BCM connector M57 terminal 30 and ground.

Terminal			Continuity
LHD Models	30	Ground	Continuity should not exist.
RHD Models			



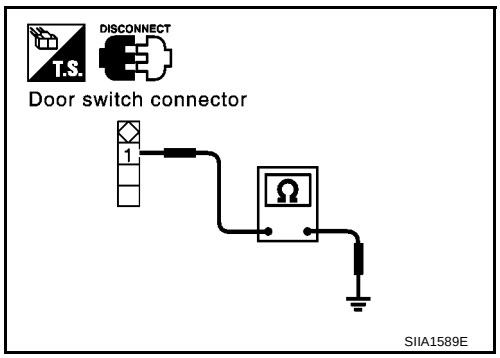
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between passenger door switch terminal 1 and ground part of door switch.

Terminal	Passenger door switch condition	Continuity
1 - Ground part of door switch	Pushed	No
	Released	Yes



OK or NG

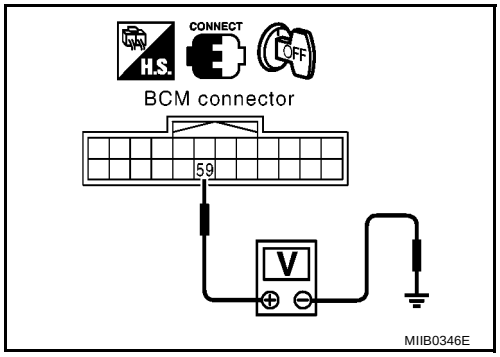
OK >> Check passenger door switch ground condition.
NG >> Replace passenger door switch.

DOOR SWITCH REAR LH

1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M58 terminal 59 and ground.

Terminal		Rear door LH condition	Voltage (V) Approx.
(+)	(–)		
59	Ground	Closed	5
		Open	0



OK or NG

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

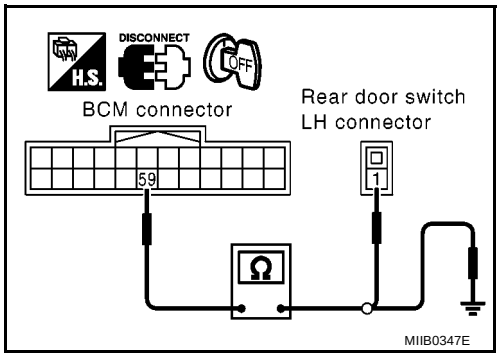
2. CHECK DOOR SWITCH HARNESS

1. Check continuity between BCM connector M58 terminal 59 and rear door switch LH connector B19 terminal 1.

   59 – 1 : Continuity should exist.

2. Check continuity between BCM connector M58 terminal 59 and ground

   59 – Ground : Continuity should not exist.



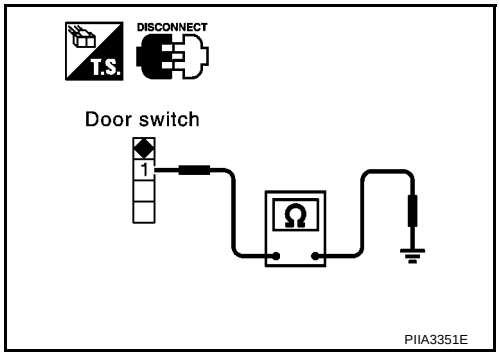
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between rear door switch LH terminal 1 and ground part of door switch.

Terminal	Rear door switch LH condition	Continuity
1 - Ground part of door switch	Pushed	No
	Released	Yes



OK or NG

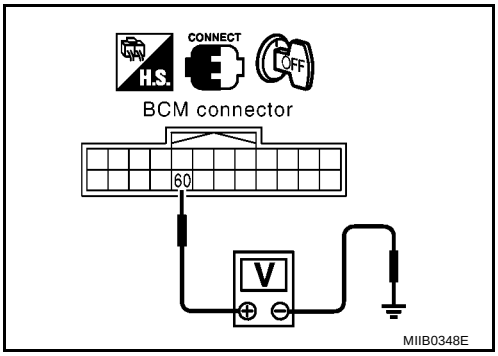
OK >> Check rear door switch LH ground condition.
NG >> Replace rear door switch LH.

DOOR SWITCH REAR RH

1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M58 terminal 60 and ground.

Terminal		Rear door RH condition	Voltage (V) Approx.
(+)	(–)		
60	Ground	Closed	5
		Open	0



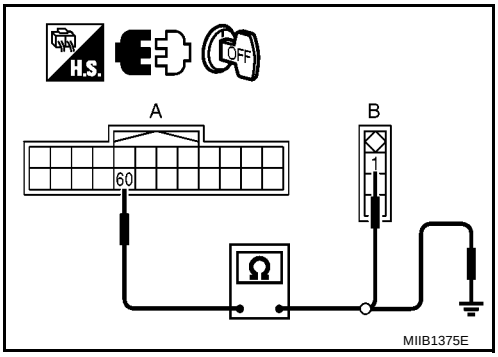
OK or NG

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

2. CHECK DOOR SWITCH HARNESS

1. Check continuity between BCM connector and rear door switch RH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch RH	Terminal	
M58	60	B42	1	Yes



2. Check continuity between BCM connector and ground

A		Ground	Continuity
BCM connector	Terminal		
M58	60		No

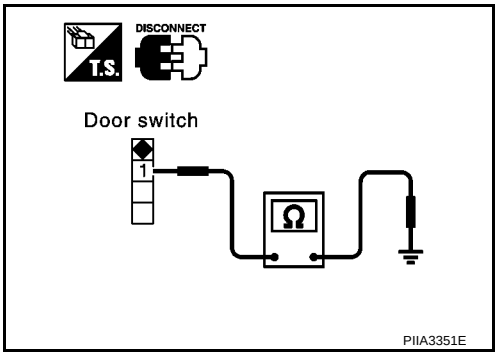
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between rear door switch RH terminal 1 and ground part of door switch.

Terminal	Rear door switch RH condition	Continuity
1 - Ground part of door switch	Pushed	No
	Released	Yes



OK or NG

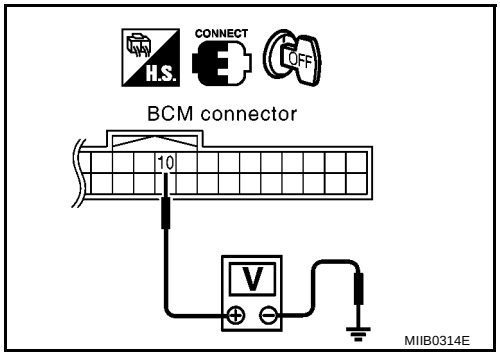
OK >> Check rear door switch RH ground condition.
NG >> Replace rear door switch RH.

BACK DOOR RELEASE ACTUATOR (BACK DOOR SWITCH)

1. CHECK BACK DOOR RELEASE ACTUATOR (BACK DOOR SWITCH) INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M57 terminal 10 and ground.

Terminal		Back door condition	Voltage (V) Approx.
(+)	(–)		
10	Ground	Closed	5
		Open	0



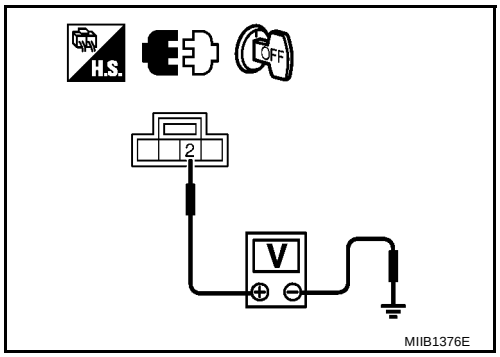
OK or NG

OK >> Back door switch circuit is OK.
NG >> GO TO 2

2. CHECK BACK DOOR RELEASE ACTUATOR (BACK DOOR SWITCH) HARNESS

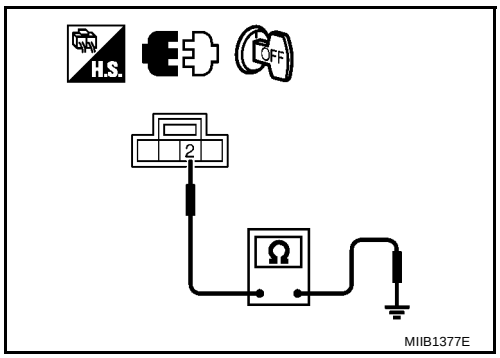
1. Disconnect back door release actuator (back door switch) connector.
2. Check voltage between back door release actuator (back door switch) connector and ground. (Check harness for open.)

Back door switch connector	Terminal	Ground	Voltage (V) (Approx.)
B46	2		Battery voltage



3. Disconnect BCM connector.
4. Check continuity between back door release actuator (back door switch) connector and ground. (Check harness for short.)

Back door switch connector	Terminal	Ground	Continuity
B46	2		No



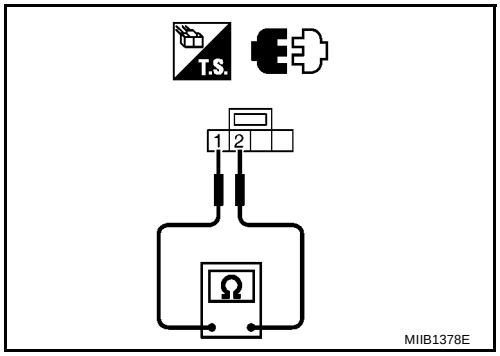
OK or NG

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

3. CHECK BACK DOOR SWITCH

Check continuity between back door release actuator (back door switch) terminal 1 and 2.

Back door switch	Terminal		Rear door condition	Continuity
	1	2	Closed	No
			Opened	Yes



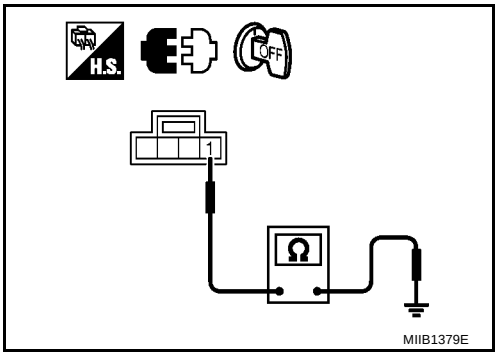
OK or NG

OK >> GO TO 4.
NG >> Replace back door release actuator (back door switch).

4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door release actuator (back door switch) connector and ground.

Back door switch connector	Terminal	Ground	Continuity
B46	1		Yes



OK or NG

OK >> Check harness connection.
NG >> Replace back door switch.

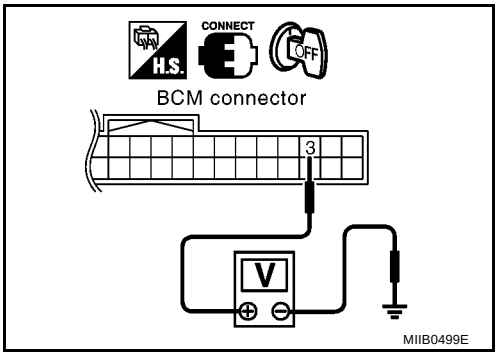
Key Switch Check

BIS000K1

1. CHECK KEY SWITCH INPUT SIGNAL

Check voltage between BCM connector M57 terminal 3 and ground.

Terminals		Key switch condition	Voltage (V) Approx.
(+)	(–)		
3	Ground	Key is inserted in IGN key cylinder (key switch is “ON”.)	Battery voltage
		Key is removed from IGN key cylinder (Key switch is “OFF”.)	0



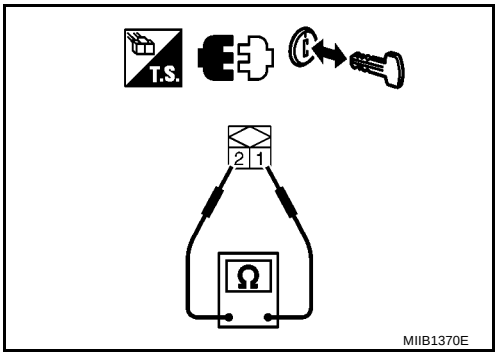
OK or NG

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

2. CHECK KEY SWITCH (INSERT)

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

	Terminals		Condition	Continuity
Key switch	1	2	Key is inserted	YES
			Key is removed	NO



OK or NG

OK >> Check the following.
- 10A fuse [No. 9, 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.

Hazard Reminder Check

BIS000K2

1. CHECK HAZARD WARNING LAMP

Check if hazard warning lamp flashes with hazard switch.

Does hazard warning lamp operate?

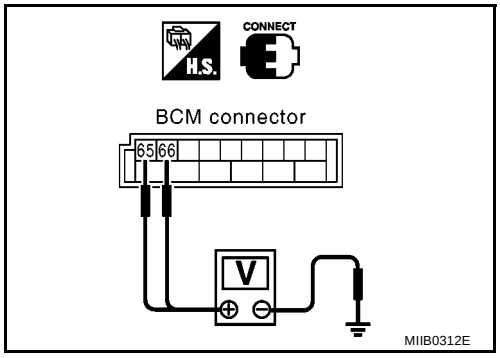
Yes >> GO TO 2

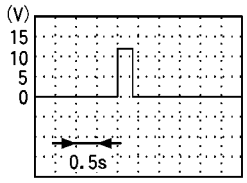
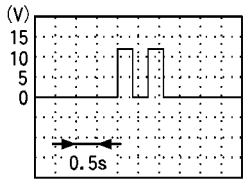
No >> Check hazard warning lamp circuit. Refer to LT-98, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

2. CHECK HAZARD REMINDER OPERATION

Check the following at when push the remote controller switch.

Check voltage between BCM harness connector M59 terminal 65, 66 and ground.



Remote controller	Voltage (V) Approx.
Pushing LOCK button	 PIIA2486J
Pushing UNLOCK button	 PIIA2487J

OK or NG

OK >> Check harness for open between BCM and hazard switch.

NG >> Check harness for short between BCM and hazard switch. If check result is “OK”, replace BCM. If check result is “NG”, repair or replace harness.

Remote Controller Battery Replacement

BIS000K3

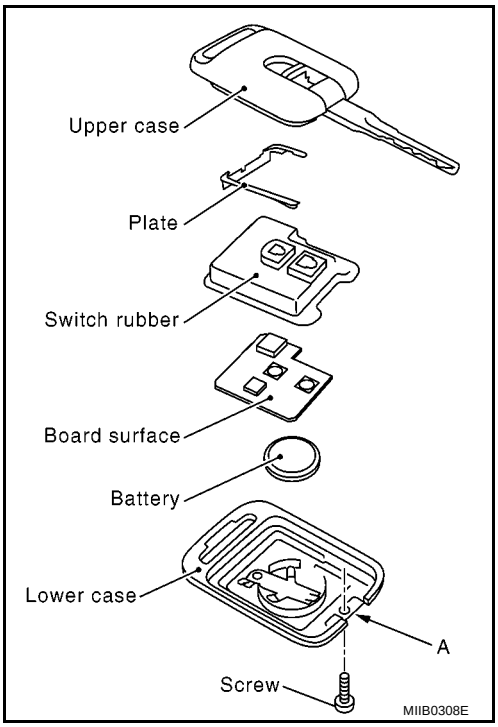
1. Remove installation screw on the rear of remote controller.
2. Place the key with the lower case facing up. Set a screwdriver wrapped with tape into section A of the lower case and separate the lower case from the upper case.
3. When replacing the circuit board assembly, remove circuit board assembly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

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

   Battery replacement : Coin-type lithium battery (CR1620)

   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 cases together, part and tighten with the screw.

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

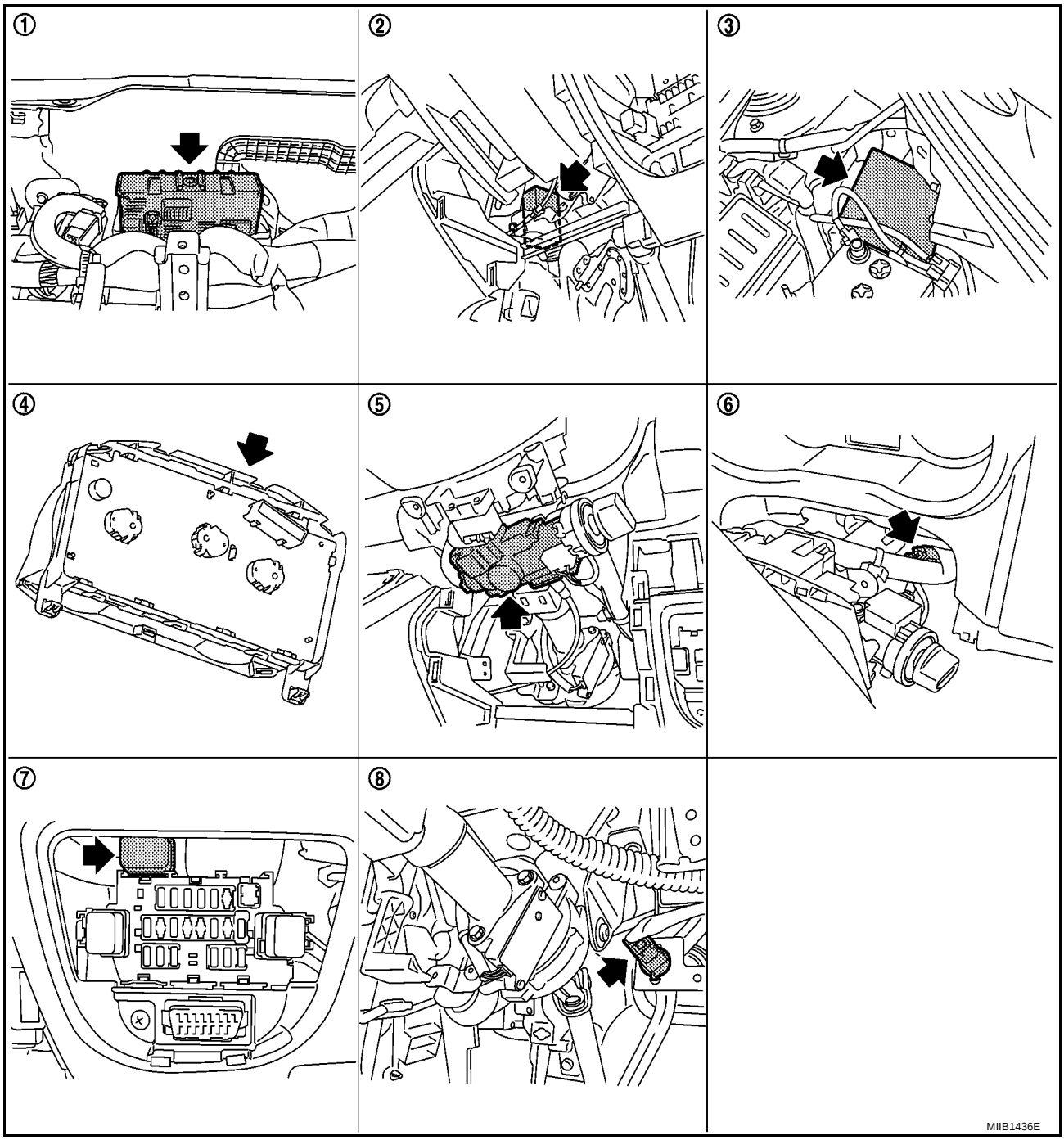


INTELLIGENT KEY SYSTEM

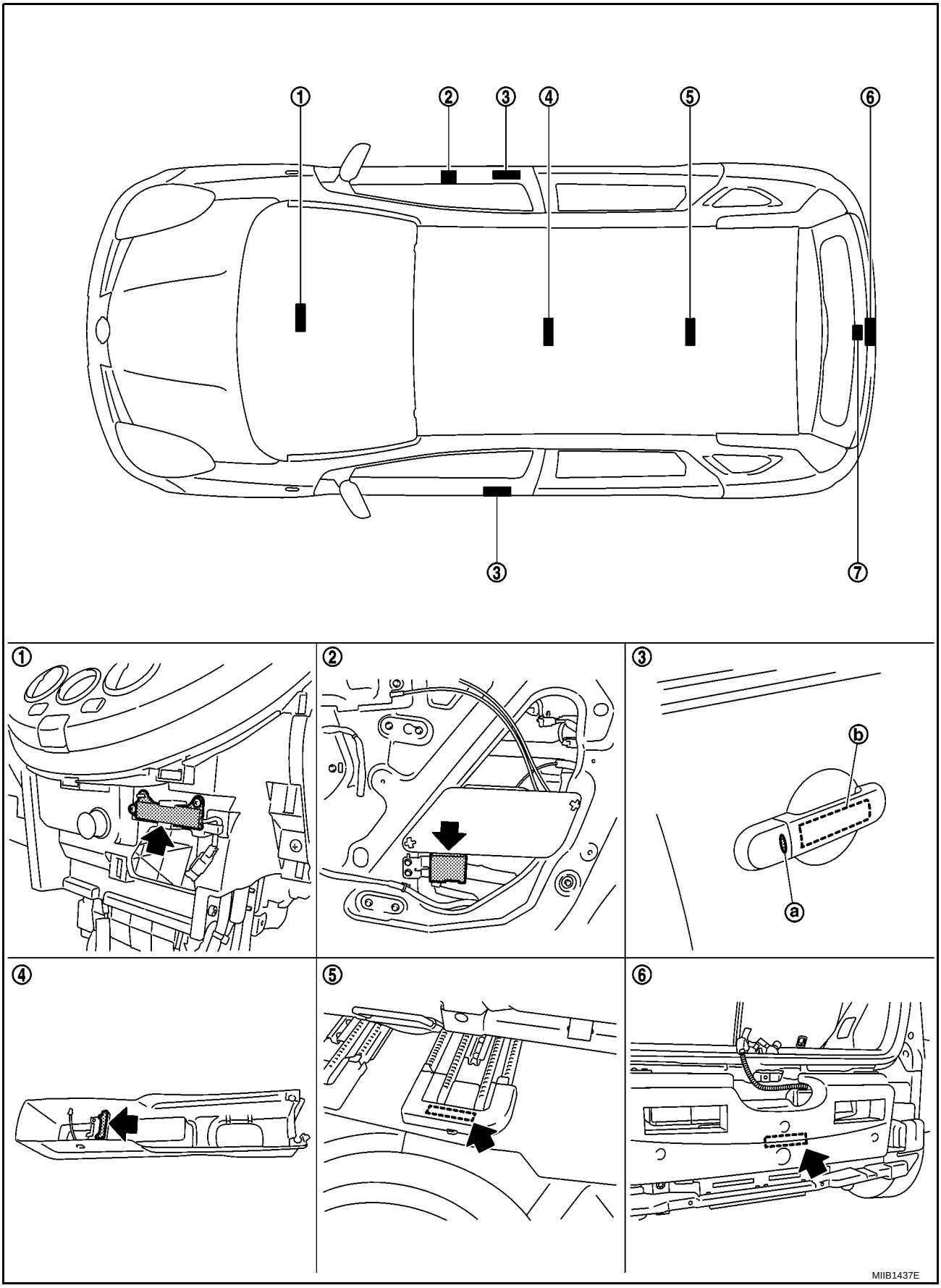
PFP:285e2

Component Parts and Harness Connector Location

BIS000K4



1. BCM M57, M58, M59
2. Intelligent Key unit M60
3. IPDM E/R E6, E10, E11, E12
4. Combination meter M27
5. Steering lock unit M37
6. Key switch and ignition knob switch M34
7. Door lock relay M20
8. Stop lamp switch
   E38: LHD CR engine and HR engine M/T models
   E60: LHD HR engine A/T models and K9K engine models
   M203: RHD CR engine and HR engine M/T models
   M204: RHD HR engine A/T models and K9K engine models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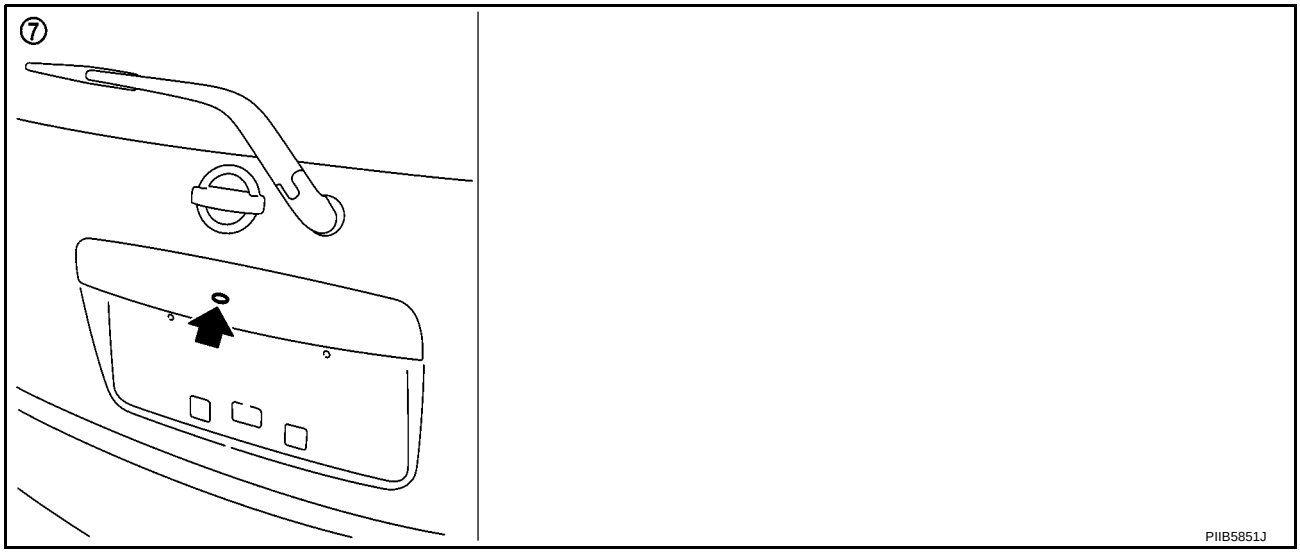


1. Inside key antenna (dash board) M47
2. Intelligent key warning buzzer D10
3. a: Door request switch (driver side) D12
   Door request switch (passenger side) D29
   b: Outside antenna (driver side) D13
   Outside antenna (passenger side) D30
4. Inside key antenna (center console) B20
5. Inside key antenna (luggage room) B32
6. Outside antenna (back door) B43
7. Door request switch (back door) D102

System Description

BIS000K6

- The Intelligent Key system is a system that makes it possible to lock and unlock the door locks (door lock function) and start the engine (engine start function) by carrying the Intelligent Key, which operates based on the results of electrical key-ID verification using two-way communications between the Intelligent Key and the vehicle.
- Operation of the remote control buttons on the Intelligent Key also provides the same functions as the remote control entry system. (Remote control entry functions)
- As an ignition key warning function, when a door lock is locked or unlocked with door request switch or Intelligent Key button operation, the hazard lamps flashes and sound the Intelligent Key buzzer.
- Even if the vehicle or Intelligent Key battery runs out, the door locks can be locked and unlocked and the engine can be initiated by the mechanical key built-in the Intelligent Key.
- If Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It has been made possible to diagnose the system, change the function setting and register Intelligent Key with the CONSULT-II.

DOOR LOCK FUNCTION

Operation Description

- When the driver door, passenger door, or back door request switch is pressed, Intelligent Key unit sends a request signal from the transmission antenna corresponding to the pressed door request switch, key-ID verification is performed using two-way communication with Intelligent Key, and if ID is successfully verified, a door lock/unlock request signal is sent to BCM (Body Control Module) through CAN communication to lock/unlock the door lock.
- With the locking operation of door request switch, door lock actuators of all doors will be locked.

Driver side door request switch operation

- When door request switch (driver side) is pressed, driver side door lock actuator will be unlocked.
- When door request switch (driver side) is pressed for the second time, within 5 seconds after the first the remaining doors will be unlock.

- Unlock mode can be changed using “WORK SUPPORT” mode in “LOCK/UNLOCK BY I-KEY”. Refer to BL-155, "CONSULT-II Function (INTELLIGENT KEY)" .

Passenger side door request switch operation

- When door request switch (passenger side) is pressed, passenger side door will be unlocked.
- When door request switch (passenger side) is pressed for the second time, with in 5 seconds after the first operation, the remaining doors will be unlock.
- Unlock mode can be changed using “WORK SUPPORT” mode in “LOCK/UNLOCK BY I-KEY”. Refer to BL-155, "CONSULT-II Function (INTELLIGENT KEY)" .

Operation Condition

Request switch operation	Operating conditions (When all the conditions below are met)
Door request switch (driver side) Door request switch (passenger side) Door request switch (back door)	● All doors closed (door switch: OFF) ● Key switch OFF (key removed) ● Ignition knob switch: OFF (ignition knob switch not pressed) ● The Intelligent Key is in the antenna detection area for the door for which the door request switch was operated.

Operation Range

The antenna detection area for each door is about 80 cm (31.50 in) from the handle of each door (driver door, passenger door and back door). However, this operating range may differed by the ambient conditions.

Auto Door Lock Function

When the door request switches are pressed and doors are locked or unlocked once, during this state, door lock will re-lock automatically unless the following conditions are met.

- Mechanical key is inserted into ignition knob.
- Ignition knob is pressed.
- Any of the doors is opened.
- Intelligent Key button is operated within 30 seconds.

Key Reminder Function

As an operation confirmation, when the doors are lock or unlock by using door request switch or Intelligent Key, hazard lamps flashes and Intelligent Key warning buzzer sounds.

Vehicle operation	Hazard lamp	Intelligent Key warning buzzer
Door unlock operation	Twice	Twice
Door lock operation	Once	Once

Intelligent Key Lock-in Prevention Function

When Intelligent Key is within the vehicle, a door is open or doors are locked using door lock and unlock switch, driver door lock knob or door request switch, Intelligent Key unit sends door unlock request signal to BCM via CAN communication to unlock all doors to prevent Intelligent Key from being locking in vehicle.

CAUTION:

The functions mentioned above are operable when the Intelligent Key is inside the vehicle. However, there may be times that the Intelligent Key cannot be detected in some blind spot of the inside key antennas. Thus engine start function system might not response when the Intelligent Key is placed on the instrument panel, rear parcel shelf or in the glove box. Furthermore, by placing the Intelligent Key in the door pocket and opening the door may interrupt the communication between the Intelligent Key and the antennas.

REMOTE CONTROL ENTRY FUNCTIONS

Door Lock Function

- Operating the button on the Intelligent Key sends the Intelligent Key-ID signals to the Intelligent Key unit. Intelligent Key unit conducts a verification of the received key-ID, and if the verification is accepted, a door lock or door unlock request signal is sent to BCM via CAN communication to lock/unlock the door lock.
- When door lock/unlock is performed using Intelligent Key button operation, confirmation is conducted by making hazard lamps flashes and Intelligent Key warning buzzer sounds.

OPERATION CONDITION

Intelligent Key operation	Operation condition
Door lock operation	● All doors closed ● Key switch OFF (key removed) ● Ignition knob switch: OFF (ignition knob not pressed)
Door unlock operation	● Key switch OFF (key removed) ● Ignition knob switch: OFF (ignition knob not pressed)

MT vehicle Key Interlock function

In case of a MT vehicle is in motion and ignition knob is turned into lock position, steering lock unit pose a risk by activating the steering lock actuator. The key interlock function is designed to override the steering lock system and prevent situation mention above to occur.

LOCK condition

When the following condition had been fulfilled and then key interlock solenoid will be locked. (Steering lock inactive)

- When ignition switch is in ON position and engine revolution speed went above 500rpm. (1 second delay)

UNLOCK condition

When any of the following conditions had been fulfilled and then key interlock solenoid will be unlocked (Steering lock active)

- When vehicle speed is below 4 km/h and the ignition switch is turned from ON to OFF (1 second delay)
- When vehicle speed is over 4 km/h but less than 10 km/h and ignition switch is turned from ON to OFF. (3 seconds delay)

Map Lamp Function

When the following conditions is met:

- Condition of map lamp switch is DOOR position
- Door switch OFF (when all the doors are closed)

Remote keyless entry system turns on interior lamp (for 30 seconds) once input of UNLOCK signal from Intelligent Key is received.
For detailed description. Refer to LT-152, "INTERIOR ROOM LAMP TIMER OPERATION" .

ENGINE STARTUP FUNCTION

Operation Description

- When ignition knob is pressed, Intelligent Key unit sends request signal from inside key antenna, key-ID verification is conducted with Intelligent Key using two-way communication, and if verification is successful, an ignition rotation prohibition latch release signal is sent to steering lock unit and releases ignition knob rotation prohibition latch. (Ignition knob can now be turned)

  NOTE:
  When it becomes impossible to rotate the ignition knob, “KEY” warning lamp in combination meter lights up red.
- When key-ID verification is successful and ignition knob switch is in the ON state, Intelligent Key unit uses CAN communication to send engine start permission signal to BCM.
- When BCM receives engine start permission signal, it uses CAN communication to sent starter request signal to IPDM E/R so that the engine will start when ignition knob is rotated to START position.

Operation Range

Engine can be started when Intelligent Key is in side the vehicle. However, sometimes engine might not start when Intelligent Key is on instrument panel, rear parcel shelf, or in glove box.

NOTE:
Luggage room is not within the operation range, but sometimes it is possible to start the engine from there.

Active Check Function

Confirm whether or not ignition knob can be rotated by checking the color of warning lamp in combination meter.

Condition	Operation
Ignition knob rotation possible	“KEY” warning lamp in combination meter is lit up green.
Ignition knob rotation not possible	“KEY” warning lamp in combination meter is lit up red.

WARNING AND ALARM FUNCTION

Operation Description

Warnings and alarms shown as follows and are given to the user as warning notice when using the combinations of Intelligent Key warning buzzer (driver door), inside vehicle buzzer (in combination meter), and warning lamps “KEY” and “LOCK.”

- Ignition switch return forgotten warning
  With the ignition in OFF or ACC position, if the driver door is opened, this warning is issued.
- Key left in ignition warning (when mechanical key is used)
  While the mechanical key in the ignition knob and the ignition switch is in the OFF, ACC, or LOCK position, if the driver door is opened, this warning is issued.
- Ignition switch OFF position warning (combination buzzer: when door closed)
  This warning is issued when the user forgets to return the ignition knob to the LOCK position.
- Ignition switch OFF position warning [Intelligent key warning buzzer (driver door): when door opened/closed]
  This warning is issued when the user leaving the car without returning the ignition knob to the LOCK position.
- This warning is issued if the Intelligent Key is taken outside the car while the engine is running. (when door open → closed)
- This warning is issued if the Intelligent Key is taken outside the car through a window while the engine is running. (from window)
- Intelligent Key low battery warning
  This warning is issued when it detects that the battery in the Intelligent Key is running low.

Operation Condition

Warning and alarm names	Operating conditions (when all the conditions below are met)
Ignition knob return forgotten warning	● The ignition switch is in the ACC, OFF, or LOCK position (knob pressed) ● The driver door is opened.
Ignition key warning (When mechanical key used)	● The mechanical key is inserted in the ignition knob (key switch: ON) ● The ignition switch is in the ACC, OFF, or LOCK position. ● The driver door opened.
Ignition knob OFF position warning (driver side door buzzer: when door closed)	● The ignition switch is in the OFF or LOCK position (knob pressed) ● In the above state, when the ACC switch is switched from ON to OFF and 1 second passes. (However, this warning is not issued if the mechanical key is inserted in the ignition knob.)
Ignition knob OFF position warning (E/G room buzzer: when door opened/closed)	● The ignition switch is in the OFF or LOCK position (knob pressed) ● In the above state, when the ACC switch is changed from ON to OFF and 1 second passes. (However, this warning is not issued if the mechanical key is inserted in the ignition knob.) ● Driver door open → closed
Warning for Intelligent Key taken outside the car (when door open → closed)	When Any of the Following Conditions Are Met ● When the ignition knob is pressed in so that it can be rotated (or has been rotated), if any of the doors has been opened, when all the doors are closed, the Intelligent Key unit compares the key-ID with the Intelligent Key using the inside key antenna (center console), if the results of the comparison are NG (the Intelligent Key is not found) ● When the ignition knob is pressed and rotated (or has been rotated), if any of the doors is open, the Intelligent Key unit compares the key-ID with that of the Intelligent Key every 5 seconds using the inside key antenna (center console), if the results of the comparison are NG (the Intelligent Key is not found) **NOTE:** However, this warning is not issued if the mechanical key is inserted in the ignition knob.

Warning and alarm names	Operating conditions (when all the conditions below are met)
Warning for Intelligent Key taken out from the window	When the ignition knob is pressed in so that it can be rotated (or has been rotated), if the vehicle speed is no greater than 5 km per hour, the Intelligent Key unit compares the key-ID with that of the Intelligent Key every 30 seconds using the inside key antenna (center console), if the results of the comparison are NG (the Intelligent Key is not found) Note: The default setting for this function is OFF.
Door lock non-operation warning	When any of the following conditions are met Intelligent Key Lock-in Prevention Warning ● When the Intelligent Key is inside the car and the ignition knob is not pressed, when an attempt is made to lock a door lock with a door request switch. **NOTE:** This warning is issued even if the Intelligent Key is not in the door antenna detection area corresponding to the door request switch was operated. Knob Return Forgotten Warning ● When the ignition knob is pressed, when an attempt is made to lock a door lock with a door request switch. **NOTE:** This warning is only issued if the Intelligent Key is in the door antenna detection area corresponding to the door request switch was operated. Door Ajar Alarm ● When any of the doors is open, when an attempt is made to lock a door with a door request switch. **NOTE:** This warning is only issued if the Intelligent Key is in the door antenna detection area corresponding to the specific door request switch was operated.
Intelligent Key low battery pre-warning	This warning is issued when the battery of the Intelligent Key is running low.

Warning Procedure

Warning and alarm names	Buzzer		Warning lamp	
	Inside car	Outside car	“KEY”	“LOCK”
Ignition switch return forgotten warning	Buzzer: Continuous	—	—	—
Ignition key warning (When mechanical key is used)	Buzzer: Continuous	—	—	—
Ignition switch OFF position warning (for inside car: when door closed)	Buzzer (twice)	—	—	Illuminate
Ignition switch OFF position warning (for outside car: when door opened → closed)	—	Buzzer (3 seconds)	—	Illuminate
Warning for removal of Intelligent Key to outside the car (when door open → closed)	—	Buzzer (3 seconds)	Red illuminate	—
Warning for removal of Intelligent Key to outside the car (from window)	Buzzer (3 seconds)	—	Red illuminate	—
Door lock non-operation warning	—	Buzzer (2 seconds)	—	—
Intelligent Key low battery pre-warning	—	—	Green illuminate (30 seconds after ignition switch comes ON)	—

CHANGE SETTINGS FUNCTION

The settings for each function can be changed with the CONSULT-II or Intelligent Key.

Changing Anti-Hijack Function Settings With the Intelligent Key

Intelligent Key remote controller button and door request switch operations change the Anti-hijack function settings (enabled/disabled).

Settings Change Procedure

1. Hold down both the LOCK and UNLOCK remote control buttons on the Intelligent Key at the same time for at least 10 seconds (The yardstick is that the Intelligent Key LED flashes 20 times.)
2. Within 3 seconds of releasing the Intelligent Key remote controller buttons, press the driver door request switch for once.
3. The KEY indicator in combination meter lights up for 3 seconds (Anti-hijack: enabled → disabled: lights up red, Anti-hijack: disabled → enabled: flashes green). This completes the setting procedure.

