SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

Precautions

EIS002J5

- 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.

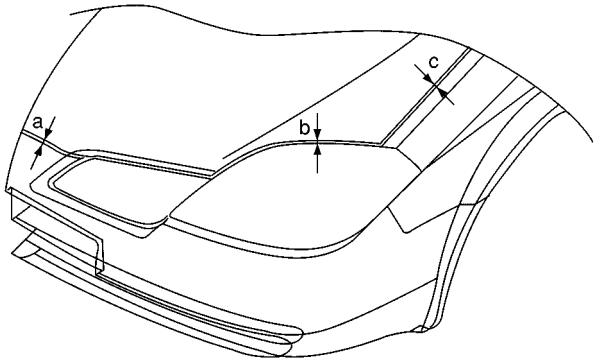
HOOD

PFP:65100

Fitting Adjustment

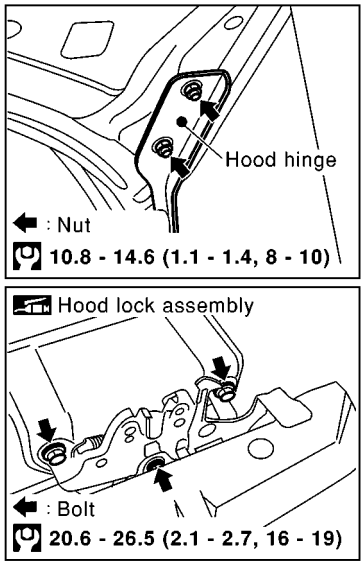
EIS002J6

SEC. 650



a: 6.0±1.5 (0.236±0.059)
b: 5.0±2.0 (0.197±0.079)
c: 3.7±1.0 (0.146±0.039)
Unit: mm (in)

: Apply grease.
: N•m (kg-m, ft-lb)



SIIA0624E

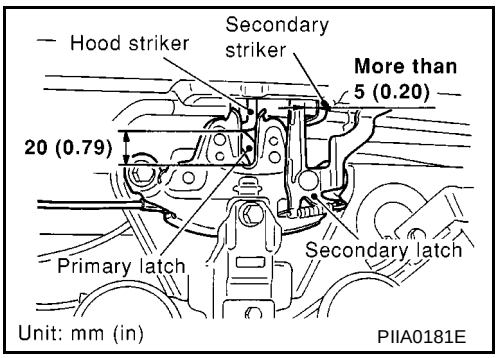
FRONT END HEIGHT ADJUSTMENT AND LATERAL/LONGITUDINAL CLEARANCE ADJUSTMENT

1. Remove hood lock. Rotate bumper rubber to adjust height until hood becomes 1 to 1.5 mm (0.04 to 0.059 in) lower than the fender.
2. Position hood lock and engage striker. Confirm hood lock and striker for looseness. Tighten lock mount bolts to the specified torque.

SURFACE HEIGHT ADJUSTMENT

1. Remove hood lock. Use bumper rubber (RH/LH) to make the hood and fender flush.
2. Position hood lock. Move hood lock to left or right until vertically centered on the striker.
3. Confirm secondary latch is securely engaged with secondary striker by releasing it from a height of approximately 200 mm (7.87 in) or by pressing it lightly approx.3kg (29 N).

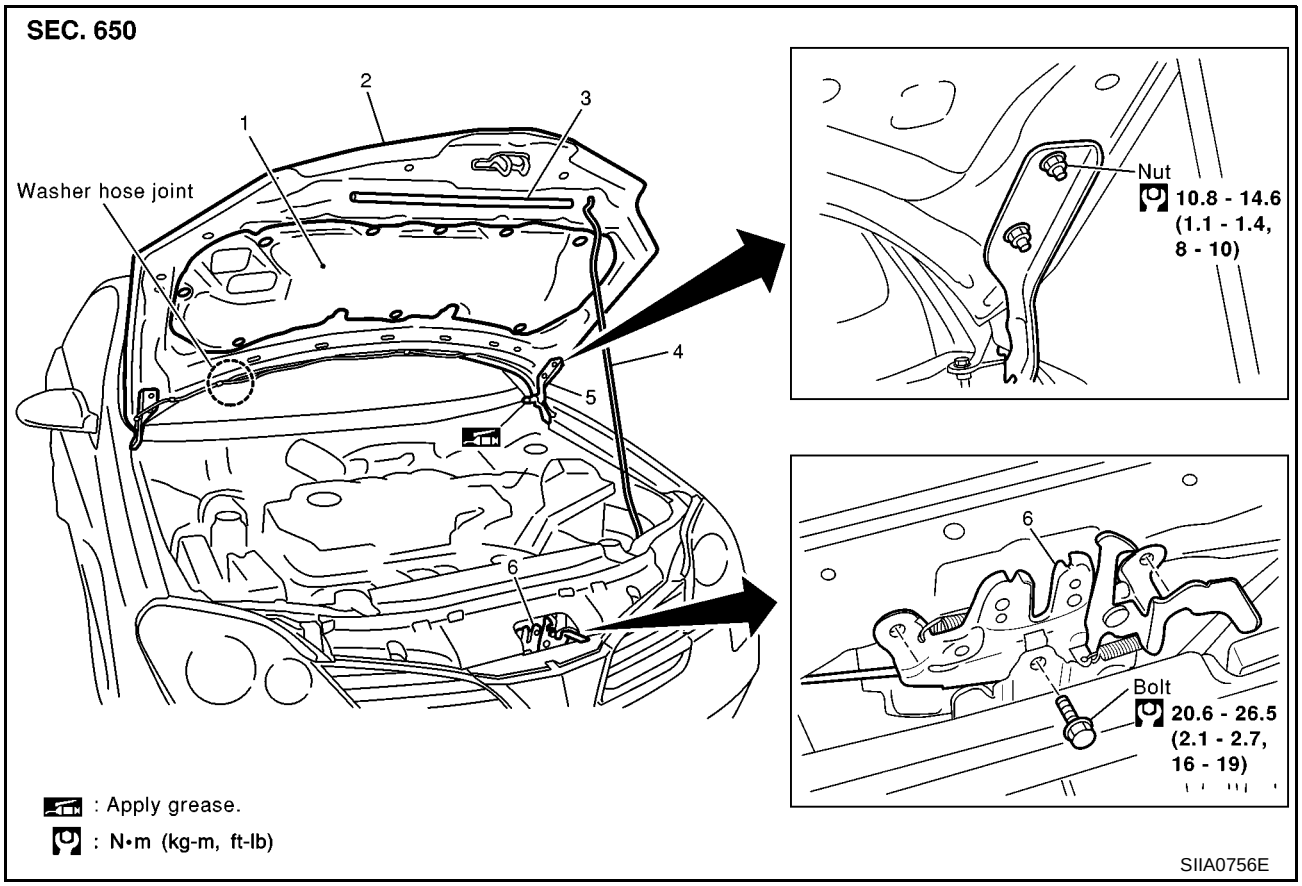
   NOTE:
   Do not release hood from a height of 300 mm (11.81 in) or higher.
4. Move hood lock up and down until striker smoothly engages the lock when the hood is closed.
5. After adjustment, tighten lock mount bolts to the specified torque.



PIIA0181E

Removal and Installation of Hood Assembly

EIS002J7



1 : Hood insulator
2 : Hood assembly
3 : Radiator core support sealing rubber
4 : Hood stay
5 : Hood hinge
6 : Hood lock assembly

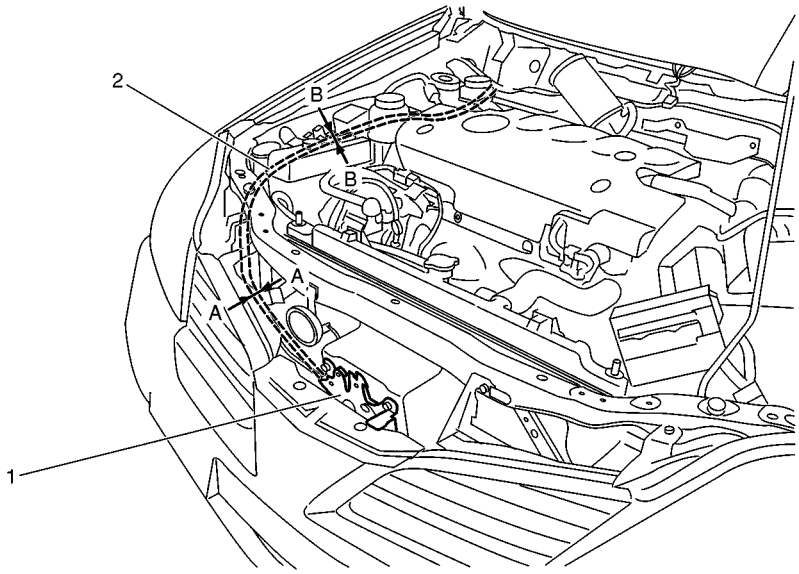
1. Disconnect washer hose at the connection.
2. Remove hinge mount nuts on the hood and then the hood assembly.

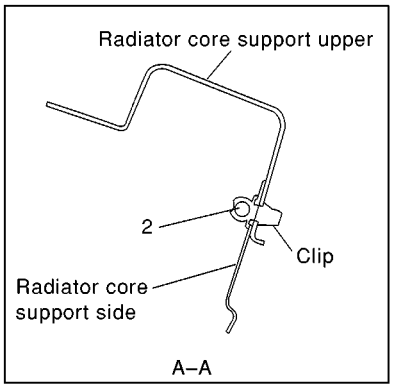
Install in the reverse order of removal.

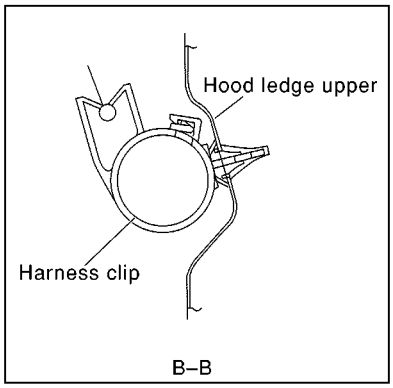
Removal and Installation of Hood Lock Control

EIS002J8

SEC. 656

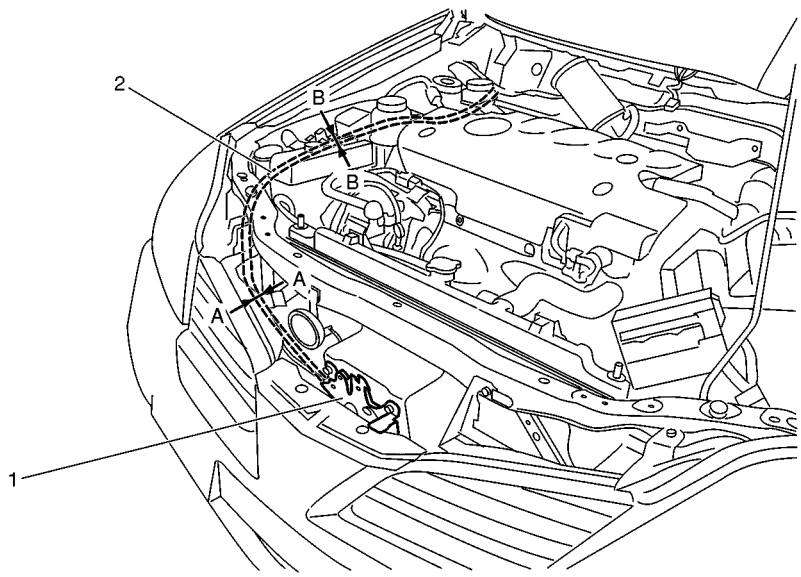


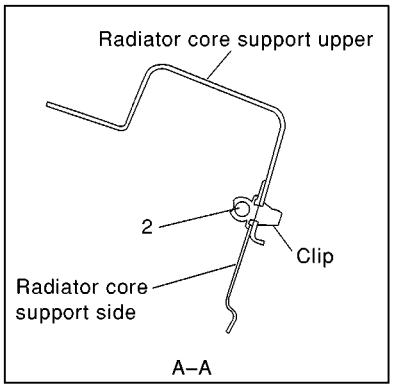


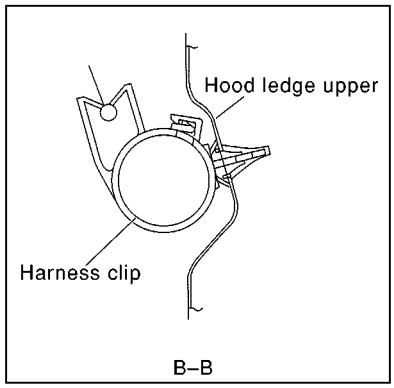


SIIA0628E

SEC. 656







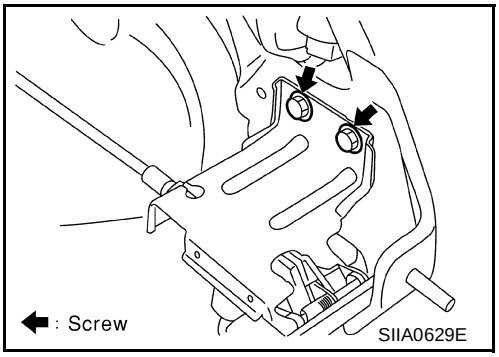
SIIA0628E

1 : Hood lock assembly 2 : Hood lock cable

REMOVAL

1. Remove hood lock cable and clip it from upper portion of radiator core support and hood ledge.
2. Remove dash side finisher. Refer to EI-25, "BODY SIDE TRIM" .
3. Remove attaching screw and then the hood opener.
4. Remove dash panel grommet and pull hood lock cable toward the passenger compartment.

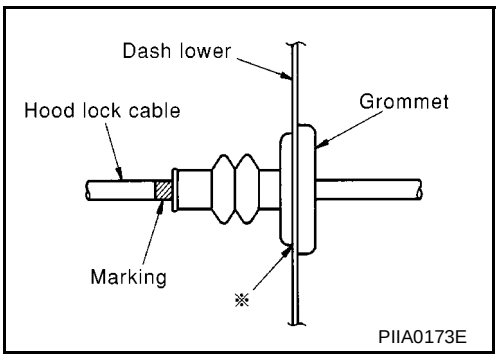
   NOTE:
   When pulling the cable, be careful not to strip or scratch the outer surface.



SIIA0629E

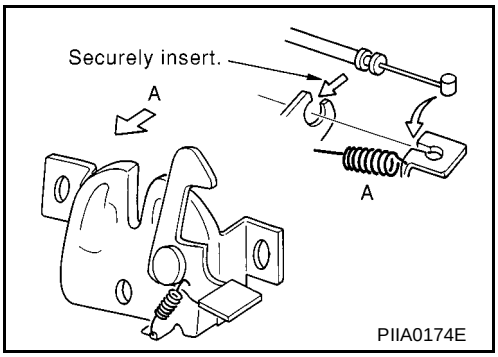
INSTALLATION

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



PIIA0173E

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

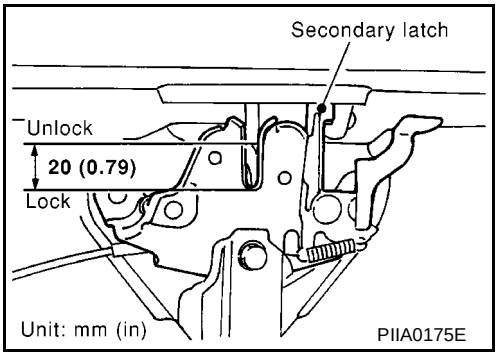


Hood Lock Control Inspection

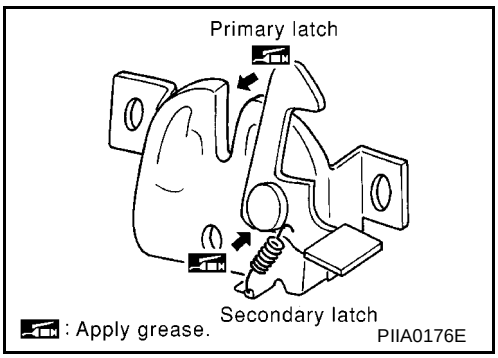
EIS002J9

NOTE:
If the 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 (7.87 in).
2. Confirm front end of the hood rises by approximately 20 mm (0.79 in) when pulling the hood opener. Also confirm hood opener returns to the original position.



3. Confirm hood lock has is properly lubricated. If necessary, apply “Grease” at the point shown in the figure.

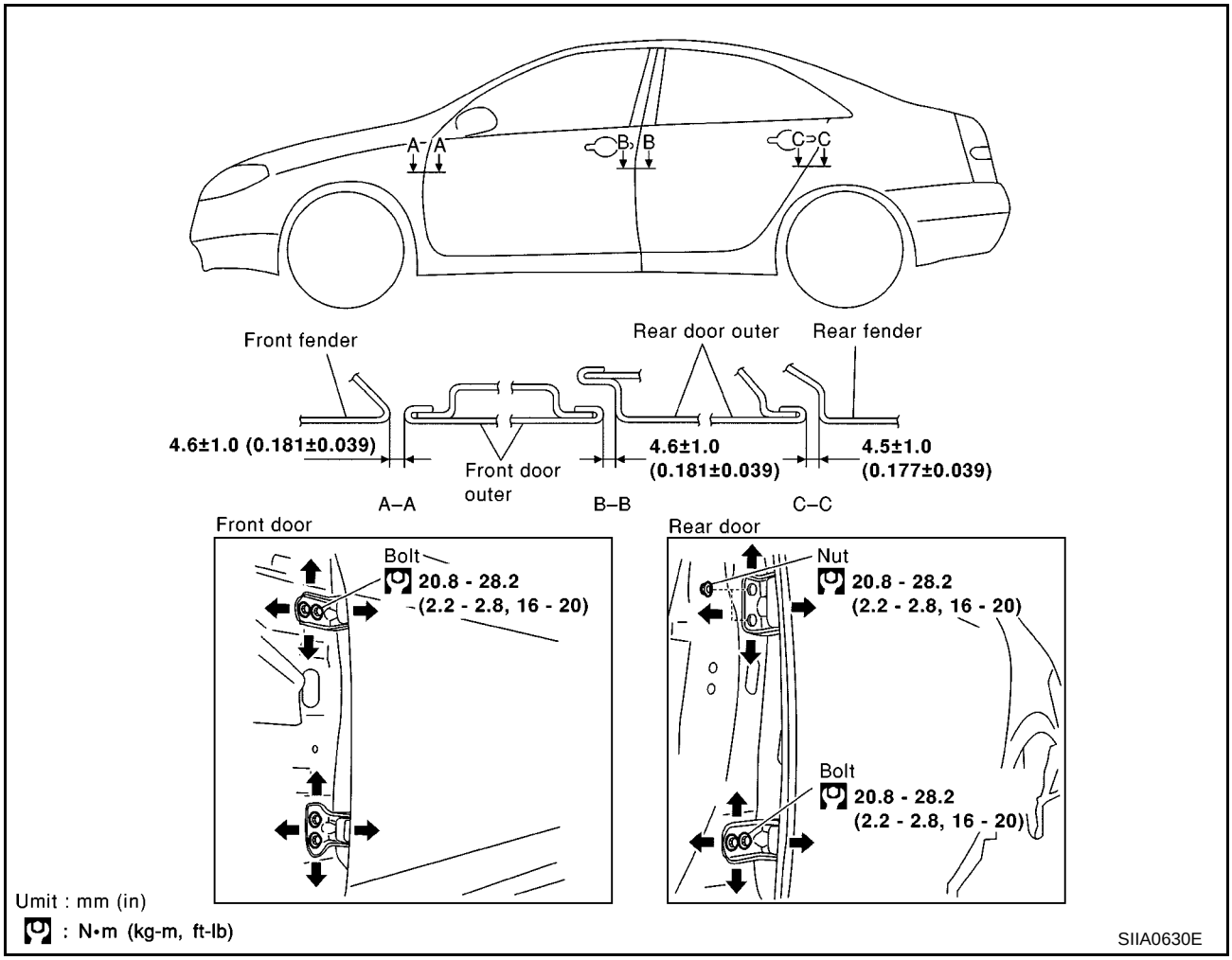


DOOR

PFP:80100

Fitting Adjustment

EIS002JA



FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove fender protector. Refer to EI-14, "FENDER PROTECTOR" .
2. Working from the inside the fender, loosen hinge mount bolts on the body. Lift rear end of the front door to adjust clearance and surface difference properly.

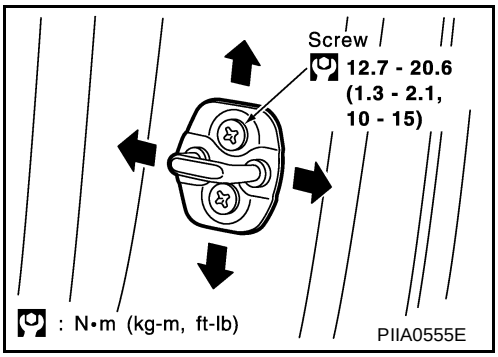
REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove upper and lower garnishes on the center pillar. Refer to EI-25, "BODY SIDE TRIM" .
2. Loosen mounting bolts from outside of vehicle, mounting nuts from inside of vehicle. Open rear door. Raise rear end of it to adjust.

STRIKER ADJUSTMENT

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



Removal and Installation

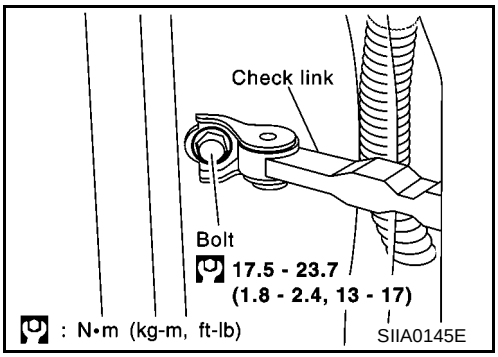
EIS002JB

NOTE:

- During door assembly removal and installation, use a jack to support the door. Place shop cloths or something similar on the jack plate to protect the door and body from damage.
- After door assembly removal and installation, always adjust it so will open and close smoothly.
- Confirm the rotating part of the hinge has adequate lubrication. If necessary, apply Body Grease.

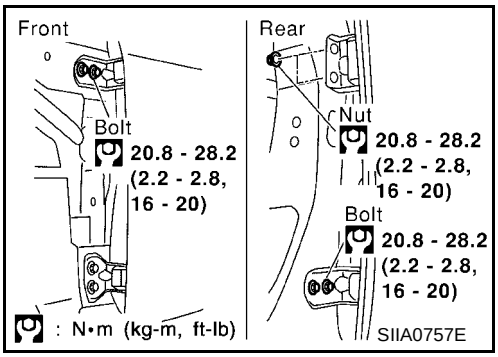
1. Remove door finisher. Refer to EI-22, "DOOR FINISHER" .
2. Remove sealing screen.

   NOTE:
   If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.
3. Remove door harness.
4. Remove check link mount bolts on the body.



5. Remove hinge mount nuts and bolts on the door and then the door assembly.

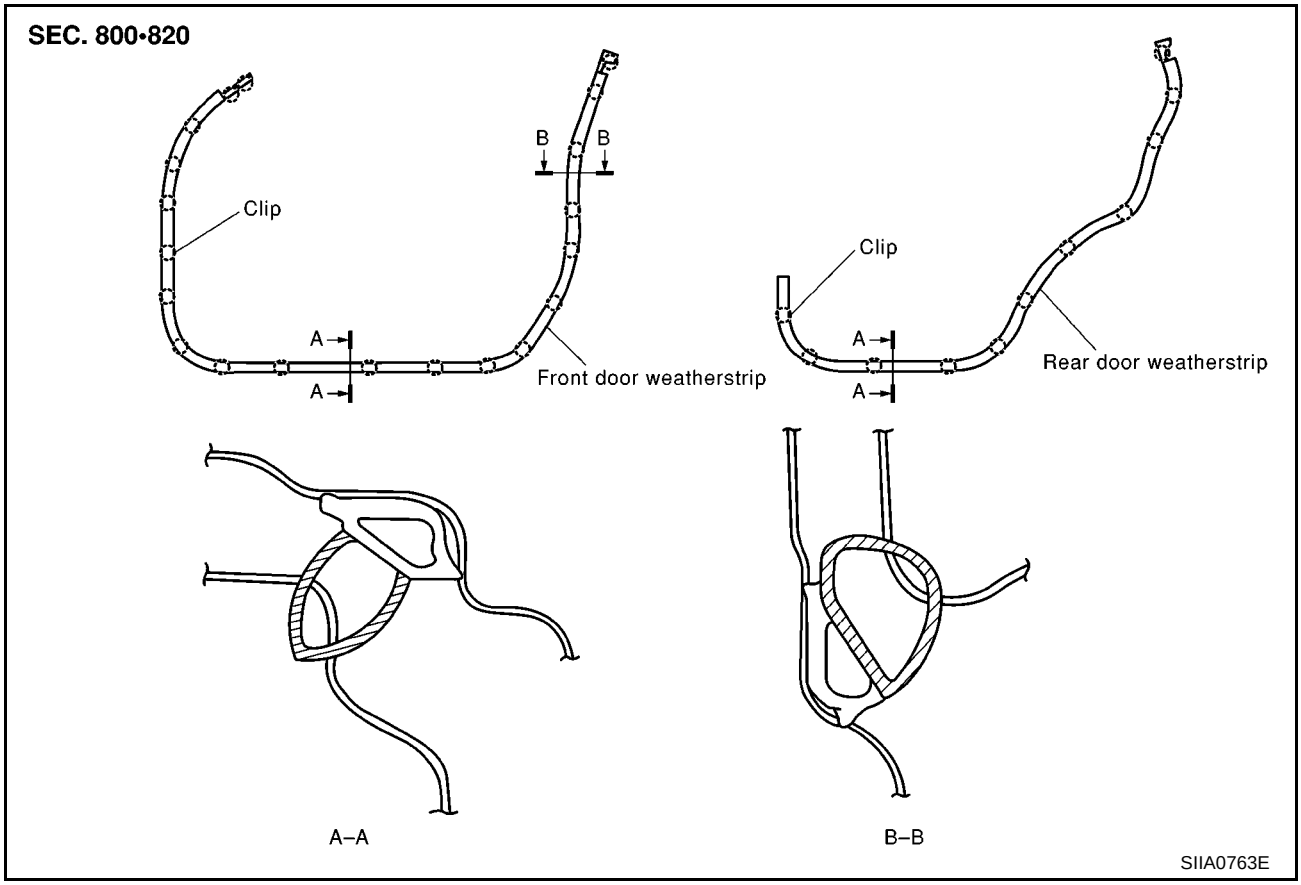
Install in the reverse order of removal.



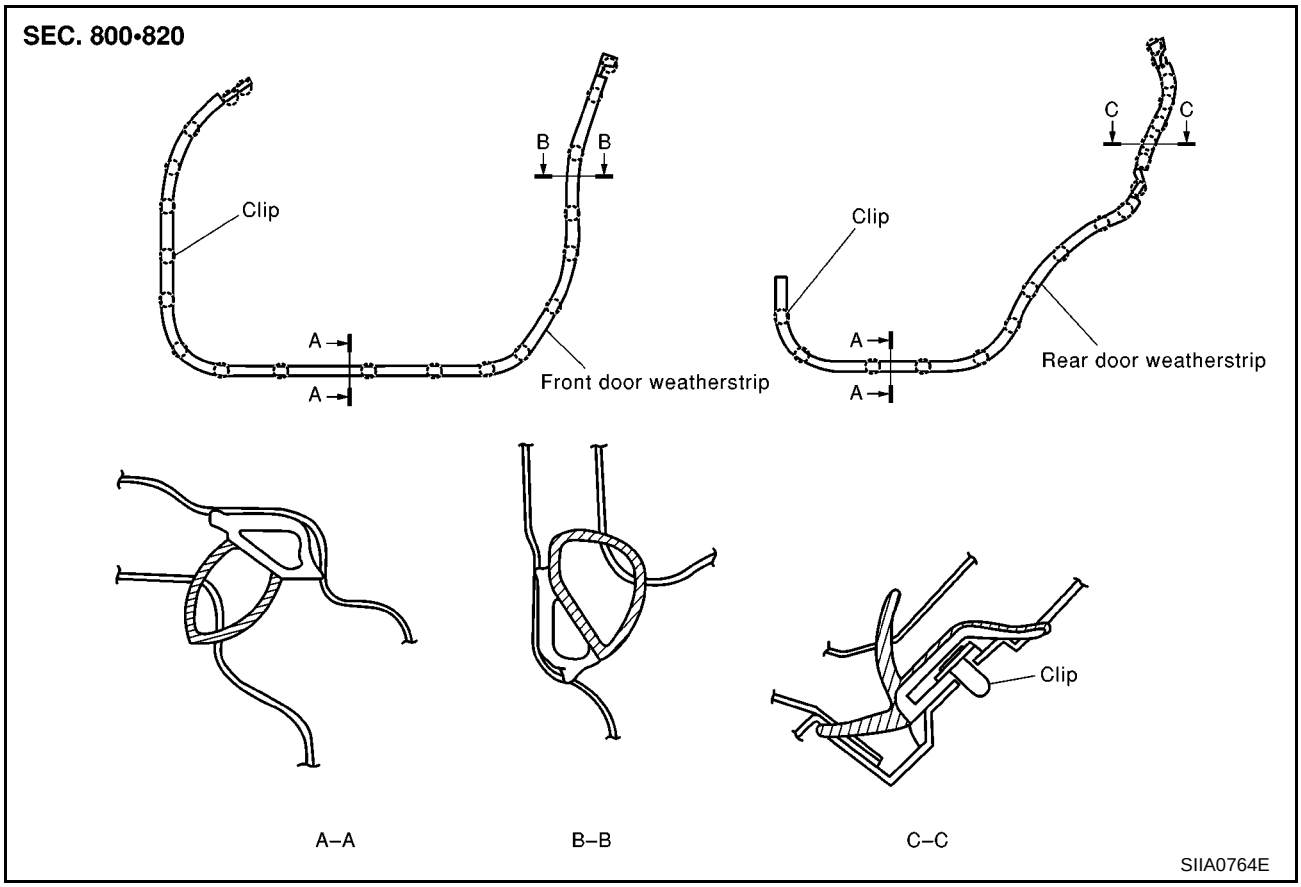
Door Weather-strip

EIS002JC

SEDAN



WAGON



POWER DOOR LOCK SYSTEM

PFP:24814

System Description

EIS002JD

OPERATION

Power is supplied at all times

- through 10A fuse (No.12, located in the fusible link and fuse box)
- to smart entrance control unit terminal 56, and
- through 40A fusible link (letter B, located in the fusible link and fuse box)
- to smart entrance control unit terminal 49.

Ground is supplied

- through body grounds M16, M50 and M70
- to smart entrance control unit terminal 53.

DOOR LOCK AND UNLOCK SWITCH OPERATION

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

- from body grounds M50 and M70
- through power window main switch (door lock/unlock switch) terminal 3
- through power window main switch (door lock/unlock switch) terminal 1
- to smart entrance control unit terminal 13.

With power and ground supplied, doors are locked.

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

- from body grounds M50 and M70
- through power window main switch (door lock/unlock switch) terminal 3
- through power window main switch (door lock/unlock switch) terminal 2
- to smart entrance control unit terminal 14

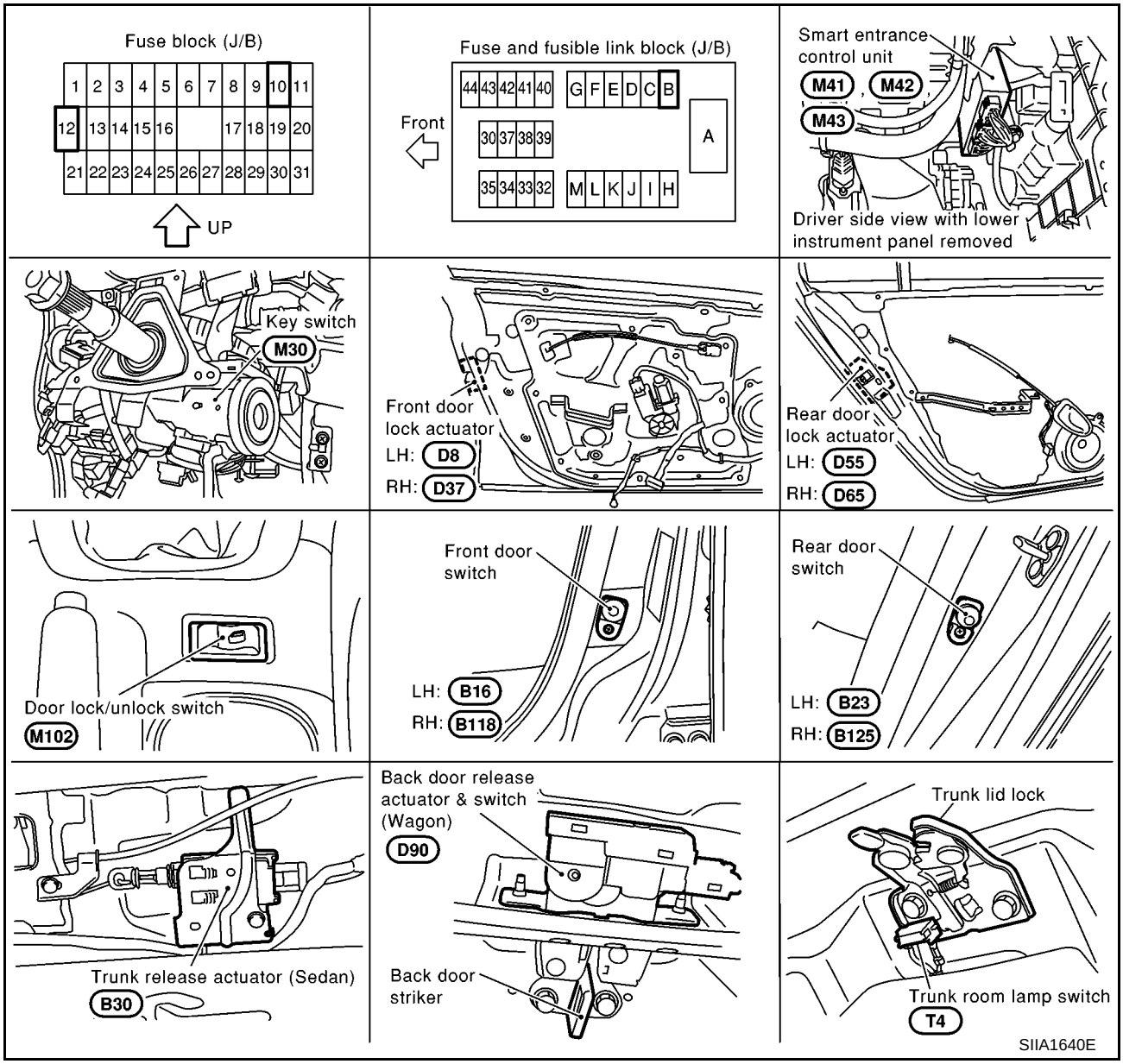
With power and ground supplied, all doors are unlocked.

KEY REMINDER SYSTEM

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

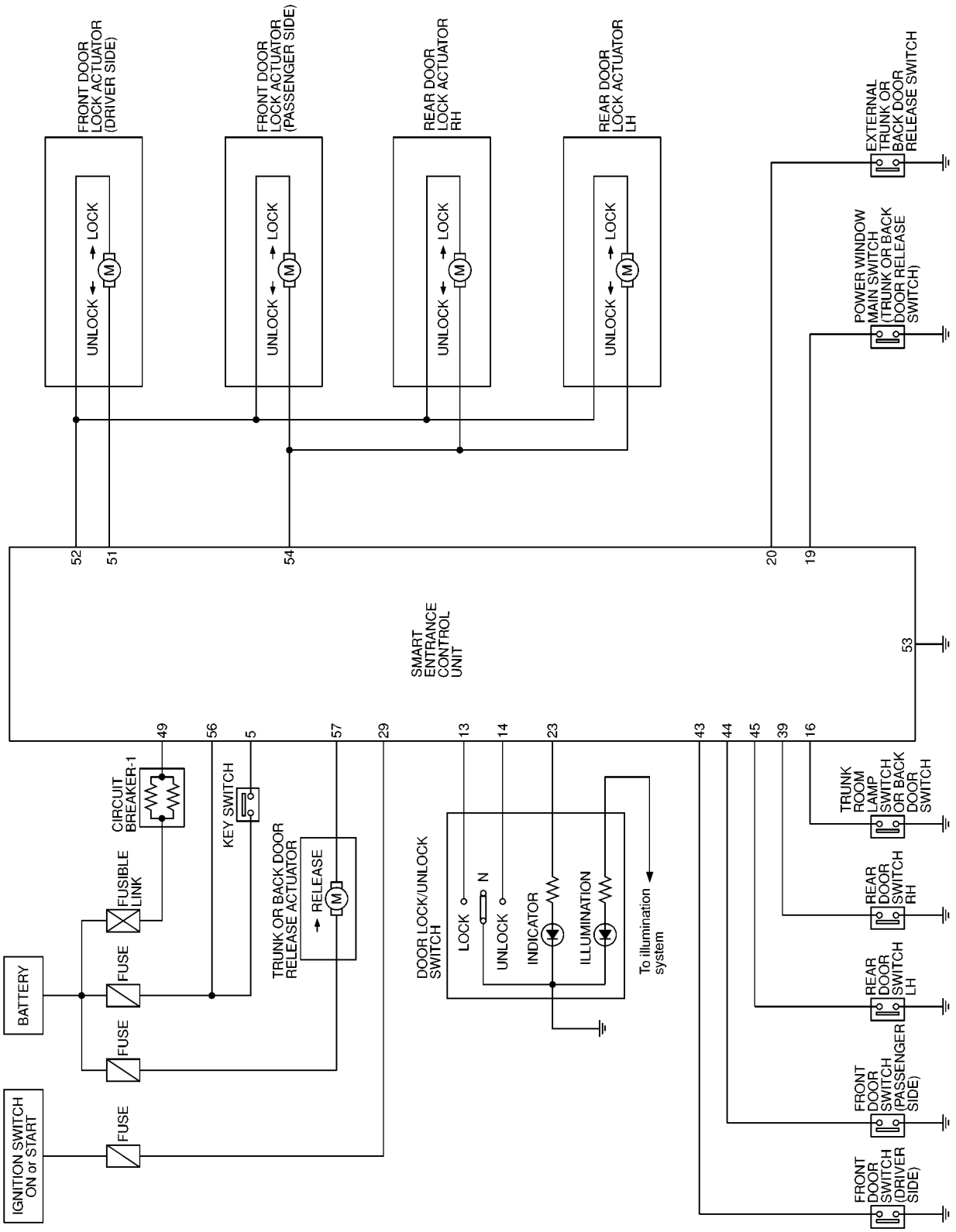
Component Parts and Harness Connector Location

EIS002JE



Schematic

EIS002JF

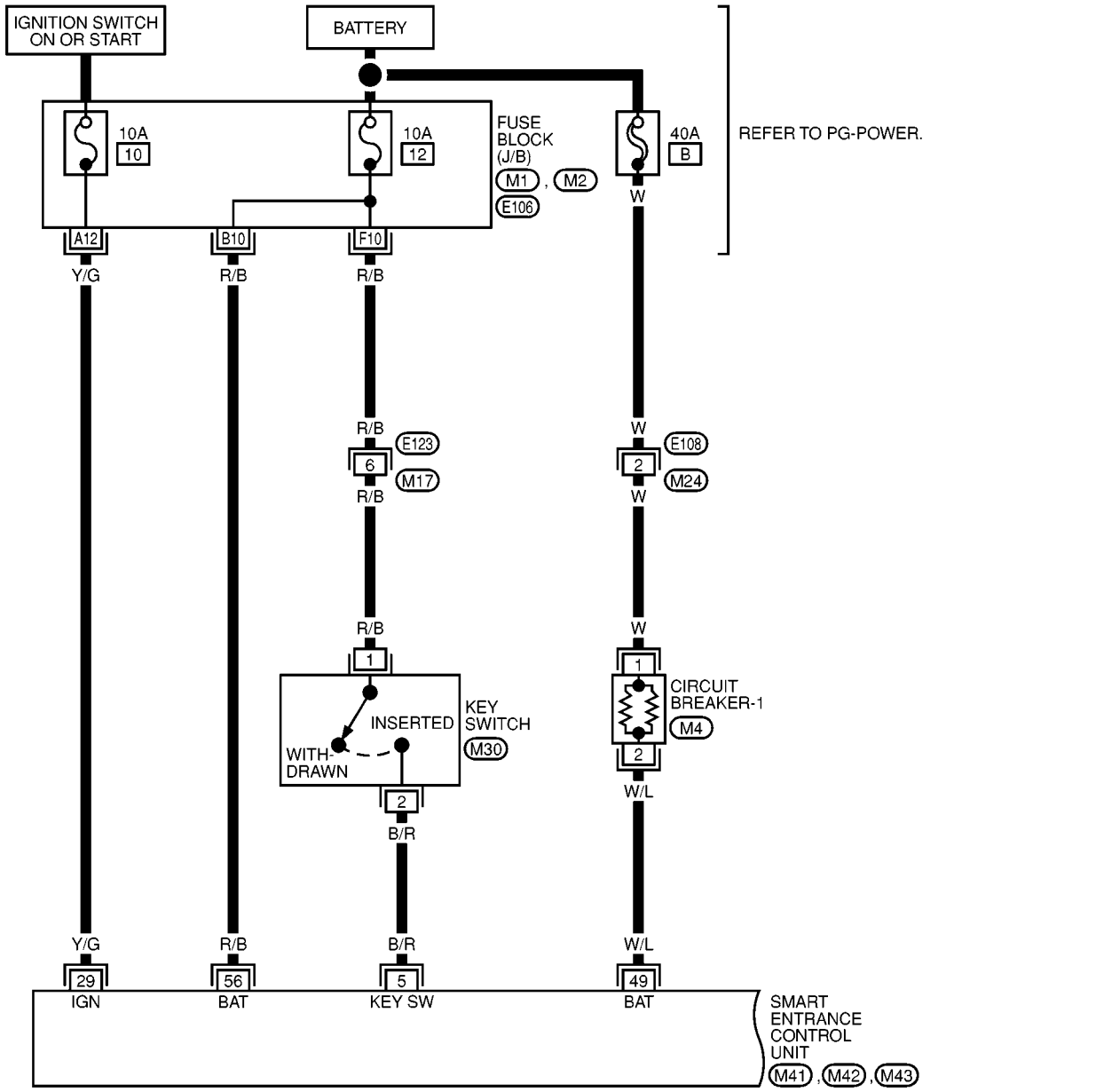


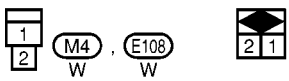
MKWA0094E

Wiring Diagram — D/LOCK —

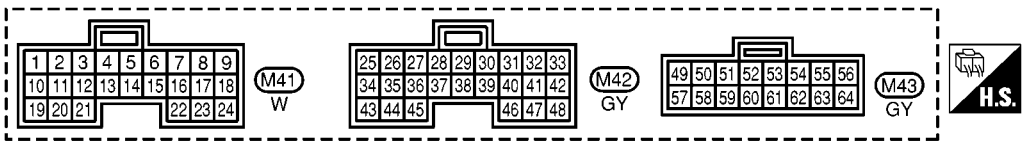
EIS002JG

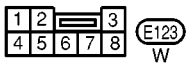
BL-D/LOCK-01





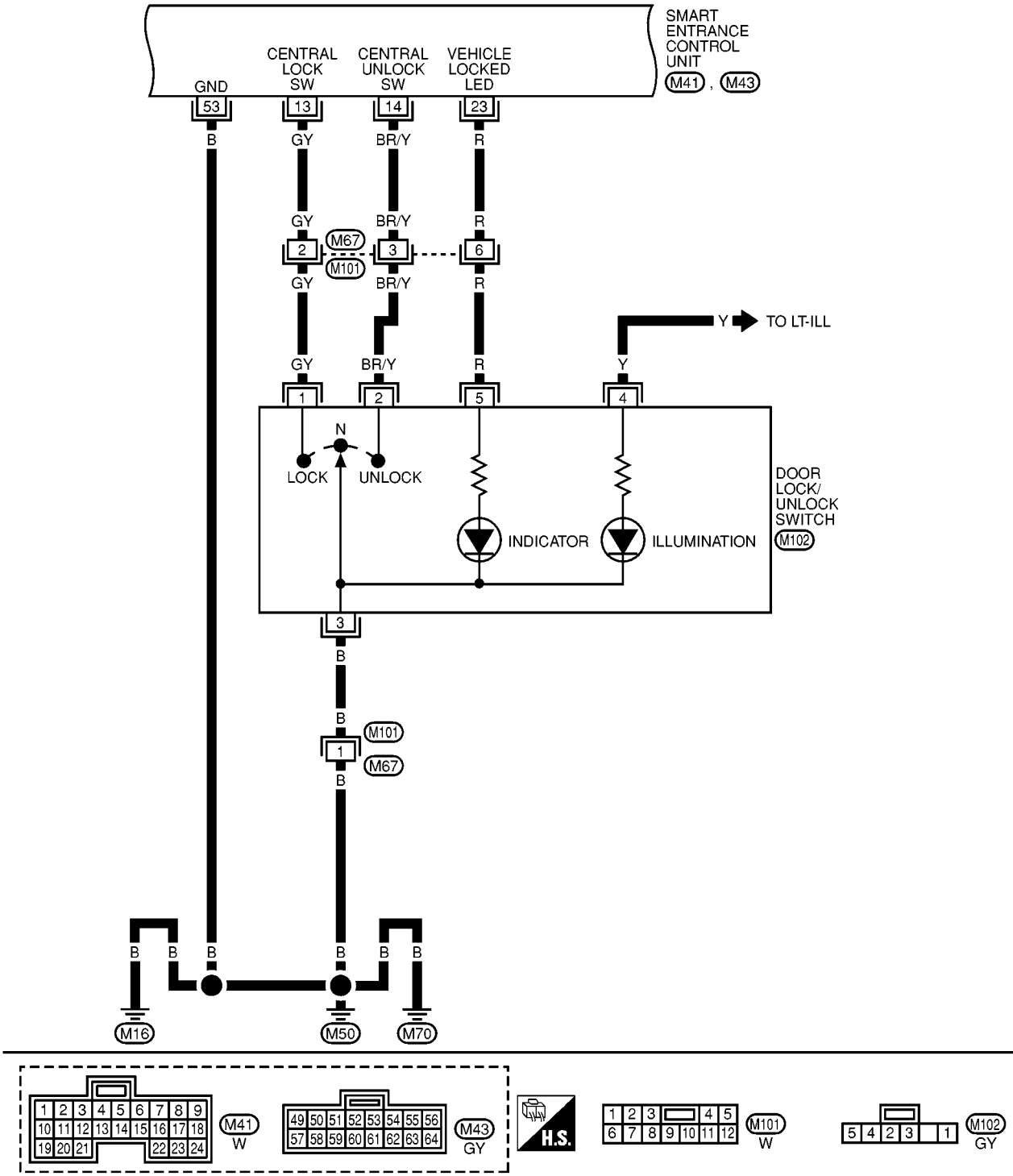
REFER TO THE FOLLOWING.
M1 , M2 , E106 -FUSE BLOCK-JUNCTION BOX (J/B)





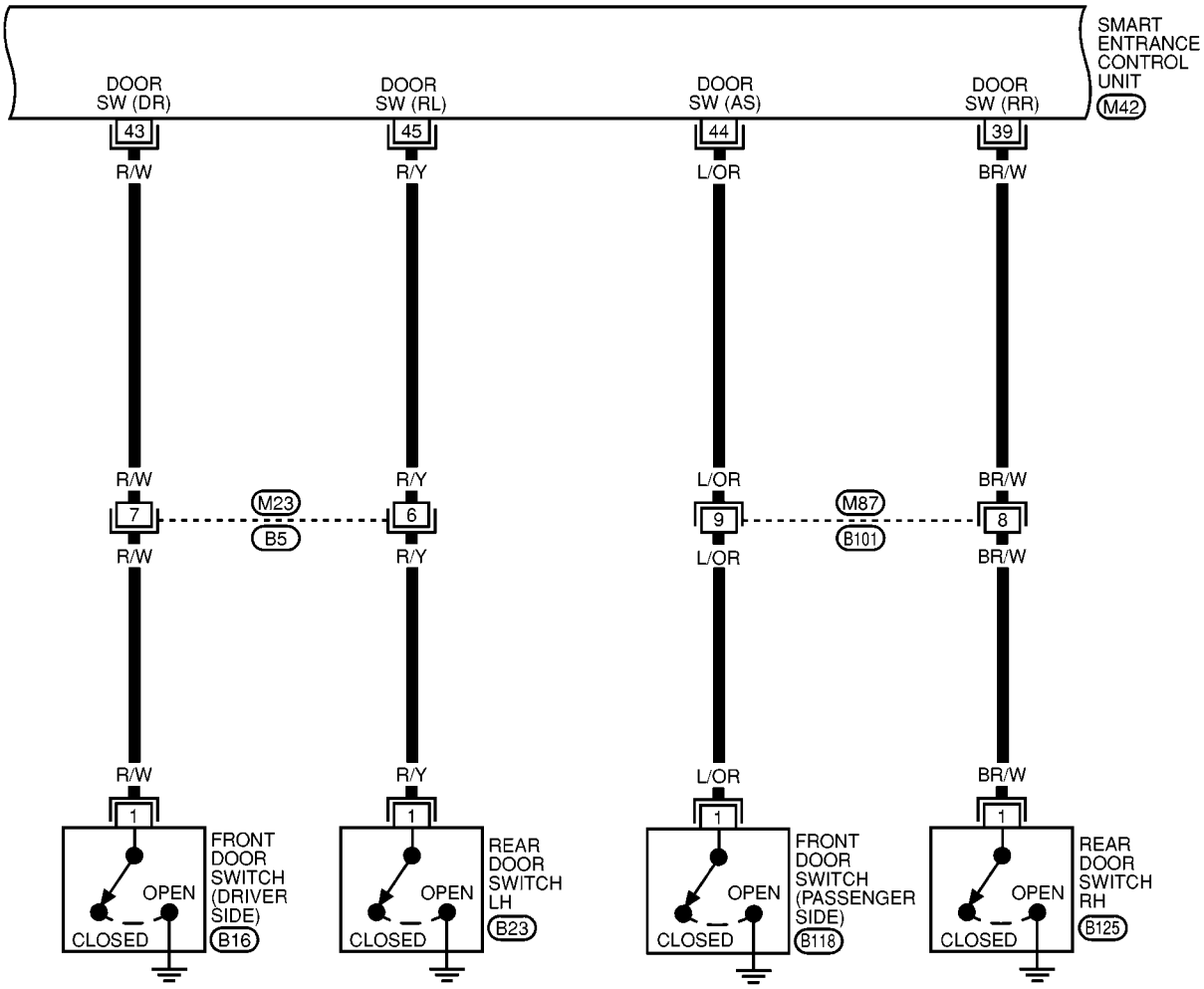
MKWA0095E

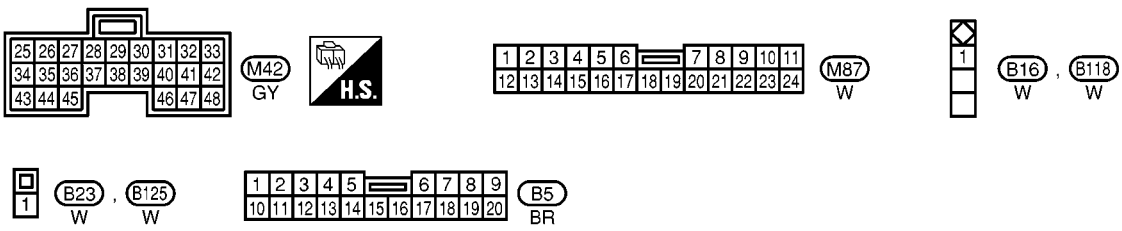
BL-D/LOCK-02



MKWA0096E

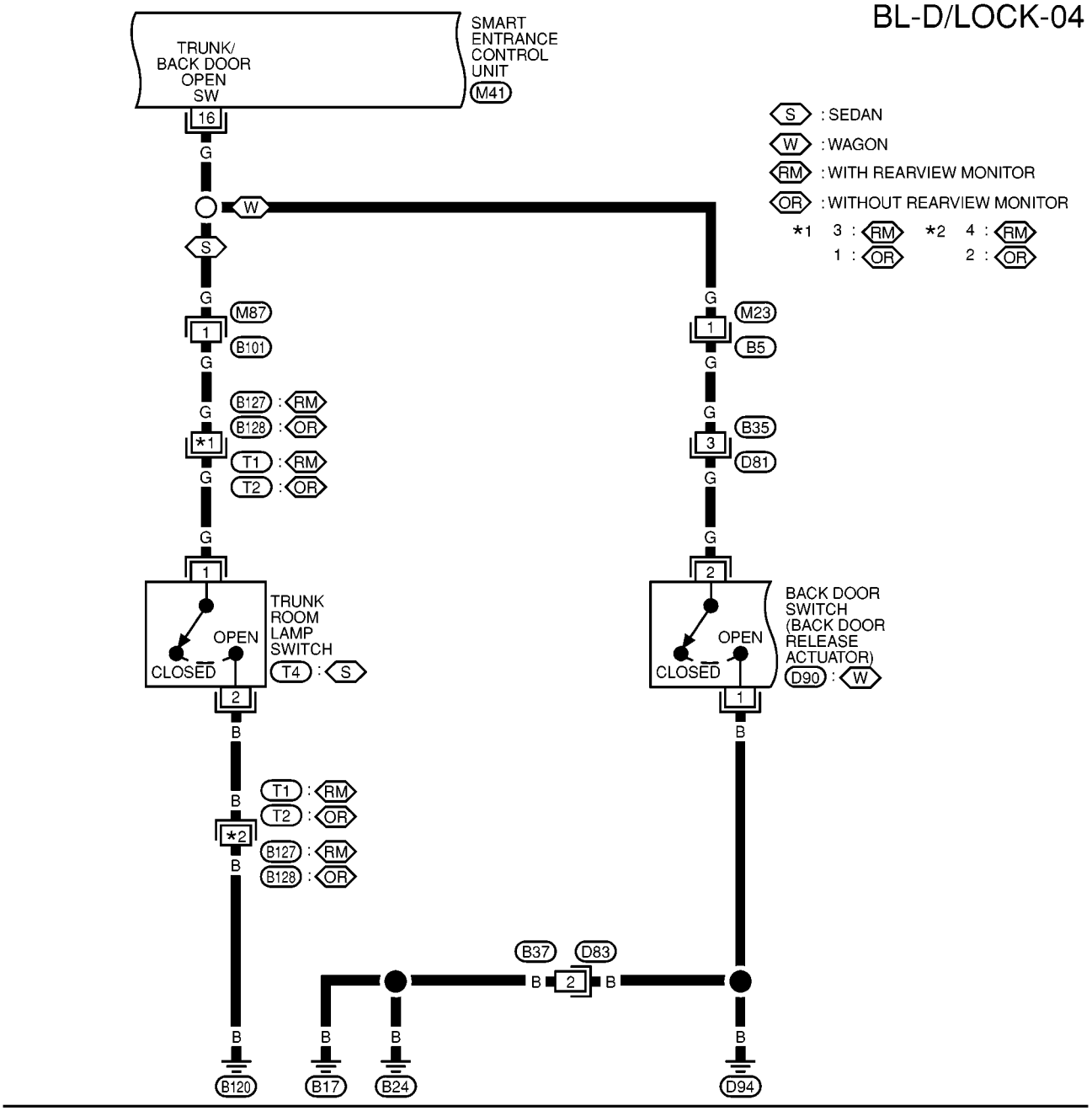
BL-D/LOCK-03

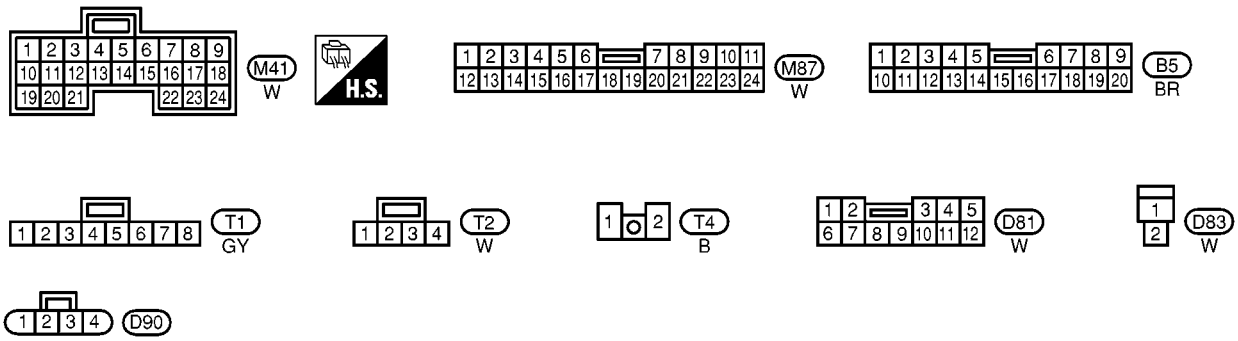




MKWA0097E

BL-D/LOCK-04





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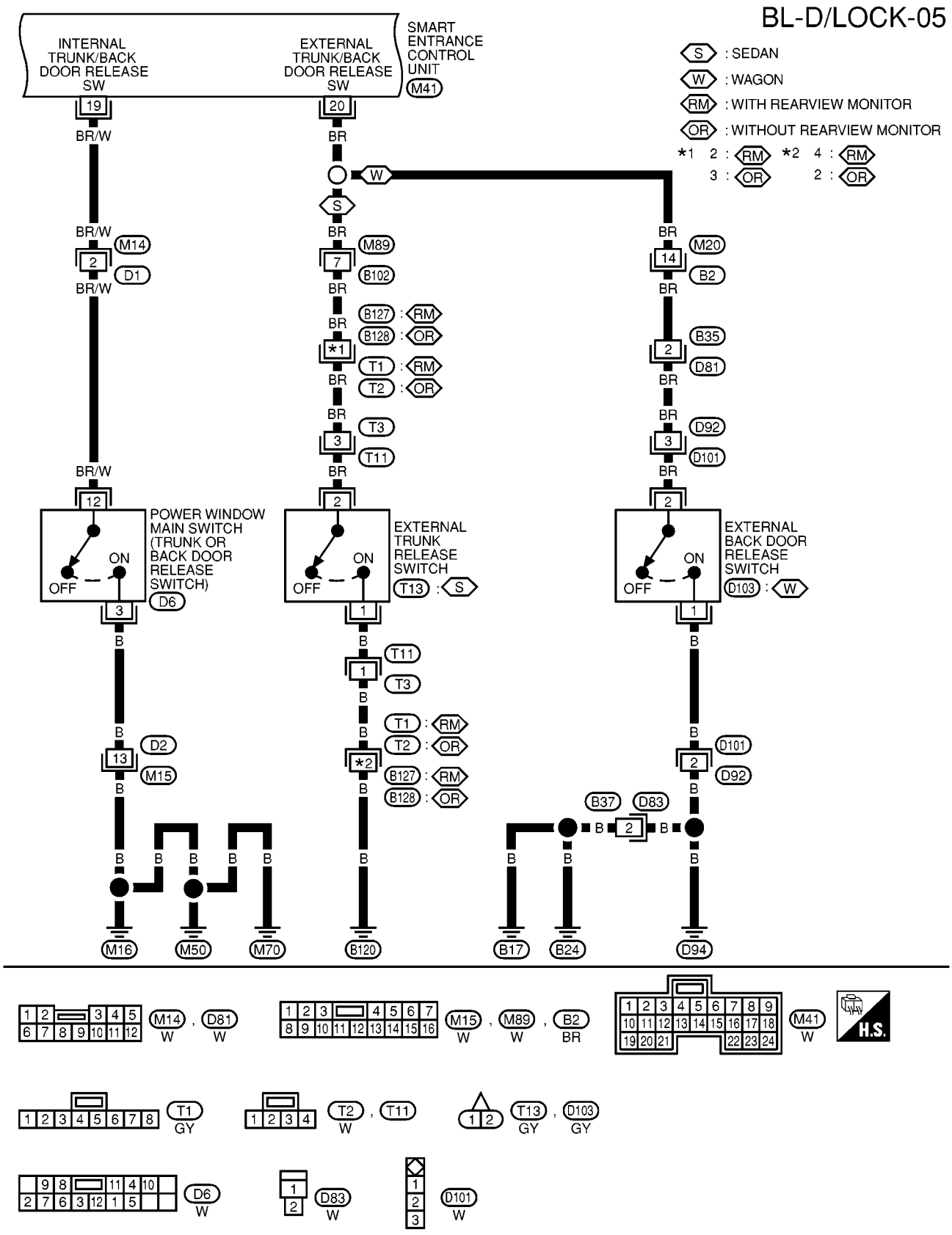
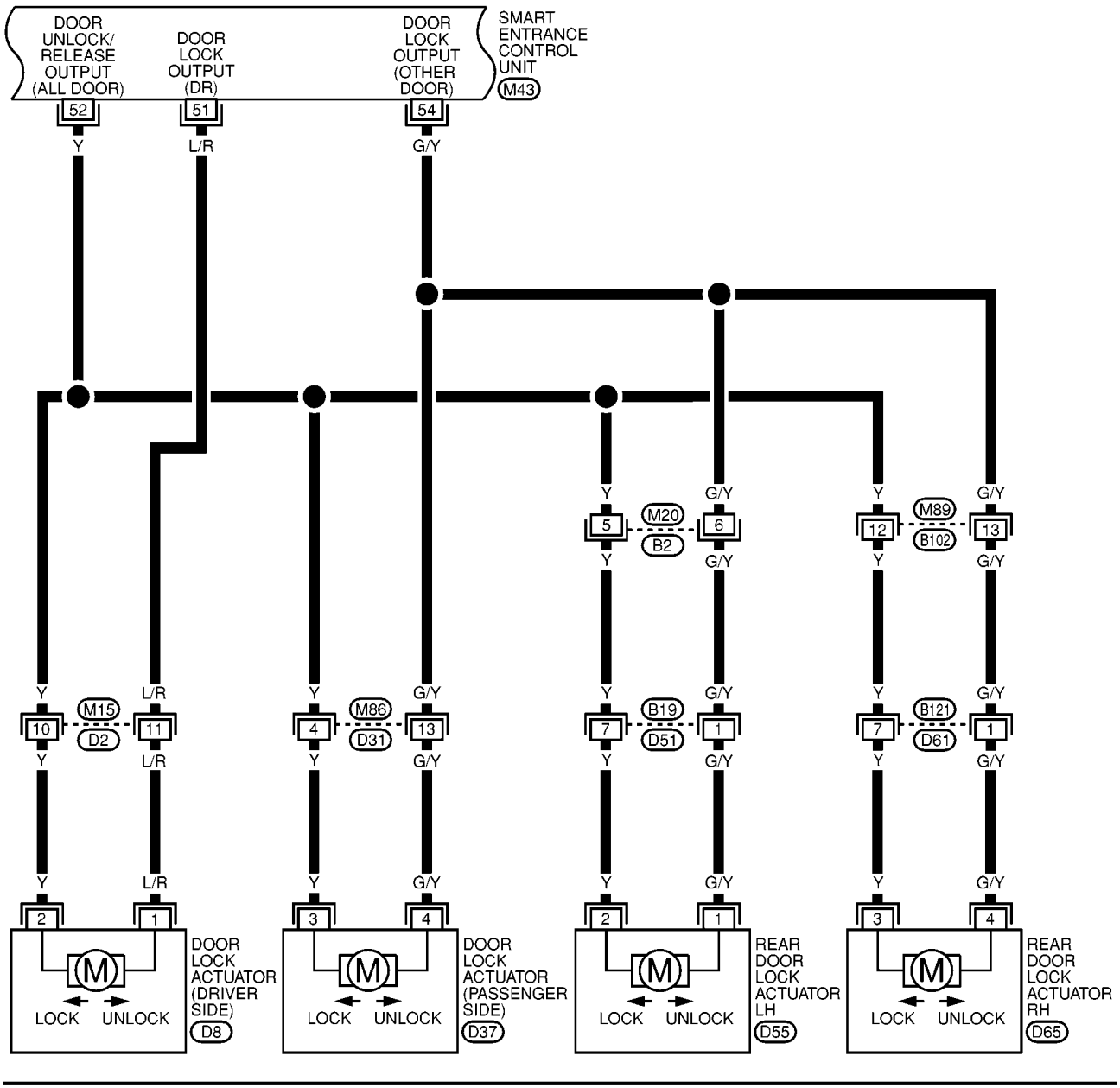
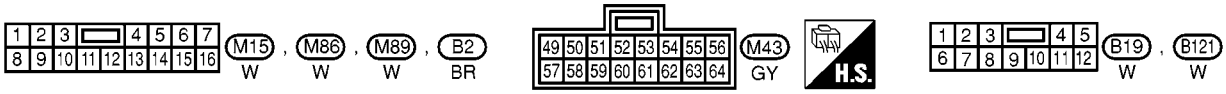
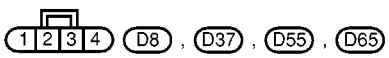

BL-D/LOCK-05
INTERNAL TRUNK/BACK DOOR RELEASE SW
EXTERNAL TRUNK/BACK DOOR RELEASE SW
SMART ENTRANCE CONTROL UNIT
M41
19
20
BR/W
BR
S : SEDAN
W : WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
*1 2 : RM 3 : OR
*2 4 : RM 2 : OR
M14
D1
M89
B102
M20
B2
B127 : RM
B128 : OR
T1 : RM
T2 : OR
T3
T11
B35
D81
D92
D101
12
2
3
7
14
POWER WINDOW MAIN SWITCH (TRUNK OR BACK DOOR RELEASE SWITCH)
D6
EXTERNAL TRUNK RELEASE SWITCH
T13 : S
EXTERNAL BACK DOOR RELEASE SWITCH
D103 : W
ON
OFF
1
13
D2
M15
*1
*2
B37
D83
M16
M50
M70
B120
B17
B24
D94
M14 , D81
W W
M15 , M89 , B2
W W BR
M41
W
H.S.
T1
GY
T2 , T11
W
T13 , D103
GY GY
D6
W
D83
W
D101
W

MKWA0099E

BL-D/LOCK-06







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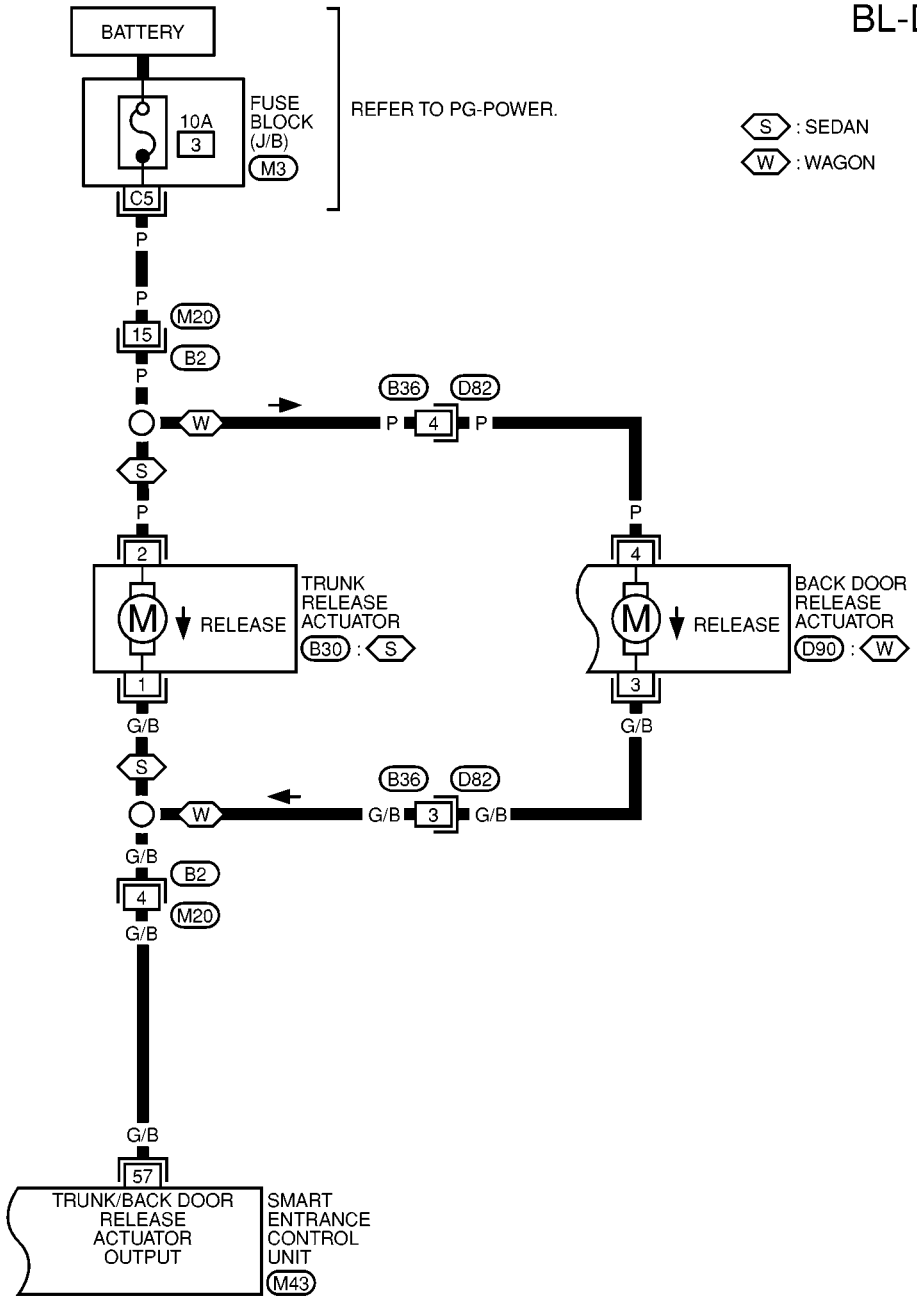
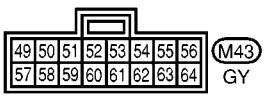
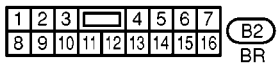
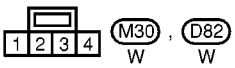
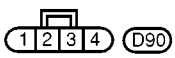










REFER TO THE FOLLOWING.
M3 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0101E

Terminal and Reference Value for Smart Entrance Control Unit

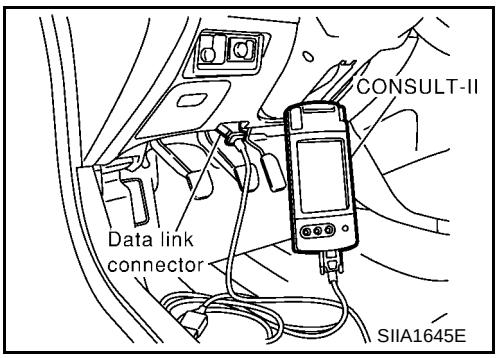
EIS002JH

TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (Approximate values)
5	B/R	Key switch	Key inserted (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0V
13	GY	Door lock/unlock switch (Lock signal)	Lock operation (ON)	0V
			Other than above (OFF)	5V
14	BR/Y	Door lock/unlock switch (Unlock signal)	Unlock operation (ON)	0V
			Other than above (OFF)	5V
16	G	Trunk room lamp switch (Back door switch)	Trunk (Back door) open (ON) → close (OFF)	0V →Battery voltage
19	BR/W	External trunk or back door release switch	OFF → ON	5V → 0V
20	BR	Power window main switch (Trunk or back door release switch)	OFF → ON	5V → 0V
23	R	Door lock/unlock switch indicator	Goes OFF→ Illuminates (Ignition switch ON and all door closed)	0V → Battery voltage
29	Y/G	IGN power supply	—	Battery voltage
39	BR/W	Rear door switch RH	Door open (ON) → close (OFF)	0V →Battery voltage
43	R/W	Driver door switch	Door open (ON) → close (OFF)	0V →Battery voltage
44	L/OR	Passenger door switch	Door open (ON) → close (OFF)	0V →Battery voltage
45	R/Y	Rear door switch LH	Door open (ON) → close (OFF)	0V →Battery voltage
49	W/L	Power source (PTC)	—	Battery voltage
51	L/R	Door lock actuator lock (ALL Doors)	Door lock/unlock switch LOCK operation	0V → 12V
52	Y	Door lock actuator unlock (Driver side)	Door lock/unlock switch Unlock operation	0V → 12V
53	B	Ground	—	0V
54	G/Y	Door lock actuator lock (Passenger and rear LH, RH side)	Door lock/unlock switch LOCK operation	0V → 12V
56	R/B	BAT power supply	—	Battery voltage
57	G/B	Trunk (Back door) release actuator	Power window main switch (Trunk or back door release switch) OPEN operation	Battery voltage → 0V

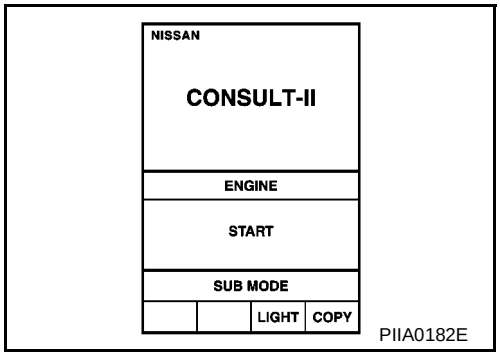
CONSULT- II Inspection Procedure

EIS002JI

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

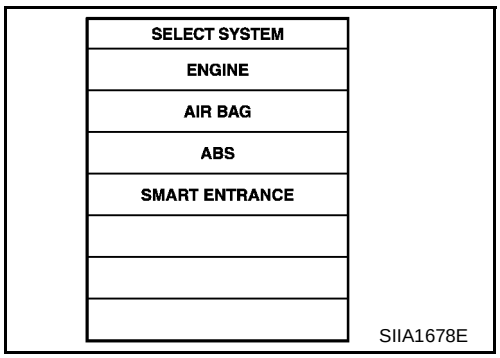


3. Turn ignition switch “ON”.
4. Touch “START”.



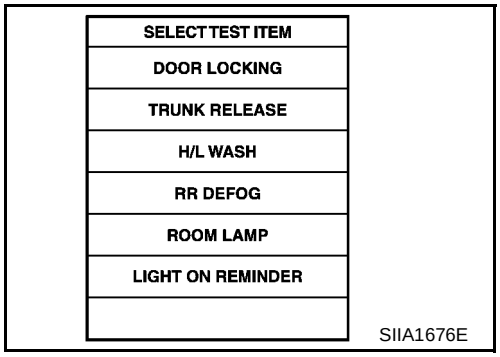
PIIA0182E

5. Touch “SMART ENTRANCE”.



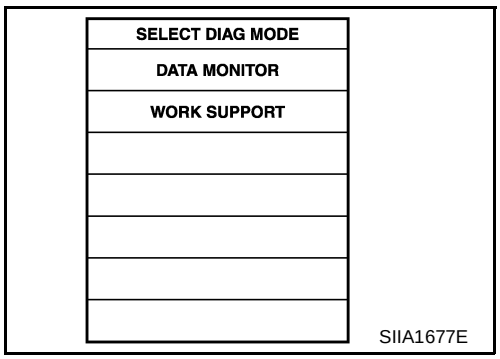
SIIA1678E

6. Touch “DOOR LOCKING” or “TRUNK RELEASE”.



SIIA1676E

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



SIIA1677E

CONSULT- II Application Items

EIS002JJ

DOOR LOCKING

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
KEY IN DETECT	Indicates [ON/OFF] condition of key switch.
DOOR SW DR RR	Indicates [ON/OFF] condition of rear door switch (driver side).
DOOR SW AS RR	Indicates [ON/OFF] condition of rear door switch (passenger side).
AS DOOR SW	Indicates [ON/OFF] condition of front door switch (passenger side).
DR DOOR SW	Indicates [ON\OFF] condition of front door switch (driver side).
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.
RKE LOCK	Indicates [ON/OFF] condition of lock signal from remote controller.
RKE UNLOCK	Indicates [ON/OFF] condition of unlock signal from remote controller.
RKE SEL UNLOCK	Indicates [ON/OFF] condition of select unlock signal from remote controller.

