ELECTRICAL SYSTEM

SECTION EL

CONTENTS

CONTENTS (Cont'd)

CONTENTS (Cont'd)

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

NLEL0001

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER” used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. The SRS system composition which is available to NISSAN MODEL V10 is as follows (The composition varies according to the destination and optional equipment.):

- For a frontal collision
  The Supplemental Restraint System consists of driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), front seat belt pre-tensioners, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.
- For a side collision
  The Supplemental Restraint System consists of front side air bag module (located in the outer side of front seat), side air bag (satellite) sensor, diagnosis sensor unit (one of components of air bags for a frontal collision), wiring harness, warning lamp (one of components of air bags for a frontal collision).

Information necessary to service the system safely is included in the **RS 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 should be performed by an authorized NISSAN 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 RS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. Spiral cable and wiring harnesses covered with yellow insulation tape either just before the harness connectors or for the complete harness are related to the SRS.**

Wiring Diagrams and Trouble Diagnosis

NLEL0002

When you read wiring diagrams, refer to the following:

- Refer to GI-11, “HOW TO READ WIRING DIAGRAMS”
- Refer to EL-10, “POWER SUPPLY ROUTING” for power distribution circuit

When you perform trouble diagnosis, refer to the following:

- Refer to GI-32, “HOW TO FOLLOW TEST GROUP IN TROUBLE DIAGNOSIS”
- Refer to GI-21, “HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT”

Check for any Service bulletins before servicing the vehicle.

Description

NLEL0003

HARNESS CONNECTOR (TAB-LOCKING TYPE)

NLEL0003S01

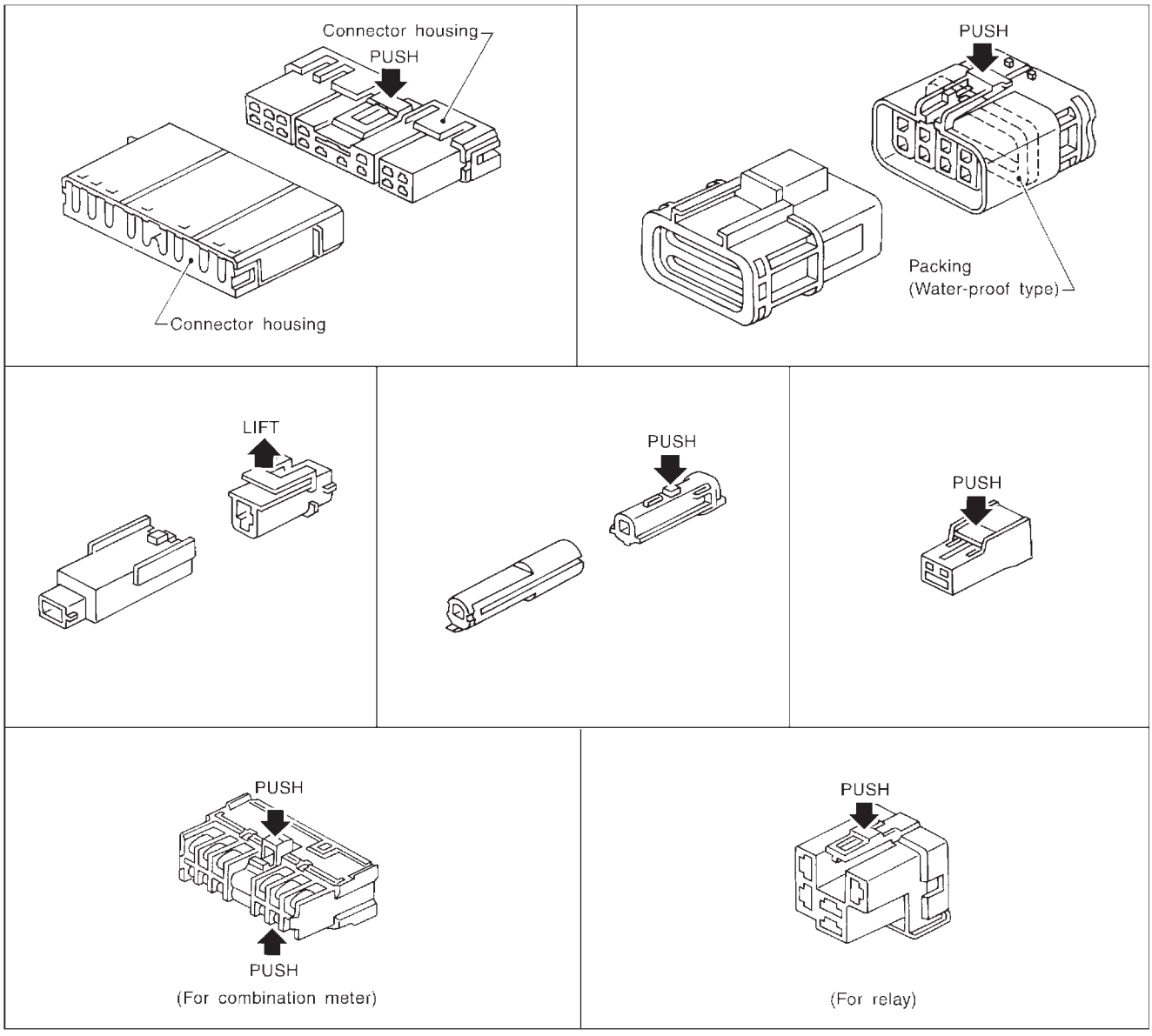
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

Refer to the next page for description of the slide-locking type connector.

CAUTION:

Do not pull the harness or wires when disconnecting the connector.

[Example]



SEL769DA

Description (Cont'd)

HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

=NLEL0003S02

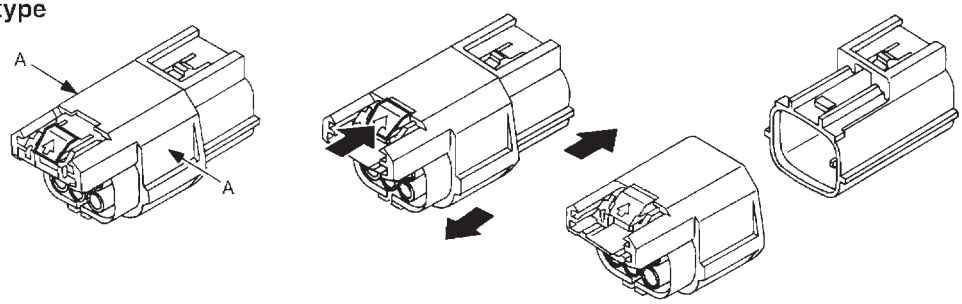
- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.
- The slide-locking type connectors are disconnected by pushing or pulling the slider. Refer to the illustration below.

CAUTION:

- **Do not pull the harness or wires when disconnecting the connector.**
- **Be careful not to damage the connector support bracket when disconnecting the connector.**

[Example]

Waterproof type

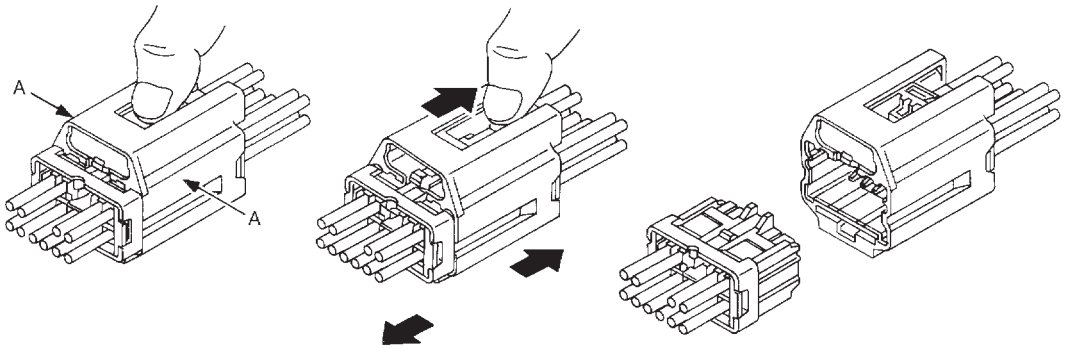


① Firmly grasp shell of connector housing at A.

② Push slider until connector pops or snaps apart.

③ Disconnect harness connector.

Non-waterproof type



① Firmly grasp shell of connector housing at A.

② Pull back on the slider while pulling apart male and famale halves of connector.

③ Disconnect harness connector.

SEL769V

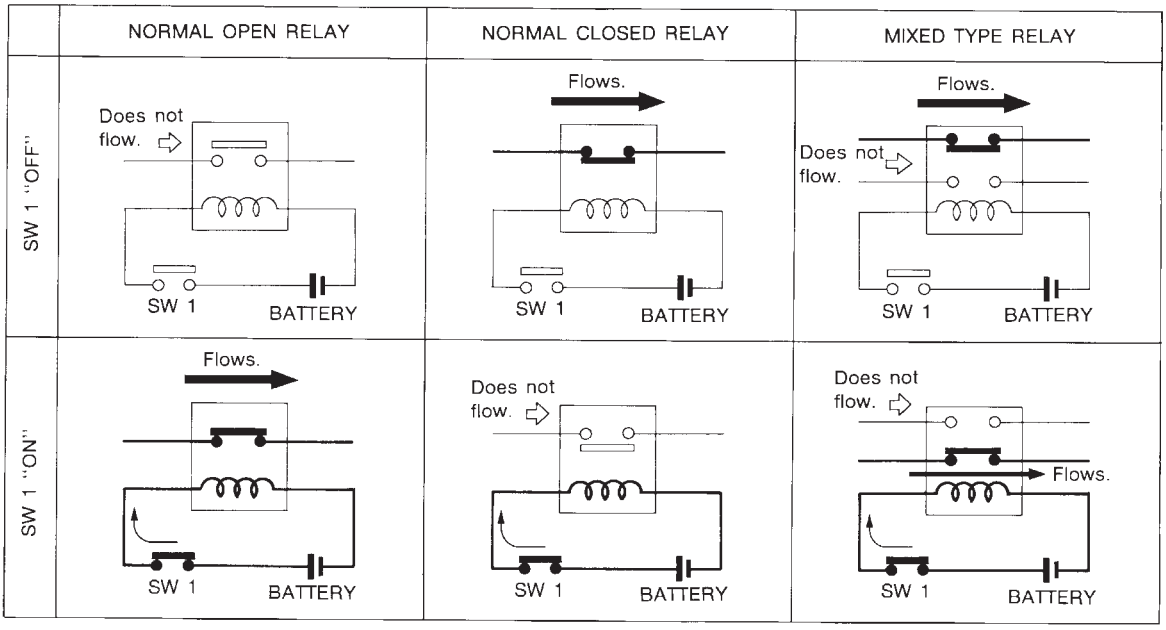
Description

NLEL0004

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

NLEL0004S01

Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.

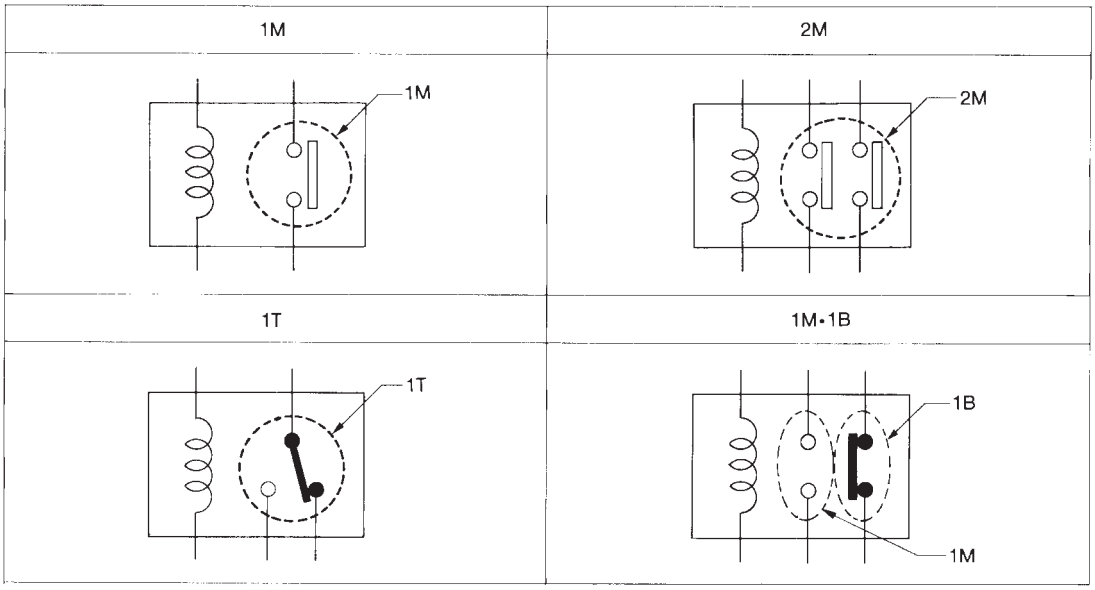


SEL881H

TYPE OF STANDARDIZED RELAYS

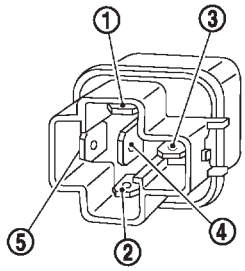
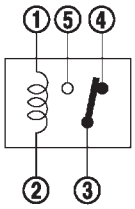
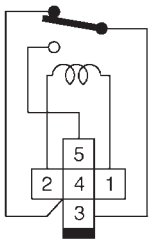
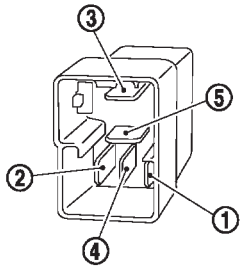
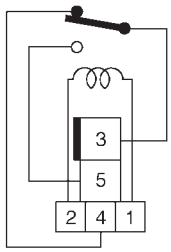
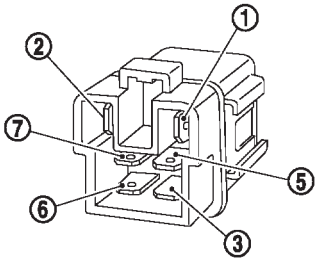
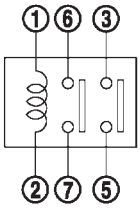
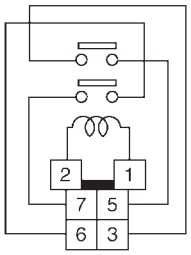
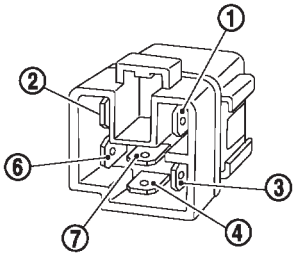
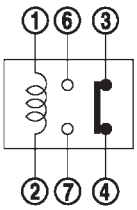
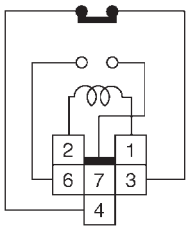
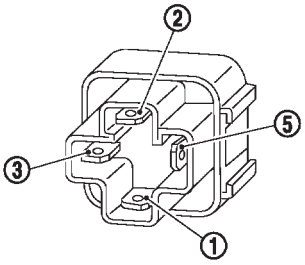
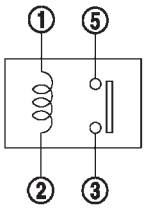
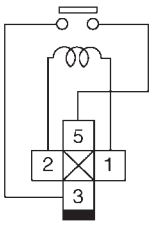
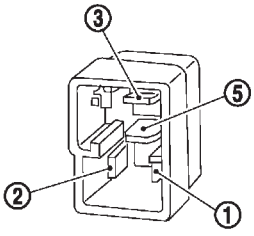
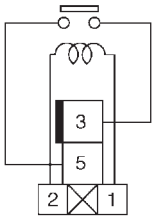
NLEL0004S02

1M	1 Make	2M	2 Make
1T	1 Transfer	1M·1B	1 Make 1 Break



SEL882H

Description (Cont'd)

Type	Outer view	Circuit	Connector symbol and connector	Case color
1T				BLACK
				
2M				BROWN
1M•1B				GRAY
1M				BLUE
				

The arrangement of terminal numbers on the actual relays may differ from those shown above.

GEL264

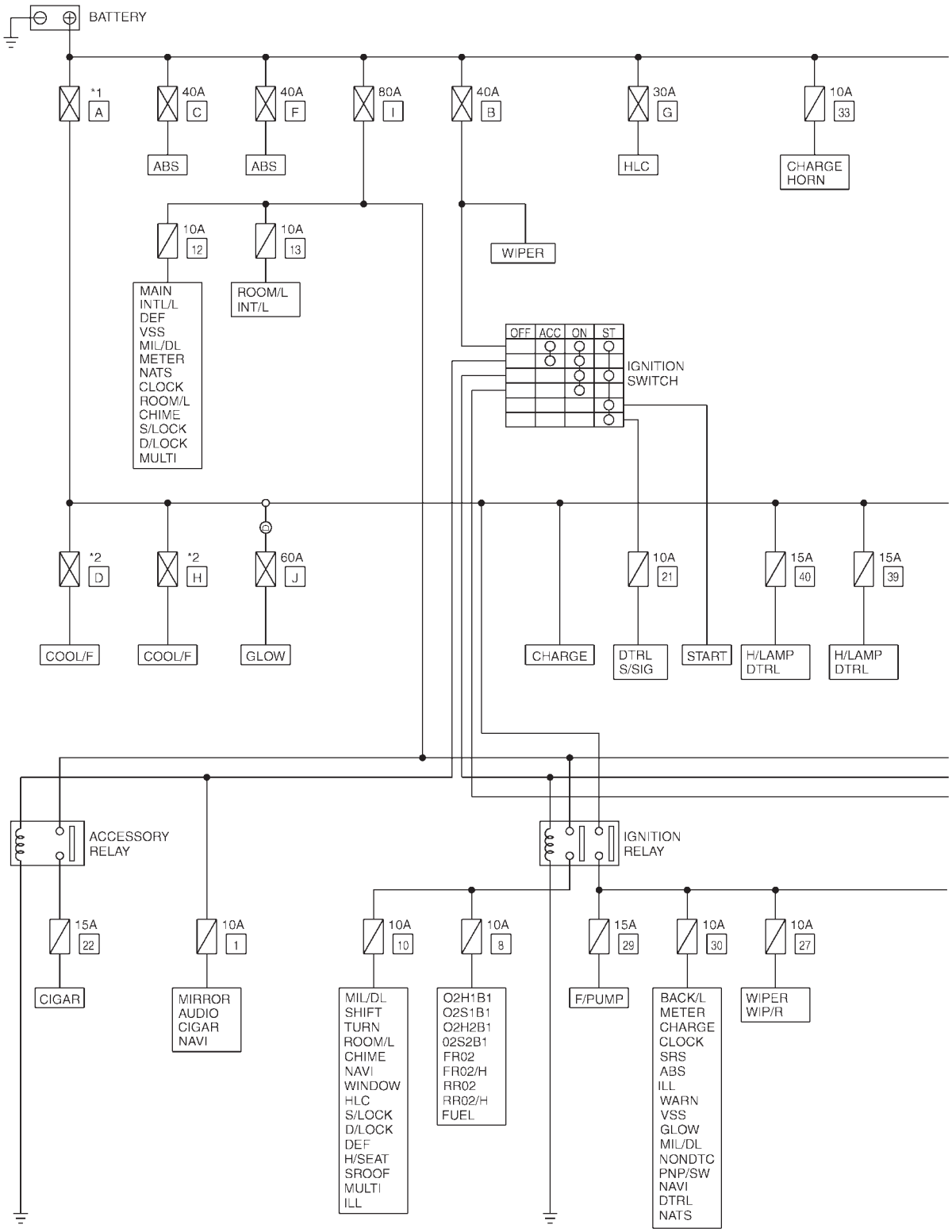
NOTE:

Schematic

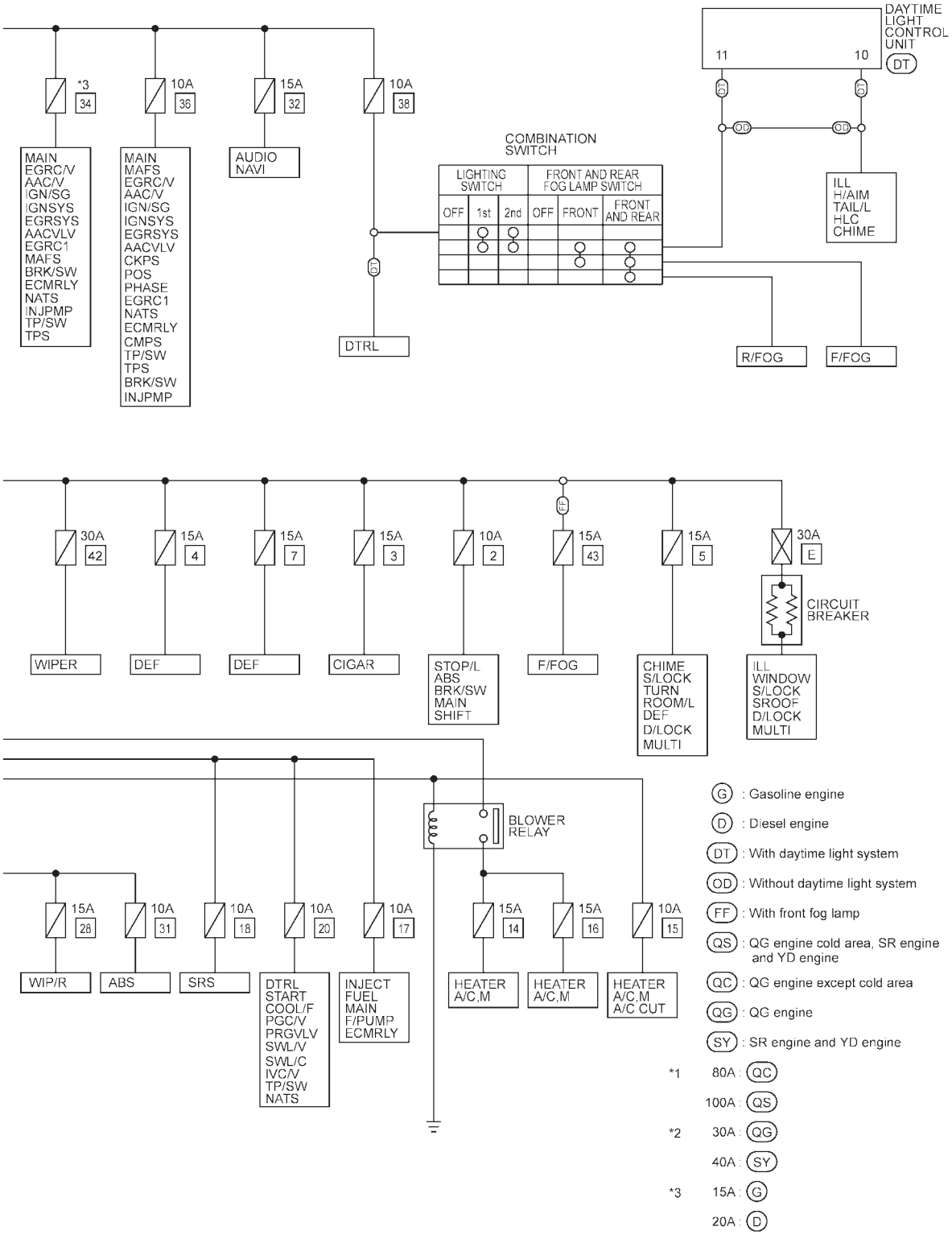
NLEL0418

NLEL0418S01

MODELS WITH FUSE AND FUSIBLE LINK BOX E43



YEL860B

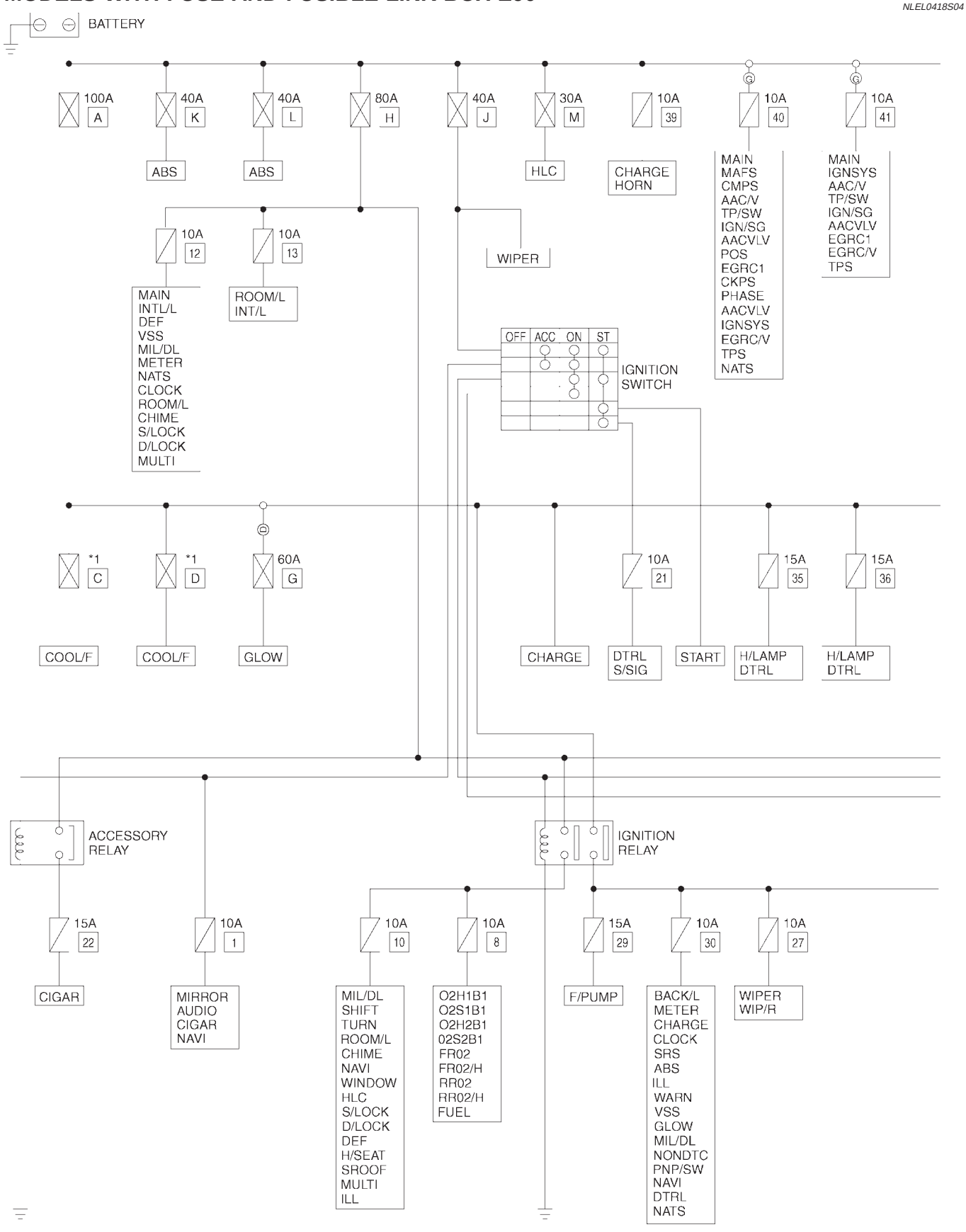

DAYTIME LIGHT CONTROL UNIT
11
10
DT
*3
34
10A
36
15A
32
10A
38
MAIN
EGRC/V
AAC/V
IGN/SG
IGNSYS
EGRSYS
AACVLV
EGRC1
MAFS
BRK/SW
ECMRLY
NATS
INJPMP
TP/SW
TPS
MAIN
MAFS
EGRC/V
AAC/V
IGN/SG
IGNSYS
EGRSYS
AACVLV
CKPS
POS
PHASE
EGRC1
NATS
ECMRLY
CMPS
TP/SW
TPS
BRK/SW
INJPMP
AUDIO
NAVI
DTRL
COMBINATION SWITCH
LIGHTING SWITCH
FRONT AND REAR FOG LAMP SWITCH
OFF
1st
2nd
OFF
FRONT
FRONT AND REAR
OD
ILL
H/AIM
TAIL/L
HLC
CHIME
R/FOG
F/FOG
30A
42
15A
4
15A
7
15A
3
10A
2
FF
15A
43
15A
5
30A
E
CIRCUIT BREAKER
WIPER
DEF
DEF
CIGAR
STOP/L
ABS
BRK/SW
MAIN
SHIFT
F/FOG
CHIME
S/LOCK
TURN
ROOM/L
DEF
D/LOCK
MULTI
ILL
WINDOW
S/LOCK
SROOF
D/LOCK
MULTI
BLOWER RELAY
15A
28
10A
31
10A
18
10A
20
10A
17
15A
14
15A
16
10A
15
WIP/R
ABS
SRS
DTRL
START
COOL/F
PGC/V
PRGVLV
SWL/V
SWL/C
IVC/V
TP/SW
NATS
INJECT
FUEL
MAIN
F/PUMP
ECMRLY
HEATER
A/C,M
HEATER
A/C,M
HEATER
A/C,M
A/C CUT
G : Gasoline engine
D : Diesel engine
DT : With daytime light system
OD : Without daytime light system
FF : With front fog lamp
QS : QG engine cold area, SR engine and YD engine
QC : QG engine except cold area
QG : QG engine
SY : SR engine and YD engine
*1
80A : QC
100A : QS
*2
30A : QG
40A : SY
*3
15A : G
20A : D

YEL861B

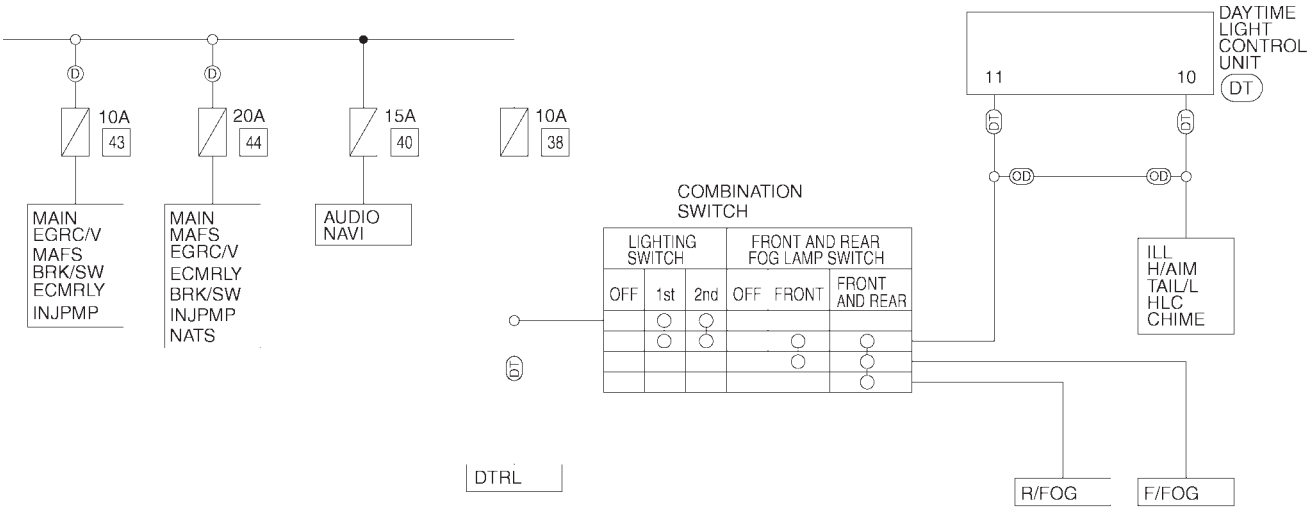
Schematic (Cont'd)

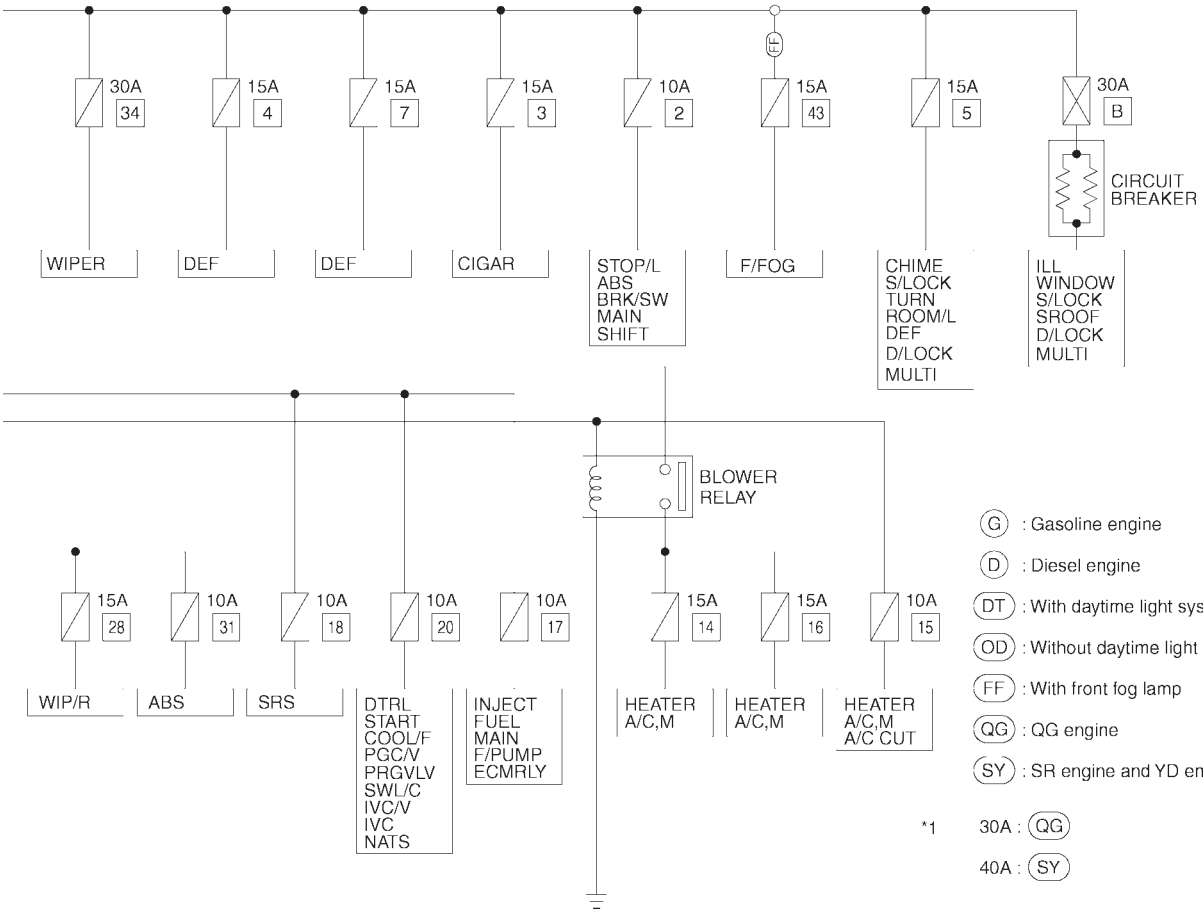
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0418S04



YEL390C


10A 43
20A 44
15A 40
10A 38
MAIN EGRC/V MAFS BRK/SW ECMRLY INJPMP
MAIN MAFS EGRC/V ECMRLY BRK/SW INJPMP NATS
AUDIO NAVI
COMBINATION SWITCH
LIGHTING SWITCH
FRONT AND REAR FOG LAMP SWITCH
OFF 1st 2nd OFF FRONT FRONT AND REAR
DTRL
DAYTIME LIGHT CONTROL UNIT
11 10 DT
ILL H/AIM TAIL/L HLC CHIME
R/FOG
F/FOG


30A 34
15A 4
15A 7
15A 3
10A 2
15A 43
15A 5
30A B
CIRCUIT BREAKER
WIPER
DEF
DEF
CIGAR
STOP/L ABS BRK/SW MAIN SHIFT
F/FOG
CHIME S/LOCK TURN ROOM/L DEF D/LOCK MULTI
ILL WINDOW S/LOCK SROOF D/LOCK MULTI
BLOWER RELAY
15A 28
10A 31
10A 18
10A 20
10A 17
15A 14
15A 16
10A 15
WIP/R
ABS
SRS
DTRL START COOL/F PGC/V PRGVLV SWL/C IVC/V IVC NATS
INJECT FUEL MAIN F/PUMP ECMRLY
HEATER A/C,M
HEATER A/C,M
HEATER A/C,M A/C CUT
G : Gasoline engine
D : Diesel engine
DT : With daytime light system
OD : Without daytime light system
FF : With front fog lamp
QG : QG engine
SY : SR engine and YD engine
*1 30A : QG
40A : SY

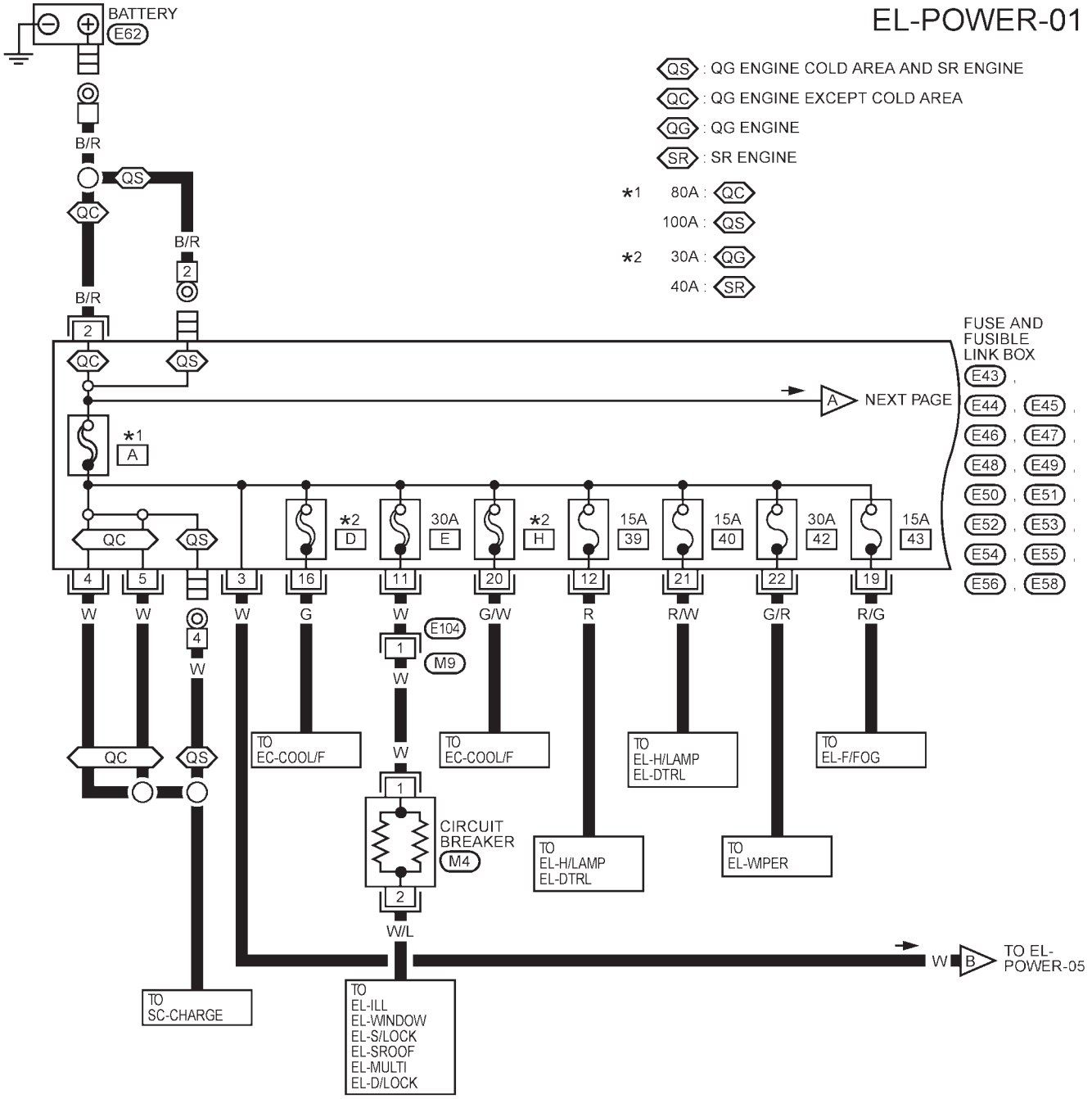
YEL391C

Wiring Diagram — POWER — (Models with fuse and fusible link box E43)

NLEL0419

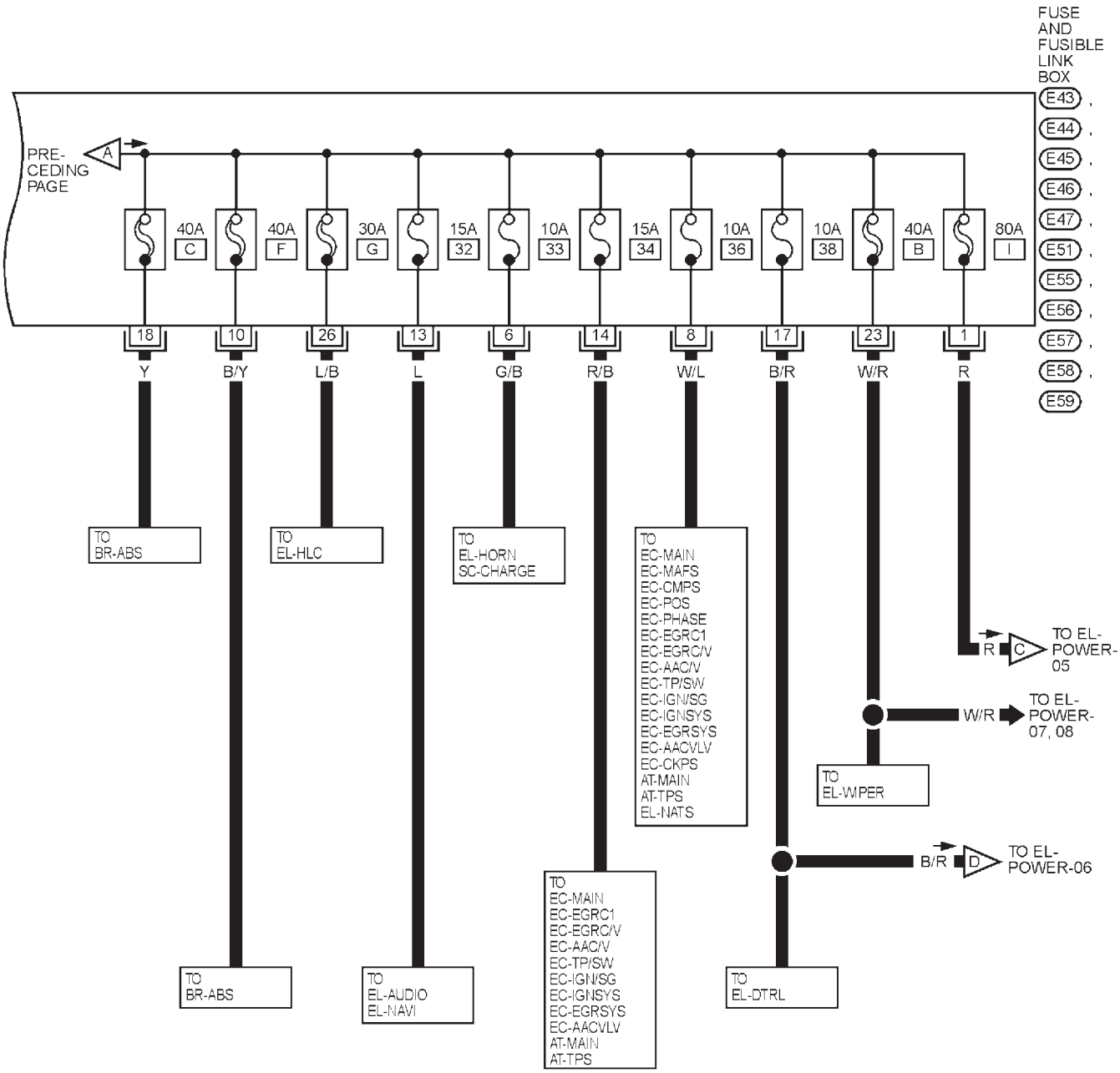
BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

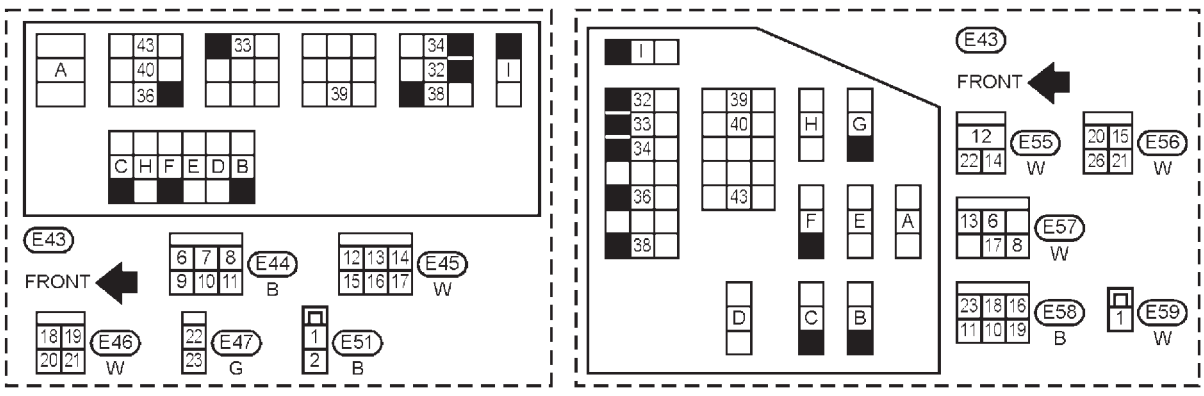
NLEL0419S01



YEL862B

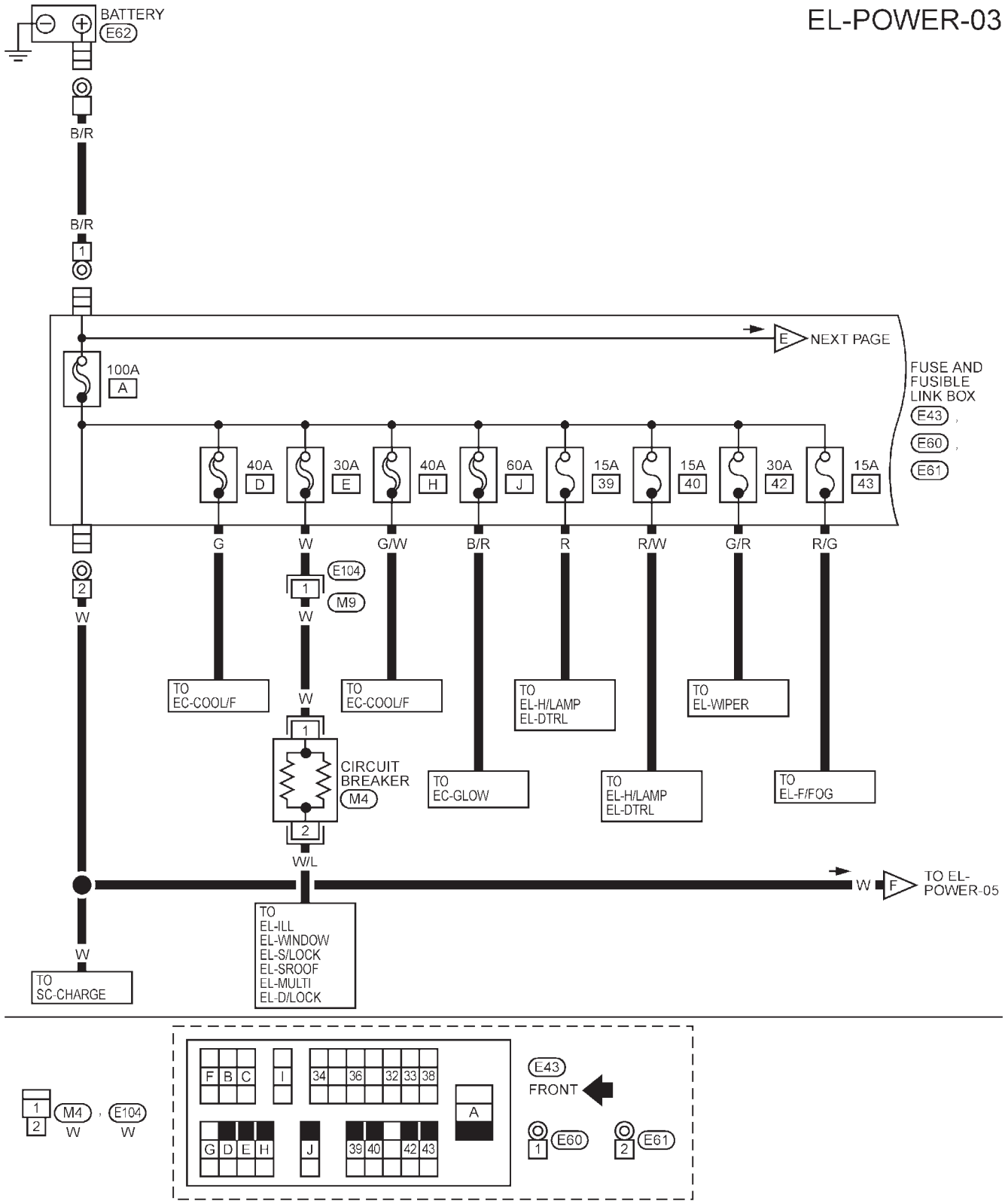
EL-POWER-02





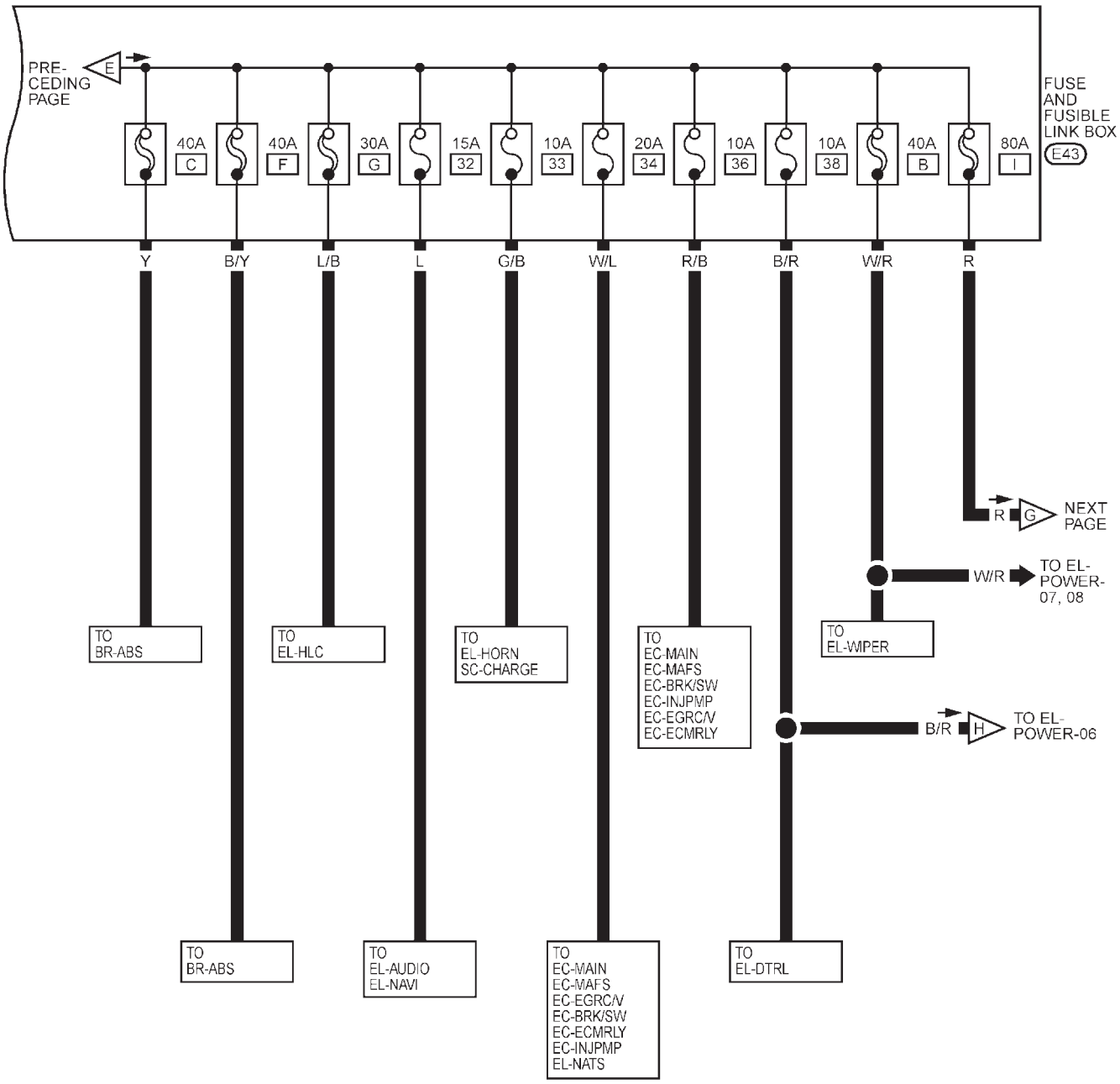
YEL863B

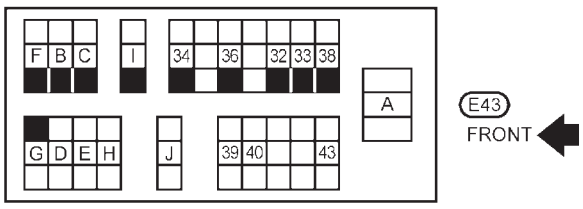
Wiring Diagram — POWER — (Models with fuse and fusible link box E43) (Cont'd)



YEL864B

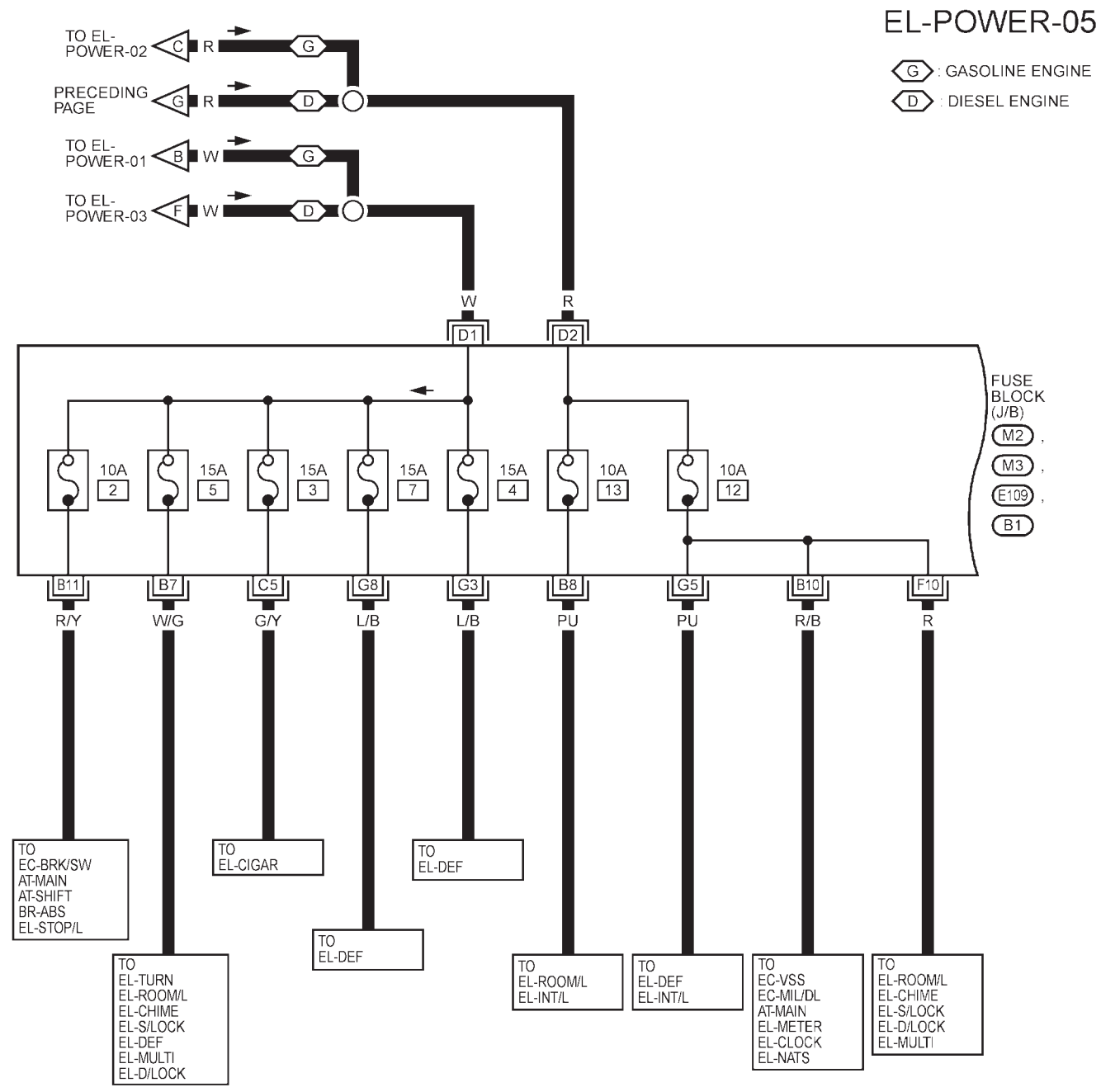
EL-POWER-04





YEL865B

Wiring Diagram — POWER — (Models with fuse and fusible link box E43) (Cont'd)



REFER TO THE FOLLOWING.

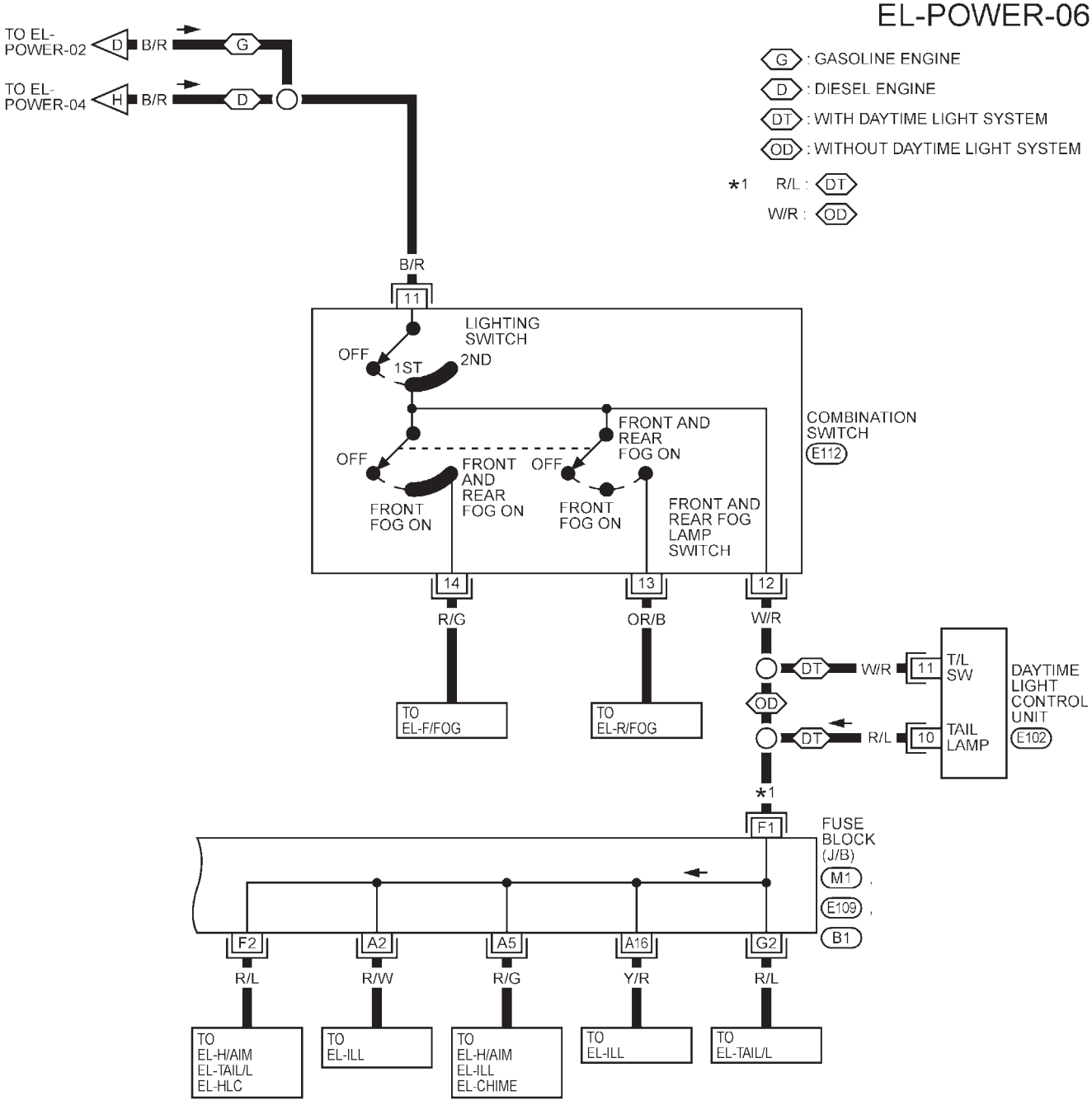
M2 , M3 , E109 , B1

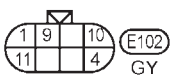
-FUSE BLOCK-
JUNCTION BOX (J/B)

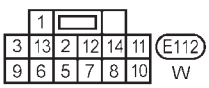
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL866B

EL-POWER-06







REFER TO THE FOLLOWING.