Changing Settings Using CONSULT-II

The settings for the Intelligent Key system functions can be changed using CONSULT-II (WORK SUPPORT).

NOTE:
Once a function setting is changed, it will remain effective even if the battery is disconnected.

INTELLIGENT KEY REGISTRATION

Intelligent Key-ID registration is executed using the CONSULT-II. Up to 4 Intelligent Key can be registered.

CAUTION:

- **After a new Intelligent Key-ID is registered, be sure to check the function.**
- **When registering an additional Intelligent Key-ID, remove any registered Intelligent Keys out of the vehicle before starting.**

CONSULT-II can be used to check and delete Intelligent Key-IDs.
For future information, see the CONSULT-II Operation Manual NATS.

STEERING LOCK UNIT REGISTRATION

Steering Lock Unit ID Registration

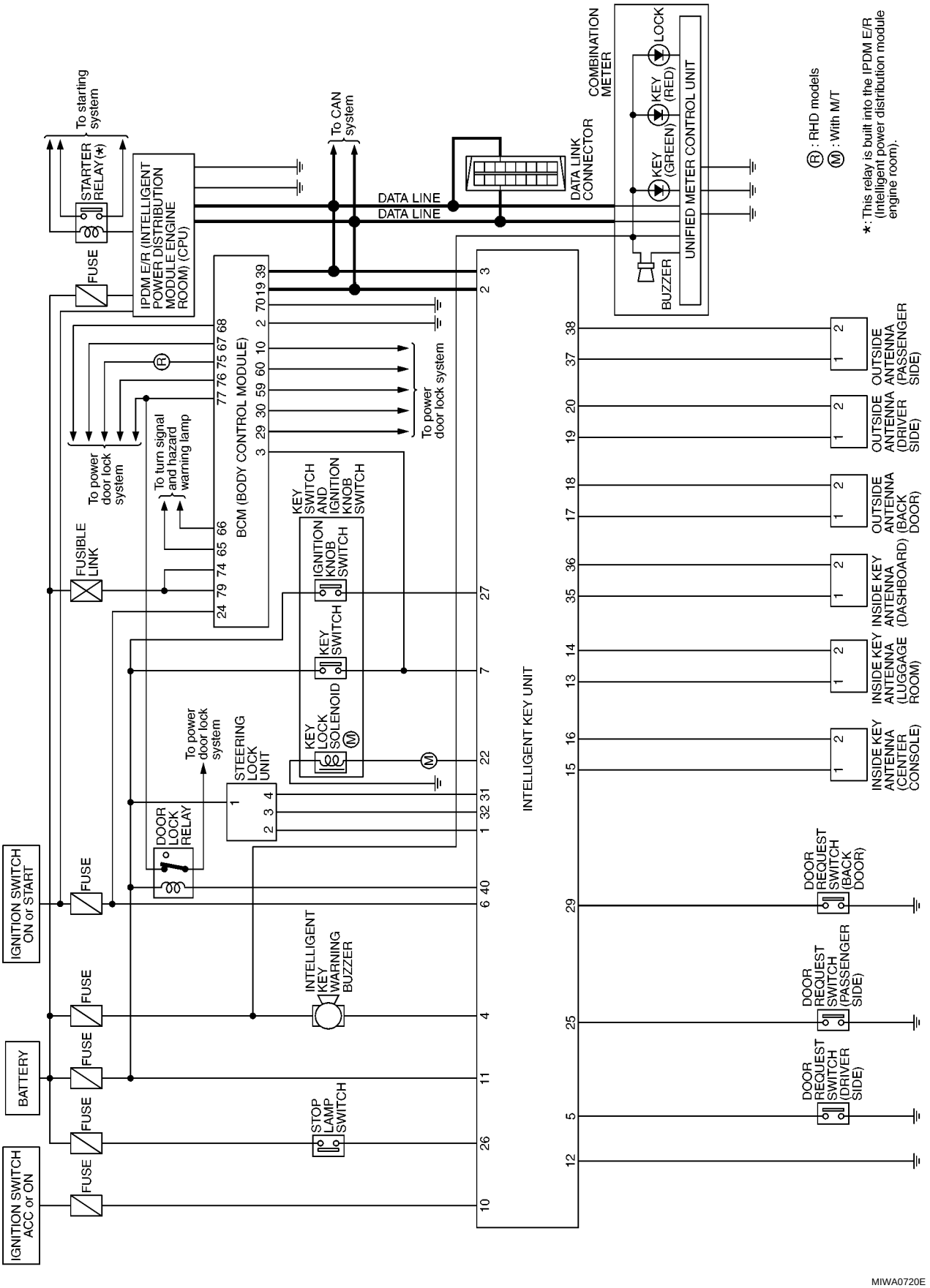
CAUTION:
The method for registering a steering lock unit ID depends on the status of the steering lock unit and Intelligent Key unit (new or old unit).
After the registration procedures are completed

- **Press and rotate the ignition knob while the registered Intelligent Key is within the vehicle to confirm the registration procedure.**
- **Press and rotate the ignition knob while the registered Intelligent Key is removed from the vehicle to confirm the registration procedure.**

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

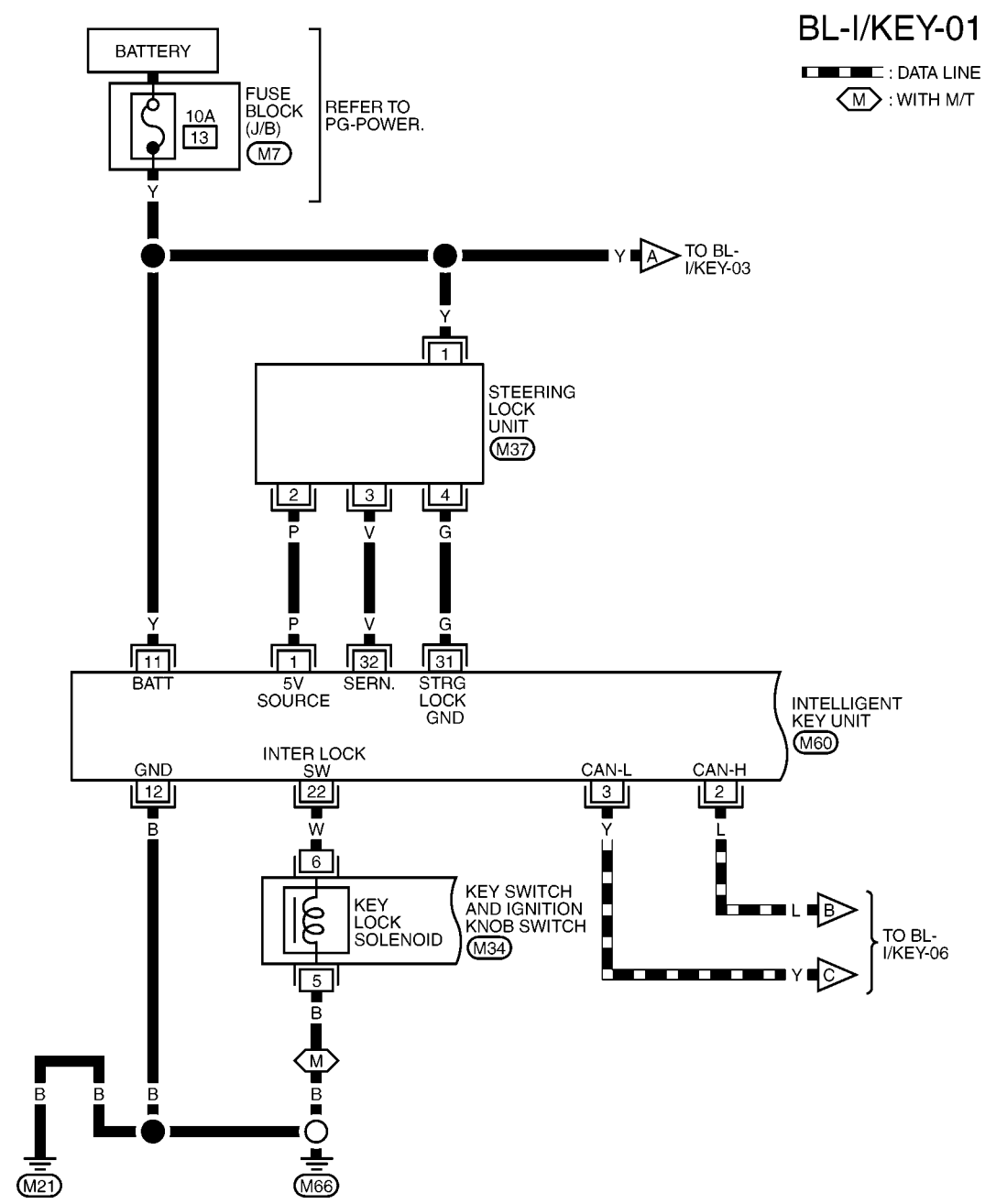
Schematic —I/KEY—

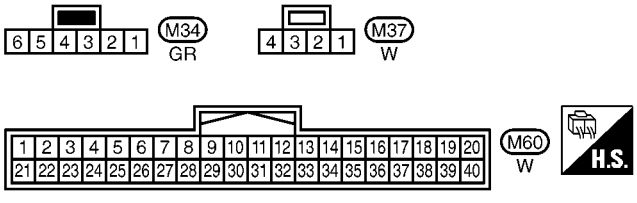
BIS000K9



Wiring Diagram — I/KEY—

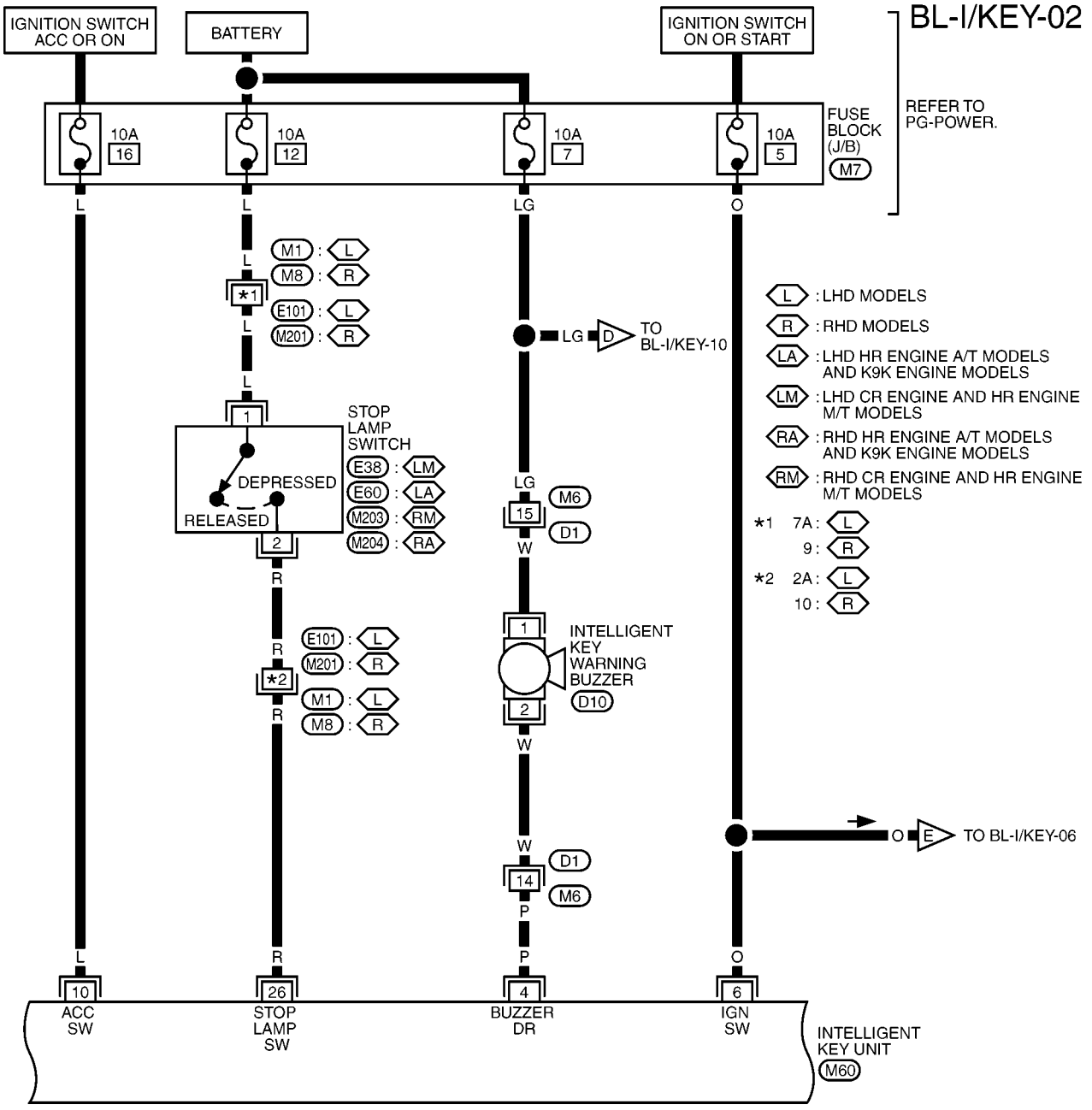
BIS000KA

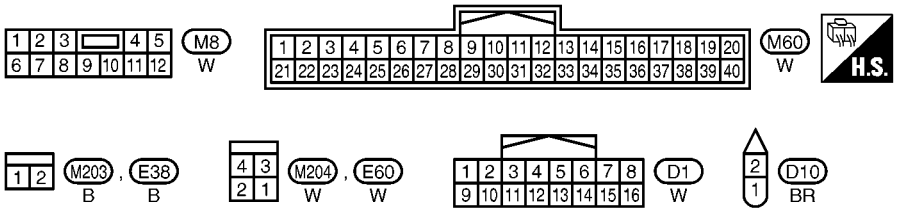




REFER TO THE FOLLOWING.
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0721E

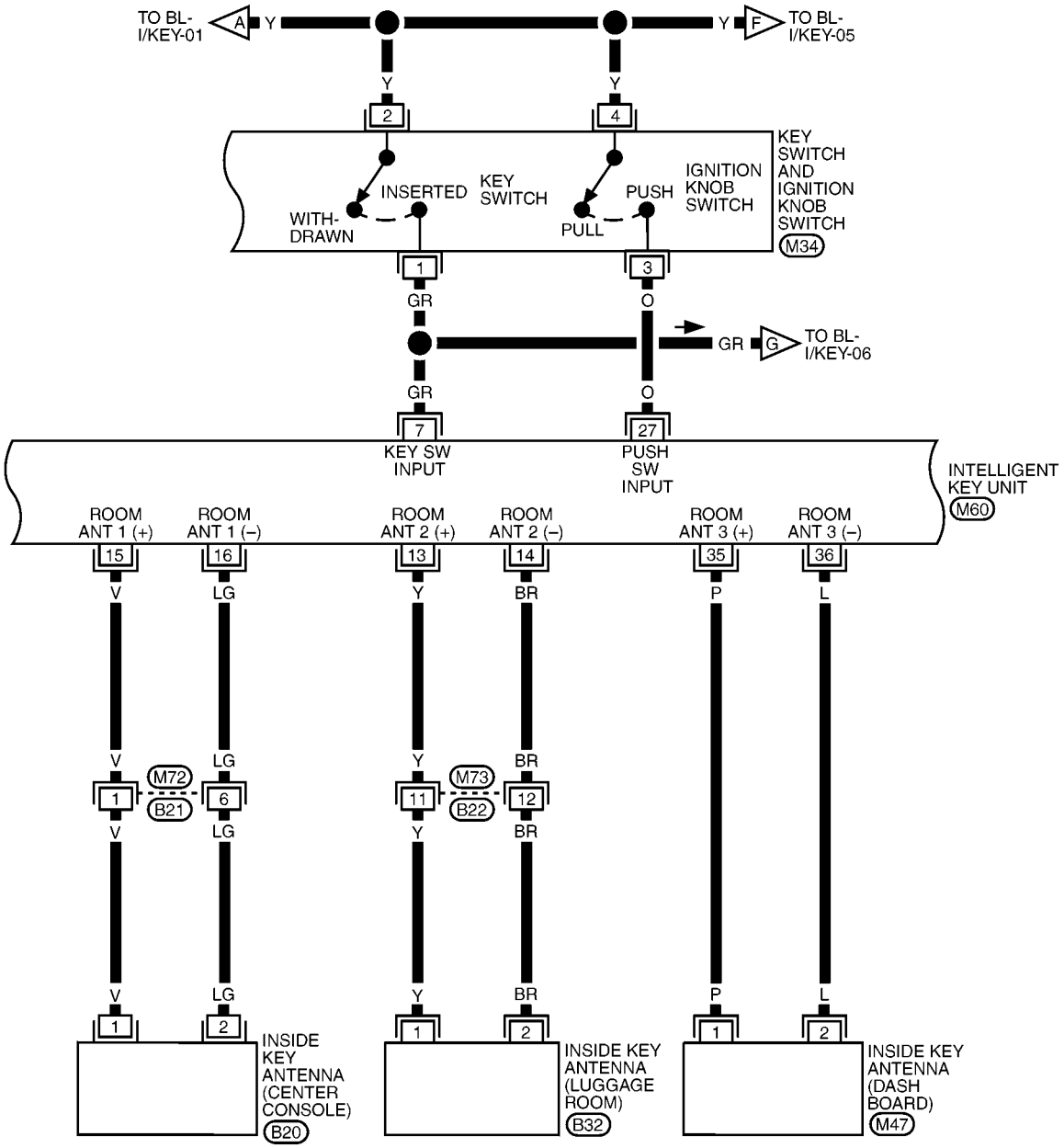


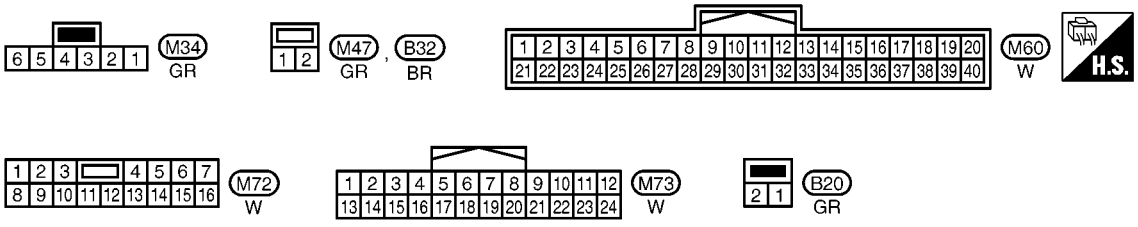


REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0722E

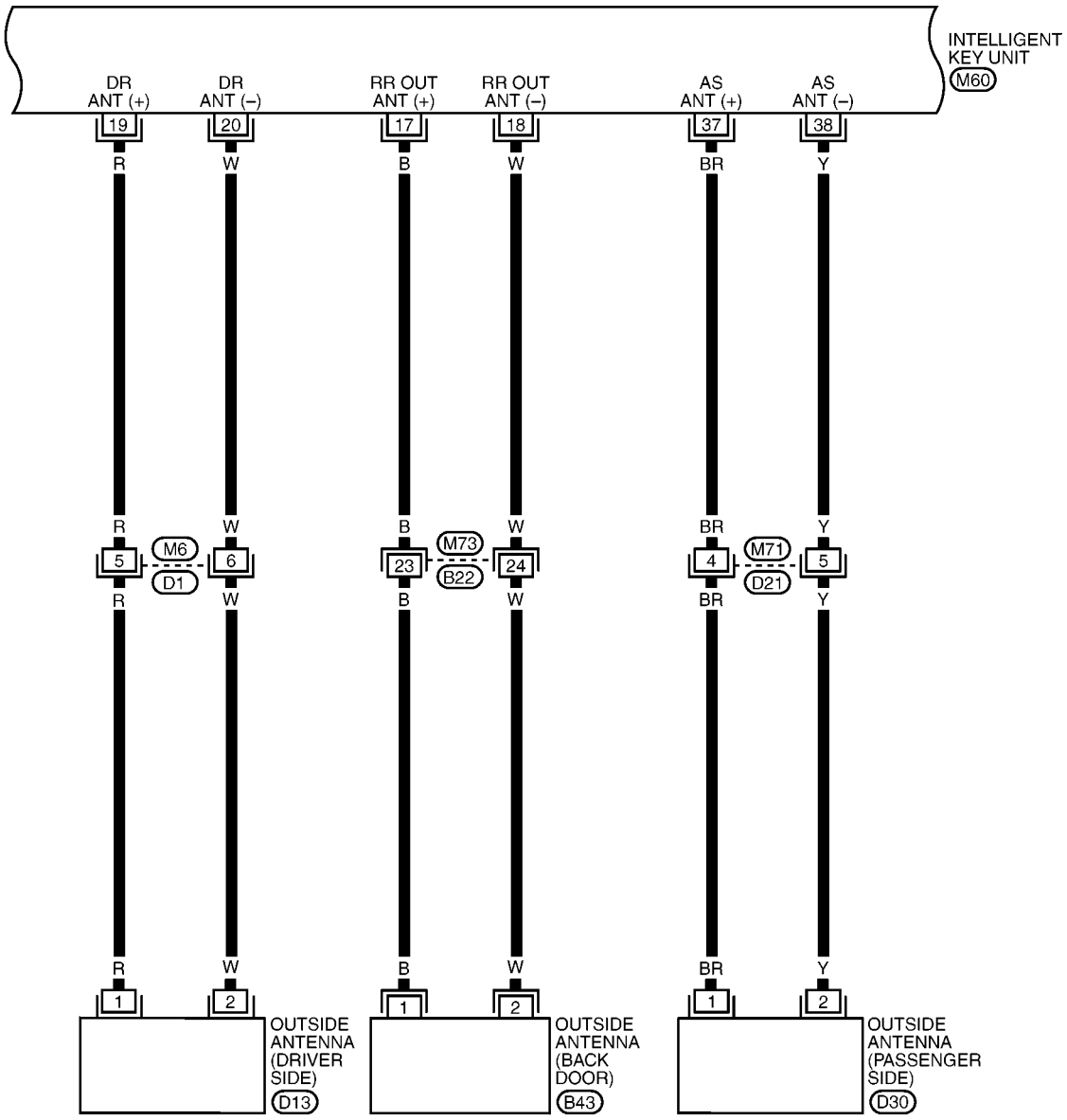
BL-I/KEY-03





MIWA0723E

BL-I/KEY-04



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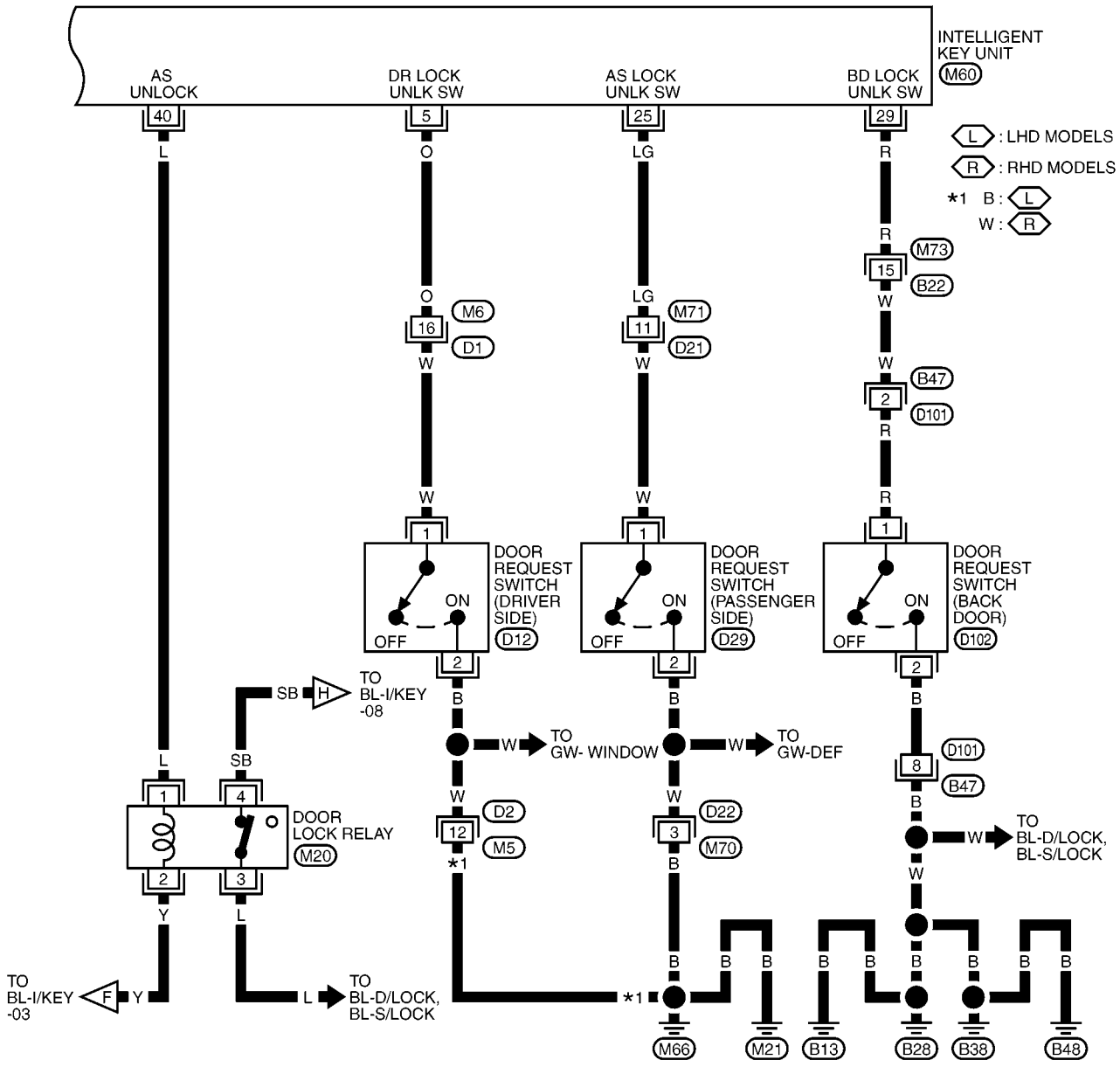
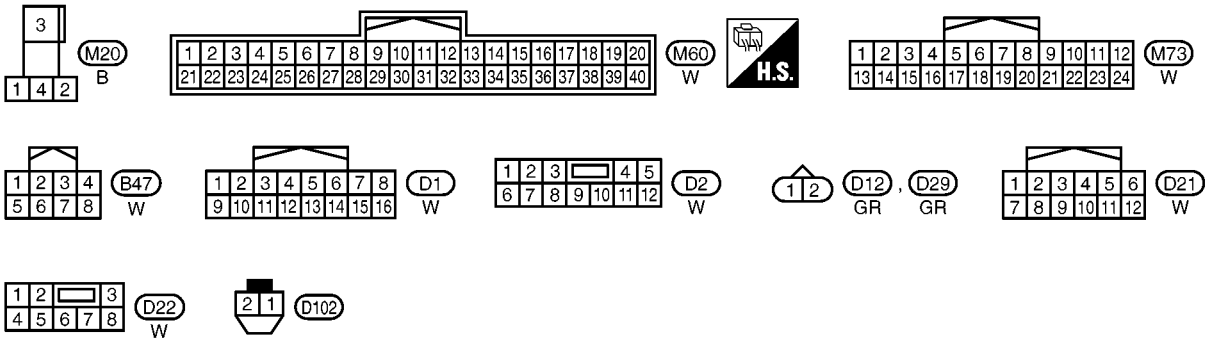
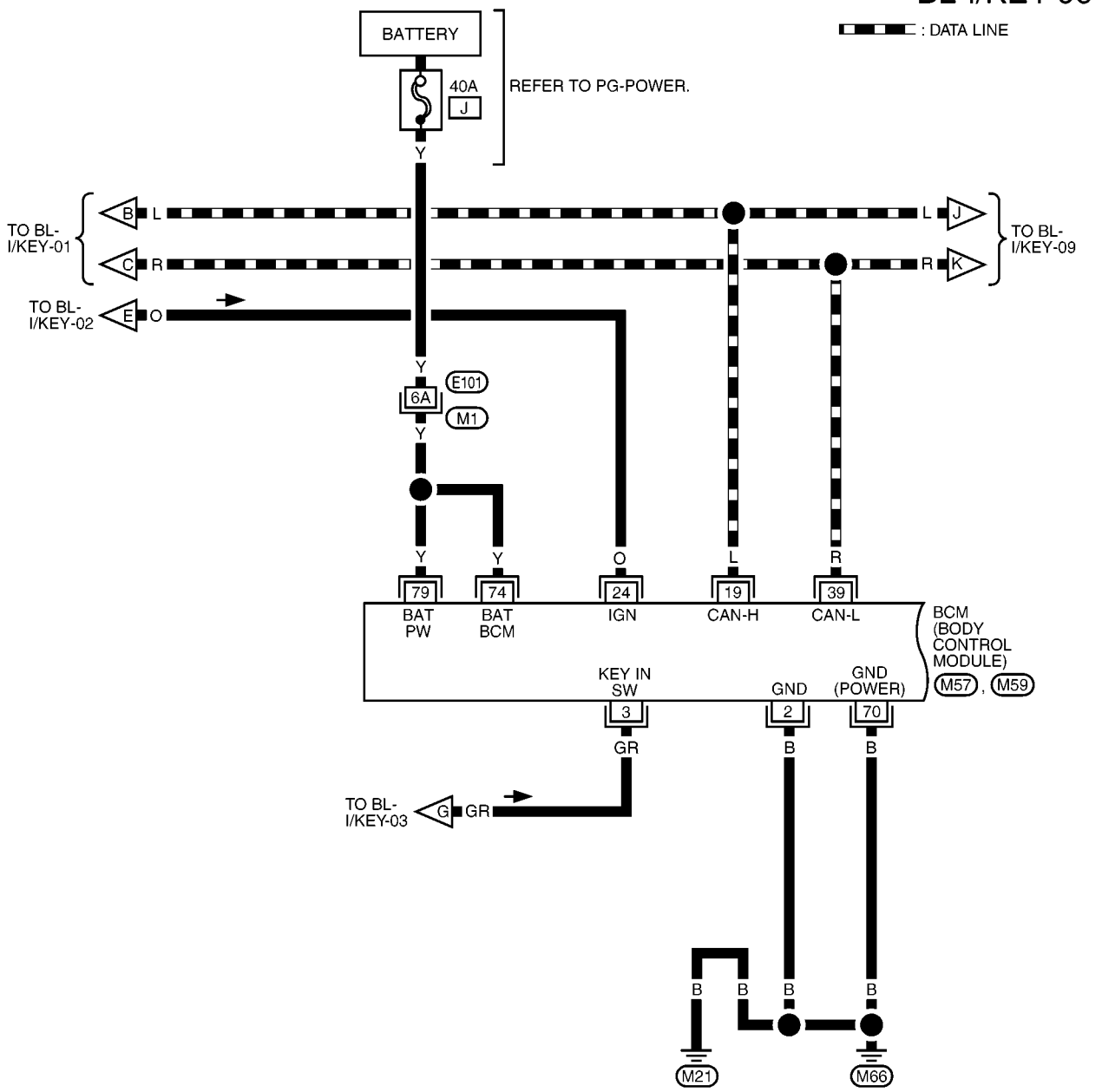
BL-I/KEY-05

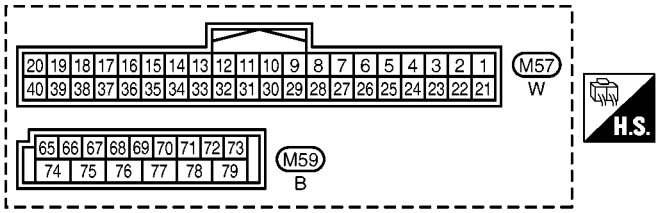




MIWA0725E

BL-I/KEY-06

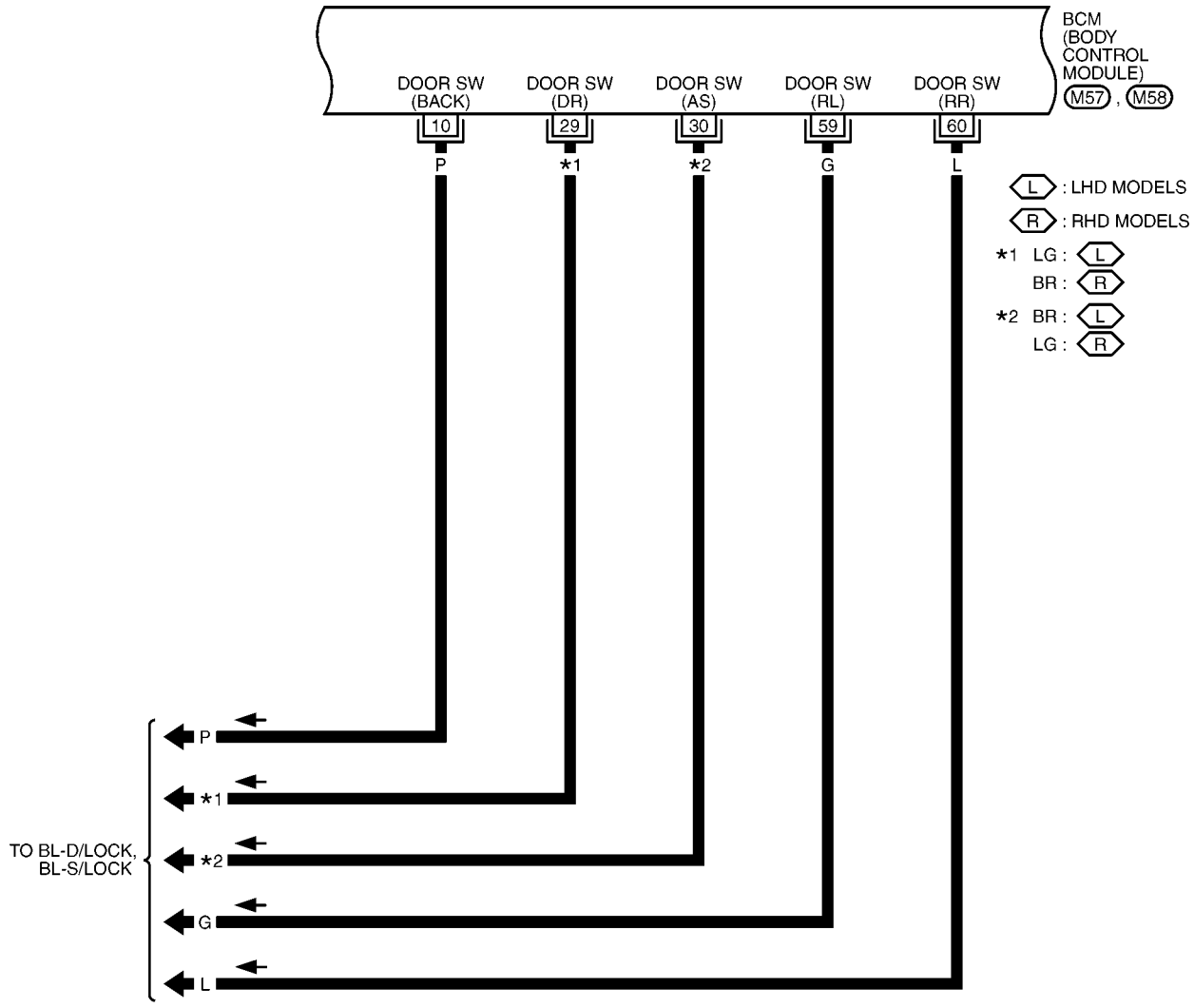


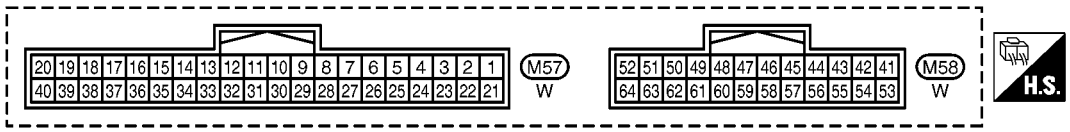


REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)