WORK SUPPORT

Monitored Item	Description
AUTO RE-LOCK	Auto re-lock function can be changed in this mode. The re-lock mode will be changed when “CHANGE MODE” on CONSULT-II screen is touched.
SELECTIVE UNLOCK	Selective unlock function can be changed in this mode. The unlock mode will be changed when “CHANGE SET” on CONSULT-II screen is touched.

TRUNK RELEASE

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
TRUNK OPEN SW	Indicates [ON/OFF] condition of trunk room lamp switch (sedan) or back door switch (wagon).
INT TRUNK REL	Indicates [ON/OFF] condition of internal trunk release switch (sedan) or internal back door release switch (wagon).
EXT TRUNK REL	Indicates [ON/OFF] condition of external trunk release switch (sedan) or external back door release switch (wagon).
RKE TRUNK REL	Indicates [ON/OFF] condition of trunk (sedan) or back door (back door) open signal from trunk or back door release switch.

WORK SUPPORT

Monitored Item	Description
TRUNK OPEN DELAY	This mode can be changed trunk release switch (sedan) or back door (wagon) release switch operation time.

Trouble Diagnoses

EIS002OC

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-33, "CONSULT-II INSPECTION PROCEDURE" .

SYMPTOM CHART

Symptom	Malfunctioning system	Reference page
Power door lock does not operate using any switch	Power supply and ground circuit check	BL-26
	Door lock actuator check	BL-28
	If above systems are OK, replace smart entrance control unit.	—

Symptom	Malfunctioning system	Reference page
Power door lock does not operate with lock/unlock switch.	Door lock/unlock switch check	BL-27
	If above system is OK, replace smart entrance control unit.	—
Specific door lock actuator does not operate.	Door lock actuator check	BL-28
*Key reminder system does not operate.	Door switch check	BL-32
	Key switch check	BL-42
	If above system is OK, replace smart entrance control unit.	—
Trunk or back door release actuator does not operate.	Trunk room lamp switch or back door switch check	BL-38
	Trunk release actuator check (sedan)	BL-40
	Back door release actuator check (wagon)	BL-41
	If above system is OK, replace smart entrance control unit.	—

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

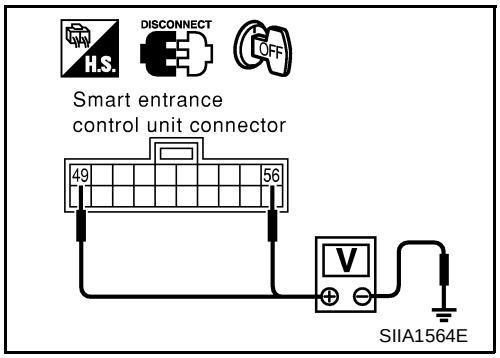
Power Supply and Ground Circuit Check

EIS002JL

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect smart entrance control unit connector.
3. Check voltage between smart entrance control unit harness connector M43 terminal 49(W/L), 56(R/B) and ground.

Terminal		Voltage
+	–	
49(W/L)	Ground	Battery voltage
56(R/B)		



OK or NG?

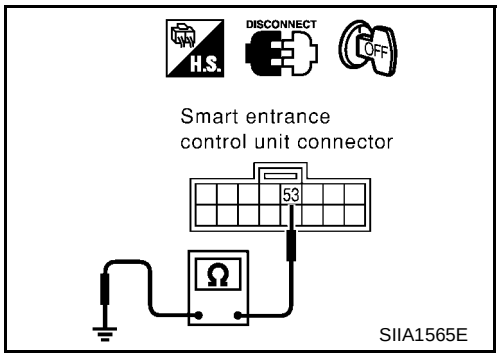
OK >> GO TO 2

NG >> Check smart entrance control unit power supply circuit for open or short.

2. CHECK GROUND CIRCUIT

Check continuity between smart entrance control unit harness connector M43 terminal 53(B) and ground.

Terminal		Continuity
+	–	
53(B)	Ground	Yes



OK or NG?

OK >> Power supply and ground circuit is OK.

NG >> Check smart entrance control unit ground circuit for open or short.

Door Lock/Unlock Switch Check

EIS002JM

1. CHECK DOOR LOCK/UNLOCK SWITCH SIGNAL

With CONSULT- II

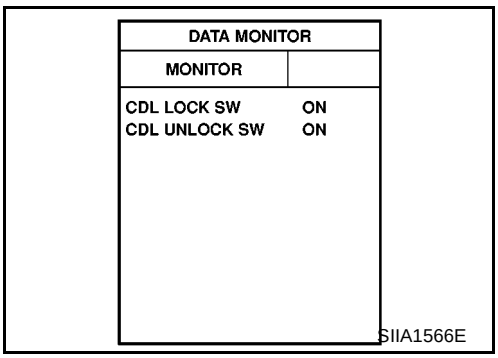
- Check door lock/unlock switch input signal (“CDL LOCK SW” “CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT- II.

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

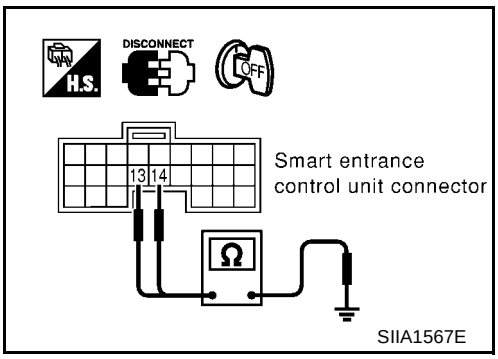
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M91 terminal 13(GY), 14(BR/Y) and ground.

Terminals	Door lock/unlock switch operation	Continuity
13 – Ground	Lock position	Yes
	Neutral or Unlock position	No
14 – Ground	Unlock position	Yes
	Neutral or Lock position	No



OK or NG?

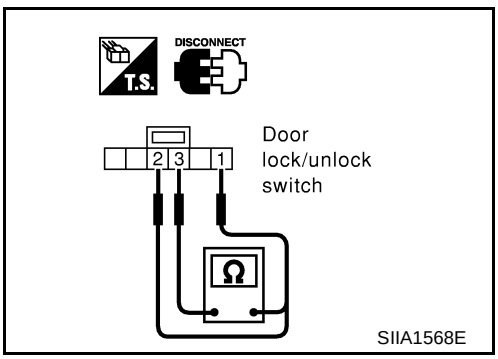
OK >> Door lock/unlock switch is OK.

NG >> GO TO 2

2. CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between door lock/unlock switch terminals 1, 2 and 3.

Terminals	Door lock/unlock switch operation	Continuity
1 – 3	Lock position	Yes
	Neutral or Unlock position	No
2 – 3	Unlock position	Yes
	Neutral or Lock position	No



OK or NG?

OK >> Check the following.

- Ground circuit for door lock/unlock switch
- Harness for open or short between door lock/unlock switch and smart entrance control unit connector

NG >> Replace power window main switch (door lock/unlock switch).

Door Lock Actuator Check

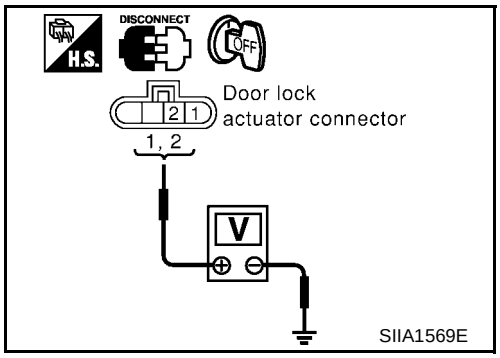
EIS002O8

DRIVER SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect door lock actuator (driver side) harness connector.
2. Check voltage between door lock actuator harness connector D8 terminal 1(L/R), 2(Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	1(L/R)	Ground	Approx. 12
Unlock position	2(Y)	Ground	



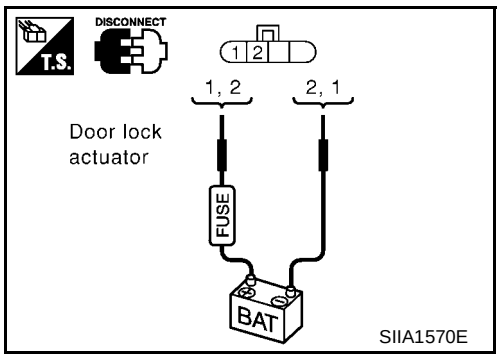
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect door lock actuator (driver side) harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

Terminal		Door lock actuator operation
+	–	
1	2	Unlock → Lock
2	1	Lock → Unlock



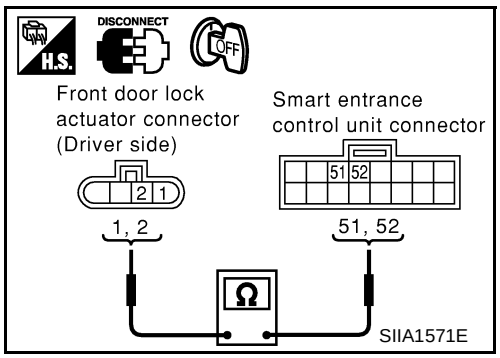
OK or NG?

OK >> GO TO 3
NG >> Replace door lock actuator (driver side).

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between door lock actuator (driver side) harness connector D8 terminal 1(L/R), 2(Y) and smart entrance control unit harness connector M43 terminal 51(L/R), 52(Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
1 (L/R)	51 (L/R)	Yes
2 (Y)	52 (Y)	Yes



OK or NG?

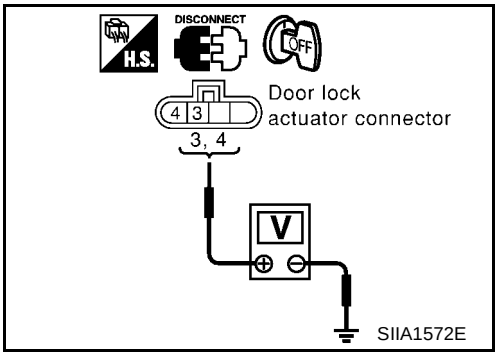
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and door lock actuator (driver side).

PASSENGER SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect door lock actuator (passenger side) harness connector.
2. Check voltage between door lock actuator harness connector D37 terminal 3(Y), 4(G/Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	4(G/Y)	Ground	Approx. 12
Unlock position	3(Y)	Ground	



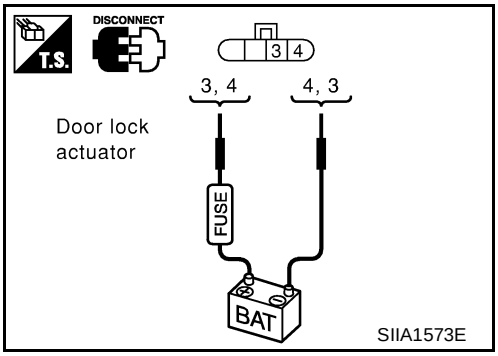
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect door lock actuator (passenger side) harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

Terminal		Door lock actuator operation
+	–	
4	3	Unlock → Lock
3	4	Lock → Unlock



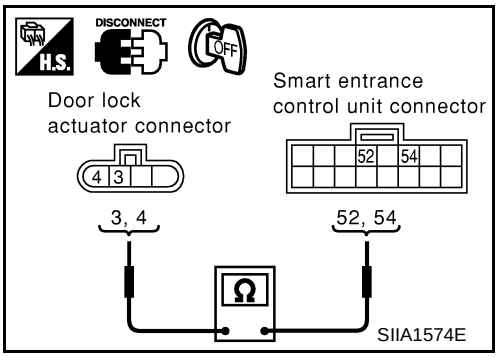
OK or NG?

OK >> GO TO 4
NG >> Replace door lock actuator (passenger side).

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between door lock actuator (passenger side) harness connector D37 terminal 3(Y), 4(G/Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
3 (Y)	52(Y)	Yes
4 (G/Y)	54(G/Y)	Yes



OK or NG?

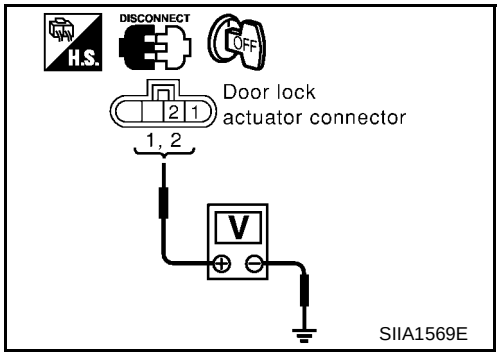
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and door lock actuator (passenger side).

REAR LH SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect rear door lock actuator LH harness connector.
2. Check voltage between door lock actuator harness connector D55 terminal 1(G/Y), 2(Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	1(G/Y)	Ground	Approx. 12
Unlock position	2(Y)	Ground	



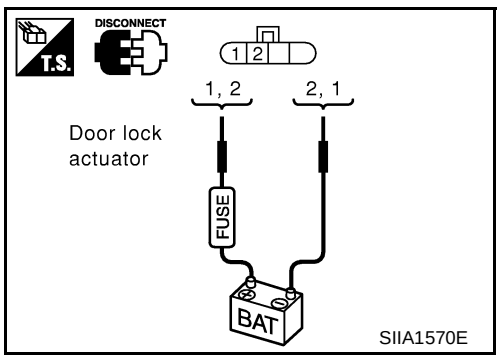
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect rear door lock actuator LH harness connector.
2. Apply 12V direct current to rear door lock actuator LH and check operation.

Terminal		Door lock actuator operation
+	–	
1	2	Unlock → Lock
2	1	Lock → Unlock



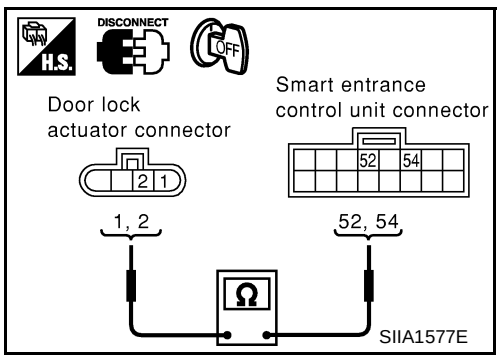
OK or NG?

OK >> GO TO 3
NG >> Replace rear door lock actuator LH.

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between rear door lock actuator LH harness connector D55 terminal 1(G/Y), 2(Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
1 (G/Y)	54 (G/Y)	Yes
2 (Y)	52 (Y)	Yes



OK or NG?

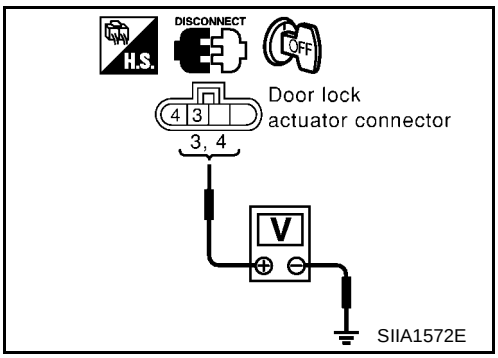
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and rear door lock actuator LH.

REAR RH SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect rear door lock actuator RH harness connector.
2. Check voltage between rear door lock actuator RH harness connector D65 terminal 3(Y), 4(G/Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	4(G/Y)	Ground	Approx. 12
Unlock position	3(Y)	Ground	



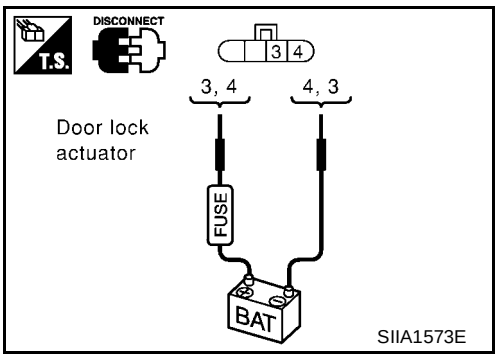
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect rear door lock actuator RH harness connector.
2. Apply 12V direct current to rear door lock actuator RH and check operation.

Terminal		Door lock actuator operation
+	–	
4	3	Unlock → Lock
3	4	Lock → Unlock



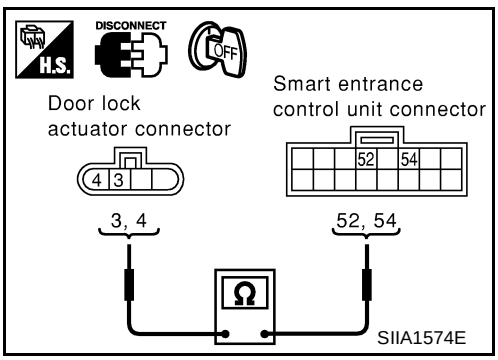
OK or NG?

OK >> GO TO 4
NG >> Replace rear door lock actuator RH.

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between rear door lock actuator RH harness connector D65 terminal 3(Y), 4(G/Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
3 (Y)	52(Y)	Yes
4 (G/Y)	54(G/Y)	Yes



OK or NG?

OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and rear door lock actuator RH.

Door Switch Check

EIS002O9

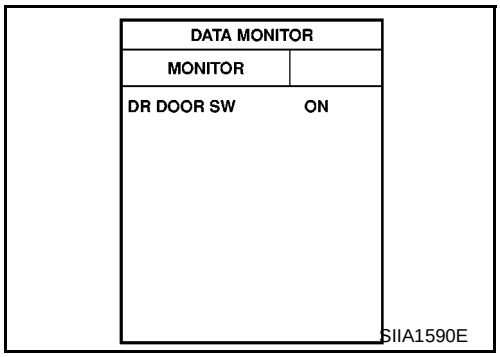
DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

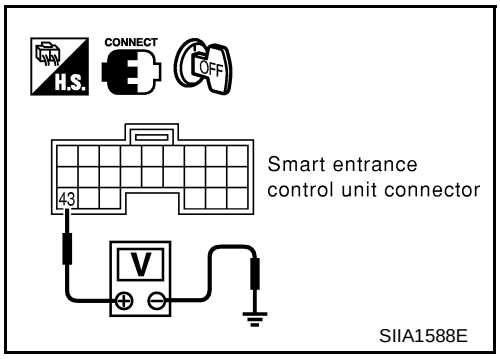
	Monitor item	Condition
DR DOOR SW	Front door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 43(R/W) and ground.

Terminal (+)	Terminal (–)	Front door LH	Voltage
43(R/W)	Ground	Closed	Approx. 5
		Open	0



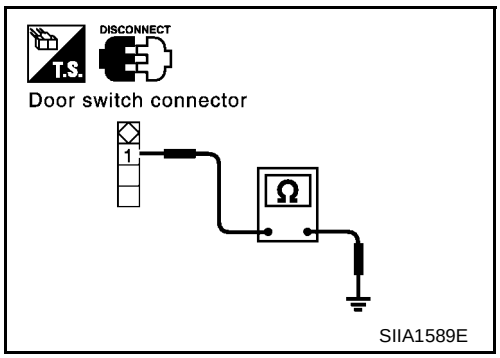
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch LH harness connector B16 terminal 1(R/W) and ground.

Terminal (+)	Terminal (–)	Front door LH switch	Continuity
1(R/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.

- Front door switch LH ground condition
- Harness for open or short between smart entrance control unit and front door switch LH

NG >> Replace front door switch LH.

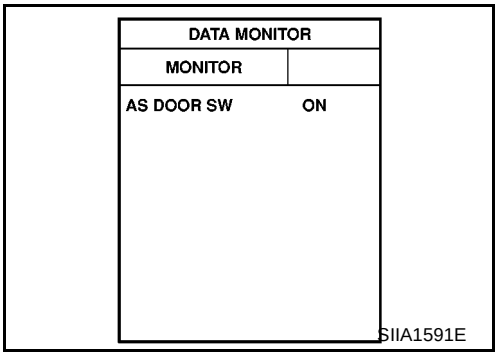
PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

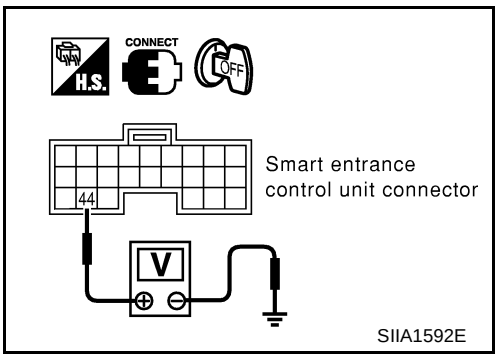
	Monitor item	Condition
AS DOOR SW	Front door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 44(L/OR) and ground.

Terminal (+)	Terminal (–)	Front door RH	Voltage
44(L/OR)	Ground	Closed	Approx. 5
		Open	0



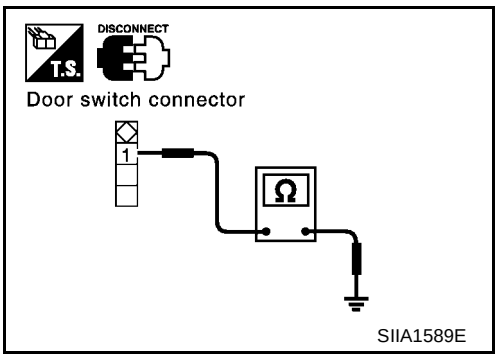
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch RH harness connector B118 terminal 1(L/OR) and ground.

Terminal (+)	Terminal (–)	Front door RH switch	Continuity
1(L/OR)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.

- Front door switch RH ground condition
- Harness for open or short between smart entrance control unit and front door switch RH

NG >> Replace front door switch RH.

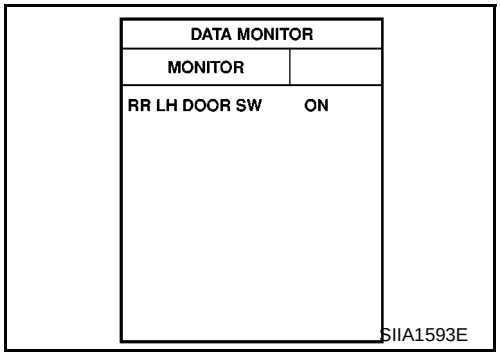
REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

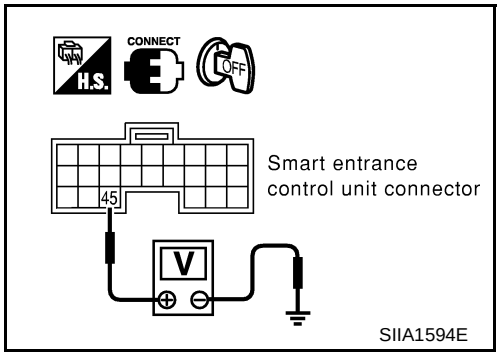
	Monitor item	Condition
RR LH DOOR SW	Rear door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 45(R/Y) and ground.

Terminal (+)	Terminal (–)	Rear door LH	Voltage
45(R/Y)	Ground	Closed	Approx. 5
		Open	0



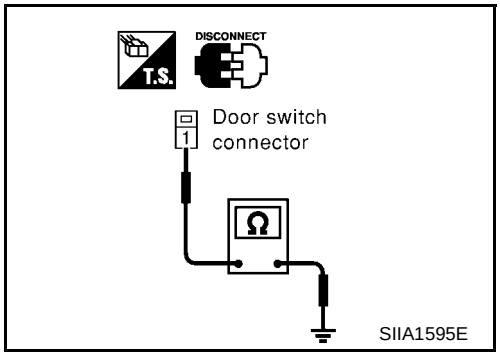
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch LH harness connector B23 terminal 1(R/Y) and ground.

Terminal (+)	Terminal (–)	Rear door LH switch	Continuity
1(R/Y)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch LH ground condition
- Harness for open or short between smart entrance control unit and rear door switch LH

NG >> Replace rear door switch LH.

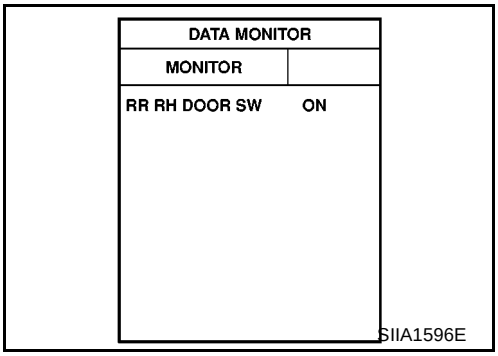
REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

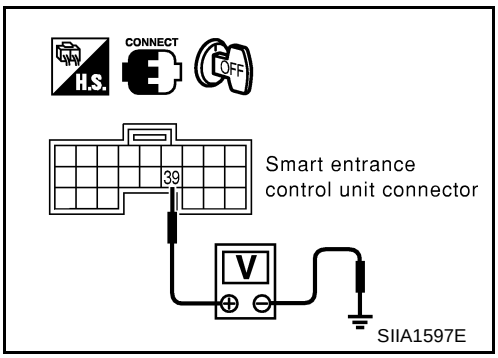
	Monitor item	Condition
RR RH DOOR SW	Rear door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 39(BR/W) and ground.

Terminal (+)	Terminal (–)	Rear door RH	Voltage
39(BR/W)	Ground	Closed	Approx. 5
		Open	0



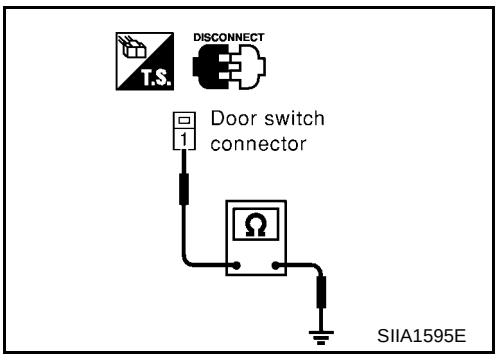
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch RH harness connector B125 terminal 1(BR/W) and ground.

Terminal (+)	Terminal (–)	Rear door RH switch	Continuity
1(BR/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch RH ground condition
- Harness for open or short between smart entrance control unit and rear door switch RH

NG >> Replace rear door switch RH.

Trunk Room Lamp Switch or Back Door Switch Check

EIS002OB

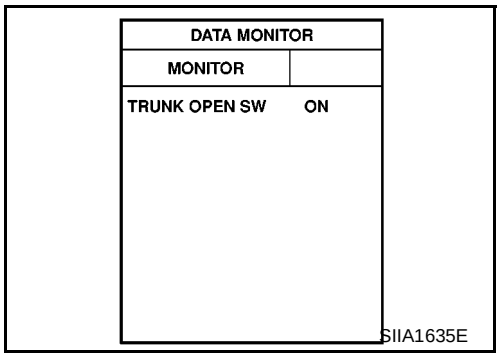
TRUNK ROOM LAMP SWITCH

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

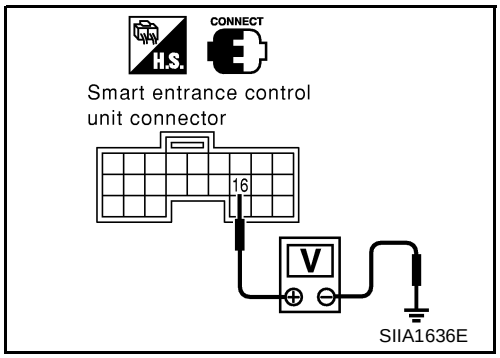
	Monitor item	Condition
TRUNK OPEN SW	Trunk room lamp switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal (+)	Terminal (–)	Trunk lid	Voltage
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

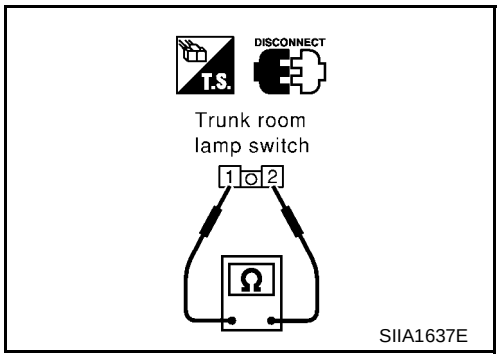
OK >> Trunk room lamp switch is OK.

NG >> GO TO 2

2. CHECK TRUNK ROOM LAMP SWITCH

Check continuity between trunk room lamp switch terminals 1 and 2.

Terminal	Trunk lid condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.

- Trunk room lamp switch ground circuit
- Harness for open or short between smart entrance control unit and trunk room lamp switch

NG >> Replace trunk room lamp switch.

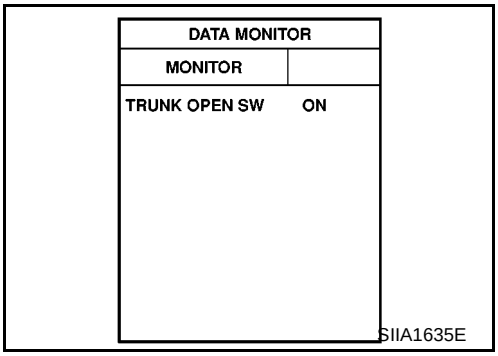
BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

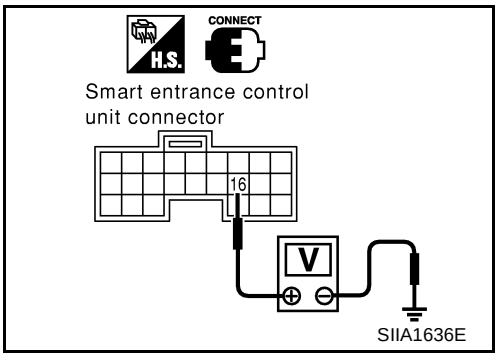
	Monitor item	Condition
TRUNK OPEN SW	Back door switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal (+)	Terminal (–)	Back door	Voltage
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

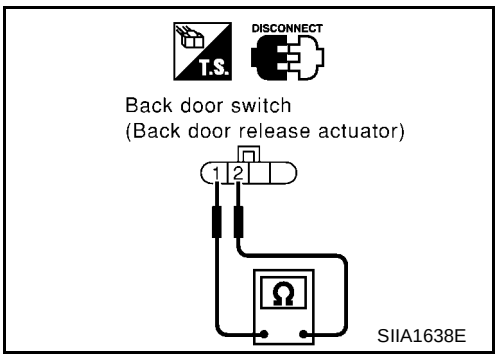
OK >> Back door switch is OK.

NG >> GO TO 2

2. CHECK BACK DOOR SWITCH

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

Terminal	Back door condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.

- Back door switch (back door release actuator) ground circuit
- Harness for open or short between smart entrance control unit and back door switch (back door release actuator)

NG >> Replace back door switch (back door release actuator).

Trunk or Back Door Release Switch Check

EIS002OA

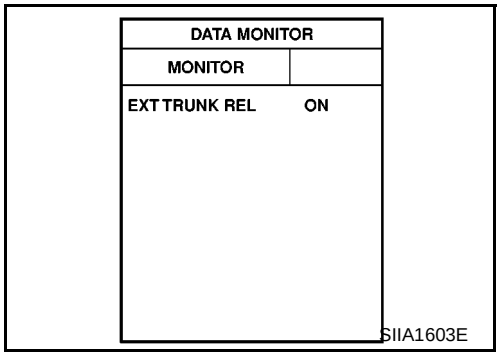
EXTERNAL SWITCH

1. CHECK EXTERNAL TRUNK OR BACK DOOR RELEASE SWITCH INPUT SIGNAL

With CONSULT-II

- Check external trunk or back door release switch input signal “EXT TRUNK REL” in “DATA MONITOR” mode with CONSULT- II.

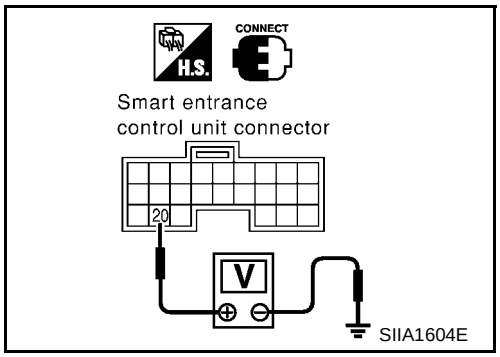
Release switch is pushed (open):
EXT TRUNK REL ON
Release switch is released (close):
EXT TRUNK REL OFF



Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 20(B/R) and ground.

Terminals		Release switch	Voltage (Approximate values)
+	–		
20(B/R)	Ground	Pushed	0V
		Released	5V



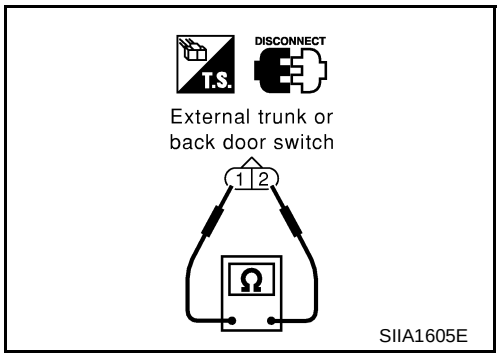
OK or NG?

OK >> Trunk or back door release switch is OK.
NG >> GO TO 2

2. CHECK EXTERNAL TRUNK OR BACK DOOR RELEASE SWITCH

1. Disconnect external trunk or back door release switch connector.
2. Check continuity between external trunk or back door release switch terminals 1 and 2.

Terminals	Release switch	Continuity
1 – 2	Pushed	Yes
	Released	No



OK or NG?

OK >> Check the following.
- Harness for open or short between external trunk or back door release switch and smart entrance control unit
- External trunk or back door release switch ground circuit

NG >> Replace external trunk or back door release switch.

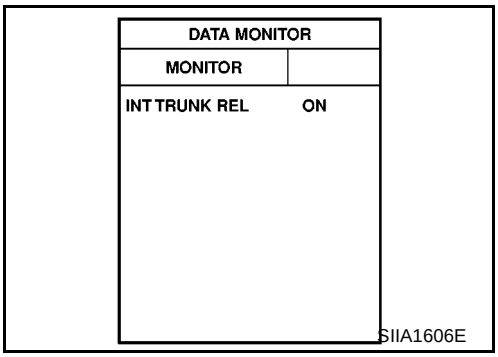
POWER WINDOW MAIN SWITCH (INTERNAL TRUNK RELEASE SWITCH)

1. CHECK TRUNK OR BACK DOOR RELEASE SWITCH INPUT SIGNAL

With CONSULT-II

- Check trunk or back door release switch input signal “INT TRUNK REL” in “DATA MONITOR” mode with CONSULT- II.

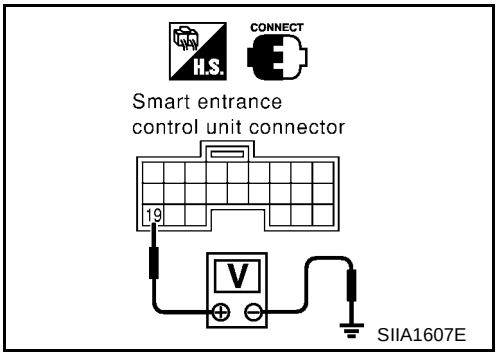
Release switch is pushed (open):
INT TRUNK REL ON
Release switch is released (close):
INT TRUNK REL OFF



Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 19(BR/W) and ground.

Terminals		Release switch	Voltage (Approximate values)
+	–		
19(BR/W)	Ground	Pushed	0V
		Released	5V



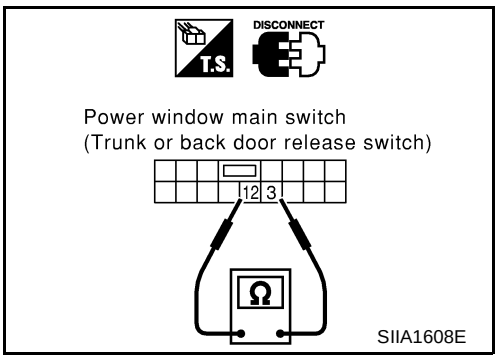
OK or NG?

OK >> Trunk or back door release switch is OK.
NG >> GO TO 2

2. CHECK TRUNK OR BACK DOOR RELEASE SWITCH

1. Disconnect power window main switch (trunk or back door release switch) connector.
2. Check continuity between power window main switch (trunk or back door release switch) terminals 3 and 12.

Terminals	Release switch	Continuity
3 –1 2	Pushed	Yes
	Released	No



OK or NG?

OK >> Check the following.
- Harness for open or short between power window main switch (trunk or back door release switch) and smart entrance control unit
- Power window main switch (trunk or back door release switch) ground circuit

NG >> Replace power window main switch (trunk or back door release switch).

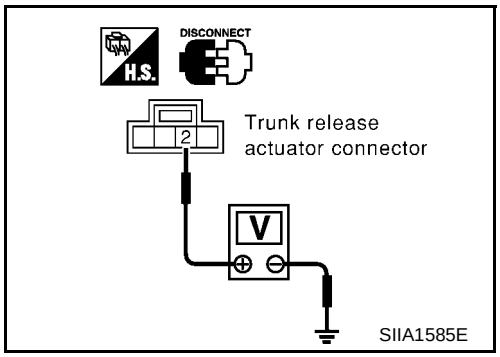
Trunk Release Actuator Check (Sedan)

EIS002NI

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect trunk release actuator harness connector.
3. Check voltage between trunk release harness connector D90 terminal 2(P) and ground.

Terminal		Voltage
+	–	
2(P)	Ground	Battery voltage



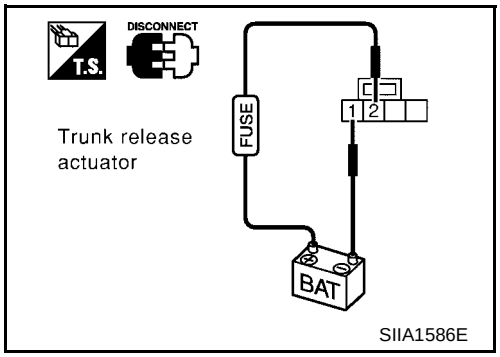
OK or NG?

OK >> GO TO 2
NG >> Check trunk release actuator power supply circuit for open or short.

2. CHECK TRUNK RELEASE ACTUATOR

1. Disconnect back door release actuator harness connector.
2. Apply 12V direct current to trunk release actuator and check operation.

Terminal		Trunk release actuator operation
+	–	
2	1	Lock → Release



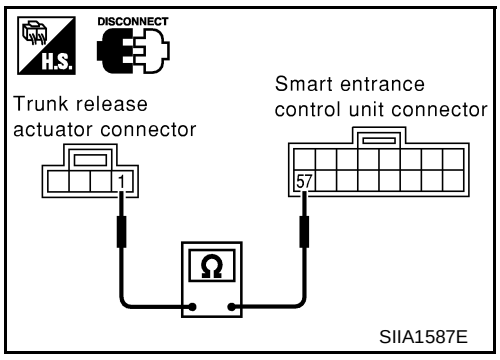
OK or NG?

OK >> GO TO 3
NG >> Replace trunk release actuator.

3. CHECK TRUNK RELEASE ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between trunk release actuator harness connector D90 terminal 1(G/B) and smart entrance control unit harness connector M43 terminal 57(G/B).

Terminal		Continuity
Trunk release actuator	Smart entrance control unit	
1(G/B)	57(G/B)	Yes



OK or NG?

OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and trunk release actuator.

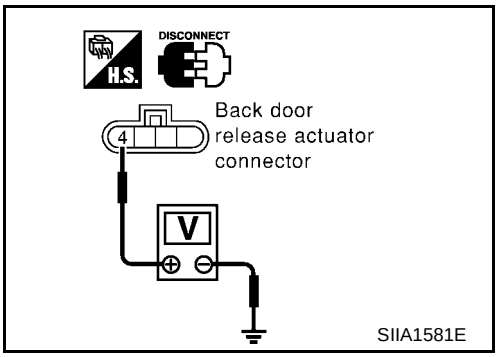
Back Door Release Actuator Check (Wagon)

EIS002JS

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect back door release actuator harness connector.
3. Check voltage between back door release actuator harness connector B30 terminal 4(P) and ground.

Terminal		Voltage
+	–	
4(P)	Ground	Battery voltage



OK or NG?

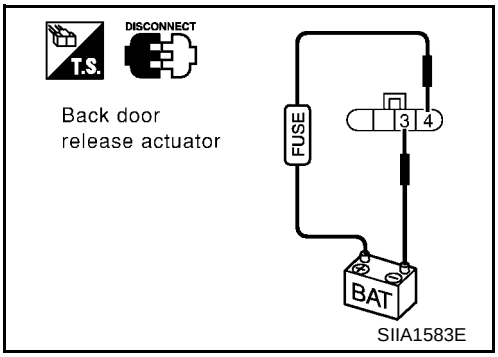
OK >> GO TO 2

NG >> Check back door release actuator power supply circuit for open or short.

2. CHECK BACK DOOR RELEASE ACTUATOR

1. Disconnect back door release actuator harness connector.
2. Apply 12V direct current to back door release actuator and check operation.

Terminal		Back door release actuator operation
+	–	
4	3	Lock → Release



OK or NG?

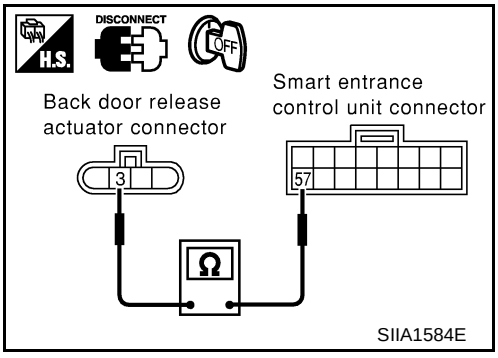
OK >> GO TO 3

NG >> Replace back door lock actuator.

3. CHECK BACK DOOR RELEASE ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between back door release actuator harness connector B30 terminal 3(G/B) and smart entrance control unit harness connector M43 terminal 57(G/B).

Terminal		Continuity
Back door release actuator	Smart entrance control unit	
3(G/B)	57(G/B)	Yes



OK or NG?

OK >> Replace smart entrance control unit.

NG >> Check harness for open or short between smart entrance control unit and back door release actuator.

Key Switch Check

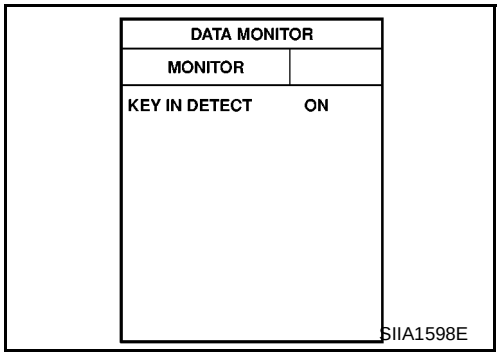
EIS002NN

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

When key is inserted in ignition key cylinder:
KEY IN DETECT ⇒ ON
When key is removed from ignition key cylinder:
KEY IN DETECT ⇒ OFF



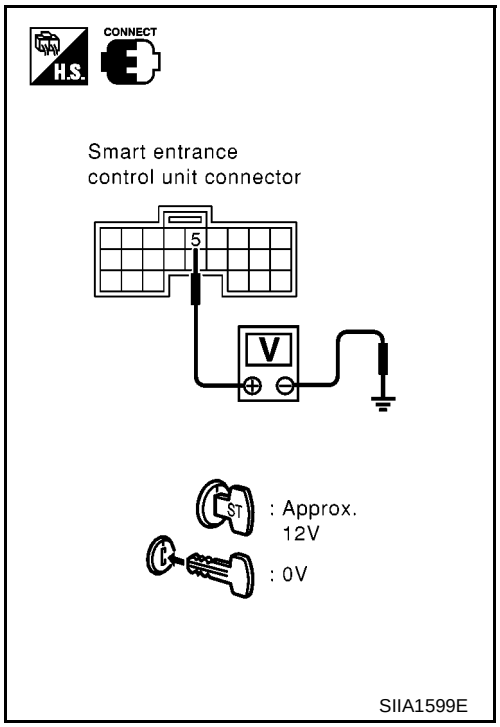
Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 5(B/R) and ground.

Terminals		Key switch	Voltage
+	–		
5(B/R)	Ground	Key is inserted	Approx. 12
		Key is removed	0

OK or NG?

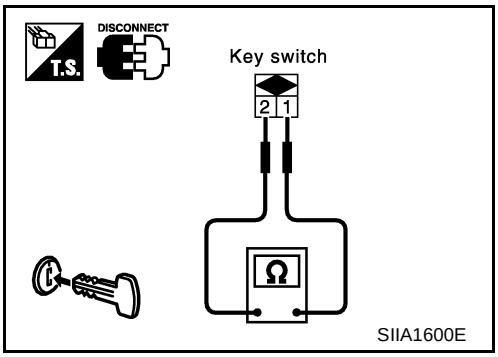
OK >> Key switch is OK.
NG >> GO TO 2



2. CHECK KEY SWITCH (INSERT)

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

Terminals	Key switch	Continuity
1 – 2	Key is inserted	Yes
	Key is removed	No



OK or NG?

OK >> Check the following.
- 10A fuse [No. 12, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between smart entrance control unit and key switch

NG >> Replace key switch.

POWER DOOR LOCK — SUPER LOCK —

PFP:24814

System Description

EIS002JW

OUTLINE

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

OPERATION

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

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

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

- 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 within 5 seconds, all other doors will be unlocked.

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.

Power door lock/unlock operation by lock/unlock switch

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

Door lock/unlock switch operation cannot control super lock

Child lock system

- The system has a child lock switch that mechanically latches in the ON and OFF condition. Child locks can only be operated when the ignition is ON and for 30 seconds after the ignition is OFF.

Child lock indicator (Located in combination meter) operation

Indicator ON	Ignition switch: ON	Child lock set	Indicator ON for 30 seconds
		Child lock not completely set	Indicator blinks & beep warning for 10 seconds
Indicator OFF	Child lock switch released	Child lock released	Indicator blinks for 10 seconds
		Child lock not completely released	Indicator blinks & beep warning for 10 seconds
	Ignition switch: OFF	—	Indicator OFF

Key reminder system

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

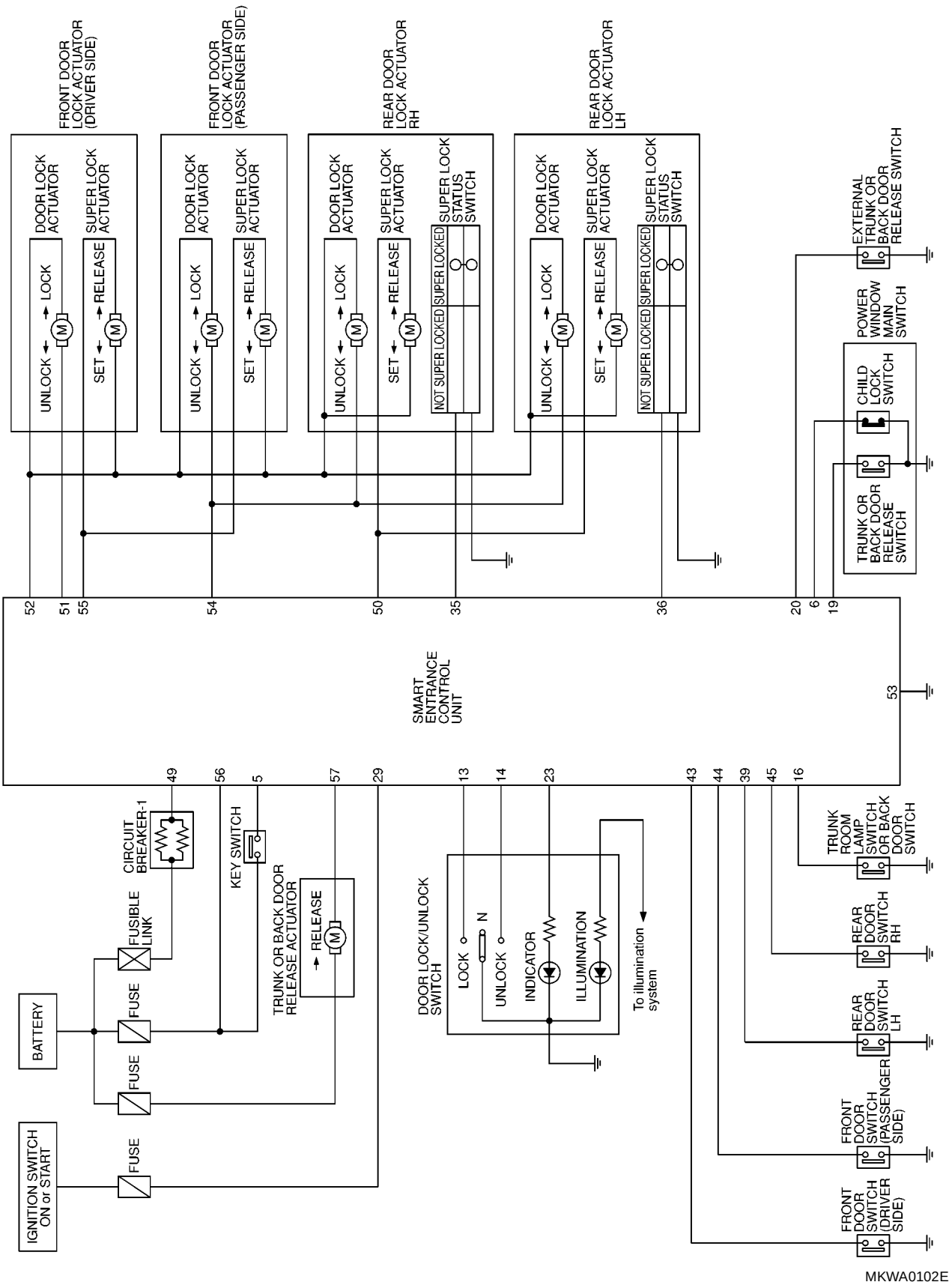
System initialization

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

– insert the key into the ignition key cylinder and turn it to ON.
– LOCK/UNLOCK operation using door key cylinder or remote controller.

Schematic

EIS002JX

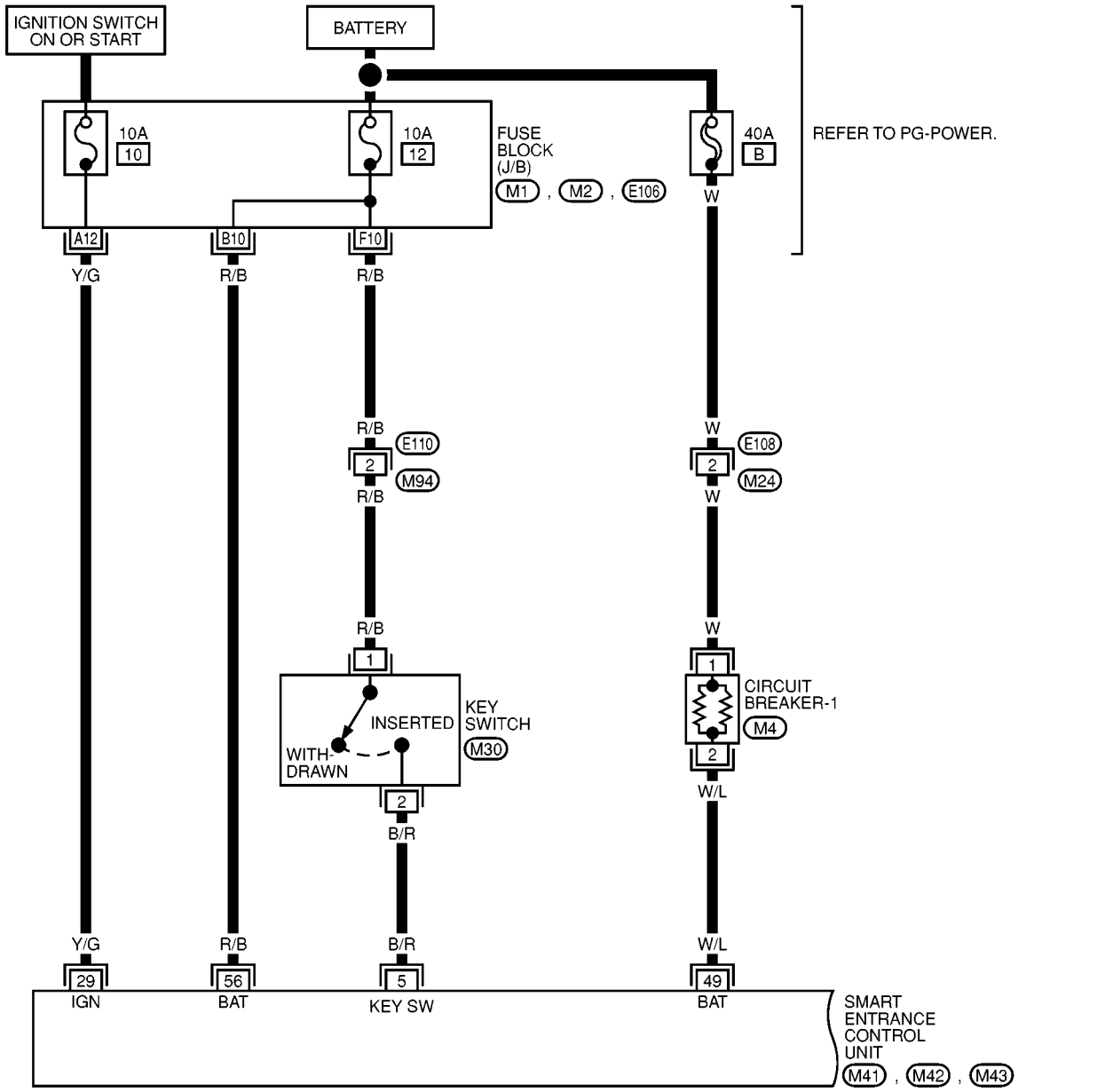


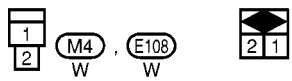
MKWA0102E

Wiring Diagram — S/LOCK —

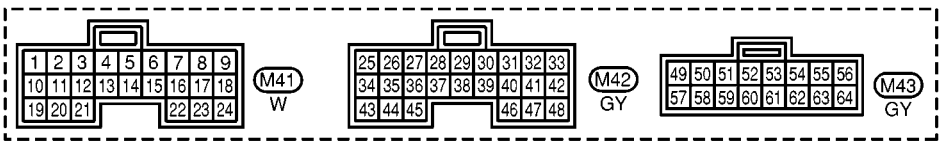
EIS002JY

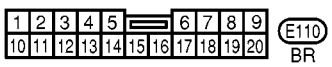
BL-S/LOCK-01





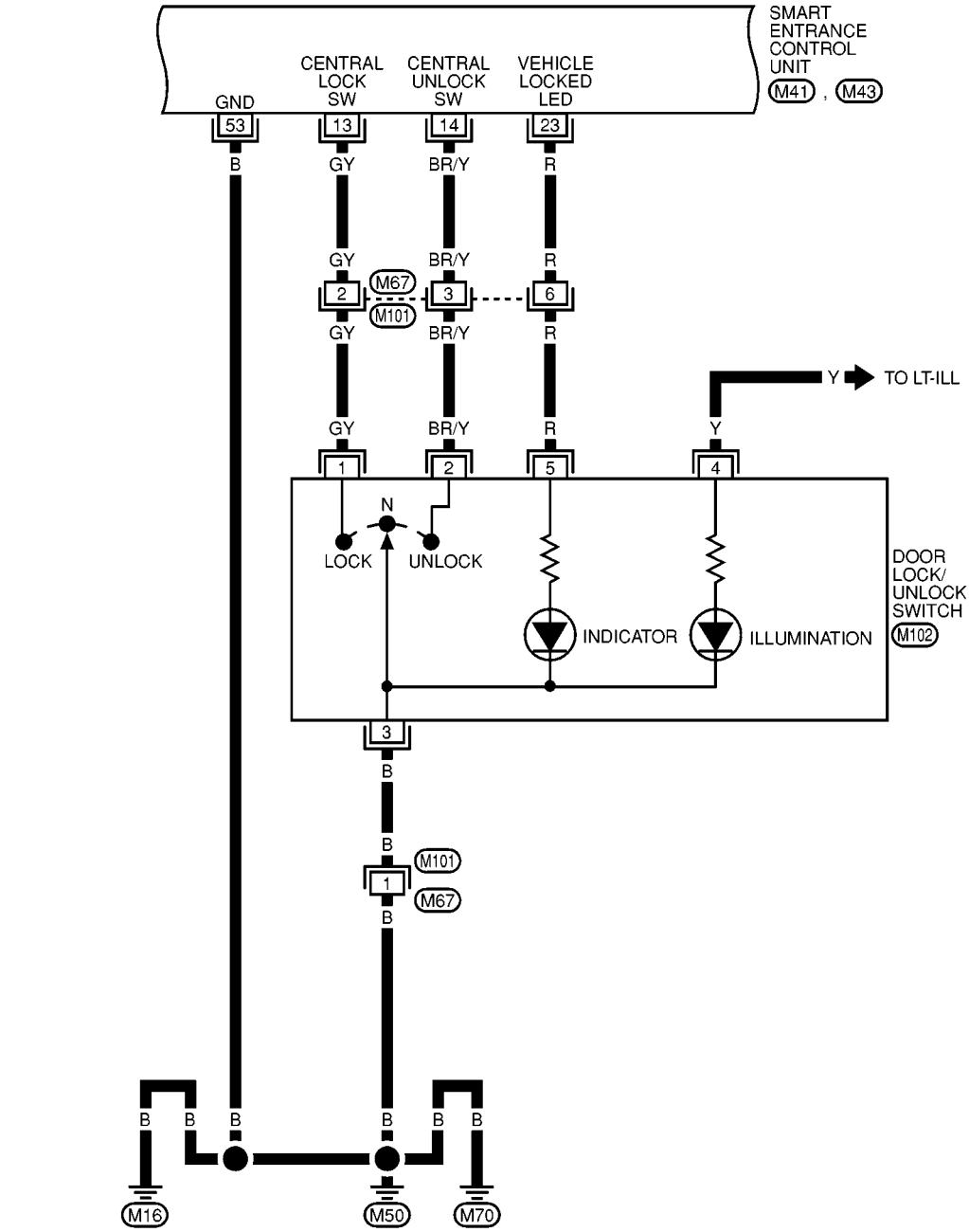
REFER TO THE FOLLOWING.
M1 , M2 , E106 -FUSE BLOCK-JUNCTION BOX (J/B)

