SECTION LT
LIGHTING SYSTEM

CONTENTS

PRECAUTION

PFP:00011

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

EKS003T7

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harness connectors.**

Precaution

EKS003T8

- Do not touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.
- Do not leave bulb out of headlamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of the headlamp. When replacing the bulb, be sure to replace it with a new one.
- Adjust aiming by tightening aiming screw. (To adjust it toward loosening side, first loosen adjusting screw, and then make adjustment by tightening.)
- To remove soil or sealant of bulbs, do not use organic solvent (thinner, gasoline, etc.)
- When replacing bulb, be sure to hold bulb socket and pull it out straight. If wiring harness of the bulb is pulled at an angle, the bulb may be caught in the lamp, making it difficult to take out.

Wiring Diagrams and Trouble Diagnosis

EKS003T9

When you read wiring diagrams, refer to the following:

- Refer to GI-14, "How to Read Wiring Diagrams" in GI section
- Refer to PG-3, "POWER SUPPLY ROUTING" for power distribution circuit in PG section

When you perform trouble diagnosis, refer to the following:

- Refer to GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES" in GI section
- Refer toGI-24, "How to Perform Efficient Diagnosis for an Electrical Incident" in GI section

HEADLAMP -CONVENTIONAL TYPE-

PFP:26010

System Description

EKS004P6

DESCRIPTION

The headlamps are controlled by the lighting switch which is built into the combination switch.
Power is supplied at all times

- to lighting switch terminal 8
- through 15A fuse (No. 41, located in the fuse and fusible link box), and
- to lighting switch terminal 5
- through 15A fuse (No. 42, located in the fuse and fusible link box).

LOW BEAM OPERATION

When the lighting switch is turned to the 2ND position and placed in LOW (“B”) position, power is supplied

- from lighting switch terminal 10
- to terminal 5 of the headlamp LH, and
- from lighting switch terminal 7
- to terminal 5 of the headlamp RH.

Terminal 2 of each headlamp supplies ground through body grounds E10 and E58.
With power and ground supplied, the low beams will illuminate.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

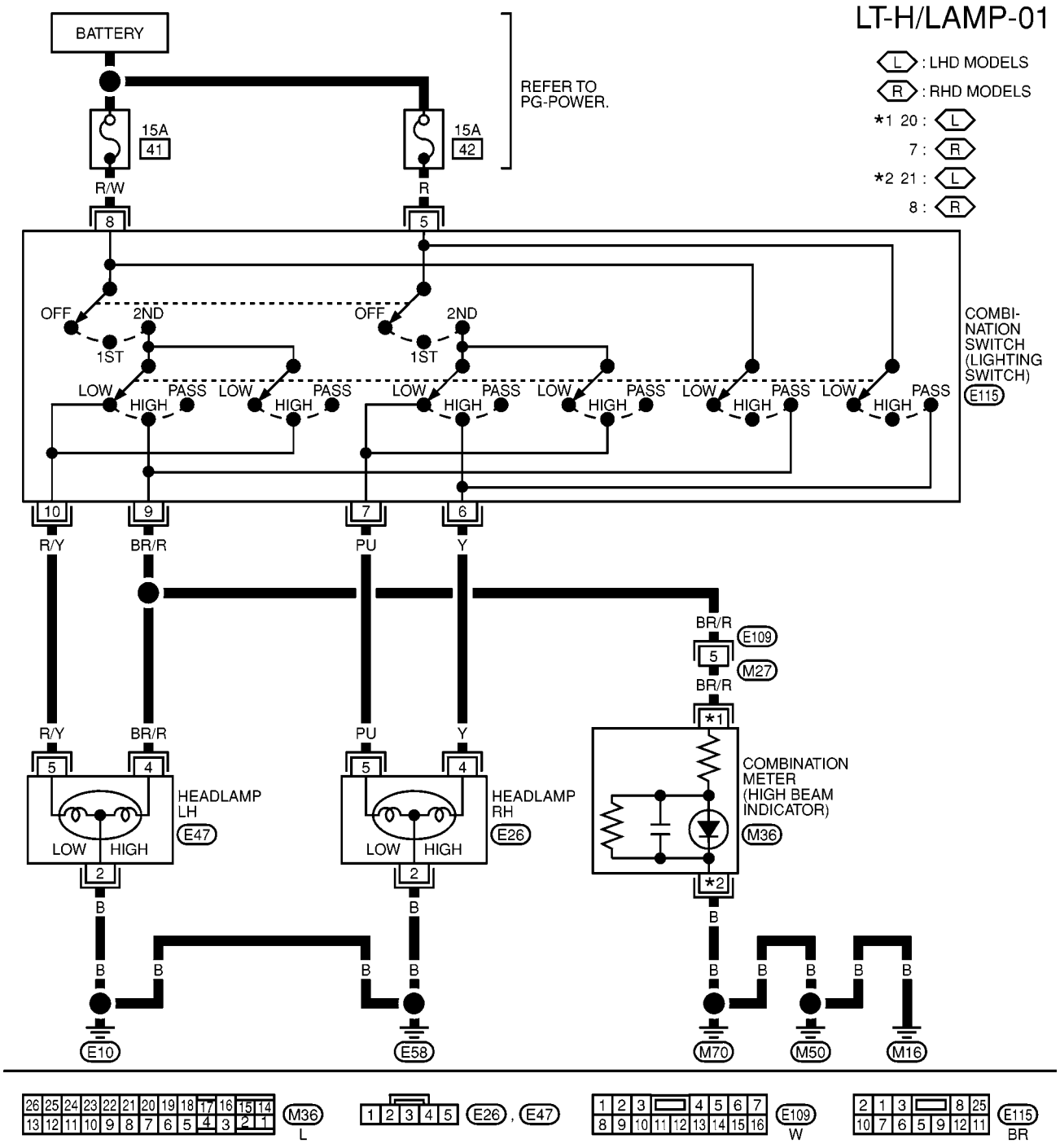
When the lighting switch is turned to the 2ND position and placed in HIGH (“A”) position or PASS (“C”) position, power is supplied

- from lighting switch terminal 9
- to terminal 4 of headlamp LH, and
- to combination meter terminal 20 (LHD models) or 7 (RHD models) for the HIGH BEAM indicator.
- from lighting switch terminal 6
- to terminal 4 of headlamp RH.

Ground is supplied to terminal 21 (LHD models) or 8 (RHD models) of the combination meter through body grounds M16, M50 and M70.
Ground is supplied to terminal 2 of each headlamp through body grounds E10 and E58.
With power and ground supplied, the high beams and the HIGH BEAM indicator illuminate.

Wiring Diagram — H/LAMP —

EKS004P7



MKWA0001E

Trouble Diagnoses

EKS004P8

Symptom	Possible cause	Repair order
LH headlamps do not operate.	1. Bulb 2. Grounds E10 and E58 3. 15A fuse 4. Lighting switch	1. Check bulb. 2. Check grounds E10 and E58. 3. Check 15A fuse (No. 41, located in fuse and fusible link box). Verify battery positive voltage is present at terminal 8 of lighting switch. 4. Check lighting switch.
RH headlamps do not operate.	1. Bulb 2. Grounds E10 and E58 3. 15A fuse 4. Lighting switch	1. Check bulb. 2. Check grounds E10 and E58. 3. Check 15A fuse (No. 42, located in fuse and fusible link box). Verify battery positive voltage is present at terminal 5 of lighting switch. 4. Check lighting switch.
LH high beam does not operate, but LH low beam operates.	1. Bulb 2. Open in LH high beams circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 9 (BR/R) and LH headlamp terminal 4 (BR/R) for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam operates.	1. Bulb 2. Open in LH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 10 (R/Y) and LH headlamp terminal 5 (R/Y) for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam operates.	1. Bulb 2. Open in RH high beams circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 6 (Y) and RH headlamp terminal 4 (Y) for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam operates.	1. Bulb 2. Open in RH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 7 (PV) and RH headlamp terminal 5 (PV) for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	1. Bulb 2. Grounds M16, M50 and M70 3. Open in high beam circuit	1. Check bulb in combination meter. 2. Check grounds M16, M50 and M70. 3. Check continuity between lighting switch terminal 9 (BR/R) and combination meter terminal 20 (BR/R) LHD or 7 (BR/R) RHD for an open circuit.

Aiming Adjustment

EKS004P9

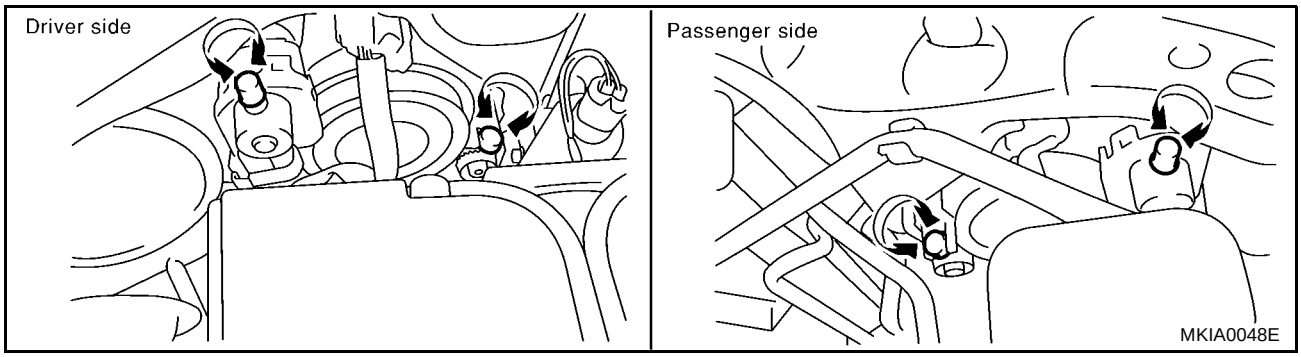
When performing headlamp aiming adjustment, use an aiming machine, aiming wall screen or headlamp tester. Aimers should be in good repair, calibrated and operated in accordance with respective operation manuals.
If any aimer is not available, aiming adjustment can be done as follows:
For details, refer to the regulations in your own country.

- Keep all tires inflated to correct pressures.
- Place vehicle and tester on one and same flat surface.
- See that there is no-load in vehicle (coolant, engine oil filled up to correct level and full fuel tank) other than the driver (or equivalent weight placed in driver′s position).

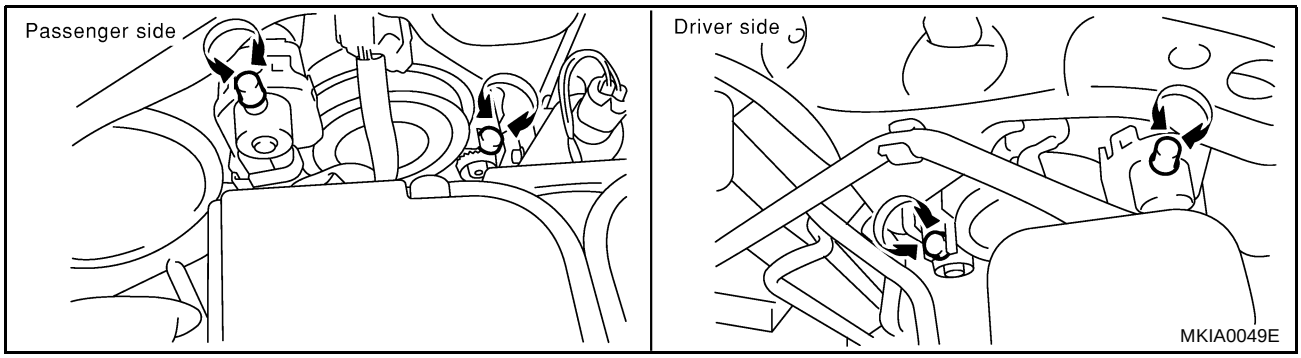
CAUTION:
Be sure aiming switch is set to “0” when performing aiming adjustment.

LOW BEAM

1. Turn headlamp low beam on.
   LHD models



   RHD models



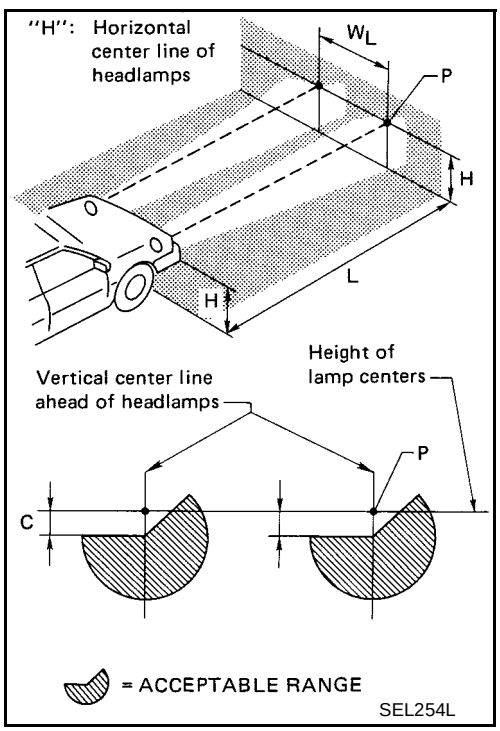
2. Use adjusting pots to perform aiming adjustment.
   - First tighten the adjusting pot all the way and then make adjustment by loosening the pot.

   If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

   - Adjust headlamps so that main axis of light is parallel to center line of body and is aligned with point P shown in illustration.
   - Figure to the left shows headlamp aiming pattern for driving on right side of road; for driving on left side of road, aiming pattern is reversed.
   - Dotted lines to point P in illustration show center of headlamp.

     “H” : Horizontal center line of headlamps
     “W_L” : Distance between each headlamp center
     ”
     “L” : 25 m (98.43 in)
     “C” : 250 mm (9.84 in)

   - Basic illuminating area for adjustment should be within the range shown in the figure. Adjust headlamps accordingly.



CAUTION:
Be sure aiming switch is set to “0” when preforming aiming adjustment.

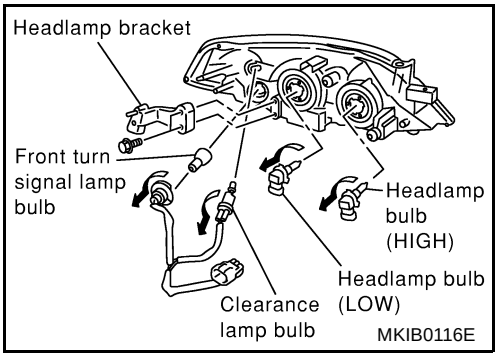
Bulb Replacement

EKS004PA

HEADLAMP

1. Disconnect connector of headlamp.
2. Unlock retaining spring, then remove bulb.

Headlamp (Low) : 12V - 55W (H7)
Headlamp (High) : 12V - 55W (H7)



CLEARANCE LAMP, FRONT TURN SIGNAL LAMP

1. Turn the bulbsocket counterclockwise and unlock it.
2. Remove the bulb from its socket.

Clearance lamp : 12V - 5W
Front turn signal lamp : 12V - 21W

CAUTION:

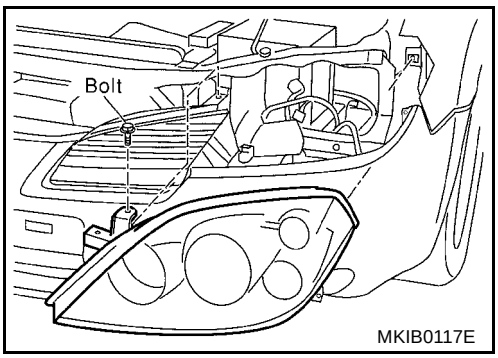
- **Do not touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.**
- **Do not leave bulb out of headlamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of headlamp. When replacing bulb, be sure to replace it with new one.**
- **When bulb is installed, be sure to lock rubber cap to ensure watertightness.**

Removal and Installation

EKS004PB

REMOVAL

1. Disconnect connector of headlamp and clearance lamp.
2. Remove the front grille. Refer to EI-12, "FRONT GRILL" .
3. Remove the headlamp mounting bolts.
4. Pull the headlamp toward the front of the vehicle.



INSTALLATION

- Install in the reverse order of removal, taking care of the following points.
  Headlamp mounting screws and nut

Tightening torque : 4.4 - 5.8 N·m (0.45 - 0.59 kg-m, 39 - 51 in-lb)

HEADLAMP - XENON TYPE -

PFP:26010

System Description

EKS004PC

The headlamps are controlled by lighting switch which is built into the combination switch.
Power is supplied at all times

- to lighting switch terminal 8
- through 15A fuse (No. 41, located in the fuse and fusible link box) and
- to lighting switch terminal 5
- through 15A fuse (No. 42, located in the fuse and fusible link box) and
- to headlamp LH relay terminal 3
- through 20A fuse (No. 37, located in the fuse and fusible link box) and
- to headlamp RH relay terminal 3
- through 20A fuse (No. 36, located in the fuse and fusible link box).

LOW BEAM OPERATION

When the lighting switch is turned to the 2ND position and placed in LOW (“B”) position, power is supplied

- from terminal 5 of each headlamp relay
- to terminal 5 of each headlamps

Terminal 3 of each headlamp supplies ground through body grounds E10 and E58.
With power and ground supplied, the low beams will illuminates.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

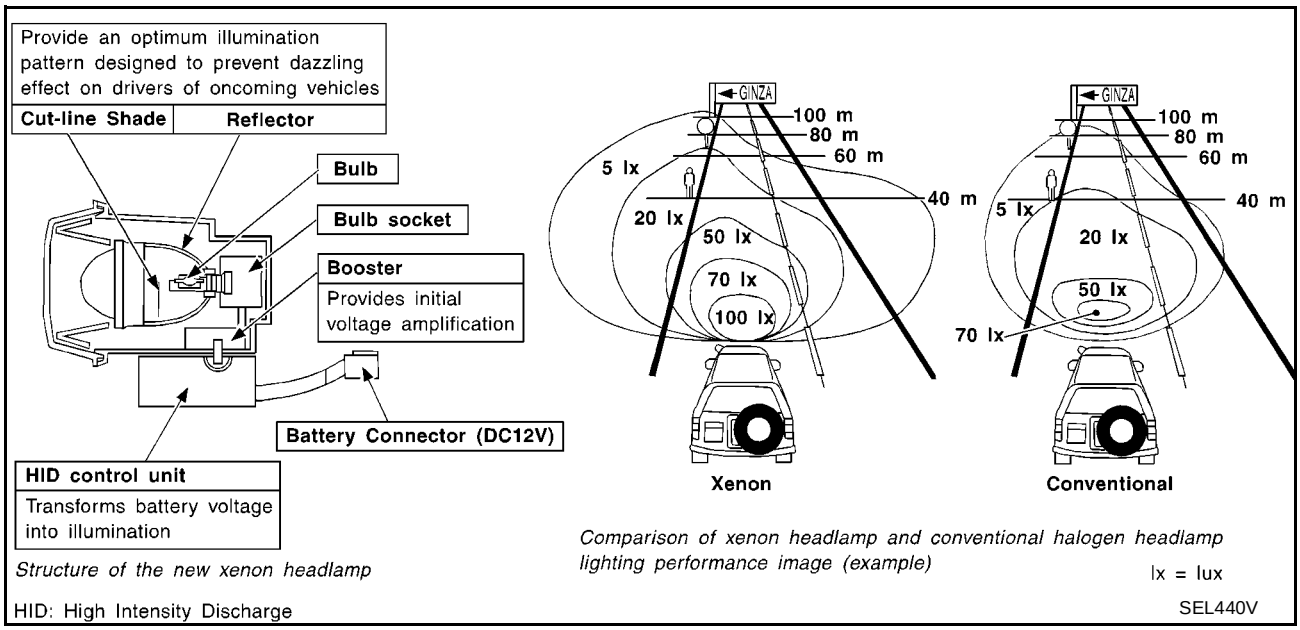
When the lighting switch is turned to 2ND position and placed in HIGH (“A”) position or PASS (“C”) position, power is supplied.

- from lighting switch terminal 6
- to terminal 4 of headlamp RH, and
- from lighting switch terminal 9
- to terminal 4 of headlamp LH, and
- to combination meter terminal 20 (LHD models) or 7 (RHD models) for the HIGH BEAM indicator.

Ground is supplied to terminal 21 (LHD models) or 8 (RHD models) of the combination meter through body grounds M16, M50 and M70.
Ground is supplied to terminal 2 of each headlamp through body grounds E10 and E58.
With power and ground supplied, the high beams and HIGH BEAM indicator illuminate.
Xenon type headlamp is adopted to the low beam headlamps. Xenon bulbs do not use a filament. Instead, they produce light when a high voltage current is passed between two tungsten electrodes through a mixture of xenon (an insert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color.
Following are some of the many advantage of the xenon type headlamp.

- The light produced by the headlamps is white color approximating sunlight that is easy on the eyes.
- Light output is nearly double that of halogen headlamps, affording increased area of illumination.
- The light features a high relative spectral distribution at wavelengths to the human eye is most sensitive, which means that even in the rain, more light is reflected back from the road surface toward the vehicle, for added visibility.

- Power consumption is approximately 25 percent less than halogen headlamps, reducing battery load.



Structure of the new xenon headlamp

Comparison of xenon headlamp and conventional halogen headlamp lighting performance image (example)

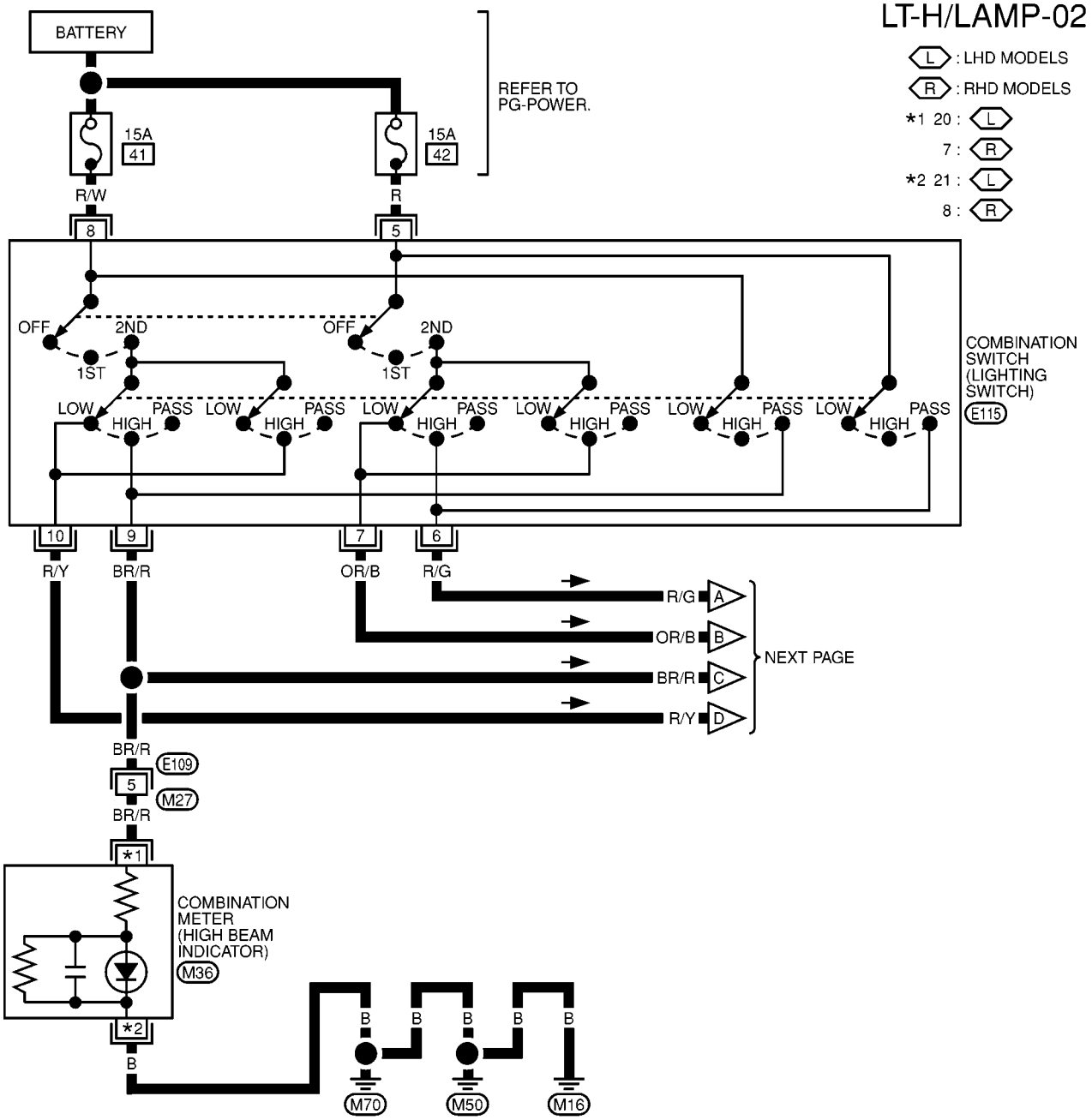
lx = lux

HID: High Intensity Discharge

SEL440V

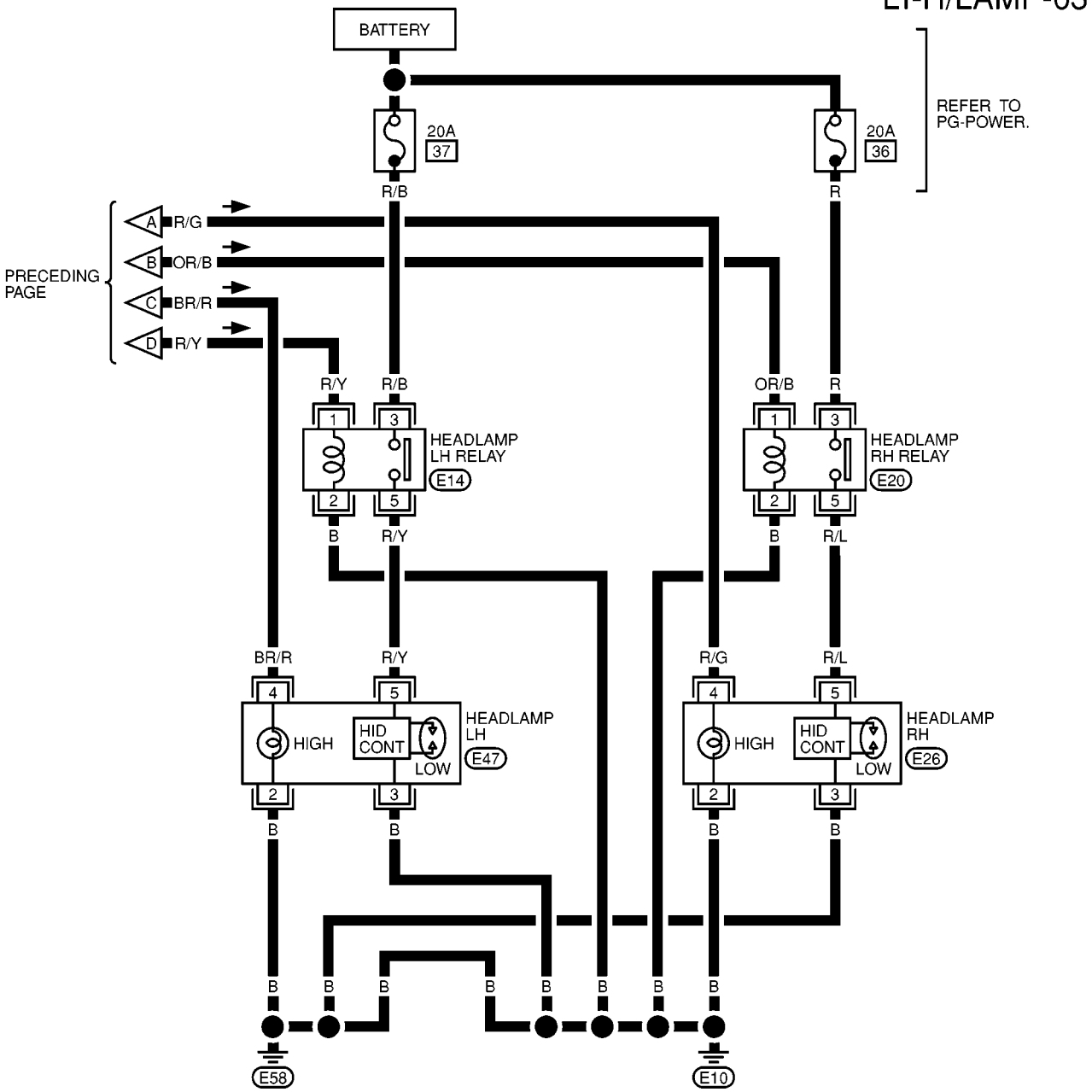
Wiring Diagram - H/LAMP -

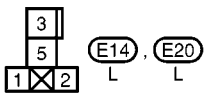
EKS004PD

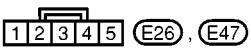


MKWA0002E

LT-H/LAMP-03







MKWA0003E

WARNING:

- **The xenon headlamp has a high-tension current generating area. Be extremely careful when removing and installing. Be certain to disconnect the battery negative cable prior to removing or installing.**
- **When the xenon headlamp is lit, do not touch the harness (covered with red or amber insulation), bulb itself or the bulb socket with your bare hands.**
- **Never service a xenon headlamp with wet hands.**
- **When checking body side harness with a circuit tester, be certain to disconnect the harness connector from the xenon headlamp.**
- **When the xenon headlamp is lit, the xenon bulb must be installed in the headlamp housing. (Never turn on xenon headlamp, if the bulb is out of the headlamp housing.)**

CAUTION:

Make sure to install the bulb securely; if the xenon bulb is improperly installed in its socket, high-tension current leaks occur. This may lead to a melted bulb and/or bulb socket.

Trouble Diagnosis

EKS004PE

Symptom	Possible cause	Repair order
LH or RH xenon headlamp (low beam) blinks, lacks brightness or does not illuminate.	1. 20A fuse 2. Relay 3. Power supply circuit to headlamp low beam 4. Xenon bulb 5. HID control unit and booster	1. Check 20A fuse [No. 37: LH, No. 36: RH, located in fuse and fusible link box]. 2. Check Headlamp relay. 3. Verify battery positive voltage is present at terminal 5 of headlamp harness with lighting switch in “2nd” and “Low” positions. (Before inspecting headlamp terminal, disconnect headlamp connector with lighting switch in “OFF” position.) 4. Replace the xenon bulb with the other side bulb or new one. (If headlamps illuminate correctly, replace the bulb.) 5. Replace the HID control unit and booster as a headlamp assembly.
LH or RH [both headlamp high and xenon (low) beam] do not illuminate.	1. Bulb 2. 15A fuse 3. Relay 4. Ground circuit	1. Check bulb. 2. Check 15A fuse [No. 41: LH, No. 42 located in fuse and fusible link box]. 3. Check headlamp relay. 4. Check continuity between headlamp terminal 2 and body ground. (Before inspecting headlamp terminal, disconnect headlamp connector with lighting switch in “OFF” position.)
LH or RH headlamp high beam does not illuminate.	1. Bulb 2. Power supply circuit to headlamp high beam	1. Check bulb. 2. Verify battery positive voltage is present at terminal 2, 3 of headlamp harness with lighting switch in “2nd” and “HIGH” position. (Before inspecting headlamp terminal, disconnect headlamp connector with lighting switch in “OFF” position.)
High beam indicator does not work.	1. Bulb 2. Grounds M16, M50 and M70 3. Open in high beam circuit	1. Check bulb in combination meter. 2. Check grounds M16, M50 and M70. 3. Check continuity between lighting switch terminal 9 (BR/R) and combination meter terminal 20 (BR/R) LHD or 7 (BR/R) RHD for an open circuit.

HID: High Intensity Discharge

Aiming Adjustment

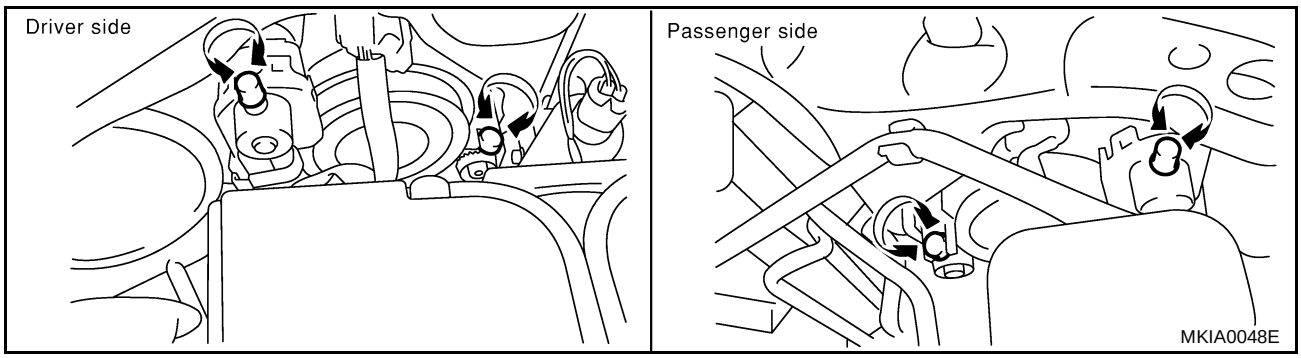
EKS004PF

When performing headlamp aiming adjustment, use an aiming machine, aiming wall screen or headlamp tester. Aimers should be in good repair, calibrated and operated in accordance with respective operation manuals.
If any aimer is not available, aiming adjustment can be done as follows:
For details, refer to the regulations in your own country.

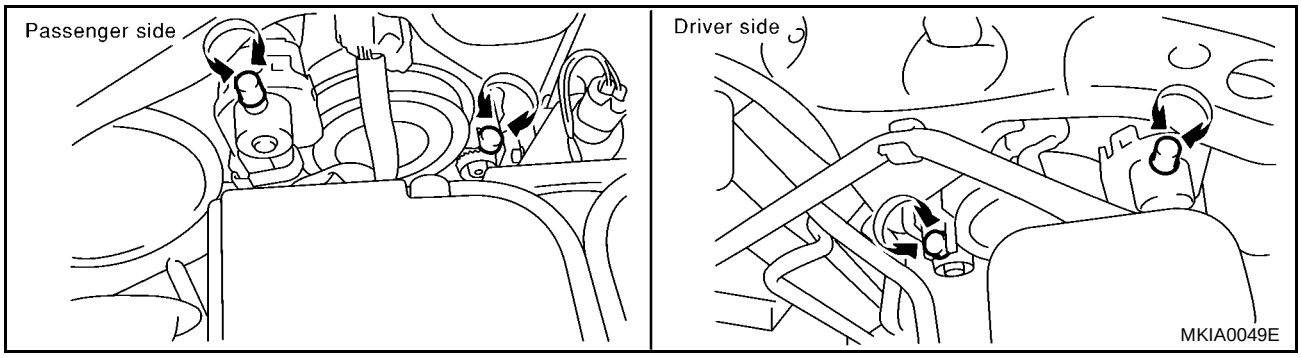
- Keep all tires inflated to correct pressures.
- Place vehicle and tester on one and same flat surface.
- See that there is no-load in vehicle (coolant, engine oil filled up to correct level and full fuel tank) other than the driver (or equivalent weight placed in driver′s position).

LOW BEAM

1. Turn headlamp low beam on.
   LHD models



   RHD models



2. Use adjusting pots to perform aiming adjustment.
   - First tighten the adjusting pot all the way and then make adjustment by loosening the pot.

   If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

- Adjust headlamps so that main axis of light is parallel to center line of body and is aligned with point P shown in illustration.
- Figure to the left shows headlamp aiming pattern for driving on right side of road; for driving on left side of road, aiming pattern is reversed.
- Dotted lines to point P in illustration show center of headlamp.

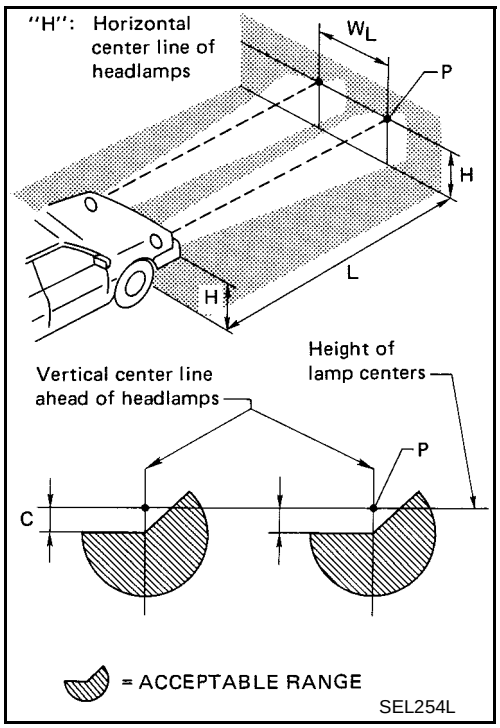
"H" : Horizontal center line of headlamps

"WL" : Distance between each headlamp center"

"L" : 25 m (98.43 in)

"C" : 250 mm (9.84 in)

- Basic illuminating area for adjustment should be within the range shown at left. Adjust headlamps accordingly.



Bulb Replacement

EKS004PG

CAUTION:

- **After replacing a new xenon bulb, be sure to make aiming adjustments.**
- **Hold only the plastic base when handling the bulb. Never touch the glass envelope.**
- **Do not leave headlamp reflector without bulb for a long period of time. Dust, moisture, smoke, etc. entering headlamp body may affect the performance of the headlamp. Remove headlamp bulb from the headlamp reflector just before a replacement bulb is installed.**

1. Disconnect negative battery cable.
2. Disconnect headlamp connector.

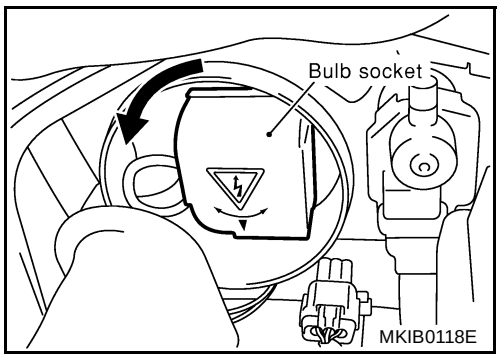
WARNING:

Never service a xenon headlamp with wet hands.

XENON BULB (LOW BEAM)

1. Remove washer inlet. (RH bulb)
2. Remove headlamp seal cover.
   Turn bulb socket counterclockwise and unlock it.
3. Release retaining pin.
4. Remove the xenon bulb.
5. Install in the reverse order of removal.

Headlamp (LOW) : 12V - 35W (D2R)



CAUTION:

- **When disposing of the xenon bulb, do not break it; always dispose of it as is.**
- **Make sure to install the bulb securely; if the xenon bulb is improperly installed in its socket, high-tension current leaks occur. This may lead to a melted bulb and/or bulb socket.**

HIGH BEAM

1. Pull off headlamp seal cover.

2. Disconnect bulb connector.
3. Release retaining pin.
4. Remove the bulb.
5. Install in the reverse order of removal.

Headlamp (HIGH) : 12V - 55W (H7)

CLEARANCE LAMP, FRONT TURN SIGNAL LAMP

Refer to LT-17, "CLEARANCE LAMP, FRONT TURN SIGNAL LAMP" .

CAUTION:

- **Do not touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.**
- **Do not leave bulb out of headlamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of headlamp. When replacing bulb, be sure to replace it with new one.**
- **When bulb is installed, be sure to lock rubber cap to ensure watertightness.**

Removal and Installation

EKS004PH

REMOVAL

Refer to LT-17, "REMOVAL" .

INSTALLATION

Refer to LT-17, "INSTALLATION" .

HEADLAMP (WITH DAYTIME) - CONVENTIONAL TYPE -

PFP:26010

System Description

EKS004PI

DESCRIPTION

The headlamp system for Northern Europe vehicles contains a daytime light control unit that activates the low beam headlamps whenever the engine is running.
Power is supplied at all times

- to daytime light control unit terminal 1
- to lighting switch terminal 11
- through 10A (No. 32, located in the fuse and fusible link box), and
- to daytime light control unit terminal 3
- to lighting switch terminal 5
- through 15A (No. 42, located in the fuse and fusible link box), and
- to daytime light control unit terminal 2
- to lighting switch terminal 8
- through 15A (No. 41, located in the fuse and fusible link box)

Ground is supplied to daytime light control unit terminal 9 through body grounds E10, E58 and E122.
When the ignition switch is in the ON or START position, power is supplied

- to daytime light control unit terminal 7
- through 10A (No. 10, located in the fuse and fusible link box)

When the ignition switch is in the START position, power is also supplied

- to daytime light control unit terminal 6
- through 10A (No. 21, located in the fuse and fusible link box)

HEADLAMP OPERATION

For description, refer to LT-5, "System Description"

DAYTIME LIGHT OPERATION

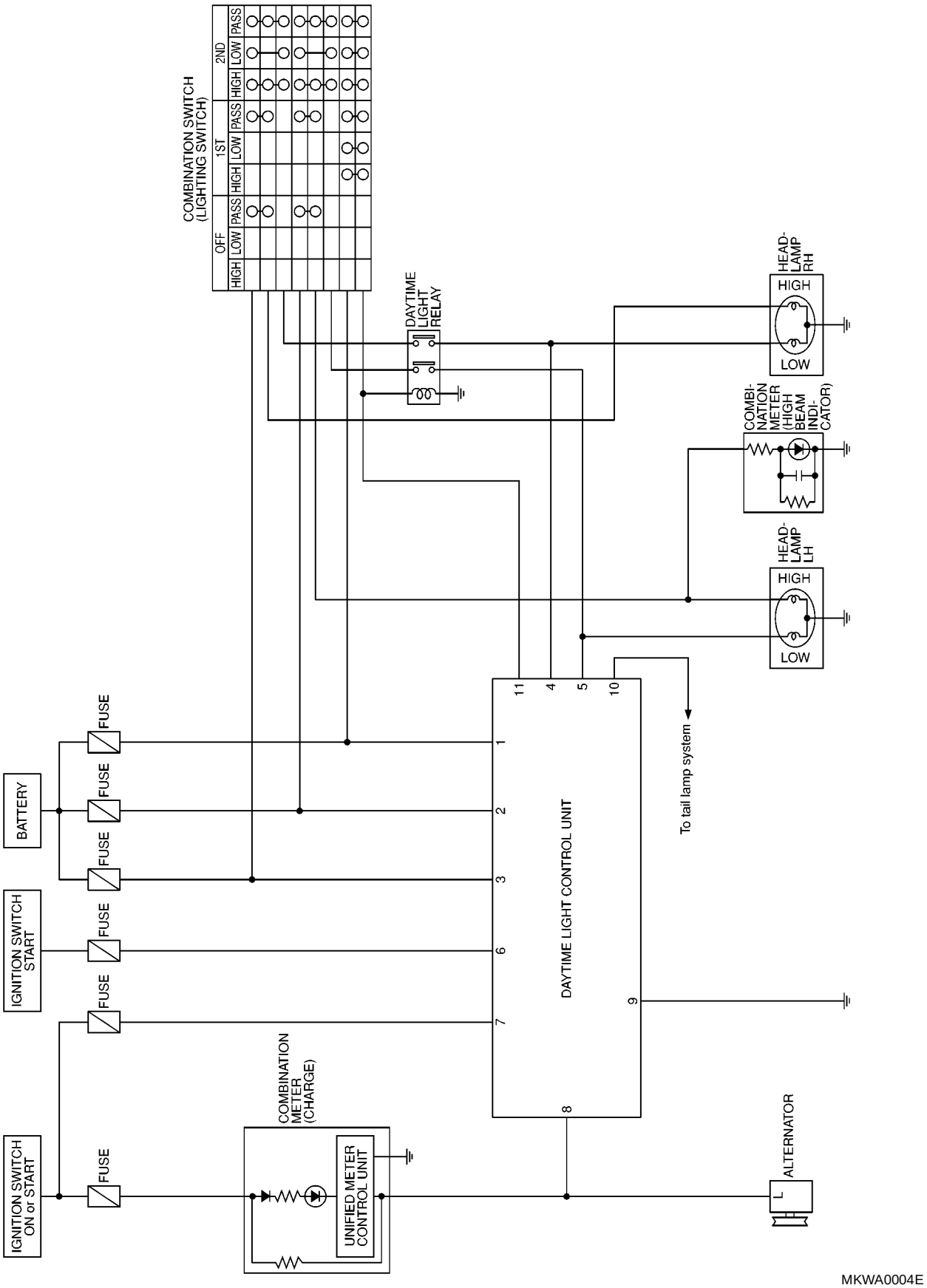
When the engine running, the lighting switch in the OFF position, power is supplied

- from alternator terminal 3
- to daytime light control unit terminal 8, and
- from daytime light control unit terminal 2
- through daytime light control unit terminal 5
- to terminal of LH headlamp
- from daytime light control unit terminal 3,
- through daytime light control unit terminal 4
- to terminal of RH headlamp, and
- from daytime light control unit terminal 1
- through daytime light control unit terminal 10

Ground is supplied to terminal 2 of each headlamp through body grounds E10 and E58.

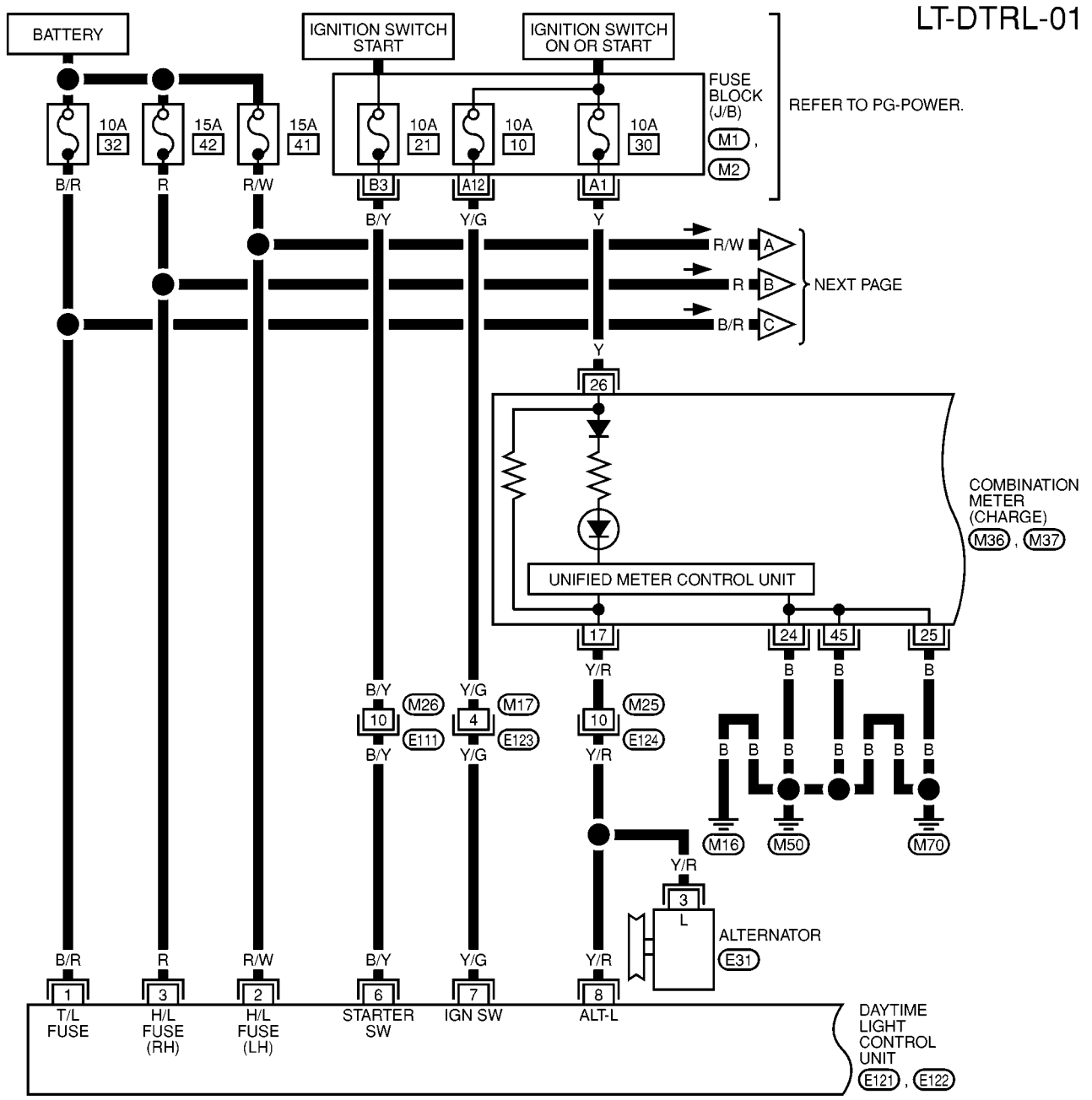
Schematic

EKS004PJ

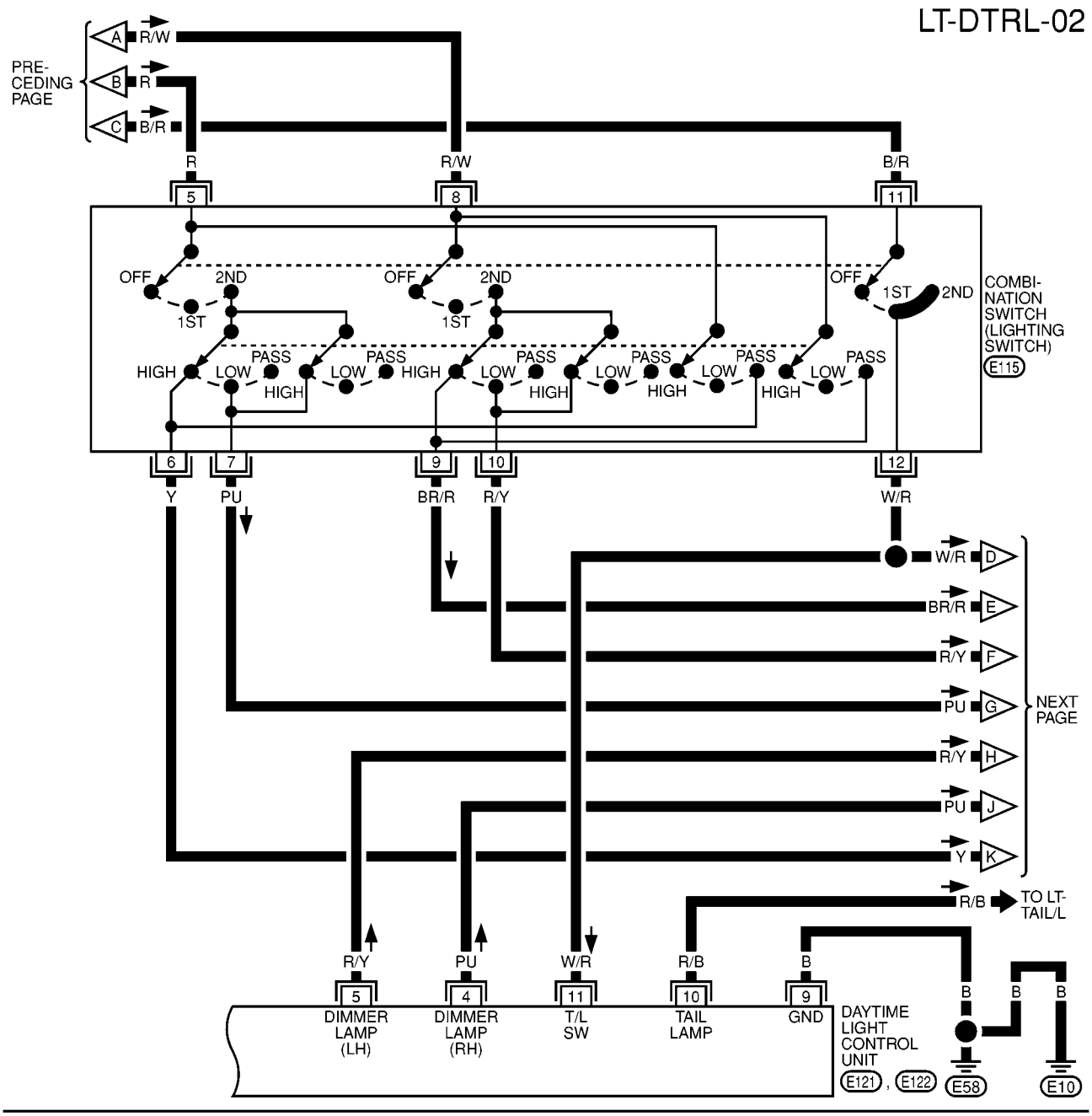


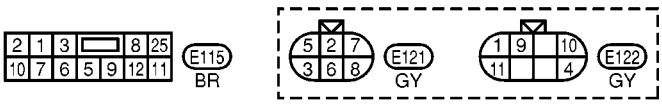
Wiring Diagram — H/LAMP —

EKS004PK



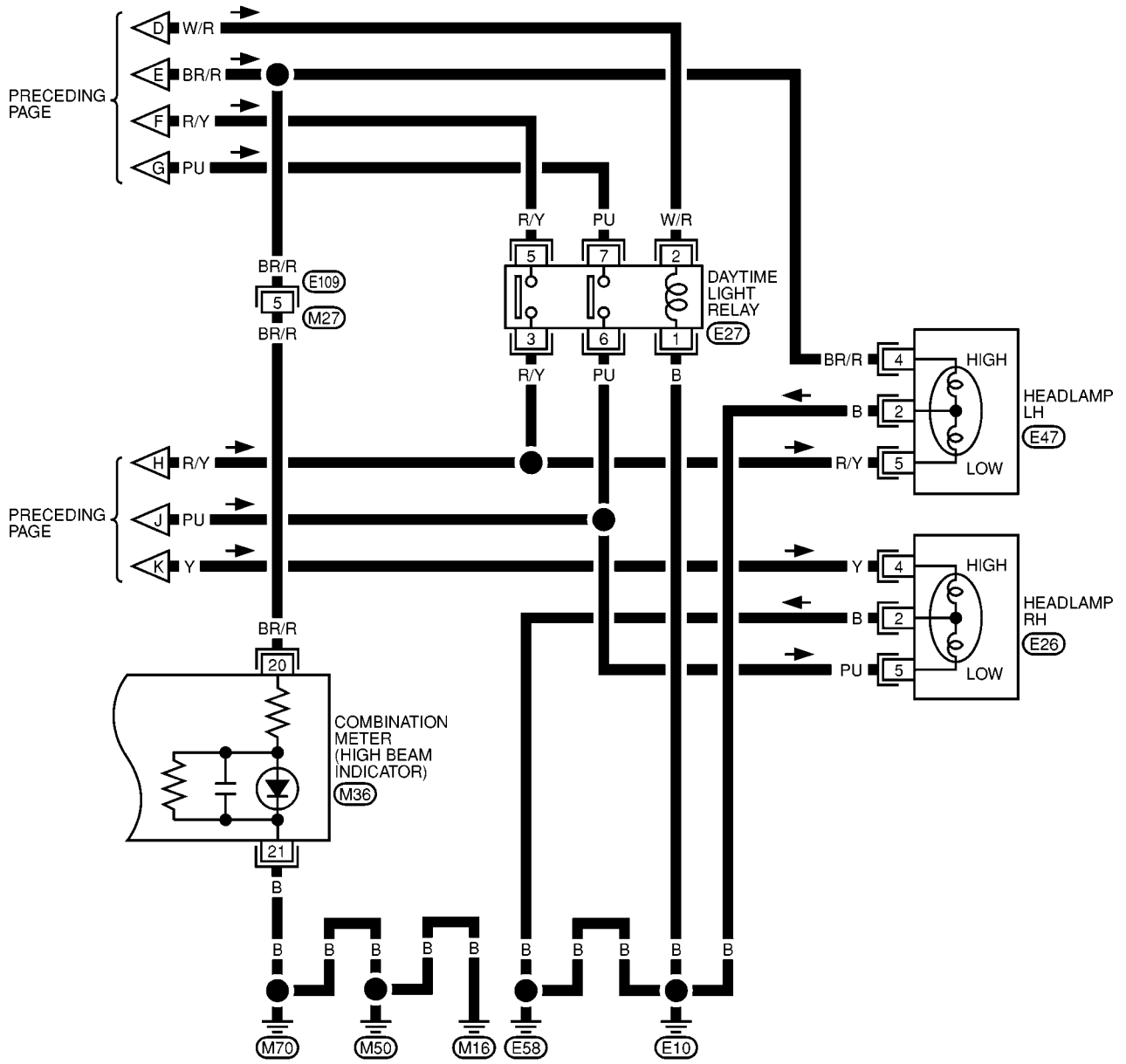
MKWA0005E

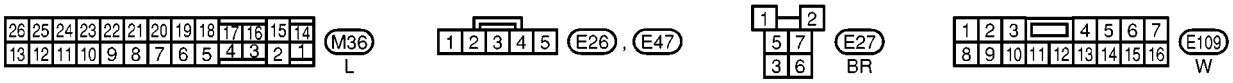

LT-DTRL-02
PRE-CEDING PAGE
A R/W
B R
C B/R
R
R/W
B/R
5
8
11
OFF
2ND
1ST
HIGH
LOW
PASS
COMBI-NATION SWITCH (LIGHTING SWITCH)
E115
6
7
9
10
12
Y
PU
BR/R
R/Y
W/R
D
E
F
G
H
J
K
NEXT PAGE
R/B
TO LT-TAIL/L
DIMMER LAMP (LH)
DIMMER LAMP (RH)
T/L SW
TAIL LAMP
GND
DAYTIME LIGHT CONTROL UNIT
E121
E122
E58
E10


E115
BR
E121
GY
E122
GY

MKWA0006E

LT-DTRL-03





MKWA0007E

Terminal and Reference Value for Daytime Light Control Unit

Terminal No.	Wire color	Item	Condition	Voltage (Approximate values)
1	B/R	Power source	Ignition switch “OFF”	Battery voltage
2	R	Power source	Ignition switch “OFF”	Battery voltage
3	R/W	Power source	Ignition switch “OFF”	Battery voltage
4	PU	RH low beam	When lighting switch is turned to the 2ND position	Battery voltage
			When engine is running and turning lighting switch to “OFF” (daytime light operation)	Battery voltage
5	R/Y	LH low beam	When lighting switch is turned to the 2ND position	Battery voltage
			When engine is running and turning lighting switch to “OFF” (daytime light operation)	Battery voltage
6	B/Y	Start signal	When turning ignition switch to “START”	Battery voltage
			When turning ignition switch to “ON” from “START”	Less than 1V
			When turning ignition switch to “OFF”	Less than 1V
7	Y/G	Power source	When turning ignition switch to “ON”	Battery voltage
			When turning ignition switch to “START”	Battery voltage
			When turning ignition switch to “OFF”	Less than 1V
8	Y/R	Alternator	When turning ignition switch to “ON”	Less than 1V
			When engine is running	Battery voltage
			When turning ignition switch to “OFF”	Less than 1V
9	B	Ground	—	—
10	R/B	Tail lamp	When turning ignition switch to “ON”	0V
			When engine is running and turning lighting switch to “OFF” (daytime light operation*)	Battery voltage
			When turning ignition switch to “OFF”	0V
11	W/R	Lighting switch	When turning lighting switch to 1ST or 2ND	Battery voltage
			When turning ignition switch to “OFF”	0V

*: Daytime light operating: Lighting switch in “OFF” position with engine running.