MIWA0726E

BL-I/KEY-07

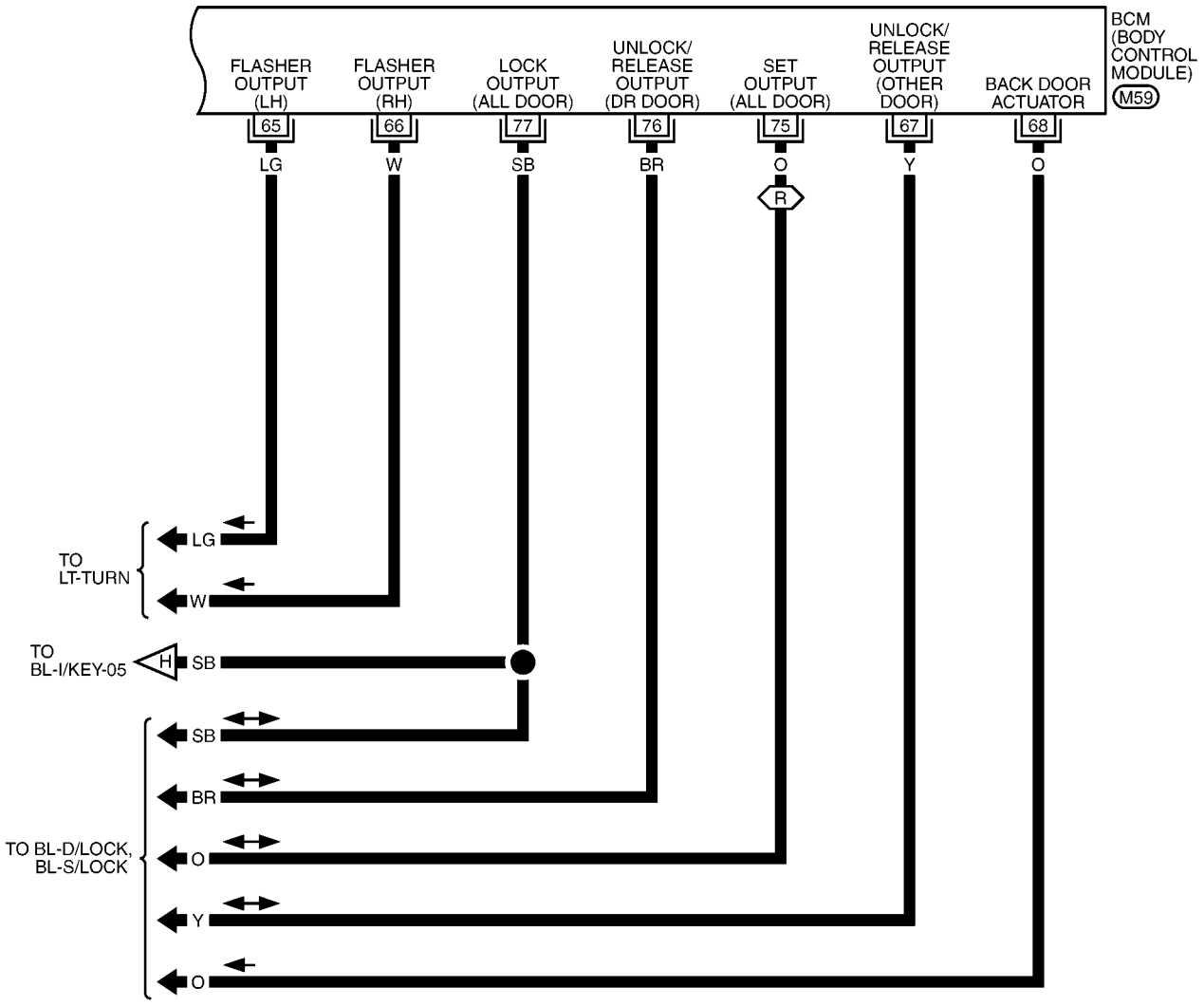


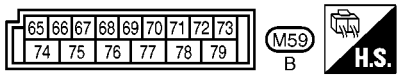


MIWA0727E

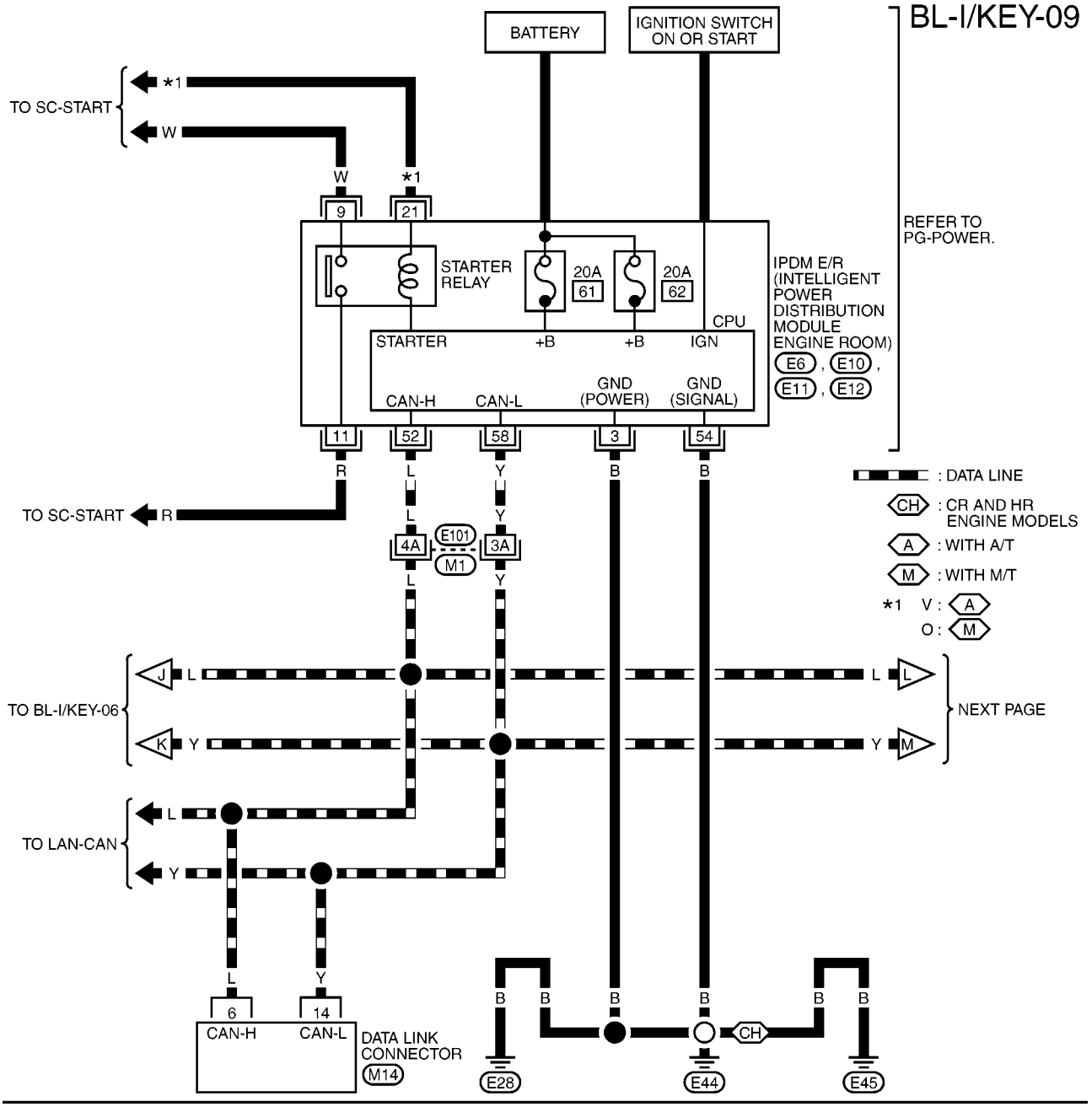
BL-I/KEY-08

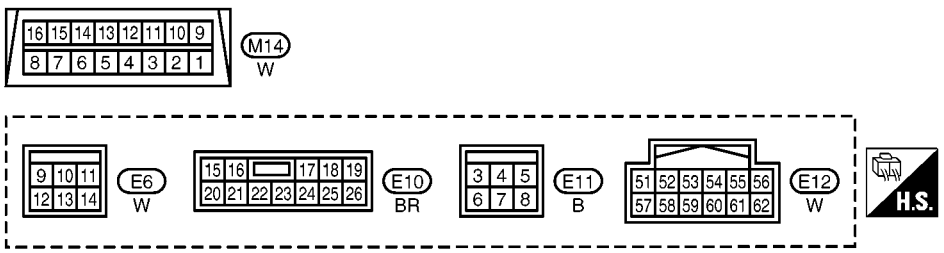
R : RHD MODELS





MIWA0728E

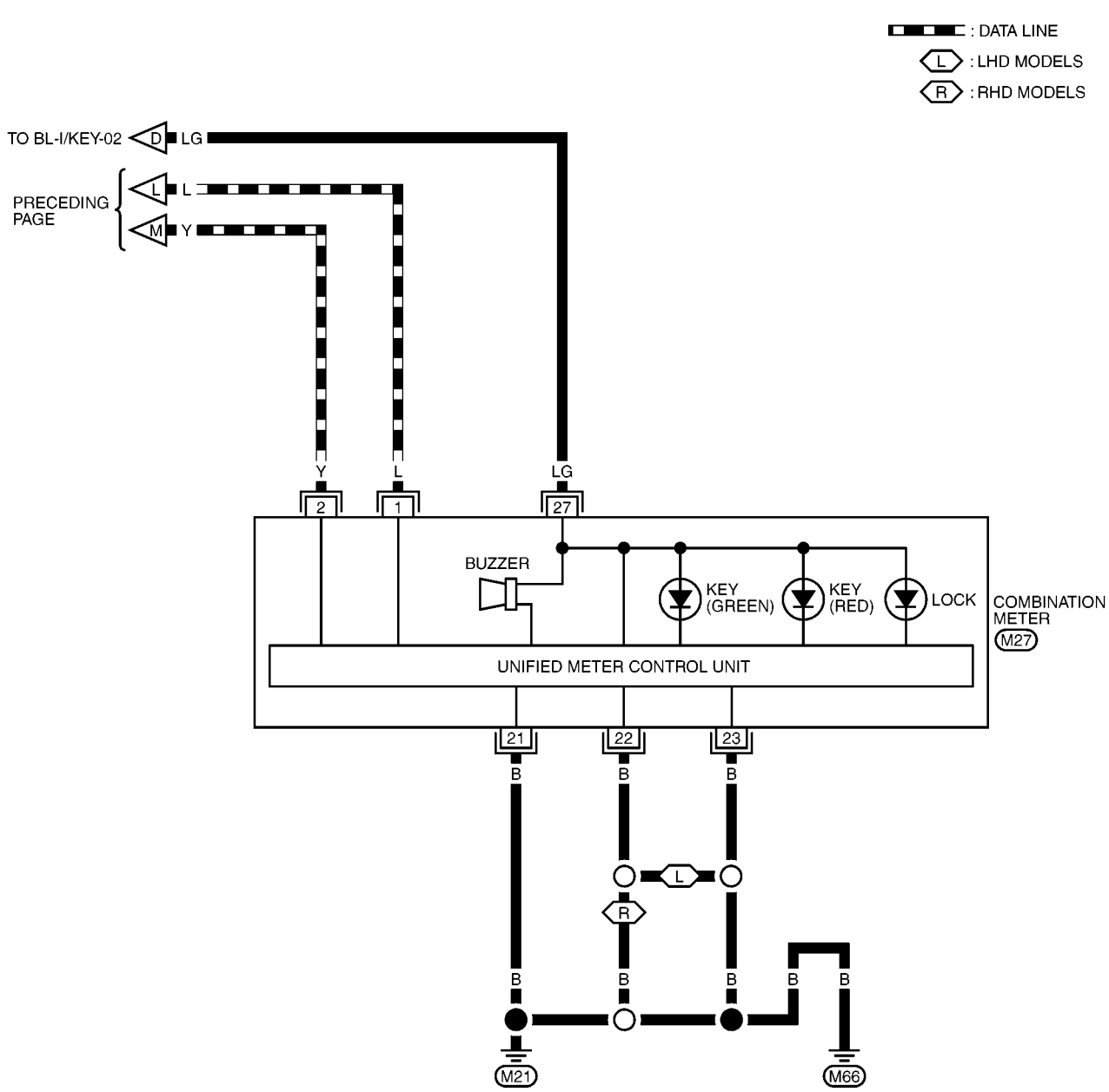


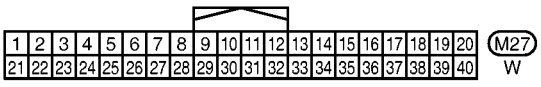


REFER TO THE FOLLOWING.
M1 - SUPER MULTIPLE JUNCTION (SMJ)

MIWA0729E

BL-I/KEY-10

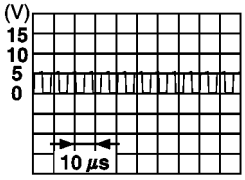
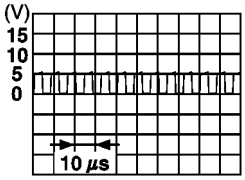
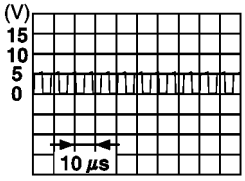
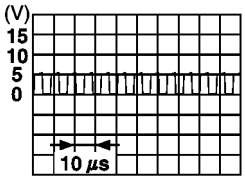


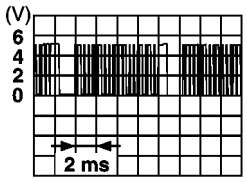
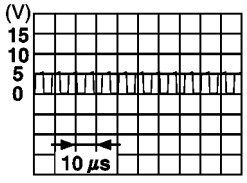
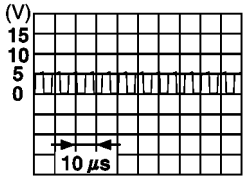


MIWA0730E

Terminals and Reference Value for INTELLIGENT KEY UNIT

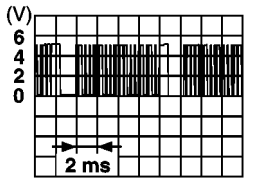
BIS000KB

Terminal	Wire color	Item	Signal Input/ Output	Measuring condition			Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions		
1	P	Steering lock unit power supply	Output	LOCK	—		5
2	L	CAN-H	Input/ Output	—	—		—
3	Y	CAN-L	Input/ Output	—	—		—
4	P	Intelligent Key warning buzzer	Output	LOCK	Operate remote controller button or door request switch.	Buzzer OFF	Battery voltage
						Sound buzzer	8
5	O	Door request switch (driver side)	Input	—	Door request switch operation: Press (ON).		0
					Other than the above (OFF)		5
6	O	Ignition power supply	Input	ON	—		Battery voltage
7	GR	Key switch	Input	LOCK	Insert mechanical key into ignition key cylinder.		Battery voltage
					Remove mechanical key from ignition key cylinder.		0
10	L	ACC power supply	Input	ACC	—		Battery voltage
11	Y	Battery power supply	Input	—	—		Battery voltage
12	B	GND	—	—	—		0
13	Y	Inside key antenna (+) (Luggage room)	Output	LOCK	Any door open → all doors shut (Door switch: ON → OFF)		 SIIA1910J
14	BR	Inside key antenna (-) (Luggage room)	Output				
15	V	Inside key antenna (+) (Center console)	Output	LOCK	Any door open → Close (Door switch: ON → OFF) Ignition knob switch: ON (press ignition knob.)		 SIIA1910J
16	LG	Inside key antenna (-) (Center console)	Output				
17	B	Out side antenna (+)	Output	LOCK	Back door request switch operation (Switch: ON)		 SIIA1910J
18	W	Back door or trunk lid antenna (-)	Output				
19	R	Outside antenna (driver side) (+)	Output	LOCK	Driver door request signal operation (Switch: ON)		 SIIA1910J
20	W	Outside antenna (driver side) (-)	Output				

Terminal	Wire color	Item	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
25	LG	Door request switch (passenger side)	Input	—	Door request switch operation: Press (ON)	0
					Other than the above (OFF)	5
26	R	Stop lamp switch	Input	—	Brake pedal depressed (ON)	Battery voltage
					Brake pedal not depressed (OFF)	0
27	O	Ignition knob switch	Input	—	Press ignition knob.	Battery voltage
					Return ignition knob to LOCK position.	0
29	R	Door request switch (back door)	Input	—	Back door request switch operation: Press (ON)	0
					Other than the above (OFF)	5
31	G	Steering lock unit ground	—	—	—	0
32	V	Steering lock unit communication signal	Input/ Output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5
35	P	Inside key antenna (+) (Dashboard)	Output	LOCK	Any door open → Close (Door switch: ON → OFF) Ignition knob switch: ON (Press ignition knob)	 SIIA1910J
36	L	Inside key antenna (-) (Dashboard)	Output			
37	BR	Outside antenna (passenger side) (+)	Output	LOCK	Passenger door request switch operation (Switch: ON)	 SIIA1910J
38	Y	Outside antenna (passenger side) (-)	Output			
40	L	Door lock relay	Output	—	Press unlock button once (in all doors locked condition)	Battery voltage → 0 → Battery voltage

Terminals and Reference Value for Steering Lock unit

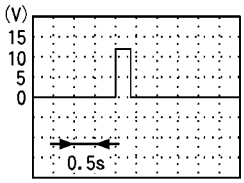
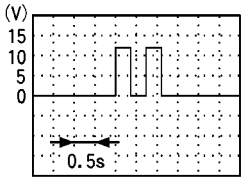
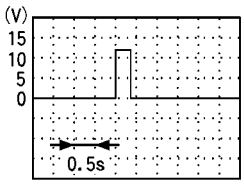
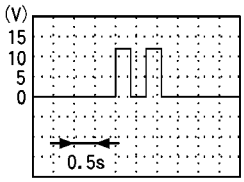
BIS000KC

Terminal	Wire color	Item	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
1	Y	Battery power supply	Input	LOCK	—	Battery voltage
2	P	Steering lock unit power supply	Input	LOCK	—	5
3	V	Steering lock unit communication signal	Input/ Output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5
4	G	Steering lock unit ground	—	—	—	0

Terminal and Reference Value for BCM

BIS000KD

Terminal	Wire color	Item	Signal Input/ Output	Measuring condition	Voltage (V) (Approx.)
2	B	Ground	—	—	0
3	GR	Key switch	Input	Mechanical key is removed from ignition knob (OFF) → Mechanical key is inserted in ignition knob (ON)	0 → Battery voltage
10	P	Back door or trunk lid switch	Input	Back door or trunk lid open (ON) → Back door or trunk lid close (OFF)	0 → Battery voltage
19	L	CAN-H	Input/ Output	—	—
24	O	IGN power supply	Input	Ignition knob ON or START position	Battery voltage
29	LG	Front door switch LH (LHD models)	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
	BR	Front door switch RH (RHD models)			
30	BR	Front door switch RH (LHD models)	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
	LG	Front door switch LH (RHD models)			
39	R	CAN-L	Input/ Output	—	—
59	G	Rear door switch LH	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage
60	L	Rear door switch RH	Input	Door open (ON) → Door close (OFF)	0 → Battery voltage

Terminal	Wire color	Item	Signal Input/ Output	Measuring condition	Voltage (V) (Approx.)
65	LG	Answer back (Turn signal lamp LH)	Output	When door lock operated using remote controller*1	 PIIA2486J
				When door unlock operated using remote controller*1	 PIIA2487J
66	W	Answer back (Turn signal lamp RH)	Output	When door lock operated using remote controller*1	 PIIA2486J
				When door unlock operated using remote controller*1	 PIIA2487J
67	Y	Door lock actuator unlock (ALL Door) (Except driver side)	Output	Door lock/unlock switch UNLOCK operation	0 → Battery voltage
68	O	Back door opener actuator	Output	Power window main switch (Back door release switch) OPEN operation	Battery voltage → 0
70	B	Ground	—	—	0
74	Y	BAT power supply (fusible link) (BCM)	Input	—	Battery voltage
75*2	O	Super lock set output (All door)	Output	Super lock operation (Set)	0 → Battery voltage
76	BR	Door lock actuator unlock (Driver side)	Output	Door lock/unlock switch Unlock operation	0 → Battery voltage
77	SB	Door lock actuator lock (ALL Door)	Output	Door lock/unlock switch LOCK operation	0 → Battery voltage
79	Y	BAT power supply (fusible link) (Power window)	Input	—	Battery voltage

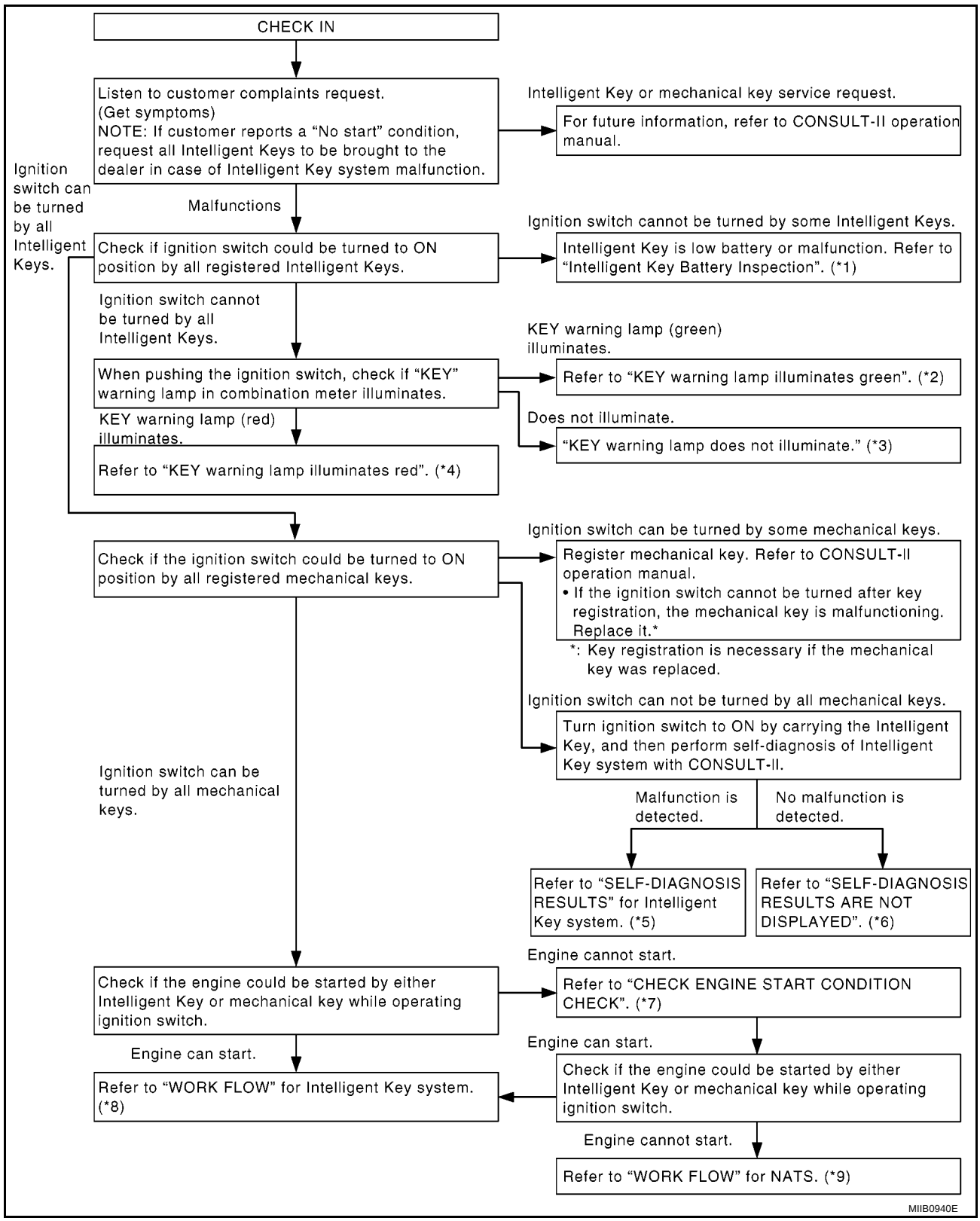
*1 : In the state that answer back operates

*2 : Only the model equipped with super lock system (RHD Models)

Trouble Diagnosis Procedure

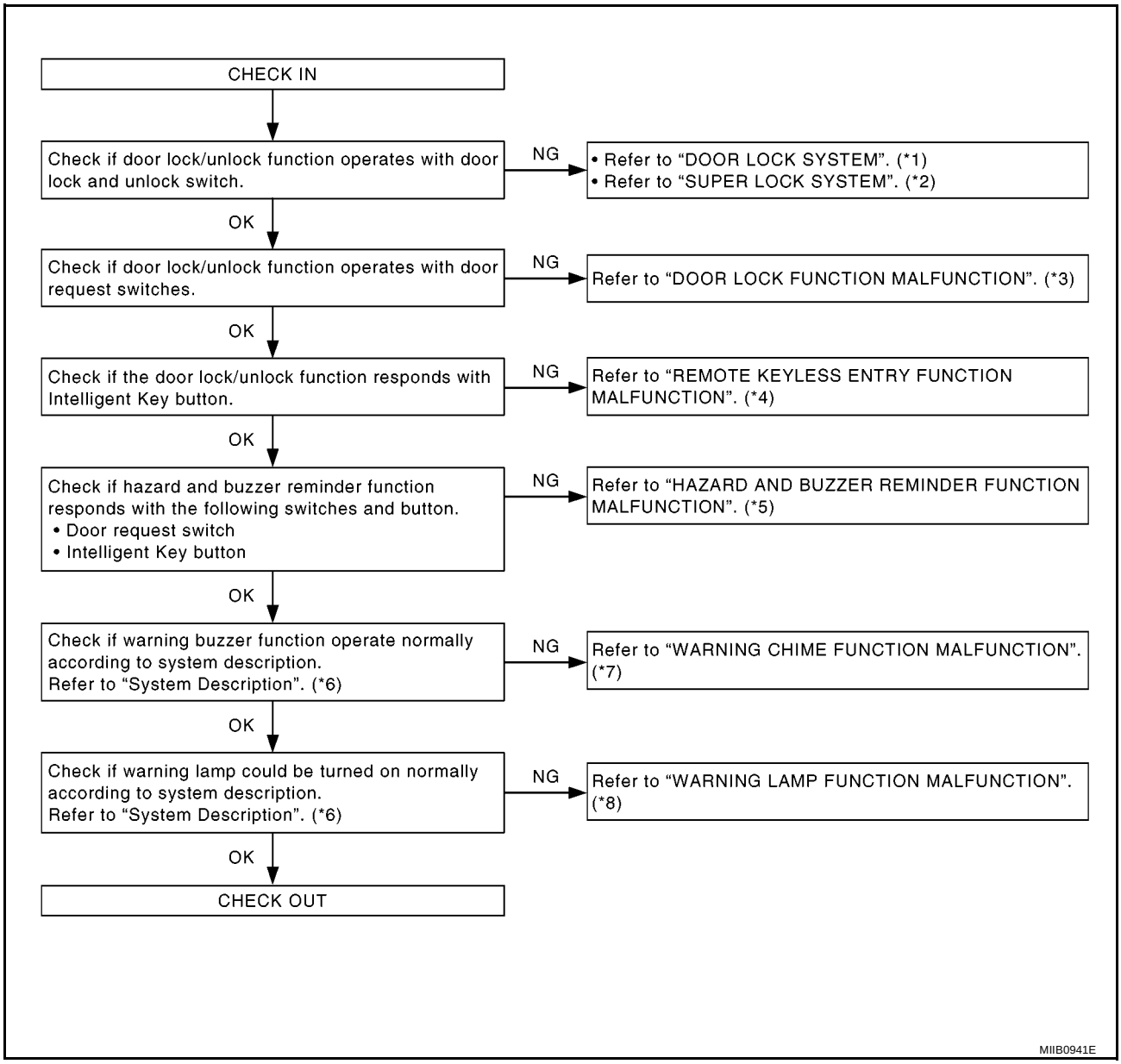
BIS0015E

PRELIMINALY CHECK



*1: BL-193 *2: BL-157 *3: BL-158
*4: BL-157 *5: BL-155 *6: BL-158
*7: BL-158 *8: BL-154 *9: BL-226

WORK FLOW



*1: BL-16 *2: BL-59 *3: BL-159
*4: BL-159 *5: BL-161 *6: BL-135
*7: BL-161 *8: BL-163

CONSULT-II Function (INTELLIGENT KEY)

BIS000KF

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

Part to be diagnosed	Test item, Diagnosis mode	Description
Intelligent Key	WORK SUPPORT	Changes settings for each function.
	SELF-DIAG RESULTS	Intelligent Key unit performs CAN communication diagnosis.
	DATA MONITOR	Displays Intelligent Key unit input data in real time.
	CAN DIAGNOSTIC SUPPORT MONITOR	The results of transmit/receive diagnosis of CAN Communication can be read.
	ACTIVE TEST	Operation of electrical loads can be checked by sending driving signal to then.
	ECU PART NUMBER	Displays Intelligent Key unit part No.

CONSULT-II Inspection Procedure

BIS000KG

CAUTION:

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

BASIC OPERATION

Refer to GI-36, "CONSULT-II Start Procedure" .

CONSULT-II Application Items

BIS000KH

SELF-DIAGNOSTIC RESULTS

Self-diag results	Description	Diagnosis procedure	Reference page
CAN COMM	Malfunction is detected in CAN communication.	Check CAN communication system.	BL-163
CAN COMM2	Intelligent Key unit internal malfunction	Check CAN communication system.	BL-163
STRG COMM	Malfunction is detected in communication of Intelligent Key unit and steering lock unit.	Check steering lock unit.	BL-188
I-KEY C/U	Intelligent Key unit internal malfunction	Replace Intelligent Key unit.	BL-193
IMMU	NATS malfunction	Check NATS.	BL-215

DATA MONITOR

Monitor item	Content
PUSH SW	Indicates [ON/OFF] condition of ignition knob switch.
KEY SW	Indicates [ON/OFF] condition of key switch.
DR REQ SW	Indicates [ON/OFF] condition of door request switch (driver side).
AS REQ SW	Indicates [ON/OFF] condition of door request switch (passenger side).
BD/TR REQ SW	Indicates [ON/OFF] condition of trunk opener request switch.
IGN SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
STOP LAMP SW	Indicates [ON/OFF] condition of door unlock sensor.
DOOR LOCK SIG*	Indicates [ON/OFF] condition of door lock signal from Intelligent Key remote controller button.
DOOR UNLOCK SIG*	Indicates [ON/OFF] condition of door unlock signal from Intelligent Key remote controller button.
DOOR SW DR*	Indicates [OPEN/CLOSE] condition of front door switch driver side from BCM via CAN communication line.
DOOR SW AS*	Indicates [OPEN/CLOSE] condition of front door switch passenger side from BCM via CAN communication line.
DOOR SW RR*	Indicates [OPEN/CLOSE] condition of rear door switch LH from BCM via CAN communication line.
DOOR SW RL*	Indicates [OPEN/CLOSE] condition of rear door switch RH from BCM via CAN communication line.
DOOR BK SW*	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication line.
VEHICLE SPEED*	Indicates [km/h] condition of vehicle speed.

*: Select “SELECTION FROM MENU”.

ACTIVE TEST

Monitor item	Description
DOOR LOCK/UNLOCK	This test is able to check all door lock actuators lock operation. These actuators lock when “LOCK” on CONSULT-II screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The buzzer will be activated on when “ON” on CONSULT-II screen is touched.
INSIDE BUZZER	This test is able to check buzzer (built in combination meter) operation. The buzzer will be activated on when either “TAKE OUT”, “KNOB” or “KEY” on CONSULT-II screen is touched.
INDICATOR	This test is able to check warning lamp operation. The lamp will be turned on when either “BLUE ON”, “BLUE IND”, “RED ON”, “RED IND”, “KNOB ON” or “KNOB IND” on CONSULT-II screen is touched.
KEY LOCK SOLENOID	This test is able to LOCK/UNLOCK the key lock solenoid.

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOW BAT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
SELECTIVE UNLOCK FUNCTION	Selective unlock function mode can be changed to operate (ON) or not operate (OFF) with this mode.
INTELLIGENT KEY FUNCTION	All of the Intelligent Key functions can be changed to operate (ON) or not operate (OFF) with this mode.
ANSWER BACK WITH I-KEY LOCK	Answer back buzzer (external buzzer) function can be changed to operate (ON) or not operate (OFF) with this mode.
ANSWER BACK WITH I-KEY UNLOCK	Answer back buzzer (external buzzer) function (unlock operation) can be changed to operate (ON) or not operate (OFF) with this mode.
AUTO RELOCK TIMER	Auto door lock timer mode can select with this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) with this mode.

Trouble Diagnosis Symptom Chart

BIS0015F

KEY WARNING LAMP (GREEN) ILLUMINATES

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure"
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. [KEY warning lamp (green) illuminates.]	1. Check steering lock unit.	BL-188
	2. Replace Intelligent Key unit.	BL-193

KEY WARNING LAMP (RED) ILLUMINATES

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. [KEY warning lamp (red) illuminates.]	1. Check inside key antenna.	BL-187
	2. Replace Intelligent Key unit.	BL-193

KEY WARNING LAMP DOES NOT ILLUMINATE

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/service procedure” column in this order.
- Check if ignition switch turns using mechanical key. If it turns, check if “ENGINE START BY I-KEY” in “WORK SUPPORT” mode is ON.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. (KEY warning lamp does not illuminate.)	1. Check Intelligent Key unit power supply and ground circuit.	BL-164
	2. Check ignition knob switch.	BL-168
	3. Check key switch.	BL-165
	4. Replace Intelligent Key unit.	BL-193

SELF-DIAGNOSIS RESULTS ARE NOT DISPLAYED

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Multiple mechanical keys are not set in a keyfob.
  (If mechanical keys are near the ignition switch, the operation may not work properly.)

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn on with mechanical key.	1. Check key switch.	BL-165
	2. Check NATS antenna amp.	BL-233

ENGINE START CONDITION CHECK

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- If the following “symptoms” are detected, check systems shown in the ”Diagnoses/service procedure” column in this order.

Symptom	Diagnosis/service procedure	Reference page
Engine start condition check	1. Check stop lamp switch.	BL-192

DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-II.
- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Door lock/unlock do not operate by all request switch.	1. Check door switch.	BL-174
	2. Check key switch.	BL-165
	3. Check ignition knob switch.	BL-168
	4. Replace Intelligent Key unit.	BL-193
Door lock/unlock does not operate by request switch (driver side).	1. Check door request switch (driver side).	BL-170
	2. Check outside key antenna (driver side).	BL-184
	3. Replace Intelligent Key unit.	BL-193
Door lock/unlock does not operate by request switch (passenger side).	1. Check door request switch (passenger side).	BL-170
	2. Check outside key antenna (passenger side).	BL-184
	3. Replace Intelligent Key unit.	BL-193
Door lock/unlock does not operate by back door request switch.	1. Check back door request switch.	BL-172
	2. Check outside key antenna (back door).	BL-185
	3. Replace Intelligent Key unit.	BL-193
Anti-hijack function does not operate by door request switch (driver side) (other door lock function operate).	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-156
	2. Replace BCM.	BCS-17
Anti-hijack function does not operate by back door request switch (other door lock function operate).	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-156
	2. Replace BCM.	BCS-17
Auto lock function does not operate.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	BL-156
	2. Check key switch.	BL-165
	3. Check ignition knob switch.	BL-168
	4. Check door switch.	BL-174
	5. Replace Intelligent Key unit.	BL-193
Key reminder function does not operate.	1. Check door switch.	BL-174
	2. Check inside key antenna.	BL-187
	3. Check Intelligent Key battery inspection.	BL-193
	4. Replace Intelligent Key unit.	BL-193

REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All of the remote keyless entry functions do not operate.	1. Check Intelligent Key battery inspection.	BL-193
	2. Replace Intelligent Key unit.	BL-193
Anti-hijack function does not operate by Intelligent Key button.	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-156
	2. Check Intelligent Key battery inspection.	BL-193
	3. Replace Intelligent Key unit.	BL-193
Auto lock function does not operate.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	BL-156
	2. Check key switch.	BL-165
	3. Check ignition knob switch.	BL-168
	4. Check door switch.	BL-174
	5. Replace Intelligent Key unit.	BL-193
Key reminder function does not operate.	1. Check door switch.	BL-174
	2. Check inside key antenna.	BL-187
	3. Check Intelligent Key battery inspection.	BL-193
	4. Replace Intelligent Key unit.	BL-193

HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Buzzer reminder is operated.)	1. Check hazard function with hazard switch.	LT-98
	2. Replace Intelligent Key unit	BL-193
Hazard reminder does not operate by Intelligent Key button. (Buzzer reminder is operated.)	1. Check hazard function with hazard switch.	LT-98
	2. Replace Intelligent Key	BL-193
Buzzer reminder does not operate properly by request switch. (Hazard reminder is operated.)	1. Check “ANSWER BACK WITH I-KEY LOCK” or “ANSWER BACK WITH I-KEY UNLOCK” setting in “WORK SUPPORT”.	BL-156
	2. Check Intelligent Key warning buzzer.	BL-183
	3. Replace Intelligent Key unit.	BL-193

WARNING CHIME FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

Each warning chime function is ON when setting on CONSULT-II.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch warning chime does not operate.	1. Check ignition knob switch.	BL-168
	2. Check door switch	BL-174
	3. Check key switch	BL-165
	4. Check warning buzzer in combination meter.	BL-191
	5. Replace Intelligent Key unit.	BL-193
Ignition key warning chime does not operate. (When mechanical key used)	1. Check key switch (Intelligent Key unit input).	BL-165
	2. Check key switch (BCM input).	BL-167
	3. Check door switch.	BL-174
	4. Check warning buzzer in combination meter.	BL-191
	5. Replace Intelligent Key unit.	BL-193
OFF position warning chime (For internal) does not operate.	1. Check ignition switch signal circuit	BL-164
	2. Check ignition knob switch.	BL-168
	3. Check key switch	BL-165
	4. Check warning buzzer in combination meter.	BL-191
	5. Replace Intelligent Key unit.	BL-193

Symptom	Diagnosis/service procedure	Reference page
OFF position warning chime (For external) does not operate.	1. Check ignition switch signal circuit	BL-164
	2. Check ignition knob switch.	BL-168
	3. Check Intelligent Key warning buzzer.	BL-183
	4. Replace Intelligent Key unit.	BL-193
Take away warning chime does not operate.	1. Check door switch.	BL-174
	2. Check ignition switch signal circuit	BL-164
	3. Check Intelligent Key battery inspection	BL-193
	4. Check inside key antenna.	BL-187
	5. Check Intelligent Key warning buzzer.	BL-191
	6. Replace Intelligent Key unit.	BL-193
Take away warning chime (Take away from window) does not operate.	1. Check “TAKE OUT FROM WINDOW WARN” setting in “WORK SUPPORT”.	BL-156
	2. Check inside key antenna.	BL-187
	3. Check key switch.	BL-165
	4. Check Intelligent Key battery inspection	BL-193
	5. Check warning buzzer in combination meter.	BL-191
	6. Replace Intelligent Key unit.	BL-193
Door lock operation warning chime does not operate.	1. Check door switch	BL-174
	2. Check ignition knob switch	BL-168
	3. Check door request switch	BL-170
	4. Check back door request switch	BL-172
	4. Check outside key antenna	BL-184
	5. Check inside key antenna	BL-187
	6. Check Intelligent Key warning buzzer.	BL-183
	7. Replace Intelligent Key unit.	BL-193

WARNING LAMP FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-153, "Trouble Diagnosis Procedure" .
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Symptom	Diagnosis/service procedure	Reference page
Intelligent Key low battery warning does not operate.	1. Check “LOW BAT OF KEY FOB WARN” setting in “WORK SUPPORT”.	BL-156
	2. Check Intelligent Key battery inspection.	BL-193
	3. Check warning lamp.	BL-191
	4. Replace Intelligent Key unit.	BL-193
Take away warning lamp does not illuminate. (Take away warning chime is operated.)	1. Check warning lamp.	BL-191
	2. Replace Intelligent Key unit.	BL-193
Ignition switch warning lamp does not illuminate. (Ignition switch warning chime is operated)	1. Check warning lamp.	BL-191
	2. Replace Intelligent Key unit.	BL-193

Check CAN Communication System

BIS0015G

1. CHECK SELF-DIAGNOSTIC RESULTS

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 performs CAN communication.

With CONSULT-II

- Connect CONSULT-II, and turn ignition switch ON.
- Touch “INTELLIGENT KEY” on “SELECT SYSTEM” screen.
- Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
- Check display content in self-diagnostic results.

CONSULT-II display item	DTC code
NO DTC IS DETECTED	—
CAN COMM	U1000
CAN COMM2	U1010

OK or NG

NO DTC IS DETECTED>> INSPECTION END

CAN COMM [U1000]>> After printing “SELF-DIAGNOSIS RESULTS”, go to “CAN SYSTEM”, Refer to LAN-3, "Precautions When Using CONSULT-II" .

CAN COMM2 [U1010]>> Replace Intelligent Key unit.

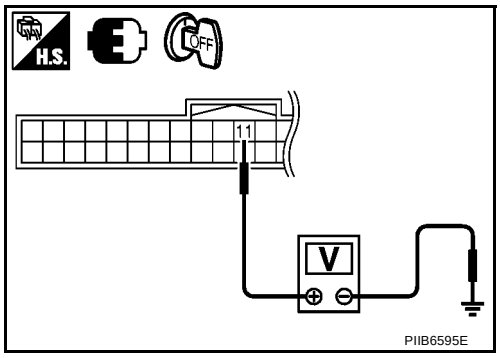
Check Power Supply and Ground Circuit

BIS00162

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Intelligent Key unit connector	Terminal		
M60	11	Ground	Battery voltage



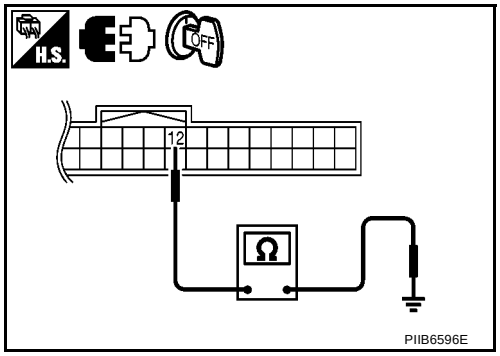
OK or NG

OK >> GO TO 2.
NG >> Repair or replace Intelligent Key power supply circuit.

2. CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal	Ground	Continuity
M60	12		Yes



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Repair or replace the Intelligent Key unit ground circuit.

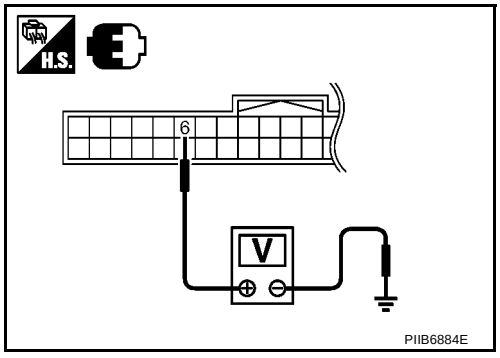
Check Ignition Switch Signal Circuit

BIS0016K

1. CHECK IGNITION SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector and ground.

Intelligent Key unit connector	Terminal		Ignition switch position		
	(+)	(–)	OFF	ACC	ON
M60	6	Ground	0V	0V	Battery voltage



OK or NG

OK >> Ignition switch signal circuit is OK.
NG >> Check the following.

- 10A fuse [No. 5, located in fuse and fusible link box (J/B)]
- Between Intelligent Key unit and fuse.

Check Key Switch (Intelligent Key Unit Input)

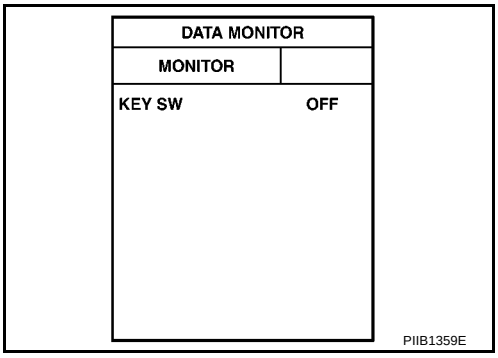
BIS00163

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

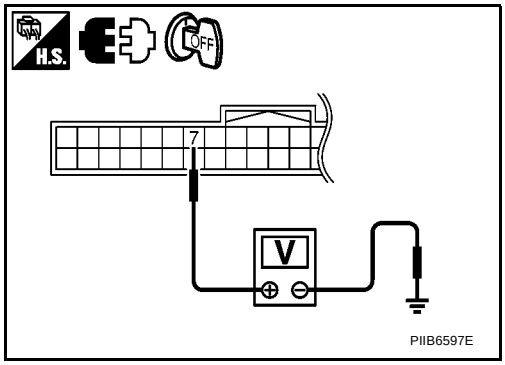
Monitor item	Condition
KEY SW	Insert mechanical key into ignition switch: ON
	Remove mechanical key from ignition switch: OFF



Without CONSULT-II

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

Terminals			Condition of key switch	Voltage (V) (Approx.)
(+)		(–)		
Intelligent Key unit connector	Terminal			
M60	7	Ground	Insert mechanical key into ignition switch	Battery voltage
			Remove mechanical key from ignition switch	0



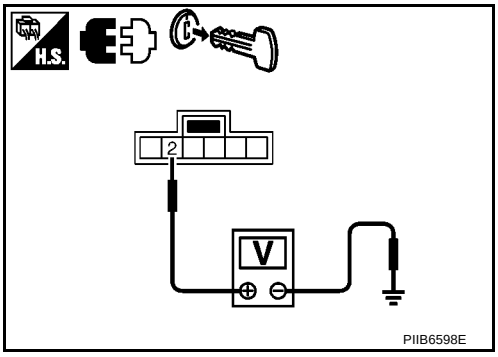
OK or NG

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

2. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Key switch and ignition knob switch connector	Terminal		
M34	2	Ground	Battery voltage



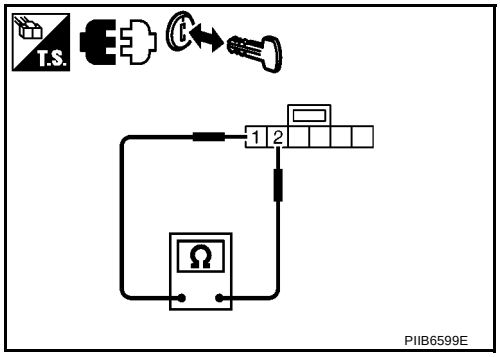
OK or NG

OK >> GO TO 3.
NG >> Repair or replace key switch and ignition knob switch power supply circuit.

3. CHECK KEY SWITCH

Check continuity key switch and ignition knob switch.

Terminal		Condition of key switch	Continuity
Key switch and ignition knob switch			
1	2	Insert mechanical key into ignition switch	Yes
		Remove mechanical key from ignition switch	No



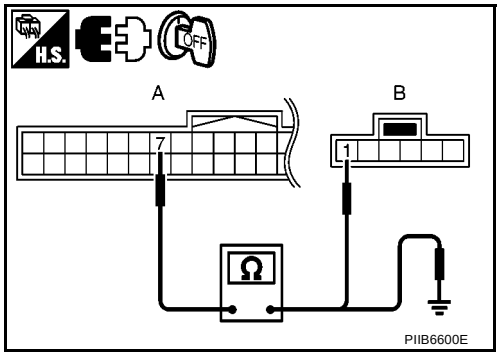
OK or NG

OK >> GO TO 4.
NG >> Replace key cylinder assembly (built-in key switch).

4. CHECK KEY SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit and key switch and ignition knob switch.

A		B		Continuity
Intelligent Key unit connector	Terminal	Key switch and ignition knob switch connector	Terminal	
M60	7	M34	1	Yes



3. Check continuity between Intelligent Key unit and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	7		No

OK or NG

OK >> Check the condition of harness and harness connector.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

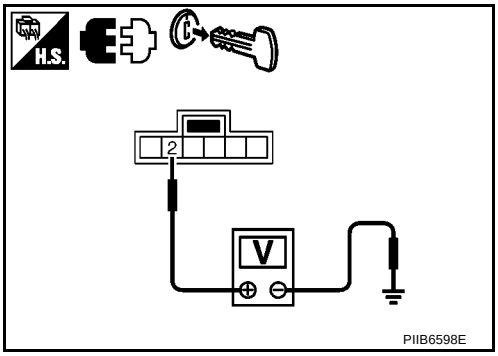
Check Key Switch (BCM Input)

BIS00164

1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Key switch and ignition knob switch connector	Terminal		
M34	2	Ground	Battery voltage



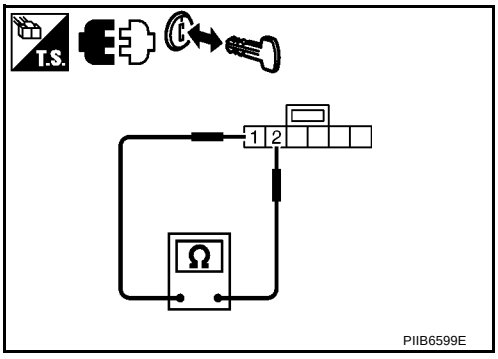
OK or NG

OK >> GO TO 2.
NG >> Check harness between key switch and ignition knob switch and fuse.

2. CHECK KEY SWITCH OPERATION

Check continuity key switch and ignition knob switch.

Terminal		Condition of key switch	Continuity
Key switch and ignition knob switch			
1	2	Insert mechanical key into ignition switch	Yes
		Remove mechanical key from ignition switch	No



OK or NG

OK >> GO TO 3.
NG >> Replace key cylinder assembly (built-in key switch).

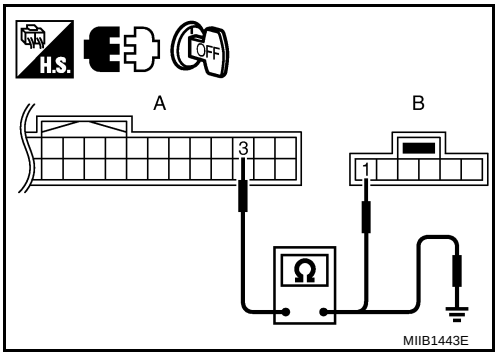
3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM and key switch and ignition knob switch.

A		B		Continuity
BCM connector	Terminal	Key switch and ignition knob switch connector	Terminal	
M57	3	M34	1	Yes

3. Check continuity between BCM and ground.

A		Ground	Continuity
BCM connector	Terminal		
M57	3		No



OK or NG

OK >> Key switch (BCM input) circuit is OK.
NG >> Repair or replace harness between key switch and ignition knob switch and BCM.

Check Ignition Knob Switch

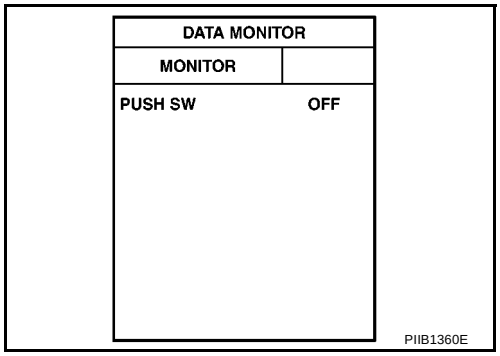
BIS00165

1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

With CONSULT-II

Display “PUSH SW” on DATA MONITOR screen, and check if ON/OFF display is linked to ignition switch operation.

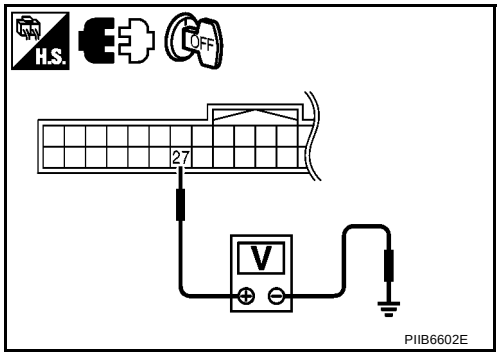
Monitor item	Condition
PUSH SW	Ignition switch is pressed: ON
	Ignition switch is released: OFF



Without CONSULT-II

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

Terminals			Condition of key switch	Voltage (V) (Approx.)
(+)		(–)		
Intelligent Key unit connector	Terminal			
M60	27	Ground	Ignition switch is pressed	Battery voltage
			Ignition switch is released	0



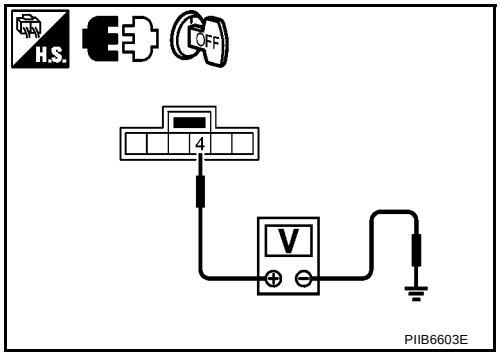
OK or NG

OK >> Ignition knob switch circuit is OK.
NG >> GO TO 2.

2. CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

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

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Key switch and ignition knob switch connector	Terminal		
M34	4	Ground	Battery voltage



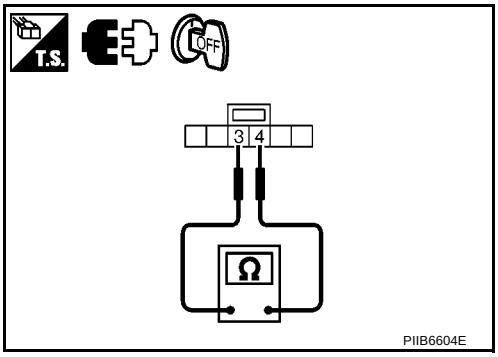
OK or NG

OK >> GO TO 3.
NG >> Repair or replace key switch and ignition knob switch power supply circuit.

3. CHECK IGNITION KNOB SWITCH

Check continuity ignition knob switch.

Terminal		Condition of key switch	Continuity
Key switch and ignition knob switch			
3	4	Ignition switch is pressed	Yes
		Ignition switch is released	No



OK or NG

OK >> GO TO 4.
NG >> Replace key switch and ignition knob switch.

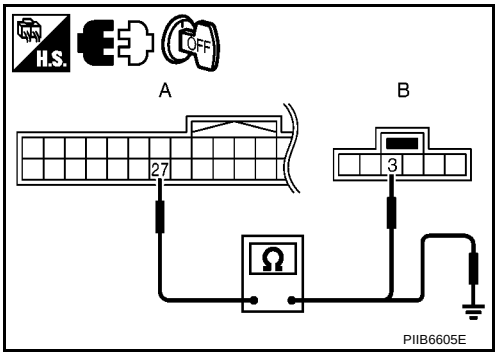
4. CHECK IGNITION KNOB SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit and key switch and ignition knob switch.

A		B		Continuity
Intelligent Key unit connector	Terminal	Key switch and ignition knob switch connector	Terminal	
M60	27	M34	3	Yes

3. Check continuity between Intelligent Key unit and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	27		No



OK or NG

OK >> Check the condition of harness and harness connector.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

Check Door Request Switch

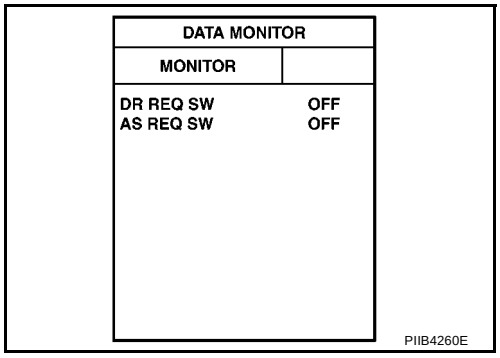
BIS00166

1. CHECK DOOR REQUEST SWITCH

With CONSULT-II

Check door request switch (“DR REQ SW” or “AS REQ SW”) in “DATA MONITOR” mode.

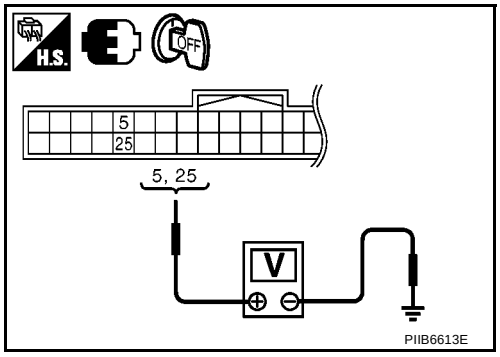
Monitor item	Condition
DR REQ SW AS REQ SW	Door request switch is pressed: ON
	Door request switch is released: OFF



Without CONSULT-II

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit harness connector and ground.

Terminals				Door request switch Condition	Voltage (V) (Approx.)
(+)			(–)		
Intelligent Key unit connector		Terminal			
M60	Door request switch (driver side)	5	Ground	Pressed	0
				Released	5
	Door request switch (passenger side)	25		Pressed	0
				Released	5



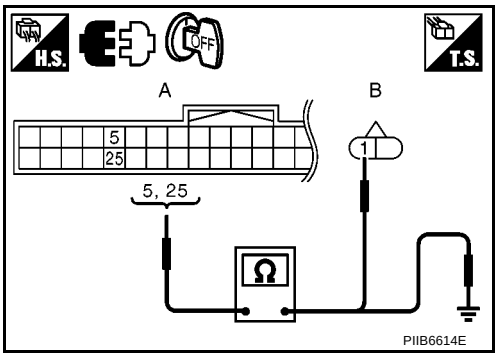
OK or NG

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

2. CHECK DOOR REQUEST SWITCH CIRCUIT

1. Disconnect Intelligent Key unit and front door request switch connector.
2. Check continuity between Intelligent Key unit connector and front door request switch connector.

A		B			Continuity
Intelligent Key unit connector	Terminal	Front door request switch connector		Terminal	
M60	5	Driver side	D12	1	Yes
	25	Passenger side	D29		



3. Check continuity between Intelligent Key unit connector and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	5		No
	25		

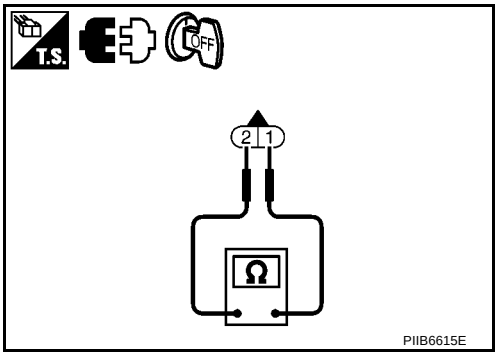
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and front door request switch.

3. CHECK DOOR REQUEST SWITCH OPERATION

Check front door request switch.

Terminal		Door request switch condition	Continuity
Front outside handle			
1	2	Pressed	Yes
		Released	No



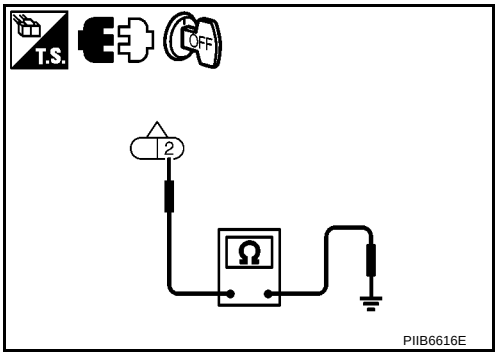
OK or NG

OK >> GO TO 4.
NG >> Replace malfunction front door request switch.

4. CHECK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between front door request switch connector and ground.

Front outside handle connector		Terminal	Ground	Continuity
Driver side	D12	2		Yes
Passenger side	D29			



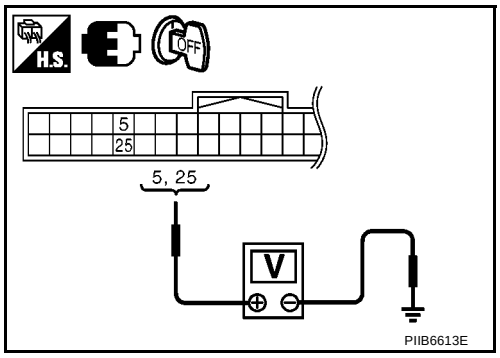
OK or NG

OK >> GO TO 5.
NG >> Repair or replace front door request switch ground circuit.

5. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect Intelligent Key unit connector.
2. Check voltage between Intelligent Key unit connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Intelligent Key unit connector	Terminal		
M60	5	Ground	5
	25		



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace Intelligent Key unit.

Check Back Door Request Switch

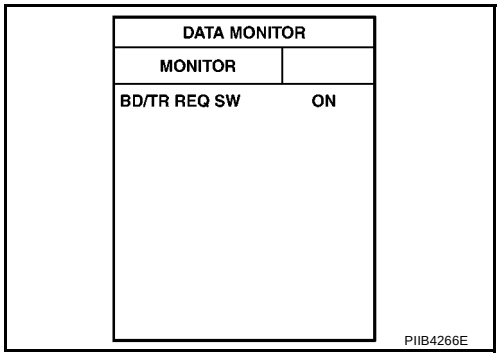
BIS00167

1. CHECK BACK DOOR REQUEST SWITCH

With CONSULT-II

Check back door request switch (“BD/TR REQ SW”) in “DATA MONITOR” mode.

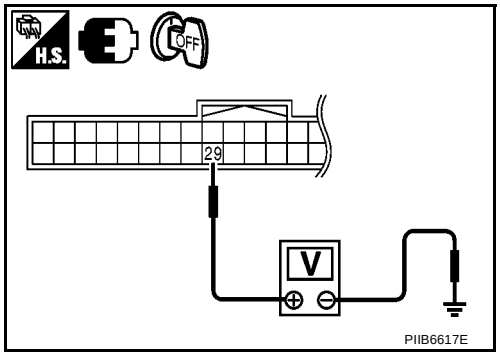
Monitor item	Condition
BD/TR REQ SW	Back door request switch is pressed: ON
	Back door request switch is released: OFF



Without CONSULT-II

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit connector and ground.

Terminals			Back door request switch condition	Voltage (V) (Approx.)
(+)		(–)		
Intelligent Key unit connector	Terminal			
M60	29	Ground	Pressed	0
			Released	5



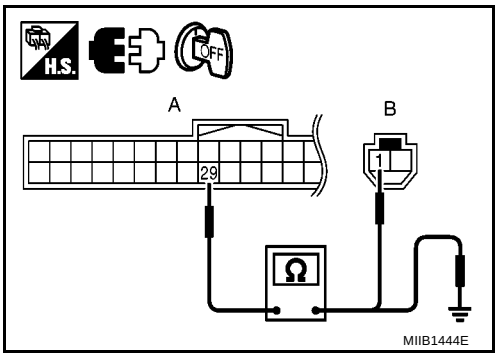
OK or NG

OK >> Trunk lid request switch circuit is OK.
NG >> GO TO 2.

2. CHECK BACK DOOR REQUEST SWITCH CIRCUIT

1. Disconnect Intelligent Key unit and back door request switch connector.
2. Check continuity between Intelligent Key unit connector and back door request switch connector.

A		B		Continuity
Intelligent Key unit connector	Terminal	Back door switch connector	Terminal	
M60	29	D102	1	Yes



3. Check continuity between Intelligent Key unit connector and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	29		No

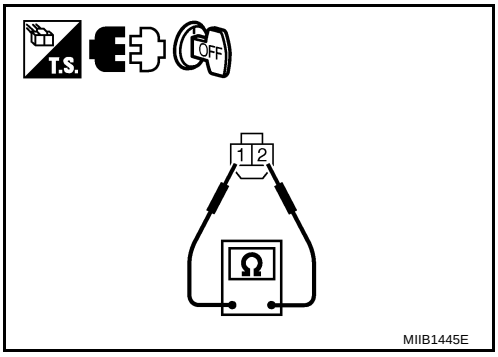
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and back door request switch.

3. CHECK BACK DOOR REQUEST SWITCH OPERATION

Check back door request switch.

Terminal		Back door request switch condition	Continuity
Back door request switch			
1	2	Pressed	Yes
		Released	No



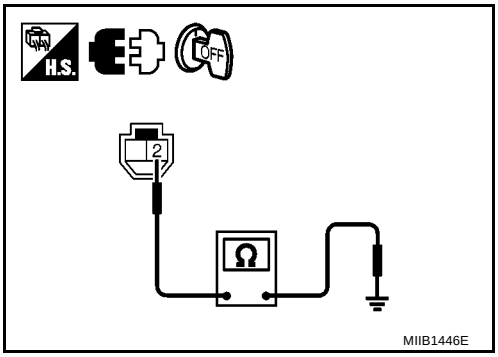
OK or NG

OK >> GO TO 4.
NG >> Replace trunk lid request switch.

4. CHECK BACK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between back door request switch connector and ground.

Back door request switch connector	Terminal	Ground	Continuity
D102	2		Yes



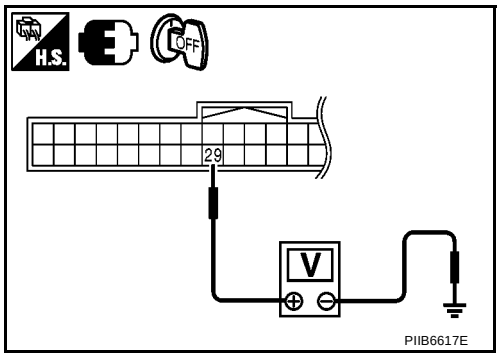
OK or NG

OK >> GO TO 5.
NG >> Repair or replace back door request switch ground circuit.

5. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect Intelligent Key unit connector.
2. Check voltage between Intelligent Key unit connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Intelligent Key unit connector	Terminal		
M60	29	Ground	5



OK or NG

OK >> Check the condition of harness and connector.
NG >> Replace Intelligent Key unit.

Check Door Switch

BIS0016J

DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

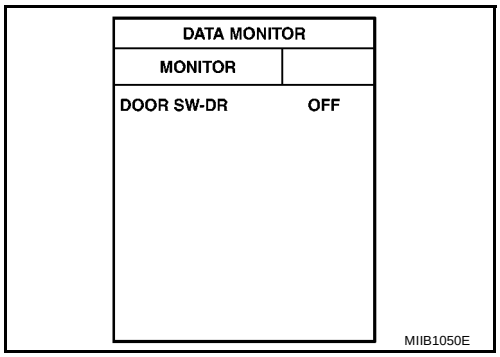
Check door switch “DOOR SW-DR” in “DATA MONITOR” mode with CONSULT- II.

When front door (driver side) is opened:

DOOR SW-DR ⇒ ON

When front door (driver side) is close:

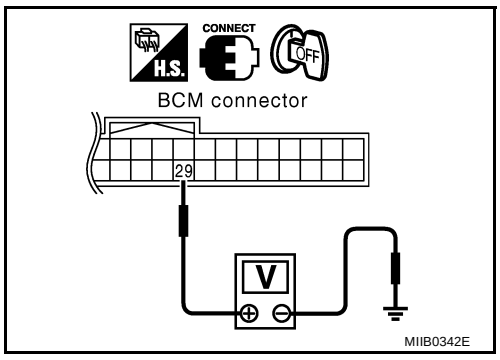
DOOR SW-DR ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	29	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Front door switch LH is OK.
NG >> GO TO 2.

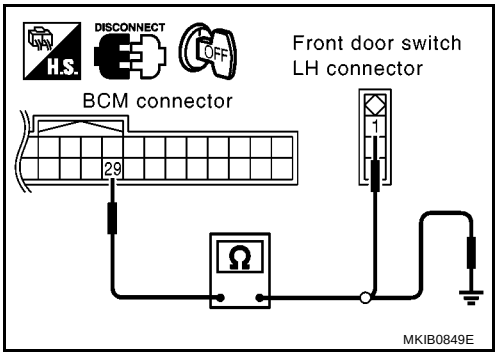
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch LH connector.
3. Check continuity between BCM connector M57 terminal 29 and front door switch LH connector B14 terminal 1.

29 – 1 : Continuity should exist.

4. Check continuity between BCM connector M57 terminal 29 and ground.

29 – Ground : Continuity should not exist.



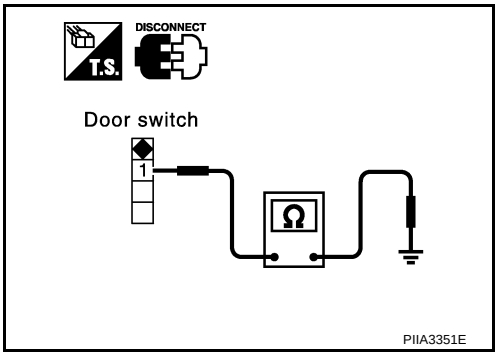
OK or NG

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

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground part of door switch.

Terminal		Condition	Continuity
1	Body ground part of door switch	Pushed	No
		Released	Yes



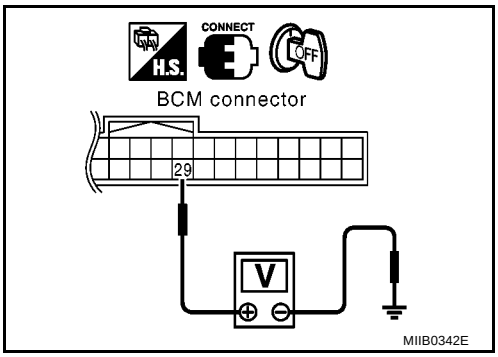
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 29 and ground.

29 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

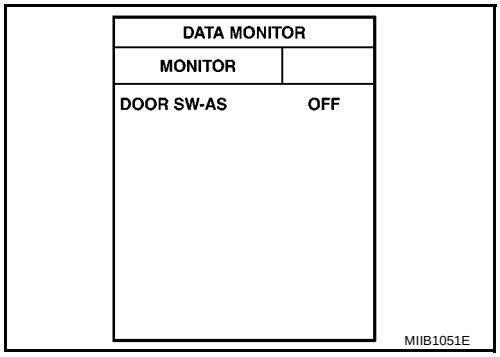
Check door switch “DOOR SW-AS” in “DATA MONITOR” mode with CONSULT- II.

When front door (passenger side) is opened:

DOOR SW-AS ⇒ ON

When front door (passenger side) is close:

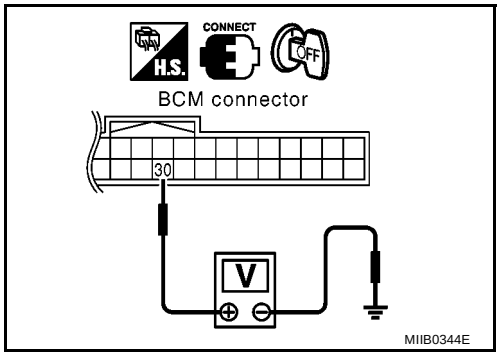
DOOR SW-AS ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector M57 terminal 30 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M57	30	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Front door switch RH is OK.

NG >> GO TO 2.

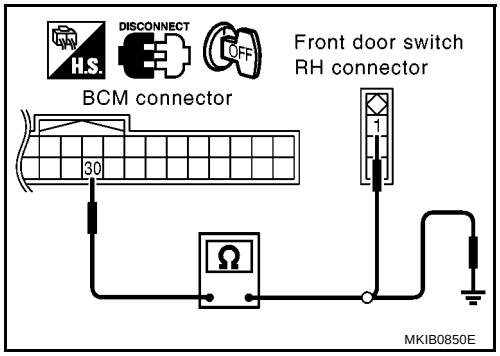
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch RH connector.
3. Check continuity between BCM connector M57 terminal 30 and front door switch RH connector B29 terminal 1.

   30 – 1 : Continuity should exist.

4. Check continuity between BCM connector M57 terminal 30 and ground.

   30 – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

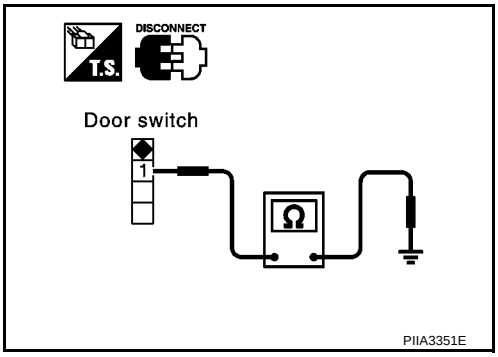
3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminal		Condition	Continuity
1	Ground	Pushed	No
		Released	Yes

OK or NG

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



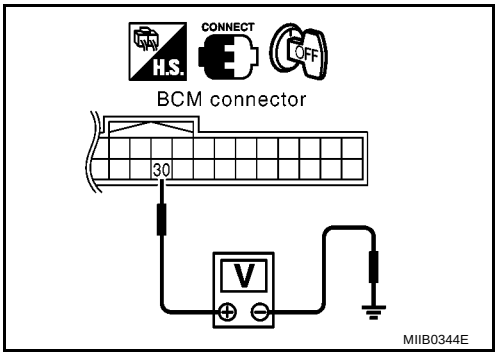
4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M57 terminal 30 and ground.

30 – Ground : Battery voltage

OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.



REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

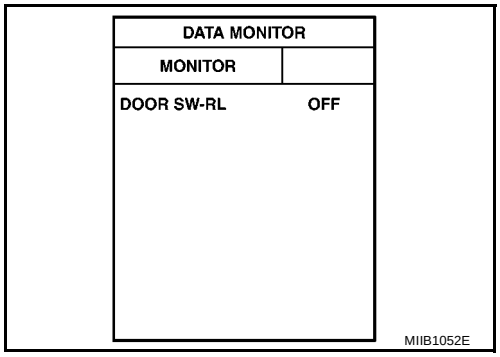
Check door switch “DOOR SW-RL” in “DATA MONITOR” mode with CONSULT- II.

When rear door (LH side) is opened:

DOOR SW-RL ⇒ ON

When rear door (LH side) is close:

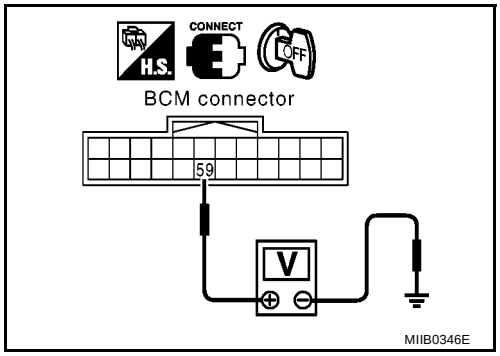
DOOR SW-RL ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector M58 terminal 59 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	59	Ground	Open	0
			Close	Battery voltage



OK or NG

OK >> Rear door switch LH is OK.

NG >> GO TO 2.

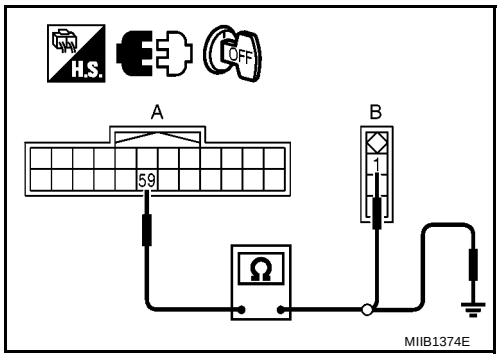
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch LH connector.
3. Check continuity between BCM connector and rear door switch LH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch LH	Terminal	
M58	59	B19	1	Yes

4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	59		No



OK or NG

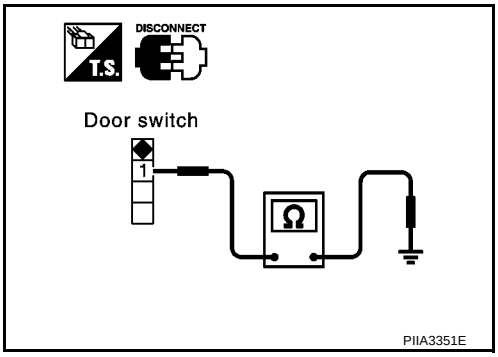
OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminals		Condition	Continuity
1	Ground	Pushed	NO
		Released	YES



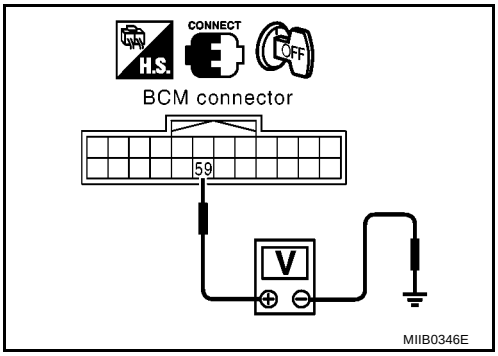
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 58 and ground.

59 – Ground : Battery voltage



OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.

REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

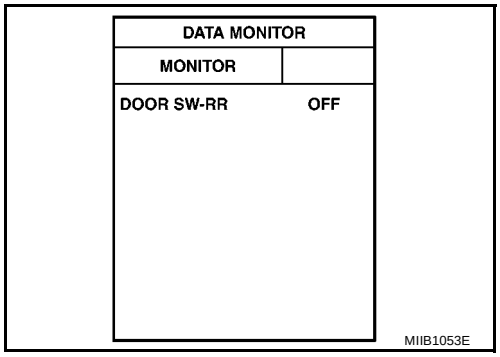
Check door switch “DOOR SW-RR” in “DATA MONITOR” mode with CONSULT- II.

When rear door (RH side) is opened:

DOOR SW-RR ⇒ ON

When rear door (RH side) is close:

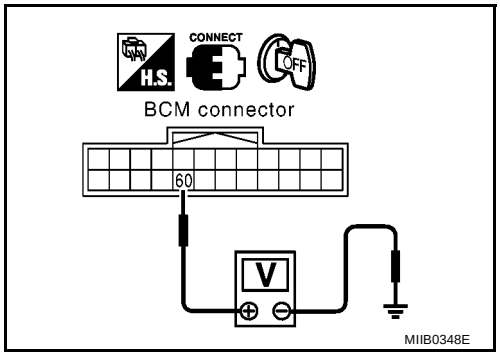
DOOR SW-RR ⇒ OFF



Without CONSULT- II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M58	60 (L)	Ground	Open	0
			Close	Battery voltage



OK or NG

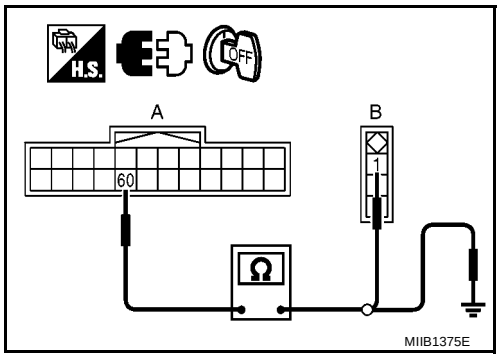
OK >> Rear door switch RH is OK.

NG >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and rear door switch RH connector.
3. Check continuity between BCM connector and rear door switch RH connector.

A		B		Continuity
BCM connector	Terminal	Rear door switch RH	Terminal	
M58	60	B42	1	Yes



4. Check continuity between BCM connector and ground.

A		Ground	Continuity
BCM connector	Terminal		
M58	60		No

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

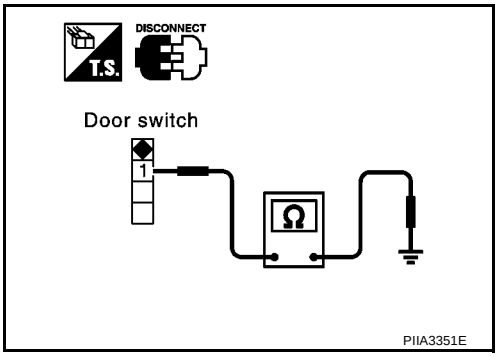
3. CHECK DOOR SWITCH

Check continuity between door switch terminal 1 and body ground of door switch.

Terminal		Condition	Continuity
1	Ground	Pushed	NO
		Released	YES

OK or NG

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



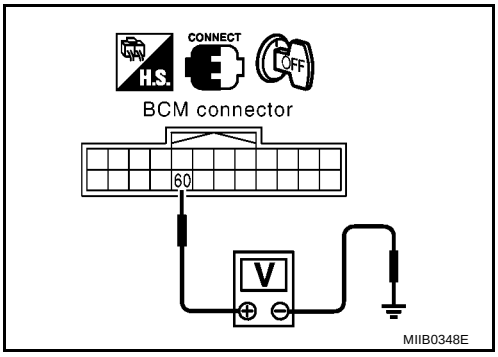
4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M58 terminal 60 and ground.

60 – Ground : Battery voltage

OK or NG

OK >> Check door switch ground condition.
NG >> Replace BCM.



BACK DOOR SWITCH

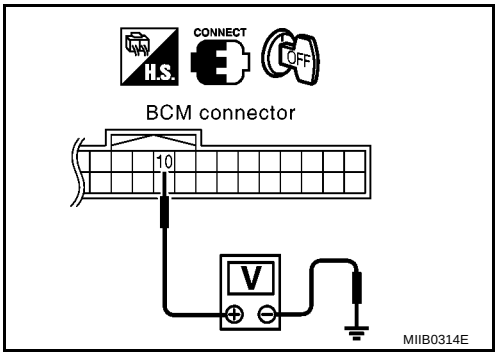
1. CHECK BACK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M57 terminal 10 and ground.