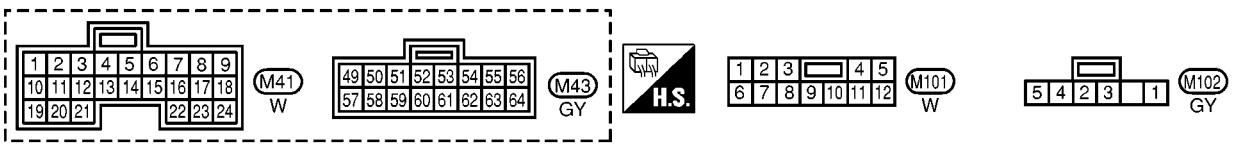




MKWA0103E

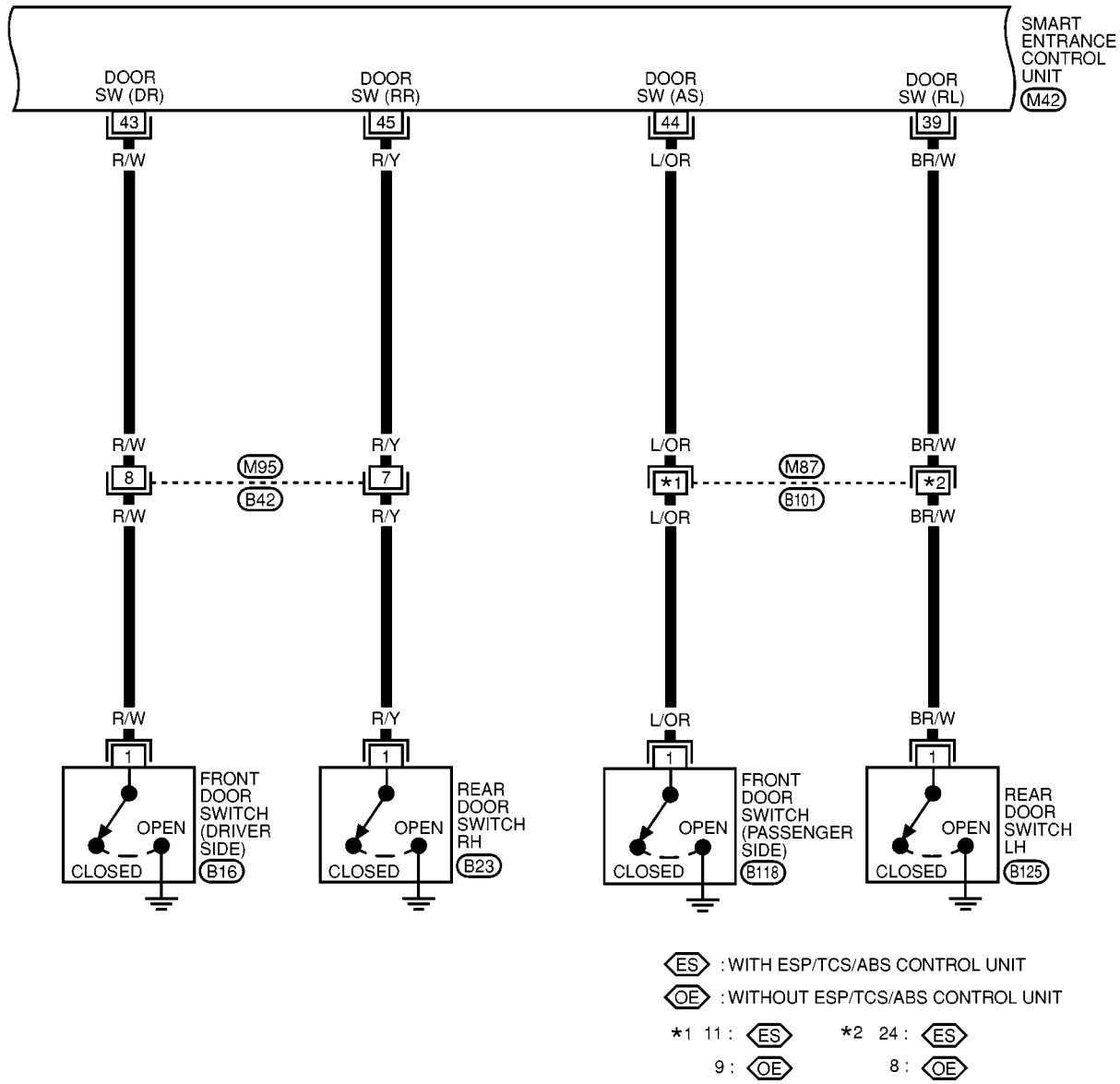
BL-S/LOCK-02

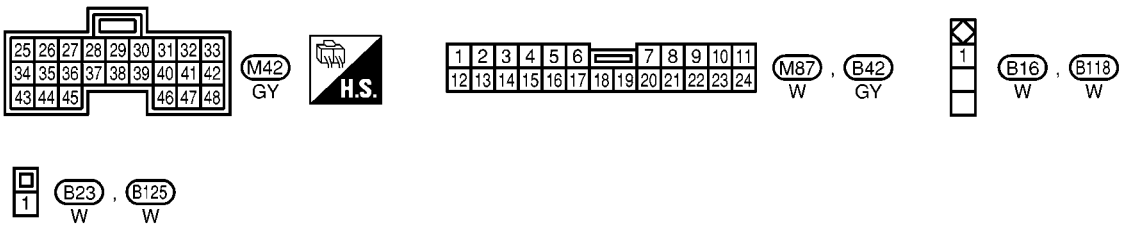




MKWA0104E

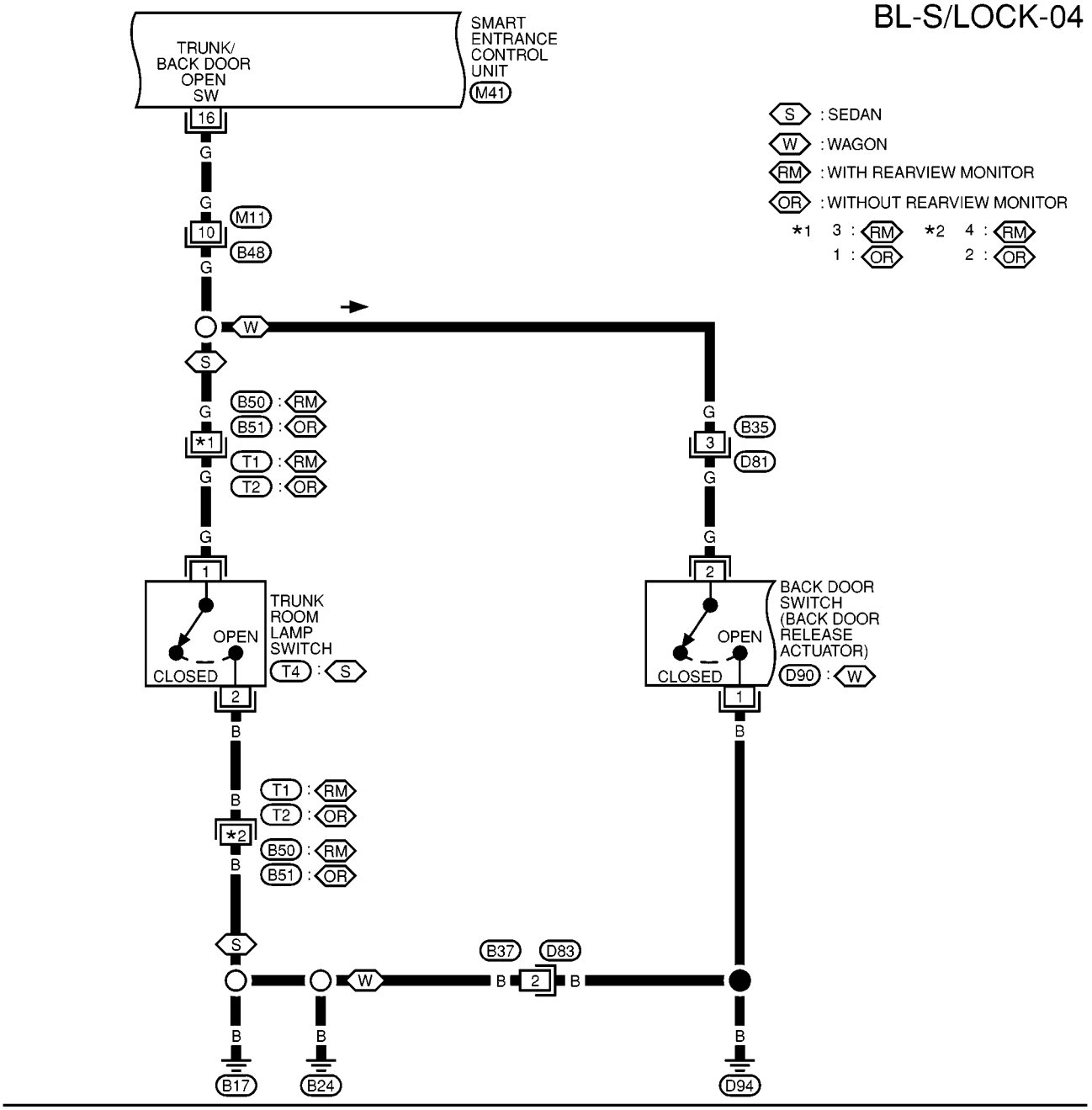
BL-S/LOCK-03

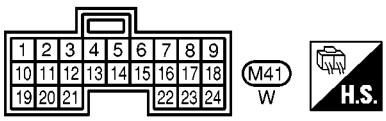


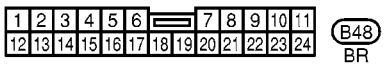


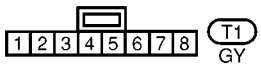
MKWA0105E

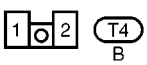
BL-S/LOCK-04

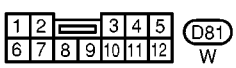


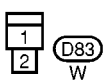


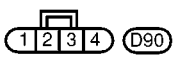




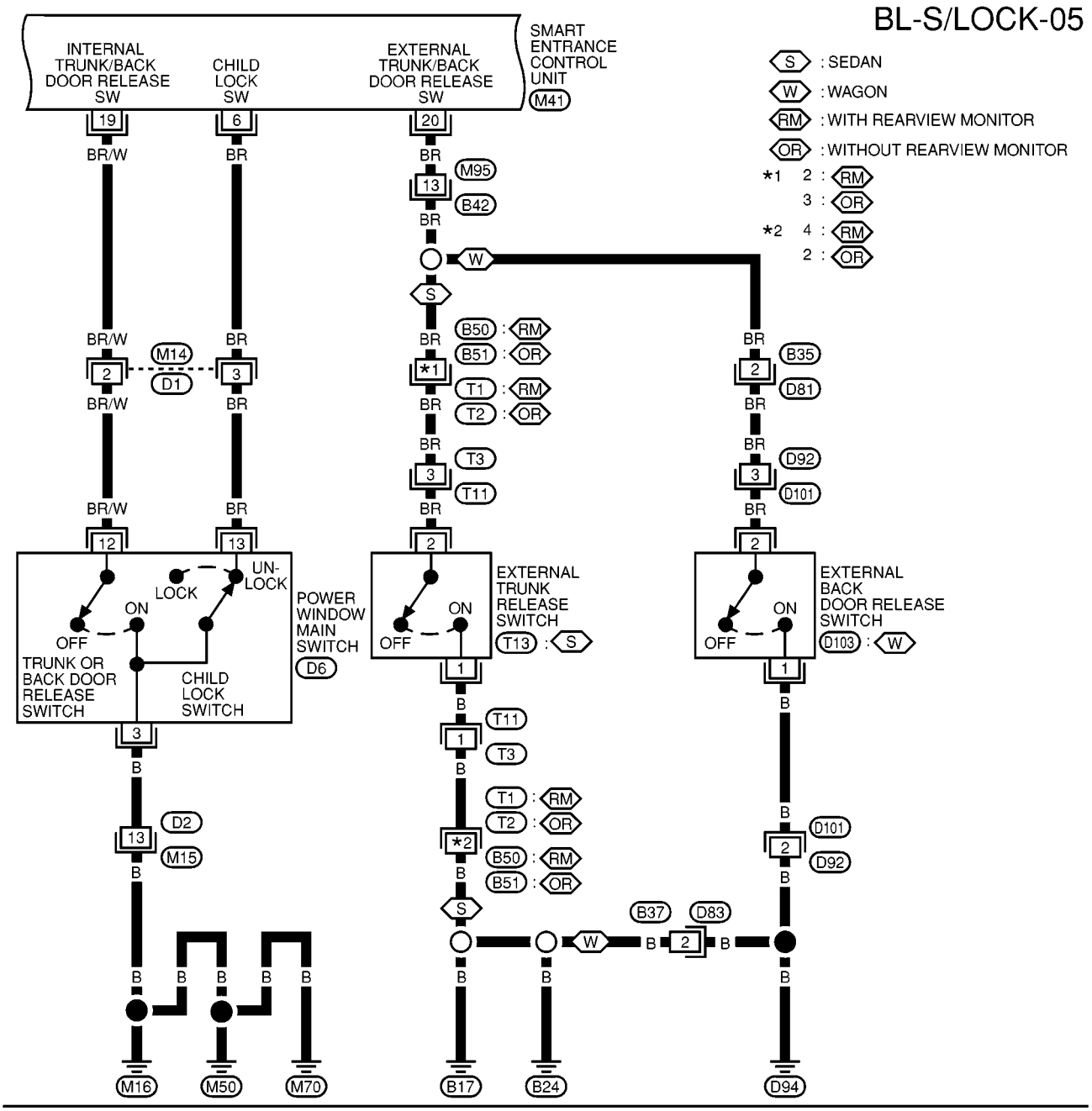


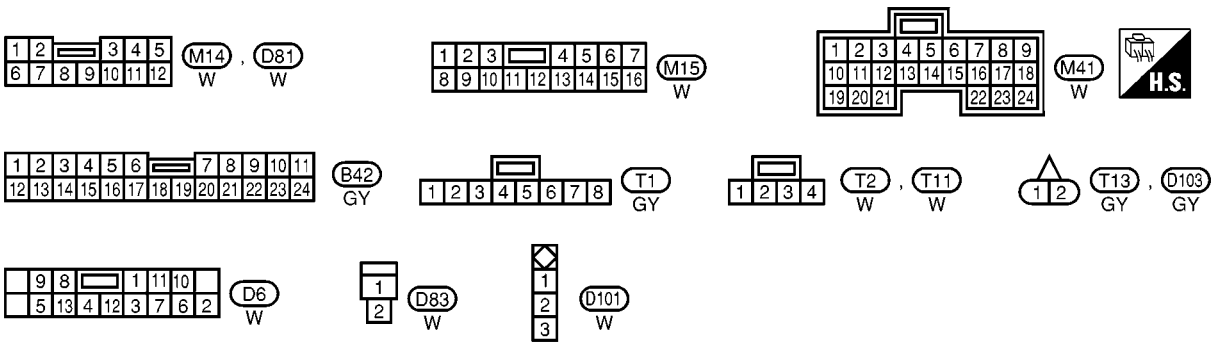






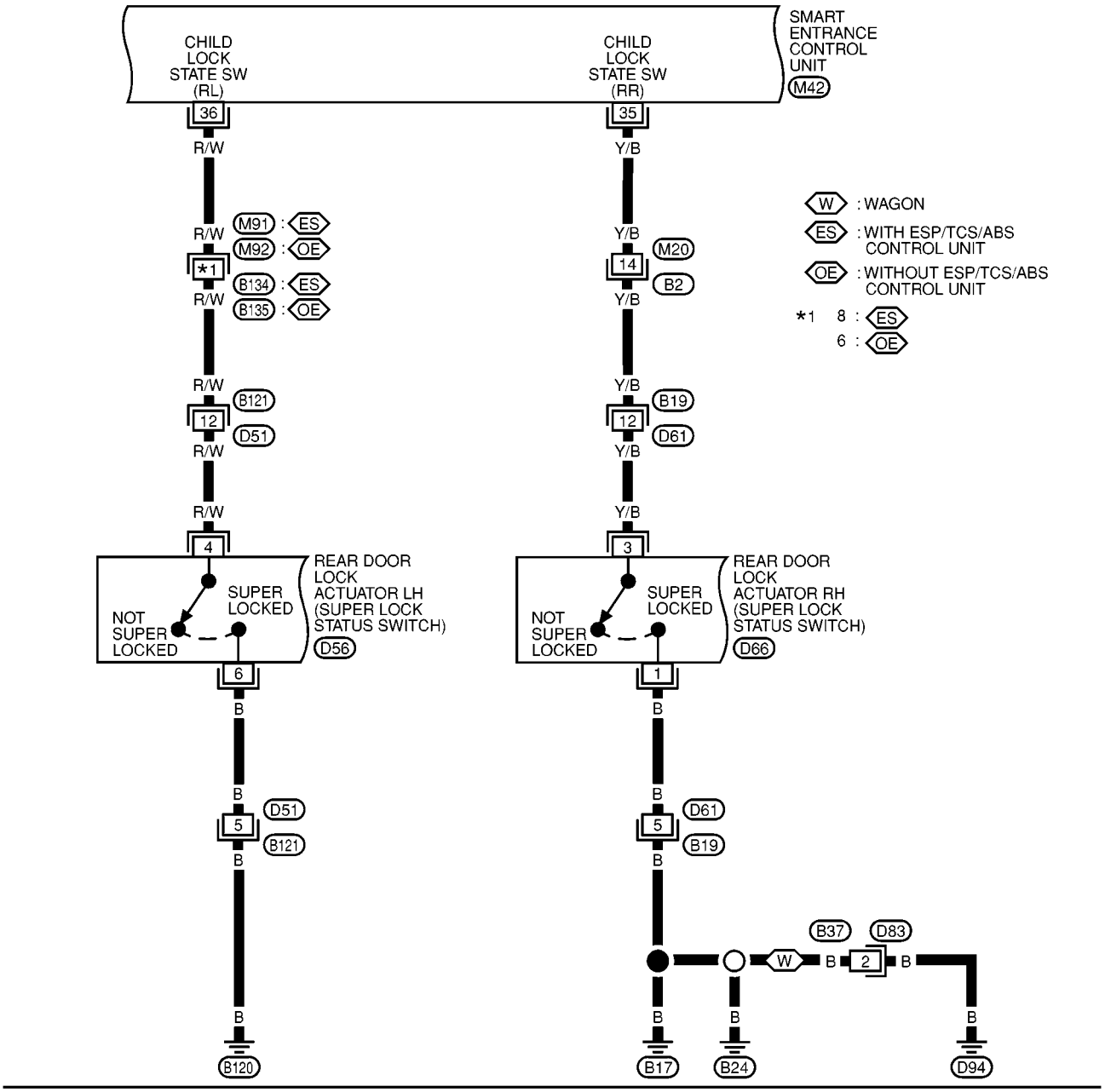
MKWA0106E

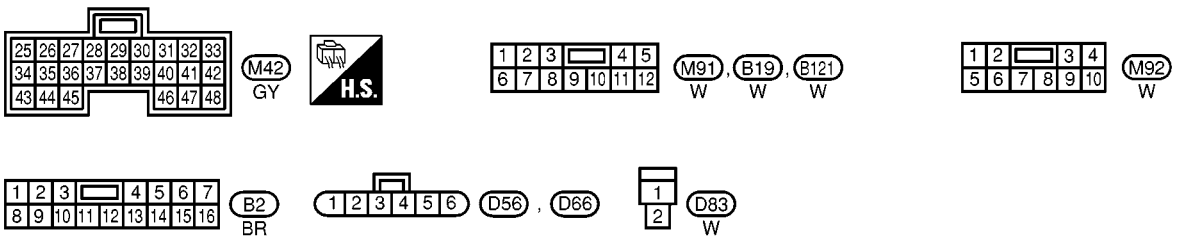

BL-S/LOCK-05
INTERNAL TRUNK/BACK DOOR RELEASE SW
CHILD LOCK SW
EXTERNAL TRUNK/BACK DOOR RELEASE SW
SMART ENTRANCE CONTROL UNIT
M41
S : SEDAN
W : WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
*1 2 : RM
3 : OR
*2 4 : RM
2 : OR
M95
B42
M14
D1
B50 : RM
B51 : OR
T1 : RM
T2 : OR
T3
T11
B35
D81
D92
D101
POWER WINDOW MAIN SWITCH
D6
LOCK
UN-LOCK
ON
OFF
TRUNK OR BACK DOOR RELEASE SWITCH
CHILD LOCK SWITCH
EXTERNAL TRUNK RELEASE SWITCH
T13 : S
EXTERNAL BACK DOOR RELEASE SWITCH
D103 : W
D2
M15
B37
D83
M16
M50
M70
B17
B24
D94


M14 , D81
W W
M15
W
M41
W
H.S.
B42
GY
T1
GY
T2 , T11
W W
T13 , D103
GY GY
D6
W
D83
W
D101
W

MKWA0107E

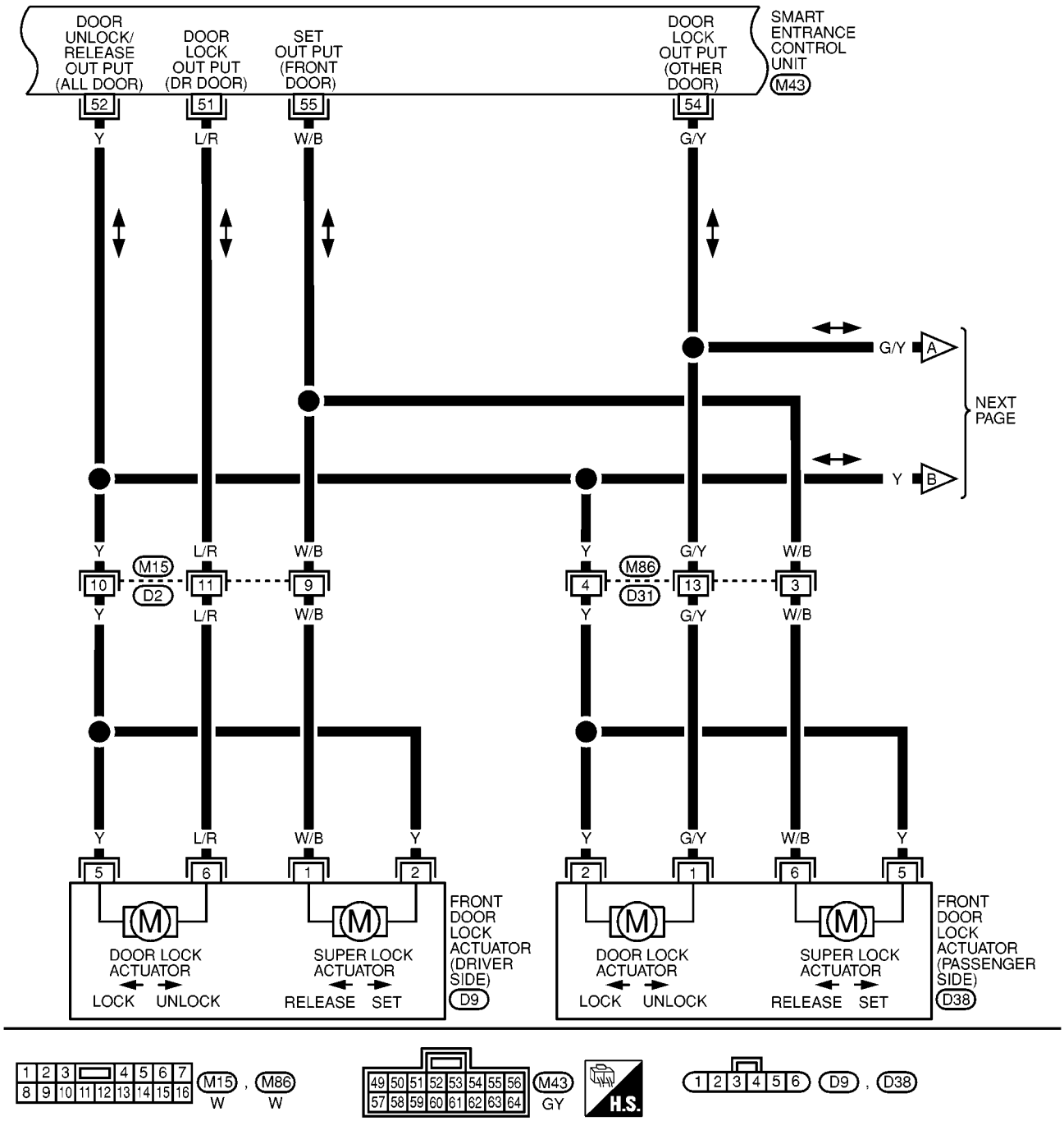
BL-S/LOCK-06





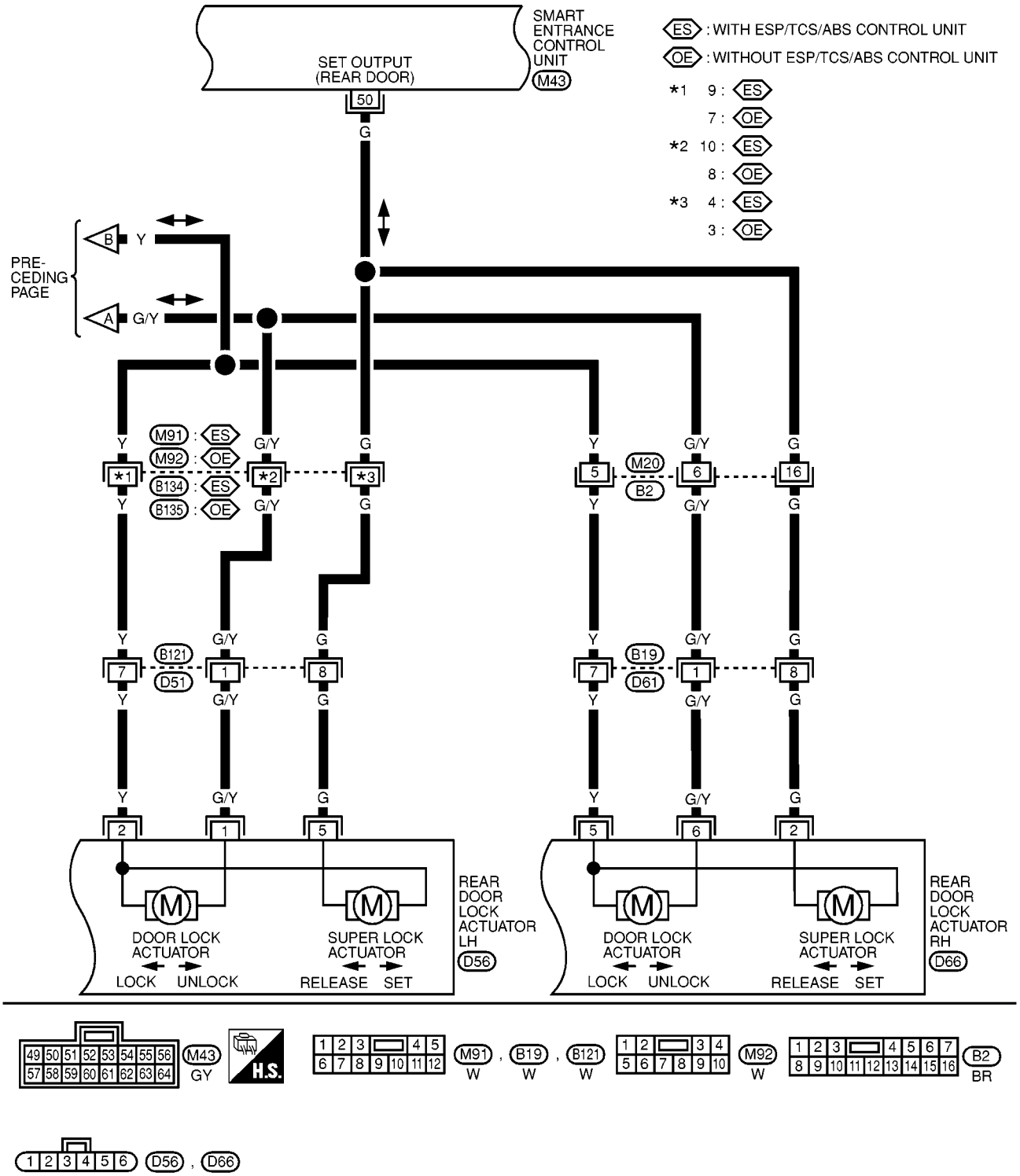
MKWA0108E

BL-S/LOCK-07

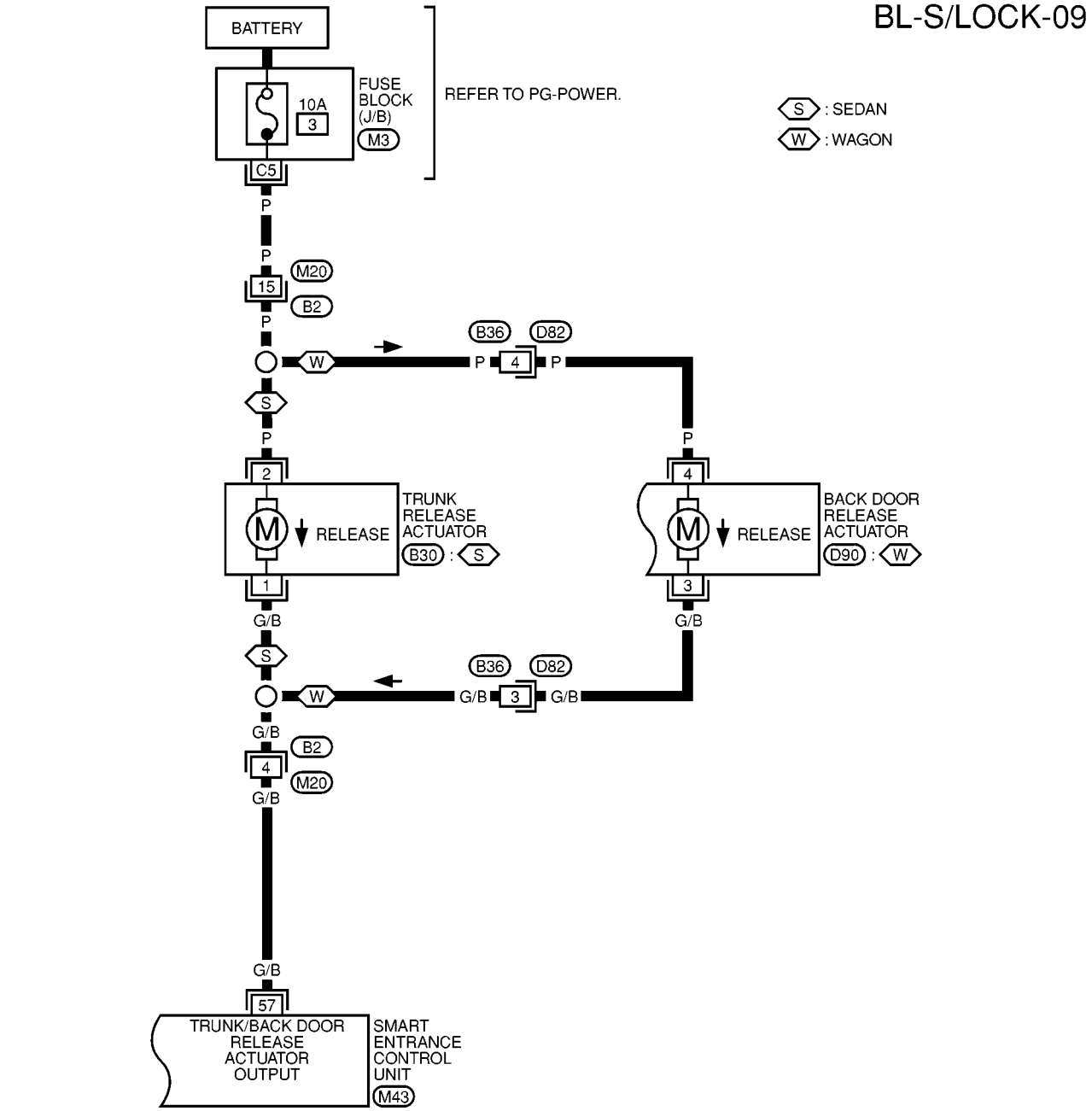


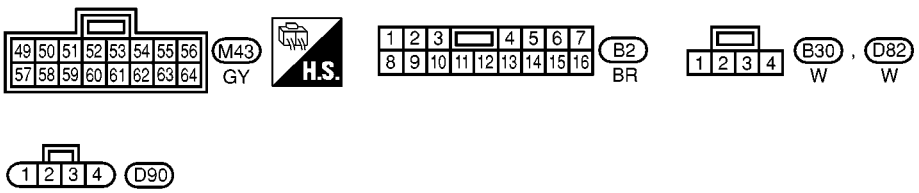
MKWA0109E

BL-S/LOCK-08



MKWA0110E





REFER TO THE FOLLOWING.
M3 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0111E

Terminal and Reference Value for Smart Entrance Control Unit

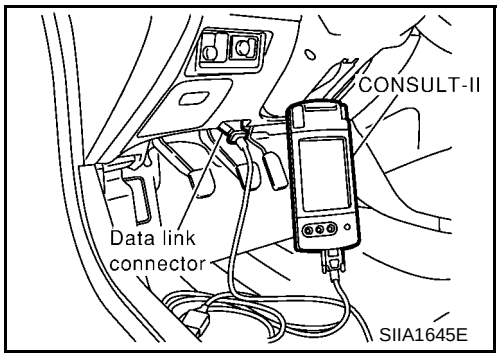
EIS002NO

TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (Approximate values)
5	B/R	Key switch	Key inserted (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0V
6	BR	Child lock switch	Locked (OFF) → Unlocked (ON)	5V → 0V
13	GY	Door lock/unlock switch (Lock signal)	Lock operation (ON)	0V
			Other than above (OFF)	5V
14	BR/Y	Door lock/unlock switch (Unlock signal)	Unlock operation (ON)	0V
			Other than above (OFF)	5V
16	G	Trunk room lamp switch (Back door switch)	Trunk (Door) open (ON) → close (OFF)	0V → Battery voltage
19	BR/W	External trunk or back door release switch	Release switch open operation	5V → 0V
20	BR	Power window main switch (Trunk or back door release switch)	Release switch open operation	5V → 0V
23	R	Door lock/unlock switch indicator	Goes OFF→ Illuminates (Ignition switch ON and all door closed)	0V → Battery voltage
29	Y/G	IGN power supply	—	Battery voltage
35	Y/B	Super lock status switch (Rear door RH side)	Super locked → Not super locked	0V → 5V
36	R/W	Super lock status switch (Rear door LH side)	Super locked → Not super locked	0V → 5V
39	BR/W	Rear door switch RH	Door open (ON) → close (OFF)	0V → Battery voltage
43	R/W	Driver door switch	Door open (ON) → close (OFF)	0V → Battery voltage
44	L/OR	Passenger door switch	Door open (ON) → close (OFF)	0V → Battery voltage
45	R/Y	Rear door switch LH	Door open (ON) → close (OFF)	0V → Battery voltage
49	W/L	Power source (PTC)	—	Battery voltage
50	G	Super lock actuator set (Rear door)	Driver's door key cylinder Lock operation (Set)	0V → 12V
51	L/R	Door lock actuator lock (Driver side)	Door lock/unlock switch Lock operation	0V → 12V
52	Y	Door lock actuator unlock & release (All doors)	Door lock/unlock switch Unlock operation	0V → 12V
53	B	Ground	—	0V
54	G/Y	Door lock actuator lock (Passenger and rear LH, RH side)	Door lock/unlock switch Lock operation	0V → 12V
55	W/B	Super lock actuator set (Front door)	Driver's door key cylinder Lock operation (Set)	0V → 12V
56	R/B	BAT power supply	—	Battery voltage
57	G/B	Trunk (Back door) release actuator	Power window main switch (Trunk or back door release switch) Open operation	Battery voltage → 0V

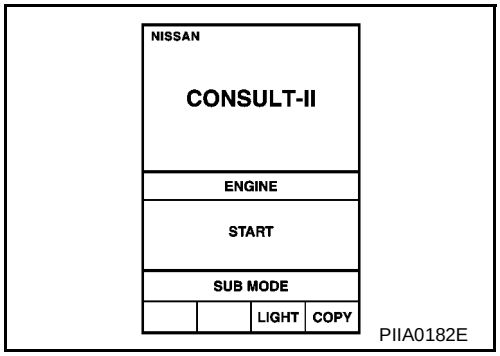
CONSULT- II Inspection Procedure

EIS002NP

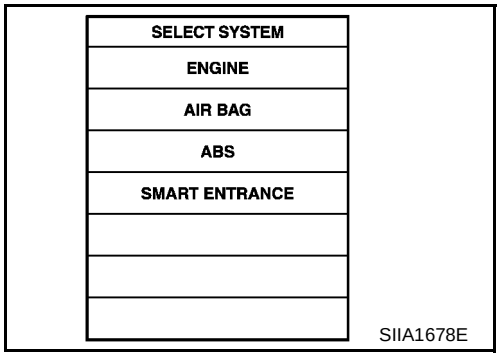
1. Turn ignition switch “OFF”.
2. Connect CONSULT-II to the data link connector.



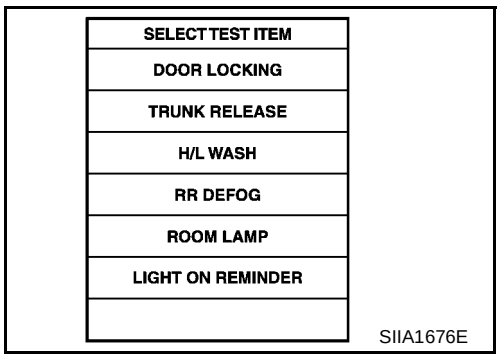
3. Turn ignition switch “ON”.
4. Touch “START”.



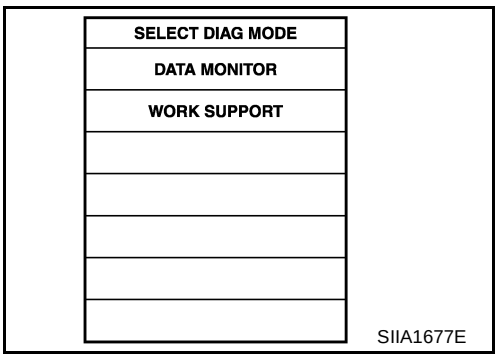
5. Touch “SMART ENTRANCE”.



6. Touch “DOOR LOCK” or “TRUNK RELEASE”.



7. Select diagnosis mode.
“DATA MONITOR” and “WORK SUPPROT” are available.



CONSULT- II Application Items

EIS002P7

DOOR LOCKING

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
KEY IN DETECT	Indicates [ON/OFF] condition of key switch.
DOOR SW DR RR	Indicates [ON/OFF] condition of rear door switch (driver side).
DOOR SW AS RR	Indicates [ON/OFF] condition of rear door switch (passenger side).
AS DOOR SW	Indicates [ON/OFF] condition of front door switch (passenger side).
DR DOOR SW	Indicates [ON\OFF] condition of front door switch (driver side).
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.
RKE LOCK	Indicates [ON/OFF] condition of lock signal from remote controller.
RKE UNLOCK	Indicates [ON/OFF] condition of unlock signal from remote controller.
RKE SEL UNLOCK	Indicates [ON/OFF] condition of select unlock signal from remote controller.

WORK SUPPORT

Monitored Item	Description
AUTO RE-LOCK	Auto re-lock function can be changed in this mode. The re-lock mode will be changed when “CHANGE MODE” on CONSULT-II screen is touched.
SELECTIVE UNLOCK	Selective unlock function can be changed in this mode. The unlock mode will be changed when “CHANGE SET” on CONSULT-II screen is touched.

TRUNK RELEASE

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
TRUNK OPEN SW	Indicates [ON/OFF] condition of trunk room lamp switch (sedan) or back door switch (wagon).
INT TRUNK REL	Indicates [ON/OFF] condition of internal trunk release switch (sedan) or internal back door release switch (wagon).
EXT TRUNK REL	Indicates [ON/OFF] condition of external trunk release switch (sedan) or external back door release switch (wagon).
RKE TRUNK REL	Indicates [ON/OFF] condition of trunk (sedan) or back door (back door) open signal from trunk or back door release switch.

WORK SUPPORT

Monitored Item	Description
TRUNK OPEN DELAY	This mode can be changed trunk release switch (sedan) or back door (wagon) release switch operation time.

CHILD LOCK

DATA MONITOR

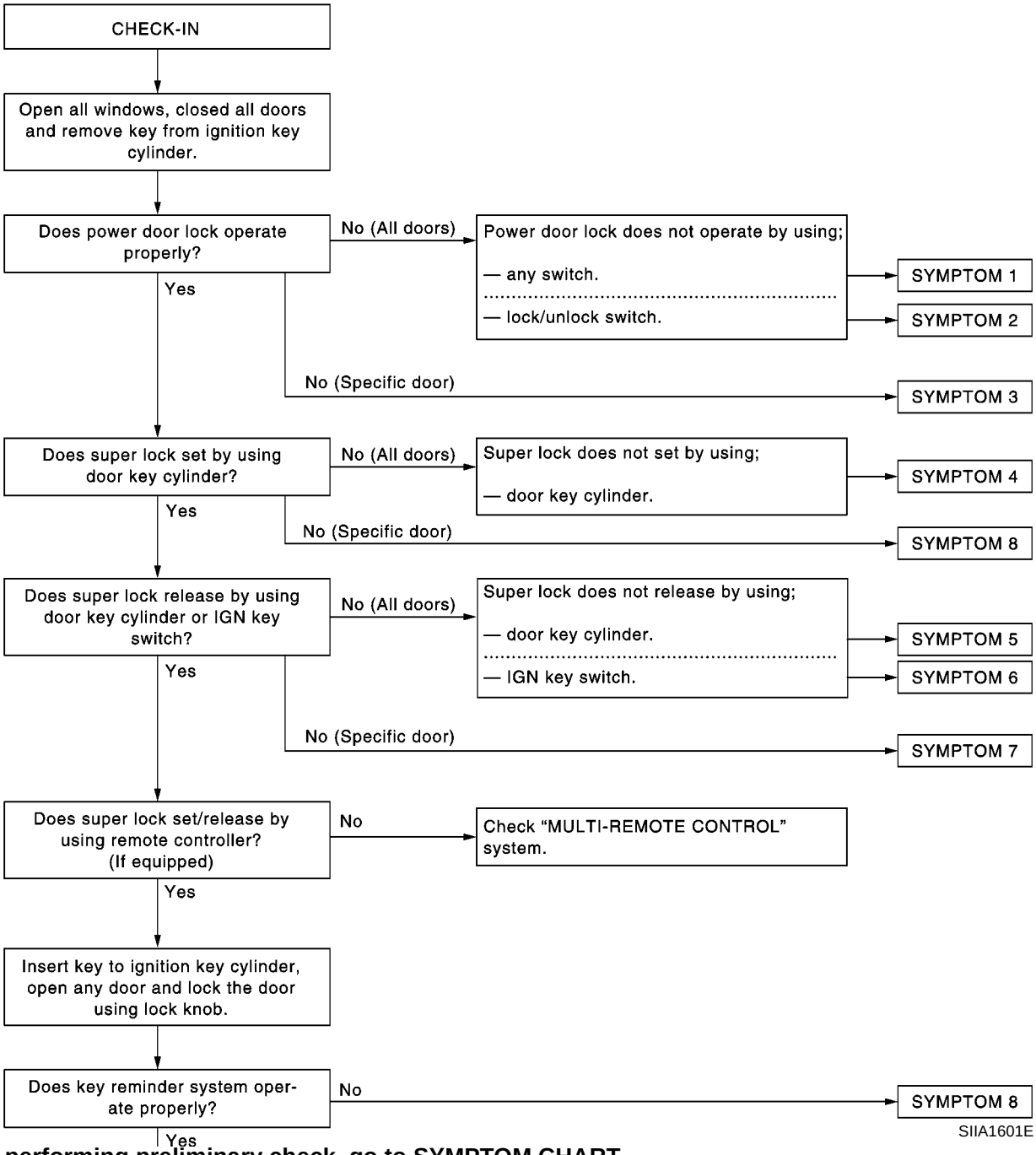
Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
CHILD LOCK SW	Indicates [ON/OFF] condition of child lock switch.
DR RR LOCK ON	Indicates [ON/OFF] condition of rear door switch.
EXT TRUNK REL	Indicates [ON/OFF] condition of external trunk release switch (sedan) or external back door release switch (wagon).
RKE TRUNK REL	Indicates [ON/OFF] condition of trunk (sedan) or back door (back door) open signal from trunk or back door release switch.

Trouble Diagnoses

EIS002K0

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-33, "CONSULT-II INSPECTION PROCEDURE" .

PRELIMINARY CHECK



SIIA1601E

After performing preliminary check, go to SYMPTOM CHART.
Before starting trouble diagnoses below, perform preliminary check.
Symptom numbers in the symptom chart correspond with those of Preliminary check.

SYMPTOM CHART

Symptom	Malfunctioning system	Reference page
SYMPTOM 1 Power door lock does not operate using any switch	Power supply and ground circuit check	BL-61
	Door lock actuator check	BL-63
	If above systems are OK, replace smart entrance control unit.	—
SYMPTOM 2 Power door lock does not operate with lock/unlock switch.	Door lock/unlock switch check	BL-62
	If above system is OK, replace smart entrance control unit.	—
SYMPTOM 3 Specific door lock actuator does not operate.	Door lock actuator check	BL-63
	If above system is OK, replace smart entrance control unit.	—
SYMPTOM 4 Super lock cannot be set by door key cylinder.	Super lock actuator check	BL-74
	Key switch check	BL-73
	Ignition switch ON circuit check	BL-61
	If above systems are OK, replace smart entrance control unit.	—
SYMPTOM 5 *Super lock cannot be released by door key cylinder.	Super lock actuator check	BL-74
	If above systems are OK, replace smart entrance control unit.	—
SYMPTOM 6 *Super lock cannot be released by ignition key switch.	Super lock actuator check	BL-74
	Ignition switch “ON” circuit check	BL-61
	If above systems are OK, replace smart entrance control unit.	—
SYMPTOM 7 Specific super lock actuator does not operate.	Super lock actuator check	BL-74
	If above system is OK, replace smart entrance control unit.	—
SYMPTOM 8 *Key reminder system does not operate.	Door switch check	BL-67
	Trunk room lamp switch or back door switch check	BL-71
	Key switch check	BL-73
	If above system is OK, replace smart entrance control unit.	—
SYMPTOM 9 Trunk or back door release actuator does not operate.	Trunk or back door release switch check	BL-76
	Trunk release actuator check (sedan)	BL-78
	Back door release actuator check (wagon)	BL-79
	If above system is OK, replace smart entrance control unit.	—
SYMPTOM 10 Child lock does not operate.	Child lock switch check	BL-80
	Super lock actuator check (Rear door)	BL-75
	Child lock status switch check	BL-80
	If above system is OK, replace smart entrance control unit.	—

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

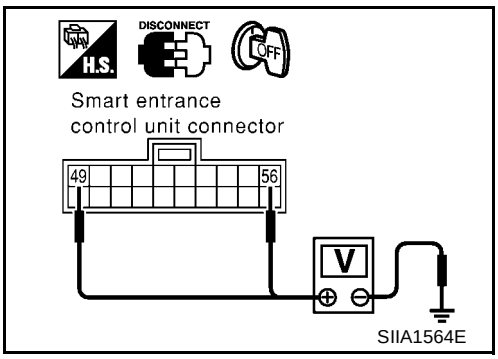
Power Supply and Ground Circuit Check

EIS002NR

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect smart entrance control unit connector.
3. Check voltage between smart entrance control unit harness connector M43 terminal 49(W/L), 56(R/B) and ground.

Terminal		Voltage
+	–	
49(W/L)	Ground	Battery voltage
56(R/B)		



OK or NG?

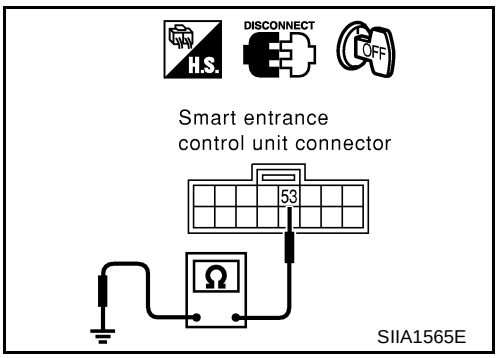
OK >> GO TO 2

NG >> Check smart entrance control unit power supply circuit for open or short.

2. CHECK GROUND CIRCUIT

Check continuity between smart entrance control unit harness connector M43 terminal 53(B) and ground.

Terminal		Continuity
+	–	
53(B)	Ground	Yes



OK or NG?

OK >> Power supply and ground circuit is OK.

NG >> Check smart entrance control unit ground circuit for open or short.

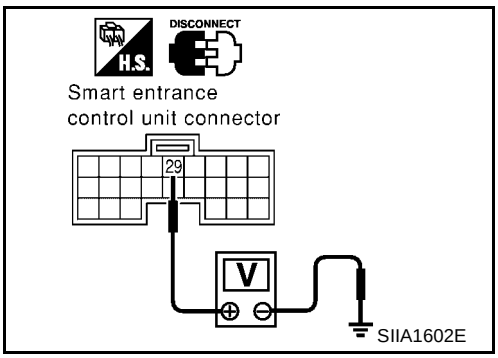
Ignition Switch “ON” Circuit Check

EIS002KA

1. CHECK IGNITION ON SIGNAL

1. Disconnect smart entrance control unit connector.
2. Check voltage between smart entrance control unit harness connector M42 terminal 29(Y/G) and ground.

Terminal		Ignition switch position: ON
+	–	
29(Y/G)	Ground	Battery voltage



OK or NG?

OK >> Ignition ON signal is OK.

NG >> Check the following.

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

Door Lock/Unlock Switch Check

EIS002O3

1. CHECK DOOR LOCK/UNLOCK SWITCH SIGNAL

With CONSULT- II

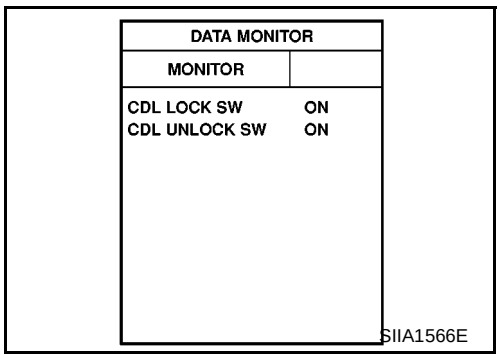
- Check door lock/unlock switch input signal (“CDL LOCK SW” “CDL UNLOCK SW”) in “DATA MONITOR” mode with CONSULT- II.

When door lock/unlock switch is turned to LOCK:

CDL LOCK SW ⇒ ON

When door lock/unlock switch is turned to UNLOCK:

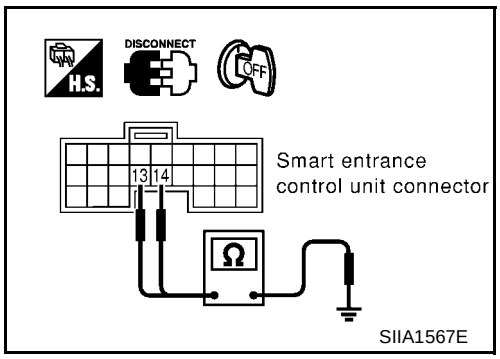
CDL UNLOCK SW ⇒ ON



Without CONSULT- II

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M91 terminal 13(GY), 14(BR/Y) and ground.

Terminals	Door lock/unlock switch operation	Continuity
13 – Ground	L.ock position	Yes
	Neutral or Unlock position	No
14 – Ground	Unlock position	Yes
	Neutral or Lock position	No



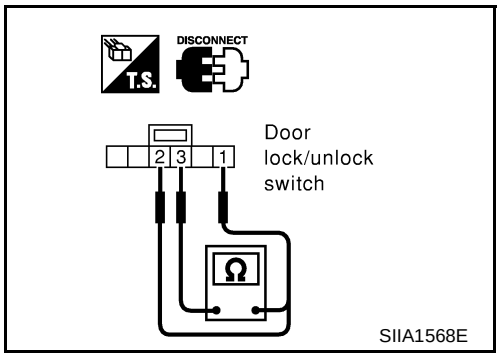
OK or NG?

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

2. CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between door lock/unlock switch terminals 1, 2 and 3.

Terminals	Door lock/unlock switch operation	Continuity
1 – 3	Lock position	Yes
	Neutral or Unlock position	No
2 – 3	Unlock position	Yes
	Neutral or Lock position	No



OK or NG?

OK >> Check the following.

- Ground circuit for door lock/unlock switch
- Harness for open or short between door lock/unlock switch and smart entrance control unit connector

NG >> Replace power window main switch (door lock/unlock switch).

Door Lock Actuator Check

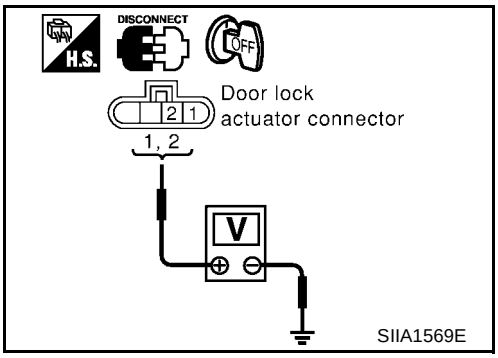
EIS002NS

DRIVER SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect door lock actuator (driver side) harness connector.
2. Check voltage between door lock actuator harness connector D8 terminal 1(L/R), 2(Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	1(L/R)	Ground	Approx. 12
Unlock position	2(Y)	Ground	



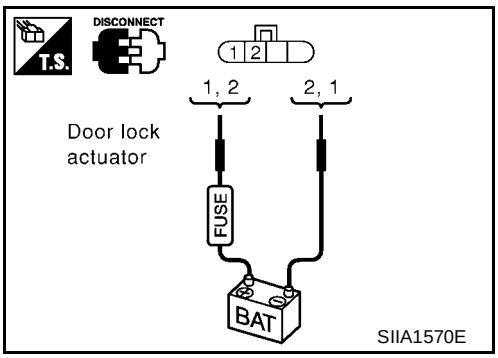
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect door lock actuator (driver side) harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

Terminal		Door lock actuator operation
+	–	
1	2	Unlock → Lock
2	1	Lock → Unlock



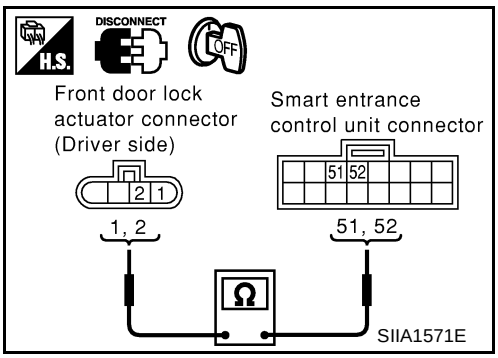
OK or NG?

OK >> GO TO 3
NG >> Replace door lock actuator (driver side).

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between door lock actuator (driver side) harness connector D8 terminal 1(L/R), 2(Y) and smart entrance control unit harness connector M43 terminal 51(L/R), 52(Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
1 (L/R)	51 (L/R)	Yes
2 (Y)	52 (Y)	Yes



OK or NG?

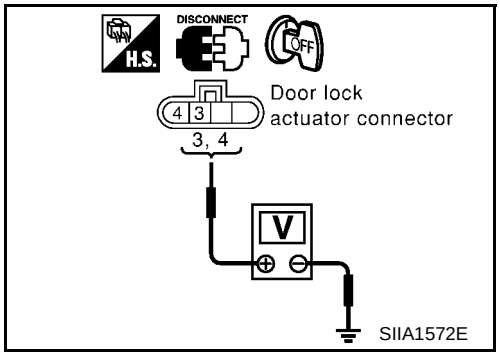
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and door lock actuator (driver side).

PASSENGER SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect door lock actuator (passenger side) harness connector.
2. Check voltage between door lock actuator harness connector D37 terminal 3(Y), 4(G/Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	4(G/Y)	Ground	Approx. 12
Unlock position	3(Y)	Ground	



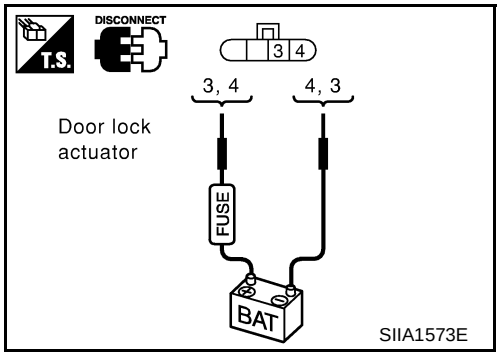
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect door lock actuator (passenger side) harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

Terminal		Door lock actuator operation
+	–	
4	3	Unlock → Lock
3	4	Lock → Unlock



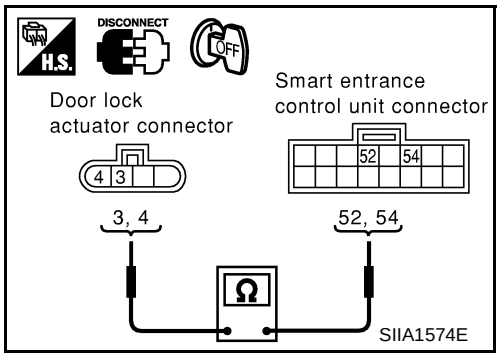
OK or NG?

OK >> GO TO 4
NG >> Replace door lock actuator (passenger side).

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between door lock actuator (passenger side) harness connector D37 terminal 3(Y), 4(G/Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
3 (Y)	52(Y)	Yes
4 (G/Y)	54(G/Y)	Yes



OK or NG?

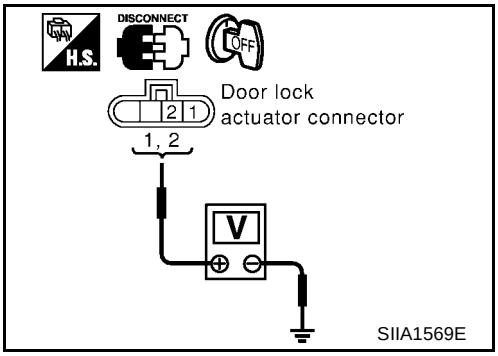
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and door lock actuator (passenger side).

REAR LH SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect rear door lock actuator LH harness connector.
2. Check voltage between door lock actuator harness connector D55 terminal 1(G/Y), 2(Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	1(G/Y)	Ground	Approx. 12
Unlock position	2(Y)	Ground	



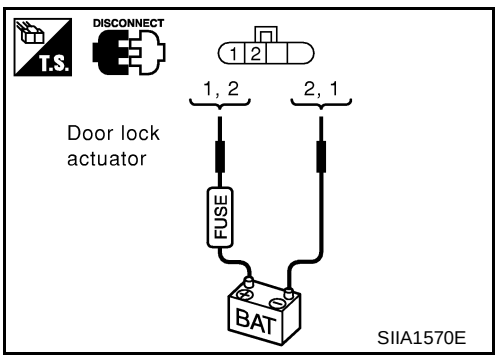
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect rear door lock actuator LH harness connector.
2. Apply 12V direct current to rear door lock actuator LH and check operation.

Terminal		Door lock actuator operation
+	–	
1	2	Unlock → Lock
2	1	Lock → Unlock



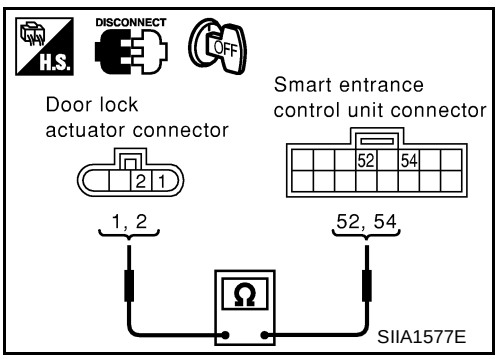
OK or NG?

OK >> GO TO 3
NG >> Replace rear door lock actuator LH.

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between rear door lock actuator LH harness connector D55 terminal 1(G/Y), 2(Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
1 (G/Y)	54 (G/Y)	Yes
2 (Y)	52 (Y)	Yes



OK or NG?

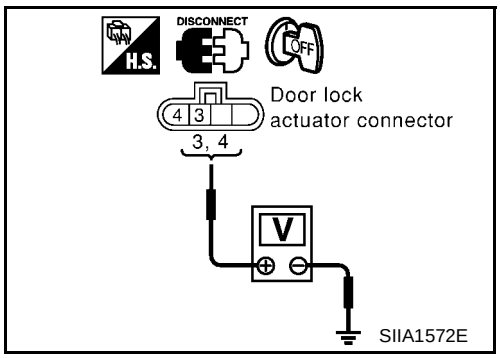
OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and rear door lock actuator LH.

REAR RH SIDE

1. CHECK DOOR LOCK SIGNAL

1. Disconnect rear door lock actuator RH harness connector.
2. Check voltage between rear door lock actuator RH harness connector D65 terminal 3(Y), 4(G/Y) and ground.

Door lock/ unlock switch	Terminals		Voltage
	+	–	
Lock position	4(G/Y)	Ground	Approx. 12
Unlock position	3(Y)	Ground	



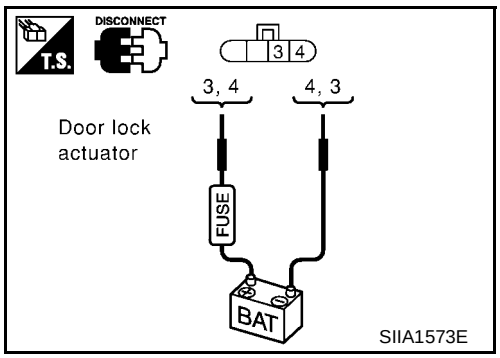
OK or NG?

OK >> GO TO 2
NG >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR

1. Disconnect rear door lock actuator RH harness connector.
2. Apply 12V direct current to rear door lock actuator RH and check operation.

Terminal		Door lock actuator operation
+	–	
4	3	Unlock → Lock
3	4	Lock → Unlock



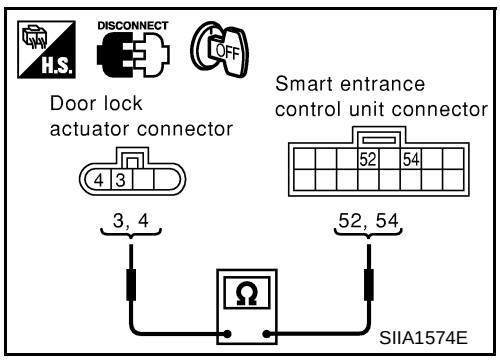
OK or NG?

OK >> GO TO 4
NG >> Replace rear door lock actuator RH.

3. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between rear door lock actuator RH harness connector D65 terminal 3(Y), 4(G/Y) and smart entrance control unit harness connector M43 terminal 52(Y), 54(G/Y).

Terminal		Continuity
Door lock actuator	Smart entrance control unit	
3 (Y)	52(Y)	Yes
4 (G/Y)	54(G/Y)	Yes



OK or NG?

OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and rear door lock actuator RH.

Door Switch Check

EIS002NY

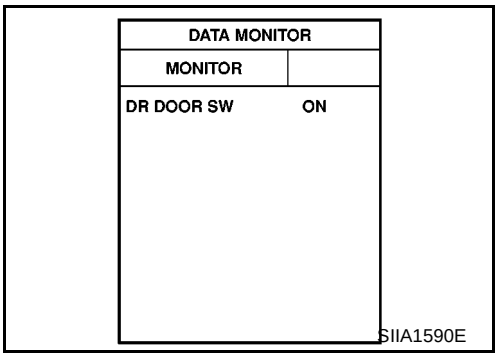
DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

	Monitor item	Condition
DR DOOR SW	Front door switch LH	Open: ON
		Close: OFF

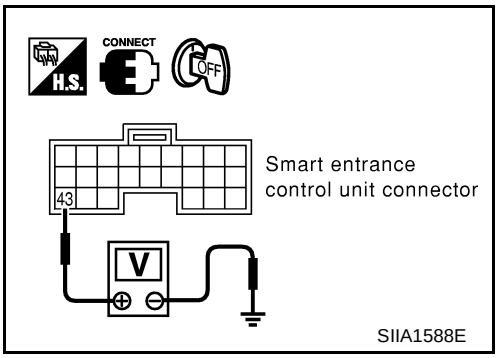


SIIA1590E

Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 43(R/W) and ground.

Terminal (+)	Terminal (–)	Front door LH	Voltage
43(R/W)	Ground	Closed	Approx. 5
		Open	0



SIIA1588E

OK or NG?

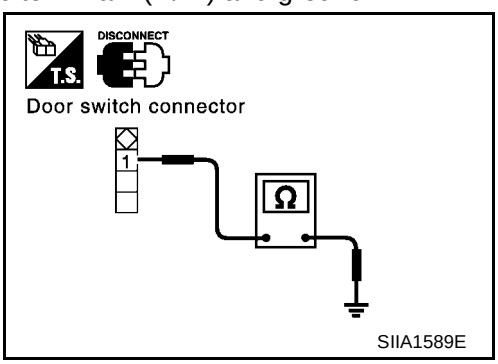
OK >> Door switch is OK.

NG >> GO TO 2

2. CHECK DOOR SWITCH

Check continuity between front door switch LH harness connector B16 terminal 1(R/W) and ground.

Terminal (+)	Terminal (–)	Front door LH switch	Continuity
1(R/W)	Ground	Pushed	No
		Released	Yes



SIIA1589E

OK or NG?

OK >> Check the following.

- Front door switch LH ground condition
- Harness for open or short between smart entrance control unit and front door switch LH

NG >> Replace front door switch LH.

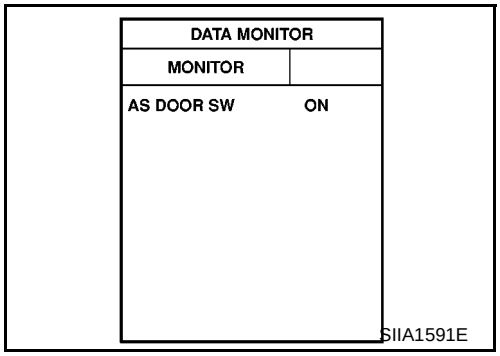
PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

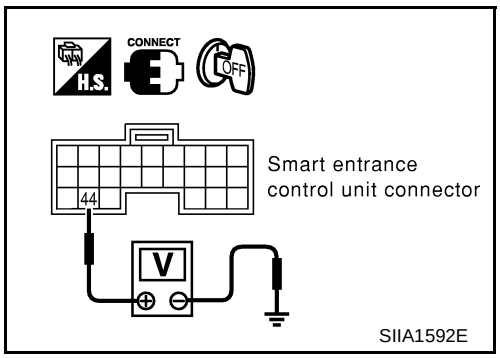
	Monitor item	Condition
AS DOOR SW	Front door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 44(L/OR) and ground.

Terminal (+)	Terminal (–)	Front door RH	Voltage
44(L/OR)	Ground	Closed	Approx. 5
		Open	0



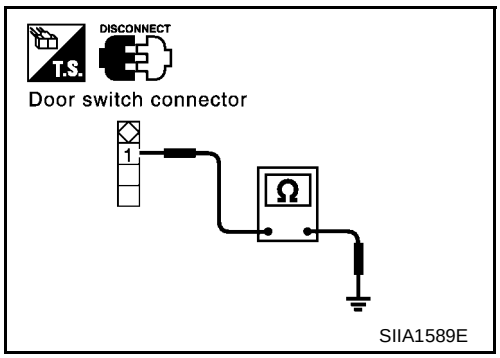
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch RH harness connector B118 terminal 1(L/OR) and ground.

Terminal (+)	Terminal (–)	Front door RH switch	Continuity
1(L/OR)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Front door switch RH ground condition
- Harness for open or short between smart entrance control unit and front door switch RH

NG >> Replace front door switch RH.

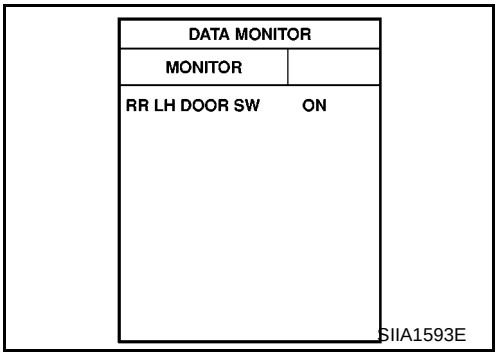
REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

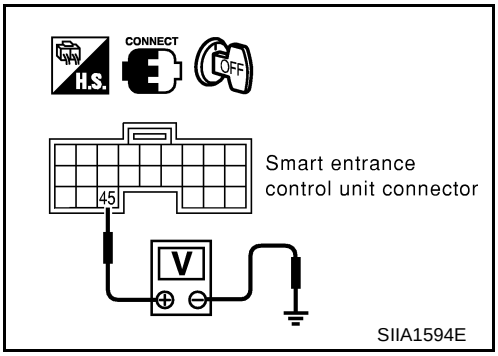
	Monitor item	Condition
RR LH DOOR SW	Rear door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 45(R/Y) and ground.

Terminal (+)	Terminal (–)	Rear door LH	Voltage
45(R/Y)	Ground	Closed	Approx. 5
		Open	0



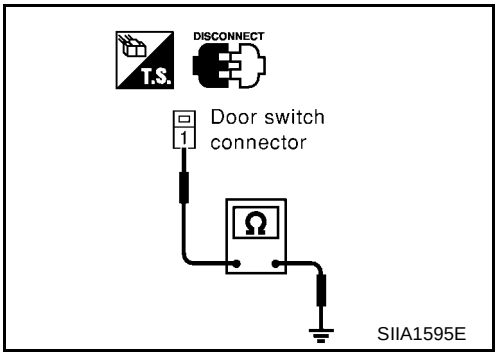
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch LH harness connector B23 terminal 1(R/Y) and ground.

Terminal (+)	Terminal (–)	Rear door LH switch	Continuity
1(R/Y)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch LH ground condition
- Harness for open or short between smart entrance control unit and rear door switch LH

NG >> Replace rear door switch LH.

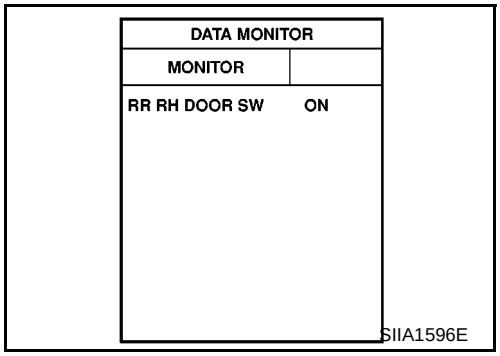
REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

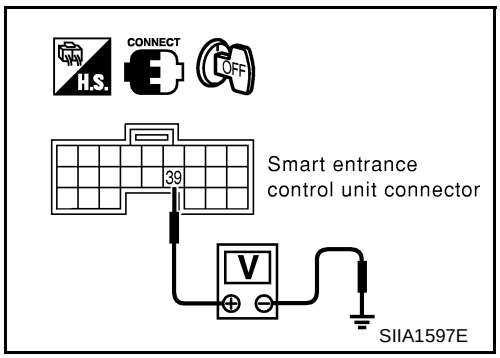
	Monitor item	Condition
RR RH DOOR SW	Rear door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 39(BR/W) and ground.

Terminal (+)	Terminal (–)	Rear door RH	Voltage
39(BR/W)	Ground	Closed	Approx. 5
		Open	0



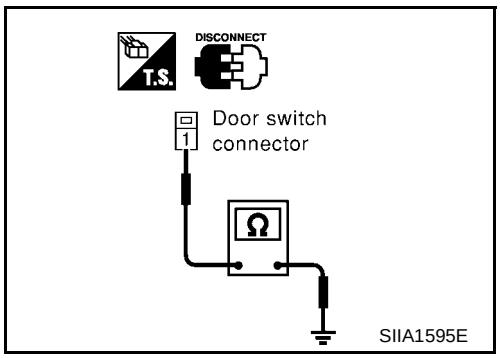
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch RH harness connector B125 terminal 1(BR/W) and ground.

Terminal (+)	Terminal (–)	Rear door RH switch	Continuity
1(BR/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch RH ground condition
- Harness for open or short between smart entrance control unit and rear door switch RH

NG >> Replace rear door switch RH.

Trunk Room Lamp Switch or Back Door Switch Check

EIS002OE

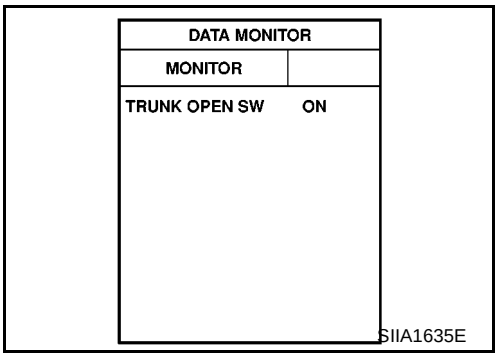
TRUNK ROOM LAMP SWITCH

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

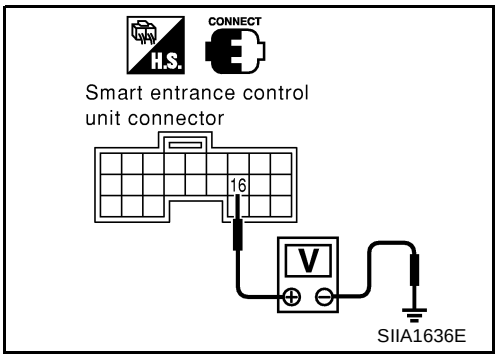
	Monitor item	Condition
TRUNK OPEN SW	Trunk room lamp switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal (+)	Terminal (–)	Trunk lid	Voltage
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

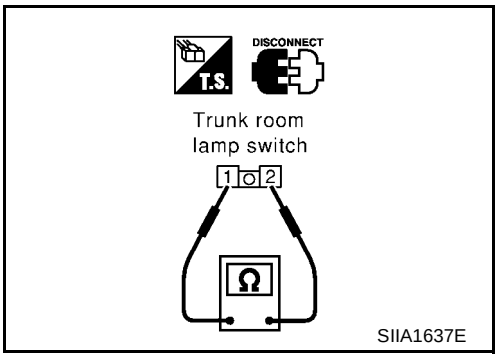
OK >> Trunk room lamp switch is OK.

NG >> GO TO 2

2. CHECK TRUNK ROOM LAMP SWITCH

Check continuity between trunk room lamp switch terminals 1 and 2.

Terminal	Trunk lid condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.

- Trunk room lamp switch ground circuit
- Harness for open or short between smart entrance control unit and trunk room lamp switch

NG >> Replace trunk room lamp switch.

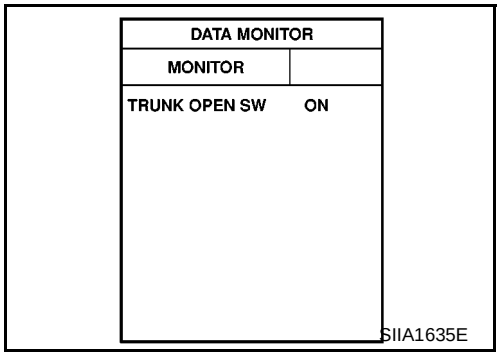
BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

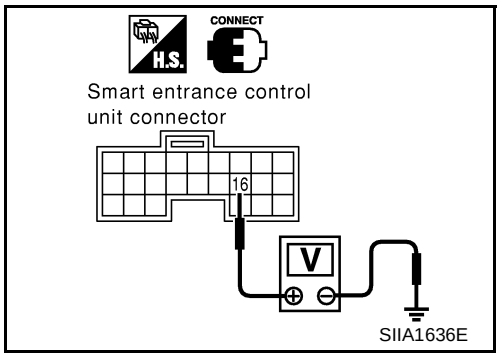
	Monitor item	Condition
TRUNK OPEN SW	Back door switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal (+)	Terminal (–)	Back door	Voltage
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

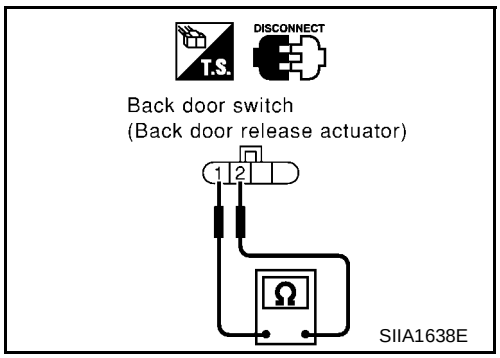
OK >> Back door switch is OK.

NG >> GO TO 2

2. CHECK BACK DOOR SWITCH

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

Terminal	Back door condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.