Trouble Diagnoses

EKS004PL

Symptom	Possible cause	Repair order
LH headlamps do not operate.	1. Bulb 2. Grounds E10 and E58 3. 15A fuse 4. Lighting switch	1. Check bulb. 2. Check grounds E10 and E58. 3. Check 15A fuse (No. 41, located in fuse and fusible link box). Verify battery positive voltage is present at terminal 8 of lighting switch. 4. Check lighting switch.
RH headlamps do not operate.	1. Bulb 2. Grounds E10 and E58 3. 15A fuse 4. Lighting switch	1. Check bulb. 2. Check grounds E10 and E58. 3. Check 15A fuse (No. 42, located in fuse and fusible link box). Verify battery positive voltage is present at terminal 5 of lighting switch. 4. Check lighting switch.

Symptom	Possible cause	Repair order
LH high beam does not operate, but LH low beam operates.	1. Bulb 2. Open in LH high beams circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 9 (BR/R) and LH headlamp terminal 4 (BR/R) for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam operates.	1. Bulb 2. Open in LH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 10 (R/Y) and LH headlamp terminal 5 (R/Y) for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam operates.	1. Bulb 2. Open in RH high beams circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 6 (Y) and RH headlamp terminal 4 (Y) for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam operates.	1. Bulb 2. Open in RH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check continuity between lighting switch terminal 7 (PU) and RH headlamp terminal 5 (PU) for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	1. Bulb 2. Grounds M16, M50 and M70 3. Open in high beam circuit	1. Check bulb in combination meter. 2. Check grounds M16, M50 and M70. 3. Check continuity between lighting switch terminal 9 (BR/R) and combination meter terminal 20 (BR/R) LHD or 7 (BR/R) RHD for an open circuit.

Aiming Adjustment

EKS004PN

Refer to LT-7, "Aiming Adjustment"

Bulb Replacement

EKS004PM

HEADLAMP

Refer to LT-9, "Bulb Replacement"

CLEARANCE LAMP, FRONT TURN SIGNAL LAMP

Refer to LT-9, "CLEARANCE LAMP, FRONT TURN SIGNAL LAMP"

HEADLAMP (WITH DAYTIME) - XENON TYPE -

PFP:26010

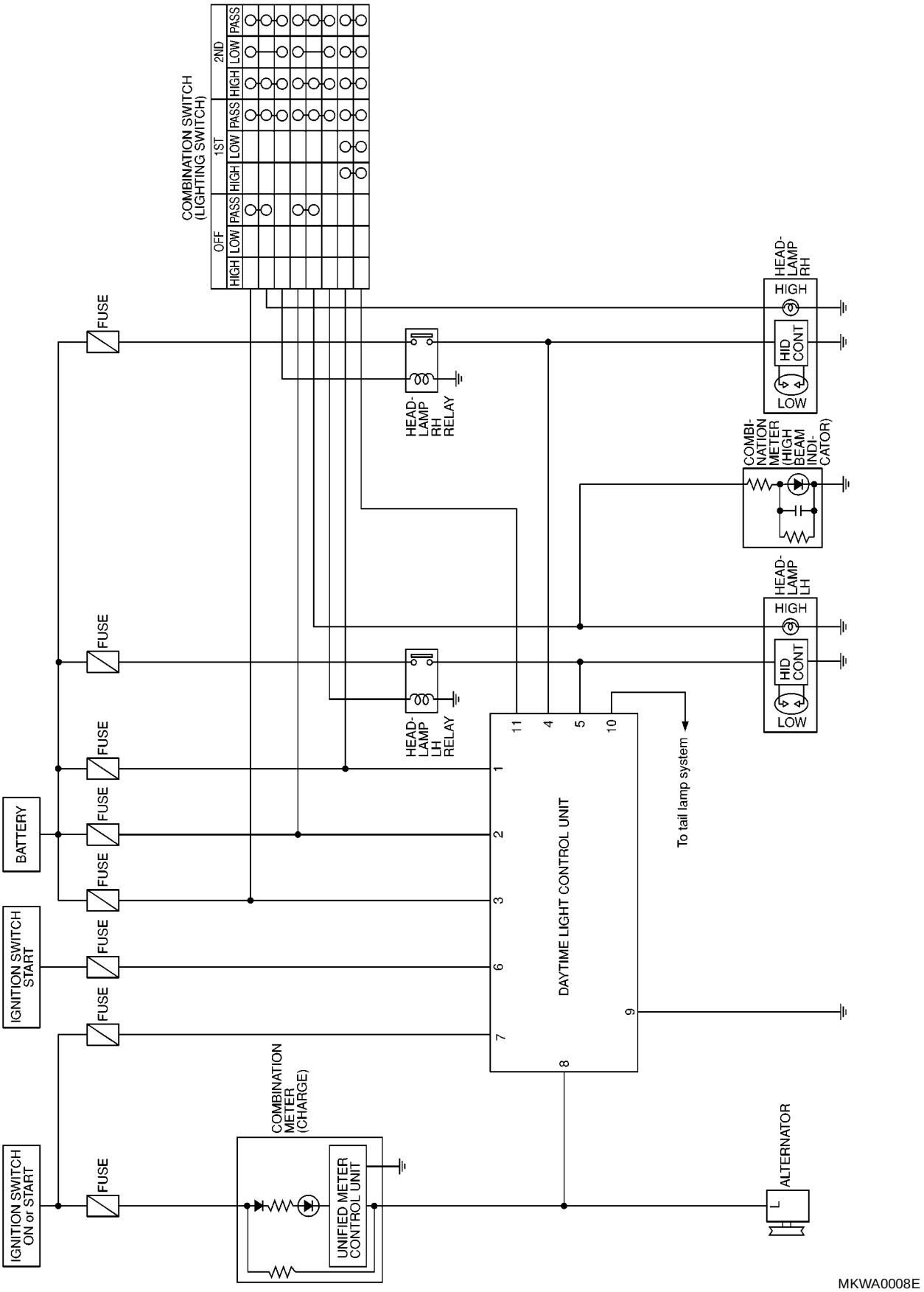
System Description

EKS0054P

For headlamp operation, refer to LT-5, "System Description" .
For daytime operation, refer to LT-18, "System Description" .

Schematic

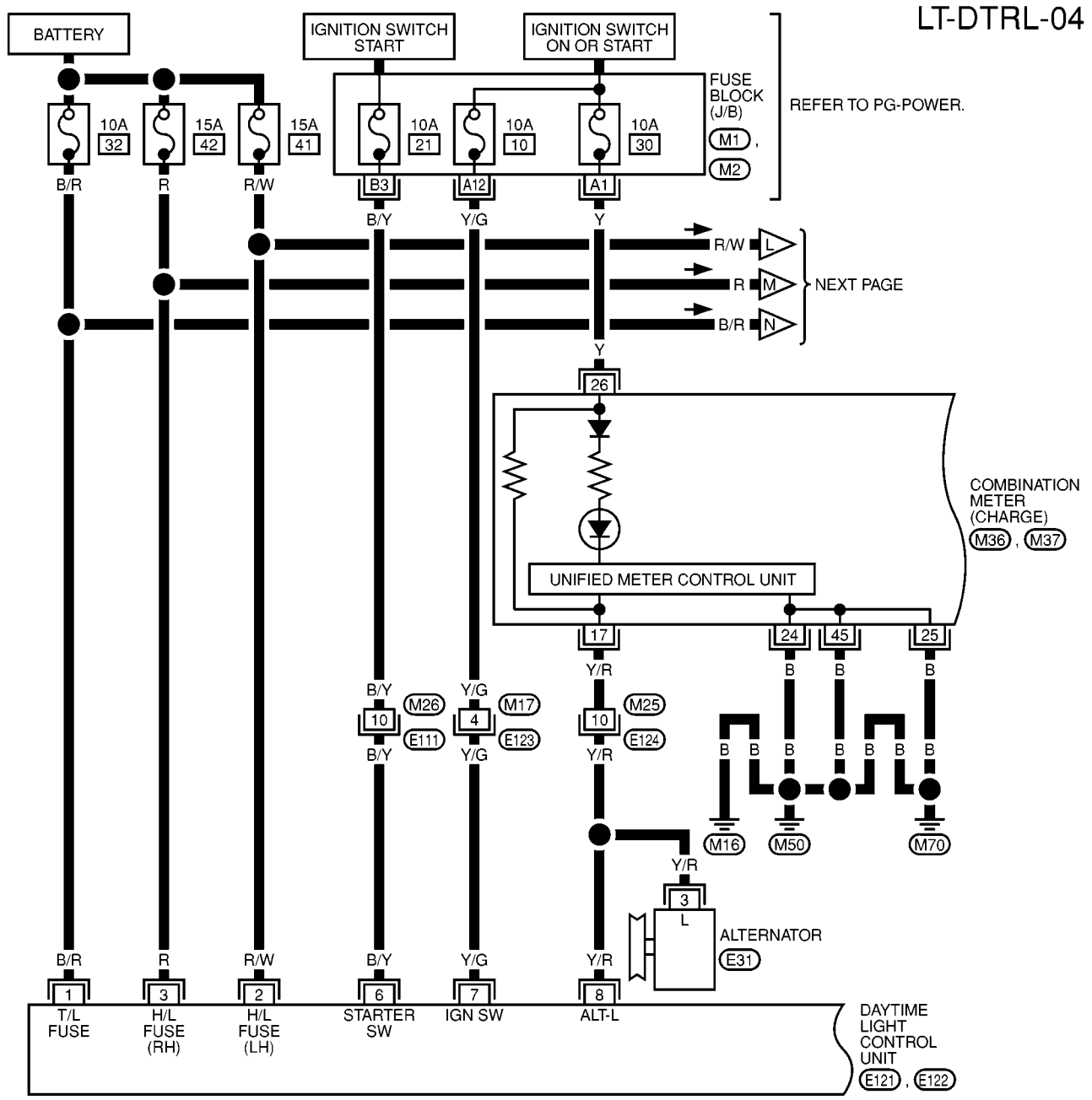
EKS004PP

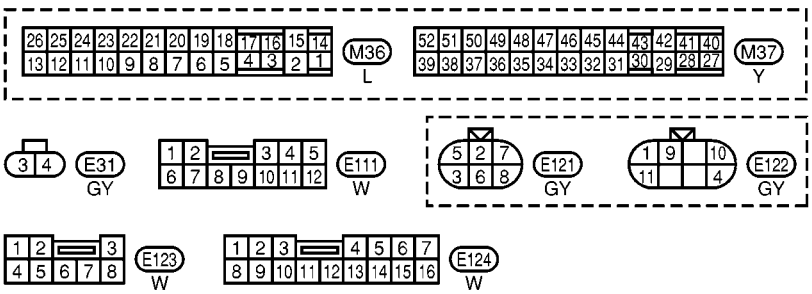


MKWA0008E

Wiring Diagram - DTRL -

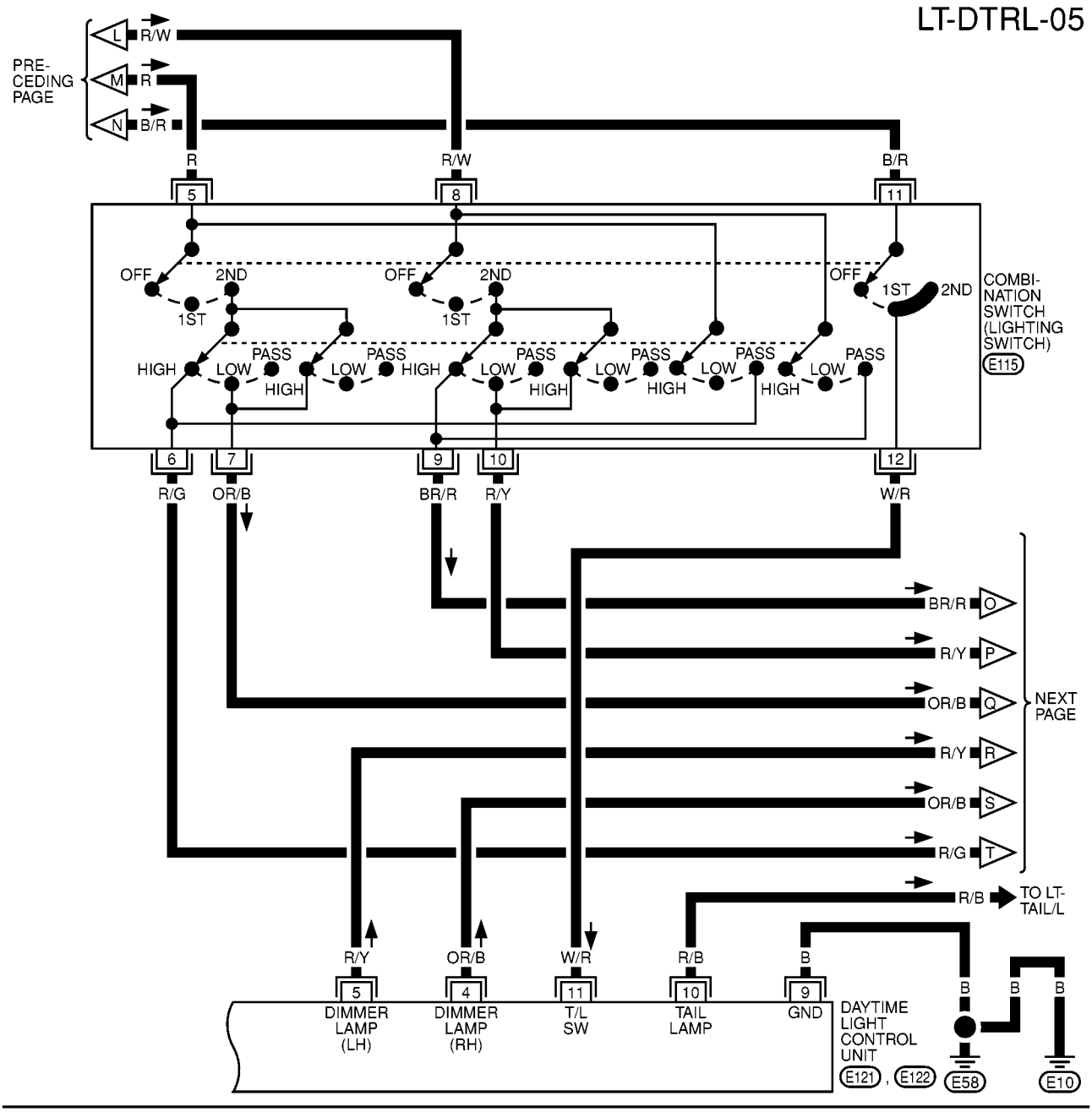
EKS004PQ





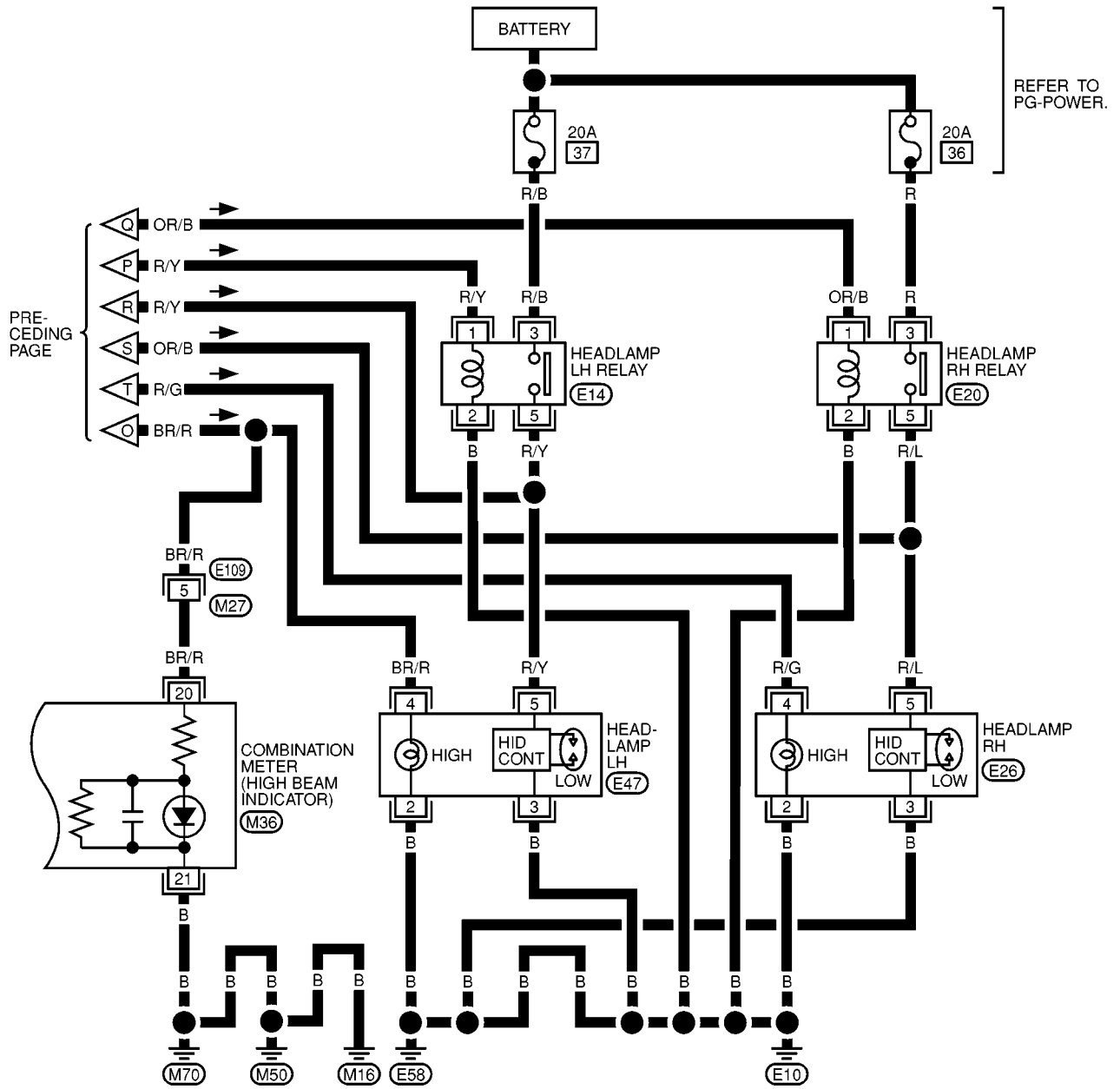
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)

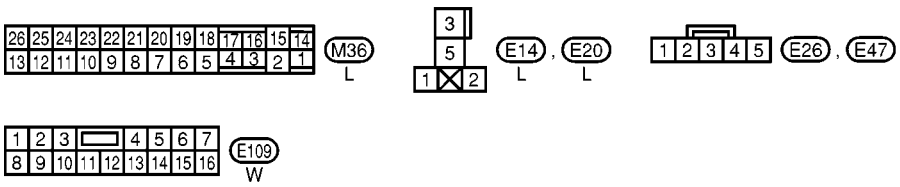
MKWA0009E


LT-DTRL-05
PRE-CEDING PAGE
L R/W
M R
N B/R
R
R/W
B/R
5
8
11
OFF
2ND
1ST
HIGH
LOW
PASS
COMBI-NATION SWITCH (LIGHTING SWITCH)
E115
6
7
9
10
12
R/G
OR/B
BR/R
R/Y
W/R
BR/R O
R/Y P
OR/B Q
R/Y R
OR/B S
R/G T
NEXT PAGE
R/B
TO LT-TAIL/L
R/Y
OR/B
W/R
R/B
B
DIMMER LAMP (LH)
DIMMER LAMP (RH)
T/L SW
TAIL LAMP
GND
DAYTIME LIGHT CONTROL UNIT
E121
E122
E58
E10
E115 BR
E121 GY
E122 GY

MKWA0010E

LT-DTRL-06





MKWA0011E

Trouble Diagnoses

EKS004PR

DAYTIME LIGHT UNIT INSPECTION TABLE

Refer to LT-23, "Trouble Diagnoses" .

Bulb Replacement

EKS004PS

Refer to LT-16, "Bulb Replacement" .

Aiming Adjustment

EKS004PT

Refer to LT-15, "Aiming Adjustment" .

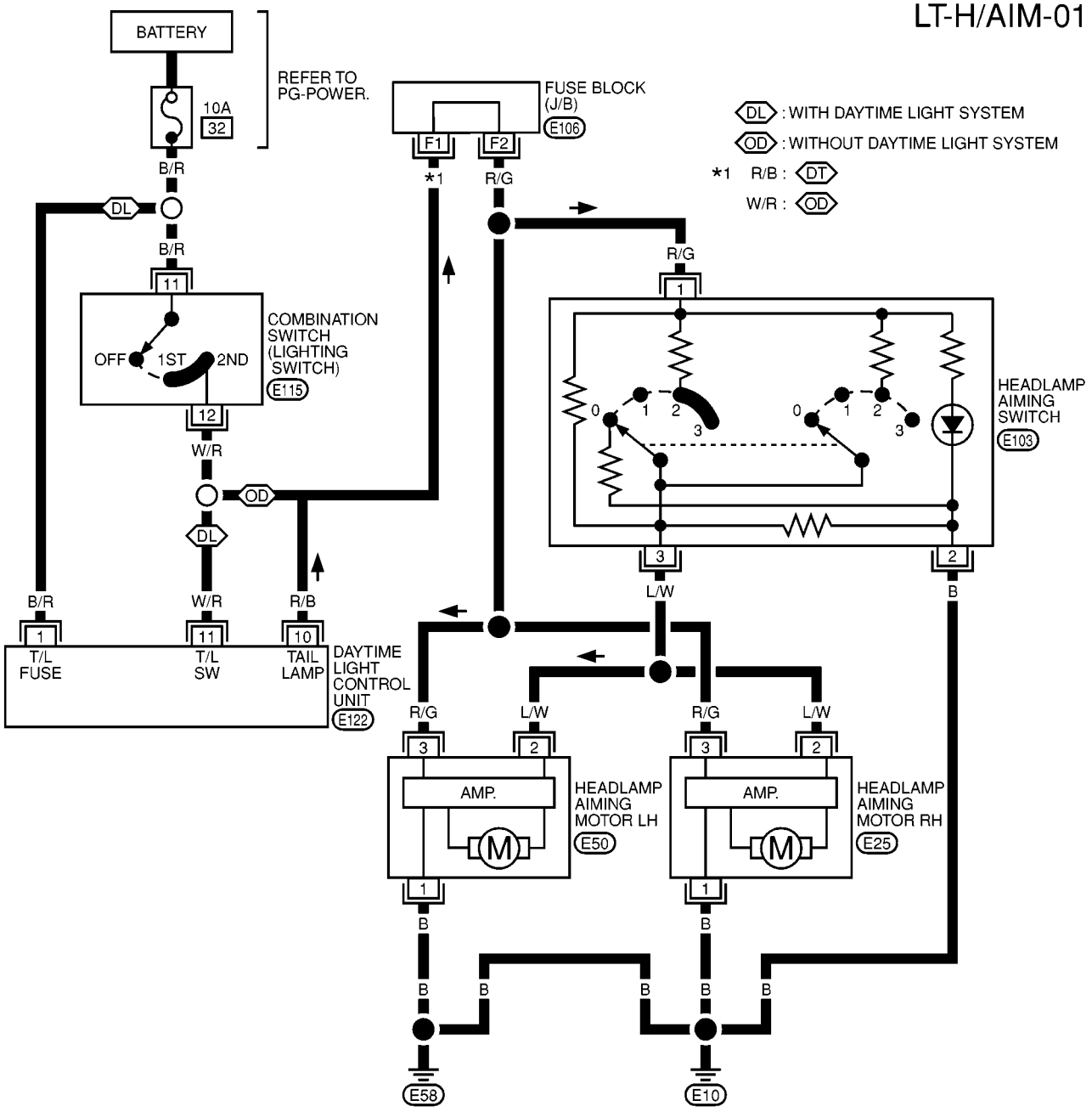
HEADLAMP AIMING CONTROL (MANUAL)

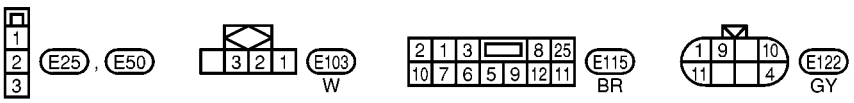
PFP:25190

Wiring Diagram — H/AIM —

EKS004T6

LT-H/AIM-01





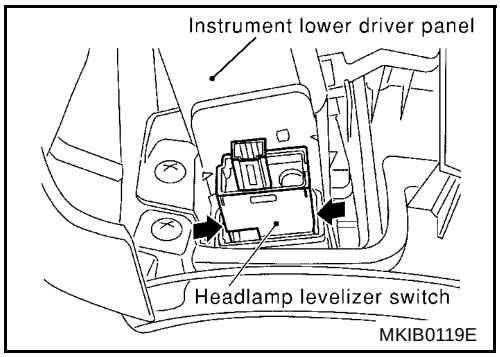
REFER TO THE FOLLOWING.
E106 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0012E

Removal and Installation

EKS004T7

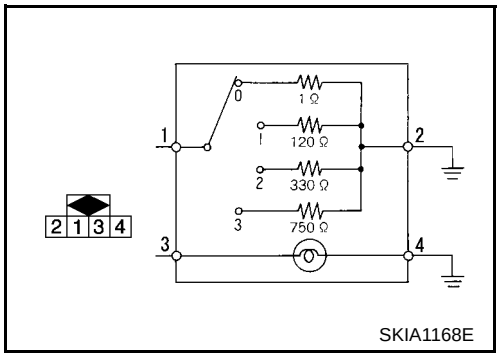
1. Remove the Instrument lower driver panel. Refer to IP-8, "INSTRUMENT LOWER DRIVER PANEL"
2. Press the headlamp aiming switch fixing tabs and remove the unit from the Instrument lower driver panel.



Switch Circuit Inspection

EKS004T8

Using a circuit tester, check continuity between the headlamp aiming switch connector terminals in each operation status of the aiming switch.



HEADLAMP AIMING CONTROL (AUTO)

PFP:53821

System Description

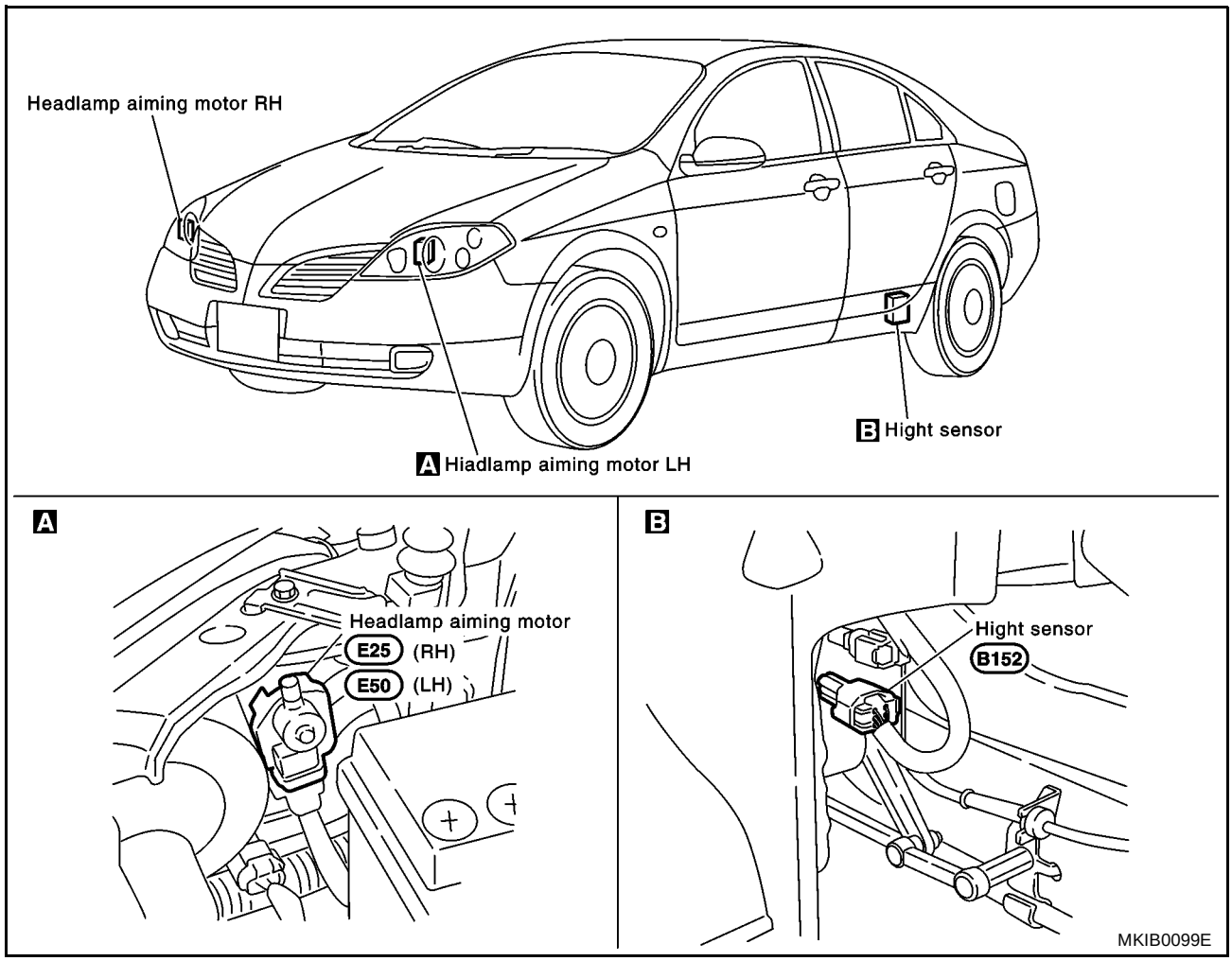
EKS004T9

The height sensor is designed to adjust the beam angle of the headlamp in response to the loading conditions of the vehicle and vehicle speed. It is not designed to compensate for the dynamic handling of the vehicle.
The vehicle rear height is measured by height sensor attached to the rear suspension lateral link arm. Height sensor received vehicle speed signal from combination meter. The height sensor calculates the correct headlamp aiming position and sends a signal to the aiming motors.

Component Parts and Harness

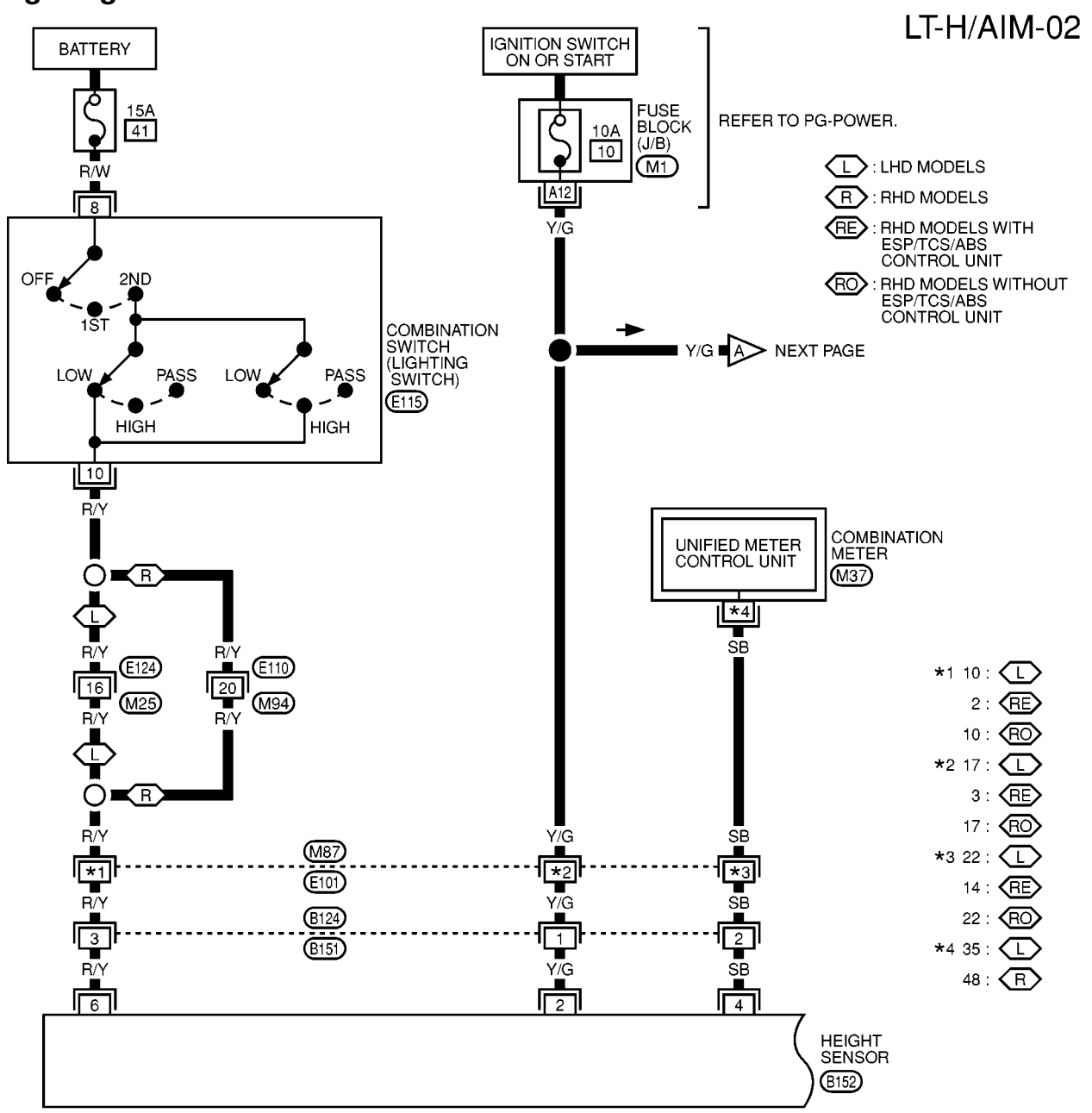
EKS004TA

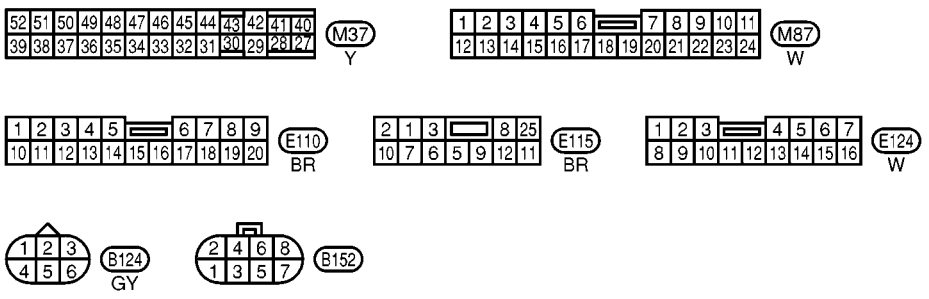
CONNECTOR LOCATION



Wiring Diagram - H/AIM -

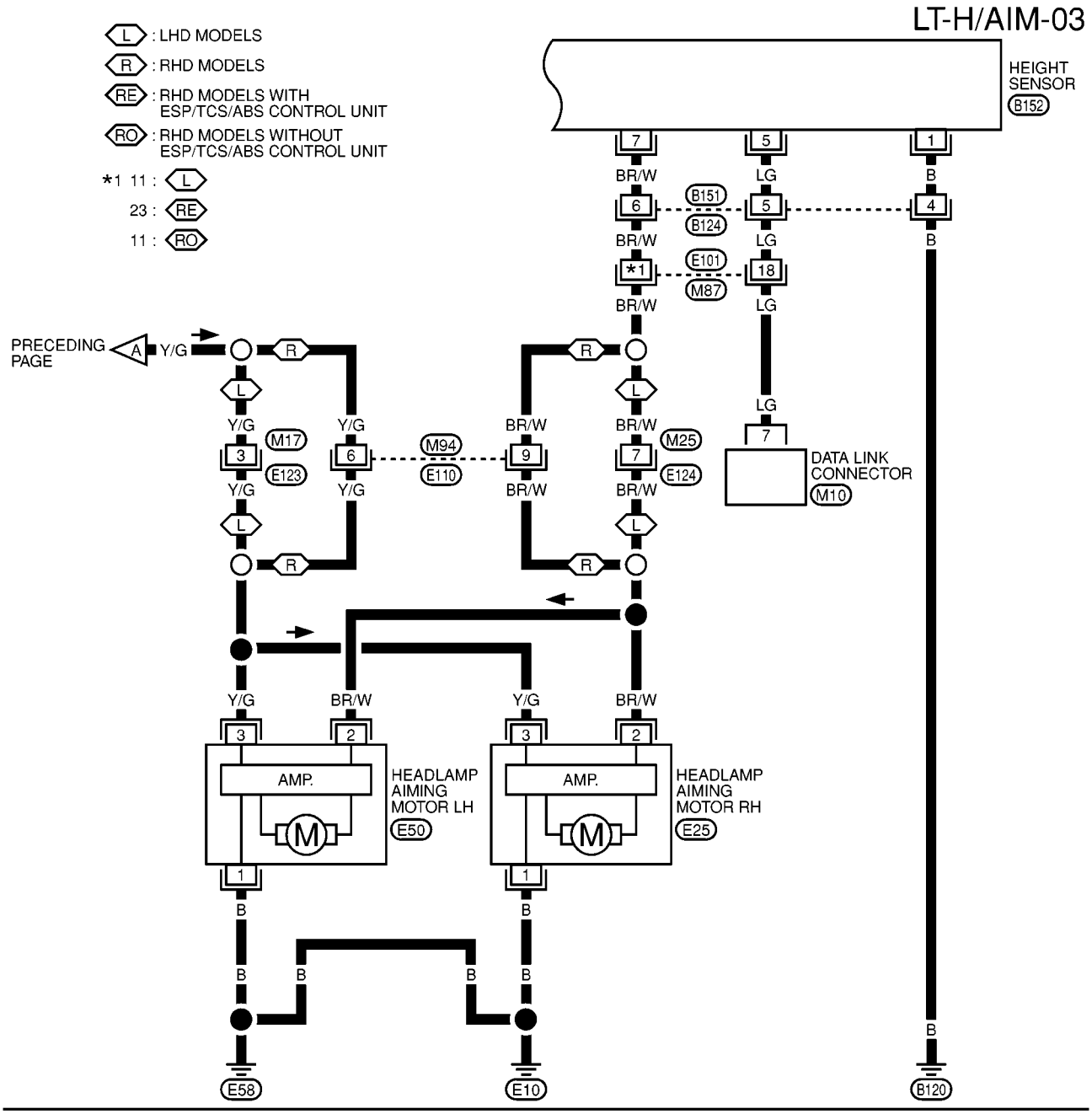
EKS004TB

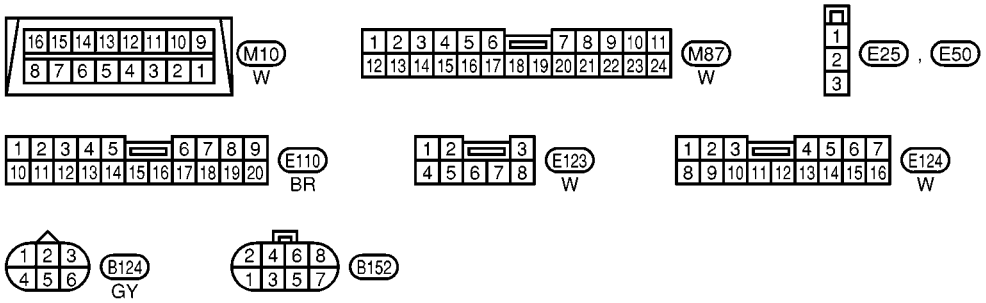




REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

MKWA0013E


LT-H/AIM-03
L : LHD MODELS
R : RHD MODELS
RE : RHD MODELS WITH ESP/TCS/ABS CONTROL UNIT
RO : RHD MODELS WITHOUT ESP/TCS/ABS CONTROL UNIT
*1 11 : L
23 : RE
11 : RO
HEIGHT SENSOR
B152
PRECEDING PAGE
A
Y/G
BR/W
LG
B
B151
B124
E101
M87
M17
E123
M94
E110
M25
E124
DATA LINK CONNECTOR
M10
AMP.
HEADLAMP AIMING MOTOR LH
E50
HEADLAMP AIMING MOTOR RH
E25
E58
E10
B120


M10
W
M87
W
E25
E50
E110
BR
E123
W
E124
W
B124
GY
B152

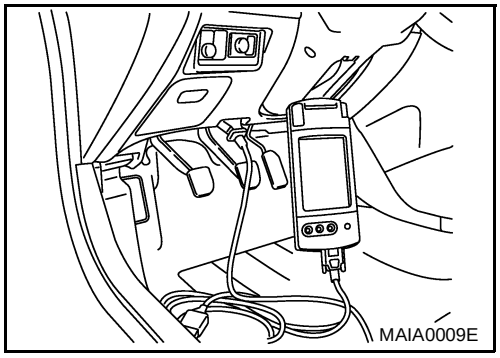
MKWA0014E

CONSULT-II

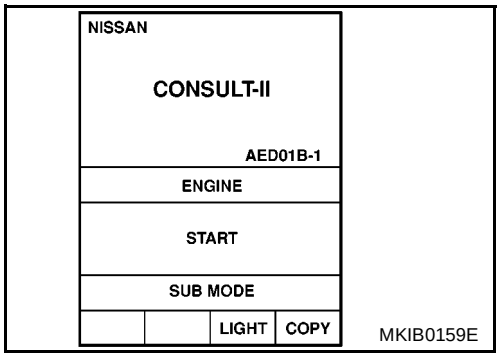
EKS004TC

CONSULT-II INSPECTION PROCEDURE

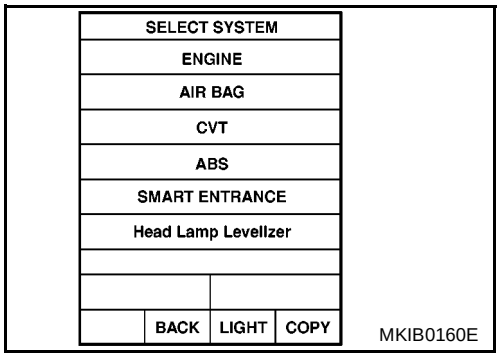
1. Turn ignition switch OFF.
2. Connect CONSULT-II to data link connector.



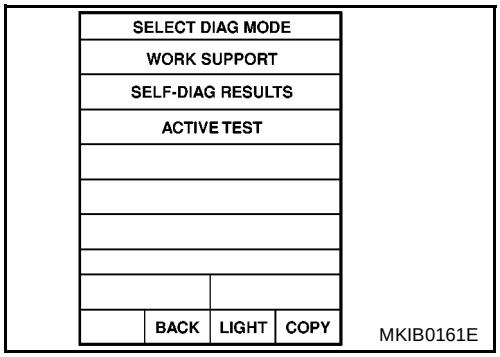
3. Turn ignition switch ON.
4. Touch “START”.



5. Touch “Headlamp Levelizer”.



6. Perform each diagnostic item according to each service procedure.



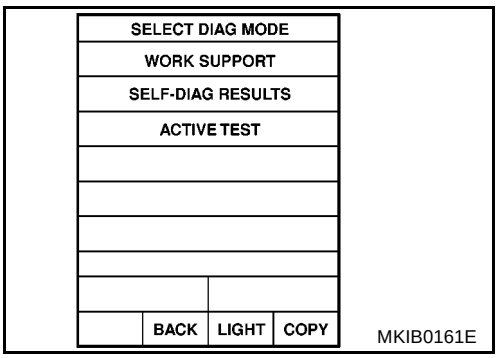
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description	
WORK SUPPORT	SENSOR INITIALISE	Replacement or adjustment of height sensor are necessary.
	SENSOR CUSTOMIZE	Change the height sensor current setting.
SELF-DIAGNOSTIC RESULTS	Detected items (screen terms) are as shown in the LT-38, "SELF-DIAGNOSTIC RESULTS ITEM CHART"	
ACTIVE TEST	This test is able to power supply from height sensor to headlamp aiming motor. This system can be operated.	

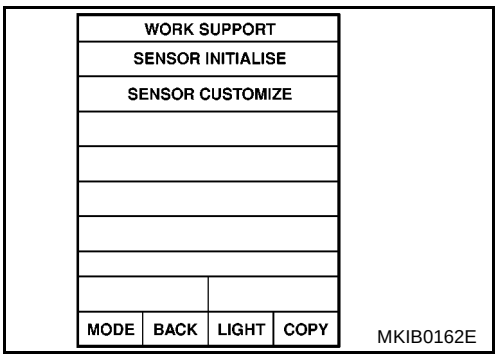
INITIALIZATION

After the replacement or adjustment of height sensor, the system must be calibrated, This is achieved as follows.