Terminal		Back door condition	Voltage (V) Approx.
(+)	(–)		
10 (P)	Ground	Closed	5
		Open	0

OK or NG

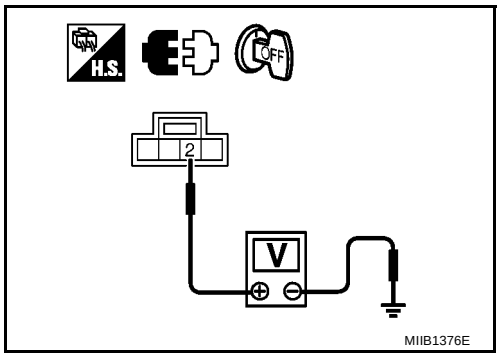
OK >> Back door switch circuit is OK.
NG >> GO TO 2



2. CHECK BACK DOOR SWITCH HARNESS

1. Disconnect back door switch connector.
2. Check voltage between back door switch connector and ground. (Check harness for open.)

Back door switch connector	Terminal	Ground	Voltage (V) (Approx.)
B46	2		Battery voltage

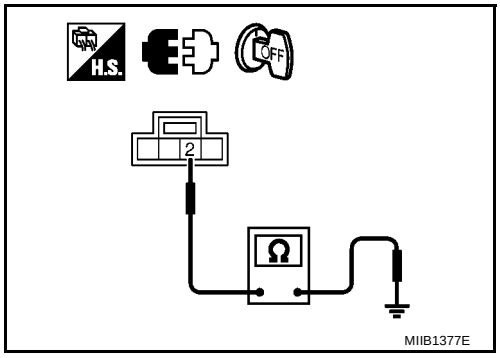


3. Disconnect BCM connector.
4. Check continuity between back door switch connector and ground. (Check harness for short.)

Back door switch connector	Terminal	Ground	Continuity
B46	2		No

OK or NG

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



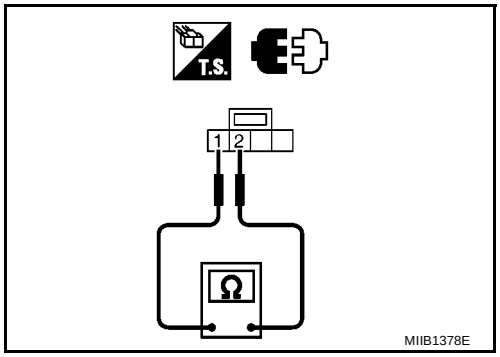
3. CHECK BACK DOOR SWITCH

Check continuity between back door switch terminal.

Back door switch	Terminal		Rear door condition	Continuity
	1	2	Closed	No
			Opened	Yes

OK or NG

OK >> GO TO 4.
NG >> Replace back door release actuator (back door switch).



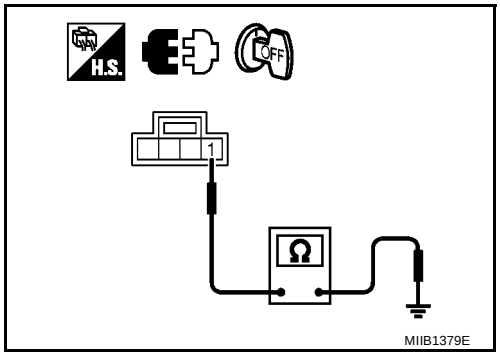
4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door switch connector and ground.

Back door switch connector	Terminal	Ground	Continuity
B46	1		Yes

OK or NG

OK >> Check harness connection.
NG >> Replace back door switch.



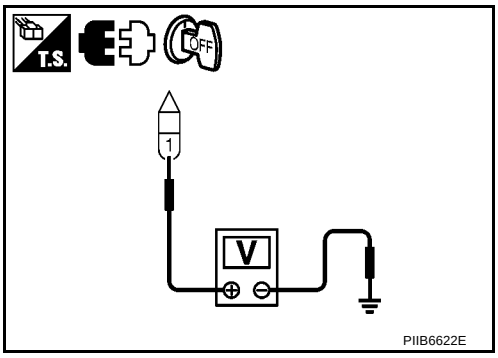
Check Intelligent Key Warning Buzzer Circuit

BIS00168

1. CHECK INTELLIGENT KEY WARNING BUZZER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key warning buzzer connector.
3. Check voltage between Intelligent Key warning buzzer connector and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Intelligent Key warning buzzer connector	Terminal		
D10	1	Ground	Battery voltage



OK or NG

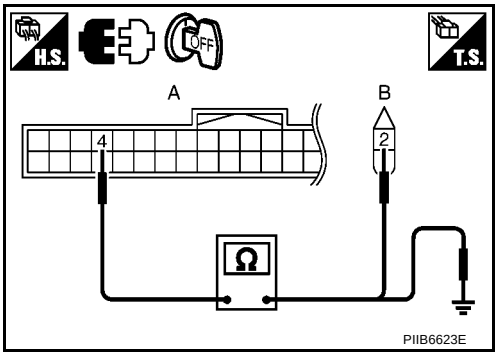
OK >> GO TO 2.
NG >> Check the following.

- 10A fuse [No. 7, located in the fuse block (J/B)]
- Continuity between Intelligent Key warning buzzer and fuse

2. CHECK INTELLIGENT KEY WARNING BUZZER CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit connector and Intelligent Key warning buzzer connector.

A		B		Continuity
Intelligent Key unit connector	Terminal	Intelligent Key warning buzzer connector	Terminal	
M60	4	D10	2	Yes



3. Check continuity between Intelligent Key unit connector and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	4		No

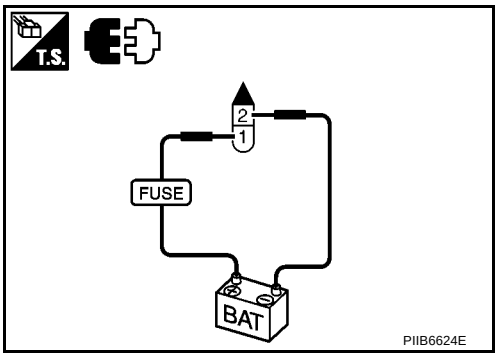
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and Intelligent Key warning buzzer.

3. CHECK INTELLIGENT KEY WARNING BUZZER OPERATION

Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 2, and check the operation.

1 (BAT+) - 2 (BAT-) : the buzzer sounds



OK or NG

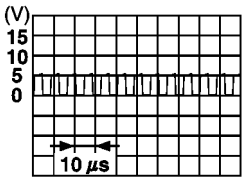
OK >> Intelligent Key warning buzzer is OK.
NG >> Replace Intelligent Key warning buzzer.

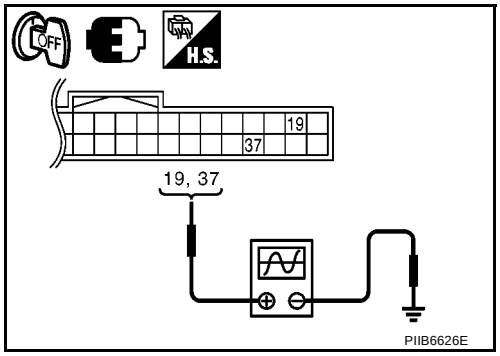
Check Outside Key Antenna (Driver Side and Passenger Side)

BIS00169

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals				Condition	Signal (Reference value.)
(+)			(–)		
Intelligent Key unit connector		Terminal			
M60	Driver side	19	Ground	Door request switch is pushed	 SIIA1910J
	Passenger side	37			



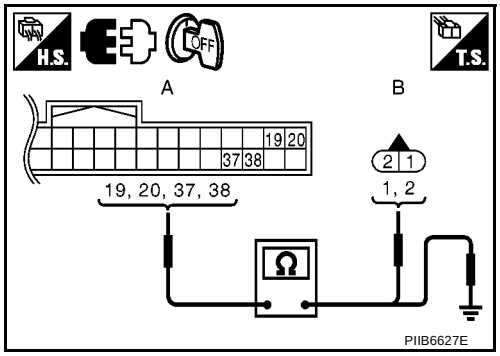
OK or NG

OK >> Outside key antenna is OK.
NG >> GO TO 2.

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit and outside key antenna connector.
2. Check continuity between Intelligent Key unit connector and outside key antenna connector.

A		B			Continuity
Intelligent Key unit connector	Terminal	Outside key antenna connector		Terminal	
M60	19	D13	Driver side	1	Yes
	20			2	
	37	D30	Passenger side	1	
	38			2	



3. Check continuity between Intelligent Key unit connector and ground.

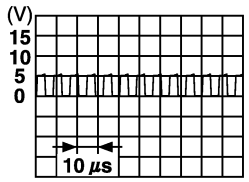
A			Continuity
Intelligent Key unit connector	Terminal		
M60	19	Ground	No
	20		
	37		
	38		

OK or NG

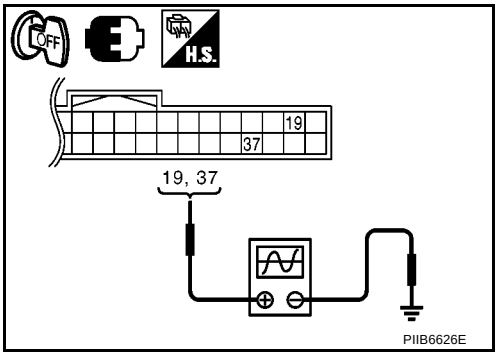
OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and outside key antenna.

3. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

1. Replace outside key antenna. (New antenna or other antenna)
2. Connect Intelligent Key unit and outside key antenna connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals (+)			Terminals (–)	Condition	Signal (Reference value.)
Intelligent Key unit connector		Terminal			
M60	Driver side	19	Ground	Door request switch is pushed	
	Passenger side	37			

SIIA1910J



PIIB6626E

OK or NG

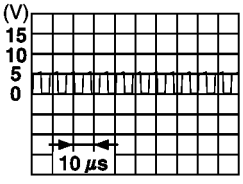
OK >> Replace malfunction outside key antenna.
NG >> Replace Intelligent Key unit.

Check Outside Key Antenna (Back Door)

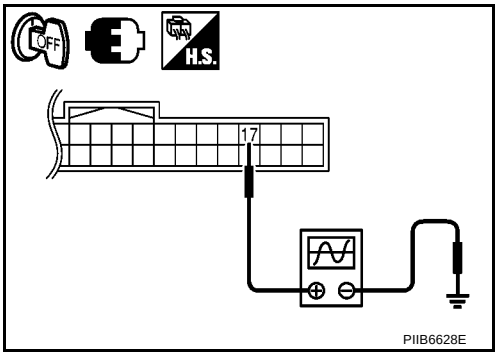
BIS0016A

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals (+)		Terminals (–)	Condition	Signal (Reference value.)
Intelligent Key unit connector	Terminal			
M60	17	Ground	Back door request switch is pushed	

SIIA1910J



PIIB6628E

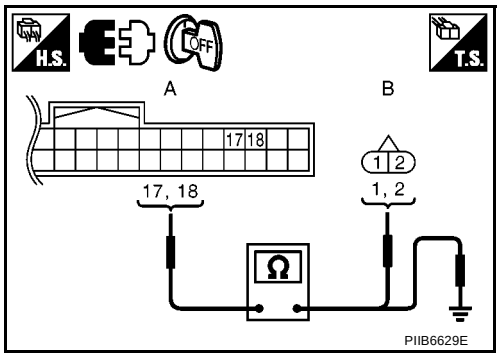
OK or NG

OK >> Outside key antenna (back door) is OK.
NG >> GO TO 2.

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit and outside key antenna (back door) connector.
2. Check continuity between Intelligent Key unit connector and outside key antenna (back door) connector.

A		B		Continuity
Intelligent Key unit connector	Terminal	Outside key antenna (back door) connector	Terminal	
M60	17	B43	1	Yes
	18		2	



3. Check continuity between Intelligent Key unit connector and ground.

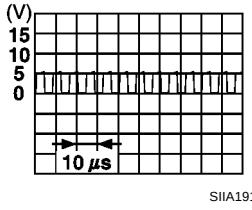
A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	17		No
	18		

OK or NG

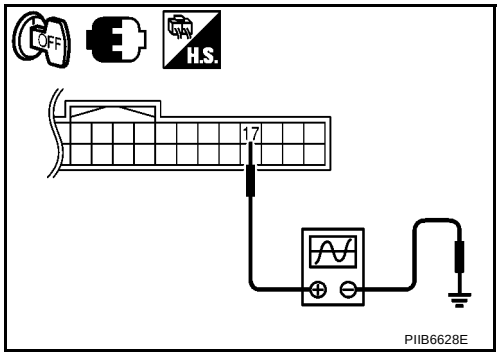
OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and outside key antenna (back door).

3. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

1. Replace outside key antenna. (New antenna or other antenna)
2. Connect Intelligent Key unit and outside key antenna (back door) connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals			Condition	Signal (Reference value.)
(+)		(–)		
Intelligent Key unit connector	Terminal			
M60	17	Ground	Trunk lid request switch is pushed	

SIIA1910J



OK or NG

OK >> Replace outside key antenna (back door).
NG >> Replace Intelligent Key unit.

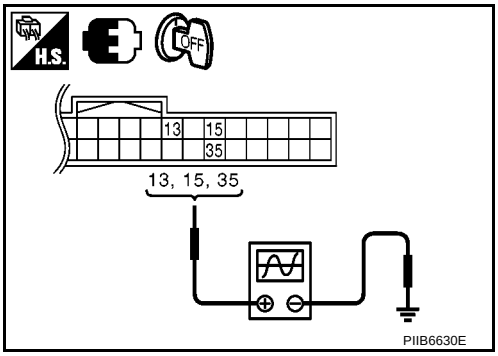
Check Inside Key Antenna

BIS0016B

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals (+)			Terminals (–)	Condition	Signal (Reference value.)
Intelligent Key unit connector		Terminal			
M60	Dash board	35	Ground	Any door is open → close	SIIA1910J
	Center console	15			
	Back door	13			



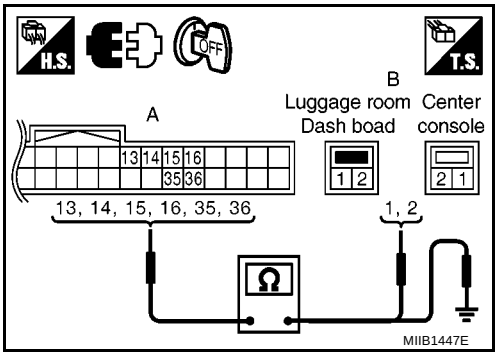
OK or NG

OK >> Check the condition of harness and connector.
NG >> GO TO 2.

2. CHECK INSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit and inside key antenna connector.
2. Check continuity between Intelligent Key unit connector and inside key antenna connector.

A		B			Continuity
Intelligent Key unit connector	Terminal	Inside key antenna connector		Terminal	
M60	35	M47	Dash board	1	Yes
	36			2	
	15	B20	Center console	1	
	16			2	
	13	B32	Back door	1	
	14			2	



3. Check continuity between Intelligent Key unit connector and ground.

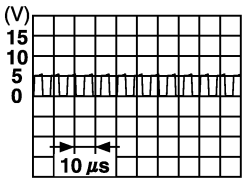
A			Ground	Continuity
Intelligent Key unit connector		Terminal		
M60	Dash board	35	Ground	No
		36		
	Center console	15		
		16		
	Back door	13		
		14		

OK or NG

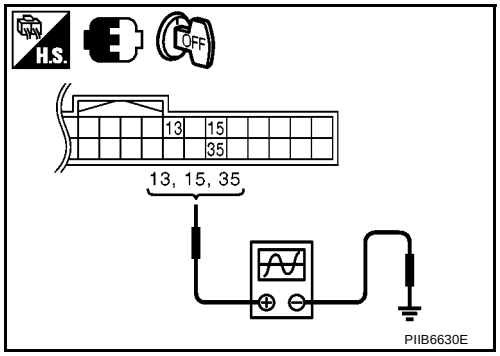
OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and inside key antenna.

3. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

1. Replace inside key antenna. (New antenna or other antenna)
2. Connect Intelligent Key unit and inside key antenna connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Terminals				Condition	Signal (Reference value.)
(+)			(–)		
Intelligent Key unit connector		Terminal			
M60	Dash board	35	Ground	Any door is open → close	
	Center console	15			
	Back door	13			

SIIA1910J



PIIB6630E

OK or NG

OK >> Replace malfunction inside key antenna.
NG >> Replace Intelligent Key unit.

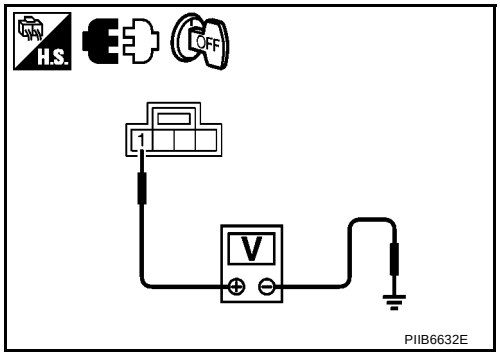
Check Steering Lock Unit

BIS0016C

1. CHECK STEERING LOCK UNIT POWER SUPPLY

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

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Steering lock unit	Terminal		
M37	1	Ground	Battery voltage



PIIB6632E

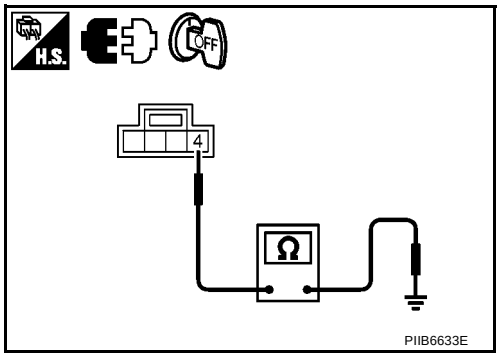
OK or NG

OK >> GO TO 2.
NG >> Repair or replace steering lock unit power supply circuit.

2. CHECK STEERING LOCK UNIT GROUND CIRCUIT

Check continuity between steering lock unit and ground.

Steering lock unit connector	Terminal	Ground	Continuity
M37	4		Yes



PIIB6633E

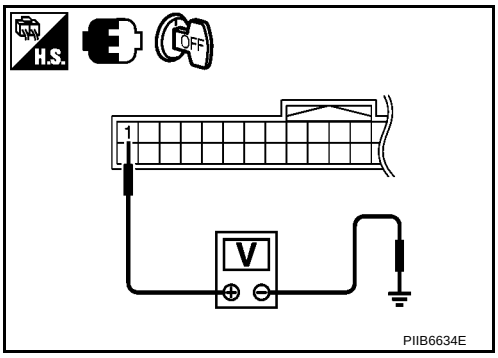
OK or NG

OK >> GO TO 3.
NG >> GO TO 6.

3. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect steering lock unit connector.
2. Check voltage between Intelligent Key unit and ground.

Terminals			Voltage (V) (Approx.)
(+)		(–)	
Intelligent Key unit connector	Terminal		
M37	1	Ground	5



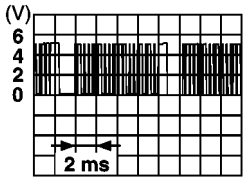
PIIB6634E

OK or NG

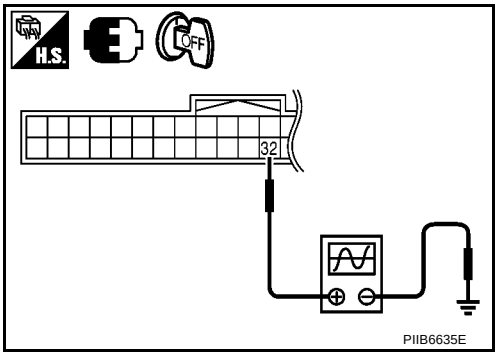
OK >> GO TO 4.
NG >> Replace Intelligent Key unit.

4. CHECK STEERING LOCK COMMUNICATION SIGNAL

Check signal between Intelligent Key unit and ground with oscilloscope.

Terminals			Condition of key switch	Voltage (V) (Approx.)
(+)		(–)		
Intelligent Key unit connector	Terminal			
M37	32	Ground	Ignition switch is pressed, when Intelligent Key is into the vehicle.	
			Other than above	5

SIIA1911J



PIIB6635E

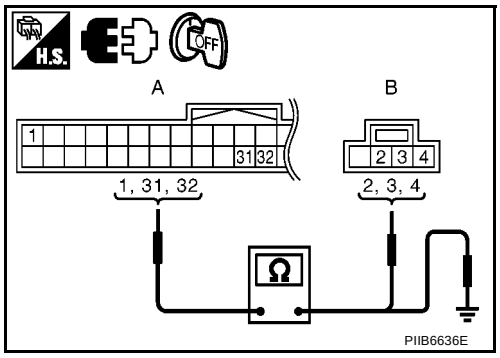
OK or NG

OK >> GO TO 5.
NG >> Replace Intelligent Key unit.

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Disconnect Intelligent Key unit and steering lock unit connectors.
2. Check continuity between Intelligent Key unit and steering lock unit.

A		B		Continuity
Intelligent Key unit connector	Terminal	Steering lock unit connector	Terminal	
M60	1	M37	2	Yes
	31		4	
	32		3	



3. Check continuity between steering lock unit and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	1		No
	31		
	32		

OK or NG

OK >> Replace steering lock unit.

- After replacing steering lock unit, perform registration procedure. Refer to “CONSULT-II Operation Manual NATS”.

NG >> Repair or replace harness between steering lock unit and Intelligent Key unit.

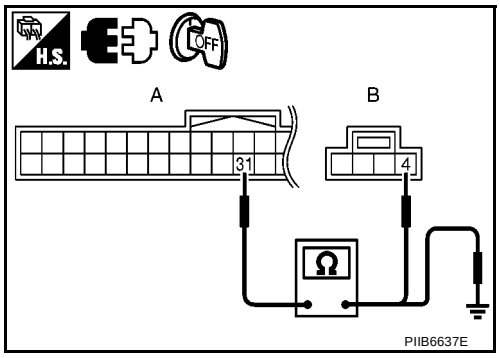
6. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit and steering lock unit.

A		B		Continuity
Intelligent Key unit connector	Terminal	Steering lock unit connector	Terminal	
M60	31	M37	4	Yes

3. Check continuity between steering lock unit and ground.

A		Ground	Continuity
Intelligent Key unit connector	Terminal		
M60	31		No



OK or NG

OK >> Check the following.

- Intelligent Key unit ground circuit.
- Intelligent Key unit.

NG >> Repair or replace harness between steering lock unit and Intelligent Key unit.

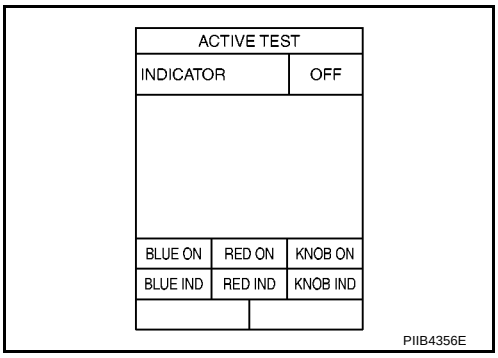
Check Warning Lamp

BIS0016E

1. CHECK WARNING LAMP OPERATION

With CONSULT-II

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-II.
- Select “BLUE ON”, “RED ON” or “KNOB ON”



Does each warning lamp illuminate?

OK or NG

OK >> INSPECTION END
NG >> GO TO DI-32, "WARNING LAMPS" .

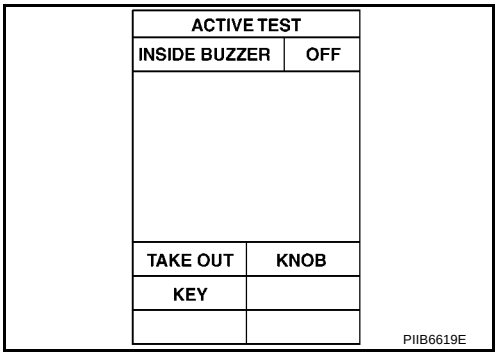
Check Warning Buzzer in Combination Meter

BIS0016F

1. CHECK WARNING BUZZER OPERATION

With CONSULT-II

- Check “INSIDE BUZZER” in “ACTIVE TEST” mode with CONSULT-II.
- Touch “TAKE OUT”, “KNOB” or “KEY” on “ACTIVE TEST” screen.



Does each warning buzzer sound?

OK or NG

OK >> INSPECTION END
NG >> GO TO 2.

2. CHECK OTHER WARNING BUZZER OPERATION

Check other warning buzzer operation using combination meter.

Does warning buzzer in combination meter sound?

OK or NG

OK >> INSPECTION END
NG >> GO TO DI-52, "WARNING CHIME" .

Check Hazard Function

BIS0016G

1. CHECK HAZARD WARNING LAMP

Does hazard warning lamp flash with hazard switch?

YES or NO

YES >> Hazard warning lamp circuit is OK.
NO >> Check hazard circuit. Refer to LT-98, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Headlamp Function

BIS0016H

1. CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning lighting switch “ON”?

YES >> Headlamp circuit is OK.
NO >> Check headlamp system. Refer to LT-7, "HEADLAMP -CONVENTIONAL TYPE-" or LT-35, "HEADLAMP - DAYTIME LIGHT SYSTEM -" .

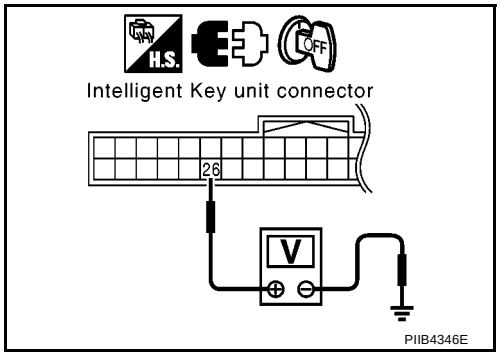
Check Stop Lamp Switch

BIS0015U

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M60	26	Ground	Brake pedal depressed	Battery voltage
			Brake pedal released	0



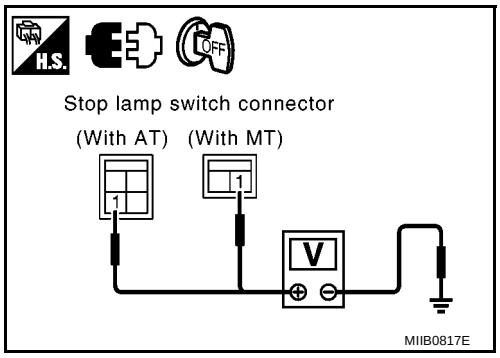
OK or NG

OK >> Stop lamp switch is OK.
NG >> GO TO 2.

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

Check voltage between stop lamp switch harness connector and ground.

1 – Ground : Battery voltage



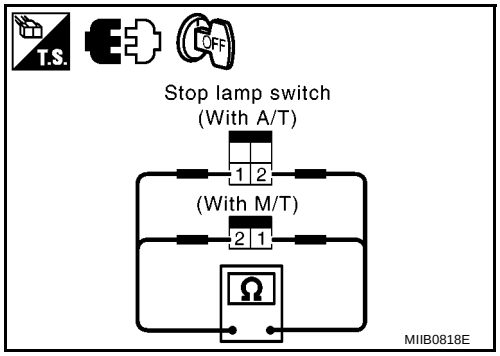
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between stop lamp switch power supply circuit and fuse.

3. CHECK STOP LAMP SWITCH OPERATION

Check continuity between stop lamp switch connector.

Connector	Terminal		Condition	Continuity
E38 (LHD with M/T) E60 (LHD with A/T) E203 (RHD with M/T) E204 (RHD with A/T)	1	2	Brake pedal depressed	Yes
			Brake pedal not depressed	No



OK or NG

OK >> GO TO 4.
NG >> Replace stop lamp switch.

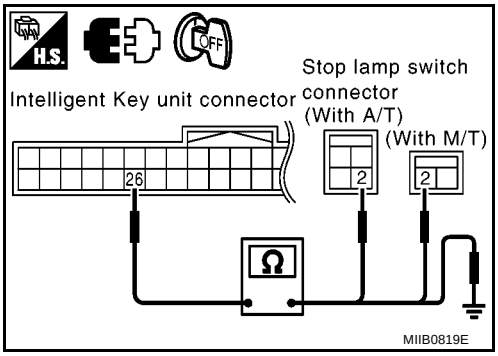
4. CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector and stop lamp switch harness connector.

26 – 2 : Continuity should exist.

2. Check continuity between Intelligent Key unit harness connector and ground.

26 – Ground : Continuity should not exist.



OK or NG

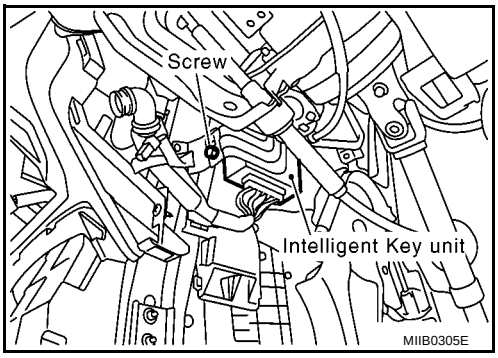
OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

Removal and Installation of Intelligent key unit

BIS000KU

REMOVAL

1. Remove the instrument lower driver panel. Refer to IP-4, "INSTRUMENT PANEL ASSEMBLY" .
2. Disconnect the Intelligent Key unit connector, remove the screw and Intelligent Key unit.



INSTALLATION

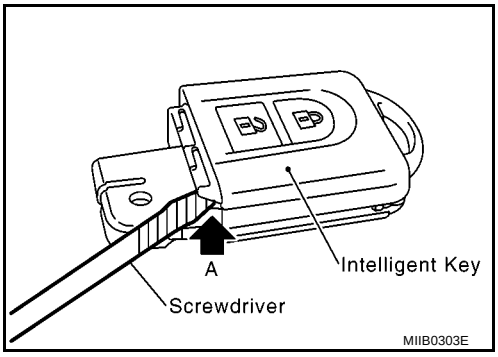
Install in the reverse order of removal.

Intelligent Key Inspection

BIS000KV

INTELLIGENT KEY DISASSEMBLY AND ASSEMBLY

1. Remove Intelligent Key cover.
2. Insert a thin screwdriver wrapped with tape into Area A and then separate lower and upper cases while twisting screwdriver.



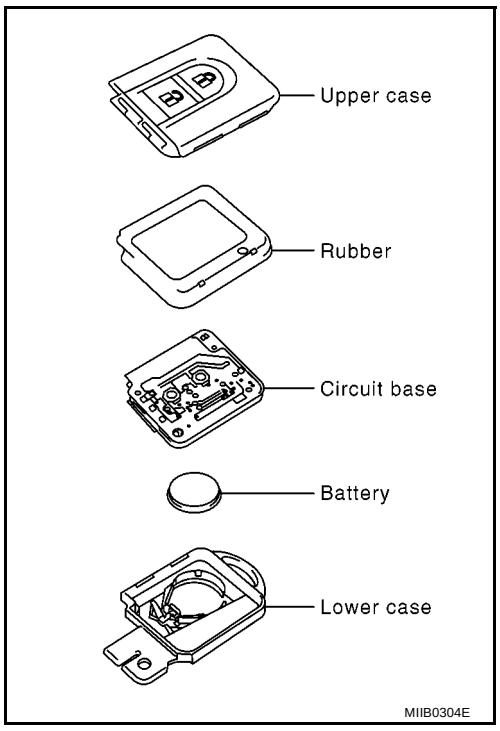
3. When replacing the circuit board or rubber
   - Remove the circuit board assembly from the upper case. (Substrate assembly: circuit board + rubber)
   - Gently press the rubber and remove the circuit board.

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

Battery replacement	: Coin-shaped lithium battery 3V (CR2032)

   CAUTION:
   When replacing battery, be sure to keep dirt, grease, and other foreign materials off the electrode contact area.
5. After replacement, assemble the upper and lower cases by engaging the hooks on their circumference while being careful not to pinch the rubber, etc.

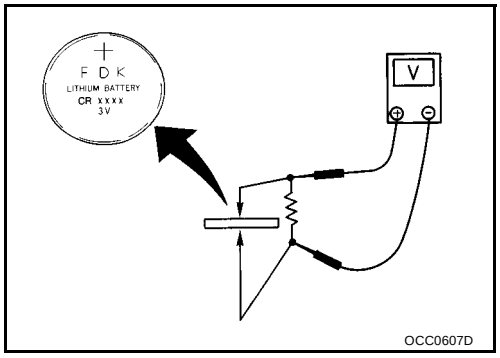
   CAUTION:
   After replacing the battery, check to make sure all Intelligent Key functions work normally.



REMOTE CONTROLLER BATTERY INSPECTION

Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

Standard : Approx. 2.5V - 3.0V

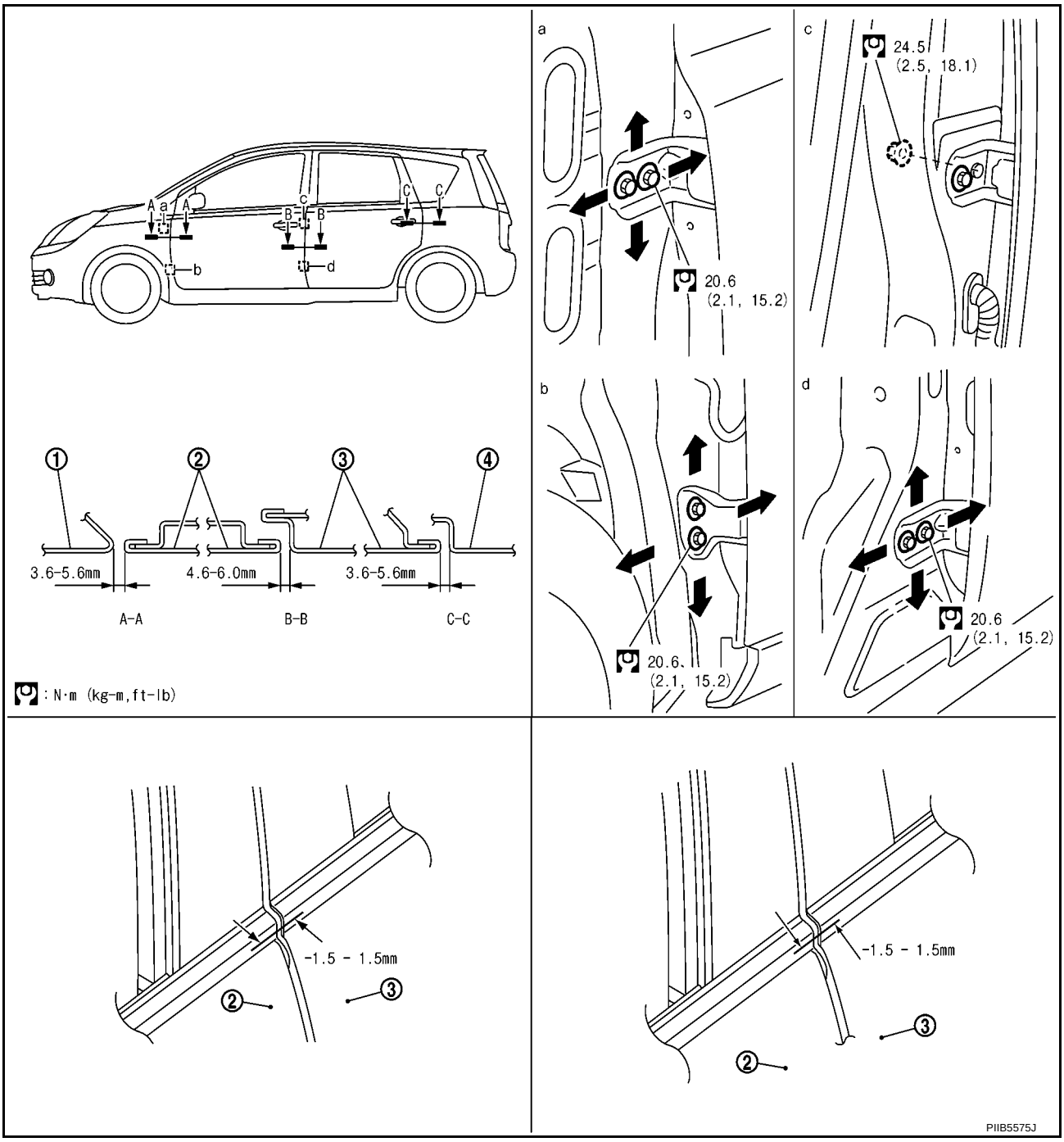


DOOR

PFP:80100

Fitting Adjustment

BIS000KW



1. Front fender
2. Front door
3. Rear door
4. Body side outor panel

FRONT DOOR

Longitudinal Gap and Front End Height Difference Adjustment

1. Remove front fender. Refer to BL-15, "Removal and Installation" .
2. Loosen the hinge bolts on body, then lift the rear end of front door to adjust the clearance and surface difference properly.

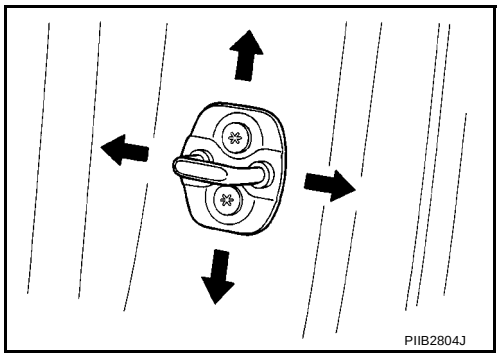
REAR DOOR

Longitudinal Gap and Front End Height Difference Adjustment

1. Remove center pillar upper garnish and center pillar lower garnish. Refer to EI-26, "Removal and Installation" .
2. Working from inside and outside vehicle, loosen bolts and nuts, and then open rear door, and adjust while raising rear door by rear edge.

STRIKER ADJUSTMENT

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



Removal and Installation

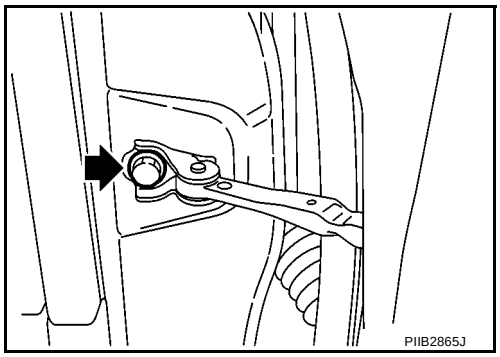
BIS000KZ

CAUTION:

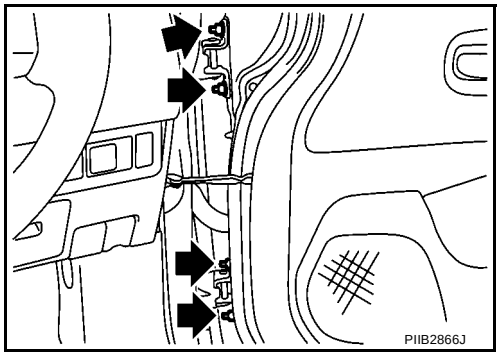
- **During removal and installation of the door assembly, use a jack to support the door. Place a shop cloth or other suitable material onto the jack plate to protect the door and body from damage.**
- **After removal and installation of the door assembly, always adjust the fit.**
- **Check hinge rotating part for poor lubrication. If necessary, apply “Body Grease”.**

REMOVAL OF FRONT DOOR

1. Remove dash side finisher. Refer to EI-20, "Removal and Installation" .
2. Dissconnect front door harness connectors.
3. Remove harness gromet, and then remove front door harness conectors.
4. Remove connectors and harness clamps in front door, and then pull out harness from front door.
5. Remove check link bolts.