- Back door switch (back door release actuator) ground circuit
- Harness for open or short between smart entrance control unit and back door switch (back door release actuator)

NG >> Replace back door switch (back door release actuator).

Key Switch Check

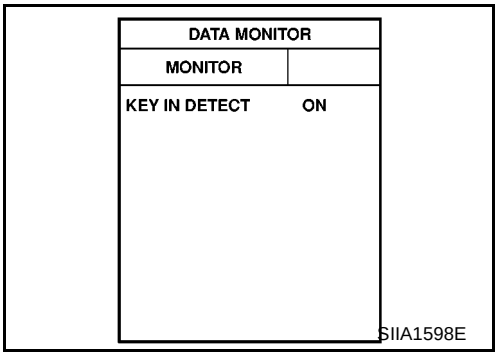
EIS002O2

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

When key is inserted in ignition key cylinder:
KEY IN DETECT ⇒ ON
When key is removed from ignition key cylinder:
KEY IN DETECT ⇒ OFF



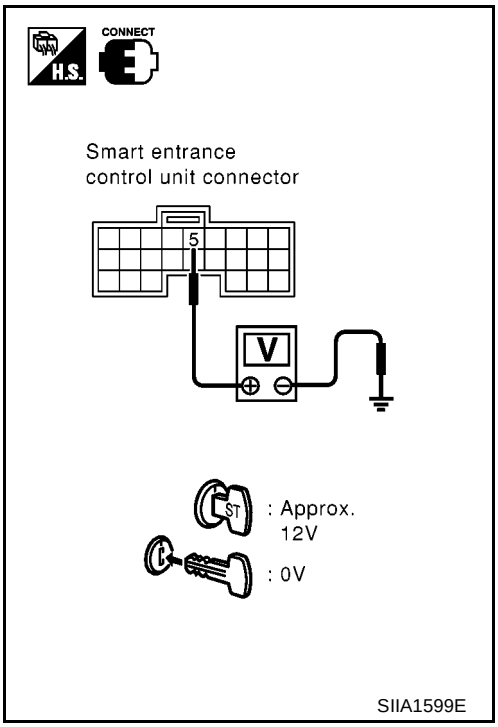
Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 5(B/R) and ground.

Terminals		Key switch	Voltage
+	–		
5(B/R)	Ground	Key is inserted	Approx. 12
		Key is removed	0

OK or NG?

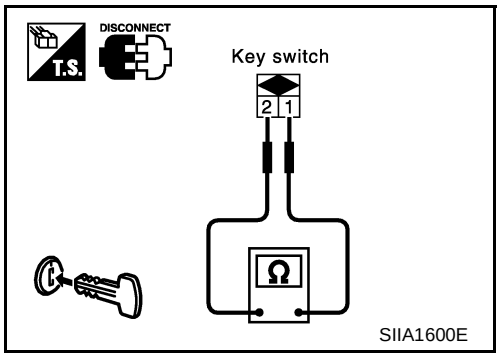
OK >> Key switch is OK.
NG >> GO TO 2



2. CHECK KEY SWITCH (INSERT)

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

Terminals	Key switch	Continuity
1 – 2	Key is inserted	Yes
	Key is removed	No



OK or NG?

OK >> Check the following.
- 10A fuse [No. 12, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between smart entrance control unit and key switch

NG >> Replace key switch.

Super Lock Actuator Check

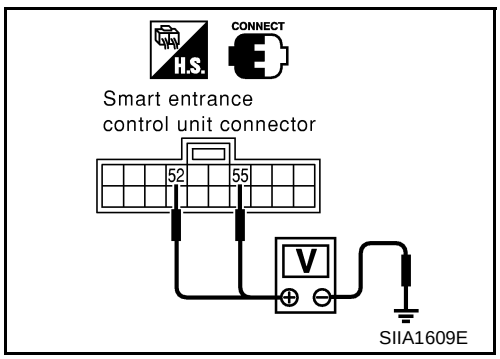
EIS002K8

FRONT DOOR

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

Check voltage between smart entrance control unit harness connector M43 terminal 52(Y), 55(W/B) and ground.

Door key cylinder (Driver side)	Terminals		Voltage
	+	–	
Lock (Set)	55(W/B)	Ground	Approx. 12
Unlock (Released)	52(Y)		



OK or NG?

OK >> GO TO 2

NG >> Replace smart entrance control unit.

2. CHECK SUPER LOCK ACTUATOR

1. Disconnect door lock actuator assembly connector.

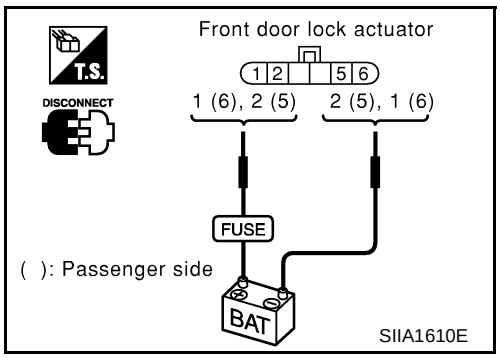
Door lock actuator connector (Driver side): D9

Door lock actuator connector (Passenger side): D38

2. Apply 12V direct current to door lock actuator assembly and check operation.

Terminals		Super lock actuator operation
+	–	
1 (6)	2 (5)	Release → Set
2 (5)	1 (6)	Set → Release

( ): Front door passenger side



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and super lock actuator.

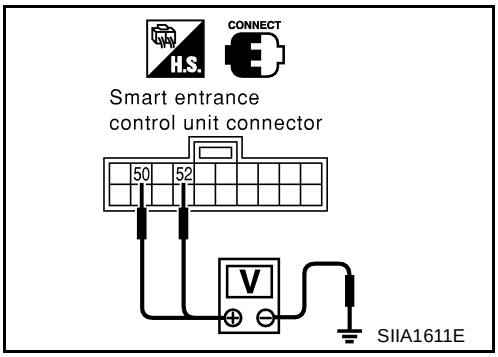
NG >> Replace super lock actuator (door lock actuator).

REAR DOOR

1. CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

Check voltage between smart entrance control unit harness connector M43 terminal 50(G), 52(Y) and ground.

Door key cylinder (Driver side)	Terminals		Voltage
	+	–	
Lock (Set)	50(G)	Ground	Approx. 12
Unlock (Released)	52(Y)		



OK or NG?

OK >> GO TO 2

NG >> Replace smart entrance control unit.

2. CHECK SUPER LOCK ACTUATOR

1. Disconnect door lock actuator assembly connector.

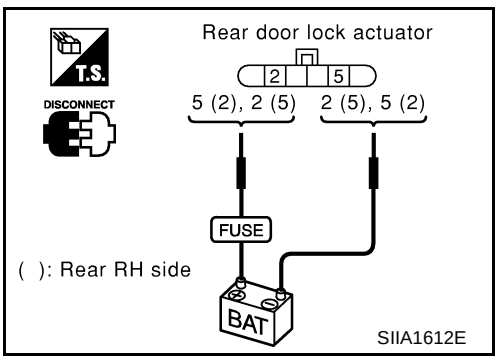
Door lock actuator connector (Rear LH side): D56

Door lock actuator connector (Rear RH side): D66

2. Apply 12V direct current to door lock actuator assembly and check operation.

Terminals		Super lock actuator operation
+	–	
5 (2)	2 (5)	Release → Set
2 (5)	5 (2)	Set → Release

( ): Rear door RH side



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and super lock actuator.

NG >> Replace super lock actuator (door lock actuator).

Trunk or Back Door Release Switch Check

EIS002O4

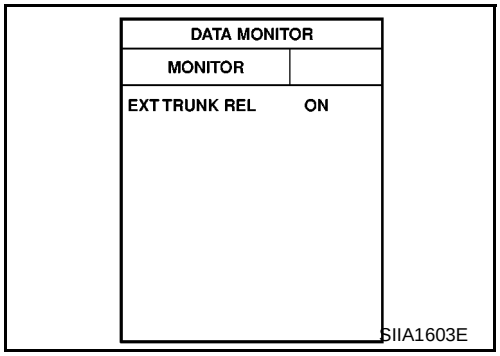
EXTERNAL SWITCH

1. CHECK EXTERNAL TRUNK OR BACK DOOR RELEASE SWITCH INPUT SIGNAL

With CONSULT-II

- Check external trunk or back door release switch input signal “EXT TRUNK REL” in “DATA MONITOR” mode with CONSULT- II.

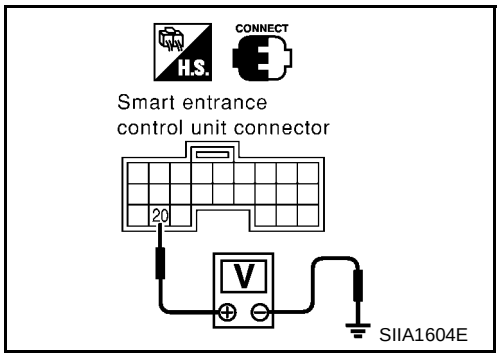
Release switch is pushed (open):
EXT TRUNK REL ON
Release switch is released (close):
EXT TRUNK REL OFF



Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 20(B/R) and ground.

Terminals		Release switch	Voltage (Approximate values)
+	–		
20(B/R)	Ground	Pushed	0V
		Released	5V



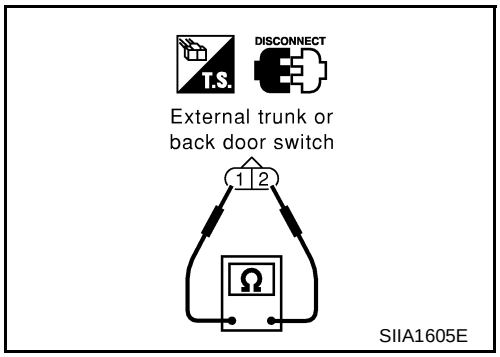
OK or NG?

OK >> Trunk or back door release switch is OK.
NG >> GO TO 2

2. CHECK EXTERNAL TRUNK OR BACK DOOR RELEASE SWITCH

1. Disconnect external trunk or back door release switch connector.
2. Check continuity between external trunk or back door release switch terminals 1 and 2.

Terminals	Release switch	Continuity
1 – 2	Pushed	Yes
	Released	No



OK or NG?

OK >> Check the following.
- Harness for open or short between external trunk or back door release switch and smart entrance control unit
- External trunk or back door release switch ground circuit

NG >> Replace external trunk or back door release switch.

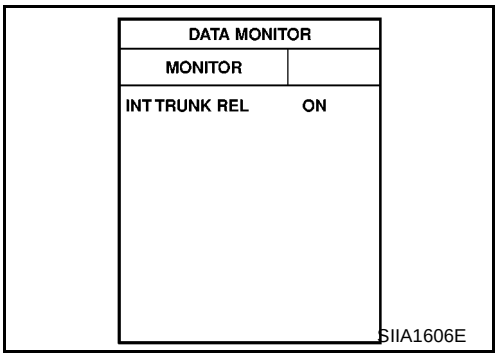
POWER WINDOW MAIN SWITCH

1. CHECK TRUNK OR BACK DOOR RELEASE SWITCH INPUT SIGNAL

With CONSULT-II

- Check trunk or back door release switch input signal “INT TRUNK REL” in “DATA MONITOR” mode with CONSULT- II.

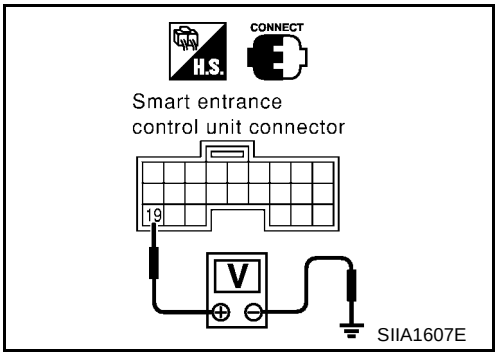
Release switch is pushed (open):
INT TRUNK REL ON
Release switch is released (close):
INT TRUNK REL OFF



Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 19(BR/W) and ground.

Terminals		Release switch	Voltage (Approximate values)
+	–		
19(BR/W)	Ground	Pushed	0V
		Released	5V



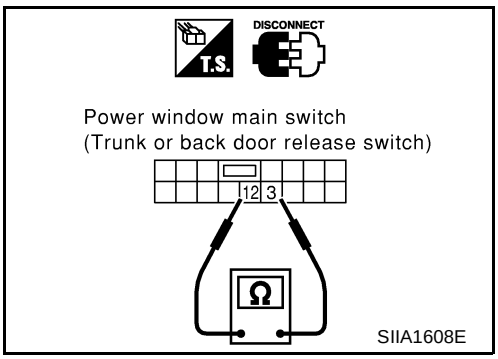
OK or NG?

OK >> Trunk or back door release switch is OK.
NG >> GO TO 2

2. CHECK TRUNK OR BACK DOOR RELEASE SWITCH

1. Disconnect power window main switch (trunk or back door release switch) connector.
2. Check continuity between power window main switch (trunk or back door release switch) terminals 3 and 12.

Terminals	Release switch	Continuity
3 –1 2	Pushed	Yes
	Released	No



OK or NG?

OK >> Check the following.
- Harness for open or short between power window main switch (trunk or back door release switch) and smart entrance control unit
- Power window main switch (trunk or back door release switch) ground circuit

NG >> Replace power window main switch (trunk or back door release switch).

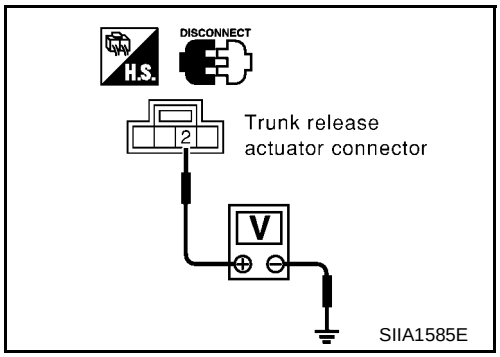
Trunk Release Actuator Check (Sedan)

EIS002Y1

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect trunk release actuator harness connector.
3. Check voltage between trunk release harness connector D90 terminal 2(P) and ground.

Terminal		Voltage
+	–	
2(P)	Ground	Battery voltage



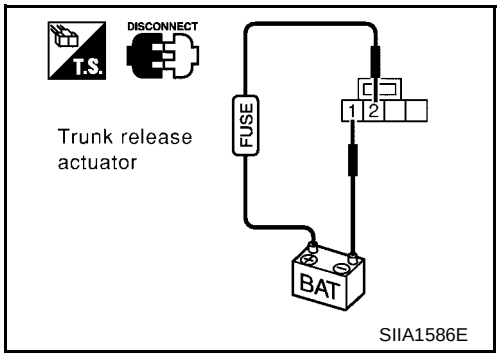
OK or NG?

OK >> GO TO 2
NG >> Check trunk release actuator power supply circuit for open or short.

2. CHECK TRUNK RELEASE ACTUATOR

1. Disconnect back door release actuator harness connector.
2. Apply 12V direct current to trunk release actuator and check operation.

Terminal		Trunk release actuator operation
+	–	
2	1	Lock → Release



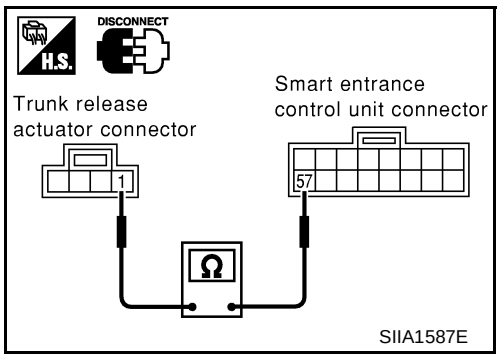
OK or NG?

OK >> GO TO 3
NG >> Replace trunk release actuator.

3. CHECK TRUNK RELEASE ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between trunk release actuator harness connector D90 terminal 1(G/B) and smart entrance control unit harness connector M43 terminal 57(G/B).

Terminal		Continuity
Trunk release actuator	Smart entrance control unit	
1(G/B)	57(G/B)	Yes



OK or NG?

OK >> Replace smart entrance control unit.
NG >> Check harness for open or short between smart entrance control unit and trunk release actuator.

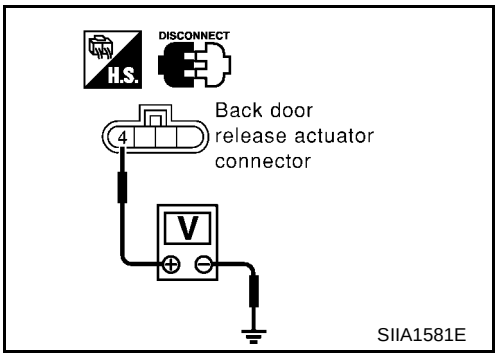
Back Door Release Actuator Check (Wagon)

EIS002Y2

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect back door release actuator harness connector.
3. Check voltage between back door release actuator harness connector B30 terminal 4(P) and ground.

Terminal		Voltage
+	–	
4(P)	Ground	Battery voltage



OK or NG?

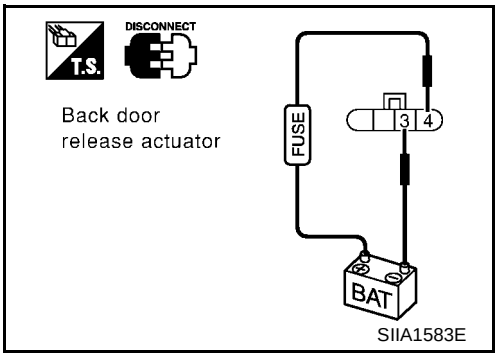
OK >> GO TO 2

NG >> Check back door release actuator power supply circuit for open or short.

2. CHECK BACK DOOR RELEASE ACTUATOR

1. Disconnect back door release actuator harness connector.
2. Apply 12V direct current to back door release actuator and check operation.

Terminal		Back door release actuator operation
+	–	
4	3	Lock → Release



OK or NG?

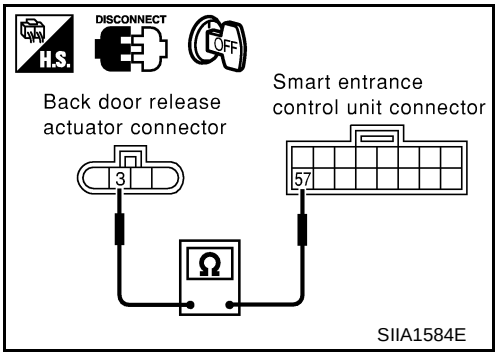
OK >> GO TO 3

NG >> Replace back door lock actuator.

3. CHECK BACK DOOR RELEASE ACTUATOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between back door release actuator harness connector B30 terminal 3(G/B) and smart entrance control unit harness connector M43 terminal 57(G/B).

Terminal		Continuity
Back door release actuator	Smart entrance control unit	
3(G/B)	57(G/B)	Yes



OK or NG?

OK >> Replace smart entrance control unit.

NG >> Check harness for open or short between smart entrance control unit and back door release actuator.

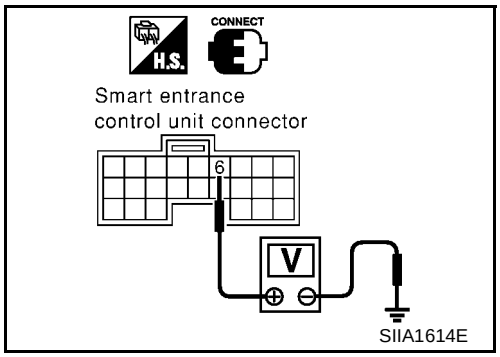
Child Lock Switch Check

EIS002O6

1. CHECK CHILD LOCK SWITCH INPUT SIGNAL

- Check voltage between smart entrance control unit harness connector M41 terminal 6(BR) and ground.

Terminals		Child lock switch	Voltage (Approximate values)
+	–		
6(BR)	Ground	Unlock operation	0V
		Lock operation	5V



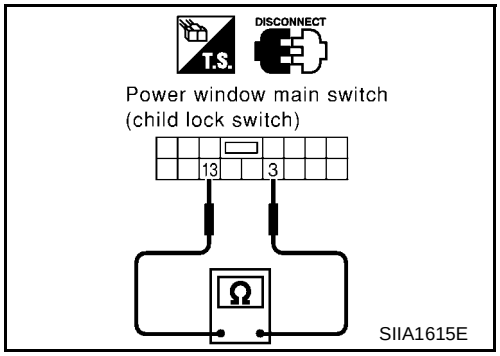
OK or NG?

OK >> Child lock switch is OK.
NG >> GO TO 2

2. CHECK CHILD LOCK SWITCH

1. Disconnect power window main switch (Child lock switch) connector.
2. Check continuity between power window main switch (Child lock switch) terminals 3 and 13.

Terminals	Child lock switch	Continuity
3 – 13	Unlock operation	Yes
	Lock operation	No



OK or NG?

OK >> Check the following.
- Harness for open or short between power window main switch (Child lock switch) and smart entrance control unit
- Power window main switch (Child lock switch) ground circuit

NG >> Replace power window main switch (Child lock switch).

Child Lock State Switch Check

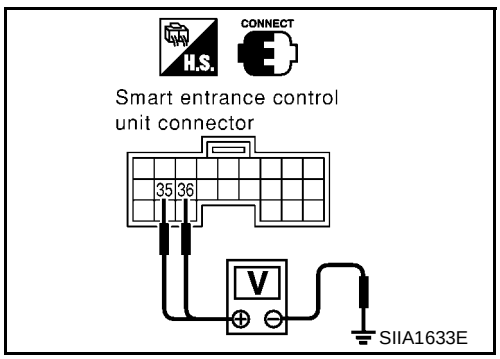
EIS002O7

1. CHECK CHILD LOCK STATE SWITCH INPUT SIGNAL

- Check voltage between smart entrance control unit harness connector M42 terminal 36:R/W(35:Y/B) and ground.

Terminals		Rear door lock actuator condition	Voltage (Approximate values)
+	–		
36:R/W (35:Y/B)	Ground	Super locked	0V
		Not super locked	5V

( ): Rear door RH side

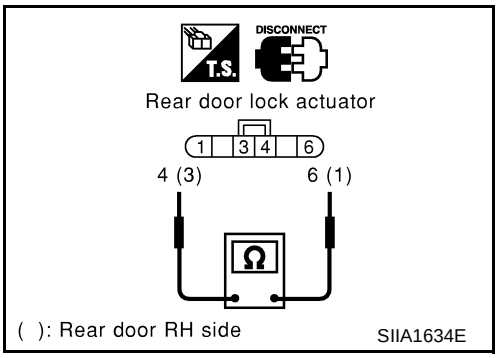


OK or NG?

OK >> Super lock status switch is OK.
NG >> GO TO 2

2. CHECK CHILD LOCK STATE SWITCH

1. Disconnect rear door lock actuator connector.
2. Check continuity between rear door lock actuator terminals 4(3) and 6(1).



Terminals	Rear door lock actuator condition	Continuity
4(3) – 6(1)	Super locked	Yes
	Not super locked	No

( ): Rear door RH side

OK or NG?

OK >> Check the following.

- Harness for open or short between rear door lock actuator and smart entrance control unit
- Rear door lock actuator (Super lock status switch) ground circuit

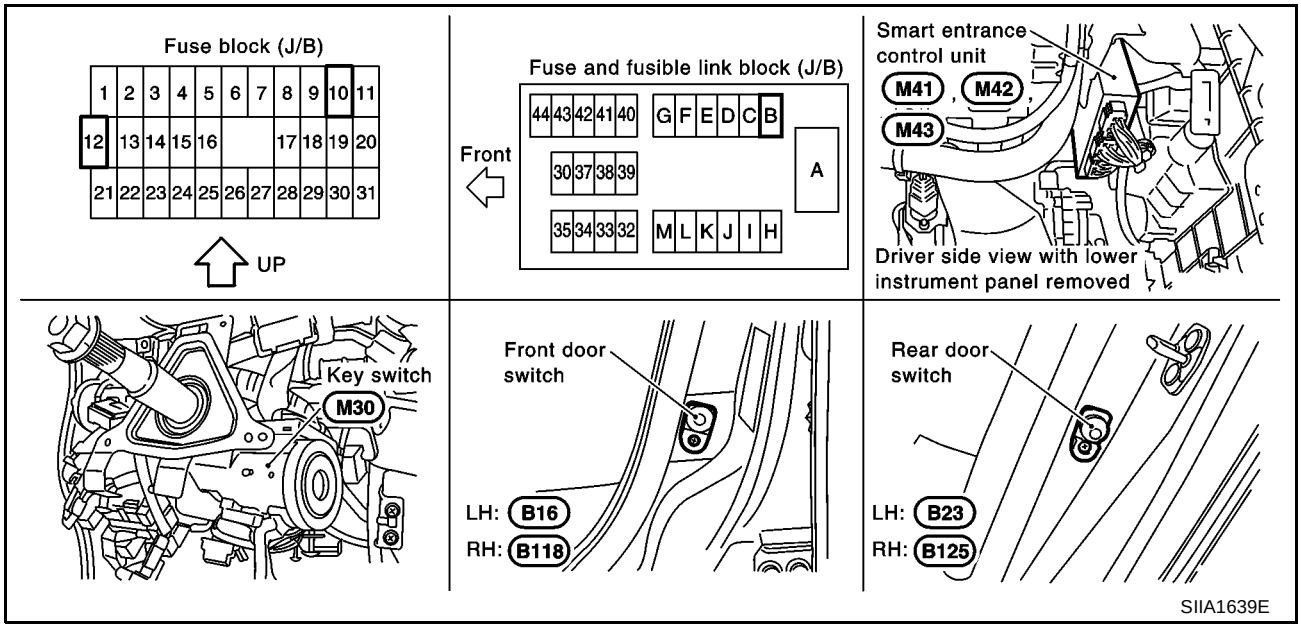
NG >> Replace rear door lock actuator.

MULTI-REMOTE CONTROL SYSTEM

PFP:28596

Component Parts and Harness Connector Location

EIS002KM



System Description

EIS002KN

INPUTS

Power is supplied at all times

- to smart entrance control unit terminal 56 and
- to key switch terminal 1
- through 10A fuse (No.12, located in the fusible link and fuse box).
- to smart entrance control unit terminal 49
- through 40A fusible link (letter B, located in the fusible link and fuse box).

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

- through key switch terminal 2
- to smart entrance control unit terminal 5.

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

- to smart entrance control unit terminal 43
- through front door switch (driver side) terminal 1
- from front door switch (drive side) case ground.

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

- to smart entrance control unit terminal 44
- through front door switch (passenger side) terminal 1
- from front door switch (passenger side) case ground.

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

- to smart entrance control unit terminal 45(LHD models) or 39(RHD models)
- through rear door switch (LH) terminal 1
- from rear door switch (LH) case ground.

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

- to smart entrance control unit terminal 39(LHD models) or 45(RHD models)
- through rear door switch (RH) terminal 1
- from rear door switch (RH) case ground.

Remote controller signal is inputted to smart entrance control unit (The antenna of the system is combined with smart entrance control unit).

The multi-remote control system controls operation of the

- power door lock
- hazard reminder

OPERATED PROCEDURE

Power Door Lock Operation

Models with super lock

Smart entrance control unit receives a LOCK signal from remote controller. Smart entrance control unit locks all doors with input of LOCK signal from remote controller.
When an UNLOCK signal is sent from remote controller once, driver's door will be unlocked.
Then, if an UNLOCK signal is sent from remote controller again within 5 seconds, all door will be unlocked.

Models without super lock

Smart entrance control unit receives a LOCK/UNLOCK signal from remote controller. Smart entrance control unit locks/unlocks all doors with input of LOCK/UNLOCK signal from remote controller.

Hazard Reminder

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

Remote Controller ID Code Entry

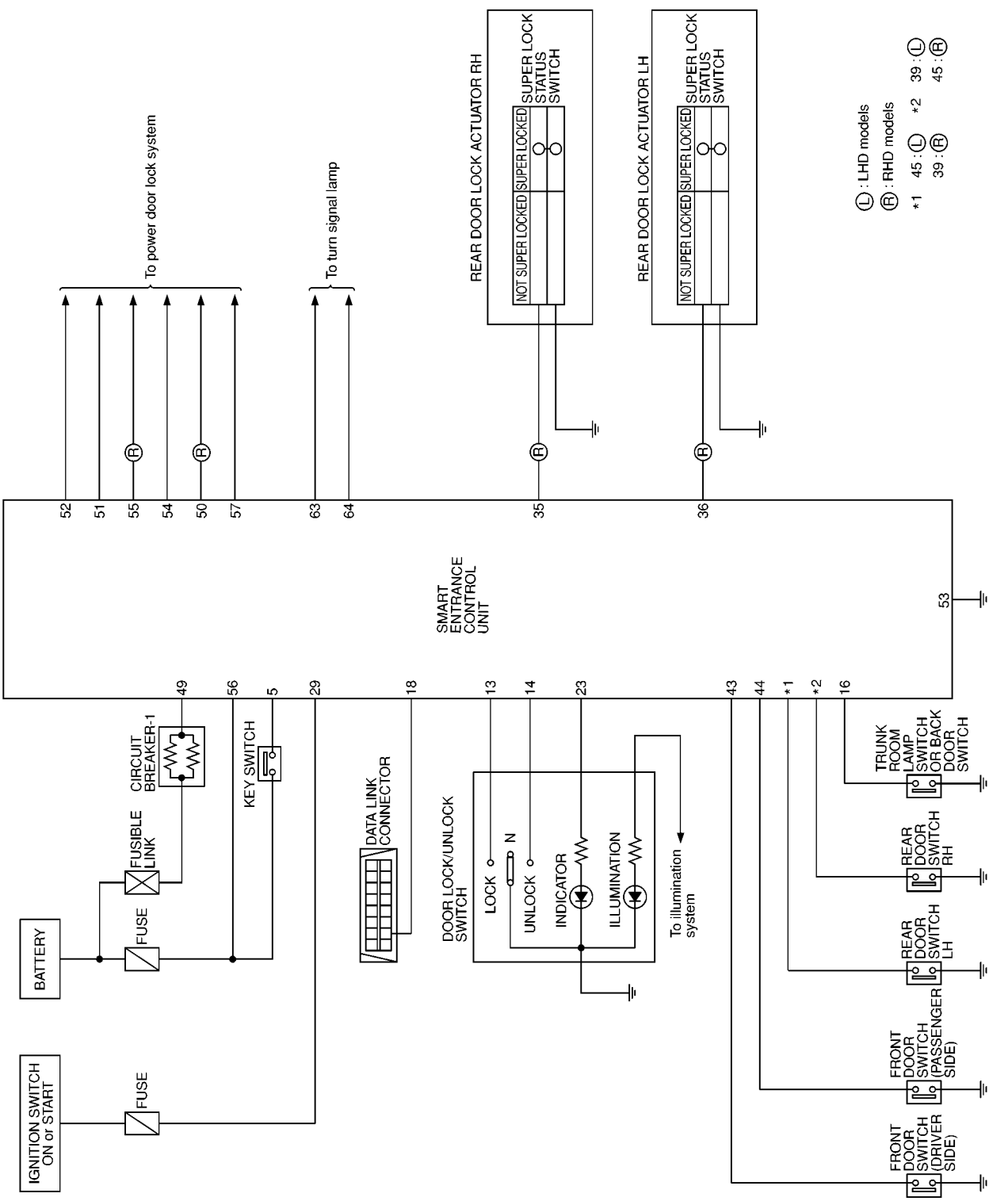
A maximum of four remote controllers can be entered.
To enter ID code entry, the following signals must be input to the smart entrance control unit.

- Ignition switch (ON)
- Signal from remote controller

For detailed procedure, refer to BL-106, "ID Code Entry Procedure"

Schematic

EIS002KO



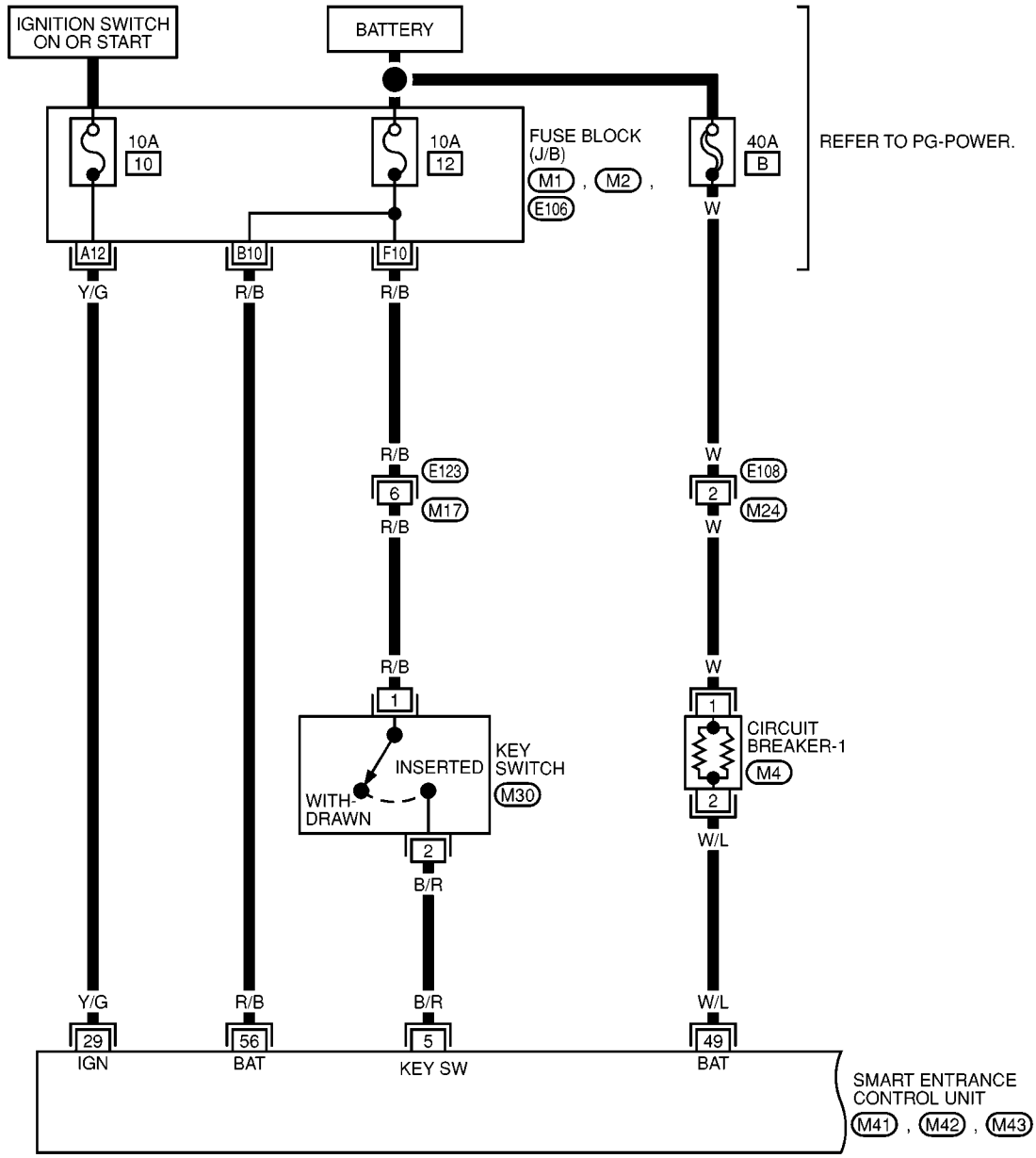
MKWA0112E

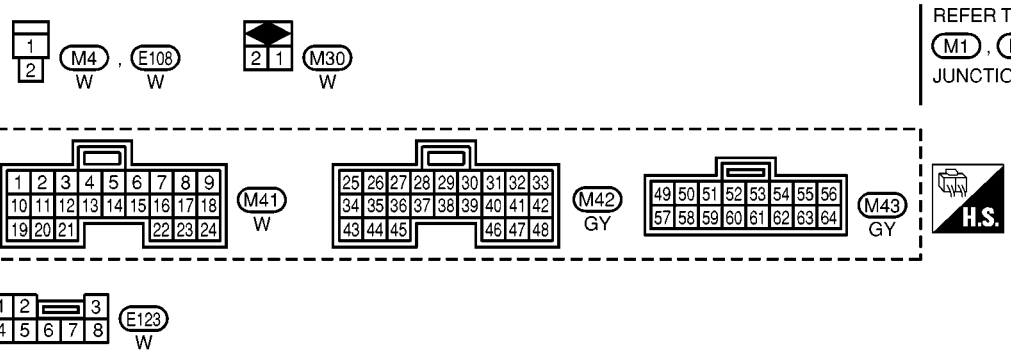
Wiring Diagram — MULTI —

EIS002OK

LHD MODELS

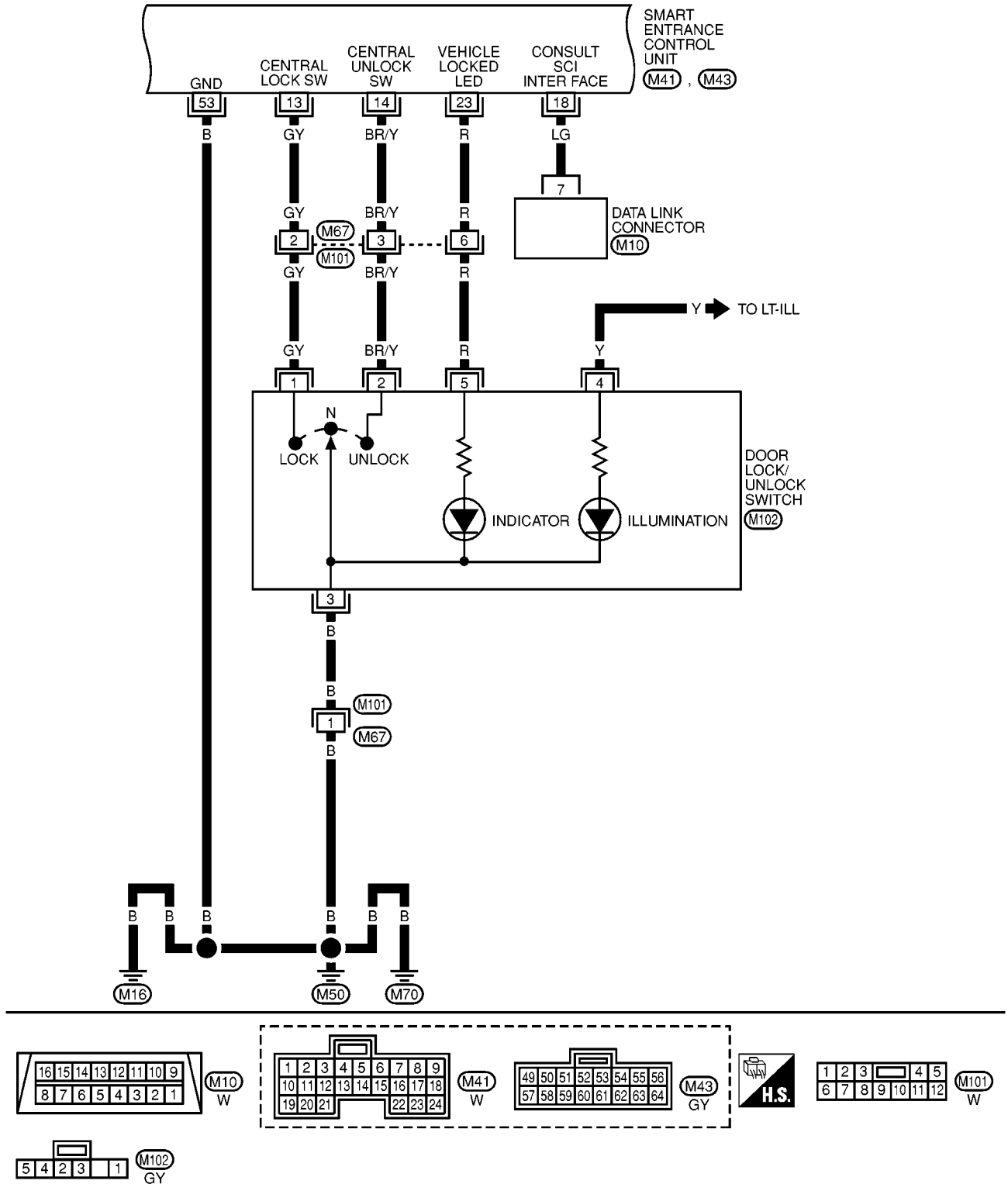
BL-MULTI-01





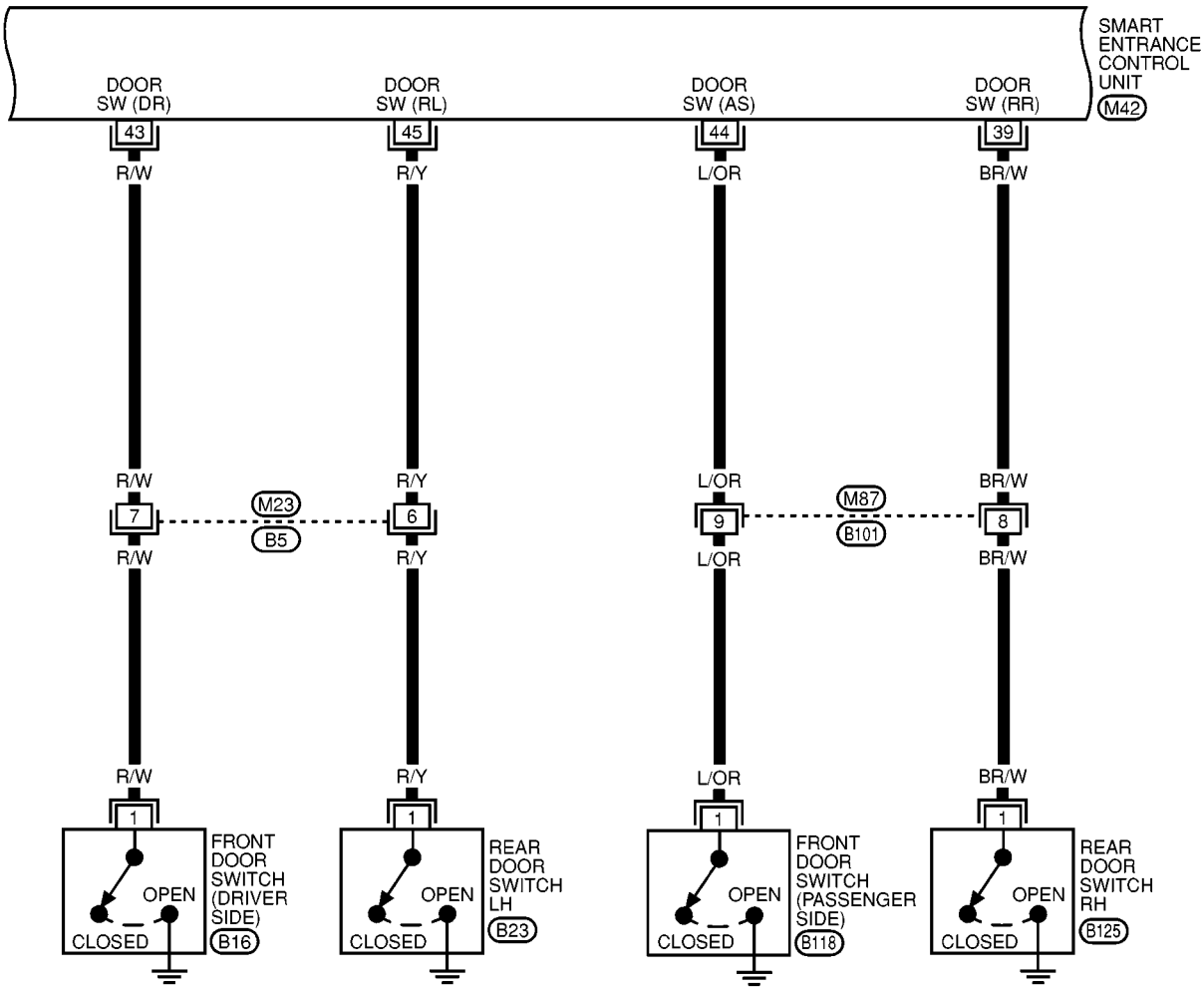
MKWA0113E

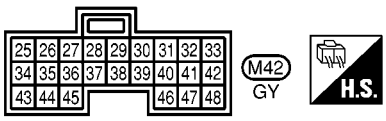
BL-MULTI-02



MKWA0114E

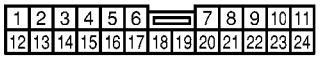
BL-MULTI-03





M42
GY

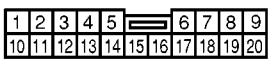
H.S.



M87
W

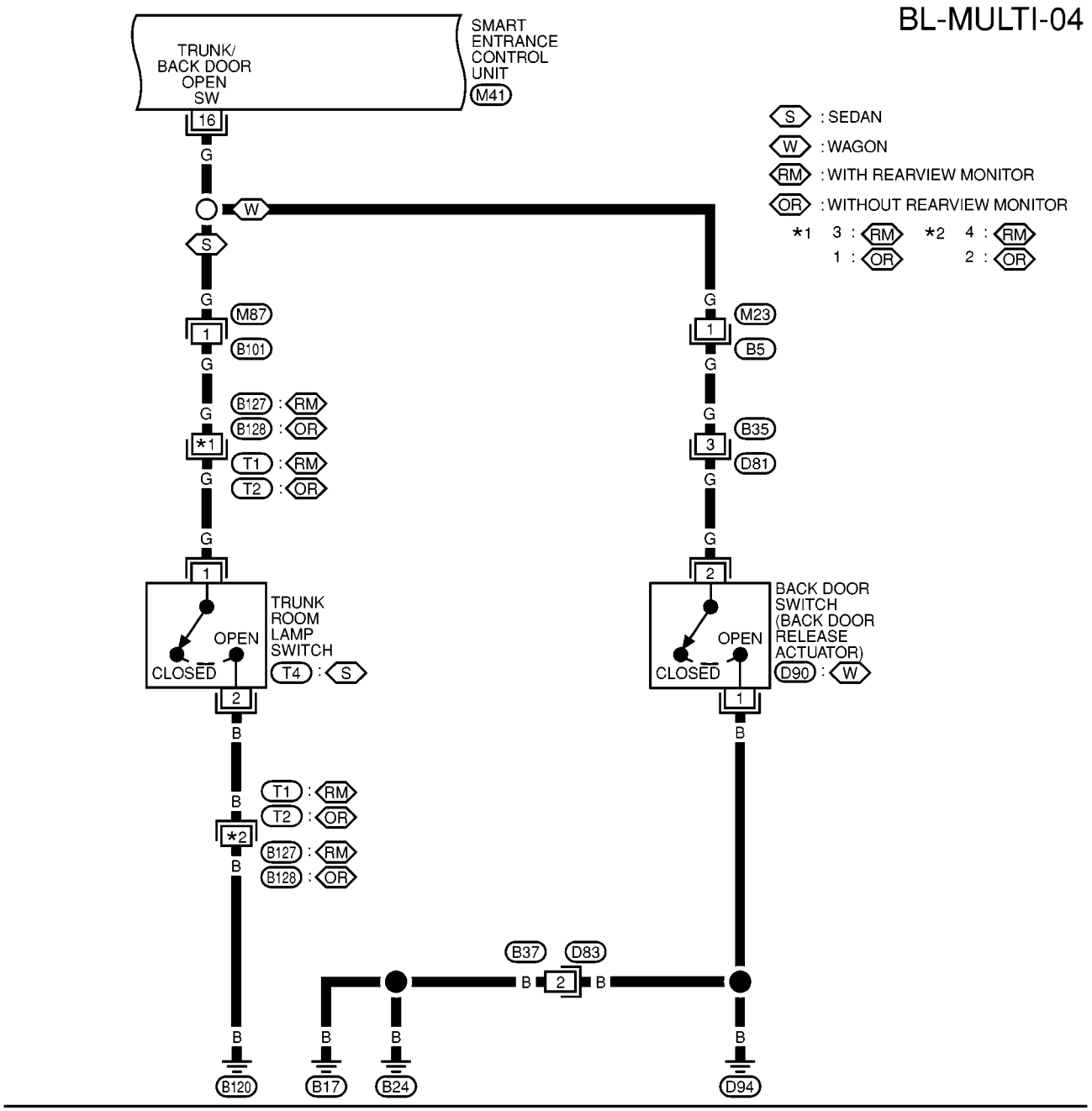
B16 , B118
W W

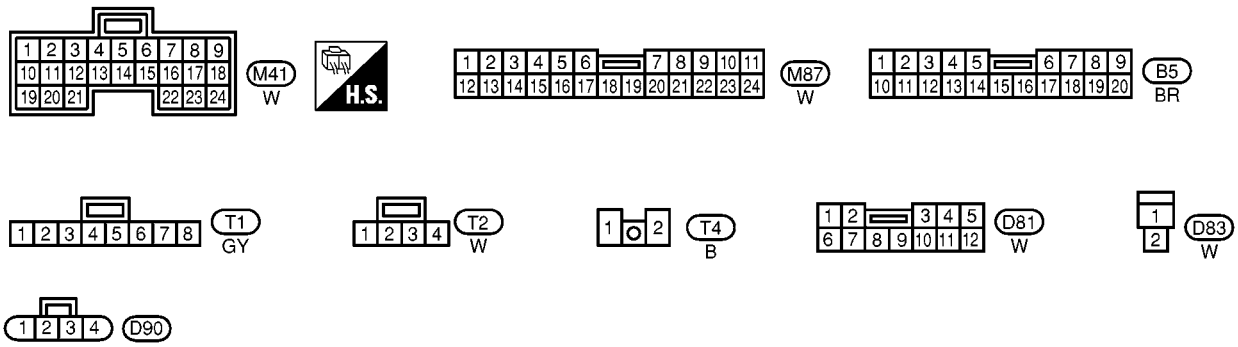
B23 , B125
W W



B5
BR

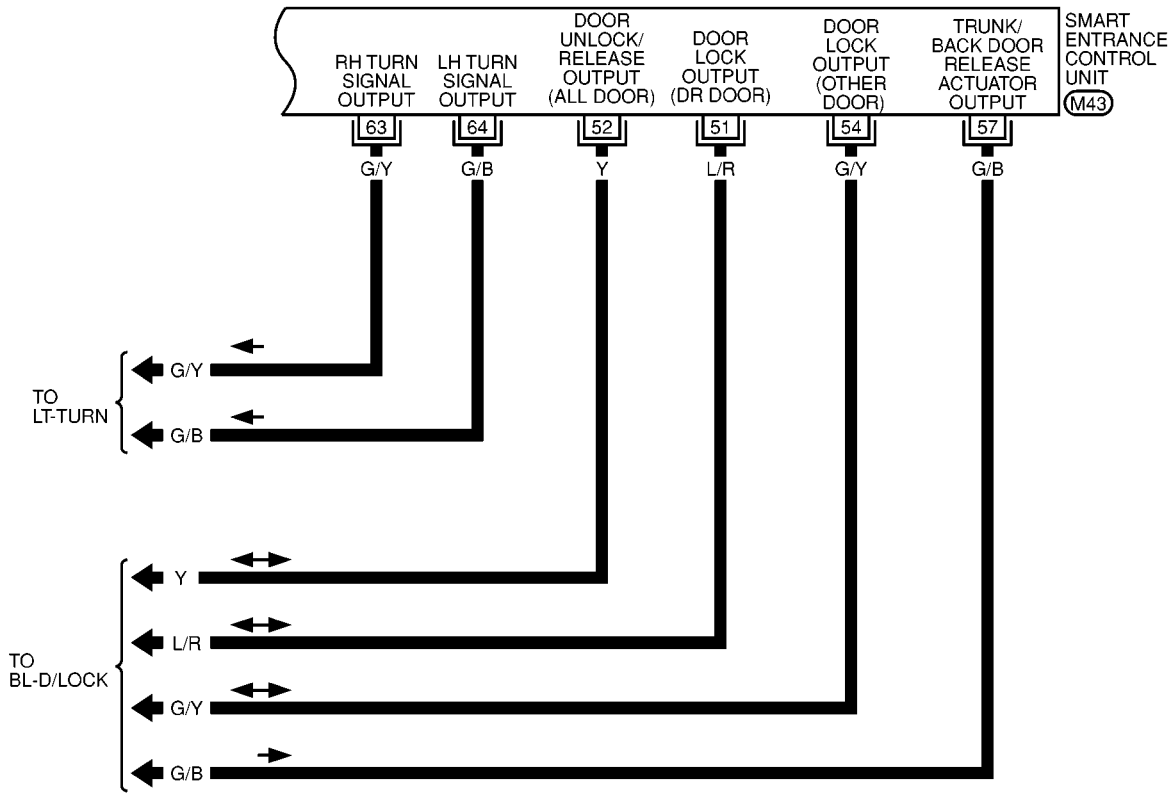
MKWA0115E

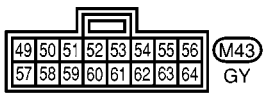

BL-MULTI-04
TRUNK/ BACK DOOR OPEN SW
SMART ENTRANCE CONTROL UNIT
M41
16
G
W
S
: SEDAN
: WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
*1 3 : RM 1 : OR
*2 4 : RM 2 : OR
M87
1
B101
M23
B5
B127 : RM
B128 : OR
*1
T1 : RM
T2 : OR
B35
3
D81
TRUNK ROOM LAMP SWITCH
OPEN
CLOSED
T4 : S
BACK DOOR SWITCH (BACK DOOR RELEASE ACTUATOR)
D90 : W
*2
B37
D83
B120
B17
B24
D94


M41
W
H.S.
M87
W
B5
BR
T1
GY
T2
W
T4
B
D81
W
D83
W
D90

MKWA0116E

BL-MULTI-05

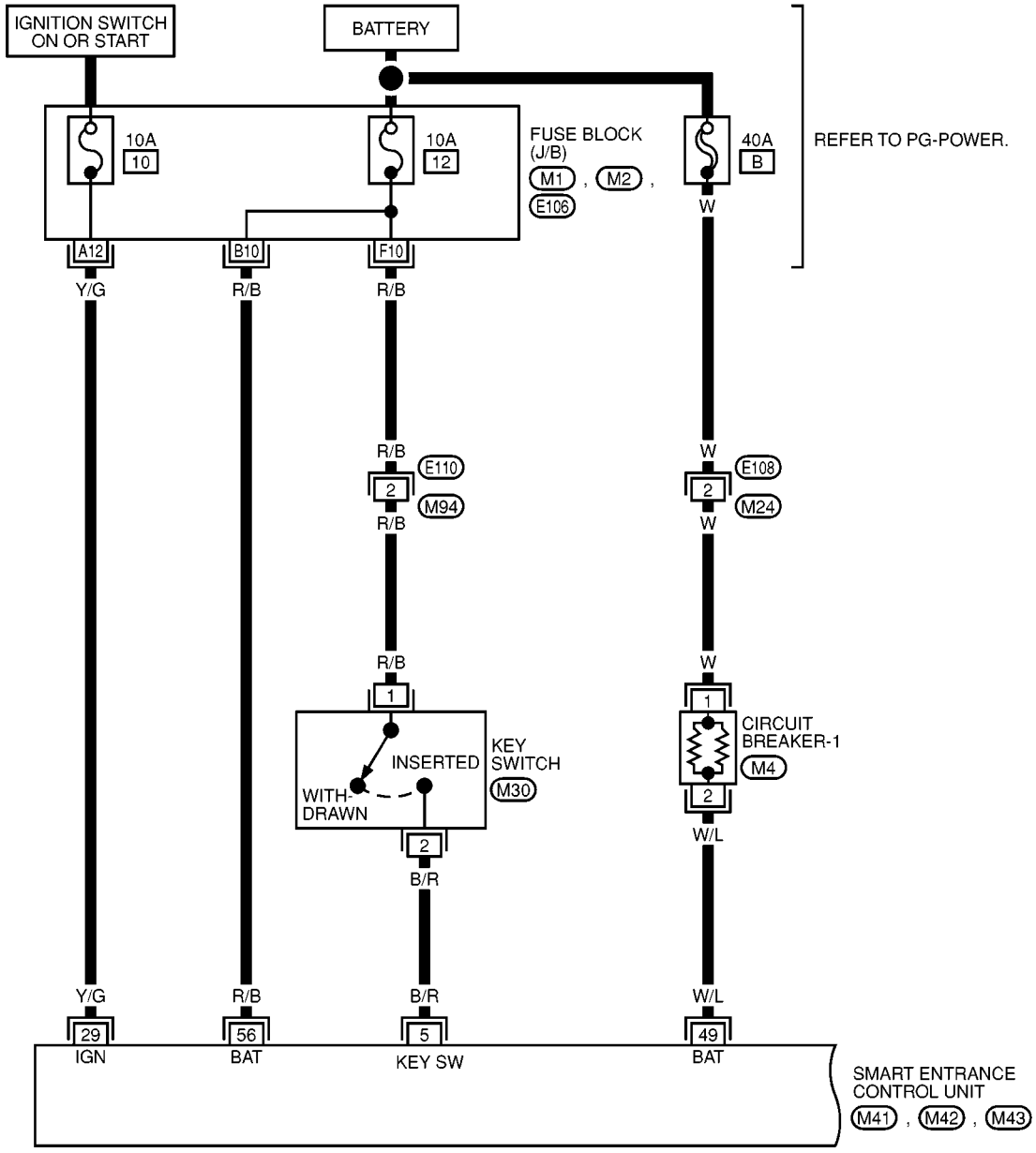


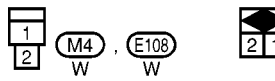


MKWA0117E

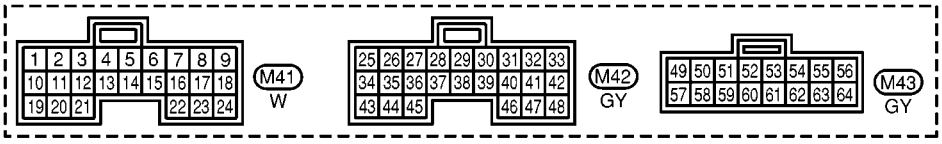
RHD MODELS

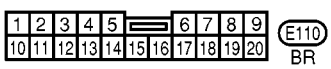
BL-MULTI-06



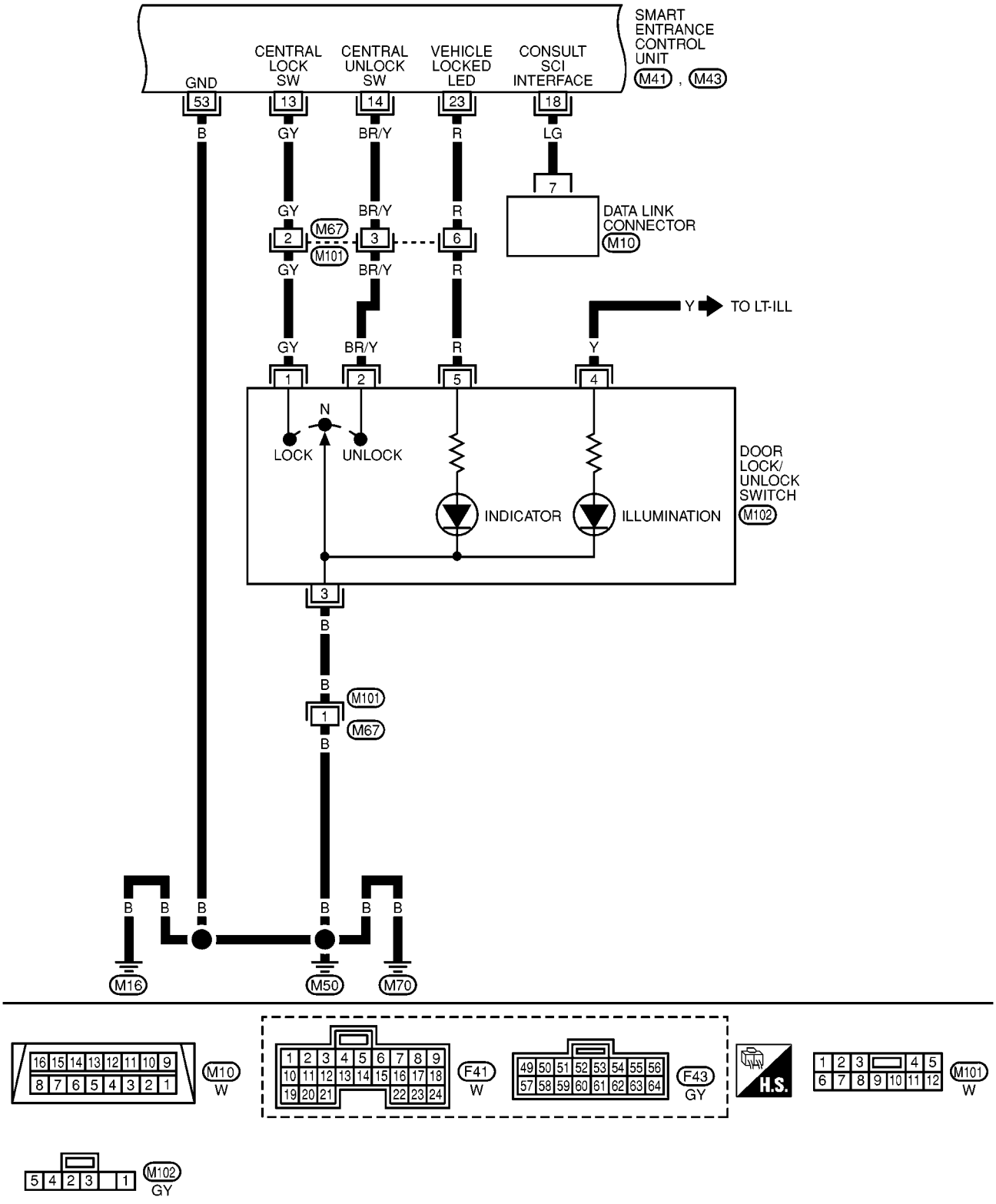


REFER TO THE FOLLOWING.
M1 , M2 , E106 -FUSE BLOCK-JUNCTION BOX (J/B)



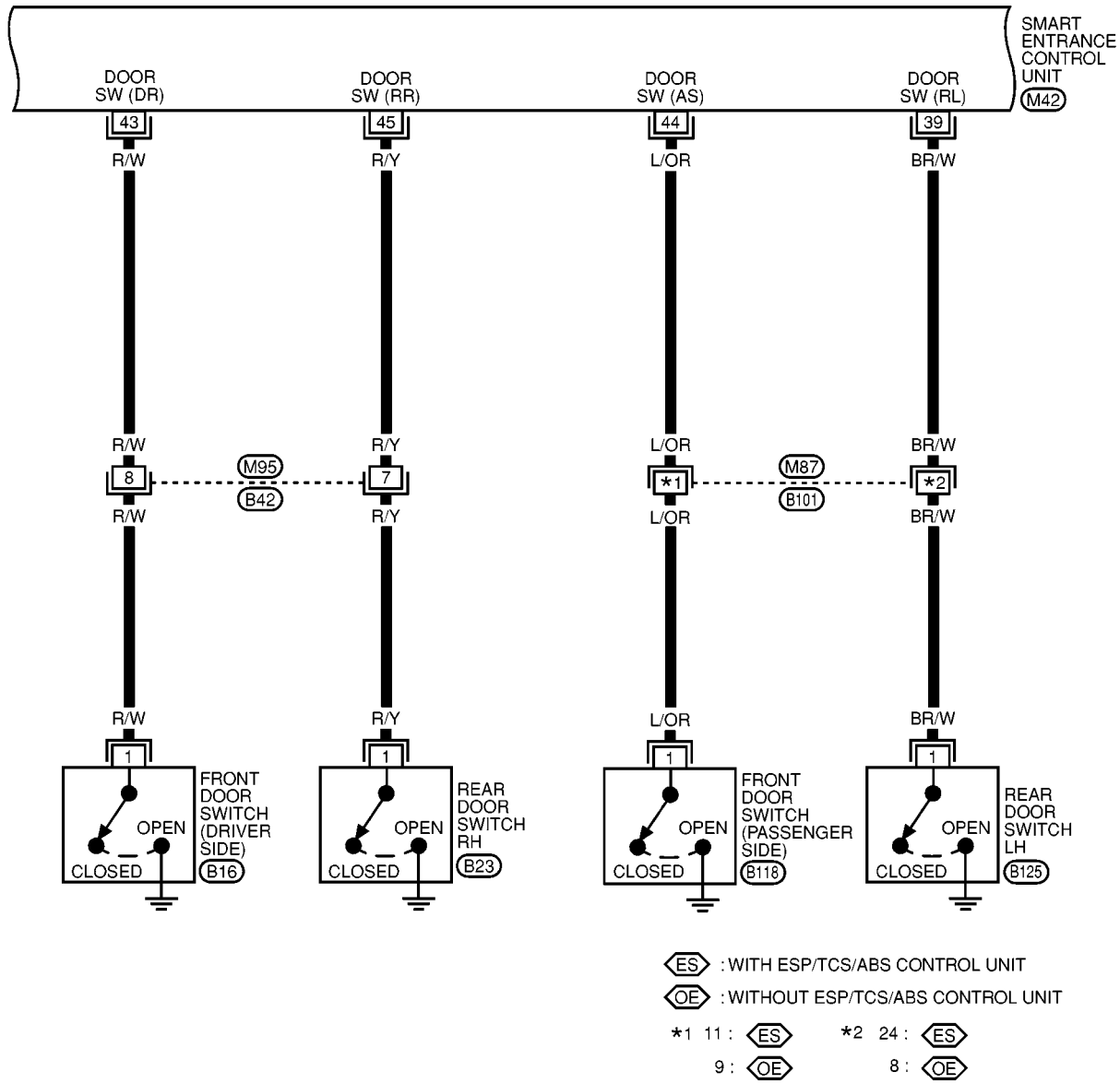


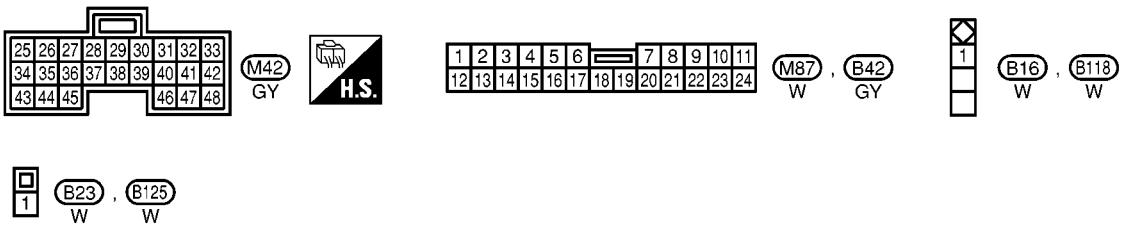
MKWA0118E


SMART ENTRANCE CONTROL UNIT
M41 , M43
GND
CENTRAL LOCK SW
CENTRAL UNLOCK SW
VEHICLE LOCKED LED
CONSULT SCI INTERFACE
53
13
14
23
18
B
GY
BR/Y
R
LG
7
DATA LINK CONNECTOR
M10
M67
M101
2
3
6
1
5
4
Y
TO LT-ILL
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M102
M16
M50
M70
M10
W
F41
W
F43
GY
H.S.
M101
W
M102
GY