1. Touch “WORK SUPPORT”.

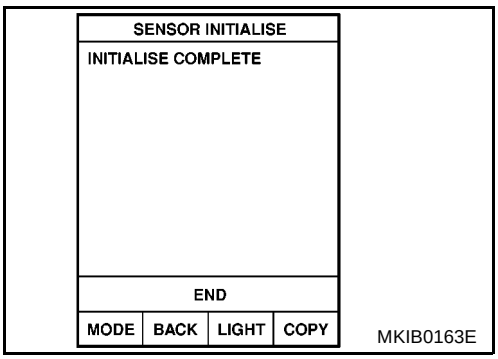


2. Touch “SENSOR INITIALISE”.



3. Touch “START”.
   Confirm that “INITIALISE COMPLETE” is displayed on CONSULT-II, close by touching “END”.

After successful calibration the headlamps must then be aimed in the conventional manner LT-15, "Aiming Adjustment" .



SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items (Screen terms)	System Condition	Reference item
ECU trouble	Height sensor error	Replace height sensor.
No initialisation	Initialisation not done	LT-37
Sensor out of range	Sensor left specified range	Replace height sensor.
Sensor not plausible	Sensor signal constant for more than 60s while car is moving.	Replace height sensor.
Supply voltage low	Supply voltage below 9V	LT-38
Light signal open line	Open line at low beam switch	LT-39
Speed frequency error	Frequency of speed line over specified limit	LT-39
Actuator shorted to ground	Calculated output value differs from measured output value.	LT-40
Actuator shorted to battery	Calculated output value differs from measured output value.	LT-40

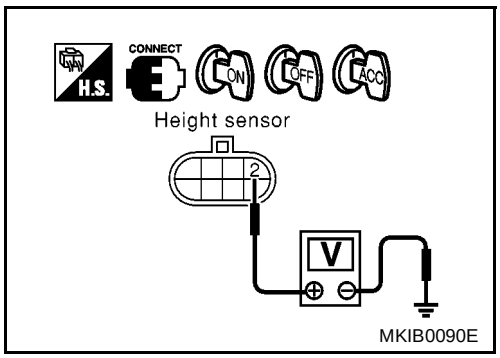
Check Power and Ground for Height Sensor

EKS0054Z

1. POWER SUPPLY CIRCUIT CHECK

Height sensor power supply check

Terminals			Ignition switch position		
(+)		(–)	OFF	ACC	ON
Connector	Terminal (wire color)				
B152	2 (Y/G)	Ground	0V	0V	Battery voltage



OK or NG

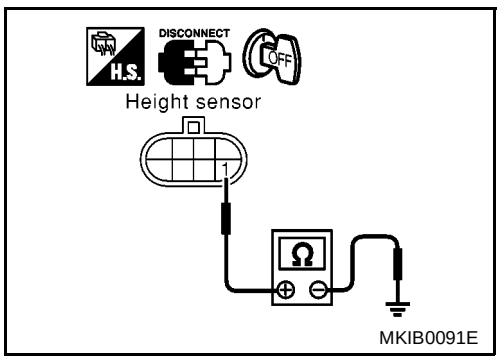
OK >> GO TO 2.
NG >> Check the following.

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

2. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect height sensor connector.
3. Check continuity between height sensor connector B152 terminal 1 (B) and ground.

Continuity should exist.



OK or NG

OK >> Height sensor OK.
NG >> Repair or replace harness connector.

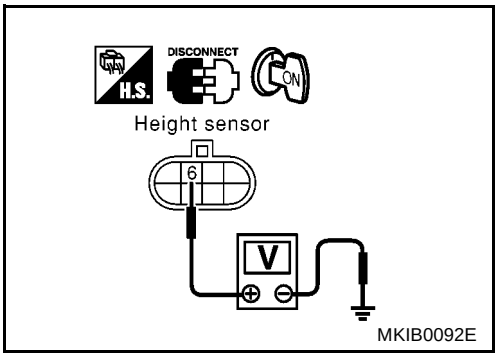
Check Lighting Switch Circuit

EKS00550

1. LIGHTING SWITCH INPUT SIGNAL CHECK

1. Disconnect height sensor connector.
2. Turn ignition switch ON.
3. Check voltage between height sensor connector B152 terminal 6 (R/Y) and ground.

Condition for lighting switch	Voltage (V)
Lighting switch in 2ND position	Approx. 12
Except for superscription	Approx. 0



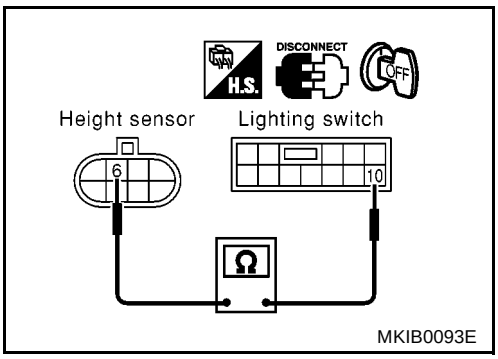
OK or NG

OK >> Replace the height sensor.
NG >> GO TO 2.

2. LIGHTING SWITCH OPEN CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect height sensor connector.
3. Check harness continuity between height sensor connector B152 terminal 6 (R/Y) and lighting switch terminal connector E115 terminal 10 (R/Y).

Continuity should exist.



OK or NG

OK >> Check combination switch LT-86, "COMBINATION SWITCH" .
NG >> Repair or replace harness.

Check Speed Signal Circuit Check

EKS00551

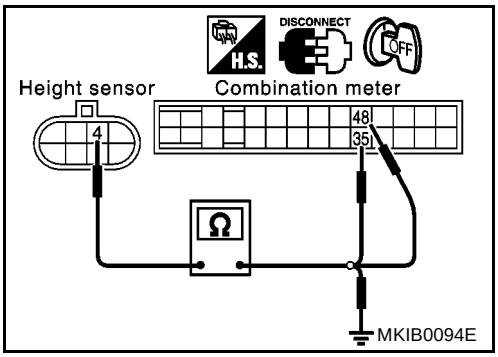
1. SPEED SIGNAL CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect height sensor connector.
3. Check continuity between height sensor connector B152 terminal 6 (SB) and combination meter connector M37 terminal 35 (LHD MODELS) or 48 (RHD MODELS).

Continuity should exist.

4. Check continuity between height sensor connector B152 terminal 1 (B) and ground.

Continuity should not exist.

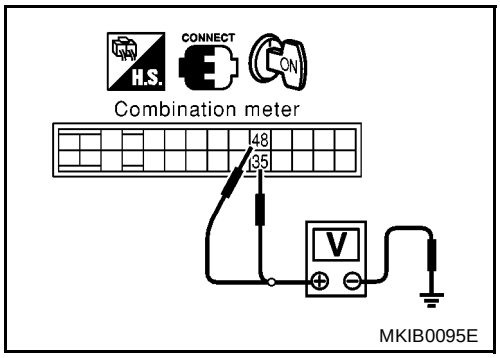


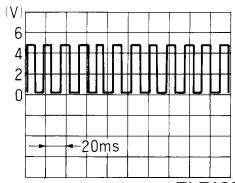
OK or NG

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

2. SPEED SIGNAL SHORT CIRCUIT CHECK

1. Turn ignition switch ON.
2. Check speed signal between combination meter connector M37 terminal 35 (LHD MODELS) or 48 (RHD MODELS) and ground.



Terminals			Shape of waves
(+)		(–)	
Connector	Terminal (Wirecolor)		
M37	35 (SB)	Ground	
	48 (SB)		

ELF1084D

OK or NG

OK >> Replace the height sensor.
NG >> Replace the combination meter.

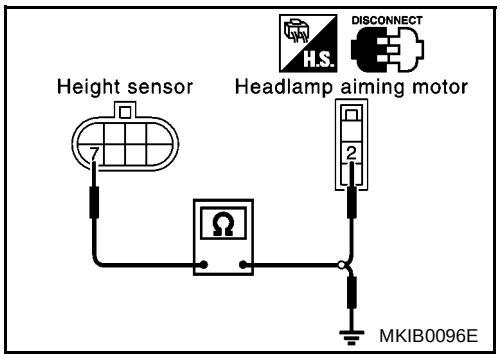
Check Headlamp Aiming Motor

EKS00552

1. HEADLAMP AIMING MOTOR CIRCUIT CHECK

1. Disconnect height sensor connector.
2. Check continuity between height sensor connector B152 terminal 7 (BR/W) and headlamp aiming motor connector E25 (RH) terminal 2 (BR/W) or E50 (LH) terminal 2 (BR/W).

Continuity should exist.

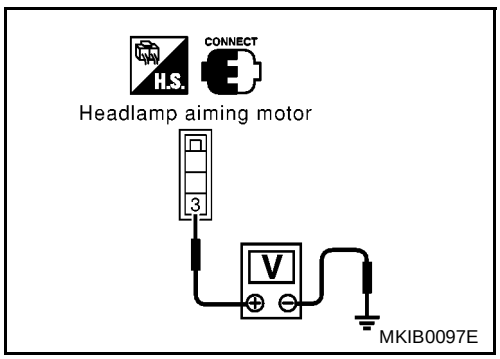


OK or NG

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

2. POWER SUPPLY CIRCUIT CHECK

1. Connect height sensor connector.
2. Check voltage between headlamp aiming motor connector E25 (RH) terminal 3 (Y/G) or E50 (LH) terminal 3 (Y/G) and ground.



Terminals			Ignition switch position		
(+)		(–)	OFF	ACC	ON
Connector	Terminal (wire color)				
E25	3 (Y/G)	Ground	0V	0V	Battery voltage
E50					

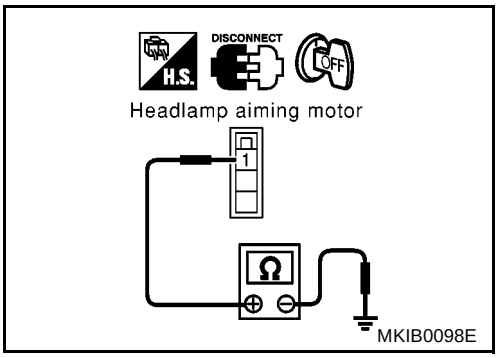
OK or NG

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

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

3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect headlamp aiming motor connector.
3. Check continuity between headlamp aiming motor connector E25 (RH) terminal 1 (B) or E50 (LH) terminal 1 (B) and ground.



Terminals			Continuity
(+)		(–)	
Connector	Terminal (wire color)		
E25	1 (B)	Ground	YES
E50			

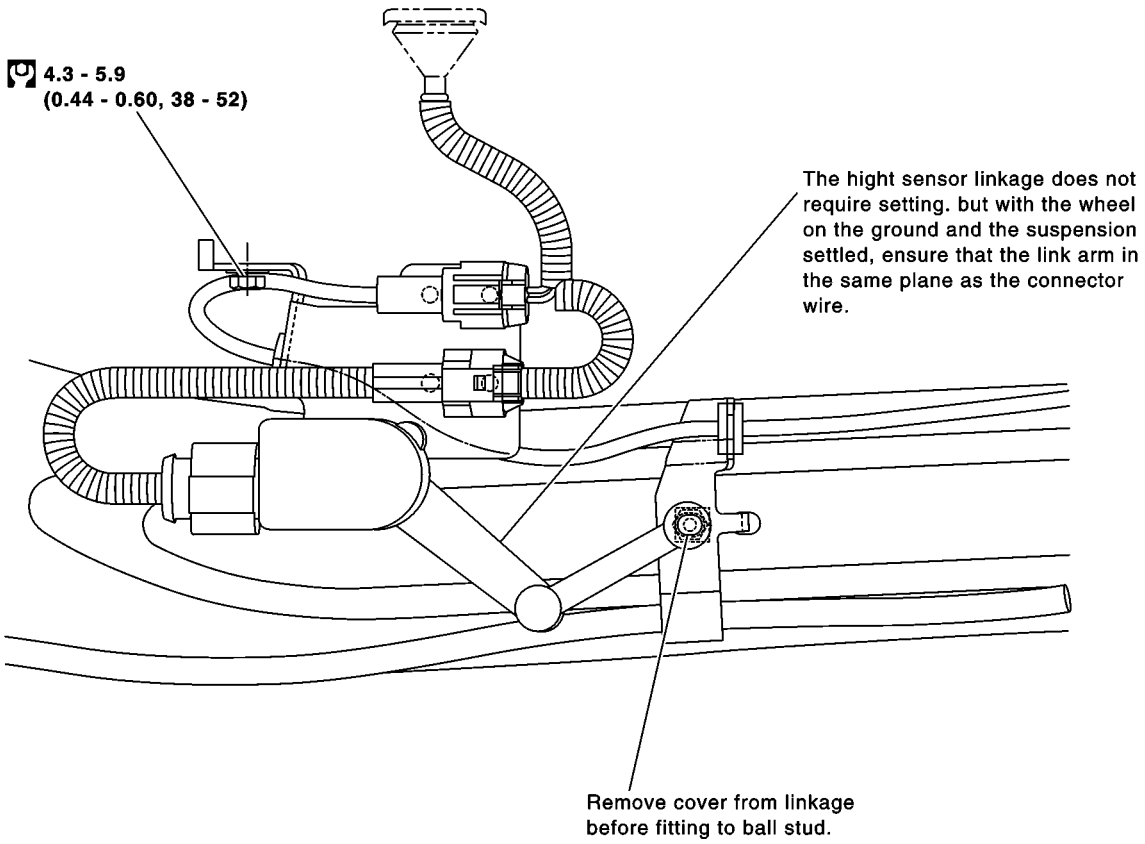
OK or NG

OK >> Replace the headlamp aiming motor.
NG >> Repair or replace harness.

Removal and installation

EKS004TD

Hight sensor



TURN SIGNAL AND HAZARD WARNING LAMPS

PFP:26120

System Description

EKS003TP

The turn signal and hazard warning lamps operation is controlled by the lighting switch which is built into the combination switch and smart entrance control unit.
Power is supplied at all time

- to smart entrance control unit terminal 56, and
- to combination meter terminal 52 (LHD models) or 39 (RHD models)
- through 10A fuse [No. 12, located in the fuse block (J/B)]

TURN SIGNAL OPERATION

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

- to smart entrance control unit terminal 29
- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to combination meter terminal 51 (LHD models) or 38 (RHD models)
- through 10A fuse [No. 30, located in the fuse block (J/B)]

LH Turn

When the turn signal switch is moved to the LH position, ground is supplied

- to smart entrance control unit terminal 25 from turn signal switch terminal 3
- through turn signal switch terminal 1
- through body grounds E10 and E58

Power is supplied from smart entrance control unit terminal 64 to

- front turn signal lamp LH terminal 1
- side turn signal lamp LH terminal 1
- rear combination lamp LH terminal 5 (for sedan models)
- rear combination lamp LH terminal 1 (for wagon models)

Ground is supplied to the front turn signal lamp LH terminal 2 through body grounds E10 and E58
Ground is supplied to the side turn signal lamp LH terminal 2 through body grounds E10 and E58
Ground is supplied to the rear combination lamp LH terminal 4 through body grounds B17 and B24 (for sedan models)
Ground is supplied to the rear combination lamp LH terminal 4 through body grounds B17, B24 and D94 (for wagon models)
With power and ground supplied, the smart entrance control unit controls the flashing of the LH turn signal lamps, and smart entrance control unit sent LH turn signal to combination meter with CAN communication line.

- to combination meter terminal 43 (LHD models) or 30 (RHD models) and 44 (LHD models) or 31 (RHD models)
- from smart entrance control unit terminal 8 and 11.

Turn signal LH is flushing of combination meter.

RH Turn

When the turn signal switch is moved to the RH position, ground is supplied

- to smart entrance control unit terminal 26 from turn signal switch terminal 2
- through turn signal switch terminal 1
- through body grounds E10 and E58

Power is supplied from smart entrance control unit terminal 63 to

- front turn signal lamp RH terminal 1
- side turn signal lamp RH terminal 1
- rear combination lamp RH terminal 2 (for sedan models)
- rear combination lamp RH terminal 1 (for wagon models)

Ground is supplied to the front turn signal lamp RH terminal 2 through body grounds E10 and E58
Ground is supplied to the side turn signal lamp RH terminal 2 through body grounds E10 and E58

Ground is supplied to the rear combination lamp RH terminal 3 through body grounds B17 and B24 (for sedan models)
Ground is supplied to the rear combination lamp RH terminal 4 through body grounds B17, B24 and D94 (for wagon models)
With power and ground supplied, the smart entrance control unit controls the flashing of the RH turn signal lamps, and smart entrance control unit sent RH turn signal to combination meter with CAN communication line.

- to combination meter terminal 43 (LHD models) or 30 (RHD models) and 44 (LHD models) or 31 (RHD models)
- from smart entrance control unit terminal 8 and 11.

HAZARD LAMP OPERATION

When the hazard switch in the ON position
Ground supplied

- to smart entrance control unit terminal 30 from hazard switch terminal 1
- through hazard switch terminal 3
- through body grounds M16, M48 and M50

Power is supplied from smart entrance control unit terminal 64 to

- front turn signal lamp LH terminal 1
- side turn signal lamp LH terminal 1
- rear combination lamp LH terminal 5 (for sedan models)
- rear combination lamp LH terminal 1 (for wagon models)

Power is supplied from smart entrance control unit terminal 63 to

- front turn signal lamp RH terminal 1
- side turn signal lamp RH terminal 1
- rear combination lamp RH terminal 2 (for sedan models)
- rear combination lamp RH terminal 1 (for wagon models)

Ground is supplied to terminal 2 each front turn signal lamp through body grounds E10 and E58
Ground is supplied to terminal 2 each side turn signal lamp through body grounds E10 and E58
Ground is supplied to terminal 3 each rear combination lamp through body grounds B17 and B24 (for sedan models)
Ground is supplied to terminal 4 each rear combination lamp through body grounds B17, B24 and D94 (for wagon models)
With power and ground supplied, the smart entrance control unit controls the flashing of the hazard warning lamps, and smart entrance control unit sent hazard warning signal to combination meter with CAN communication line.

- to combination meter terminal 43 (LHD models) or 30 (RHD models) and 44 (LHD models) or 31 (RHD models)
- from smart entrance control unit terminals 8 and 11.

MULTI-REMOTE CONTROL SYSTEM OPERATION

When smart entrance control unit receives LOCK or UNLOCK signal from remote controller with all doors closed, power is supplied

- through smart entrance control unit terminal 64
- to front turn signal lamp LH terminal 1 and
- to side turn signal lamp LH terminal 1 and
- to rear combination lamp LH terminal 5 (for sedan models) and
- to rear combination lamp LH terminal 1 (for wagon models) and
- through smart entrance control unit terminal 63
- to front turn signal lamp RH terminal 1 and
- to side turn signal lamp RH terminal 1 and
- to rear combination lamp RH terminal 2 (for sedan models) and
- to rear combination lamp RH terminal 1 (for wagon models)

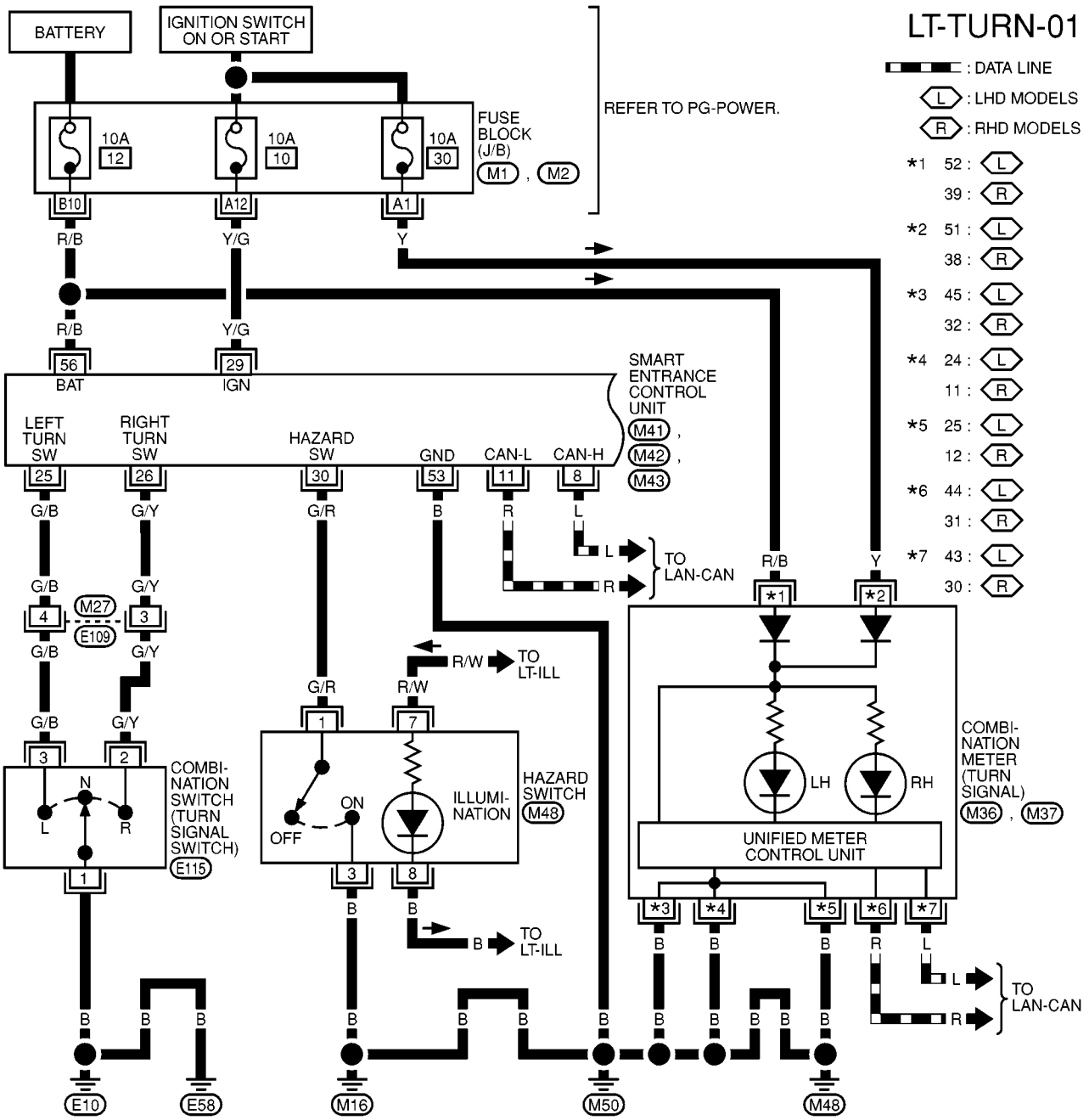
Ground is supplied to terminal 2 each front turn signal lamp through body grounds E10 and E58
Ground is supplied to terminal 2 each side turn signal lamp through body grounds E10 and E58
Ground is supplied to terminal 3 each rear combination lamp through body grounds B17 and B24 (for sedan models)
Ground is supplied to terminal 4 each rear combination lamp through body grounds B17, B24 and D90 (for wagon models)
With power and ground supplied, the smart entrance control unit controls the flashing of the hazard warning lamps. and smart entrance control unit sent hazard warning signal to combination meter with CAN communication line LT-125, "CAN COMMUNICATION" .

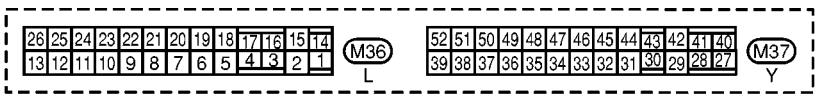
- to combination meter terminal 43 (LHD models) or 30 (RHD models) and 44 (LHD models) or 31 (RHD models)
- from smart entrance control unit terminals 8 and 11

Turn signal is flushing of combination meter.

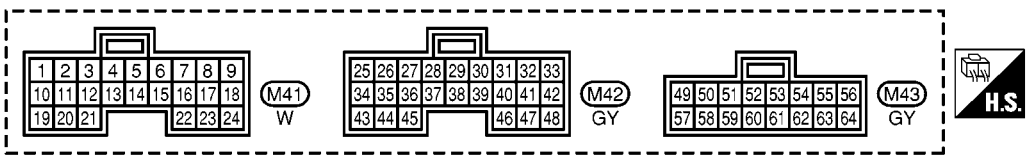
Wiring Diagram — TURN —

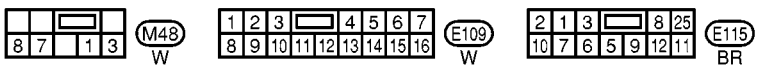
EKS003TQ



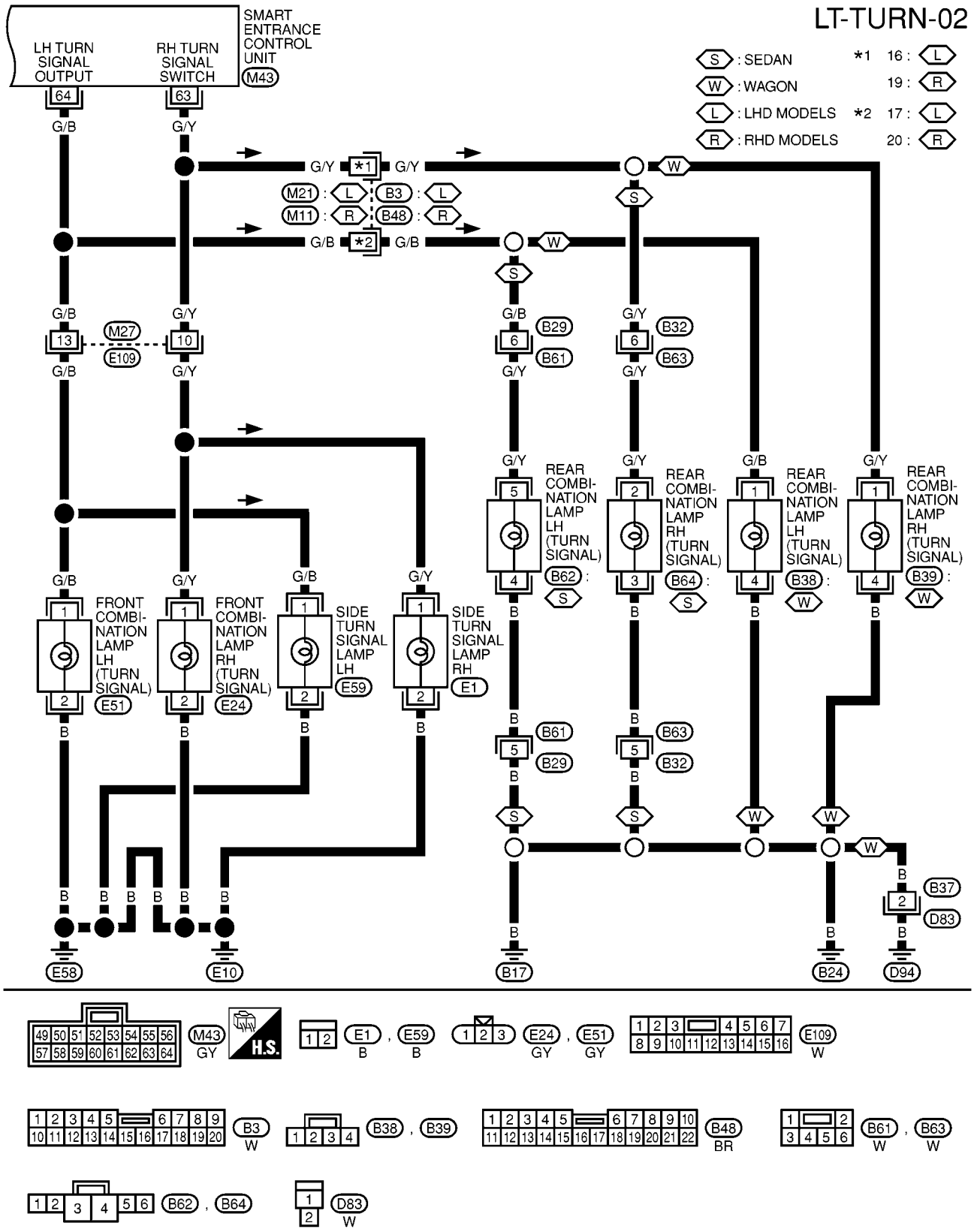


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)





MKWA0255E


LT-TURN-02
SMART ENTRANCE CONTROL UNIT
LH TURN SIGNAL OUTPUT
RH TURN SIGNAL SWITCH
M43
64
63
S : SEDAN
W : WAGON
L : LHD MODELS
R : RHD MODELS
*1 16 : L 19 : R
*2 17 : L 20 : R
M21 : L B3 : L
M11 : R B48 : R
M27
E109
B29
B61
B32
B63
REAR COMBI-NATION LAMP LH (TURN SIGNAL)
REAR COMBI-NATION LAMP RH (TURN SIGNAL)
B62
B64
B38
B39
FRONT COMBI-NATION LAMP LH (TURN SIGNAL)
FRONT COMBI-NATION LAMP RH (TURN SIGNAL)
SIDE TURN SIGNAL LAMP LH
SIDE TURN SIGNAL LAMP RH
E51
E24
E59
E1
B37
D83
E58
E10
B17
B24
D94
M43 GY
E1 , E59 B
E24 , E51 GY
E109 W
B3 W
B38 , B39
B48 BR
B61 , B63 W
B62 , B64
D83 W

MKWA0256E

Terminal and Reference Valve for Smart Entrance Control Unit

EKS00553

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)
8	L	CAN communication line	—	—
11	R	CAN communication line	—	—
25	G/B	Combination switch (Turn signal switch)	Turn signal switch: Neutral → Left turn position	12V → 0V
26	G/Y	Combination switch (Turn signal switch)	Turn signal switch: Neutral → Right turn position	12V → 0V
29	Y/G	Ignition key switch	Ignition key is in “ON” position	12V
30	G/R	Hazard switch	Hazard switch: OFF → ON	12V → 0V
53	B	Ground	—	0V
56	R/B	Power source	—	12V
63	G/Y	RH turn signal lamp	[When door lock or unlock is operated using remote controller] Turn signal lamp: OFF → ON → OFF	0V → 12V → 0V
64	G/B	LH turn signal lamp	[When door lock or unlock is operated using remote controller] Turn signal lamp: OFF → ON → OFF	0V → 12V → 0V

Turn Signal And Hazard Warning Lamp Do Not Operate

EKS0054Q

1. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

YES or NO

YES >> Check the CAN communication line.
NO >> GO TO 2.

2. FUSE CHECK

Check if any of the following fuses in smart entrance control unit.

Unit	Power source	Fuse No.
Smart entrance control unit	Battery	12
	Ignition switch ON or START position	10

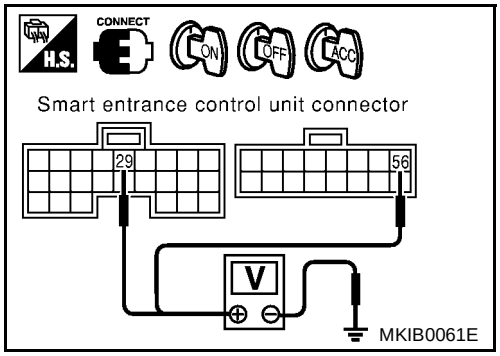
OK or NG

OK >> GO TO 3.
NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse.

3. POWER SUPPLY CIRCUIT CHECK

Check smart entrance control unit power supply.

Terminals			Ignition switch position		
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
M43	56 (R/B)	Ground	Battery voltage	Battery voltage	Battery voltage
M42	29 (Y/G)	Ground	0V	0V	Battery voltage



OK or NG

OK >> GO TO 4.
NG >> Check harness for open or short between smart entrance control unit and fuse.

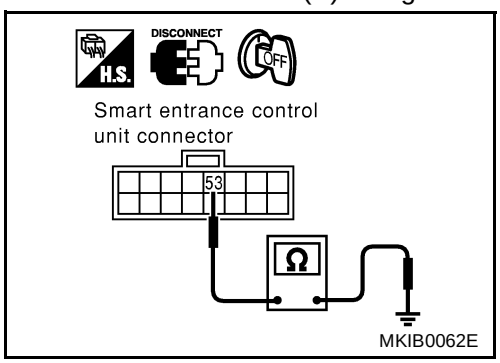
4. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect smart entrance control unit connector.
3. Check continuity between smart entrance control unit harness connector M43 terminal 53 (B) and ground.

Continuity should exist.

OK or NG

OK >> Replace smart entrance control unit.
NG >> Repair or replace harness.



Turn Signal Lamps Do Not Operate But Hazard Warning Lamp Do Operate

EKS004Q4

1. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

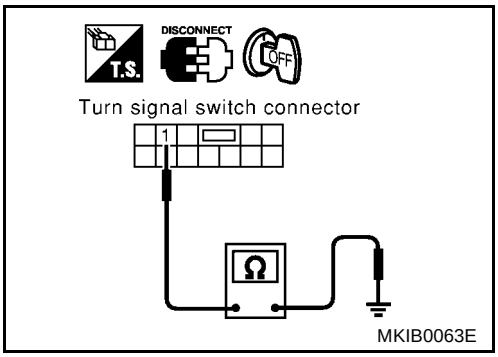
YES or NO

YES >> Check the CAN communication line.
NO >> GO TO 2.

2. TURN SIGNAL SWITCH GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect turn signal switch connector.
3. Check continuity between combination switch harness connector E115 terminal 1 (B) and ground.

Continuity should exist.



OK or NG

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

3. TURN SIGNAL SWITCH CHECK

Check turn signal switch LT-86, "COMBINATION SWITCH" .

OK or NG

OK >> Replace smart entrance control unit.
NG >> Replace turn signal switch.

Hazard Warning Lamps Do Not Operate But Turn Signal Lamp Do Operate

EKS0054R

1. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

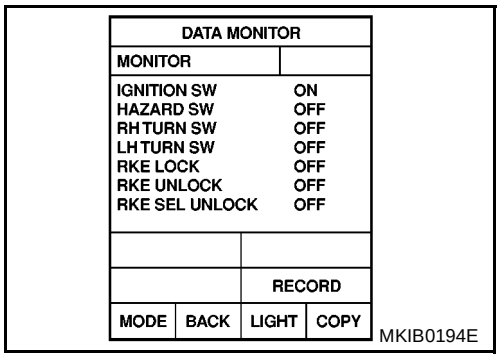
YES or NO

YES >> Check the CAN communication line.
NO >> GO TO 2.

2. CHECK HAZARD SWITCH INPUT SIGNAL

WITH CONSULT-II

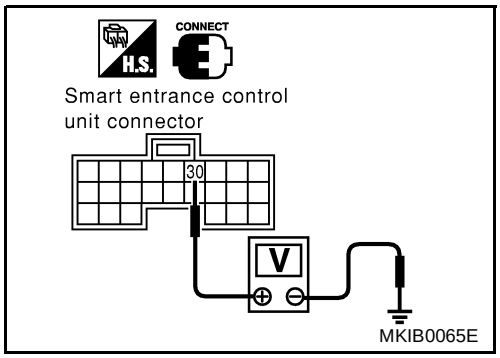
Check hazard switch in “DATA MONITOR” mode with CONSULT-II.



WITHOUT CONSULT-II

Check battery voltage between smart entrance control unit harness connector M42 terminal 30 (G/R) and ground.

Condition	Voltage (V)
Hazard switch ON	0
Hazard switch OFF	Approx. 0.5



OK or NG

OK >> Hazard switch OK.
NG >> GO TO 3.

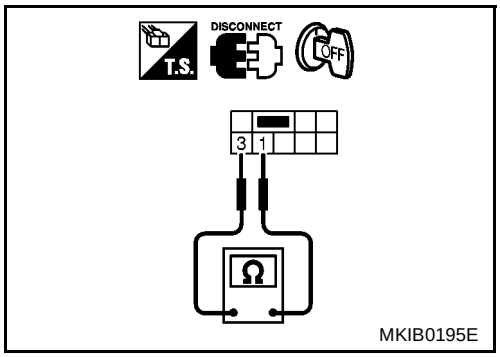
3. HAZARD SWITCH CHECK

1. Turn ignition switch OFF.
2. Disconnect hazard switch connector.
3. Check continuity between hazard switch terminal 1 (G/R) and 3 (B).

Continuity should exist.

OK or NG

OK >> GO TO 4.
NG >> Replace the hazard switch.



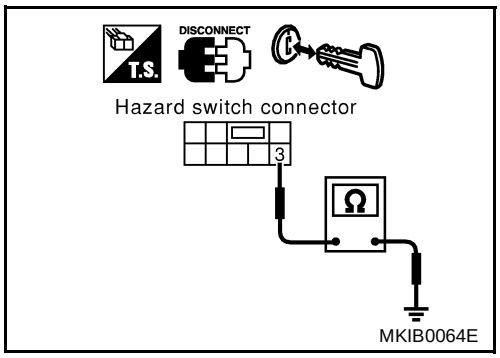
4. GROUND CIRCUIT CHECK

Check continuity between hazard switch harness connector M48 terminal 3 (B) and ground.

Continuity should exist.

OK or NG

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



Turn Signal Lamps LH Do Not Operate

EKS004Q6

1. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

YES or NO

YES >> Check the CAN communication line.
NO >> GO TO 2.

2. BULB CHECK

Check turn signal lamp LH bulb.

OK or NG

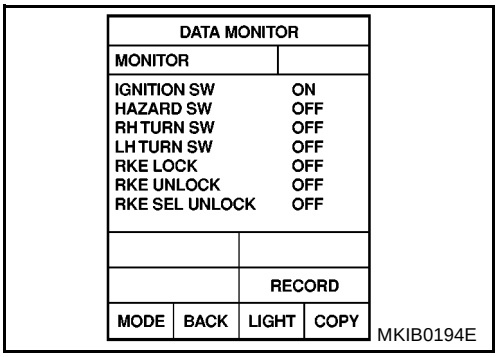
OK >> GO TO 3.
NG >> Replace bulb.

3. CHECK TURN SWITCH LH INPUT SIGNAL

Check turn switch LH signal in “DATA MONITOR” mode with CONSULT-II.

OK or NG

OK >> Turn signal switch OK.
NG >> GO TO 4.



MKIB0194E

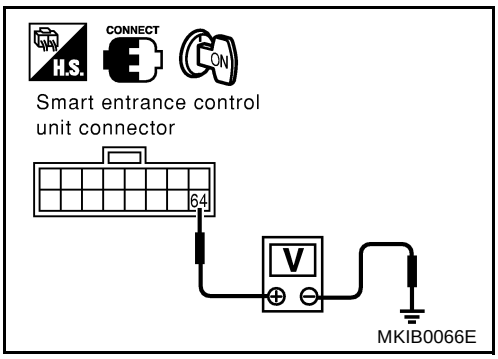
4. POWER SUPPLY CIRCUIT CHECK

Check battery voltage between smart entrance control unit harness connector M43 terminal 64 (G/B) and ground.

Condition	Voltage
Turn signal LH illuminates.	0V
Turn signal LH does not illuminate.	Battery voltage

OK or NG

OK >> GO TO 5.
NG >> Replace the smart entrance control unit.

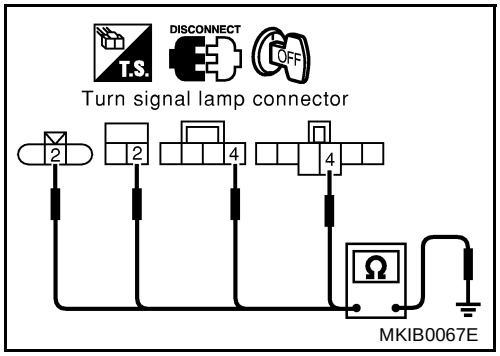


MKIB0066E

5. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect each turn signal lamps LH connector.
3. Check continuity between the following harness connector terminal of the each turn signal lamps LH and body ground.

Terminals			Continuity
(+)		(–)	
Connector	Terminal (Wire color)		
E51	2 (B)	Ground	Yes
E59	2 (B)	Ground	Yes
B38	4 (B)	Ground	Yes
B62	4 (B)	Ground	Yes



OK or NG

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

Turn Signal Lamps RH Do Not Operate

EKS004Q7

1. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

YES or NO

YES >> Check the CAN communication line.
NO >> GO TO 2.

2. BULB CHECK

Check turn signal lamp RH bulb.

OK or NG

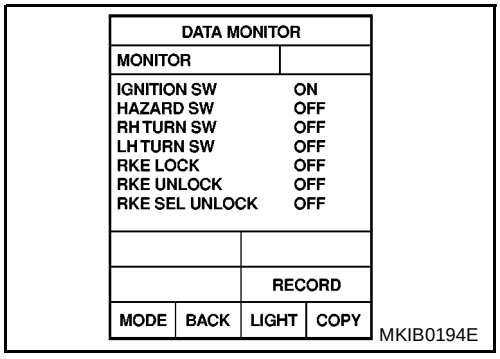
OK >> GO TO 3.
NG >> Replace bulb.

3. CHECK TURN SWITCH LH INPUT SIGNAL

Check turn switch RH signal in “DATA MONITOR” mode with CONSULT-II.

OK or NG

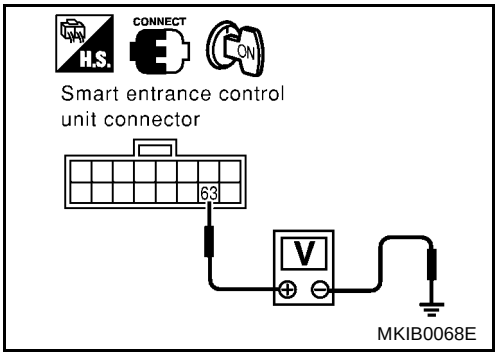
OK >> Turn signal switch OK.
NG >> GO TO 4.



4. POWER SUPPLY CIRCUIT CHECK

Check battery voltage between smart entrance control unit harness connector M43 terminal 63 (G/Y) and ground.

Condition	Voltage
Turn signal RH illuminates.	0V
Turn signal RH does not illuminate.	Battery voltage



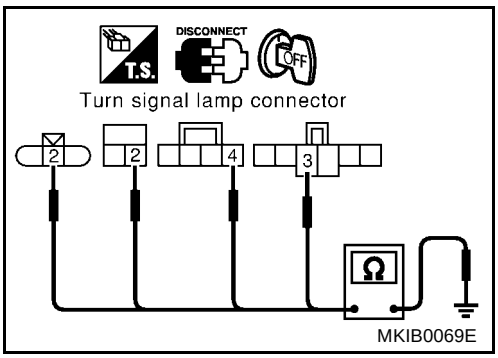
OK or NG

OK >> GO TO 5.
NG >> Replace the smart entrance control unit.

5. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect each turn signal lamps RH connector.
3. Check continuity between the following harness connector terminal of the each turn signal lamps RH and body ground.

Terminals			Continuity
(+)		(–)	
Connector	Terminal (Wire color)		
E1	2 (B)	Ground	Yes
E24	2 (B)	Ground	Yes
B39	4 (B)	Ground	Yes
B64	3 (B)	Ground	Yes



OK or NG

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

LH and RH Turn Indicators Do Not Operate

EKS0054S

1. COMBINATION METER POWER AND GROUND CIRCUIT CHECK

Check combination meter power and ground circuit check.
Refer to DI-29, "Power Supply and Ground Circuit Check" (LHD) or DI-58, "Power Supply and Ground Circuit Check" (RHD).

OK or NG

OK >> GO TO 2.
NG >> Replace combination meter.

2. SELF-DIAGNOSIS FOR SMART ENTRANCE CONTROL UNIT

Perform smart entrance control unit self-diagnosis mode.
Refer to BCS-39, "Trouble Diagnoses" .

Does the display of CAN appear?

YES or NO

YES >> Check the CAN communication line.
NO >> Replace combination meter.

Bulb Replacement

EKS003TT

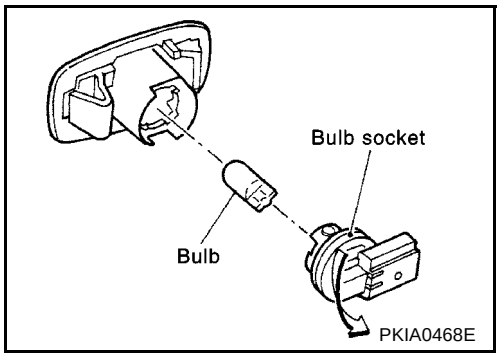
FRONT TURN SIGNAL LAMP

Refer to LT-9, "CLEARANCE LAMP, FRONT TURN SIGNAL LAMP" .

Front turn signal lamp : 12V - 21W (amber)

SIDE TURN SIGNAL LAMP

1. Remove side turn signal lamp. Refer to LT-54, "Removal and Installation for Side Turn Signal Lamp" .
2. Turn the bulb socket counterclockwise and unlock it.
3. Remove the bulb from its socket.



Side turn signal lamp : 12V - 5W

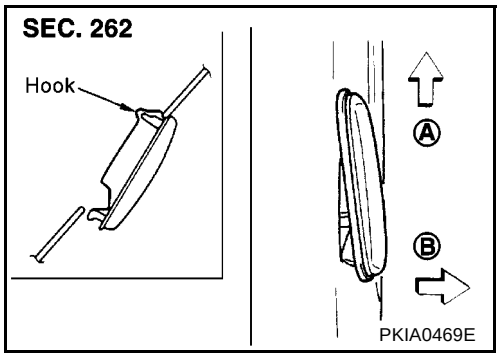
REAR TURN SIGNAL LAMP

Refer to LT-82, "REAR COMBINATION LAMP" .

Removal and Installation for Side Turn Signal Lamp

EKS003TV

1. Push the side turn signal lamp toward A direction in the figure, and pull up B direction in the figure.
2. Disconnect the side turn signal lamp connector.



Removal and Installation for Rear Turn Signal Lamp

EKS003TW

Refer to LT-82, "REAR COMBINATION LAMP" .

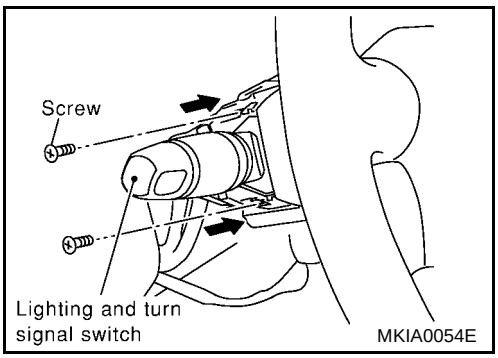
LIGHTING AND TURN SIGNAL SWITCH

PFP:25540

Removal and Installation

EKS003TX

1. Remove the steering column cover. Refer to PS-10, "STEERING COLUMN" .
2. Remove lighting and turn signal switch mounting screw and remove the lighting and turn signal switch from the spiral cable.



3. Disconnect the lighting and turn signal switch connector.

Switch Circuit Inspection

EKS003TY

Using circuit tester, check continuity between the lighting and turn signal switch connector terminals in each operation status of the switch.

- Lighting switch; refer to LT-86, "COMBINATION SWITCH" .
- Turn signal lamp switch; refer to LT-45, "Wiring Diagram — TURN —" .
- Front fog lamp switch; refer to LT-72, "Wiring Diagram — F/FOG —" .
- Rear fog lamp switch; refer to LT-75, "Wiring Diagram — R/FOG — /Without Front Fog Lamp" ,LT-76, "Wiring Diagram — R/FOG — /With Front Fog Lamp" .

HAZARD SWITCH

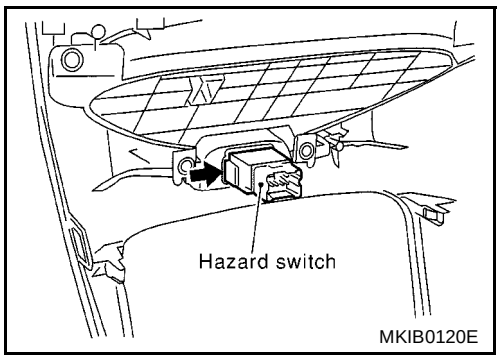
PFP:25290

Removal and Installation

EKS003TZ

REMOVAL

1. Remove cluster lid C. Refer to IP-6, "CLUSTER LID C" in “INSTRUMENT PANEL (IP)” section.
2. Using a flat-bladed screwdriver or other suitable tool, press pawl to remove hazard switch from cluster lid C.



INSTALLATION

Installation is in the reverse order of removal.