M1 , E109 , B1

-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

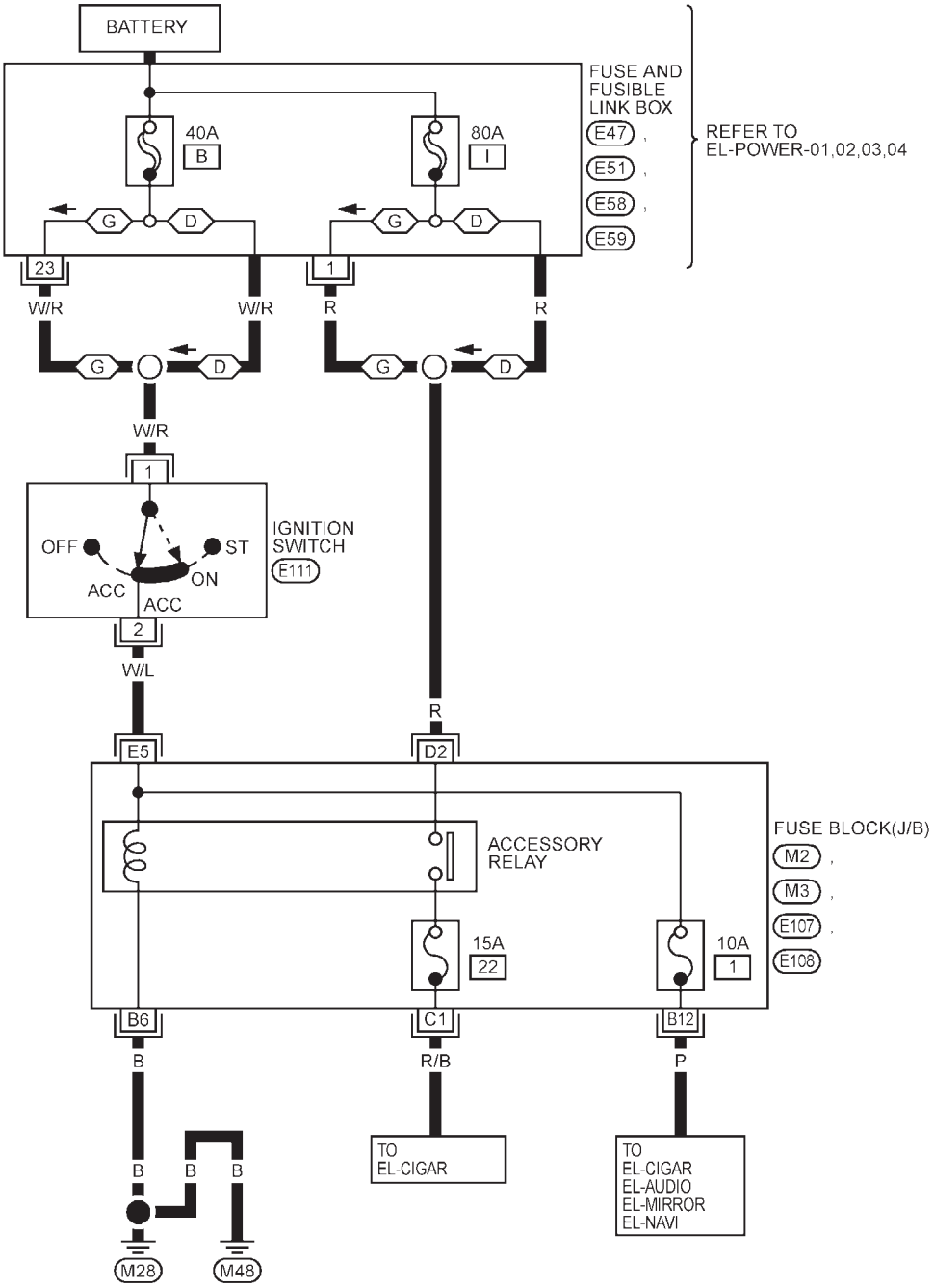
YEL867B

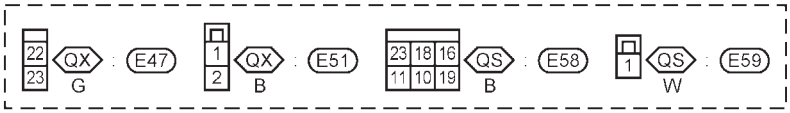
ACCESSORY POWER SUPPLY — IGNITION SWITCH IN "ACC" OR "ON"

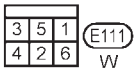
NLEL0419S04

EL-POWER-07

G : GASOLINE ENGINE
D : DIESEL ENGINE
QX : QG ENGINE EXCEPT COLD AREA
QS : QG ENGINE COLD AREA AND SR ENGINE







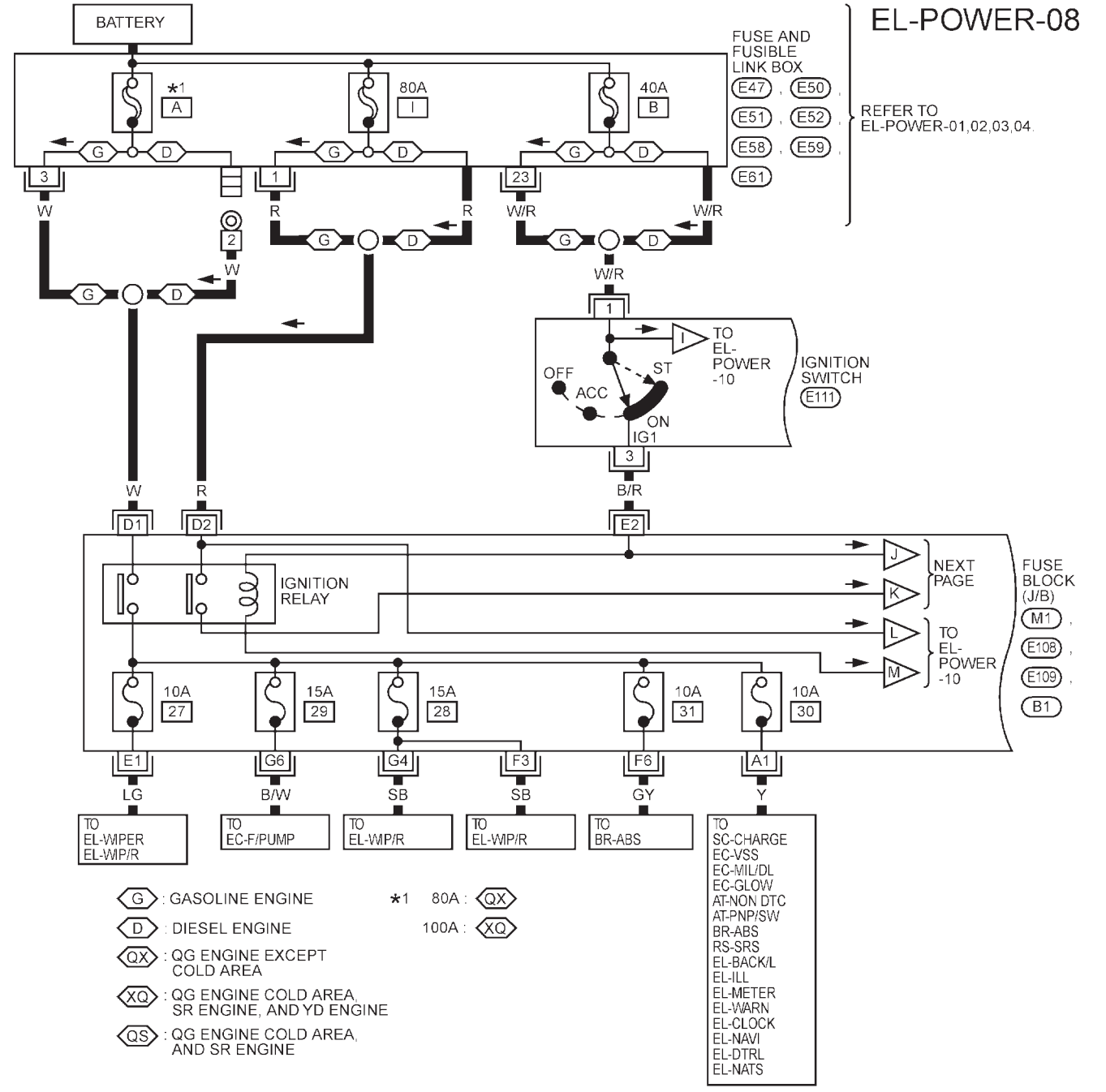
REFER TO THE FOLLOWING.
M2 , M3 , E107 , E108
-FUSE BLOCK-
JUNCTION BOX (J/B)

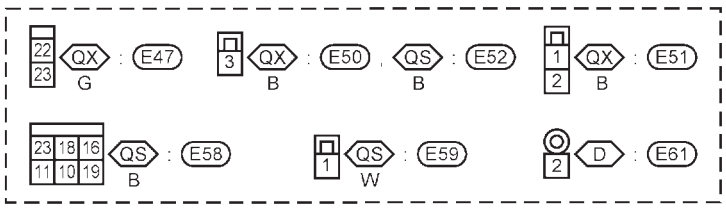
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

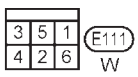
YEL868B

IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"

NLEL0419S05







REFER TO THE FOLLOWING.

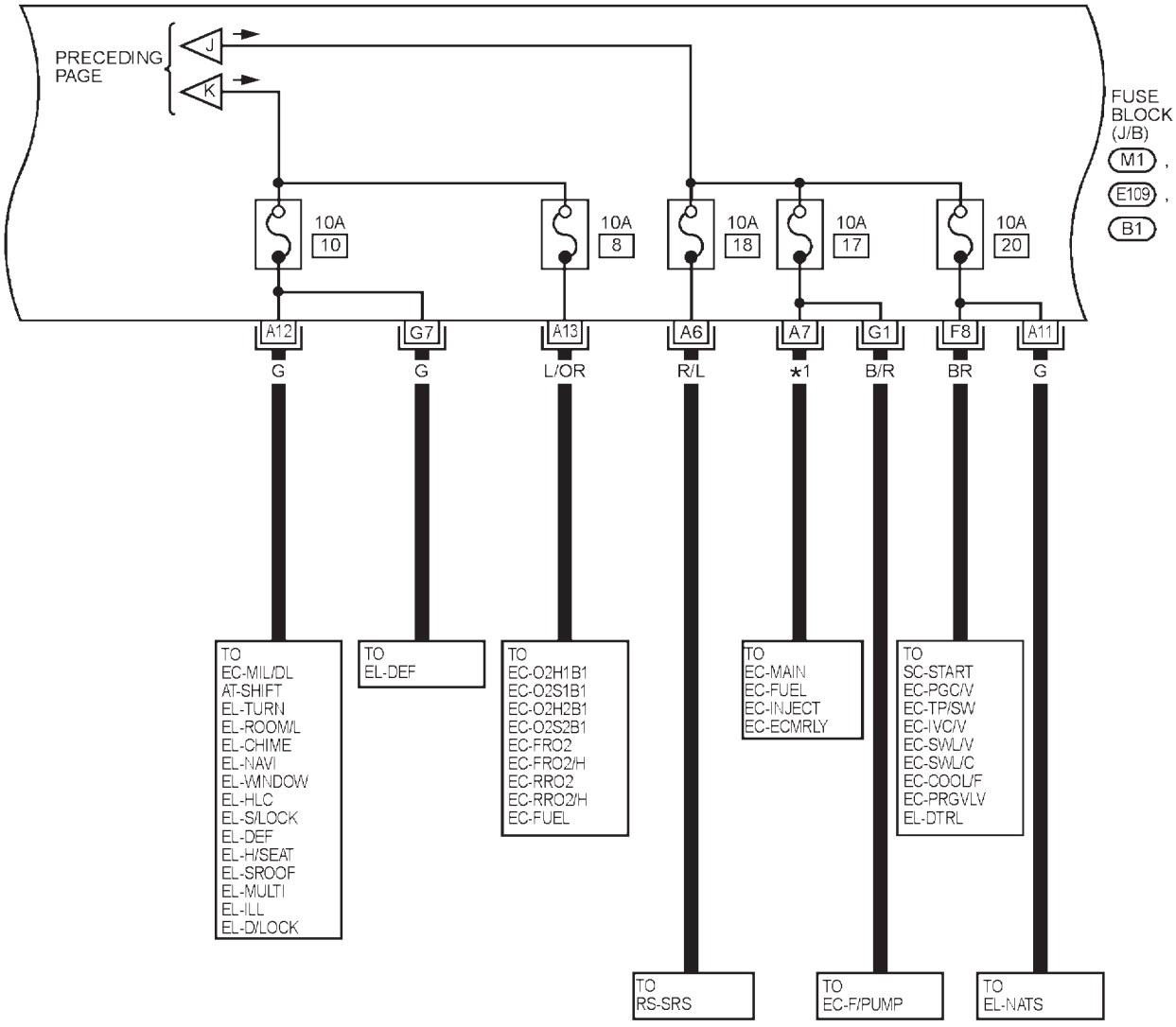
M1 E108 E109 B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL869B

EL-POWER-09

G : GASOLINE ENGINE
D : DIESEL ENGINE
*1 B/R : G
W/R : D

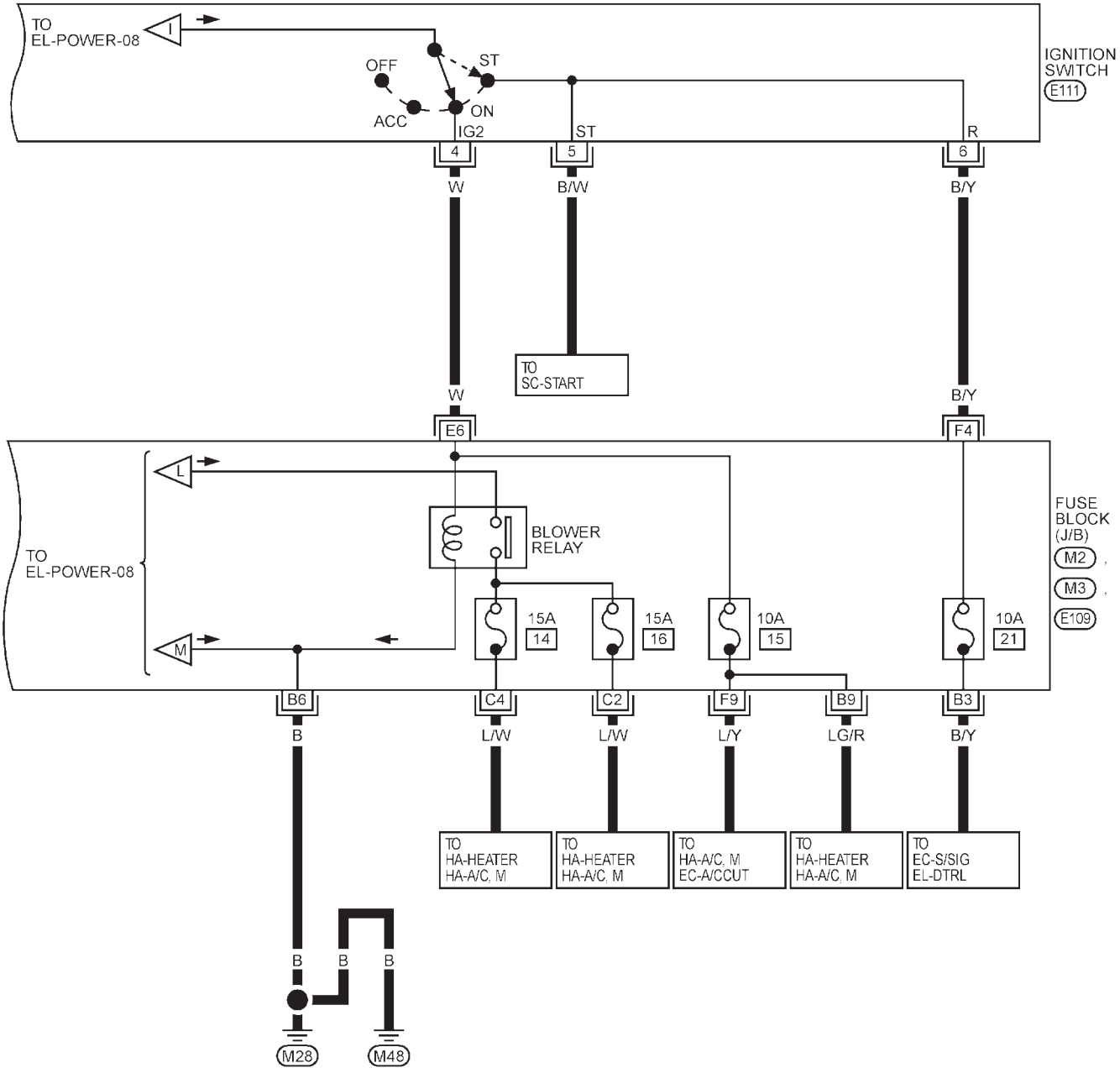


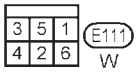
REFER TO THE FOLLOWING.
M1 , E109 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL870B

EL-POWER-10





REFER TO THE FOLLOWING

M2 , M3 , E109

-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

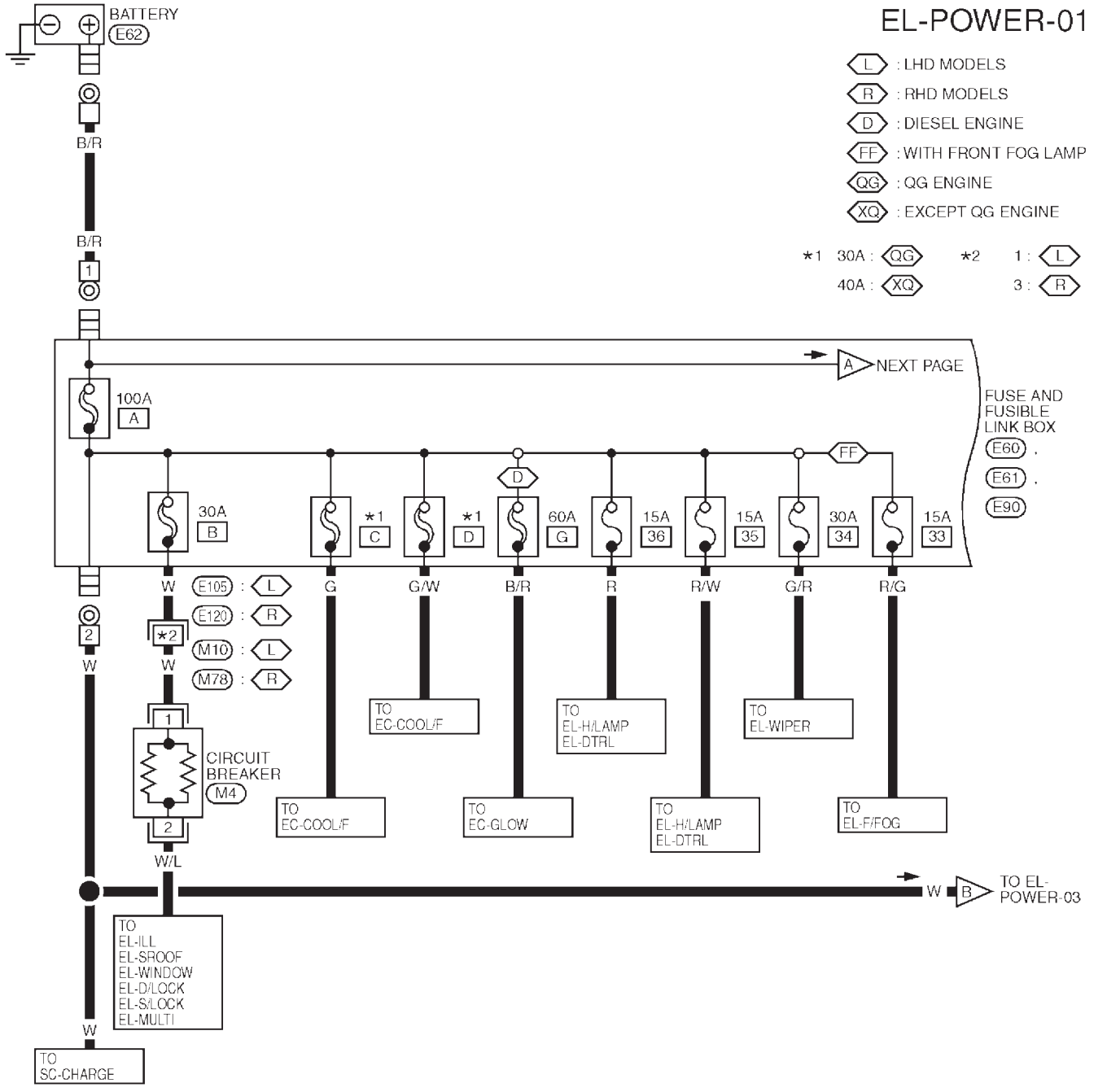
YEL871B

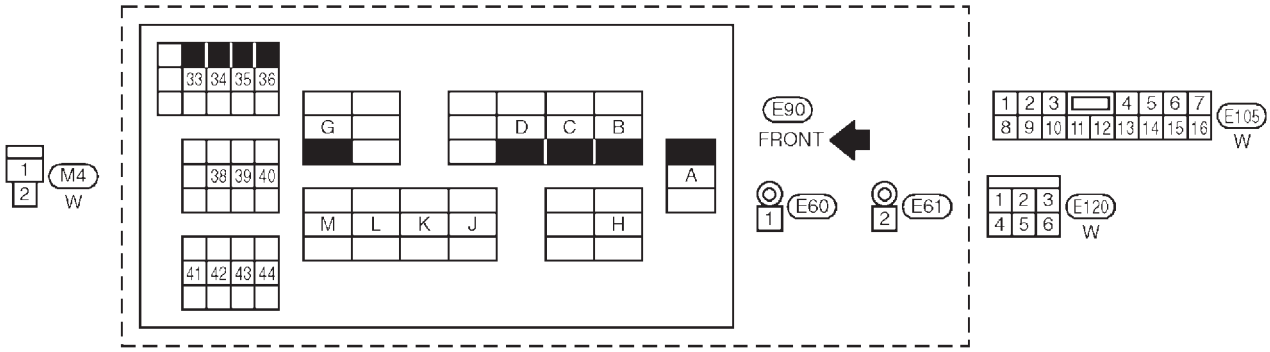
Wiring Diagram — POWER — (Models with fuse and fusible link box E90)

NLEL0527

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

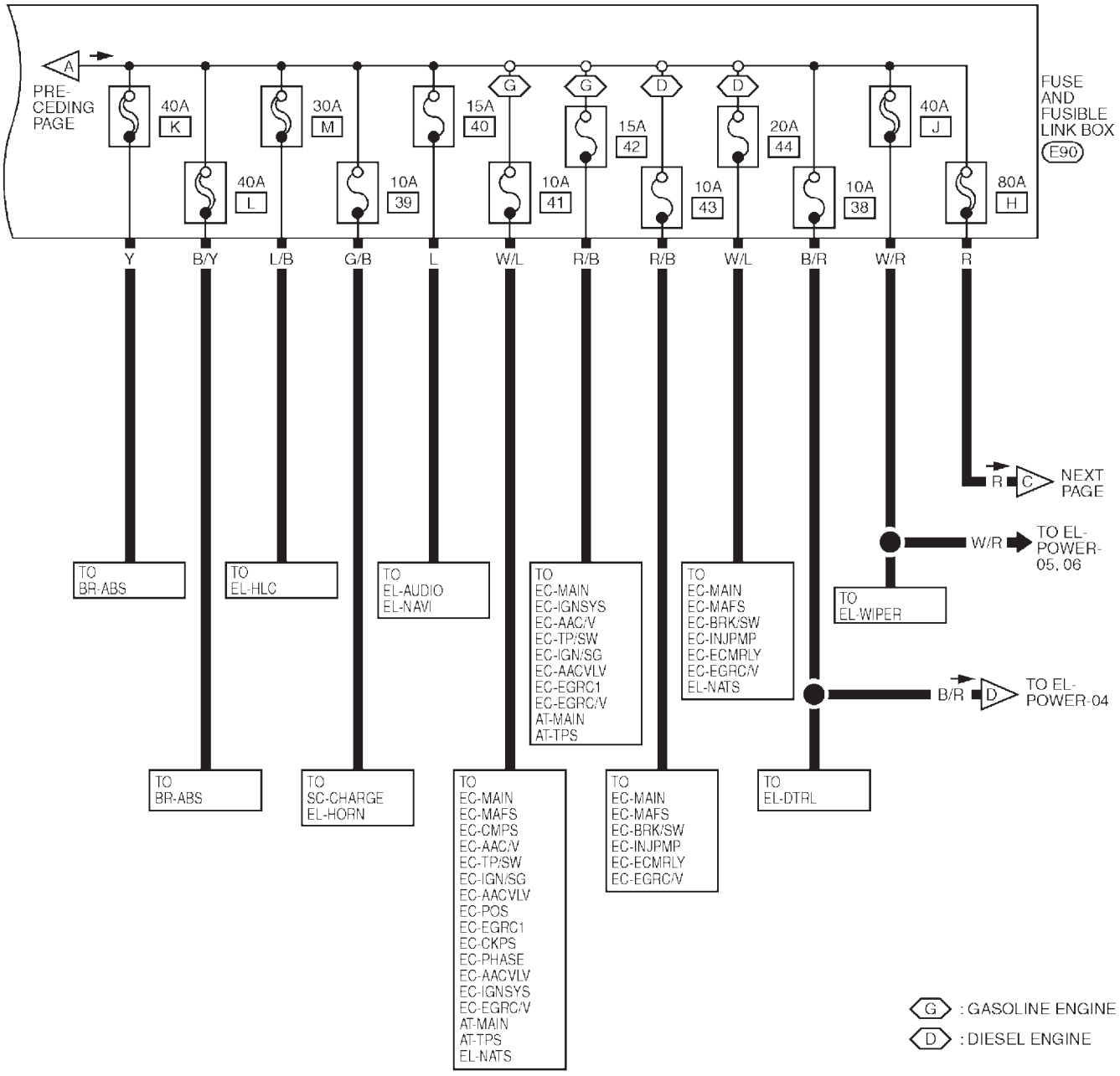
NLEL0527S01

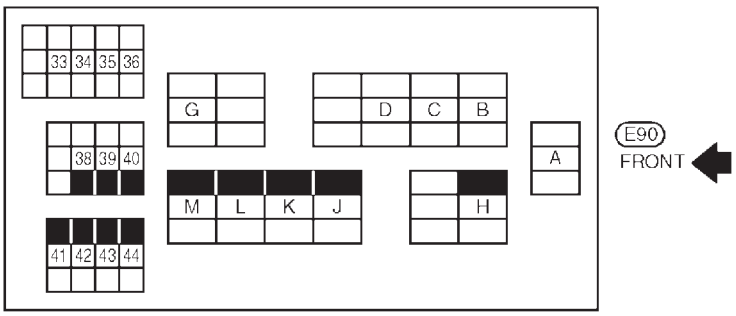




YEL392C

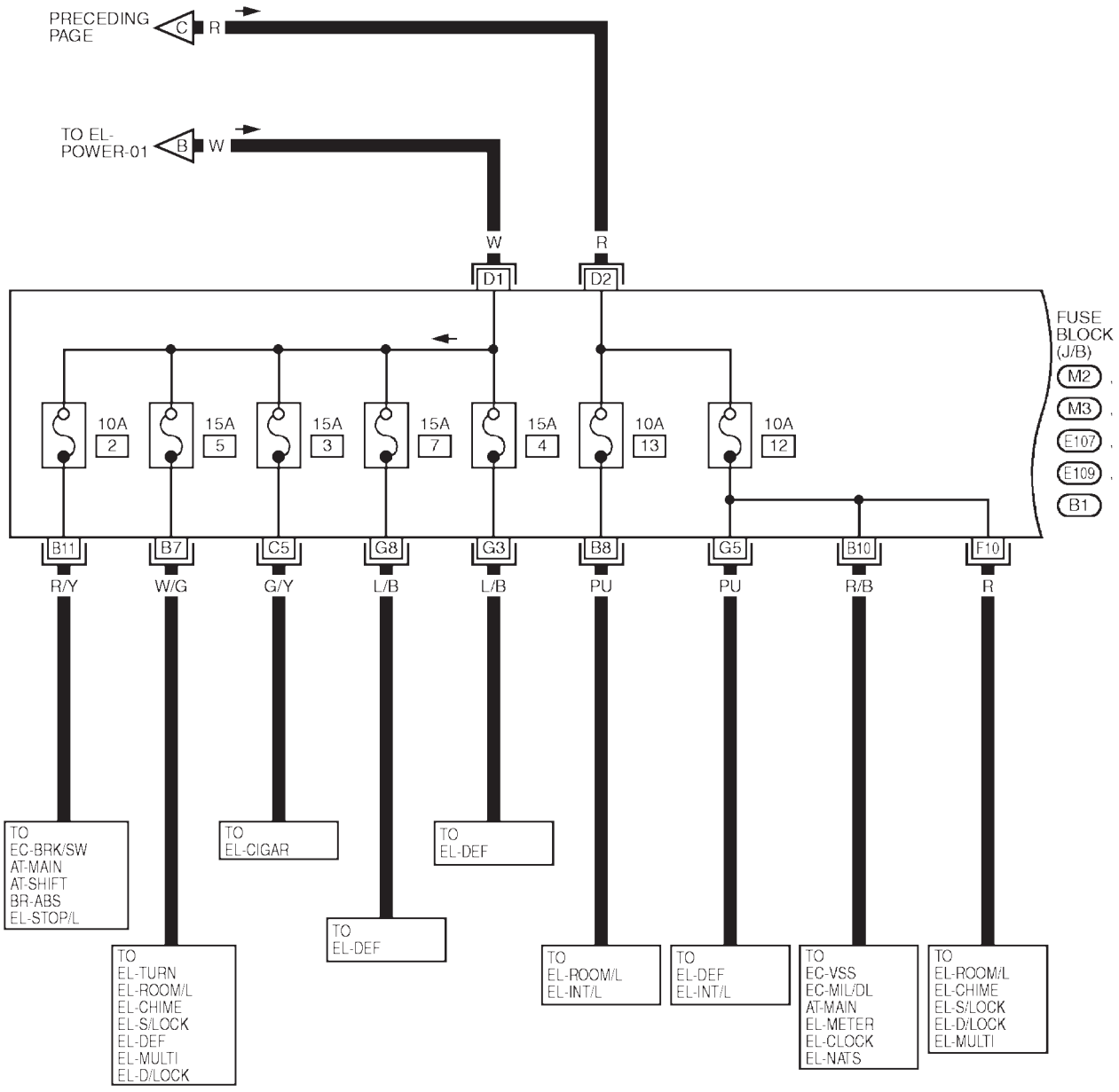
EL-POWER-02





YEL393C

EL-POWER-03



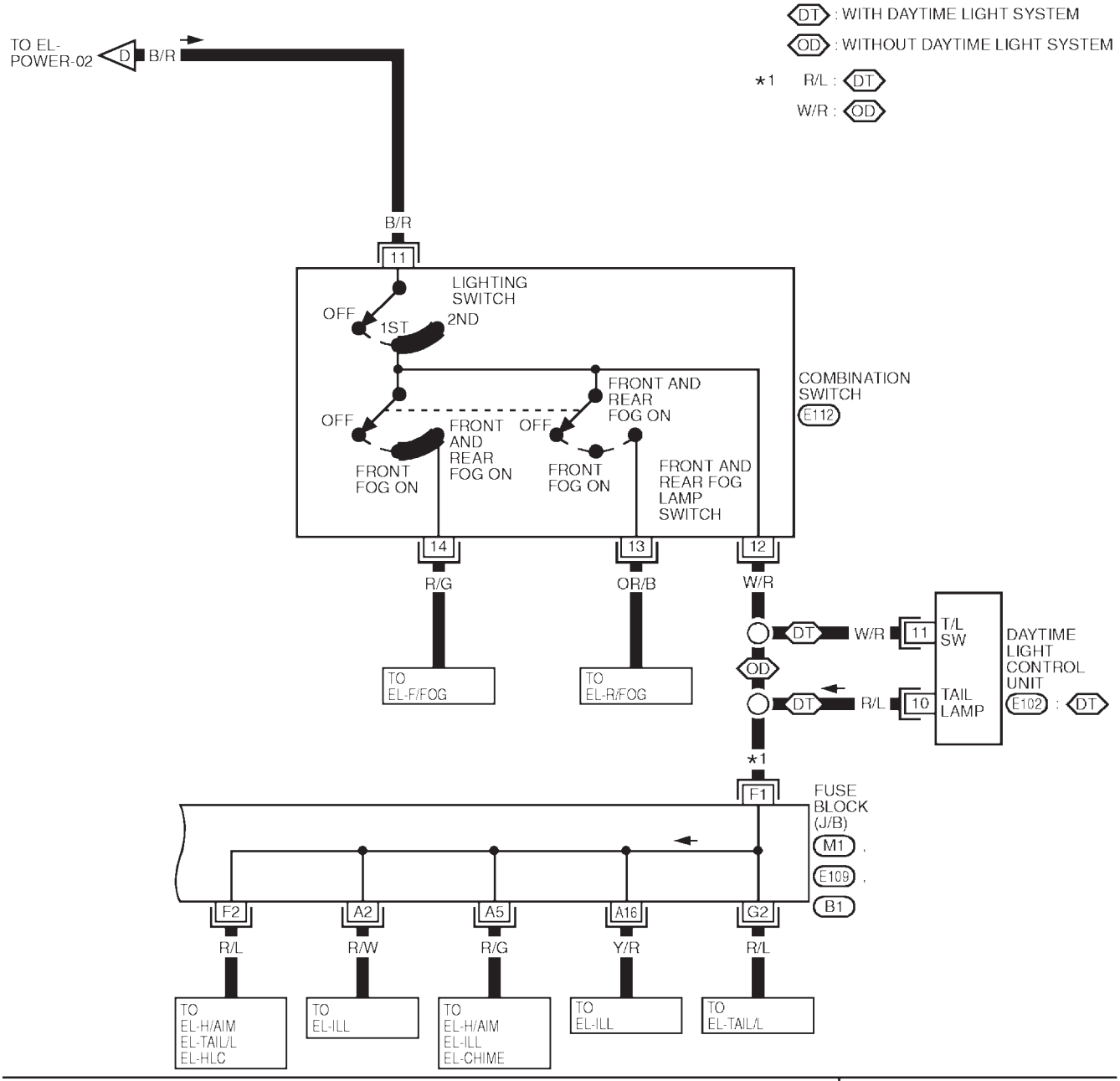
REFER TO THE FOLLOWING.

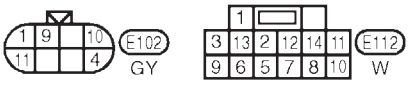
M2 , M3 , E107 , E109 ,
B1 -FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL394C

EL-POWER-04





REFER TO THE FOLLOWING.

M1 , E109 , B1

-FUSE BLOCK-
JUNCTION BOX (J/B)

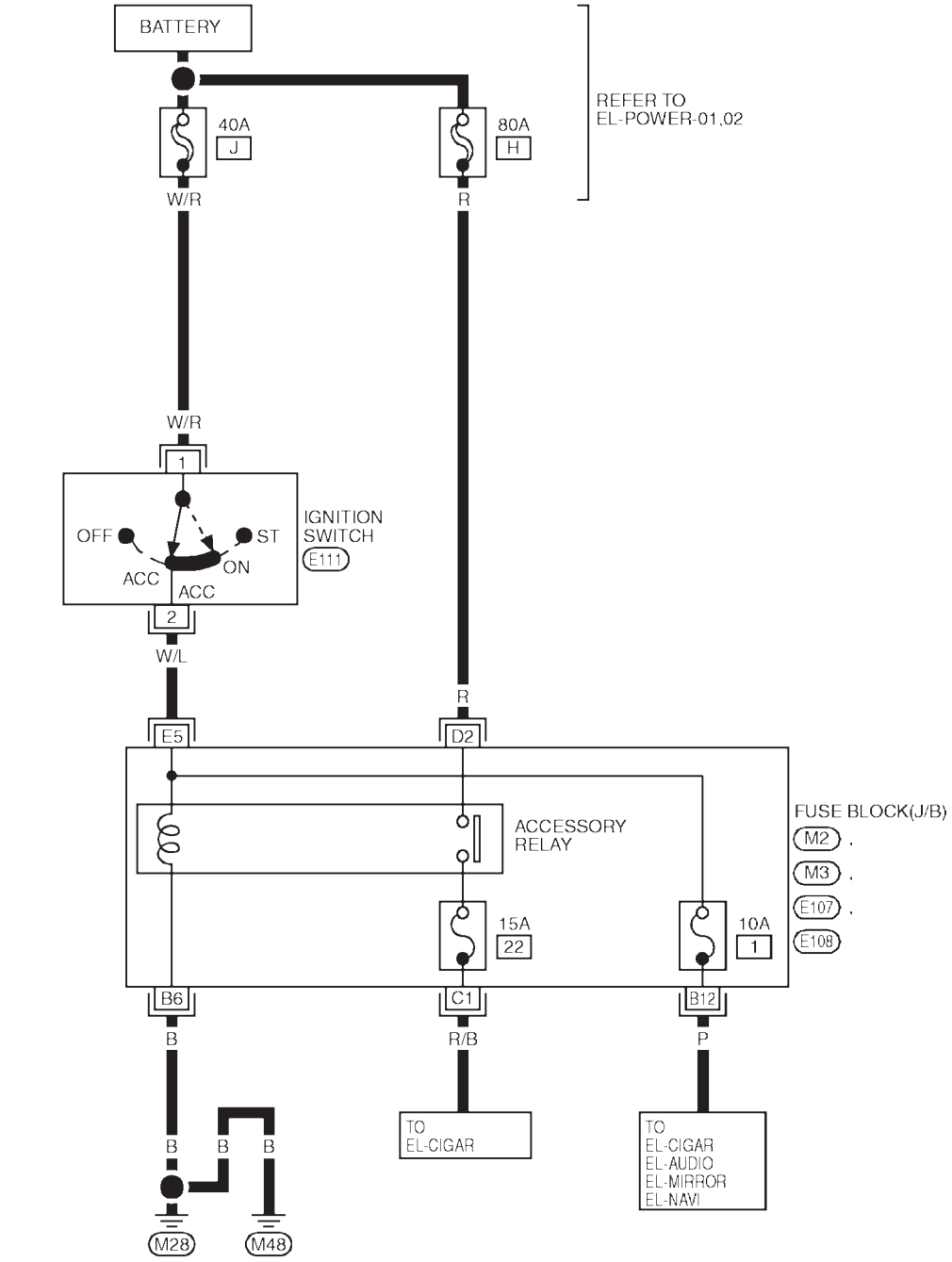
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

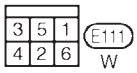
YEL395C

ACCESSORY POWER SUPPLY — IGNITION SWITCH IN "ACC" OR "ON"

NLEL0527S02

EL-POWER-05





REFER TO THE FOLLOWING.

M2 , M3 , E107 , E108

-FUSE BLOCK-

JUNCTION BOX (J/B)

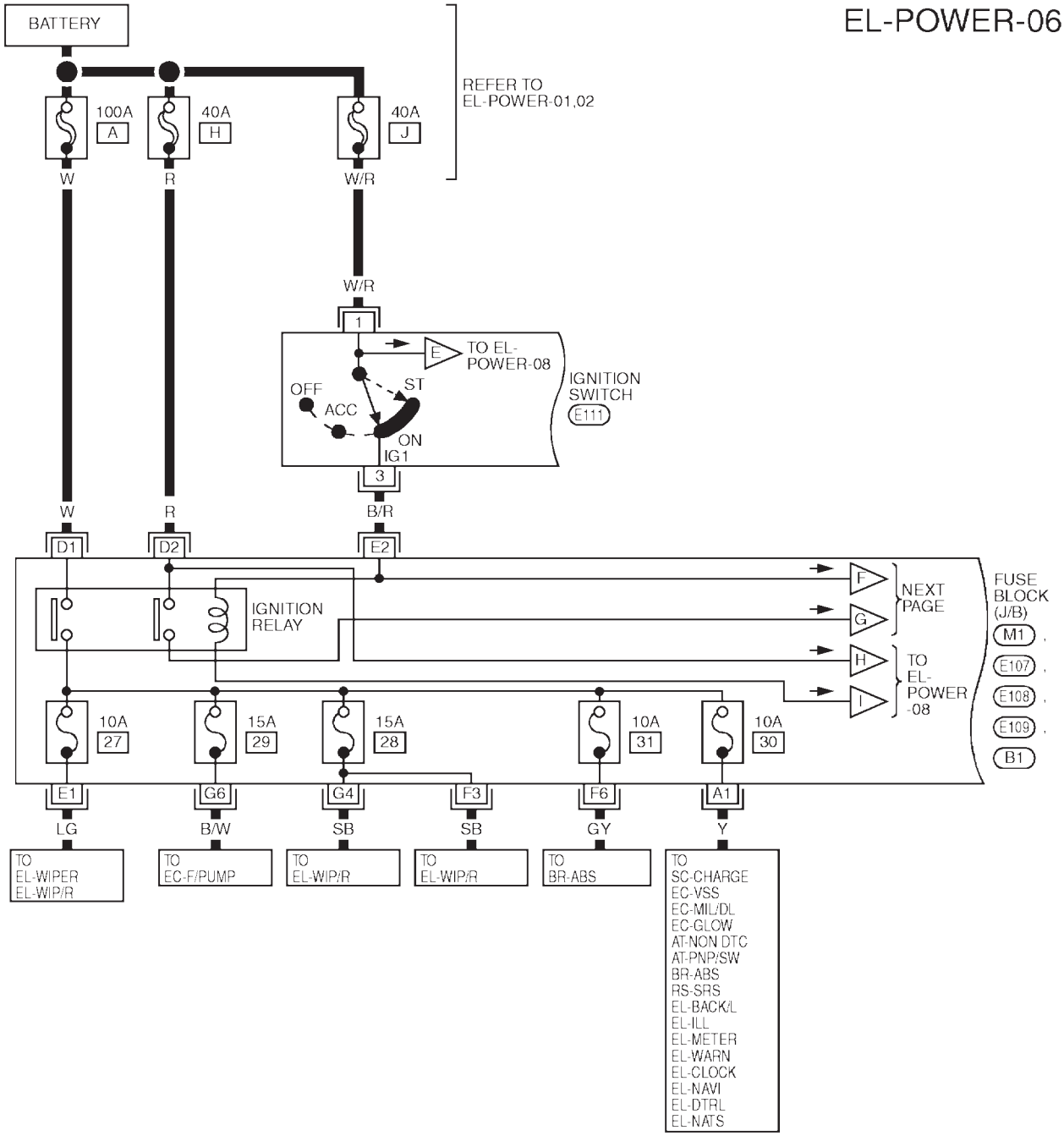
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

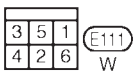
YEL396C

IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"

NLEL0527S03

EL-POWER-06





REFER TO THE FOLLOWING.

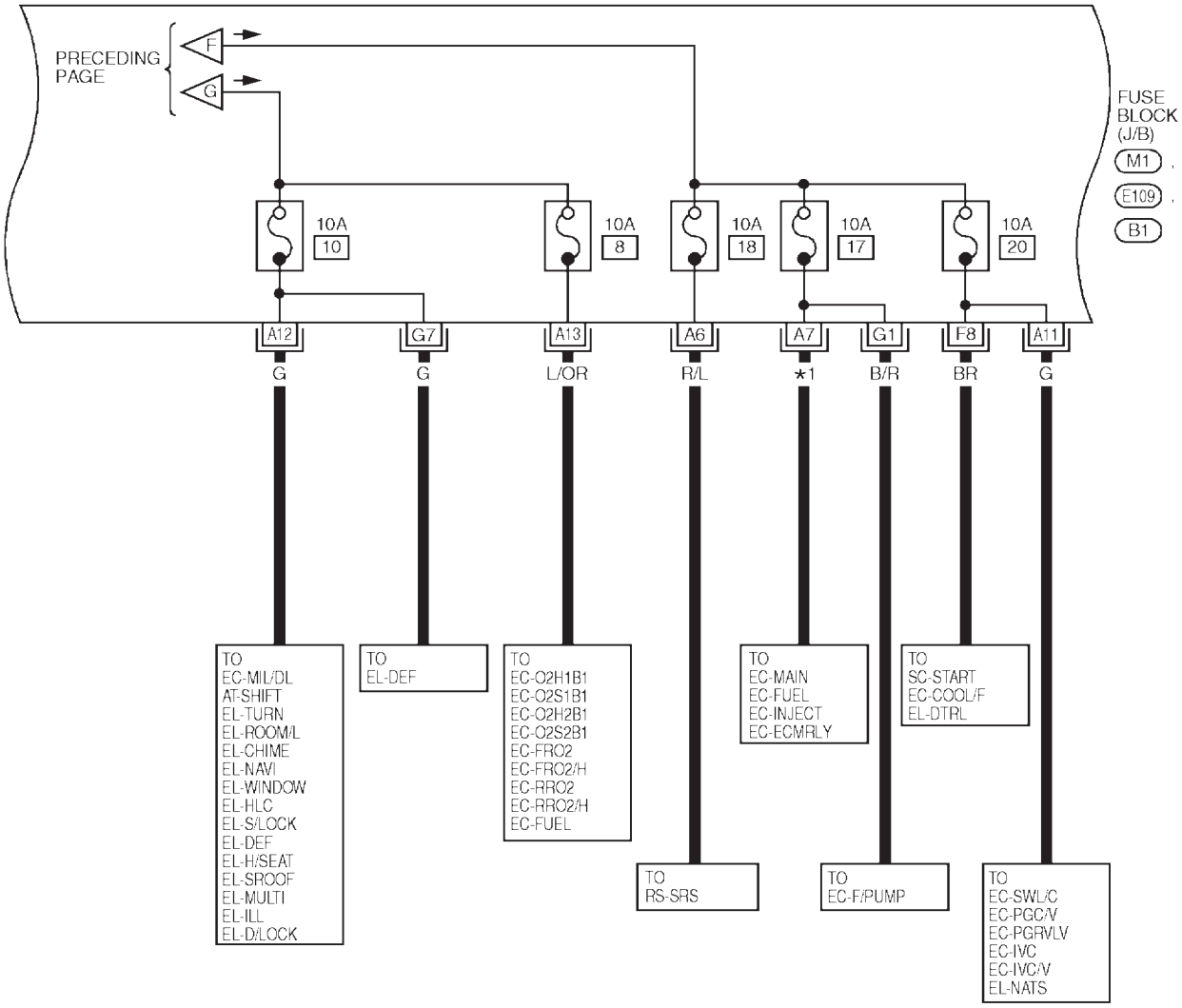
M1 , E107 , E108 , E109 ,
B1 -FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL397C

EL-POWER-07

G : GASOLINE ENGINE
D : DIESEL ENGINE
*1 B/R : G
W/R : D

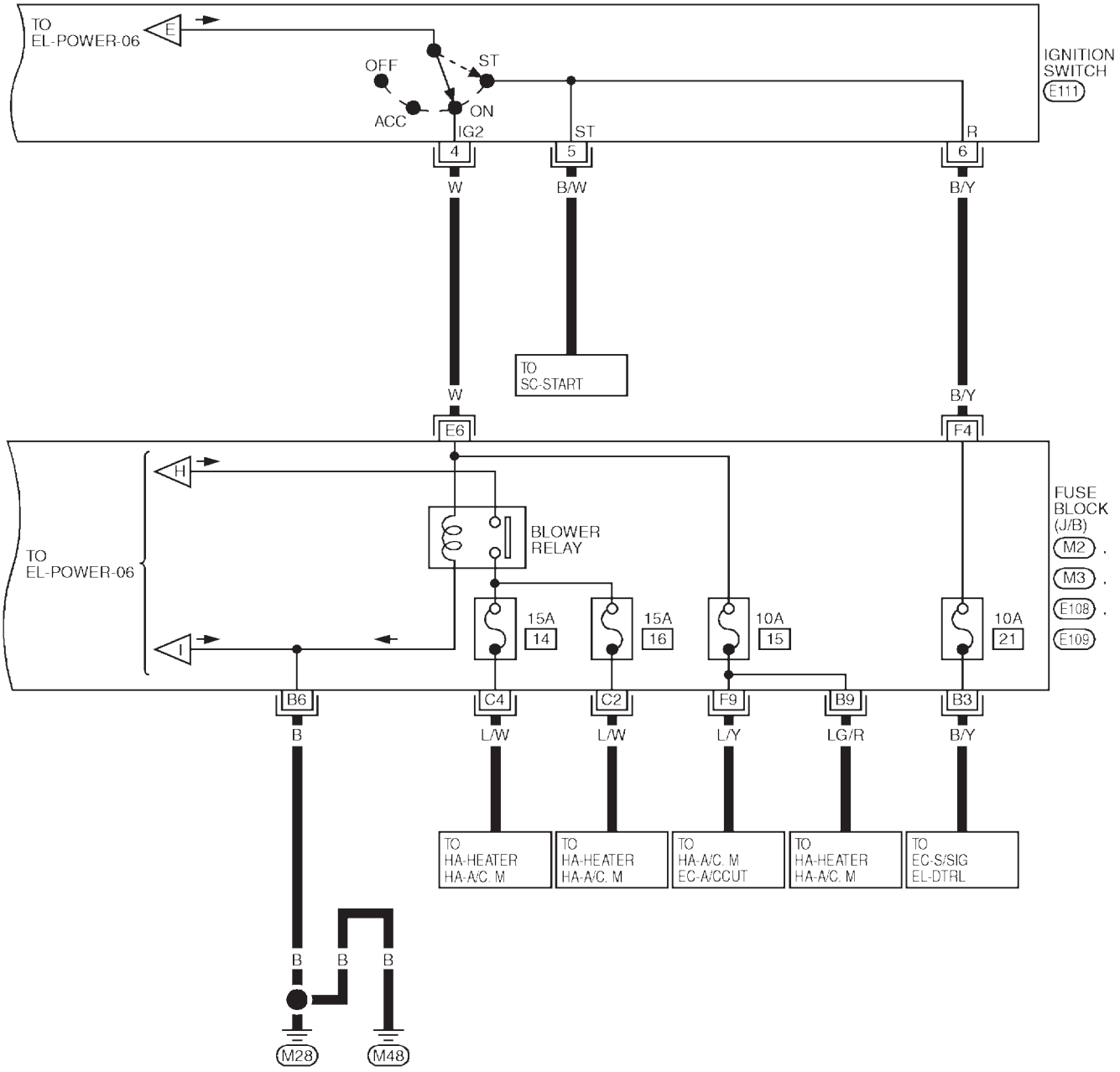


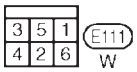
REFER TO THE FOLLOWING.
M1 , E109 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL398C

EL-POWER-08





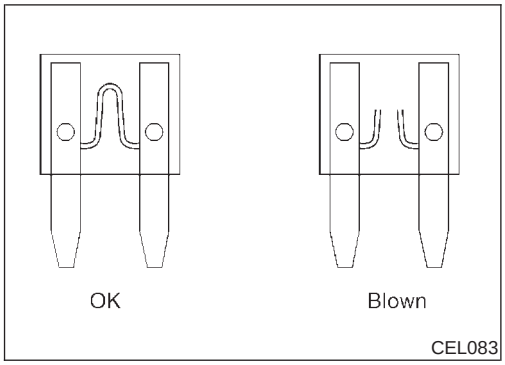
REFER TO THE FOLLOWING.

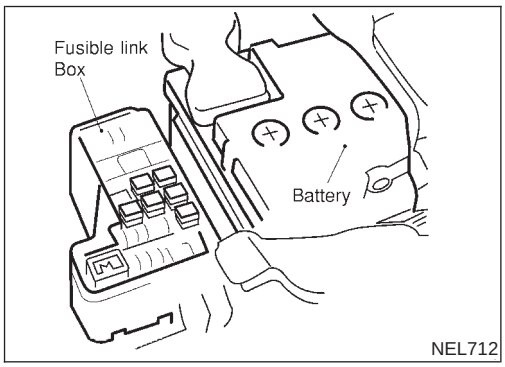
M2 , M3 , E108 , E109

-FUSE BLOCK-
JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL399C





Inspection

NLEL0007

FUSE

NLEL0007S01

- **If fuse is blown, be sure to eliminate cause of problem before installing new fuse.**
- **Use fuse of specified rating. Never use fuse of more than specified rating.**
- **Do not partially install fuse; always insert it into fuse holder properly.**
- **Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not used for a long period of time.**

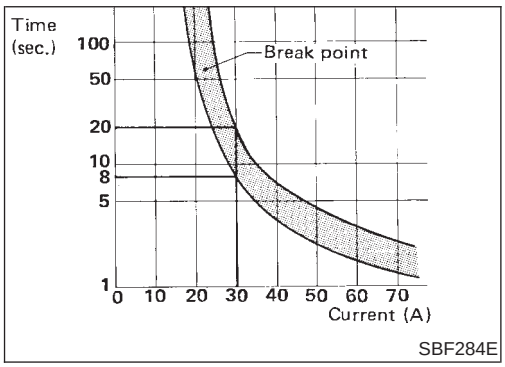
FUSIBLE LINK

NLEL0007S02

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

CAUTION:

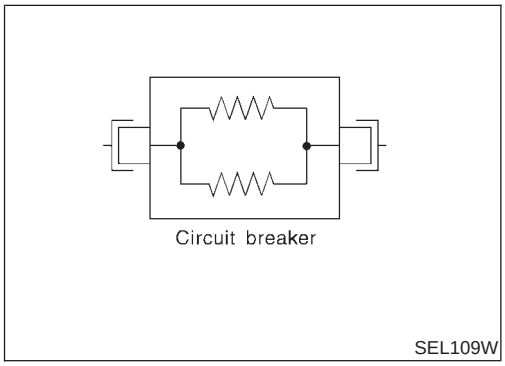
- **If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of problem.**
- **Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring harness, vinyl or rubber parts.**



CIRCUIT BREAKER

NLEL0007S03

For example, when current is 30A, the circuit is broken within 8 to 20 seconds.



CIRCUIT BREAKER (PTC THERMISTOR TYPE)

NLEL0007S04

The PTC thermister generates heat in response to current flow. The temperature (and resistance) of the thermister element varies with current flow. Excessive current flow will cause the element’s temperature to rise. When the temperature reaches a specified level, the electrical resistance will rise sharply to control the circuit current.

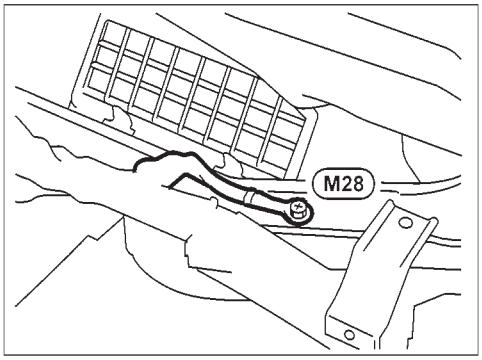
Reduced current flow will cause the element to cool. Resistance falls accordingly and normal circuit current flow is allowed to resume.