MKWA0119E

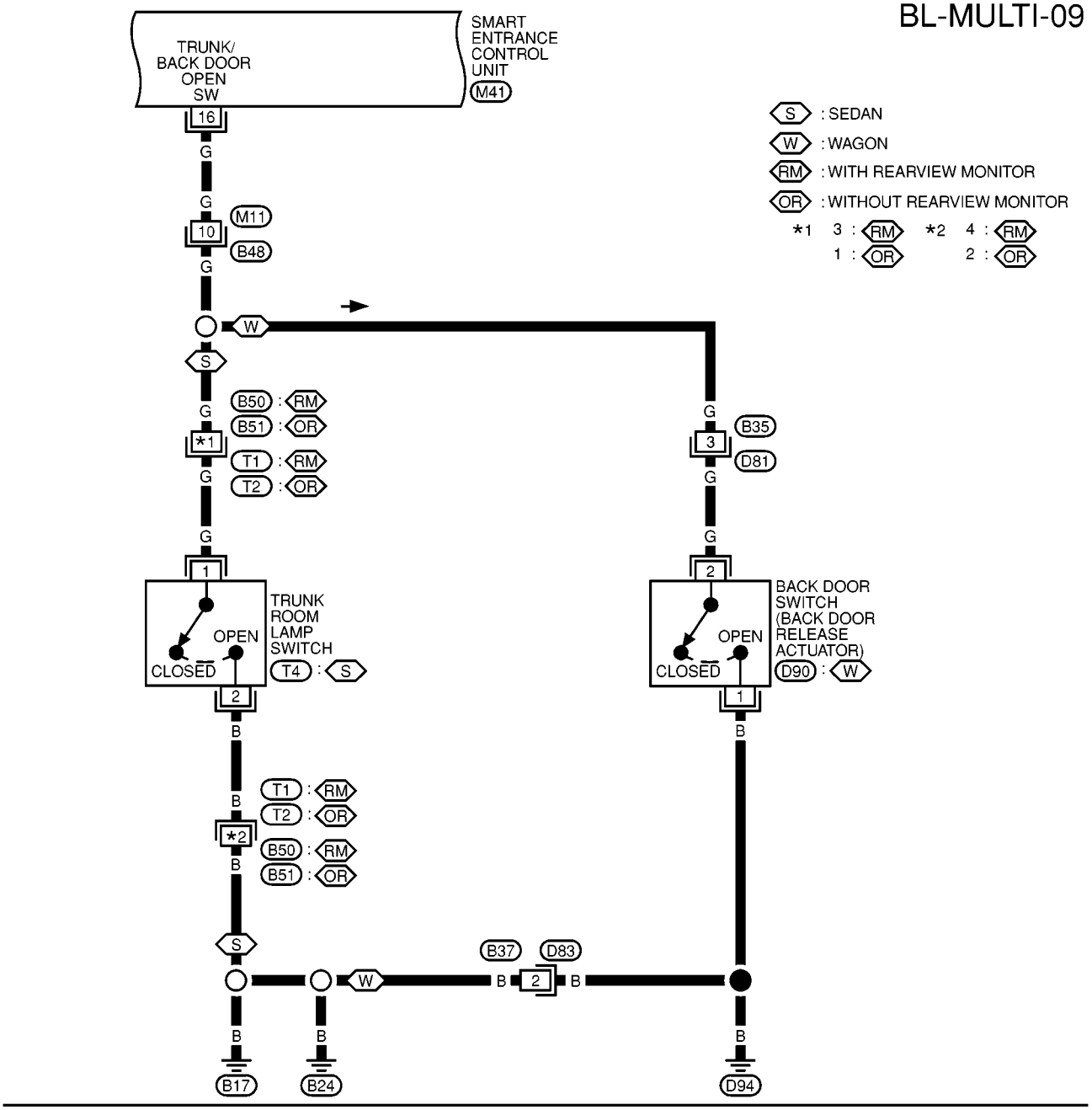
BL-MULTI-08

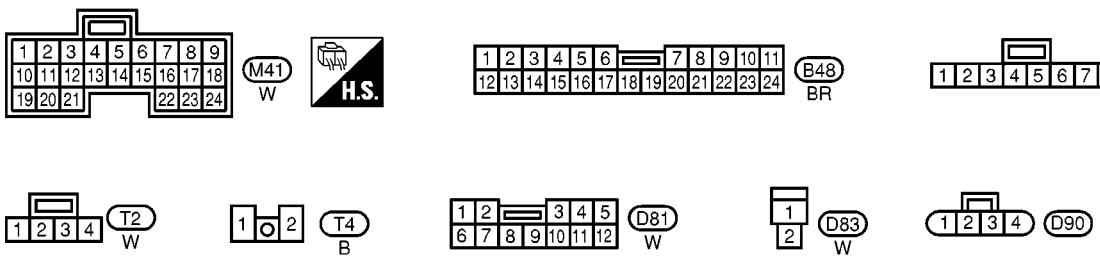




MKWA0120E

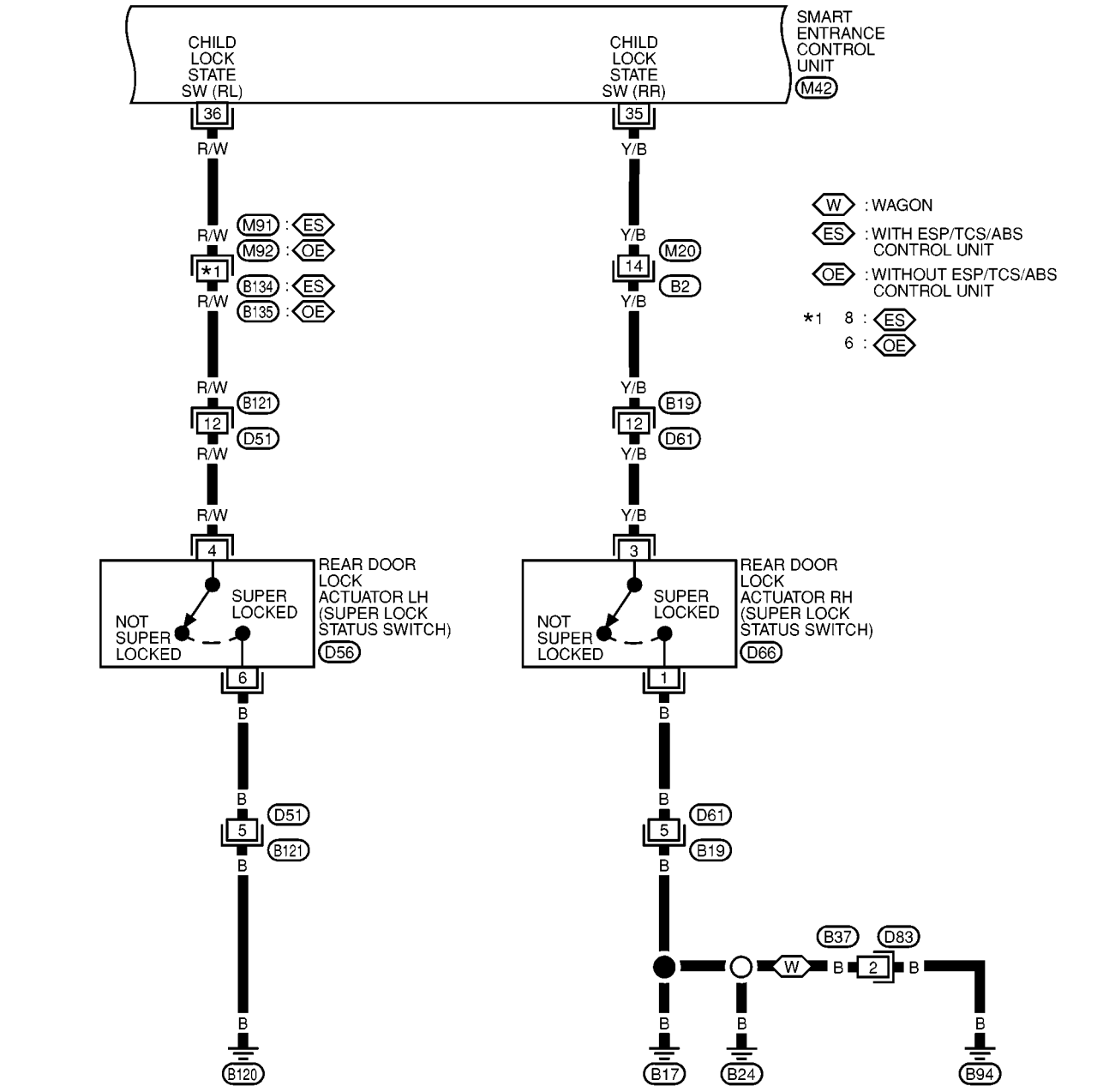
BL-MULTI-09

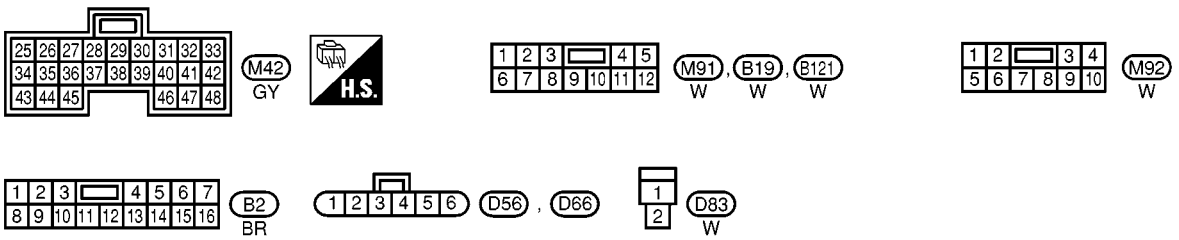




MKWA0121E

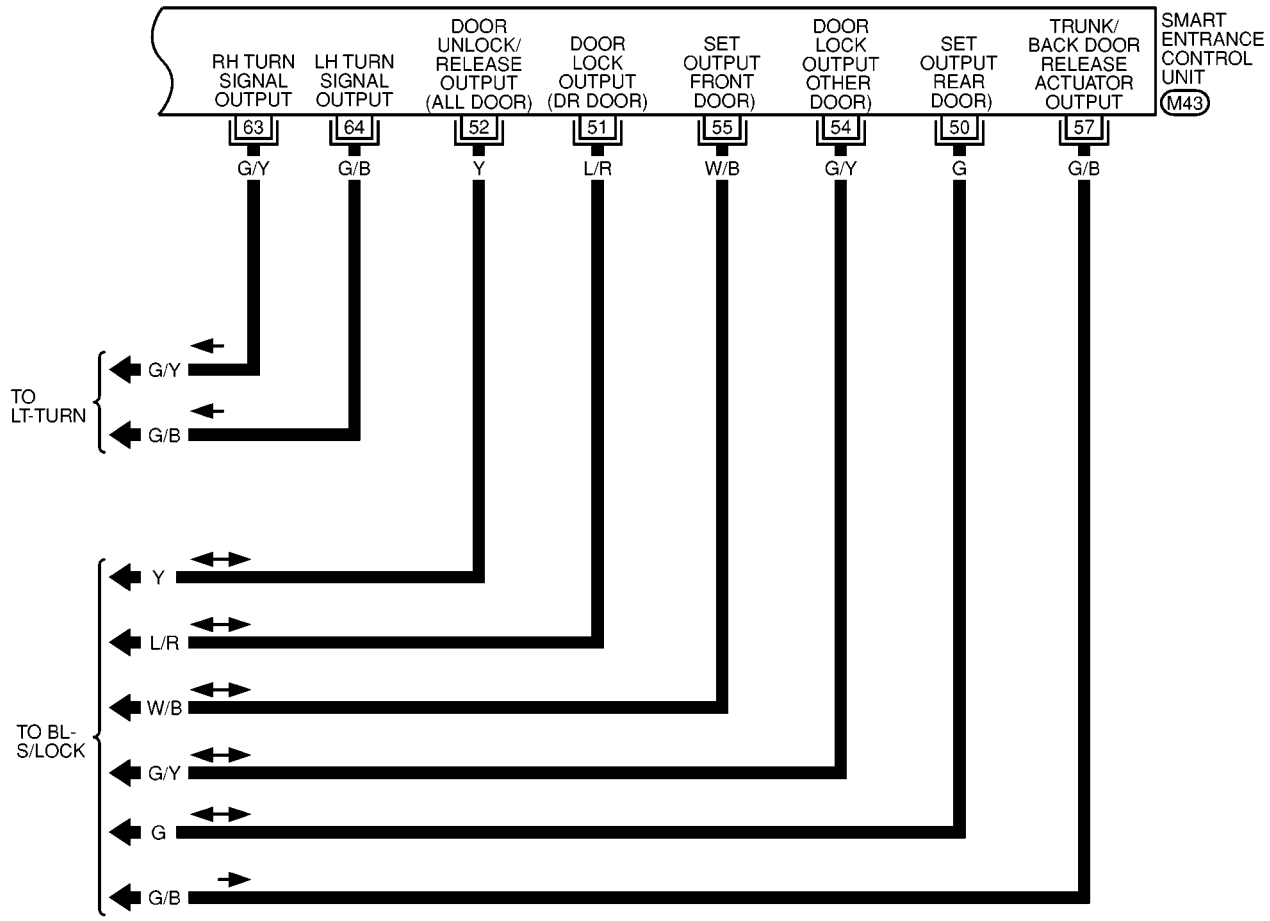
BL-MULTI-10

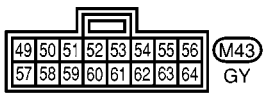




MKWA0122E

BL-MULTI-11





MKWA0123E

Terminal and Reference Value for Smart Entrance Control Unit

EIS002OL

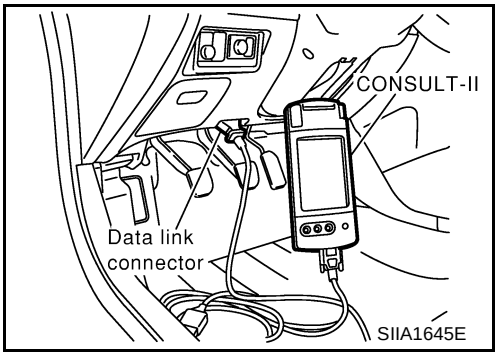
TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (Approximate values)
5	B/R	Key switch	Key inserted (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0V
13	GY	Door lock/unlock switch (Lock signal)	Lock operation (ON)	0V
			Other than above (OFF)	5V
14	BR/Y	Door lock/unlock switch (Unlock signal)	Unlock operation (ON)	0V
			Other than above (OFF)	5V
16	G	Trunk room lamp switch (Back door switch)	Trunk (Back door) open (ON) → close (OFF)	0V → Battery voltage
19	BR/W	External trunk or back door release switch	OFF → ON	5V → 0V
20	BR	Power window main switch (Trunk or back door release switch)	OFF → ON	5V → 0V
23	R	Door lock/unlock switch indicator	Goes OFF→ Illuminates (Ignition switch ON and all door closed)	0V → Battery voltage
29	Y/G	IGN power supply	—	Battery voltage
35	Y/B	Super lock status switch (Rear door RH side)	Super locked → Not super locked	0V → 5V
36	R/W	Super lock status switch (Rear door LH side)	Super locked → Not super locked	0V → 5V
39	BR/W	Rear door switch RH (LHD models)	Door open (ON) → close (OFF)	0V → Battery voltage
		Rear door switch LH (RHD models)		
43	R/W	Driver door switch	Door open (ON) → close (OFF)	0V → Battery voltage
44	L/OR	Passenger door switch	Door open (ON) → close (OFF)	0V → Battery voltage
45	R/Y	Rear door switch LH (LHD models)	Door open (ON) → close (OFF)	0V → Battery voltage
		Rear door switch RH (RHD models)		
49	W/L	Power source (PTC)	—	Battery voltage
50	G	Super lock actuator set (Rear door)	Driver's door key cylinder Lock operation (Set)	0V → 12V
51	L/R	Door lock actuator lock (ALL Door)	Door lock/unlock switch LOCK operation	0V → 12V
52	Y	Door lock actuator unlock (Driver side)	Door lock/unlock switch Unlock operation	0V → 12V
53	B	Ground	—	0V
54	G/Y	Door lock actuator lock (Passenger and rear LH, RH side)	Door lock/unlock switch LOCK operation	0V → 12V
55	W/B	Super lock actuator set (Front door)	Driver's door key cylinder Lock operation (Set)	0V → 12V
56	R/B	BAT power supply	—	Battery voltage
57	G/B	Trunk (Back door) release actuator	Power window main switch (Trunk or back door release switch) OPEN operation	Battery voltage → 0V

TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (Approximate values)
63	G/Y	Hazard reminder (Turn signal lamp RH)	When door lock or unlock operated using remote controller (ON → OFF)	0V → Battery voltage
64	G/B	Hazard reminder (Turn signal lamp LH)	When door lock or unlock operated using remote controller (ON → OFF)	0V → Battery voltage

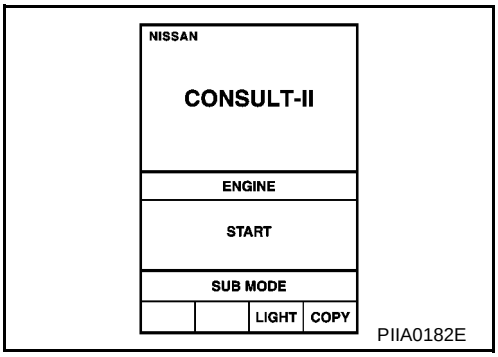
CONSULT- II Inspection Procedure

EIS002OM

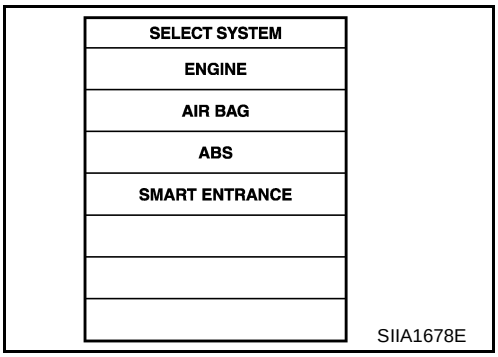
1. Turn ignition switch “OFF”.
2. Connect CONSULT-II to the data link connector.



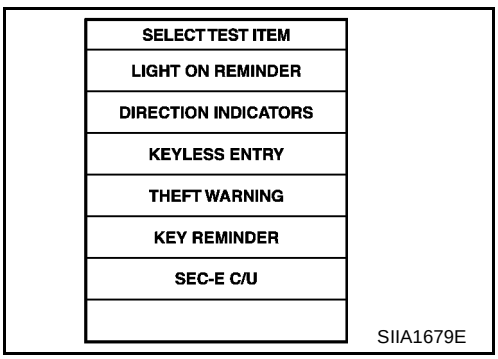
3. Turn ignition switch “ON”.
4. Touch “START”.



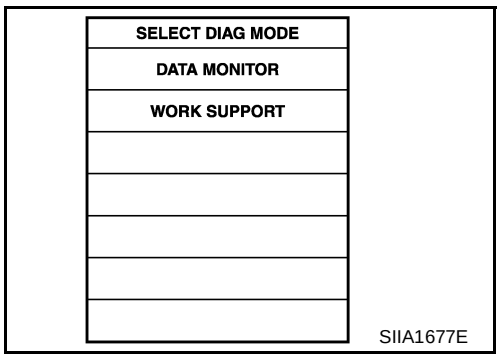
5. Touch “SMART ENTRANCE”.



6. Touch “KEYLESS ENTRY”.



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



CONSULT- II Application Items

EIS002ON

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch in ON position.
TRUNK OPEN SW	Indicates [ON/OFF] condition of trunk room lamp switch (sedan) or back door switch (wagon).
RKE LOCK	Indicates [ON/OFF] condition of lock signal from remote controller.
RKE UNLOCK	Indicates [ON/OFF] condition of unlock signal from remote controller.
RKE SEL UNLOCK	Indicates [ON/OFF] condition of select unlock signal from remote controller.
RKE TRUNK REL	Indicates [ON/OFF] condition of trunk (sedan) or back door (wagon) open signal from trunk or back door release switch.
BATTERY CHECK	Indicates [OK/NG] condition of remote controller battery.

WORK SUPPORT

Test Item	Description
KEYLESS CHECK	It can be checked whether remote controller ID code is registered or not in this mode.
KEYLESS REGISTRATION	Remote controller ID code can be registered.
KEYLESS DI FLASH	This mode can be setting remote controller function.

Trouble Diagnoses

EIS002KT

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trounble diagnosis. Refer to BCS-33, "CONSULT-II INSPECTION PROCEDURE" .

NOTE:

- Always check remote controller battery before replacing remote controller.

SYMPTOM CHART

Symptom	Diagnoses/service procedure	Reference page
All function of multi-remote control system do not operate.	Remote controller battery check	BL-99
	Power supply and ground circuit for smart entrance control unit check	BL-99
	.If above systems are OK, replace smart entrance control unit.	—
The new ID of remote controller cannot be entered.	Remote controller battery check	BL-99
	Key switch check	BL-105
	Door switch check	BL-100
	Power supply and ground circuit check	BL-99
	If above systems are OK, replace smart entrance control unit.	—
Door lock or unlock does not function.	If the power door lock system does not operate manually, check power door lock system.	BL-25
	Remote controller battery check	BL-99
	If above systems are OK, replace smart entrance control unit.	—

Symptom	Diagnoses/service procedure	Reference page
Hazard reminder does not activate properly when pressing lock or unlock button of remote controller.	Remote controller battery check	BL-99
	Hazard reminder check	BL-106
	If above systems are OK, replace smart entrance control unit.	—

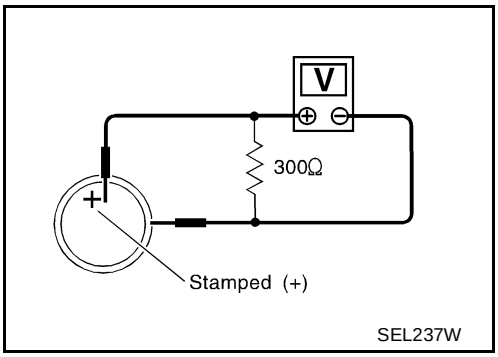
Remote Controller Battery Check

EIS002KU

1. CHECK REMOTE CONTROLLER BATTERY

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

Voltage : 2.5V – 3.0V



SEL237W

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

OK or NG?

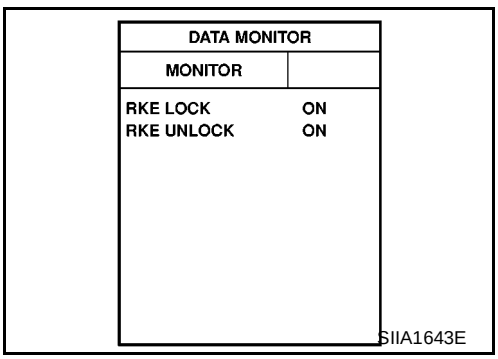
OK >> GO TO 2
NG >> Replace battery. Refer to BL-110, "Remote Controller Battery Replacement" .

2. CHECK REMOTE CONTROLLER FUNCTION

With CONSULT-II

Check remote controller function (“RKE LOCK”, “RKE UNLOCK”) in “DATA MONITOR” mode with CONSULT-II.

Condition	Monitor item
Pushing LOCK button	RKE LOCK: ON
Pushing UNLOCK button	RKE UNLOCK: ON



SIIA1643E

OK or NG?

OK >> Remote controller is OK. Further inspection is necessary. Refer to BL-98, "Trouble Diagnoses" .
NG >> Replace remote controller.

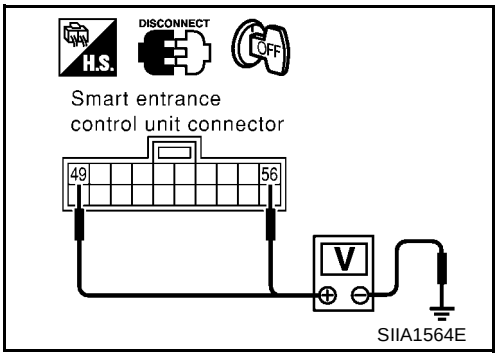
Power Supply and Ground Circuit Check

EIS002OF

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect smart entrance control unit connector.
3. Check voltage between smart entrance control unit harness connector M43 terminal 49(W/L), 56(R/B) and ground.

Terminal		Voltage
+	–	
49(W/L)	Ground	Battery voltage
56(R/B)		



SIIA1564E

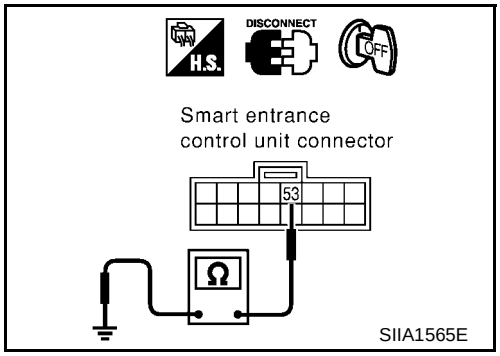
OK or NG?

OK >> GO TO 2
NG >> Check smart entrance control unit power supply circuit for open or short.

2. CHECK GROUND CIRCUIT

Check continuity between smart entrance control unit harness connector M43 terminal 53(B) and ground.

Terminal		Continuity
+	–	
53(B)	Ground	Yes



OK or NG?

OK >> Power supply and ground circuit is OK.
NG >> Check smart entrance control unit ground circuit for open or short.

Door Switch Check

EIS002OG

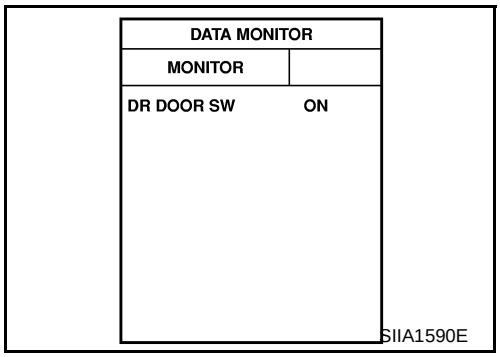
DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

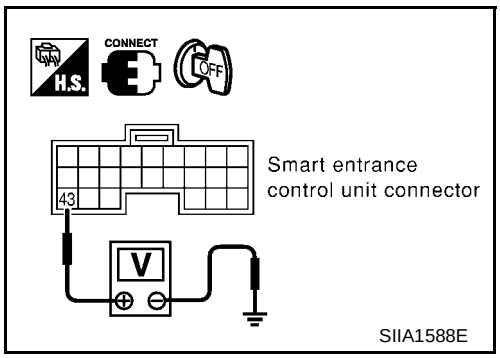
	Monitor item	Condition
DR DOOR SW	Front door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 43(R/W) and ground.

Terminal		Front door LH	Voltage
(+)	(–)		
43(R/W)	Ground	Closed	Approx. 5
		Open	0



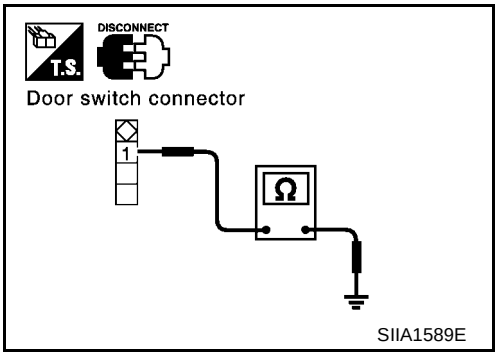
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch LH harness connector B16 terminal 1(R/W) and ground.

Terminal		Front door LH switch	Continuity
(+)	(–)		
1(R/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Front door switch LH ground condition
- Harness for open or short between smart entrance control unit and front door switch LH

NG >> Replace front door switch LH.

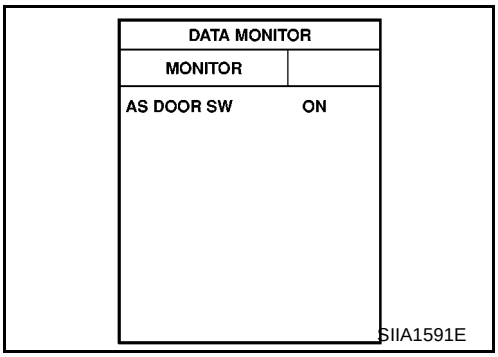
PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

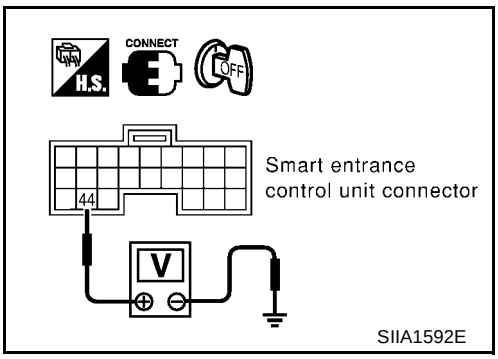
	Monitor item	Condition
AS DOOR SW	Front door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 44(L/OR) and ground.

Terminal		Front door RH	Voltage
(+)	(–)		
44(L/OR)	Ground	Closed	Approx. 5
		Open	0



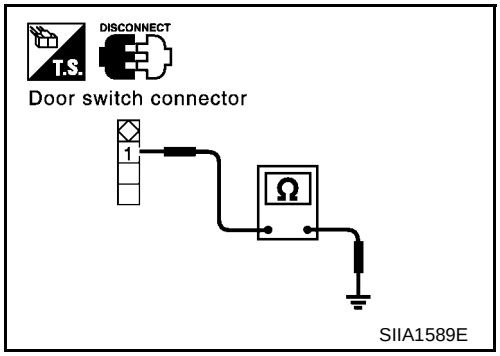
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch RH harness connector B118 terminal 1(L/OR) and ground.

Terminal		Front door RH switch	Continuity
(+)	(–)		
1(L/OR)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Front door switch RH ground condition
- Harness for open or short between smart entrance control unit and front door switch RH

NG >> Replace front door switch RH.

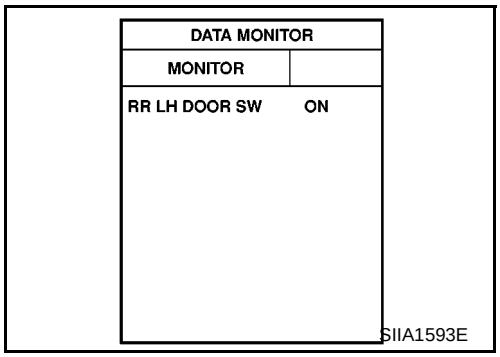
REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

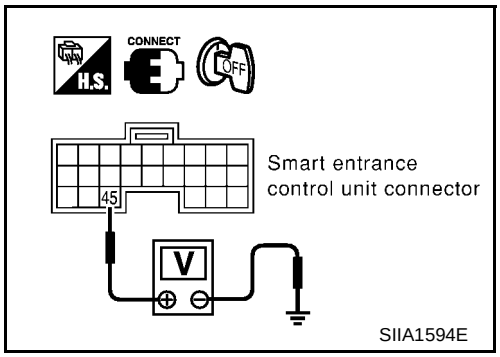
	Monitor item	Condition
RR LH DOOR SW	Rear door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 45(R/Y) and ground.

Terminal		Rear door LH	Voltage
(+)	(–)		
45(R/Y)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

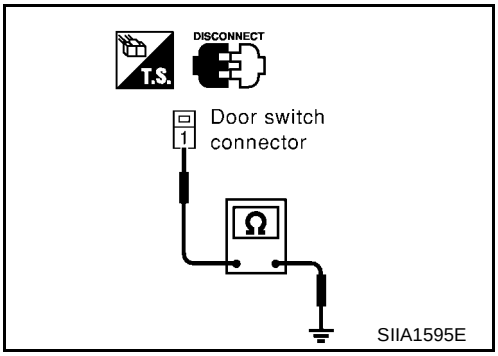
OK >> Door switch is OK.

NG >> GO TO 2

2. CHECK DOOR SWITCH

Check continuity between rear door switch LH harness connector B23 terminal 1(R/Y) and ground.

Terminal		Rear door LH switch	Continuity
(+)	(–)		
1(R/Y)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch LH ground condition
- Harness for open or short between smart entrance control unit and rear door switch LH

NG >> Replace rear door switch LH.

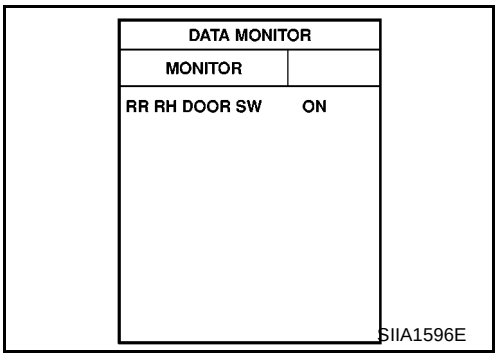
REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

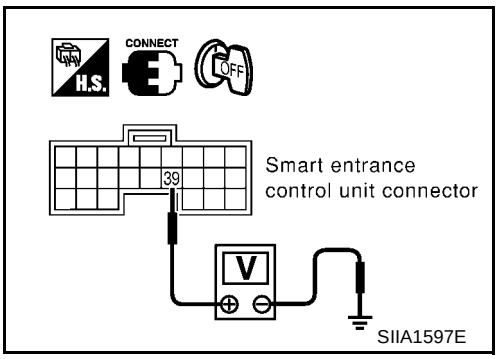
	Monitor item	Condition
RR RH DOOR SW	Rear door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 39(BR/W) and ground.

Terminal		Rear door RH	Voltage
(+)	(–)		
39(BR/W)	Ground	Closed	Approx. 5
		Open	0



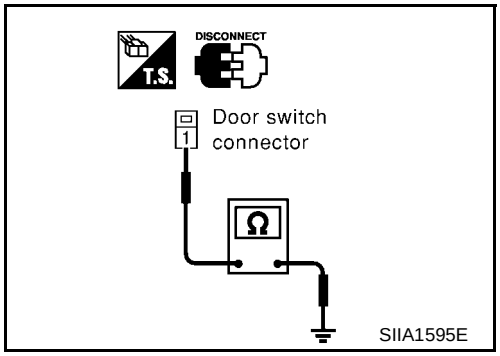
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch RH harness connector B125 terminal 1(BR/W) and ground.

Terminal		Rear door RH switch	Continuity
(+)	(–)		
1(BR/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.

- Rear door switch RH ground condition
- Harness for open or short between smart entrance control unit and rear door switch RH

NG >> Replace rear door switch RH.

Key Switch Check

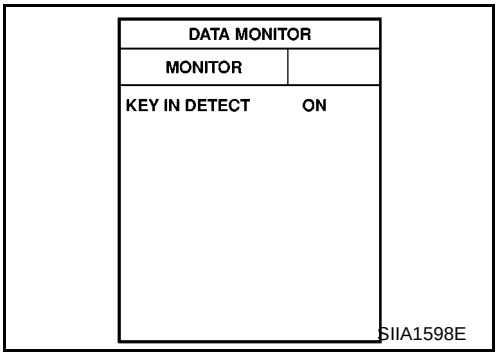
EIS002OH

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

When key is inserted in ignition key cylinder:
KEY IN DETECT ⇒ ON
When key is removed from ignition key cylinder:
KEY IN DETECT ⇒ OFF



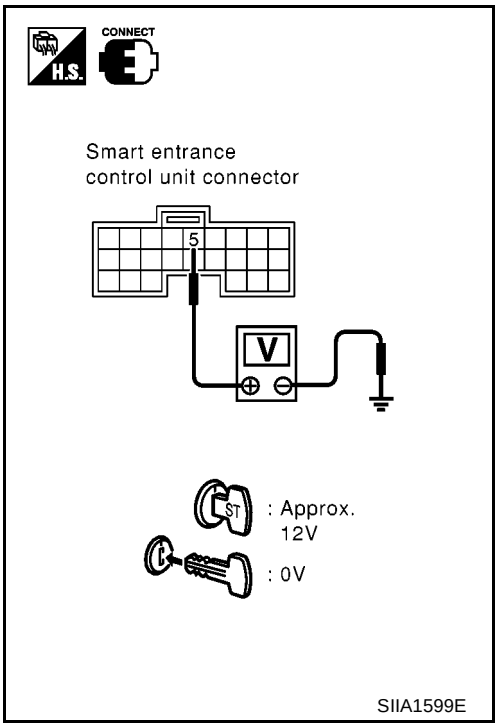
Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 5(B/R) and ground.

Terminals		Key switch	Voltage
+	–		
5(B/R)	Ground	Key is inserted	Approx. 12
		Key is removed	0

OK or NG?

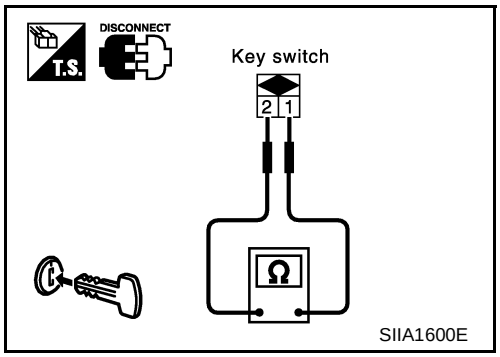
OK >> Key switch is OK.
NG >> GO TO 2



2. CHECK KEY SWITCH (INSERT)

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

Terminals	Key switch	Continuity
1 – 2	Key is inserted	Yes
	Key is removed	No



OK or NG?

OK >> Check the following.
- 10A fuse [No. 12, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between smart entrance control unit and key switch

NG >> Replace key switch.

Hazard Reminder Check

EIS002KZ

1. CHECK HAZARD WARNING LAMP

Check if hazard warning lamp flashes with hazard switch.

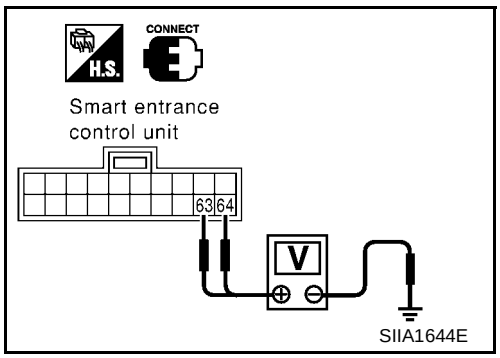
Does hazard warning lamp operate?

Yes >> GO TO 2
No >> Check hazard warning lamp circuit.

2. CHECK HAZARD REMINDER OPERATION

Check the following at when push the remote controller switch.
Check voltage between smart entrance control unit harness connector M43 terminal 63, 64 and ground.

Remote controller	Voltage (Approximate values)
Pushing LOCK button	0V → 12V → 0V
Pushing UNLOCK button	0V → 12V → 0V → 12V → 0V



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and hazard switch.
NG >> Replace smart entrance control unit.

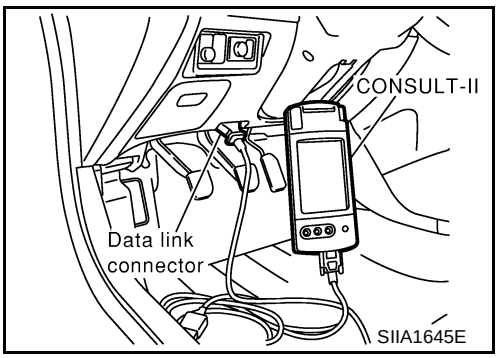
ID Code Entry Procedure

EIS002OO

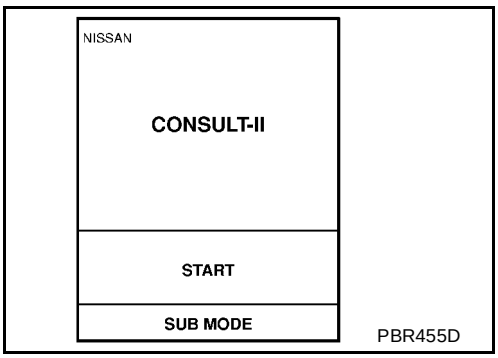
REMOTE CONTROLLER ID SET UP WITH CONSULT-II

NOTE:
If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. When the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.

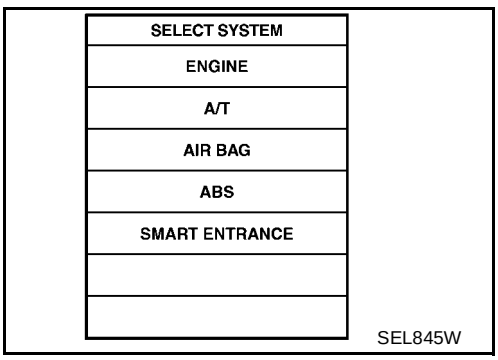
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



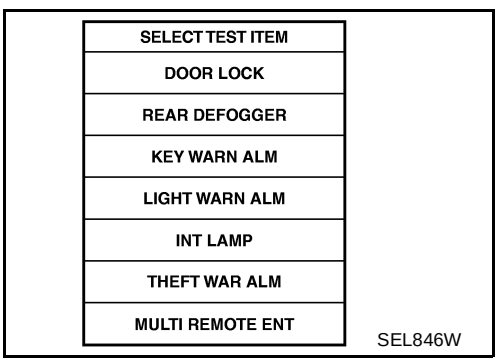
3. Turn ignition switch “ON”.
4. Touch “START”.



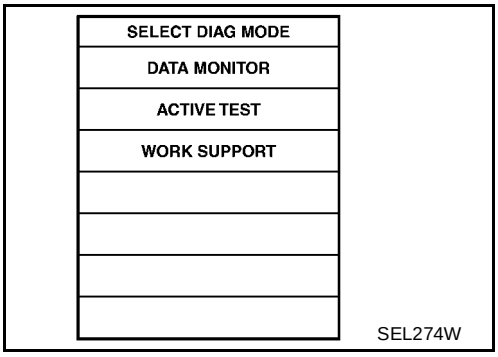
5. Touch “SMART ENTRANCE”.



6. Touch “KEYLESS ENTRY”.

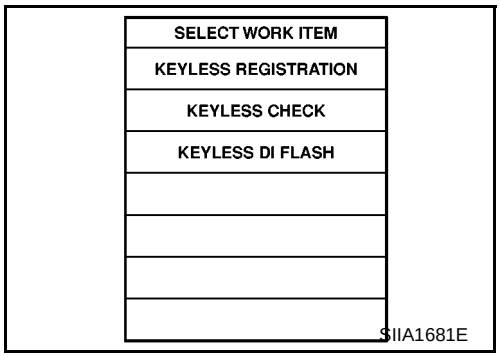


7. Touch “WORK SUPPORT”.



8. The items are shown on the figure at left can be set up.
   - “KEYLESS CHECK”
     Use this mode to confirm if a remote controller ID code is registered or not.
   - “KEYLESS REGISTRATION”
     Use this mode to register a remote controller ID code.

   NOTE:
   Register the ID code when remote controller or smart entrance control unit is replaced, or when additional remote controller is required.
   - “KEYLESS DI FLASH”
     This mode can be setting remote controller function.



REMOTE CONTROLLER ID SET UP WITHOUT CONSULT- II

Activation of the registration mode:

The vehicle must have been unlocked by either the multi-remote controller or a transponder OK signal (TPOK) from the vehicle's immobilizer.
Preparation:
- Make sure all doors unlock.
- Make sure all multi-remote controllers to be registered are available.
- Make sure the batteries of all multi-remote controllers are in a good condition.
- Make sure all transmitting sources are out of the neighbourhood of the vehicle.
- Make sure the battery of the vehicle is in a good condition.

↓

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

↓

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

↓ OK

Proceed with the registration mode.

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

Registration mode

Press and hold the "UNLOCK" button of the multi-remote controller.

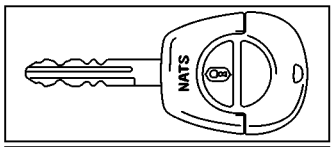
↓

Press the "LOCK" button 3 times.

↓

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

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



NG → (Press and hold the "UNLOCK" button of the multi-remote controller.)

Do you want to register another multi-remote controller? (max. 4)
(If 4 controllers have been registered, you should turn the ignition switch to the ON position.)

OK ←

No ↓

Yes → (Press and hold the "UNLOCK" button of the multi-remote controller.)

Turn the ignition switch to the ON position.

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

OK ↓

NG → (Press and hold the "UNLOCK" button of the multi-remote controller.)

Take the ignition key out of the ignition switch and confirm the functioning of all multi-remote controllers by locking and unlocking the vehicle with each of the multi-remote controllers.

↓

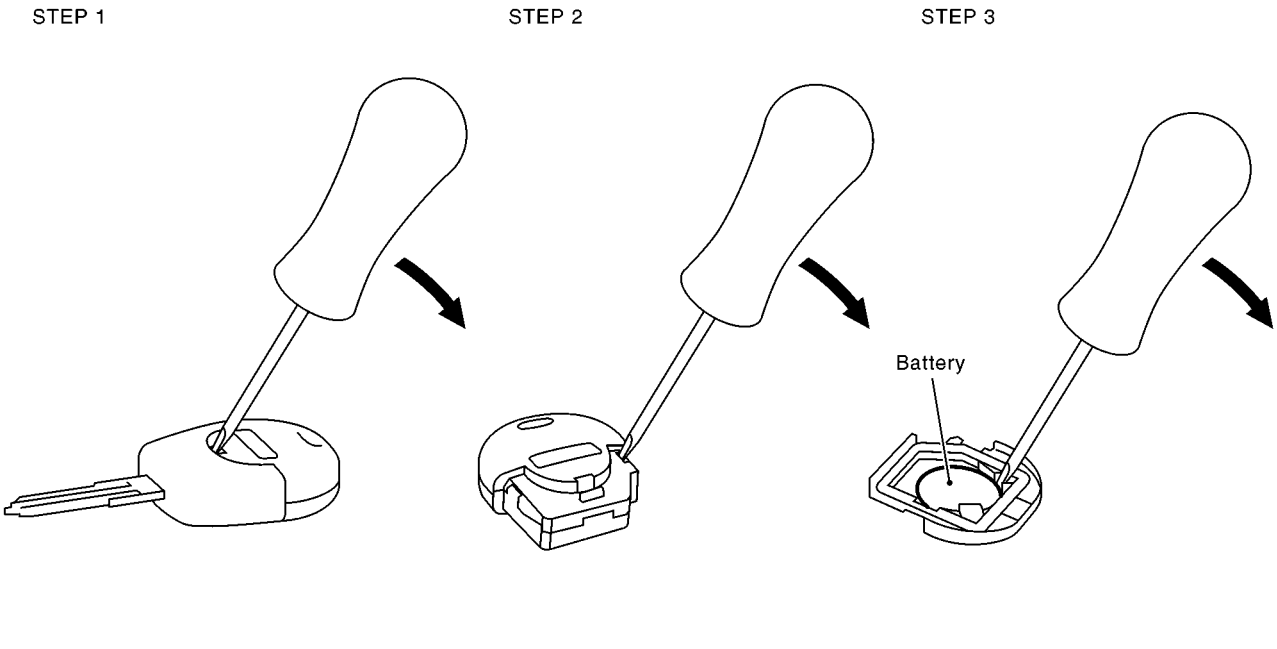
End

SEL497X

Remote Controller Battery Replacement

EIS002OP

NOTE:
- **Be careful not to touch the circuit board or battery terminal.**
- **The remote controller is water-resistant. However, if it does get wet, immediately wipe it dry.**
- **Push the remote controller button two or three times to check its operation after replacing battery.**

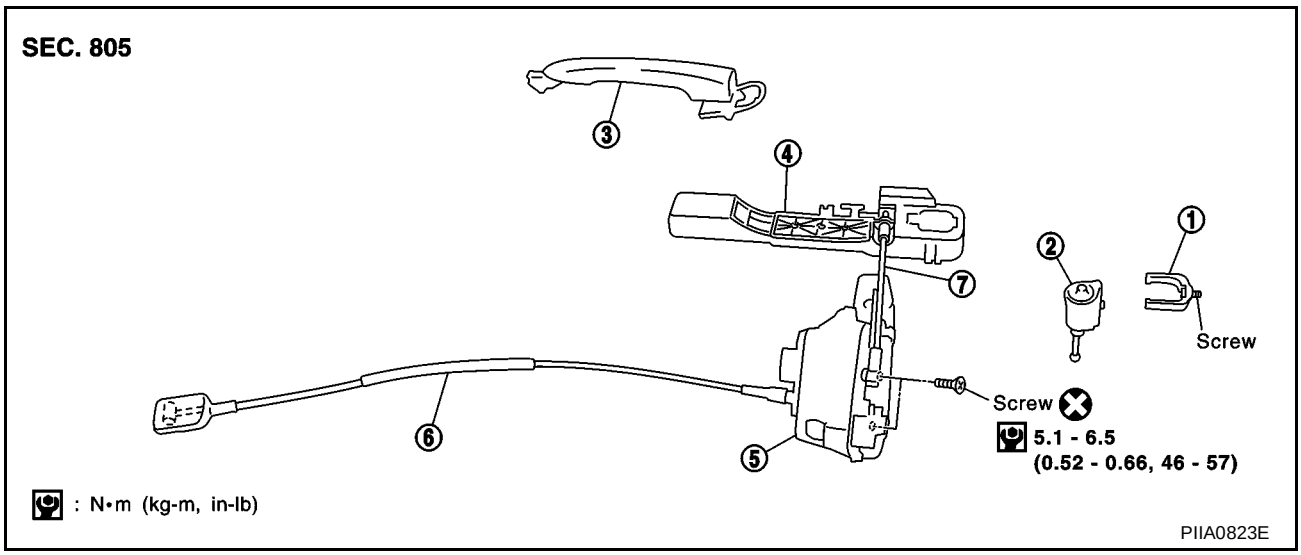


FRONT DOOR LOCK

PFP:80502

Component Parts

EIS002L4



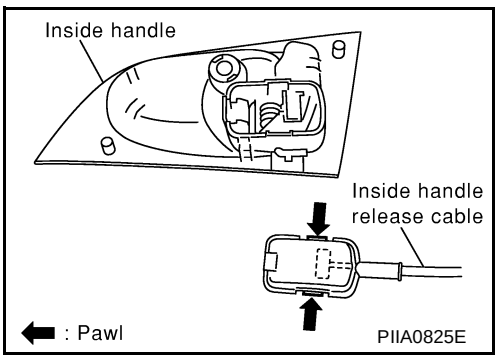
1 : Fixing bracket
2 : Key cylinder (Driver side)
3 : Door outside handle grip
4 : Door outside handle bracket
5 : Door lock assembly
6 : Inside handle release cable
7 : Outside handle release cable

Removal and Installation

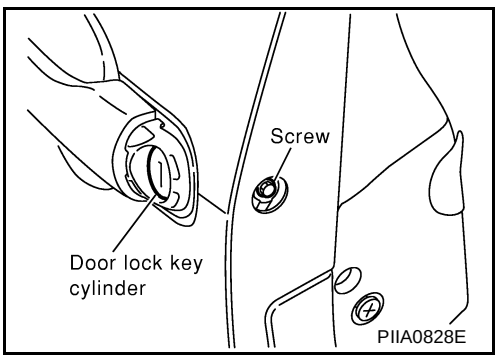
EIS002L6

REMOVAL

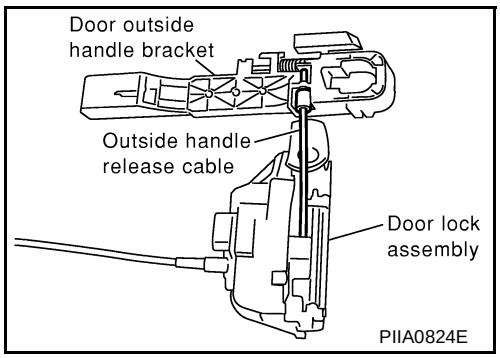
1. Remove door finisher. Refer to EI-22, "DOOR FINISHER" .
2. Remove front door glass. Refer to GW-74, "FRONT DOOR GLASS AND REGULATOR" .
3. Remove front door module assembly. Refer to GW-74, "FRONT DOOR GLASS AND REGULATOR" .
4. Disconnect inside release cable at the joint.



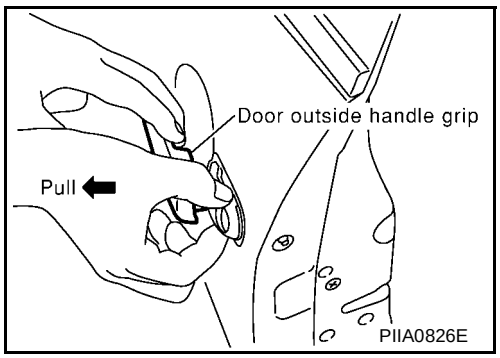
5. Remove front door lock key cylinder assembly mount screw.
6. Remove front door lock key cylinder cap (driver side).



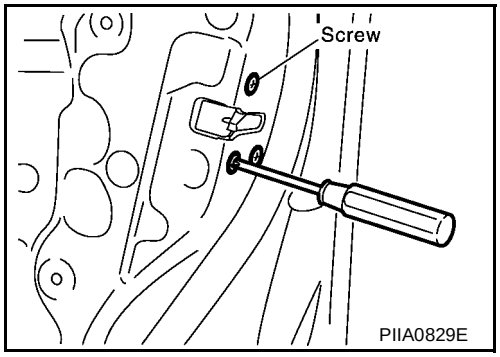
7. Working through the access hole, disconnect outside handle release cable (on the handle) at the joint.



8. Remove outside handle grip.
9. Remove outside handle bracket and front door lock key cylinder.



10. Disconnect door lock actuator connector.
11. Remove mount screw and remove door lock assembly through the access hole.



INSTALLATION

Install in the reverse order of removal.

NOTE:

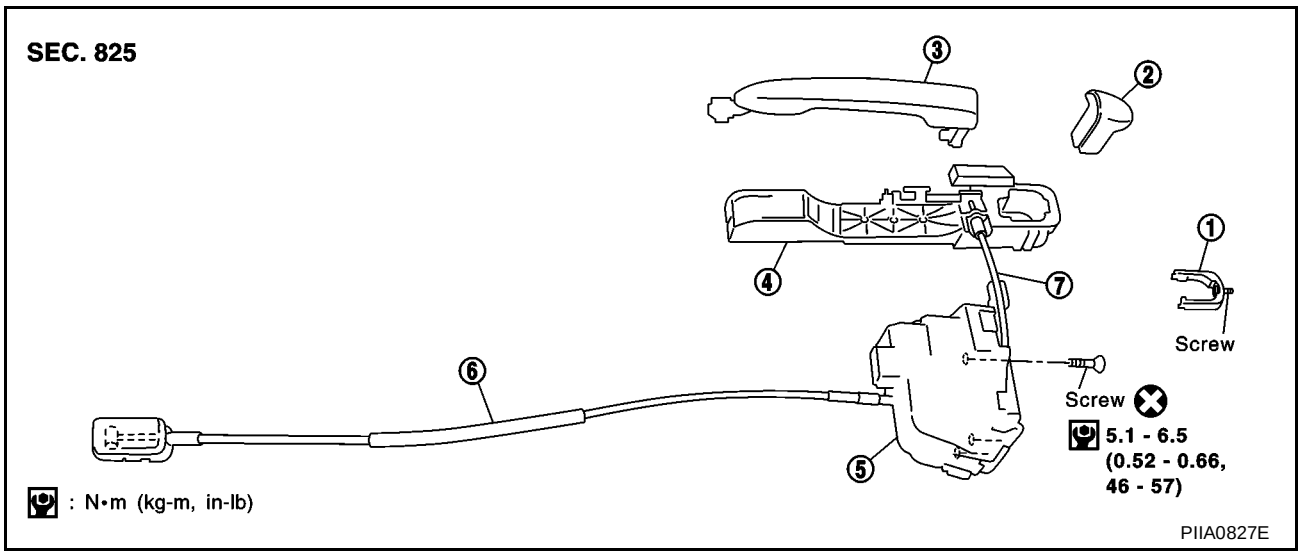
- Install the outside handle by pressing it forward and downward while tightening the bolts.

REAR DOOR LOCK

PFP:82502

Component Parts

EIS002L8



1 : Fixing bracket
2 : Door outside handle escutcheon
3 : Door outside handle grip
4 : Door outside handle bracket
5 : Door lock actuator assembly
6 : Inside handle release cable
7 : Outside handle release cable

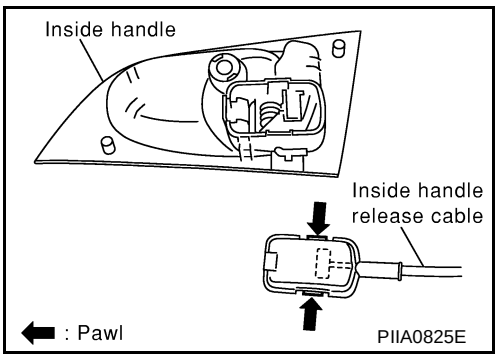
Removal and Installation

EIS002NA

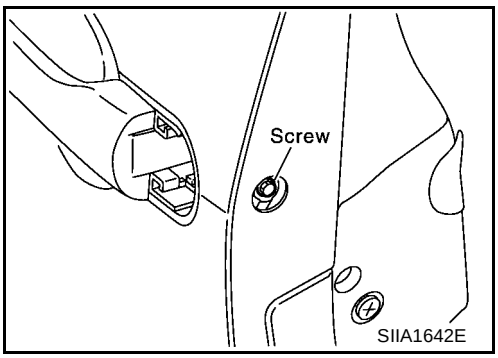
REMOVAL

1. Remove door finisher. Refer to EI-22, "DOOR FINISHER" .
2. Remove remove sealing screen.

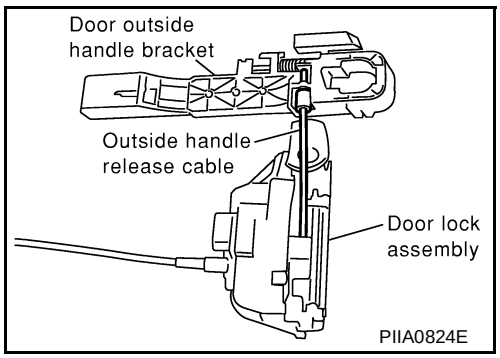
   NOTE:
   If sealing screen is reused, cut butyl tape in a way that leaves it on the sealing screen.
3. Remove rear door glass. Refer to GW-78, "REAR DOOR GLASS AND REGULATOR" .
4. Disconnect inside release cable at the joint.



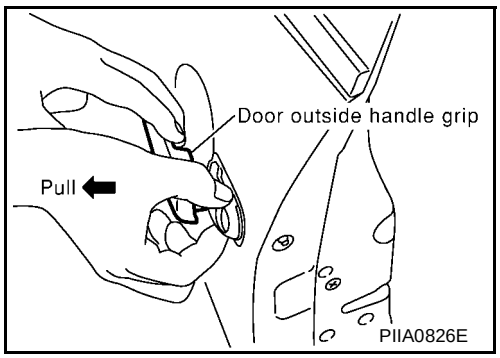
5. Remove mount screw and remove door out side handle escutcheon.



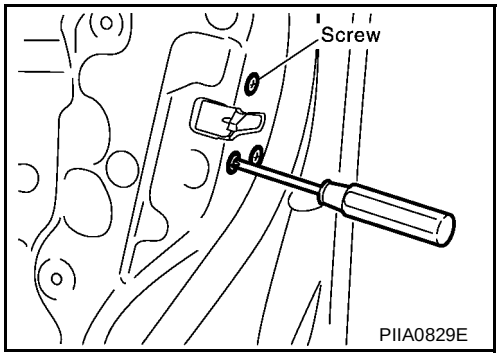
6. Working through the access hole, disconnect out side handle release cable (on the handle) at the joint.



7. Remove outside handle grip.
8. Remove out side handle bracket.



9. Disconnect door lock actuator connector.
10. Remove mount screw and remove door lock assembly through the access hole.



INSTALLATION

Install in the reverse order of removal.

NOTE:

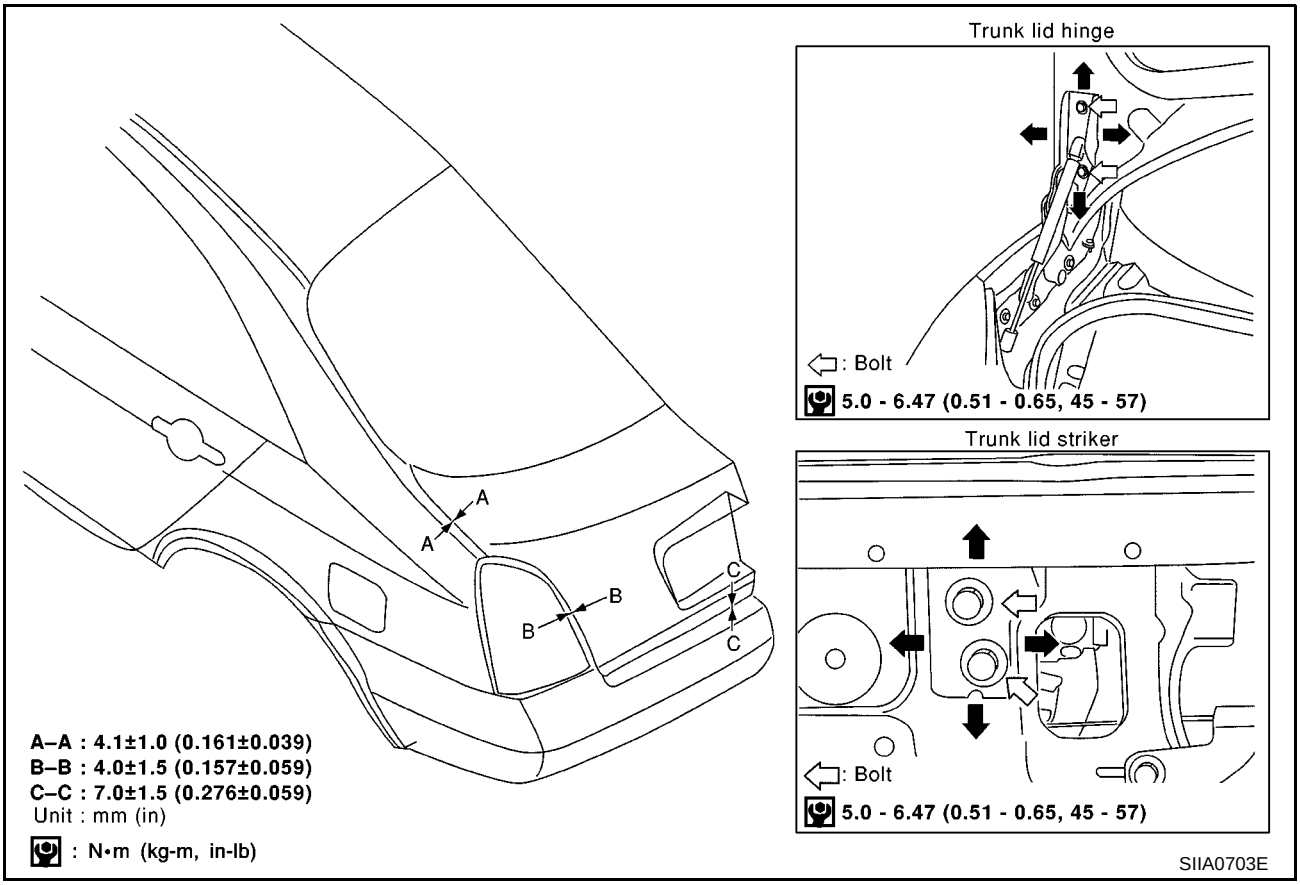
- Install the outside handle by pressing it forward and downward while tightening the bolts.

TRUNK LID

PFP:H4300

Fitting Adjustment

EIS002NB



LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

1. With the striker released, loosen the trunk lid hinge mounting bolts to close the trunk lid.
2. Make the lateral clearance and the clearance to the rear window glass equal, and open the trunk lid to tighten the mounting bolts to the specified torque.

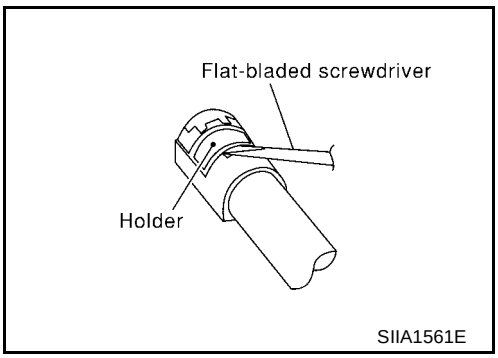
SURFACE HEIGHT ADJUSTMENT

1. Loosen the striker mounting bolts. Raise the striker to the top position, and temporarily tighten the upper mounting bolt at the position.
2. Close the trunk lid lightly and adjust the surface height, then open the trunk lid to finally tighten the striker mounting bolts to the specified torque.

Removal and Installation of Trunk Lid Assembly

EIS002NF

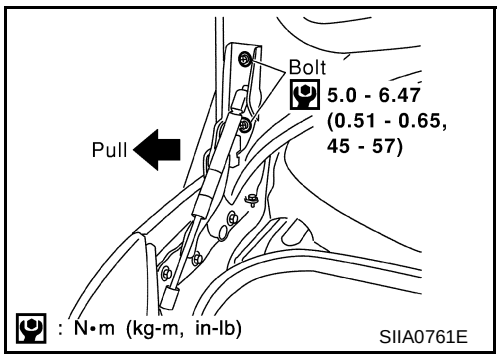
1. Disconnect the connectors in the trunk lid, and remove the harness clamps to pull the harness out of the trunk lid.
2. Insert flat-bladed screw driver into the gap and remove holder.



3. Remove trunk lid stay (gas stay).
4. Remove the mounting bolts, and remove the trunk lid assembly.

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

Install in the reverse order of removal.



Removal and Installation of Trunk Lid Lock

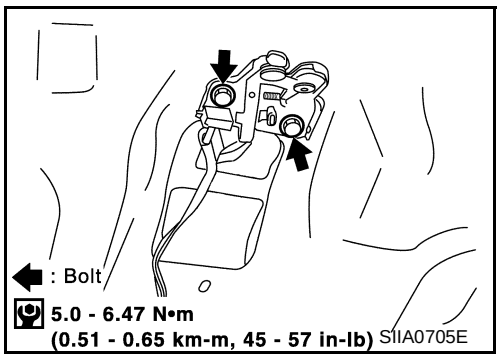
EIS002ND

STRIKER REMOVAL

1. Remove trunk room rear plate. Refer to EI-35, "TRUNK ROOM TRIM AND TRUNK LID TRIM" .
2. Remove striker mounting bolts.

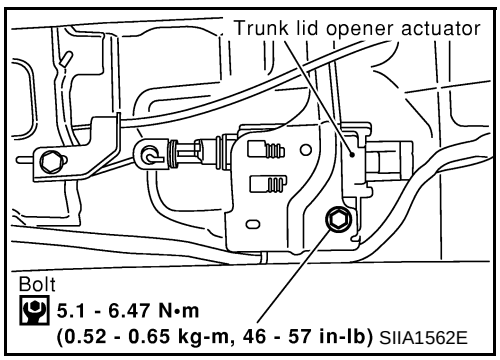
LOCK REMOVAL

1. Remove the trunk lid trim. Refer to EI-35, "TRUNK ROOM TRIM AND TRUNK LID TRIM" .
2. Remove trunk lid lock cover.
3. Separate the key cylinder rod.
4. After removing the harness connector, remove the mounting bolts, and remove the trunk lid lock.



ACTUATOR REMOVAL

1. Remove trunk room rear plate. Refer to EI-35, "TRUNK ROOM TRIM AND TRUNK LID TRIM" .
2. Disconnect trunk release actuator harness connector.
3. Remove the mounting bolts, and remove the trunk release actuator.



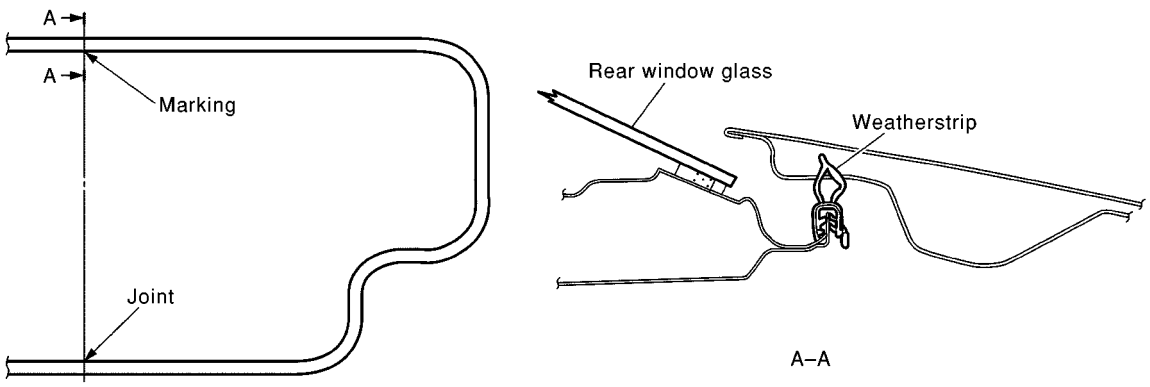
INSTALLATION

1. Install in the reverse order of removal.
2. After installing, close the trunk lid lightly. Preform the lock and surface height adjustment. Refer to BL-115, "Fitting Adjustment" .
3. After installing, check the operation.

Removal and Installation of Trunk Lid Weather-strip

EIS002NE

SEC. 843



SIIA0783E

1. Install the weather-strip from the front with the vehicle center mark aligned to the weather-strip mark.
2. At rear side, align the weather-strip seam to the center of the striker.
3. After installing, pull the weather-strip lightly to check for looseness.

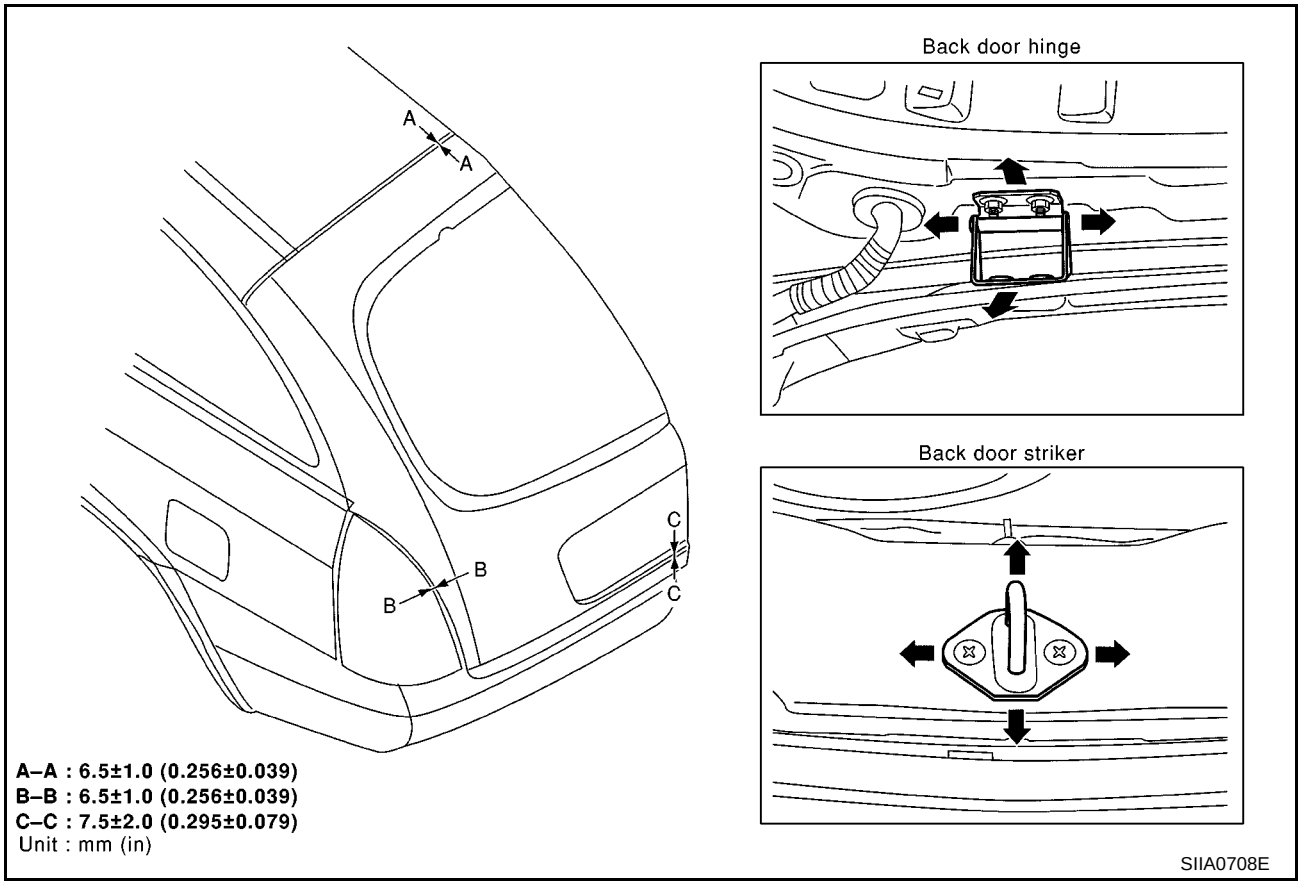
NOTE:
The weather-strip shall be fit tightly onto the corners and trunk lid rear plate.