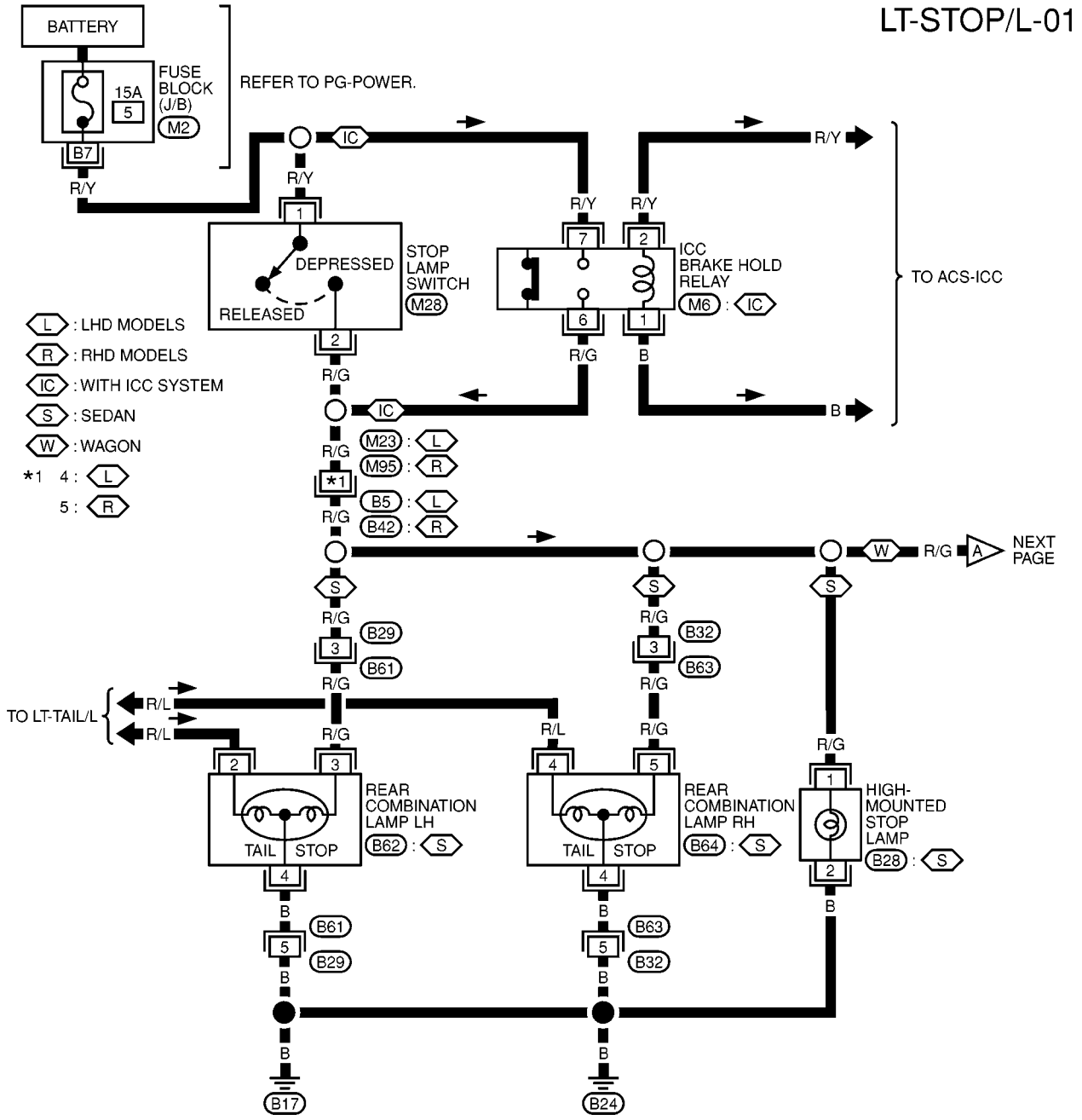
STOP LAMP

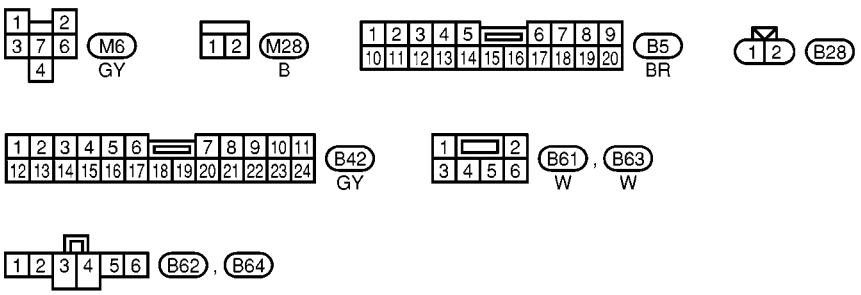
PFP:26550

Wiring Diagram — STOP/L —

EKS003U0

LT-STOP/L-01

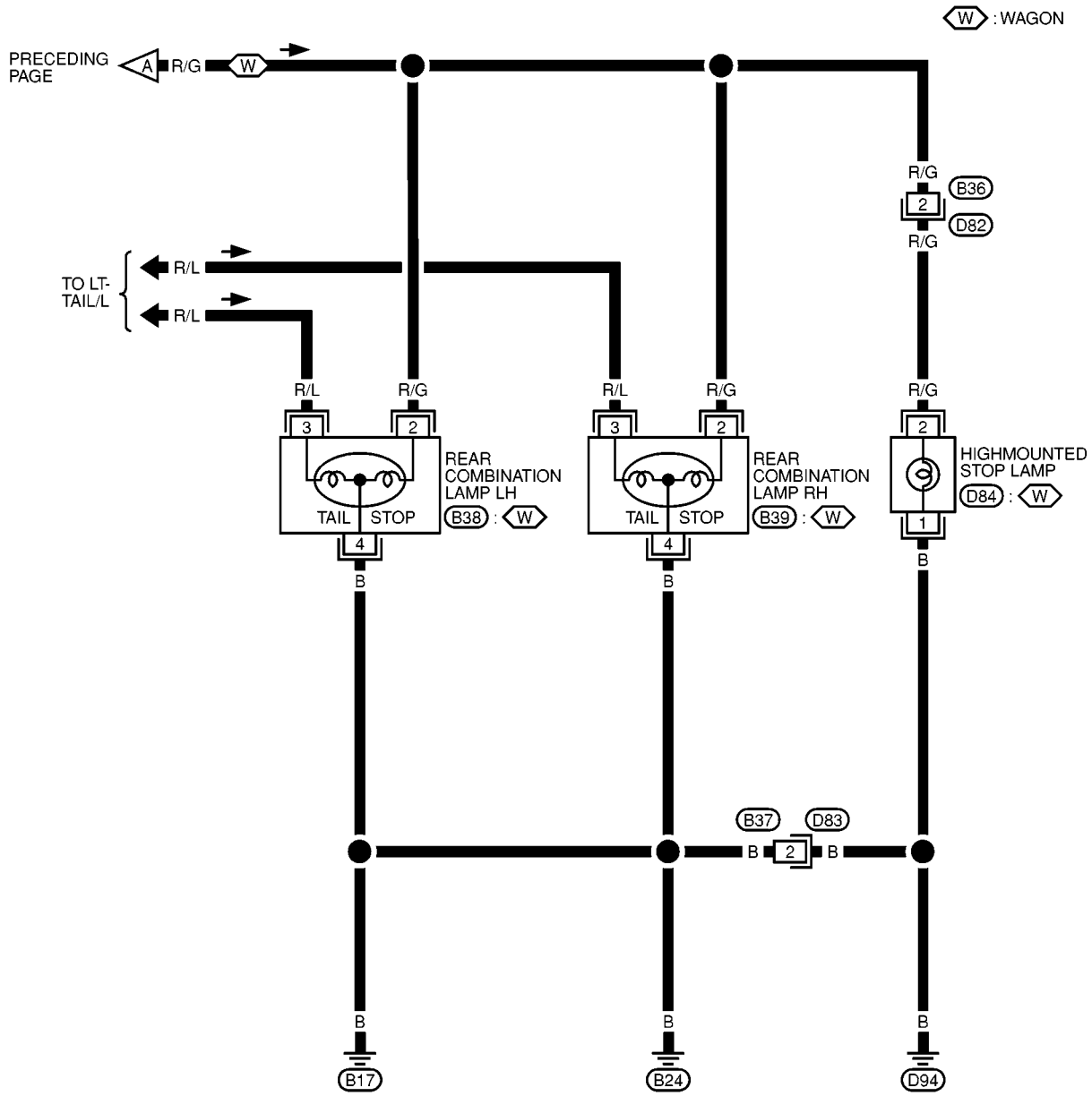




REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0021E

LT-STOP/L-02



MKWA0022E

Bulb Replacement

EKS003U1

STOP LAMP

Refer to LT-82, "REAR COMBINATION LAMP"

Removal and Installation

EKS003U2

STOP LAMP

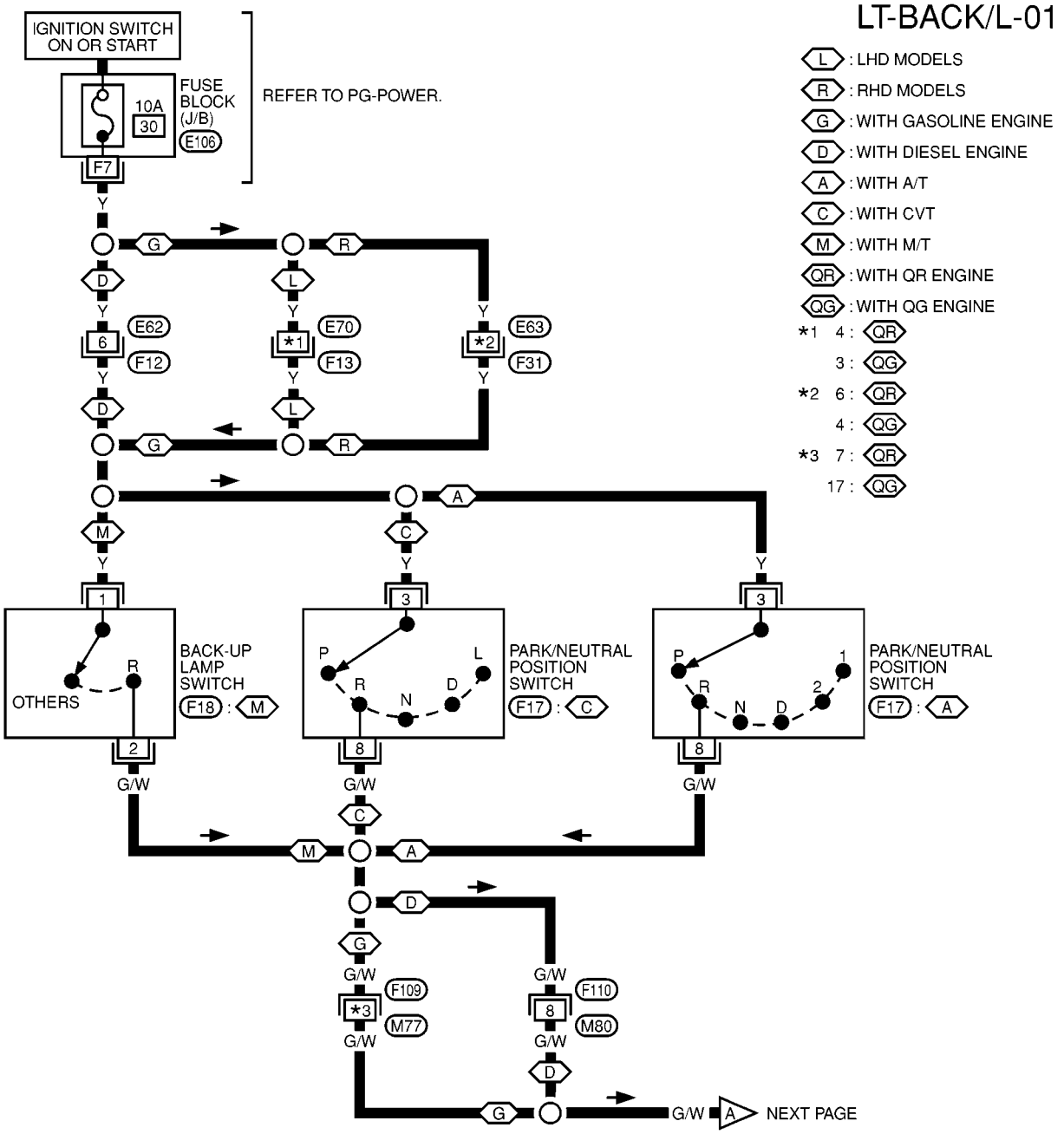
Refer to LT-82, "REAR COMBINATION LAMP" .

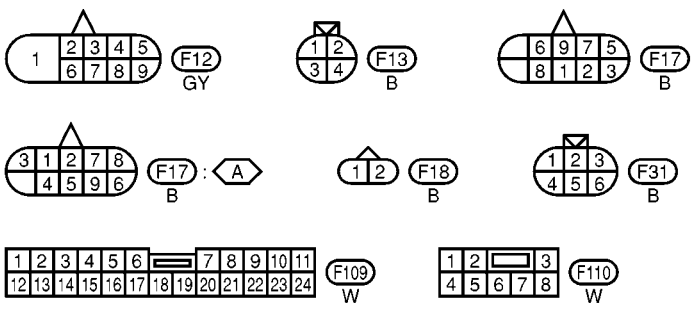
BACK-UP LAMP

PFP:26550

Wiring Diagram — BACK/L —

EKS003U3

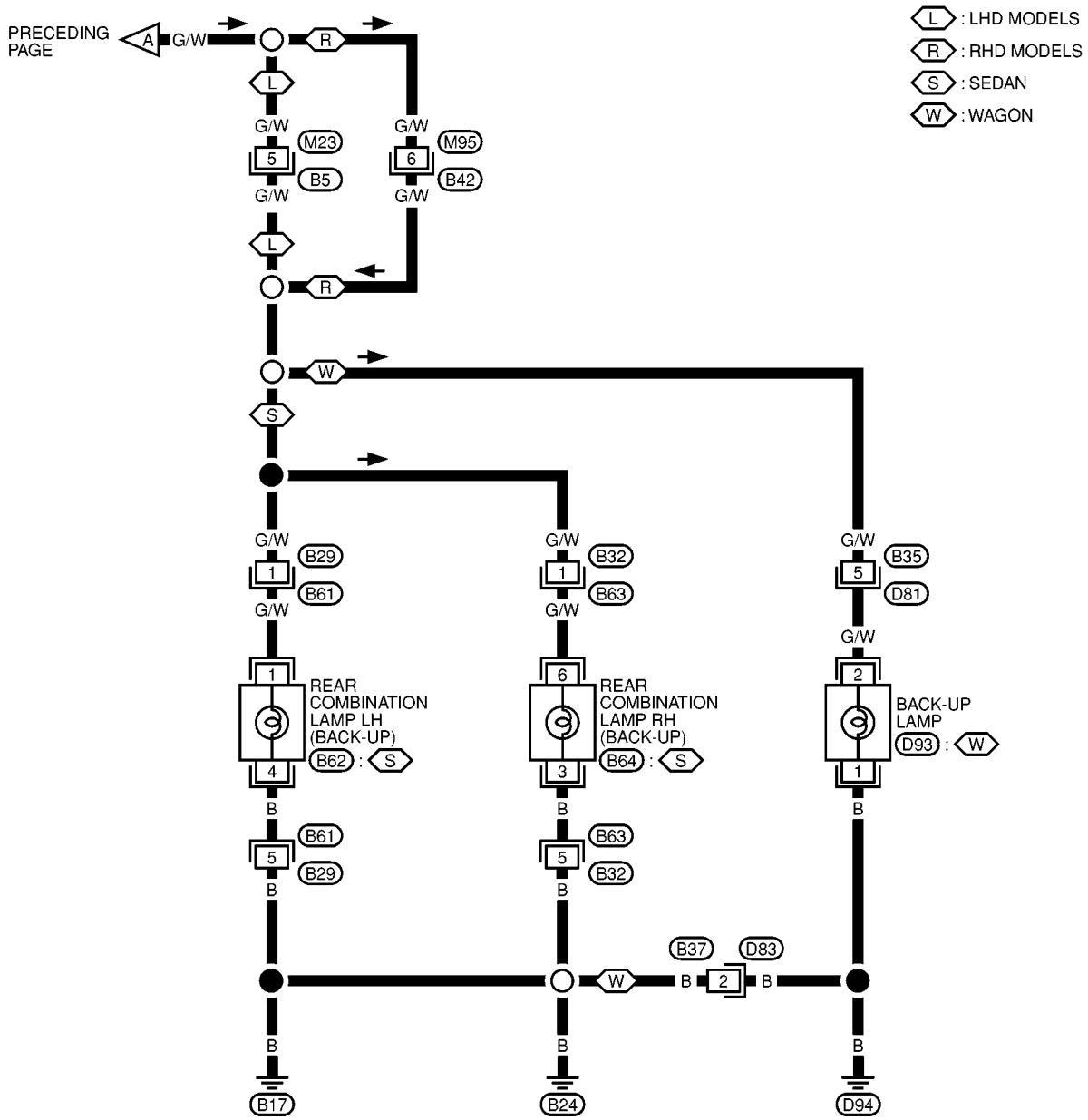


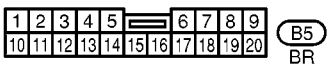


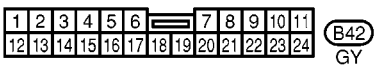
REFER TO THE FOLLOWING.
E106 -FUSE BLOCK-JUNCTION BOX (J/B)

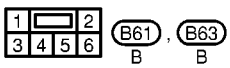
MKWA0023E

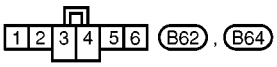
LT-BACK/L-02

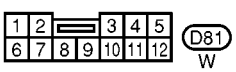


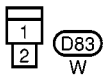


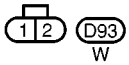












MKWA0024E

Bulb Replacement (Sedan)

EKS003U4

Refer to LT-82, "REAR COMBINATION LAMP" .

Bulb Replacement (Wagon)

EKS0055D

Refer to LT-63, "PARKING, LICENSE PLATE AND TAIL LAMPS" .

Removal and Installation (Sedan)

EKS003U5

Refer to LT-82, "REAR COMBINATION LAMP" .

Removal and Installation (Wagon)

EKS0055E

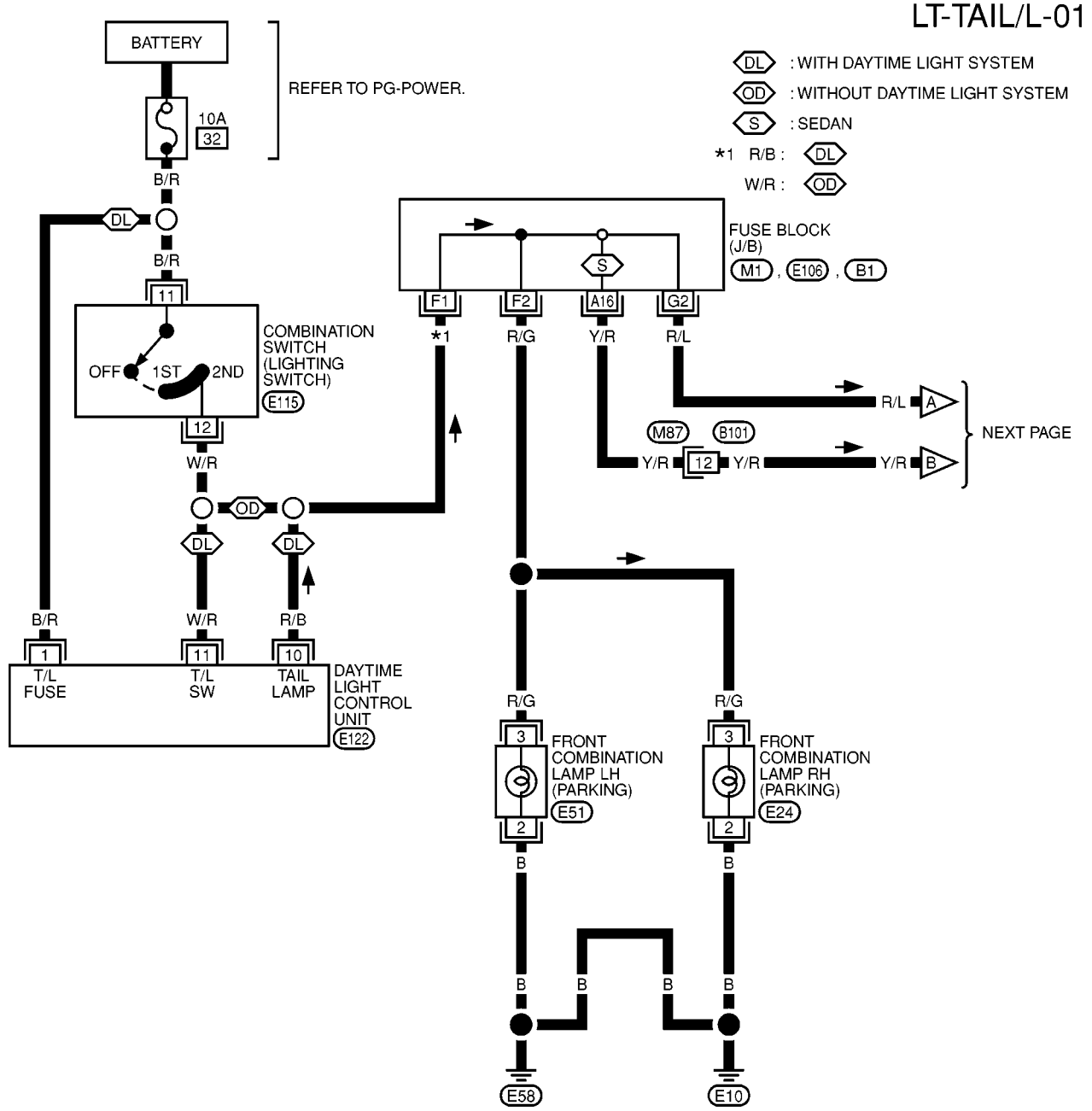
Refer to LT-63, "PARKING, LICENSE PLATE AND TAIL LAMPS" .

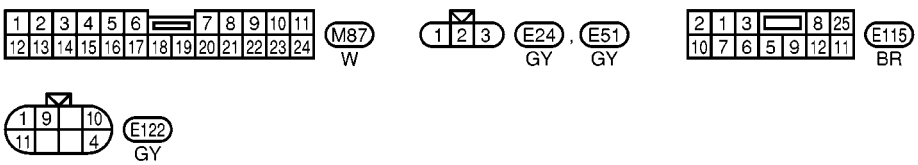
PARKING, LICENSE PLATE AND TAIL LAMPS

PFP:26550

Wiring Diagram - TAIL/L -/LHD MODELS

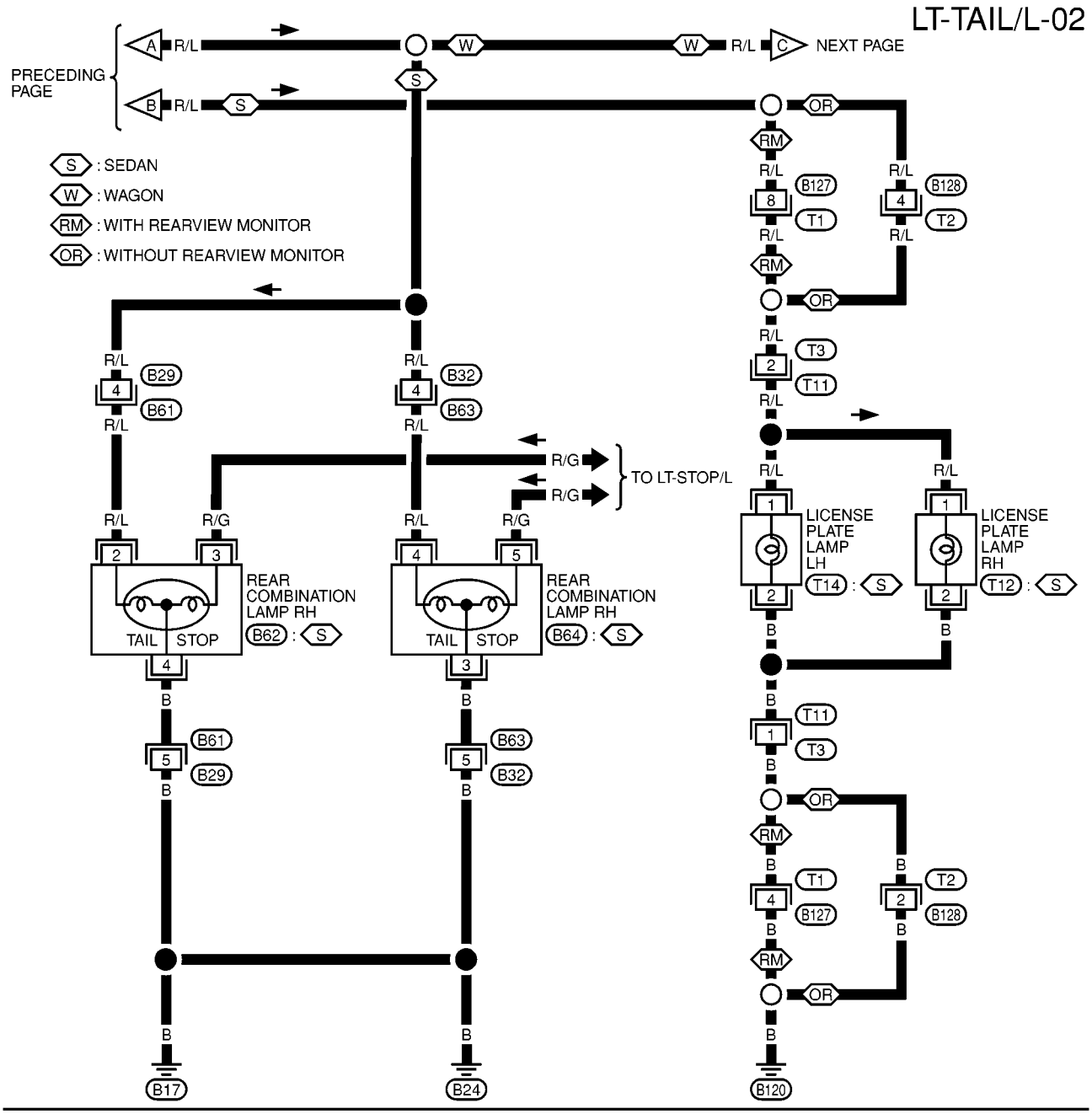
EKS004Q9

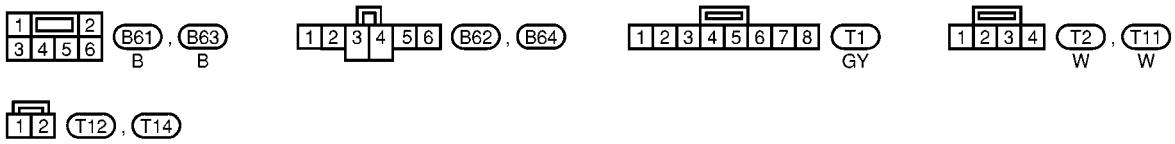




REFER TO THE FOLLOWING.
M1 , E106 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

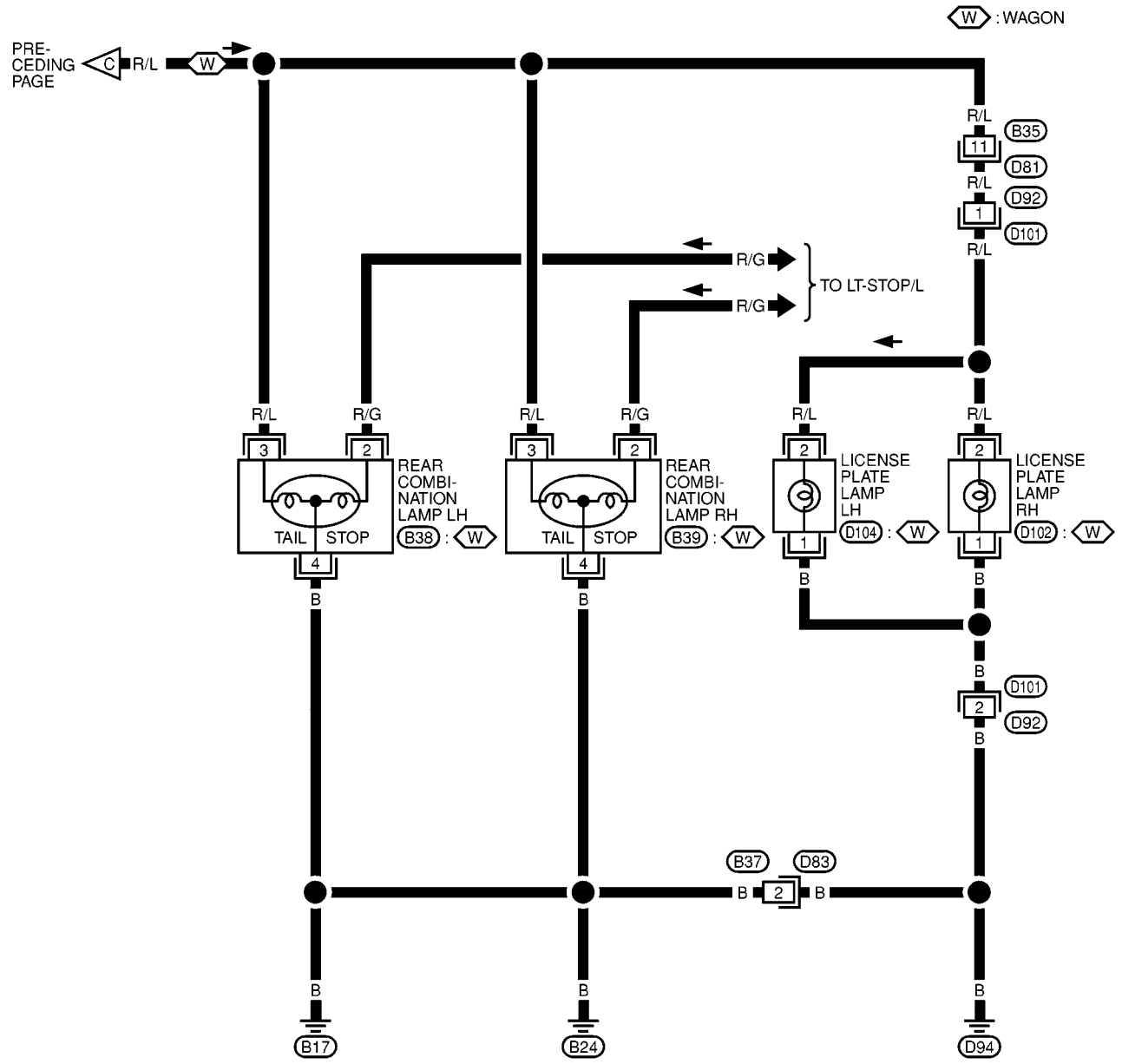
MKWA0015E

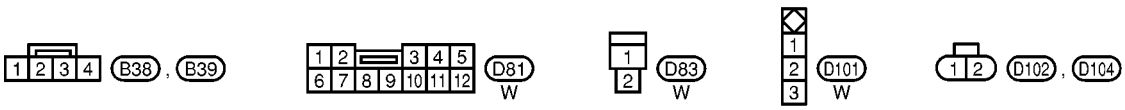

LT-TAIL/L-02
PRECEDING PAGE
A R/L
B R/L
W
S
W R/L C NEXT PAGE
S : SEDAN
W : WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
OR
RM
R/L 8 B127 T1
R/L 4 B128 T2
R/L 2 T3 T11
R/L 4 B29 B61
R/L 4 B32 B63
R/G
R/G
TO LT-STOP/L
R/L 1 LICENSE PLATE LAMP LH T14 : S
R/L 1 LICENSE PLATE LAMP RH T12 : S
R/L 2 R/G 3 REAR COMBINATION LAMP RH B62 : S
R/L 4 R/G 5 REAR COMBINATION LAMP RH B64 : S
TAIL STOP
B 4 B 5 B61 B29
B 3 B 5 B63 B32
B 1 T11 T3
B 4 T1 B127
B 2 T2 B128
B B17
B B24
B B120


B61 , B63
B B
B62 , B64
T1
GY
T2 , T11
W W
T12 , T14

MKWA0016E

LT-TAIL/L-03



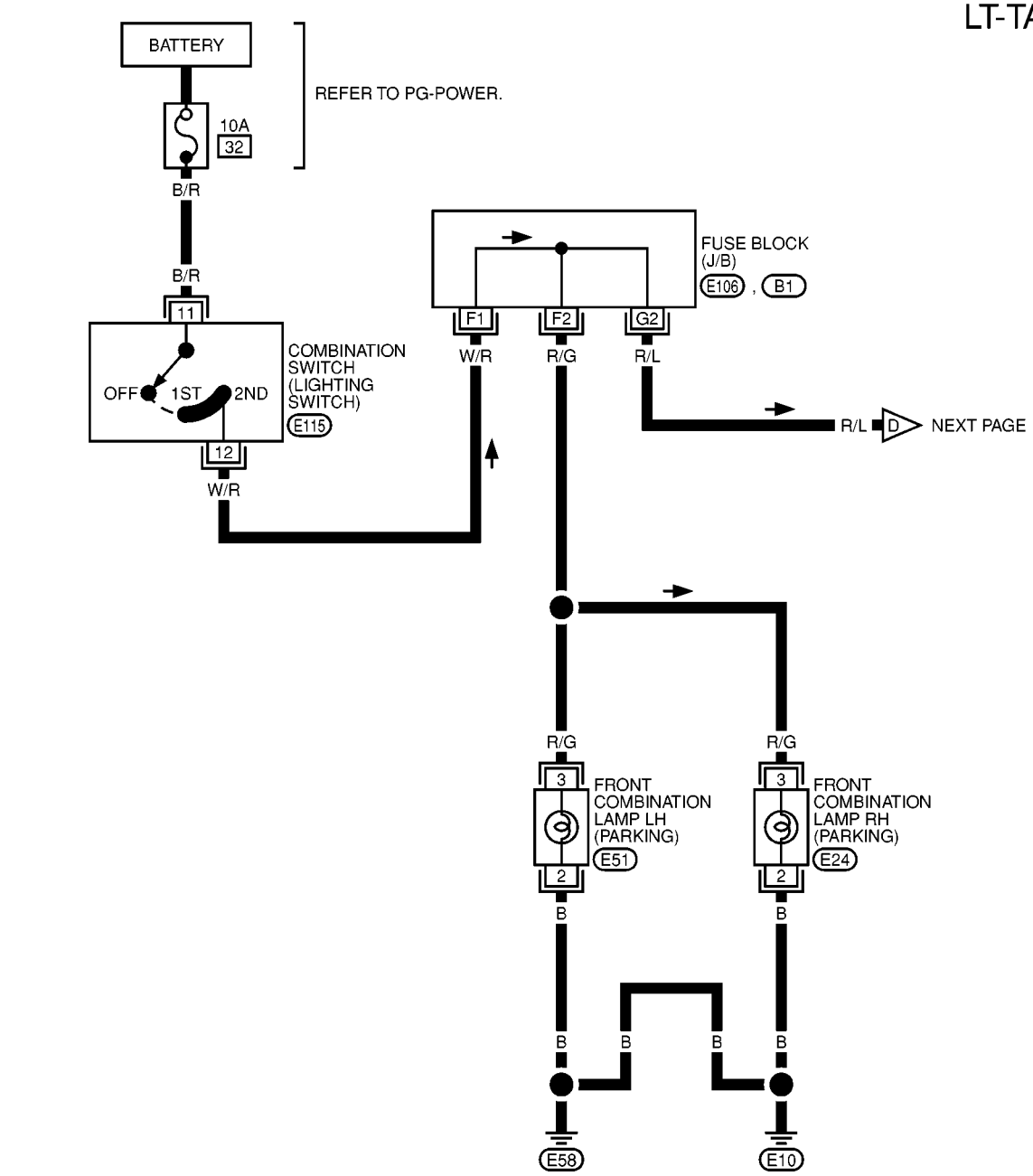


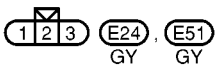
MKWA0017E

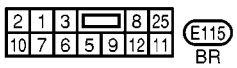
Wiring Diagram - TAIL/L -/RHD MODELS

EKS004QA

LT-TAIL/L-04

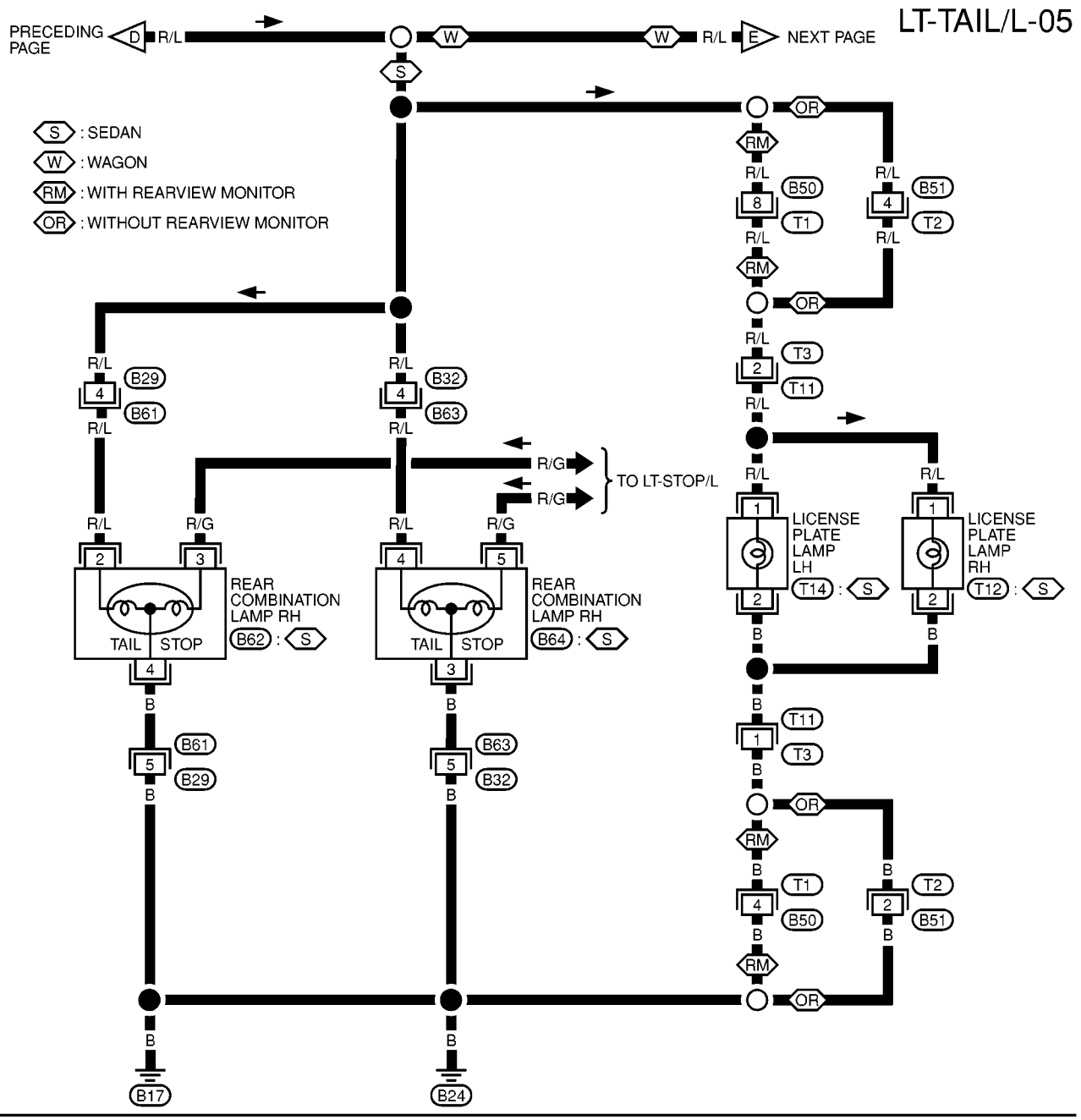


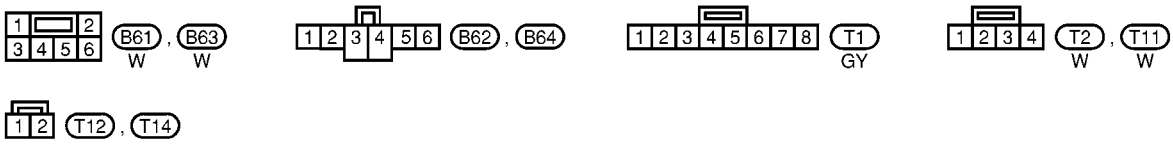




REFER TO THE FOLLOWING.
E106 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

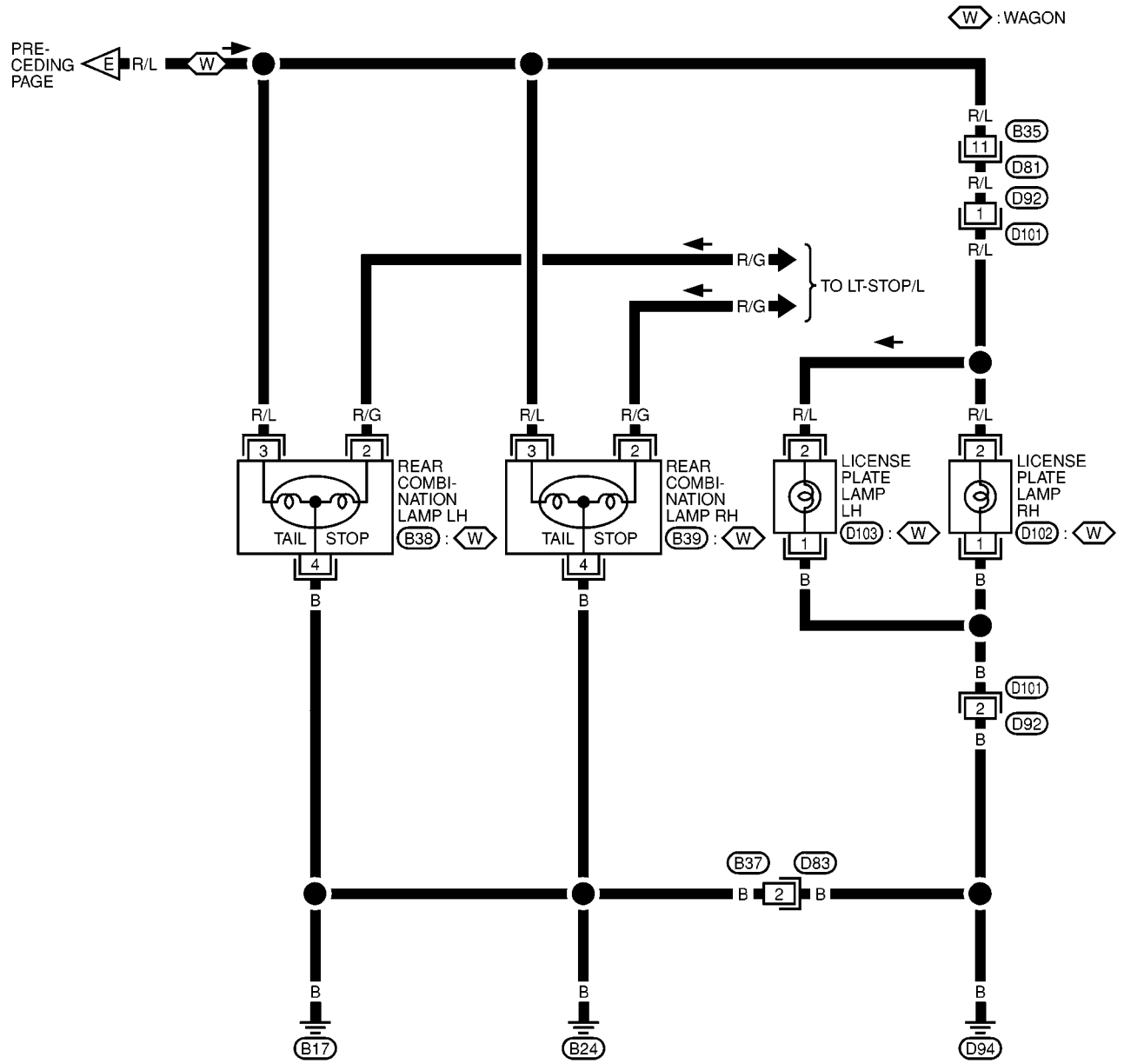
MKWA0018E

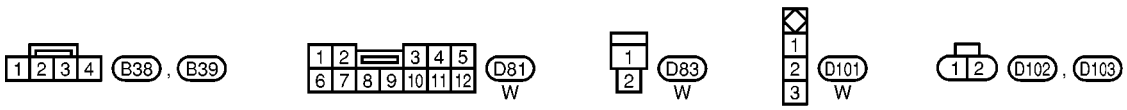

LT-TAIL/L-05
PRECEDING PAGE
D
R/L
W
W
R/L
E
NEXT PAGE
S
: SEDAN
W
: WAGON
RM
: WITH REARVIEW MONITOR
OR
: WITHOUT REARVIEW MONITOR
OR
RM
R/L
B50
8
T1
R/L
B51
4
T2
R/L
T3
2
T11
R/L
B29
4
B61
R/L
B32
4
B63
R/L
R/G
R/G
TO LT-STOP/L
R/L
1
LICENSE PLATE LAMP LH
T14 : S
R/L
1
LICENSE PLATE LAMP RH
T12 : S
R/L
2
R/G
3
TAIL
STOP
REAR COMBINATION LAMP RH
B62 : S
R/L
4
R/G
5
TAIL
STOP
REAR COMBINATION LAMP RH
B64 : S
B
4
B
3
B
T11
1
T3
B
B61
5
B29
B
B63
5
B32
B
OR
RM
B
T1
4
B50
B
T2
2
B51
B
RM
OR
B
B17
B
B24


B61 , B63
W W
B62 , B64
T1
GY
T2 , T11
W W
T12 , T14

MKWA0019E

LT-TAIL/L-06





MKWA0020E

Bulb Replacement

EKS003U7

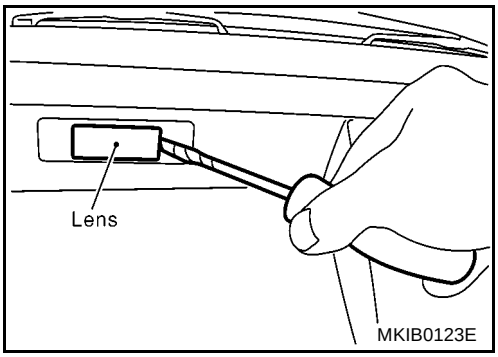
PARKING AND TAIL LAMPS

Refer to LT-82, "REAR COMBINATION LAMP" .

LICENSE PLATE LAMP

1. Remove the lens using a clip driver or a suitable tool.
2. Remove the bulb from its socket.

License plate lamp : 12V - 5W



Removal and Installation

EKS003U8

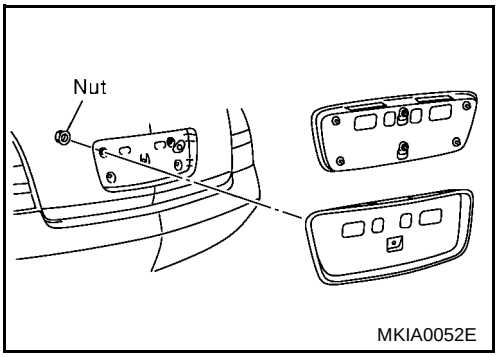
PARKING AND TAIL LAMPS

Refer to LT-82, "REAR COMBINATION LAMP" .

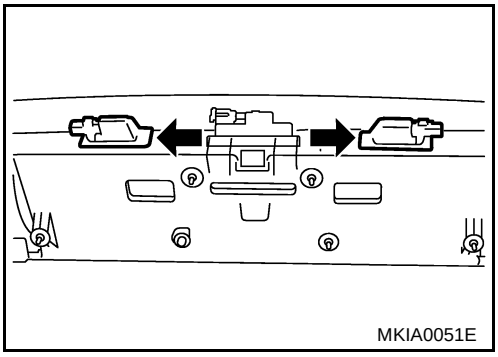
LICENSE PLATE LAMP

Removal (Sedan)

1. Remove the license lamp finisher. Refer to EI-21, "LICENSE PLATE FINISHER" .
2. Remove the harness from installation pawl for harness.



3. Push license plate lamp mounting hook.
4. Pull out license plate lamp from finisher.

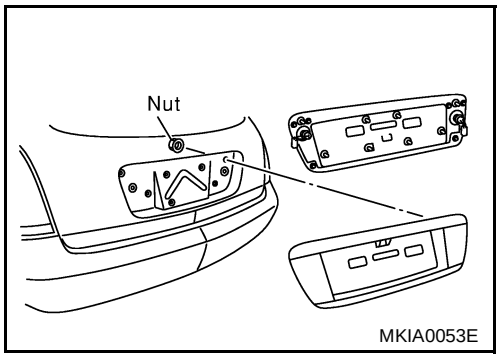


Installation

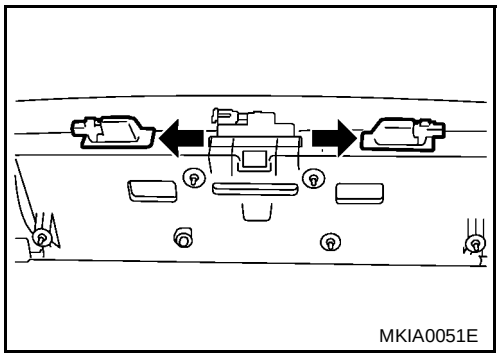
- Install license plate lamp in the reverse order of removal.

Removal (Wagon)

1. Remove the license lamp finisher. Refer to EI-21, "LICENSE PLATE FINISHER" .
2. Remove the harness from installation pawl for harness.



3. Push license plate lamp mounting hook.
4. Pull out license plate lamp from finisher.



Installation

- Install license plate lamp in the reverse order of removal.

FRONT FOG LAMP

PFP:00011

System Description

EKS003U9

DESCRIPTION

Power is supplied at all times to fog lamp relay terminal 3

- through 15A fuse (No. 43, located in the fuse and fusible link box).

With the lighting switch in the 2ND position and LOW (“B”) position, power is supplied

- through 10A fuse (No. 32, located in the fuse and fusible link box).
- to lighting switch terminal 11
- through terminal 12 of the lighting switch
- to fog lamp switch terminal 32
- through terminal 31 of the fog lamp switch
- to fog lamp relay terminal 1.

FOG LAMP OPERATION

The fog lamp switch is built into the combination switch. The lighting switch must be in the 1st or 2nd position and LOW (“B”) position for fog lamp operation.
With the fog lamp switch in the ON position, ground is supplied

- to fog lamp relay terminal 2
- through the fog lamp switch and body grounds E10 and E58.

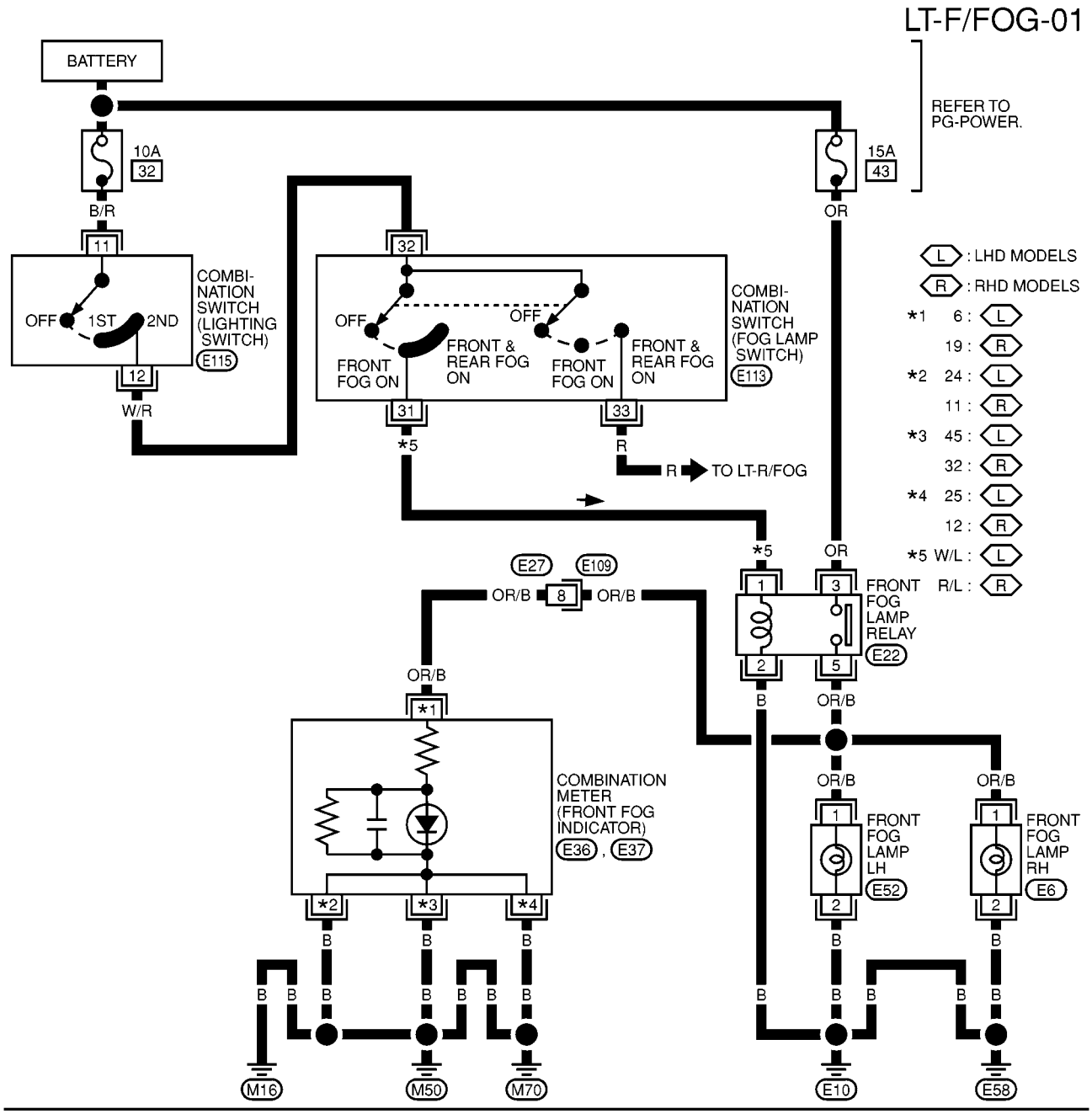
The fog lamp relay is energized and power is supplied

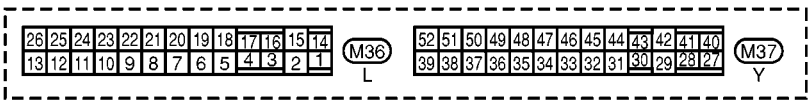
- from fog lamp relay terminal 5
- to terminal 1 of each fog lamp, and
- to combination meter terminal 6 (LHD models) or 19 (RHD models) for the FRONT FOG indicator.

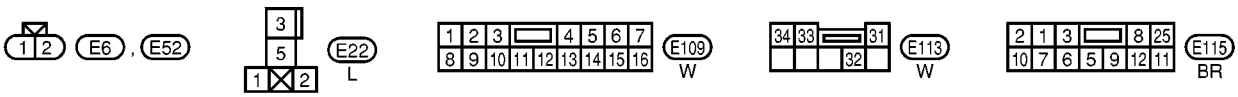
Ground is supplied to terminals 24, 25 and 45 (LHD models) or 11, 12 and 32 (RHD models) to the combination meter through body grounds M16, M50 and M70.
Ground is supplied to terminal 2 of each fog lamp through body grounds E10 and E58.
With power and ground supplied, the fog lamps and the FRONT FOG indicator illuminate.