6. Remove hinge nuts on the door and then the door assembly.

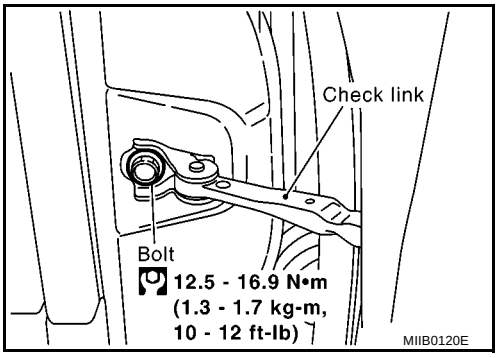


INSTALLATION

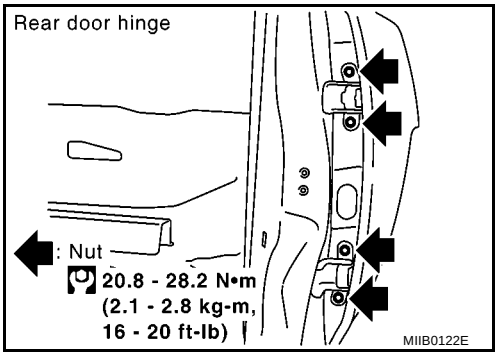
Install in the reverse order of removal.

REMOVAL OF REAR DOOR

1. Remove rear door finisher. Refer to EI-20, "Removal and Installation" .
2. Remove door window. Refer to GW-93, "Removal and Installation" .
3. Remove connectors and harness clamps from rear door and then pull out harness from rear door.
4. Remove check link bolts.



5. Remove hinge nuts on the door and then the door assembly.

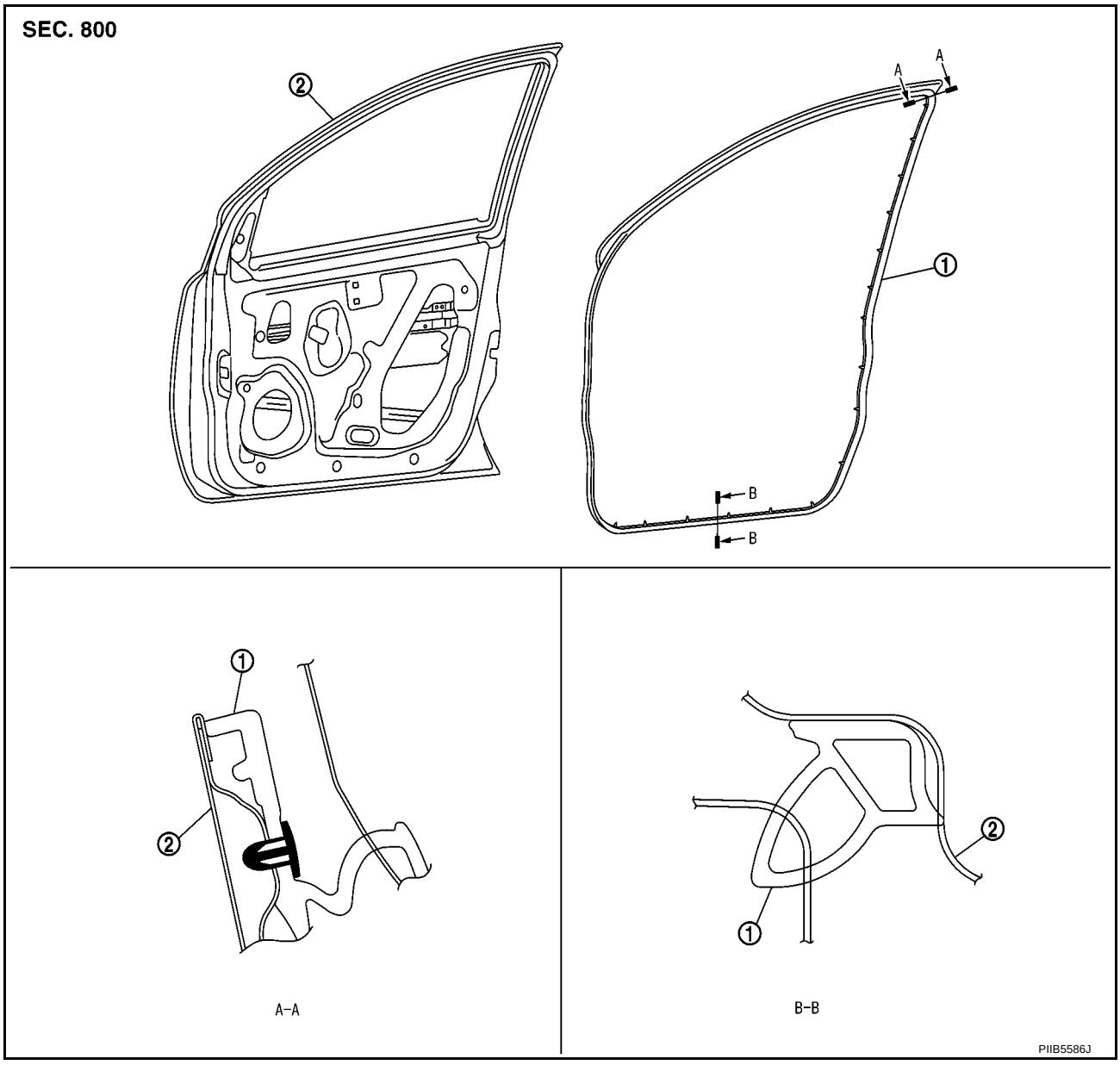


INSTALLATION

Install in the reverse order of removal.

Front Door Weatherstrip

BIS000L0



1. Front door weatherstrip
2. Front door

CAUTION:

During removal, if peeling off the double-sided tape is difficult, apply remover (product equivalent to Sumitomo 3M Cleaner 30) and then remove the double-sided tape. When using remover, keep it way from open flame and work in a sufficiently ventilated area.

REMOVAL

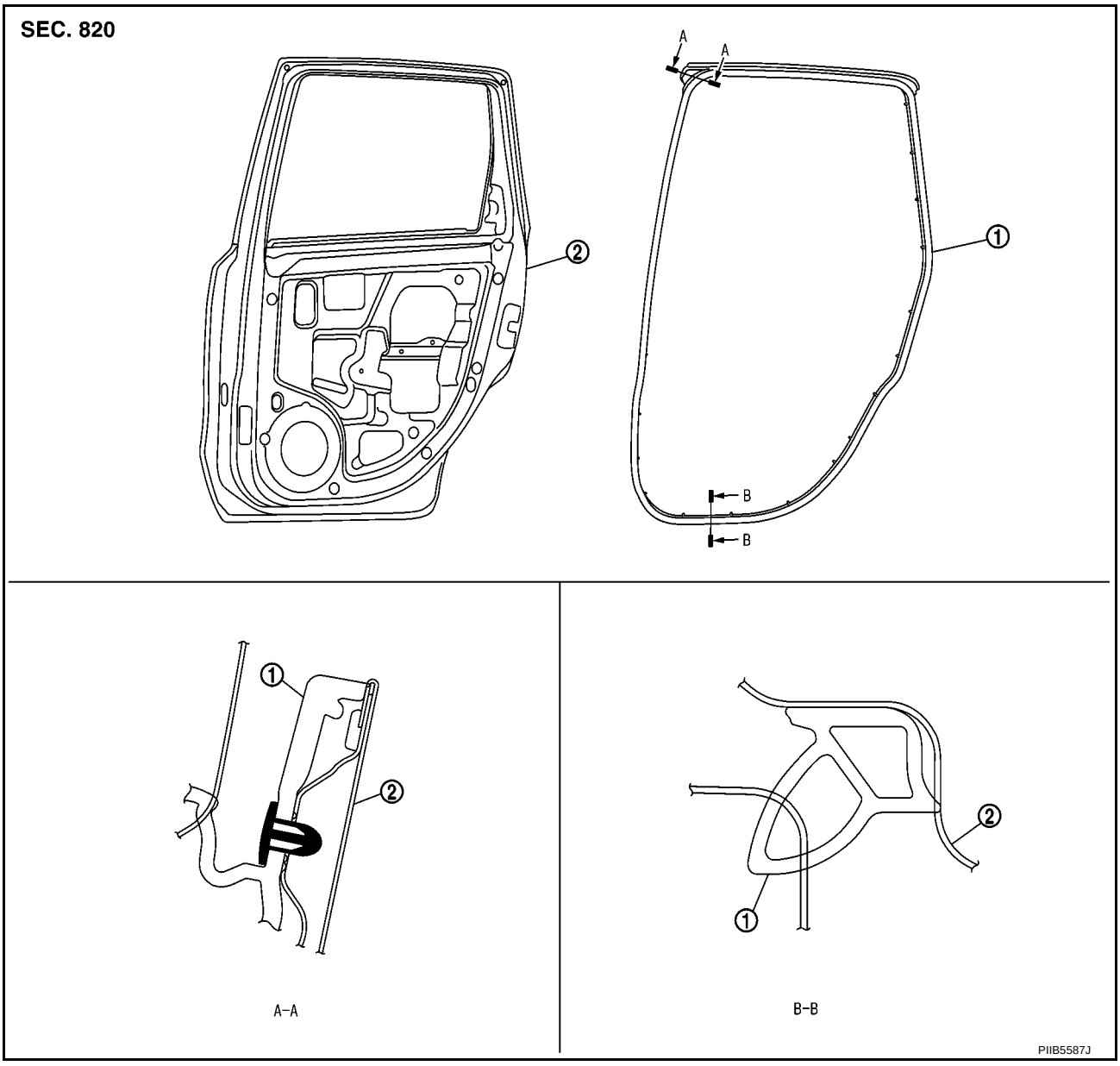
1. Remove check link bolts.
2. Remove door weatherstrip.

INSTALLATION

Install in the reverse order of removal.

Front Door Weatherstrip

BIS000UG



1. Rear door weatherstrip
2. Rear door

CAUTION:

During removal, if peeling off the double-sided tape is difficult, apply remover (product equivalent to Sumitomo 3M Cleaner 30) and then remove the double-sided tape. When using remover, keep it way from open flame and work in a sufficiently ventilated area.

REMOVAL

1. Removal check link bolts.
2. Remove door weatherstrip.

INSTALLATION

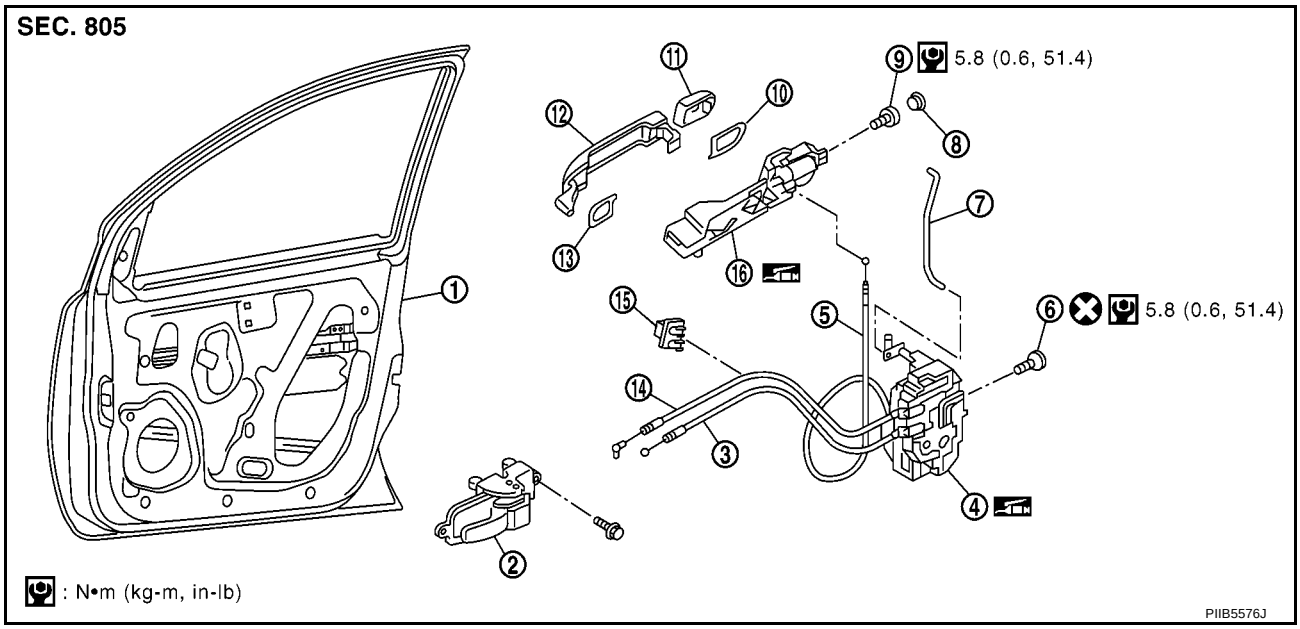
Install in the reverse oprder of removal.

FRONT DOOR LOCK

PFP:80502

Component Parts Location

BIS000L1



1. Front door panel
2. Inside handle
3. Inside handle cable
4. Door lock assembly
5. Outside handle cable
6. TOLX bolt (T30)
7. Key cylinder connecting rod
8. Grommet
9. TOLX bolt (T30)
10. Rear gasket
11. *Door key cylinder assembly
12. Outside handle
13. Front gasket
14. Lock knob cable
15. Holder
16. Outside handle bracket

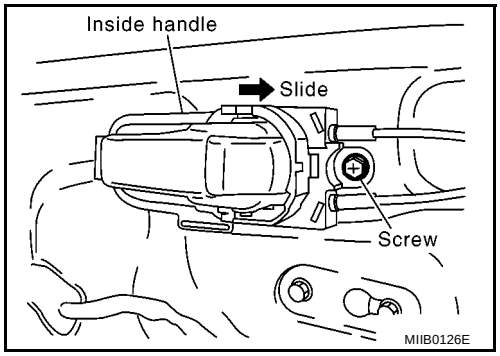
*: Outside handle escutcheon for vehicles with passenger door key cylinders.

Removal and Installation

BIS000L2

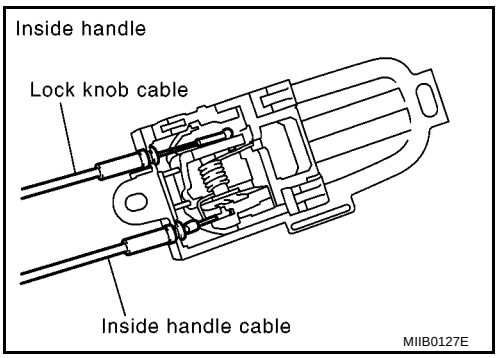
REMOVAL

1. Remove front door finisher. Refer to EI-20, "Removal and Installation" .
2. Fully close front door glass.
3. Remove sealing screen.
4. Remove front door lower sash (rear). Refer to GW-89, "Removal and Installation" .
5. Remove inside handle cable and lock knob cable from holder.
6. Remove inside handle screws, slide handle toward rear of vehicle, disengage handle from door panel, and remove inside handle.

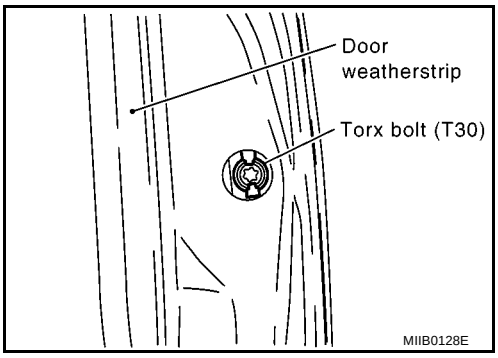


7. Disconnect inside handle cable and lock knob cable from inside handle.

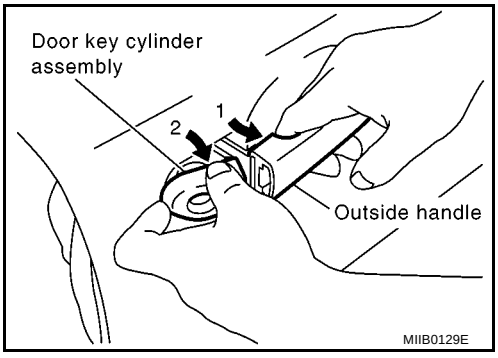
CAUTION:
During removal and installation, work so as not to bend the ends of the lock knob cable and inside handle cable.



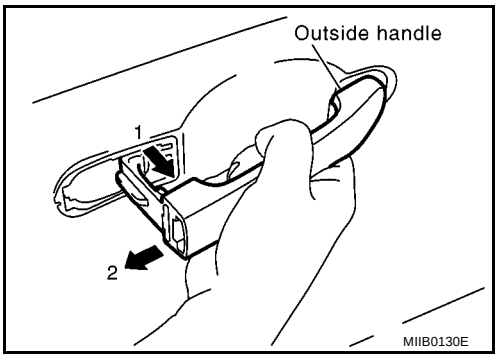
8. Remove door side grommets, and then remove door key cylinder assembly (escutcheon) bolts (Torx T30) from the grommet holes.
9. Remove key cylinder connecting rod (key cylinder side).: If there is no door key cylinder, GO TO 9.
10. Disconnect door antenna and door request switch connector and remove harness clamp. (Vehicle with intelligent key systems only)



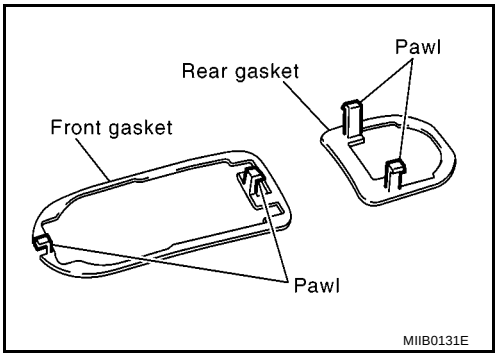
11. Remove door cylinder assembly while pulling outside handle forward.



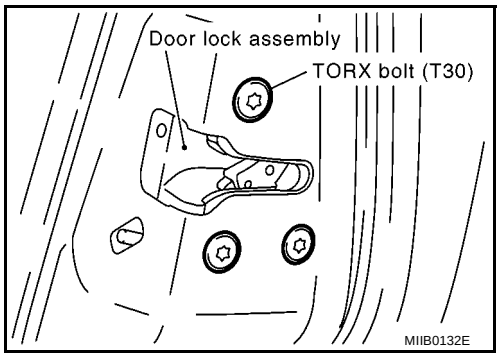
12. Pull outside door handle forward and then slide it toward vehicle rear to remove.



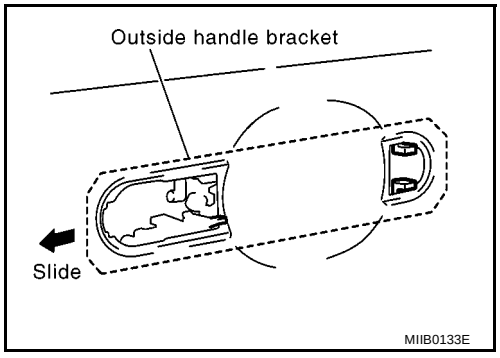
13. Remove front and rear gaskets.



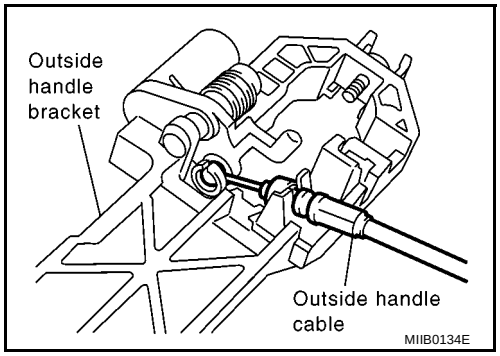
14. Remove door lock assembly bolts (Torx T30).



15. Slide outside handle bracket toward rear of vehicle, and then remove outside handle bracket and door lock assembly.
16. Disconnect door lock assembly connector.



17. Disconnect outside handle cable from outside handle bracket.



Install in the reverse order of removal.

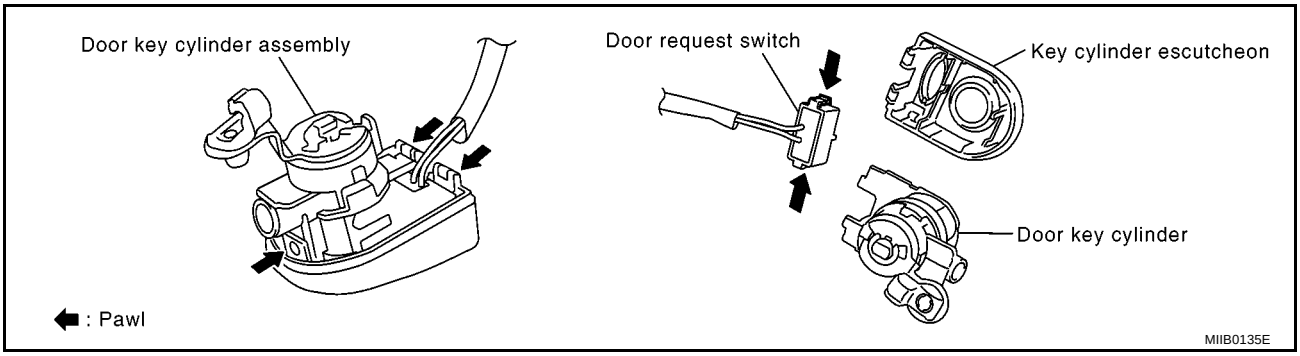
CAUTION:

- **Before installing door lock assembly, apply “anti-corrosion wax M-97 super” onto mounting seat on the body.**
- **Install each rod by rotating the rod holder until it engages with a tactile feel.**

Disassembly and Assembly

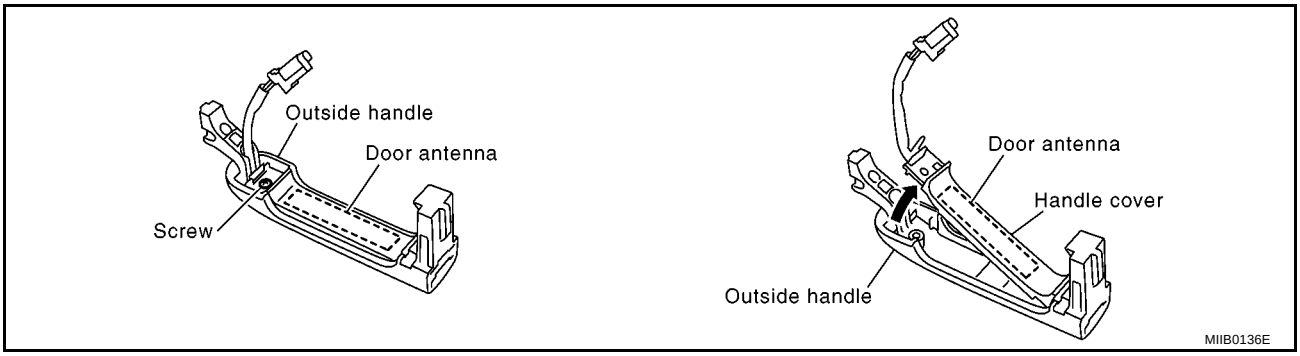
BIS000L3

DOOR KEY CYLINDER ASSEMBLY



1. Remove key cylinder escutcheon engagement (3 locations), and then remove door key cylinder.
2. Remove hook (2 locations) engagements, and then remove door request switch from key cylinder escutcheon. (Vehicles with intelligent key systems only)

OUTSIDE HANDLE



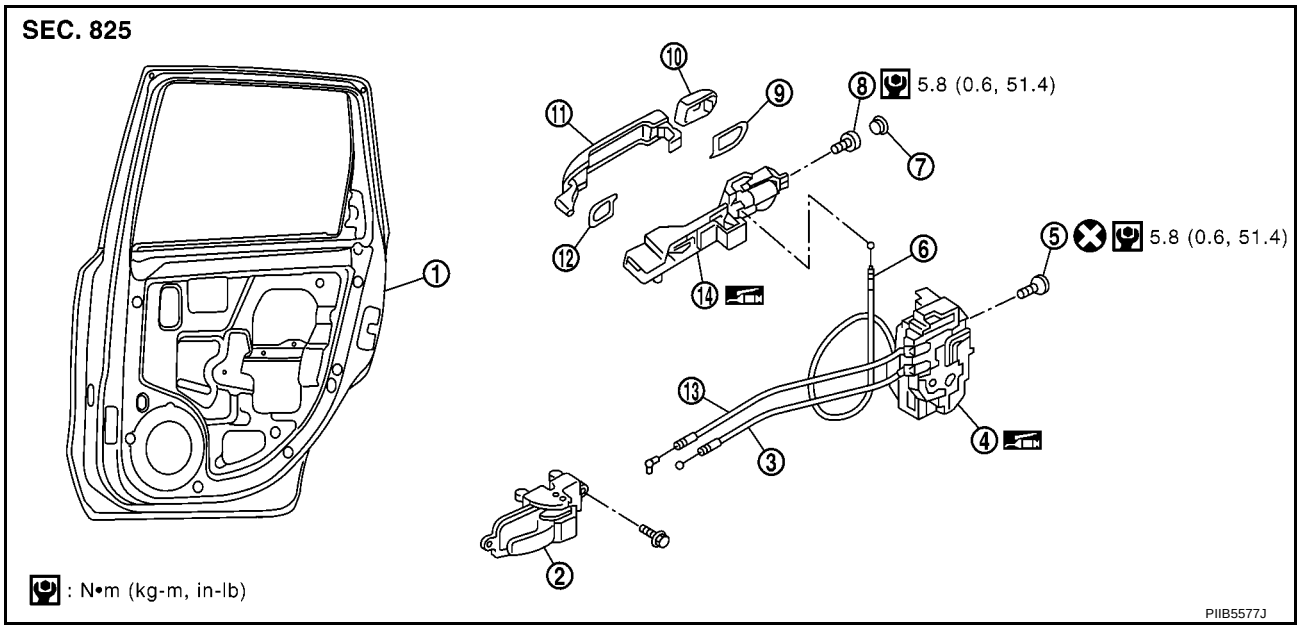
1. Remove handle cover screws.
2. Remove handle cover, and then remove door antenna. (Vehicles with intelligent key systems only)

REAR DOOR LOCK

PFP:82502

Component Parts Location

BIS000L4



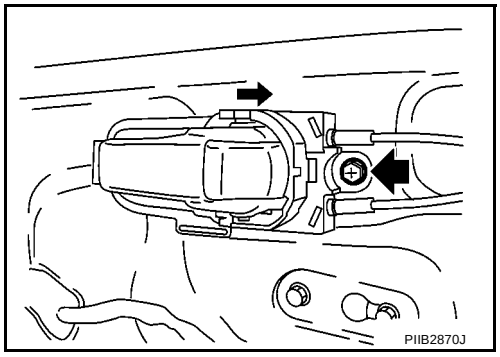
1. Rear door panel
2. Inside handle
3. Inside handle cable
4. Door lock assembly
5. TOLX bolt (T30)
6. Outside handle cable
7. Grommet
8. TOLX bolt (T30)
9. Rear gasket
10. Outside handle escutcheon
11. Outside handle
12. Front gasket
13. Lock knob cable
14. Outside handle bracket

Removal and Installation

BIS000L5

REMOVAL

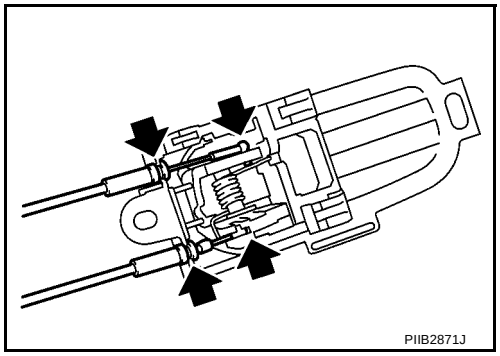
1. Remove rear door finisher. Refer to EI-20, "Removal and Installation" .
2. Remove sealing screen.
3. Remove partition sash. Refer to GW-93, "Removal and Installation" .
4. Support door glass while lifting it up to the door window completely closed position.
5. Remove inside handle bolts, slide handle toward rear of vehicle, remove engagement with door panel, and remove inside handle.



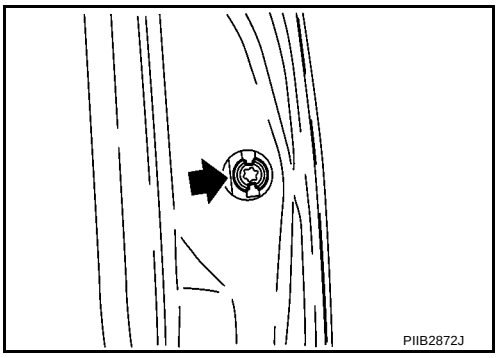
6. Disconnect inside handle cable and lock knob cable from inside handle.

CAUTION:

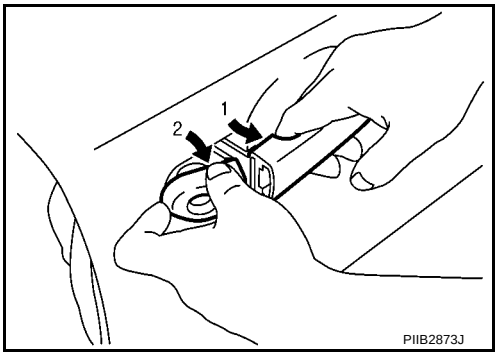
During removal and installation, work so as not to bend the ends of the lock knob cable and inside handle cable.



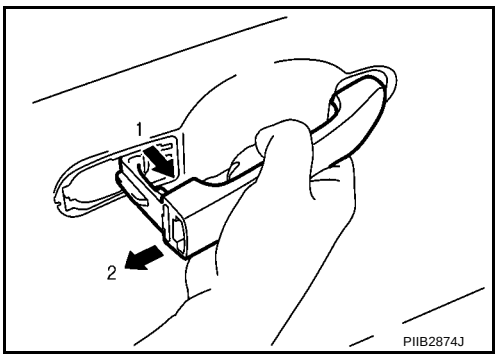
7. Remove door side grommets, and then remove outside handle escutcheon screws (Torx T30) from grommet holes.



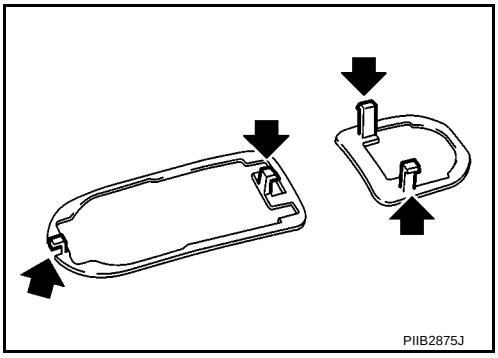
8. Pull outside handle forward while removing outside handle escutcheon.



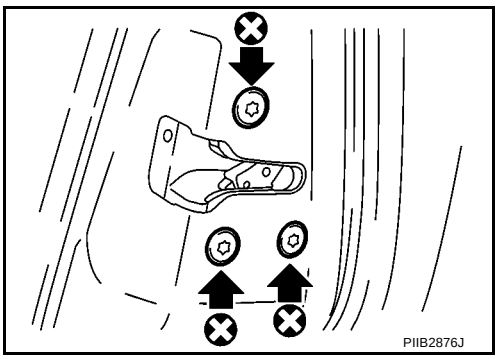
9. Pull outside door handle forward and then slide it toward vehicle rear to remove.



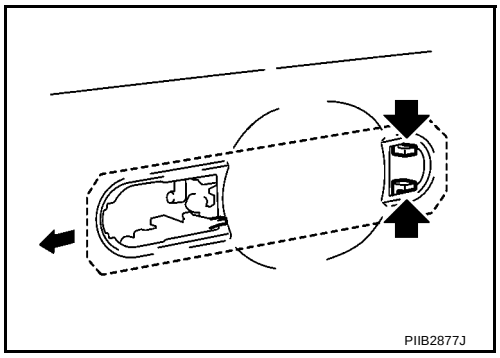
10. Remove front and rear gaskets.



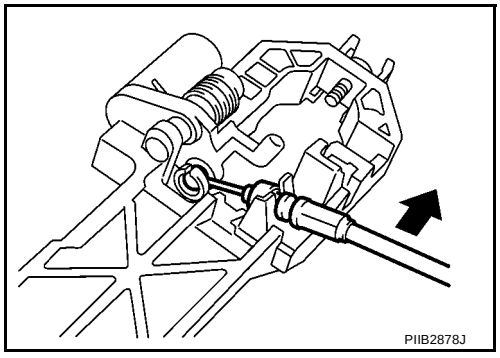
11. Remove door lock assembly screws (Torx T30).



12. Slide outside handle bracket toward rear of vehicle, and then remove outside handle bracket and door lock assembly.
13. Disconnect door lock assembly connector.



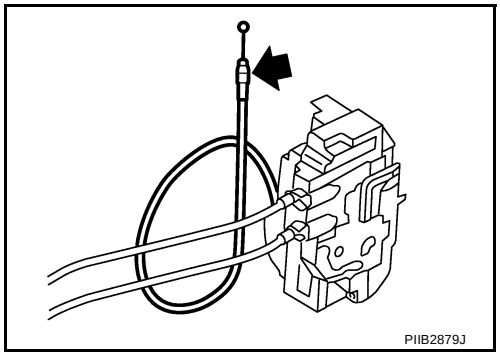
14. Disconnect outside handle cable from outside handle bracket.



Install in the reverse order of removal.

CAUTION:

- **Before installing door lock assembly, apply “anti-corrosion wax M-97 super” onto mounting seat on the body.**
- **When installing door lock assembly, be careful when rotating the outside handle cable as shown in the figure.**
  - **Place the outside handle bracket cable on the outside of door lock assembly before installing.**

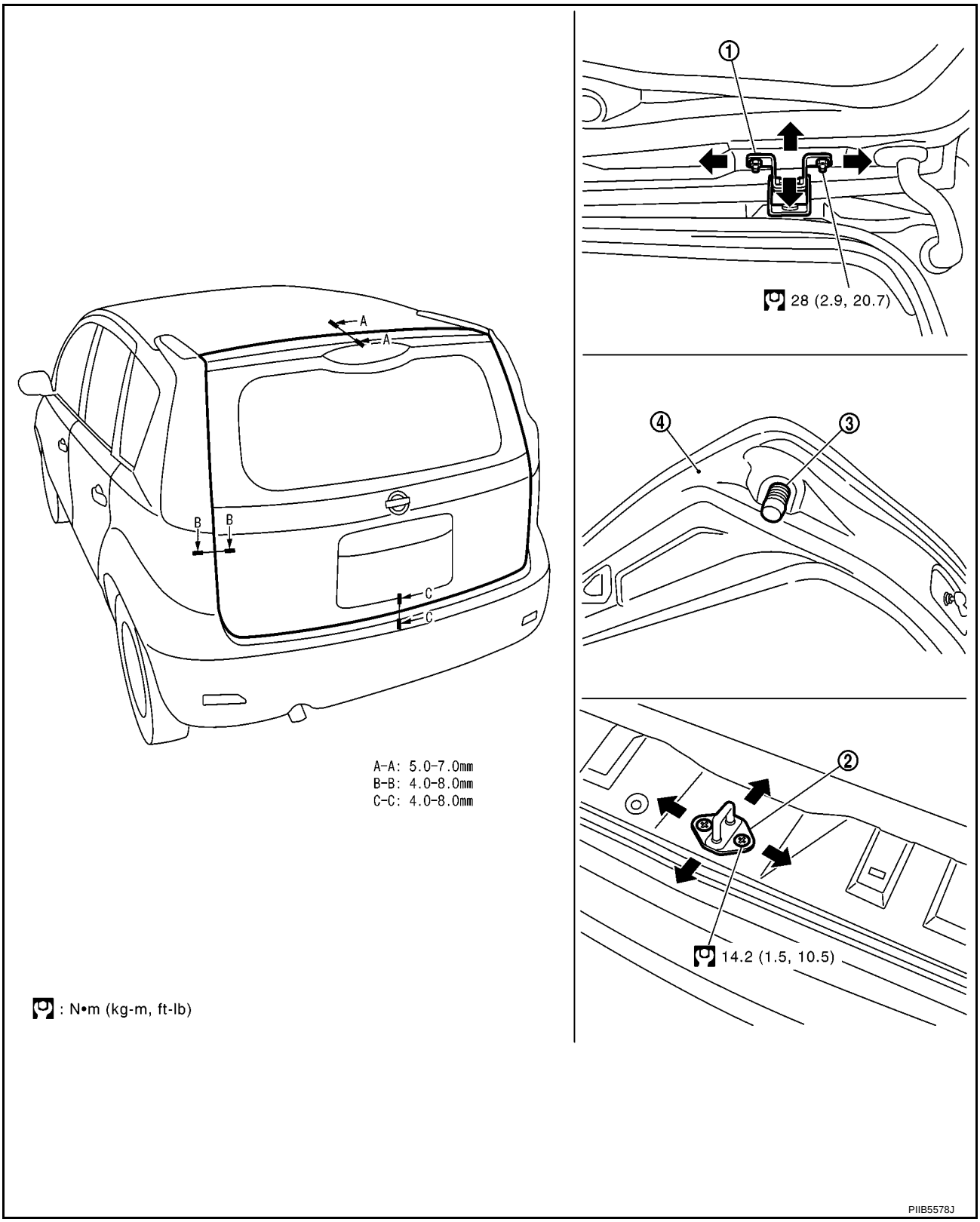


BACK DOOR

PFP:90100

Fitting Adjustment

BIS000L6



1. Back door hingel
2. Back door striker
3. Bamper robber
4. Back door panel

VERTICAL/LATERAL CLEARANCE (SURFACE DIFFERENCE) ADJUSTMENT

1. Remove luggage rear plate. Refer to EI-32, "Removal and Installation" .

2. Loosen back door striker screws.
3. Use a rubber hammer, etc., to strike back door striker to make the gap on the right and left and with the rear bumper even, and then tighten striker screws to specified torque.

CAUTION:
Adjust gap between back door and other areas to attain the right and left dimensional difference shown below.

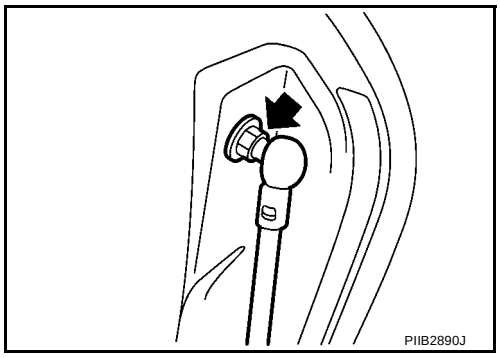
Back door outer (B) - Body side outer (B) : 2.0 mm or less

Back Door Assembly

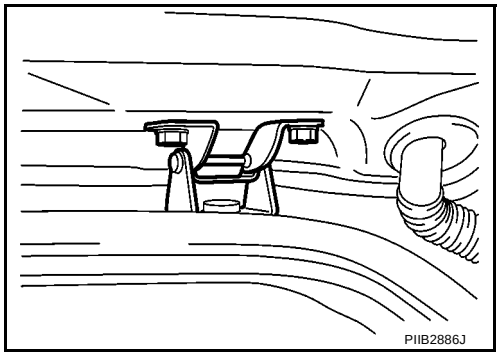
BIS000L7

REMOVAL

1. Remove back door finisher. Refer to EI-22, "Removal and Installation" .
2. Disconnect connectors in back door and unclamp harness. Pull out harness from back door.
3. After supporting the back door lock to keep it from falling, use a screwdriver, etc., to remove the back door stay (glass stay) door side hooks, and then pull out back door stay from stud pole.