Ground Distribution (Models with fuse and fusible link box E43)

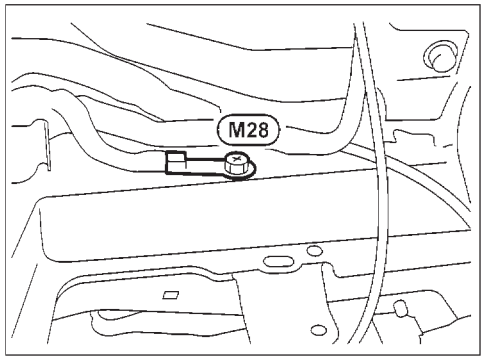
NLEL0008

MAIN HARNESS

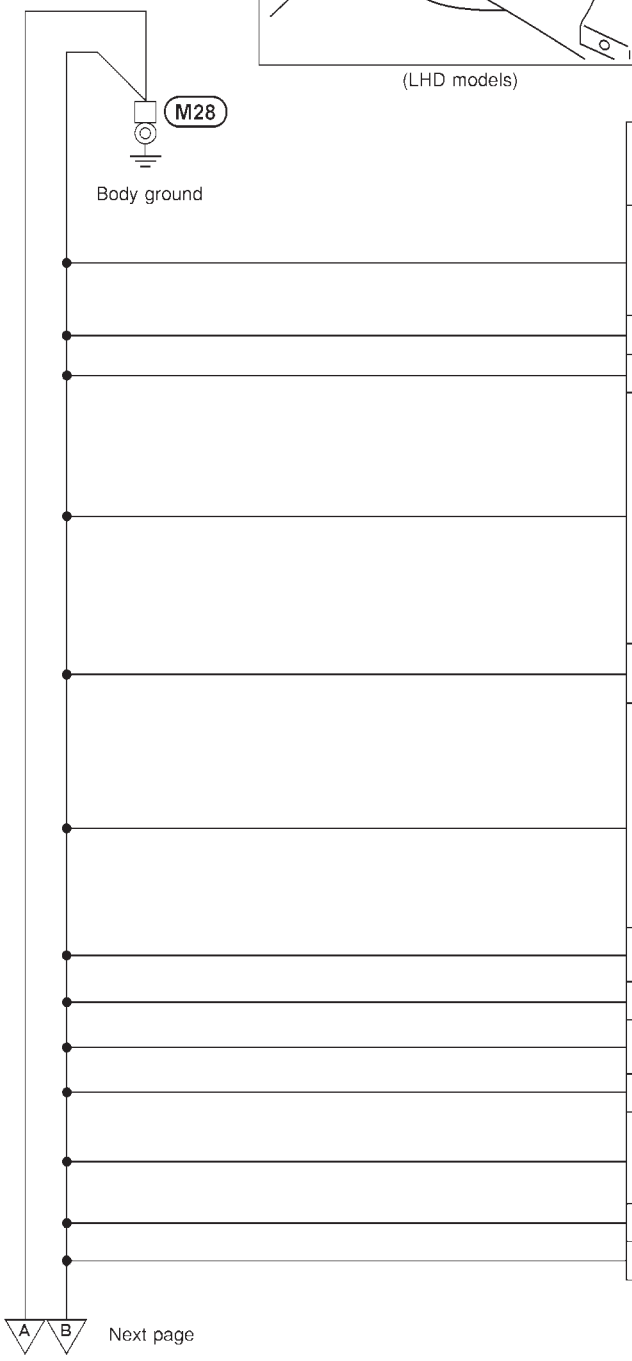
NLEL0008S01



(LHD models)



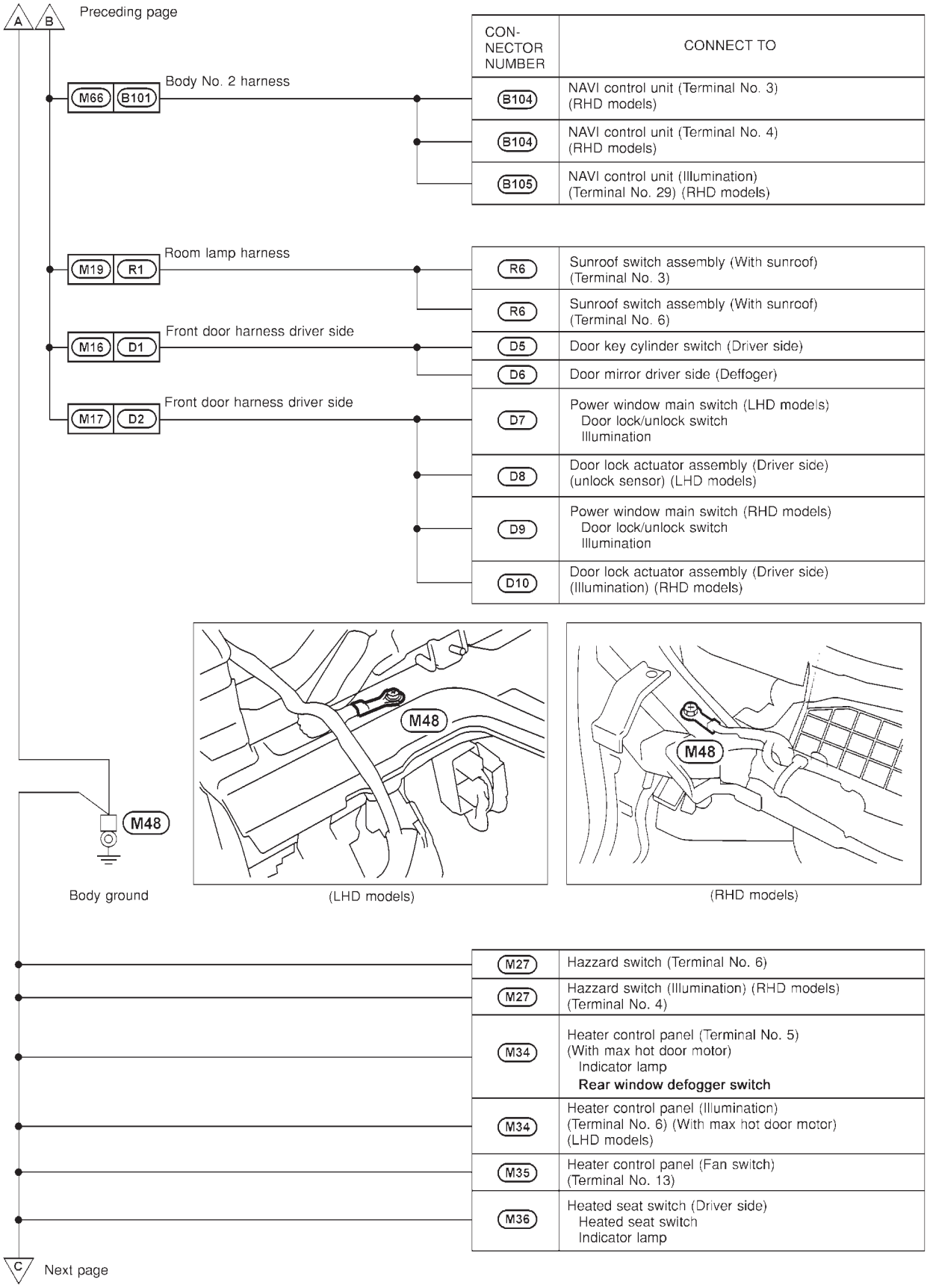
(RHD models)



CON-NECTOR NUMBER	CONNECT TO
M2	Fuse block (J/B) Accessory relay Ignition relay Blower relay
M5	Power window relay
M6	Data link connector (Terminal No. 4)
M24	Combination meter (Terminal No. 7) Air bag warning lamp Clock Fuel gauge Speedmeter Tacho meter Unified meter control unit (With odo/trip meter) Water temperature gauge
M24	Combination meter (Illumination) (Terminal No. 11)
M25	Combination meter (LHD models) (Terminal No. 30) ABS warning lamp Air bag warning lamp Front fog indicator lamp High beam indicator lamp Rear fog indicator lamp Turn signal
M27	Hazard switch (Illumination) (LHD models) (Terminal No. 4)
M31	Time control unit
M34	Heater control panel (Illumination)(With max hoot door motor) (Terminal No. 6) (RHD models)
M41	Ashtray illumination (RHD models)
M42	A/T device (Terminal No. 6) Park position switch Shift lock solenoid
M59	Power socket relay
M60	Door mirror remote control switch

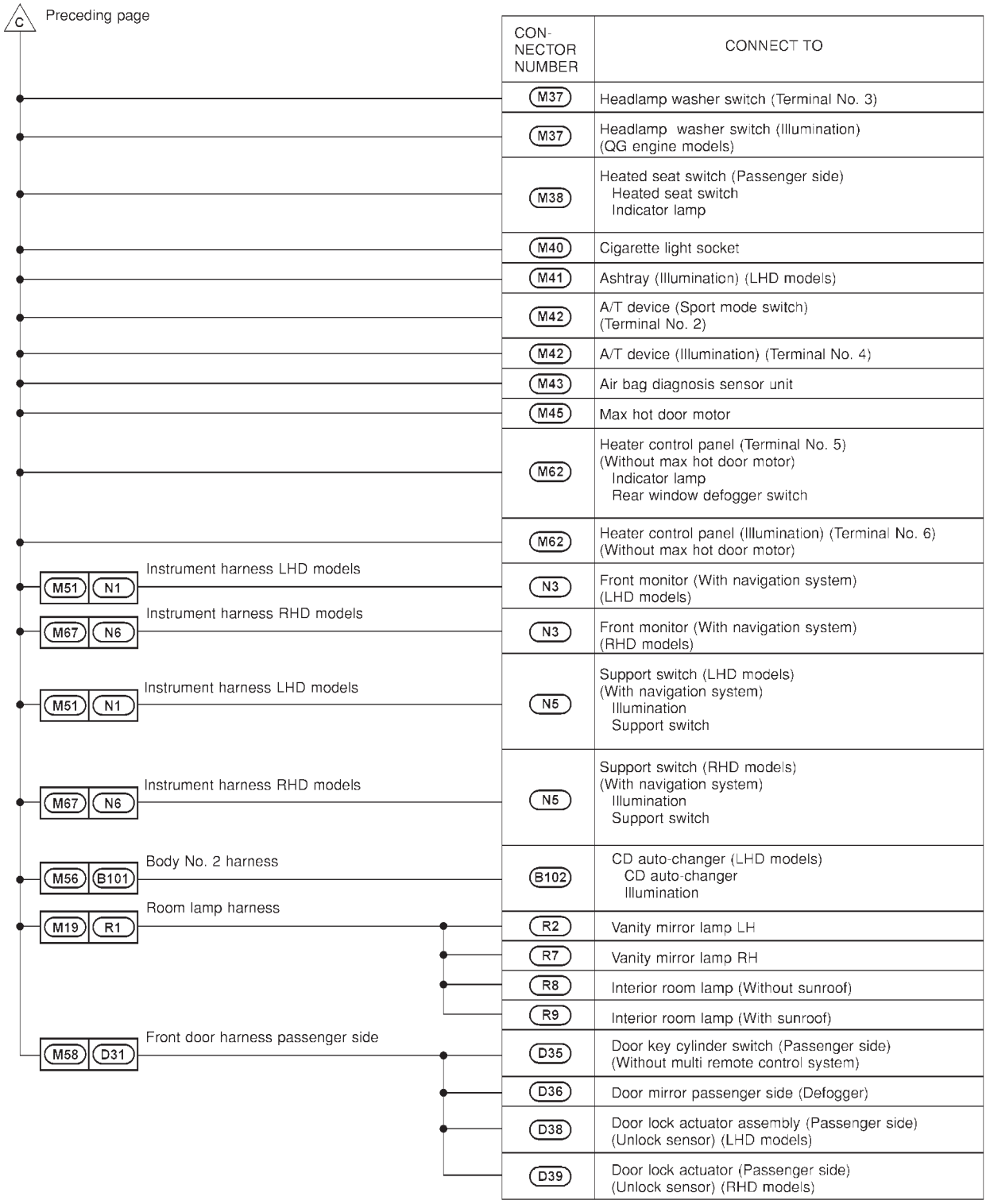
YEL967B

Ground Distribution (Models with fuse and fusible link box E43) (Cont'd)



CONNECTOR NUMBER	CONNECT TO
B104	NAVI control unit (Terminal No. 3) (RHD models)
B104	NAVI control unit (Terminal No. 4) (RHD models)
B105	NAVI control unit (Illumination) (Terminal No. 29) (RHD models)
R6	Sunroof switch assembly (With sunroof) (Terminal No. 3)
R6	Sunroof switch assembly (With sunroof) (Terminal No. 6)
D5	Door key cylinder switch (Driver side)
D6	Door mirror driver side (Deffoger)
D7	Power window main switch (LHD models) Door lock/unlock switch Illumination
D8	Door lock actuator assembly (Driver side) (unlock sensor) (LHD models)
D9	Power window main switch (RHD models) Door lock/unlock switch Illumination
D10	Door lock actuator assembly (Driver side) (Illumination) (RHD models)
M27	Hazzard switch (Terminal No. 6)
M27	Hazzard switch (Illumination) (RHD models) (Terminal No. 4)
M34	Heater control panel (Terminal No. 5) (With max hot door motor) Indicator lamp **Rear window defogger switch**
M34	Heater control panel (Illumination) (Terminal No. 6) (With max hot door motor) (LHD models)
M35	Heater control panel (Fan switch) (Terminal No. 13)
M36	Heated seat switch (Driver side) Heated seat switch Indicator lamp

YEL968B



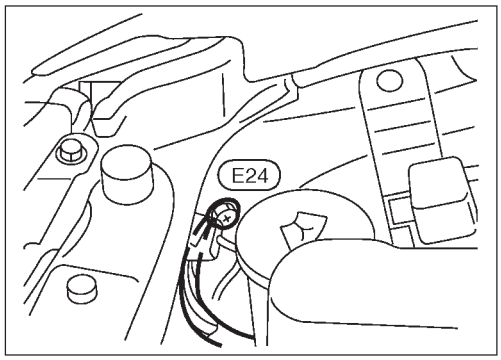
CON-NECTOR NUMBER	CONNECT TO
M37	Headlamp washer switch (Terminal No. 3)
M37	Headlamp washer switch (Illumination) (QG engine models)
M38	Heated seat switch (Passenger side) Heated seat switch Indicator lamp
M40	Cigarette light socket
M41	Ashtray (Illumination) (LHD models)
M42	A/T device (Sport mode switch) (Terminal No. 2)
M42	A/T device (Illumination) (Terminal No. 4)
M43	Air bag diagnosis sensor unit
M45	Max hot door motor
M62	Heater control panel (Terminal No. 5) (Without max hot door motor) Indicator lamp Rear window defogger switch
M62	Heater control panel (Illumination) (Terminal No. 6) (Without max hot door motor)
N3	Front monitor (With navigation system) (LHD models)
N3	Front monitor (With navigation system) (RHD models)
N5	Support switch (LHD models) (With navigation system) Illumination Support switch
N5	Support switch (RHD models) (With navigation system) Illumination Support switch
B102	CD auto-changer (LHD models) CD auto-changer Illumination
R2	Vanity mirror lamp LH
R7	Vanity mirror lamp RH
R8	Interior room lamp (Without sunroof)
R9	Interior room lamp (With sunroof)
D35	Door key cylinder switch (Passenger side) (Without multi remote control system)
D36	Door mirror passenger side (Defogger)
D38	Door lock actuator assembly (Passenger side) (Unlock sensor) (LHD models)
D39	Door lock actuator (Passenger side) (Unlock sensor) (RHD models)

YEL969B

Ground Distribution (Models with fuse and fusible link box E43) (Cont'd)

ENGINE ROOM HARNESS

NLEL0008S02



E24

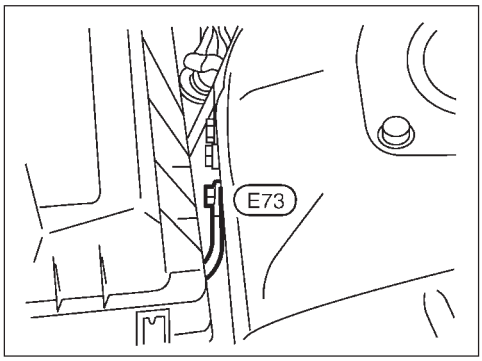
Body ground

CONNECTOR NUMBER	CONNECT TO
E2	Front wiper motor
E3	Side turn signal lamp RH
E10	Rear wiper relay
E11	Front fog lamp relay
E13	Cooling fan relay-2 (SR engine models)
E14	Front wiper relay-2
E23	Front turn signal lamp RH
E25	Front fog lamp RH
E26	Parking lamp RH
E37	Cooling fan motor-1 (QG engine models)
E38	Cooling fan motor-2 (QG engine models)
E40	Cooling fan motor-2 (SR engine models)
E63	Front fog lamp LH
E74	Brake fluid level switch
E110	Front wiper relay-1
E112	Combination meter (Terminal No. 1) Turn signal switch
E114	Combination switch (Terminal No. 4) Rear wiper switch Washer switch Variable intermittent wiper volume
E114	Combination switch (Terminal No. 17) Front wiper switch
E28	Headlamp aiming motor RH
E64	Headlamp aiming motor LH

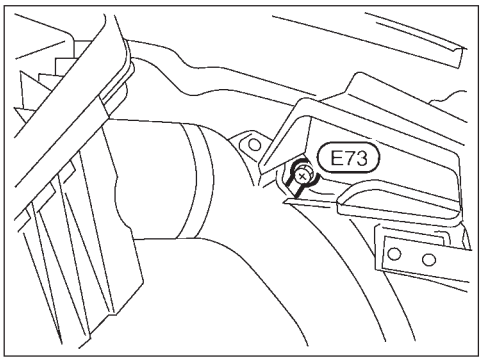
E73

Body ground

D Next page



(LHD models)

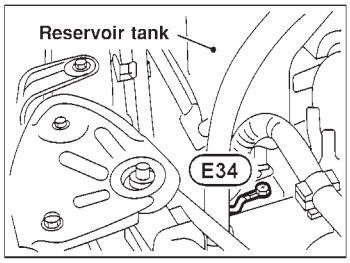


(RHD models)

YEL970B

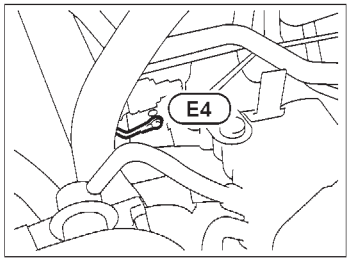
D Preceding page

CON-NECTOR NUMBER	CONNECT TO
E12	Headlamp washer timer
E13	Headlamp relay LH (QG engine models) (With daytime light)
E13	Cooling fan relay-2 (YD engine models)
E15	Headlamp relay RH (QG engine models) (With daytime light)
E16	Cooling fan relay-4 (YD engine models)
E17	Headlamp relay RH (SR engine models) (With daytime light)
E17	Headlamp relay RH (YD engine models) (With daytime light)
E18	Headlamp relay LH (SR engine models) (With daytime light)
E18	Headlamp relay LH (YD engine models) (With daytime light)
E27	Headlamp RH
E40	Cooling fan motor-2 (YD engine models)
E65	Headlamp LH
E66	Parking lamp LH
E67	Front turn signal lamp LH
E78	Side turn signal lamp LH
E102	Daytime light control unit
E117	Combination meter (Terminal No. 30) (RHD models) ABS warning lamp Air bag warning lamp High beam indicator lamp Front fog indicator lamp Rear fog indicator lamp Turn signal



CON-NECTOR NUMBER	CONNECT TO
E29	Alternator (E)

E34
Body ground



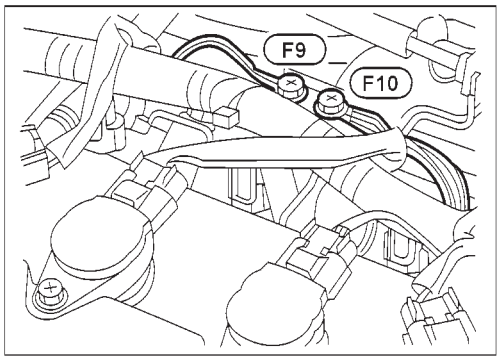
CON-NECTOR NUMBER	CONNECT TO
E1	ABS actuator and electric unit (Control unit) (Terminal No. 16)
E1	ABS actuator and electric unit (Control unit) (Terminal No. 19)

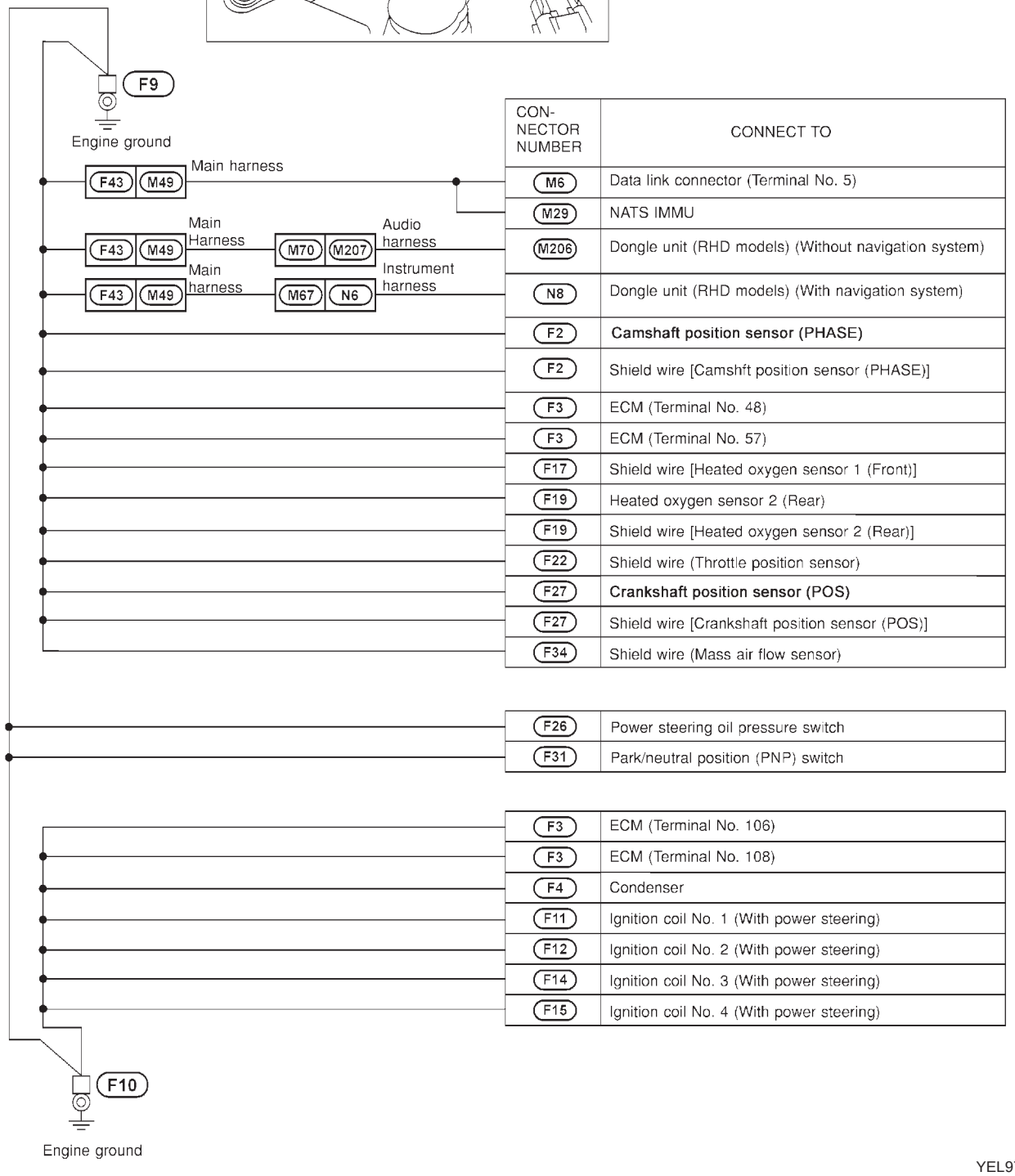
E4
Body ground

YEL971B

ENGINE CONTROL HARNESS/QG ENGINE MODELS

NLEL0008S03



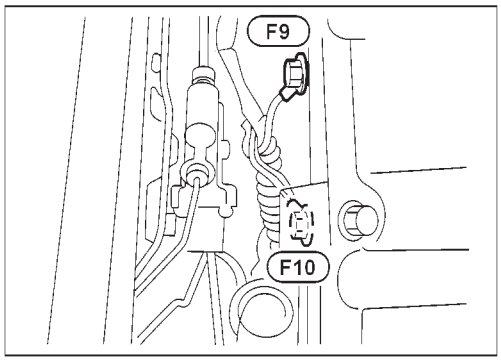


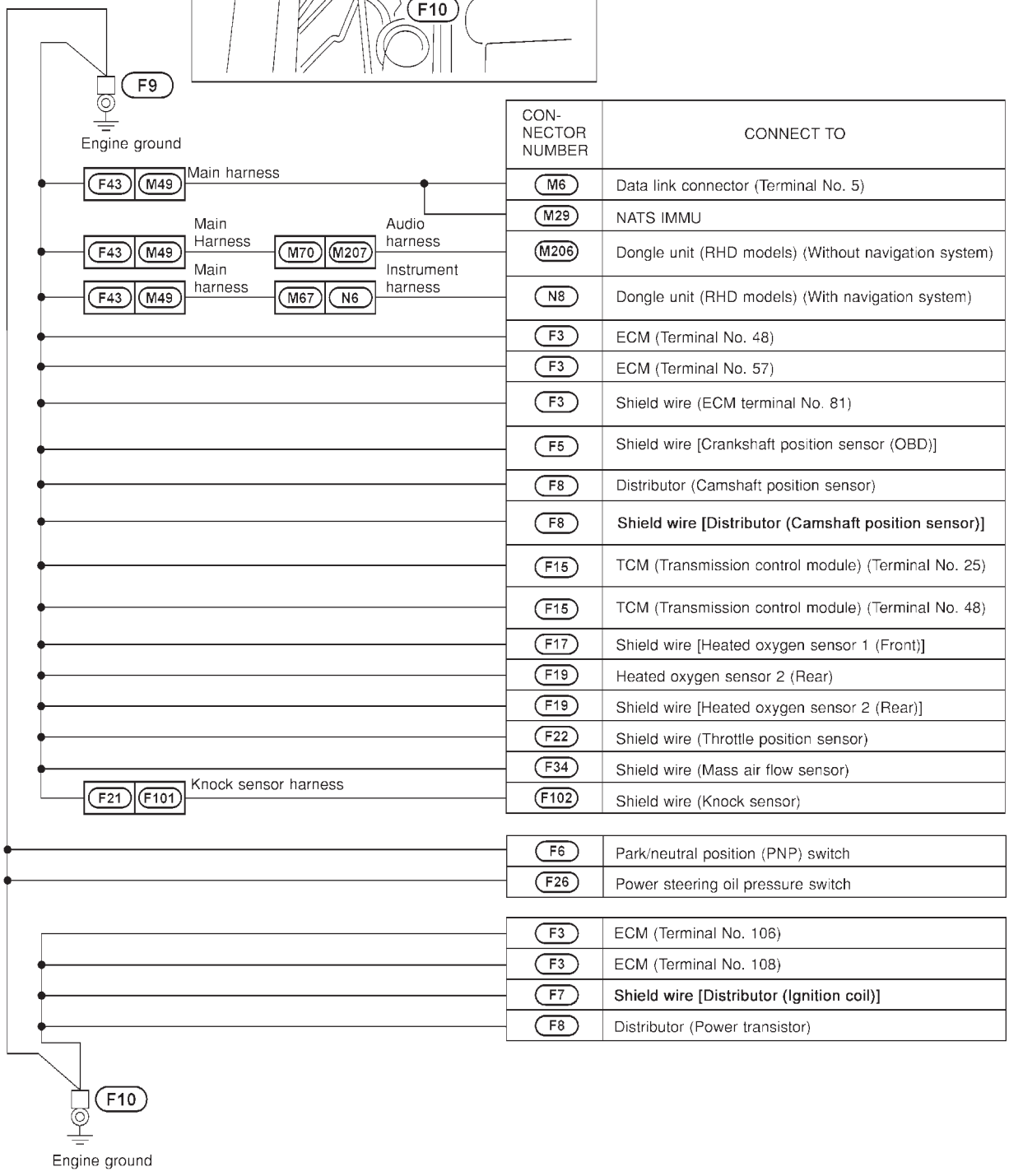
CONNECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M206	Dongle unit (RHD models) (Without navigation system)
N8	Dongle unit (RHD models) (With navigation system)
F2	**Camshaft position sensor (PHASE)**
F2	Shield wire [Camshaft position sensor (PHASE)]
F3	ECM (Terminal No. 48)
F3	ECM (Terminal No. 57)
F17	Shield wire [Heated oxygen sensor 1 (Front)]
F19	Heated oxygen sensor 2 (Rear)
F19	Shield wire [Heated oxygen sensor 2 (Rear)]
F22	Shield wire (Throttle position sensor)
F27	**Crankshaft position sensor (POS)**
F27	Shield wire [Crankshaft position sensor (POS)]
F34	Shield wire (Mass air flow sensor)
F26	Power steering oil pressure switch
F31	Park/neutral position (PNP) switch
F3	ECM (Terminal No. 106)
F3	ECM (Terminal No. 108)
F4	Condenser
F11	Ignition coil No. 1 (With power steering)
F12	Ignition coil No. 2 (With power steering)
F14	Ignition coil No. 3 (With power steering)
F15	Ignition coil No. 4 (With power steering)

YEL972B

ENGINE CONTROL HARNESS/SR ENGINE MODELS

NLEL0008S12



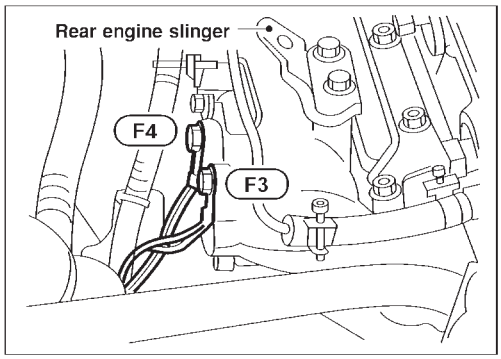


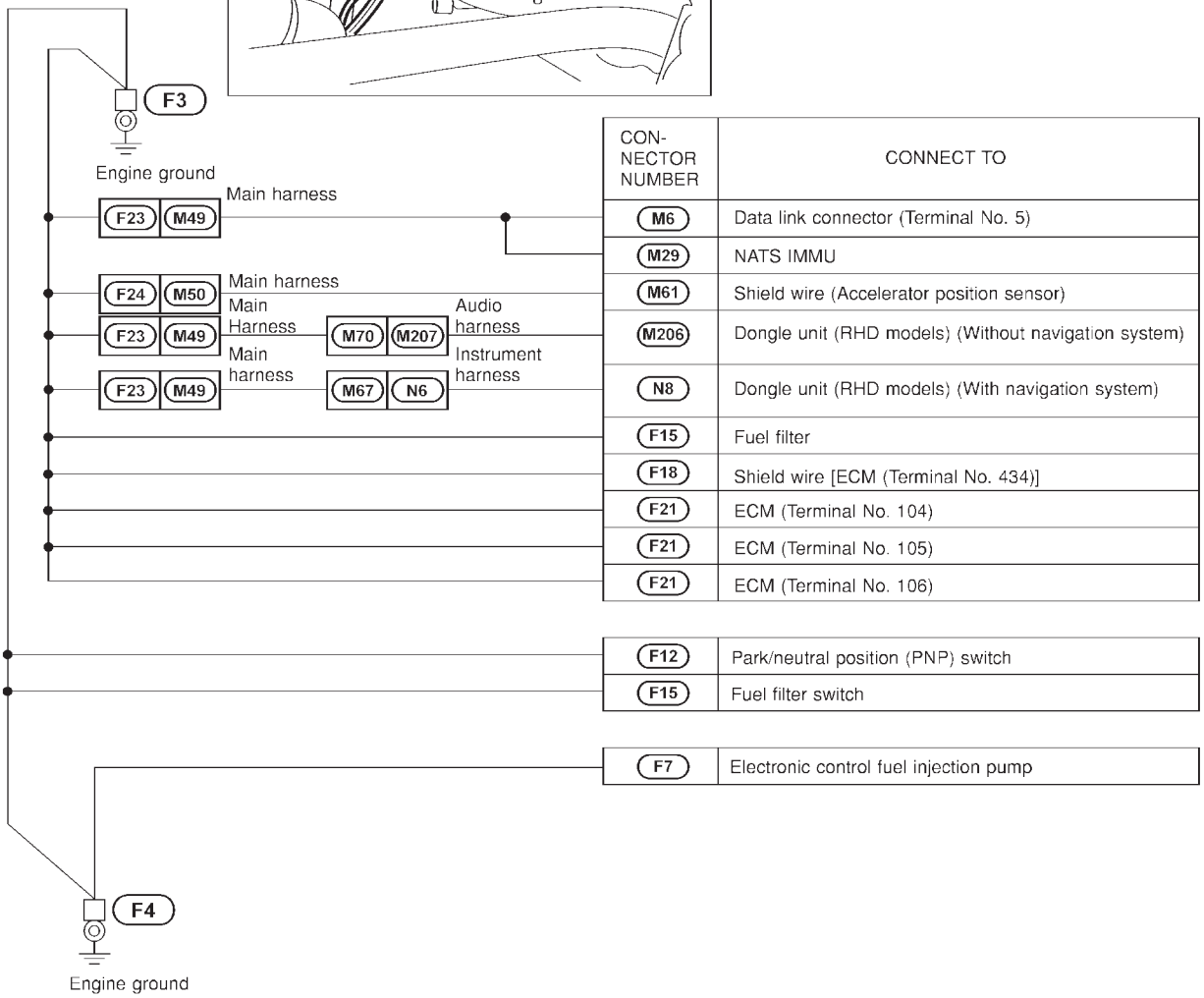
CON-NECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M206	Dongle unit (RHD models) (Without navigation system)
N8	Dongle unit (RHD models) (With navigation system)
F3	ECM (Terminal No. 48)
F3	ECM (Terminal No. 57)
F3	Shield wire (ECM terminal No. 81)
F5	Shield wire [Crankshaft position sensor (OBD)]
F8	Distributor (Camshaft position sensor)
F8	**Shield wire [Distributor (Camshaft position sensor)]**
F15	TCM (Transmission control module) (Terminal No. 25)
F15	TCM (Transmission control module) (Terminal No. 48)
F17	Shield wire [Heated oxygen sensor 1 (Front)]
F19	Heated oxygen sensor 2 (Rear)
F19	Shield wire [Heated oxygen sensor 2 (Rear)]
F22	Shield wire (Throttle position sensor)
F34	Shield wire (Mass air flow sensor)
F102	Shield wire (Knock sensor)
F6	Park/neutral position (PNP) switch
F26	Power steering oil pressure switch
F3	ECM (Terminal No. 106)
F3	ECM (Terminal No. 108)
F7	**Shield wire [Distributor (Ignition coil)]**
F8	Distributor (Power transistor)

YEL973B

ENGINE CONTROL HARNESS/YD ENGINE MODELS

NLEL0008S09



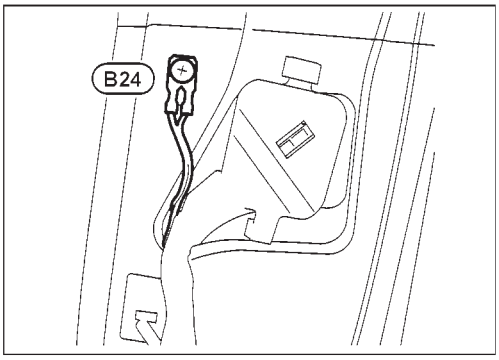


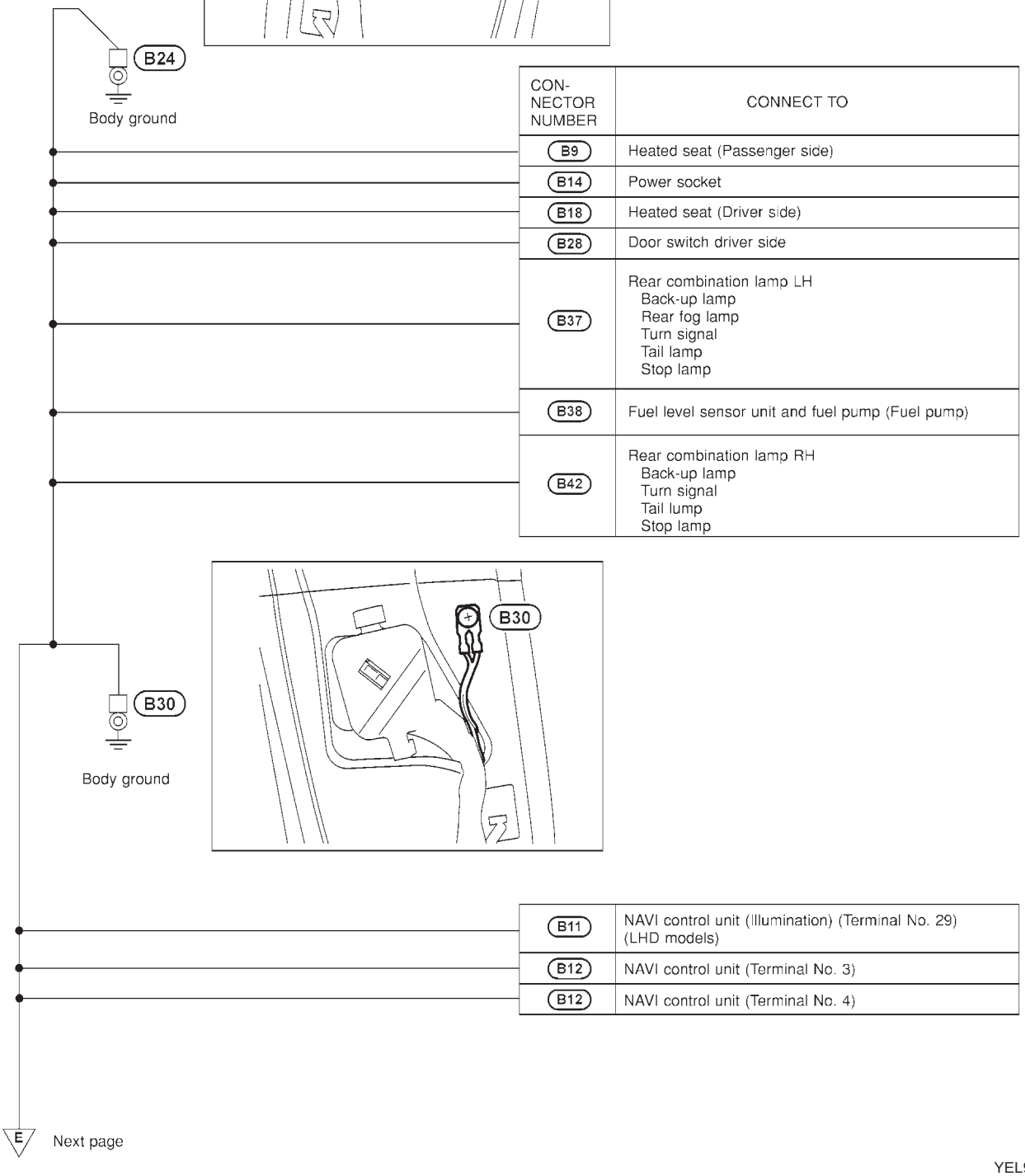
CON-NECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M61	Shield wire (Accelerator position sensor)
M206	Dongle unit (RHD models) (Without navigation system)
N8	Dongle unit (RHD models) (With navigation system)
F15	Fuel filter
F18	Shield wire [ECM (Terminal No. 434)]
F21	ECM (Terminal No. 104)
F21	ECM (Terminal No. 105)
F21	ECM (Terminal No. 106)
F12	Park/neutral position (PNP) switch
F15	Fuel filter switch
F7	Electronic control fuel injection pump

YEL974B

BODY HARNESS/LHD MODELS

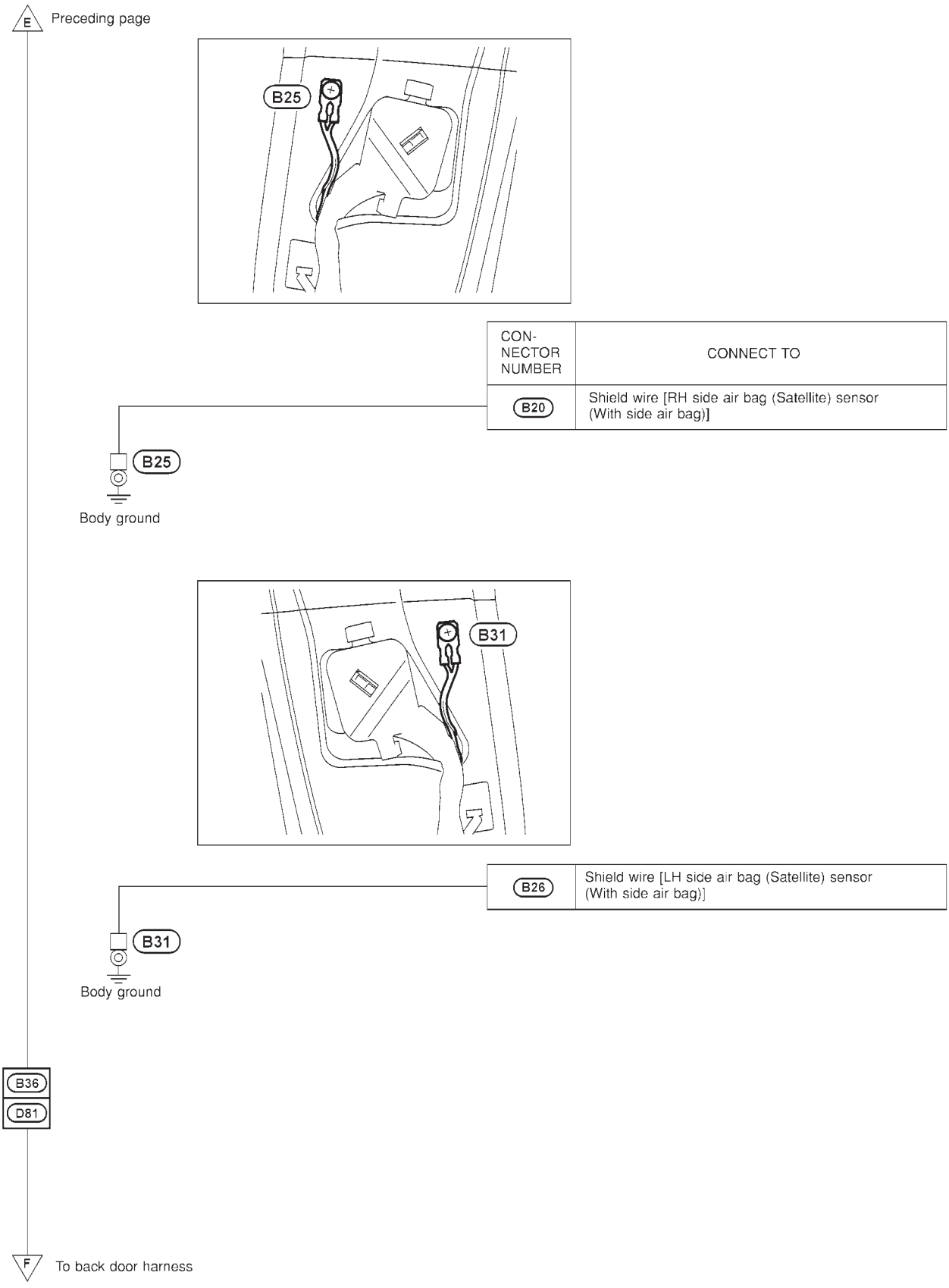
NLEL0008S04





CON-NECTOR NUMBER	CONNECT TO
B9	Heated seat (Passenger side)
B14	Power socket
B18	Heated seat (Driver side)
B28	Door switch driver side
B37	Rear combination lamp LH Back-up lamp Rear fog lamp Turn signal Tail lamp Stop lamp
B38	Fuel level sensor unit and fuel pump (Fuel pump)
B42	Rear combination lamp RH Back-up lamp Turn signal Tail lump Stop lamp
B11	NAVI control unit (Illumination) (Terminal No. 29) (LHD models)
B12	NAVI control unit (Terminal No. 3)
B12	NAVI control unit (Terminal No. 4)

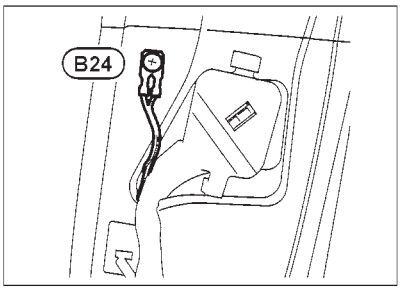
YEL975B

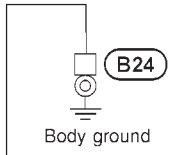

E
Preceding page
B25
CON-NECTOR NUMBER
CONNECT TO
B20
Shield wire [RH side air bag (Satellite) sensor (With side air bag)]
B25
Body ground
B31
B26
Shield wire [LH side air bag (Satellite) sensor (With side air bag)]
B31
Body ground
B36
D81
F
To back door harness

YEL976B

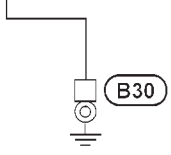
BODY HARNESS/RHD MODELS

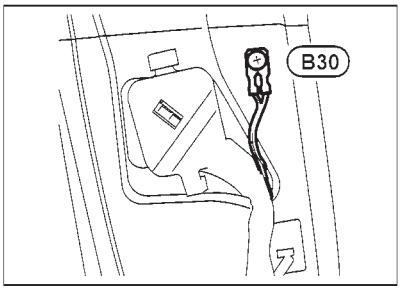
NLEL0008S10

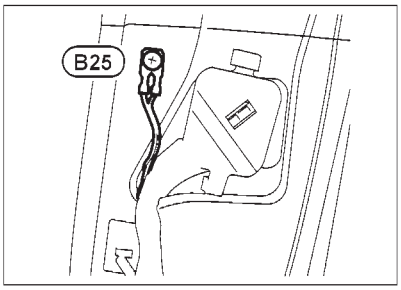




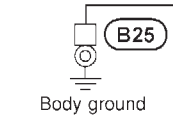
CONNECTOR NUMBER	CONNECT TO
B9	Heated seat (Passenger side)
B14	Power socket
B18	Heated seat (Driver side)
B28	Door switch driver side
B37	Rear combination lamp LH Back-up lamp Stop lamp Tail lamp Turn signal
B38	Fuel level sensor unit and fuel pump (Fuel pump)
B42	Rear combination lamp RH Back-up lamp Rear fog lamp Stop lamp Tail lamp Turn signal
B48	CD auto-changer CD auto-changer illumination





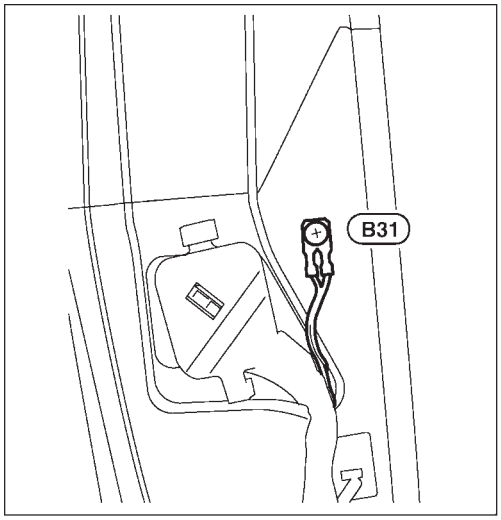


B20	Shield wire [RH side air bag (Satellite) sensor (With side air bag)]



YEL978B

Ground Distribution (Models with fuse and fusible link box E43) (Cont'd)



CON-NECTOR NUMBER	CONNECT TO
B26	Shield wire [LH side air bag (Satellite) sensor (With side air bag)]

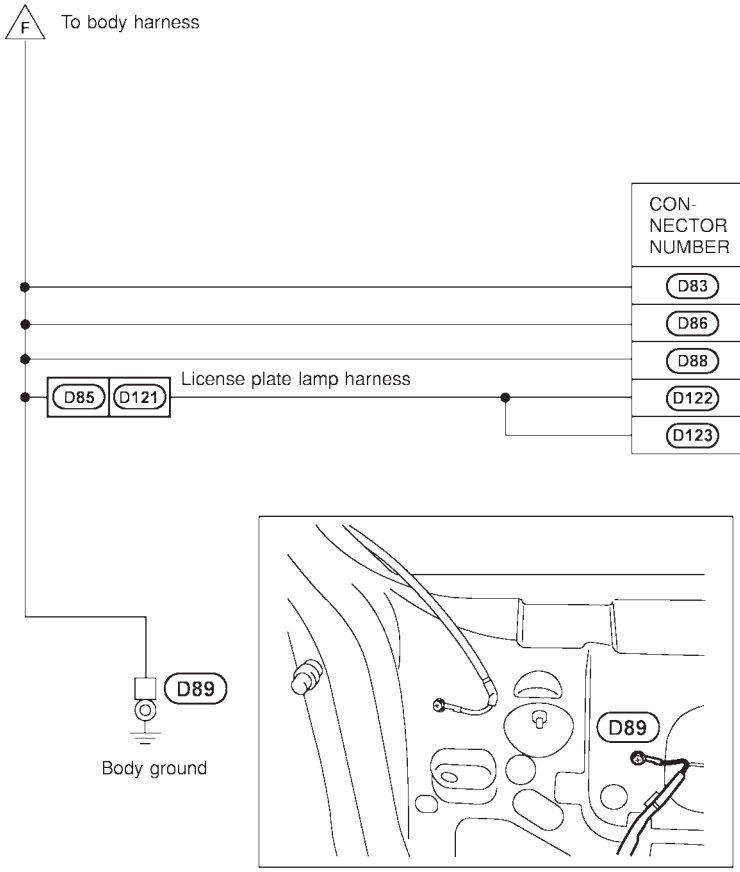
B31

Body ground

YEL979B

BACK DOOR HARNESS/LHD MODELS

NLEL0008S11

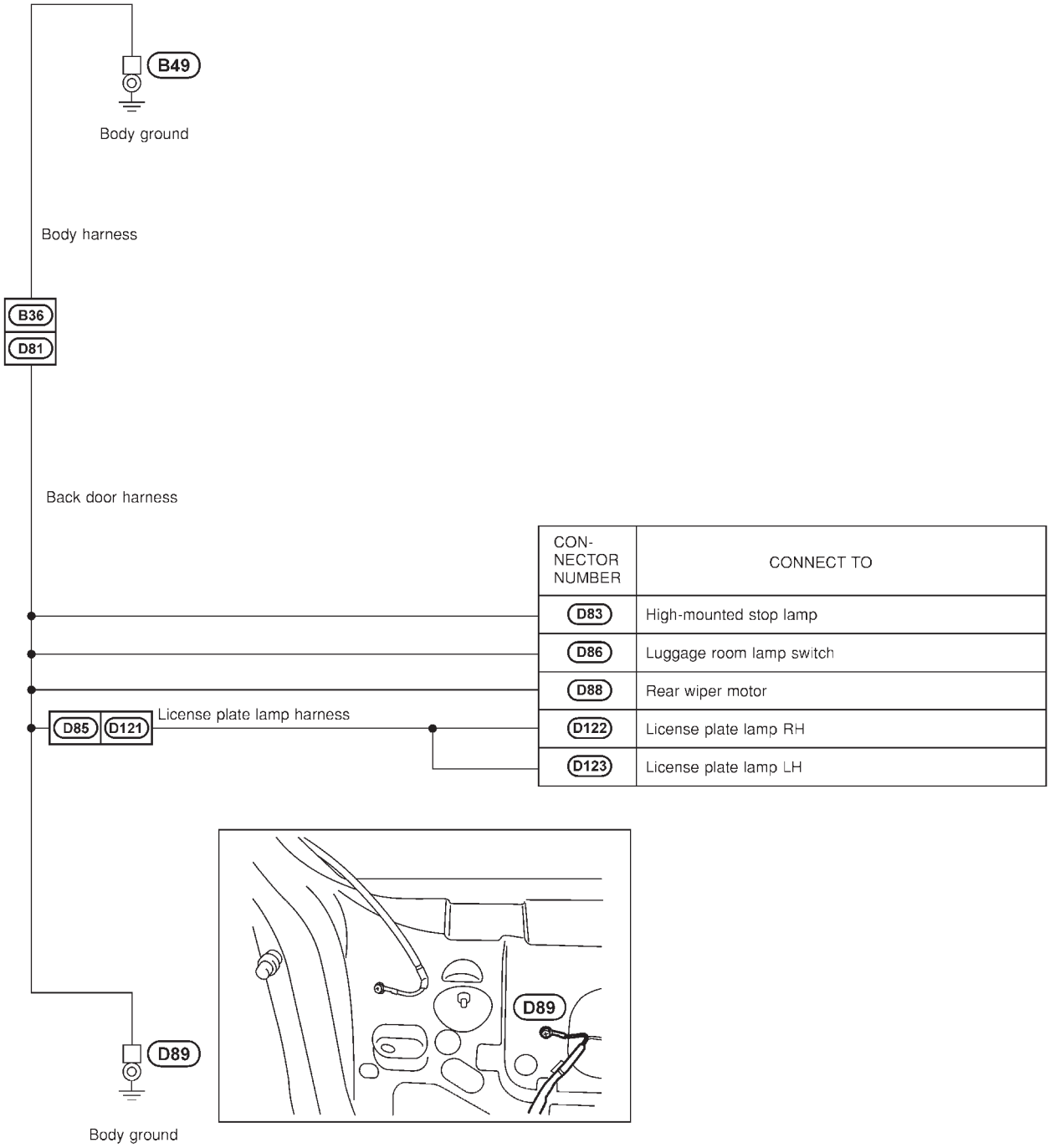


CON-NECTOR NUMBER	CONNECT TO
D83	High-mounted stop lamp
D86	Luggage room lamp switch
D88	Rear wiper motor
D122	License plate lamp RH
D123	License plate lamp LH

YEL977B

BACK DOOR HARNESS/RHD MODELS

NLEL0008S13

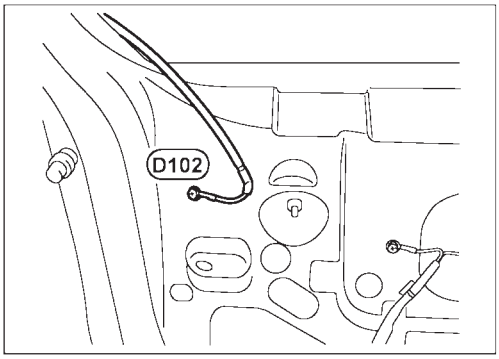


CON-NECTOR NUMBER	CONNECT TO
D83	High-mounted stop lamp
D86	Luggage room lamp switch
D88	Rear wiper motor
D122	License plate lamp RH
D123	License plate lamp LH

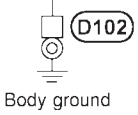
YEL980B

REAR WINDOW DEFOGGER HARNESS

NLEL0008S08



CON-NECTOR NUMBER	CONNECT TO
D101	Rear window defogger



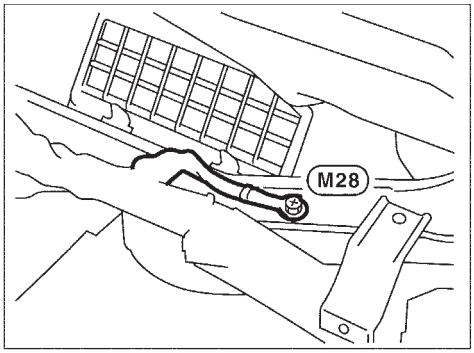
YEL982B

Ground Distribution (Models with fuse and fusible link box E90)

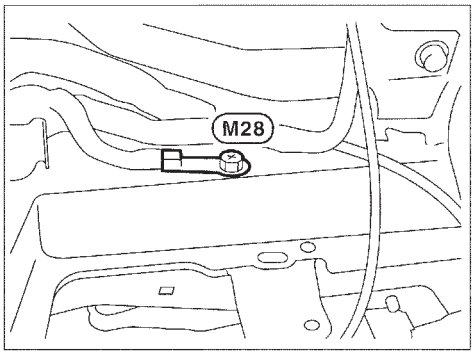
NLEL0528

NLEL0528S01

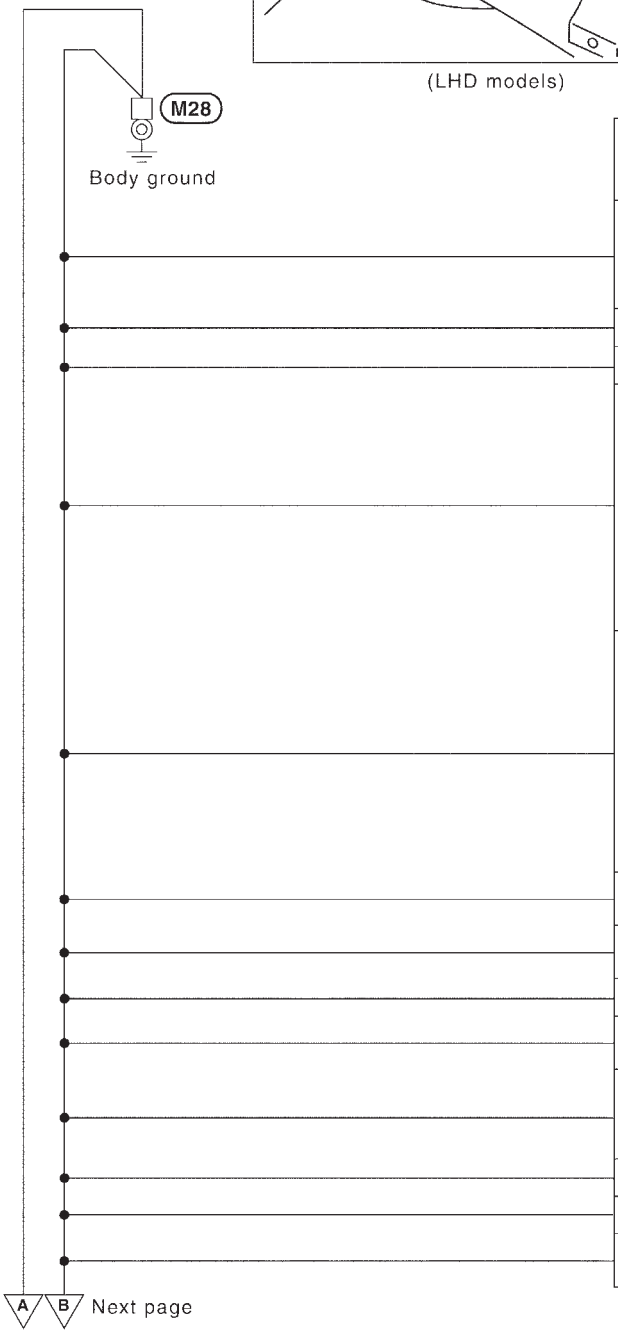
MAIN HARNESS



(LHD models)

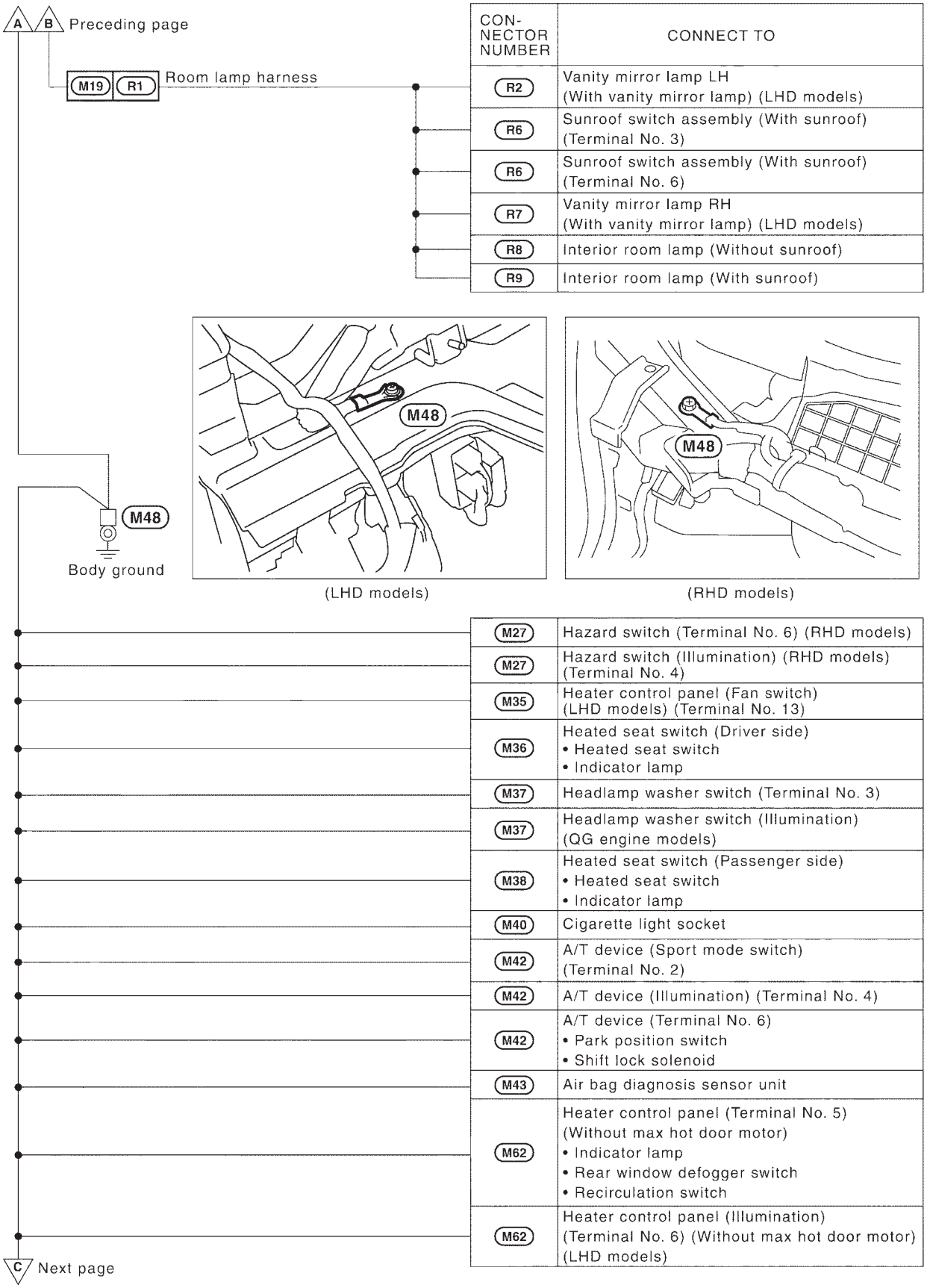


(RHD models)



CON-NECTOR NUMBER	CONNECT TO
M2	Fuse block (J/B) • Accessory relay • Ignition relay • Blower relay
M5	Power window relay
M6	Data link connector (Terminal No. 4)
M24	Combination meter (Terminal No. 7) • Air bag warning lamp • Clock • Fuel gauge • Speedometer • Tachometer • Unified meter control unit (With odo/trip meter) • Water temperature gauge
M25	Combination meter (LHD models) (Terminal No. 30) • ABS warning lamp • Air bag warning lamp • Front fog indicator lamp • High beam indicator lamp • Rear fog indicator lamp • Turn signal • Illumination
M27	Hazard switch (Illumination) (LHD models) (Terminal No. 8)
M27	Hazard switch (LHD models) (Terminal No. 6)
M31	Time control unit
M35	Heater control panel (Fan switch) (RHD models) (Terminal No. 13)
M42	A/T device (Terminal No. 6) • Park position switch • Shift lock solenoid
M59	Power socket relay
M60	Door mirror remote control switch
M62	Heater control panel (Illumination) (Terminal No. 6) (RHD models)

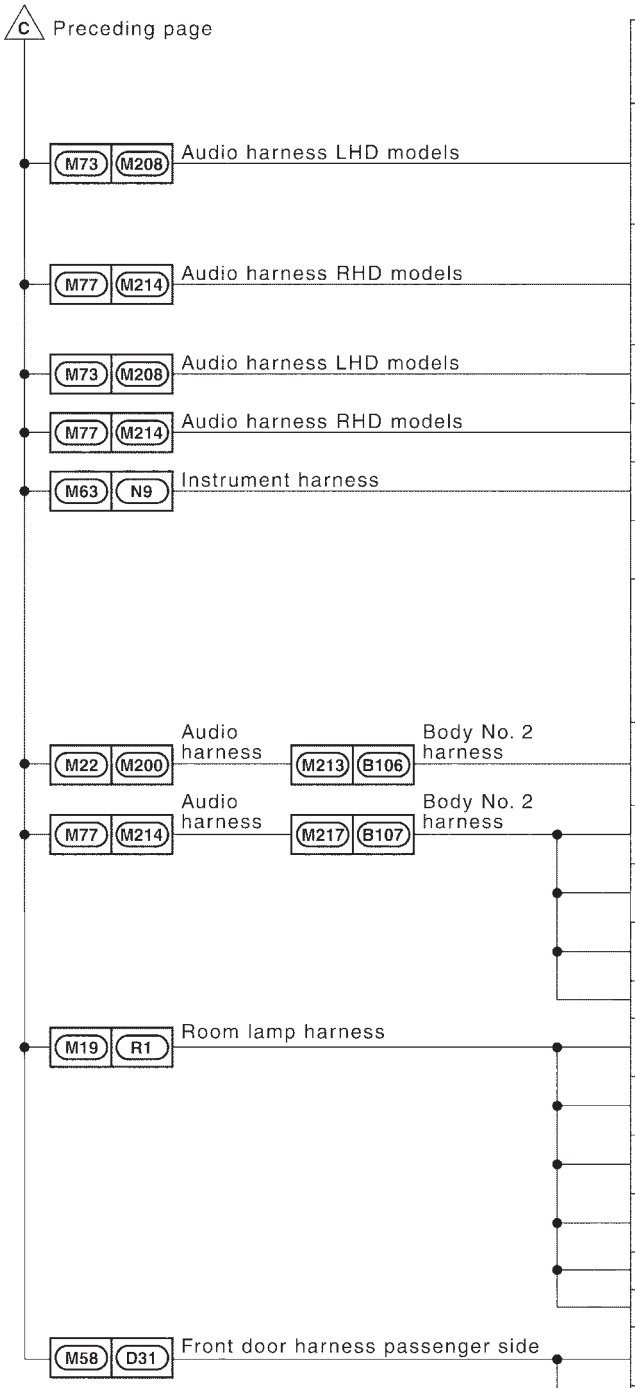
YEL497C



CON-NECTOR NUMBER	CONNECT TO
R2	Vanity mirror lamp LH (With vanity mirror lamp) (LHD models)
R6	Sunroof switch assembly (With sunroof) (Terminal No. 3)
R6	Sunroof switch assembly (With sunroof) (Terminal No. 6)
R7	Vanity mirror lamp RH (With vanity mirror lamp) (LHD models)
R8	Interior room lamp (Without sunroof)
R9	Interior room lamp (With sunroof)
M27	Hazard switch (Terminal No. 6) (RHD models)
M27	Hazard switch (Illumination) (RHD models) (Terminal No. 4)
M35	Heater control panel (Fan switch) (LHD models) (Terminal No. 13)
M36	Heated seat switch (Driver side) • Heated seat switch • Indicator lamp
M37	Headlamp washer switch (Terminal No. 3)
M37	Headlamp washer switch (Illumination) (QG engine models)
M38	Heated seat switch (Passenger side) • Heated seat switch • Indicator lamp
M40	Cigarette light socket
M42	A/T device (Sport mode switch) (Terminal No. 2)
M42	A/T device (Illumination) (Terminal No. 4)
M42	A/T device (Terminal No. 6) • Park position switch • Shift lock solenoid
M43	Air bag diagnosis sensor unit
M62	Heater control panel (Terminal No. 5) (Without max hot door motor) • Indicator lamp • Rear window defogger switch • Recirculation switch
M62	Heater control panel (Illumination) (Terminal No. 6) (Without max hot door motor) (LHD models)

YEL498C

Ground Distribution (Models with fuse and fusible link box E90) (Cont'd)