Wiring Diagram — F/FOG —

EKS003UA





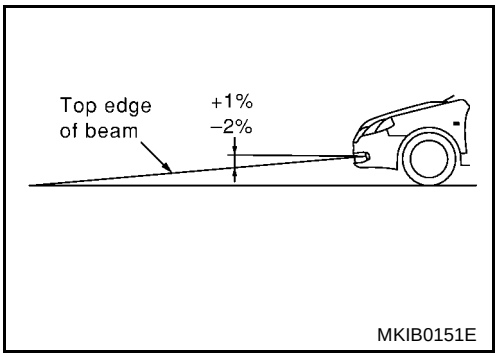


MKWA0025E

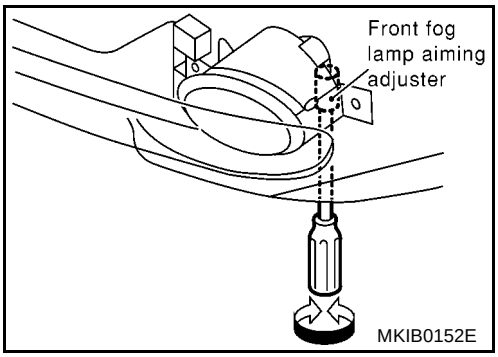
Aiming Adjustment

EKS003UB

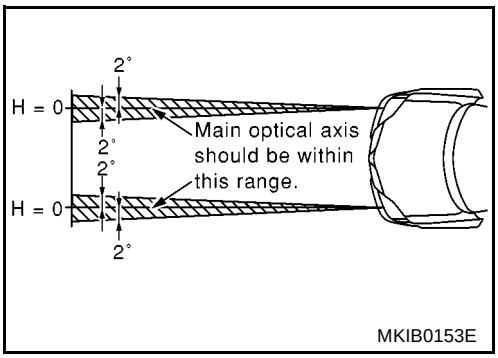
1. Set the top edge of the fog lamp lens as shown in the figure.



2. Turn front fog lamps ON.



3. Adjust front fog lamps as shown in the figure.
   - When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

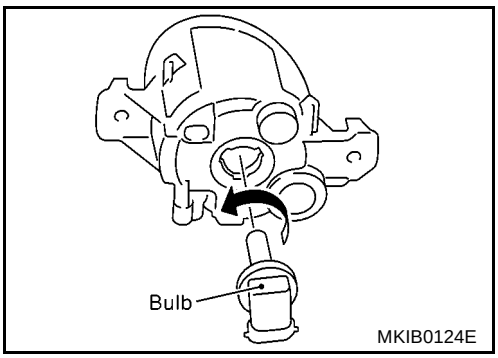


Bulb Replacement

EKS003UC

1. Remove fender protector.
2. Turn bulb counterclockwise then remove it.

Front fog lamp : 12V - 55W (H11)



CAUTION:

- **Do not touch the glass of bulb directly by hand. Keep grease and other oily matters away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.**
- **Do not leave bulb out of headlamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of headlamp. When replacing bulb, be sure to replace it with new one.**
- **When bulb is installed, be sure to lock plastic cap to ensure watertightness.**

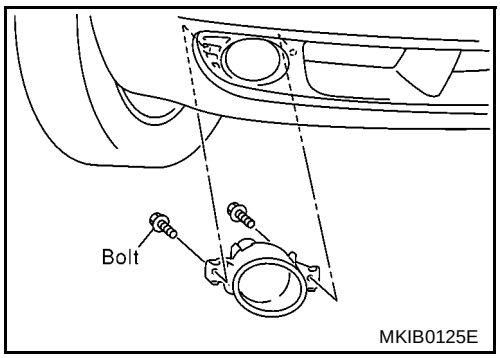
Removal and Installation

EKS003UD

REMOVAL

1. Remove fender protector. Refer toEI-14, "FENDER PROTECTOR" .
2. Disconnect fog lamp connector.

3. Remove fog lamp mounting bolt.
4. Pull out fog lamp from vehicle and disconnect connector.



INSTALLATION

- Install fog lamp in the reverse order of removal, observing the tightening torque shown below.
  Fog lamp mounting screw

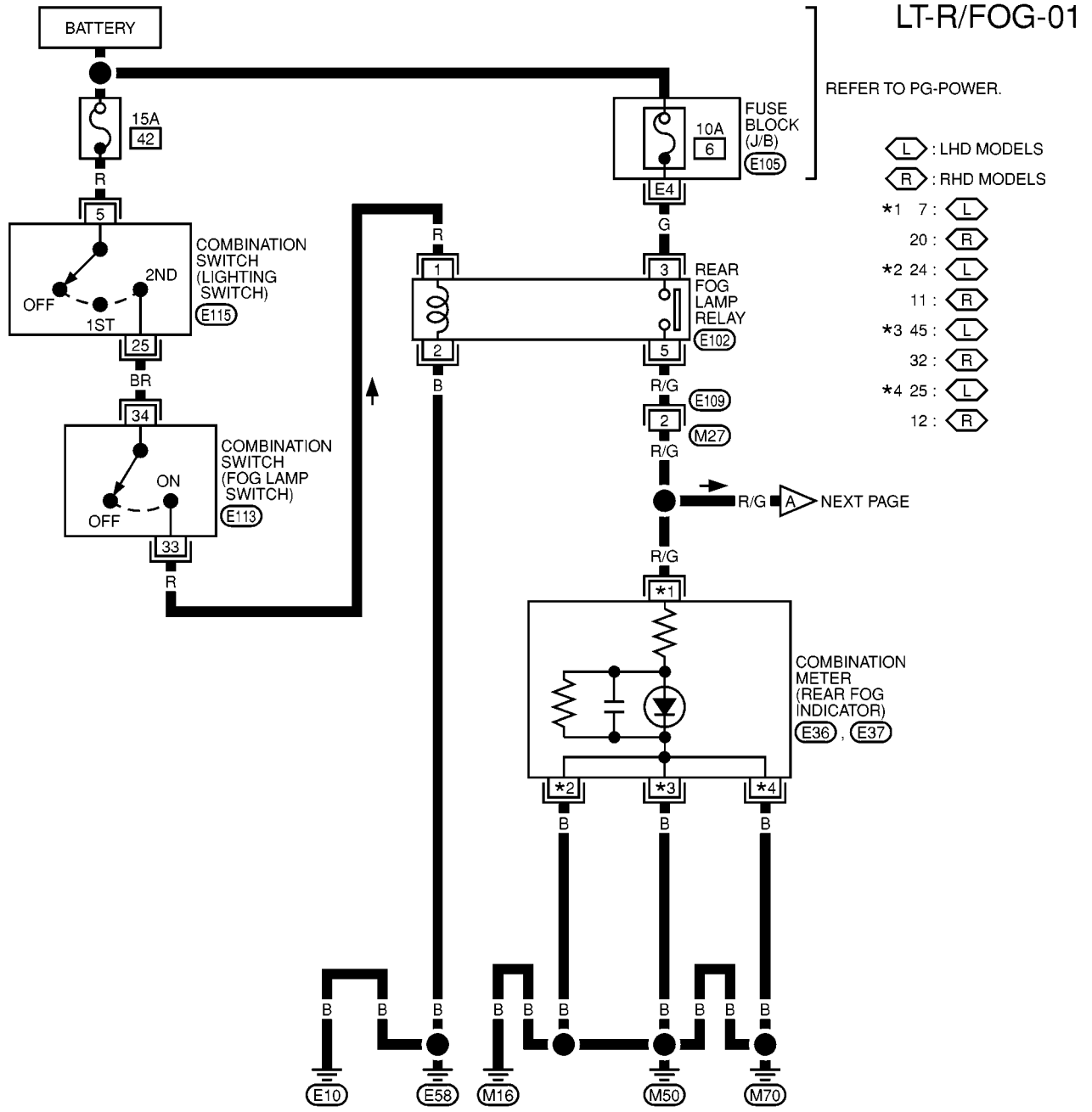
  : 3.3 - 7.7 N·m (0.33 - 0.79 kg-m, 29 - 69 in-lb)

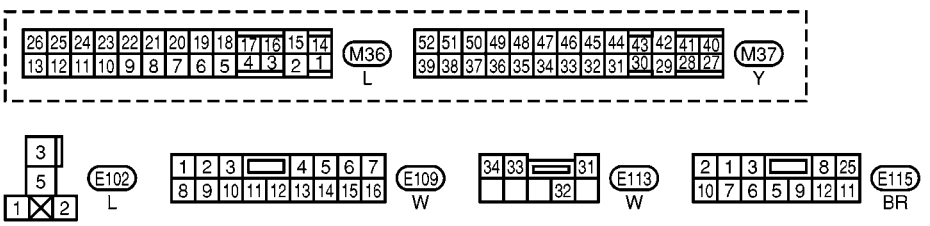
REAR FOG LAMP

PFP:26550

Wiring Diagram — R/FOG — /Without Front Fog Lamp

EKS003UE





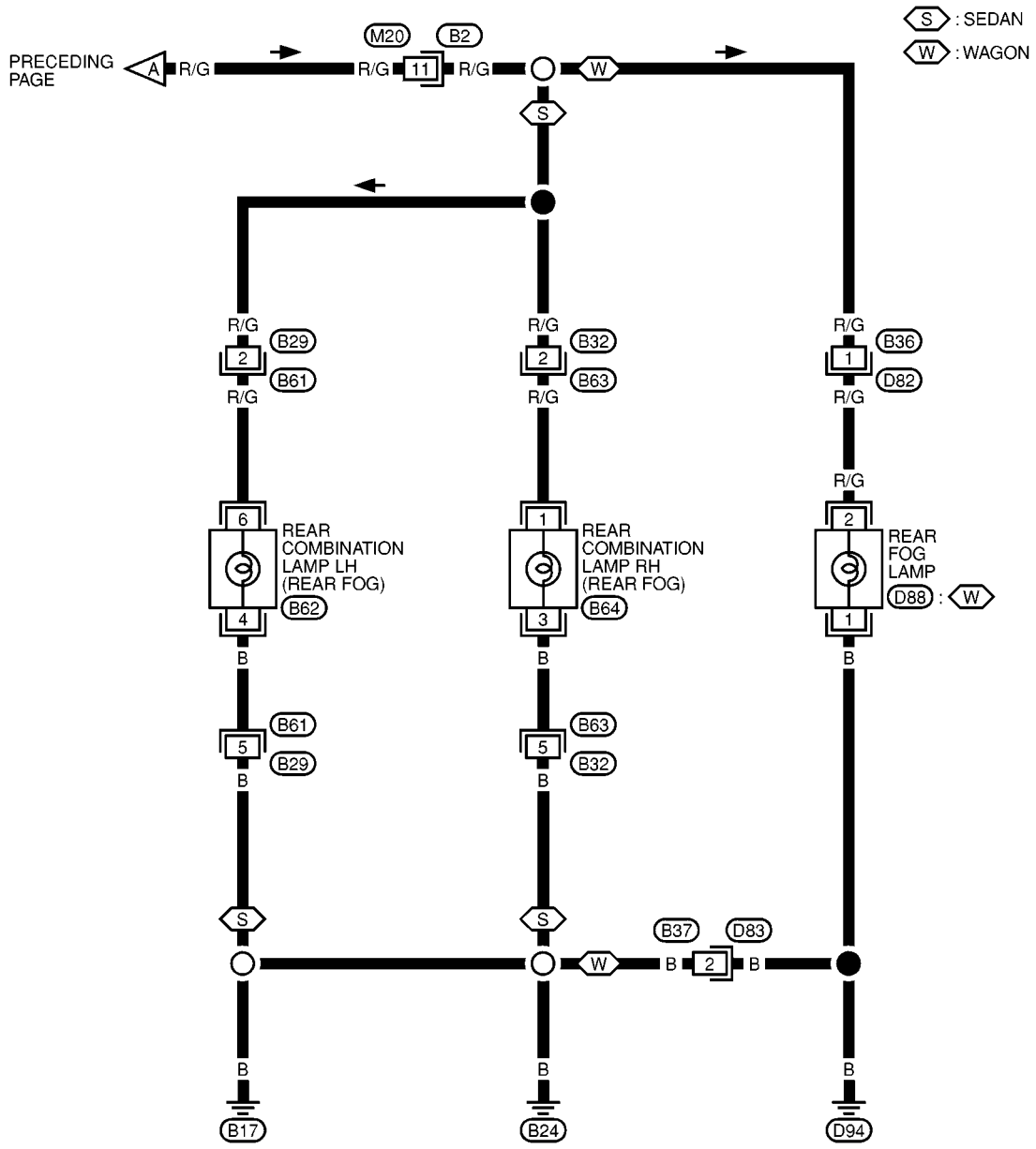
REFER TO THE FOLLOWING.
E105 -FUSE BLOCK-JUNCTION BOX (J/B)

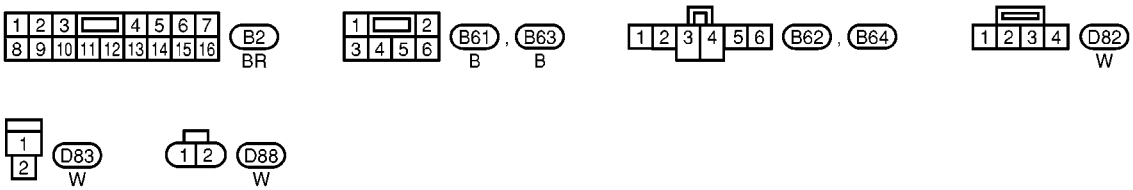
MKWA0026E

Wiring Diagram — R/FOG — /With Front Fog Lamp

EKS003UF

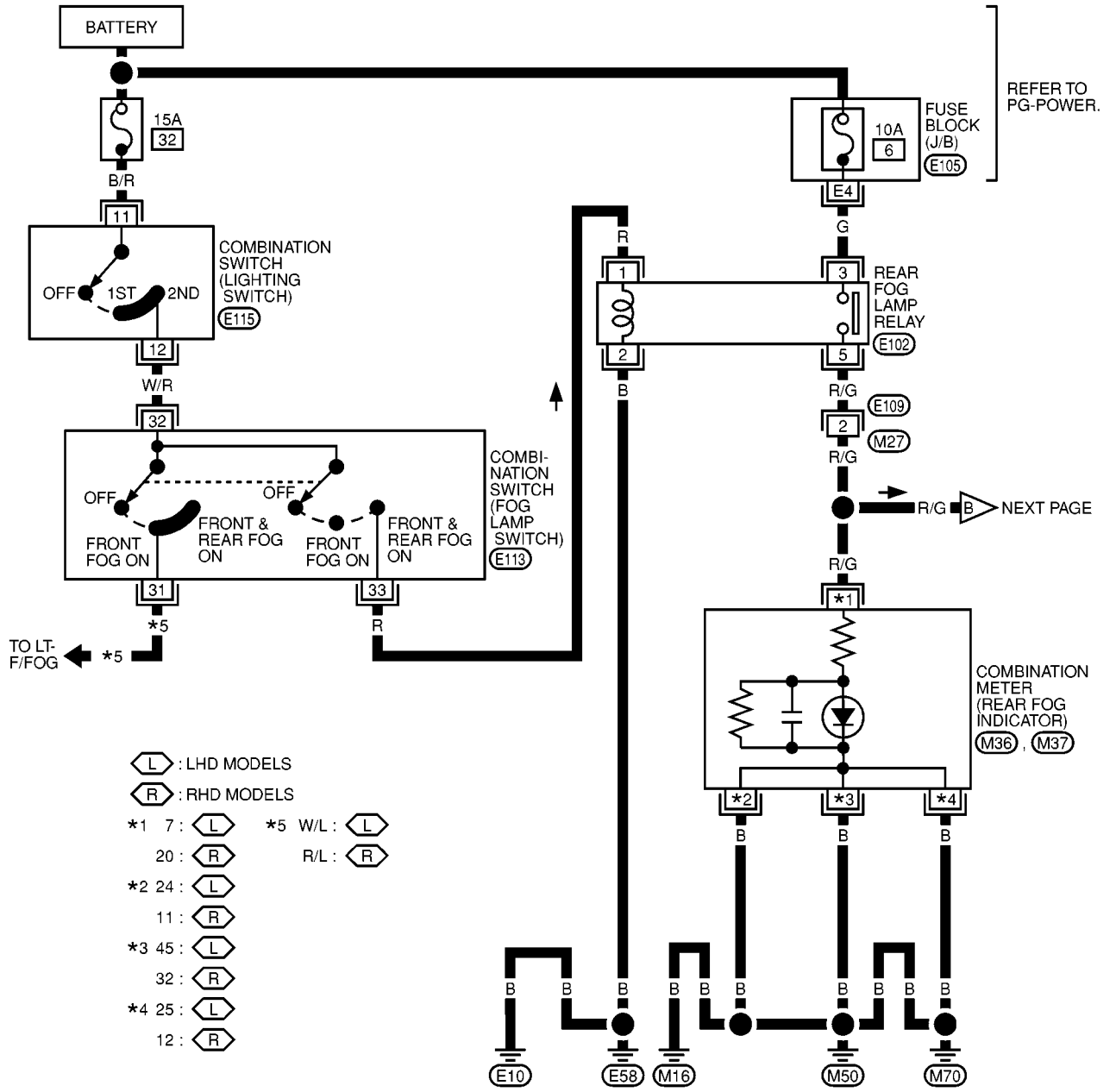
LT-R/FOG-02

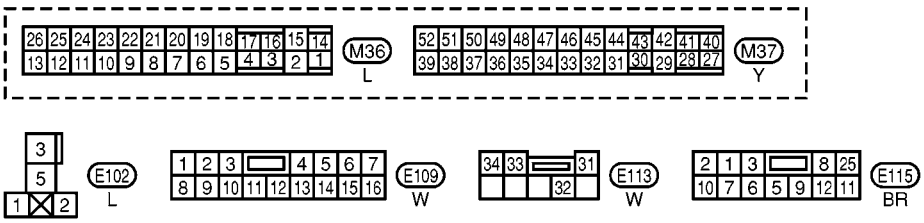




MKWA0027E

LT-R/FOG-03

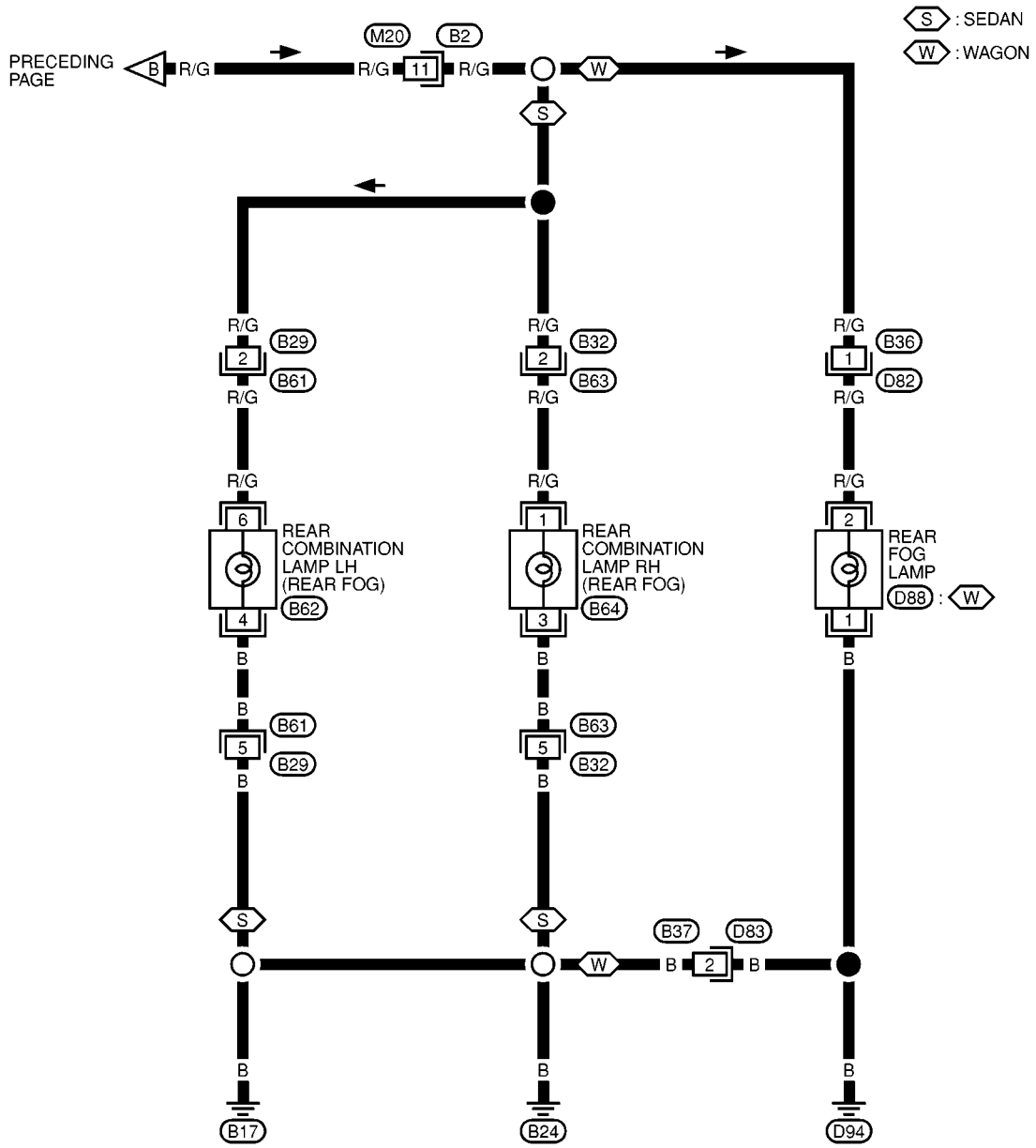


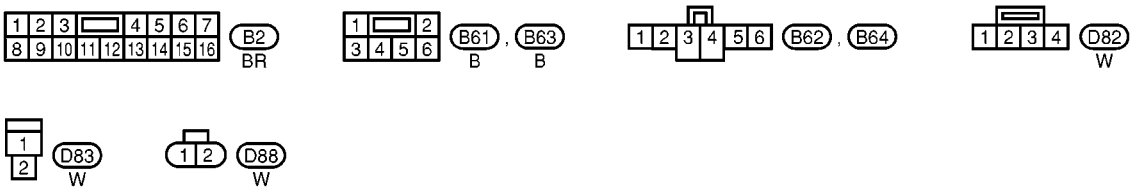


REFER TO THE FOLLOWING.
E105 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0028E

LT-R/FOG-04





MKWA0029E

Bulb Replacement (Sedan)

EKS003UG

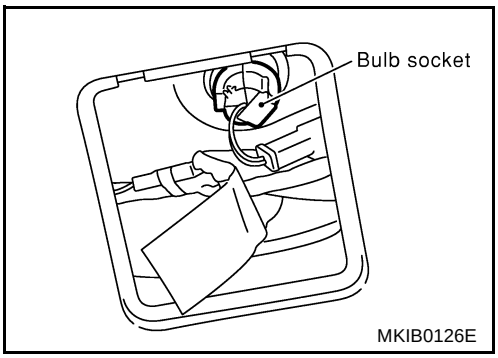
Refer to LT-82, "REAR COMBINATION LAMP" .

Bulb Replacement (Wagon)

EKS0055G

1. Remove the back door mask RH (RHD) or LH (LHD) on the back door finisher.
2. Turn bulb socket counterclockwise and unlock it.
3. Remove bulb.

Rear fog lamp : 12V - 21W



Removal and Installation

EKS003UH

REMOVAL (SEDAN)

Refer to LT-82, "REAR COMBINATION LAMP" .

REMOVAL (WAGON)

Refer to LT-63, "PARKING, LICENSE PLATE AND TAIL LAMPS" .

INSTALLATION (SEDAN)

Refer to LT-82, "REAR COMBINATION LAMP" .

INSTALLATION (WAGON)

Refer to LT-63, "PARKING, LICENSE PLATE AND TAIL LAMPS" .

CLEARANCE LAMP/TAIL LAMP

PFP:26010

Bulb Replacement (Clearance Lamp)

EKS003UI

Refer to LT-5, "HEADLAMP -CONVENTIONAL TYPE-" .

Bulb Replacement (Tail Lamp)

EKS003UJ

Refer to LT-82, "REAR COMBINATION LAMP" .

Removal and Installation of Clearance Lamp

EKS003UK

Refer to LT-18, "HEADLAMP (WITH DAYTIME) - CONVENTIONAL TYPE -" .

Removal and Installation of Tail Lamp

EKS003UL

Refer to LT-82, "REAR COMBINATION LAMP" .

HIGH-MOUNTED STOP LAMP

PFP:26590

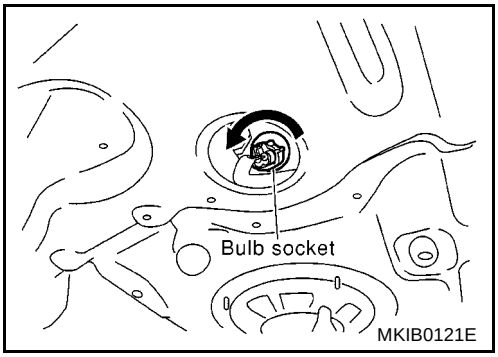
Bulb Replacement

EKS003UM

HIGH-MOUNTED STOP LAMP (SEDAN)

1. Open the trunk lid.
2. Turn the bulb socket counterclockwise and unlock it.
3. Remove the bulb from its socket.

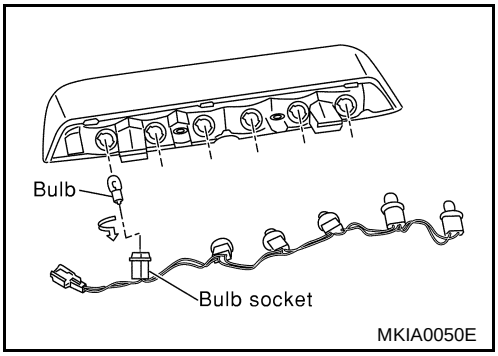
High-mounted stop lamp : 12V - 21W



HIGH-MOUNTED STOP LAMP (WAGON)

1. Remove the high-mounted stop lamp. Refer to LT-81, "HIGH-MOUNTED STOP LAMP" in “Removal and Installation”.
2. Turn the high-mounted stop lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb.

High-mounted stop lamp : 12V 5W

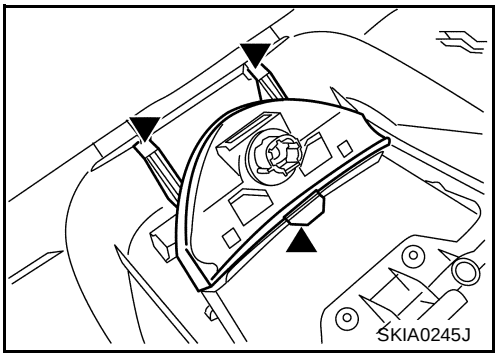


Removal and Installation

EKS003UN

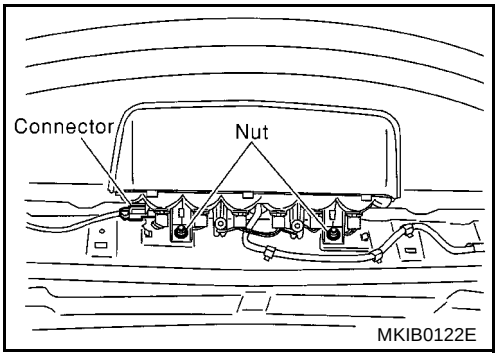
HIGH-MOUNTED STOP LAMP (SEDAN)

1. Remove the rear parcel shelf. Refer to EI-29, "REAR PARCEL SHELF FINISHER" .
2. Take off front and rear nails, then remove high-mounted stop lamp from rear parcel shelf finisher.



HIGH-MOUNTED STOP LAMP (WAGON)

1. Remove the back door upper garnish. Refer toEI-24, "BACK DOOR TRIM"
2. Disconnect the high-mounted stop lamp connector.
3. Remove the high-mounted stop lamp mounting bolts.
4. Remove from the vehicle.

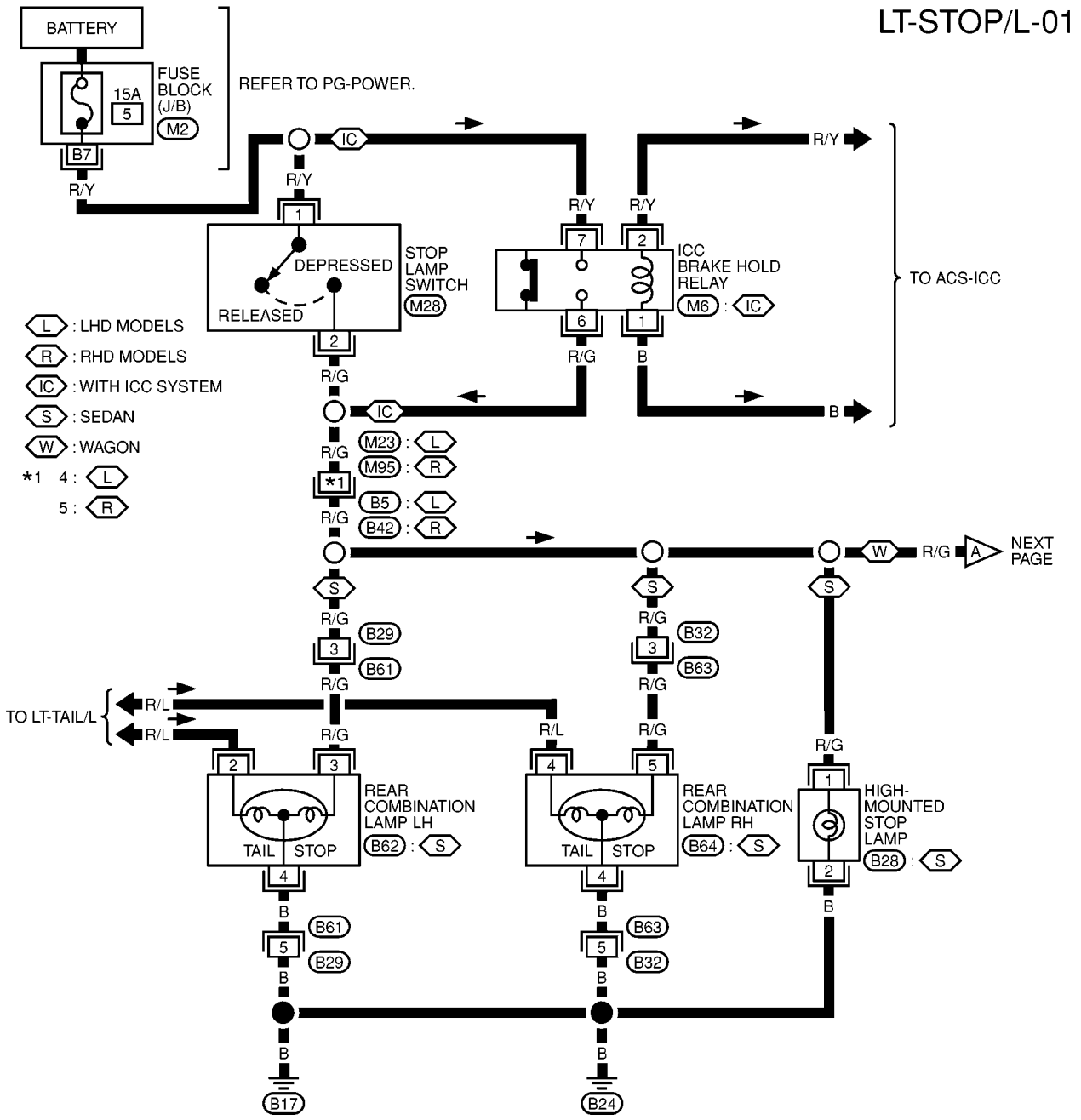


REAR COMBINATION LAMP

PFP:26554

Wiring Diagram —STOP/L—

EKS003UO



M6 GY

M28 B

B5 BR

B28

B42 GY

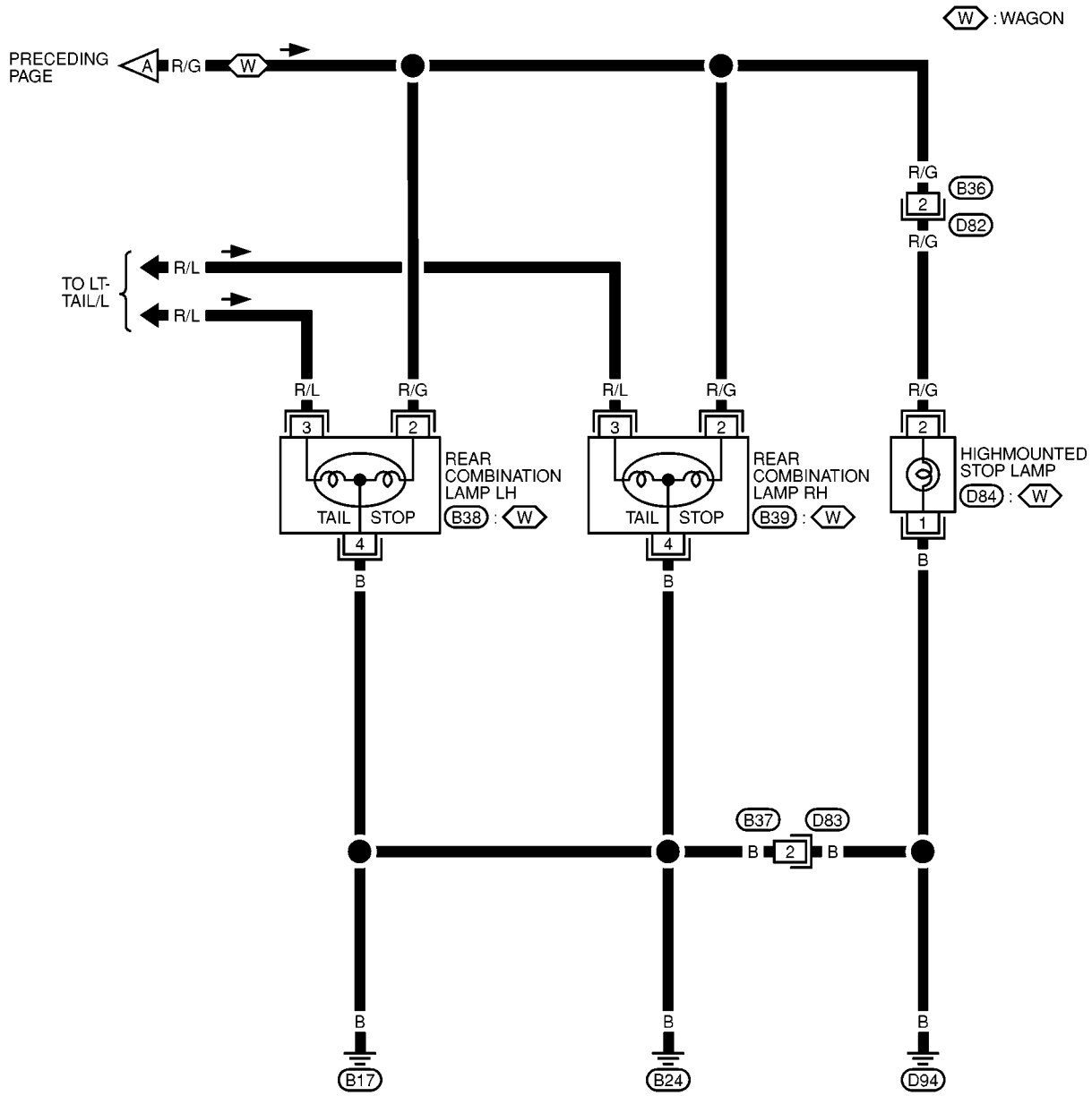
B61 , B63 W W

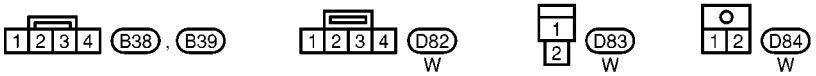
B62 , B64

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

MKWA0021E

LT-STOP/L-02





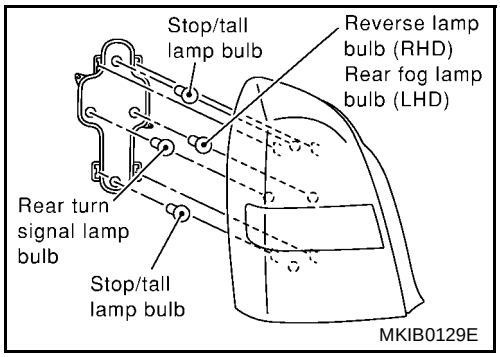
MKWA0022E

Bulb Replacement (Sedan)

EKS003UP

1. Open the trunk lid and remove wheel house finisher.
2. Remove rear combination lamp mounting nuts (2).
3. Pull rear combination lamp toward rear of vehicle. Disengage locating pins (2).
4. Turn bulb socket counterclockwise and unlock it.
5. Remove bulbs.

Stop/taillight	**: 12V - 21/5W**
Rear turn signal lamp	**: 12V - 21W**
Back-up lamp	**: 12V - 21W**
Rear fog lamp	**: 12V - 21W**

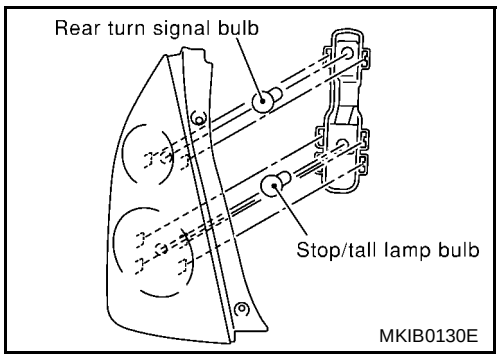


Bulb Replacement (Wagon)

EKS0055F

1. Open the back door, and remove rear combination lamp mounting bolts (2).
2. Pull rear combination lamp toward rear of vehicle. Disengage locating pins (2).
3. Turn bulb socket counterclockwise and unlock it.
4. Remove bulb.

Stop/taillight	**: 12V - 21/5W**
Rear turn signal lamp	**: 12V - 21W**

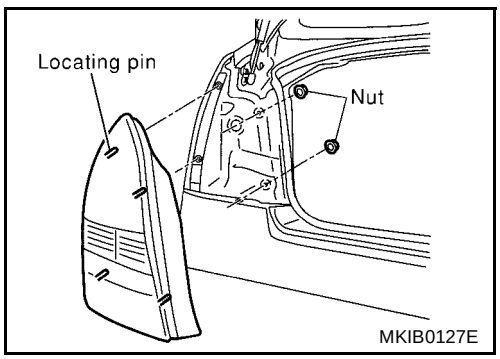


Removal and Installation

EKS003UQ

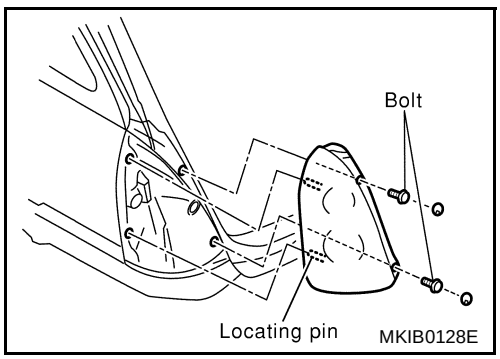
REMOVAL (SEDAN)

1. Open the trunk lid and remove wheel house finisher.
2. Remove rear combination lamp mounting nuts (2).
3. Pull rear combination lamp toward rear of vehicle. Disengage locating pins (2).
4. Disconnect rear combination lamp connector.
5. From outside the vehicle, remove harness.



REMOVAL (WAGON)

1. Open the back door and remove rear combination lamp mounting bolts (2).
2. Pull rear combination lamp toward rear of vehicle. Disengage locating pins (2).
3. Disconnect rear combination lamp connector.
4. From outside the vehicle, remove harness.



INSTALLATION

Install in the reverse order of removal, paying attention to the following.

Rear combination lamp mounting bolts and nuts:

- **: 2.5 - 3.8 N·m (0.25 - 0.39 kg-m, 23 - 33 in-lb) (SEDAN)**
- **: 3.3 - 7.7 N·m (0.34 - 0.79 kg-m, 30 - 68 in-lb) (WAGON)**

COMBINATION SWITCH

PFP:25567

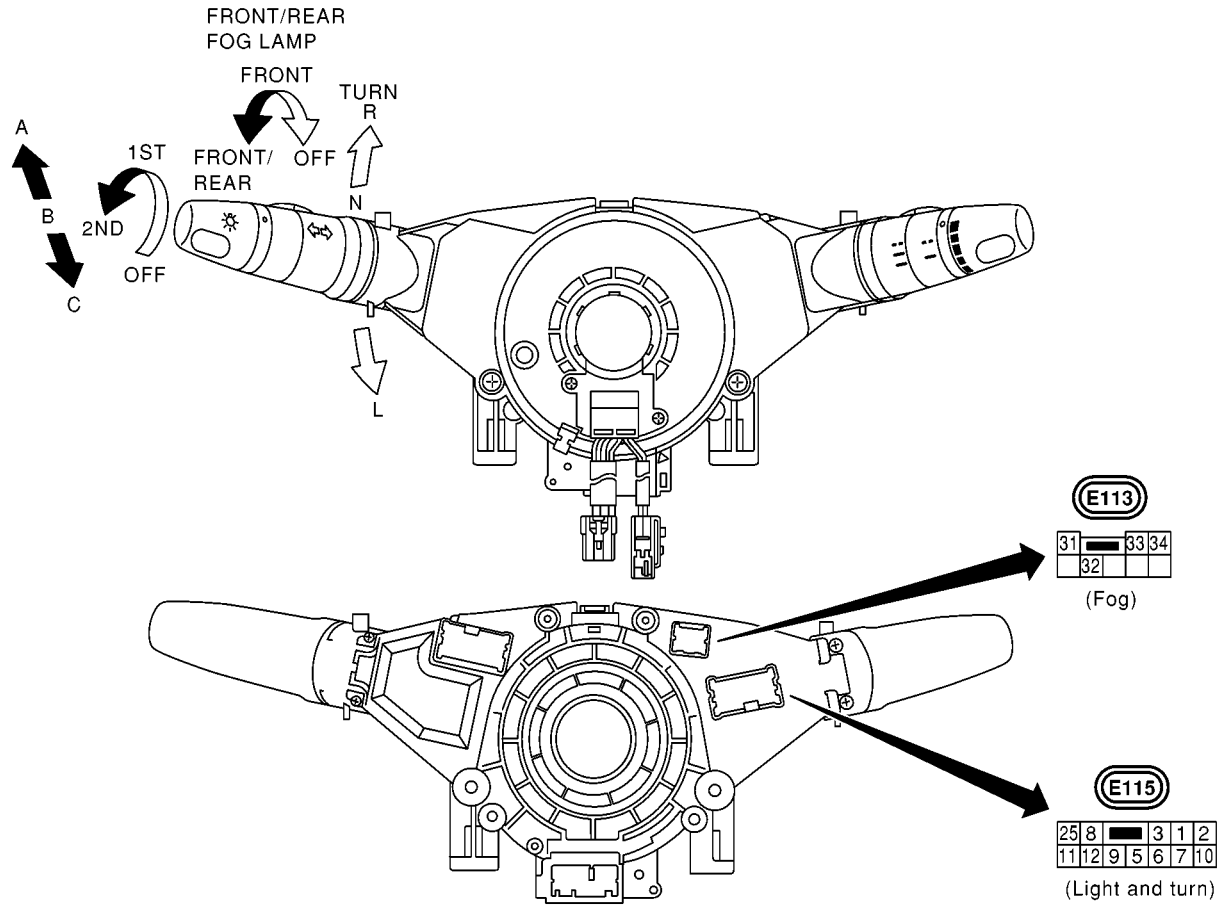
Removal and Installation

EKS003UR

Refer to SRS-34, "SPIRAL CABLE" in “SUPPLEMENTAL RESTRAINT SYSTEM (SRS)” section for details.

Switch Circuit Inspection

EKS003US



LIGHTING SWITCH
(With front and rear fog lamp)

	OFF			1ST			2ND		
	A	B	C	A	B	C	A	B	C
5			○			○	○	○	○
6			○			○	○		○
7							○	○	○
8			○			○	○	○	○
9			○			○	○		○
10							○	○	○
11				○	○	○	○	○	○
12				○	○	○	○	○	○

LIGHTING SWITCH
(With rear fog lamp)

	OFF			1ST			2ND		
	A	B	C	A	B	C	A	B	C
25							○	○	○
5			○			○	○	○	○
6			○			○	○		○
7							○	○	○
8			○			○	○	○	○
9			○			○	○		○
10							○	○	○
11				○	○	○	○	○	○
12				○	○	○	○	○	○

FOG LAMP SWITCH
(With front and rear fog lamp)

	OFF	FR	FR+RR
31		○	○
32		○	○
33			○

FOG LAMP SWITCH
(With rear fog lamp)

	OFF	RR
34		○
33		○

TURN SIGNAL SWITCH

	R	N	L
1	○		○
2	○		
3			○

MKWA0295E

Refer to LT-55, "Switch Circuit Inspection" in “LIGHTING AND TURN SIGNAL SWITCH” section, and WW-8, "Terminal and Reference Values for Combination Switch" , WW-38, "Terminal and Reference Values for Combination Switch" in “ WW Wiper/Washer Horn” section for details.

ILLUMINATION

PFP:27545

System Description

EKS003UT

Power is supplied at all times

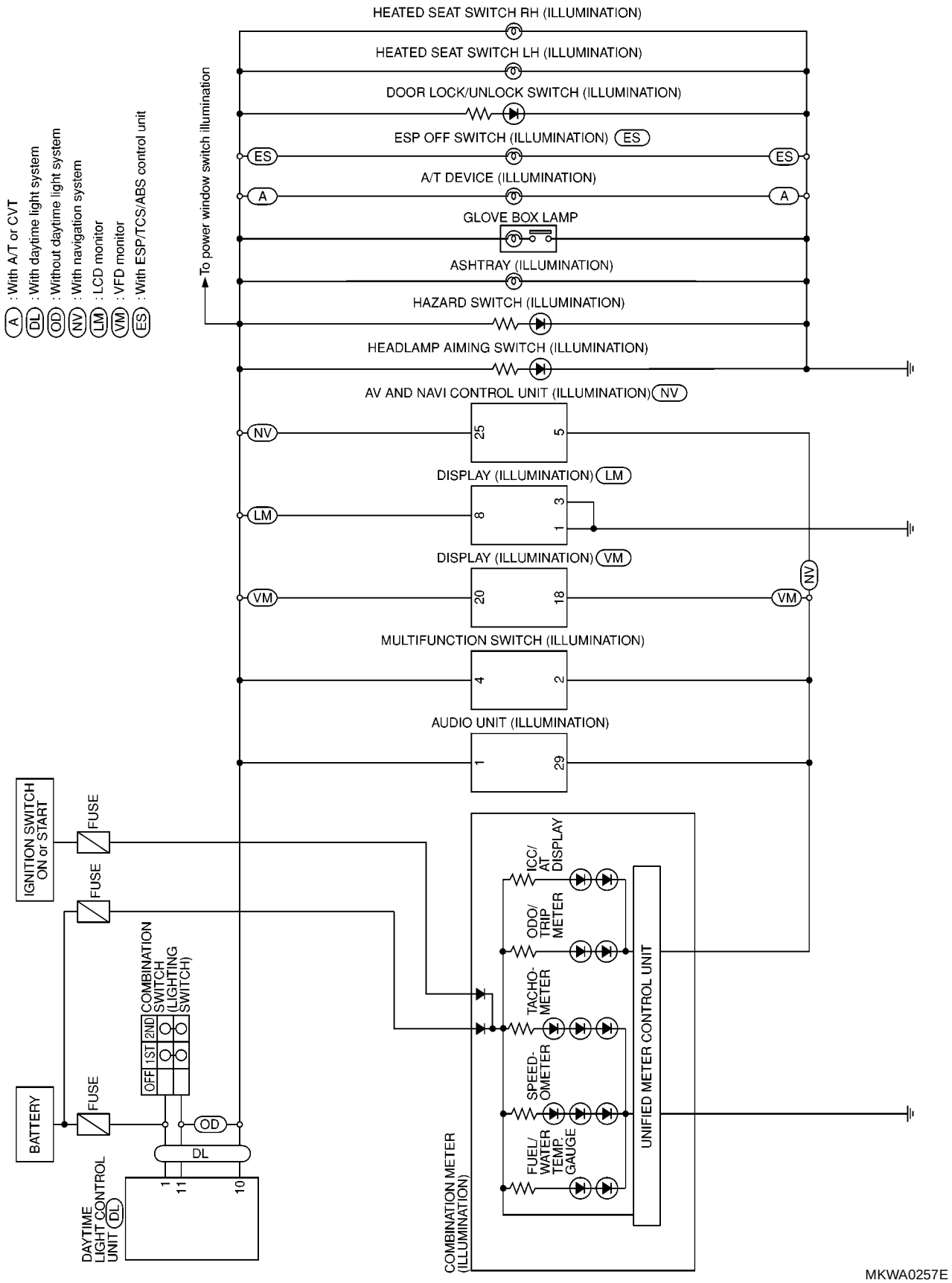
- through 10A fuse [No. 32, located in the fuse and fusible link box]
- to lighting switch terminal 11.

The lighting switch must be in the 1ST or 2ND position for illumination.
The following chart shows the power and ground connector terminals for the components included in the illumination system.