4. Remove back door hinge bolts, and then remove back door assembly.

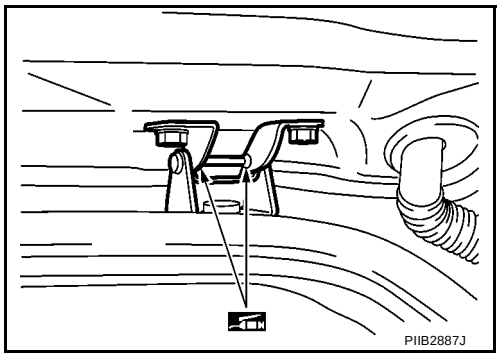


INSTALLATION

Install in the order of removal.

INSPECTION

1. Check hinges for the following:
   - Unusual noise or door closing and opening effort
   - Component wear or damage
2. Apply body grease to the rotating part of the hinge.



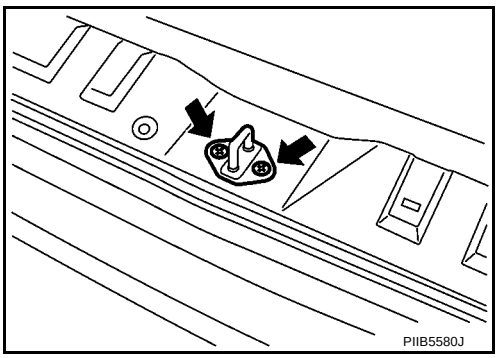
Back Door Striker

BIS000L8

REMOVAL

1. Remove luggage rear plate. Refer to EI-32, "Removal and Installation" .

2. Remove screws and back door striker.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

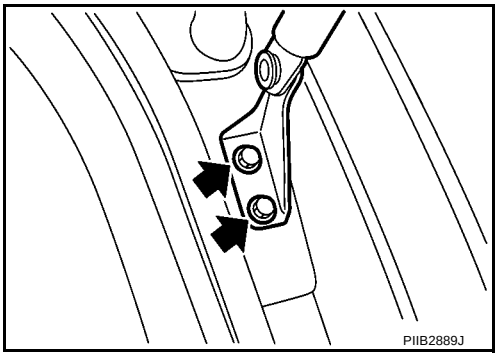
- **After finishing work, confirm proper operation.**
- **After finishing work, adjust fitting. Refer to BL-207, "Fitting Adjustment" .**

Back Door Stay Assembly

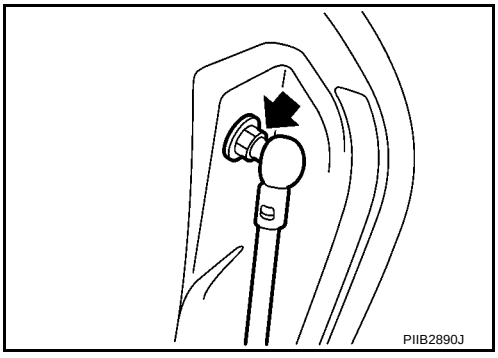
BIS000L9

REMOVAL

1. Support back door lock to prevent it from falling.
2. Remove back door stay assembly (gas stay) vehicle side bracket bolts.



3. Remove back door stud balls, and then remove back door stay assembly from back door.



INSTALLATION

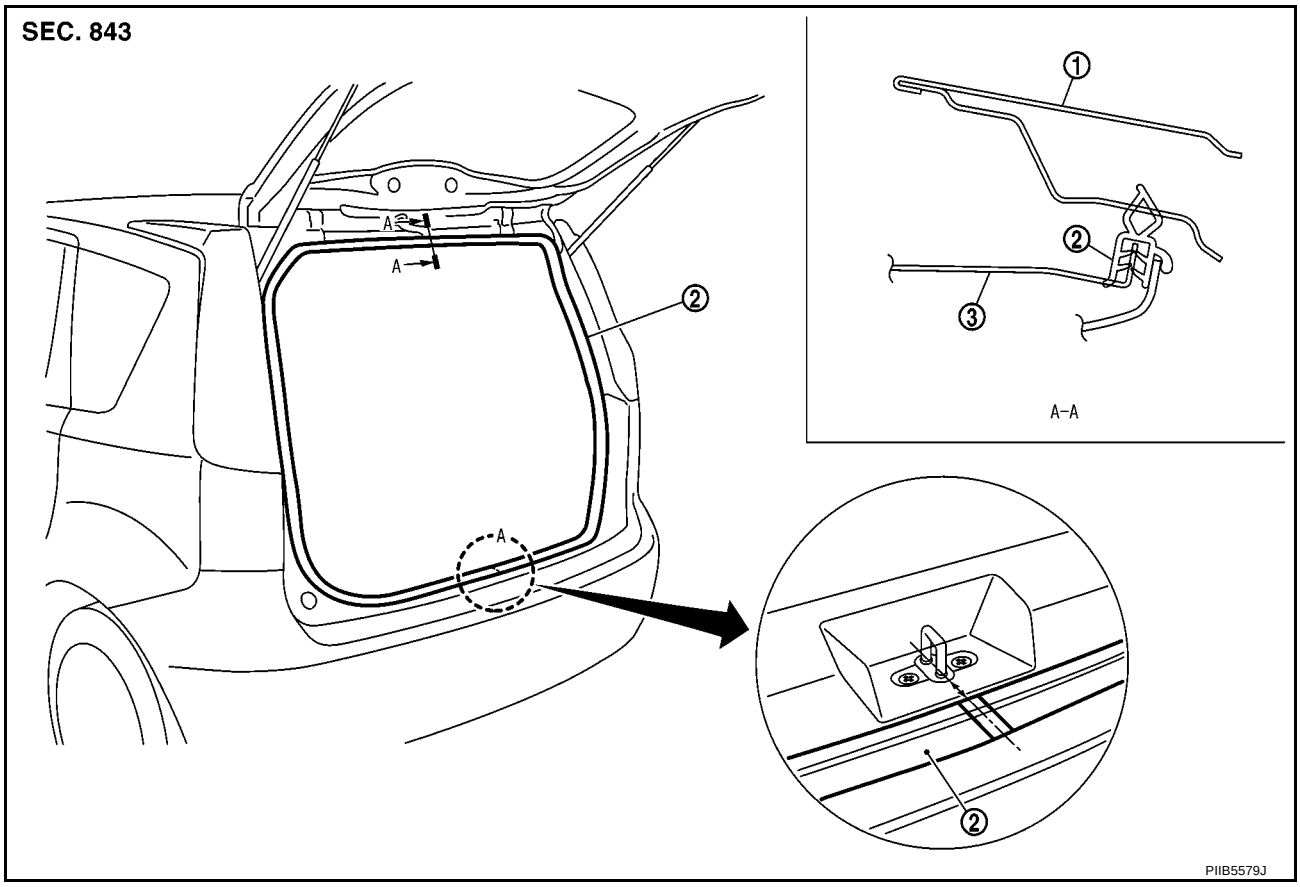
Install in the reverse order of removal.

CAUTION:

- **After finishing work, confirm proper operation.**

Removal and Installation of Back Door Weatherstrip

BIS000LA



1. Back door panel
2. Back door weatherstrip
3. Roof panel

REMOVAL

Pull up and remove engagement with body from weatherstrip joint.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

INSTALLATION

Install in the reverse order of removal.

- Working from the upper section, align weatherstrip mark with vehicle center position mark and install weatherstrip onto the back door.
- For the lower section, align the weatherstrip seam with center of the striker.
- After finishing work, pull weatherstrip lightly to check for looseness.
- Make sure the weatherstrip is fit tightly at each corner and luggage rear plate.

BACK DOOR LOCK

PFP:90504

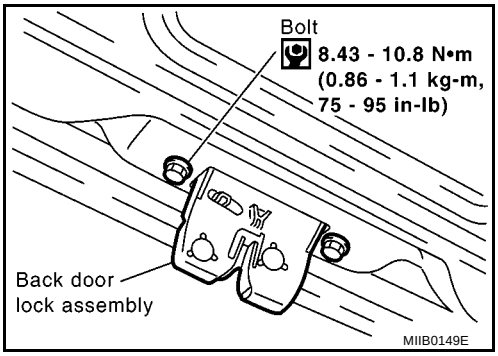
Removal and Installation

BIS000LB

BACK DOOR LOCK ASSEMBLY

Removal

1. Remove back door finisher. Refer to EI-22, "Removal and Installation" .
2. Disconnect back door lock assembly connector.
3. Remove bolts to remove back door lock assembly from inside back door panel.



Installation

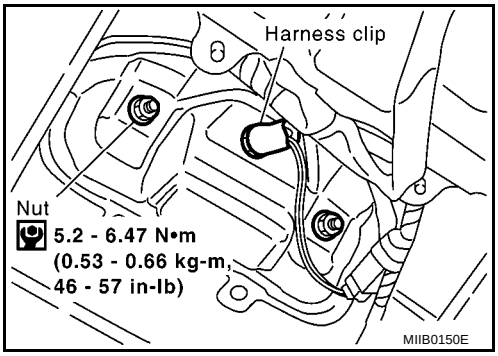
Install in the reverse order of removal.

- If greasing condition in each sliding section on back door assembly is poor, apply “BODY GREASE”.
- After finishing work, confirm proper operation.

BACK DOOR HANDLE ASSEMBLY

Removal

1. Remove back door finisher. Refer to EI-22, "Removal and Installation" .
2. Remove back door request switch (vehicles with intelligent key systems) and back door open switch harness fastening clips and connectors.
3. Remove back door handle assembly nuts, and then remove back door handle assembly.



Installation

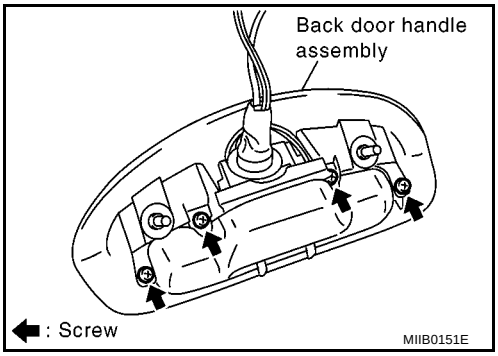
Install in the reverse order of removal.

CAUTION:

After finishing work, confirm proper operation.

Disassembly and Assembly

Remove screws, and then remove back door request switch (vehicles with intelligent key systems) and back door open switch.

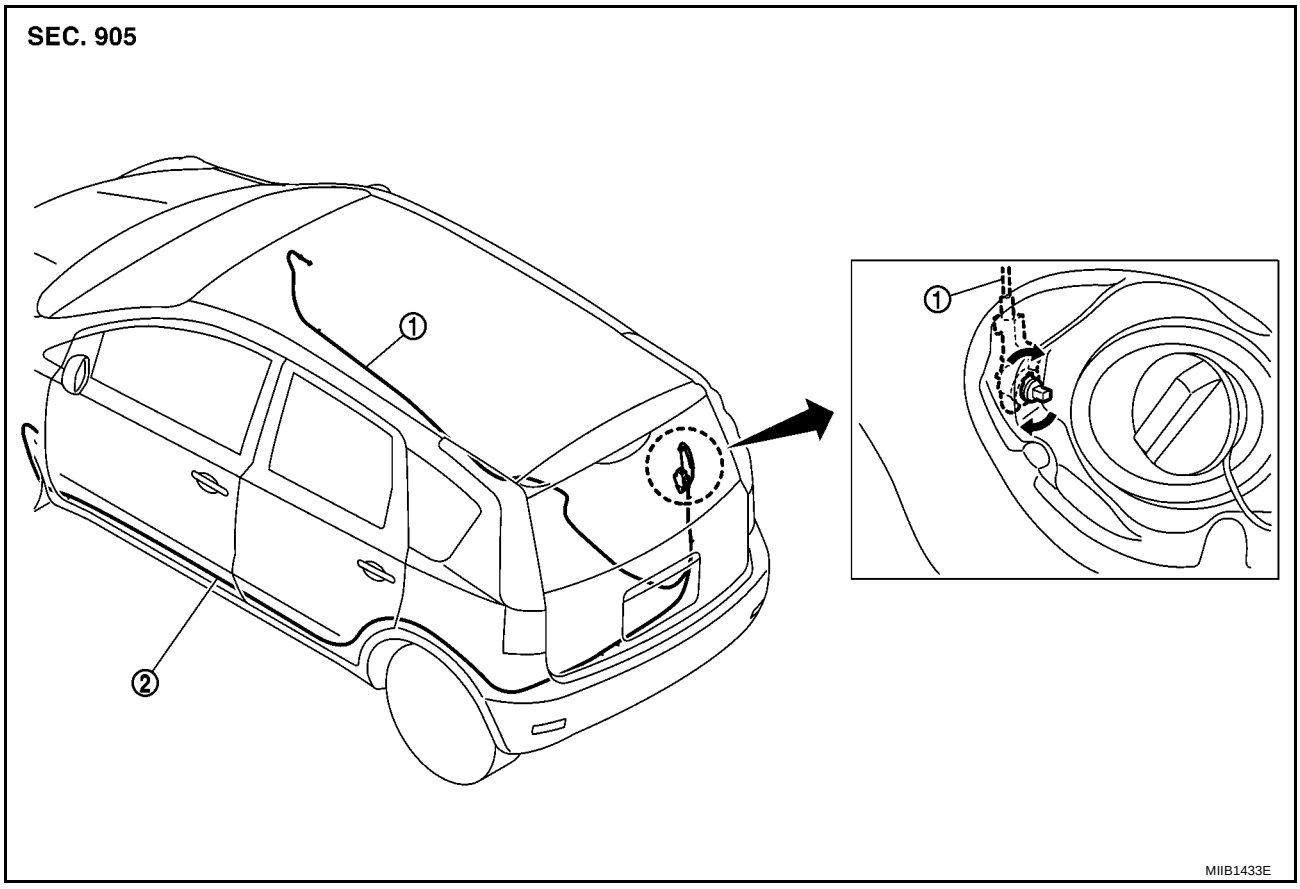


FUEL FILLER LID OPENER

PFP:78820

Removal and Installation of Fuel Filler Lid Opener

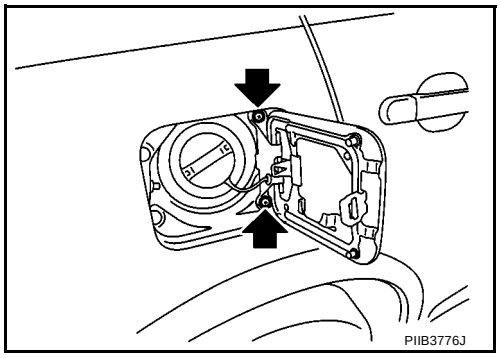
BIS0014T



1. Fuel filler lid opener cable (RH)
2. Fuel filler lid opener cable (LH)

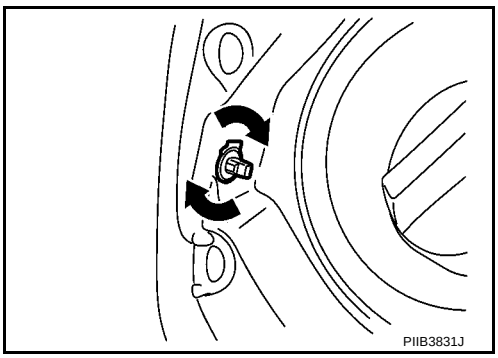
REMOVAL

1. Remove fuel filler lid.
2. Remove trunk side finisher (RH). Refer to EI-32, "Removal and Installation" .

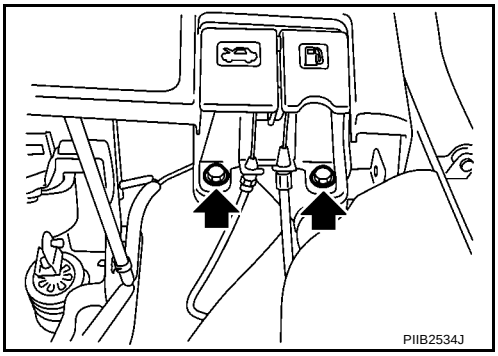


3. Remove ruggage rear plat.
4. Remove ruggage side lower finisher.
5. Remove ruggage floor finisher.(LH models)

6. Remove fuel filler lock.
7. Remove front kicking plate and rear kicking plate. Refer to EI-26, "Removal and Installation" .



8. Remove fuel filler lid opener cable mounting clip on vehicle.
9. Remove mounting bolts and remove fuel filler lid opener.
10. Remove fuel filler lid opener cable.



INSTALLATION

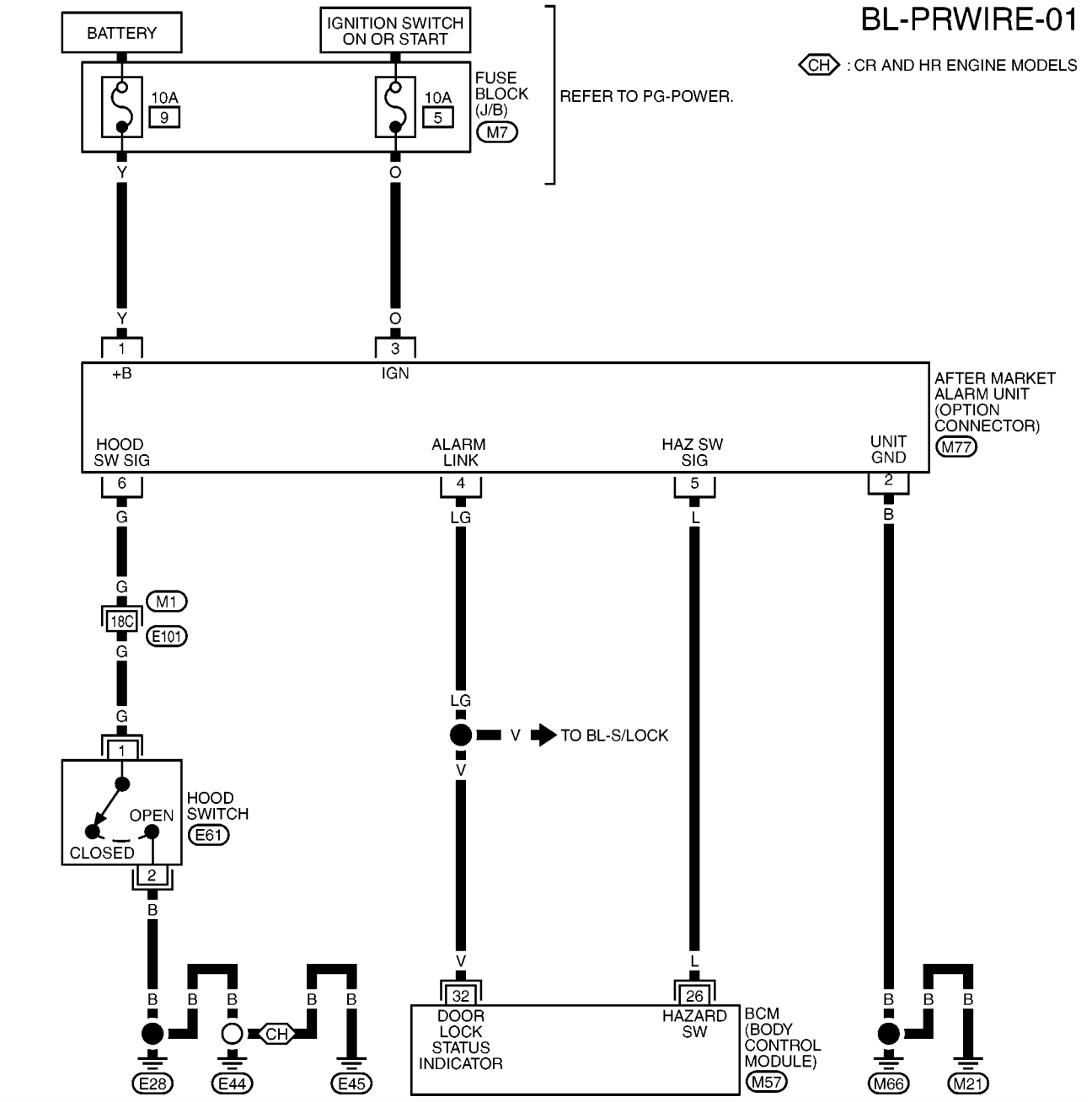
Install in the reverse order of removal.

THEFT WARNING SYSTEM

PFP:25362

Wiring Diagram — THEFT — / PRWIRE

BIS000LN



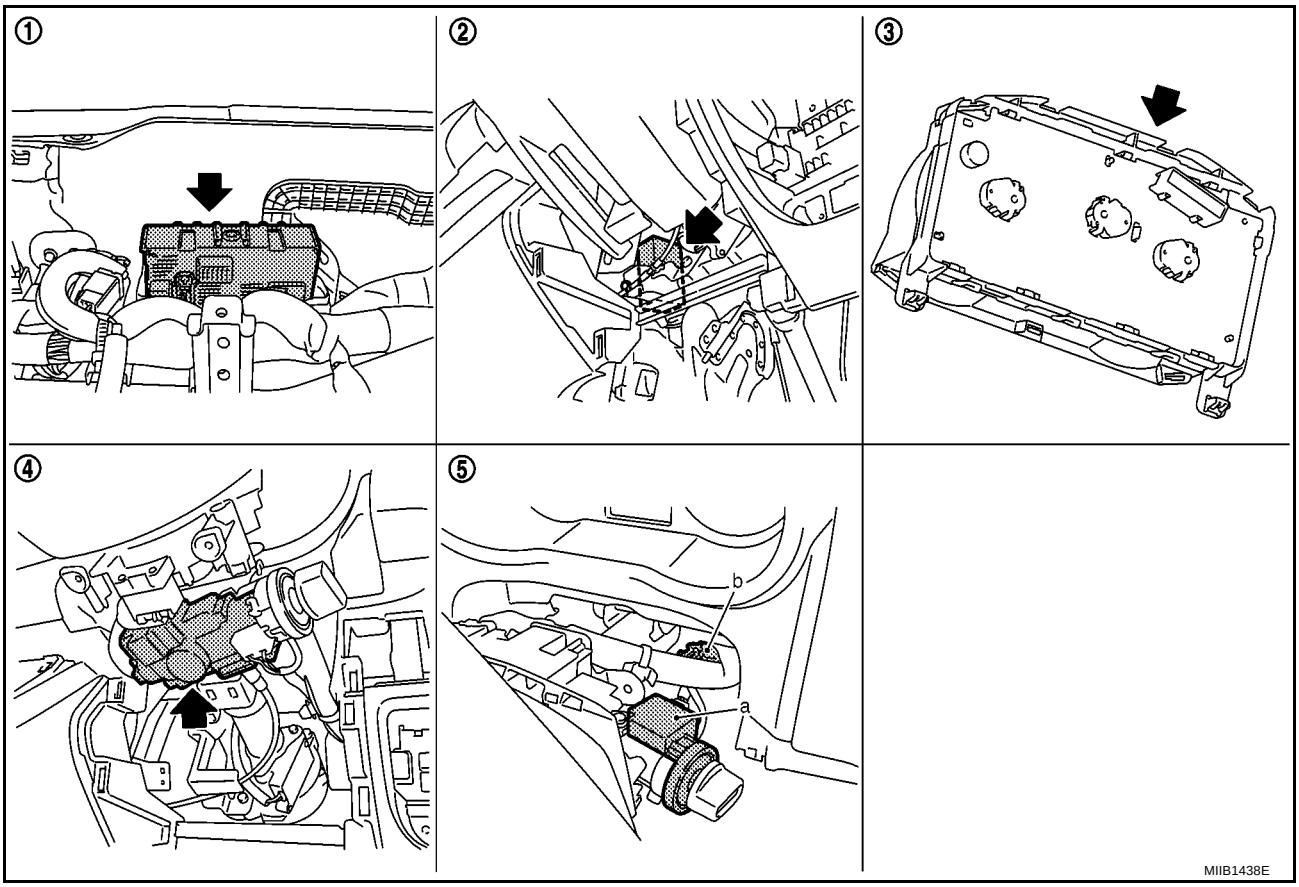
MIWA0731E

NATS (NISSAN ANTI-THEFT SYSTEM)

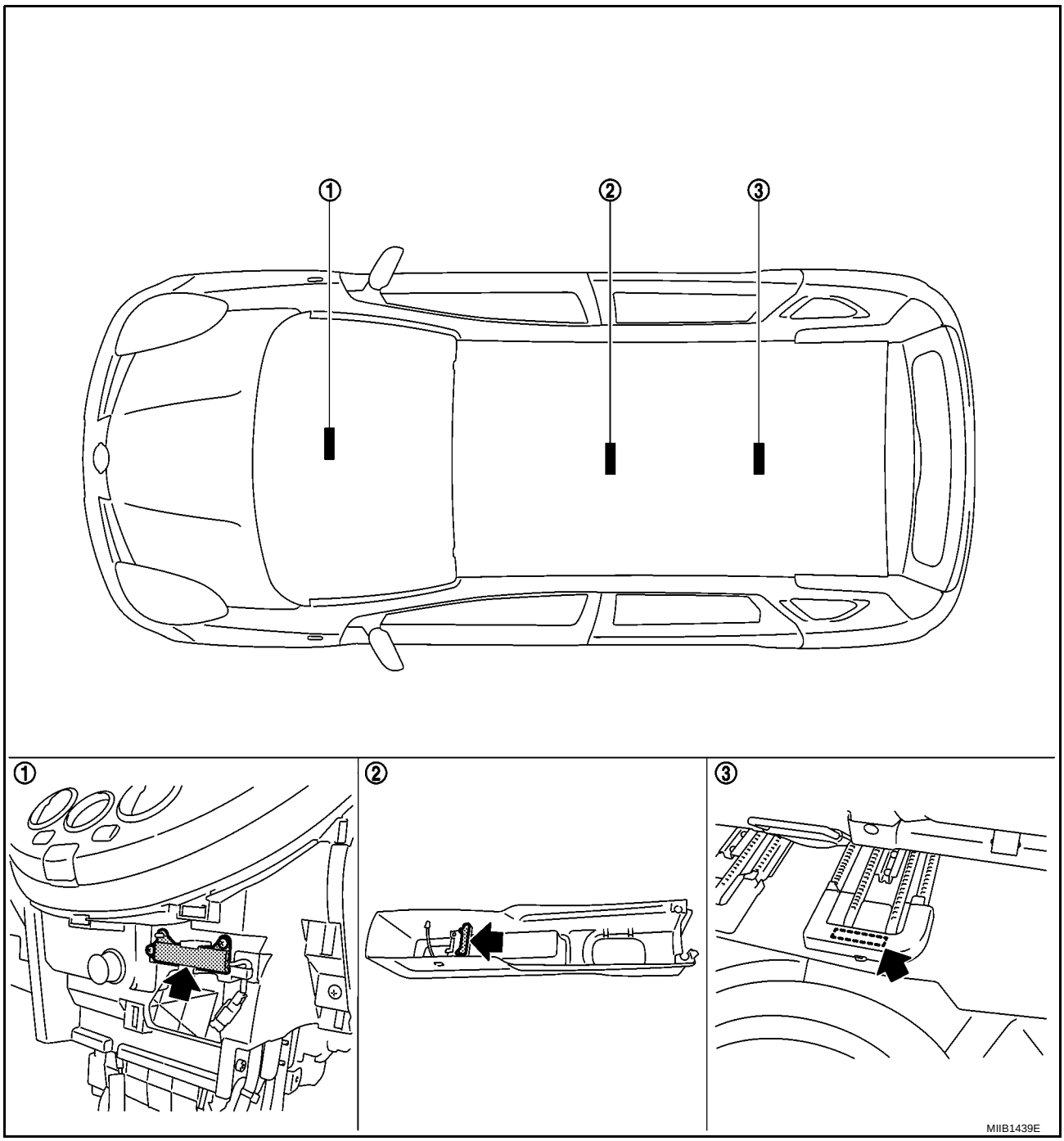
PFP:28591

Component Parts and Harness Connector Location (Hatchback)

BIS000M0



1. BCM M57, M58, M59 (Without Intelligent Key system)
2. Intelligent Key unit M60 (With Intelligent Key system)
3. Combination meter M27
4. Steering lock unit M37 (With Intelligent Key system)
5. a: NATS antenna AMP. M35: With Intelligent Key system M36: Without Intelligent Key system b: Key switch and ignition knob switch connector M34 (with Intelligent Key system)



1. Inside key antenna (dash board) M47
2. Inside key antenna (center console) B20
3. Inside key antenna (luggage room) B32

NOTE:
If customer reports a “NO START” condition, request ALL ignition key (without Intelligent Key system) or mechanical key (with Intelligent Key system) to be brought to the dealer to check for a NATS malfunction.

System Description

BIS000M2

OPERATING DESCRIPTION

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

- NATS shows a higher anti-theft performance at preventing engine to be initiates by an unregistered key. (Registered key: Ignition key, mechanical key, Intelligent Key)
- Only a key with key ID registered in BCM (without Intelligent Key system) or Intelligent Key unit (with Intelligent Key system) and ECM can start engine, it has a higher protection against auto thefts that duplicates keys.
- If a malfunction has been detected, security indicator will keep illuminates when ignition switch is in ON position.
- Intelligent Key can be registered up to 5 keys (Including the standard key) on request from the owner.
- During trouble diagnosis or when the following parts have been replaced, and if ignition key or mechanical key is added, registration* is required.
  *: All keys kept by the owner of the vehicle should be registered with ignition key or mechanical key.

– ECM
– BCM (without Intelligent Key system)
– Intelligent Key unit (with Intelligent Key system)
– Ignition key (without Intelligent Key system)
– Mechanical key (with Intelligent Key system)

- NATS trouble diagnoses, system initialization and additional registration of other ignition key or mechanical key IDs must be carried out using CONSULT-II hardware and CONSULT-II NATS software. When NATS initialization has been completed, the ID of the inserted ignition key or mechanical key is automatically registered. Then, if necessary, additional registration of other ignition key or mechanical key IDs can be carried out. Regarding the procedures of NATS initialization and ignition key or mechanical key ID registration, refer to CONSULT-II operation manual, NATS.

SECURITY INDICATOR

- Fore warns that the vehicle is equipped with NATS (Nissan Anti-Theft System).
- Vehicles without Intelligent Key system, security indicator will not blink while the ignition knob is in ON or START state.
- Vehicles with Intelligent Key system, security indicator blinks constantly when the mechanical key is removed from the ignition key cylinder.

  NOTE:
  Because security indicator is highly efficient, the battery is barely affected.

Condition of Security Indicator (Normal)

WITHOUT INTELLIGENT KEY SYSTEM

		Ignition key state			
Security indicator condition	Ignition key	ON position	ACC position	OFF position (Key inserted.)	OFF position (Key removed.)
	Registered key	OFF	Flashing	Flashing	Flashing
	Unregistered key	ON	Flashing	Flashing	Flashing

WITH INTELLIGENT KEY SYSTEM

		Key condition			
Security indicator condition	Ignition key	Ignition knob pressed	Ignition knob released	Key inserted	Key removed
	Intelligent key	ON	Flashing	×	×
	Mechanical key	×	×	OFF	Flashing

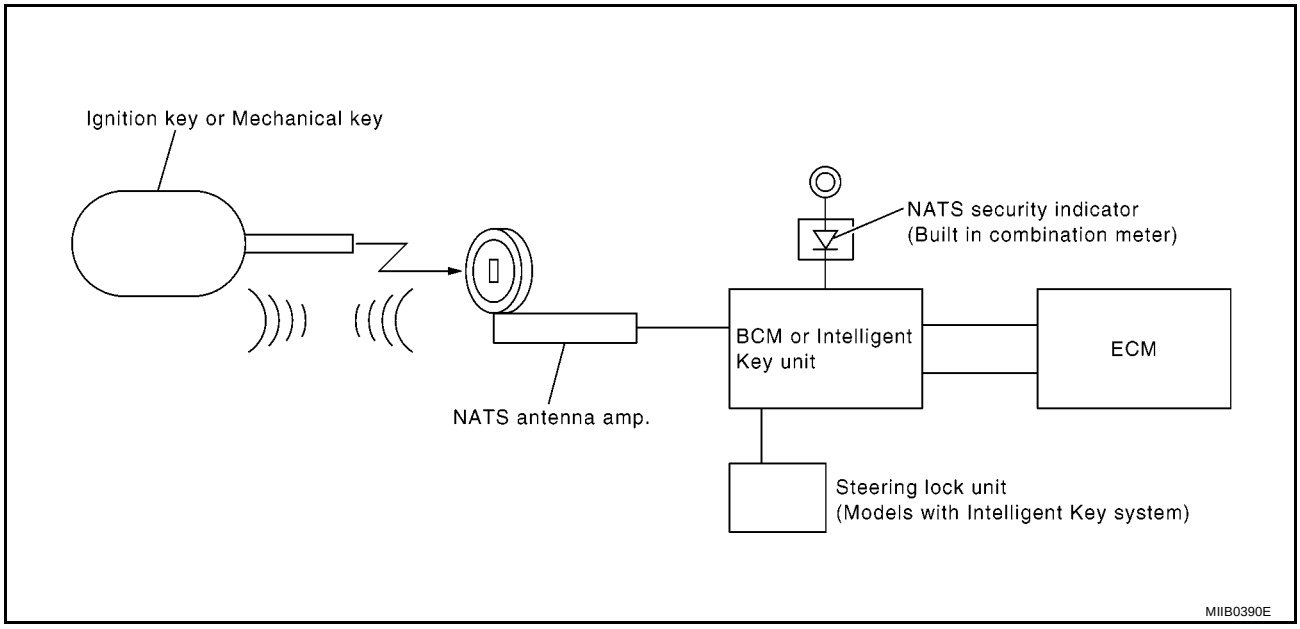
System Composition

BIS000M3

The function of the NATS consists of the following:

- Ignition key (without Intelligent Key system)
- Mechanical key (with Intelligent Key system)
- NATS antenna amp.
- Steering lock unit. (with Intelligent Key system)
- BCM (without Intelligent Key system)
- Intelligent Key unit (with Intelligent Key system)
- Engine control module (ECM)
- Security indicator (built-in combination meter)

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



ECM Re-communicating Function

BIS000M4

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:

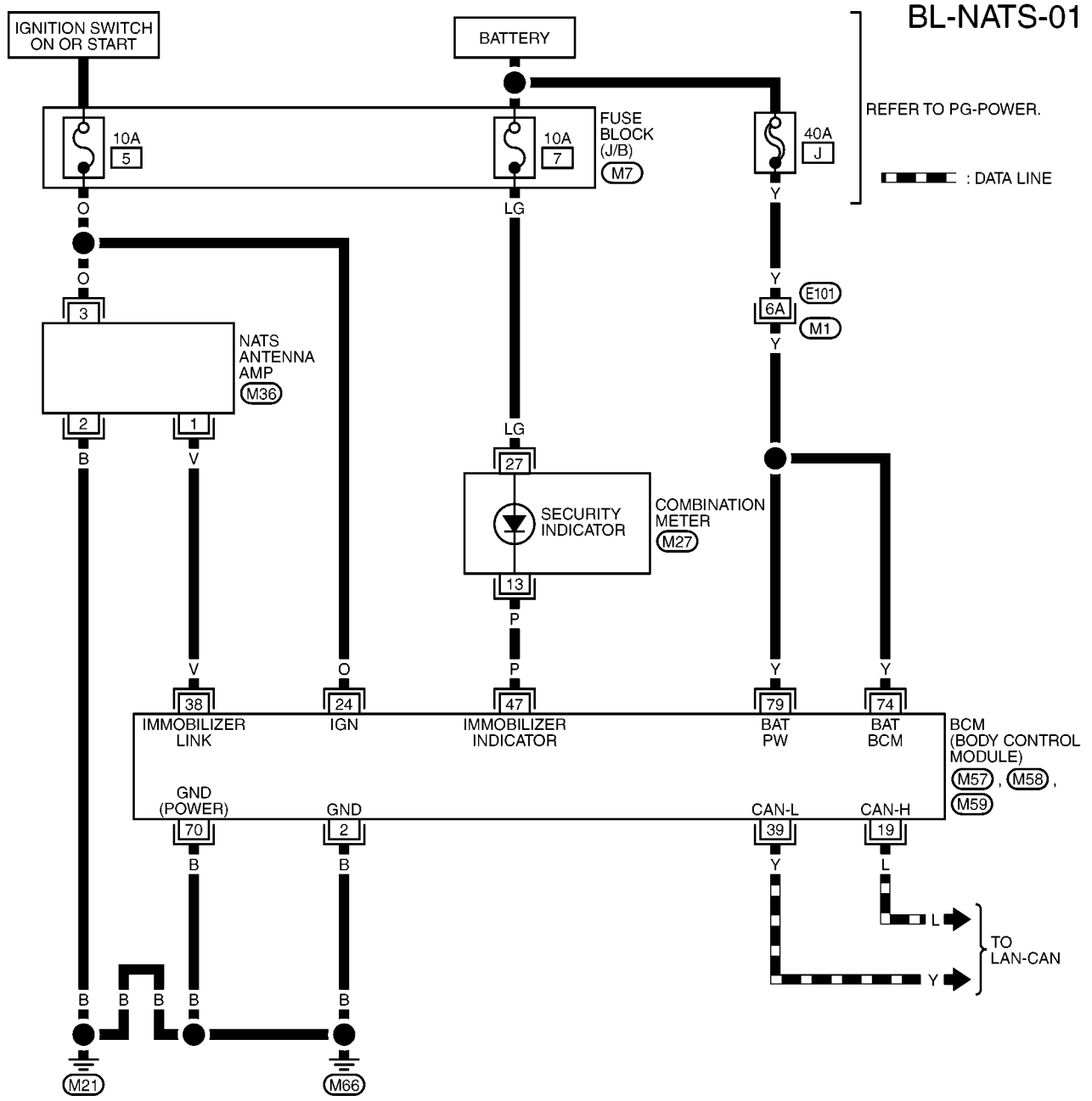
- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