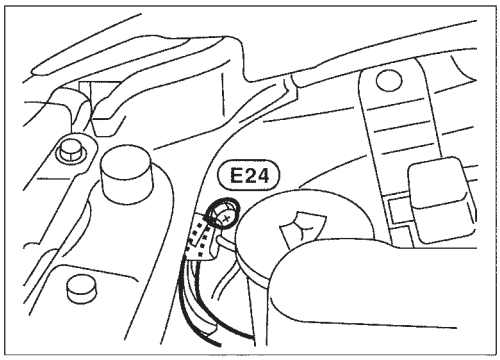


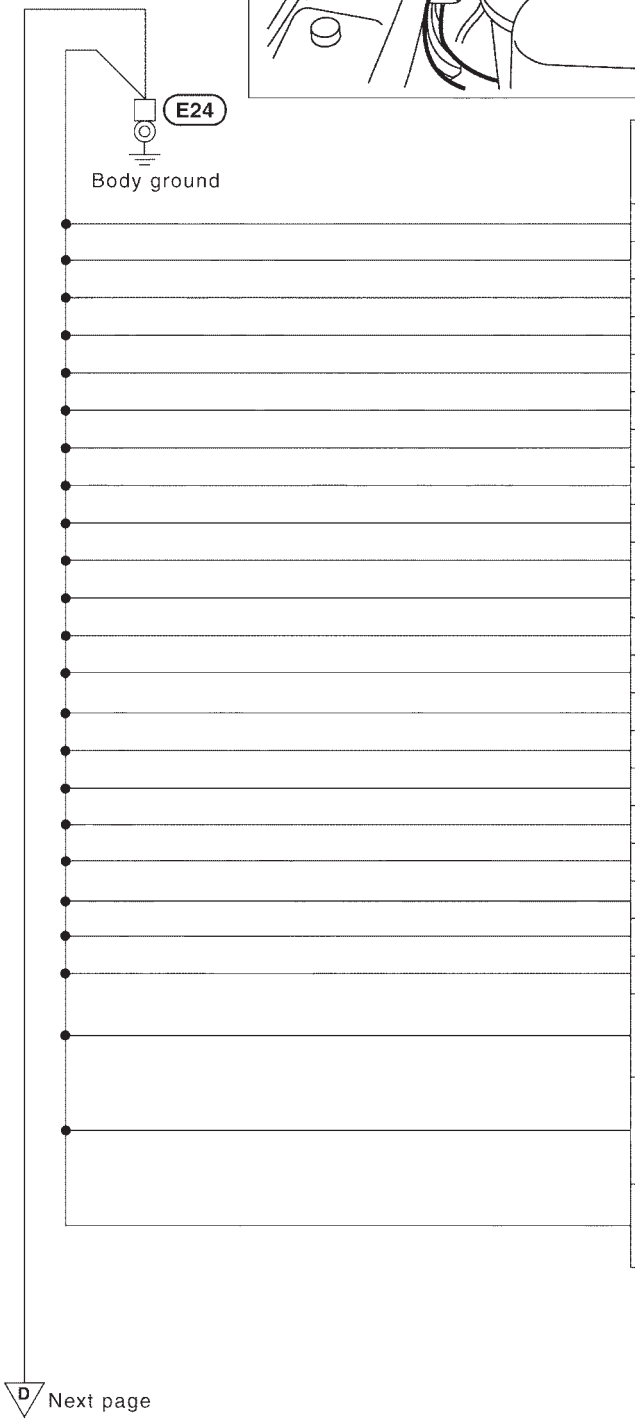
CONNECTOR NUMBER	CONNECT TO
M209	Support switch (LHD models) (With navigation system) • Illumination • Support switch
M209	Support switch (RHD models) (With navigation system) • Illumination • Support switch
M211	Front monitor (With navigation system) (LHD models)
M211	Front monitor (With navigation system) (RHD models)
N10	Max hot door motor (With max hot door motor)
N11	Heater control panel (Terminal No. 5) (With max hot door motor)
N11	Heater control panel (Terminal No. 6) (With max hot door motor) • Indicator lamp • Rear window defogger switch • Recirculation switch
B102	CD auto-changer (LHD models) • CD auto-changer • Illumination
B104	NAVI control unit (Terminal No. 3) (With navigation system RHD models)
B104	NAVI control unit (Terminal No. 4) (With navigation system RHD models)
B104	NAVI control unit (Terminal No. 29) (With navigation system RHD models)
B105	NAVI control unit (Illumination) (RHD models)
R2	Vanity mirror lamp LH (With vanity mirror lamp RHD models)
R6	Sunroof switch assembly (Terminal No. 3) (With sunroof RHD models)
R6	Sunroof switch assembly (Terminal No. 6) (With sunroof RHD models)
R7	Vanity mirror lamp RH (With vanity mirror lamp RHD models)
R8	Interior room lamp (Without sunroof)
R9	Interior room lamp (With sunroof)
D35	Door key cylinder switch (Passenger side) (Without multi remote control system)
D36	Door mirror passenger side (Defogger)
D38	Door lock actuator assembly (Passenger side) (Unlock sensor) (LHD models)
D39	Door lock actuator assembly (Passenger side) (Unlock sensor) (RHD models)

YEL499C

ENGINE ROOM HARNESS

NLEL0528S02





CONNECTOR NUMBER	CONNECT TO
E2	Front wiper motor
E10	Rear wiper relay
E11	Front fog lamp relay
E12	Headlamp washer timer (LHD models)
E13	Cooling fan relay-2 (YD engine LHD models)
E13	Cooling fan relay-2 (SR engine LHD models)
E14	Front wiper relay-2
E16	Cooling fan relay-4 (YD engine LHD models)
E23	Front turn signal lamp RH
E26	Parking lamp RH
E28	Headlamp aiming motor RH (RHD models)
E37	Cooling fan motor-1 (QG engine LHD models)
E38	Cooling fan motor-2 (QG engine LHD models)
E40	Cooling fan motor-2 (SR engine LHD models)
E40	Cooling fan motor-2 (YD engine LHD models)
E64	Headlamp aiming motor LH (RHD models)
E80	Side turn signal lamp RH
E83	Front fog lamp RH
E84	Front fog lamp LH
E86	Brake fluid level switch (RHD models)
E110	Front wiper relay-1 (RHD models)
E112	Combination meter (Terminal No. 1) (RHD models) • Turn signal switch
E114	Combination switch (Terminal No. 4) • Rear wiper switch • Washer switch • Variable intermittent wiper volume
E114	Combination switch (Terminal No. 17) (RHD models) • Front wiper switch

D Next page

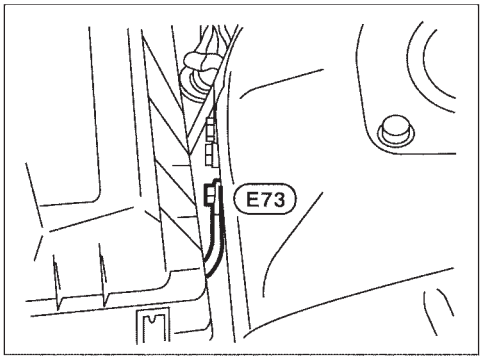
YEL500C

Ground Distribution (Models with fuse and fusible link box E90) (Cont'd)

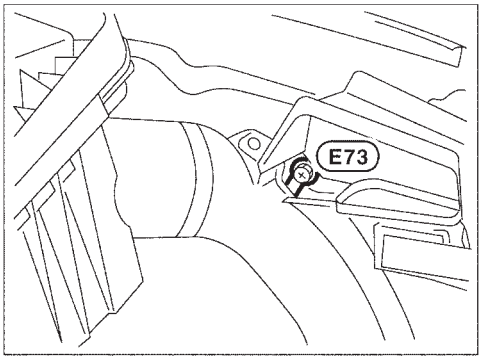
D Preceding page

CONNECTOR NUMBER	CONNECT TO
E16	Cooling fan relay-4 (YD engine LHD models)
E27	Headlamp RH (LHD models)
E65	Headlamp LH (LHD models)

E73
Body ground



(LHD models)



(RHD models)

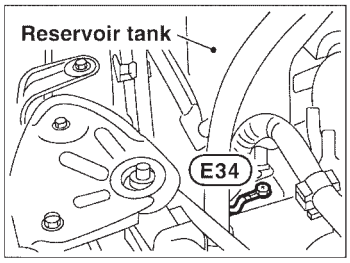
E12	Headlamp washer timer (RHD models)
E13	Headlamp relay LH (QG engine models) (With daytime light)
E13	Cooling fan relay-2 (SR engine RHD models)
E13	Cooling fan relay-2 (YD engine RHD models)
E15	Headlamp relay RH (QG engine models) (With daytime light)
E16	Cooling fan relay-4 (YD engine RHD models)
E17	Headlamp relay RH (SR engine models) (With daytime light)
E17	Headlamp relay RH (YD engine models) (With daytime light)
E18	Headlamp relay LH (SR engine models) (With daytime light)
E18	Headlamp relay LH (YD engine models) (With daytime light)
E27	Headlamp RH (RHD models with daytime lighting system)
E28	Headlamp aiming motor RH (LHD models)
E37	Cooling fan motor-1 (QG engine RHD models)
E38	Cooling fan motor-2 (QG engine RHD models)
E40	Cooling fan motor-2 (SR engine RHD models)
E40	Cooling fan motor-2 (YD engine RHD models)
E64	Headlamp aiming motor LH (LHD models)
E65	Headlamp LH (RHD models with daytime light system)
E66	Parking lamp LH
E67	Front turn signal lamp LH
E86	Brake fluid level switch (LHD models)
E87	Side turn signal lamp LH
E88	Fuel filter switch (Diesel engine)

E Next page

YEL501C

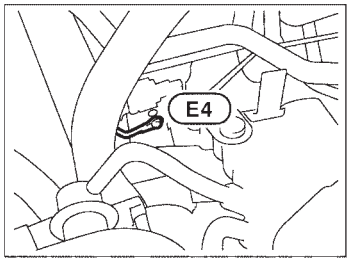
E Preceding page

CONNECTOR NUMBER	CONNECT TO
E102	Daytime light control unit
E110	Front wiper relay-1 (LHD models)
E114	Combination switch (Terminal No. 4) (LHD models) • Washer switch • Rear wiper switch • Variable intermittent wiper volume
E114	Combination switch (Terminal No. 17) (LHD models) • Front wiper switch
E117	Combination meter (Terminal No. 30) (RHD models) • ABS warning lamp • Air bag warning lamp • High beam indicator lamp • Front fog indicator lamp • Rear fog indicator lamp • Turn signal • Illumination



E34
Body ground

CONNECTOR NUMBER	CONNECT TO
E29	Alternator (E)



E4
Body ground

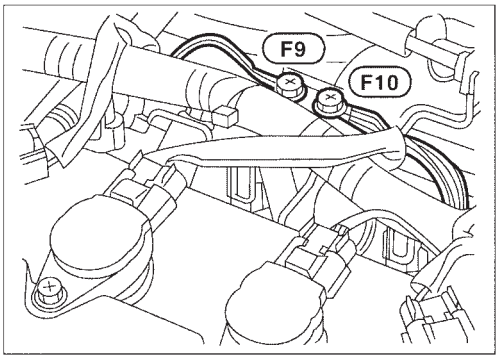
CONNECTOR NUMBER	CONNECT TO
E1	ABS actuator and electric unit (Control unit) (Terminal No. 16)
E1	ABS actuator and electric unit (Control unit) (Terminal No. 19)

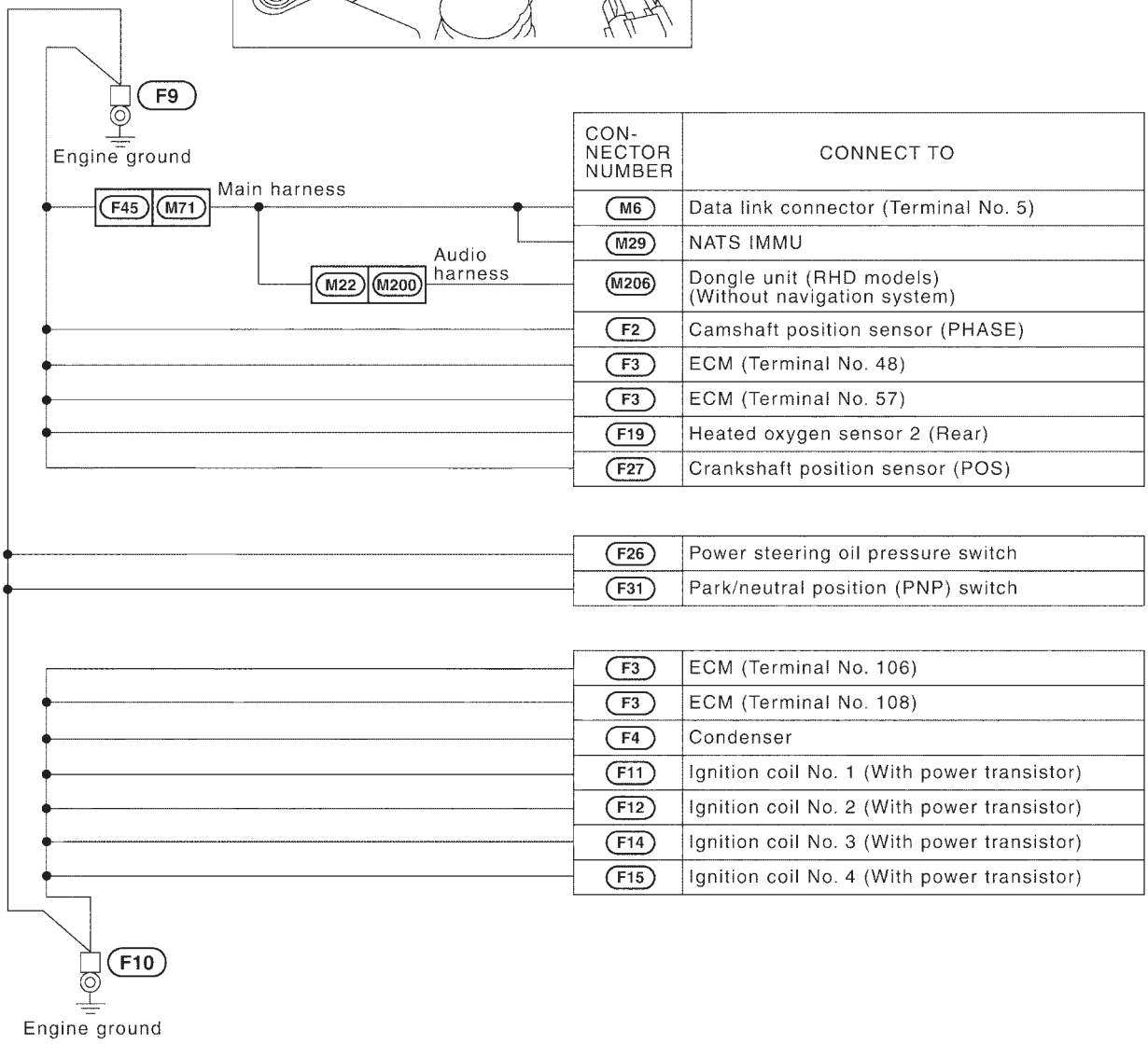
YEL502C

Ground Distribution (Models with fuse and fusible link box E90) (Cont'd)

ENGINE CONTROL HARNESS/QG ENGINE MODELS

NLEL0528S03



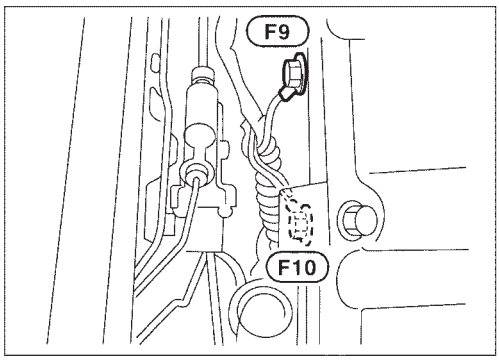


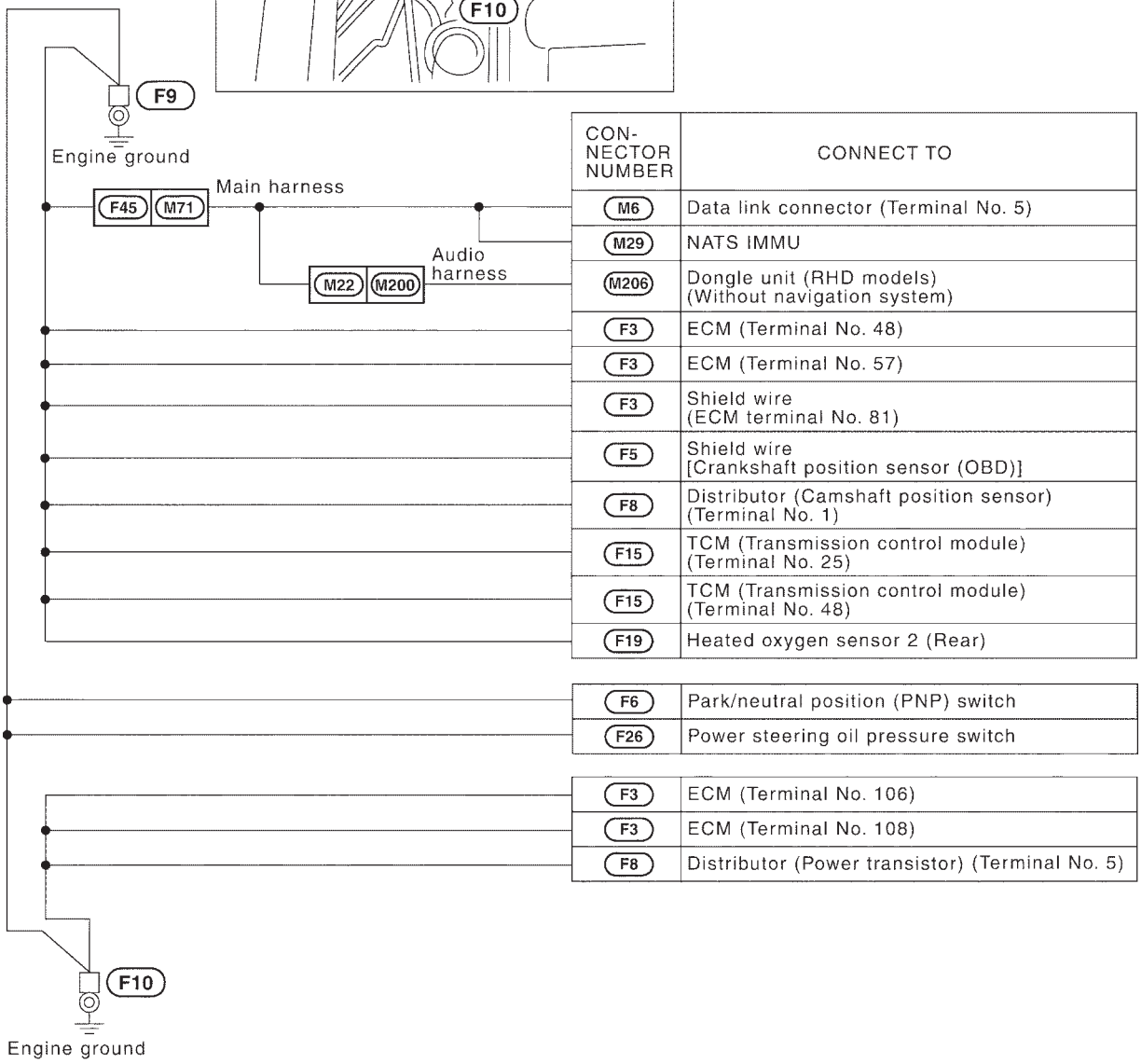
CON-NECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M206	Dongle unit (RHD models) (Without navigation system)
F2	Camshaft position sensor (PHASE)
F3	ECM (Terminal No. 48)
F3	ECM (Terminal No. 57)
F19	Heated oxygen sensor 2 (Rear)
F27	Crankshaft position sensor (POS)
F26	Power steering oil pressure switch
F31	Park/neutral position (PNP) switch
F3	ECM (Terminal No. 106)
F3	ECM (Terminal No. 108)
F4	Condenser
F11	Ignition coil No. 1 (With power transistor)
F12	Ignition coil No. 2 (With power transistor)
F14	Ignition coil No. 3 (With power transistor)
F15	Ignition coil No. 4 (With power transistor)

YEL503C

ENGINE CONTROL HARNESS/SR ENGINE MODELS

NLEL0528S04





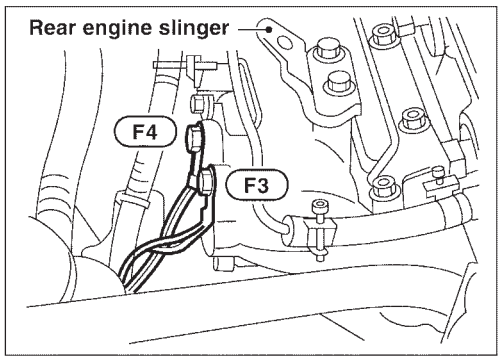
CONNECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M206	Dongle unit (RHD models) (Without navigation system)
F3	ECM (Terminal No. 48)
F3	ECM (Terminal No. 57)
F3	Shield wire (ECM terminal No. 81)
F5	Shield wire [Crankshaft position sensor (OBD)]
F8	Distributor (Camshaft position sensor) (Terminal No. 1)
F15	TCM (Transmission control module) (Terminal No. 25)
F15	TCM (Transmission control module) (Terminal No. 48)
F19	Heated oxygen sensor 2 (Rear)
F6	Park/neutral position (PNP) switch
F26	Power steering oil pressure switch
F3	ECM (Terminal No. 106)
F3	ECM (Terminal No. 108)
F8	Distributor (Power transistor) (Terminal No. 5)

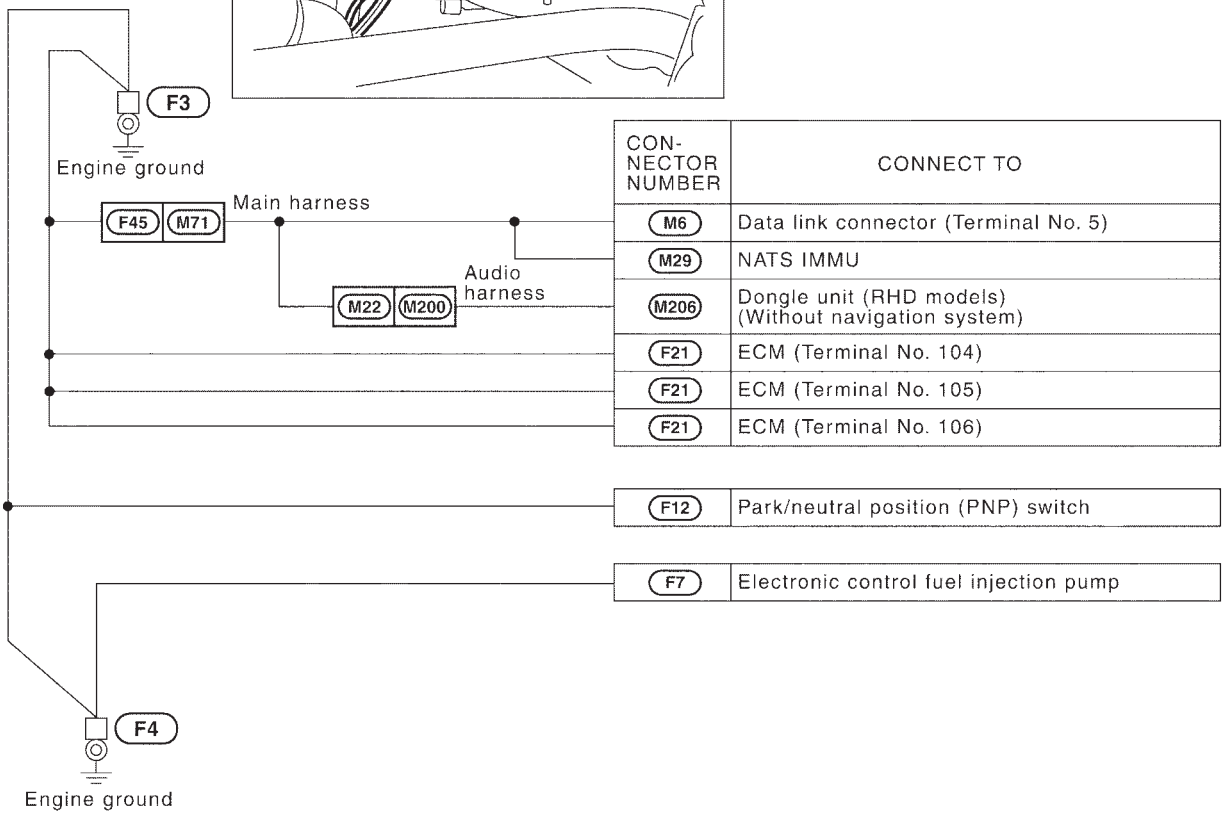
YEL504C

Ground Distribution (Models with fuse and fusible link box E90) (Cont'd)

ENGINE CONTROL HARNESS/YD ENGINE MODELS

NLEL0528S05



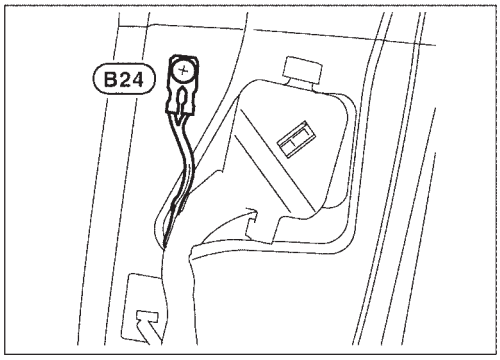


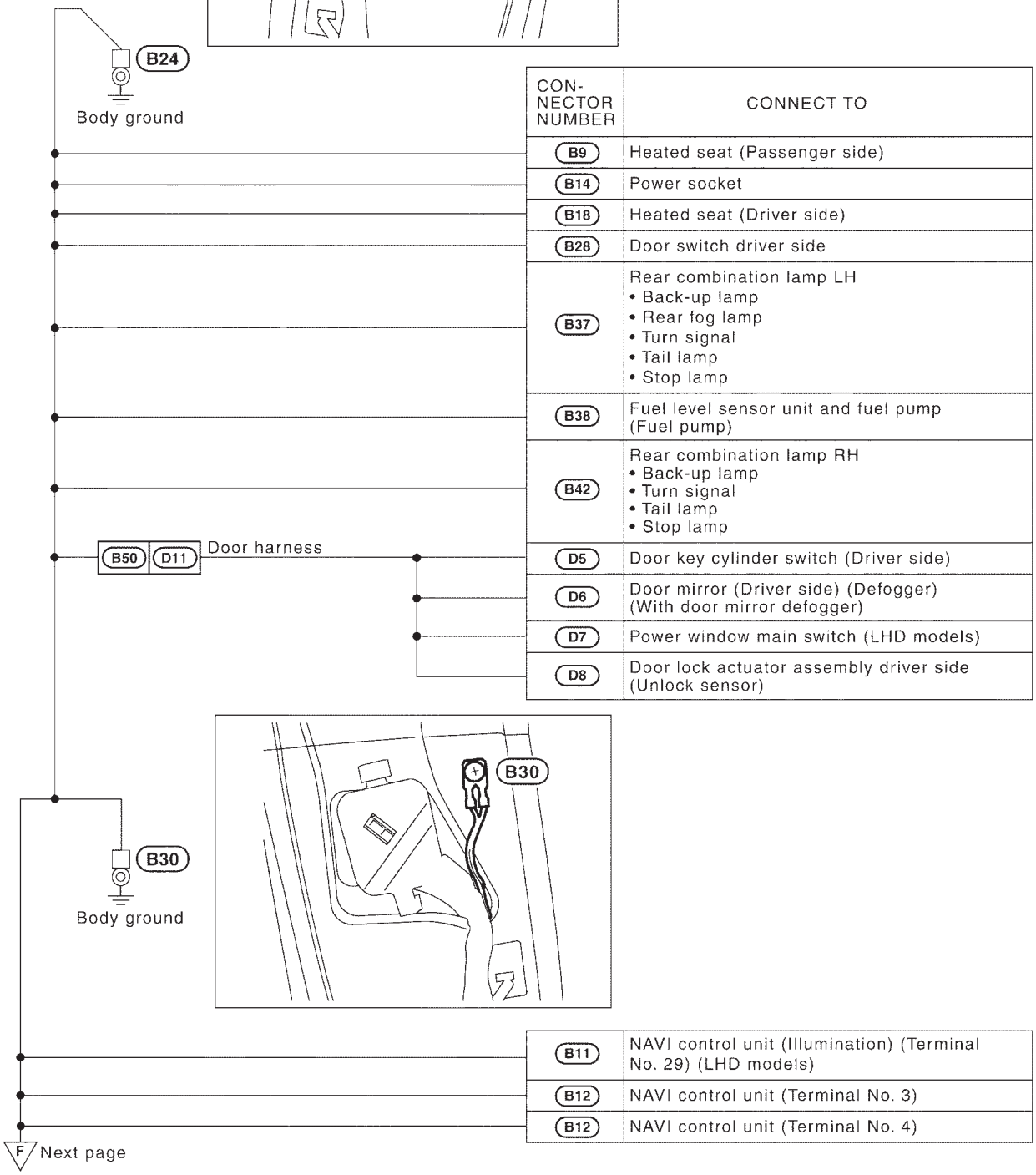
CONNECTOR NUMBER	CONNECT TO
M6	Data link connector (Terminal No. 5)
M29	NATS IMMU
M206	Dongle unit (RHD models) (Without navigation system)
F21	ECM (Terminal No. 104)
F21	ECM (Terminal No. 105)
F21	ECM (Terminal No. 106)
F12	Park/neutral position (PNP) switch
F7	Electronic control fuel injection pump

YEL505C

BODY HARNESS/LHD MODELS

NLEL0528S06

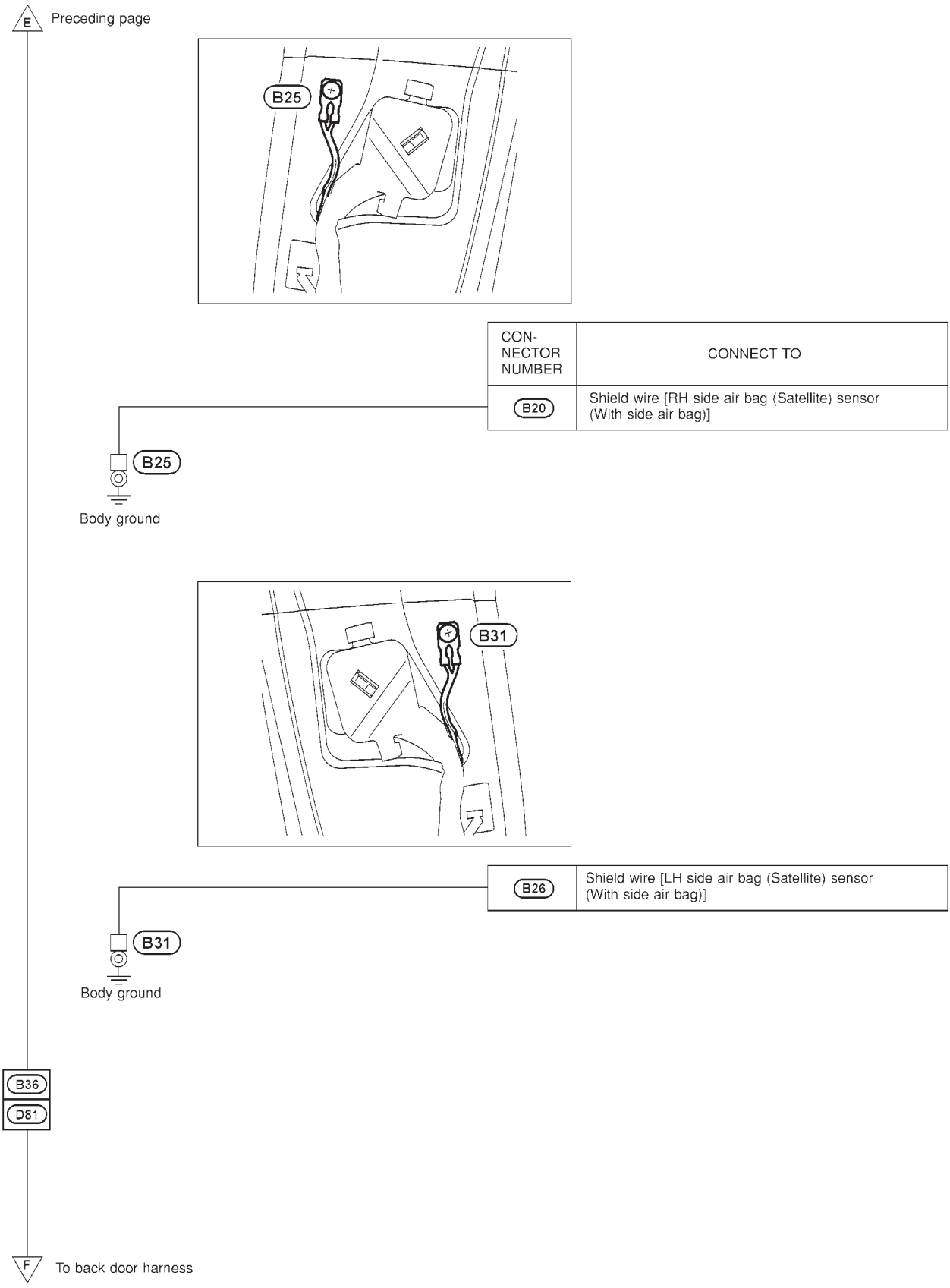




CON-NECTOR NUMBER	CONNECT TO
B9	Heated seat (Passenger side)
B14	Power socket
B18	Heated seat (Driver side)
B28	Door switch driver side
B37	Rear combination lamp LH • Back-up lamp • Rear fog lamp • Turn signal • Tail lamp • Stop lamp
B38	Fuel level sensor unit and fuel pump (Fuel pump)
B42	Rear combination lamp RH • Back-up lamp • Turn signal • Tail lamp • Stop lamp
D5	Door key cylinder switch (Driver side)
D6	Door mirror (Driver side) (Defogger) (With door mirror defogger)
D7	Power window main switch (LHD models)
D8	Door lock actuator assembly driver side (Unlock sensor)

B11	NAVI control unit (Illumination) (Terminal No. 29) (LHD models)
B12	NAVI control unit (Terminal No. 3)
B12	NAVI control unit (Terminal No. 4)

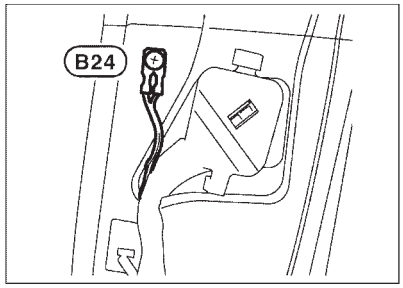
YEL506C

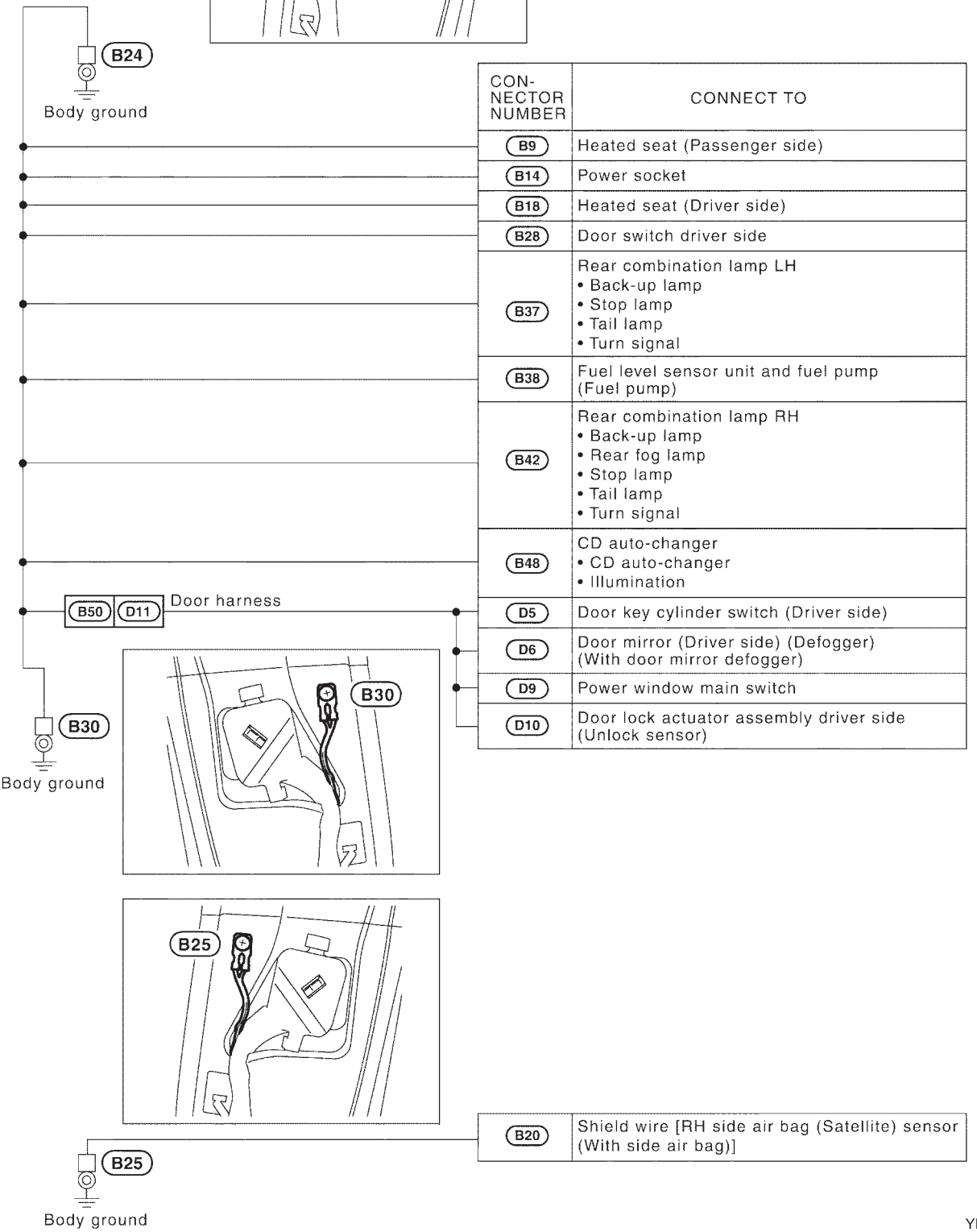

E
Preceding page
B25
CON-NECTOR NUMBER
CONNECT TO
B20
Shield wire [RH side air bag (Satellite) sensor (With side air bag)]
B25
Body ground
B31
B26
Shield wire [LH side air bag (Satellite) sensor (With side air bag)]
B31
Body ground
B36
D81
F
To back door harness

YEL976B

BODY HARNESS/RHD MODELS

NLEL0528S07

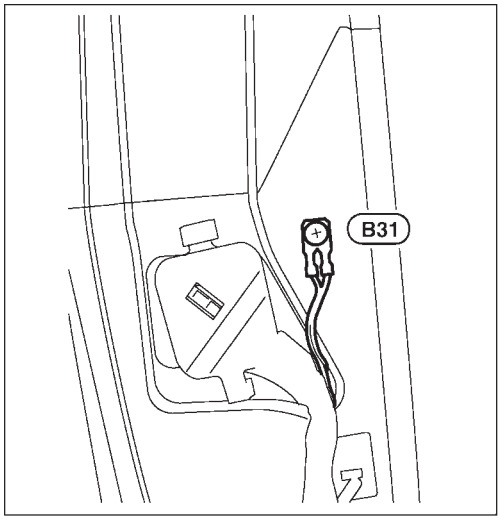




CON-NECTOR NUMBER	CONNECT TO
B9	Heated seat (Passenger side)
B14	Power socket
B18	Heated seat (Driver side)
B28	Door switch driver side
B37	Rear combination lamp LH • Back-up lamp • Stop lamp • Tail lamp • Turn signal
B38	Fuel level sensor unit and fuel pump (Fuel pump)
B42	Rear combination lamp RH • Back-up lamp • Rear fog lamp • Stop lamp • Tail lamp • Turn signal
B48	CD auto-changer • CD auto-changer • Illumination
D5	Door key cylinder switch (Driver side)
D6	Door mirror (Driver side) (Defogger) (With door mirror defogger)
D9	Power window main switch
D10	Door lock actuator assembly driver side (Unlock sensor)
B20	Shield wire [RH side air bag (Satellite) sensor (With side air bag)]

YEL507C

Ground Distribution (Models with fuse and fusible link box E90) (Cont'd)



CON-NECTOR NUMBER	CONNECT TO
B26	Shield wire [LH side air bag (Satellite) sensor (With side air bag)]

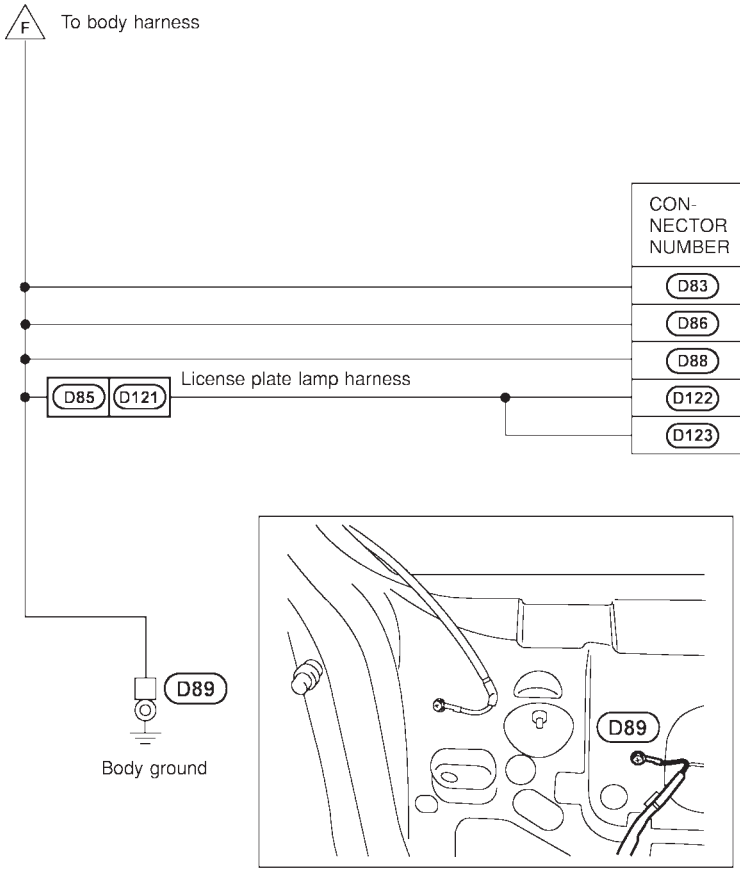
B31

Body ground

YEL979B

BACK DOOR HARNESS/LHD MODELS

NLEL0528S08

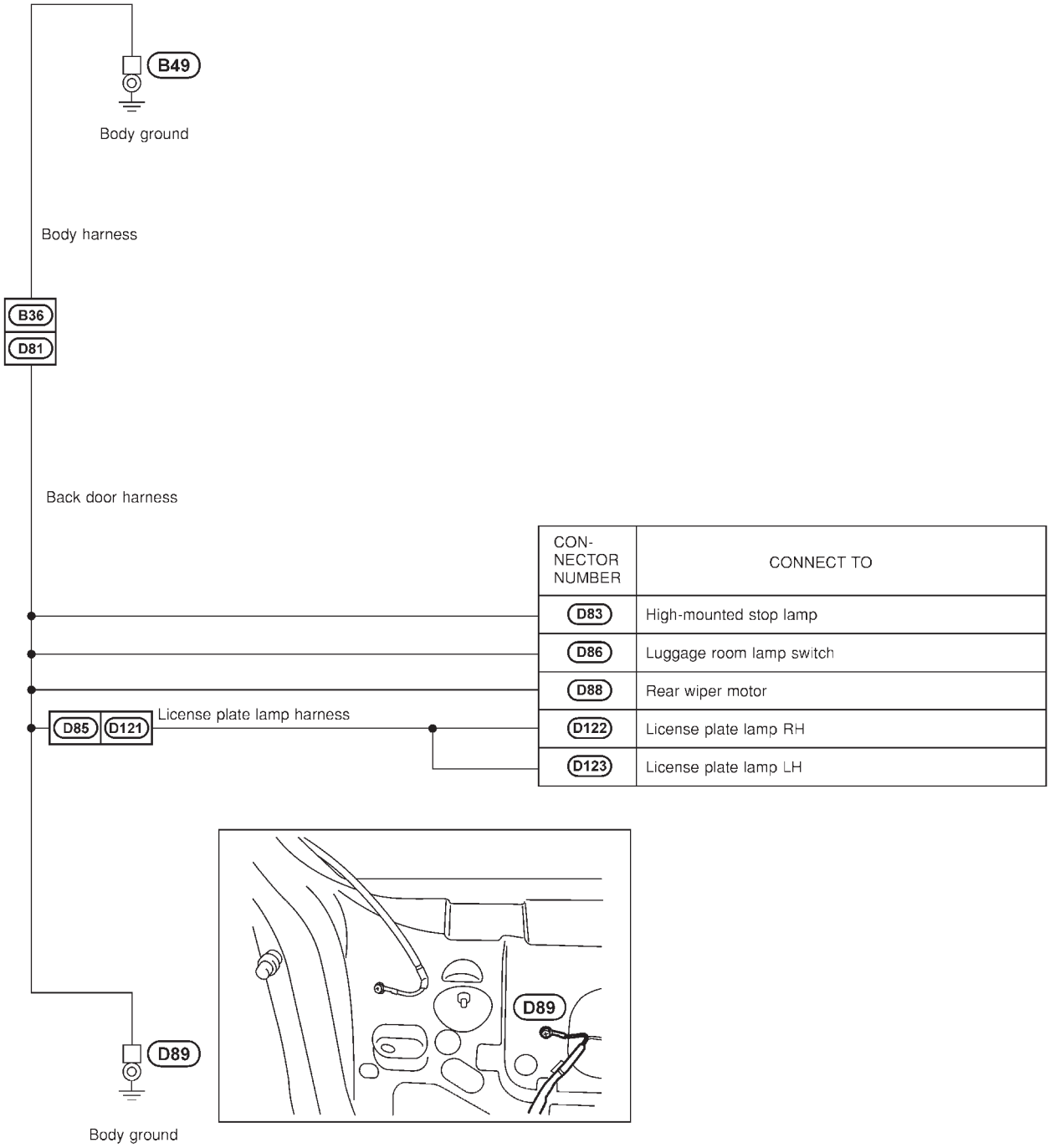


CON-NECTOR NUMBER	CONNECT TO
D83	High-mounted stop lamp
D86	Luggage room lamp switch
D88	Rear wiper motor
D122	License plate lamp RH
D123	License plate lamp LH

YEL977B

BACK DOOR HARNESS/RHD MODELS

NLEL0528S09

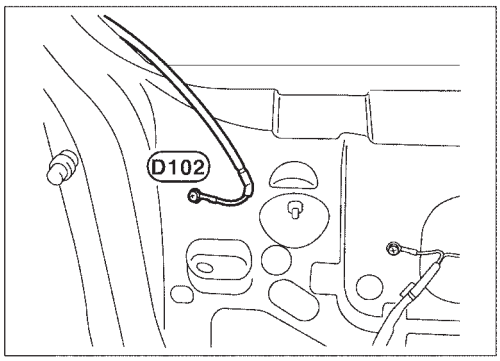


CON-NECTOR NUMBER	CONNECT TO
D83	High-mounted stop lamp
D86	Luggage room lamp switch
D88	Rear wiper motor
D122	License plate lamp RH
D123	License plate lamp LH

YEL980B

REAR WINDOW DEFOGGER HARNESS

NLEL0528S10



CON-NECTOR NUMBER	CONNECT TO
D101	Rear window defogger

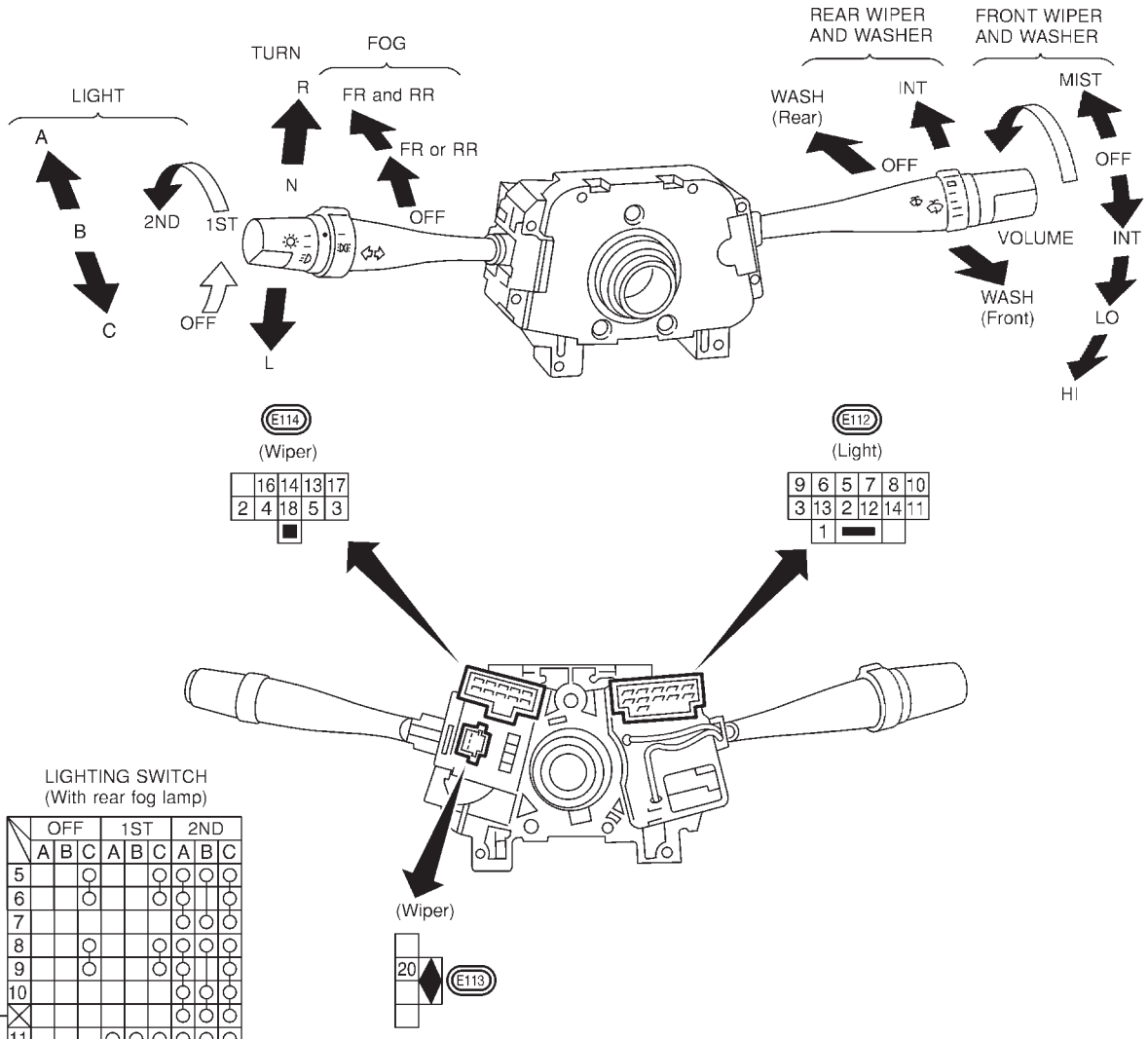
YEL508C

Check

NLEL0423

MODELS WITH INTERMITTENT REAR WIPER

NLEL0423S01



LIGHTING SWITCH
(With rear fog lamp)

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

FOG LAMP SWITCH

	OFF	REAR
13		○

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				○	○	○	○	○	○

FOG LAMP SWITCH

	OFF	FR	FR AND RR
14		○	○
13			○

WIPER AND WASHER SWITCH

	FRONT					WASH			REAR		
	MIST	OFF	INT	LO	HI	FR/WASH	OFF	RR/WASH	OFF	INT	ON
13		○	○								
14	○	○	○	○							
			○								
16			○		○						
17	○		○	○	○						
18						○		○			
										○	
2											○
3						○		○			
4						○		○		○	○
5						○		○			
20											

WIPER AMP.

INTERMITTENT WIPER VOLUME

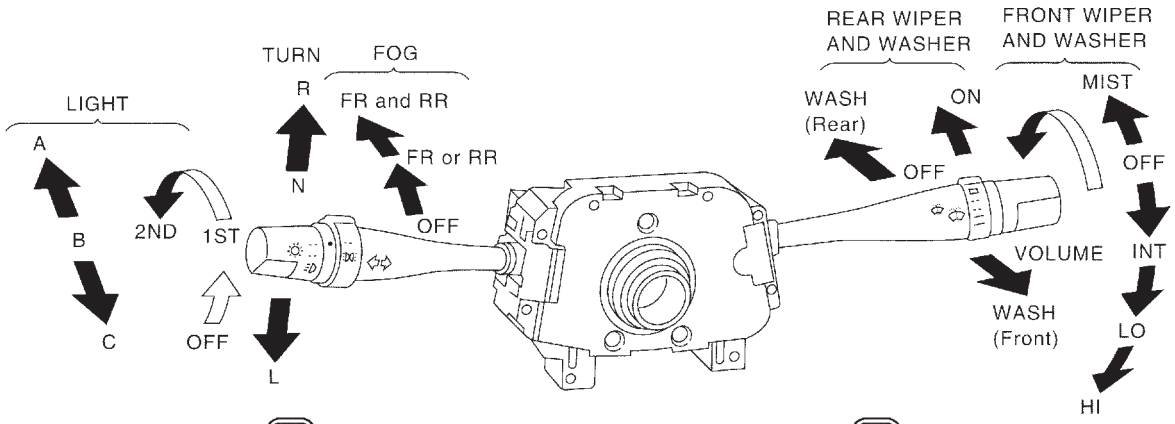
TURN SIGNAL SWITCH

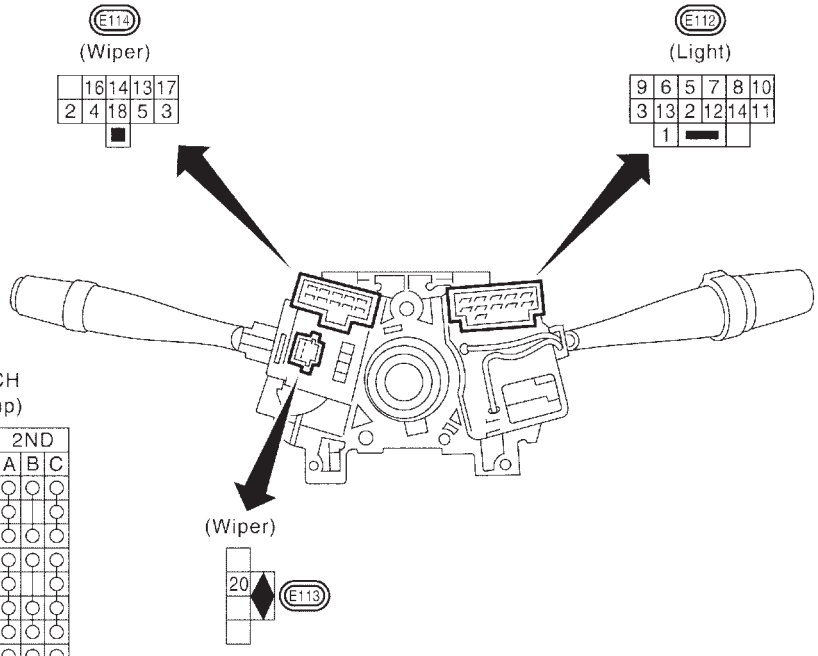
	L	N	R
1	○		○
2			○
3	○		

YEL992B

MODELS WITHOUT INTERMITTENT REAR WIPER

NLEL0423S02





LIGHTING SWITCH
(With rear fog lamp)

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

FOG LAMP SWITCH

	OFF	REAR
⊠		
13		○

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				○	○	○	○	○	○
⊠				○	○	○	○	○	○

FOG LAMP SWITCH

	OFF	FR	FR AND RR
⊠		○	○
14		○	○
13			○

WIPER AND WASHER SWITCH

	FRONT					WASH			REAR	
	MIST	OFF	INT	LO	HI	FR/WASH	OFF	RR/WASH	OFF	ON
13		○	○							
14	○	○	○	○						
			○	○						
16			○		○					
17	○		○	○	○					
18						○		○		
2										○
3						○		○		
4						○		○		○
5						○		○		
20										

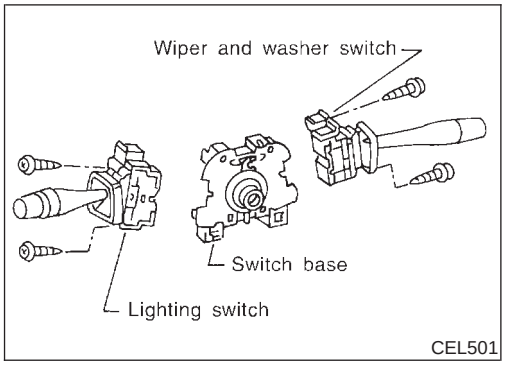
TURN SIGNAL SWITCH

	L	N	R
1	○		○
2			○
3	○		

WIPER AMP.

INTERMITTENT WIPER VOLUME

YEL490C

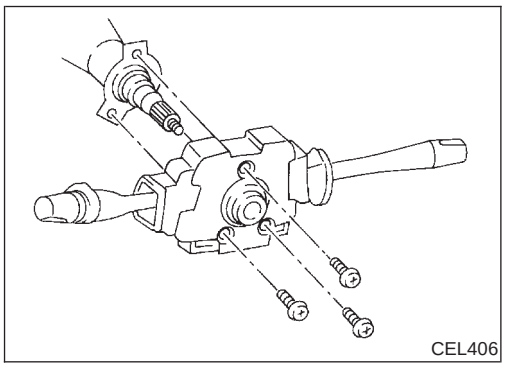


Replacement

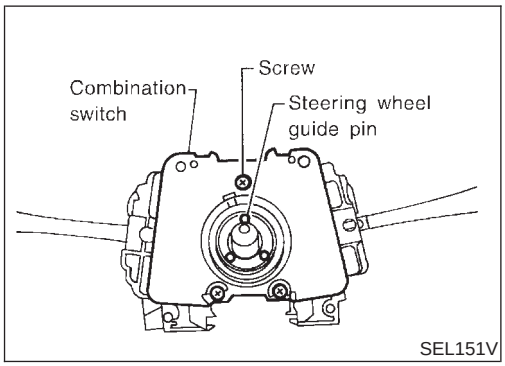
NLEL0010

For removal and installation of spiral cable, refer to RS-24 "Installation — Air Bag Module and Spiral Cable".

- Each switch can be replaced without removing combination switch base.



- To remove combination switch base, remove base attaching screw.



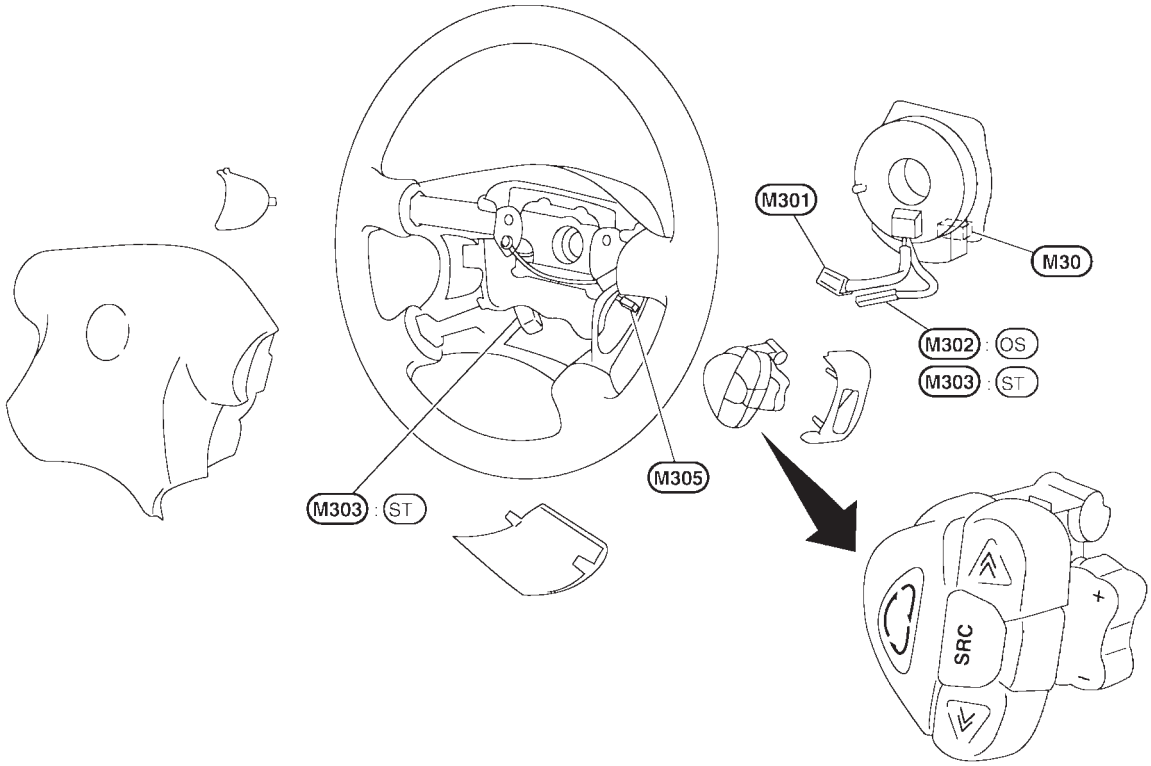
- Before installing the steering wheel, align the steering wheel guide pins with the screws which secure the combination switch as shown in the left figure.