Component	Connector No.	Power terminal	Ground terminal
Headlamp aiming switch	E103	1	2
ESP off switch	M8	3	4
Hazard switch	M48	7	8
Combination meter (LHD models)	M36, M37	51, 52	24, 25, 45
Combination meter (RHD models)	M36, M37	38, 39	11, 12, 32
Audio	M51, M53	1	29
A/T device (With A/T)	M65	3	4
A/T device (With CVT)	M66	1	2
Heated seat switch LH	M104	5	6
Heated seat switch RH	M103	5	6
Door lock/unlock switch	M102	4	3
Glove box lamp	M71	2	1
Ashtray illumination	M57	1	2
AV and NAVI control unit	M54, M55	25	5
VFD Display	M61	20	18
LCD Display	M61	8	1, 3
Multifunction switch	M49	4	2

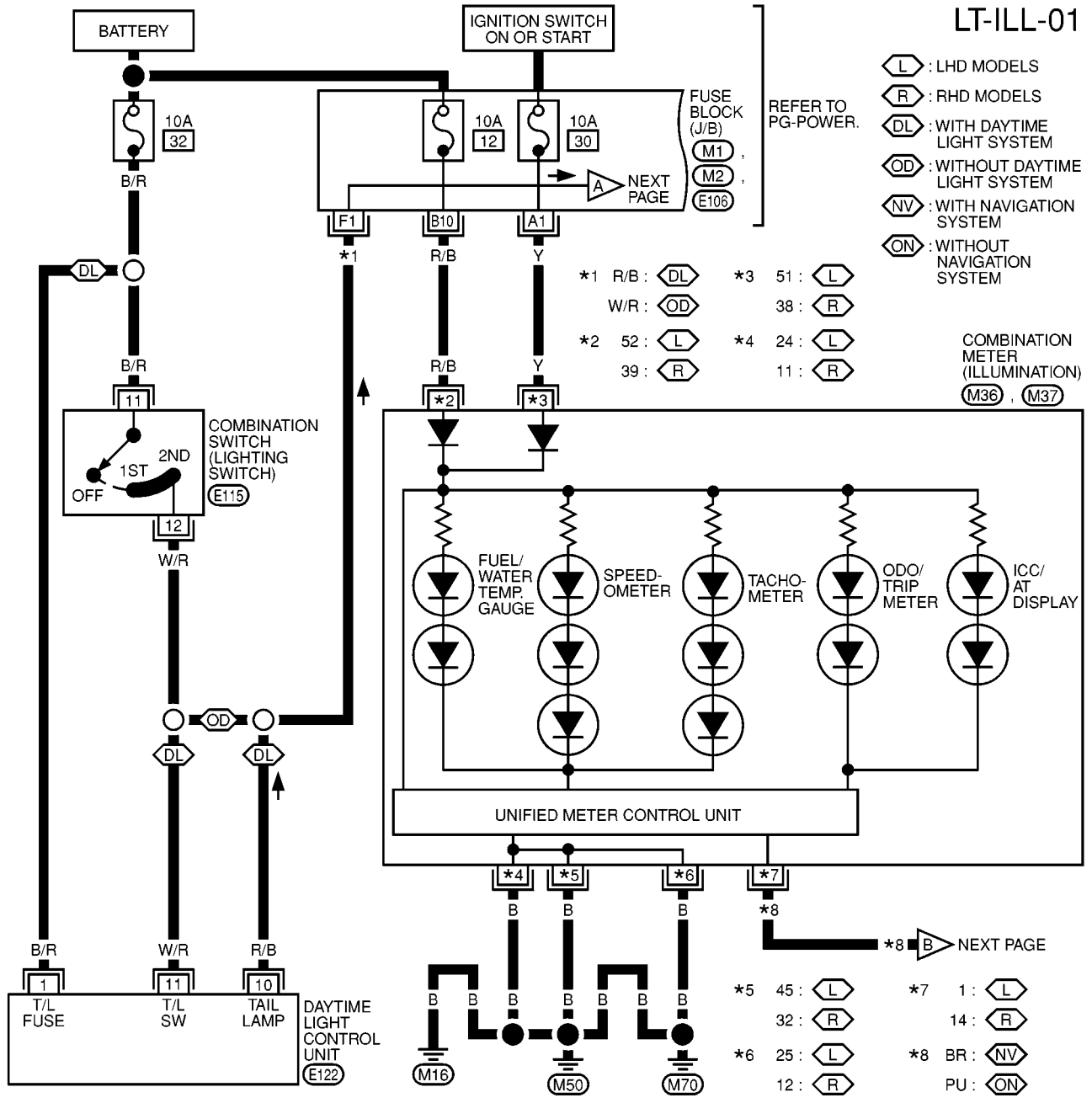
Schematic

EKS003UU



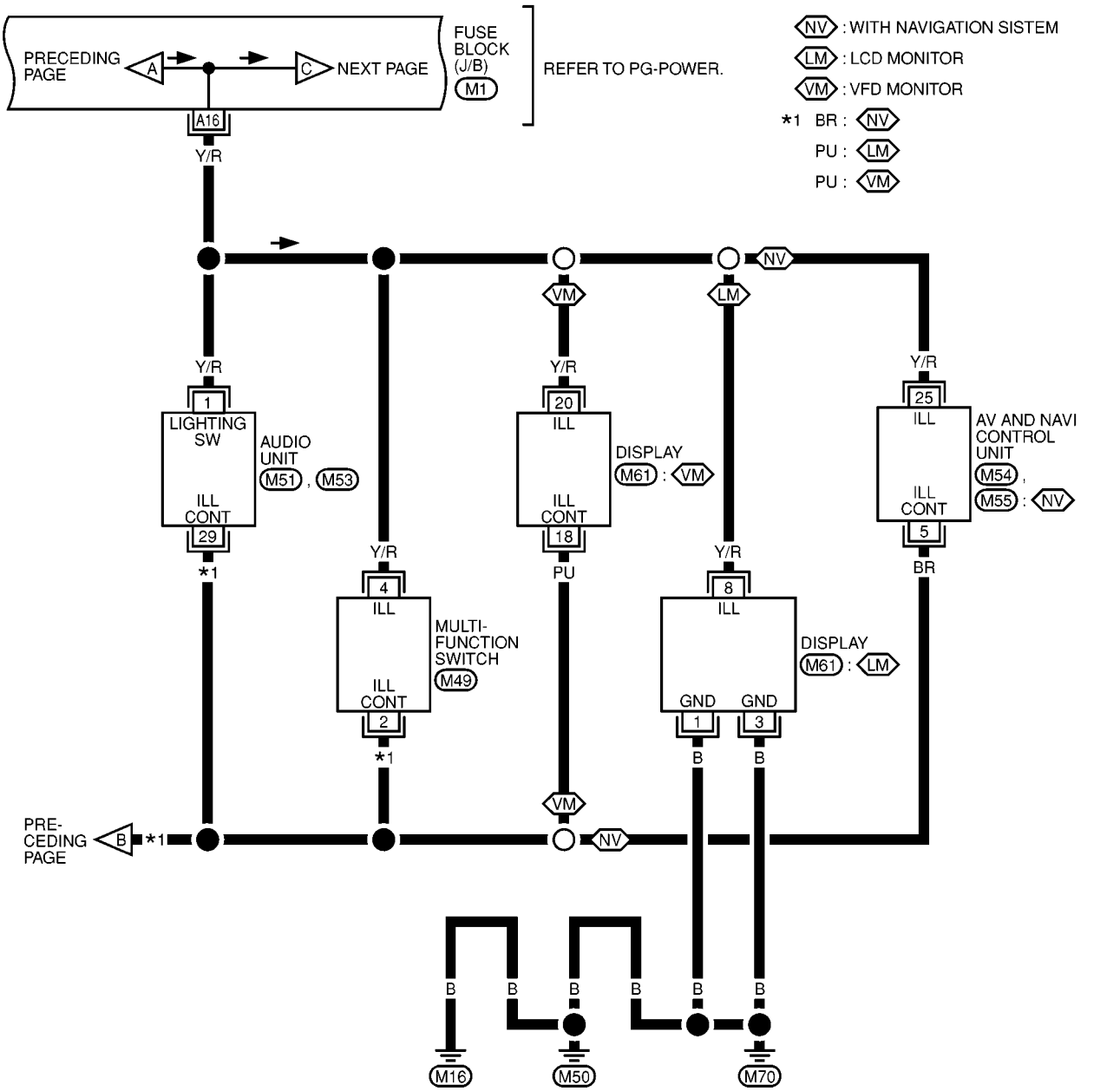
Wiring Diagram

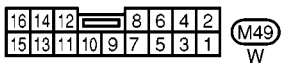
EKS004QB

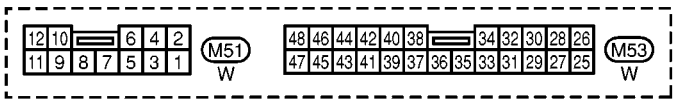


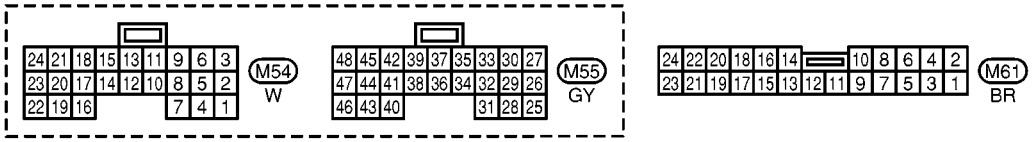
MKWA0258E

LT-ILL-02





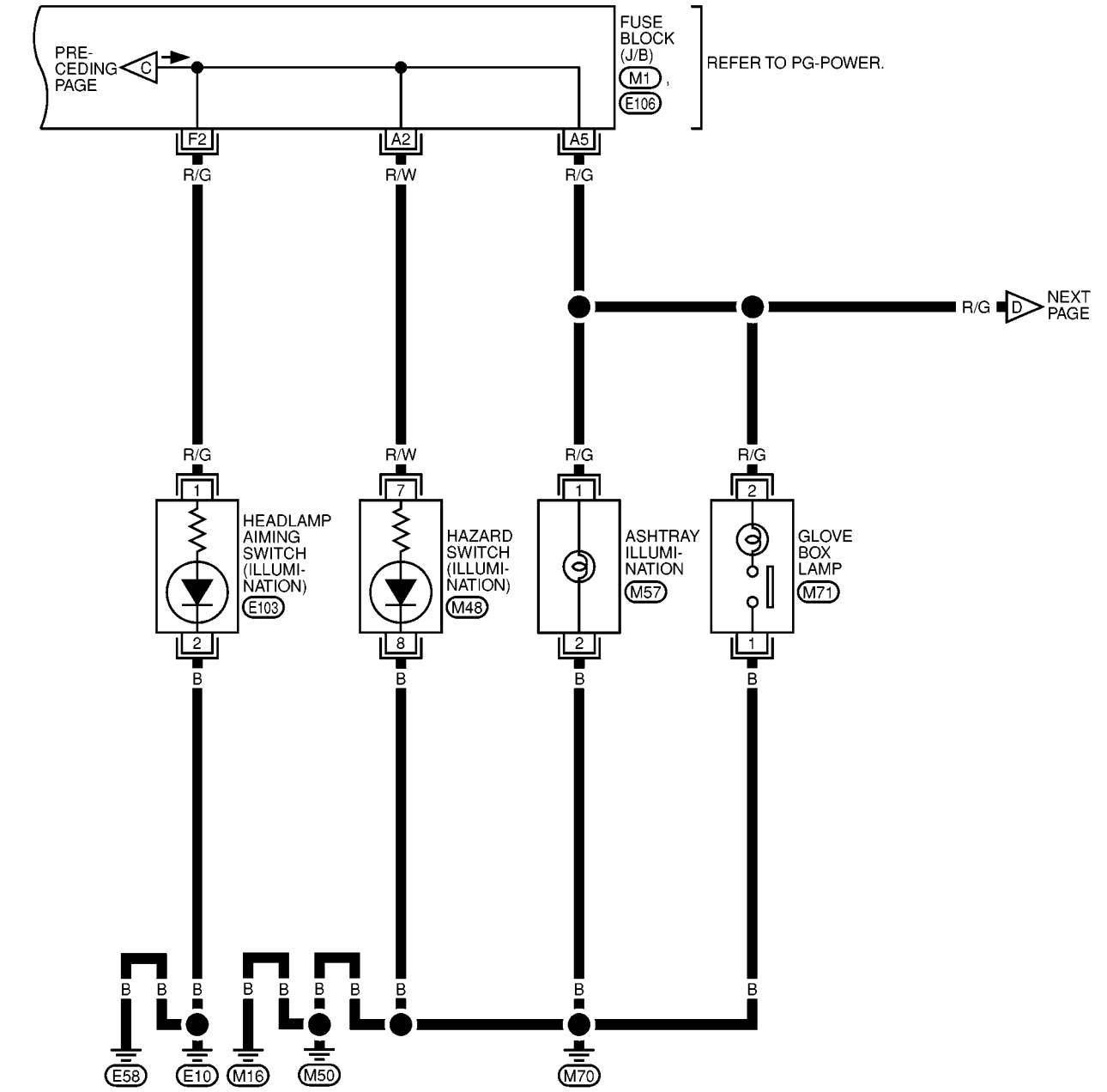




REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

MKWA0259E

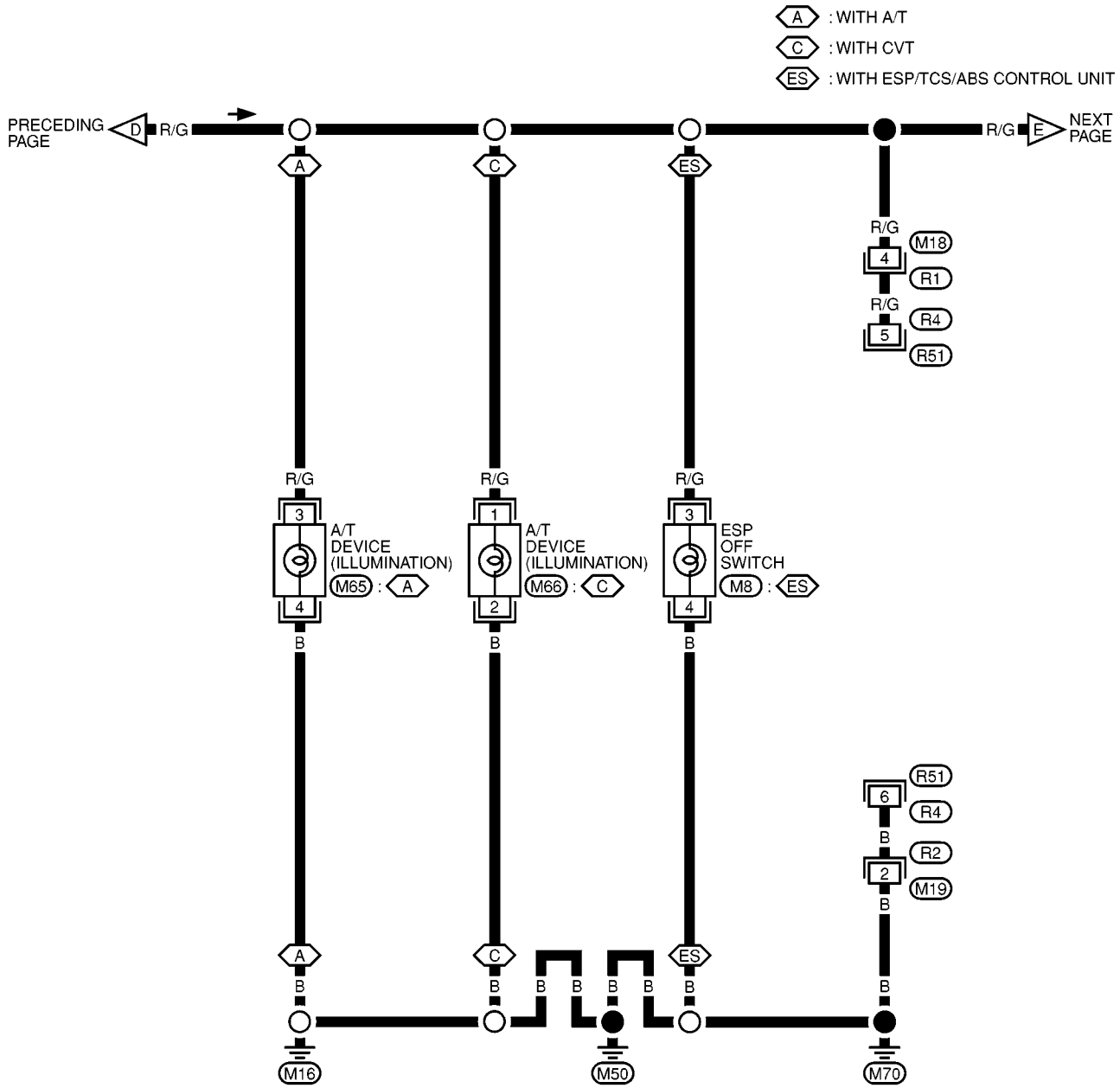
LT-ILL-03

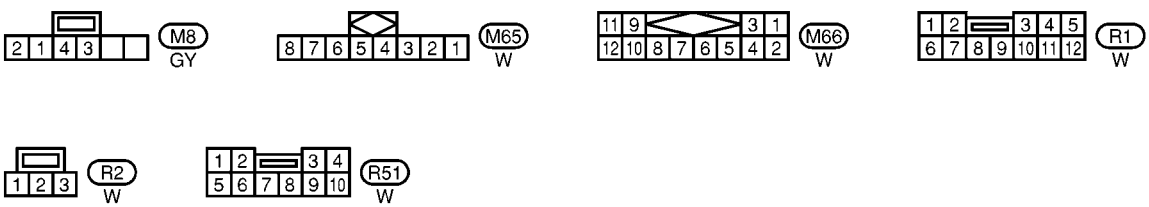


REFER TO THE FOLLOWING.
M1 , E106 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0260E

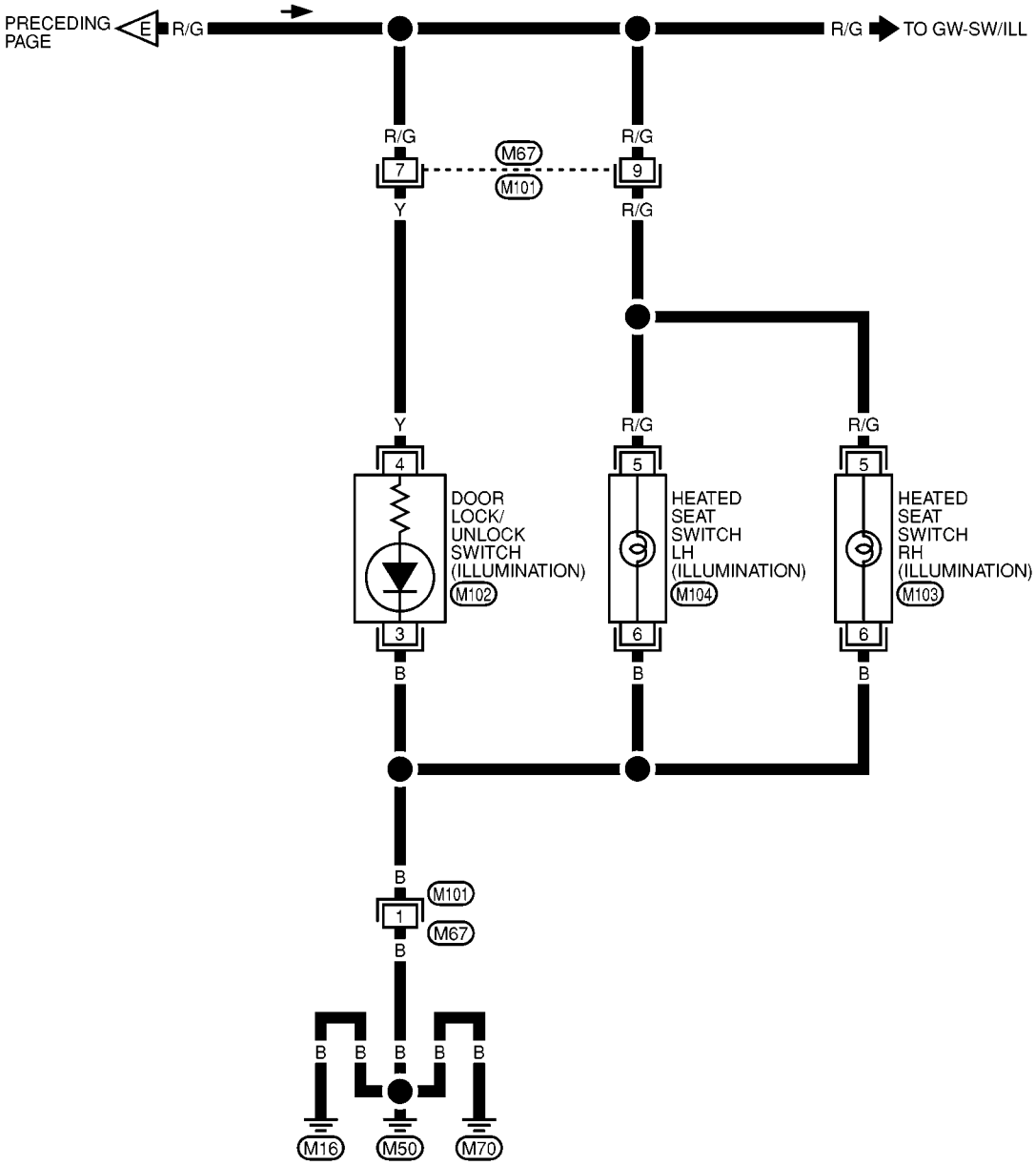
LT-ILL-04

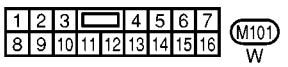


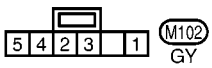


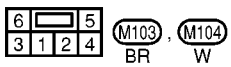
MKWA0261E

LT-ILL-05









MKWA0262E

INTERIOR ROOM LAMP

PFP:26410

System Description

EKS0054T

POWER SUPPLY AND GROUND

Power is supplied at all times:

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 1 and
- to smart entrance control unit terminal 56
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to interior room lamp terminal 1 and
- to keyhole illumination terminal 2 and
- to each door steplamp terminal 1.

When the key is removed from ignition key cylinder, power is interrupted:

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

With the ignition key 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:

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

When any door (except back door) is opened, ground is supplied:

- through case ground of each door switch
- to each door switch terminal 1
- to smart entrance control unit terminals 39, 43 and 44, 45.

When trunk (For SEDAN) is opened, ground is supplied:

- through body ground B120
- to trunk room lamp switch terminal 2
- to smart entrance control unit terminal 16.

When back door (For WAGON) is opened, ground is supplied:

- through body grounds B17, B24 and D94
- to back door switch terminal 1
- to smart entrance control unit terminal 16.

When the driver side door is unlocked by the door lock/unlock switch, the smart entrance control unit receives a ground signal:

- through body grounds terminals M16, M50 and M70
- to door lock/unlock switch terminal 3
- from door lock/unlock switch terminal 2
- to smart entrance control unit terminal 14.

When the driver side door is locked by the door lock/unlock switch, the smart entrance control unit receives a ground signal:

- through body grounds terminals M16, M50 and M70
- to door lock/unlock switch terminal 3
- from door lock/unlock switch terminal 1
- to smart entrance control unit terminal 13

When a signal, or combination of signals is received by the smart entrance control unit, ground is supplied:

- through smart entrance control unit terminal 28
- to interior room lamp terminal 2.

With power and ground supplied, the interior room lamp illuminates.

SWITCH OPERATION

When interior room lamp switch is ON, ground is supplied:

- through case grounds of interior room lamp
- to interior room lamp.

INTERIOR ROOM LAMP TIMER OPERATION

When interior room lamp switch is in the “DOOR” position, the time control unit keeps the interior room lamp illuminated for about 30 seconds when:

- unlock signal is supplied from driver′s door lock/unlock switch while all doors are closed and key is out of ignition key cylinder
- unlock signal is supplied from remote controller while all doors are closed and key is out of the ignition key cylinder.
- key is removed from ignition key cylinder while all doors are closed
- driver′s door is opened and then closed while key is out of the ignition key cylinder. (However, if the driver′s door is closed with the key inserted in the ignition key cylinder after the driver′s door is opened with the key removed, the timer is operated.)

However, ignition keyhole illumination remains on for about 30 seconds after driver′s door has been locked.
The timer is canceled when:

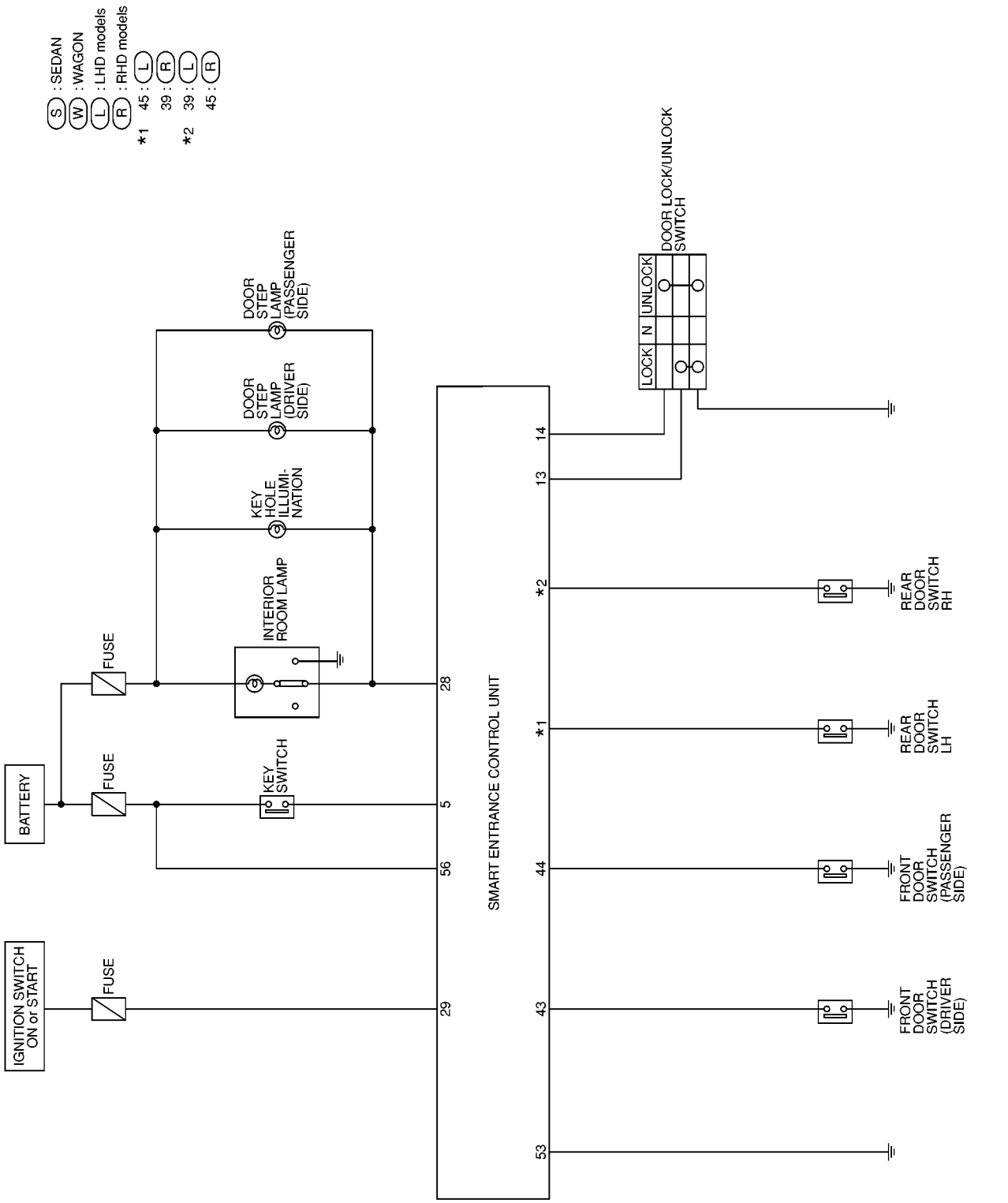
- driver′s door is locked,
- driver′s door is opened, or
- ignition switch is turned ON.

ON-OFF CONTROL

When the driver side door, front passenger door, rear LH or RH door is opened, the interior room lamp turns on while the interior room lamp switch is in the “DOOR” position.
When any door is opened, step lamps turn ON.

Schematic

EKS004RB

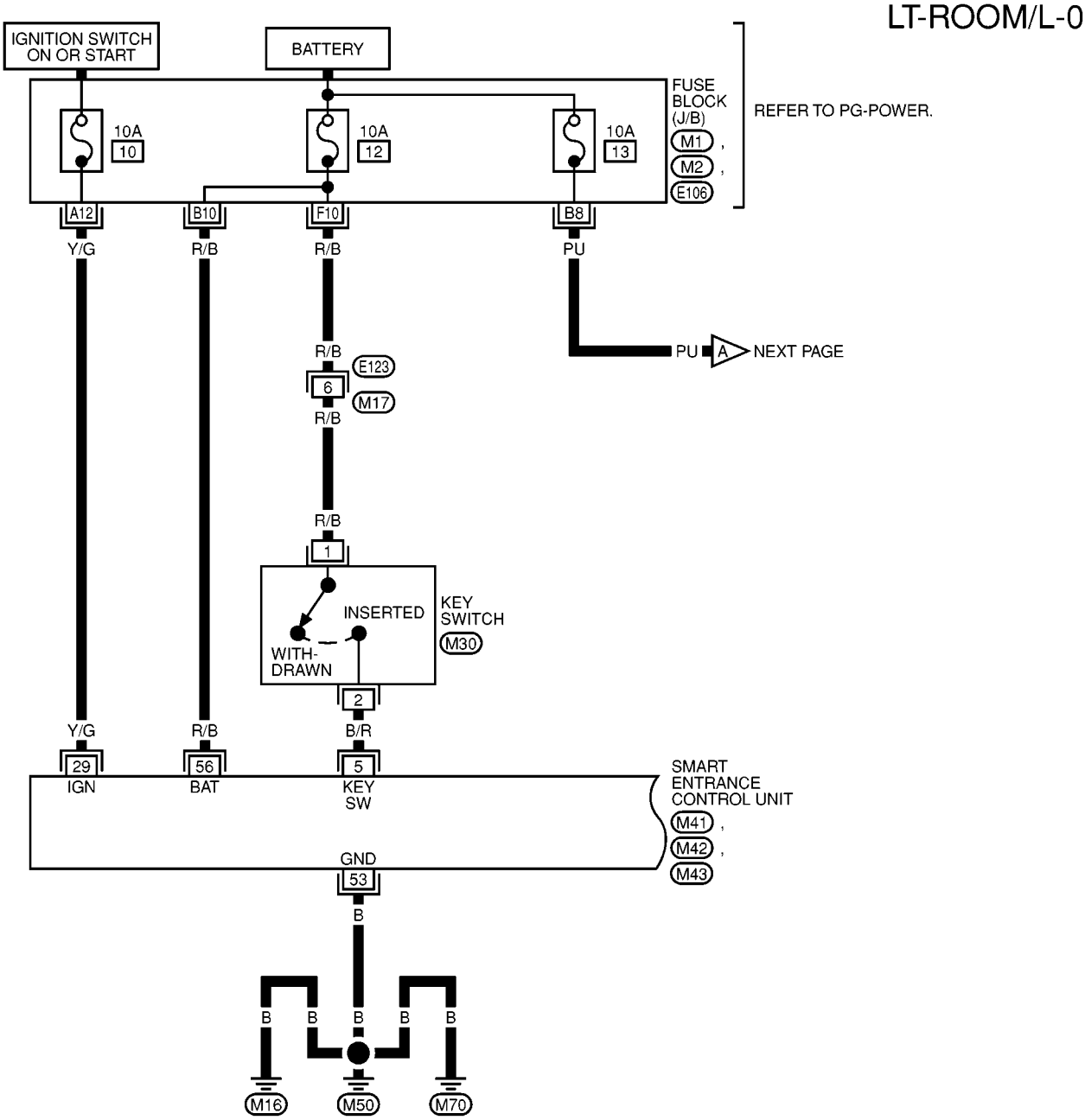


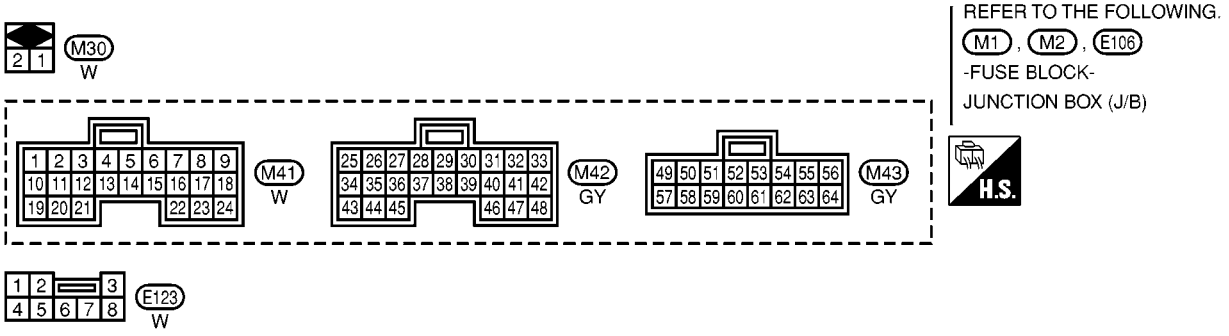
MKWA0263E

Wiring Diagram - ROOM/L -/LHD MODELS

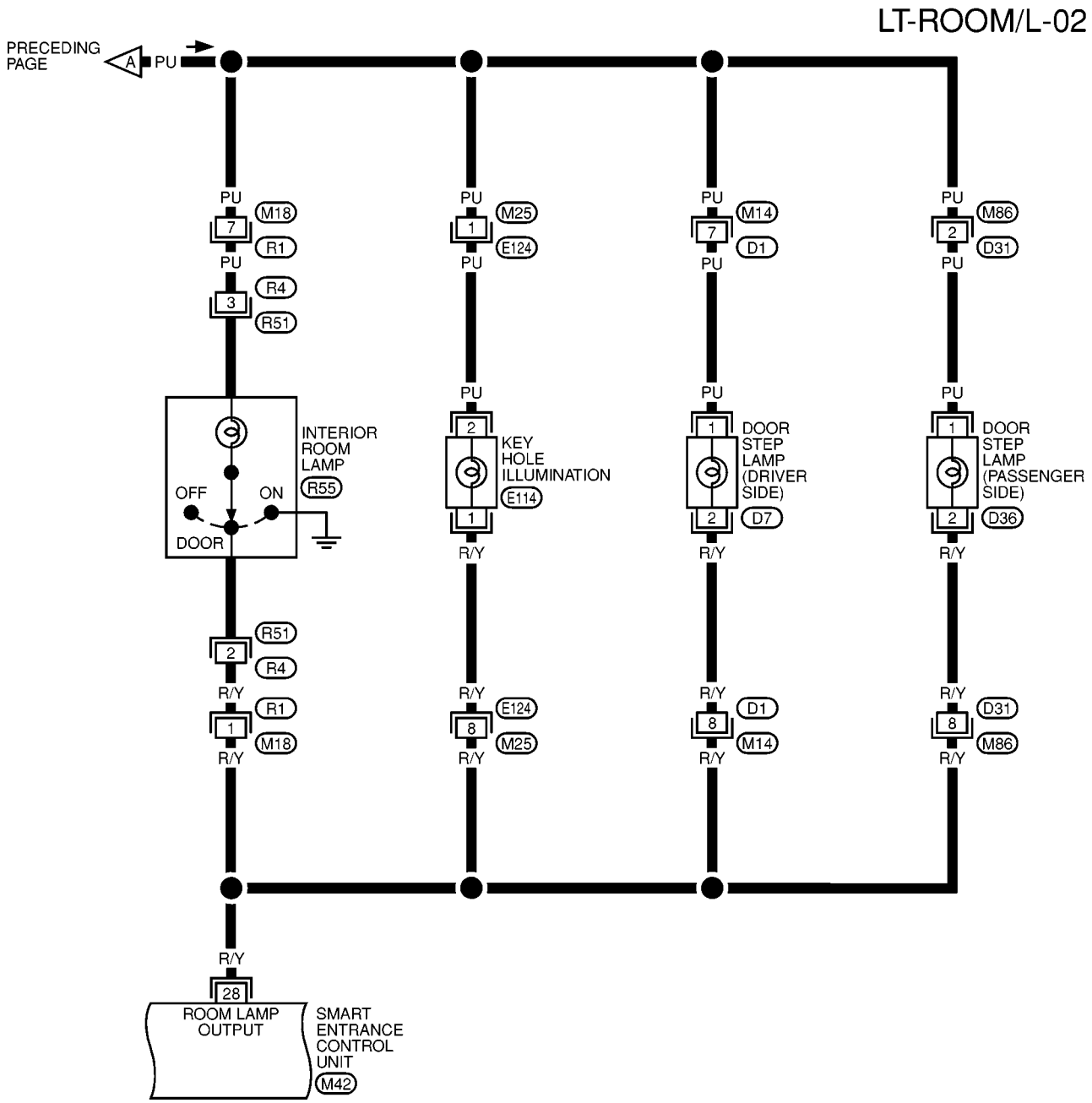
EKS004RC

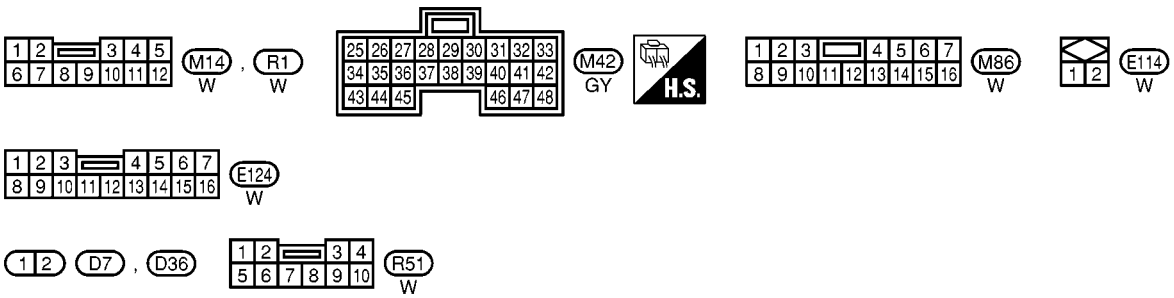
LT-ROOM/L-01





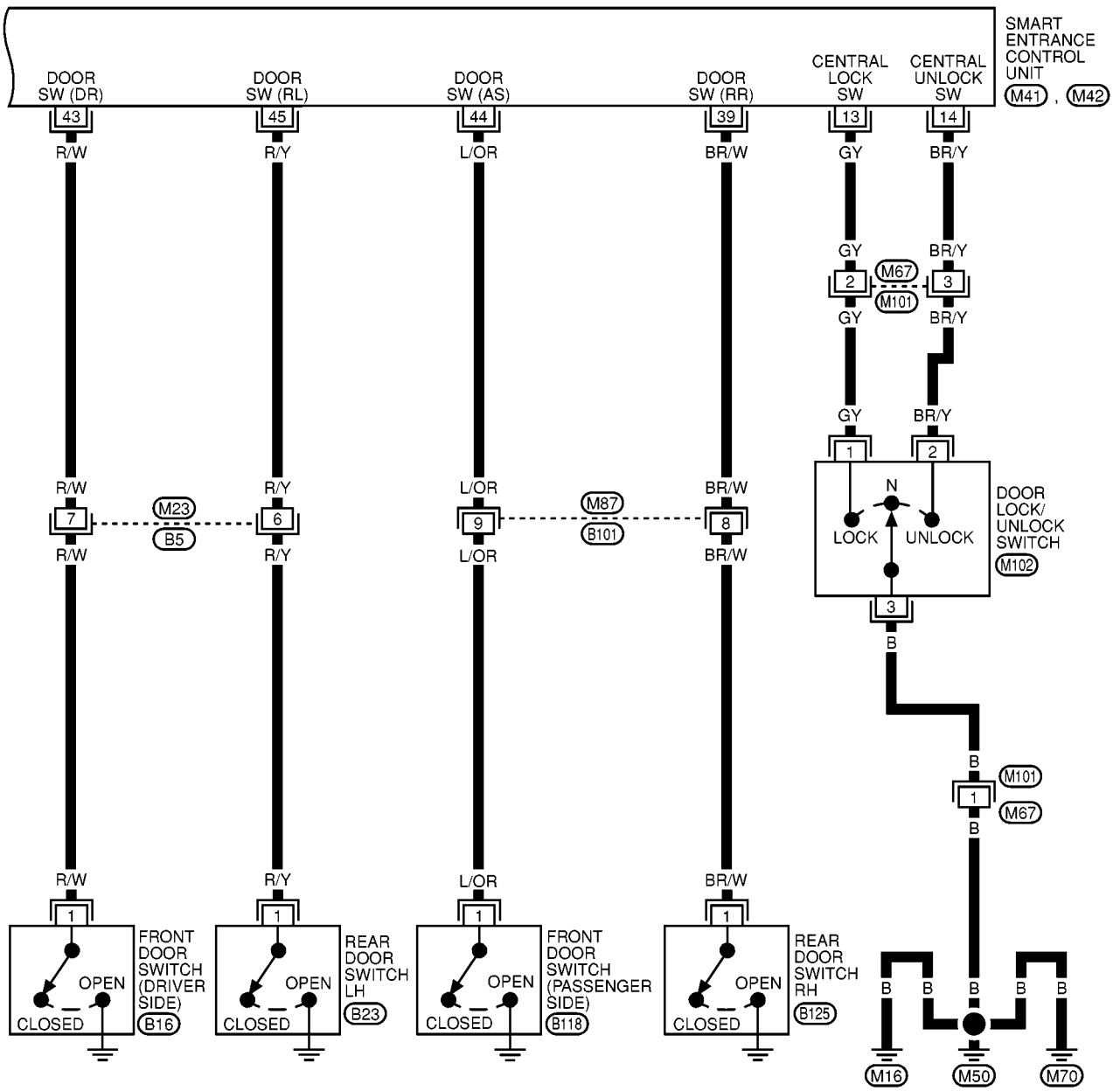
MKWA0264E

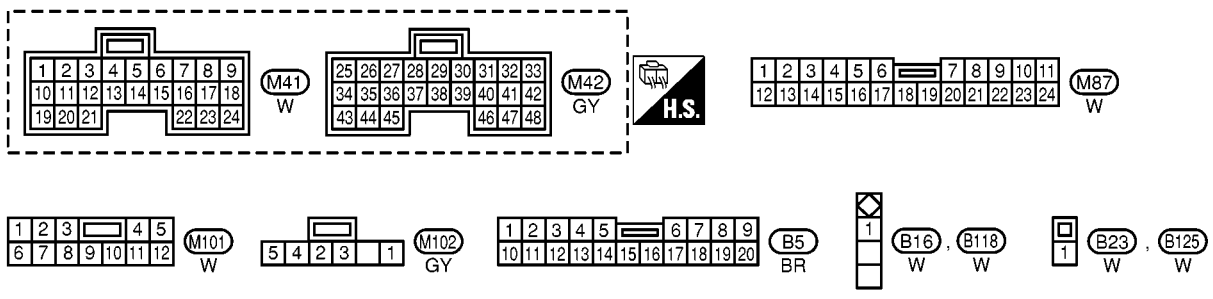

LT-ROOM/L-02
PRECEDING PAGE
A
PU
PU
M18
7
R1
PU
3
R4
R51
INTERIOR ROOM LAMP
R55
OFF
ON
DOOR
R51
2
R4
R/Y
1
R1
M18
R/Y
R/Y
28
ROOM LAMP OUTPUT
SMART ENTRANCE CONTROL UNIT
M42
PU
M25
1
E124
PU
2
KEY HOLE ILLUMINATION
E114
1
R/Y
R/Y
E124
8
M25
R/Y
PU
M14
7
D1
PU
1
DOOR STEP LAMP (DRIVER SIDE)
2
D7
R/Y
R/Y
D1
8
M14
R/Y
PU
M86
2
D31
PU
1
DOOR STEP LAMP (PASSENGER SIDE)
2
D36
R/Y
R/Y
D31
8
M86
R/Y


M14 , R1
W W
M42
GY
H.S.
M86
W
E114
W
E124
W
D7 , D36
R51
W

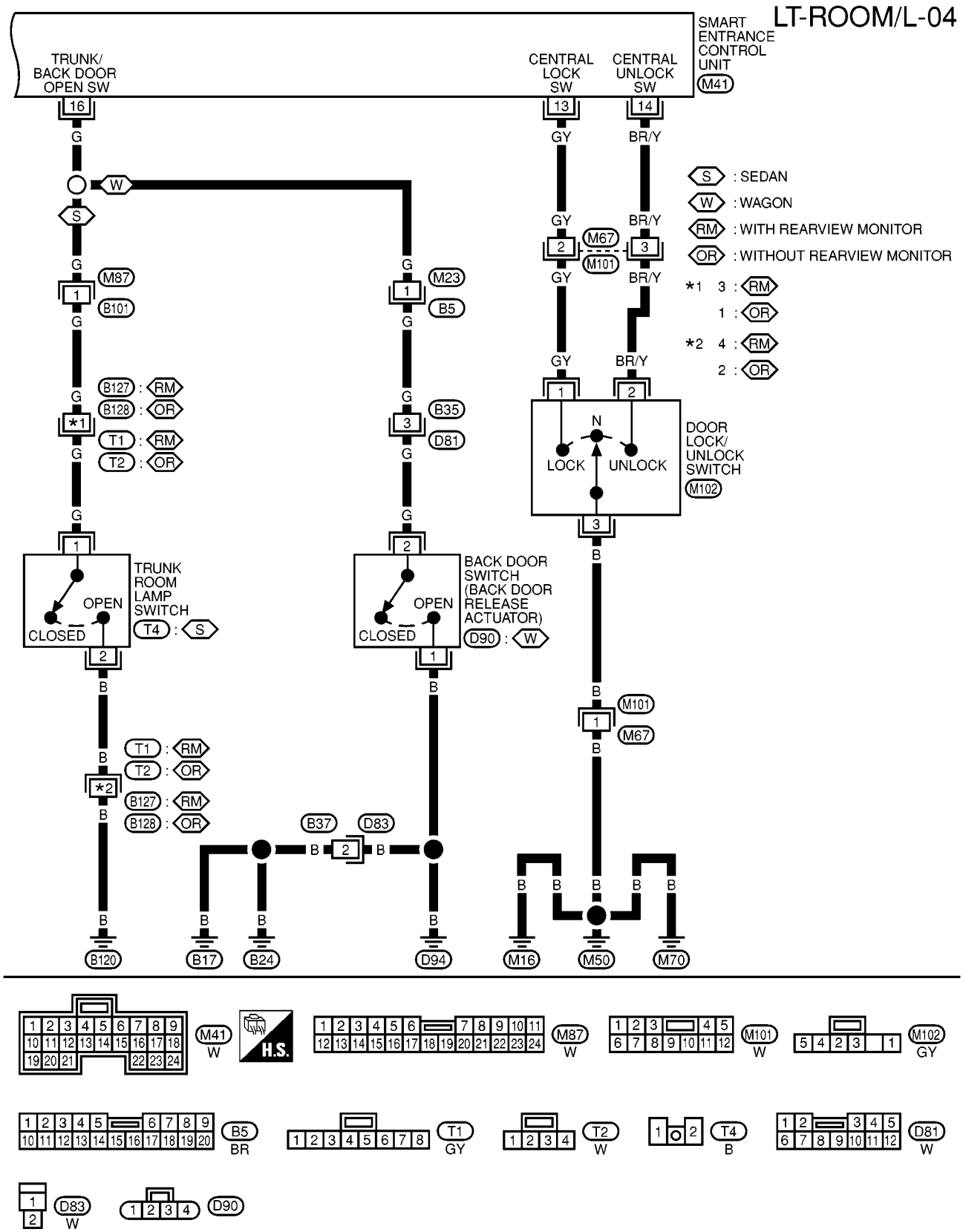
MKWA0265E

LT-ROOM/L-03





MKWA0266E


LT-ROOM/L-04
SMART ENTRANCE CONTROL UNIT
M41
TRUNK/ BACK DOOR OPEN SW
CENTRAL LOCK SW
CENTRAL UNLOCK SW
S : SEDAN
W : WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
*1 3 : RM
1 : OR
*2 4 : RM
2 : OR
M67
M101
M87
B101
M23
B5
B127 : RM
B128 : OR
T1 : RM
T2 : OR
B35
D81
DOOR LOCK/ UNLOCK SWITCH
M102
LOCK
UNLOCK
N
TRUNK ROOM LAMP SWITCH
T4 : S
BACK DOOR SWITCH (BACK DOOR RELEASE ACTUATOR)
D90 : W
OPEN
CLOSED
B37
D83
B120
B17
B24
D94
M16
M50
M70

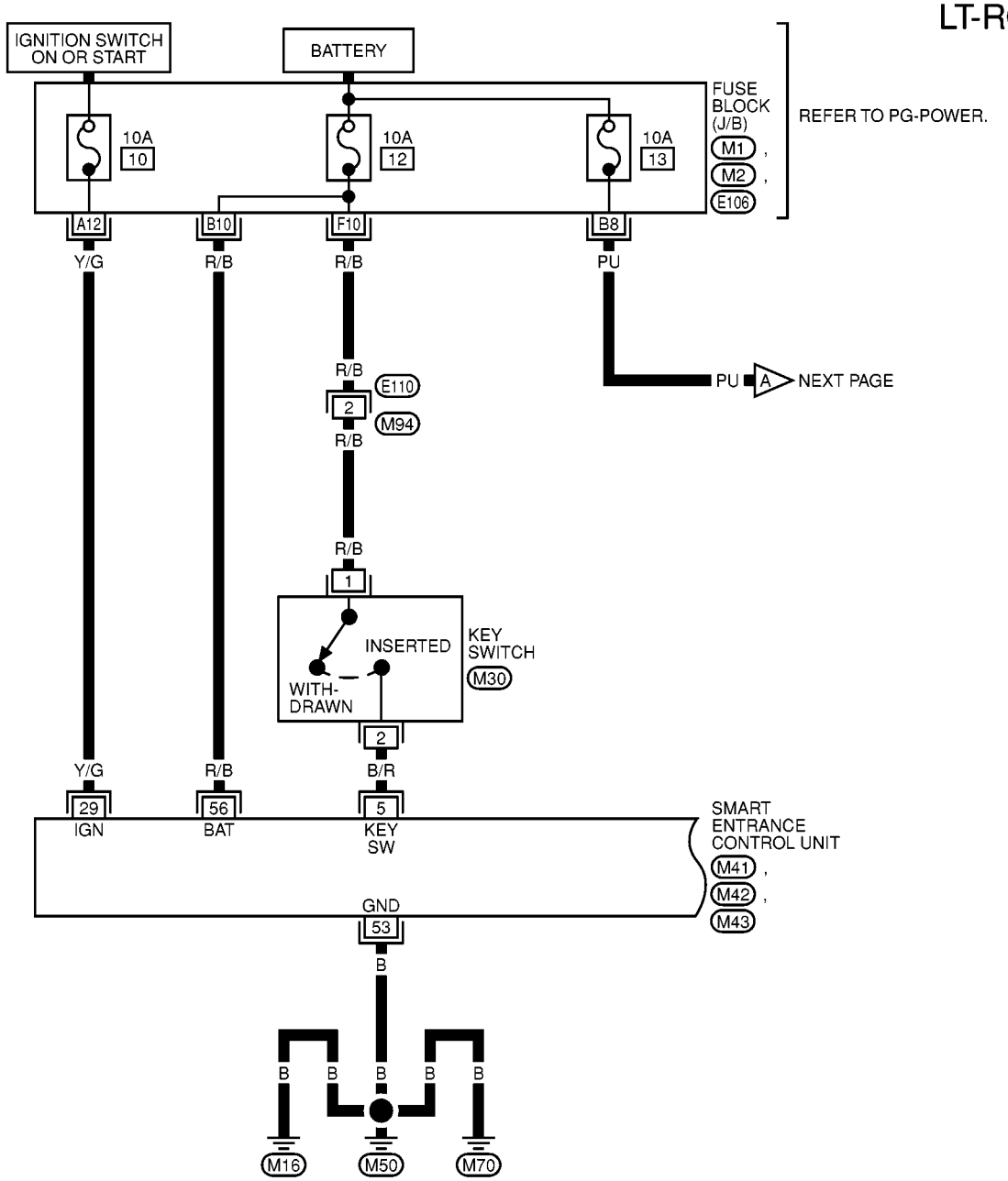
M41 W
H.S.
M87 W
M101 W
M102 GY
B5 BR
T1 GY
T2 W
T4 B
D81 W
D83 W
D90

MKWA0267E

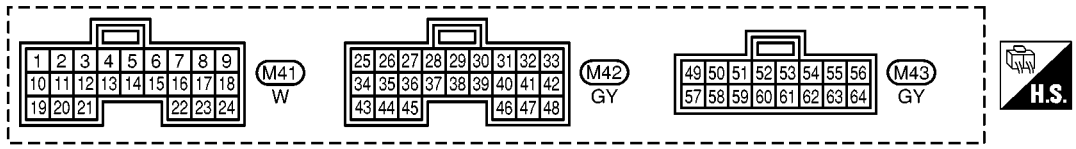
Wiring Diagram - ROOM/L -/RHD MODELS

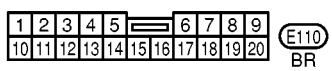
EKS004RD

LT-ROOM/L-04

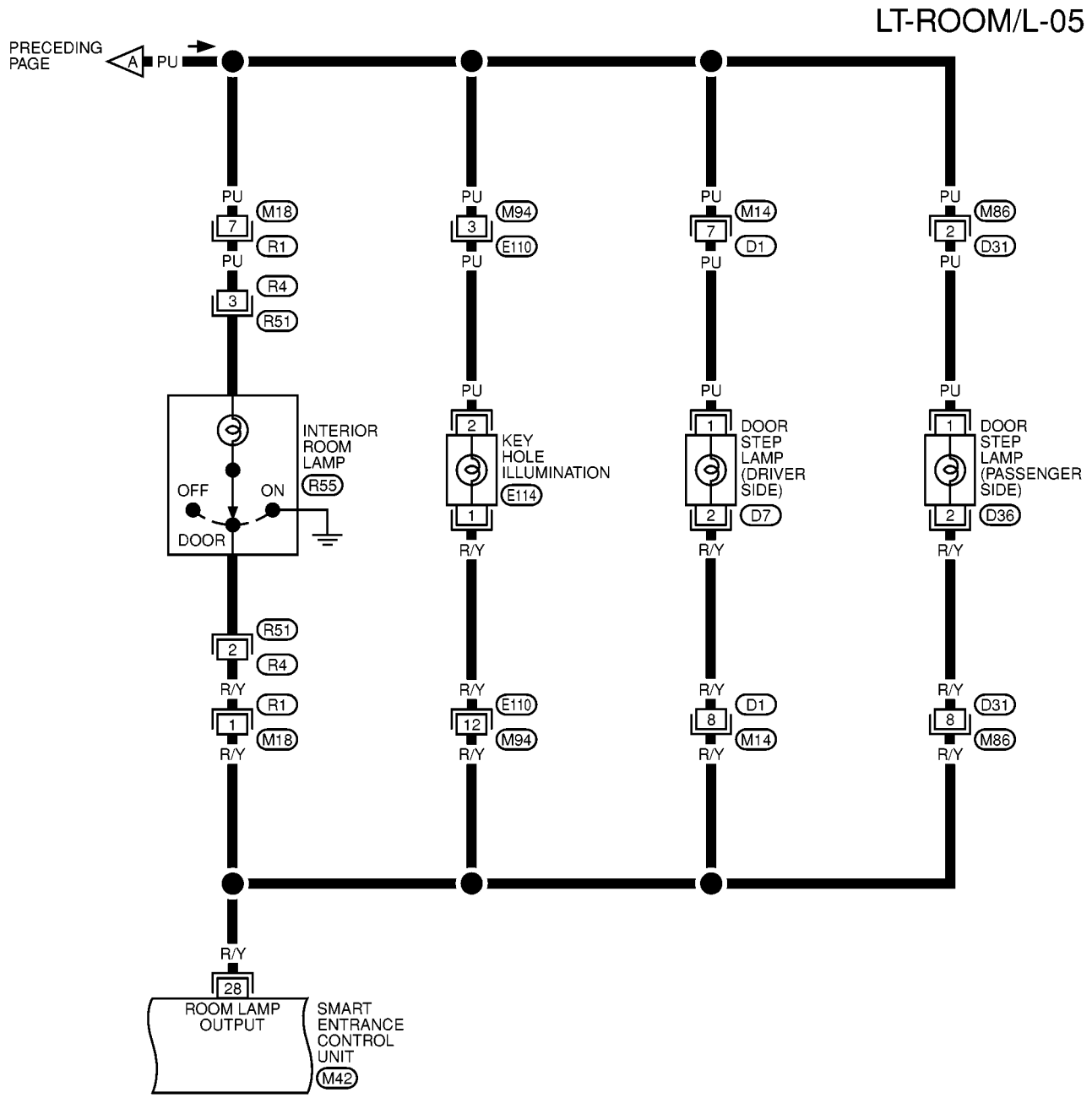


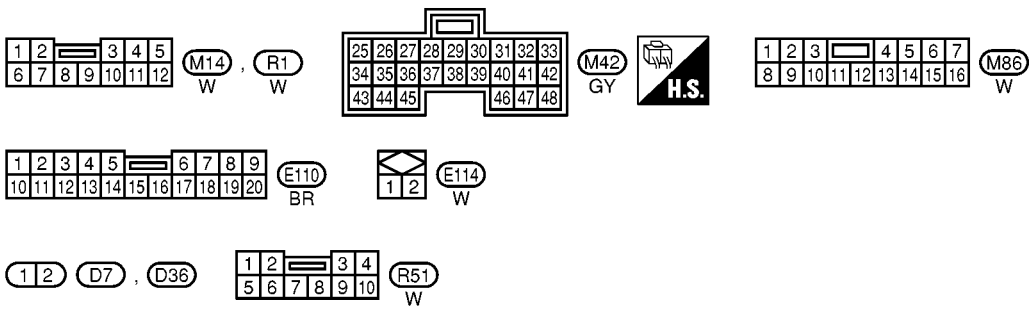
REFER TO THE FOLLOWING.
M1 , M2 , E106
-FUSE BLOCK-
JUNCTION BOX (J/B)