BACK DOOR

PFP:90100

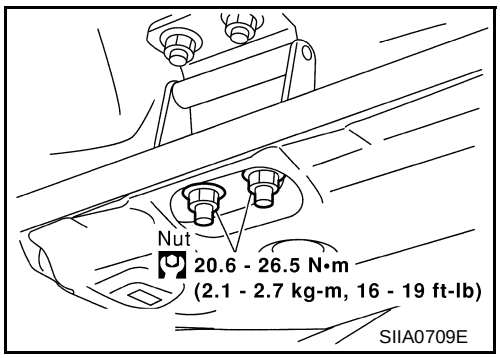
Fitting Adjustment

EIS002LC



VERTICAL/LATERAL CLEARANCE ADJUSTMENT

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



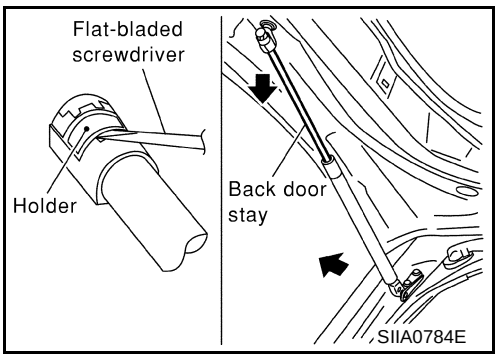
Back Door Assembly

EIS002LD

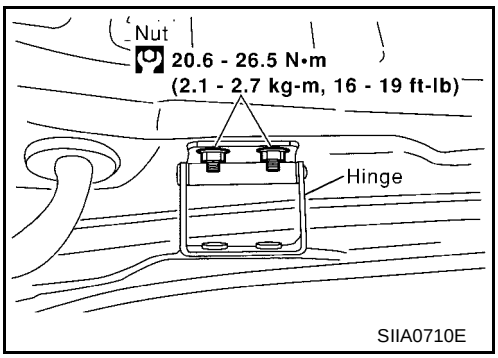
REMOVAL

1. Disconnect connector in the back door harness. Pull the harness out of the back door.

2. Support the back door lock with a proper material to prevent it from falling and remove back door stay (gas stay).



3. Remove hinge mount nuts on the back door and remove back door assembly.

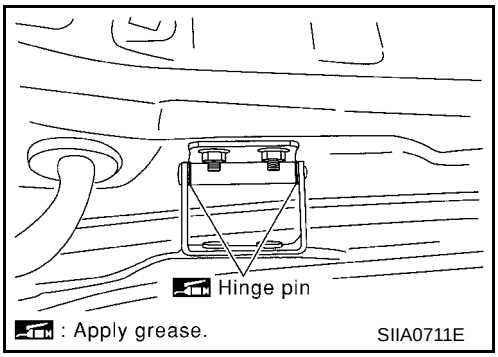


INSTALLATION

Install in the reverse order of removal.

INSPECTION

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

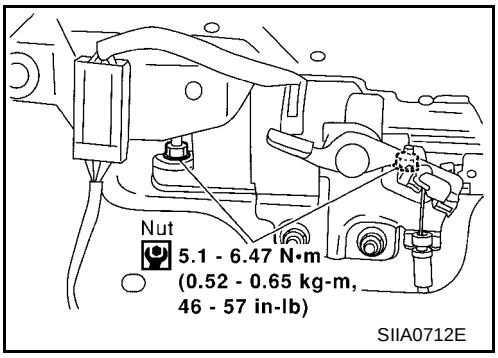


Removal and Installation of Back Door Handle

EIS002LE

1. Remove back door finisher. Refer to EI-24, "BACK DOOR TRIM" .
2. Remove back door handle mount nuts.

Install in the reverse order of removal.

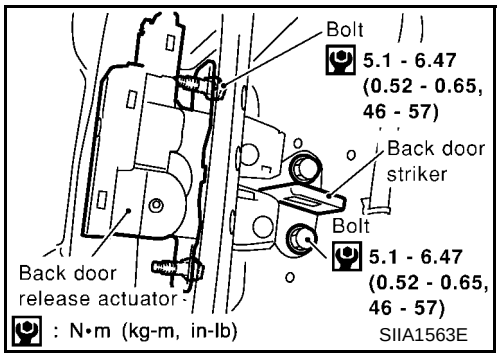


Removal and Installation of Back Door Lock & Actuator

EIS002LF

1. Remove back door finisher. Refer to EI-24, "BACK DOOR TRIM" .
2. Disconnect back door release actuator connector.
3. Remove mounting bolts, and remove back door release actuator from the back door.

Install in the reverse order of removal.

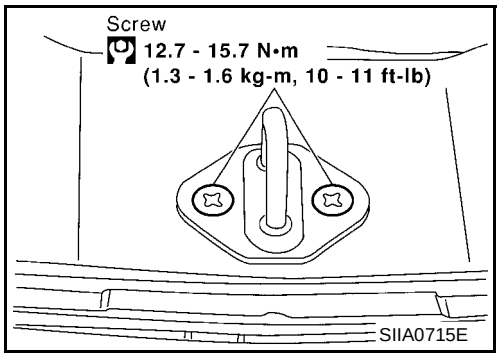


Removal and Installation of Back Door Striker

EIS002NG

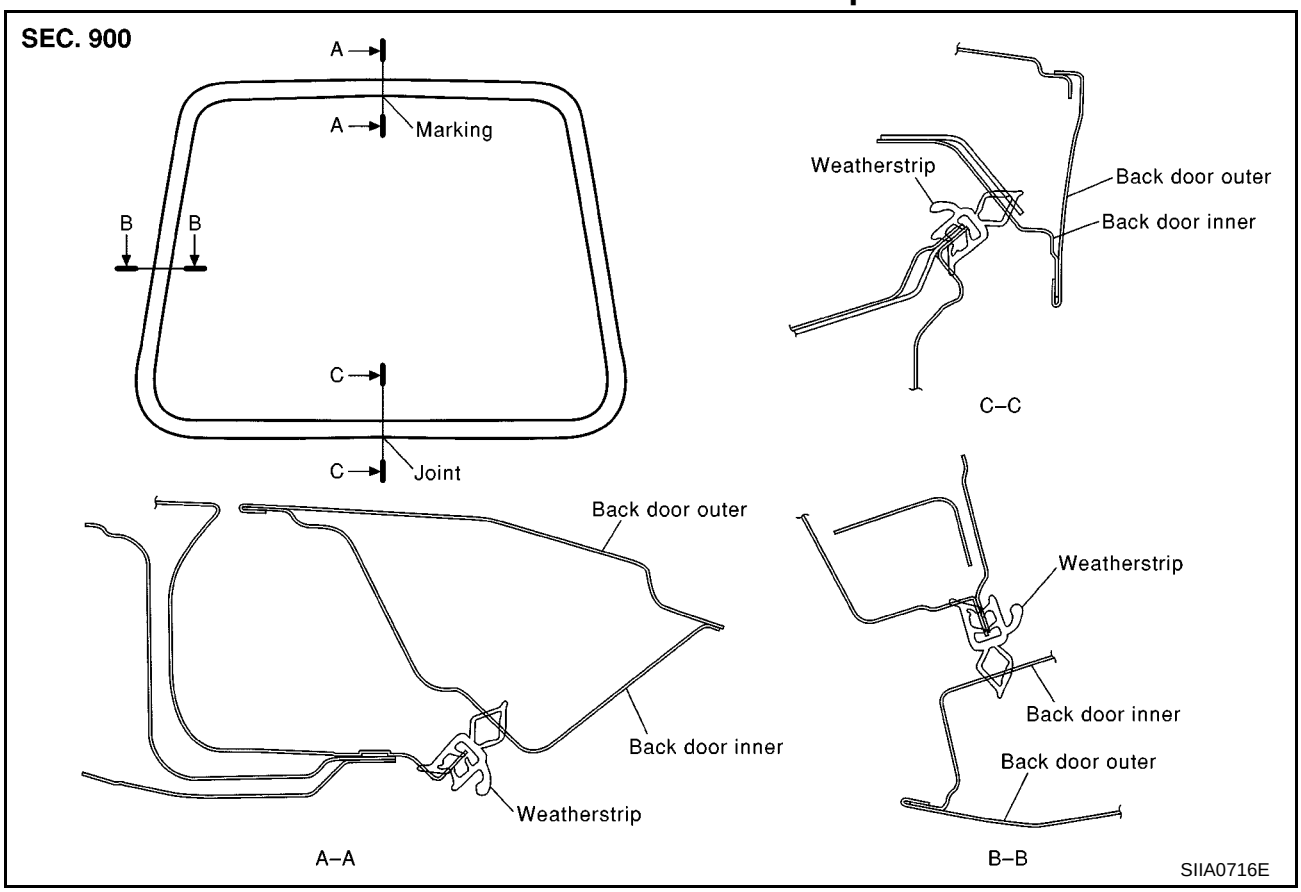
1. Remove luggage rear spacer. Refer to EI-27, "Removal and Installation (Wagon Models)" .
2. Remove mounting screws, and remove striker from the vehicle.

Install in the reverse order of removal.



Removal and Installation of Back Door Weather-strip

EIS002LG



1. Working from the upper section, align weather-strip mark with vehicle center position mark and install weather-strip onto the back door.
2. For the lower section, align the weather-strip seam with center of the striker.

3. After installation, pull the weather-strip gently to ensure that there is no loose section.

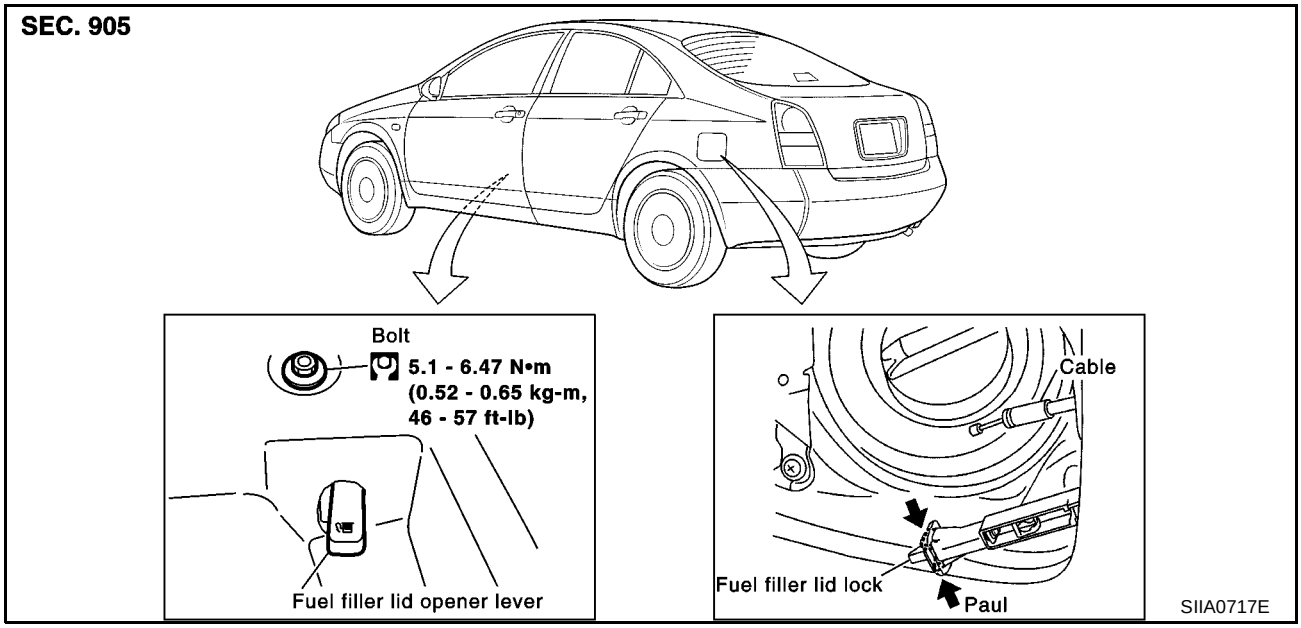
NOTE:
Make sure the weather-strip is fit tightly at each corner and back door rear plate.

FUEL FILLER LID OPENER

PFP:78820

Component Parts Location

EIS002LH

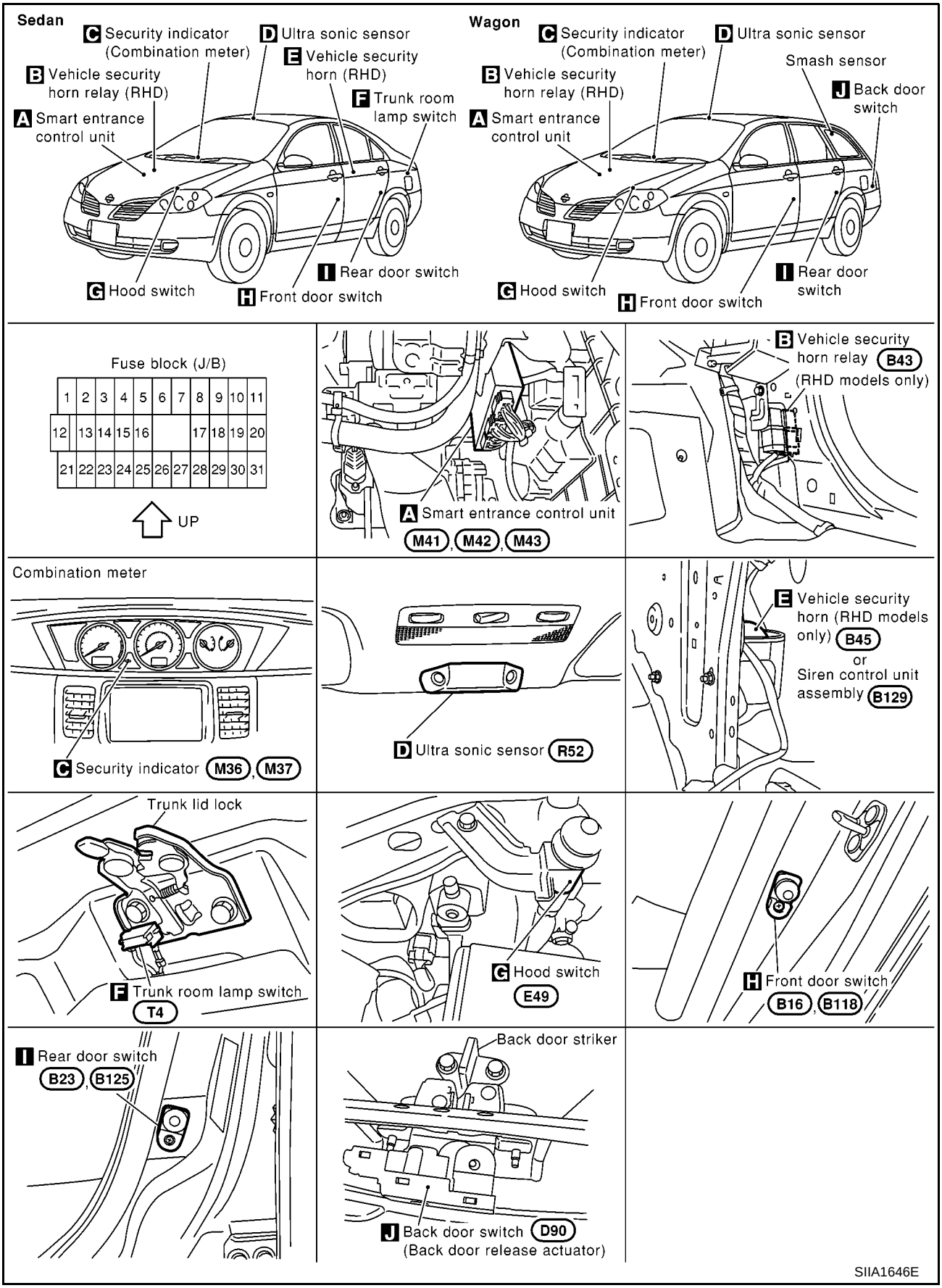


THEFT WARNING SYSTEM

PFP:25362

Component Parts and Harness Connector Location

EIS002LJ

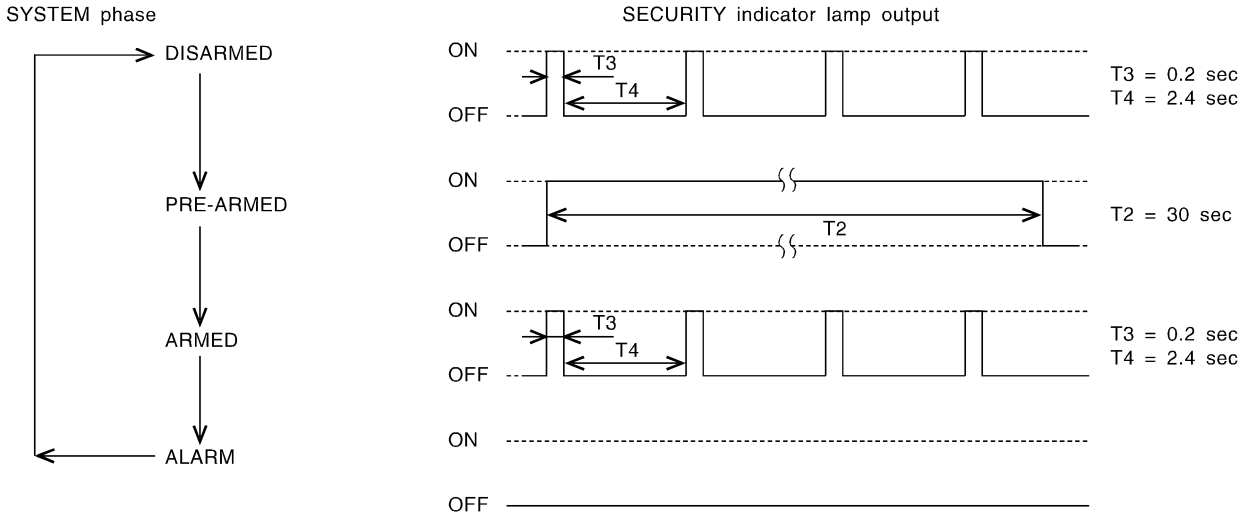


System Description

EIS002LK

DESCRIPTION

Operation Flow



SEL334W

Setting The Theft Warning System

Initial condition

1. Ignition switch is in OFF position.
2. Close all doors.
3. Close hood and trunk lid (Sedan) or back door (Wagon).

Disarmed phase

- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.6 seconds.

Pre-armed phase and armed phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

1. Smart entrance control unit receives LOCK signal from controller after hood, and all doors are closed.
2. Hood and all doors are closed after front doors are locked by key, lock/unlock switch or remote controller.

After about 30 seconds, the system automatically shifts into the “armed” phase (the system is set). (The security indicator lamp blinks every 2.6 seconds.)

Canceling The Set Theft Warning System

When the following 1 or 2 operation is performed, the armed phase is canceled.

1. Unlock the doors with remote controller.
2. Insert key in ignition key cylinder and turn it to ON.

Activating The Alarm Operation of The Theft Warning System

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.6 seconds.)
When the following operation 1, 2, 3, 4, 5 or 6 is performed, the system sounds the horns and flashes about 30 seconds.

1. Engine hood, trunk lid (Sedan), back door (Wagon) or any doors is opened before unlocking door with the remote controller.
2. A door is unlocked without using the remote controller.
3. The ignition is switched ON without using a NATS registered key.
4. The ultra sonic sensing is triggered.
5. A rear side window breakage is detected (Wagon).
6. Disconnecting and connecting the battery connector before canceling armed phase.

POWER SUPPLY AND GROUND

Power is supplied at all times

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to security indicator lamp terminal 52.
- to smart entrance control unit terminal 56

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

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to smart entrance control unit terminal 29.

Ground is supplied

- to smart entrance control unit terminals 53
- through body grounds M16, M50 and M70.

INITIAL CONDITION TO ACTIVE THE SYSTEM

The operation of the theft warning system is controlled by the doors and hood.
To activate the theft warning system, the smart entrance control unit must receive signals indicating the doors and hood are closed.
When a door is open, smart entrance control unit terminal 39, 43, 44 or 45 receives a ground signal from each door switch.
When the hood is open, smart entrance control unit terminal 15 receives a ground signal

- from terminal 1 of the hood switch
- through body grounds E10, E58.

When the trunk lid (Sedan) or back door (Wagon) is open, smart entrance control unit terminal 16 receives a ground signal

Trunk lid (Sedan)

- from terminal 1 of the trunk room lamp switch
- through body ground B120.

Back door (Wagon)

- from terminal 2 of the back door switch (back door release actuator)
- through body grounds B17, B24 and D94.

When smart entrance control unit receives LOCK signal from door lock actuator or remote controller and none of the described conditions exist, the theft warning system will automatically shift to armed mode.

THEFT WARNING SYSTEM ACTIVATION

If lock signal from remote controller is received by the smart entrance control unit, the vehicle security system will activate automatically.

NOTE:
Theft warning system can be set even though all doors are not locked.
Once the vehicle security system has been activated, smart entrance control unit terminal 34 supplies ground to terminal 5 of the security indicator lamp.
The security lamp will illuminate for approximately 30 seconds and then blinks every 2.6 seconds.
Now the vehicle security system is in armed phase.

THEFT WARNING SYSTEM ALARM OPERATION

The theft warning system is triggered by

- opening a door
- opening the hood
- opening the trunk lid (Sedan) or back door (Wagon)
- triggering the ultra sonic sensor
- smashing the back door window (wagon model only)
- detection of battery disconnect and connect.

Once the vehicle security system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 39, 43, 44, 45 (door switch), 15(hood switch), 16(trunk room lamp switch or back door switch) the vehicle security system will be triggered. The hazard lamp flashes, the horn sounds (RHD models) intermittently.

Power is supplied at all times (RHD models)

- through 20A fuse (No, 7 located in fuse and fusible link box)
- to vehicle security horn relay terminal 2 and 5.

When the vehicle security system is triggered, ground is supplied intermittently (RHD models)

- from smart entrance control unit terminal 27
- to vehicle security horn relay terminal 1.

When vehicle security horn relay are energized, then power is supplied to horn.
The horn sounds intermittently.
The alarm automatically turns off after 50 seconds but will reactivate if the vehicle is tampered with again.

THEFT WARNING SYSTEM DEACTIVATION

To deactivate the theft warning system, a door must be unlocked with the key or remote controller.
When the smart entrance control unit receives either one of these signals or unlock signal from remote controller, the theft warning system is deactivated. (Disarmed phase)

SMASH SENSOR (WAGON MODEL ONLY)

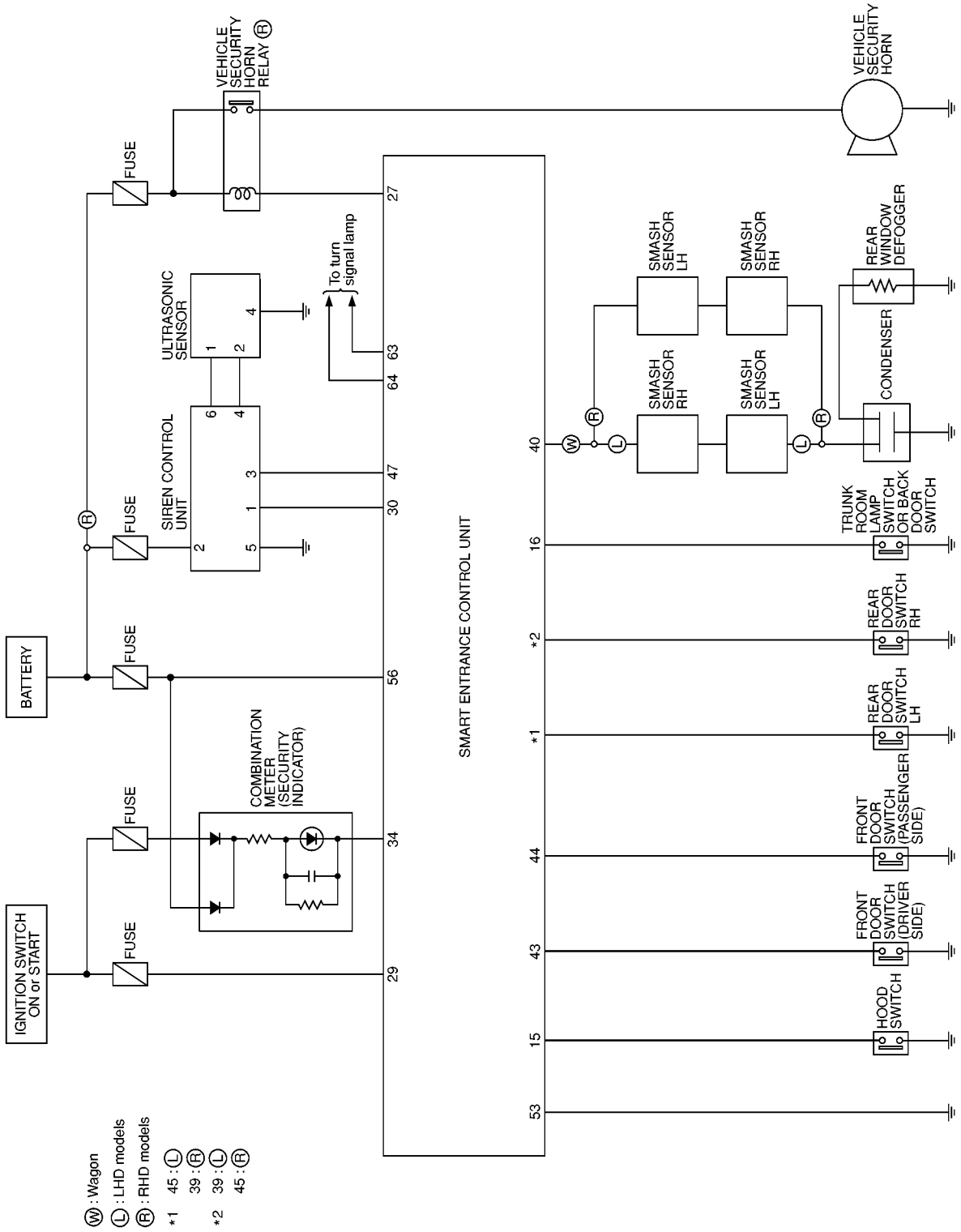
The smash sensor will trigger the alarm when the side window LH or RH is broken. There are side window protected:

- Side window. Sensor circuit is bonded to the side window glass.

Two sensor are wired in series. By breaking any of the side window (sensor circuit open), the alarm will sound.

Schematic

EIS002LL

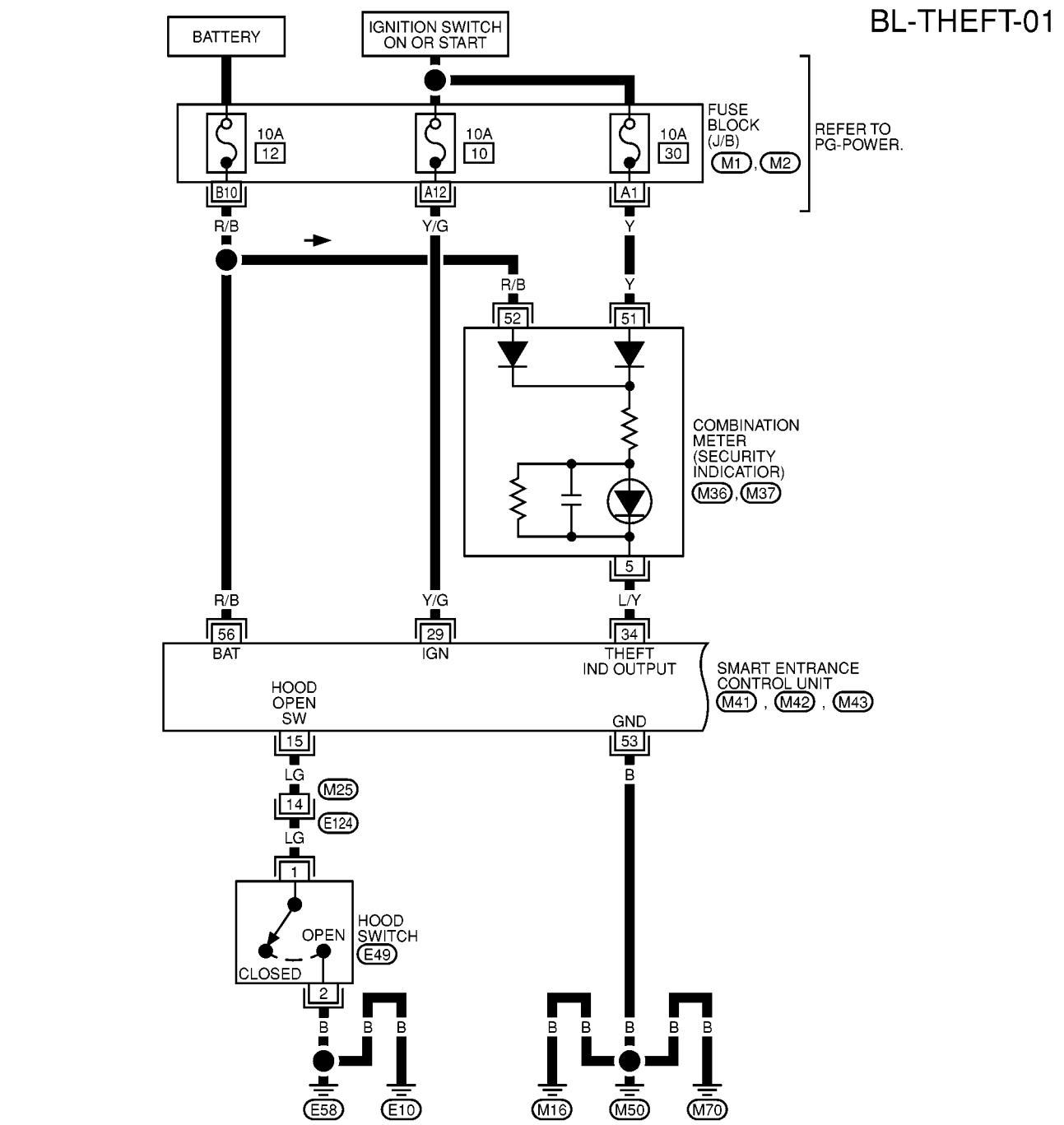


MKWA0124E

Wiring Diagram — THEFT —

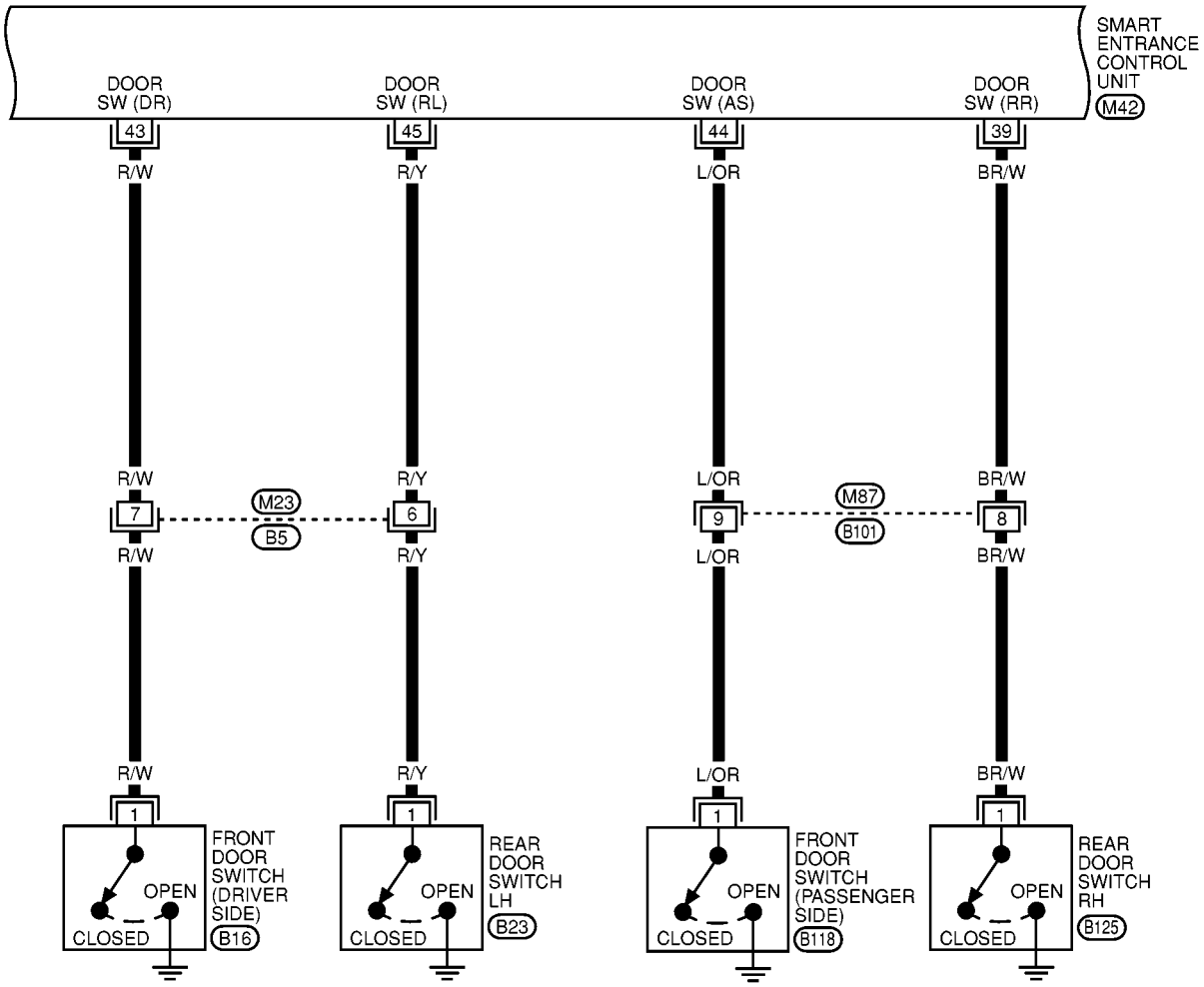
EIS002LM

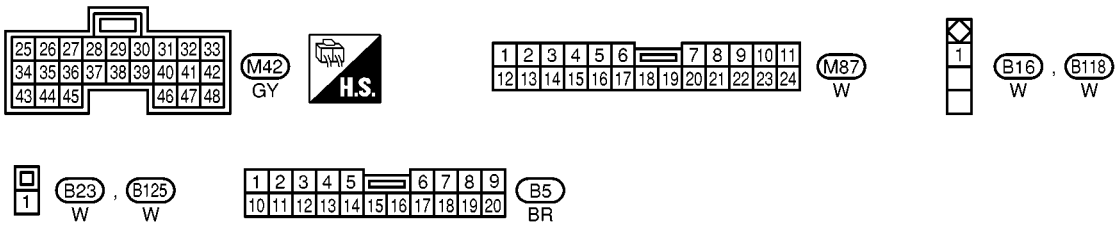
LHD MODELS



MKWA0125E

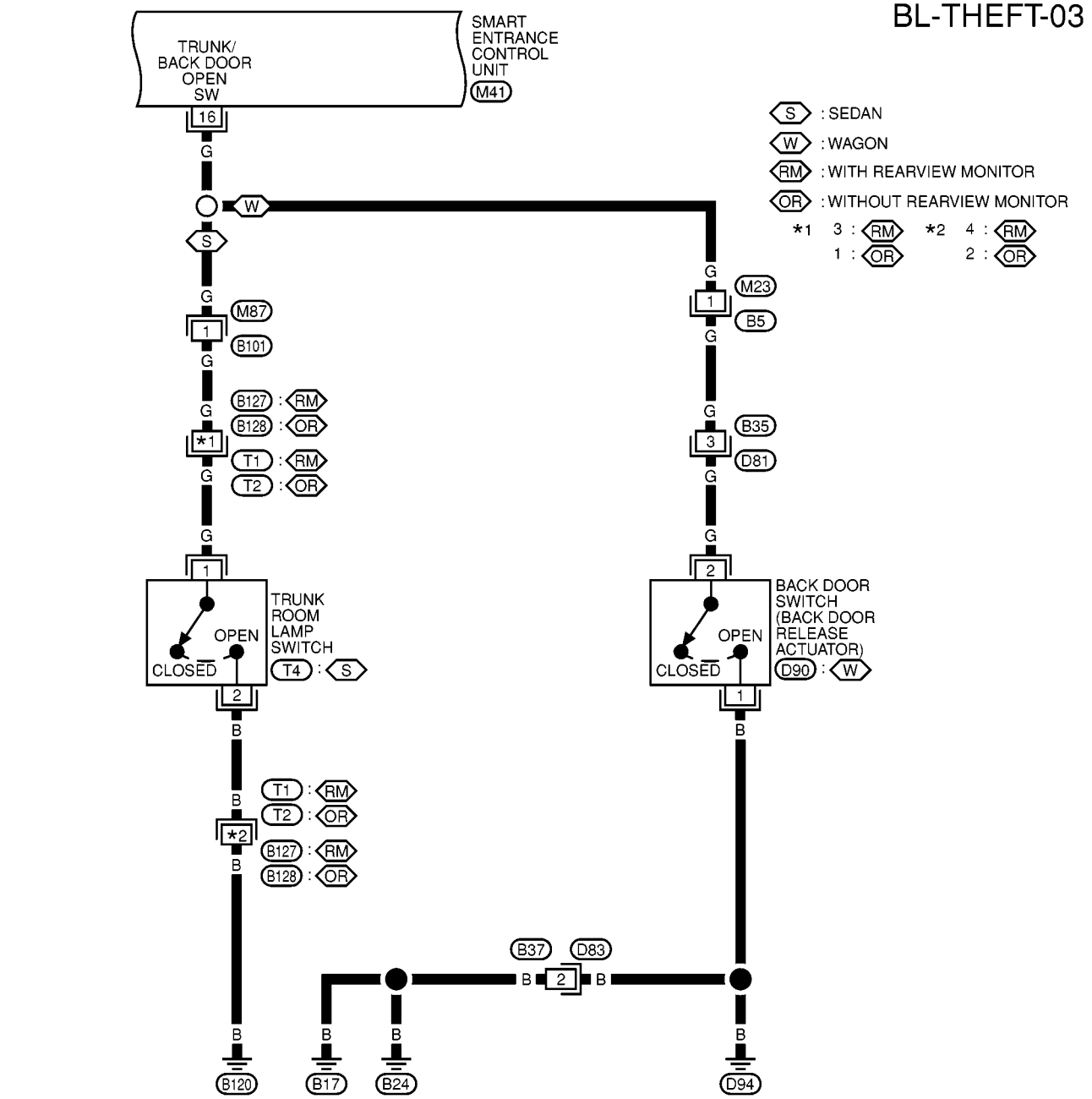
BL-THEFT-02

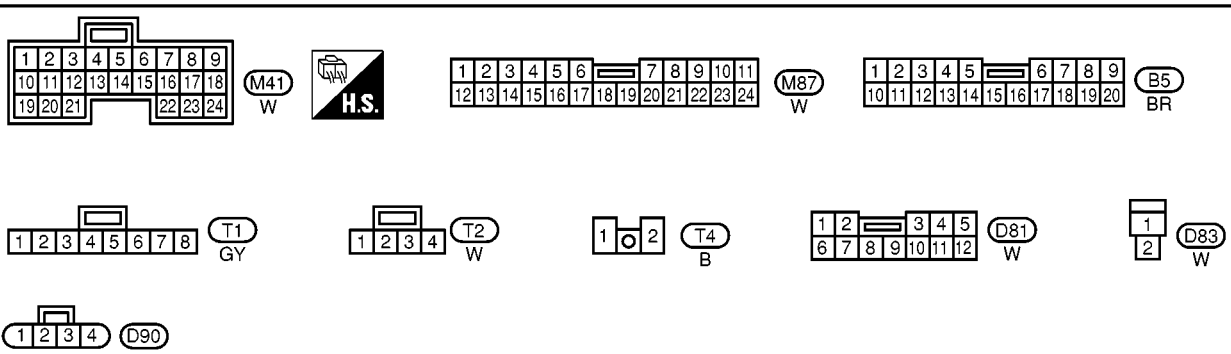




MKWA0126E

BL-THEFT-03





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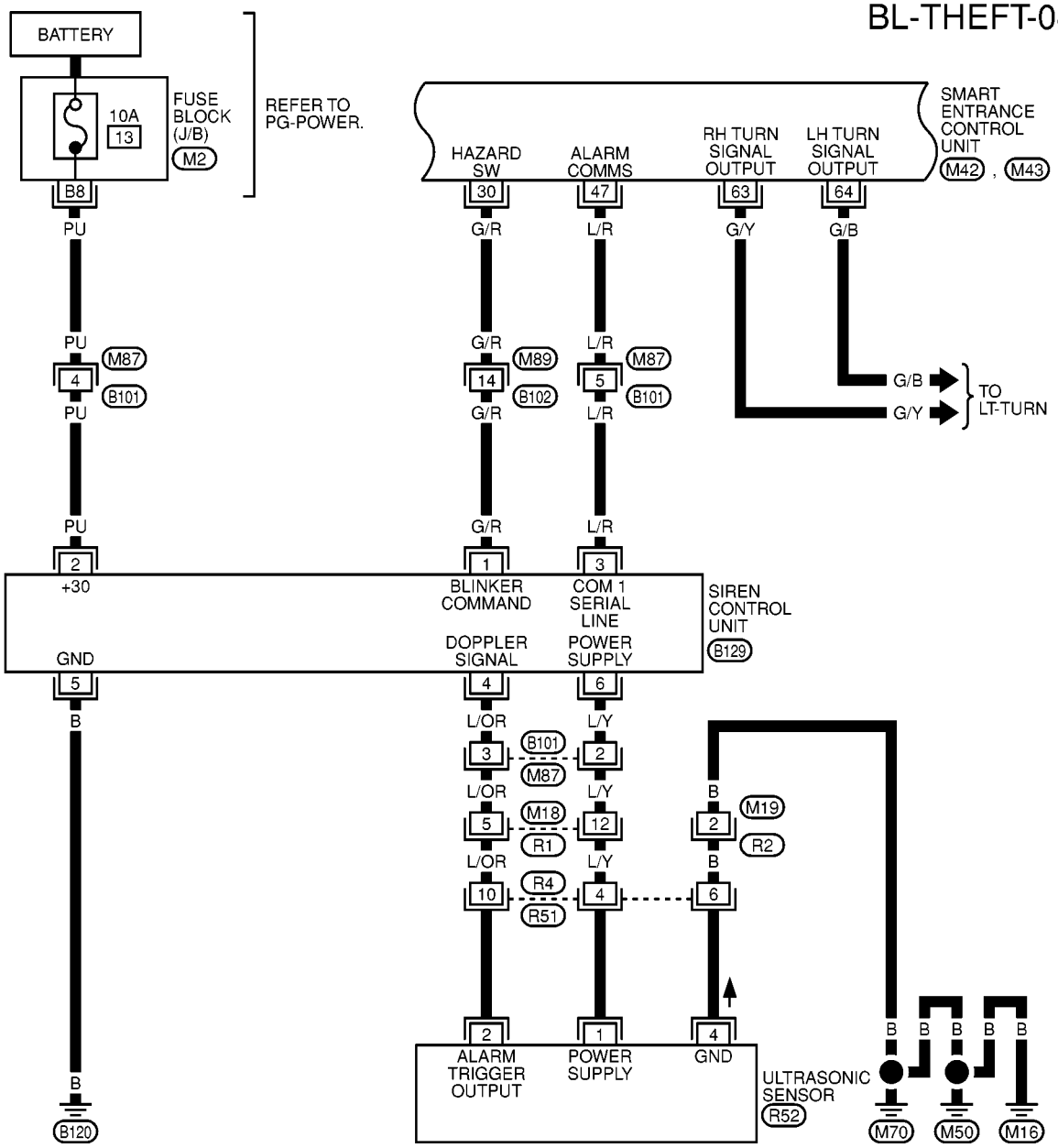
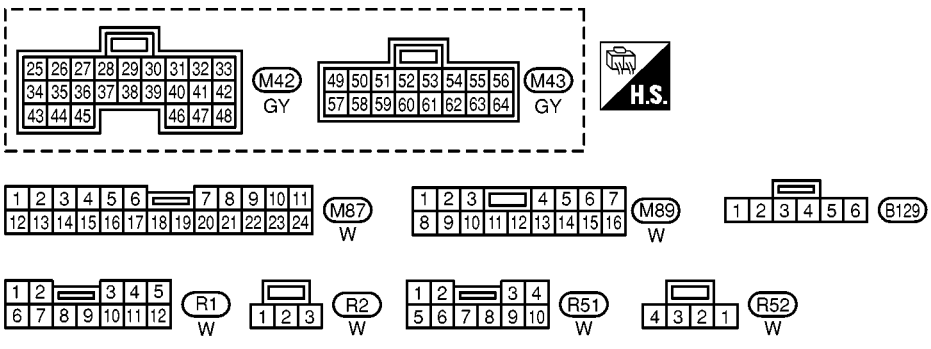
BL-THEFT-04

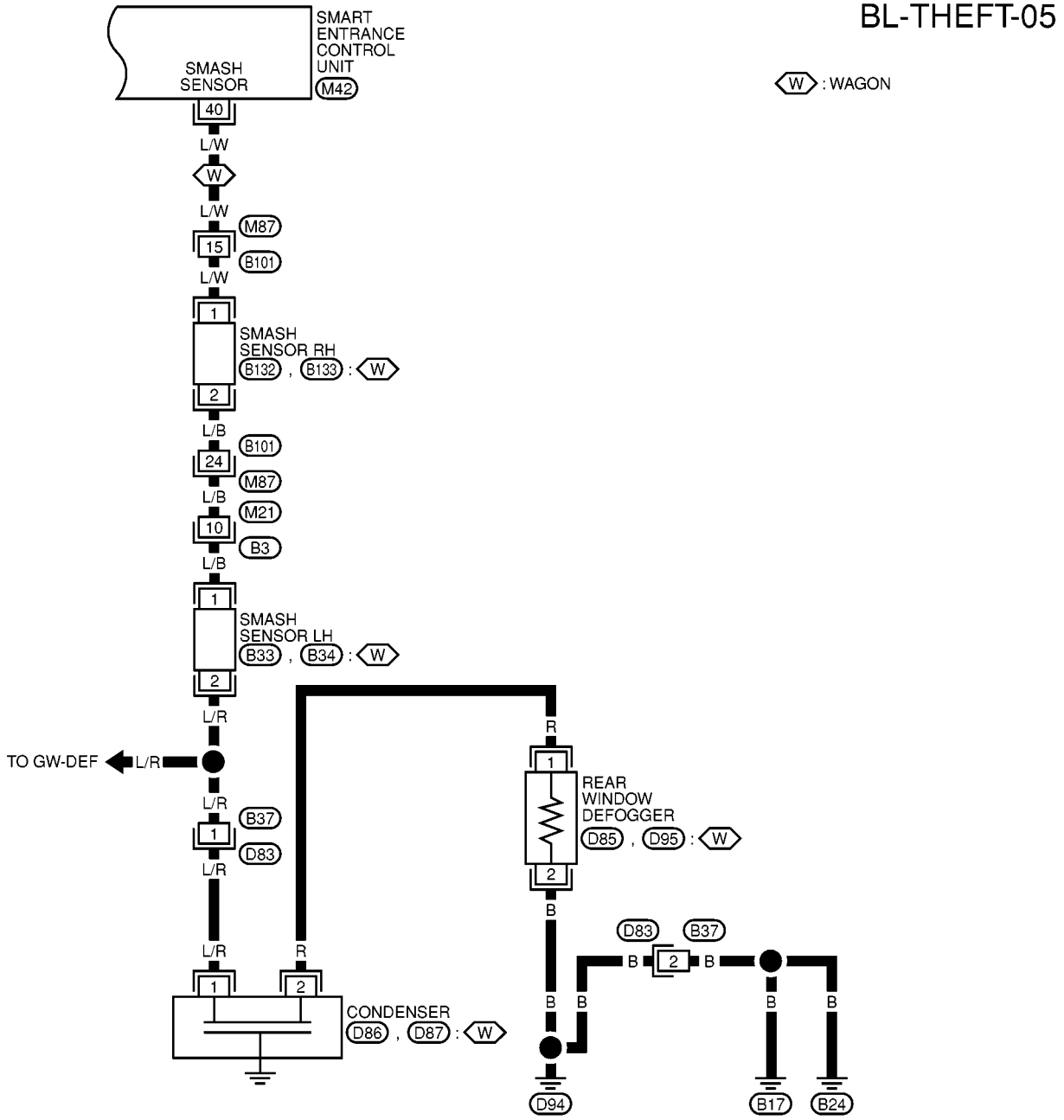


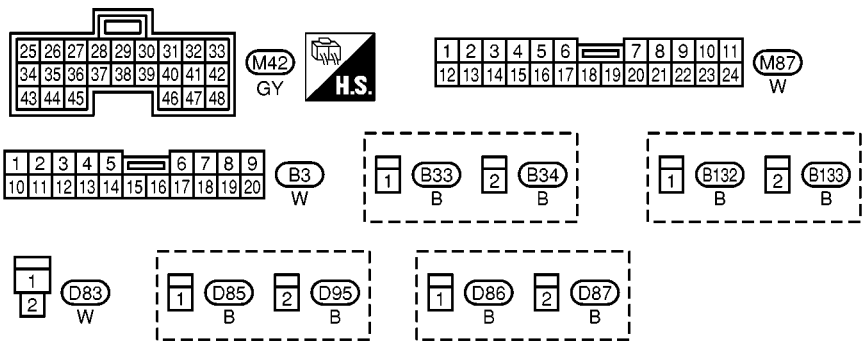


REFER TO THE FOLLOWING.

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

MKWA0128E

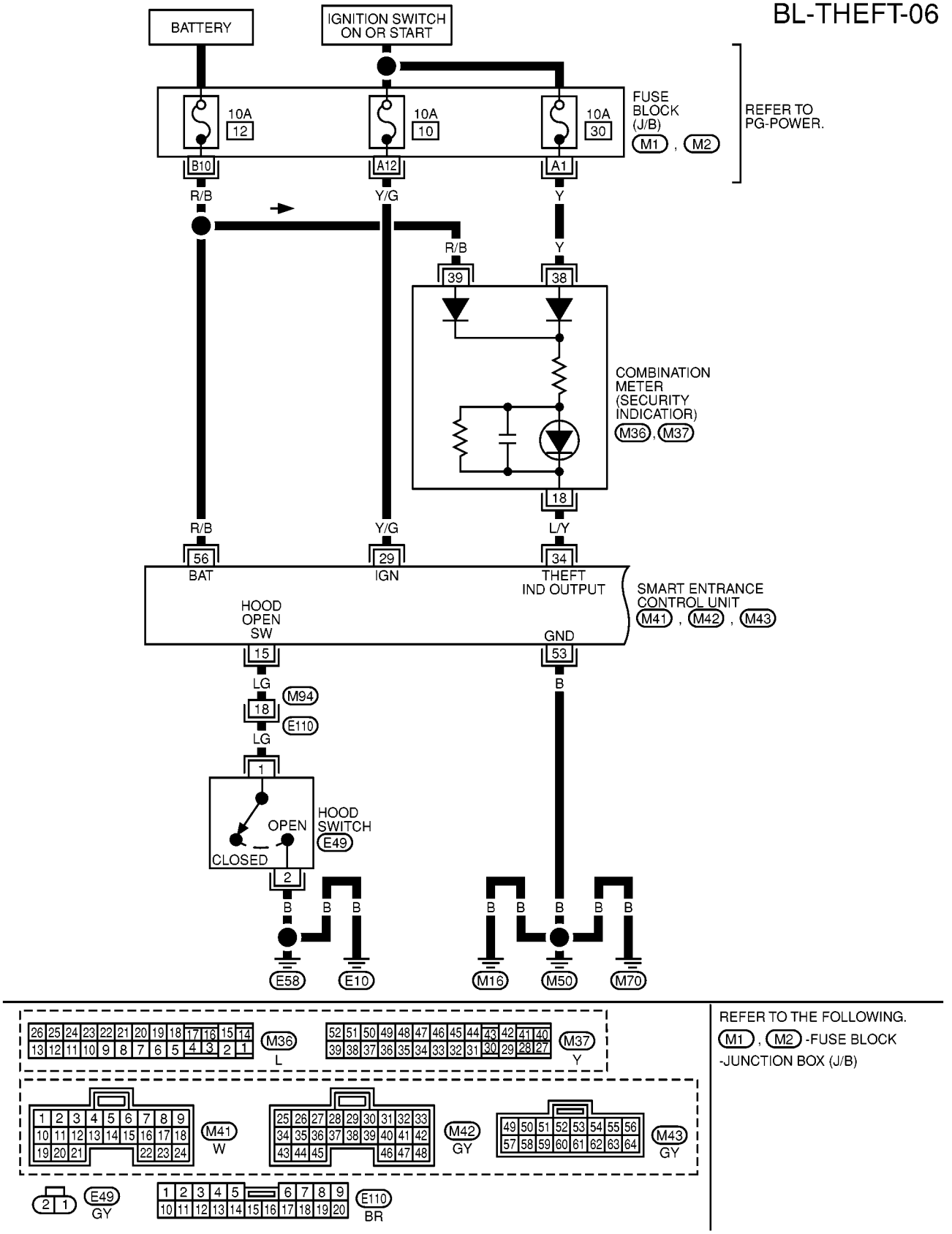

BL-THEFT-05
W : WAGON
SMART ENTRANCE CONTROL UNIT
M42
SMASH SENSOR
40
L/W
W
M87
15
B101
1
SMASH SENSOR RH
B132 , B133 : W
2
L/B
B101
24
M87
M21
10
B3
SMASH SENSOR LH
B33 , B34 : W
L/R
TO GW-DEF
B37
D83
R
REAR WINDOW DEFOGGER
D85 , D95 : W
B
D83
B37
CONDENSER
D86 , D87 : W
D94
B17
B24


M42
GY
H.S.
M87
W
B3
W
B33
B
B34
B
B132
B
B133
B
D83
W
D85
B
D95
B
D86
B
D87
B

MKWA0129E

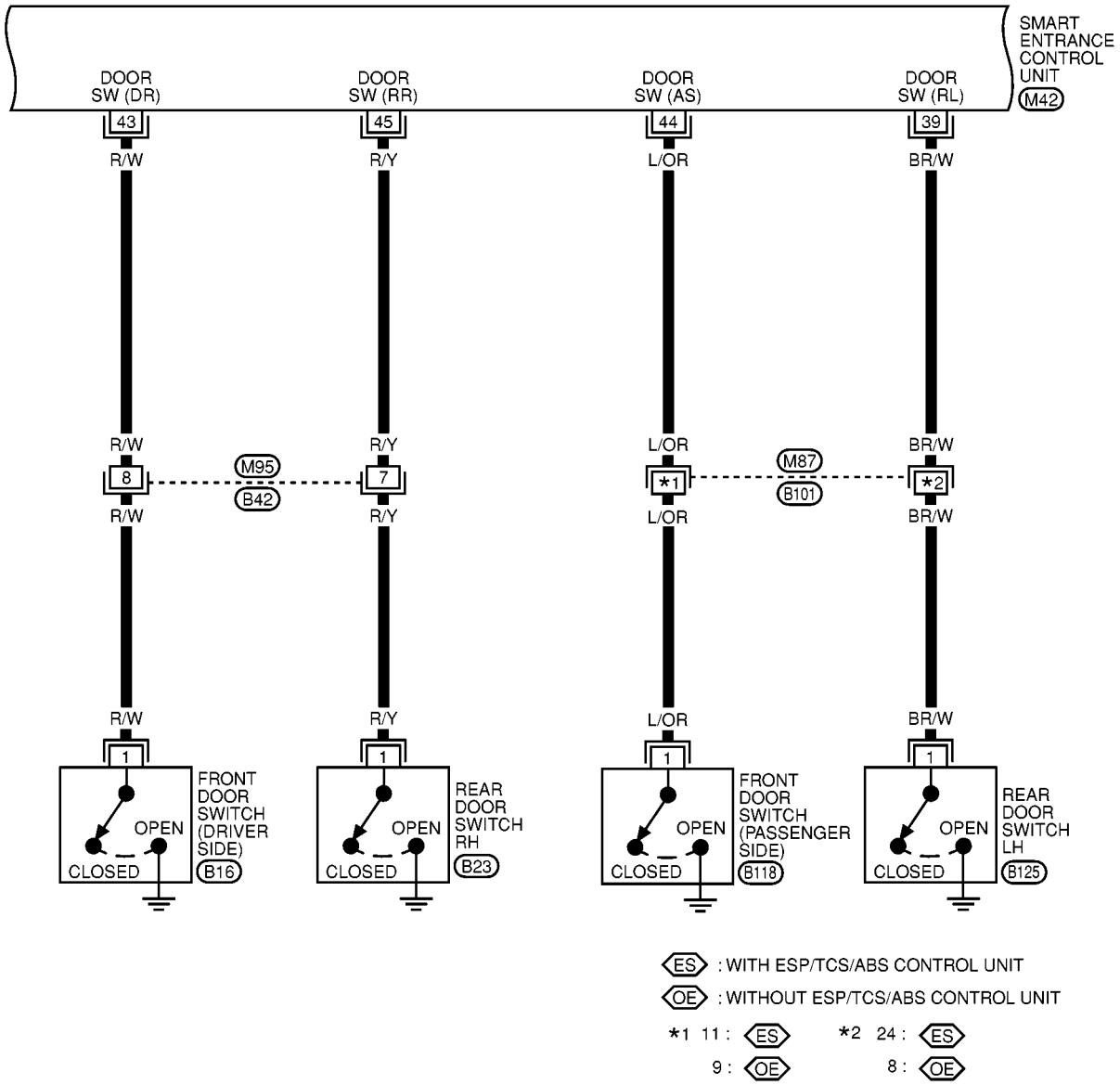
RHD MODELS

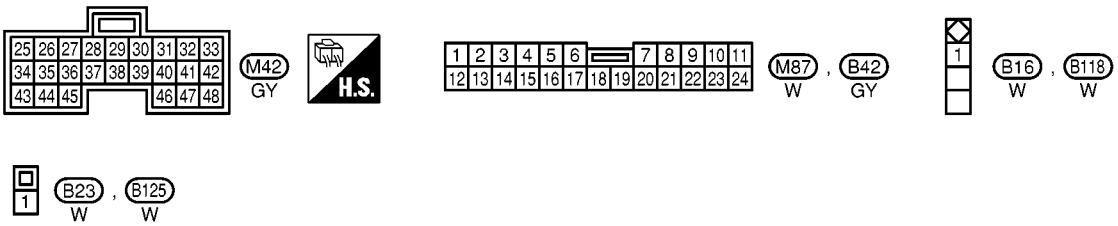
BL-THEFT-06



MKWA0130E

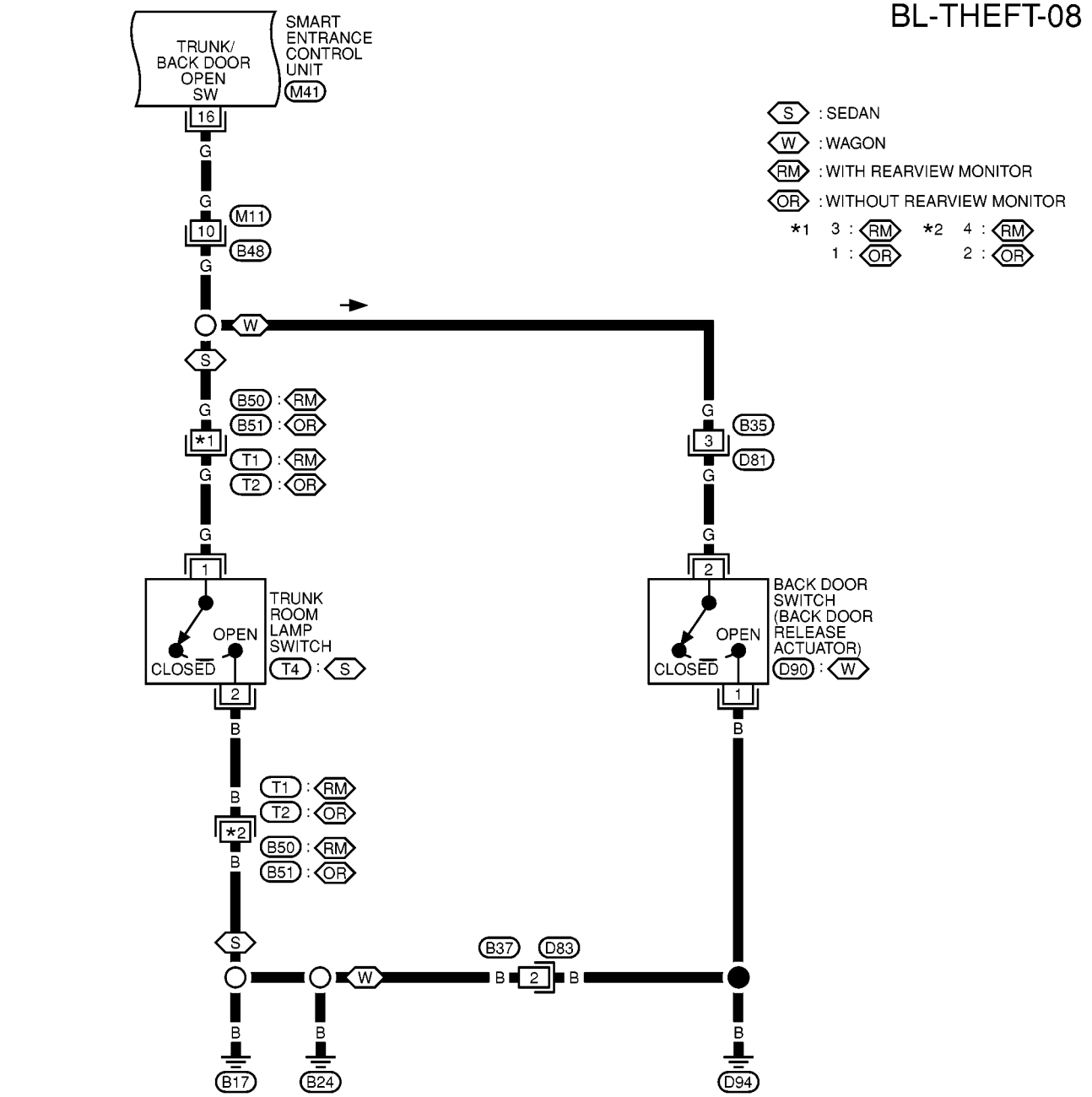
BL-THEFT-07

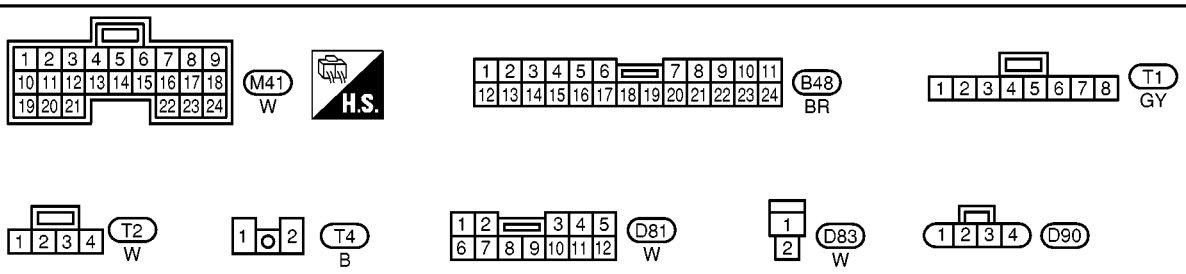




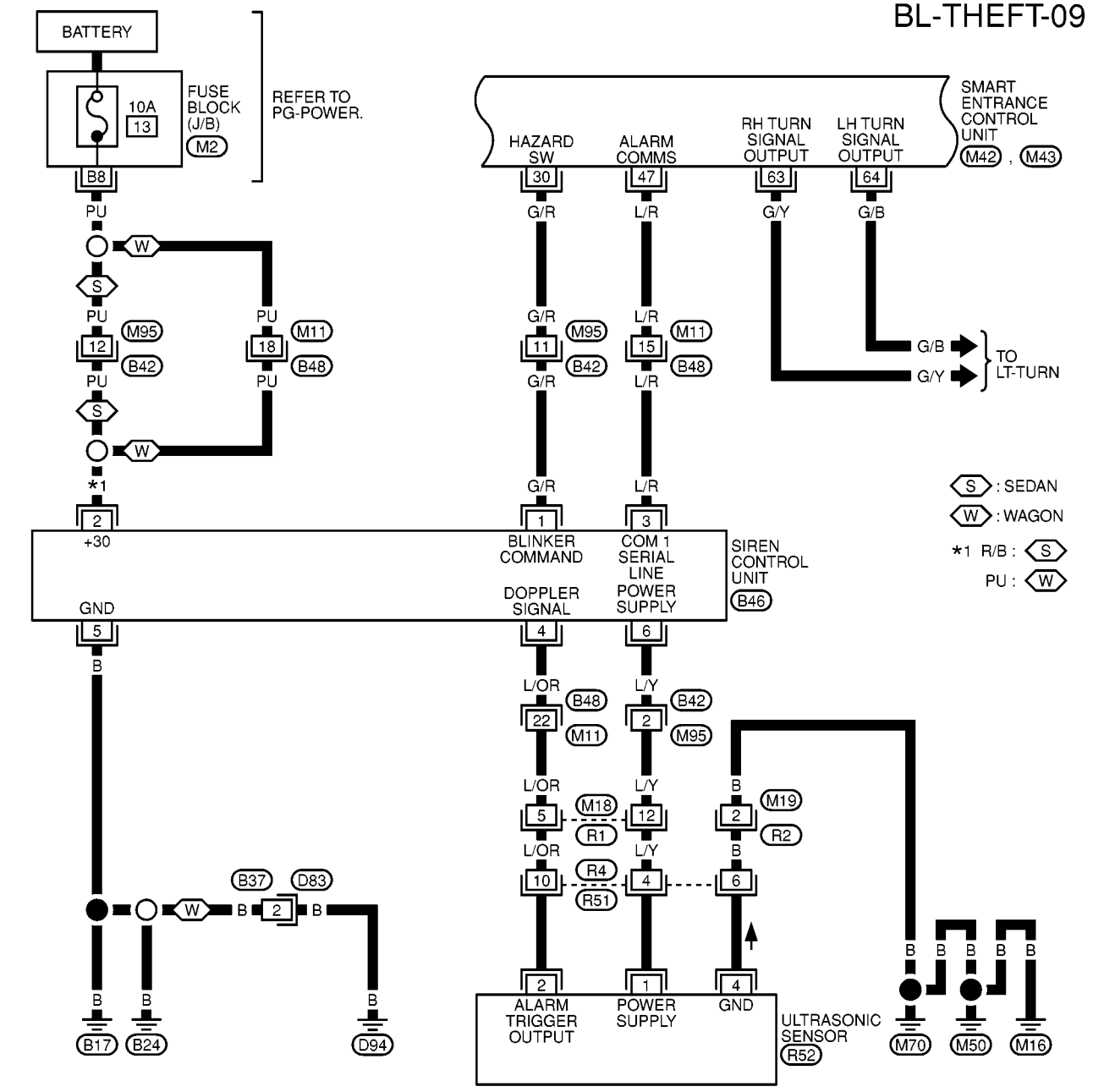
MKWA0131E

BL-THEFT-08

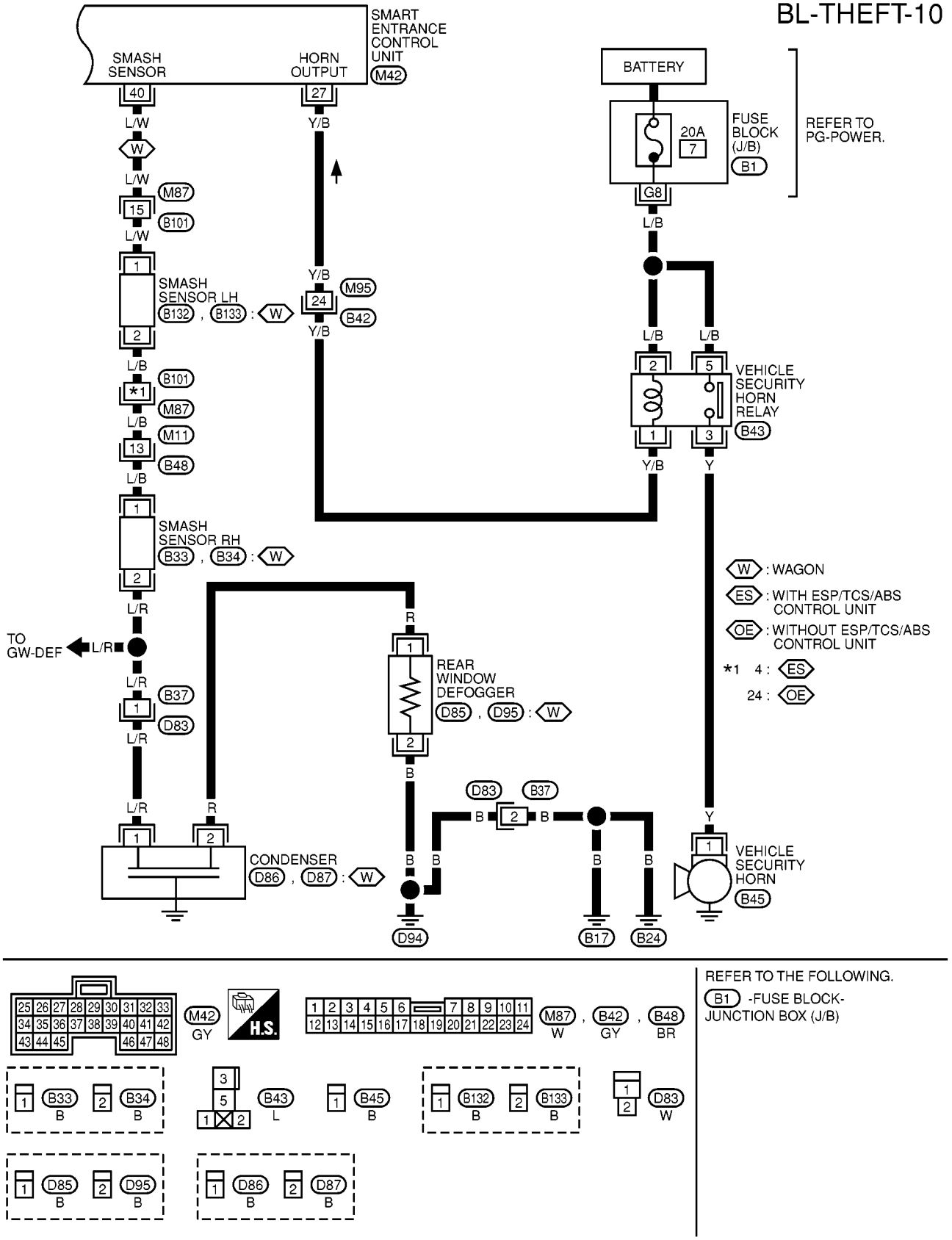




MKWA0132E


BL-THEFT-09
BATTERY
FUSE BLOCK (J/B) M2
10A 13
REFER TO PG-POWER.
B8
PU
W
S
PU
12
M95
B42
PU
18
M11
B48
PU
S
W
*1
2
+30
GND
5
B
SMART ENTRANCE CONTROL UNIT M42, M43
HAZARD SW 30
ALARM COMMS 47
RH TURN SIGNAL OUTPUT 63
LH TURN SIGNAL OUTPUT 64
G/R
L/R
G/Y
G/B
G/B
G/Y
TO LT-TURN
G/R
11
M95
B42
L/R
15
M11
B48
G/R
L/R
G/R
1
BLINKER COMMAND
L/R
3
COM 1 SERIAL LINE
SIREN CONTROL UNIT B46
DOPPLER SIGNAL 4
POWER SUPPLY 6
S : SEDAN
W : WAGON
*1 R/B : S
PU : W
L/OR
22
M11
B48
L/Y
2
M95
B42
L/OR
5
M18
R1
L/Y
12
B
2
M19
R2
L/OR
10
R4
R51
L/Y
4
B
6
B37
D83
W
B
2
B
B
B
B
B
B17
B24
D94
2
ALARM TRIGGER OUTPUT
1
POWER SUPPLY
4
GND
ULTRASONIC SENSOR R52
B
B
B
B
B
M70
M50
M16
M42 GY
M43 GY
H.S.
REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)
B3 W
B42 GY
B48 BR
B46
D83 W
R1 W
R2 W
R51 W
R52 W

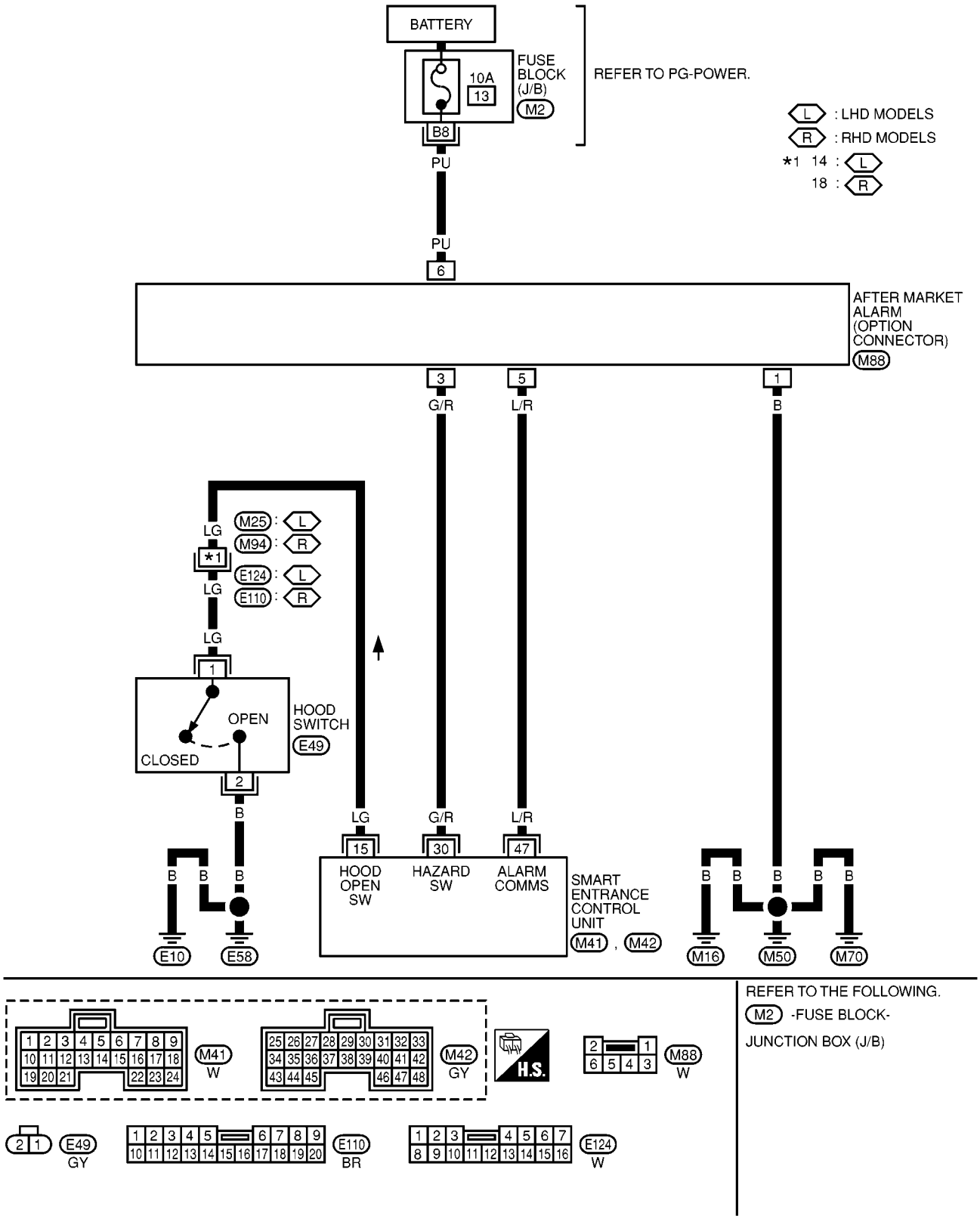
MKWA0133E


BL-THEFT-10
SMART ENTRANCE CONTROL UNIT
M42
SMASH SENSOR
HORN OUTPUT
40
27
L/W
Y/B
W
M87
15
B101
1
2
SMASH SENSOR LH
B132 , B133 : W
M95
24
B42
*1
M11
13
B48
SMASH SENSOR RH
B33 , B34 : W
TO GW-DEF
L/R
B37
D83
R
REAR WINDOW DEFOGGER
D85 , D95 : W
B
D94
CONDENSER
D86 , D87 : W
BATTERY
20A
7
FUSE BLOCK (J/B)
B1
REFER TO PG-POWER.
G8
L/B
VEHICLE SECURITY HORN RELAY
B43
Y/B
Y
VEHICLE SECURITY HORN
B45
B17
B24
W : WAGON
ES : WITH ESP/TCS/ABS CONTROL UNIT
OE : WITHOUT ESP/TCS/ABS CONTROL UNIT
*1 4 : ES
24 : OE
REFER TO THE FOLLOWING.
B1 -FUSE BLOCK- JUNCTION BOX (J/B)
M42 GY
H.S.
M87 W , B42 GY , B48 BR
B33 B
B34 B
B43 L
B45 B
B132 B
B133 B
D83 W
D85 B
D95 B
D86 B
D87 B

MKWA0134E

OPTION CONNECTOR — PREWIRE —

BL-PRWIRE-01

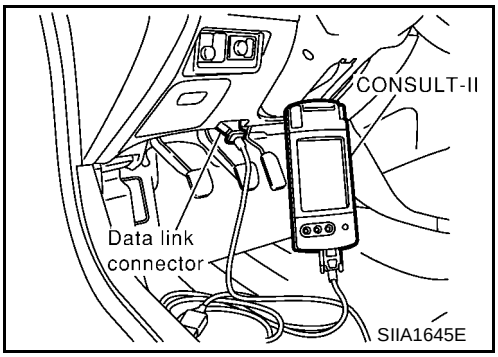


MKWA0135E

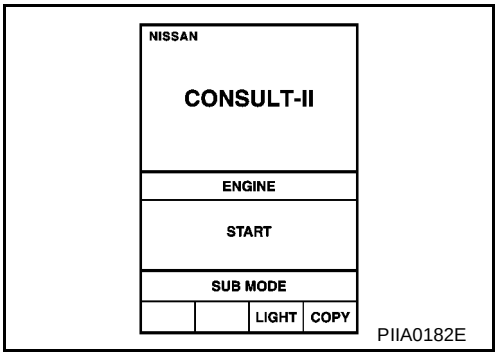
CONSULT- II Inspection Procedure

EIS002OT

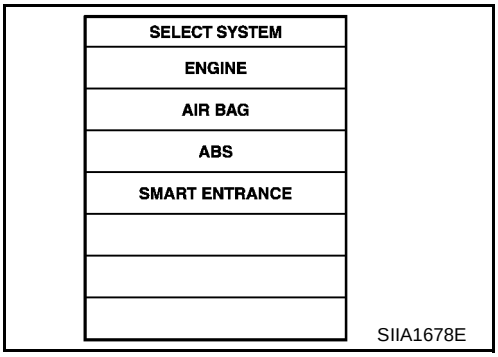
1. Turn ignition switch “OFF”.
2. Connect CONSULT-II to the data link connector.