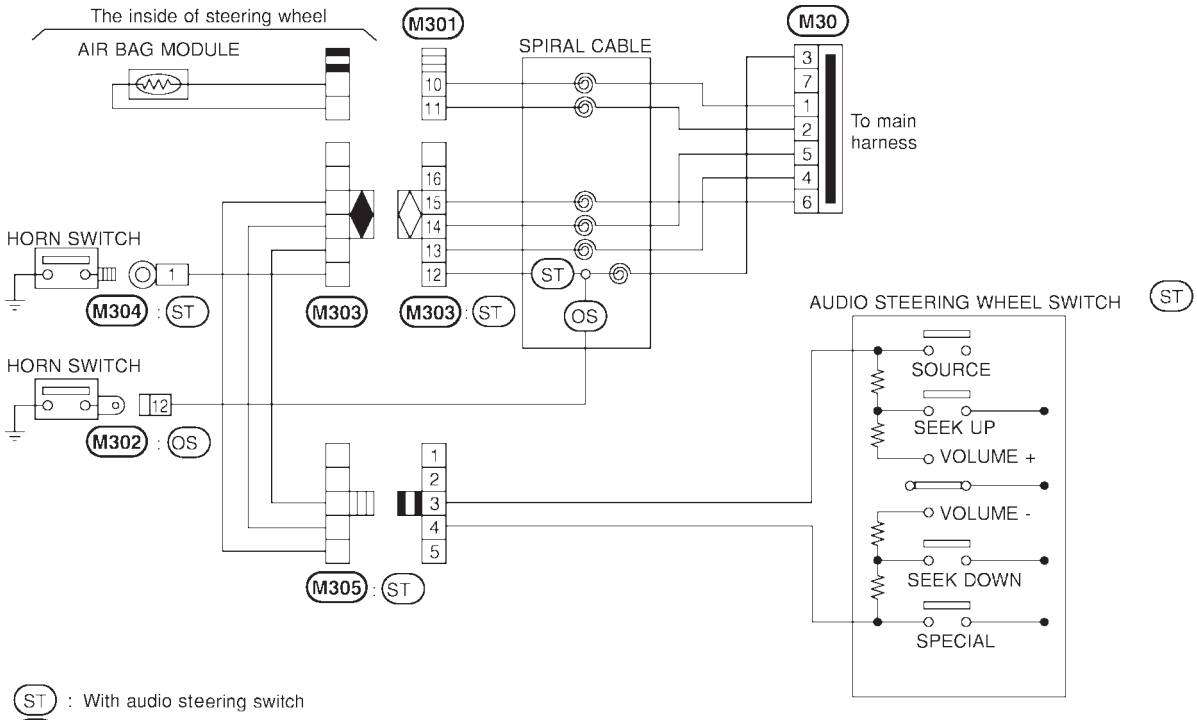
Check

NLEL0350

WHERE FITTED-1

NLEL0350S01



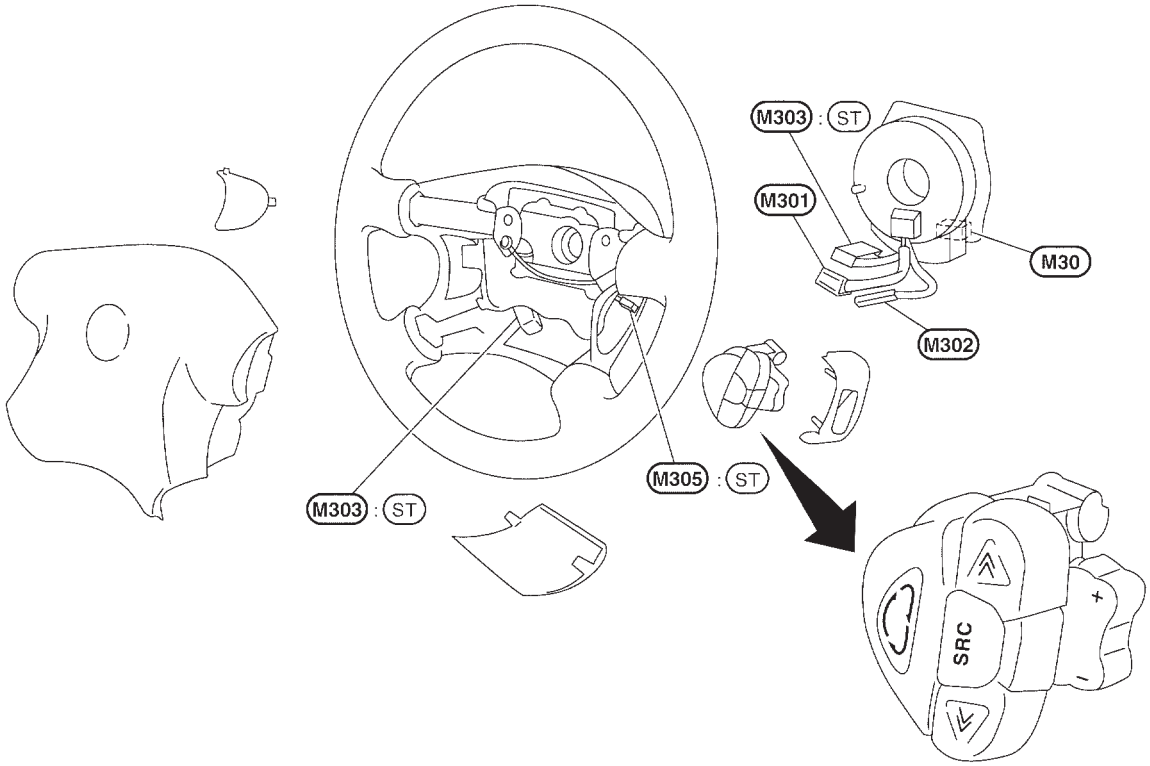


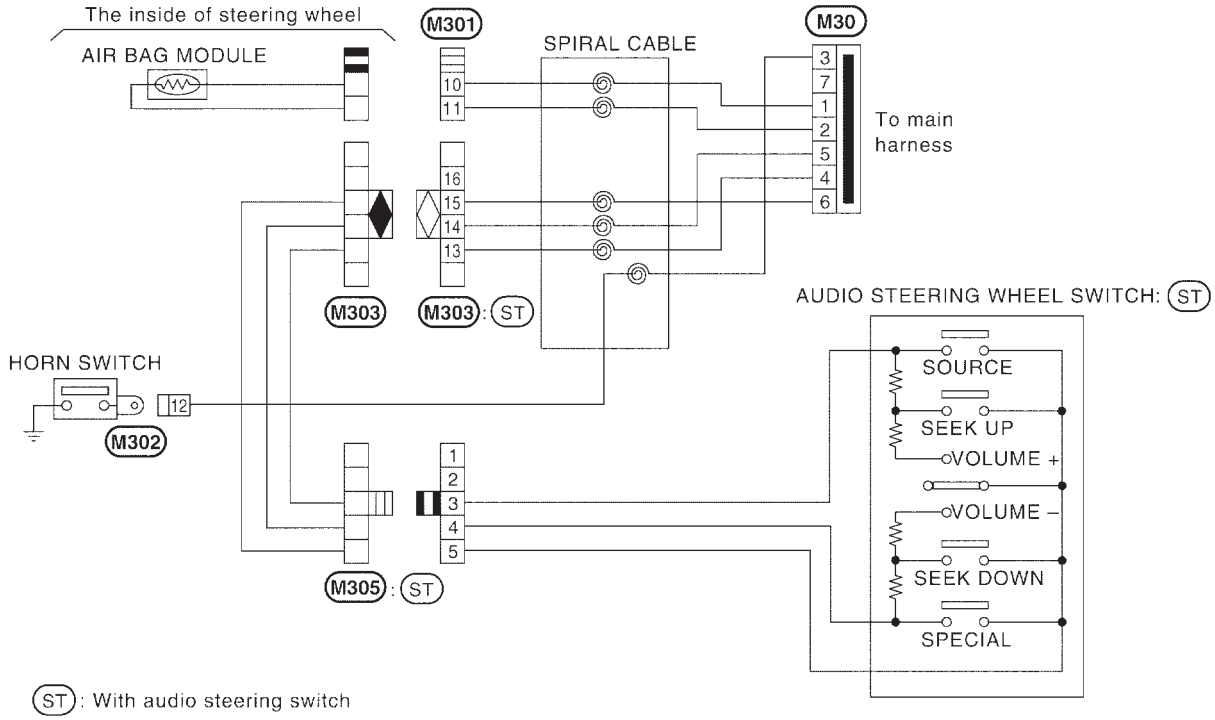
ST : With audio steering switch
OS : Without audio steering switch

YEL993B

WHERE FITTED-2

NLEL0350S02





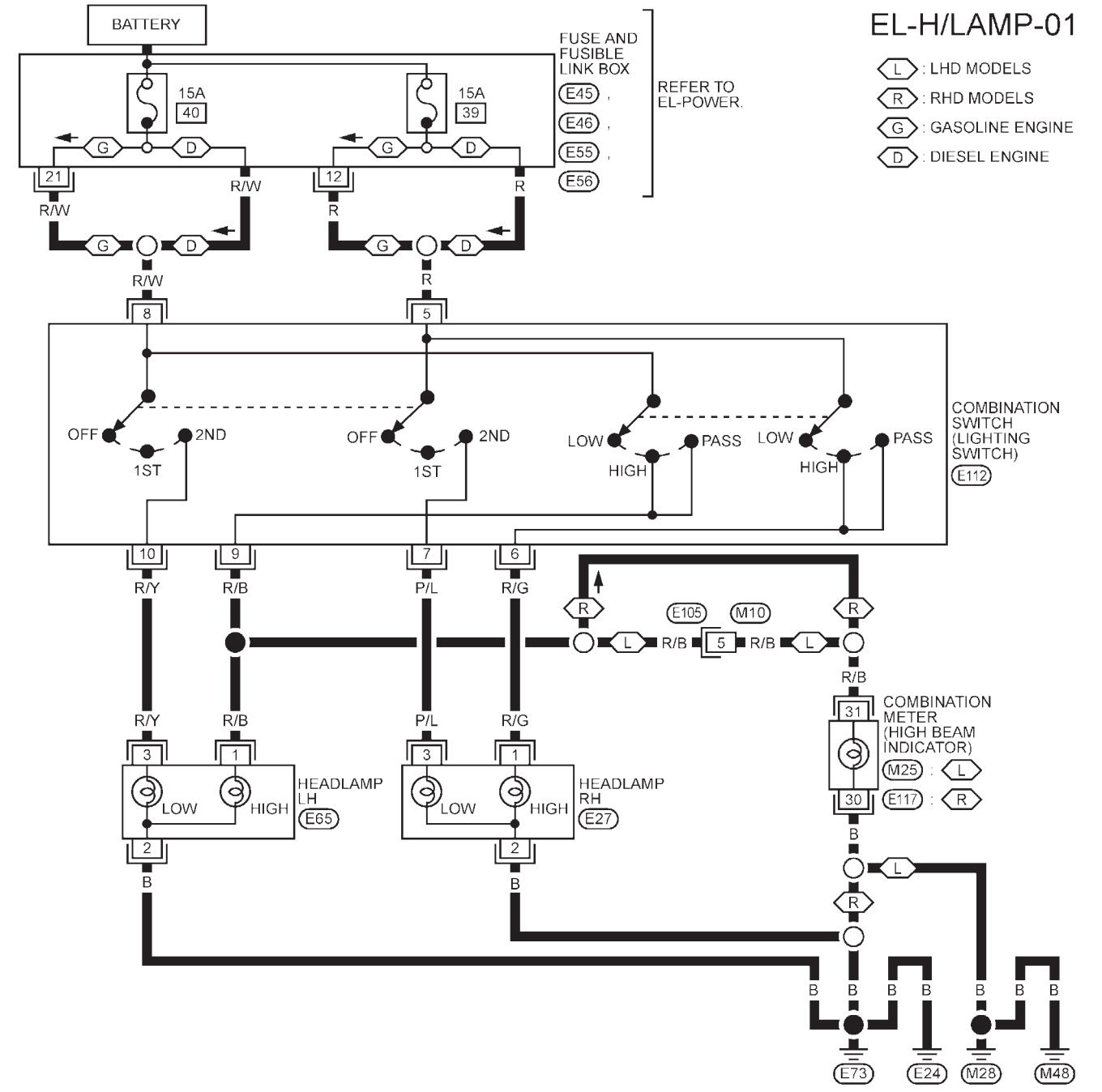
YEL491C

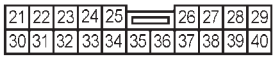
Wiring Diagram — H/LAMP —

NLEL0420

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

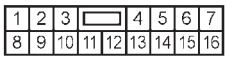
NLEL0420S05



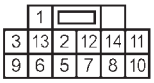


L BR : M25 , R BR : E117

E27 GY , E65 GY



E105 W



E112 W

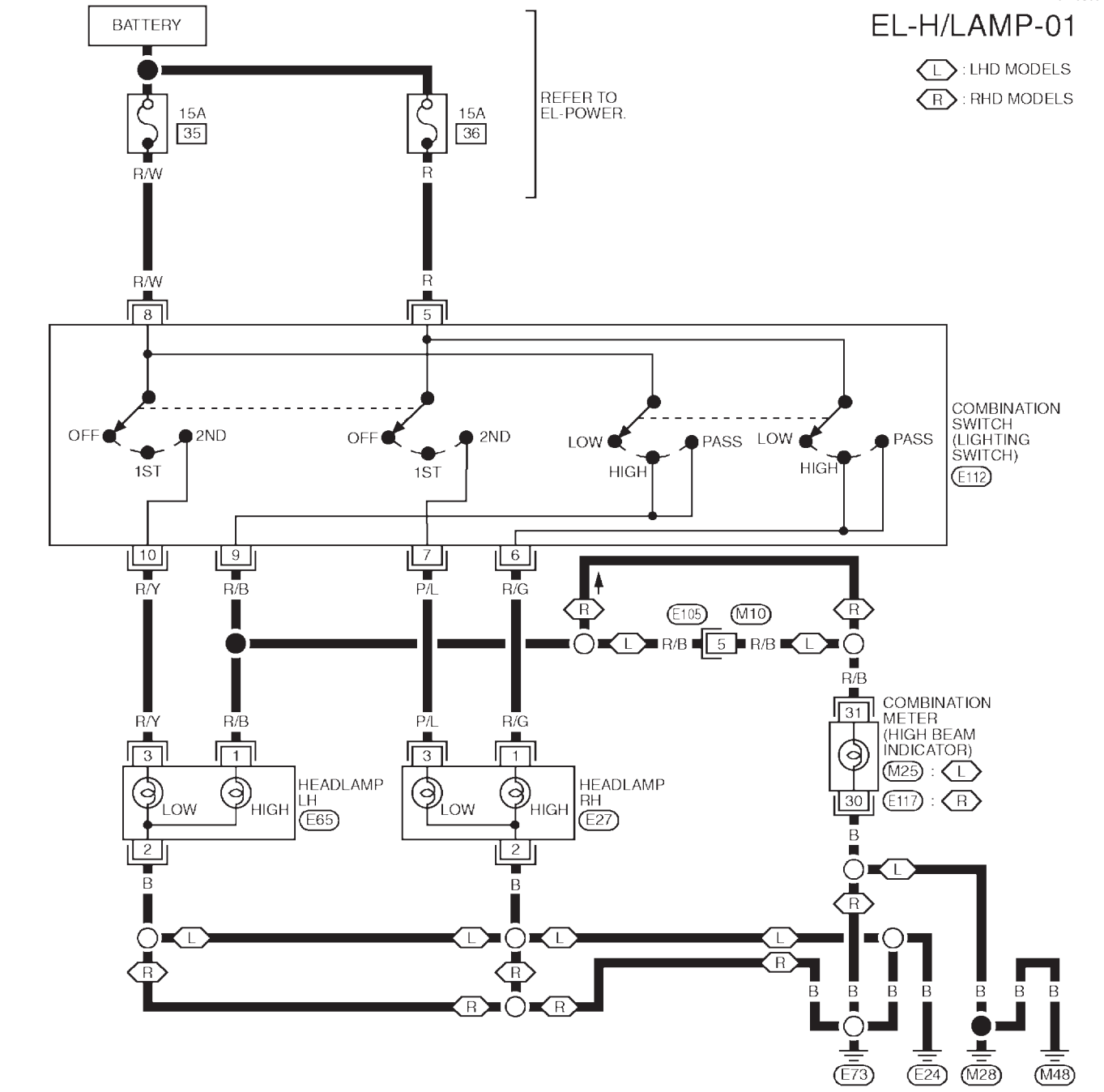
REFER TO THE FOLLOWING
E45 , E46 , E55 , E56
-FUSE AND FUSIBLE LINK BOX

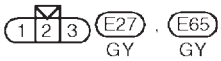
YEL872B

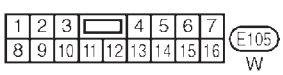
Wiring Diagram — H/LAMP — (Cont'd)

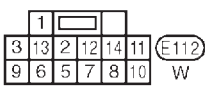
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0420S06







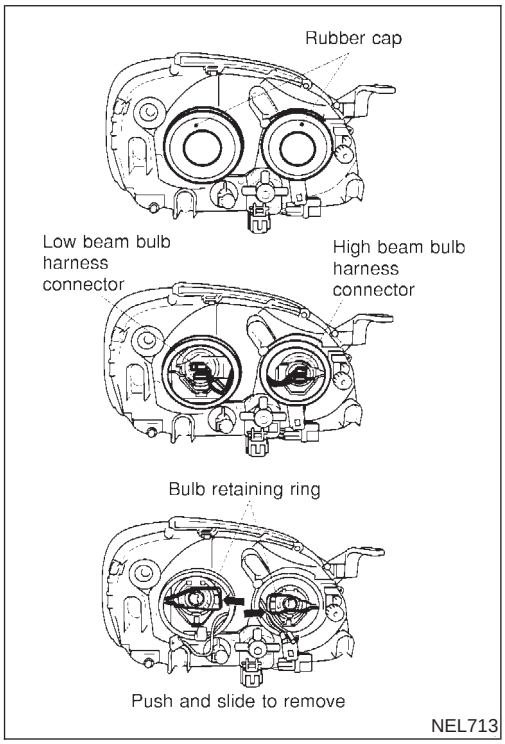


YEL400C

Trouble Diagnoses

NLEL0202

Symptom	Possible cause	Repair order
Neither headlamp operates.	1. Lighting switch	1. Check Lighting switch.
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	1. 15A fuse 2. Headlamp LH ground circuit 3. Lighting switch	1. Check 15A fuse. Verify battery positive voltage is present at lighting switch terminal 8. 2. Check headlamp LH ground circuit. 3. Check lighting switch.
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	1. 15A fuse 2. Headlamp RH ground circuit 3. Lighting switch	1. Check 15A fuse. Verify battery positive voltage is present at lighting switch terminal 5. 2. Check headlamp RH ground circuit. 3. Check lighting switch.
LH high beam does not operate, but LH low beam does operate.	1. Bulb 2. Open in LH high beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and LH high beam for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam does operate.	1. Bulb 2. Open in LH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and LH low beam for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam does operate.	1. Bulb 2. Open in RH high beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH high beam for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam does operate.	1. Bulb 2. Open in RH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH low beam for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	1. Bulb 2. Ground circuit 3. Open in high beam circuit	1. Check bulb in combination meter. 2. Check harness between high beam indicator and ground. 3. Check the harness between lighting switch and combination meter for an open circuit.



Bulb Replacement

NLEL0015

The headlamp is a semi-sealed beam type which uses a replaceable halogen bulb. The bulb can be replaced from the engine compartment side without removing the headlamp body.

- **Grasp only the plastic base when handling the bulb. Never touch the glass envelope.**

1. Disconnect the battery cable.
2. Pull off the rubber cap.
3. Disconnect the harness connector from the back side of the bulb.
4. Remove the bulb retaining ring.
5. Remove the headlamp bulb carefully. Do not shake or rotate the bulb when removing it.
6. Install in the reverse order of removal.

CAUTION:

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.

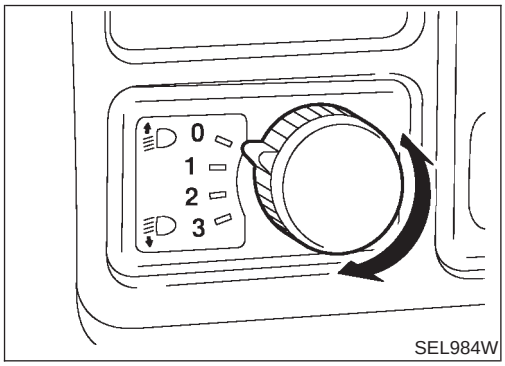
Aiming Adjustment

NLEL0016

For details, refer to the regulations in your own country.

Before performing aiming adjustment, check the following.

1) Keep all tires inflated to correct pressures.
2) Place vehicle on flat surface.
3) 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).



SEL984W

CAUTION:

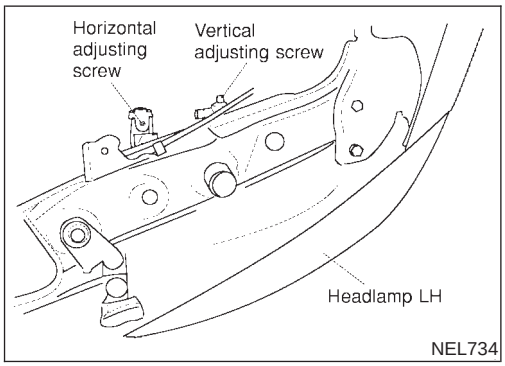
Be sure aiming switch is set to "0" when performing aiming adjustment on vehicles equipped with headlamp aiming control.

LOW BEAM

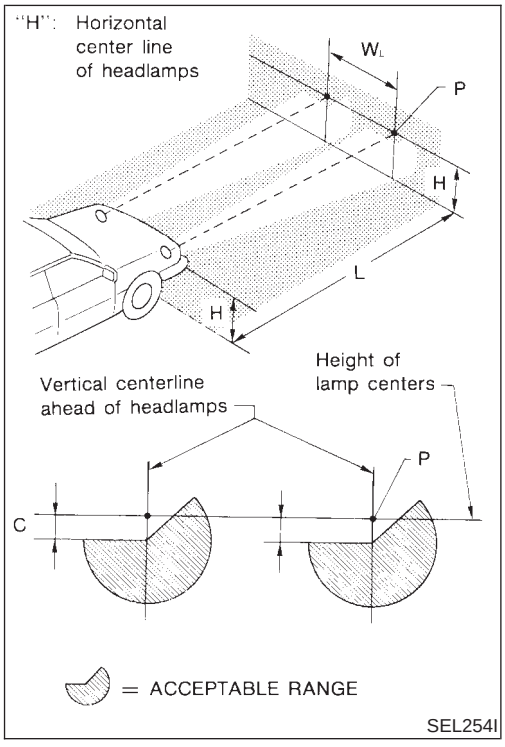
NLEL0016S02

1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.

- **First tighten the adjusting screw all the way and then make adjustment by loosening the screw.**



NEL734



SEL254I

- **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": 5,000 mm (196.85 in)
  "C": 65 mm (2.56 in)

System Description

NLEL0351

The headlamp system on vehicles for North Europe contains a daytime light unit. The unit activates the following whenever the engine is running with the lighting switch in the OFF position:

- Low beam headlamps
- Parking, license, tail and illumination lamps

Power is supplied at all times

- through 10A fuse (No. 38, located in the fusible link and fuse box)
- to daytime light unit terminal 1 and
- to lighting switch terminal 11.

Power is also supplied at all times

- through 15A fuse
- to daytime light unit terminal 3 and
- to lighting switch terminal 5.

Power is also supplied at all times

- through 15A fuse
- to daytime light unit terminal 2 and
- to lighting switch terminal 8.

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

- through 10A fuse [No. 20, located in the fuse block (J/B)]
- to daytime light unit terminal 7.

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

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to daytime light unit terminal 6.

Ground is supplied to daytime light unit terminal 9 through body grounds E24 and E73.

HEADLAMP OPERATION (DAYTIME LIGHT CANCEL OPERATION)

NLEL0351S01

When the lighting switch is turned to the 1st or 2nd position, power is supplied

- through lighting switch terminal 12,
- to daytime light unit terminal 11.

Then daytime light will be canceled. And the lighting system operation will be the same as no daytime light system.

DAYTIME LIGHT OPERATION

NLEL0351S02

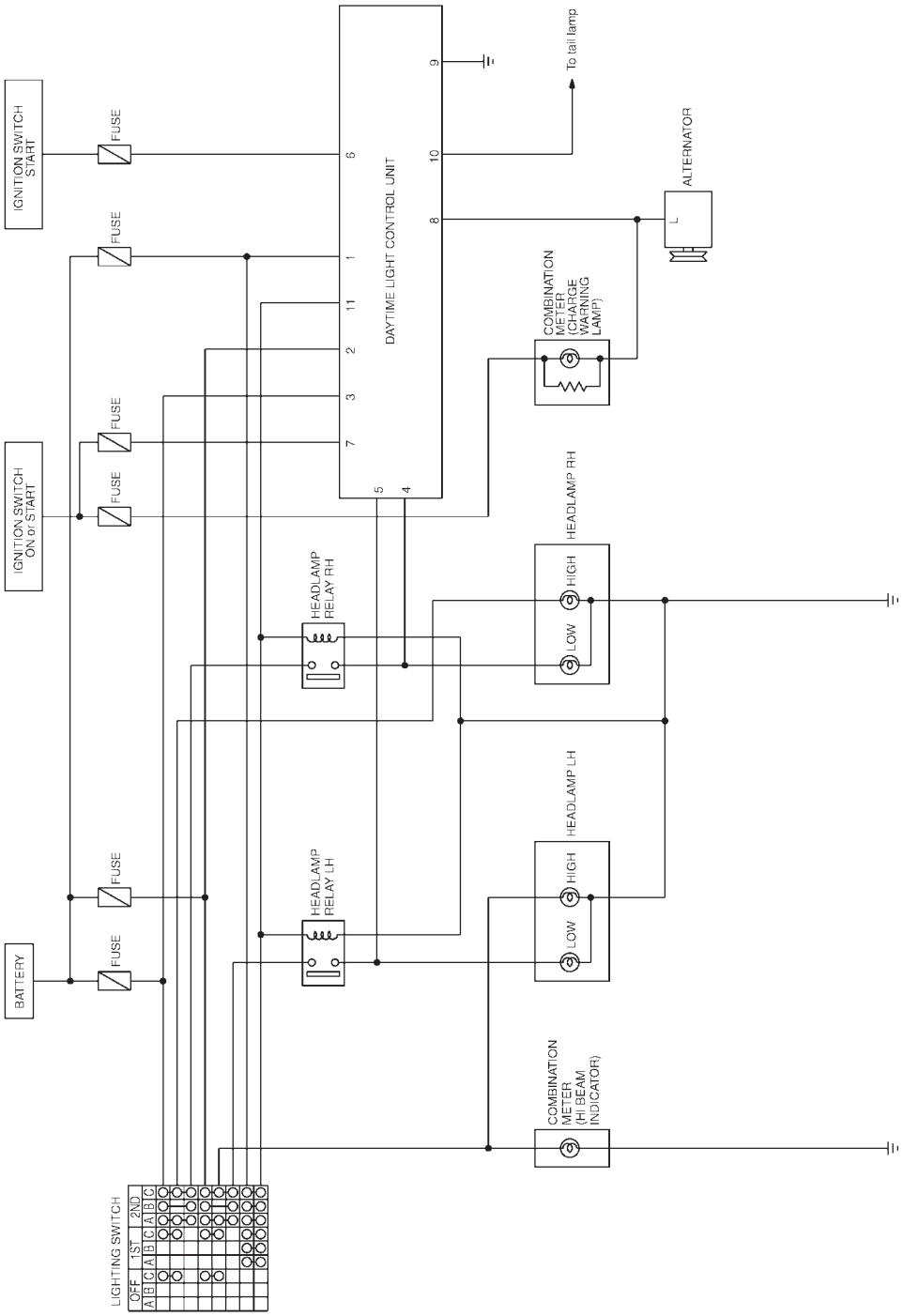
With the engine running and the lighting switch in the OFF position, power is supplied

- from alternator terminal 3
- to daytime light unit terminal 8,
- through daytime light unit terminal 5
- to terminal 3 of headlamp LH,
- through daytime light unit terminal 4
- to terminal 3 of headlamp RH and
- through daytime light unit terminal 10
- to tail lamp and illumination.

Ground is supplied to terminal 2 of each headlamp through body grounds E24 and E73.

Schematic

NLEL0421



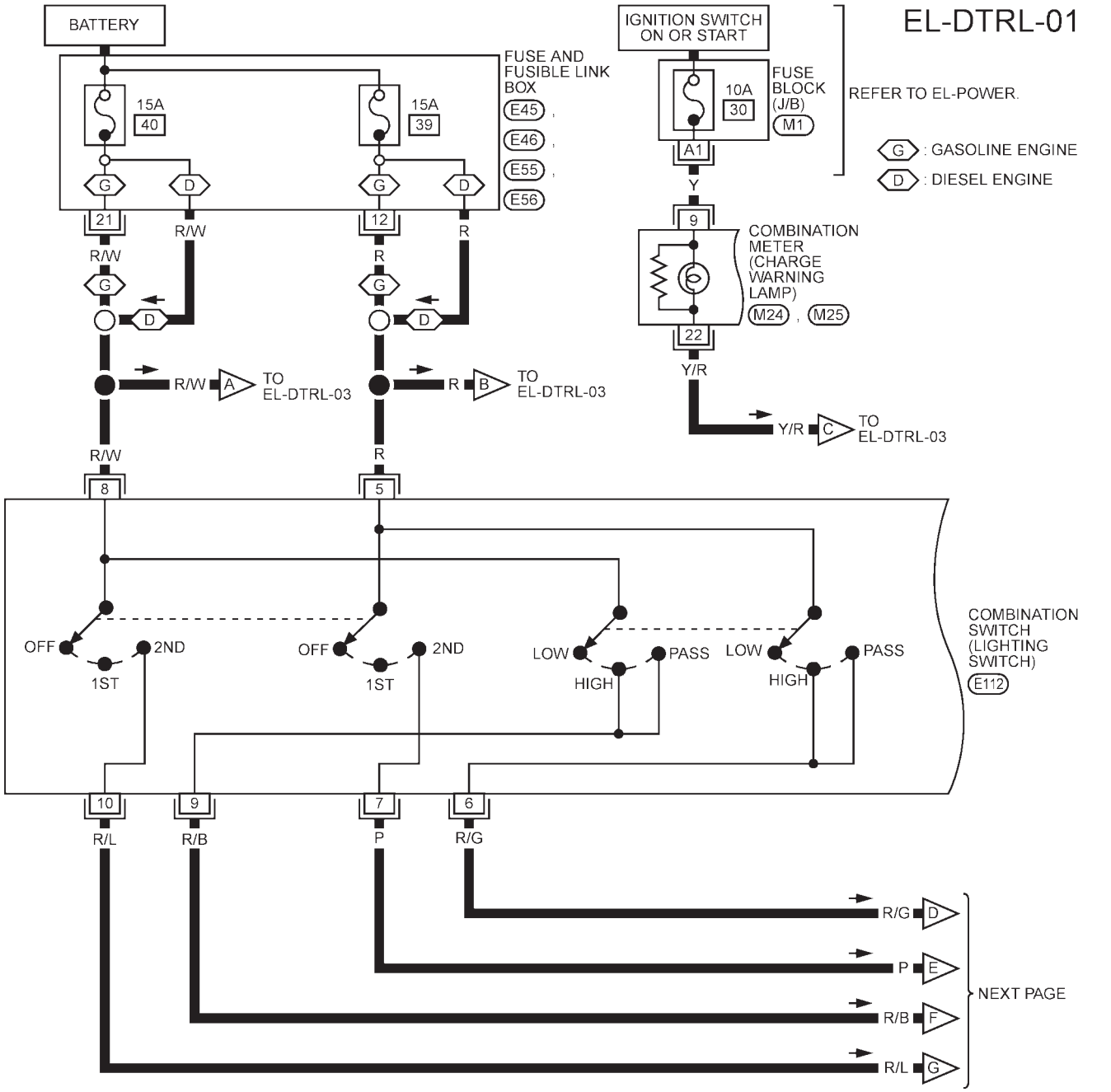
YEL981B

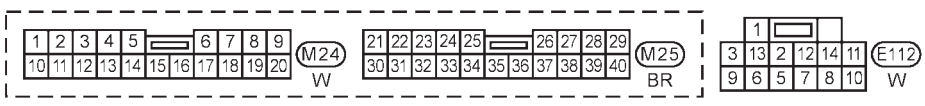
Wiring Diagram — DTRL —

NLEL0422

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0422S01

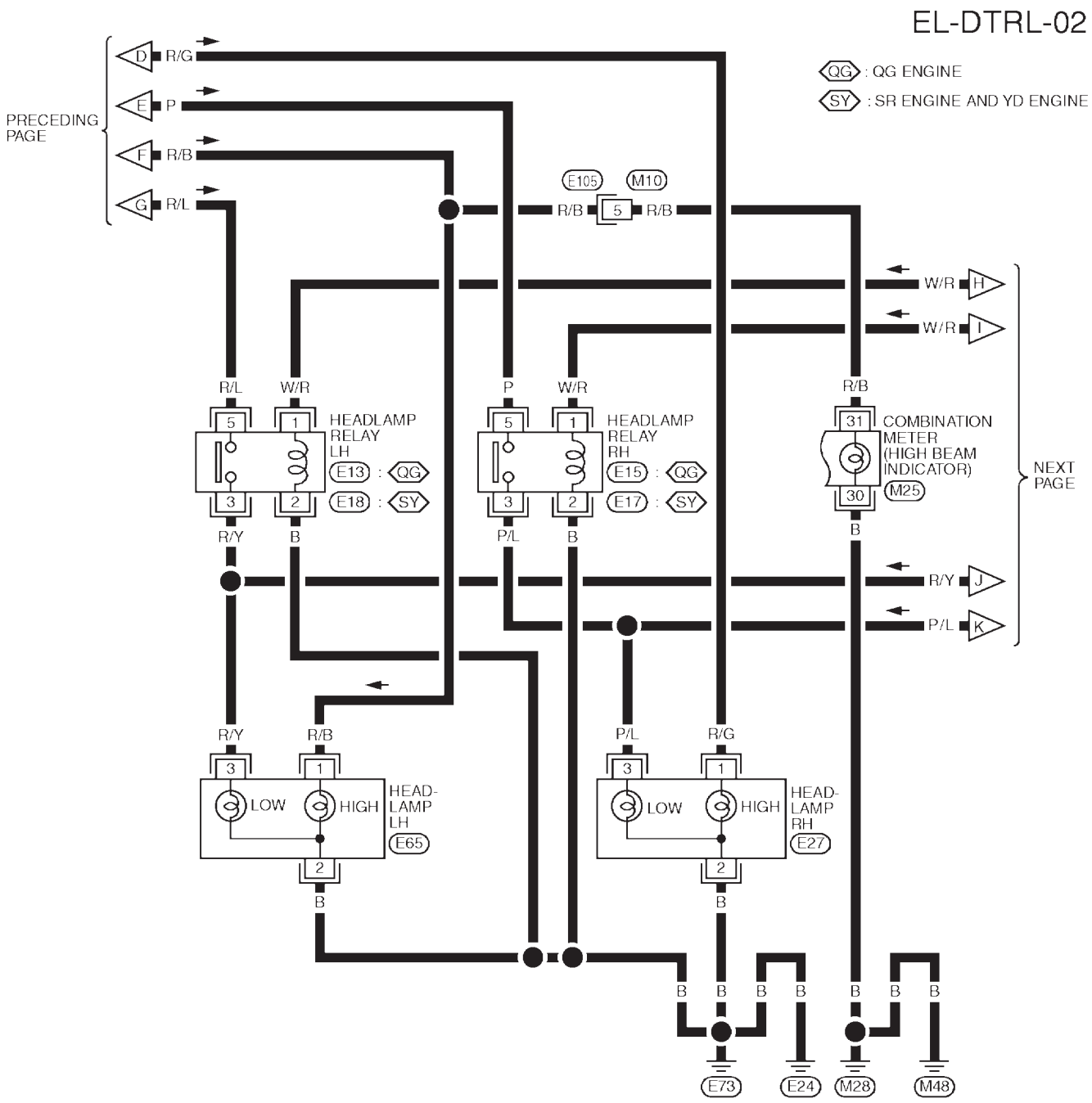


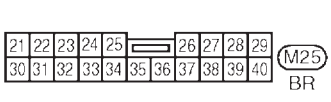


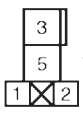
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)
E45 , E46 , E55 , E56
- FUSE AND FUSIBLE LINK BOX

YEL873B

Wiring Diagram — DTRL — (Cont'd)

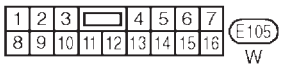




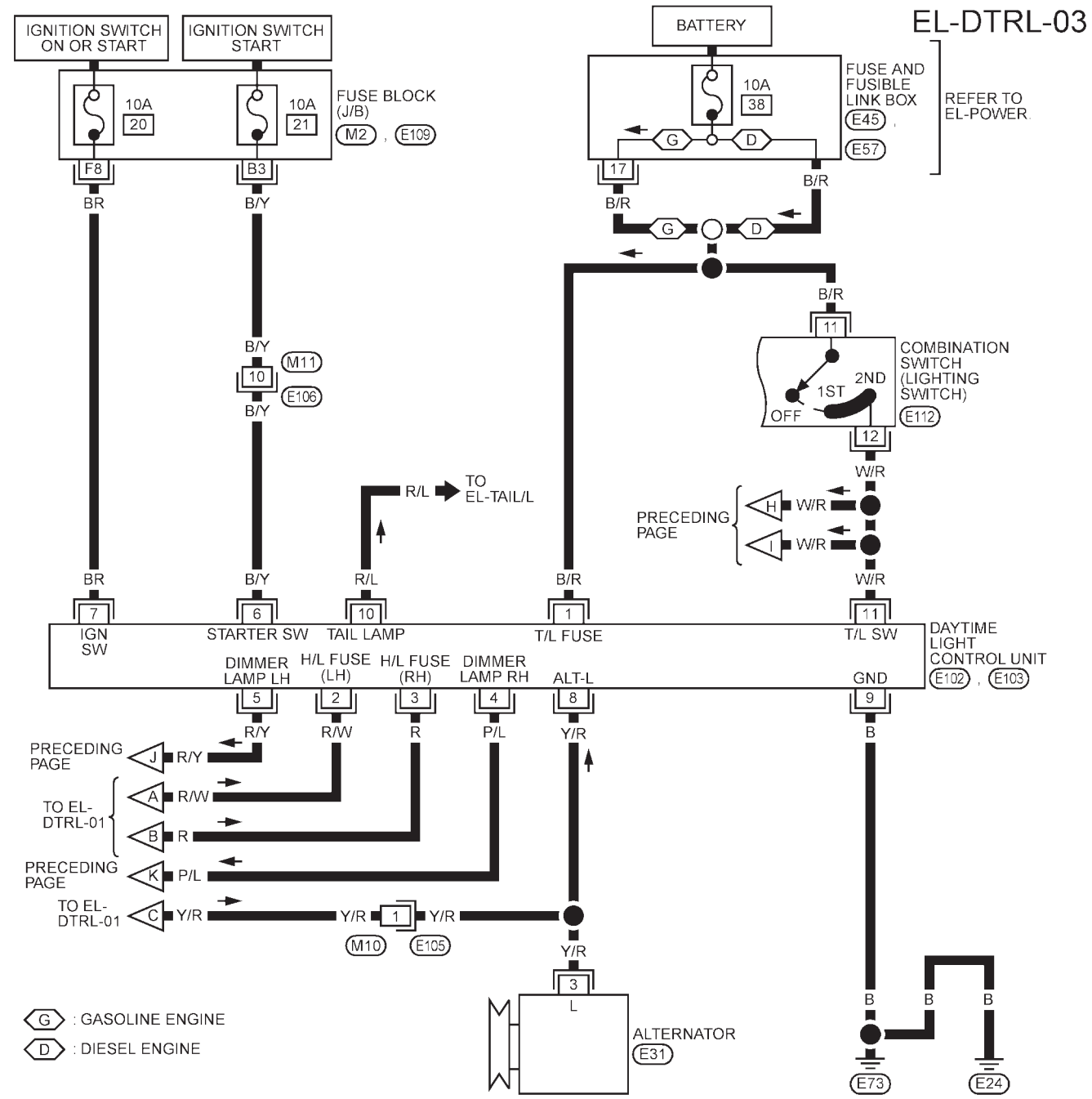


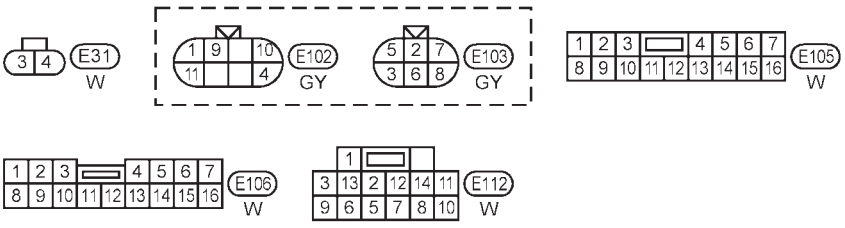
QG : E13 , QG : E15 , SY : E17 , SY : E18

L L L L



YEL874B





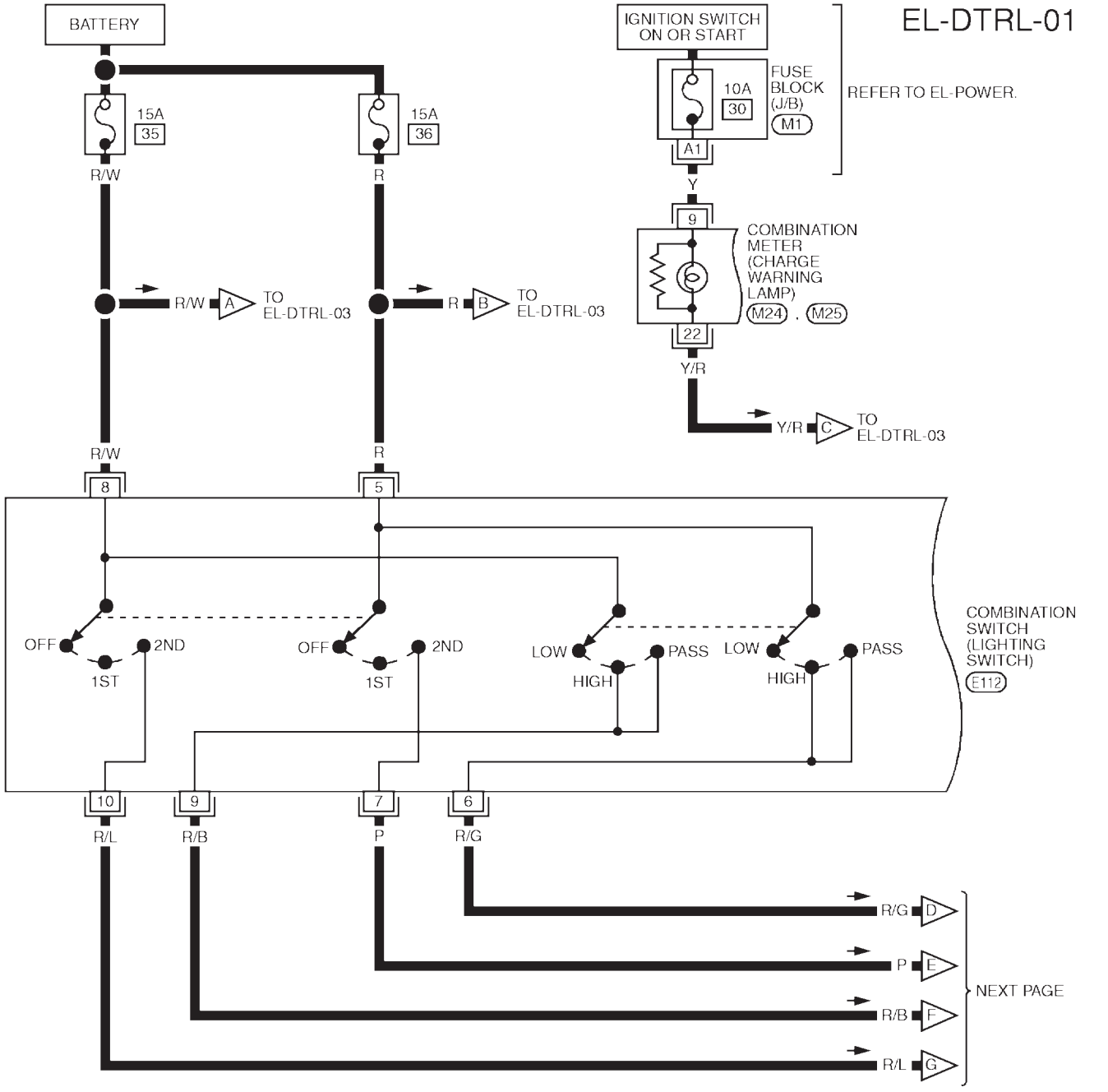
REFER TO THE FOLLOWING.
M2 , E109 -FUSE BLOCK- JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

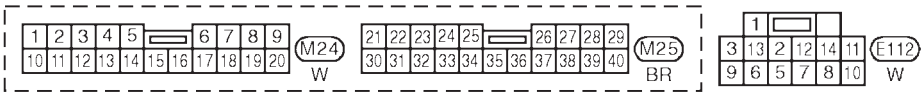
YEL875B

Wiring Diagram — DTRL — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0422S02

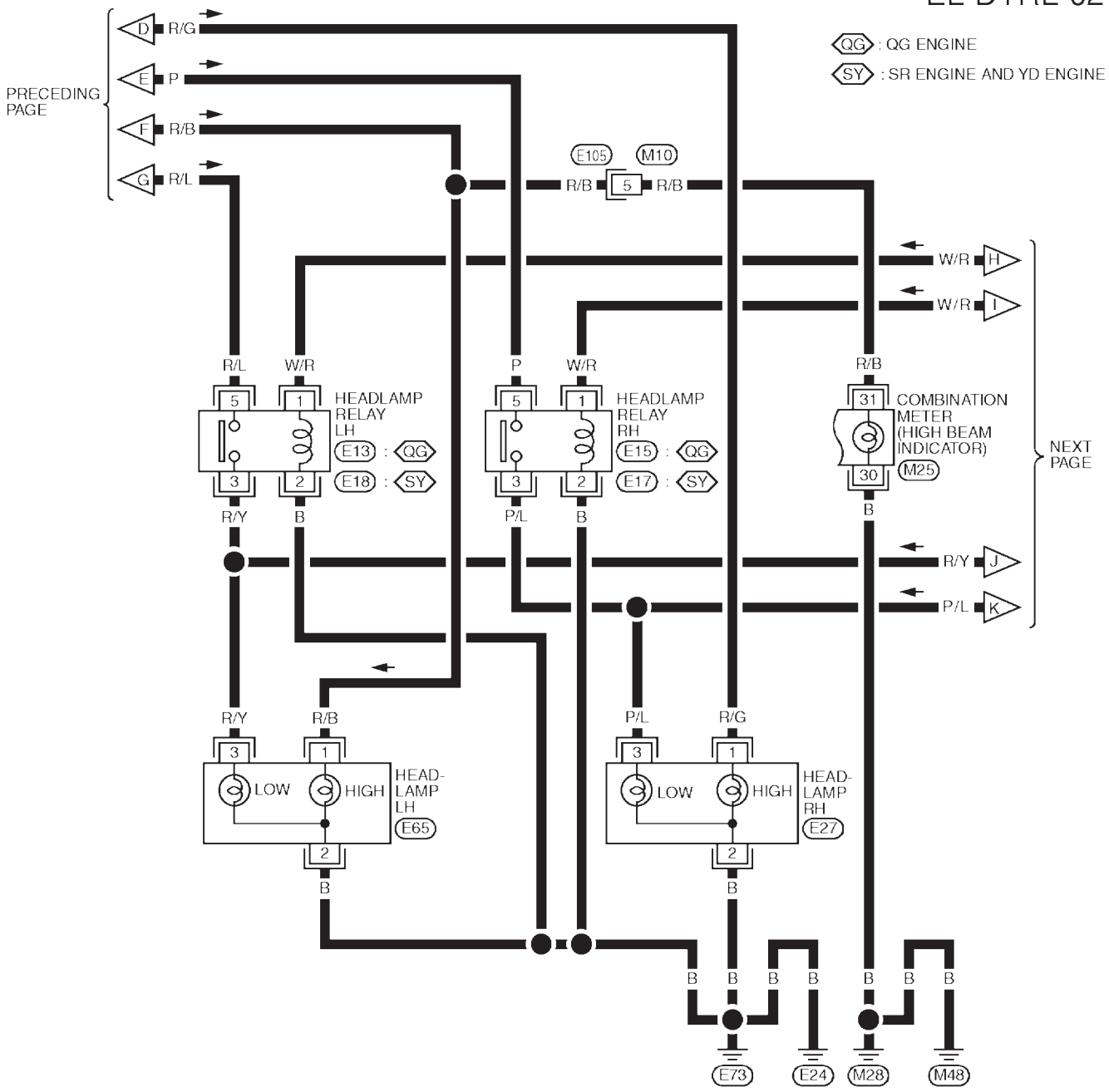


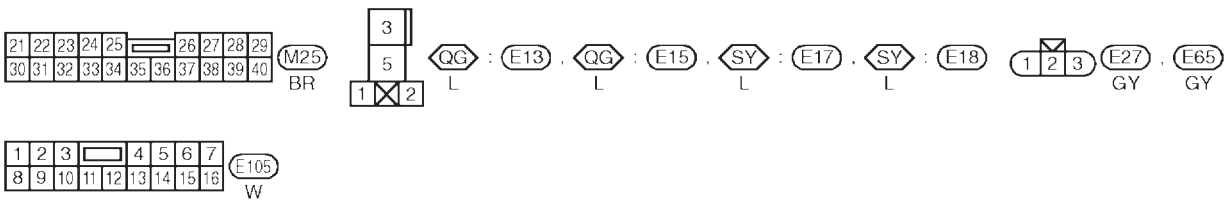


REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL401C

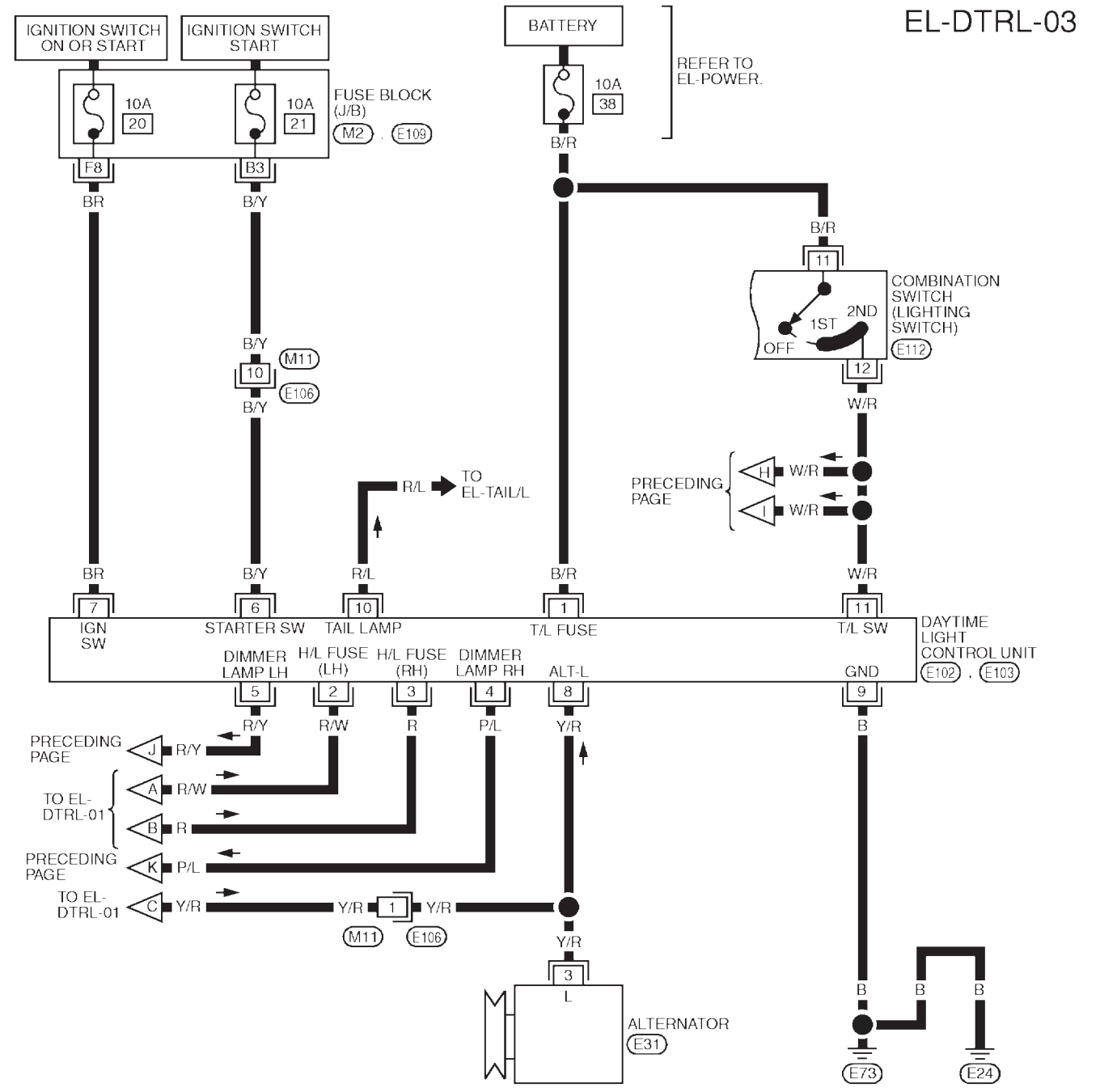
EL-DTRL-02





YEL874B

Wiring Diagram — DTRL — (Cont'd)



Trouble Diagnoses

NLEL0354

DAYTIME LIGHT UNIT INSPECTION TABLE

NLEL0354S01

Terminal No.	Connections	INPUT (I)/ OUTPUT (O)	Operated condition		Voltage (V) (Approximate values)
1	Power source for illumination & tail lamp	—	—		12
2	Power source for headlamp LH	—	—		12
3	Power source for headlamp RH	—	—		12
4	Headlamp RH	O	ON (daytime light operating*)		12
			OFF		0
5	Headlamp LH	O	ON (daytime light operating*)		12
			OFF		0
6	Start signal	I	Ignition switch	START	12
				ON, ACC or OFF	0
7	Power source	—	Ignition switch	ON or START	12
				ACC or OFF	0
8	Alternator “L” terminal	I	Engine	Running	12
				Stopped	0
9	Ground	—	—		—
10	Illumination & tail lamp	O	ON (daytime light operating*)		12
			OFF		0
11	Lighting switch	I	1ST·2ND position		12
			OFF		0

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

Bulb Replacement

NLEL0355

Refer to “HEADLAMP” (EL-71).

Aiming Adjustment

NLEL0356

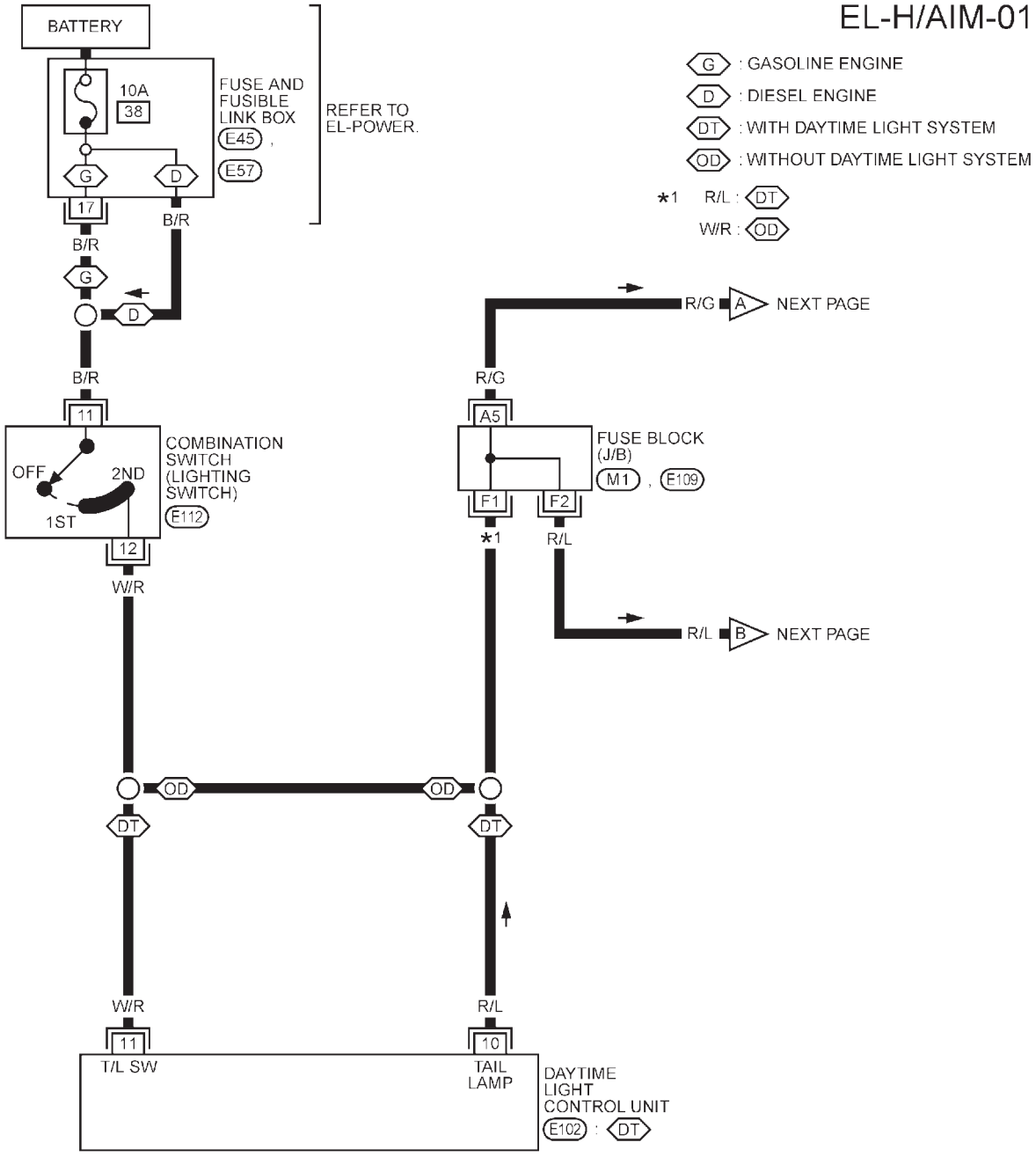
Refer to “HEADLAMP” (EL-72).