MKWA0268E


LT-ROOM/L-05
PRECEDING PAGE
A
PU
PU
7
M18
R1
PU
3
R4
R51
INTERIOR ROOM LAMP
R55
OFF
ON
DOOR
R51
2
R4
R/Y
1
R1
M18
R/Y
PU
3
M94
E110
PU
2
KEY HOLE ILLUMINATION
E114
1
R/Y
R/Y
12
E110
M94
R/Y
PU
7
M14
D1
PU
1
DOOR STEP LAMP (DRIVER SIDE)
2
D7
R/Y
R/Y
8
D1
M14
R/Y
PU
2
M86
D31
PU
1
DOOR STEP LAMP (PASSENGER SIDE)
2
D36
R/Y
R/Y
8
D31
M86
R/Y
R/Y
28
ROOM LAMP OUTPUT
SMART ENTRANCE CONTROL UNIT
M42


M14
W
R1
W
M42
GY
H.S.
M86
W
E110
BR
E114
W
D7
D36
R51
W

MKWA0269E

LT-ROOM/L-06

ES : WITH ESP/TCS/ABS CONTROL UNIT

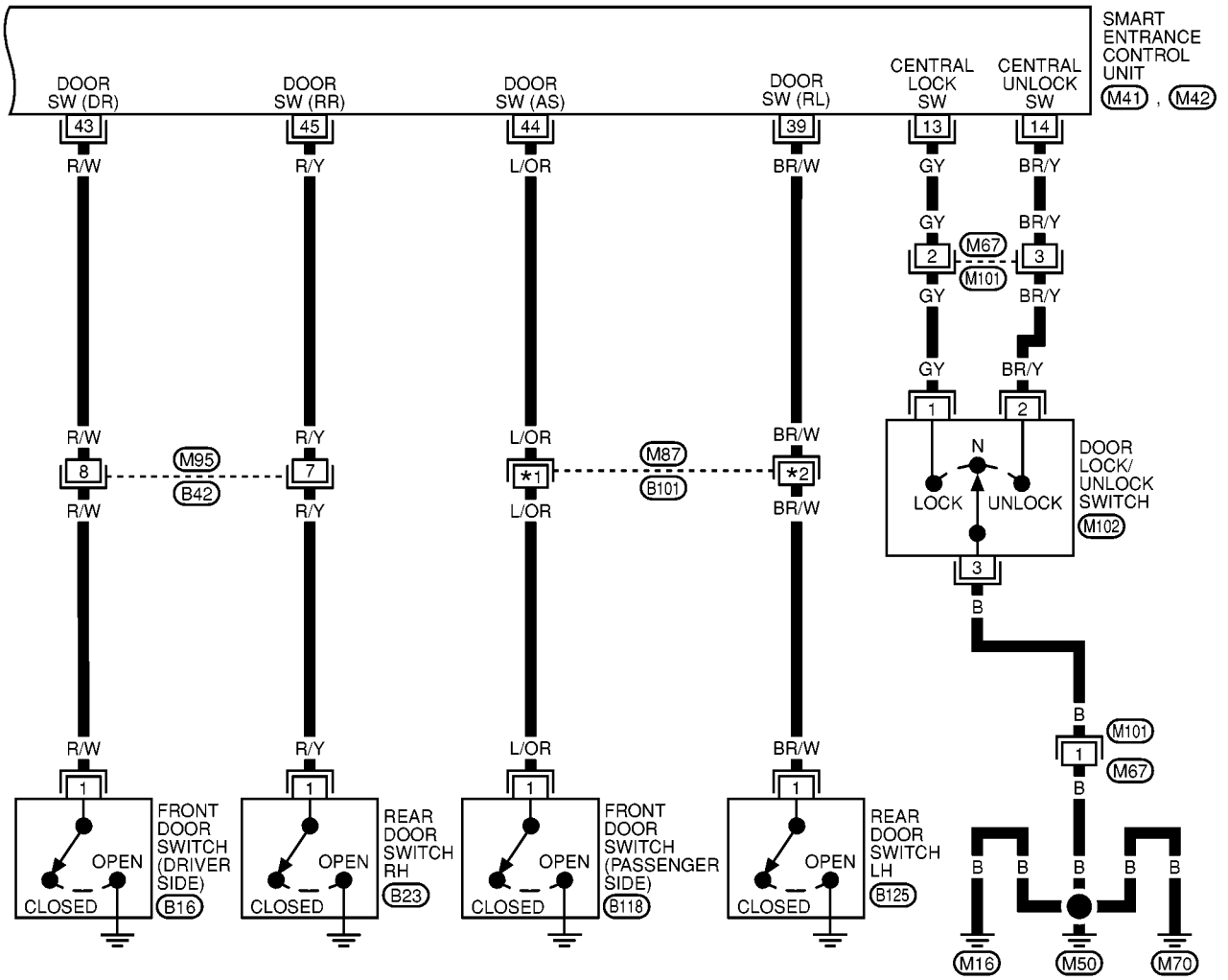
OE : WITHOUT ESP/TCS/ABS CONTROL UNIT

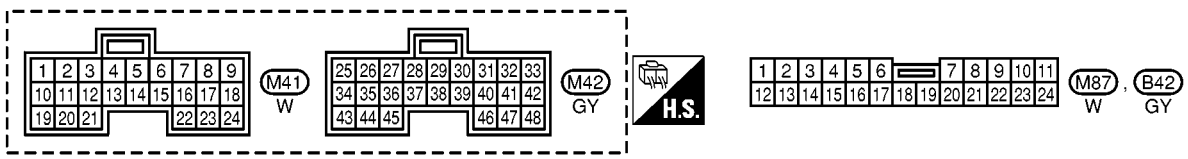
*1 11 : ES

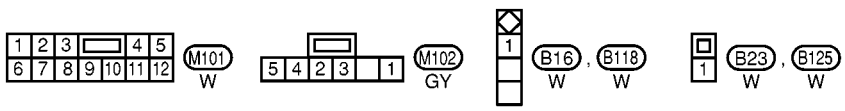
9 : OE

*2 24 : ES

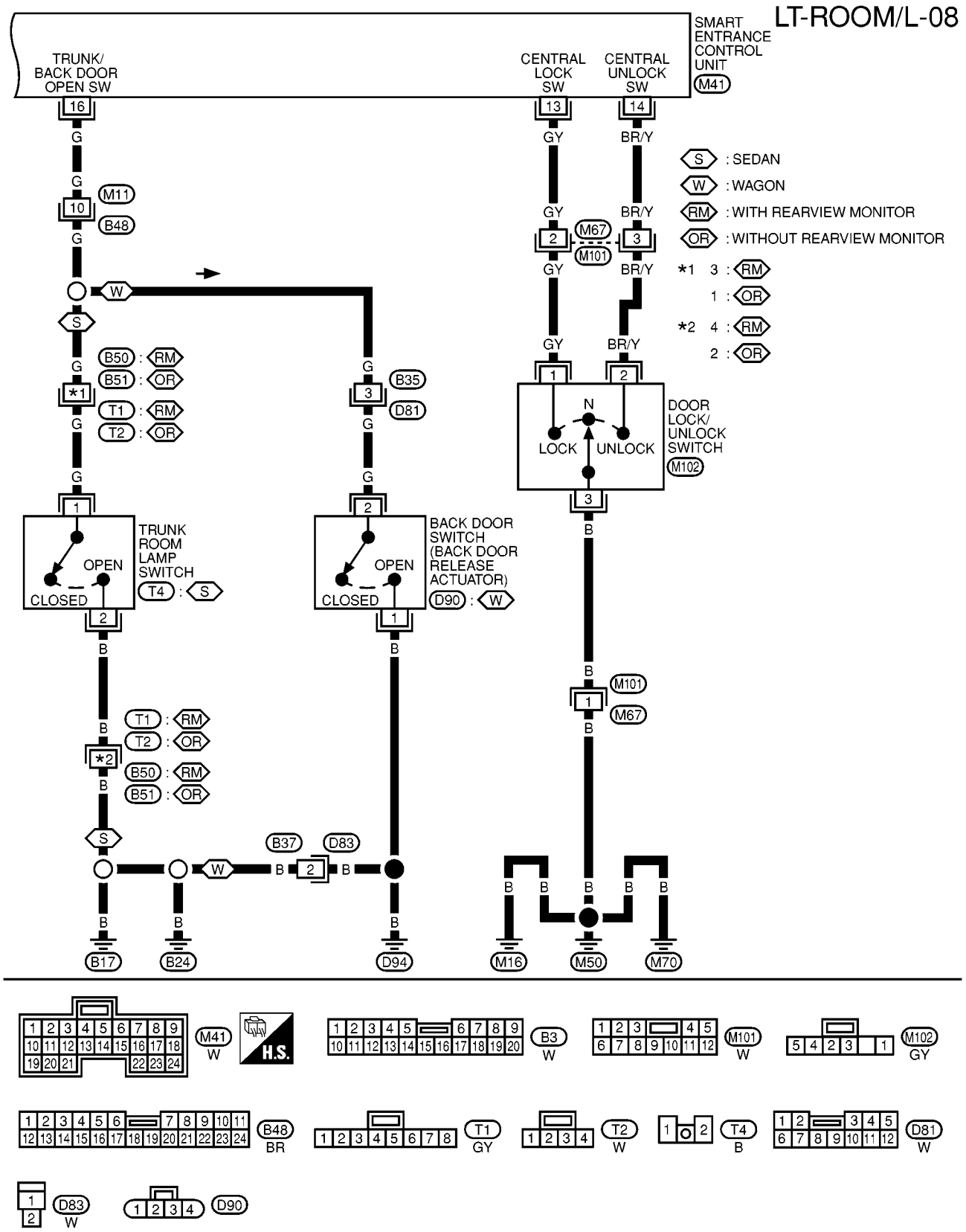
8 : OE







MKWA0270E


LT-ROOM/L-08
SMART ENTRANCE CONTROL UNIT
M41
TRUNK/ BACK DOOR OPEN SW
CENTRAL LOCK SW
CENTRAL UNLOCK SW
16
13
14
G
GY
BR/Y
M11
10
B48
M67
2
3
M101
S : SEDAN
W : WAGON
RM : WITH REARVIEW MONITOR
OR : WITHOUT REARVIEW MONITOR
*1 3 : RM
1 : OR
*2 4 : RM
2 : OR
W
S
B50 : RM
B51 : OR
*1
T1 : RM
T2 : OR
B35
3
D81
1
2
N
LOCK
UNLOCK
DOOR LOCK/ UNLOCK SWITCH
M102
TRUNK ROOM LAMP SWITCH
T4 : S
OPEN
CLOSED
BACK DOOR SWITCH (BACK DOOR RELEASE ACTUATOR)
D90 : W
B
*2
B37
D83
B17
B24
D94
M16
M50
M70

M41 W
H.S.
B3 W
M101 W
M102 GY
B48 BR
T1 GY
T2 W
T4 B
D81 W
D83 W
D90

MKWA0271E

Terminal and Reference Valve for Smart Entrance Control Unit

EKS00554

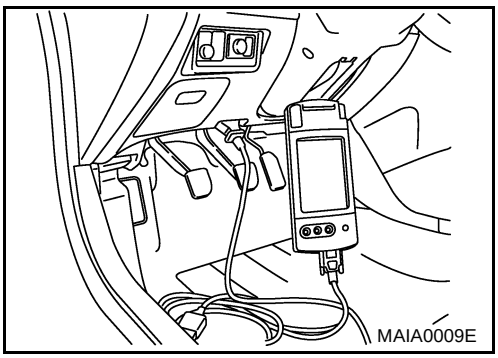
Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)
5	B/Y	Key switch	Ignition key Removed → Inserted	0V → 12V
13	G/Y	Door lock/unlock switches	Neutral → Locks	12V → 0V
14	BR/Y	Door lock/unlock switches	Neutral → Unlocks	12V → 0V
16	G	Trunk opener switch	Trunk opener switch: OFF → ON (Only when pressed)	12V → 0V
28	R/Y	Interior room lamp	When interior lamp is operated using remote controller (Lamp switch in “DOOR” position)	12V → 0V
29	Y/G	Ignition key switch	Ignition key is in “ON” position	12V
39	BR/W	Rear door switch (Passenger side)	Rear door LH or RH: Open → Closed	0V → 12V
43	R/W	Front door switch (Driver side)	Front door (Driver side): Open → Closed	12V → 0V
44	L/OR	Front door switch (Passenger side)	Front door (Passenger side): Open → Closed	0V → 12V
45	R/Y	Rear door switch (Driver side)	Rear door LH or RH: Open → Closed	0V → 12V
53	B	Ground	—	0V
56	R/B	Power source	—	12V

CONSULT-II Inspection Procedure

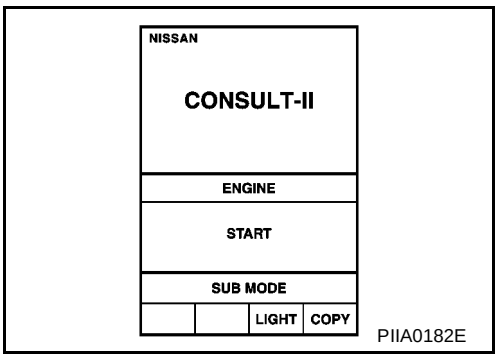
EKS00555

“ROOM LAMP”

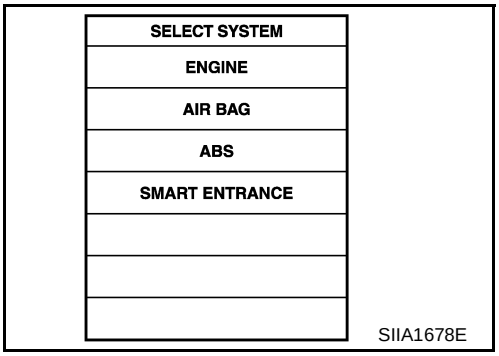
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



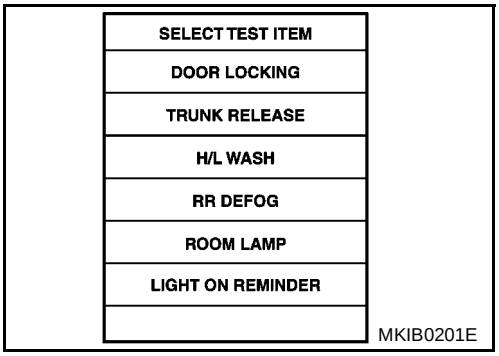
3. Turn ignition switch “ON”.
4. Touch “START”.



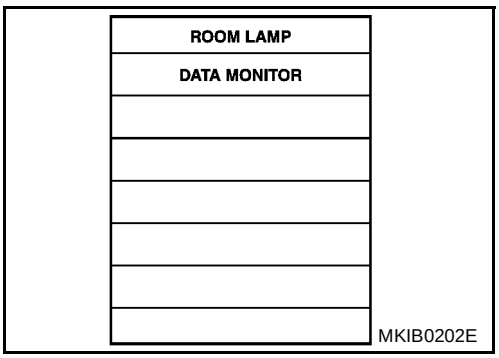
5. Touch “SMART ENTRANCE”.



6. Touch “ROOM LAMP”.



7. Select diagnosis mode.
“DATA MONITOR” are available for “ROOM LAMP”.



CONSULT-II Application Items

EKS00556

ROOM LAMP

Data Monitor Mode

Item (CONSULT-II screen terms)	Diagnosed system
IGNITION SW	Indicates [ON/OFF] condition of ignition switch.
KEY IN DETECT	Indicates [ON/OFF] condition of electronic 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 door lock/unlock switch (lock signal).
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock/unlock switch (unlock signal).
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.

Interior Room Lamp Timer Does Not Operate

EKS0054U

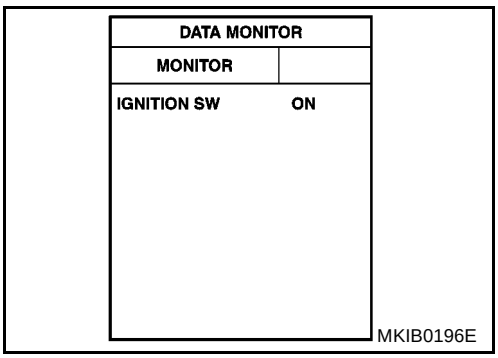
1. CHECK IGNITION ON SIGNAL

WITH CONSULT-II

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

When ignition switch is ON: IGNITION SW ON

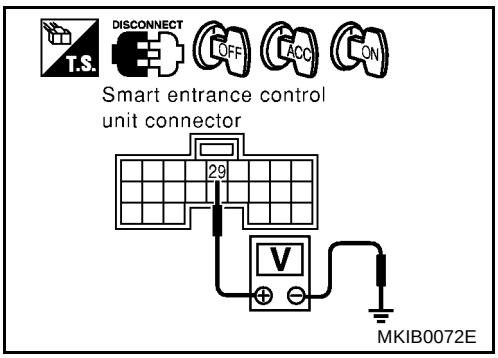
When ignition switch is OFF: IGNITION SW OFF



WITHOUT CONSULT-II

1. Disconnect smart entrance control unit.
2. Check voltage between smart entrance control unit harness connector terminal 29 and ground.

Terminals			Ignition switch position		
(+)		(–)	OFF	ACC	ON
Connector	Terminal (wire color)				
M42	29 (Y/G)	Ground	0V	0V	Battery voltage



OK or NG

OK >> GO TO 2.

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

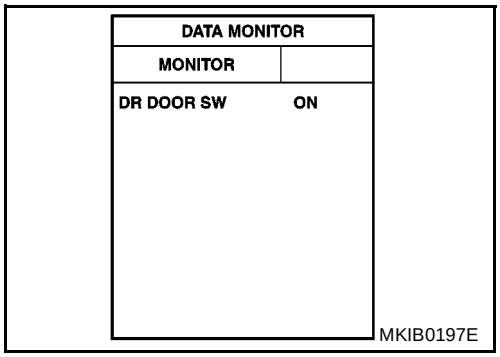
2. CHECK DOOR SWITCH INPUT SIGNAL

WITH CONSULT-II

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

When driver′s door switch is open: DR DOOR SW ON

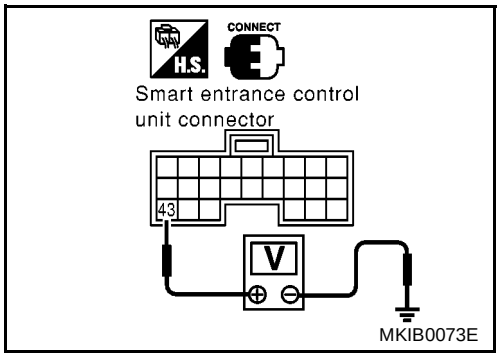
When driver′s door switch is closed: DR DOOR SW OFF



WITHOUT CONSULT-II

1. Connect smart entrance control unit connector.
2. Check voltage between smart entrance control unit harness connector terminal 43 (R/W) and ground.

Condition	Voltage (V)
Driver′s door is open.	0
Driver′s door is closed.	Approx. 3



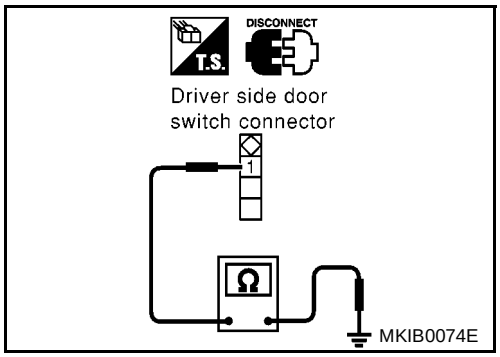
OK or NG

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

3. CHECK DRIVER SIDE DOOR SWITCH

1. Disconnect smart entrance control unit connector.
2. Check continuity between front door switch (driver side) terminal 1 and ground.

	Terminals	Condition	Continuity
Door switch	1 - Ground	Closed	No
		Open	Yes



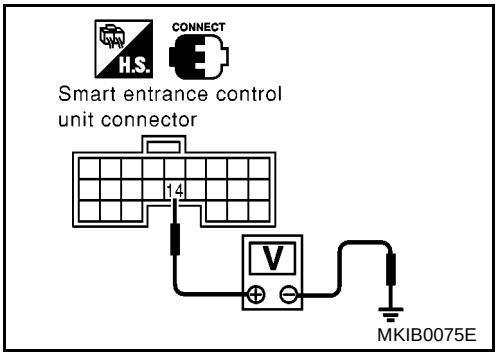
OK or NG

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

4. CHECK CENTRAL UNLOCK INPUT SIGNAL

Check voltage between smart entrance control unit harness connector.

Terminals			Condition (Driver's door)	Voltage [V]
(+)		(–)		
Connector	Terminal (wire color)			
M41	14 (BR/Y)	Ground	Locked	Approx. 0.5
			Open	0



OK or NG

OK >> GO TO 6.
NG >> GO TO 5.

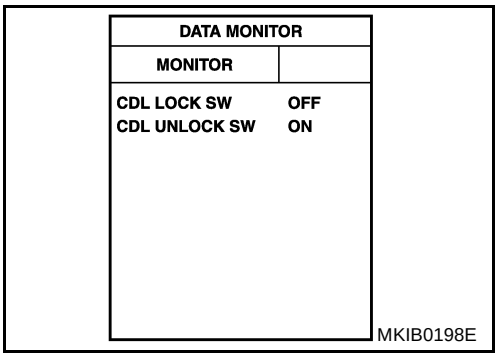
5. CHECK DOOR LOCK/UNLOCK SWITCH

WITH CONSULT-II

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

When door lock/unlock is locked: **CDL LOCK SW ON, CDL UNLOCK SW OFF**

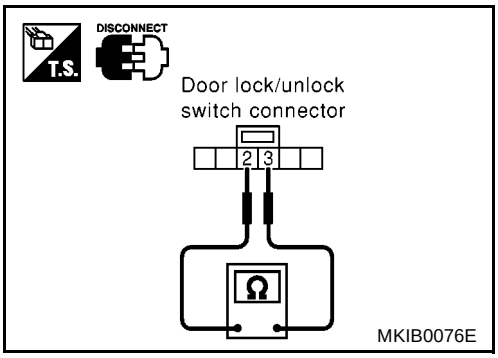
When door lock/unlock is unlocked: **CDL LOCK SW OFF, CDL UNLOCK SW ON**



WITHOUT CONSULT-II

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

Condition	Continuity
Door lock/unlock switch is locked.	No
Door lock/unlock switch is unlocked.	Yes



OK or NG

OK >> Check harness for open or short between smart entrance control unit and door lock/unlock switch.
NG >> Replace lock/unlock switch.

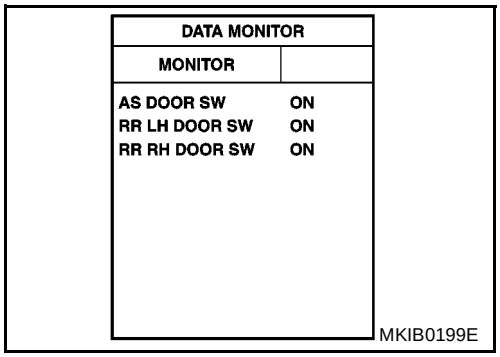
6. CHECK OTHER DOORS SWITCHES INPUT SIGNAL

WITH CONSULT-II

Check other doors switch signal (“AS DOOR SW”, “RR DOOR SW” or “RR RH DOOR SW”) in “DATA MONITOR” mode with CONSULT-II.

When each doors is open: EACH DOOR SW ON

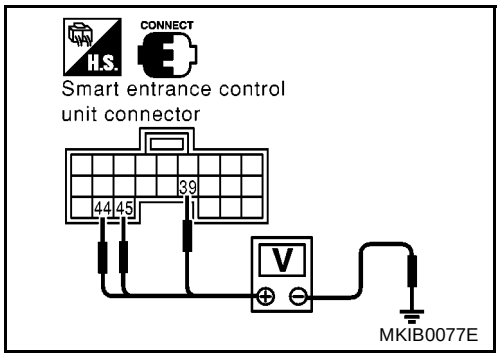
When each doors is closed: EACH DOOR SW OFF



WITHOUT CONSULT-II

Check voltage between smart entrance control unit and ground.

Terminals			Condition (Driver’s side)	Voltage [V]
(+)		(–)		
Connector	Terminal (wire color)			
M42	39 (BR/W)	Ground	Locked	Approx. 0.5
			Open	0
	44 (L/OR)	Ground	Locked	Approx. 3
			Open	0
	45 (R/Y)	Ground	Locked	Approx. 0.5
			Open	0



OK or NG

OK >> GO TO 8.
NG >> GO TO 7.

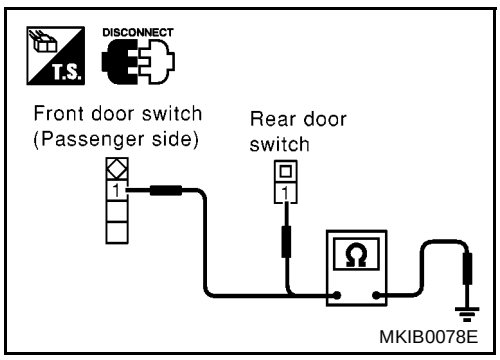
7. CHECK DOOR SWITCHES

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminal 1 and ground.

	Terminals	Condition	Continuity
Door switches	1 - Ground	Closed	No
		Open	Yes

OK or NG

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



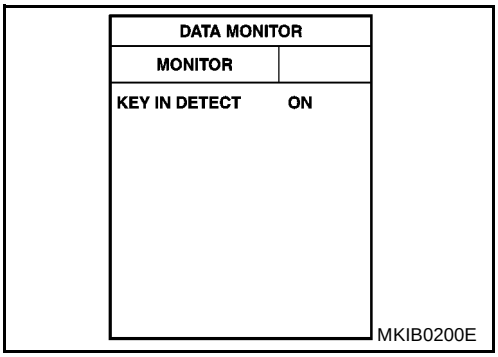
8. CHECK KEY SWITCH INPUT SIGNAL

WITH CONSULT-II

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

When key is inserted: KEY IN DETECT ON

When key is removed: KEY IN DETECT OFF



WITHOUT CONSULT-II

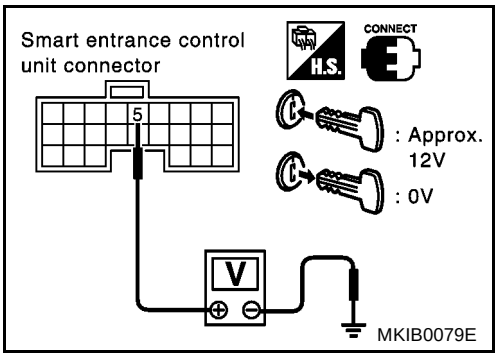
Check voltage between smart entrance control unit harness connector terminal 5 (B/R) and ground.

Condition	Voltage (V)
Key is inserted.	Approx. 12
Key is removed.	0

OK or NG

OK >> Replace smart entrance control unit.

NG >> GO TO 9.



9. CHECK KEY SWITCH (INSERT)

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

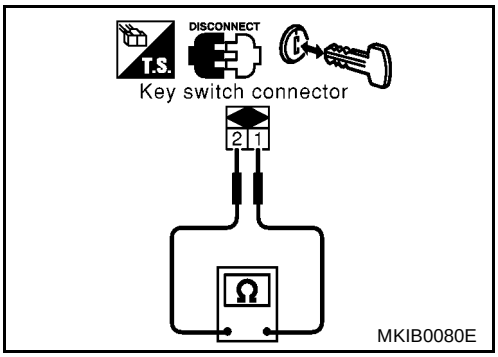
Condition	Continuity
Key is inserted.	Yes
Key is removed.	No

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.



Interior Room Lamp Timer Does Not Cancel

EKS0054V

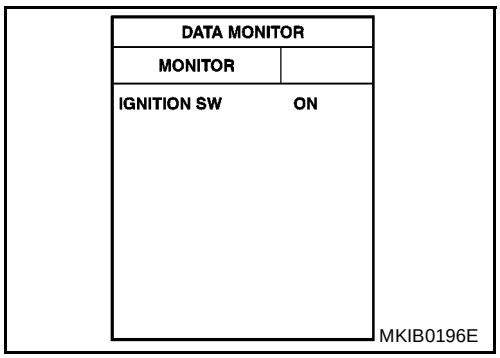
1. CHECK IGNITION ON SIGNAL

WITH CONSULT-II

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

When ignition switch is ON: IGNITION SW ON

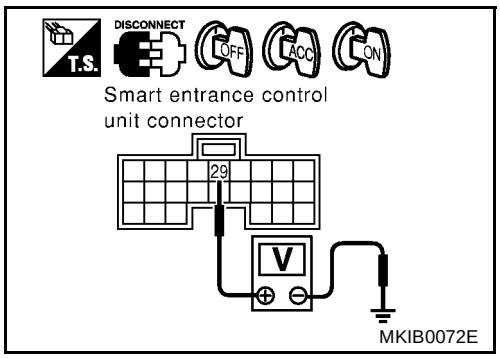
When ignition switch is OFF: IGNITION SW OFF



WITHOUT CONSULT-II

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

Terminals			Ignition switch position		
(+)		(–)	OFF	ACC	ON
Connector	Terminal (wire color)				
M42	29 (Y/G)	Ground	0V	0V	Battery voltage



OK or NG

OK >> GO TO 2.

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

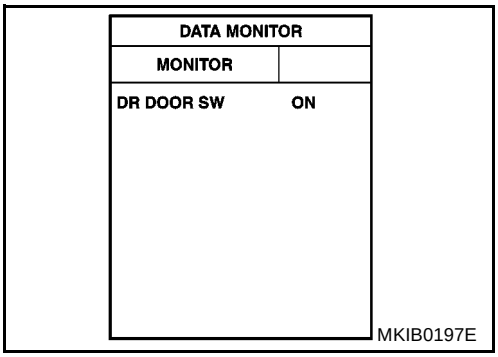
2. CHECK DOOR SWITCH INPUT SIGNAL

WITH CONSULT-II

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

When driver′s door switch is open: DR DOOR SW ON

When driver′s door switch is closed: DR DOOR SW OFF



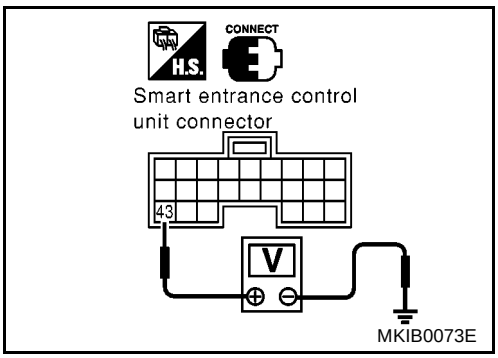
WITHOUT CONSULT-II

1. Connect smart entrance control unit connector.
2. Check voltage between smart entrance control unit harness connector terminal 43 (R/W) and ground.

Condition	Voltage (V)
Driver′s door is open.	0
Driver′s door is closed.	Approx. 3

OK or NG

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



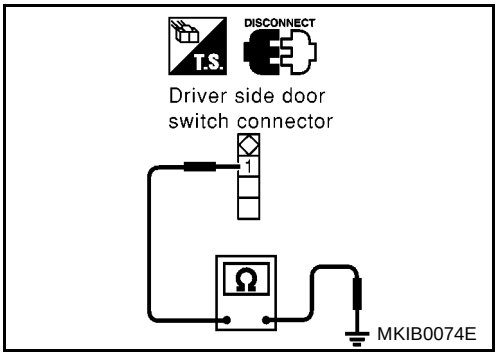
3. CHECK DRIVER SIDE DOOR SWITCH

1. Disconnect smart entrance control unit connector.
2. Check continuity between front door switch (driver side) terminal 1 and ground.

	Terminals	Condition	Continuity
Door switch	1 - Ground	Closed	No
		Open	Yes

OK or NG

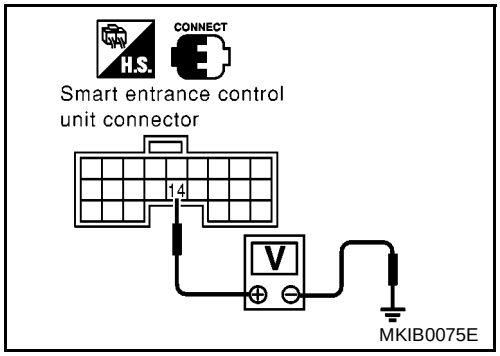
OK >> Check harness for open or short between smart entrance control unit and driver side door switch.
NG >> Replace driver side door switch.



4. CHECK CENTRAL UNLOCK INPUT SIGNAL

Check voltage between smart entrance control unit harness connector.

Terminals			Condition (Driver's door)	Voltage [V]
(+)		(–)		
Connector	Terminal (wire color)			
M41	14 (BR/Y)	Ground	Locked	Approx. 0.5
			Open	0



OK or NG

OK >> GO TO 6.
NG >> GO TO 5.

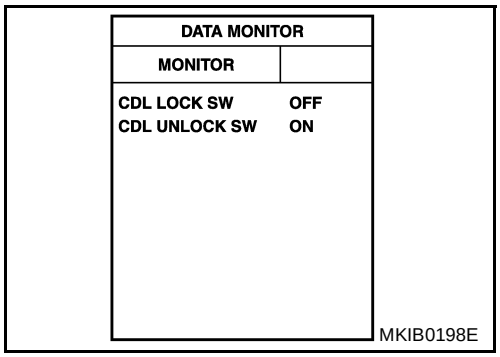
5. CHECK DOOR LOCK/UNLOCK SWITCH

WITH CONSULT-II

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

When door lock/unlock is locked: **CDL LOCK SW ON, CDL UNLOCK SW OFF**

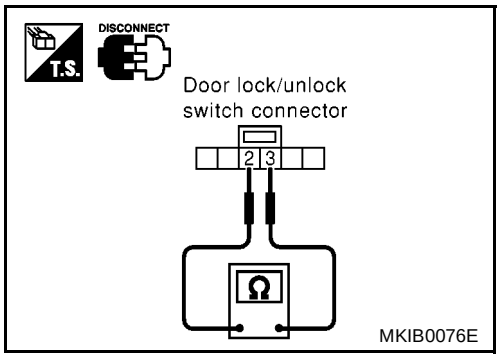
When door lock/unlock is unlocked: **CDL LOCK SW OFF, CDL UNLOCK SW ON**



WITHOUT CONSULT-II

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

Condition	Continuity
Door lock/unlock switch is locked.	No
Door lock/unlock switch is unlocked.	Yes



OK or NG

OK >> Check harness for open or short between smart entrance control unit and door lock/unlock switch.
NG >> Replace lock/unlock switch.

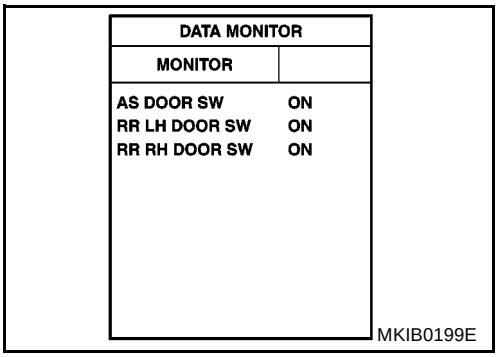
6. CHECK OTHER DOORS SWITCHES INPUT SIGNAL

WITH CONSULT-II

Check other doors switch signal (“AS DOOR SW”, “RR DOOR SW” or “RR RH DOOR SW”) in “DATA MONITOR” mode with CONSULT-II.

When each doors is open: EACH DOOR SW ON

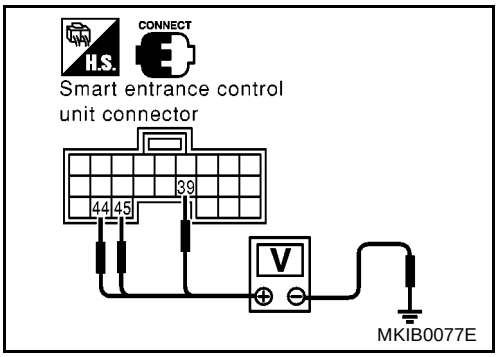
When each doors is closed: EACH DOOR SW OFF



WITHOUT CONSULT-II

Check voltage between smart entrance control unit and ground.

Terminals			Condition (Driver’s side)	Voltage [V]
(+)		(–)		
Connector	Terminal (wire color)			
M42	39 (BR/W)	Ground	Locked	Approx. 0.5
			Open	0
	44 (L/OR)	Ground	Locked	Approx. 3
			Open	0
	45 (R/Y)	Ground	Locked	Approx. 0.5
			Open	0



OK or NG

OK >> GO TO 8.
NG >> GO TO 7.

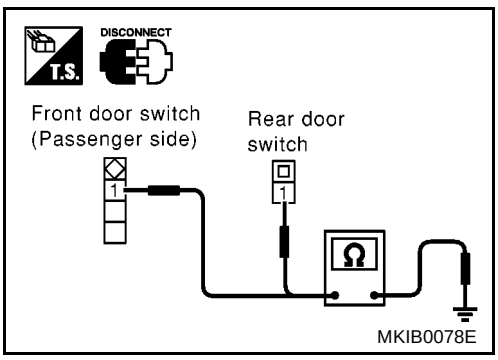
7. CHECK DOOR SWITCHES

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminal 1 and ground.

	Terminals	Condition	Continuity
Door switches	1 - Ground	Closed	No
		Open	Yes

OK or NG

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



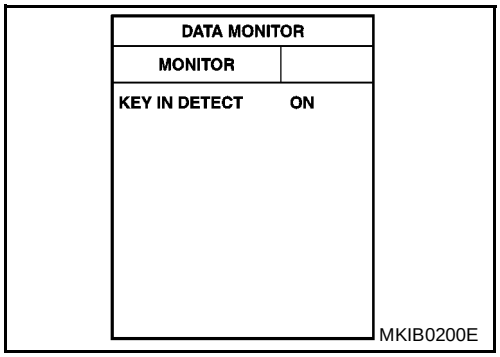
8. CHECK KEY SWITCH INPUT SIGNAL

WITH CONSULT-II

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

When key is inserted: KEY IN DETECT ON

When key is removed: KEY IN DETECT OFF



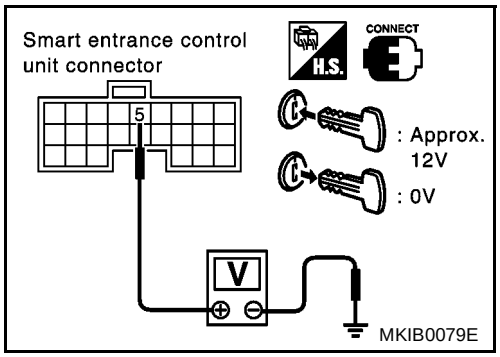
WITHOUT CONSULT-II

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

Condition	Voltage (V)
Key is inserted.	Approx. 12
Key is removed.	0

OK or NG

OK >> Replace smart entrance control unit.
NG >> GO TO 9.



9. CHECK KEY SWITCH (INSERT)

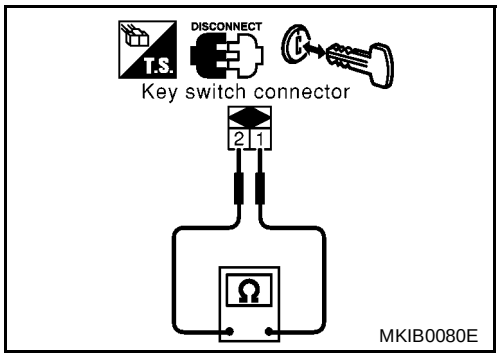
1. Disconnect key switch connector.
2. Check continuity between 1 and 2.

Condition	Continuity
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.



Bulb Replacement

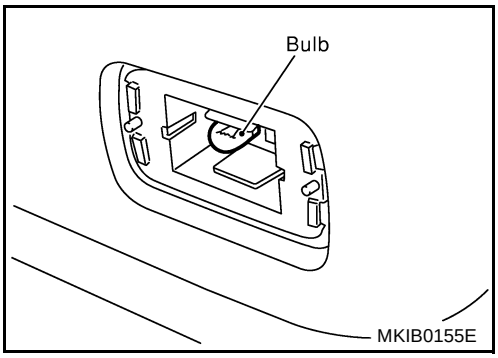
EKS0054W

INTERIOR ROOM LAMP

Refer to LT-123, "SPOT LAMP" .

STEP LAMP

1. Remove the lens using a clip driver or a suitable tool.
2. Remove the bulb.



ASHTRAY

Removal and installation, refer to LT-119, "ASHTRAY" .

Removal and Installation

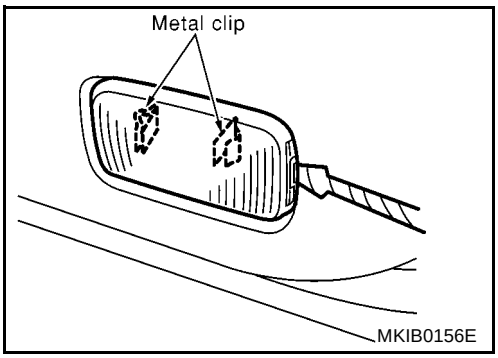
EKS0054X

INTERIOR ROOM LAMP

Refer to LT-123, "SPOT LAMP" .

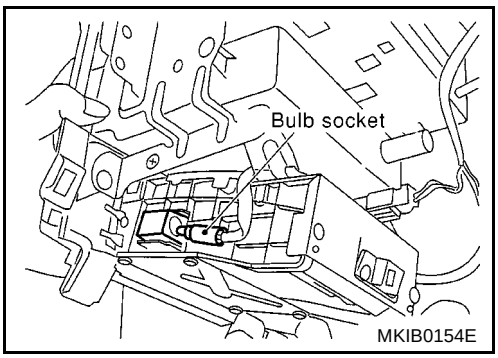
STEP LAMP

1. Using a clips driver or a suitable tool, press and remove the metal clip of the step lamp.
2. Disconnect the interior step lamp connector.



ASHTRAY

1. Remove the A/T finisher. Refer to IP-3, "INSTRUMENT PANEL ASSEMBLY"
2. Remove the console box (front, rear).
3. Remove the instrument finisher E.
4. Remove the cluster lid C.
5. Remove the audio assembly.
6. Turn the bulb socket counterclockwise and unlock it.