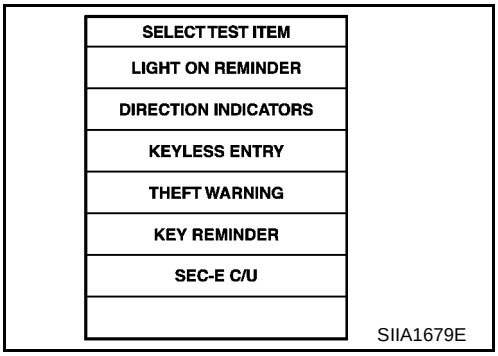
3. Turn ignition switch “ON”.
4. Touch “START”.



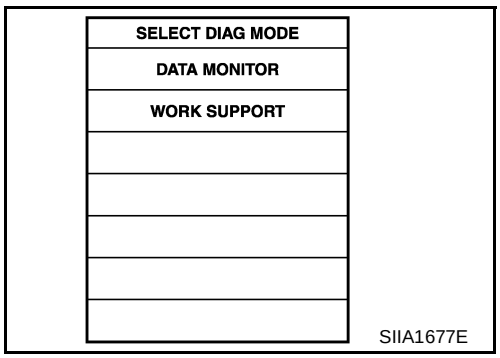
5. Touch “SMART ENTRANCE”.



6. Touch “THEFT WARNING”.



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



CONSULT- II Application Items

EIS002OU

DATA MONITOR

Monitored Item	Description
IGNITION SW	Indicates [ON/OFF] condition of ignition switch in ON position.
RR LH DOOR SW	Indicates [ON/OFF] condition of rear door switch LH.
RR RH DOOR SW	Indicates [ON/OFF] condition of rear door switch RH.
AS DOOR SW	Indicates [ON/OFF] condition of front door switch (passenger side).
DR DOOR SW	Indicates [ON\OFF] condition of front door switch (driver side).
TRUNK OPEN SW	Indicates [ON/OFF] condition of trunk room lamp switch (sedan) or back door switch (wagon).
HOOD OPEN SW	Indicates [ON/OFF] condition of hood 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 - ALL	Indicates [ON/OFF] condition of door switch (All).
RKE LOCK	Indicates [ON/OFF] condition of lock signal from remote controller.
RKE UNLOCK	Indicates [ON/OFF] condition of unlock signal from remote controller.
RKE SEL UNLOCK	Indicates [ON/OFF] condition of select unlock signal from remote controller.
RKE TRUNK REL	Indicates [ON/OFF] condition of trunk (sedan) or back door (wagon) open signal from trunk or back door release switch.

WORK SUPPORT

Test Item	Description
THEFT WARNING	This mode can be setting theft warning function.
LASTEST ALARM TRIGGER	This mode can be displayed last alarm trigger condition.
PRE- ARM FAST FLASH	This mode can be changed alarm operation.
SIREN FITTED	This mode can be setting siren condition.
PUREVIOUS ALARM TRIGGER	This mode can be displayed previous alarm trigger condition.
OLDEST ALARM TRIGGER	This mode can be displayed oldest alarm trigger condition.

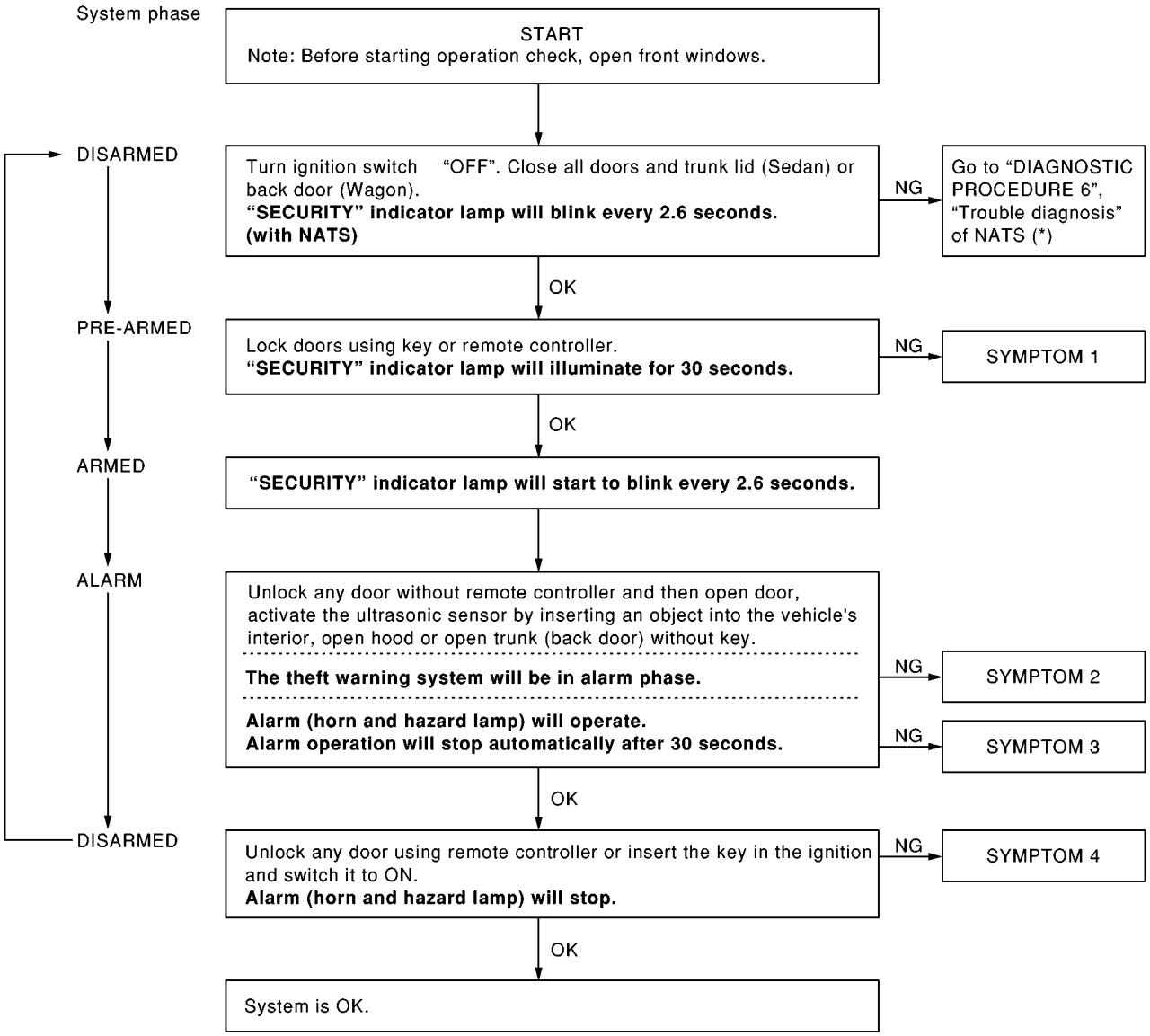
Trouble Diagnoses

EIS002OW

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-33, "CONSULT-II INSPECTION PROCEDURE" .

PRELIMINARY CHECK

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



SIIA1648E

After performing preliminary check, go to symptom chart. Refer to BL-142, "SYMPTOM CHART".

SYMPTOM CHART

PROCEDURE / SYMPTOM			Diagnostic procedure	Reference page
1	Theft warning system cannot be set by ····	All items	Power supply and ground circuit check	BL-142
			Door switch check	BL-143
			Hood switch check	BL-149
			Trunk room lamp switch or back door switch check	BL-147
			If the above systems are “OK”, replace smart entrance control unit.	—
		Remote controller	Check “MULTI-REMOTE CONTROL” system.	BL-82
	Security indicator does not turn “ON”.		Security indicator lamp check	BL-153
			If the above systems are “OK”, replace smart entrance control unit.	—
2	*1 Theft warning system does not alarm when ····	Any door is opened.	Door switch check	BL-143
			Hood switch check	BL-149
			Trunk room lamp switch or back door switch check	BL-147
			If the above systems are “OK”, replace smart entrance control unit.	—
		Glass breakage is detected	Smash sensor check	BL-154
3	Vehicle security alarm does not activate.	Horn alarm	Vehicle security horn alarm check	BL-152
		Hazard lamp alarm	Hazard lamp alarm check	BL-153
4	Theft warning system cannot be canceled by ····	Ignition key	Key switch check	BL-151
			Check “NATS (NISSAN ANTI-THEFT SYSTEM)” system.	BL-156
		Remote controller	Check “MULTI-REMOTE CONTROL” system.	BL-82

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

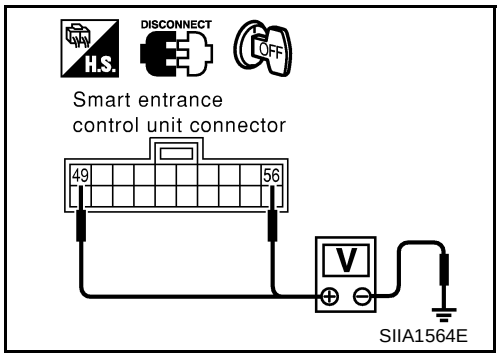
Power Supply and Ground Circuit Check

EIS002OX

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect smart entrance control unit connector.
3. Check voltage between smart entrance control unit harness connector M43 terminal 49(W/L), 56(R/B) and ground.

Terminal		Voltage
+	–	
49(W/L)	Ground	Battery voltage
56(R/B)		



OK or NG?

OK >> GO TO 2

NG >> Check smart entrance control unit power supply circuit for open or short.

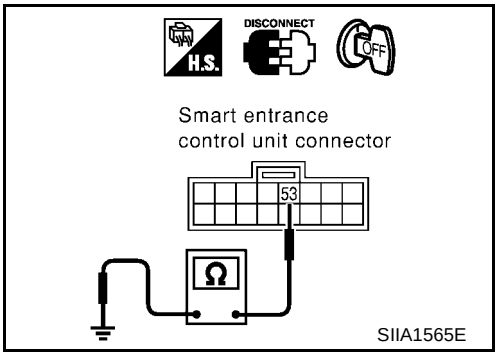
2. CHECK GROUND CIRCUIT

Check continuity between smart entrance control unit harness connector M43 terminal 53(B) and ground.

Terminal		Continuity
+	–	
53(B)	Ground	Yes

OK or NG?

OK >> Power supply and ground circuit is OK.
NG >> Check smart entrance control unit ground circuit for open or short.



Door Switch Check

EIS002OY

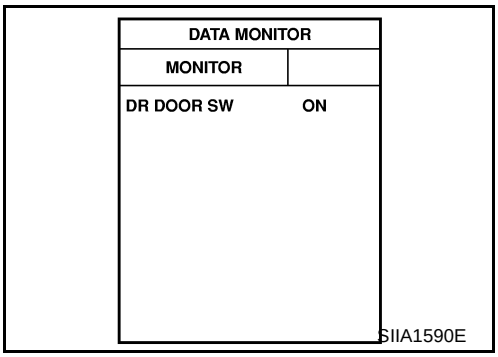
DRIVER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

	Monitor item	Condition
DR DOOR SW	Front door switch LH	Open: ON
		Close: OFF



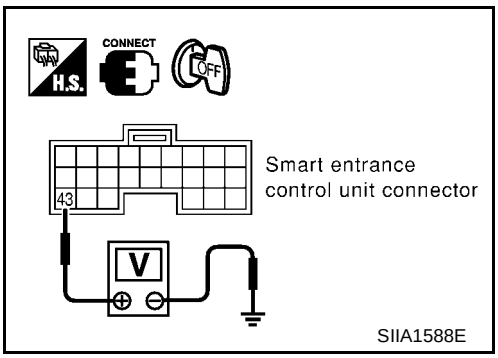
Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 43(R/W) and ground.

Terminal		Front door LH	Voltage
(+)	(–)		
43(R/W)	Ground	Closed	Approx. 5
		Open	0

OK or NG?

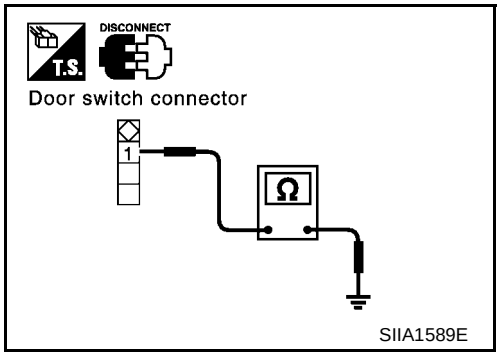
OK >> Door switch is OK.
NG >> GO TO 2



2. CHECK DOOR SWITCH

Check continuity between front door switch LH harness connector B16 terminal 1(R/W) and ground.

Terminal		Front door LH switch	Continuity
(+)	(–)		
1(R/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Front door switch LH ground condition
- Harness for open or short between smart entrance control unit and front door switch LH

NG >> Replace front door switch LH.

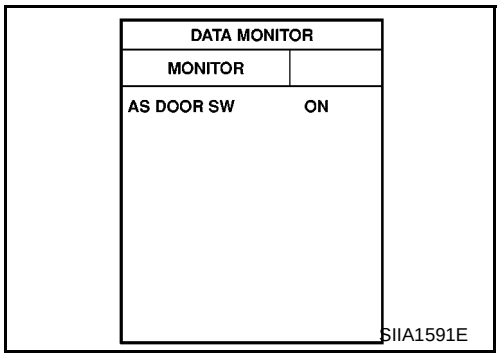
PASSENGER SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

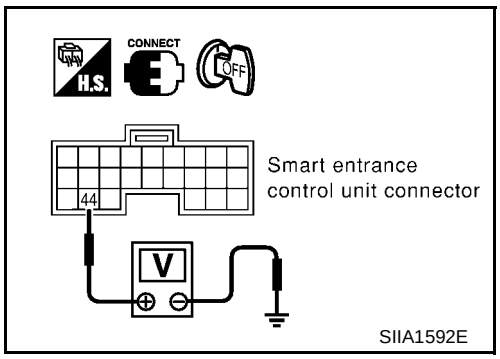
	Monitor item	Condition
AS DOOR SW	Front door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 44(L/OR) and ground.

Terminal		Front door RH	Voltage
(+)	(–)		
44(L/OR)	Ground	Closed	Approx. 5
		Open	0



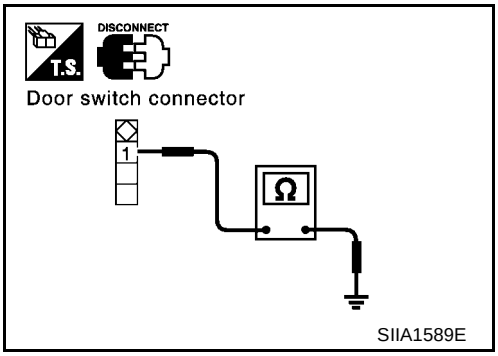
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between front door switch RH harness connector B118 terminal 1(L/OR) and ground.

Terminal		Front door RH switch	Continuity
(+)	(–)		
1(L/OR)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Front door switch RH ground condition
- Harness for open or short between smart entrance control unit and front door switch RH

NG >> Replace front door switch RH.

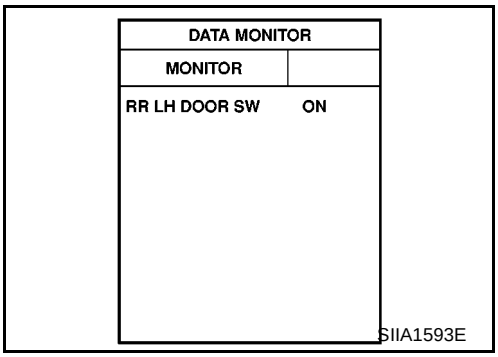
REAR LH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

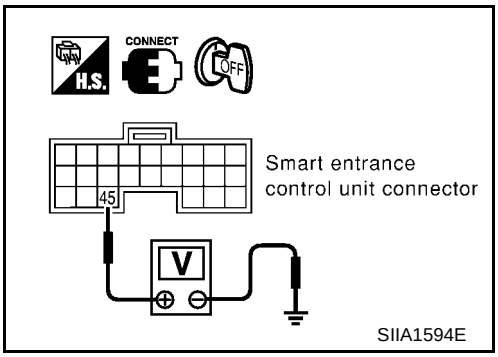
	Monitor item	Condition
RR LH DOOR SW	Rear door switch LH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 45(R/Y) and ground.

Terminal		Rear door LH	Voltage
(+)	(–)		
45(R/Y)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

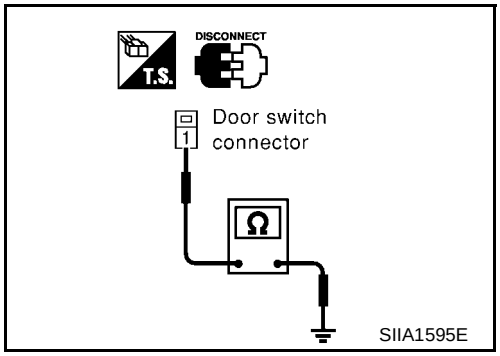
OK >> Door switch is OK.

NG >> GO TO 2

2. CHECK DOOR SWITCH

Check continuity between rear door switch LH harness connector B23 terminal 1(R/Y) and ground.

Terminal		Rear door LH switch	Continuity
(+)	(–)		
1(R/Y)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch LH ground condition
- Harness for open or short between smart entrance control unit and rear door switch LH

NG >> Replace rear door switch LH.

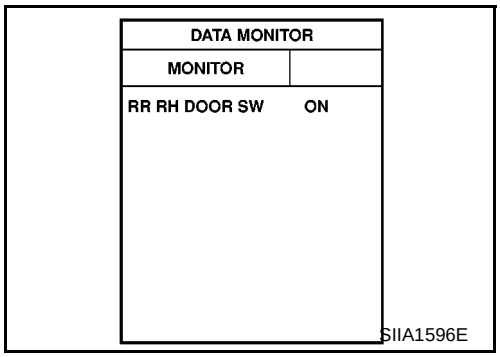
REAR RH SIDE

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

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

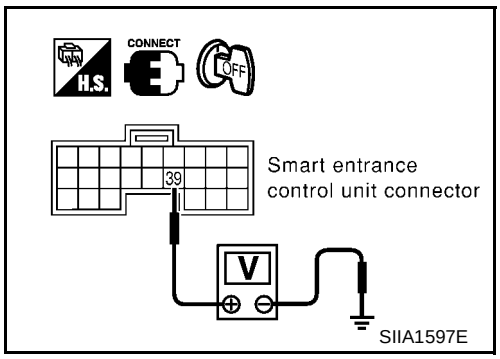
	Monitor item	Condition
RR RH DOOR SW	Rear door switch RH	Open: ON
		Close: OFF



Without CONSULT- II

1. Turn ignition switch OFF.
2. Check voltage between smart entrance control unit harness connector M42 terminal 39(BR/W) and ground.

Terminal		Rear door RH	Voltage
(+)	(–)		
39(BR/W)	Ground	Closed	Approx. 5
		Open	0



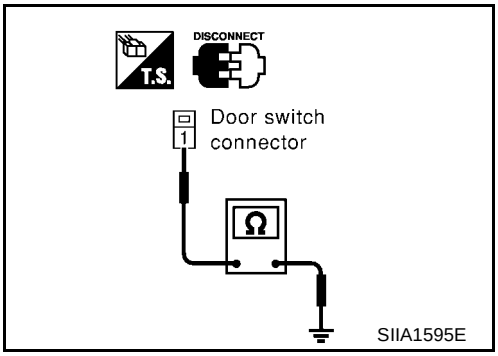
OK or NG?

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

2. CHECK DOOR SWITCH

Check continuity between rear door switch RH harness connector B125 terminal 1(BR/W) and ground.

Terminal		Rear door RH switch	Continuity
(+)	(–)		
1(BR/W)	Ground	Pushed	No
		Released	Yes



OK or NG?

OK >> Check the following.
- Rear door switch RH ground condition
- Harness for open or short between smart entrance control unit and rear door switch RH

NG >> Replace rear door switch RH.

Trunk Room Lamp Switch or Back Door Switch Check

EIS002OZ

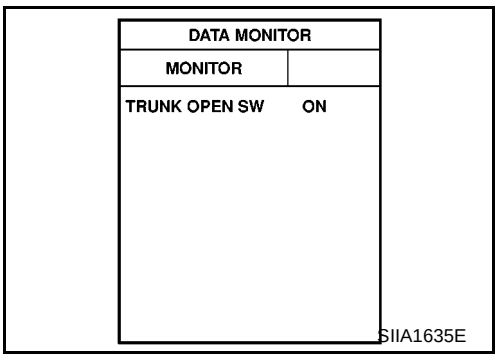
TRUNK ROOM LAMP SWITCH

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

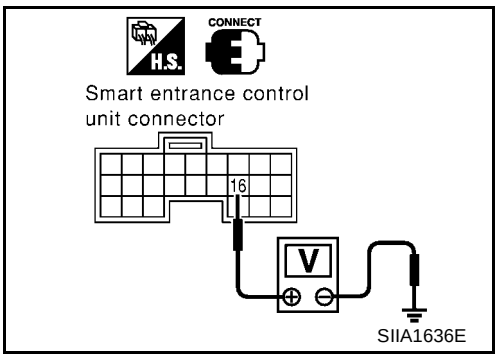
	Monitor item	Condition
TRUNK OPEN SW	Trunk room lamp switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal		Trunk lid	Voltage
(+)	(–)		
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

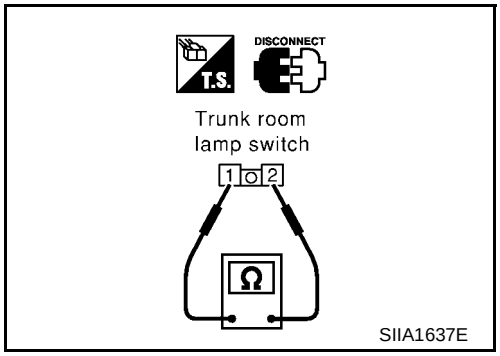
OK >> Trunk room lamp switch is OK.

NG >> GO TO 2

2. CHECK TRUNK ROOM LAMP SWITCH

Check continuity between trunk room lamp switch terminals 1 and 2.

Terminal	Trunk lid condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.
- Trunk room lamp switch ground circuit
- Harness for open or short between smart entrance control unit and trunk room lamp switch

NG >> Replace trunk room lamp switch.

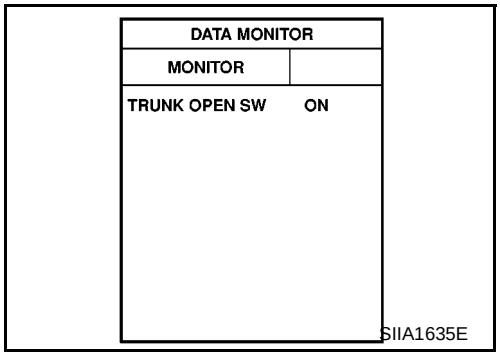
BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT- II

- Check door switch “TRUNK OPEN SWITCH” in “DATA MONITOR” mode with CONSULT- II.

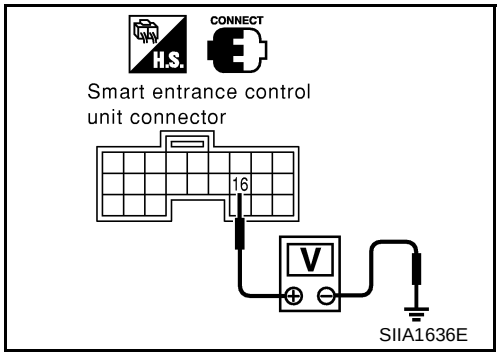
	Monitor item	Condition
TRUNK OPEN SW	Back door switch	Open: ON
		Close: OFF



Without CONSULT- II

Check voltage between smart entrance control unit harness connector M41 terminal 16(G) and ground.

Terminal (+)	Terminal (–)	Back door	Voltage
16(G)	Ground	Closed	Approx. 5
		Open	0



OK or NG?

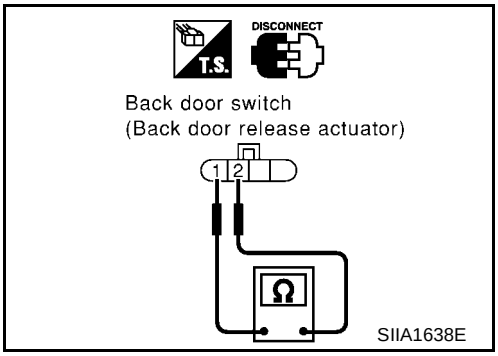
OK >> Back door switch is OK.

NG >> GO TO 2

2. CHECK BACK DOOR SWITCH

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

Terminal	Back door condition	Continuity
1 – 2	Opened	Yes
	Closed	No



OK or NG?

OK >> Check the following.

- Back door switch (back door release actuator) ground circuit
- Harness for open or short between smart entrance control unit and back door switch (back door release actuator)

NG >> Replace back door switch (back door release actuator).

Hood Switch Check

EIS002P0

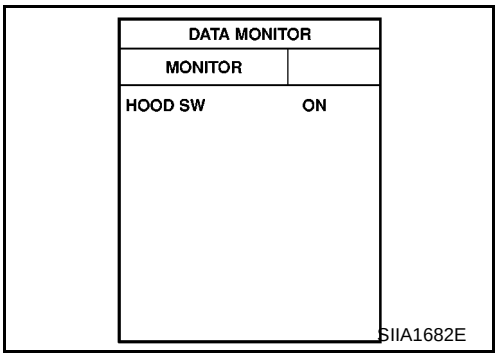
1. CHECK HOOD SWITCH INPUT SIGNAL

With CONSULT–II

Check “HOOD SWITCH” in “DATA MONITOR” mode with CONSULT–II.

Engine hood is open : HOOD SW ON

Engine hood is closed : HOOD SW OFF

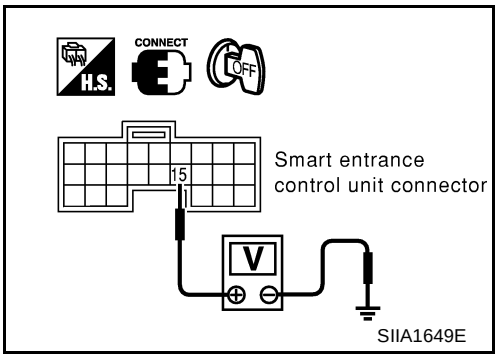


Without CONSULT–II

Check voltage between smart entrance control unit harness connector M41 terminal 15(LG) and ground.

Engine hood is open. : 0V

Engine hood is closed. : Approx. 5V



OK or NG?

OK >> Hood switch is OK.

NG >> GO TO 2.

2. CHECK DOOR SWITCH

Check hood switch and hood fitting condition.

OK or NG?

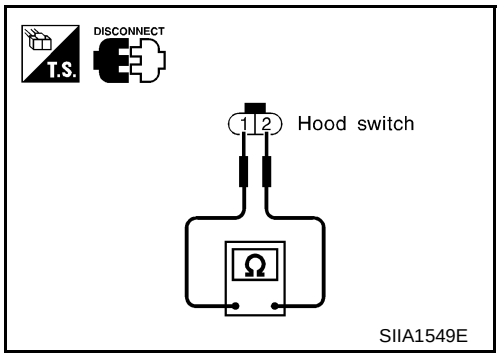
OK >> GO TO 3.

NG >> Adjust installation of hood switch.

3. CHECK HOOR SWITCH

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

Terminals	Condition	Continuity
1– 2	Closed (Pushed)	No
	Open (Released)	Yes



OK or NG?

OK >> Check the following.
- Hood switch ground circuit
- Harness for open or short between hood switch and smart entrance control unit

NG >> Replace hood switch.

Key Switch Check

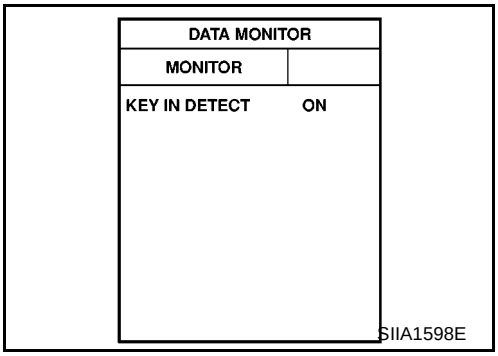
EIS002P1

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

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

When key is inserted in ignition key cylinder:
KEY IN DETECT ⇒ ON
When key is removed from ignition key cylinder:
KEY IN DETECT ⇒ OFF



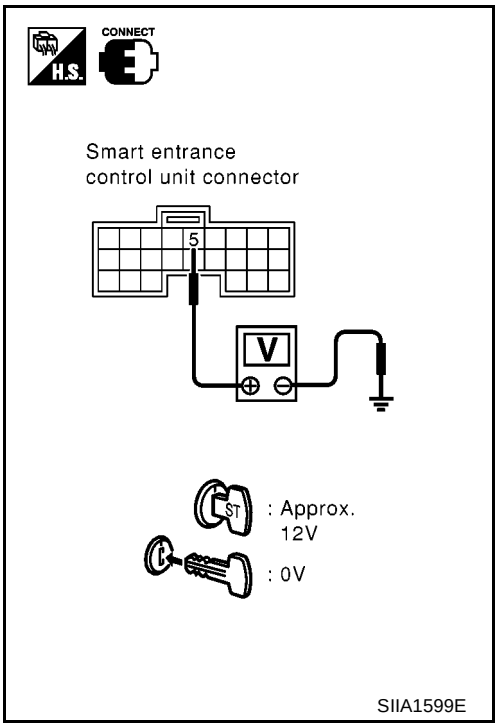
Without CONSULT- II

- Check voltage between smart entrance control unit harness connector M41 terminal 5(B/R) and ground.

Terminals		Key switch	Voltage
+	–		
5(B/R)	Ground	Key is inserted	Approx. 12
		Key is removed	0

OK or NG?

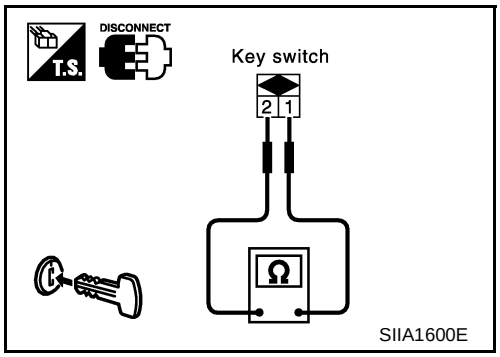
OK >> Key switch is OK.
NG >> GO TO 2



2. CHECK KEY SWITCH (INSERT)

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

Terminals	Key switch	Continuity
1 – 2	Key is inserted	Yes
	Key is removed	No



OK or NG?

OK >> Check the following.
- 10A fuse [No. 12, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between smart entrance control unit and key switch

NG >> Replace key switch.

Vehicle Security Horn Alarm Check

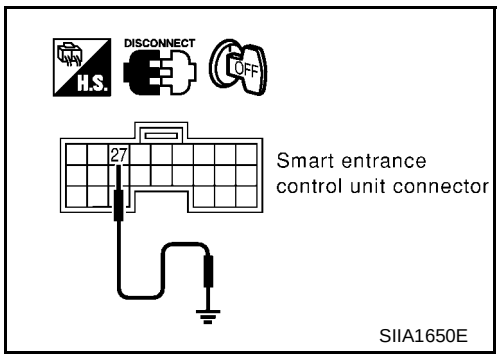
EIS002P2

1. CHECK VEHICLE SECURITY HORN OPERATION

1. Disconnect smart entrance control unit harness connector.
2. Apply ground to smart entrance control unit harness connector M42 terminal 27(Y/B).

Does horn operate?

Yes >> Replace smart entrance control unit.
No >> GO TO 2.



2. CHECK VEHICLE SECURITY HORN RELAY POWER SUPPLY

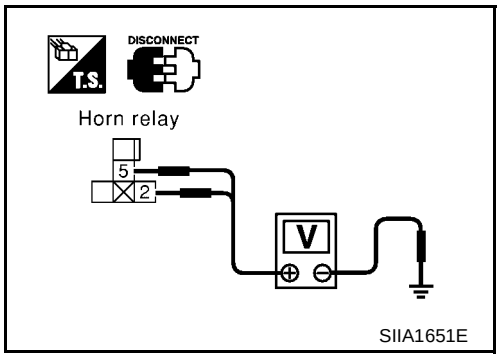
1. Disconnect vehicle security horn relay connector.
2. Check voltage between vehicle security horn relay harness connector B43 terminal 2, 5 and ground.

: Battery voltage should exist.

OK or NG?

OK >> Check the following.
- Harness for open or short between smart entrance control unit and vehicle security horn relay
- Harness open or short between vehicle security horn relay and ground

NG >> Check harness open or short between vehicle security horn relay and fuse.



Hazard Lamp Alarm Check

EIS002P3

1. CHECK HAZARD LAMP ALARM

Check if hazard lamp alarm flashes with hazard switch.

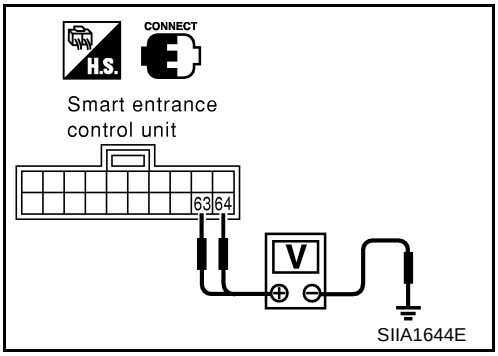
Does hazard warning lamp operate?

Yes >> GO TO 2
No >> Check hazard lamp alarm circuit.

2. HAZARD LAMP ALARM OPERATION

Check the following at when push the remote controller switch.
Check voltage between smart entrance control unit harness connector M43 terminal 63(G/Y), 64(G/B) and ground.

Remote controller	Voltage (Approximate values)
Pushing LOCK button	0V → 12V → 0V
Pushing UNLOCK button	0V → 12V → 0V → 12V → 0V



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and hazard switch.
NG >> Replace smart entrance control unit.

Security Indicator Lamp Check

EIS002P6

1. CHECK FUSE

Check 10A fuse [No.12 and No.30, located in the fuse block (J/B)]

10A fuse OK?

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

2. CHECK SECURITY INDICATOR LAMP

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

: Security indicator lamp should be light up.

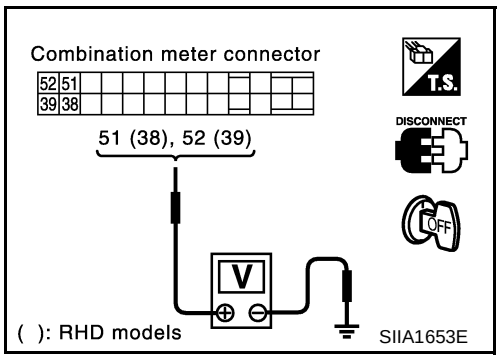
OK or NG?

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

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector M37 terminal 51: Y(38: Y), 52: R/B(39: R/B) and ground.
   ( ): RHD models

   : Battery voltage should exist.



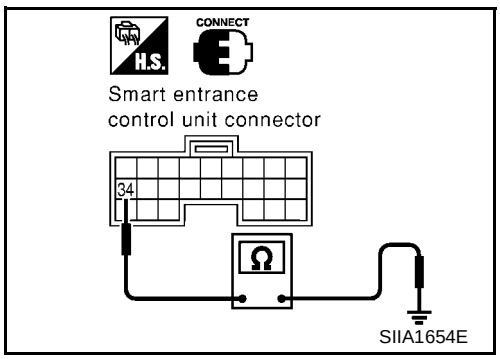
OK or NG?

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

4. CHECK SMART ENTRANCE CONTROL UNIT FUNCTION

1. Disconnect combination meter connector.
2. Connect smart entrance control unit connector.
3. Check continuity between smart entrance control unit harness connector M42 terminal 34(L/Y) and ground.

   : Continuity should exist intermittently.



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and combination meter.
NG >> Smart entrance control unit is malfunctioning.

- Replace smart entrance control unit
  Ref. part No. A
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II operation manual NATS”

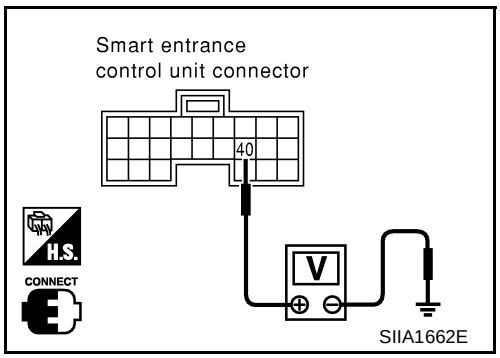
Smash Sensor Check

EIS002LW

1. CHECK SMASH SENSOR CIRCUIT

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M42 terminal 40 (L/W) and ground.

   : Continuity should exist.



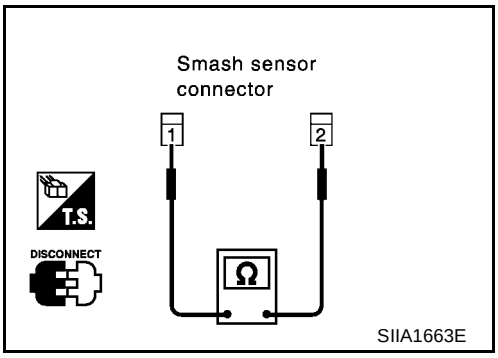
OK or NG?

OK >> Smash sensor is OK.
NG >> GO TO 2.

2. CHECK SMASH SENSOR

1. Disconnect smash sensor LH and RH connector.
2. Check continuity between smash sensor terminal 1 and 2.

: Continuity should exist.



OK or NG?

OK >> Check the following.

- Harness for open or short between smart entrance control unit and smash sensor
- Harness for open or short between smash sensor LH and RH
- Rear window defogger system, refer to???.

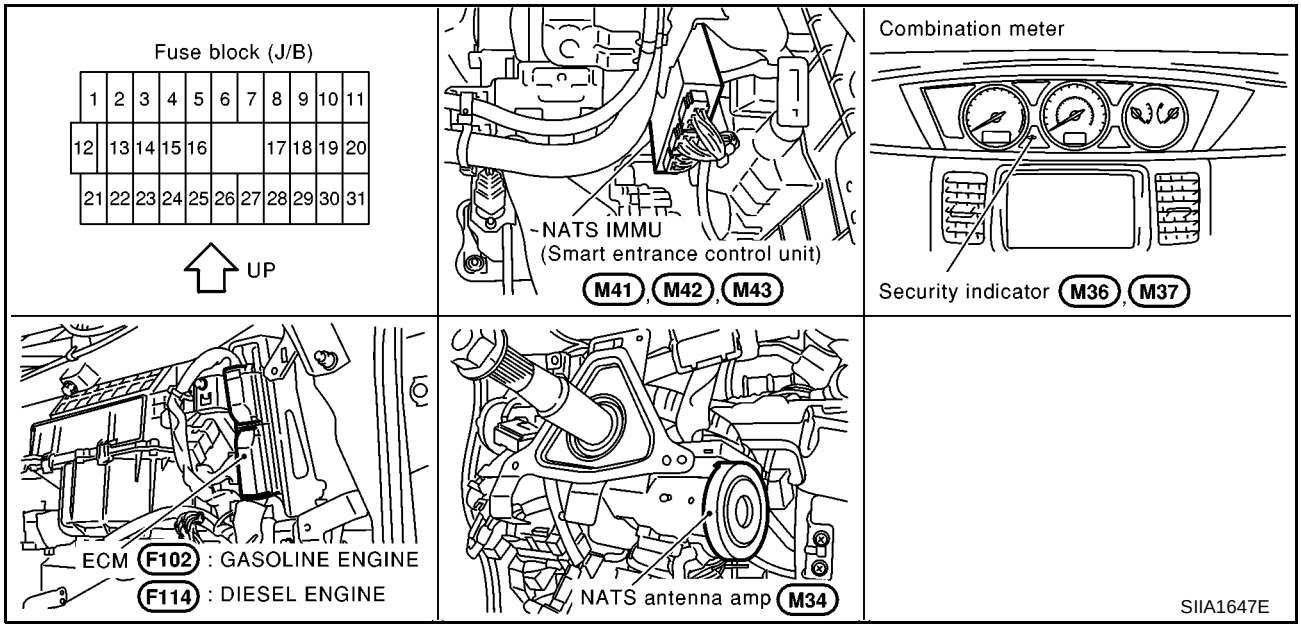
NG >> Replace smash sensor.

NATS (NISSAN ANTI-THEFT SYSTEM)

PFP:25386

Component Parts and Harness Connector Location

EIS002LZ



System Description

EIS002M0

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

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

Condition IGN ON and	Security indicator	
	With dongle	With out dongle
NATS malfunction (except dongle unit) is detected	1. 6 time blinking 2. Staying ON after ignition switch is turned ON	Staying ON
Only malfunction of dongle unit is detected.	Stay ON for about 15 minutes after ignition switch is turned ON	—
Malfunction of NATS and engine related parts are detected	1. 6 time blinking 2. Staying ON after ignition switch is turned ON	Staying ON

Condition IGN ON and	Security indicator	
	With dongle	With out dongle
Only engine related part malfunction is detected.	—	—
Just after initialization of NATS	6 time blinking	—

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

CAN COMMUNICATION

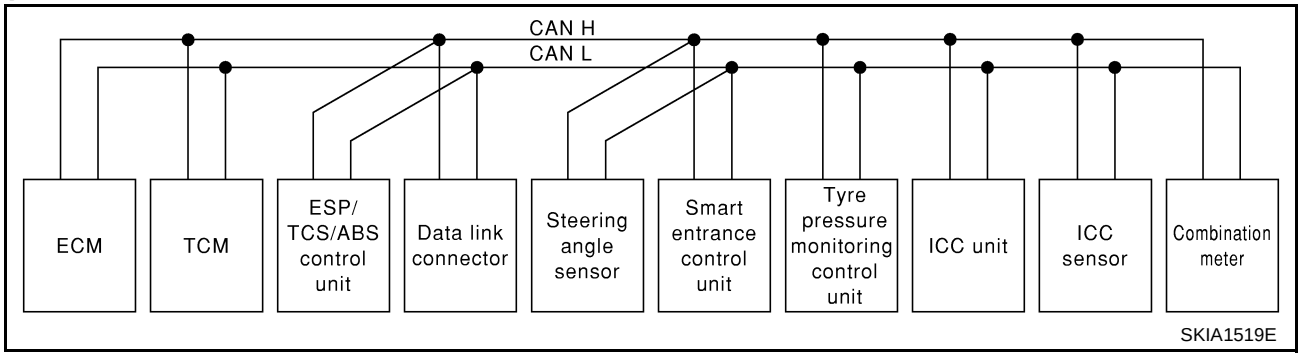
CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information 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 FOR LHD MODELS WITH TYRE PRESSURE MONITORING SYSTEM

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6			

Type 1



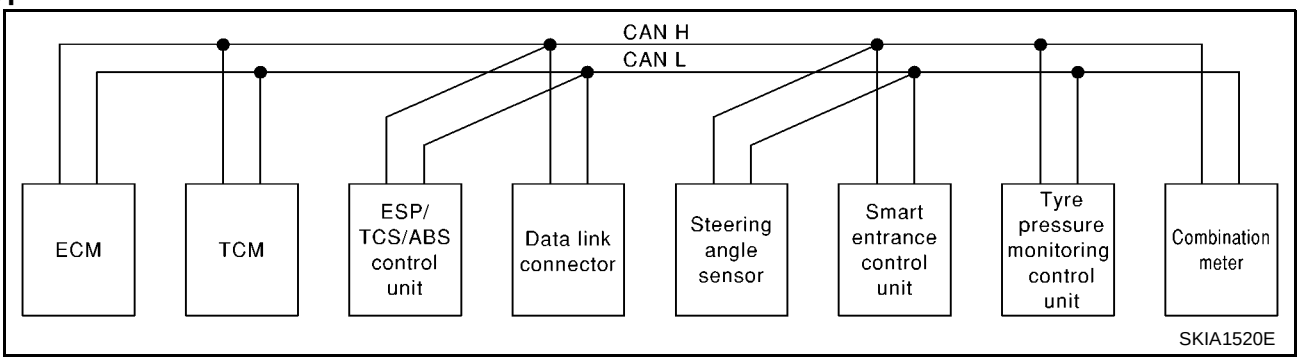
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R				R		R
Accelerator pedal position signal	T	R	R				R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal			T				R		
ICC system display signal							T		R
ICC sensor signal							R	T	
ESP operation signal	R		T				R		
TCS operation signal	R		T				R		
ABS operation signal	R	R	T				R		
Stop lamp switch signal		R	T						
Steering wheel angle sensor signal			R	T					
Wheel speed sensor signal			T				R		
Rear window defogger signal	R				T				
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal			T						R
	R								T
Seat belt reminder signal					R				T
Headlamp switch signal					T				R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Flashing indicator signal					T				R
Engine cooling fan speed signal	T				R				
Child lock indicator signal					T				R
Door switches state signal					T				R
Key ID signal	R				T				
	T				R				
A/C compressor signal	T				R				
Tire pressure signal						T			R

Type 2



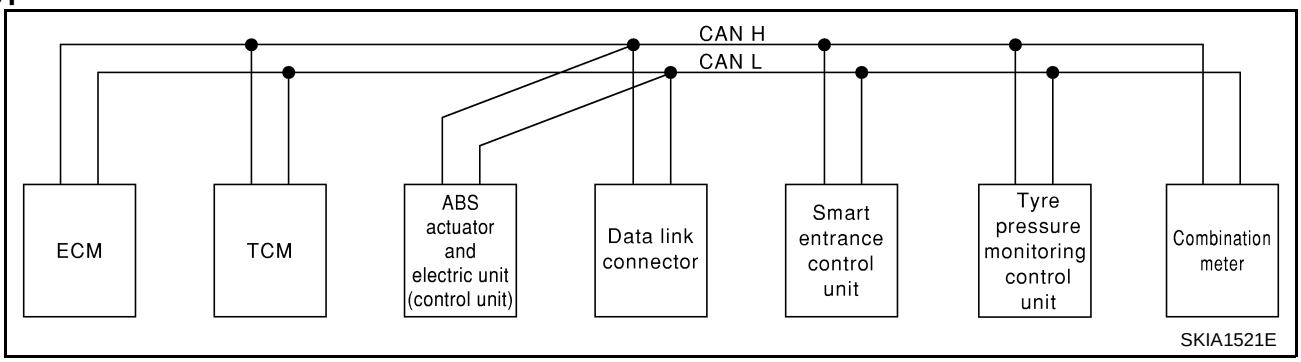
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R	T			
Rear window defogger signal	R				T		
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature signal	T						R
Fuel consumption signal	T						R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal					R		T
Headlamp switch signal					T		R
Flashing indicator signal					T		R
Engine cooling fan speed signal	T				R		
Child lock indicator signal					T		R
Door switches state signal					T		R
Key ID signal	R				T		
	T				R		
A/C compressor signal	T				R		
Tire pressure signal						T	R

Type 3



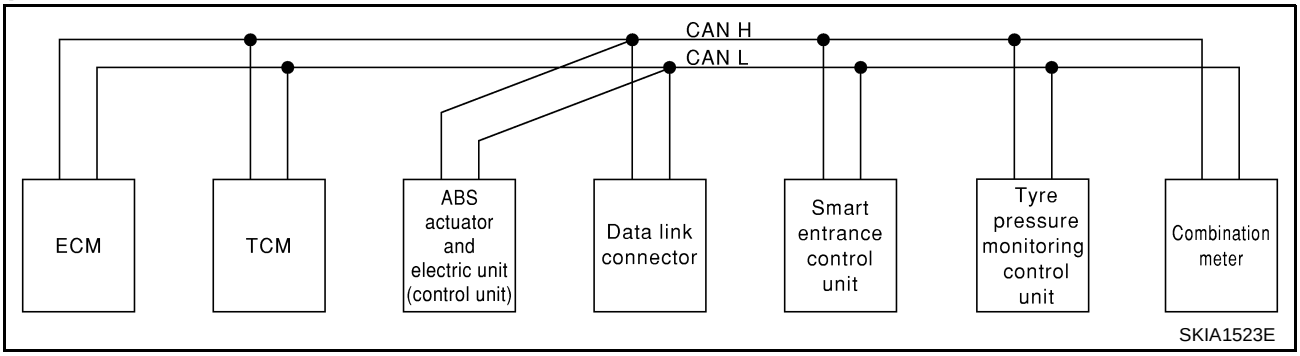
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal				R		T

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

Type 4



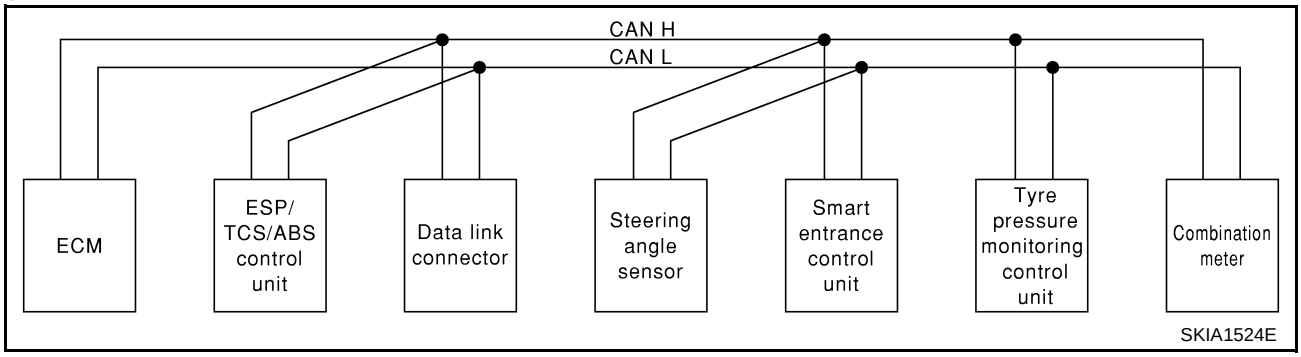
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

Type 5



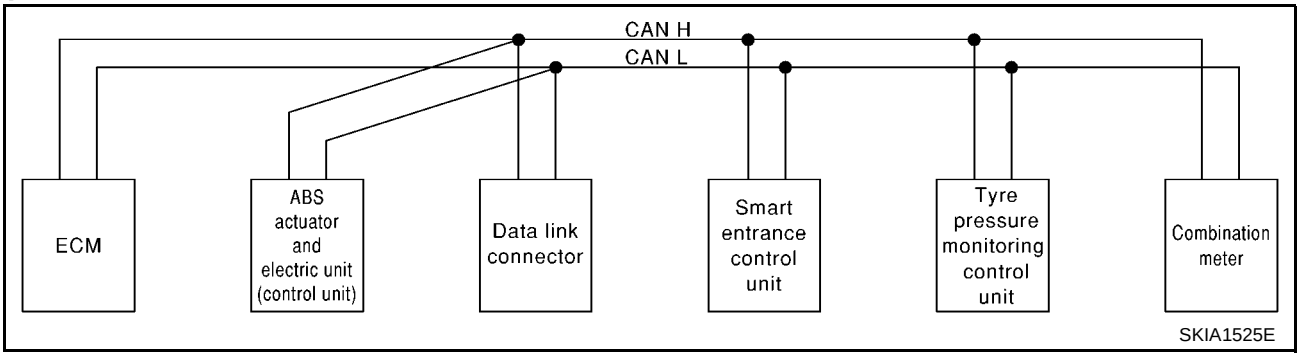
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				
TCS operation signal	R	T				
ABS operation signal	R	T				
Steering wheel angle sensor signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
A/C compressor signal	T			R		
Tire pressure signal					T	R

Type 6



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1		T		
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal			R		T
Headlamp switch signal			T		R
Flashing indicator signal			T		R
Engine cooling fan speed signal	T		R		
Child lock indicator signal			T		R
Door switches state signal			T		R
Key ID signal	R		T		
	T		R		
A/C compressor signal	T		R		
Tire pressure signal				T	R

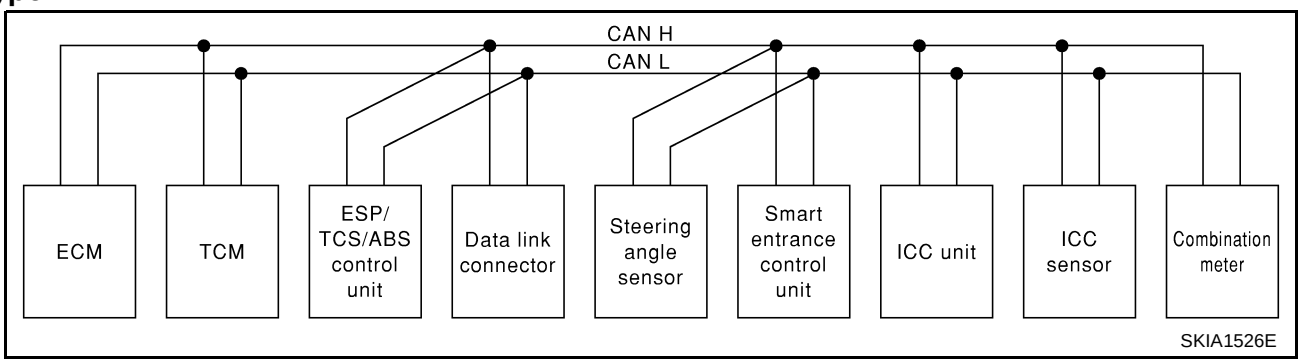
*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

CAN COMMUNICATION UNIT FOR LHD MODELS WITHOUT TYRE PRESSURE MONITORING SYSTEM

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
Can communication type	Type 7	Type 8	Type 9	Type 10	Type 11	Type 12			

Type 7



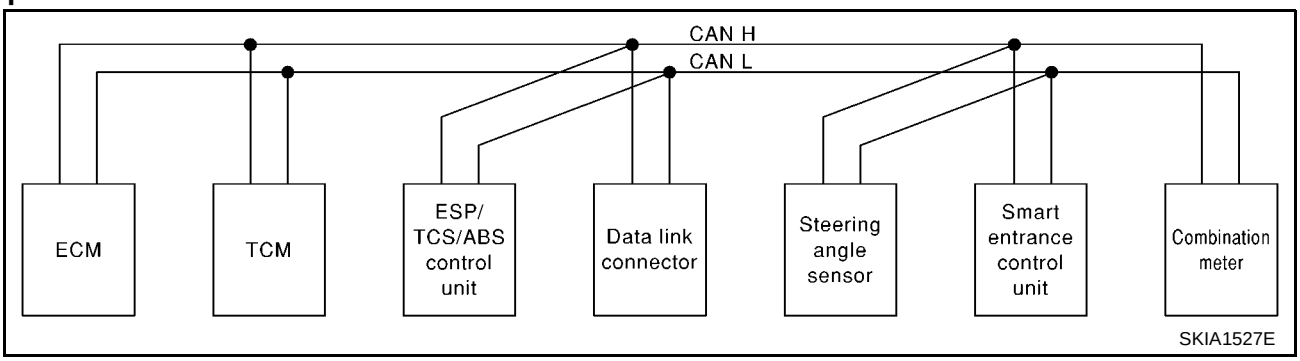
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R			R		R
Accelerator pedal position signal	T	R	R			R		
Closed throttle position signal	T					R		
ICC steering switch signal	T					R		
Shift pattern signal		T				R		
Parking brake switch signal			T			R		
ICC system display signal						T		R
ICC sensor signal						R	T	
ESP operation signal	R		T			R		
TCS operation signal	R		T			R		

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	ICC unit	ICC sensor	Combination meter
ABS operation signal	R	R	T			R		
Stop lamp switch signal		R	T					
Steering wheel angle sensor signal			R	T				
Wheel speed sensor signal			T			R		
Rear window defogger signal	R				T			
Heater fan switch signal	R							T
Air conditioner switch signal	R							T
Primary pulley revolution signal	R	T				R		
Secondary pulley revolution signal	R	T				R		
ICC operation signal	R					T		
Brake switch signal	R					T		
MI signal	T							R
Current gear position signal		T						R
Engine coolant temperature signal	T					R		R
Fuel consumption signal	T							R
Vehicle speed signal			T					R
	R							T
Seat belt reminder signal					R			T
Headlamp switch signal					T			R
Flashing indicator signal					T			R
Engine cooling fan speed signal	T				R			
Child lock indicator signal					T			R
Door switches state signal					T			R
Key ID signal	R				T			
	T				R			
A/C compressor signal	T				R			

Type 8



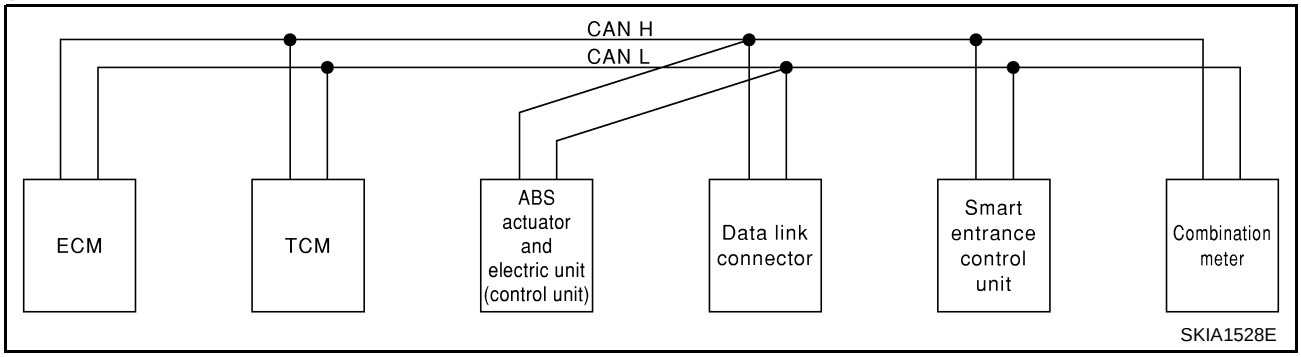
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R			R
Accelerator pedal position signal	T	R	R			

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
ESP operation signal	R		T			
TCS operation signal	R		T			
ABS operation signal	R	R	T			
Stop lamp switch signal		R	T			
Steering wheel angle sensor signal			R	T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	

Type 9



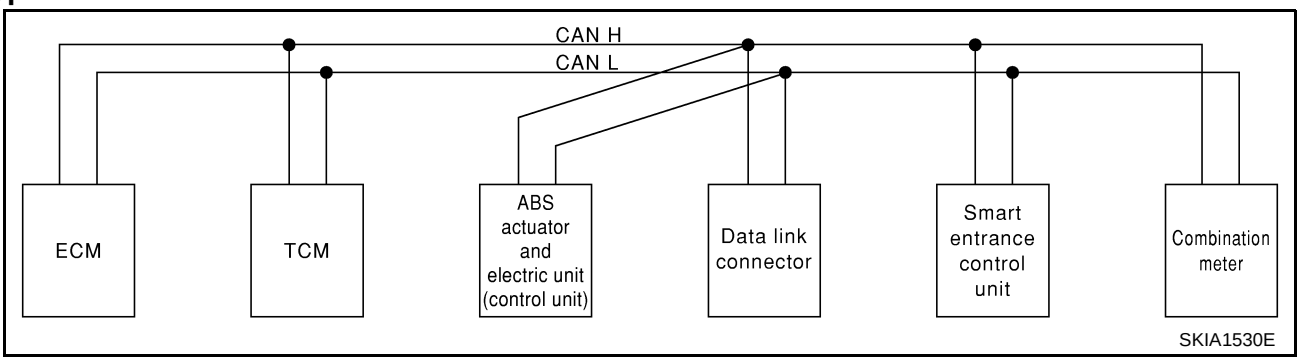
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
Primary pulley revolution signal	R	T			
Secondary pulley revolution signal	R	T			
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 10



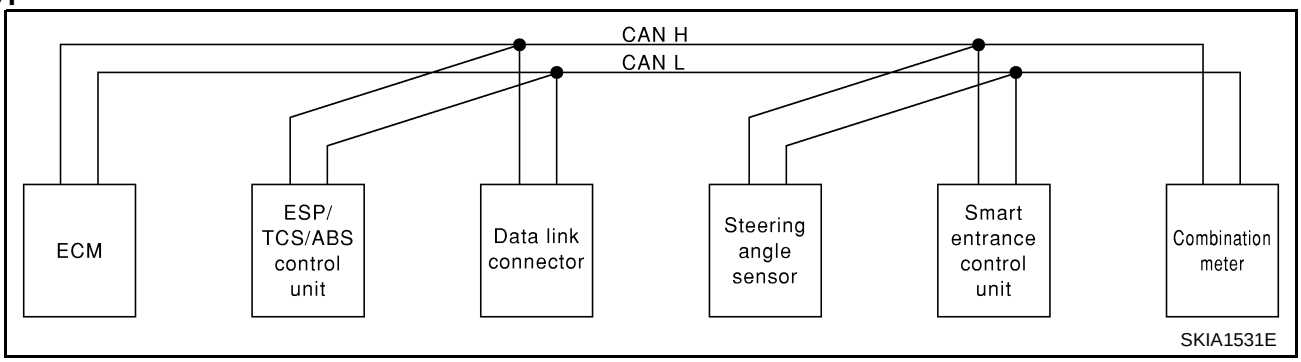
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 11