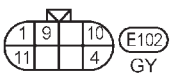
Wiring Diagram — H/AIM —

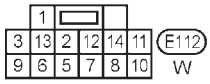
NLEL0424

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0424S01



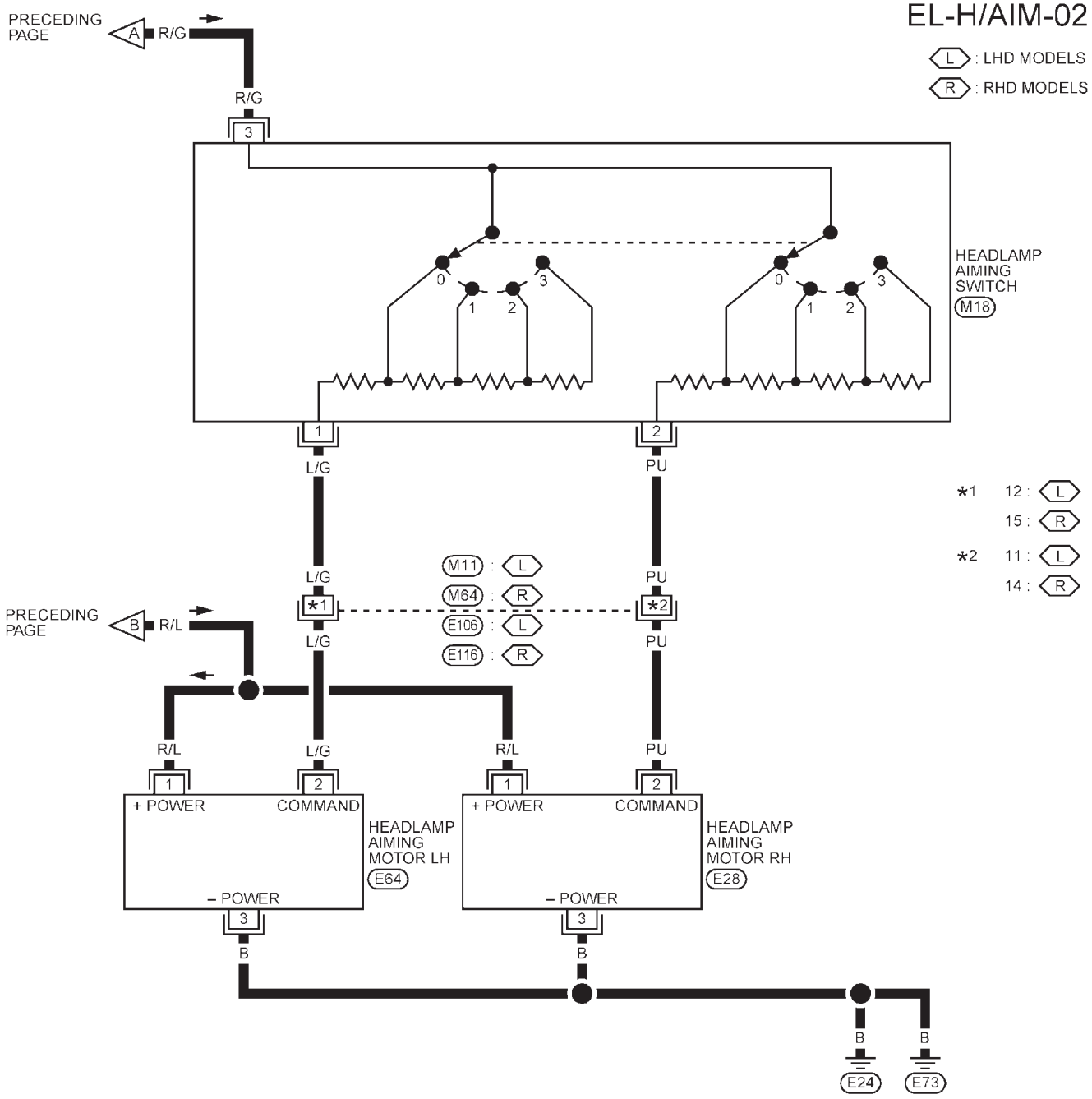


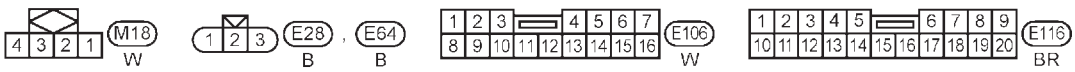


REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK-JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

YEL876B

Wiring Diagram — H/AIM — (Cont'd)



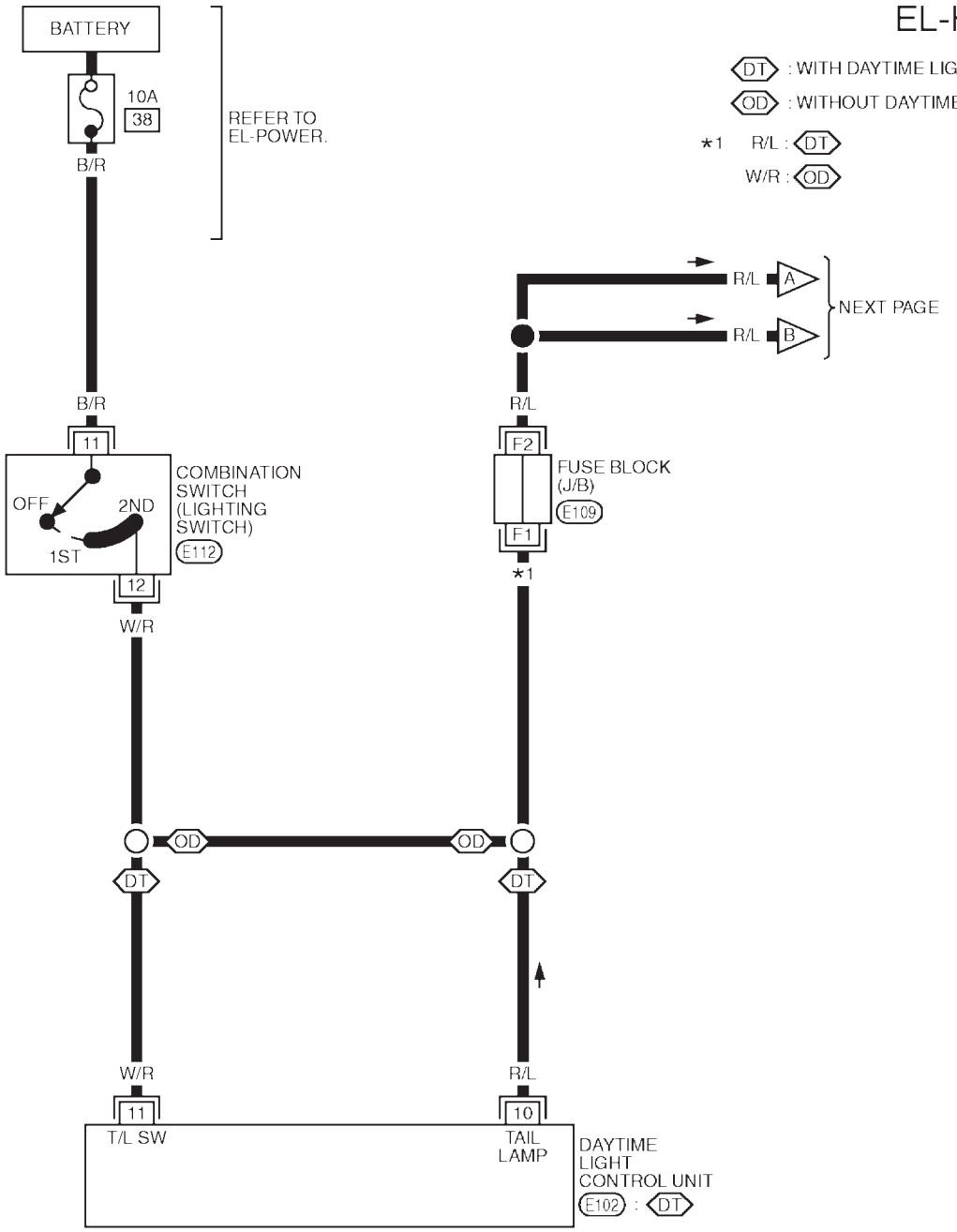


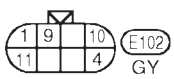
YEL877B

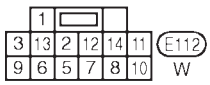
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0424S02

EL-H/AIM-01



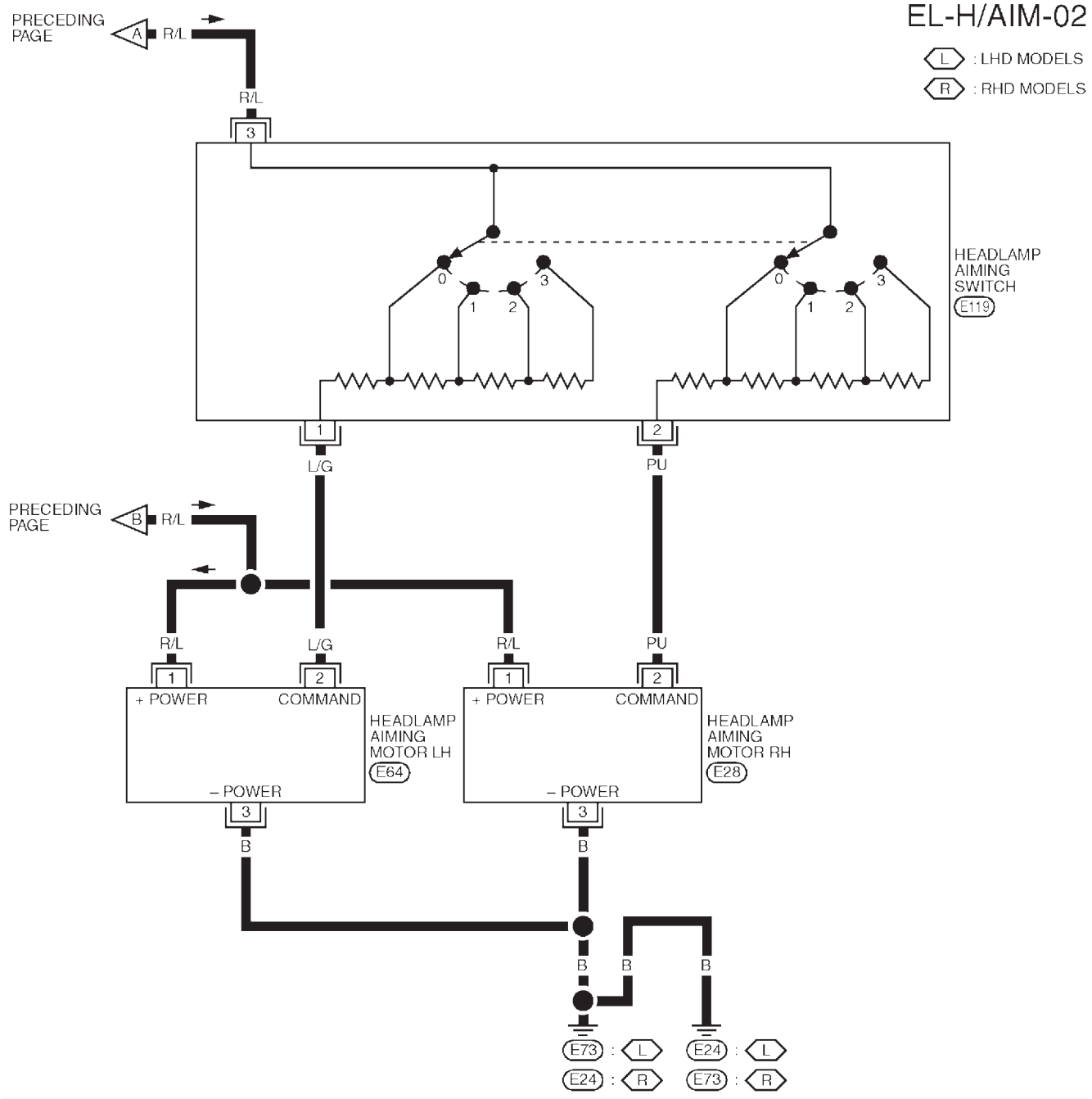


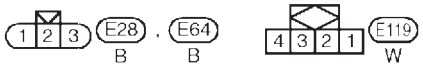


REFER TO THE FOLLOWING.
E109 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL403C

Wiring Diagram — H/AIM — (Cont'd)





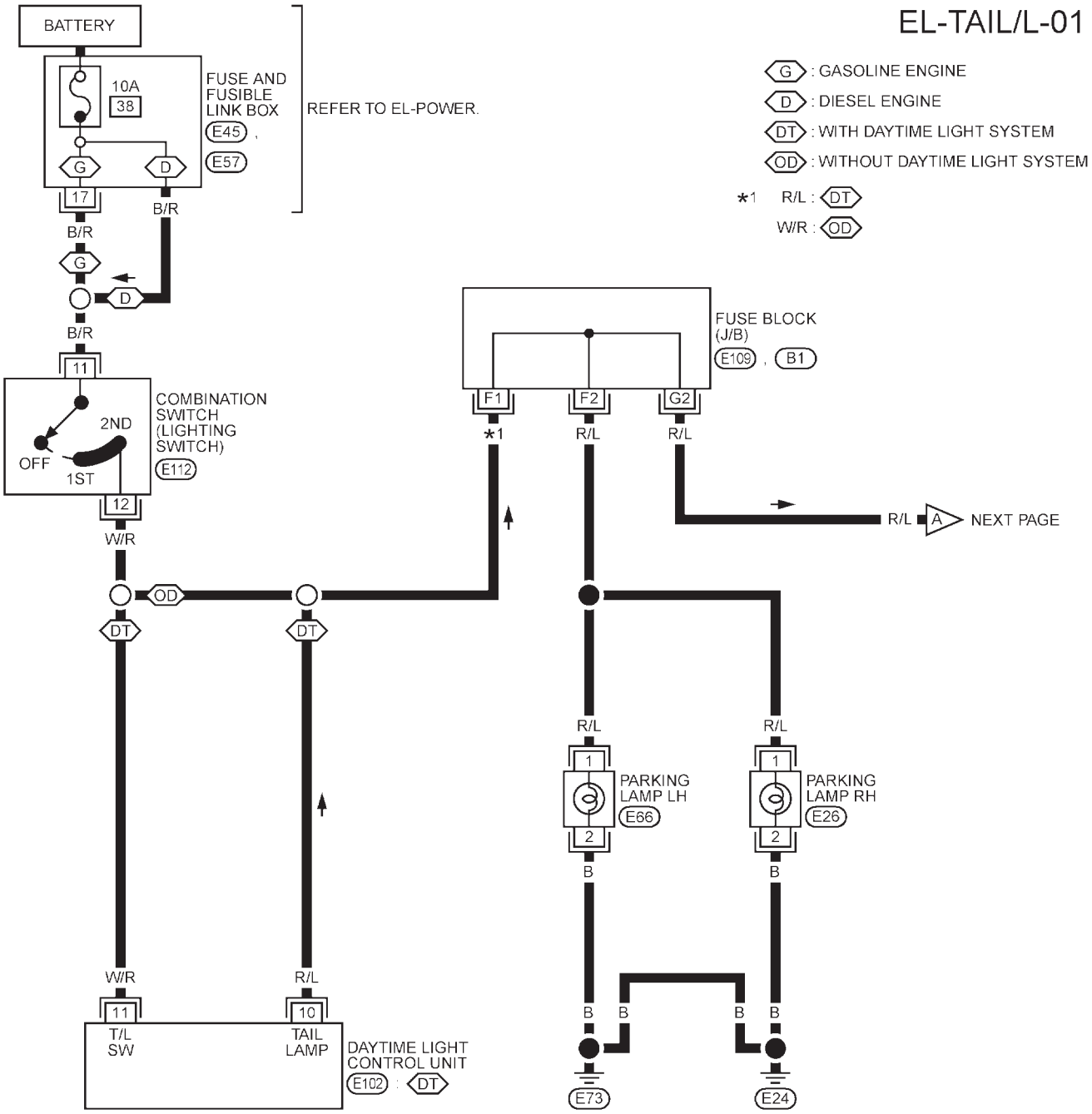
YEL404C

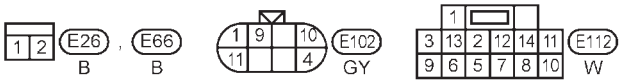
Wiring Diagram — TAIL/L —

NLEL0425

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0425S01

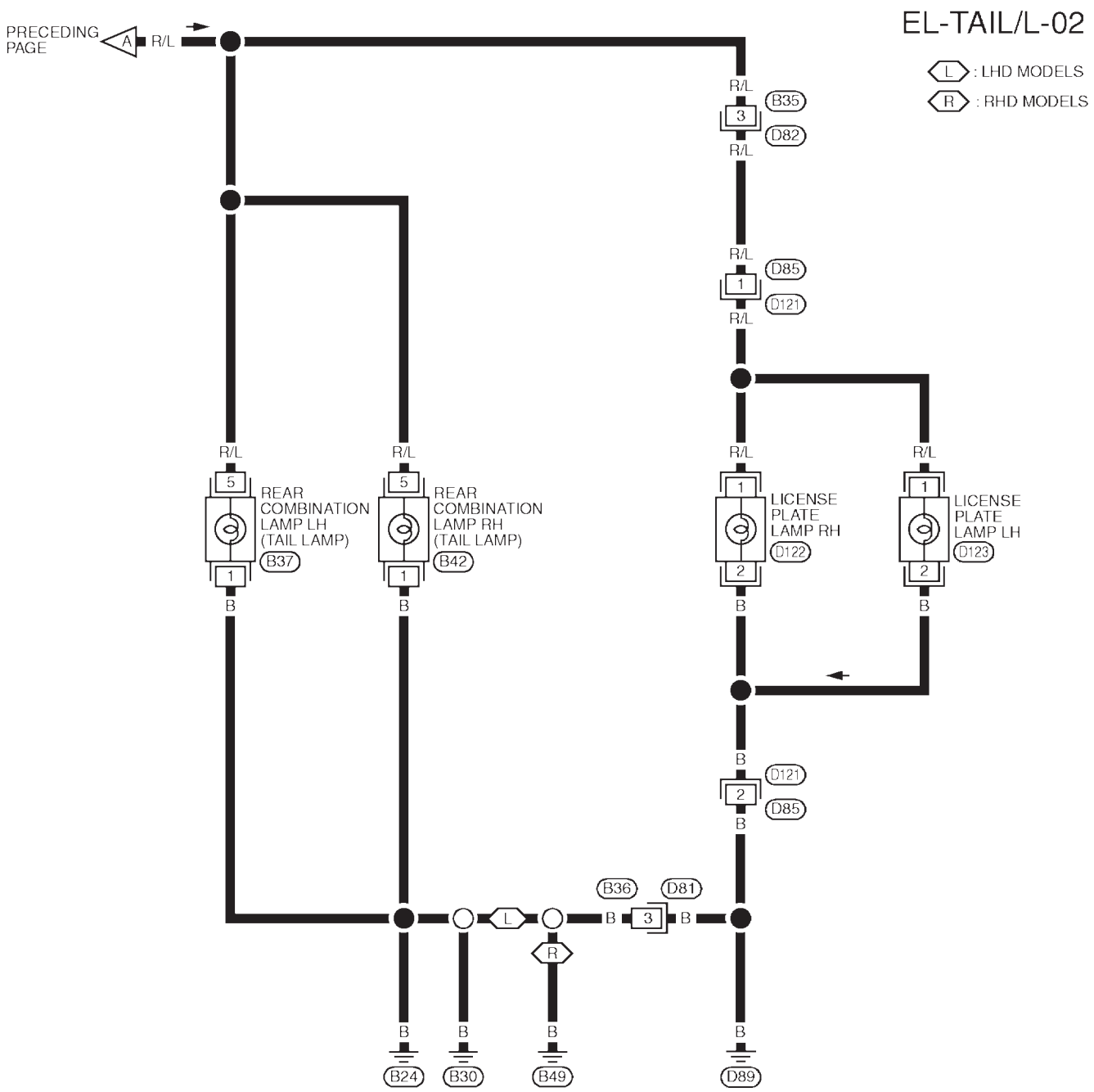


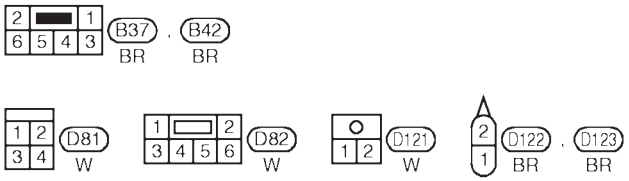


REFER TO THE FOLLOWING.
E109 , B1 -FUSE BLOCK- JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

YEL878B

Wiring Diagram — TAIL/L — (Cont'd)

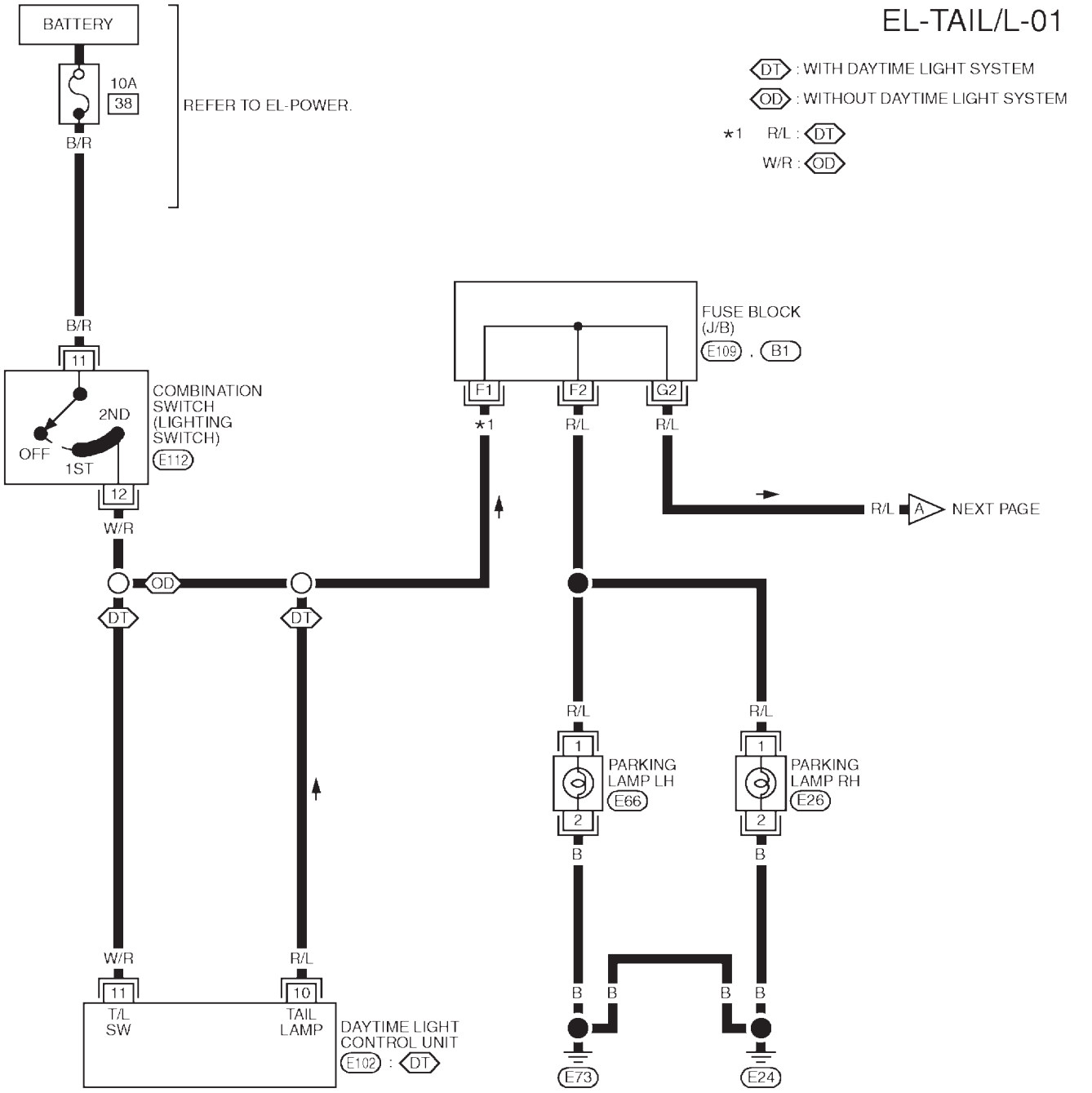


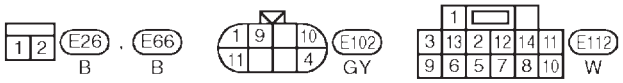


YEL879B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0425S02

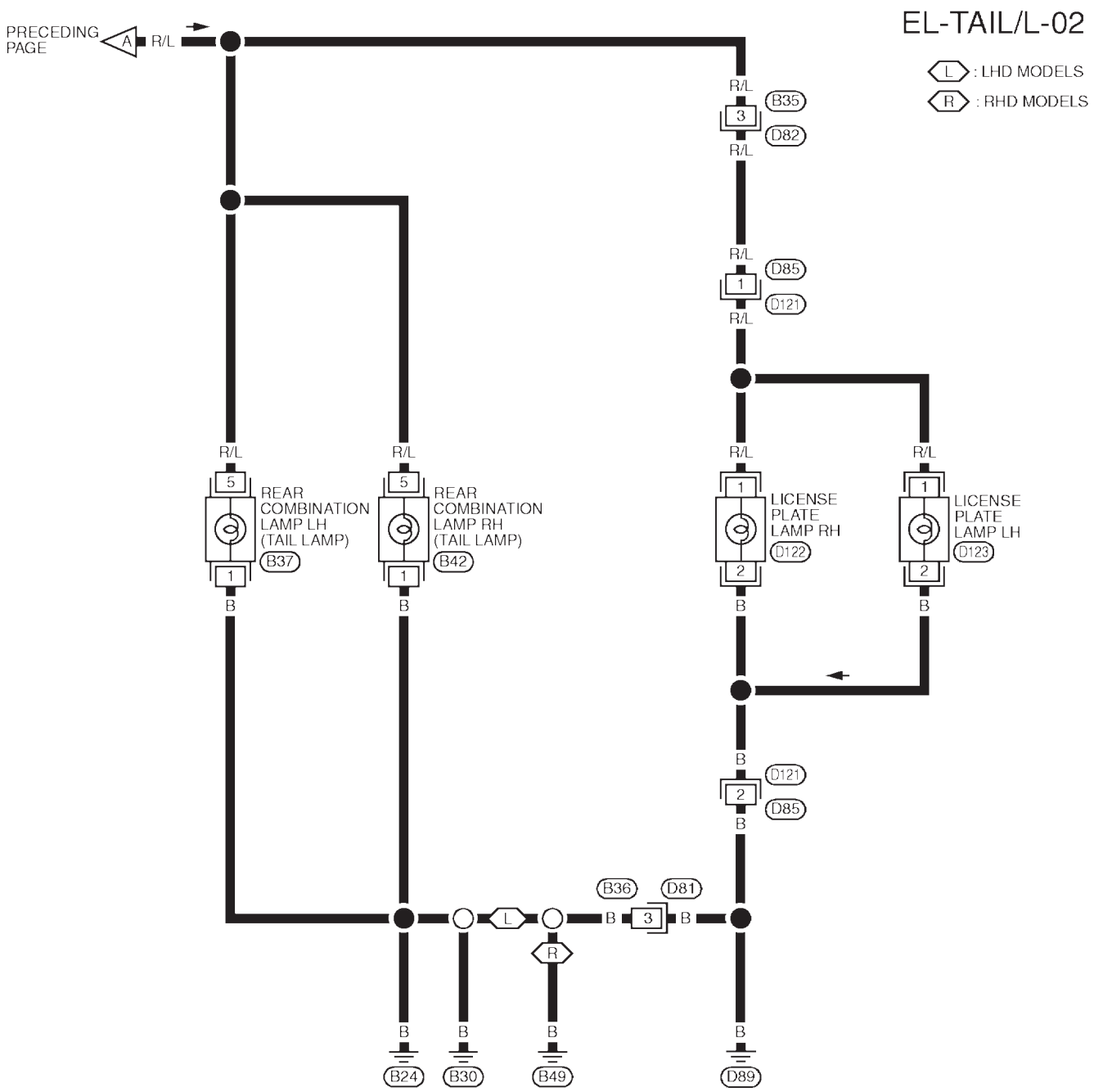


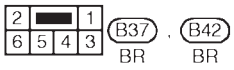


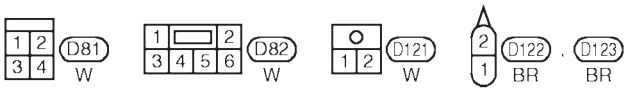
REFER TO THE FOLLOWING.
E109 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL405C

Wiring Diagram — TAIL/L — (Cont'd)







YEL879B

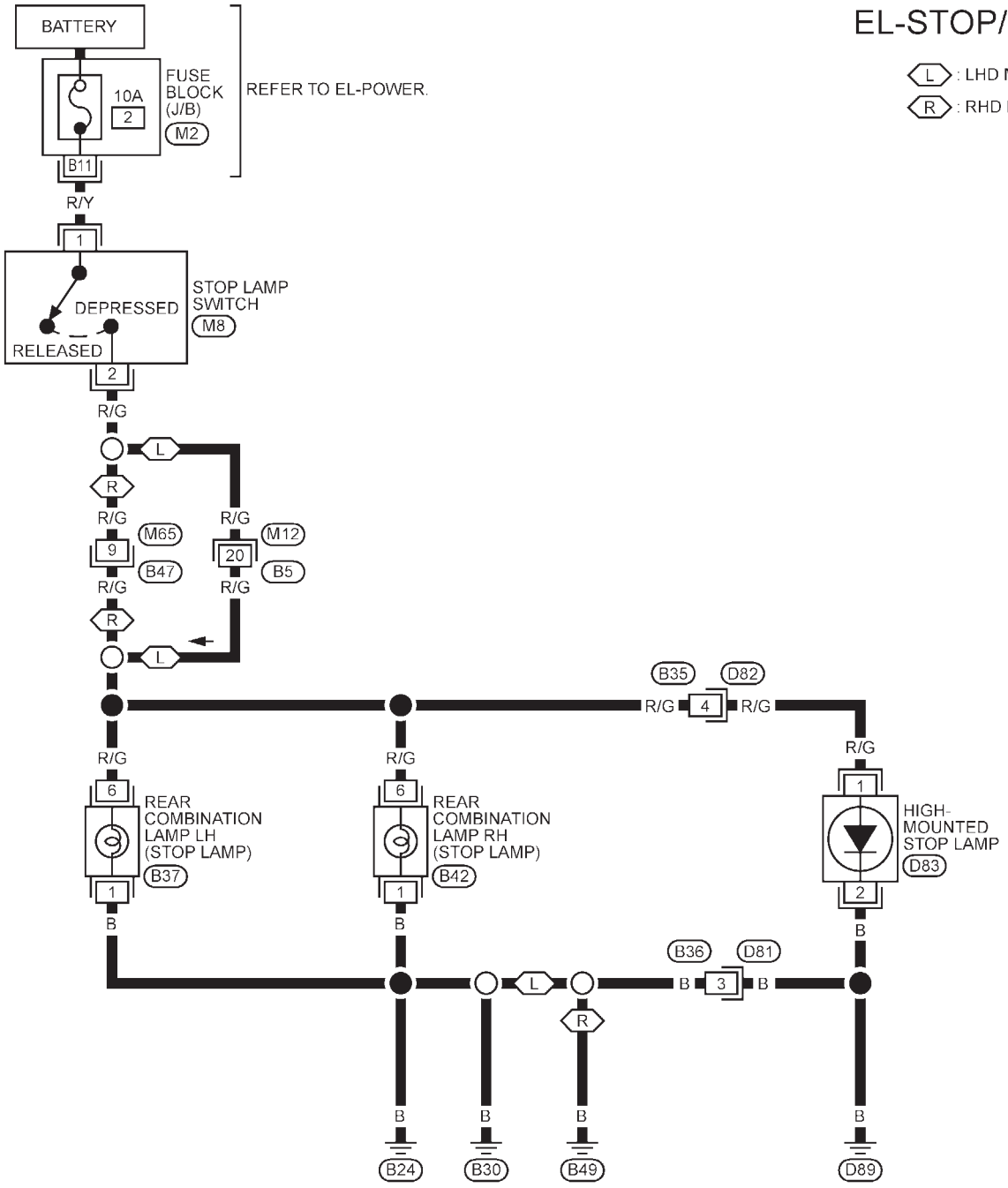
Wiring Diagram — STOP/L —

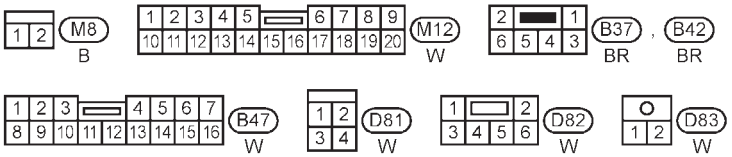
NLEL0426

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0426S01

EL-STOP/L-01





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

YEL880B

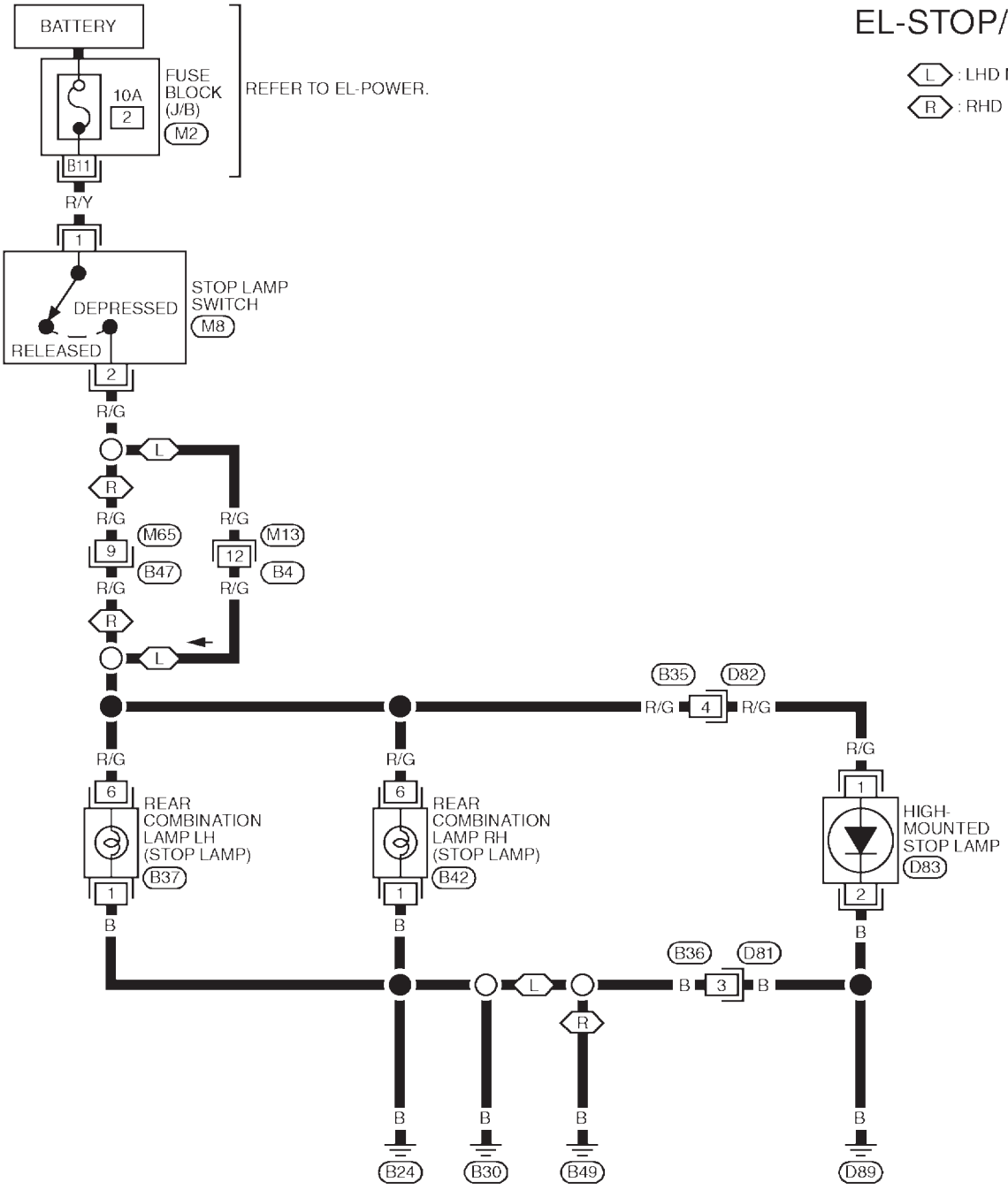
Wiring Diagram — STOP/L — (Cont'd)

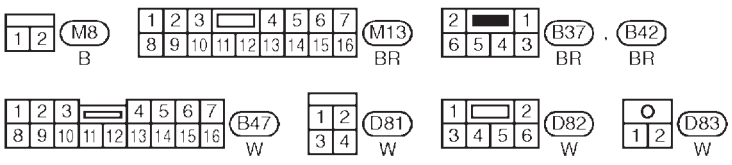
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0426S02

EL-STOP/L-01

L : LHD MODELS
R : RHD MODELS





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

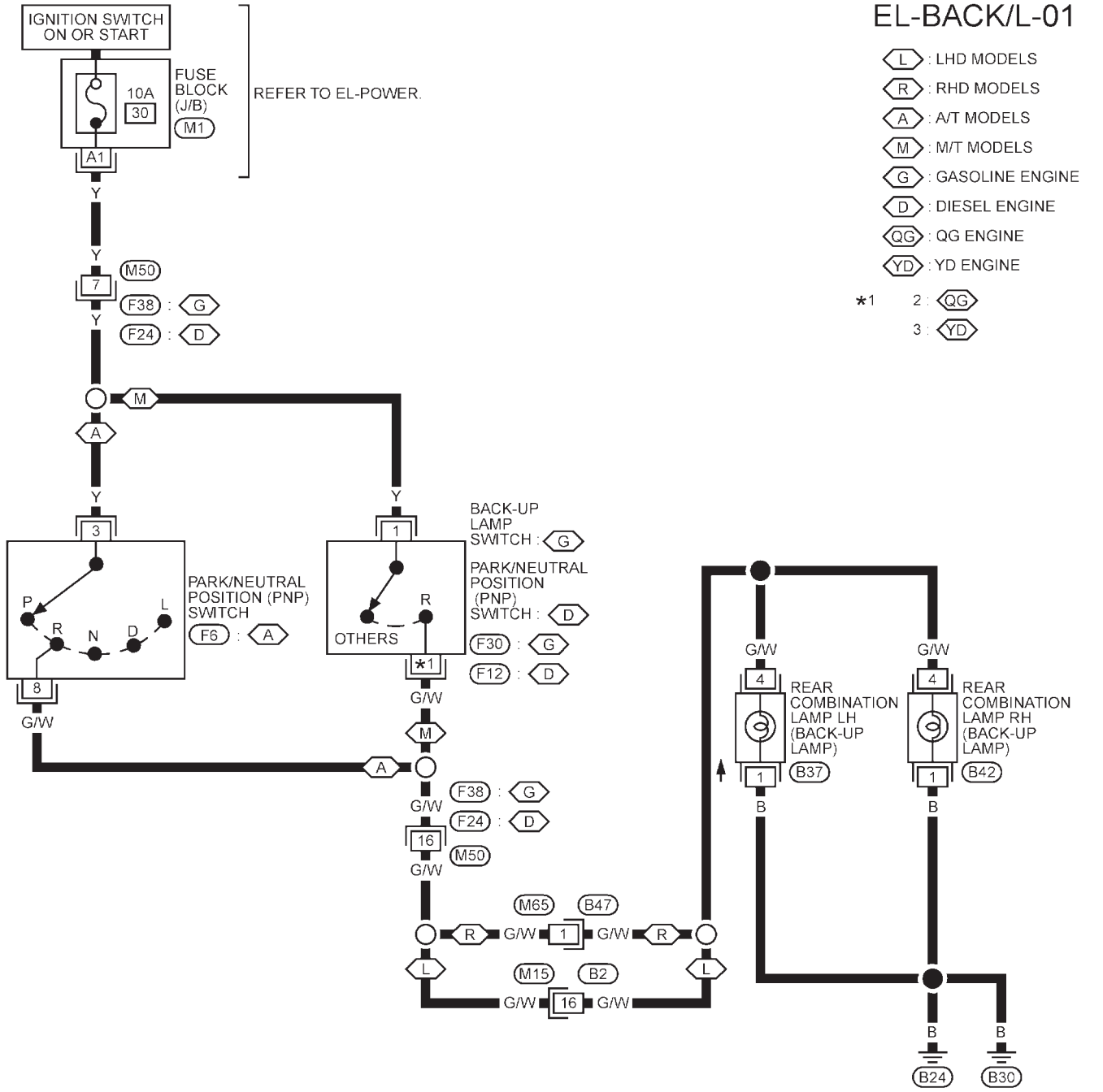
YEL406C

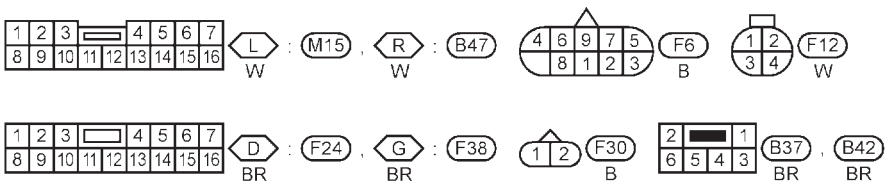
Wiring Diagram — BACK/L —

NLEL0427

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0427S01





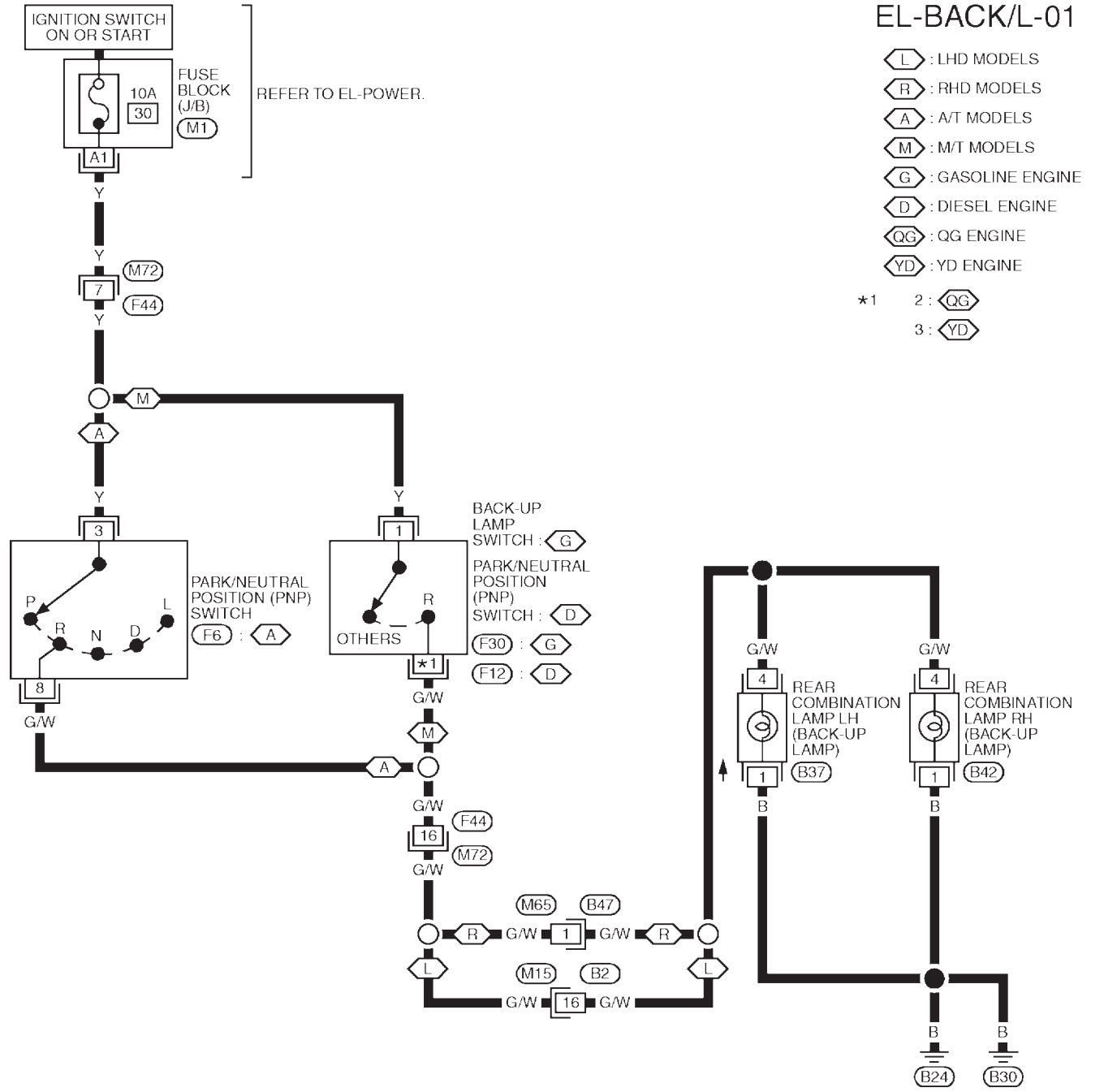
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

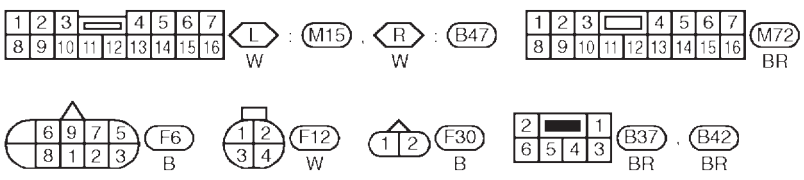
YEL881B

Wiring Diagram — BACK/L — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0427S02





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

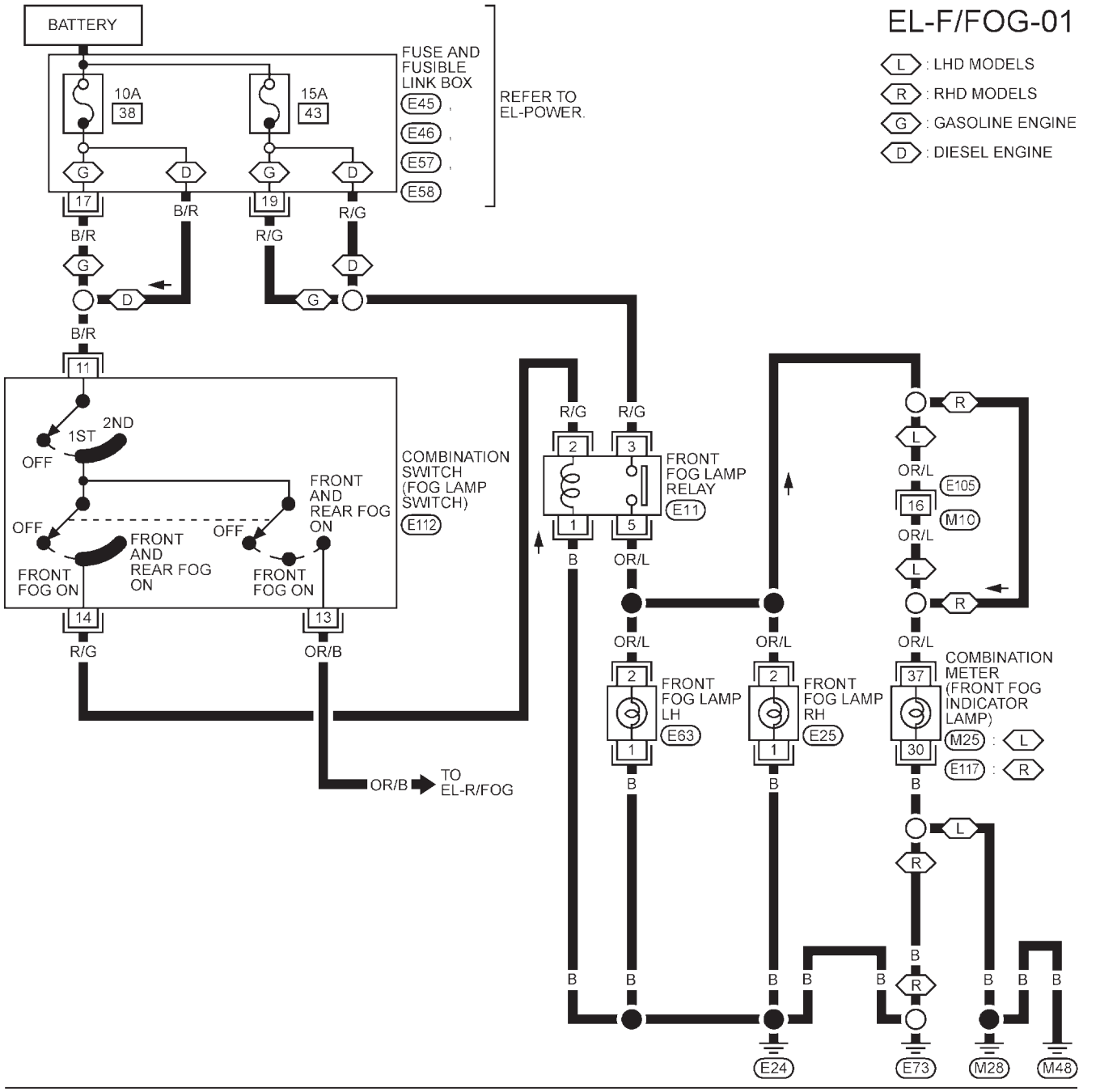
YEL407C

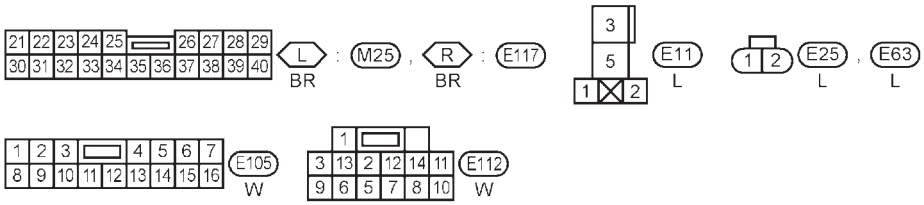
Wiring Diagram — F/FOG —

NLEL0428

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0428S01





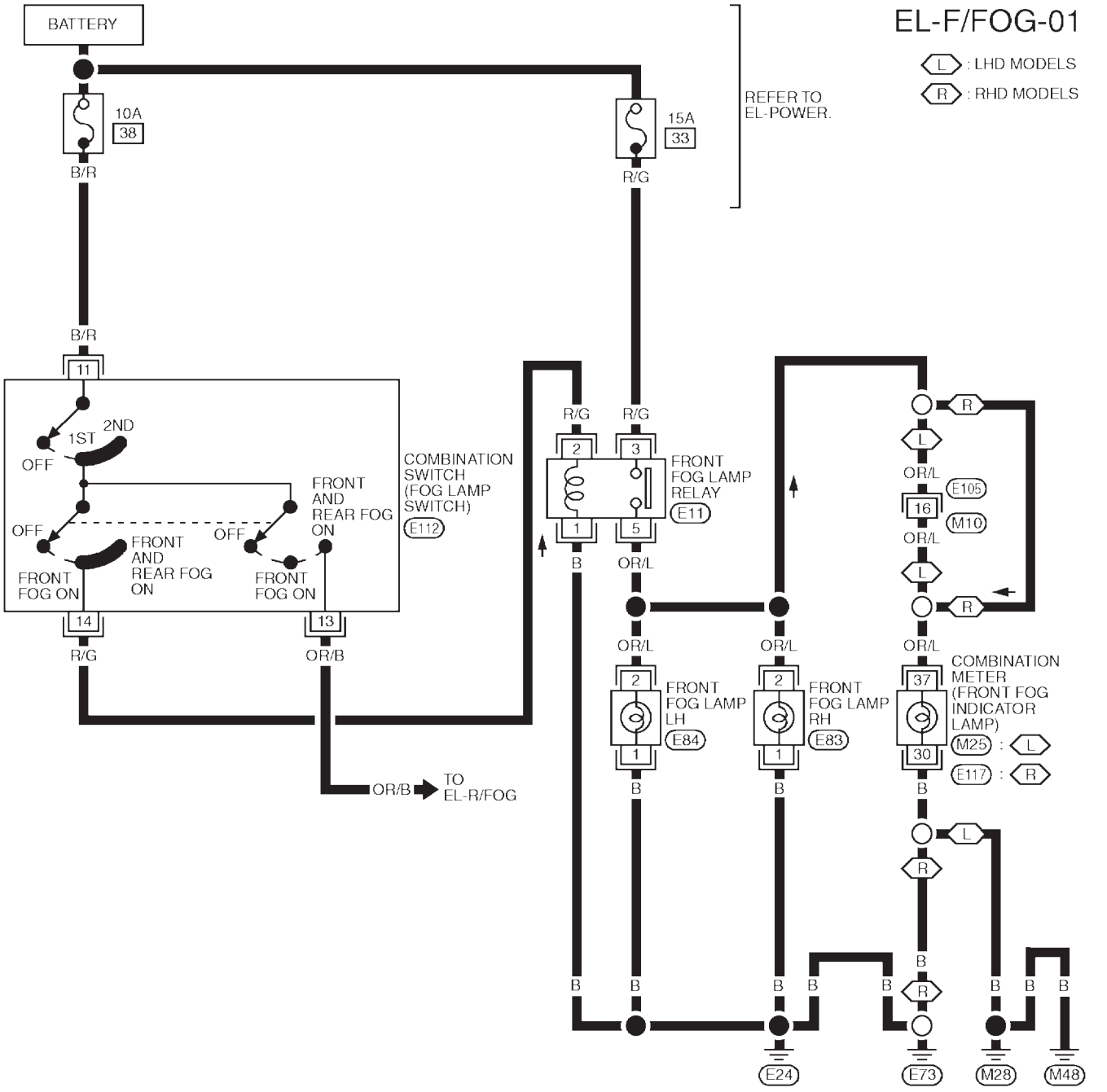
REFER TO THE FOLLOWING.
E45 , E46 , E57 , E58
-FUSE AND FUSIBLE LINK BOX

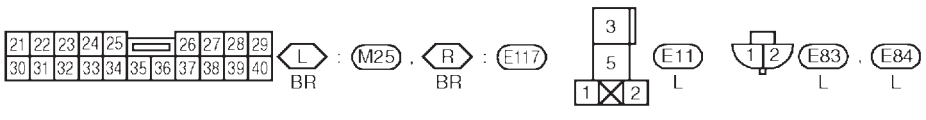
YEL882B

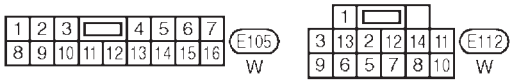
Wiring Diagram — F/FOG — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

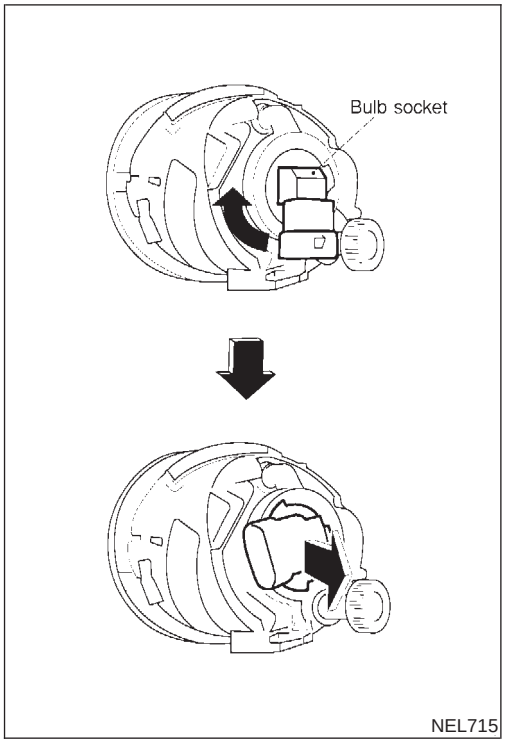
NLEL0428S02







YEL408C



Bulb Replacement

NLEL0314

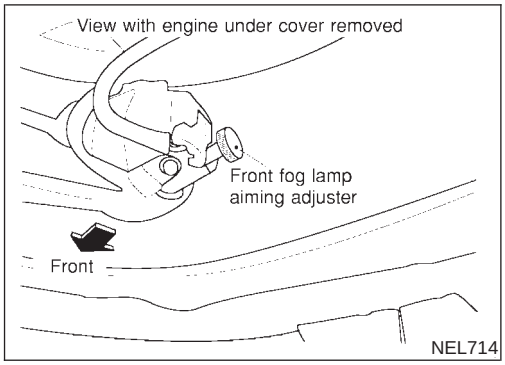
The front fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

- **Grasp only the plastic base when handling the bulb. Never touch the glass envelope.**

1. Disconnect the battery cable.
2. Disconnect the harness connector.
3. Remove the front fog lamp bulb carefully. Do not shake the bulb when removing it.
4. Install in the reverse order of removal.

CAUTION:

- **Do not leave front fog lamp reflector without bulb for a long period of time. Dust, moisture, smoke, etc. entering front fog lamp body may affect the performance of the front fog lamp. Remove front fog lamp bulb from the front fog lamp reflector just before a replacement bulb is installed.**



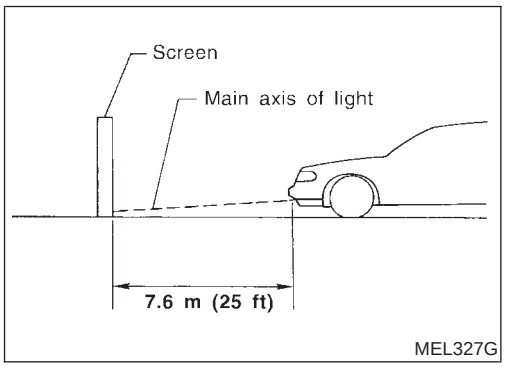
Aiming Adjustment

=NLEL0029

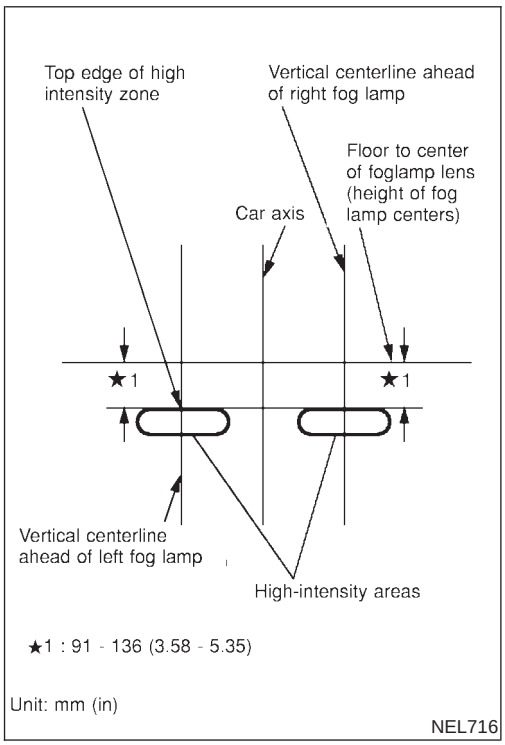
Before performing aiming adjustment, make sure of the following.

1) Keep all tires inflated to correct pressure.
2) Place vehicle on level ground.
3) See that vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in driver's seat.

Adjust aiming in the vertical direction by turning the adjusting screw.



1. Set the distance between the screen and the center of the fog lamp lens as shown at left.
2. Remove front fog lamp rim. For detail, refer to "BODY END" in BT section.
3. Turn front fog lamps ON.



4. Adjust front fog lamps so that the top edge of the high intensity zone is 91 to 136 mm (3.58 to 5.35 in) below the height of the fog lamp centers as shown at left.

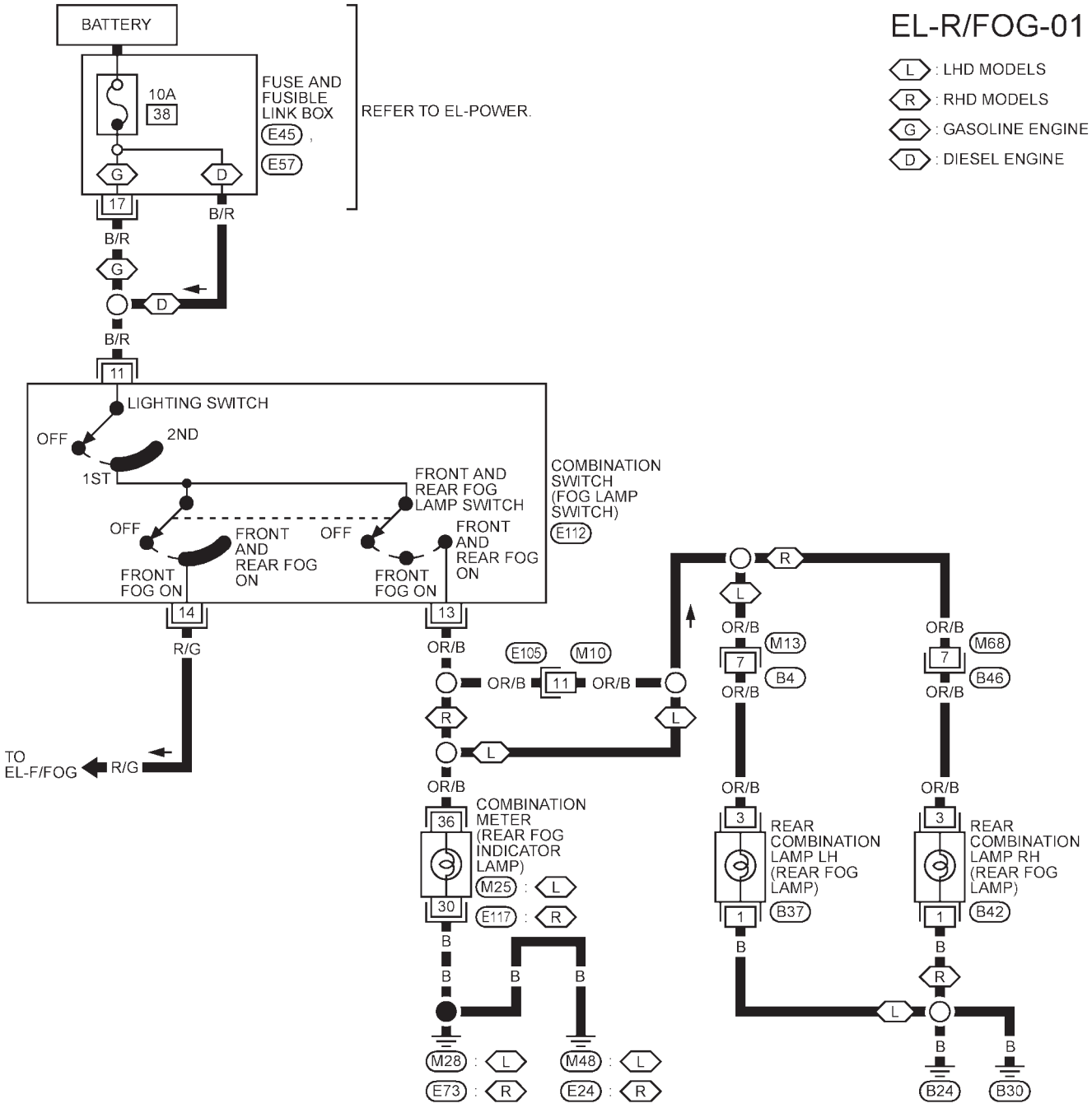
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

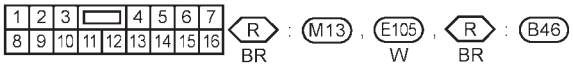
Wiring Diagram — R/FOG —

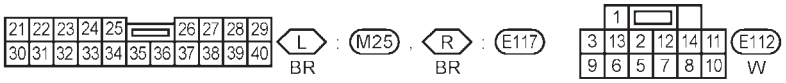
NLEL0429

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0429S01







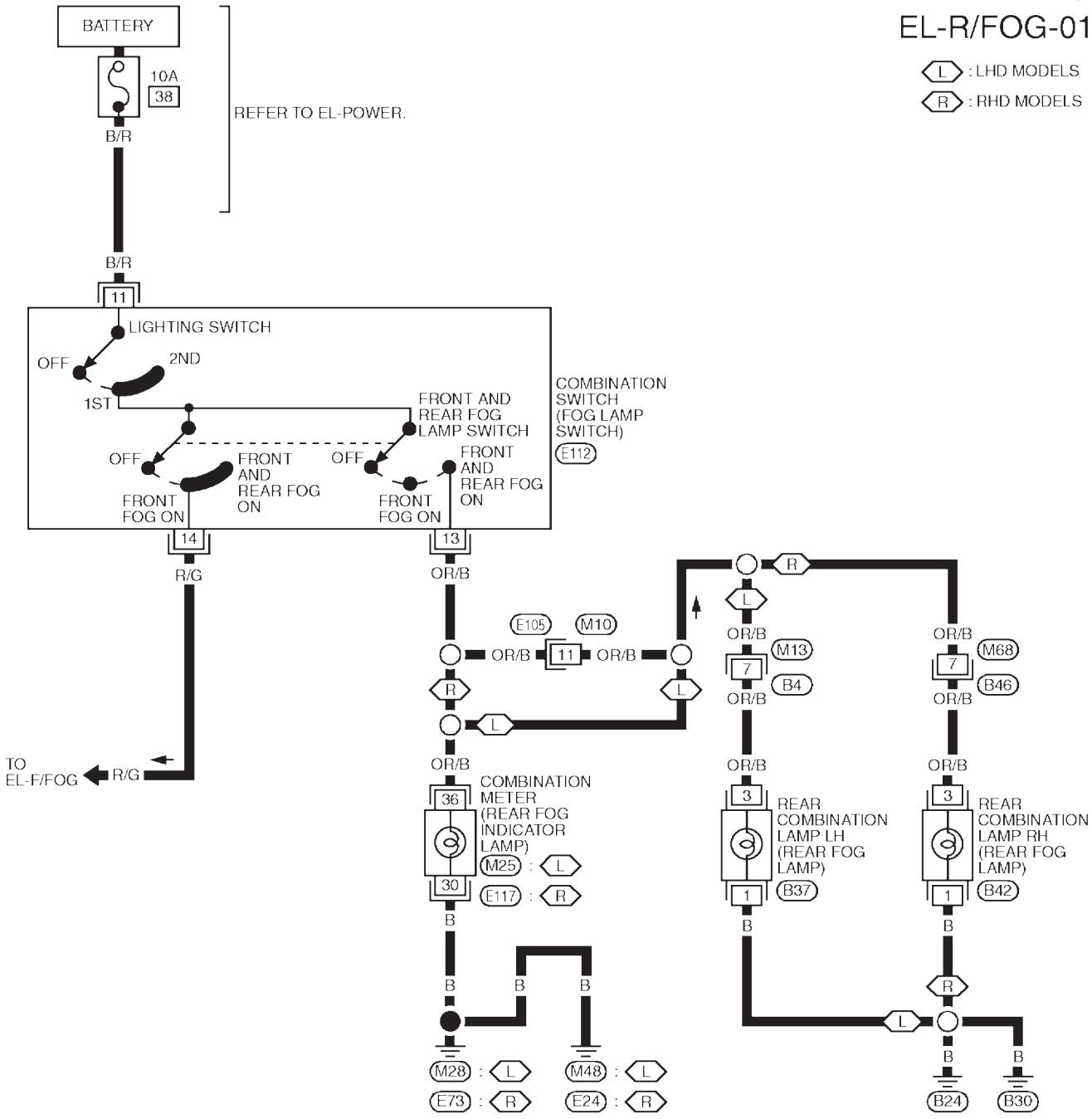
REFER TO THE FOLLOWING.
E45 , E47 -FUSE AND FUSIBLE LINK BOX

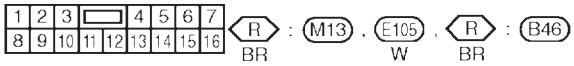
YEL883B

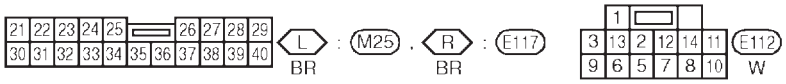
Wiring Diagram — R/FOG — (Cont'd)

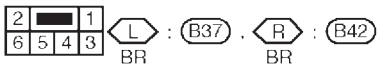
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0429S02









YEL409C

System Description

NLEL0430

TURN SIGNAL OPERATION

NLEL0430S01

Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9

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

- through 10A fuse [No. 10, located in fuse block (J/B)]
- to time control unit terminal 1

Ground is supplied to time control unit terminal 16 through body grounds M28 and M48.