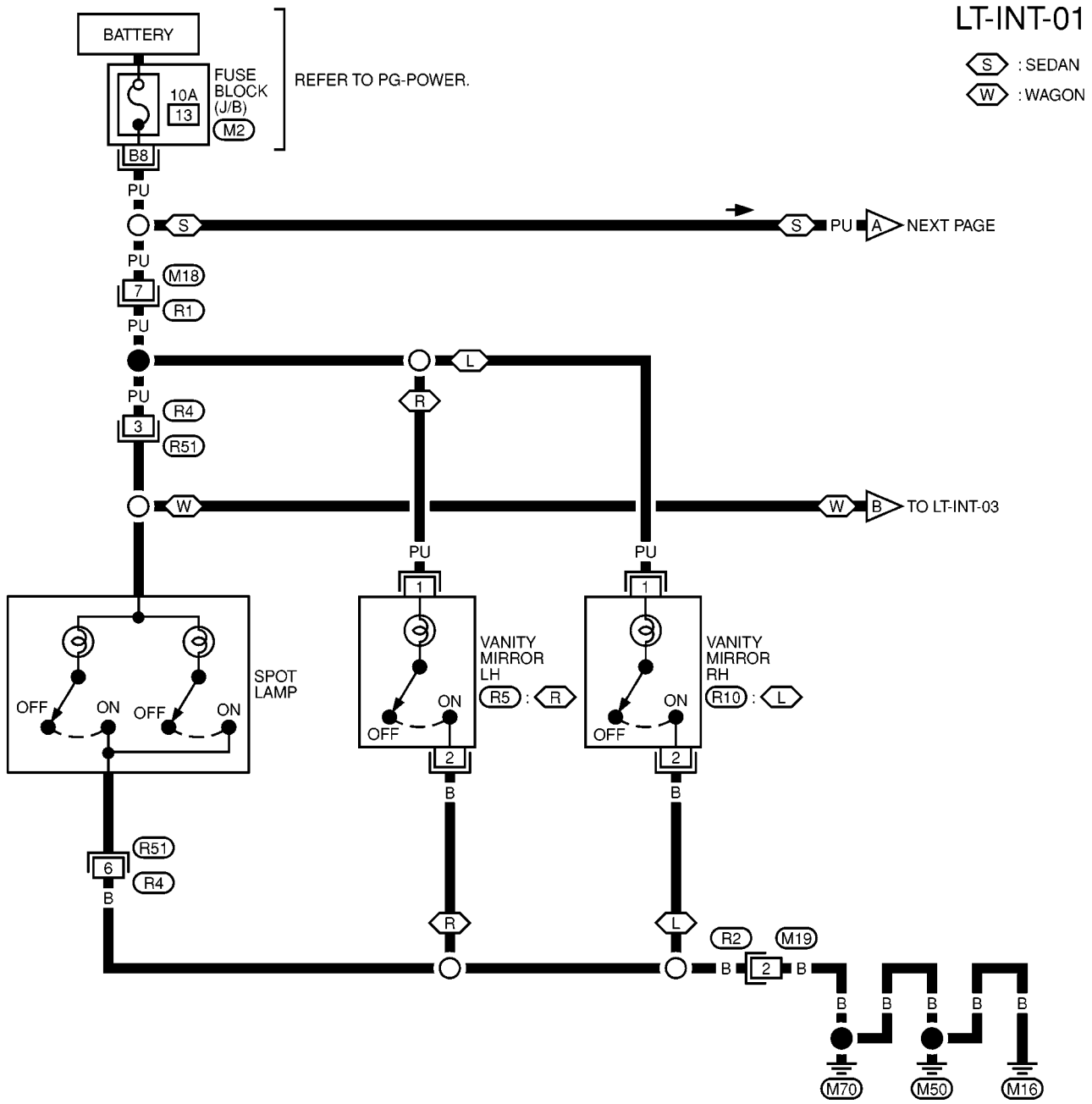


SPOT, VANITY MIRROR AND TRUNK (LUGGAGE) ROOM LAMPS

PFP:26470

Wiring Diagram — INT/L —

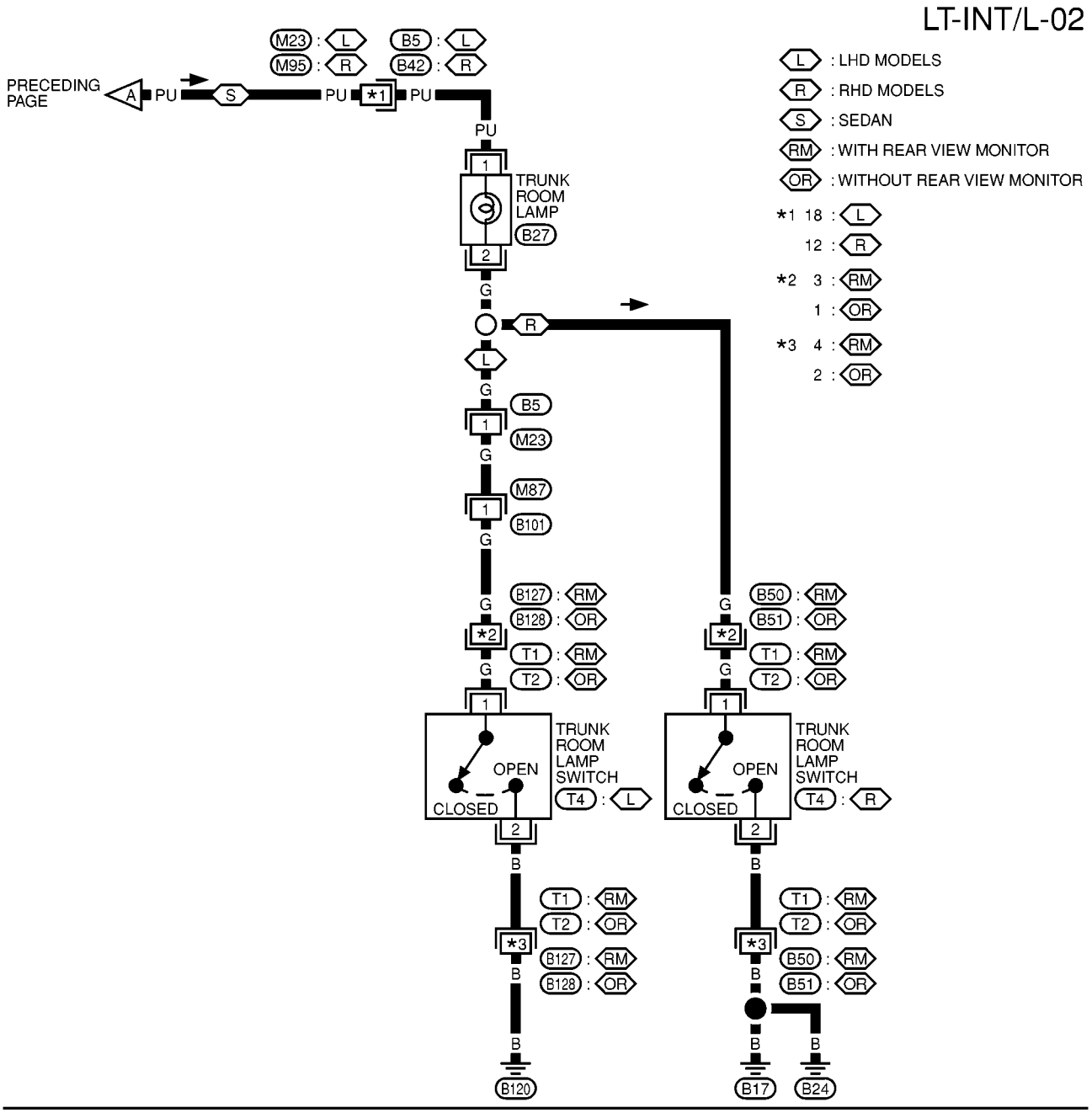
EKS004TZ

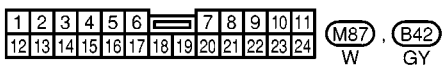


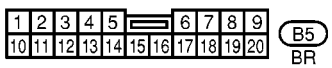
R1 W | R2 W | R5 B, R10 B | R51 W

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

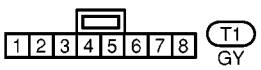
MKWA0272E

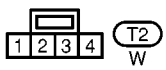

LT-INT/L-02
M23 : L
M95 : R
B5 : L
B42 : R
PRECEDING PAGE
A
PU
S
*1
TRUNK ROOM LAMP
B27
G
R
L
B5
M23
M87
B101
B127 : RM
B128 : OR
*2
T1 : RM
T2 : OR
TRUNK ROOM LAMP SWITCH
OPEN
CLOSED
T4 : L
T4 : R
B50 : RM
B51 : OR
*3
B
B120
B17
B24
: LHD MODELS
: RHD MODELS
: SEDAN
RM : WITH REAR VIEW MONITOR
OR : WITHOUT REAR VIEW MONITOR
*1 18 : L
12 : R
*2 3 : RM
1 : OR
*3 4 : RM
2 : OR

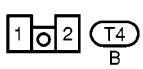

M87
W
B42
GY


B5
BR

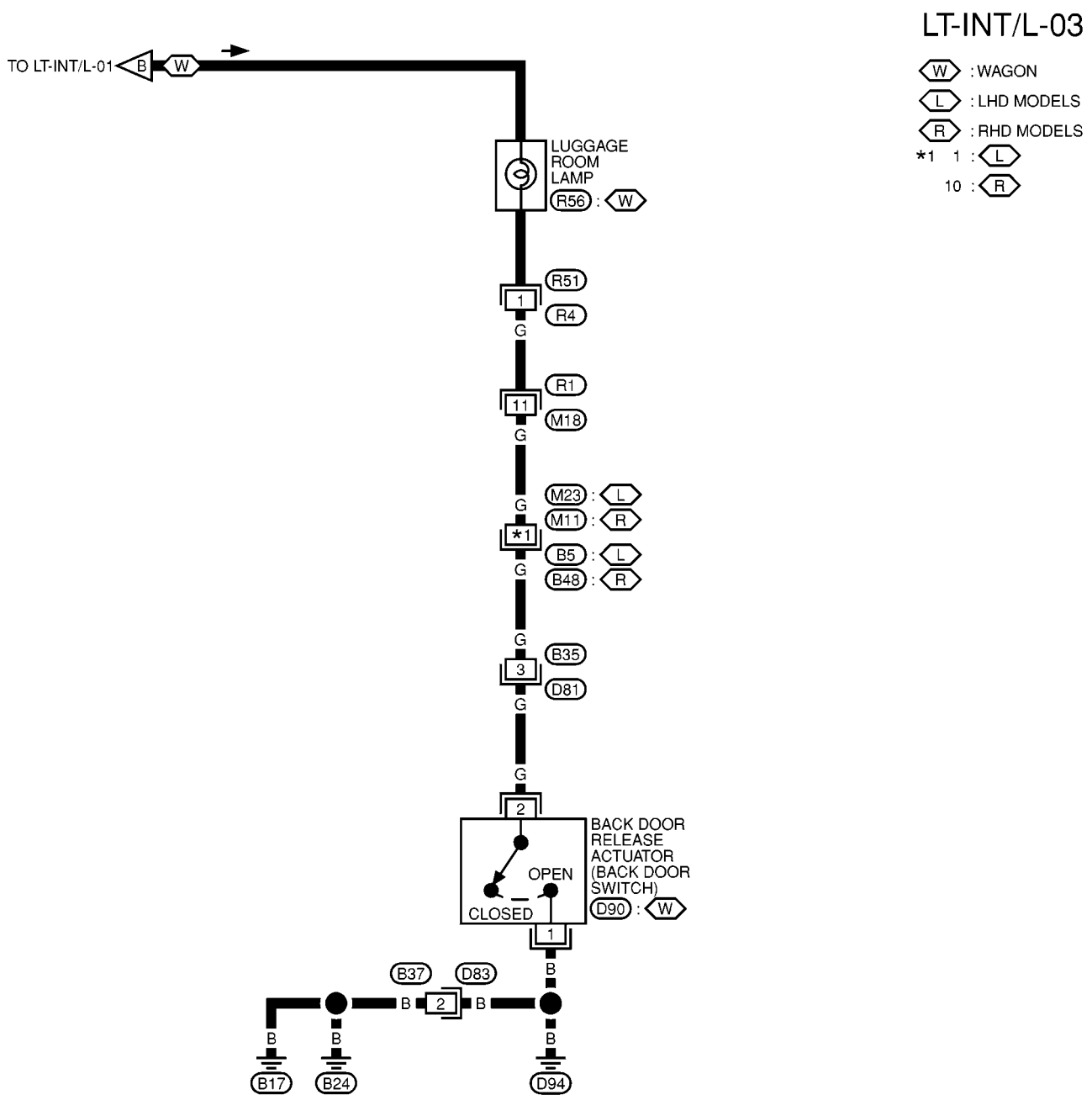

B27
W

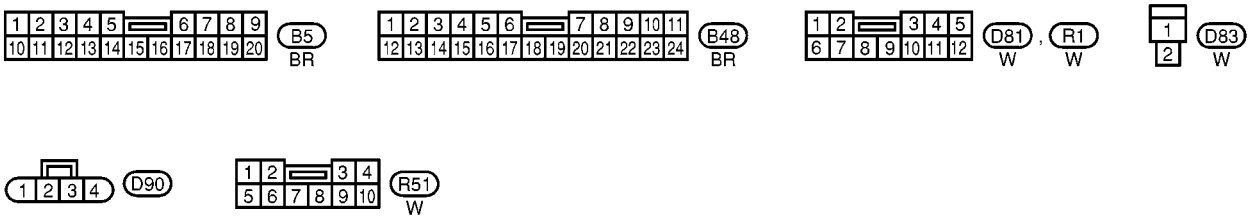

T1
GY


T2
W


T4
B

MKWA0273E


LT-INT/L-03
W : WAGON
L : LHD MODELS
R : RHD MODELS
*1 1 : L
10 : R
TO LT-INT/L-01
B
W
LUGGAGE ROOM LAMP
R56 : W
R51
1
R4
G
R1
11
M18
M23 : L
M11 : R
*1
B5 : L
B48 : R
B35
3
D81
2
BACK DOOR RELEASE ACTUATOR (BACK DOOR SWITCH)
OPEN
CLOSED
D90 : W
B37
D83
B17
B24
D94


B5
BR
B48
BR
D81
W
R1
W
D83
W
D90
R51
W

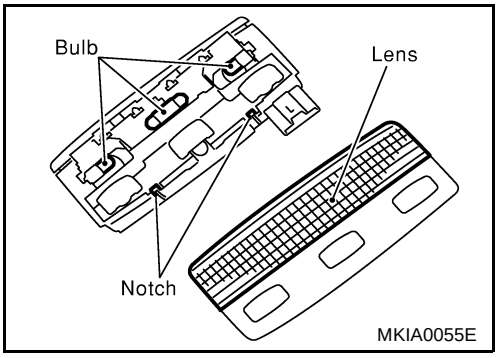
MKWA0274E

Bulb Replacement

EKS004U0

SPOT LAMP

1. Remove the lens using a clip driver or a suitable tool.
2. Remove the bulb.



Interior room lamp	**: 12V - 7W**
Spot lamp	**: 12V - 5W**

TRUNK ROOM LAMP

Removal and instalation, refer to LT-123, "TRUNK ROOM LAMP" .

Trunk room lamp	**: 12V - 3.4W**

LUGGAGE ROOM LAMP

Removal and installation, refer to LT-124, "LUGGAGE ROOM LAMP" .

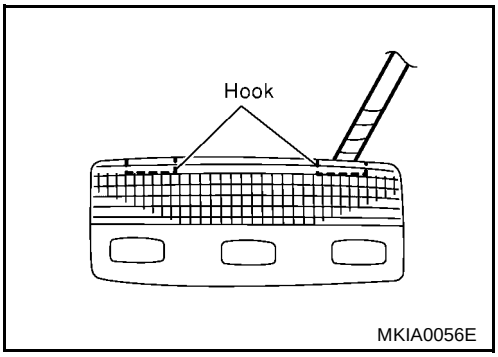
Luggage room lamp	**: 12V - 10W**

Removal and Installation

EKS004U1

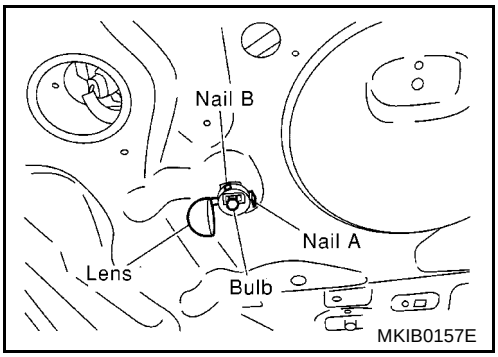
SPOT LAMP

1. Using a clips driver or a suitable tool, press and remove the hook of the spot lamp.
2. Disconnect the spot lamp connector.



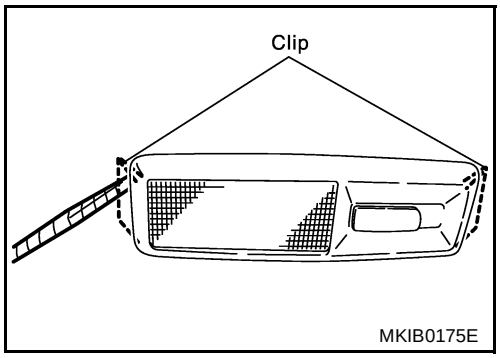
TRUNK ROOM LAMP

1. Remove the lens disengage nail A.
2. Pushing the nail B, remove the trunk room lamp.
3. Disconnect the trunk room lamp connector.



LUGGAGE ROOM LAMP

1. Using a clips driver or a suitable tool. Press and remove the clip of the luggage room lamp.
2. Disconnect the luggage room lamp connector.



CAN COMMUNICATION

PFP:23710

System Description

EKS00557

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

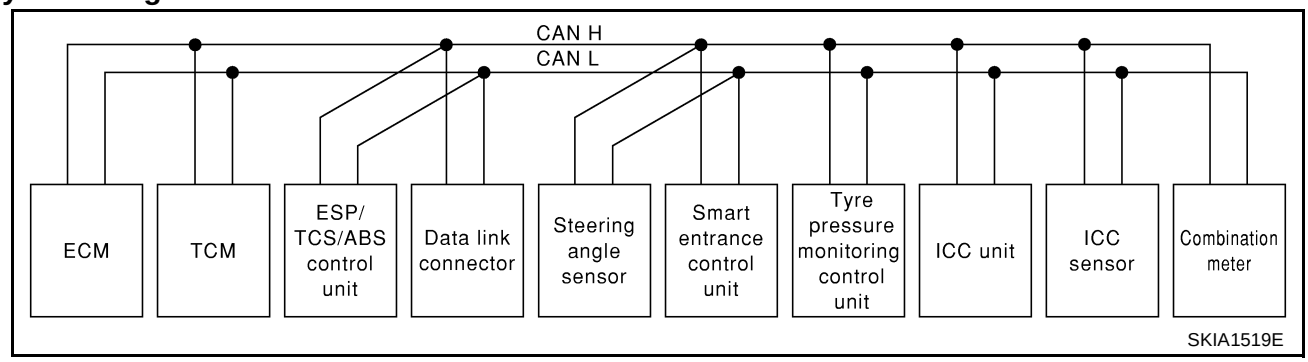
EKS00558

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	LT-126, "TYPE 1"	LT-127, "TYPE 2"	LT-128, "TYPE 3"	LT-129, "TYPE 4"	LT-130, "TYPE 5"	LT-131, "TYPE 6"			
Can system Trouble diagnosis	LAN-36, "CAN SYSTEM (TYPE 1)"	LAN-63, "CAN SYSTEM (TYPE 2)"	LAN-83, "CAN SYSTEM (TYPE 3)"	LAN-102, "CAN SYSTEM (TYPE 4)"	LAN-121, "CAN SYSTEM (TYPE 5)"	LAN-138, "CAN SYSTEM (TYPE 6)"			

TYPE 1

System diagram



Input/output signal chart

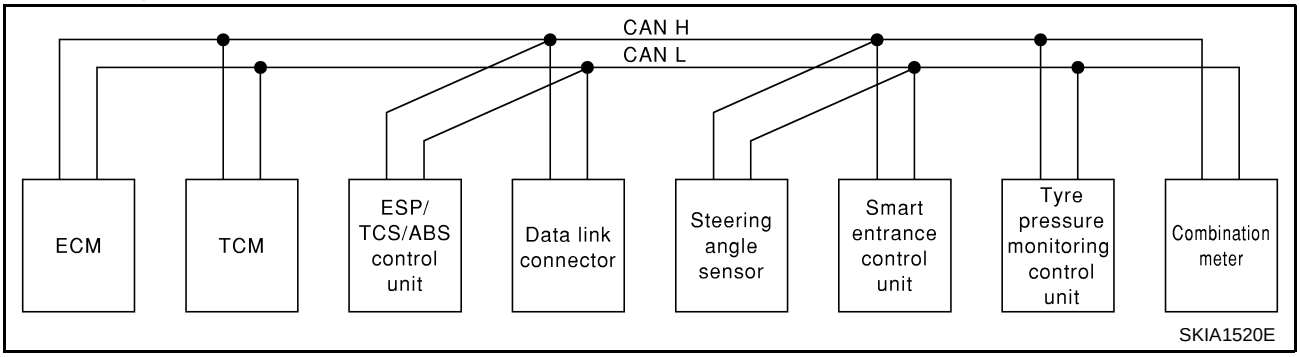
T: Transmit R: Receive

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

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
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 2

System diagram



Input/output signal chart

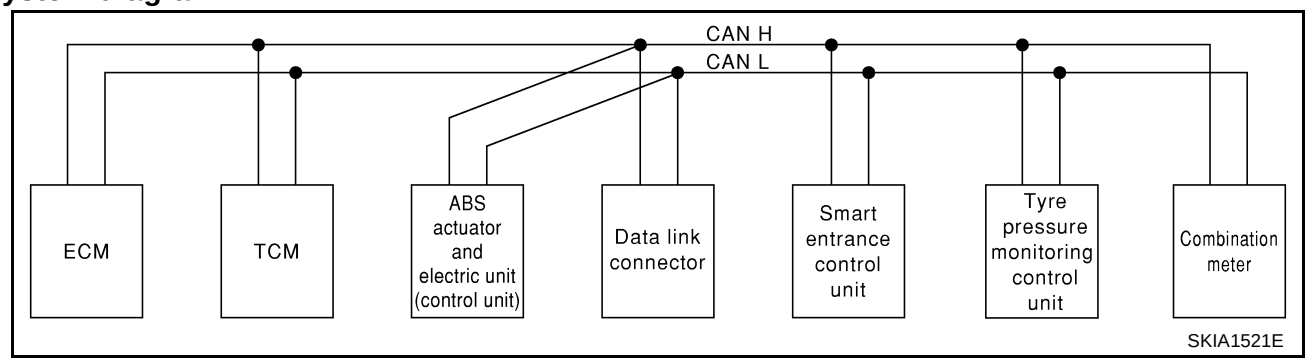
T: Transmit R: Receive

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

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring 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

TYPE 3

System diagram



Input/output signal chart

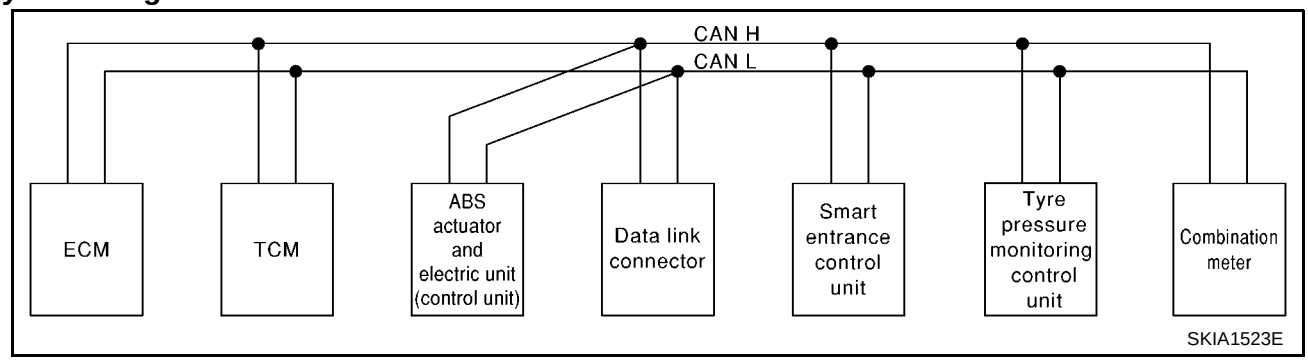
T: Transmit R: Receive

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

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
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 4

System diagram



Input/output signal chart

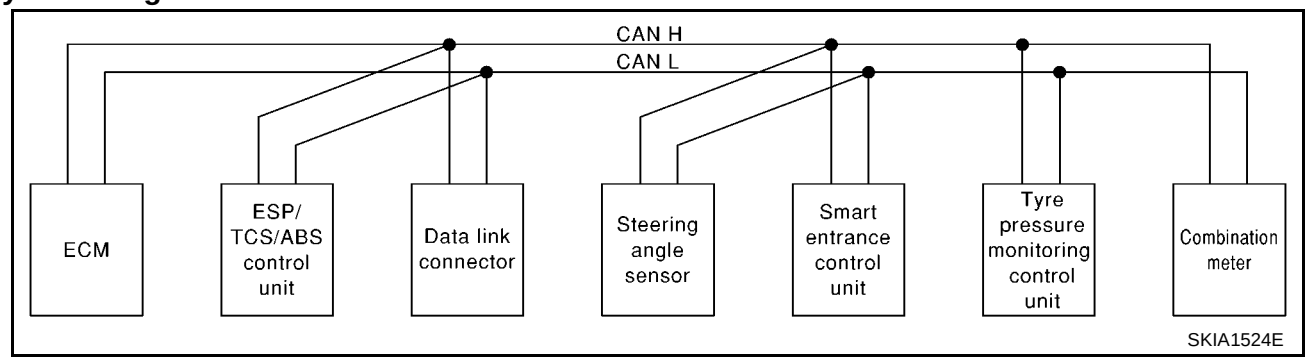
T: Transmit R: Receive

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

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
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 5

System diagram



Input/output signal chart

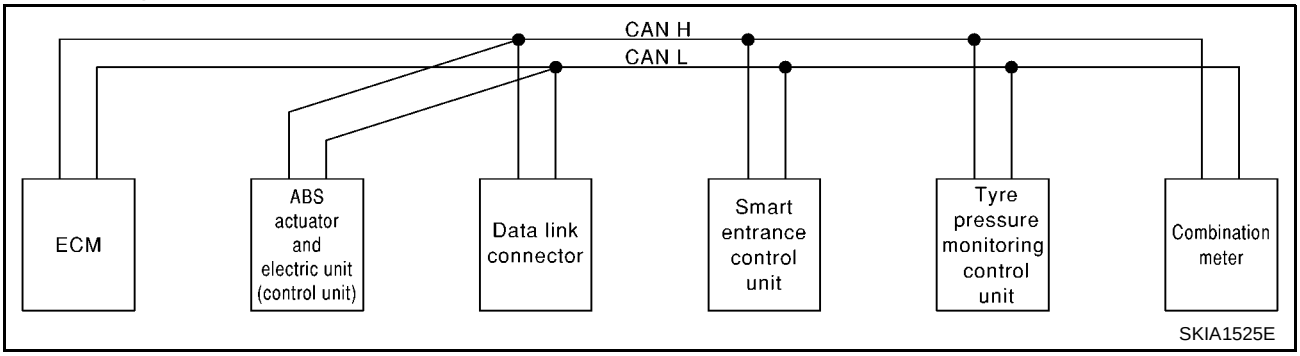
T: Transmit R: Receive

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

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	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 6

System diagram



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

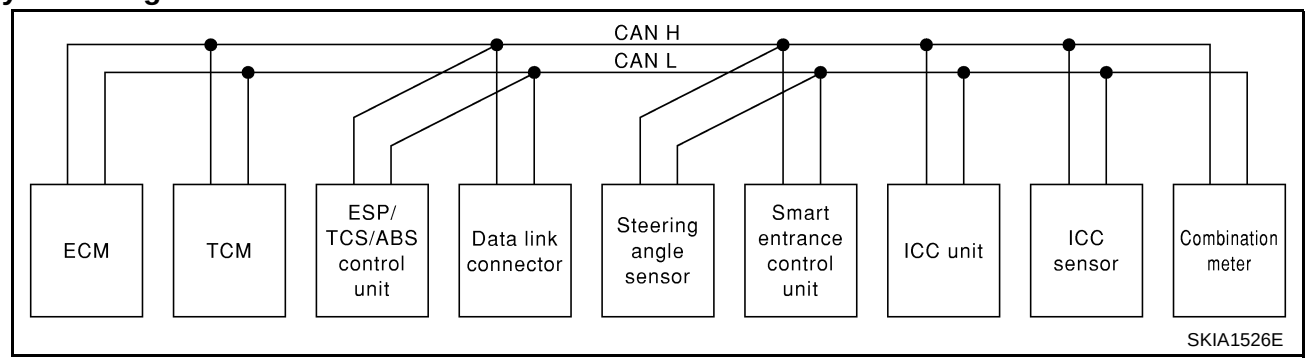
EKS00559

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	LT-133, "TYPE 7"	LT-134, "TYPE 8"	LT-135, "TYPE 9"	LT-136, "TYPE 10"	LT-137, "TYPE 11"	LT-138, "TYPE 12"			
Can system Trouble diagnosis	LAN-156, "CAN SYSTEM (TYPE 7)"	LAN-179, "CAN SYSTEM (TYPE 8)"	LAN-195, "CAN SYSTEM (TYPE 9)"	LAN-210, "CAN SYSTEM (TYPE 10)"	LAN-225, "CAN SYSTEM (TYPE 11)"	LAN-238, "CAN SYSTEM (TYPE 12)"			

TYPE 7

System diagram



Input/output signal chart

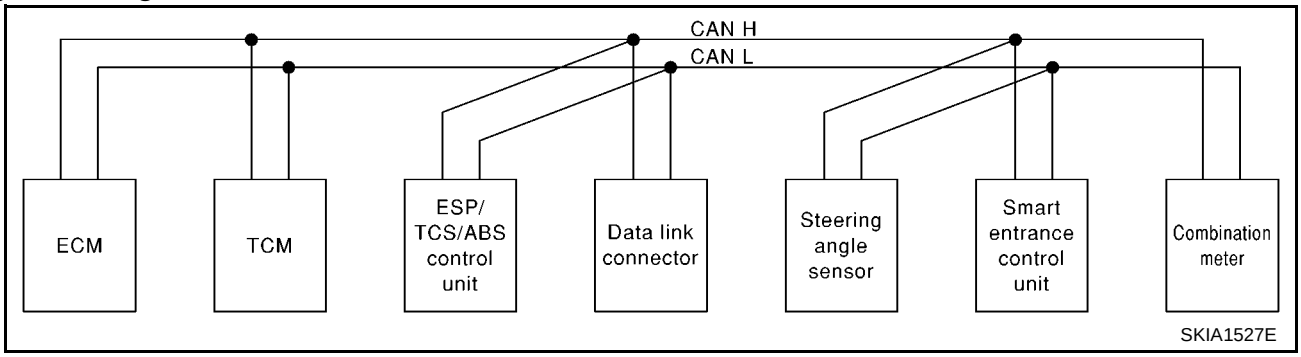
T: Transmit R: Receive

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		
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	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	ICC unit	ICC sensor	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 8

System diagram



Input/output signal chart

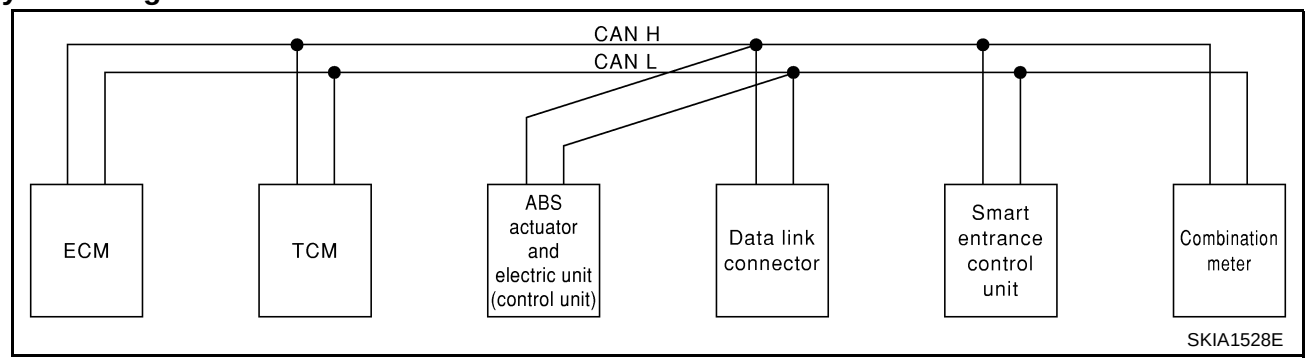
T: Transmit R: Receive

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 9

System diagram



Input/output signal chart

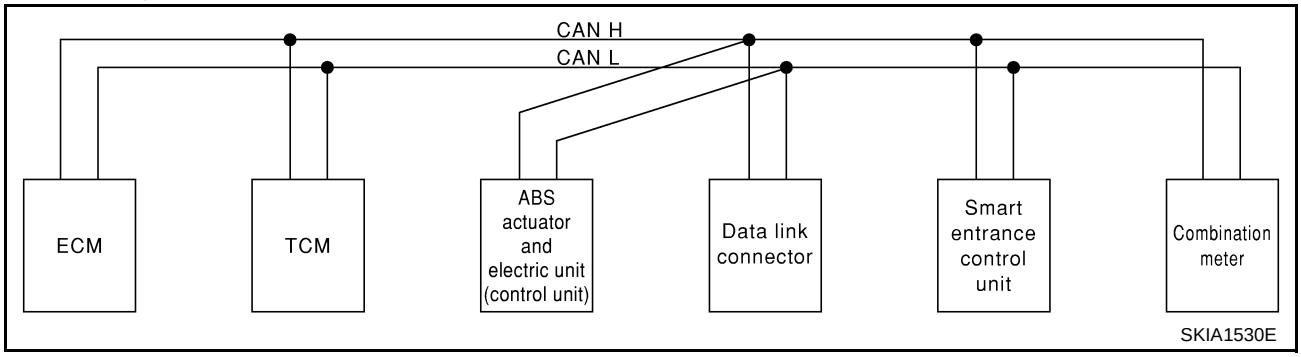
T: Transmit R: Receive

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 10

System diagram



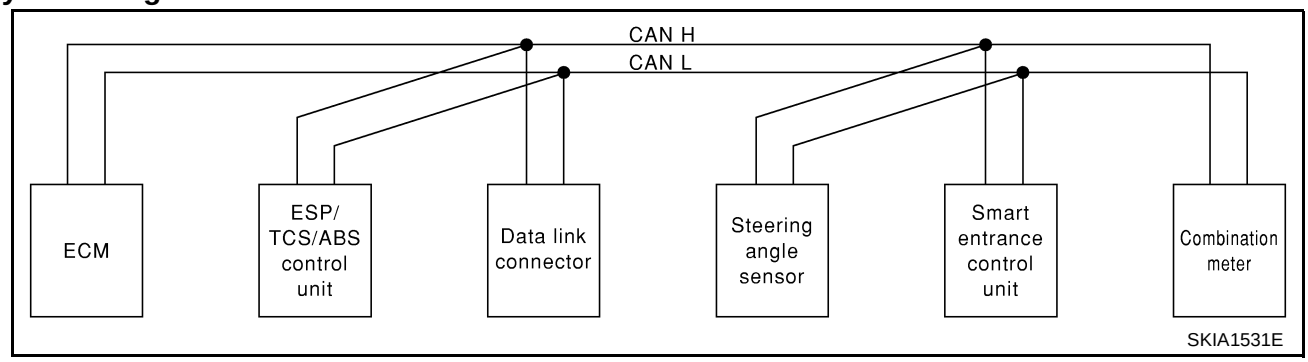
Input/output signal chart

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 11

System diagram



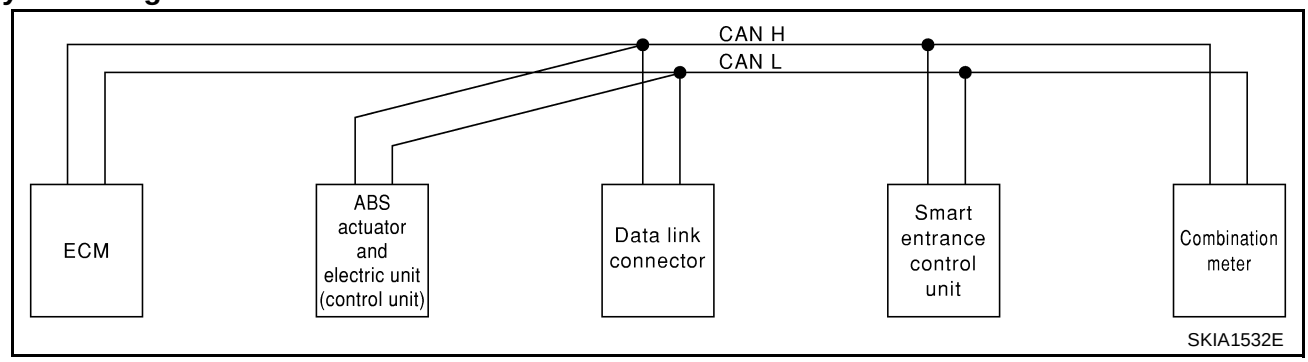
Input/output signal chart

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	
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

System diagram



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

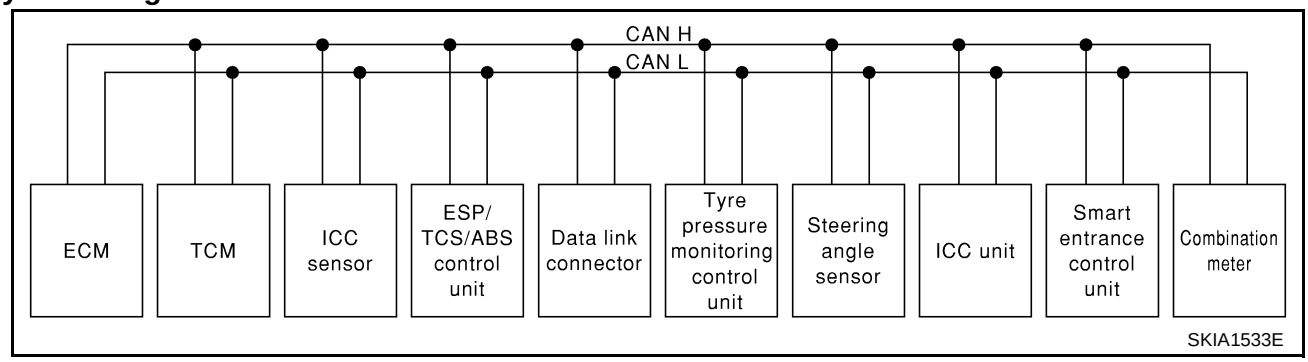
EKS0055A

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	×	×	×	×					
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	LT-140, "TYPE 13"	LT-141, "TYPE 14"	LT-142, "TYPE 15"	LT-143, "TYPE 16"	LT-144, "TYPE 17"	LT-145, "TYPE 18"			
Can system Trouble diagnosis	LAN-254, "CAN SYSTEM (TYPE 13)"	LAN-282, "CAN SYSTEM (TYPE 14)"	LAN-304, "CAN SYSTEM (TYPE 15)"	LAN-324, "CAN SYSTEM (TYPE 16)"	LAN-344, "CAN SYSTEM (TYPE 17)"	LAN-362, "CAN SYSTEM (TYPE 18)"			

TYPE 13

System diagram



Input/output signal chart

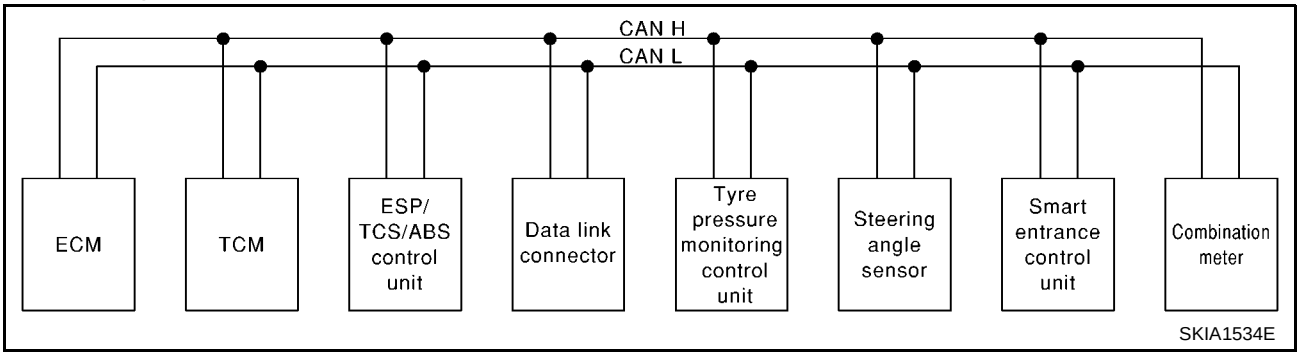
T: Transmit R: Receive

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
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		
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

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
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

System diagram



Input/output signal chart

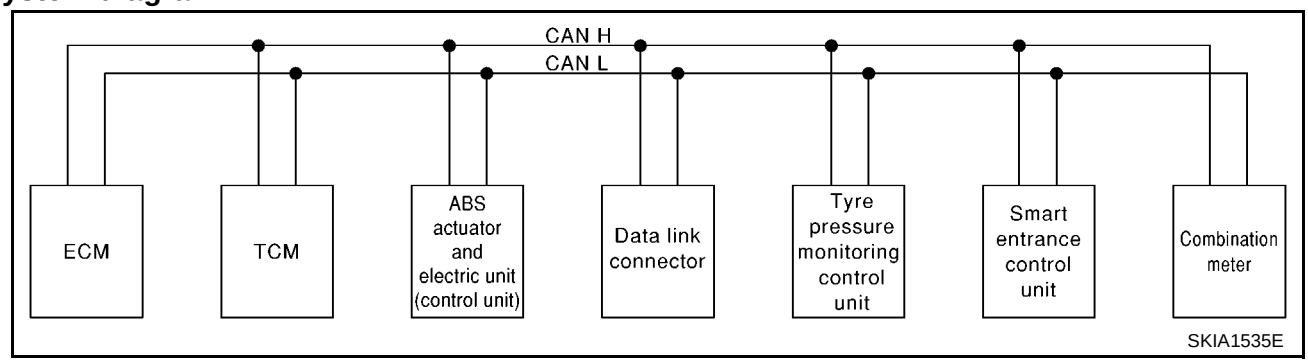
T: Transmit R: Receive

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

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	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

TYPE 15

System diagram



Input/output signal chart

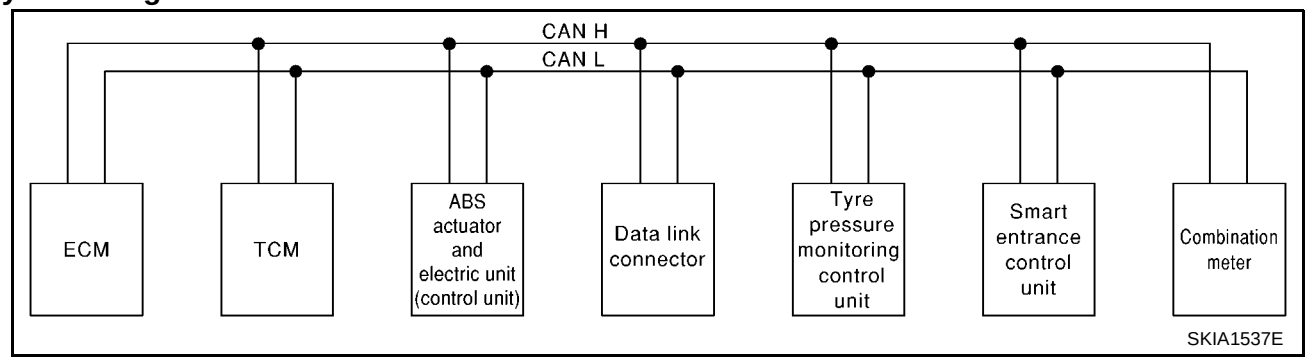
T: Transmit R: Receive

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

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring 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	
Tire pressure signal				T		R

TYPE 16

System diagram



Input/output signal chart

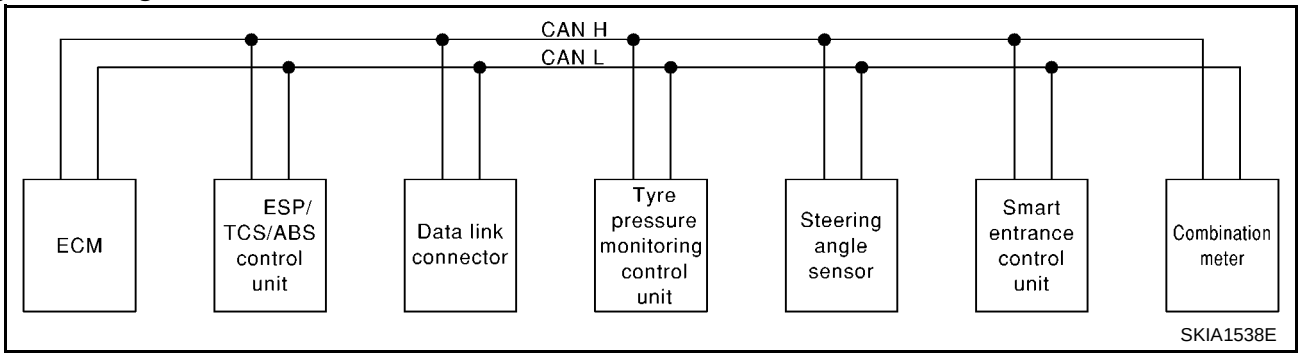
T: Transmit R: Receive

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

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	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 17

System diagram



Input/output signal chart

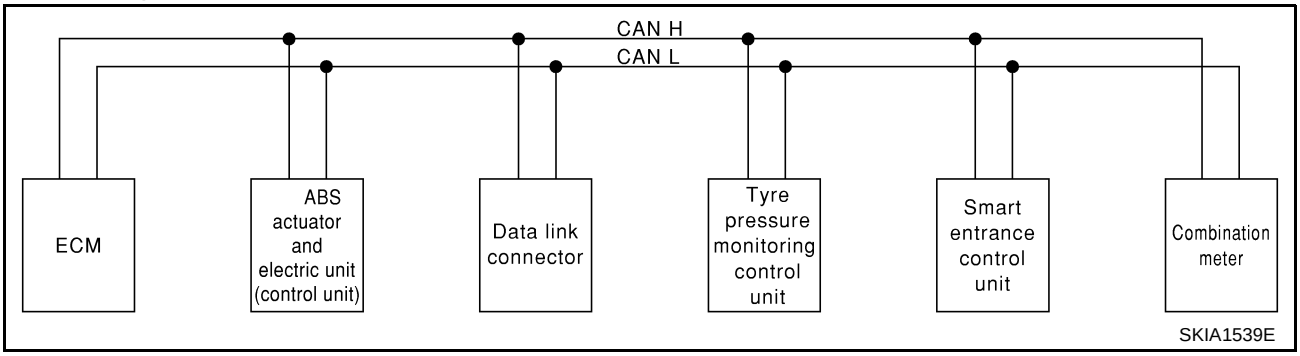
T: Transmit R: Receive

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				
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	Tyre pressure monitoring 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	
Tire pressure signal			T			R

TYPE 18

System diagram



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
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	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
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

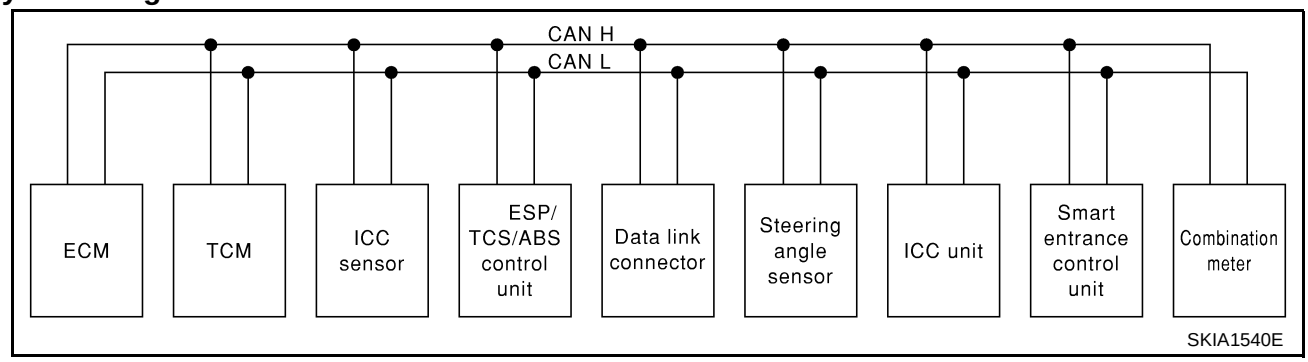
EKS0055B

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	LT-147, "TYPE 19"	LT-148, "TYPE 20"	LT-149, "TYPE 21"	LT-150, "TYPE 22"	LT-151, "TYPE 23"	LT-152, "TYPE 24"			
Can system Trouble Diagnosis	LAN-379, "CAN SYSTEM (TYPE 19)"	LAN-404, "CAN SYSTEM (TYPE 20)"	LAN-422, "CAN SYSTEM (TYPE 21)"	LAN-438, "CAN SYSTEM (TYPE 22)"	LAN-454, "CAN SYSTEM (TYPE 23)"	LAN-469, "CAN SYSTEM (TYPE 24)"			

TYPE 19

System diagram



Input/output signal chart

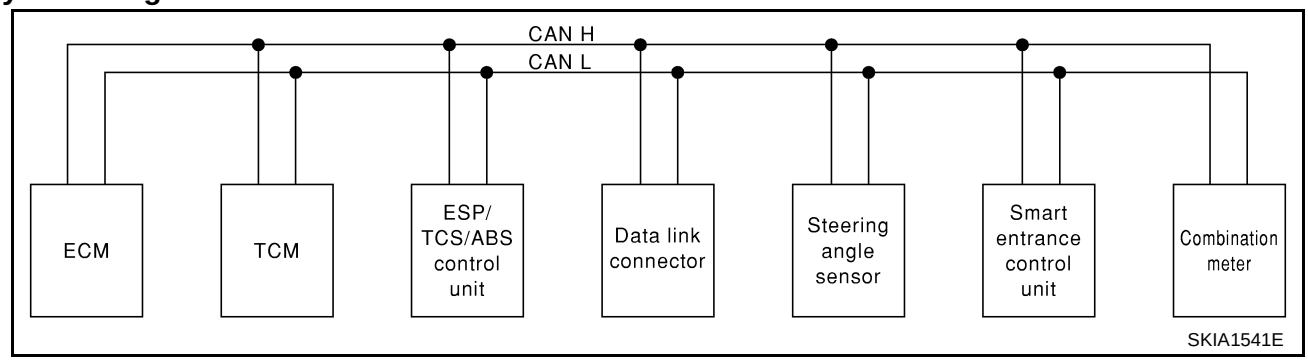
T: Transmit R: Receive

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

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Steering angle sensor	ICC unit	Smart entrance control unit	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	

TYPE 20

System diagram



Input/output signal chart

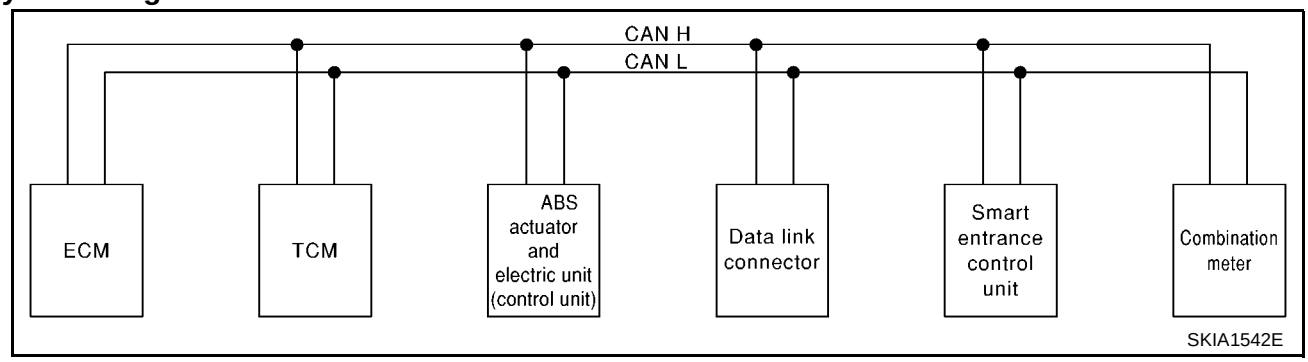
T: Transmit R: Receive

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

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance 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	

TYPE 21

System diagram



Input/output signal chart

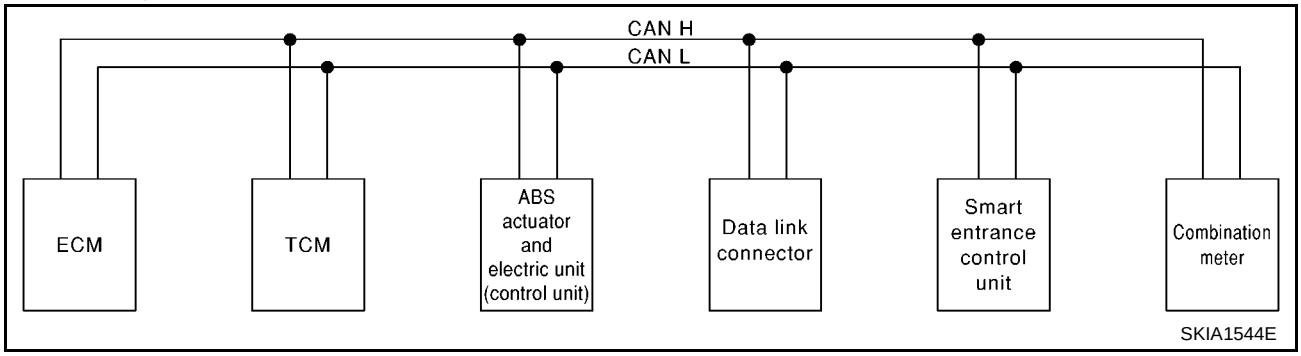
T: Transmit R: Receive

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

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

TYPE 22

System diagram



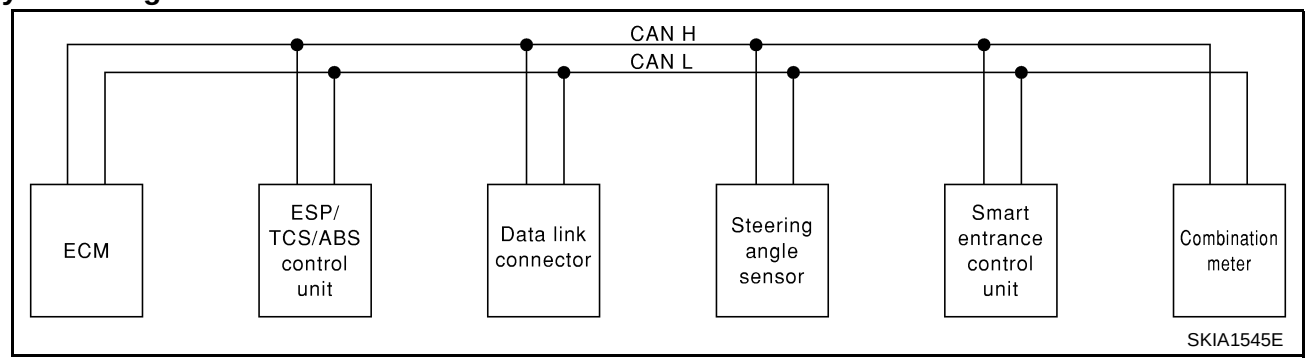
Input/output signal chart

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

System diagram



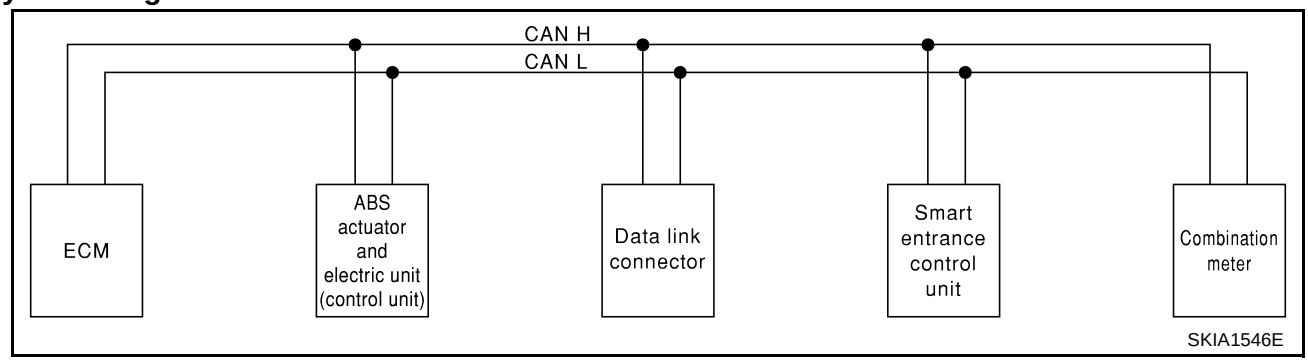
Input/output signal chart

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

System diagram



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

BULB SPECIFICATIONS

PFP:26297

Headlamp

EKS003V6

Item		Wattage (W)
High/Low	Without xenon headlamp	55/55 (H7/H7)
	With xenon headlamp	55/35 (H7/D2R)

Exterior Lamp

EKS003V7

Item		Wattage (W)
Front combination lamp	Clearance lamp	5
Front turn signal lamp		21 (amber)
Side turn signal lamp		5
Fog lamp	Front fog lamp	55 (H11)
	Rear fog lamp	21
Rear combination lamp	Stop/Tail lamp	21/5
	Turn signal lamp	21
	Back-up lamp	21
License plate lamp		5
High-mounted stop lamp (Sedan)		21
High-mounted stop lamp (Wagon)		5

Interior Lamp/Illumination

EKS0054Y

Item	Wattage (W)
Interior room lamp	7
Spot lamp	5
Trunk room lamp (Sedan)	3.4
Luggage room lamp (Wagon)	10