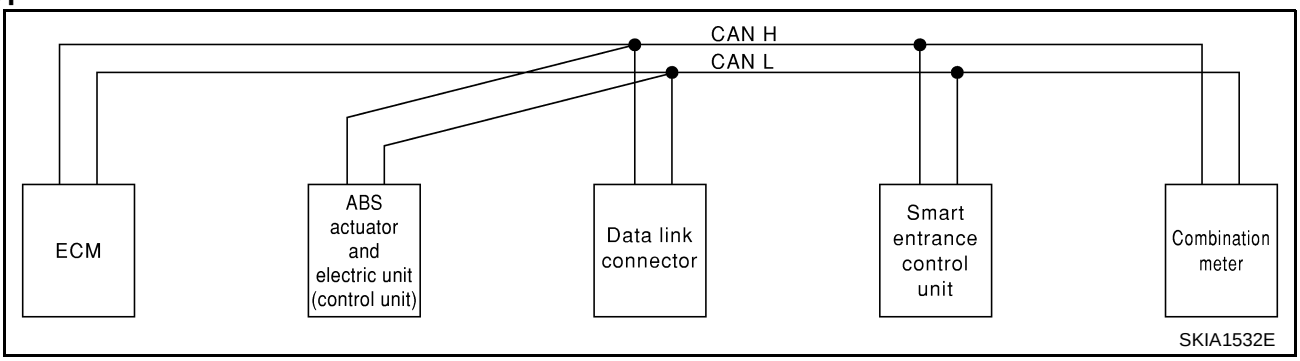
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Accelerator pedal position signal	T	R			
ESP operation signal	R	T			
TCS operation signal	R	T			
ABS operation signal	R	T			
Steering wheel angle sensor signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 12



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T			R
Rear window defogger signal	R*1		T	
Heater fan switch signal	R*1			T
Air conditioner switch signal	R			T
MI signal	T			R
Glow lamp signal*2	T			R
Engine coolant temperature signal	T			R
Fuel consumption signal	T			R
Vehicle speed signal		T		R
	R			T
Seat belt reminder signal			R	T
Headlamp switch signal			T	R
Flashing indicator signal			T	R
Engine cooling fan speed signal	T		R	
Child lock indicator signal			T	R
Door switches state signal			T	R
Key ID signal	R		T	
	T		R	
A/C compressor signal	T		R	

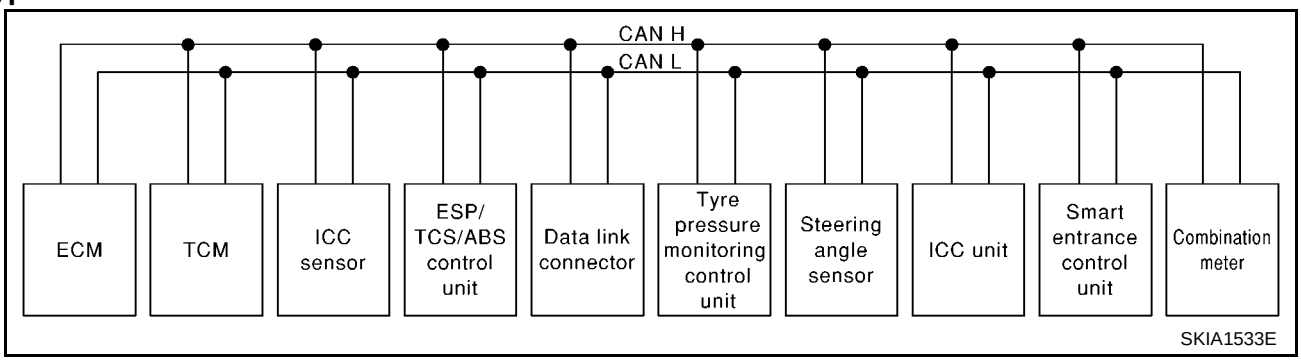
*1: Except YD22DDTi engine model
*2:YD22DDTi engine model only

CAN COMMUNICATION UNIT FOR RHD MODELS WITH TYRE PRESSURE MONITORING SYSTEM

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE		QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T			6M/T	
Brake control	ESP		ABS		ESP	ABS				
ICC system	Applica-ble	Not applicable								
CAN communication unit										
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ICC sensor	×								
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
ICC unit	×								
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	Type 13	Type 14	Type 15	Type 16	Type 17	Type 18			

Type 13



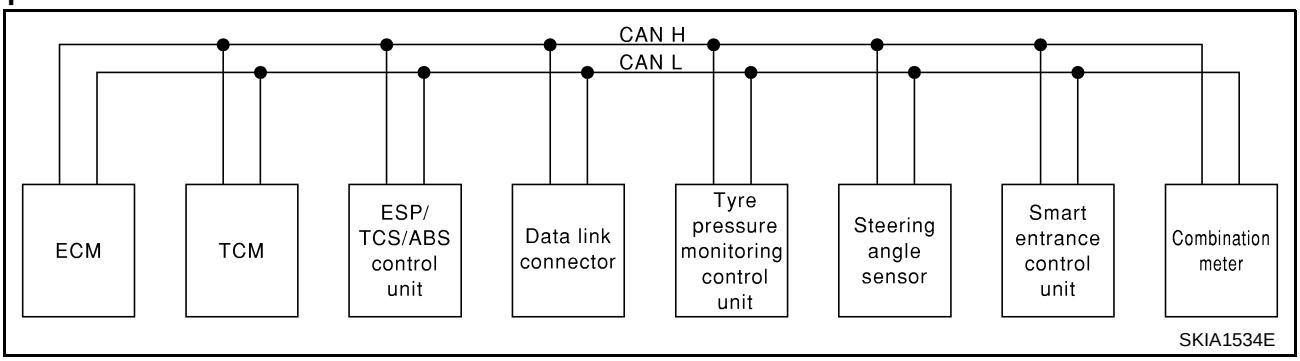
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Tyre pres-sure monitor-ing con-trol unit	Steer-ing angle sensor	ICC unit	Smart entranc e con-trol unit	Combi-nation meter
Engine speed signal	T	R		R			R		R
Accelerator pedal position signal	T	R		R			R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal				T			R		
ICC system display signal							T		

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
ICC sensor signal			T				R		
ESP operation signal	R			T			R		
TCS operation signal	R			T			R		
ABS operation signal	R	R		T			R		
Stop lamp switch signal		R		T					
Steering wheel angle sensor signal				R		T			
Wheel speed sensor signal				T			R		
Rear window defogger signal	R							T	
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal				T					R
	R								T
Seat belt reminder signal								R	T
Headlamp switch signal								T	R
Flashing indicator signal								T	R
Engine cooling fan speed signal	T							R	
Child lock indicator signal								T	R
Door switches state signal								T	R
Key ID signal	R							T	
	T							R	
A/C compressor signal	T							R	
Tire pressure signal					T				R

Type 14

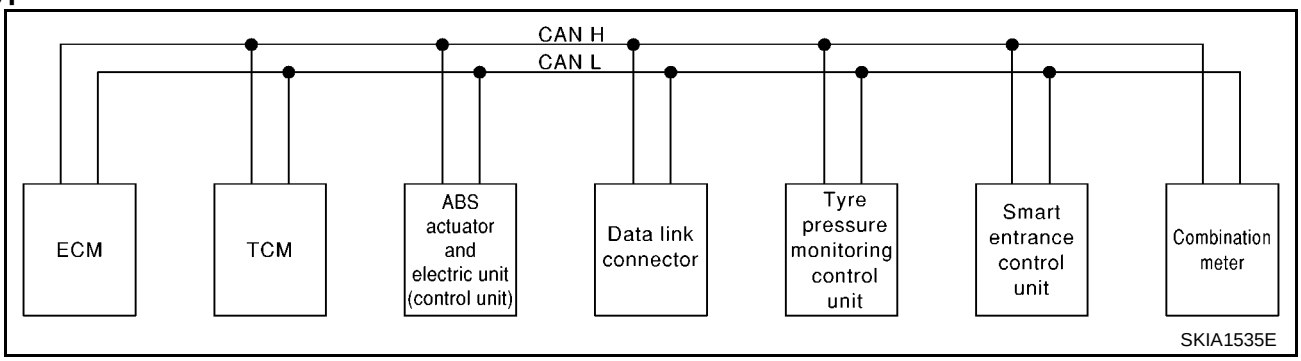


Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R		T		
Rear window defogger signal	R					T	
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature	T						R
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal						R	T
Headlamp switch signal						T	R
Flashing indicator signal						T	R
Engine cooling fan speed signal	T					R	
Child lock indicator signal						T	R
Door switches state signal						T	R
Key ID signal	R					T	
	T					R	
A/C compressor signal	T					R	
Tire pressure signal				T			R

Type 15

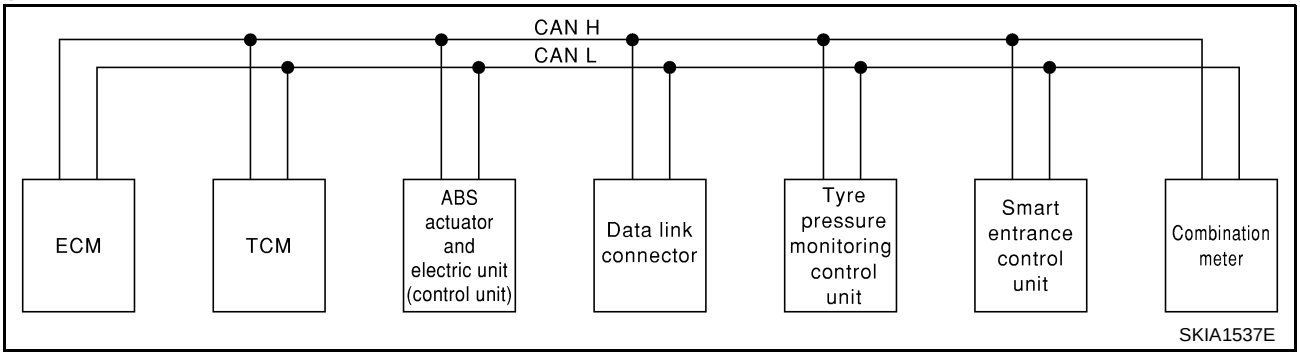


Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal				T		R

Type 16

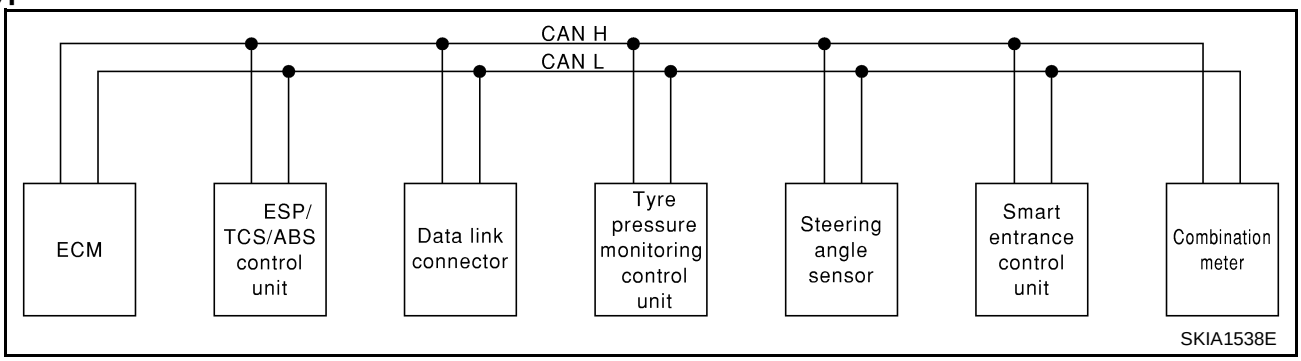


Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal				T		R

Type 17



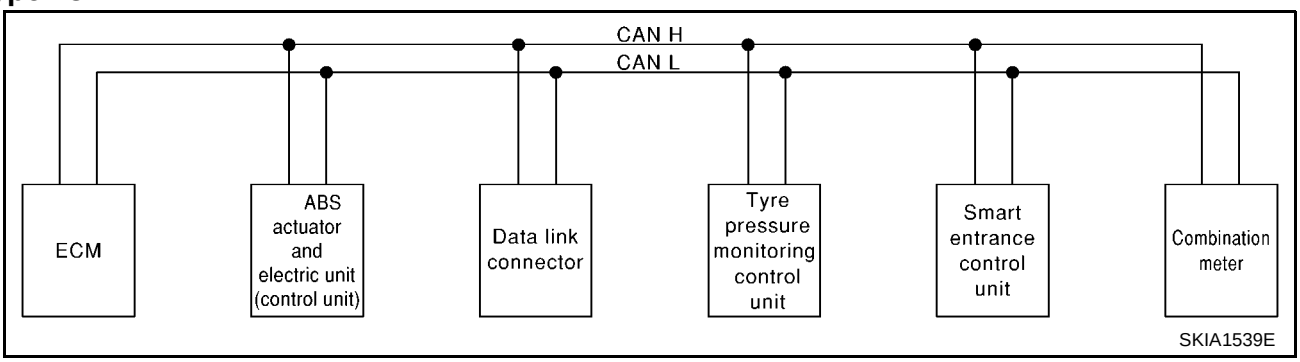
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				
TCS operation signal	R	T				

Signals	ECM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
ABS operation signal	R	T				
Steering wheel angle sensor signal		R		T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal			T			R

Type 18



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1			T	
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R

Signals	ECM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	
Tire pressure signal			T		R

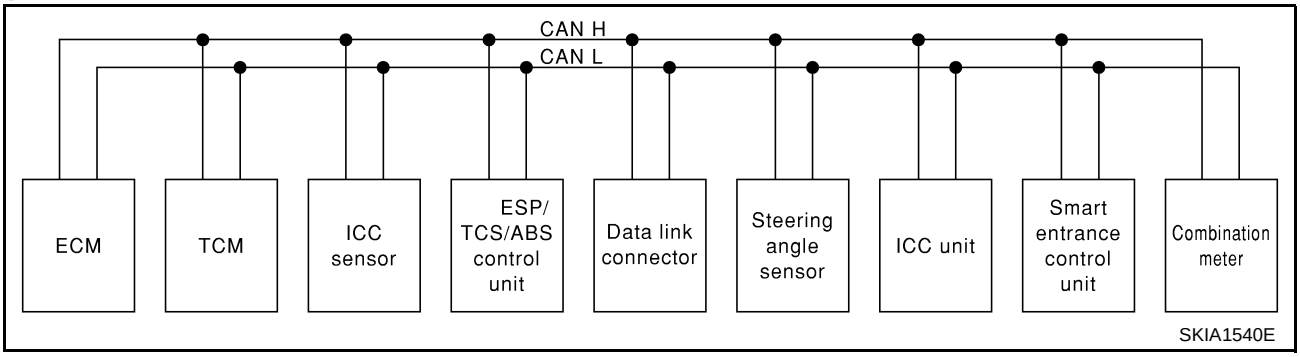
*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

CAN COMMUNICATION UNIT FOR RHD MODELS WITHOUT TYRE PRESSURE MONITORING SYSTEM

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DDTi
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ICC sensor	×								
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
ICC unit	×								
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×
Can communication type	Type 19	Type 20	Type 21	Type 22	type 23	Type 24			

Type 19



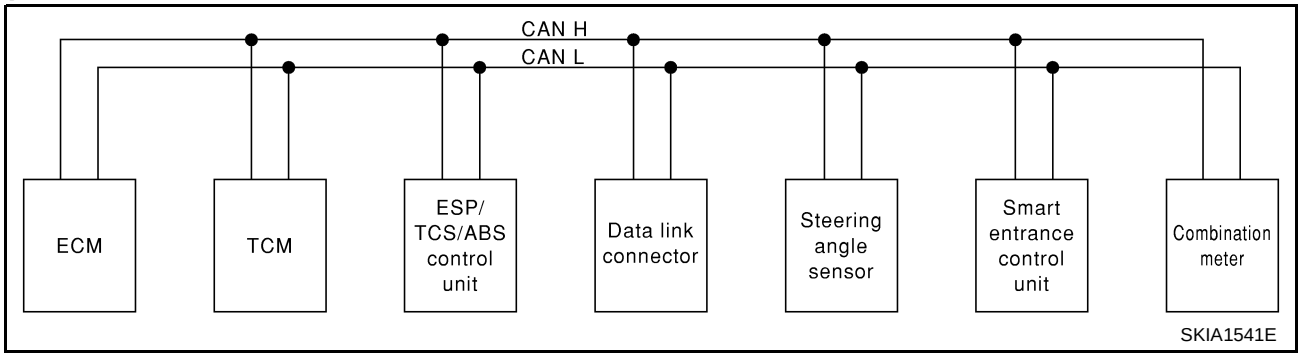
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R		R		R		R
Accelerator pedal position signal	T	R		R		R		
Closed throttle position signal	T					R		
ICC steering switch signal	T					R		
Shift pattern signal		T				R		
Parking brake switch signal				T		R		
ICC system display signal						T		R
ICC sensor signal			T			R		
ESP operation signal	R			T		R		
TCS operation signal	R			T		R		
ABS operation signal	R	R		T		R		
Stop lamp switch signal		R		T				
Steering wheel angle sensor signal				R	T			
Wheel speed sensor signal				T		R		
Rear window defogger signal	R						T	
Heater fan switch signal	R							T
Air conditioner switch signal	R							T
Primary pulley revolution signal	R	T				R		
Secondary pulley revolution signal	R	T				R		
ICC operation signal	R					T		
Brake switch signal	R					T		
MI signal	T							R
Current gear position signal		T						R
Engine coolant temperature signal	T					R		R
Fuel consumption signal	T							R
Vehicle speed signal				T				R
	R							T
Seat belt reminder signal							R	T
Headlamp switch signal							T	R
Flashing indicator signal							T	R

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Engine cooling fan speed signal	T						R	
Child lock indicator signal							T	R
Door switches state signal							T	R
Key ID signal	R						T	
	T						R	
A/C compressor signal	T						R	

Type 20



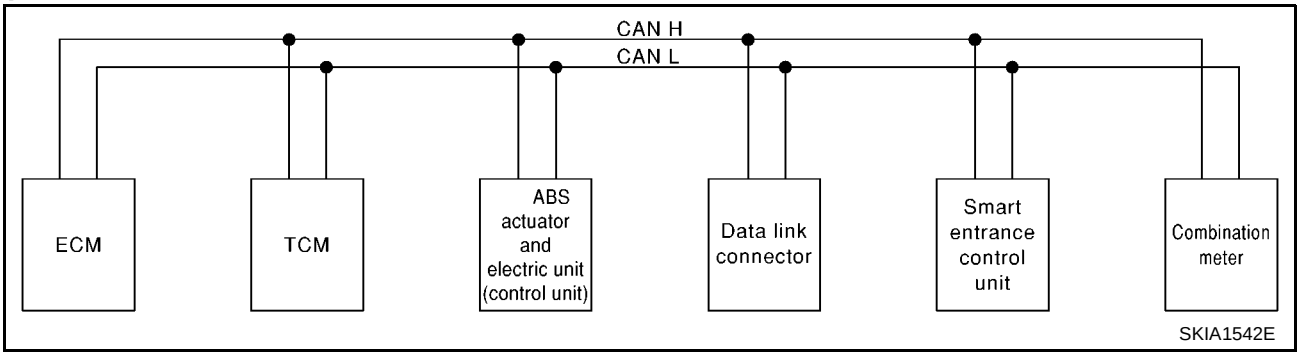
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R			R
Accelerator pedal position signal	T	R	R			
ESP operation signal	R		T			
TCS operation signal	R		T			
ABS operation signal	R	R	T			
Stop lamp switch signal		R	T			
Steering wheel angle sensor signal			R	T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	

Type 21



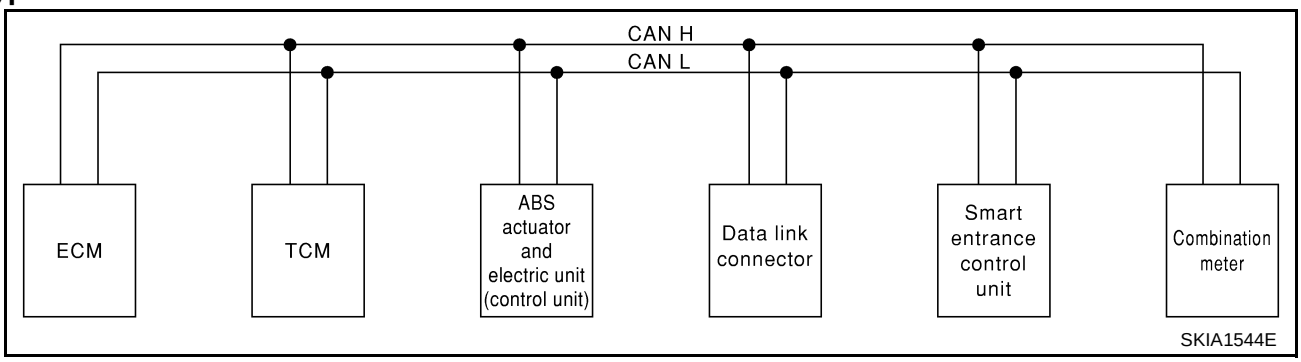
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
Primary pulley revolution signal	R	T			
Secondary pulley revolution signal	R	T			
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 22

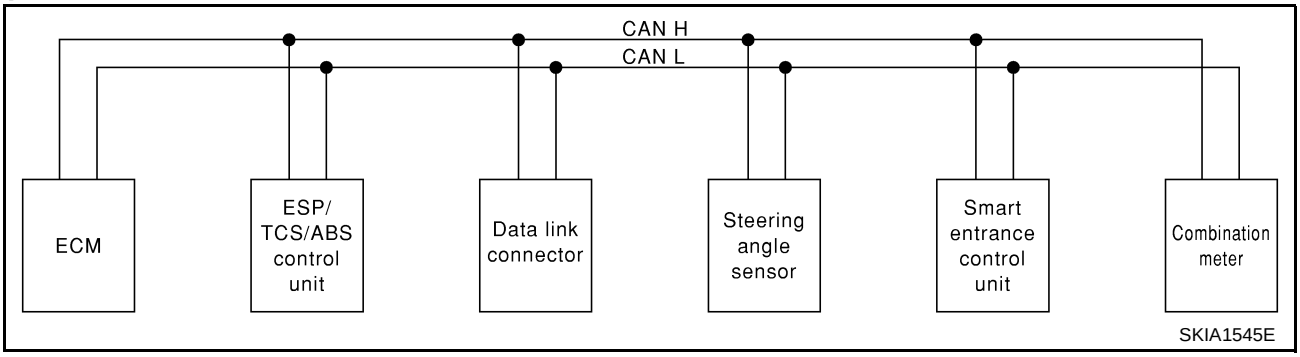


Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 23

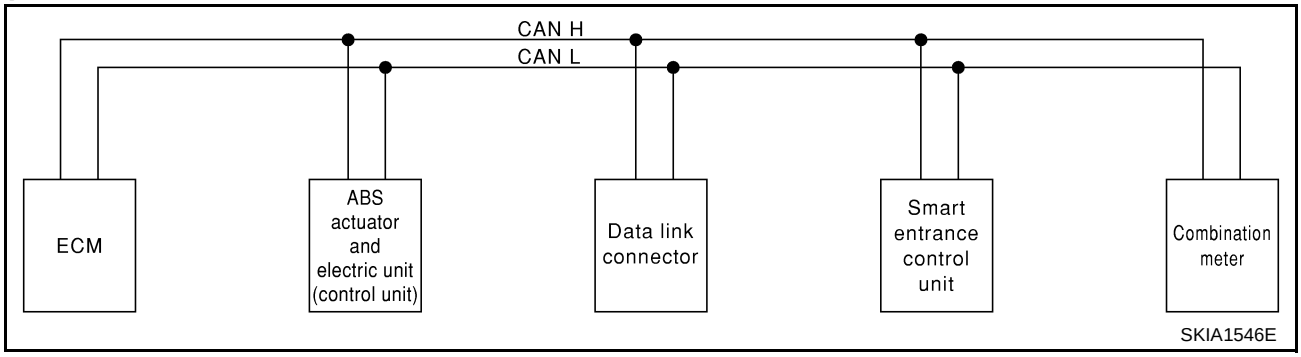


Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combina-tion meter
Engine speed signal	T	R			R
Accelerator pedal position signal	T	R			
ESP operation signal	R	T			
TCS operation signal	R	T			
ABS operation signal	R	T			
Steering wheel angle sensor signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

Type 24



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T			R
Rear window defogger signal	R*1		T	
Heater fan switch signal	R*1			T
Air conditioner switch signal	R			T
MI signal	T			R
Glow lamp signal*2	T			R
Engine coolant temperature signal	T			R
Fuel consumption signal	T			R
Vehicle speed signal		T		R
	R			T
Seat belt reminder signal			R	T
Headlamp switch signal			T	R
Flashing indicator signal			T	R
Engine cooling fan speed signal	T		R	
Child lock indicator signal			T	R
Door switches state signal			T	R
Key ID signal	R		T	
	T		R	
A/C compressor signal	T		R	

*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

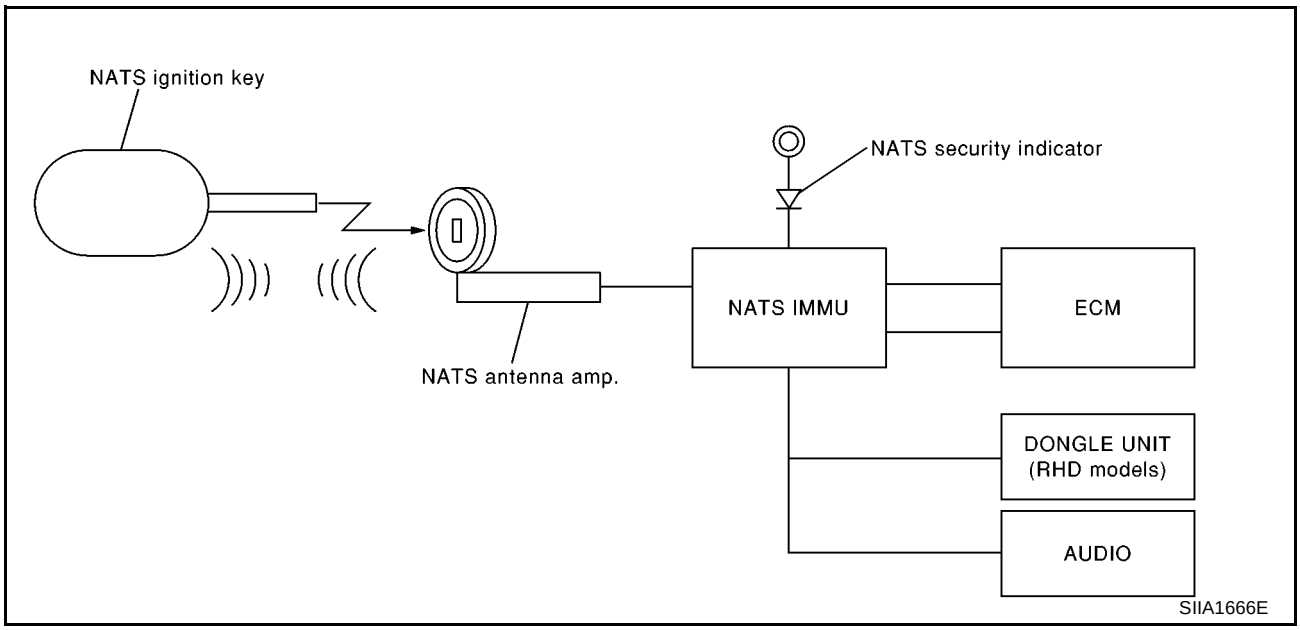
System Composition

EIS002M1

The immobilizer function of the NATS consists of the following:

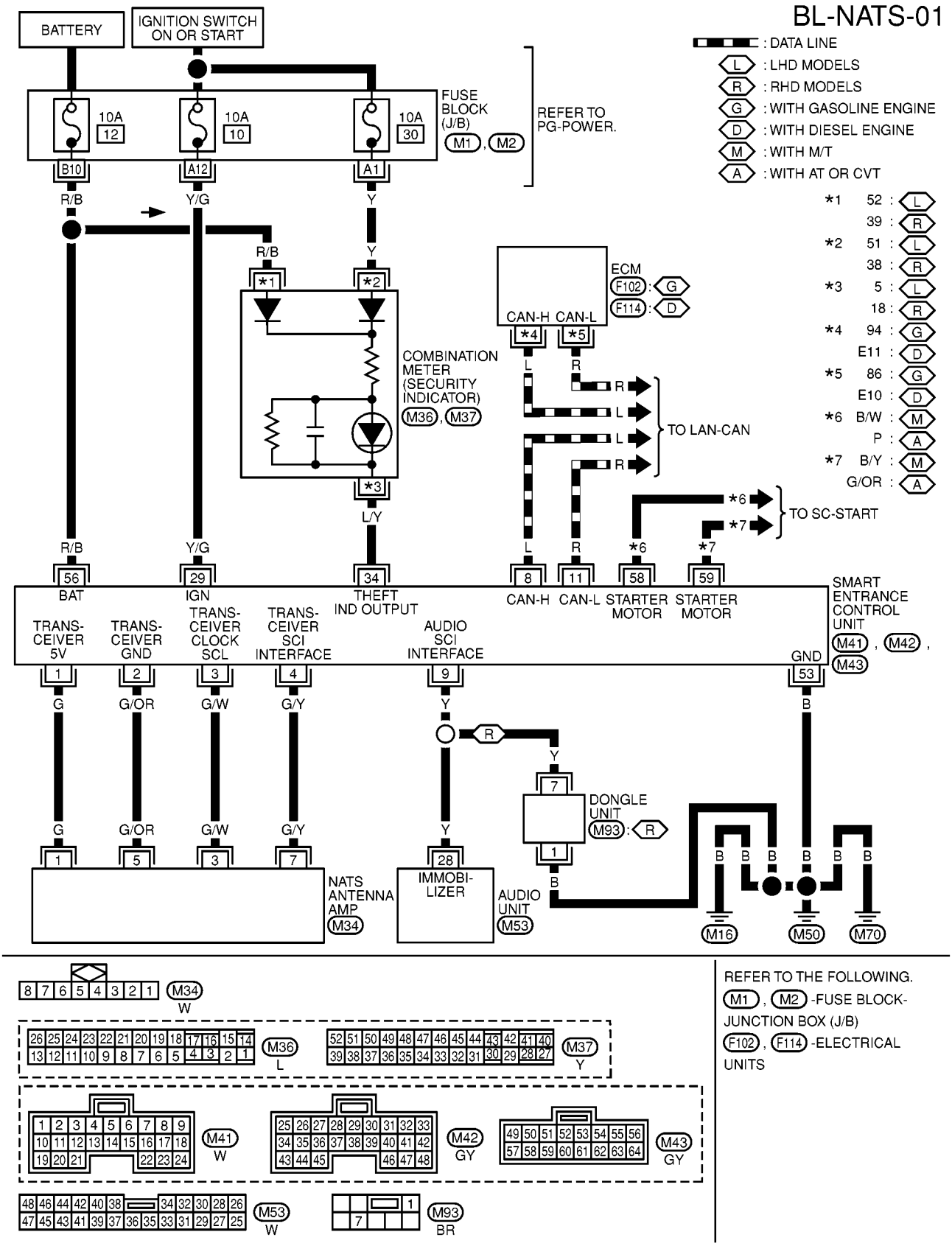
- NATS ignition key
- NATS antenna amp located in the ignition key cylinder
- NATS IMMU (Smart entrance control unit)
- Engine control module (ECM)
- Dongle unit (RHD models)

- Security indicator located in the combination meter



Wiring Diagram — NATS —

EIS002M2



REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
F102, F114 -ELECTRICAL UNITS

MKWA0136E

CONSULT-II

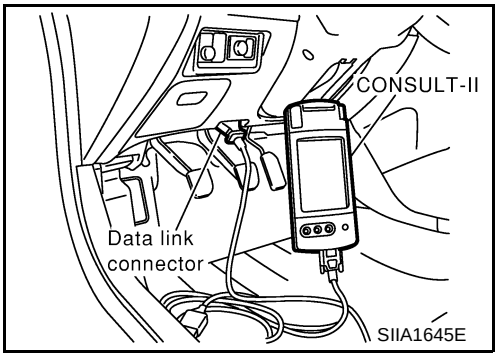
EIS002M4

CONSULT-II INSPECTION PROCEDURE

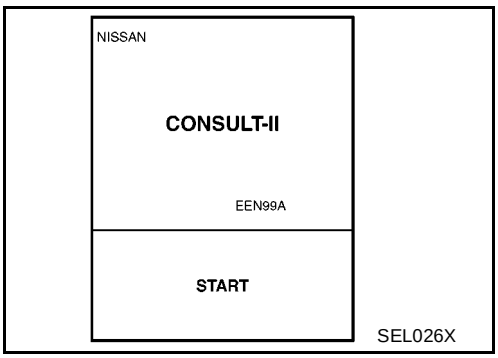
1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.

   Program card : NATS (AEN00B)

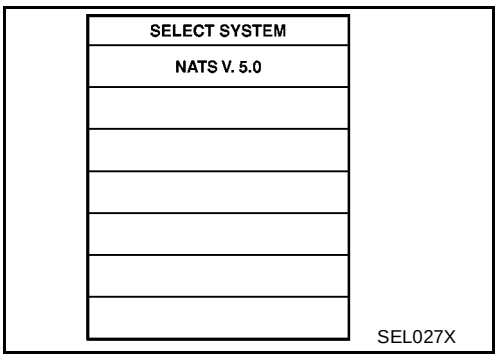
3. Connect CONSULT-II to data link connector.



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

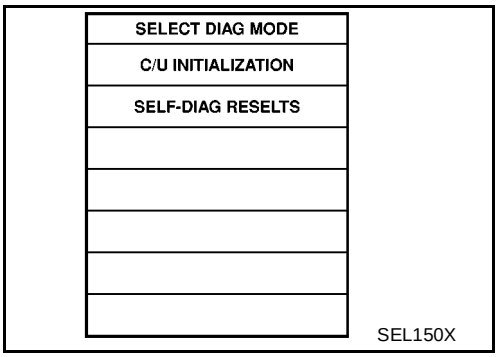


6. Select “NATS V.5.0”.



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

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



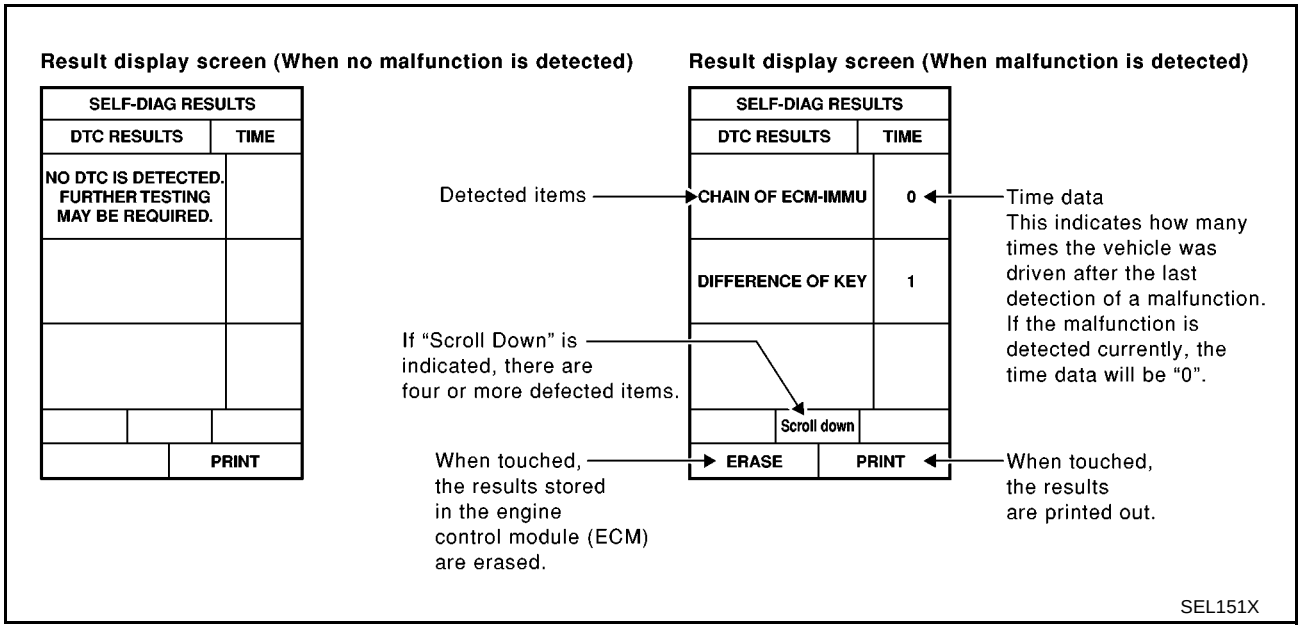
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

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 ignition keys are necessary. [NATS ignition key/ IMMU(Smart entrance control unit)/ ECM]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. BL-186, "NATS SELF-DIAGNOSTIC RESULTS ITEM CHART"

NOTE:

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

HOW TO READ SELF-DIAGNOSTIC RESULTS

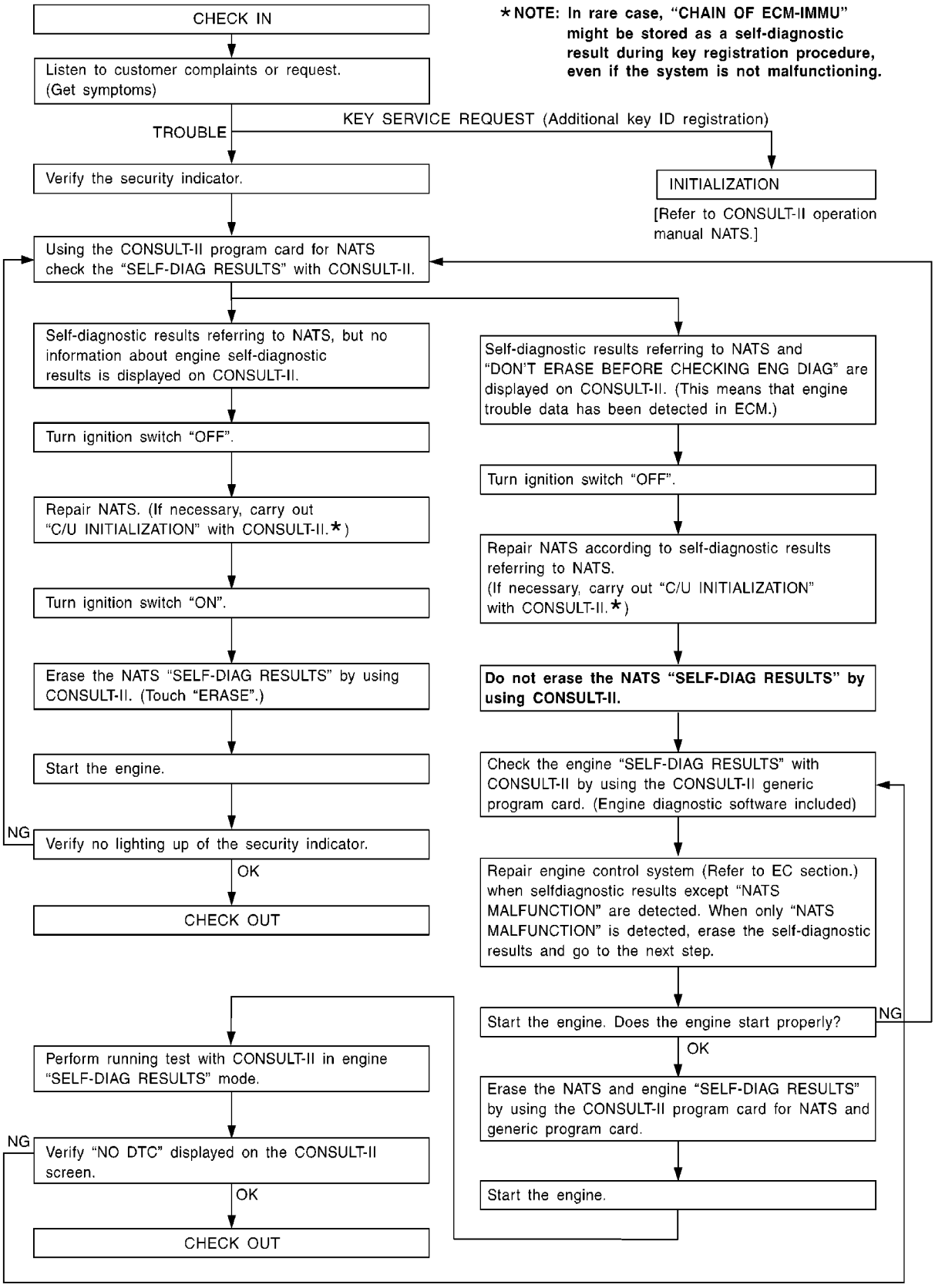


NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of “ENGINE”	Malfunction is detected when.....	Reference page
ECM INT CIRC-IMMU	NATS MALFUNCTION P1613	The malfunction of ECM internal circuit of IMMU communication line is detected.	BL-193
CHAIN OF ECM-IMMU	NATS MALFUNCTION P1612	Communication impossible between ECM and IMMU (In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.)	BL-193
DIFFERENCE OF KEY	NATS MALFUNCTION P1615	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	BL-194
CHAIN OF IMMU-KEY	NATS MALFUNCTION P1614	IMMU cannot receive the key ID signal.	BL-195
ID DISCORD, IMM-ECM	NATS MALFUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	BL-197
LOCK MODE	NATS MALFUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. ● Unregistered ignition key is used. ● IMMU or ECM’s malfunctioning.	BL-199
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NATS trouble code has been detected in ECM.	BL-187

Work Flow

EIS002M5



SEL729WE

Trouble Diagnoses

EIS002M6

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-33, "CONSULT-II INSPECTION PROCEDURE"

SYMPTOM MATRIX CHART 1

Self-diagnosis related item

SYMPTOM	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
● Security indicator lighting up* ● Engine cannot be started	ECM INT CIRC-IMMU	PROCEDURE 1 (BL-193)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (BL-193)	In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of IMMU circuit	C1
			Open circuit in ignition line of IMMU circuit	C2
			Open circuit in ground line of IMMU circuit	C3
			Open circuit in communication line between IMMU and ECM	C4
			Short circuit between IMMU and ECM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM communication line and ground line	C4
			ECM	B
			IMMU	A
	DIFFERENCE OF KEY	PROCEDURE 3 (BL-194)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (BL-195)	Malfunction of key ID chip	E5
			Communication line between ANT/ AMP and IMMU: Open circuit or short circuit of battery voltage line or ground line	E1
				E2
			Open circuit in power source line of ANT/ AMP circuit	E3
			Open circuit in ground line of ANT/ AMP circuit	E4
			Antenna amp.	E6
			Dongle unit	G
			IMMU	A
	ID DISCORD, IMM-ECM	PROCEDURE 5 (BL-197)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE	PROCEDURE 7 (BL-199)	LOCK MODE	D

SYMPTOM	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-187)	Engine trouble data and NATS trouble data have been detected in ECM	—

*: When NATS detects trouble, the security indicator lights up while ignition key is in the “ON” position.

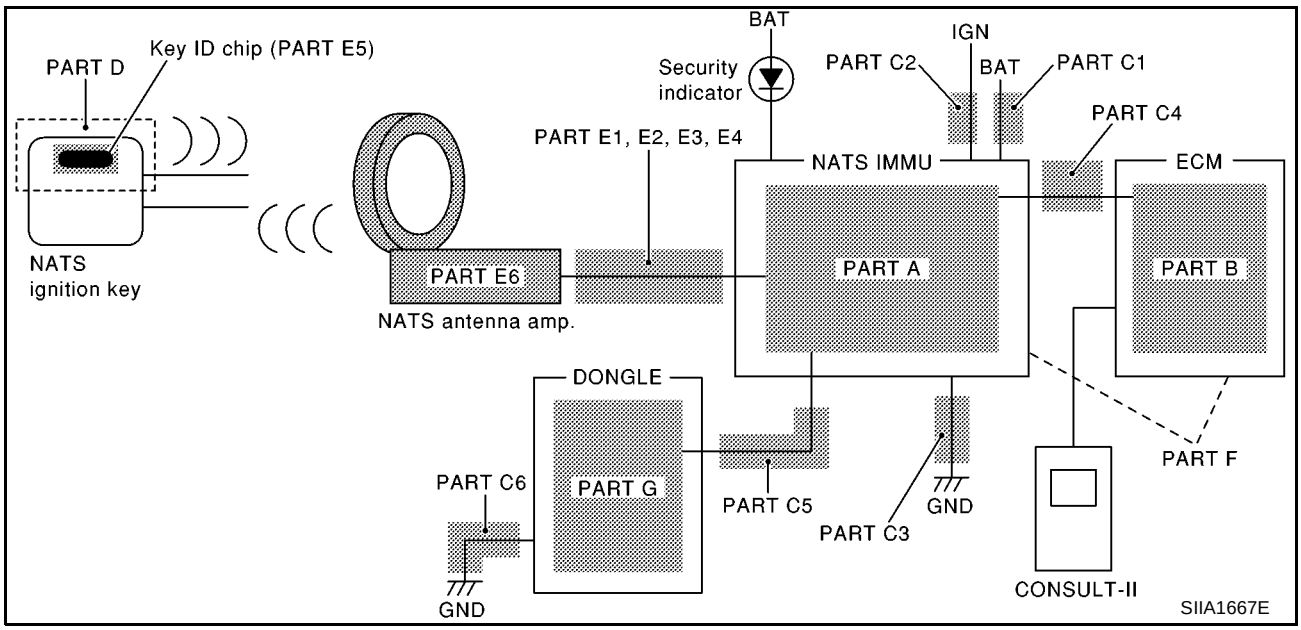
SYMPTOM MATRIX CHART 2

Non self-diagnosis related item

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security ind. does not light up.	PROCEDURE 6 (BL-198)	Security ind.	—
		Open circuit between Fuse and IMMU	—
		Continuation of initialization mode	—
		IMMU	A
Security ind. does not blink just after initialization even if the vehicle is equipped with dongle unit.	PROCEDURE 8 (RHD models only: BL-200)	NATS might be initialized without connecting dongle unit properly.	—
Security ind. does not blink just after ignition switch is turned to ON when some malfunction related to NATS is detected even if the vehicle is equipped with dongle unit.		Open circuit in ground line of dongle unit circuit	C6
		Open or short circuit in communication line between IMMU and dongle unit	C5
		Dongle unit	G
Security ind. dose not blink just after ignition switch is turned to ON. Engine can not be started*	PROCEDURE 9 (BL-201)	Open or short circuit starter motor between smart entrance control unit	—

*: CONSULT-II Self-diagnostic results display screen “no malfunction is detected”.

DIAGNOSTIC SYSTEM DIAGRAM



Diagnostic Procedure 1

EIS002M7

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

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

SELF-DIAG RESULTS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL152X

Diagnostic Procedure 2

EIS002M8

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

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2
No >> GO TO BL-189, "SYMPTOM MATRIX CHART 1" .

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU	0

SEL292W

2. CHECK POWER SUPPLY CIRCUIT FOR IMMU

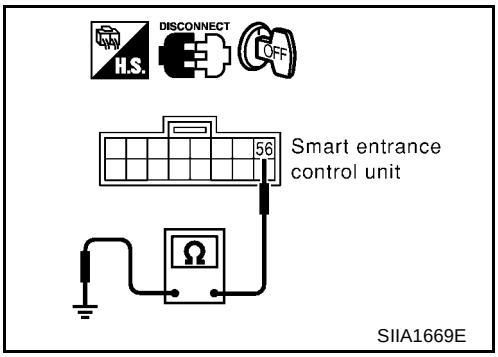
1. Disconnect IMMU connector.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M43 terminal 56(R/B) and ground CONSULT-II or tester.

: Battery voltage should exist.

OK or NG?

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

- 10A fuse [No. 12, located in the fuse block (J/B)]
- Harness for open or short between fuse and IMMU connector
  Ref. Part No. C1

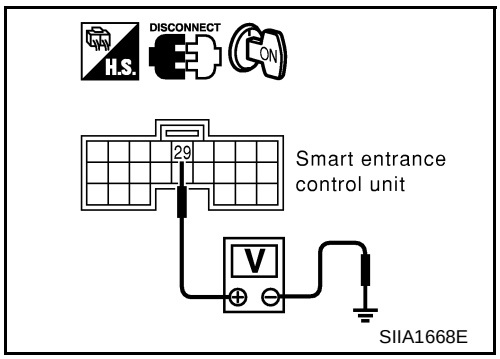


SIIA1669E

3. CHECK IGN SW. ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M42 terminal 29(Y/G) and ground with CONSULT-II or tester.

: Battery voltage should exist.



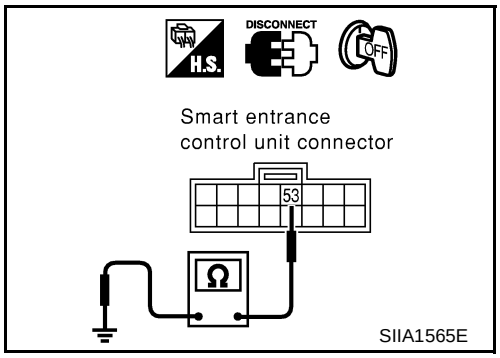
OK or NG?

OK >> GO TO 4
NG >> Check the following
- 10A fuse [No. 10, located in the fuse block (J/B)]
- Harness for open or short between fuse and IMMU connector
  Ref. part No. C2

4. CHECK GROUND CIRCUIT FOR IMMU

1. Turn ignition OFF.
2. Check continuity between IMMU (Smart entrance control unit) harness connector M43 terminal 53(B) and ground.

: Continuity should exist.



OK or NG?

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

5. REPLACE IMMU (SMART ENTRANCE CONTROL UNIT)

1. Replace IMMU (Smart entrance control unit) **Ref. part No. A**
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II operation manual NATS”.

Does the engine start?

Yes >> IMMU (Smart entrance control unit) is malfunctioning.
No >>
- ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II operation manual NATS”

Diagnostic Procedure 3

EIS002M9

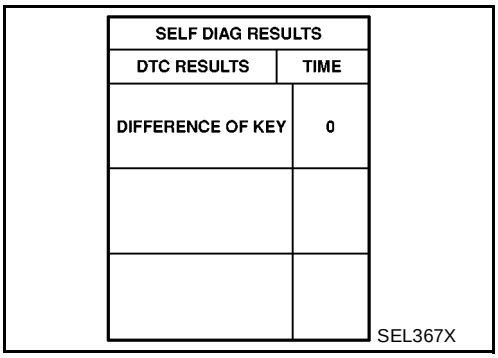
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2
No >> GO TO BL-189, "SYMPTOM MATRIX CHART 1" .



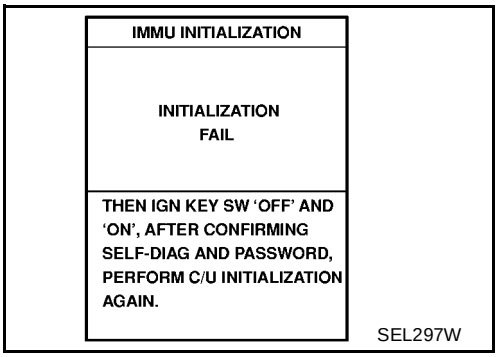
2. PERFORM INITIALIZATION WITH CONSULT-II

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

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

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

Yes >> ● Ignition key ID was unregistered. **Ref. part No. D**
No >> ● IMMU (Smart entrance control unit) is malfunctioning.
● Replace IMMU (Smart entrance control unit). **Ref. part No. A**
● Perform initialization with CONSULT-II.
● For initialization, refer to “CONSULT-II operation manual NATS”.



Diagnostic Procedure 4

EIS002MA

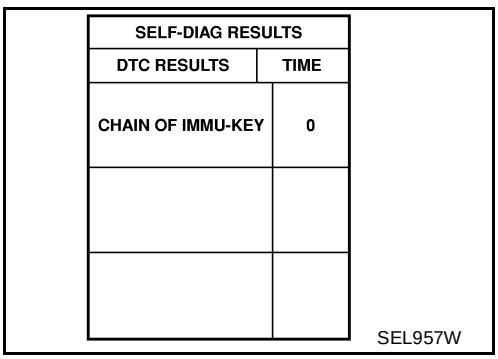
Self-diagnostic results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2
No >> GO TO BL-189, "SYMPTOM MATRIX CHART 1" .



2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-203, "How to Replace NATS Antenna Amp" .

OK or NG?

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

3. CHECK NATS IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

Yes >> ● Ignition key ID chip is malfunctioning.
- Replace the ignition key.
- **Ref. part No. E5**
- 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.

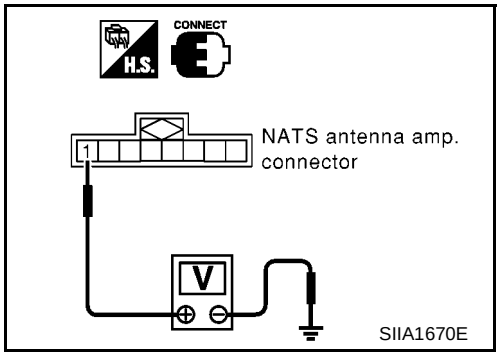
Check voltage between NATS antenna amp. harness connector M34 terminal 1(G) and ground with analogue tester.

Before turning ignition switch “ON”

Voltage: 0V

Just after turning ignition switch “ON”

: Pointer of tester should move.



OK or NG?

OK >> GO TO 5

NG >> ● Check harness for open or short between NATS antenna amp and IMMU (Smart entrance control unit).

NOTE:
If harness is OK, replace IMMU, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual NATS”.

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

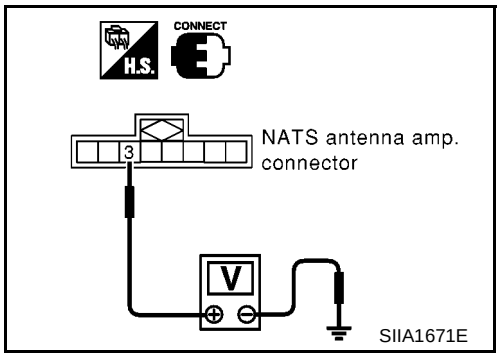
Check voltage between NATS antenna amp. harness connector M34 terminal 3(G/W) and ground with analogue tester.

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 IMMU (Smart entrance control unit).

NOTE:
If harness is OK, replace IMMU, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual NATS”.

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

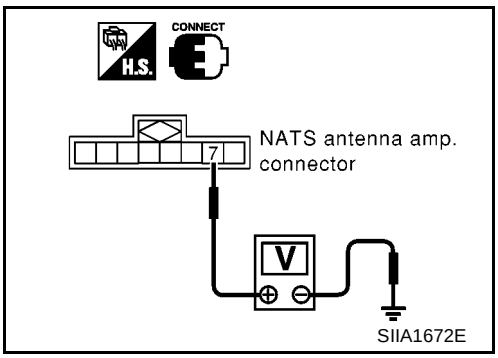
Check voltage between NATS antenna amp. harness connector M34 terminal 7(Y/G) and ground with analogue tester.

Before turning ignition switch "ON"

Voltage: 0V

Just after turning ignition switch "ON"

: Pointer of tester should move.



OK or NG?

OK >> GO TO 7

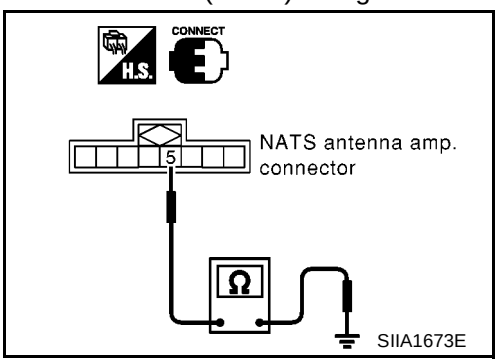
NG >> ● Check harness for open or short between NATS antenna amp and IMMU (Smart entrance control unit).

NOTE:
If harness is OK, replace IMMU, perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch "OFF"
2. Disconnect NATS antenna amp connector.
3. Check continuity between NATS antenna amp. harness connector M34 terminal 5(G/OR) and ground.

: Continuity should exist.



OK or NG?

OK >> ● NATS antenna amp. malfunctioning.
Ref. part No. E6

NG >> ● Check harness for open or short between NATS antenna amp and IMMU (Smart entrance control unit).

NOTE:
If harness is OK, replace IMMU, perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

Diagnostic Procedure 5

EIS002MB

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

1. CONFIRM SELF-DIAGNOSTIC RESULTS

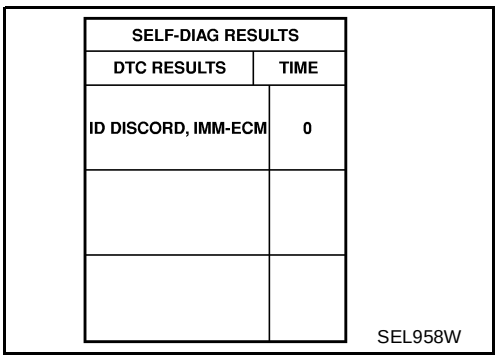
Confirm SELF-DIAGNOSTIC RESULTS "ID DISCORD, IMM-ECM" displayed on CONSULT-II screen.

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2

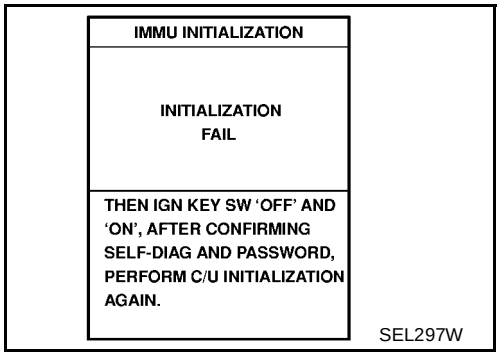
No >> GO TO BL-189, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

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

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



Can the system be initialized?

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

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

Diagnostic Procedure 6

EIS002P8

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. CHECK FUSE

Check 10A fuse [No.12 and No.30, located in the fuse block (J/B)]

10A fuse OK?

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

2. CHECK SECURITY INDICATOR LAMP

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

: Security indicator lamp should be light up.

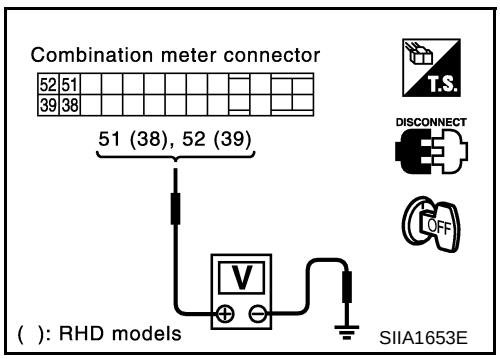
OK or NG?

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

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector M37 terminal 51(38), 52(39) and ground.
   ( ): RHD models

: Battery voltage should exist.



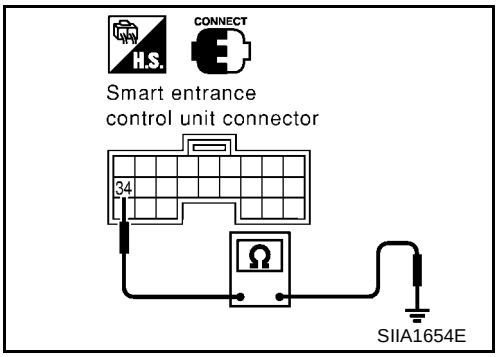
OK or NG?

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

4. CHECK SMART ENTRANCE CONTROL UNIT FUNCTION

1. Disconnect combination meter connector.
2. Connect smart entrance control unit connector.
3. Check continuity between smart entrance control unit harness connector M42 terminal 34(L/Y) and ground.

: Continuity should exist intermittently.



OK or NG?

OK >> Check harness for open or short between smart entrance control unit and combination meter.

NG >> IMMU (Smart entrance control unit) is malfunctioning.

- Replace smart entrance control unit
  Ref. part No. A
- Perform initialization with CONSULT-II
- For initialization, refer to “CONSULT-II operation manual NATS”

Diagnostic Procedure 7

EIS002MD

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

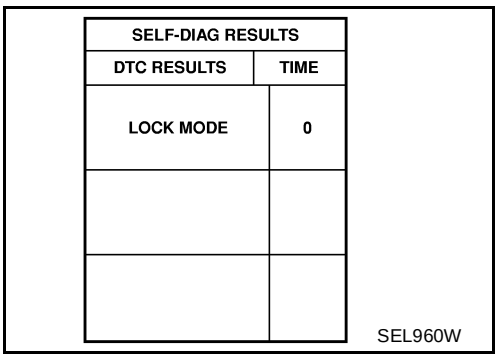
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2

No >> GO TO BL-189, "SYMPTOM MATRIX CHART 1" .



2. ESCAPE FROM LOCK MODE

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

Does engine start?

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

No >> GO TO 3

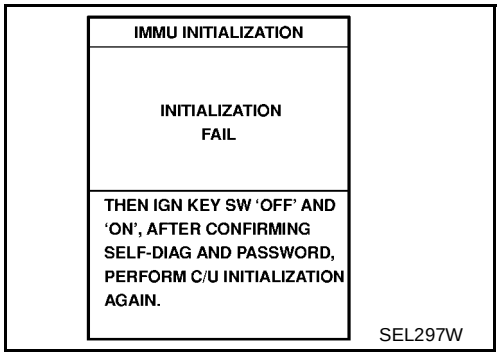
3. PERFORM INITIALIZATION WITH CONSULT-II

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

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

Can the system be initialized?

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



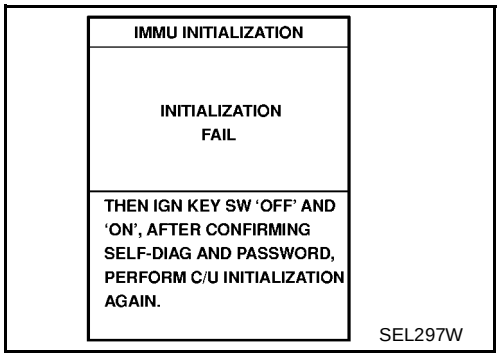
4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

1. Replace IMMU (Smart entrance control unit).
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II operation manual NATS”.

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

Can the system be initialized?

Yes >> System is OK. (IMMU is malfunctioning. **Ref. part No. A**)
No >> ● ECM is malfunctioning.
Replace ECM. **Ref. part No. B**
Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II operation manual NATS”.



Diagnostic Procedure 8

EIS002P9

1. CHECK HARNESS CONNECTOR CONNECTION

Perform initialization with CONSULT-II
Check harness connector connection between Dongle unit harness connector M93 and IMMU (Smart entrance control unit) harness connector M41.
Then initialize NATS. For the initialization operation, refer to “CONSULT-II operation manual NATS”

Does the security indicator blink just after initialization?

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

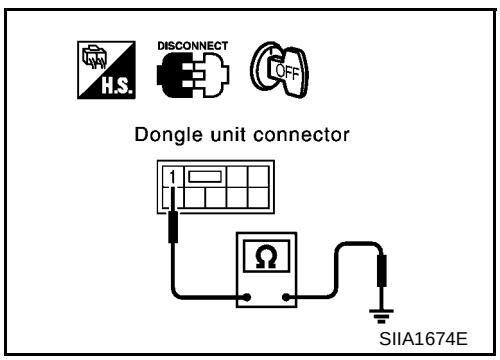
2. CHECK GROUND CIRCUIT FOR DONGLE UNIT

1. Disconnect dongle unit harness connector.
2. Check continuity between dongle unit harness connector M93 terminal 1(B) and ground.

: Continuity should exist.

OK or NG?

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



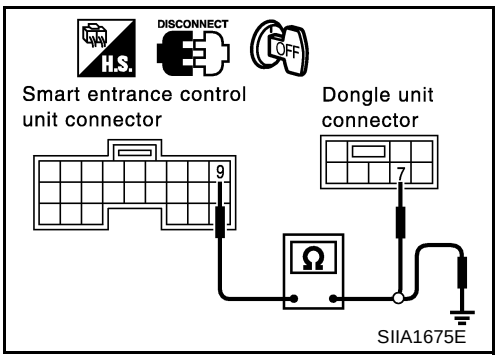
3. CHECK INTERFACE CIRCUIT

1. Disconnect dongle unit and IMMU (Smart entrance control unit) harness connector.
2. Check continuity between IMMU (Smart entrance control unit) harness connector M41 terminal 9(Y) and dongle unit harness connector M93 terminal 7(Y).

   : Continuity should exist.

3. Check continuity between (Smart entrance control unit) harness connector M41 terminal 9(Y) and ground.

   : Continuity should not exist.



OK or NG?

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

NG >> Repair harness.

Diagnostic Procedure 9

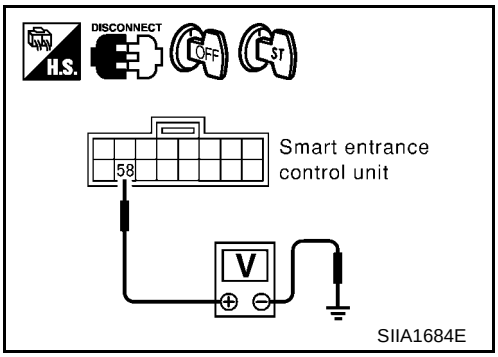
EIS002Y0

M/T MODELS

1. CHECK POWER SUPPLY CIRCUIT FOR IMMU

1. Disconnect IMMU (Smart entrance control unit) connector.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M43 terminal 58(B/W) and ground with CONSULT-II or tester.

Ignition switch START position	**: Battery voltage should exist.**
Ignition switch OFF position	**: 0V**



OK or NG?

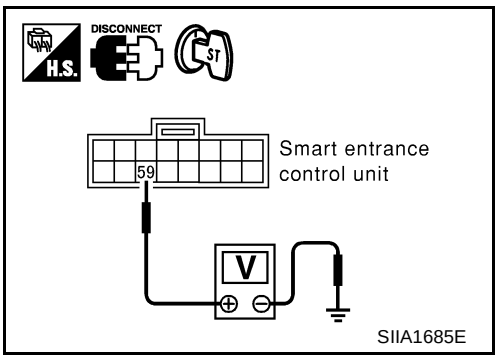
OK >> GO TO 2

NG >> Check the following
- Ignition switch
- Harness for open or short between ignition switch and IMMU (Smart entrance control unit)

2. CHECK START SIGNAL

1. Turn ignition switch START.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M43 terminal 59(B/Y) and ground with CONSULT-II or tester.

   : Battery voltage should exist.



OK or NG?

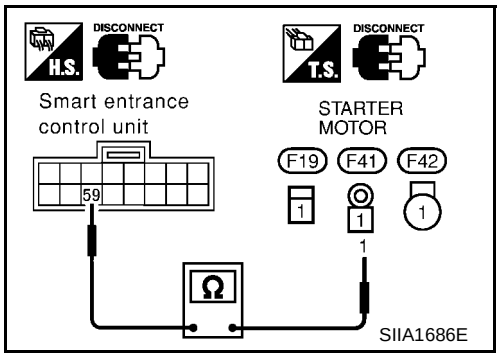
OK >> GO TO 3

NG >> Replace IMMU (Smart entrance control unit).

3. CHECK STARTER CIRCUIT FOR IMMU

1. Turn ignition OFF.
2. Disconnect IMMU (Smart entrance control unit) harness connector and starter motor harness connector.
3. Check continuity between IMMU (Smart entrance control unit) harness connector M43 terminal 59(B/Y) and starter motor harness connector F19(TD), F41(QG) or F42(GC) terminal 1(B/Y).

: Continuity should exist.



OK or NG?

OK >> Check starter motor. Refer to SC-22, "STARTING SYSTEM"

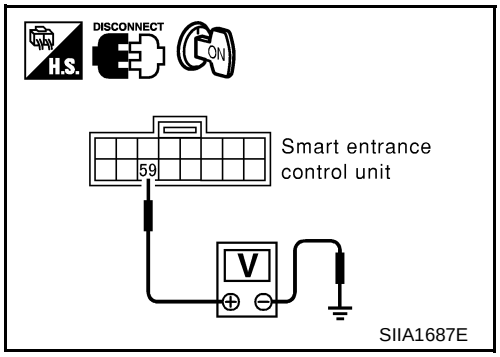
NG >> Harness for open or short between IMMU (Smart entrance control unit) and starter motor.

A/T, CVT MODELS

1. CHECK POWER SUPPLY CIRCUIT FOR IMMU

1. Disconnect IMMU (Smart entrance control unit) connector.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M43 terminal 59(B/W) and ground with CONSULT-II or tester.

: Battery voltage should exist.



OK or NG?

OK >> GO TO 2

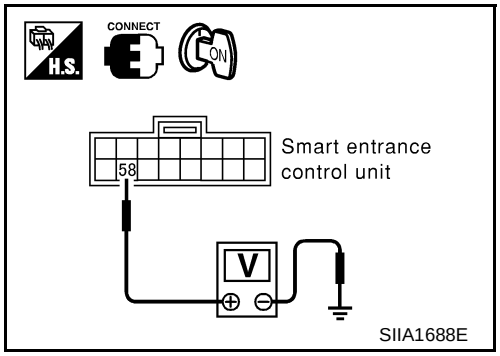
NG >> Check the following

- Park/neutral position relay
- Harness for open or short between park/neutral position relay and IMMU

2. CHECK START SIGNAL

1. Connect IMMU (Smart entrance control unit) connector.
2. Check voltage between IMMU (Smart entrance control unit) harness connector M43 terminal 58(P) and ground with CONSULT-II or tester.

: Battery voltage should exist.



OK or NG?

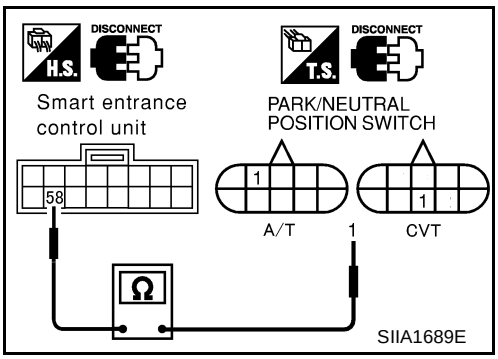
OK >> GO TO 3

NG >> Replace IMMU (Smart entrance control unit).

3. CHECK STARTER CIRCUIT FOR IMMU

1. Disconnect IMMU (Smart entrance control unit) connector and park/neutral position switch connector.
2. Check continuity between IMMU (Smart entrance control unit) harness connector M43 terminal 58(P) and park/neutral position switch harness connector F17 terminal 1(P).

: Continuity should exist.



OK or NG?

OK >> Check starter motor. Refer to SC-22, "STARTING SYSTEM"

NG >> Harness for open or short between IMMU (Smart entrance control unit) and park/neutral position switch.

How to Replace NATS Antenna Amp

EIS002ME

NOTE:

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