LH Turn

NLEL0430S0101

When the turn signal switch is moved to the L position, ground is supplied from body grounds E24 and E73 to

- time control unit terminal 2
- through turn signal switch terminals 3 and 1

With ground is supplied, time control unit controls the flashing of the LH turn signal lamps.

RH Turn

NLEL0430S0102

When the turn signal switch is moved to the R position, ground is supplied from body grounds E30 and E73 to

- time control unit terminal 4
- through turn signal switch terminals 2 and 1

With ground is supplied, time control unit controls the flashing of the RH turn signal lamps.

HAZARD LAMP OPERATION

NLEL0430S02

Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9

Ground is supplied to time control unit terminal 16 through body grounds M28 and M48.
With the hazard switch in the ON position, ground is supplied from body grounds M28 and M48 to

- time control unit terminal 5
- through hazard switch terminals 6 and 4

With ground is supplied, time control unit controls the flashing of the hazard warning lamps.

HAZARD REMINDER OPERATION FOR MULTI-REMOTE CONTROL SYSTEM

NLEL0430S04

When the doors are locked or unlocked by multi-remote controller, time control unit controls turn lamps hazard reminder flashes as follows.

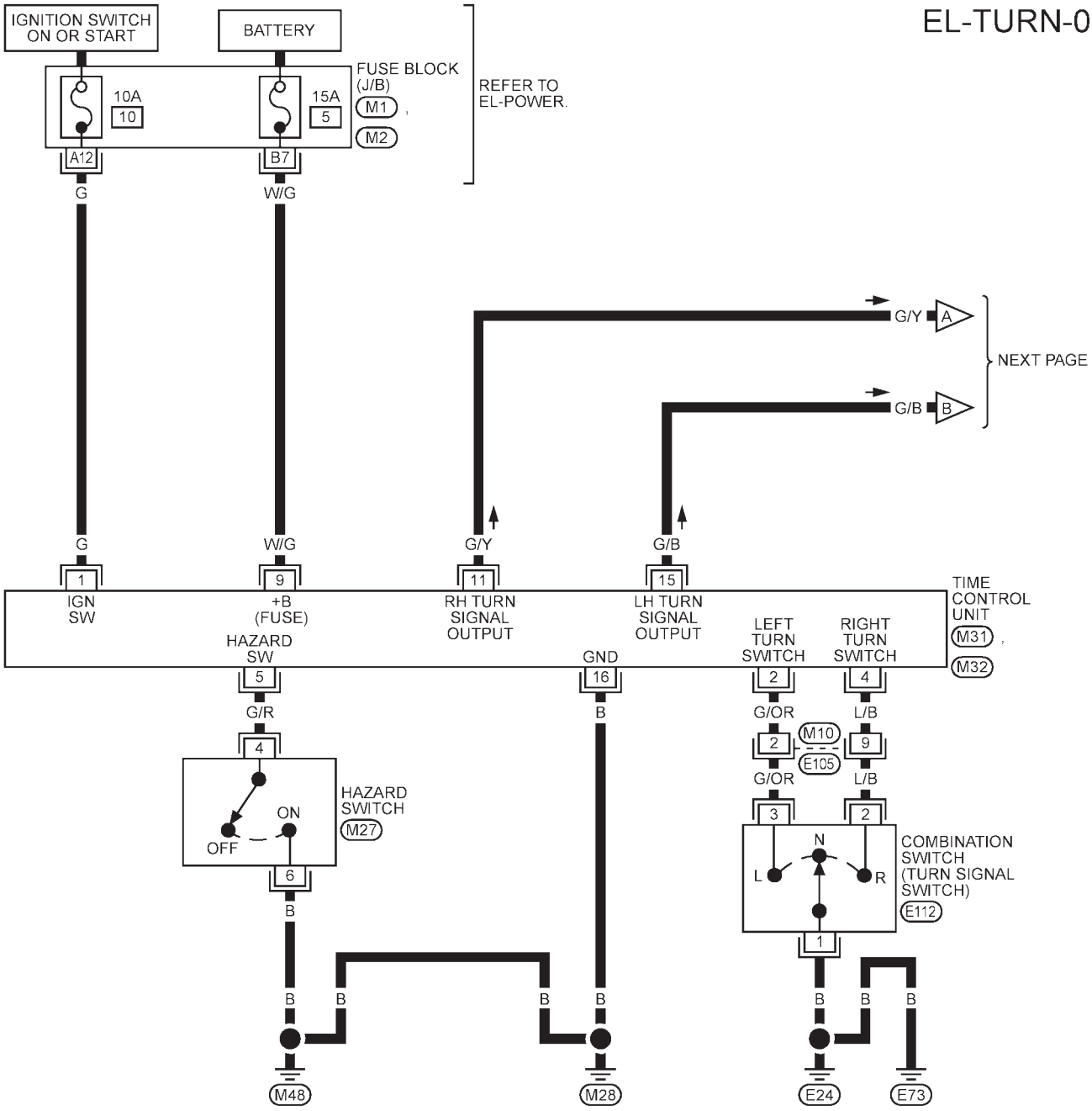
- Locked operation: Flash once
- Unlock operation: Flash twice

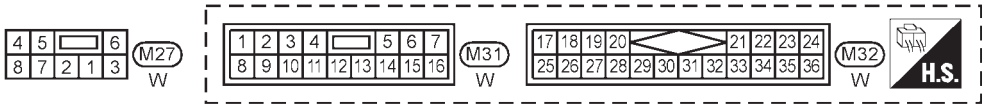
Wiring Diagram — TURN —

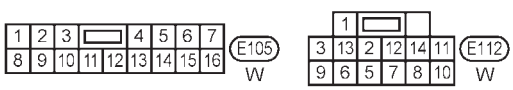
NLEL0431

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0431S01

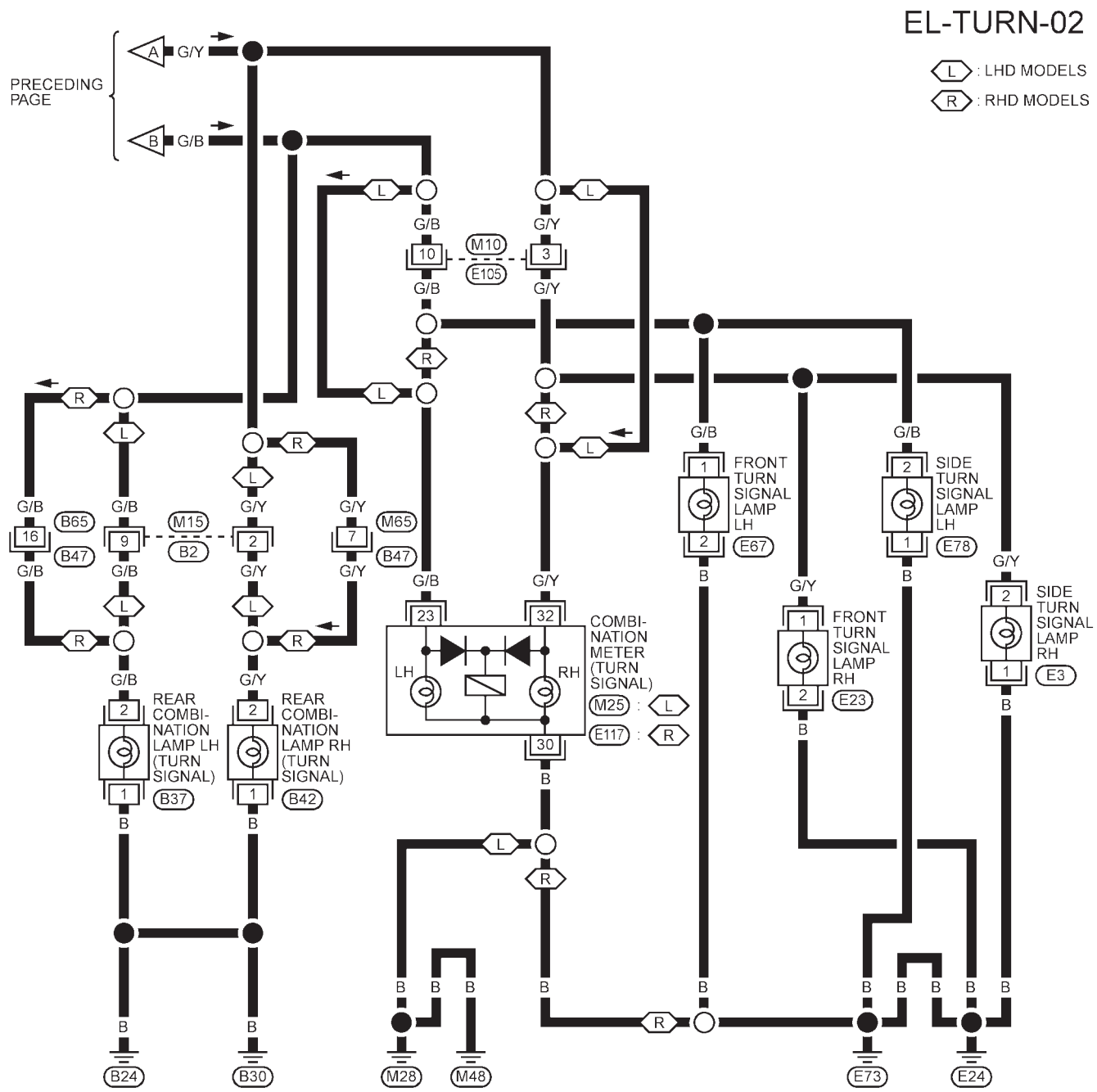


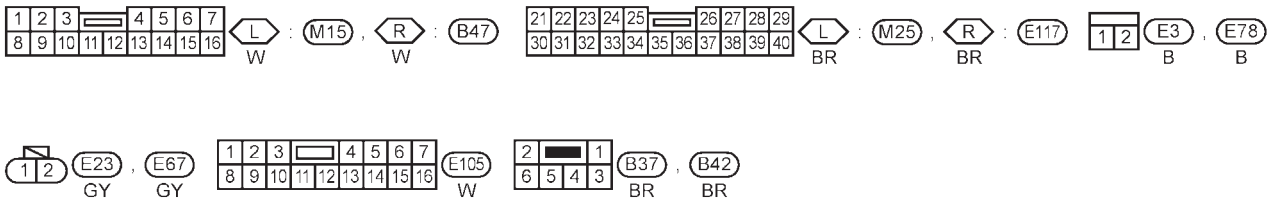




REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK- JUNCTION BOX (J/B)

YEL884B


EL-TURN-02
L : LHD MODELS
R : RHD MODELS
PRECEDING PAGE
A G/Y
B G/B
M10
E105
M15
B2
M65
B47
B65
B47
FRONT TURN SIGNAL LAMP LH
E67
SIDE TURN SIGNAL LAMP LH
E78
FRONT TURN SIGNAL LAMP RH
E23
SIDE TURN SIGNAL LAMP RH
E3
COMBI-NATION METER (TURN SIGNAL)
M25 : L
E117 : R
LH
RH
REAR COMBI-NATION LAMP LH (TURN SIGNAL)
B37
REAR COMBI-NATION LAMP RH (TURN SIGNAL)
B42
B24
B30
M28
M48
E73
E24

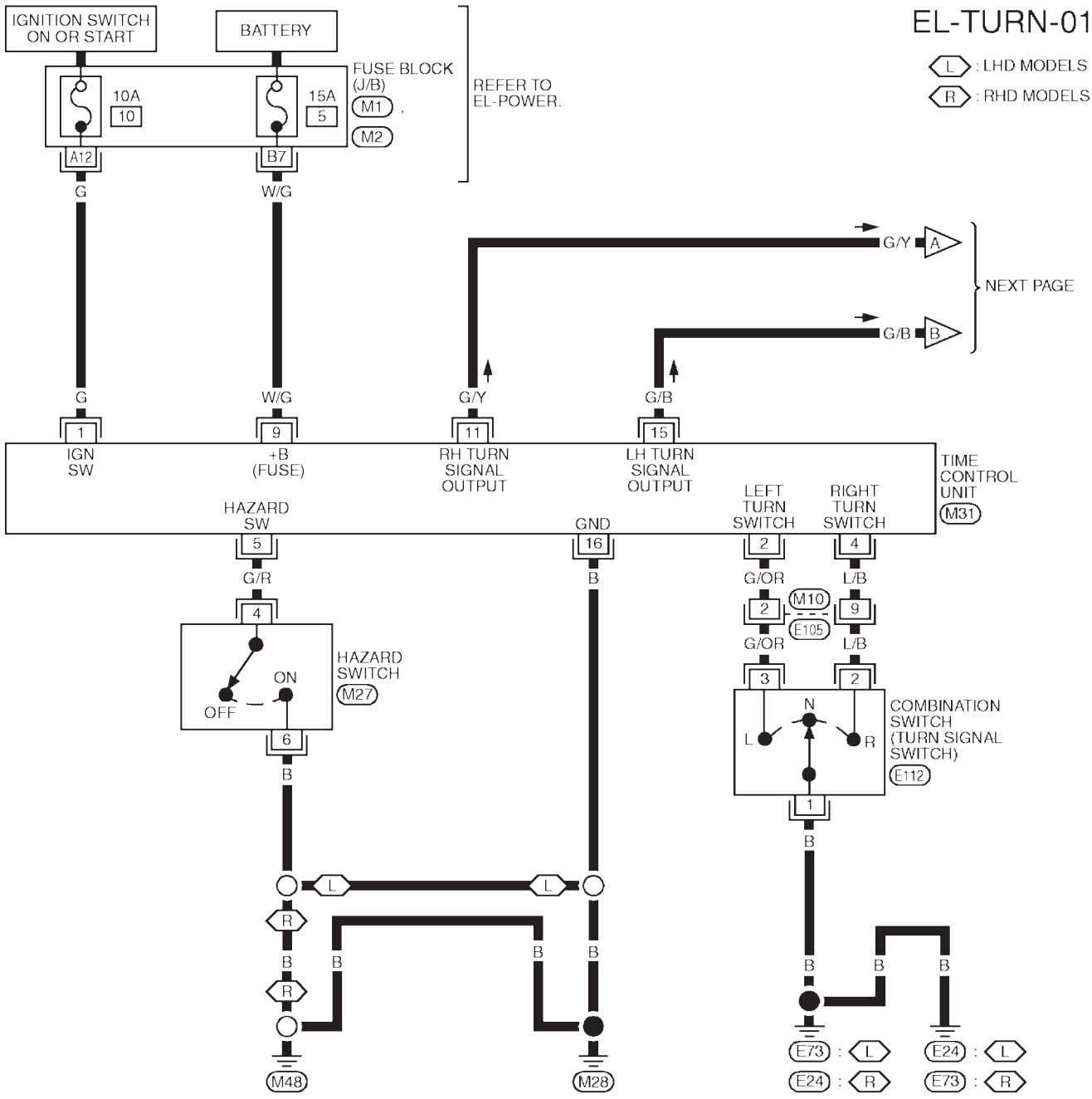

M15 W
B47 W
M25 BR
E117 BR
E3 B
E78 B
E23 GY
E67 GY
E105 W
B37 BR
B42 BR

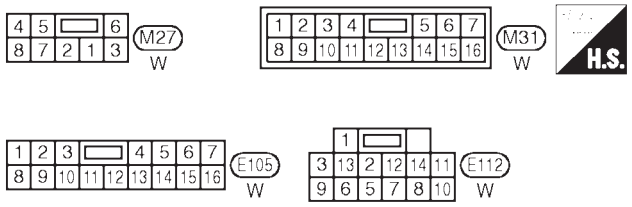
YEL885B

Wiring Diagram — TURN — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

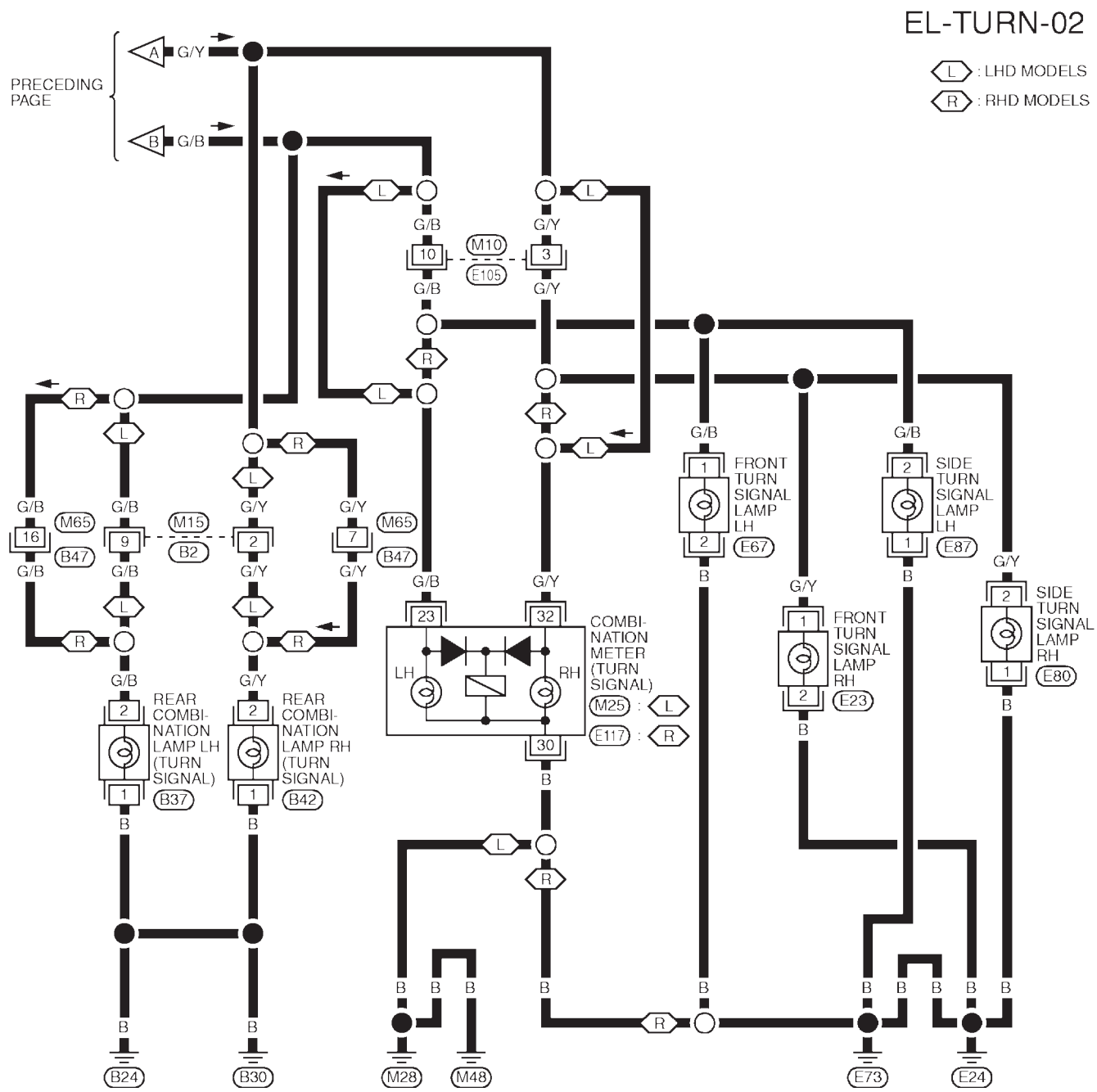
NLEL0431S02

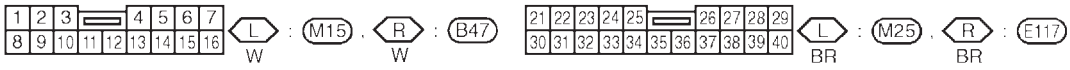


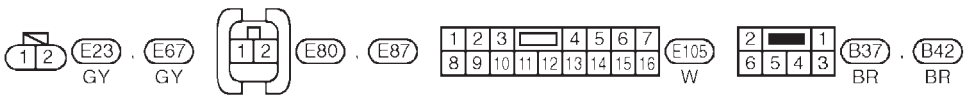


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK- JUNCTION BOX (J/B)

YEL410C


EL-TURN-02
L : LHD MODELS
R : RHD MODELS
PRECEDING PAGE
A G/Y
B G/B
M10
E105
M15
B2
M65
B47
FRONT TURN SIGNAL LAMP LH
E67
SIDE TURN SIGNAL LAMP LH
E87
FRONT TURN SIGNAL LAMP RH
E23
SIDE TURN SIGNAL LAMP RH
E80
COMBI-NATION METER (TURN SIGNAL)
M25 : L
E117 : R
LH
RH
REAR COMBI-NATION LAMP LH (TURN SIGNAL)
B37
REAR COMBI-NATION LAMP RH (TURN SIGNAL)
B42
B24
B30
M28
M48
E73
E24


L W : M15 , R W : B47
L BR : M25 , R BR : E117


E23 GY , E67 GY
E80 , E87
E105 W
B37 BR , B42 BR

YEL411C

Trouble Diagnoses

NLEL0432

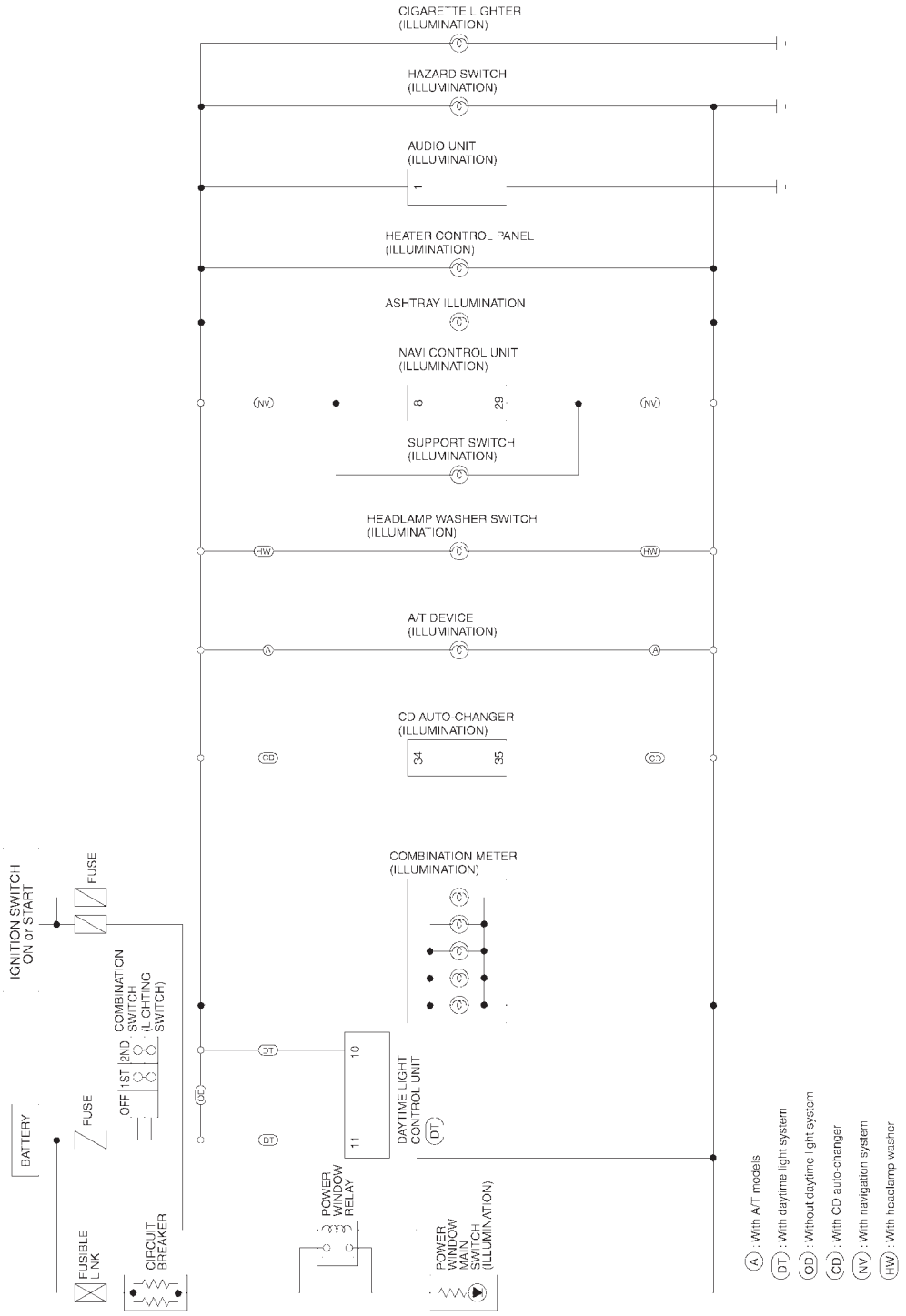
Symptom	Possible cause	Repair order
Turn signal and hazard warning lamps do not operate.	1. Time control unit 2. Time control unit circuit	1. Check power door lock operation. 2. Check power supply and ground circuit for time control unit.
Turn signal lamps do not operate but hazard warning lamps operate.	1. Turn signal switch 2. Open in turn signal switch circuit	1. Check turn signal switch. 2. Check turn signal switch ground for open circuit.
Hazard warning lamps do not operate but turn signal lamps operate.	1. Hazard switch 2. Open in hazard switch circuit	1. Check hazard switch. 2. Check hazard switch ground for open circuit.
Front turn signal lamp LH or RH does not operate.	1. Bulb 2. Open in front turn signal lamp circuit	1. Check bulb. 2. Check power supply and ground circuit for front turn signal lamp.
Side turn signal lamp LH or RH does not operate.	1. Bulb 2. Open in rear combination lamp circuit	1. Check bulb. 2. Check power supply and ground circuit for rear combination lamp.
Rear combination lamp LH or RH does not operate.	1. Bulb 2. Open in side turn signal lamp circuit	1. Check bulb. 2. Check grounds check power supply and ground circuit for rear combination lamp.
LH and RH turn indicators do not operate.	1. Ground	1. Check grounds E24·E73 (RHD models) or M28·M48 (LHD models)
LH or RH turn indicator does not operate.	1. Bulb	1. Check bulb in combination meter.

Schematic

NLEL0433

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0433S01

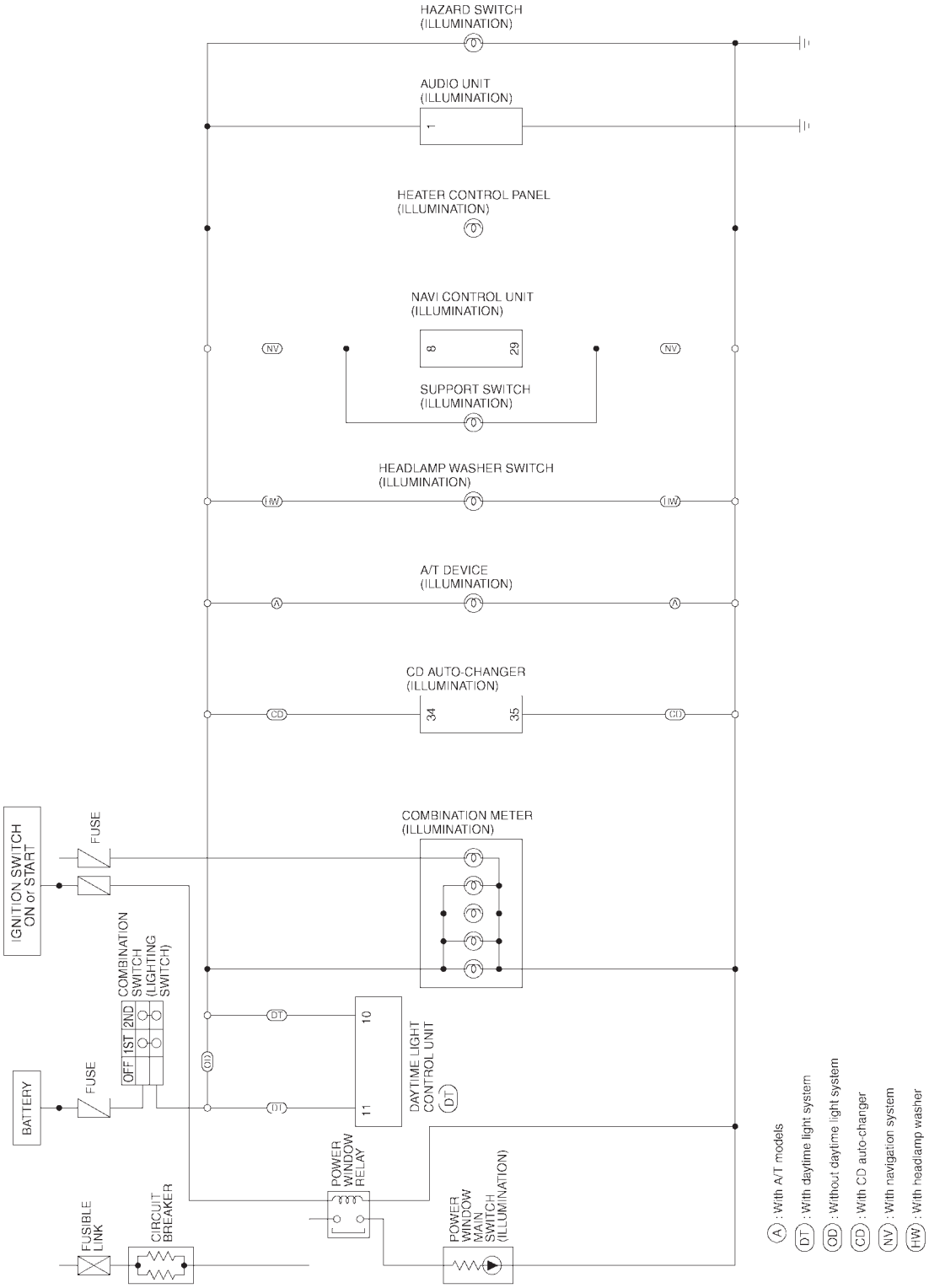


YEL886B

Schematic (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0433S02



YEL412C

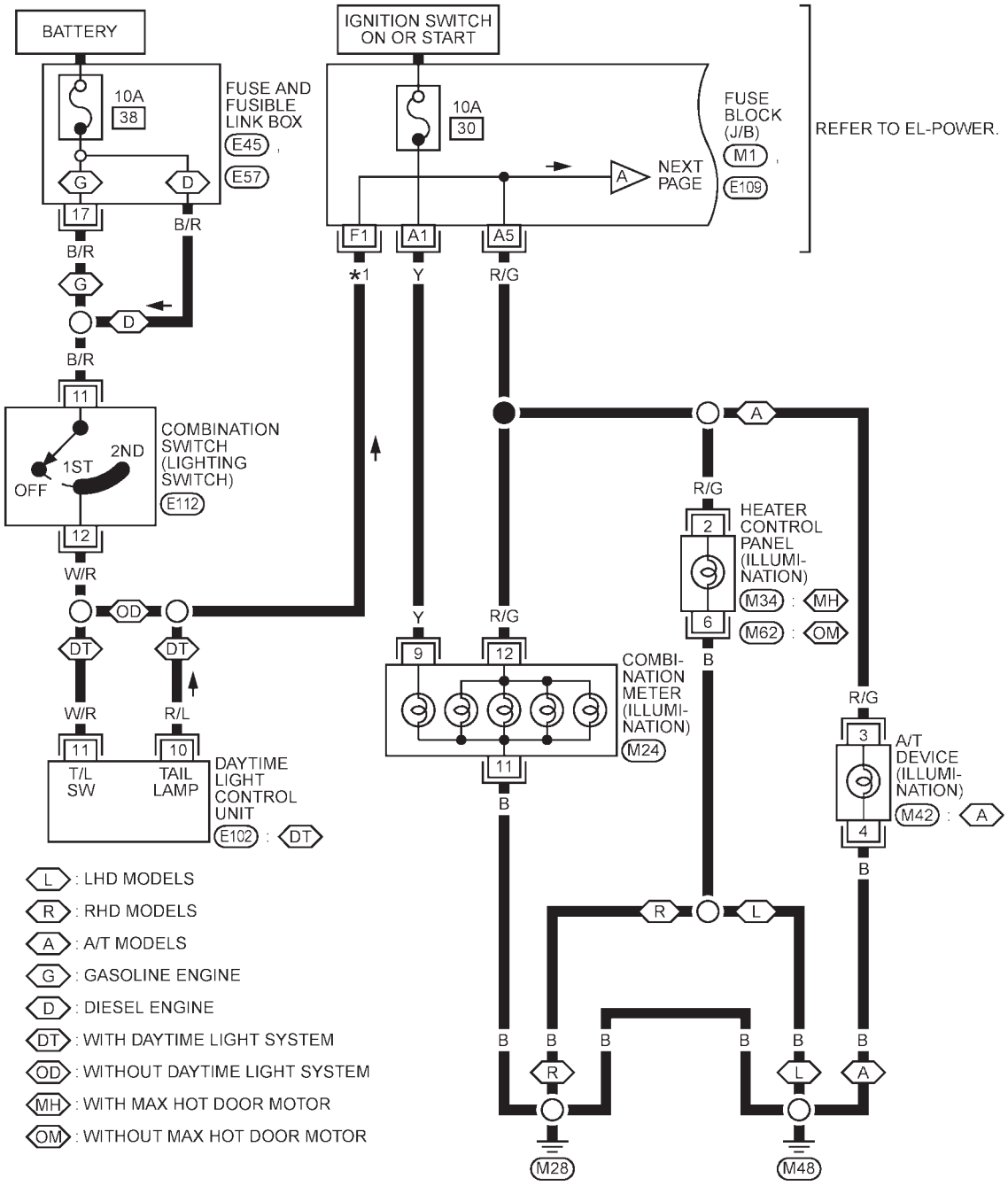
Wiring Diagram — ILL —

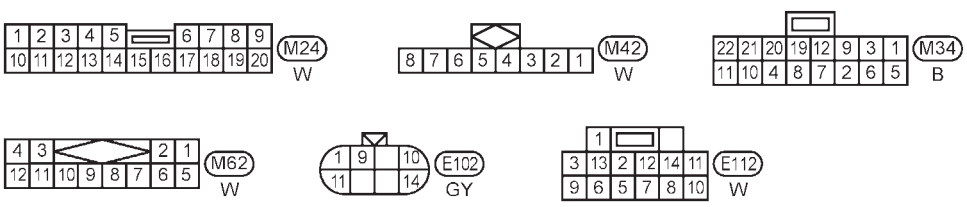
NLEL0434

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0434S01

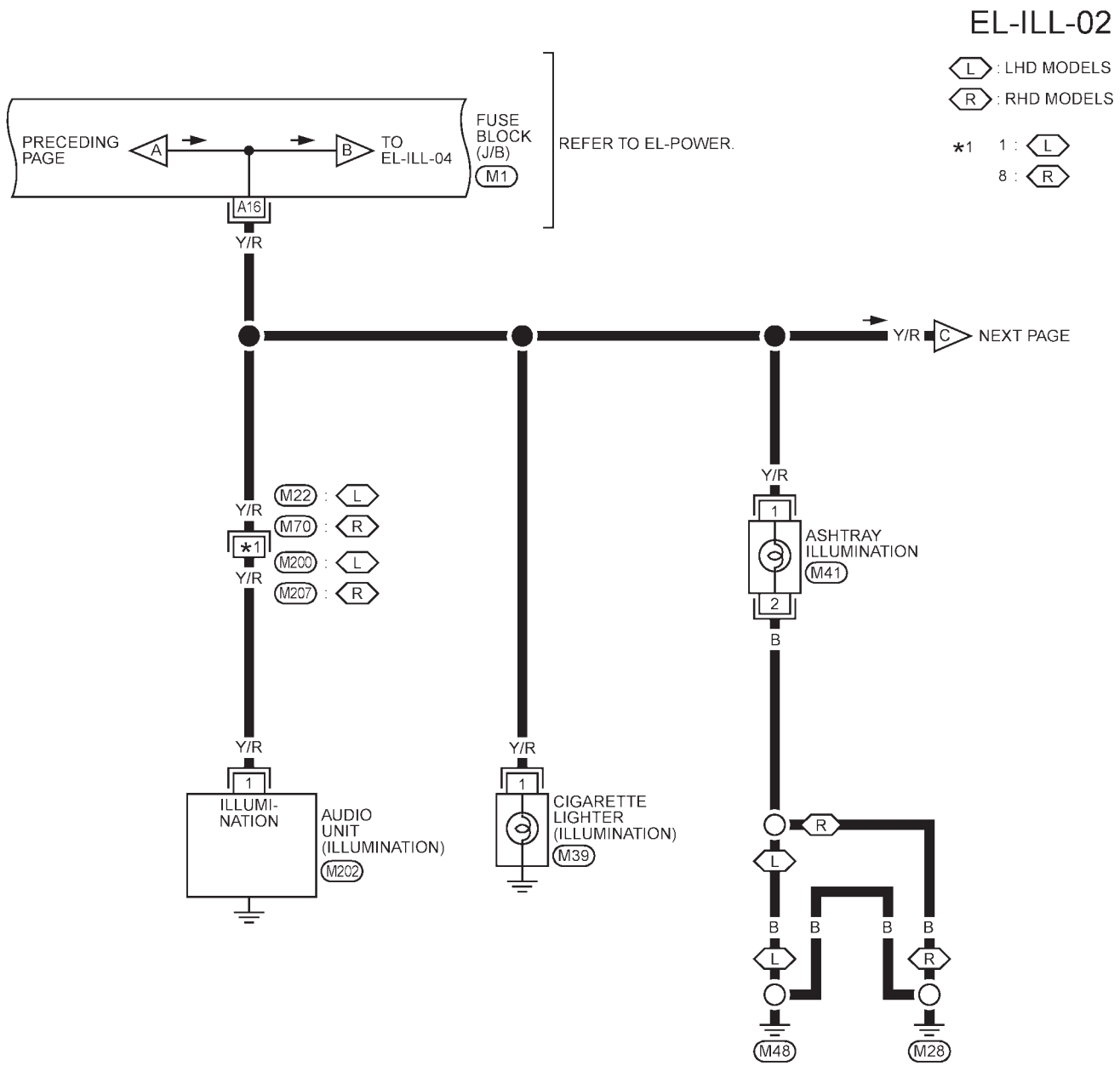
EL-ILL-01

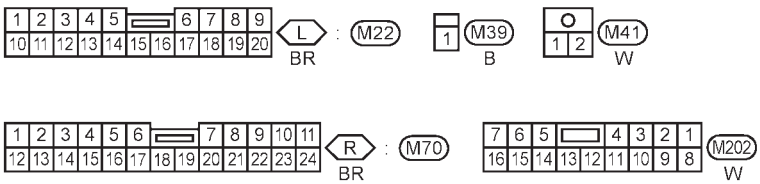




REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK-JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

YEL887B

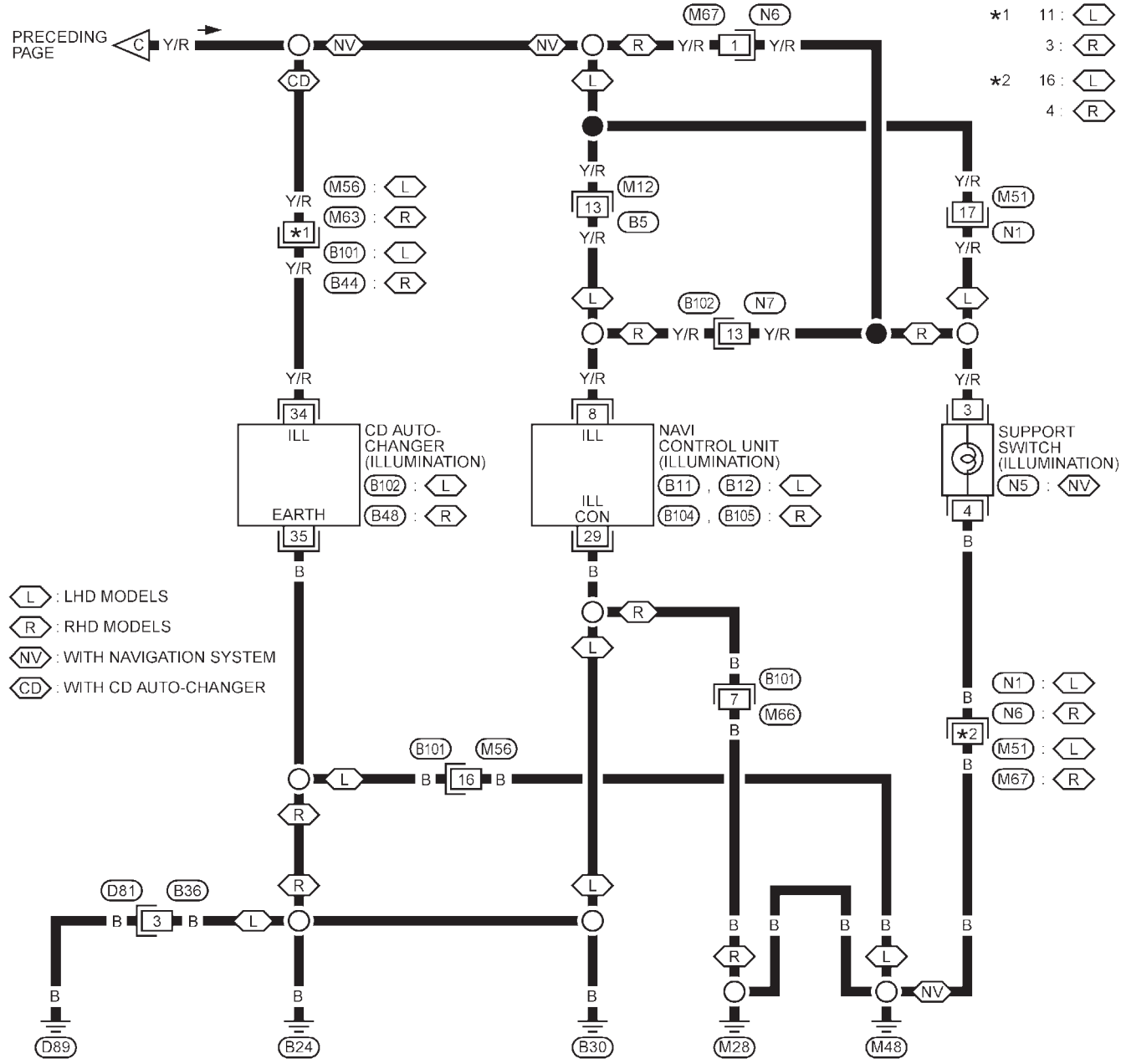


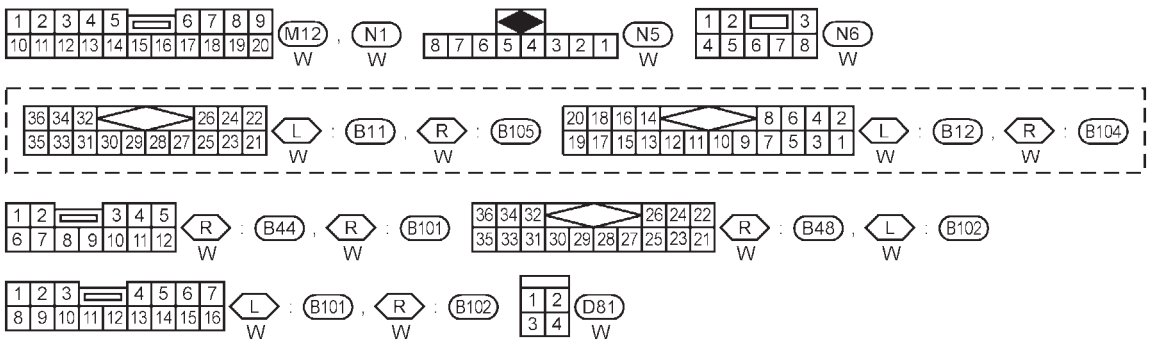


REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

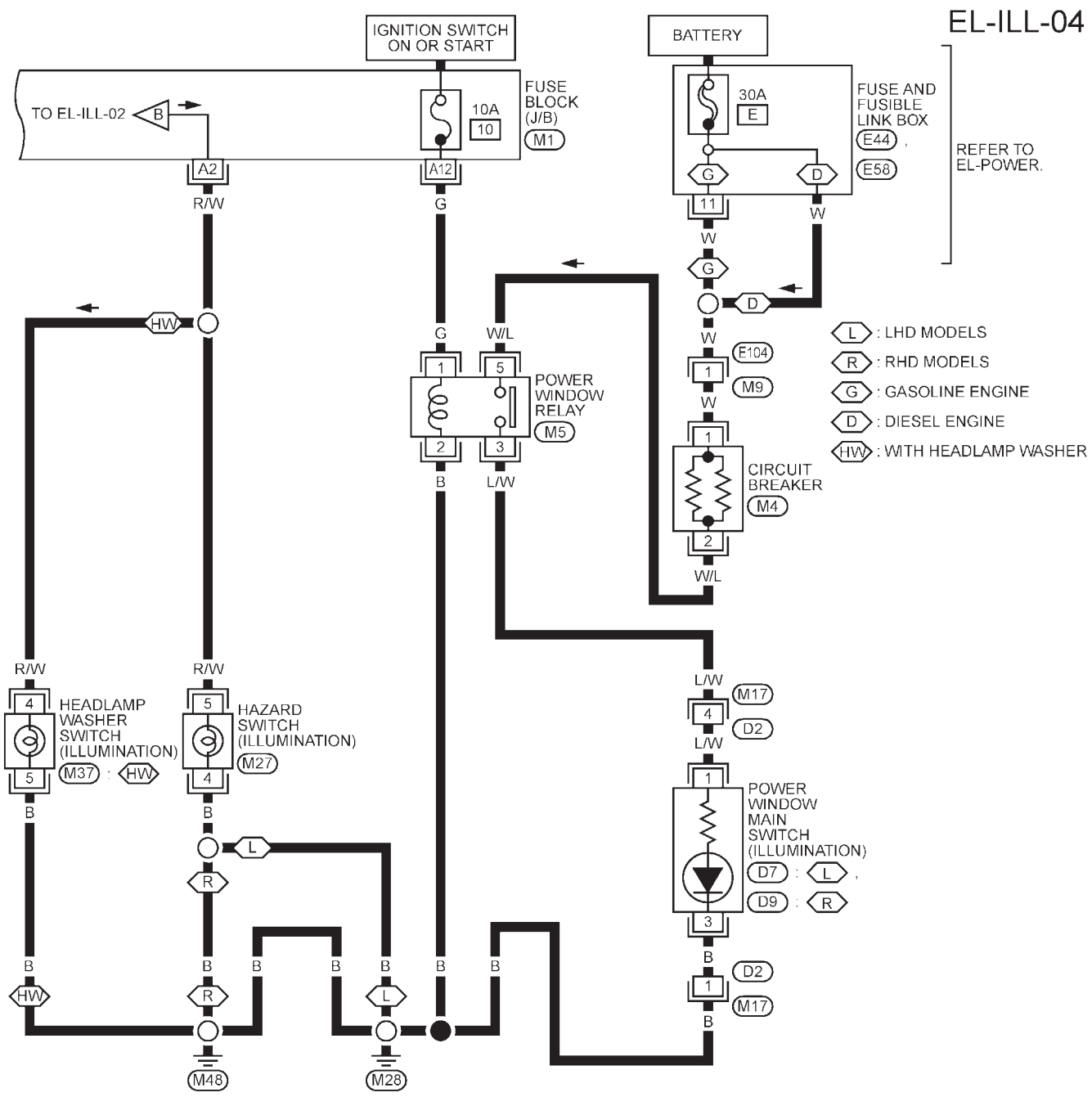
YEL888B

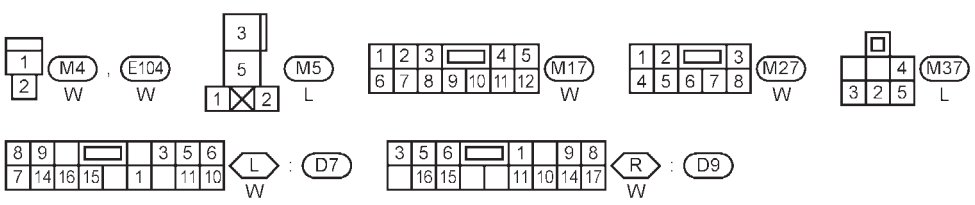
EL-ILL-03





YEL889B



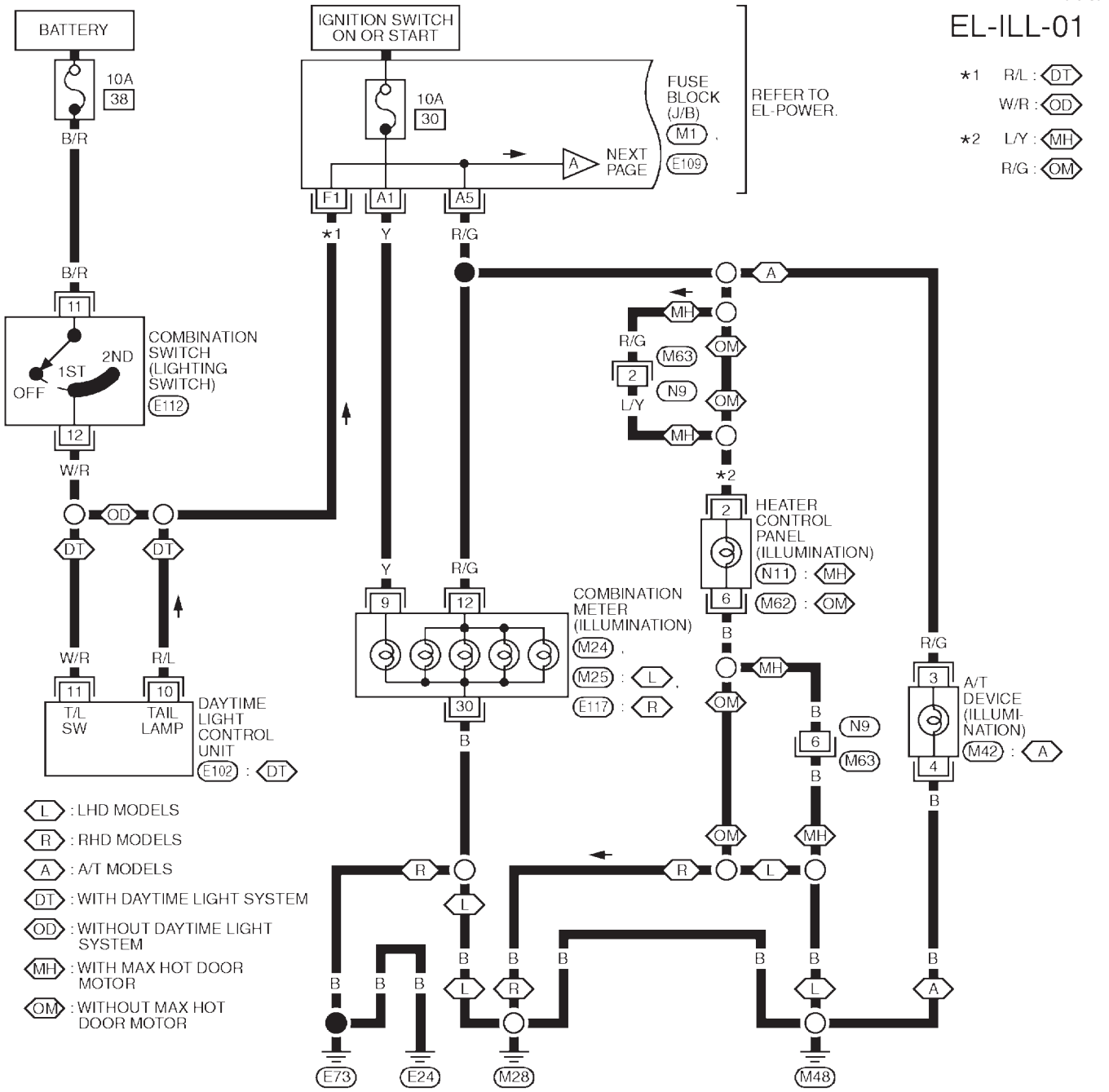


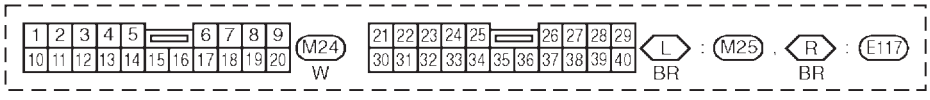
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK- JUNCTION BOX (J/B)
E44 , E58 -FUSE AND FUSIBLE LINK BOX

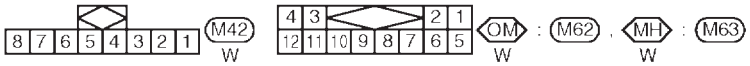
YEL890B

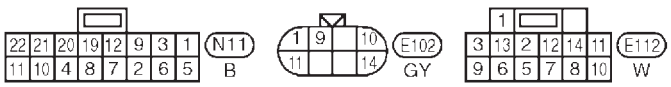
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0434S02





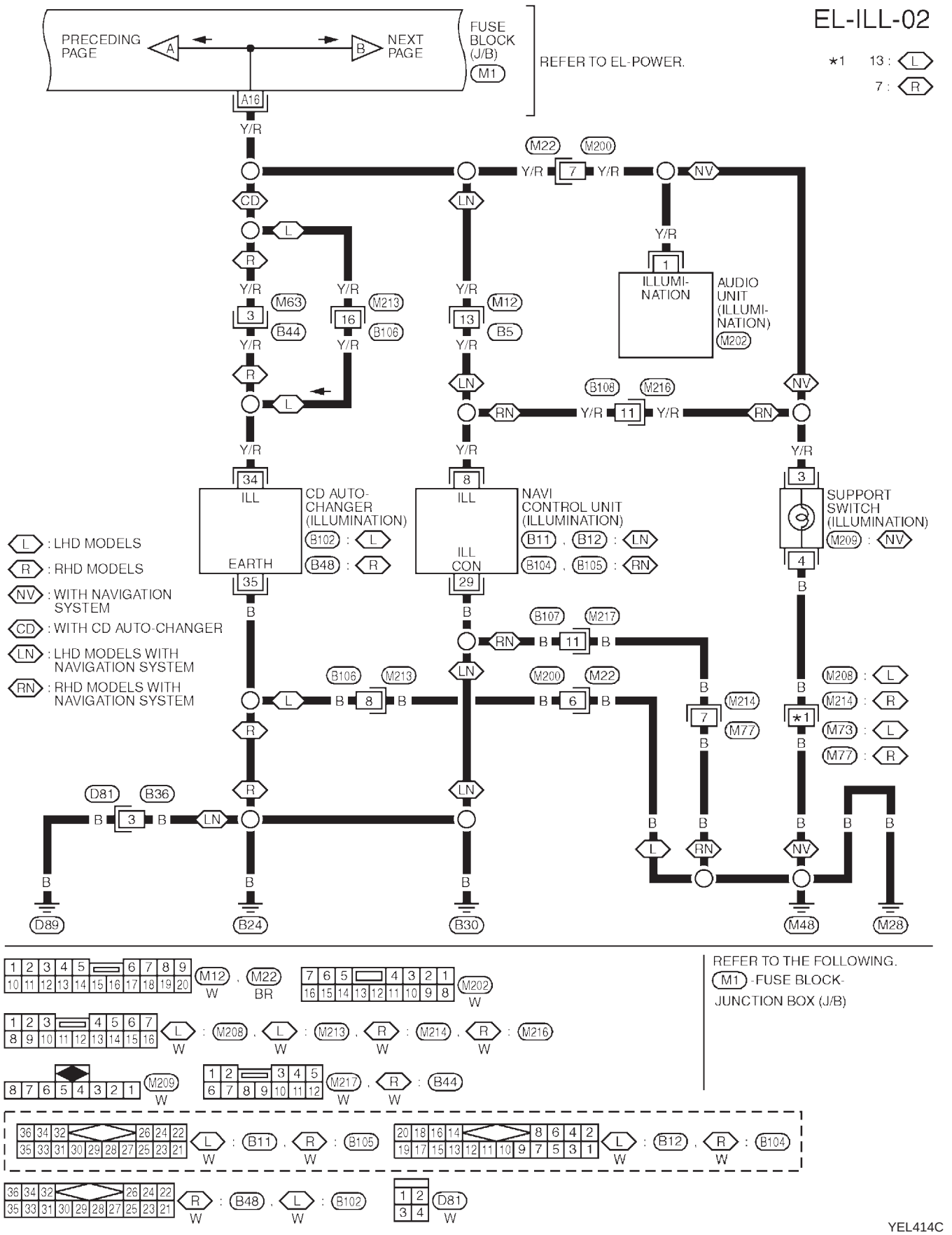




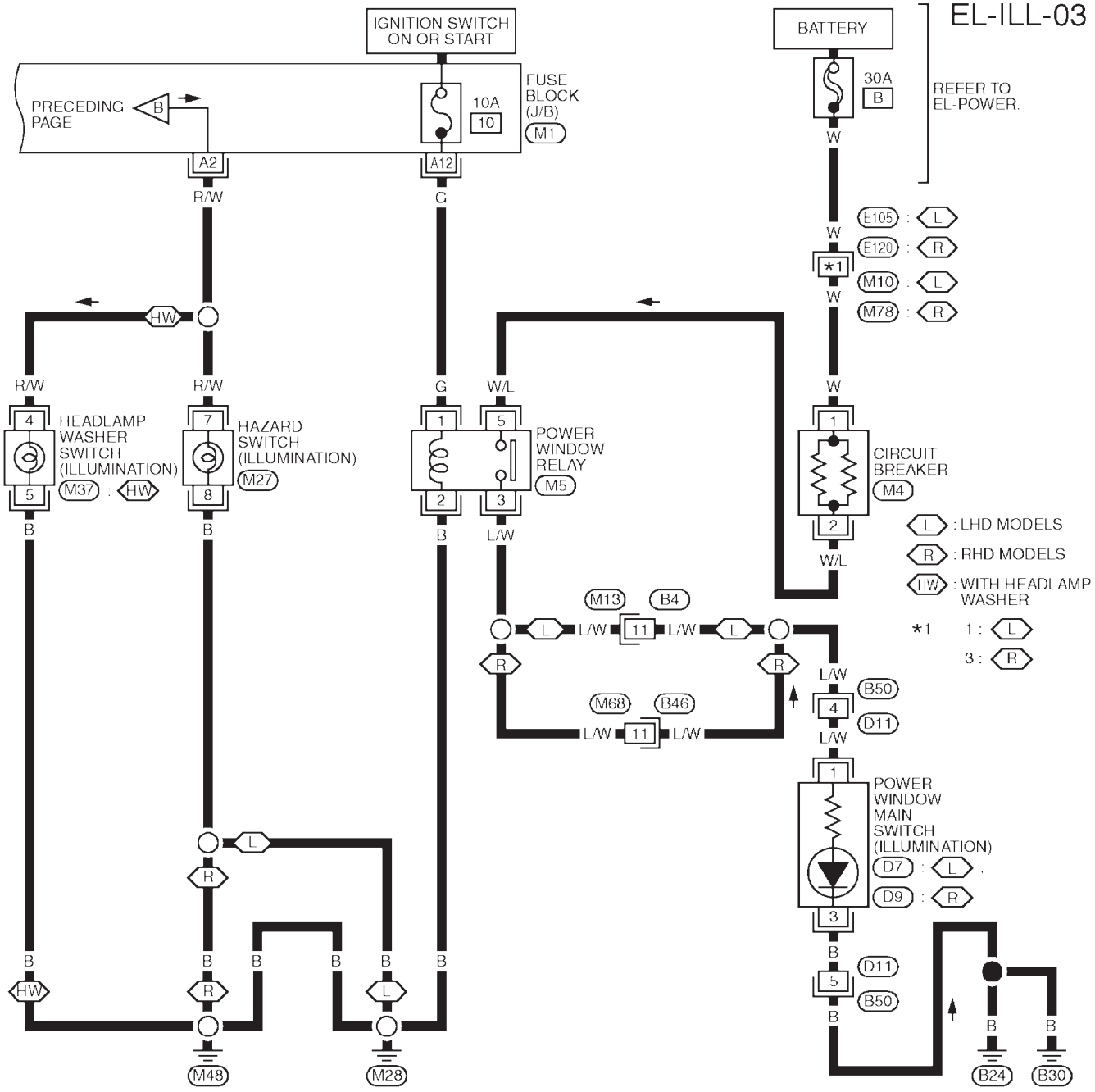
REFER TO THE FOLLOWING.
M1, E109 -FUSE BLOCK-JUNCTION BOX (J/B)

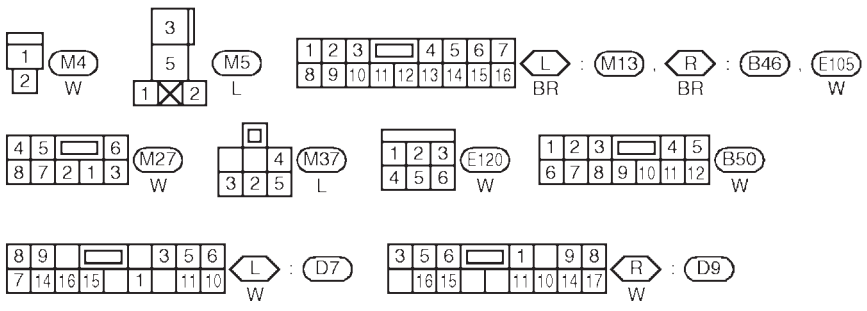
YEL413C

Wiring Diagram — ILL — (Cont'd)



YEL414C





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

YEL415C

System Description

NLEL0435

POWER SUPPLY AND GROUND

NLEL0435S01

Power is supplied at all times:

- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to time control unit terminal 9,
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 1 and
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to spot lamp terminal 1, and
- to interior room lamp terminal 1.