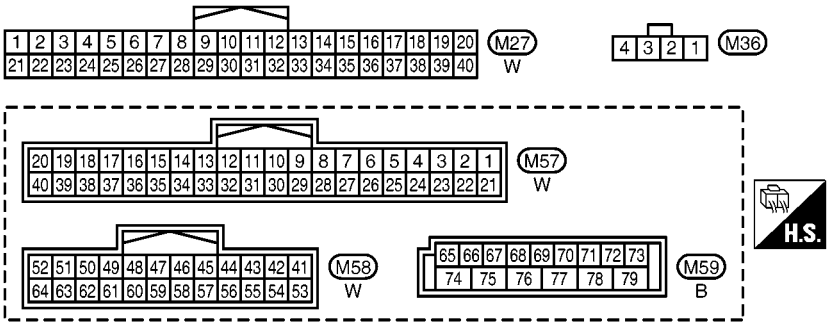
1. Install ECM.
2. Using a registered key (*2), turn ignition switch to “ON”.
   *2: To perform this step, use the key that has been used before performing ECM replacement.
3. Maintain ignition switch in “ON” position for at least 5 seconds.
4. Turn ignition switch to “OFF”.
5. Start engine.
   If engine 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—

BIS000M5

WITHOUT INTELLIGENT KEY SYSTEM

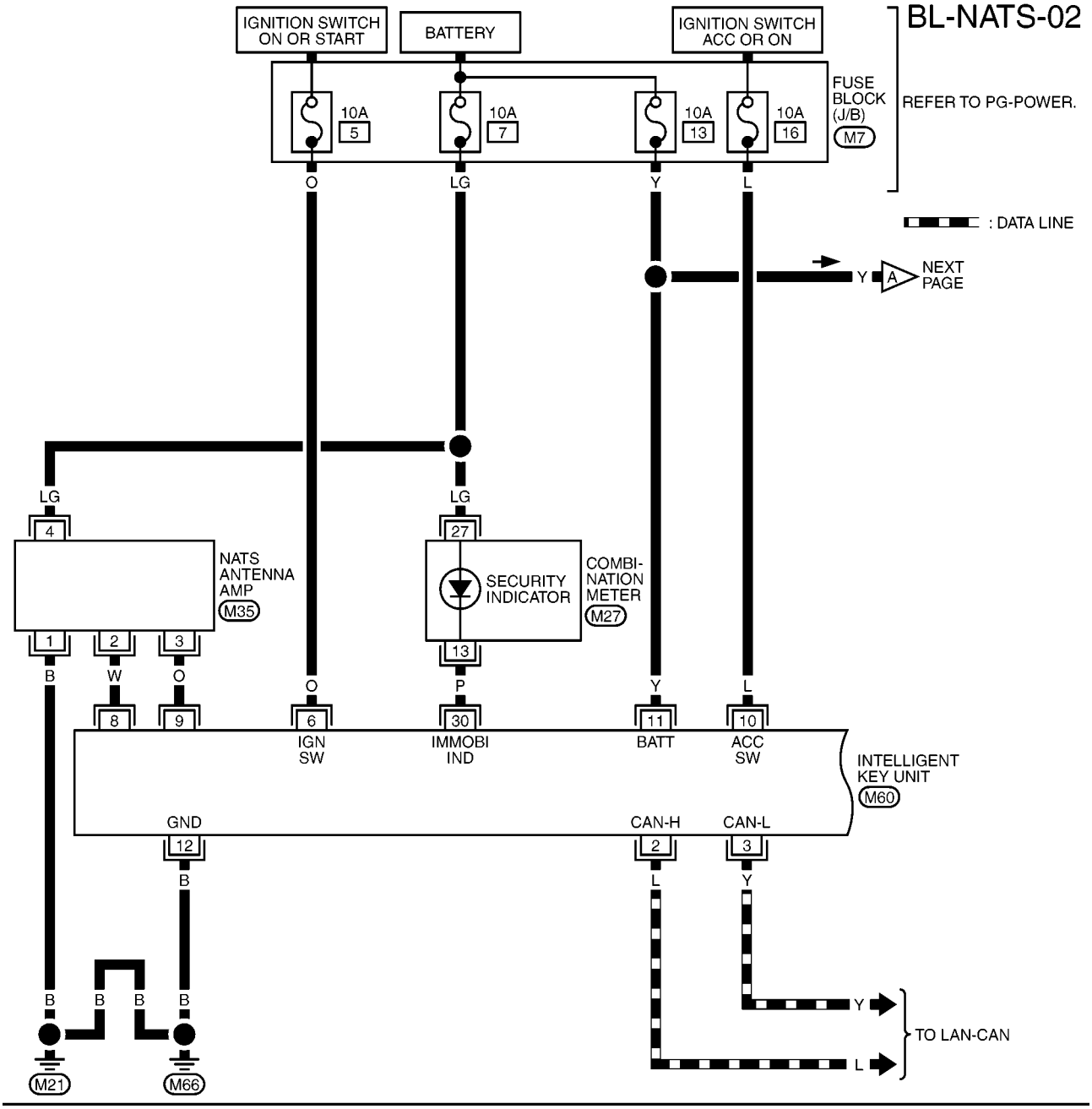


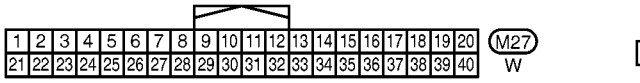


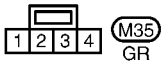
REFER TO THE FOLLOWING.
(M1) - SUPER MULTIPLE JUNCTION (SMJ)
(M7) - FUSE BLOCK - JUNCTION BOX (J/B)

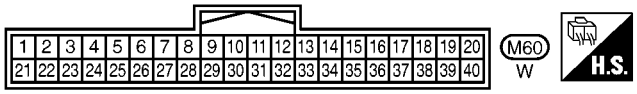
MIWA0732E

WITH INTELLIGENT KEY SYSTEM





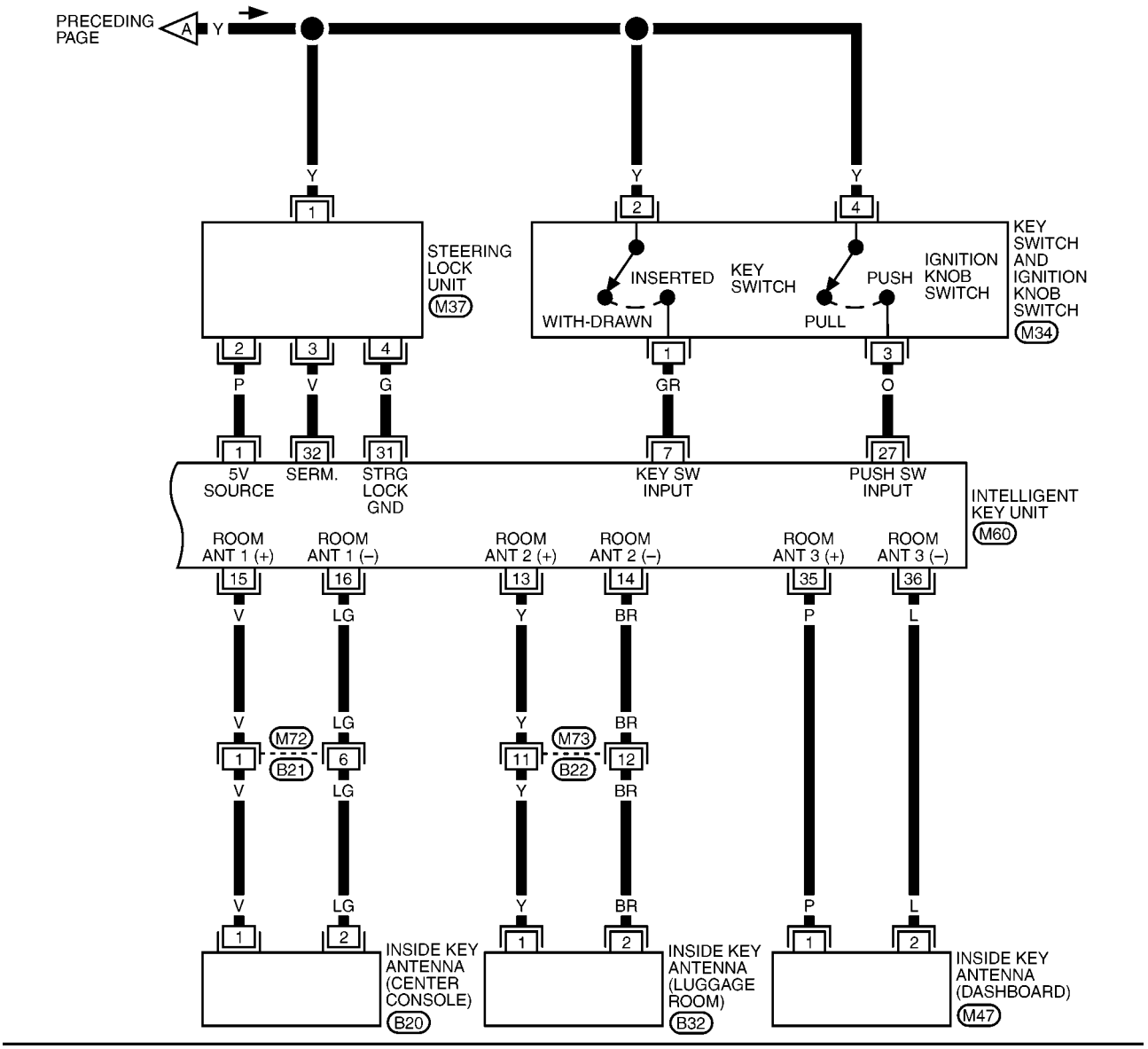




REFER TO THE FOLLOWING.
M7 - FUSE BLOCK - JUNCTION BOX (J/B)

MIWA0733E

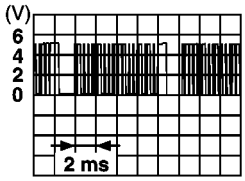
BL-NATS-03



MIWA0734E

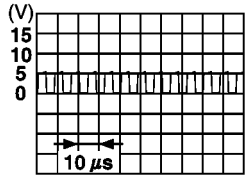
Terminals and Reference Value for Steering Lock Unit/With Intelligent Key System

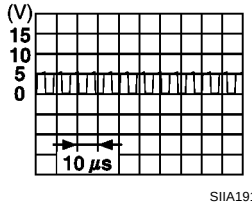
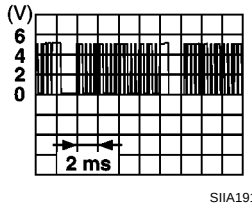
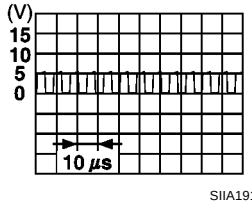
BIS000M6

Terminal	Wire color	Signal Designation	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
1	Y	Battery power supply	Input	LOCK	—	Battery voltage
2	P	Steering wheel lock unit power supply	Input	LOCK	—	5
3	V	Steering wheel lock unit communication signal	Input/ Output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5
4	G	Steering wheel lock unit ground	—	—	—	0

Terminals and Reference Value for Intelligent Key Unit/With Intelligent Key System

BIS000M7

Terminal	Wire color	Signal designation	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
1	P	Steering wheel lock unit power supply	Output	LOCK	—	5
2	L	CAN-H	Input/ Output	—	—	—
3	Y	CAN-L	Input/ Output	—	—	—
6	O	Ignition power supply	Input	ON	—	Battery voltage
7	GR	Ignition knob switch	Input	—	Press ignition knob.	Battery voltage
					Return ignition knob to LOCK position.	0
8	W	NATS antenna amp.	Input	—	Ignition knob OFF → ON position	Right after turning ignition switch “ON” pointer tester of tester should move
9	O	NATS antenna amp.	Output	—	Ignition knob OFF → ON position	Right after turning ignition switch to ON position pointer of tester should move
10	L	ACC power supply	Input	ACC	—	Battery voltage
11	Y	Battery power supply	Input	—	—	Battery voltage
12	B	GND	—	—	—	0
13	Y	Inside key antenna (+) (Luggage room)	Output	LOCK	Any door open → all doors shut (Door switch: ON → OFF)	 SIIA1910J
14	BR	Inside key antenna (-) (Luggage room)	Output			

Terminal	Wire color	Signal designation	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
15	V	Inside key antenna (+) signal (Center console)	Output	LOCK	Any door open → Close (Door switch: ON → OFF) Ignition knob switch: ON (press ignition knob.)	 SIIA1910J
16	LG	Inside key antenna (-) signal (Center console)	Output			
27	O	Key switch signal	Input	LOCK	Insert mechanical key into ignition key cylinder.	Battery voltage
					Remove mechanical key from ignition key cylinder.	0
30	P	Security indicator lamp	Output	LOCK	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
31	G	Steering wheel lock unit ground	—	—	—	0
32	Y	Steering wheel lock unit communication signal	Input/ Output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5
35	P	Inside key antenna (+) signal (Dashboard)	Output	LOCK	Any door open → Close (Door switch: ON → OFF) Ignition knob switch: ON (press ignition knob.)	 SIIA1910J
36	L	Inside key antenna (-) signal (Dashboard)	Output			

Terminals and Reference Value for BCM/Without Intelligent Key System

BIS000M8

Terminal	Wire color	Signal designation	Signal Input/ Output	Measuring condition		Voltage (V) (Approx.)
				Ignition switch position	Operation or conditions	
2	B	GND	—	—	—	0
19	L	CAN-H	Input/ Output	—	—	—
24	O	Ignition power supply	Input	ON	—	Battery voltage
38	V	NATS antenna amp.	Input/ Output	—	Ignition knob OFF → ON position	Right after turning ignition switch to ON position pointer of tester should move
39	Y	CAN-L	Input/ Output	—	—	—
47	P	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
70	B	GND	—	—	—	0
74	Y	Battery power supply	Input	—	—	Battery voltage
79	Y	Battery power supply	Input	—	—	Battery voltage

CONSULT-II

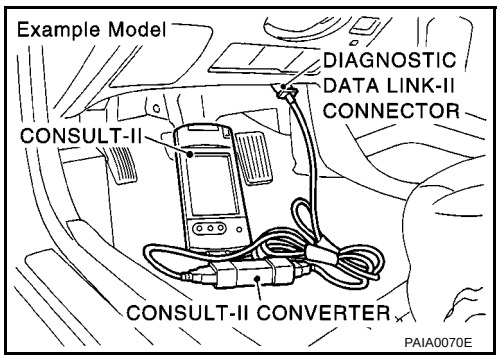
BIS000M9

CONSULT-II INSPECTION PROCEDURE

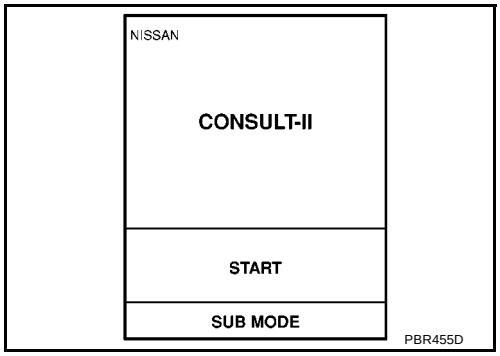
1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.

Program card : NATS (AEN06A)

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



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



6. Select “E11”
7. 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 mechanical keys are necessary. [mechanical key, BCM or Intelligent Key unit]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart.

NOTE:

- When any initialization is performed, all ID previously registered will be erased and all NATS mechanical keys must be registered again. The engine can not be start be started with an unregistered key. The system will show “DIFFERENCE OF KEY” as IMMU FUNCTION CHECK on the CONSULT-II screen.

CHECK RESULT ITEM CHART FOR NATS IMMU FUNCTION

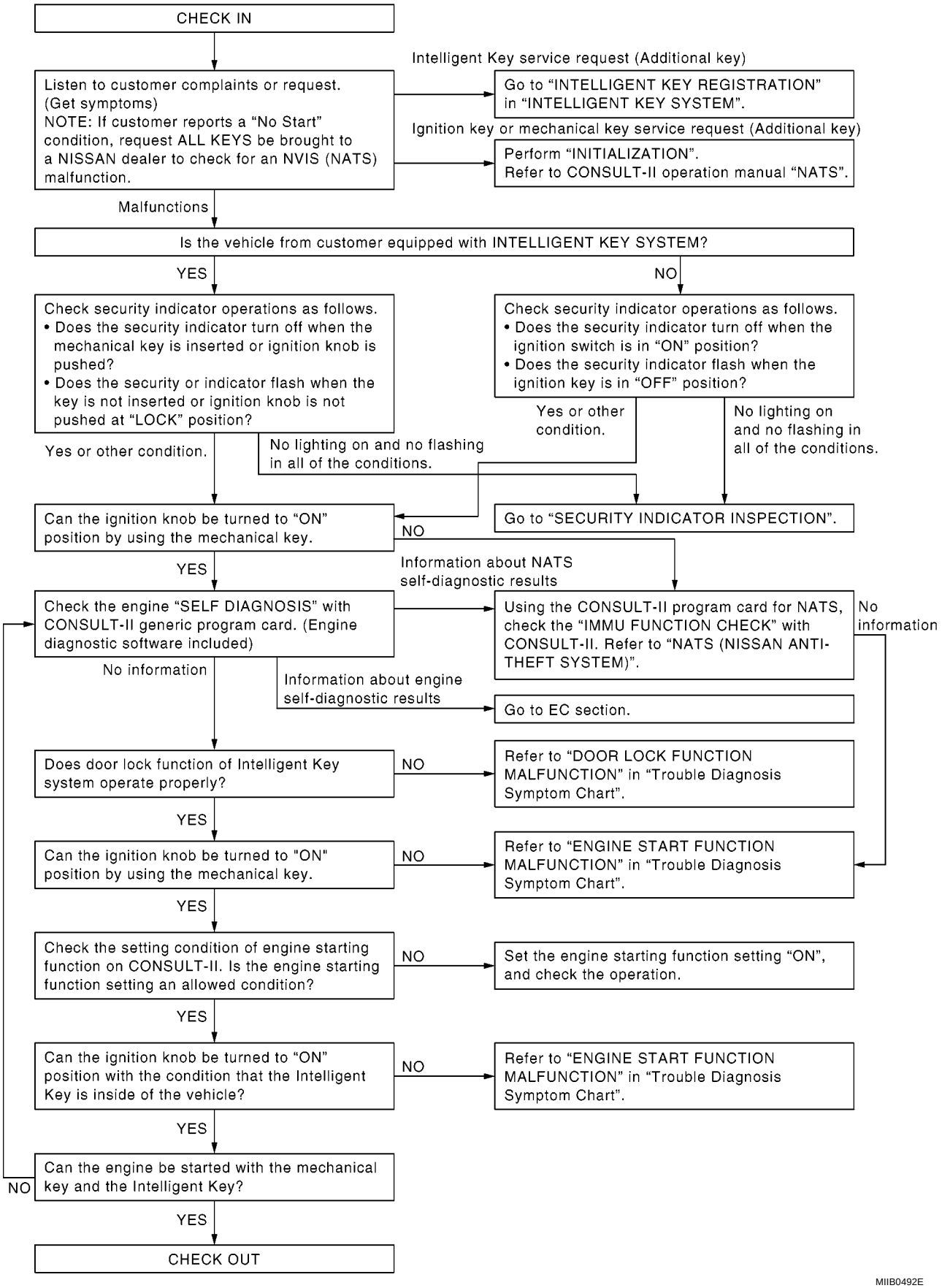
Detected items (Screen terms)	Description
UNREGISTERED BCM*	ID is not registered in BCM
CHAIN OF IMMU-KEY	NATS IMMU cannot receive the key ID signal.
DIFFERENCE OF KEY	BCM or Intelligent Key unit receive the key ID signal but the result of ID verification between key ID and BCM or Intelligent Key is NG
CHAIN OF IPDM-IMMU*	The communication with IPDM E/R.
ID DISCORD IPDM-IMMU	BCM or Intelligent Key unit receive from IPDM E/R signal but the result of ID verification is NG.
CHAIN OF METER-IMMU*	The communication with combination meter.
ID DISCORD METER-IMMU	BCM or Intelligent Key unit receive from combination meter ID signal but the result of ID verification is NG.
CHAIN OF EPS-IMMU*	The communication with EPS is malfunction.
ID DISCORD EPS-IMMU	BCM or Intelligent Key unit receive from EPS ID signal but the result of ID verification is NG.
UNREGISTERED ECM	ID is not registered in ECM.
ID DISCORD ECM-IMMU	The result of ID verification between BCM and ECM is NG. System initialization is required.

*: Applied for models without Intelligent Key system.

Diagnosis Procedure

BIS000MA

WORK FLOW



MIIB0492E

Trouble Diagnosis Symptom Chart

BIS000MB

MODELS WITHOUT INTELLIGENT KEY SYSTEM

NOTE:

Perform “Diagnostic Procedure 7”, when “P1610” is displayed by the “SELF-DIAG RESULTS” of the ENGINE. Refer to “CONSULT-II Operation Manual NATS”.

SYMPTOM	Displayed “IMMU FUNCTION CHECK” results on CONSULT-II screen.	Diagnoses service procedure	DIAGNOSTIC PROCEDURE
● Security indicator lighting up* ● Engine hard to start	UNREGISTERED BCM	Replace BCM	Refer to BL-229, "Diagnostic Procedure 1" .
	CHAIN OF IMMU-KEY	1. Check the following parts ● Open or short circuit between BCM and NATS antenna amp. ● Malfunction of key ID chip ● NATS antenna amp.	Refer to BL-229, "Diagnostic Procedure 2" .
		2. If the above system are “OK”, replace BCM	
	DIFFERENCE OF KEY	1. Perform registration key	Refer to BL-233, "Diagnostic Procedure 3" .
		2. If the above system is “OK”, replace BCM	Refer to BCS-17, "Removal and Installation of BCM" .
	CHAIN OF IPDM-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication is “OK”, replace IPDM E/R	Refer to PG-37, "Removal and Installation of IPDM E/R" .
	ID DISCORD IPDM-IMMU	Replace IPDM E/R	Refer to PG-37, "Removal and Installation of IPDM E/R" .
	CHAIN OF METER-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication is “OK”, replace combination meter	Refer to DI-20, "Removal and Installation for Combination Meter" .
	ID DISCORD METER-IMMU	Replace combination meter	Refer to DI-20, "Removal and Installation for Combination Meter" .
	CHAIN OF EPS-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication is “OK”, replace EPS	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
	ID DISCORD EPS-IMMU	Replace EPS	Refer to PS-7, "STEERING COLUMN" .
	UNREGISTERED ECM	Replace ECM	Refer to BL-233, "Diagnostic Procedure 4" .
	ID DISCORD ECM-IMMU	Replace ECM	Refer toBL-234, "Diagnostic Procedure 5" .

*: When NATS detects trouble, the security indicator lights up while ignition key is in the “ON” position.

MODELS WITH INTELLIGENT KEY SYSTEM

NOTE:
Perform “Diagnostic Procedure 7”, when “P1610” is displayed by the “SELF-DIAG RESULTS” of the ENGINE. Refer to “CONSULT-II Operation Manual NATS”.

SYMPTOM	Displayed “IMMU FUNCTION CHECK” results on CONSULT-II screen.	Diagnoses service procedure	DIAGNOSTIC PROCEDURE
● Security indicator lighting up* ● Engine hard to start	CHAIN OF IMMU-KEY	1. Check the following parts ● Open or short circuit between BCM and NATS antenna amp. ● Malfunction of key ID chip ● NATS antenna amp.	Refer to BL-229, "Diagnostic Procedure 2" .
		2. If the above system are “OK”, replace Intelligent Key unit	Refer to BL-193, "Removal and Installation of Intelligent key unit" .
	DIFFERENCE OF KEY	1. Perform key registration	Refer to BL-233, "Diagnostic Procedure 3" .
		2. If the above system is “OK”, replace Intelligent Key unit	Refer to BL-193, "Removal and Installation of Intelligent key unit" .
	ID DISCORD IPDM-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication system is “OK”, replace IPDM E/R	Refer to PG-37, "Removal and Installation of IPDM E/R" .
	ID DISCORD METER-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication system is “OK”, replace combination meter	Refer to DI-20, "Removal and Installation for Combination Meter" .
	ID DISCORD EPS-IMMU	1. Check CAN communication system	Refer to BCS-17, "CAN Communication Inspection With CONSULT-II (Self-Diagnosis)" .
		2. If CAN communication system is “OK”, replace EPS	Refer to PS-7, "STEERING COLUMN" .
	ID DISCORD ECM-IMMU	Replace ECM	Refer to BL-234, "Diagnostic Procedure 5" .

*: When NATS detects trouble, the security indicator lights up while mechanical key is inserted.

Security Indicator Inspection

BIS000MC

SYMPTOM	SYSTEM (Malfunctioning part or mode)	DIAGNOSTIC PROCEDURE
Security indicator does not operate*	Security indicator	Refer toBL-234, "Diagnostic Procedure 6" .
	Open circuit between Fuse and NATS IMMU (BCM or Intelligent Key unit)	
	Continuation of initialization mode	
	BCM (without Intelligent Key system)	
	Intelligent Key unit (with Intelligent Key system)	

*: CONSULT-II “IMMU FUNCTION CHECK” results display screen “no malfunction is detected”.

Diagnostic Procedure 1

BIS000MD

IMMU FUNCTION CHECK results:
“UNREGISTERD BCM” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “UNREGISTERD BCM” displayed on CONSULT-II screen.
Is CONSULT-II screen displayed as above?

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

NO >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

Diagnostic Procedure 2

BIS000ME

MODELS WITHOUT INTELLIGENT KEY SYSTEM

IMMU FUNCTION CHECK results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.
Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-237, "Removal and Installation NATS Antenna Amp." .
OK or NG

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

3. CHECK IGNITION KEY ID CHIP

Start engine with another registered ignition key.
Does the engine start?

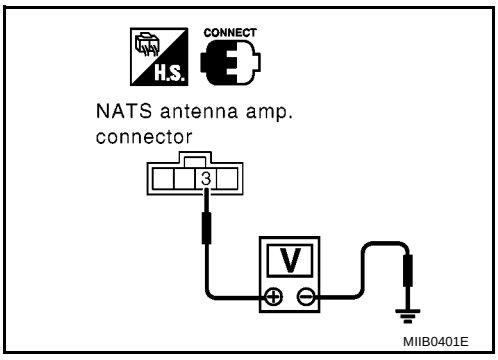
Yes >>
- Ignition key ID chip is malfunctioning.
- Replace the ignition key.
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS”.

No >> GO TO 4.

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

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

3 - Ground: Battery voltage

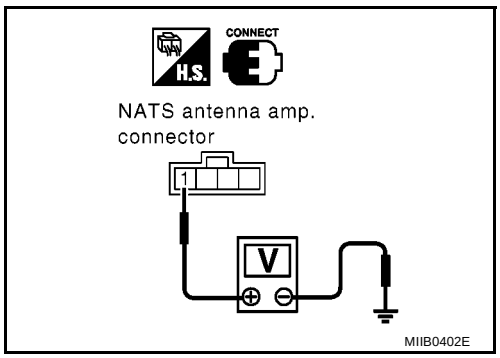


OK or NG

OK >> GO TO 5.
NG >> Check harness for open or short between NATS antenna amp. and fuse.

5. CHECK NATS ANTENNA AMP. SIGNAL LINE

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



Before turning ignition switch “ON”

Voltage: 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.

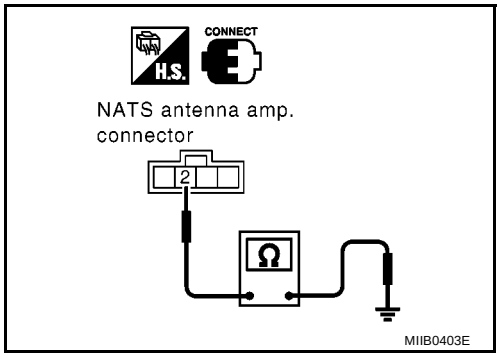
NOTE:

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

*: New one means virgin control unit that has never been energized on-board.

6. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

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



2 - Ground: Continuity should exist.

OK or NG

OK >> NATS antenna amp. is malfunctioning.

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

NOTE:

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

*: New one means virgin control unit that has never been energized on-board.

MODELS WITH INTELLIGENT KEY SYSTEM

IMMU FUNCTION CHECK results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-237, "Removal and Installation NATS Antenna Amp." .

OK or NG

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

3. CHECK MECHANICAL KEY ID CHIP

Start engine with another registered mechanical key.

Does the engine start?

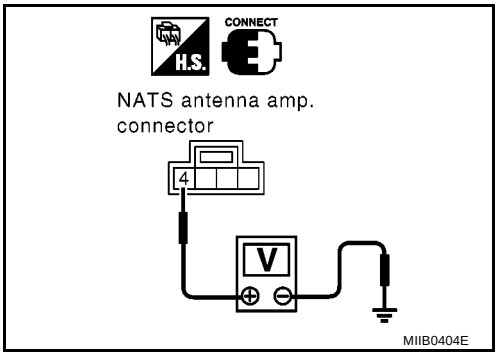
Yes >>
- Mechanical key ID chip is malfunctioning.
- Replace the mechanical key.
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS”.

No >> GO TO 4.

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

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

4 - Ground: Battery voltage



OK or NG

OK >> GO TO 5.
NG >> Check harness for open or short between NATS antenna amp. and fuse.

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

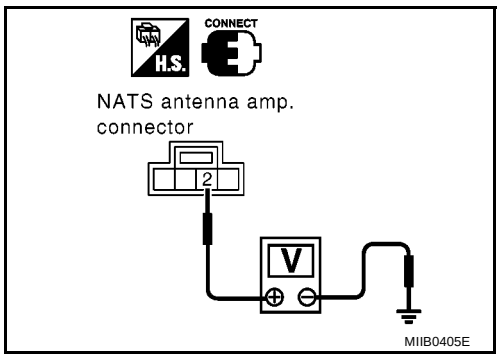
Check voltage between NATS antenna amp. connector M35 terminal 2 and ground with analogue tester.

Before inserting mechanical key in ignition knob

Voltage: 0V

Just after inserting mechanical key in ignition knob

: Pointer of tester should move.



OK or NG

OK >> GO TO 6.

NG >> ● Check harness for open or short between NATS antenna amp. and Intelligent Key unit.

NOTE:

If harness is OK, replace new* Intelligent Key unit, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.

*: New one means virgin control unit that has never been energized on-board.

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

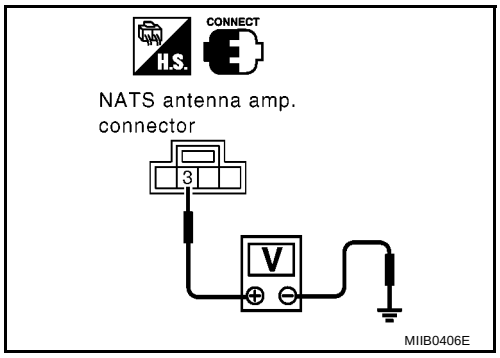
Check voltage between NATS antenna amp. connector M35 terminal 3 and ground with analogue tester.

Before inserting mechanical key in ignition knob

Voltage: 0V

Just after inserting mechanical key in ignition knob

: Pointer of tester should move.



OK or NG

OK >> GO TO 7.

NG >> ● Check harness for open or short between NATS antenna amp. and Intelligent Key unit.

NOTE:

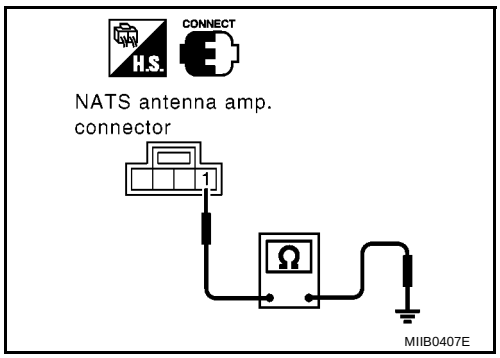
If harness is OK, replace new* Intelligent Key unit, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.

*: New one means virgin control unit that has never been energized on-board.

7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch “OFF”.
2. Check continuity between NATS antenna amp. connector M35 terminal 1 and ground.

1 - Ground: Continuity should exist.



OK or NG

OK >> NATS antenna amp. is malfunctioning.

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

NOTE:

If harness is OK, replace new* Intelligent Key unit, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.

*: New one means virgin control unit that has never been energized on-board.

Diagnostic Procedure 3

BIS000MF

IMMU FUNCTION CHECK results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

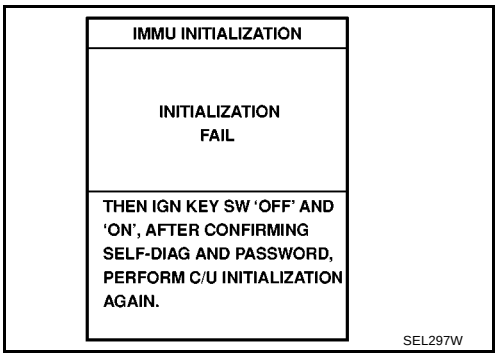
Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

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. (models without Intelligent Key system)
  - Replace new* BCM.
- Intelligent Key unit is malfunctioning. (models with Intelligent Key system)
  - Replace new* Intelligent Key unit.
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS”.

*: New one means virgin control unit that has never been energized on-board.

Diagnostic Procedure 4

BIS000MG

IMMU FUNCTION CHECK results:
“UNREGISTERD ECM” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “UNREGISTERD ECM” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

YES >>
- ECM is malfunctioning.
- Replace ECM.
- Perform initialization or re-communicating function.
  - For initialization, refer to BL-218, "ECM Re-communicating Function" .

NO >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

Diagnostic Procedure 5

BIS000MH

IMMU FUNCTION CHECK results:
“ID DISCORD ECM-IMMU” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “UNREGISTERD ECM” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

YES >>
- ECM is malfunctioning.
- Replace ECM.
- Perform initialization or re-communicating function.
  - For initialization, refer to “CONSULT-II Operation Manual NATS”.

NO >> GO TO BL-227, "Trouble Diagnosis Symptom Chart" .

Diagnostic Procedure 6

BIS000MI

MODELS WITHOUT INTELLIGENT KEY SYSTEM
“Security indicator does not light up”

1. CHECK FUSE

Check 10A fuse [No. 7, located in the fuse block (J/B)]

OK or NG

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

2. CHECK SECURITY INDICATOR LAMP

1. Install 10A fuse.
2. Start engine and turn ignition switch OFF.
3. Check the security indicator lamp lights up.

Security indicator lamp should light up.

OK or NG

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

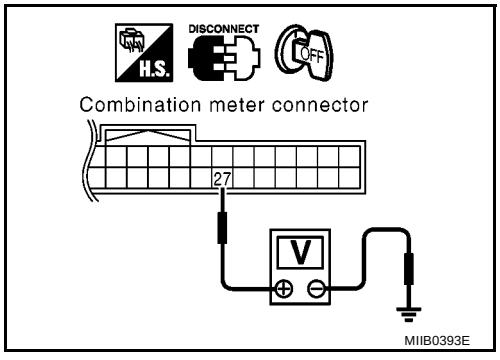
3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter (security indicator lamp) connector.
2. Check voltage between security indicator lamp connector M27 terminal 27 and ground.

27 - Ground: Battery voltage

OK or NG

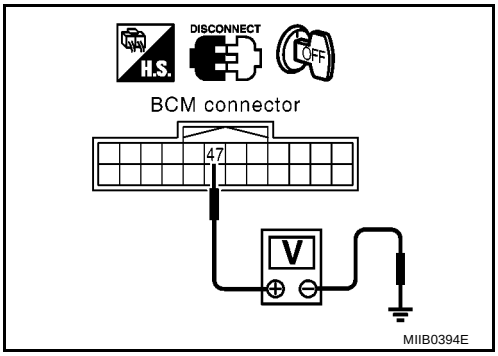
OK >> GO TO 4.
NG >> Check harness for open or short between fuse and security indicator lamp.



4. CHECK BCM FUNCTION

1. Connect combination meter (security indicator lamp) connector.
2. Disconnect BCM connector.
3. Check voltage between BCM connector M58 terminal 47 and ground.

47 - Ground: Battery voltage



OK or NG

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

NG >> Check the following.
- Harness for open or short between security indicator lamp and BCM.
- Indicator lamp condition

MODELS WITH INTELLIGENT KEY SYSTEM
“Security indicator does not light up”

1. CHECK FUSE

Check 10A fuse [No. 7, located in the fuse block (J/B)]

OK or NG

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

2. CHECK SECURITY INDICATOR LAMP

1. Install 10A fuse.
2. Start engine and turn ignition knob OFF position.
3. Check the security indicator lamp lights up.

Security indicator lamp should light up.

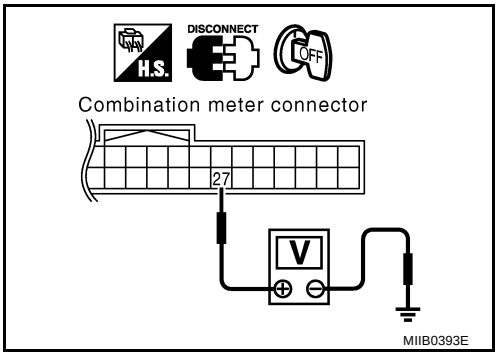
OK or NG

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

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter (security indicator lamp) connector.
2. Check voltage between security indicator lamp connector M27 terminal 27 and ground.

27 - Ground: Battery voltage



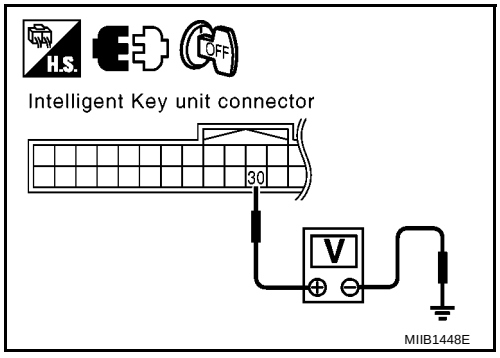
OK or NG

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

4. CHECK INTELLIGENT KEY UNIT FUNCTION

1. Connect combination meter (security indicator lamp) connector.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit connector M60 terminal 30 and ground.

30 - Ground: Battery voltage



OK or NG

OK >> Intelligent Key is malfunctioning.
- Replace Intelligent Key unit.
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS”.

NG >> Check the following.
- Harness for open or short between security indicator lamp and Intelligent Key unit.
- Indicator lamp condition

Diagnostic Procedure 7

BIS000MJ

IMMU FUNCTION CHECK results:
“P1610” displayed on CONSULT-II screen

1. CONFIRM IMMU FUNCTION CHECK

Confirm “IMMU FUNCTION CHECK” results “P1610” (LOCK MODE) is displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-226, "WORK FLOW" .

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 >> Perform “IMMU FUNCTION CHECK”, and repair the diagnosis result on the display.

Removal and Installation NATS Antenna Amp.

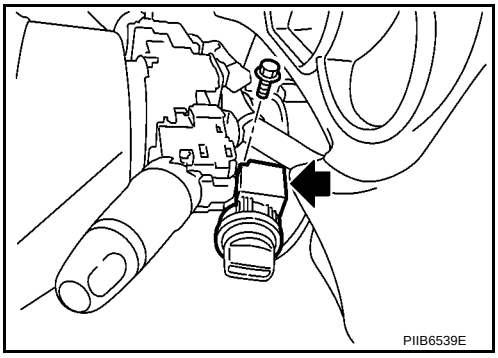
BIS000MK

REMOVAL

CAUTION:

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

1. Remove the spiral cable. Refer to SRS-38, "Removal and Installation" .
2. Disconnect the NATS antenna amp. connect, remove the screw and NATS antenna amp.



INSTALLATION

Install in the reverse order of removal.