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

- through key switch terminal 2
- to time control unit terminal 22.

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 time control unit terminal 1.

Ground is supplied:

- through body grounds terminals M28 and M48
- to time control unit terminal 16

When the driver side door is opened, ground is supplied:

- through body grounds B24 and B30
- to door switch driver side terminal 3
- from door switch driver side terminal 2
- to time control unit terminal 6.

When any door is opened, ground is supplied:

- through case ground of each door switch
- to each door switch terminal 1
- to time control unit terminal 7.

When the driver side door is unlocked, the time control unit receives a ground signal:

- through body grounds terminals M28 and M48
- to door unlock sensor terminal 2 (LHD models) or 4 (RHD models)
- from door unlock sensor terminal 5 (LHD models) or 2 (RHD models)
- to time control unit terminal 35.

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

- through time control unit terminal 12
- to spot lamp terminal 2, and
- to interior room lamp terminal 2.

With power and ground supplied, the interior room lamp and spot lamp illuminates when the lamp switch is in “DOOR” position.

SWITCH OPERATION

NLEL0435S02

When interior room lamp switch is in “ON” position, ground is supplied:

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

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

INTERIOR ROOM LAMP TIMER OPERATION

NLEL0435S03

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 unlock sensor while all doors are closed
- key is removed from ignition key cylinder while all doors are closed
- driver’s door is opened and then closed

The timer is canceled when:

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

ON-OFF CONTROL

NLEL0435S04

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.

BATTERY SAVER

NLEL0435S11

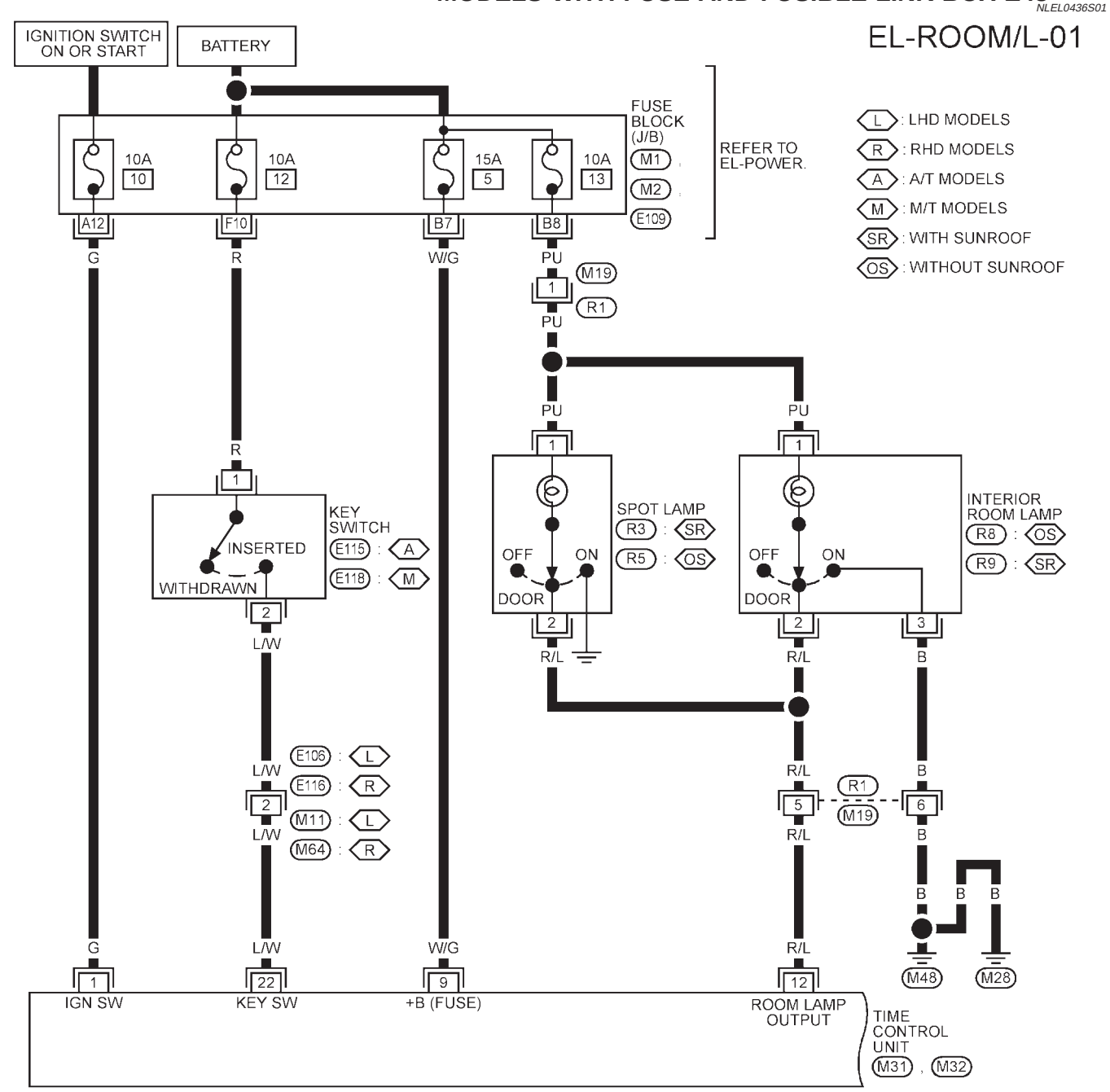
The interior room lamp is turned OFF automatically with the lamp switch in the "DOOR" position after about 30 minutes, if the lamp remains lit by the door switch open signal.

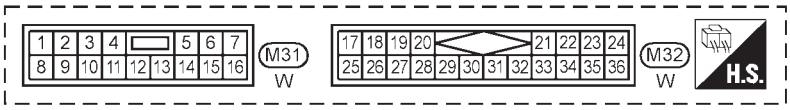
Wiring Diagram — ROOM/L —

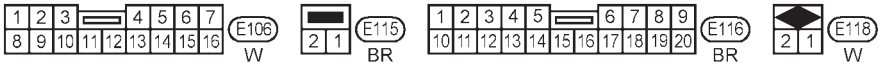
NLEL0436

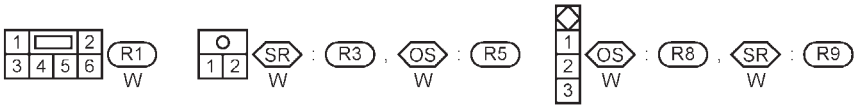
MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0436S01





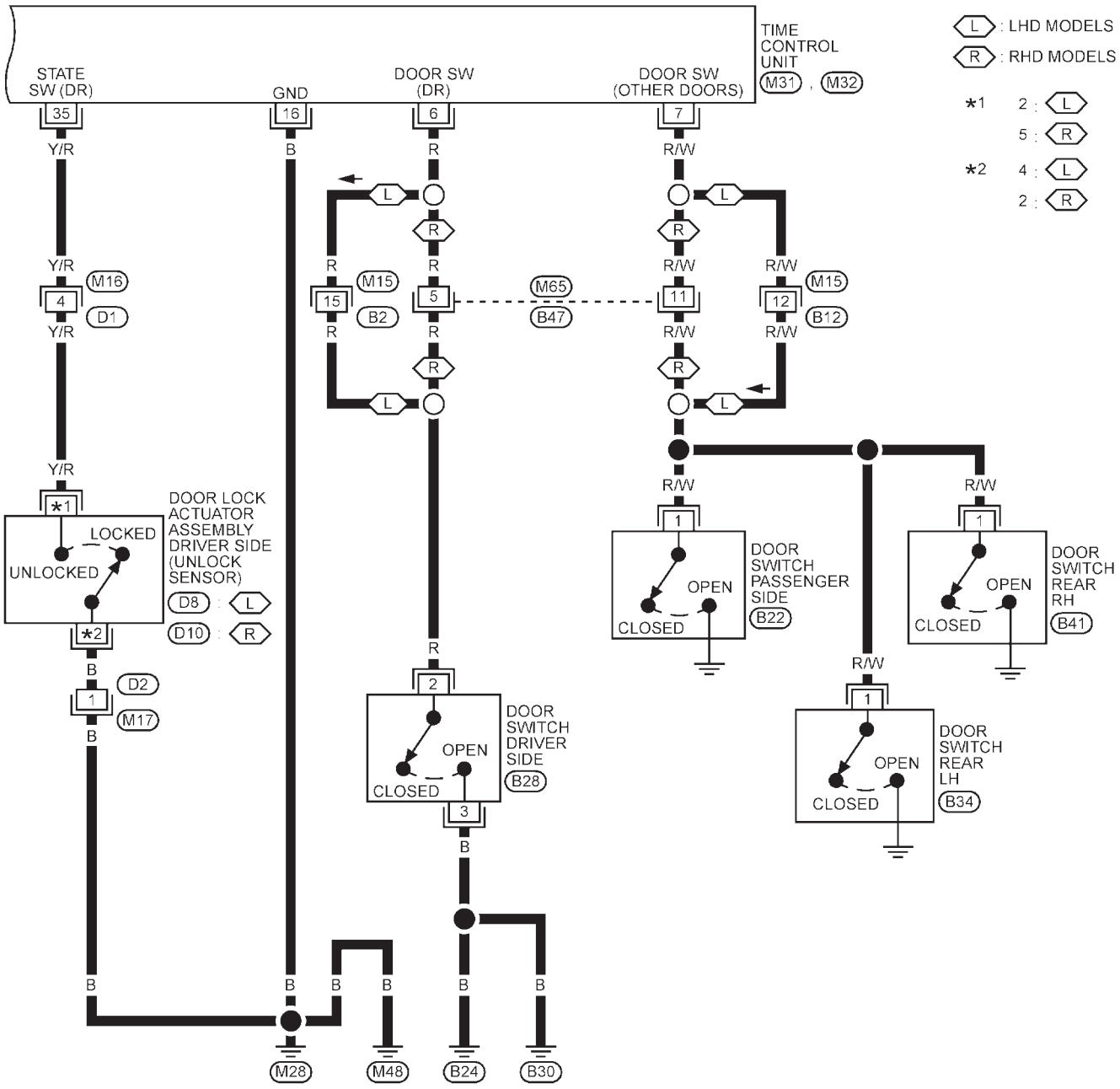


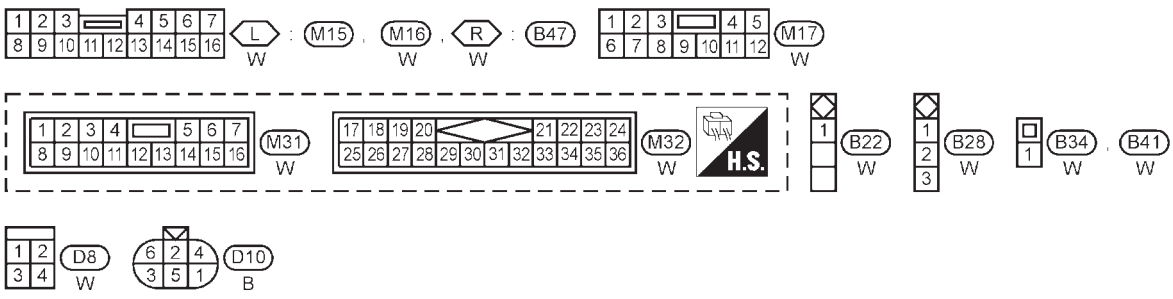


REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL891B

EL-ROOM/L-02



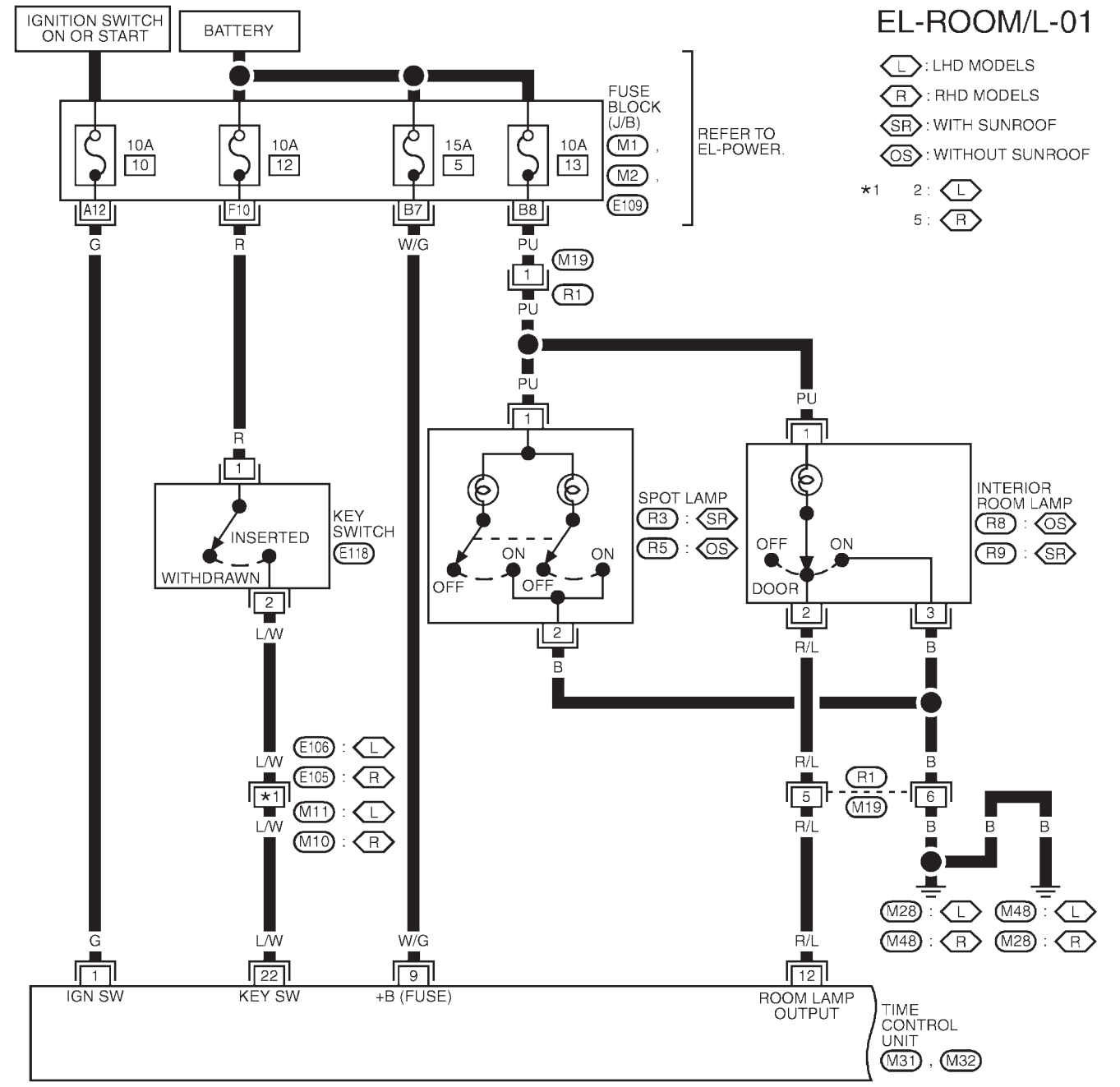


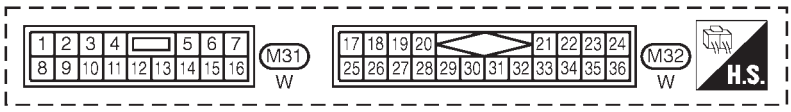
YEL892B

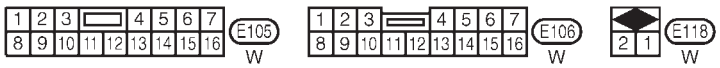
Wiring Diagram — ROOM/L — (Cont'd)

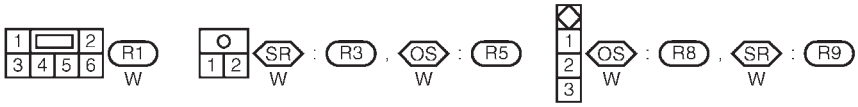
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0436S02



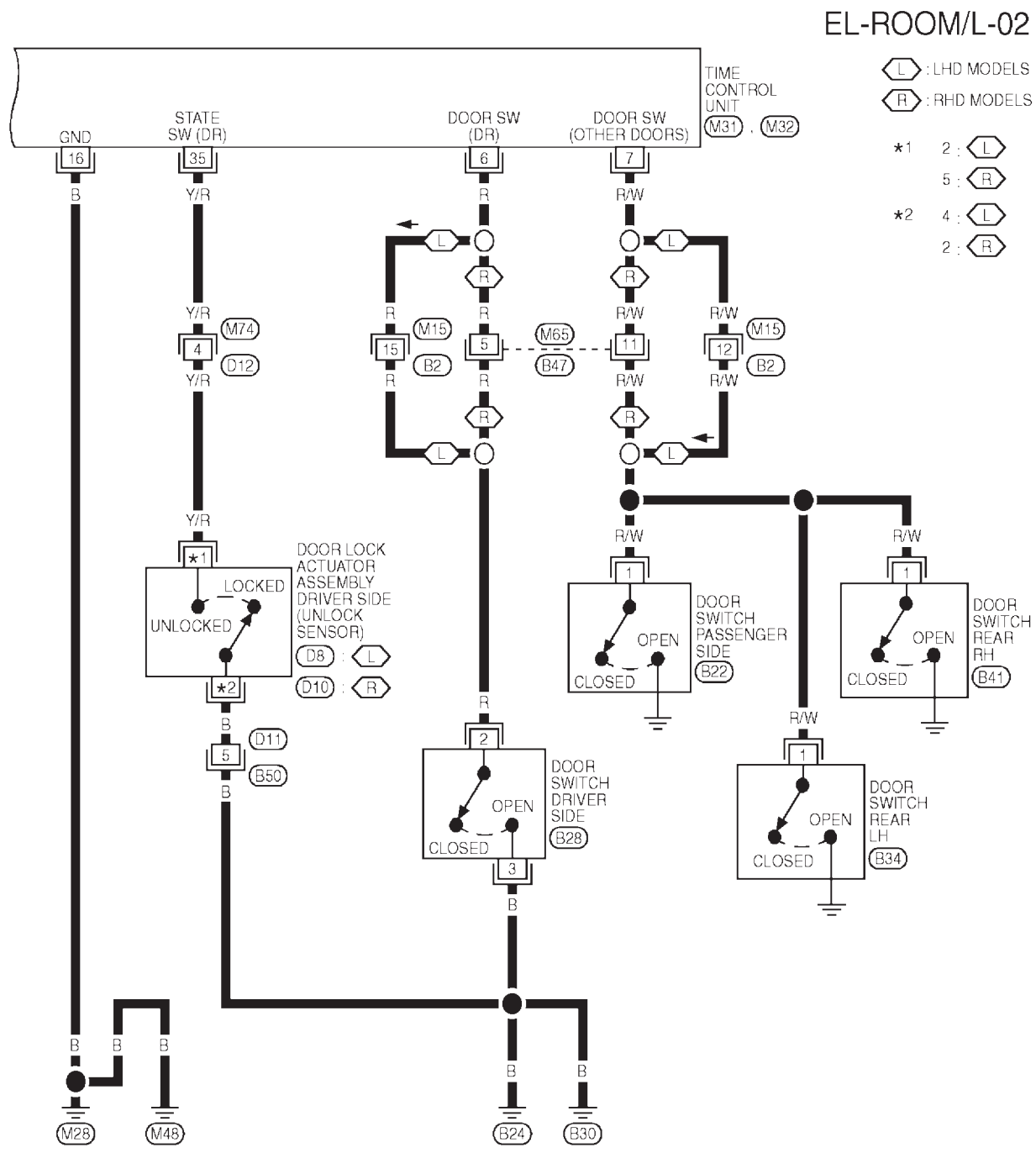


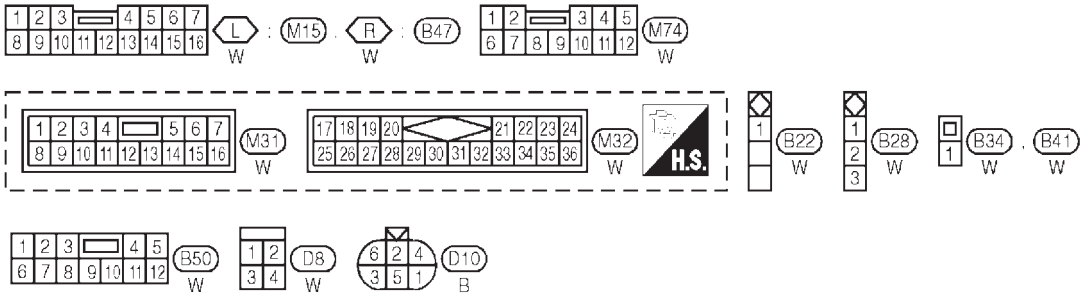




REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL416C


EL-ROOM/L-02
L : LHD MODELS
R : RHD MODELS
*1 2 : L
5 : R
*2 4 : L
2 : R
TIME CONTROL UNIT
M31 , M32
GND
STATE SW (DR)
DOOR SW (DR)
DOOR SW (OTHER DOORS)
16
35
6
7
B
Y/R
R
R/W
M74
D12
M15
B2
M65
B47
15
5
11
12
4
DOOR LOCK ACTUATOR ASSEMBLY DRIVER SIDE (UNLOCK SENSOR)
LOCKED
UNLOCKED
*1
*2
D8 : L
D10 : R
D11
B50
DOOR SWITCH DRIVER SIDE
DOOR SWITCH PASSENGER SIDE
DOOR SWITCH REAR RH
DOOR SWITCH REAR LH
OPEN
CLOSED
B28
B22
B41
B34
M28
M48
B24
B30


M15 , M47 , M74
M31 , M32
B22
B28
B34 , B41
B50
D8
D10
W
B
H.S.

YEL417C

Trouble Diagnoses

=NLEL0437

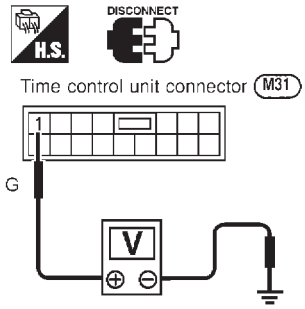
DIAGNOSTIC PROCEDURE 1

NLEL0437S01

SYMPTOM: Interior room lamp timer does not operate.

1	CHECK IGNITION ON SIGNAL

Check voltage between time control unit harness connector terminal 1 and ground.



Terminals		Ignition swtich position		
(+)	(–)	OFF	ACC	ON
1	Ground	0V	0V	Battery voltage

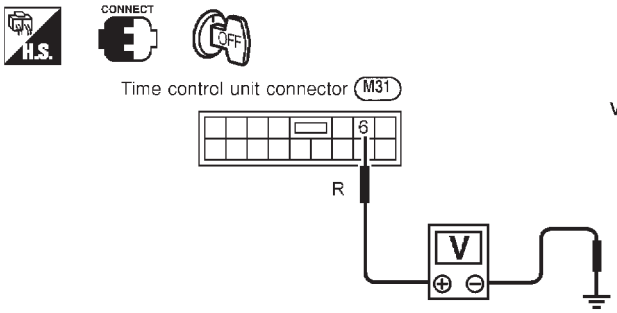
NEL646

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 time control unit and fuse

2	CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector terminal 6 and ground.



Voltage [V]:
Condition of driver's door: CLOSED
Approx. 5
Condition of driver's door: OPEN
0

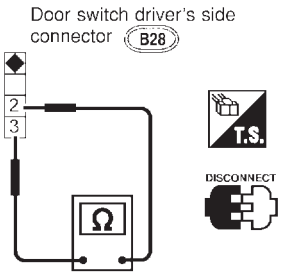
NEL647

OK or NG

OK	▶	GO TO 4.
NG	▶	GO TO 3.

3	CHECK DRIVER SIDE DOOR SWITCH

Check continuity between door switch terminals 2 and 3.



Continuity:
Door switch is pushed
No
Door switch is released
Yes

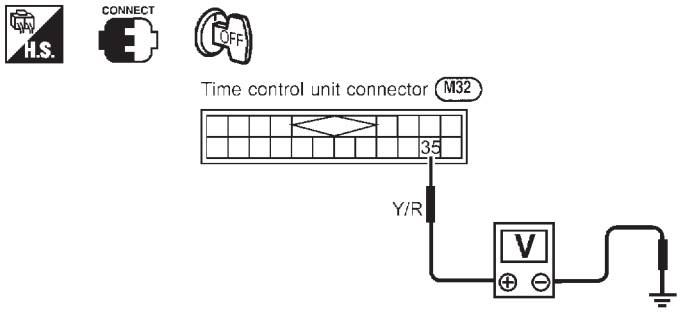
NEL648

OK or NG

OK	▶	**Check the following.** ● Driver side door switch ground circuit and condition ● Harness for open or short between time control unit and driver side door switch
NG	▶	Replace driver side door switch.

4	CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between time control unit harness connector terminal 35 and ground.



Terminals		Condition (Driver's door)	Voltage [V]
(+)	(–)		
35	Ground	Locked	Approx. 5
		Unlocked	0

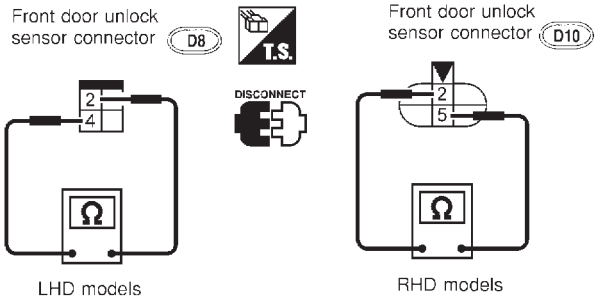
NEL649

OK or NG

OK	▶	GO TO 6.
NG	▶	GO TO 5.

5	CHECK FRONT DOOR UNLOCK SENSOR

1. Disconnect front door unlock sensor harness connector.
2. Check continuity between door unlock sensor terminals.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

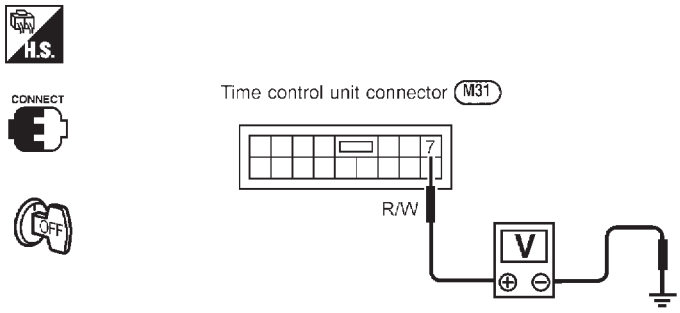
NEL650

OK or NG

OK	▶	**Check the following.** ● Door unlock sensor ground circuit ● Harness for open or short between time control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

6	CHECK DOOR SWITCHES INPUT SIGNAL

Check voltage between time control unit harness connector terminal 7 and ground.



Terminals (+)	Terminals (–)	Condition (All door)	Voltage [V]
7	Ground	Open	0
		Closed	Approx. 5

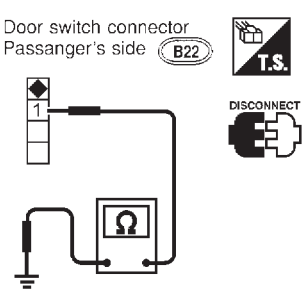
NEL651

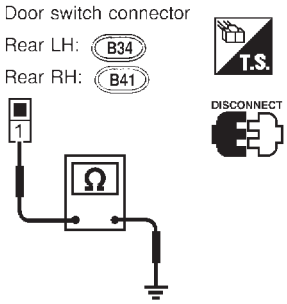
OK or NG

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

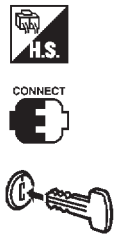
NEL652

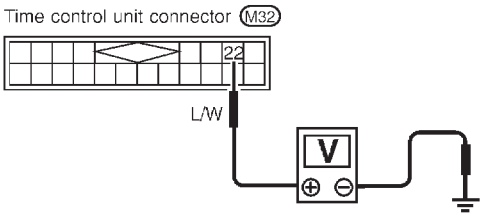
OK or NG

OK	▶	**Check the following.** ● Door switch ground condition ● Harness for open or short between time control unit and door switch
NG	▶	Replace door switch.

8	CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector terminal 22 and ground.





Voltage [V]:
Condition of switch: Key is inserted.
Approx. 12
Condition of switch: Key is removed
0

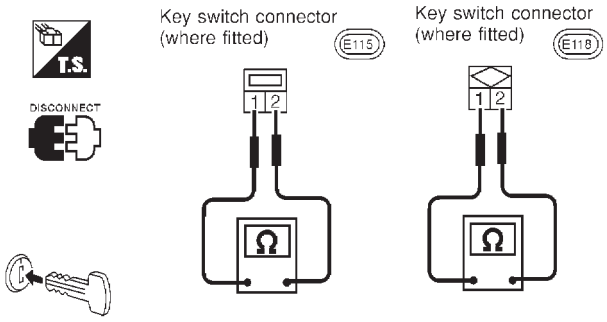
NEL653

OK or NG

OK	▶	Replace time control unit.
NG	▶	GO TO 9.

9	CHECK KEY SWITCH (INSERT)

Check continuity between terminals 1 and 2.



NEL787

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 time control unit and key switch
NG	▶	Replace key switch.

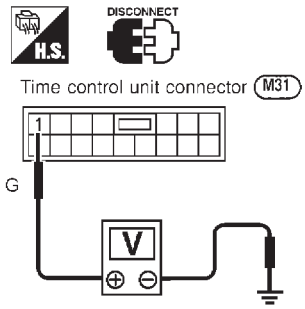
DIAGNOSTIC PROCEDURE 2

NLEL0437S02

SYMPTOM: Interior lamp timer does not cancel properly.

1	CHECK IGNITION ON SIGNAL

Check voltage between time control unit harness connector terminal 1 and ground.



Terminals		Ignition swtich position		
(+)	(–)	OFF	ACC	ON
1	Ground	0V	0V	Battery voltage

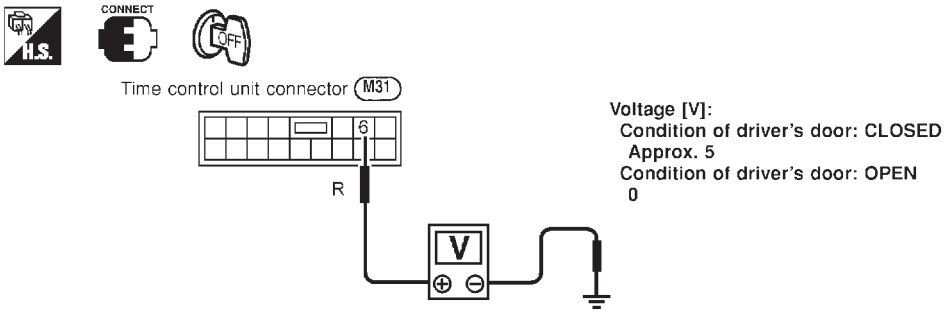
NEL646

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 time control unit and fuse

2	CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector terminal 6 and ground.



NEL647

OK or NG

OK	▶	GO TO 4.
NG	▶	GO TO 3.

3	CHECK DRIVER SIDE DOOR SWITCH

Check continuity between terminals 2 and 3.

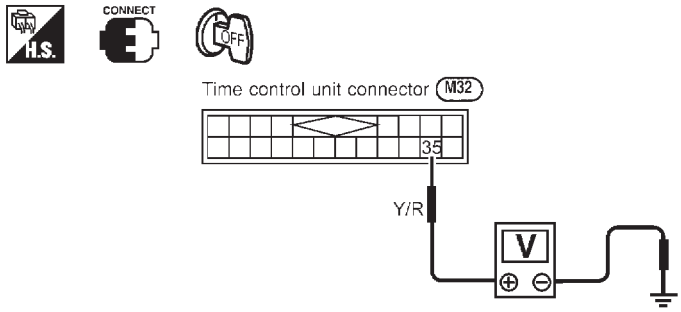
NEL648

OK or NG

OK	▶	**Check the following.** ● Driver side door switch ground circuit and condition ● Harness for open or short between time control unit and driver side door switch
NG	▶	Replace driver side door switch.

4	CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between time control unit harness connector terminal 35 and ground.



Terminals		Condition (Driver's door)	Voltage [V]
(+)	(–)		
35	Ground	Locked	Approx. 5
		Unlocked	0

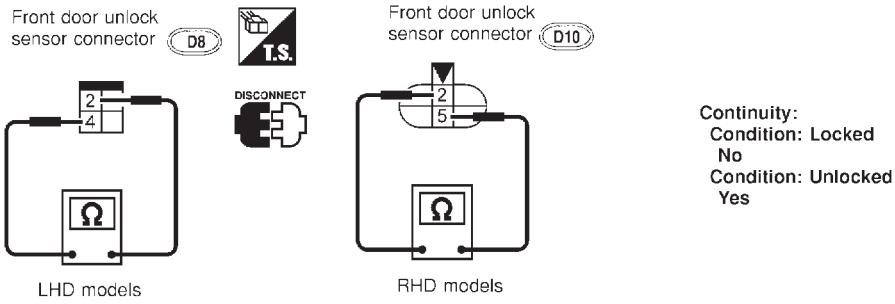
NEL649

OK or NG

OK	▶	Replace time control unit.
NG	▶	GO TO 5.

5	CHECK FRONT DOOR UNLOCK SENSOR

1. Disconnect front door unlock sensor harness connector.
2. Check continuity between door unlock sensor terminals.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

NEL650

OK or NG

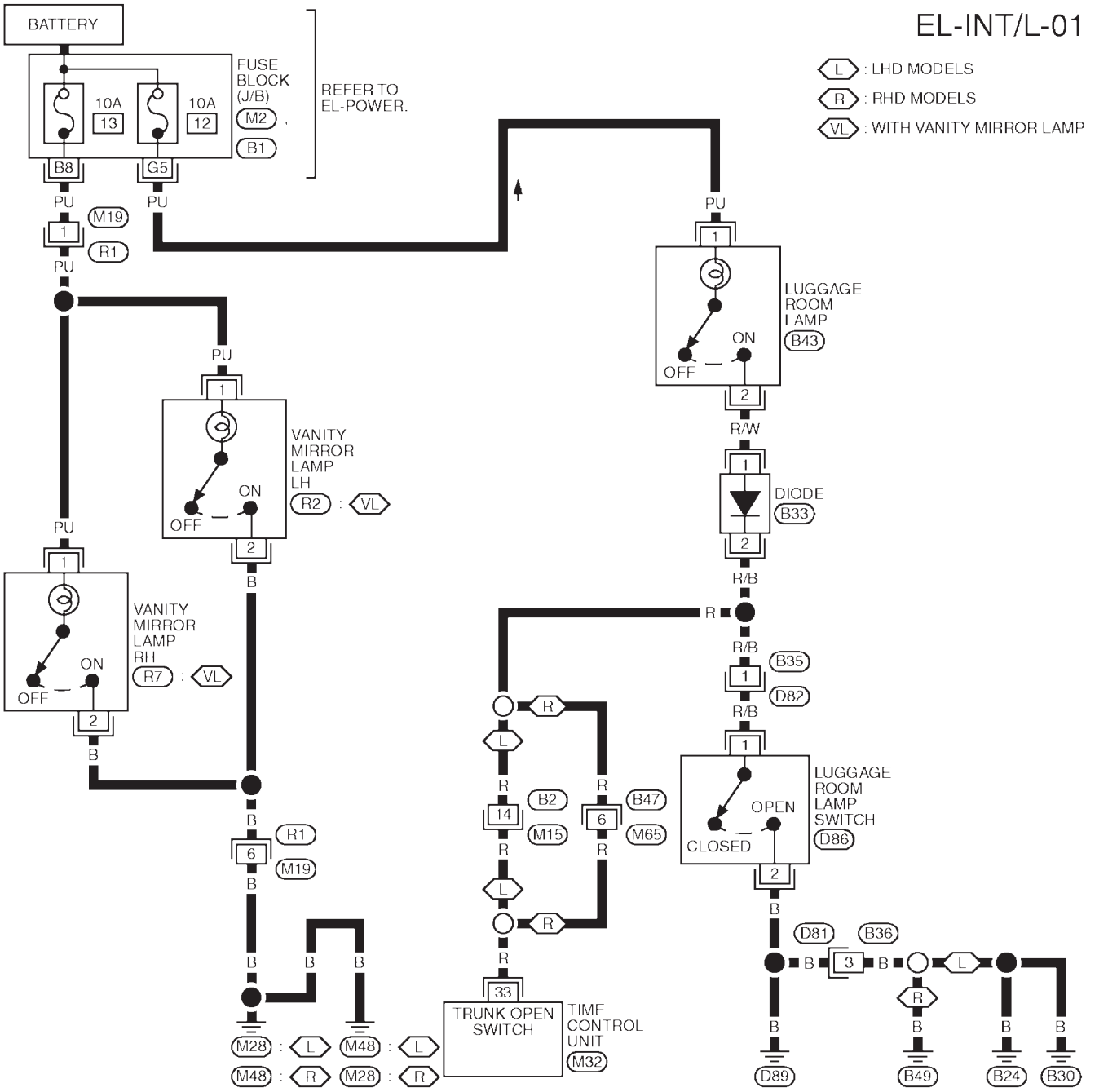
OK	▶	**Check the following.** ● Door unlock sensor ground circuit ● Harness for open or short between time control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

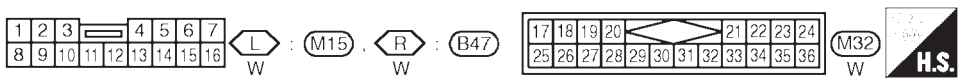
Wiring Diagram — INT/L —

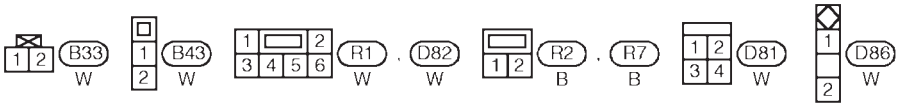
NLEL0532

WHERE FITTED

NLEL0532S01





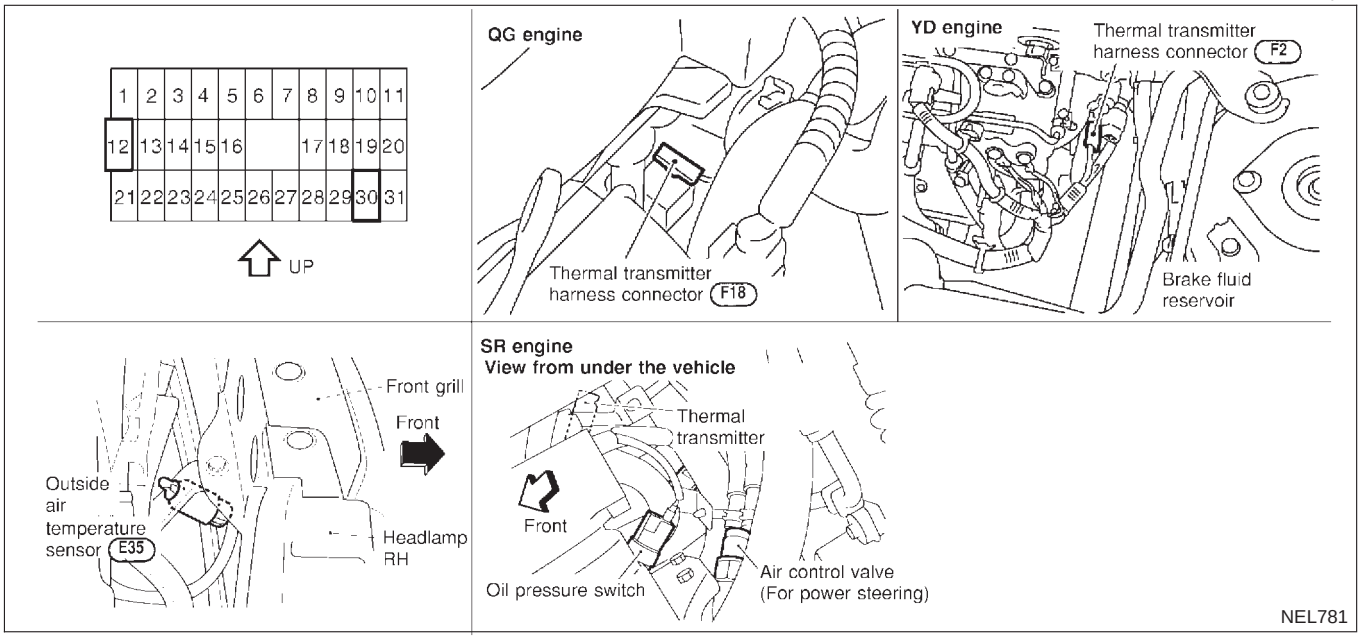


REFER TO THE FOLLOWING.
M2 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL418C

Component Parts and Harness Connector Location

NLEL0441



NEL781

System Description

NLEL0442

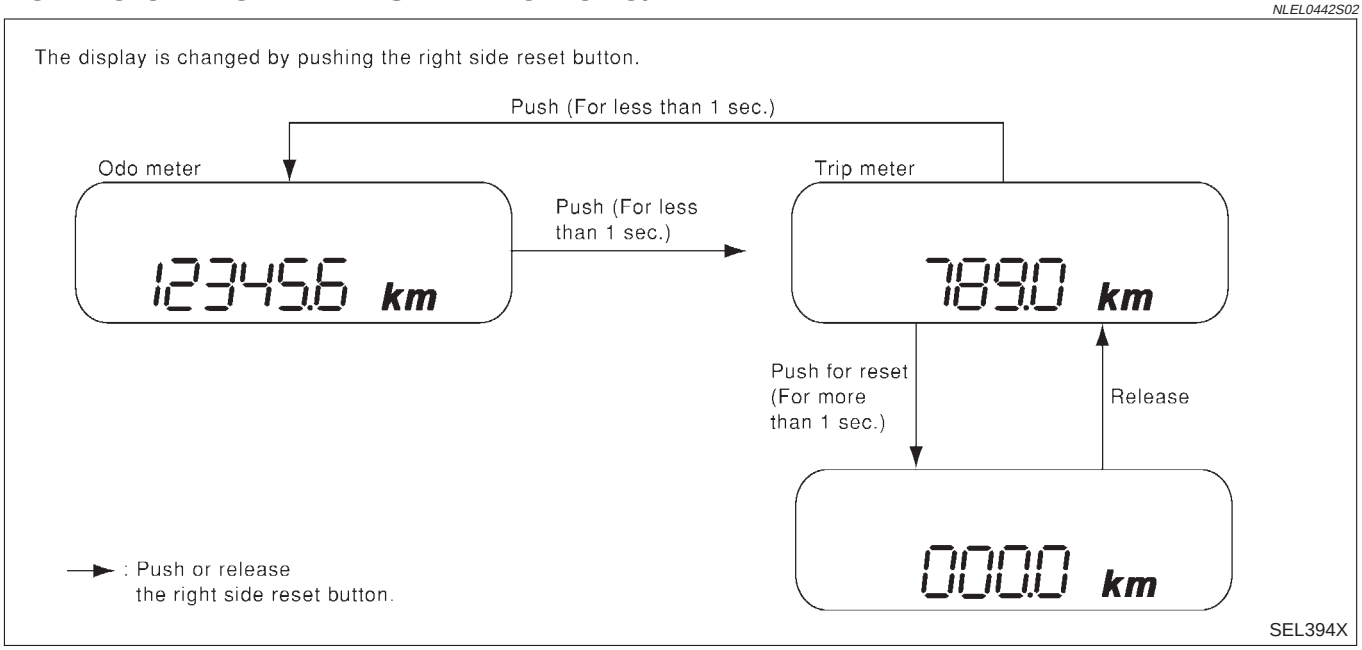
UNIFIED CONTROL METER

NLEL0442S01

- Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled totally by control unit built-in combination meter.
- Digital meter is adopted for odo/trip meter.*
  *The record of the odo meter is kept even if the battery cable is disconnected. The record of the trip meter is erased when the battery cable is disconnected.
- Odo/trip meter segment can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

NLEL0442S02



SEL394X

NOTE:
Turn ignition switch to the “ON” position to operate odo/trip meter.

POWER SUPPLY AND GROUND CIRCUIT

NLEL0442S03

Power is supplied at all times

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to combination meter terminal 8.

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

- through 10A fuse [No. 30, located in the fuse block (J/B)]
- to combination meter terminal 9.

Ground is supplied

- through body grounds M28 and M48
- to combination meter terminal 7.

WATER TEMPERATURE GAUGE

NLEL0442S04

The water temperature gauge indicates the engine coolant temperature. The reading on the gauge is based on the resistance of the thermal transmitter.
As the temperature of the coolant increases, the resistance of the thermal transmitter decreases. A variable ground is supplied to terminal 5 of the combination meter for the water temperature gauge. The needle on the gauge moves from "C" to "H".

TACHOMETER

NLEL0442S05

The tachometer indicates engine speed in revolutions per minute (rpm).
The tachometer is regulated by a signal

- from terminal 32 (Gasoline engine models) or 439 (Diesel engine models) of the ECM
- to combination meter terminal 19 for the tachometer.

FUEL GAUGE

NLEL0442S06

The fuel gauge indicates the approximate fuel level in the fuel tank.
The fuel gauge is regulated by a variable ground signal supplied

- from body grounds M28 and M48
- through terminals 4 and 7 of combination meter,
- through terminal 1 of the fuel level sensor unit and
- through terminal 4 of the fuel level sensor unit
- to combination meter terminal 3 for the fuel gauge.

SPEEDOMETER

NLEL0442S07

The combination meter provides a voltage signal to the vehicle speed sensor for the speedometer.
The voltage is supplied

- from combination meter terminal 18 for the speedometer
- to terminal 1 of the vehicle speed sensor.

Ground is supplied

- from body grounds M28 and M48
- through terminals 6 and 7 of combination meter
- to terminal 2 of the vehicle speed sensor.

The speedometer converts the voltage into the vehicle speed displayed.

Combination Meter

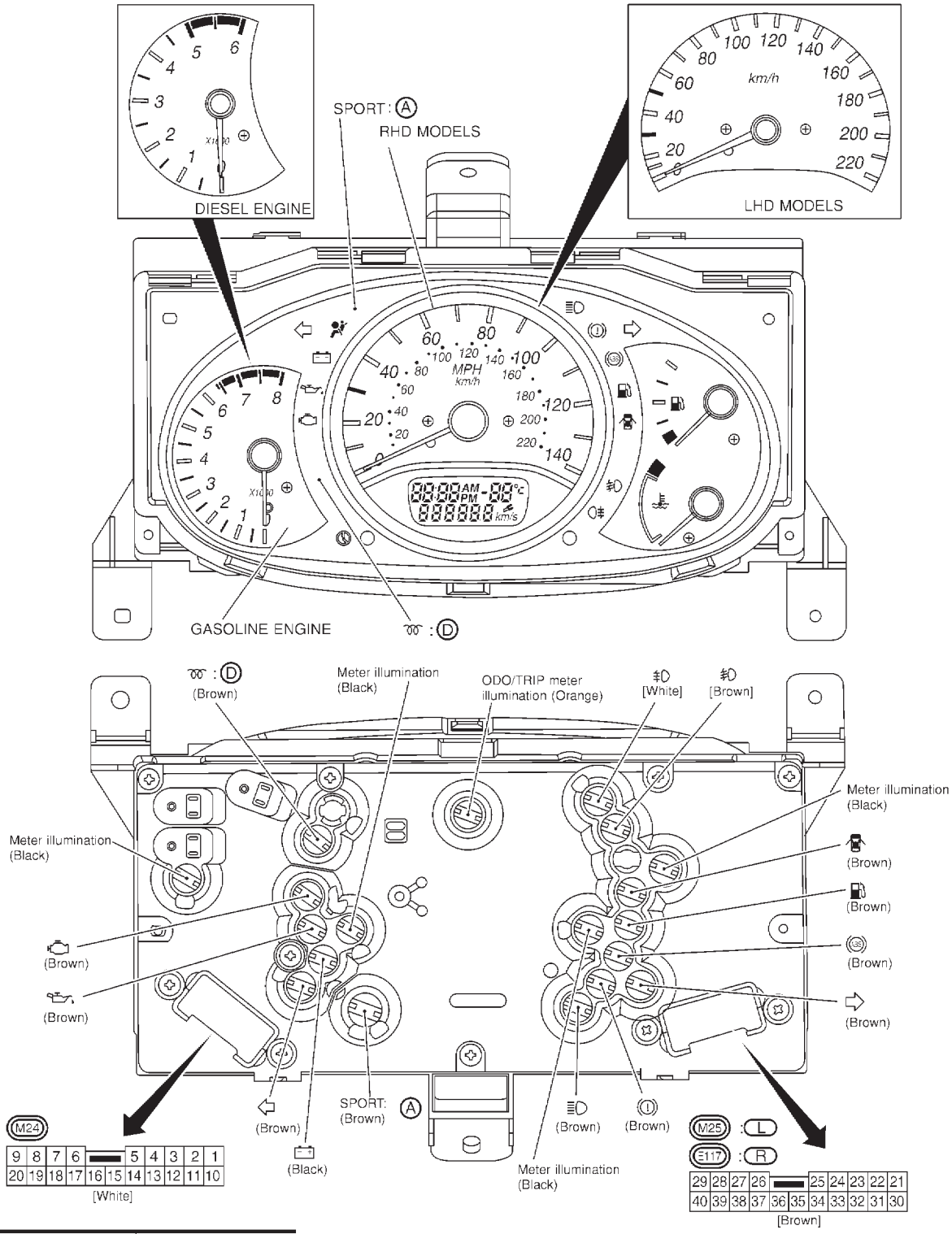
NLEL0443

NLEL0443S01

NLEL0443S0105

CHECK

Models with NATS security indicator on dash board



Bulb socket color	Bulb wattage
Brown	1.4W
Black	3.0W
Orange	

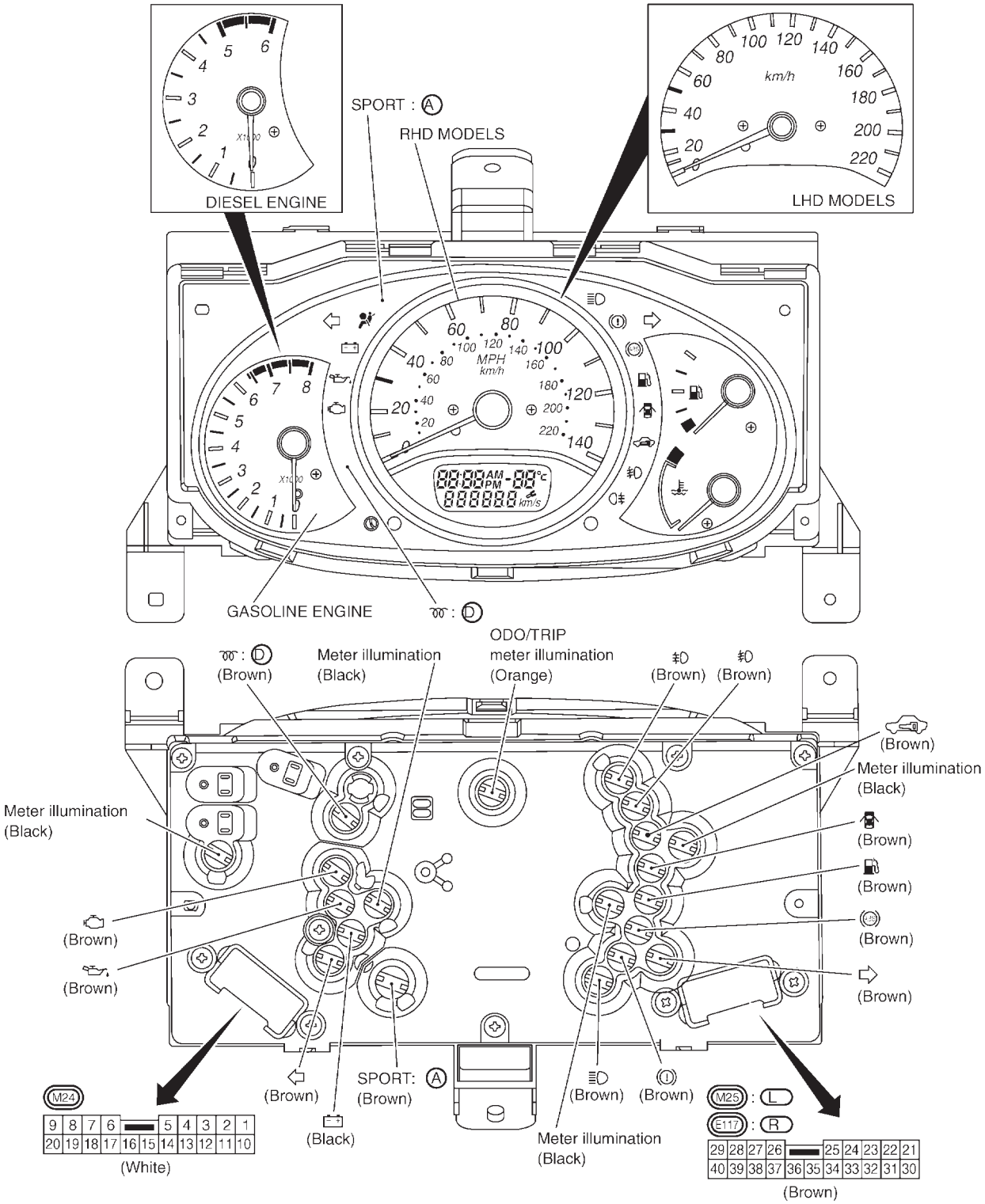
( ): Warning bulb socket colour

Ⓛ : LHD models
Ⓡ : RHD models
Ⓐ : A/T models
Ⓓ : Diesel engine

YEL990B

Models with NATS security indicator in combination meter

NLEL0443S0106



Bulb socket color	Bulb wattage
Brown	1.4W
Black	3.0W
Orange	

( ) : Warning bulb socket color

L : LHD models
R : RHD models
A : A/T models
D : Diesel engine

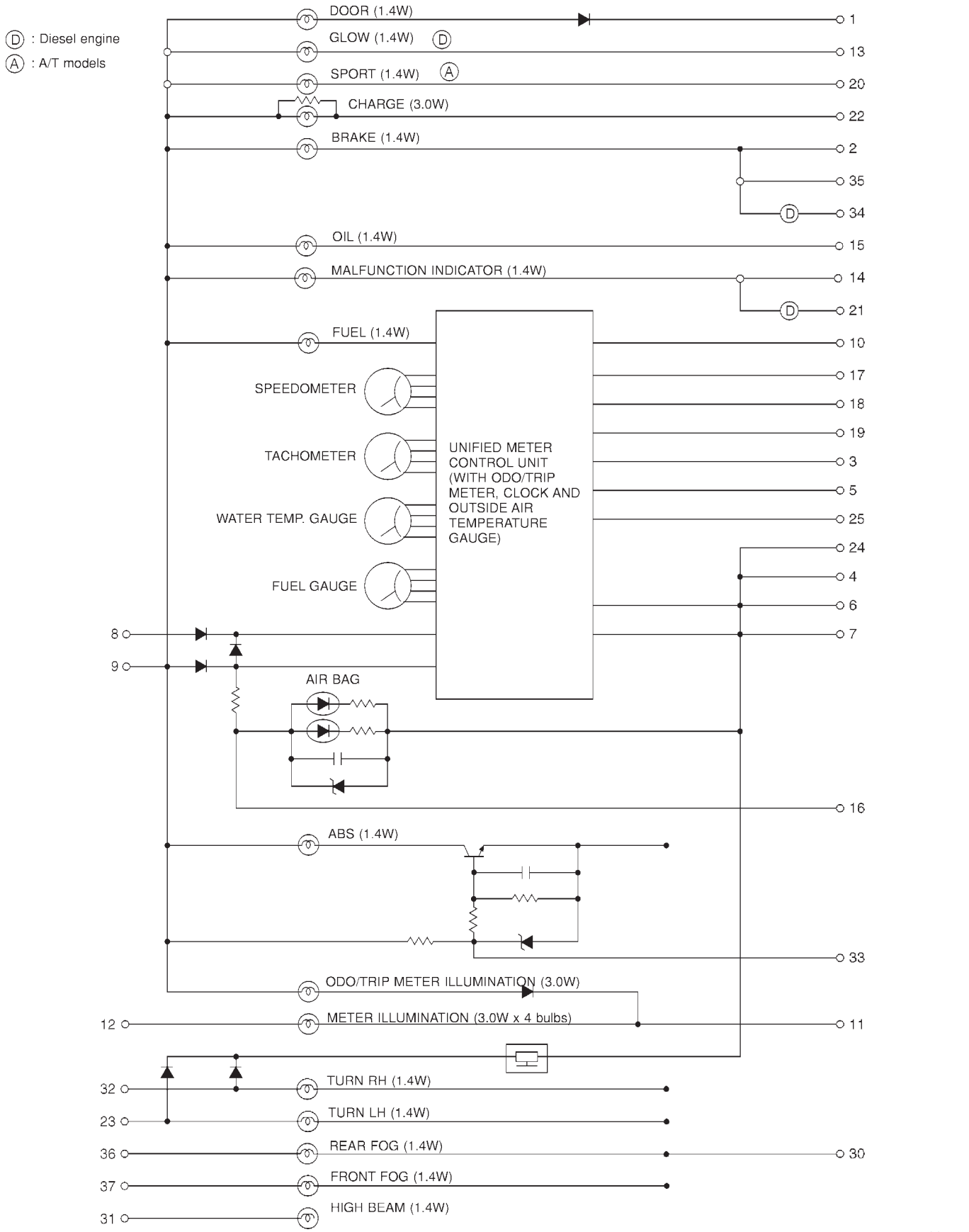
YEL488C

Schematic

NLEL0444

MODELS WITH NATS SECURITY INDICATOR ON DASH BOARD

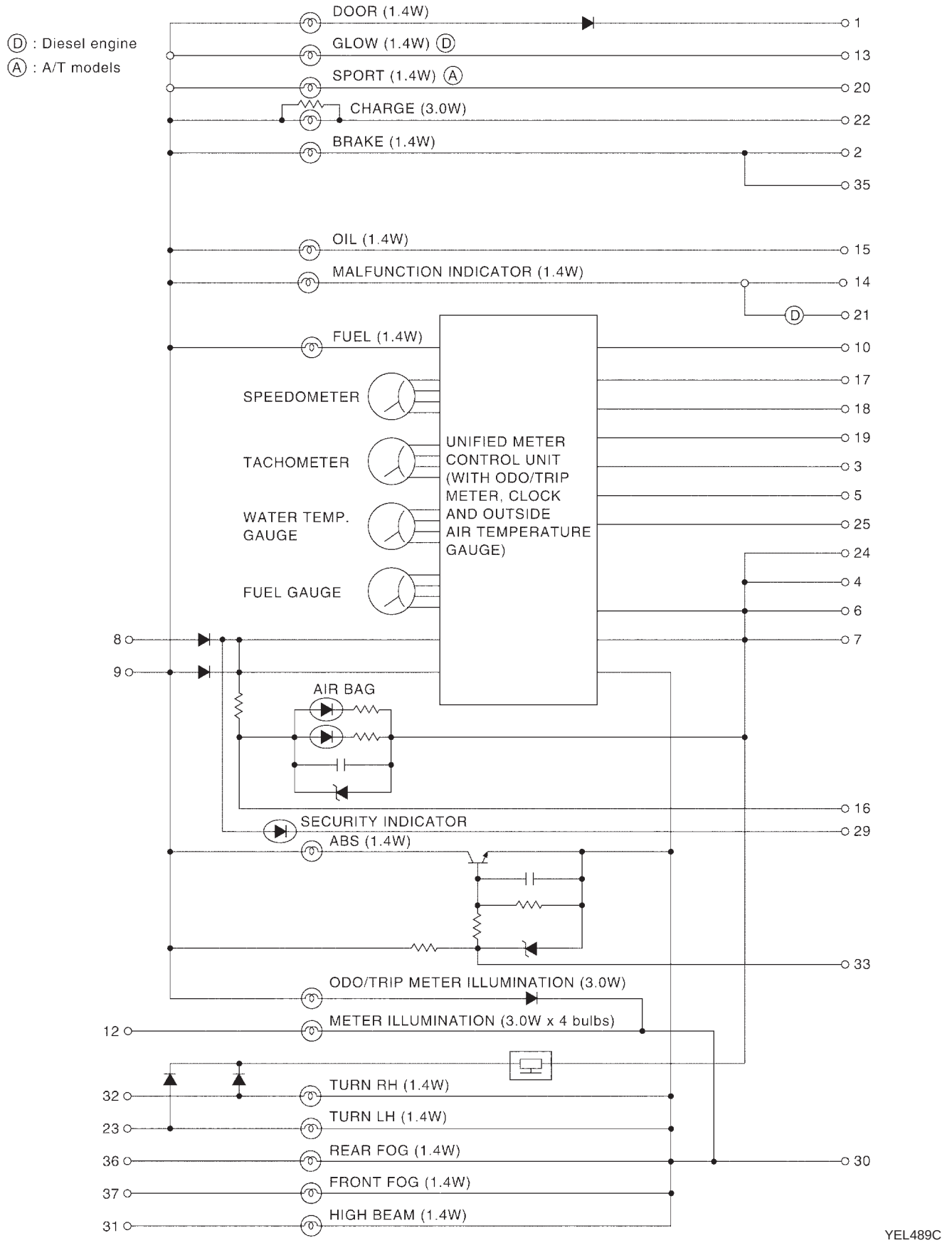
NLEL0444S02



YEL991B

MODELS WITH NATS SECURITY INDICATOR IN COMBINATION METER

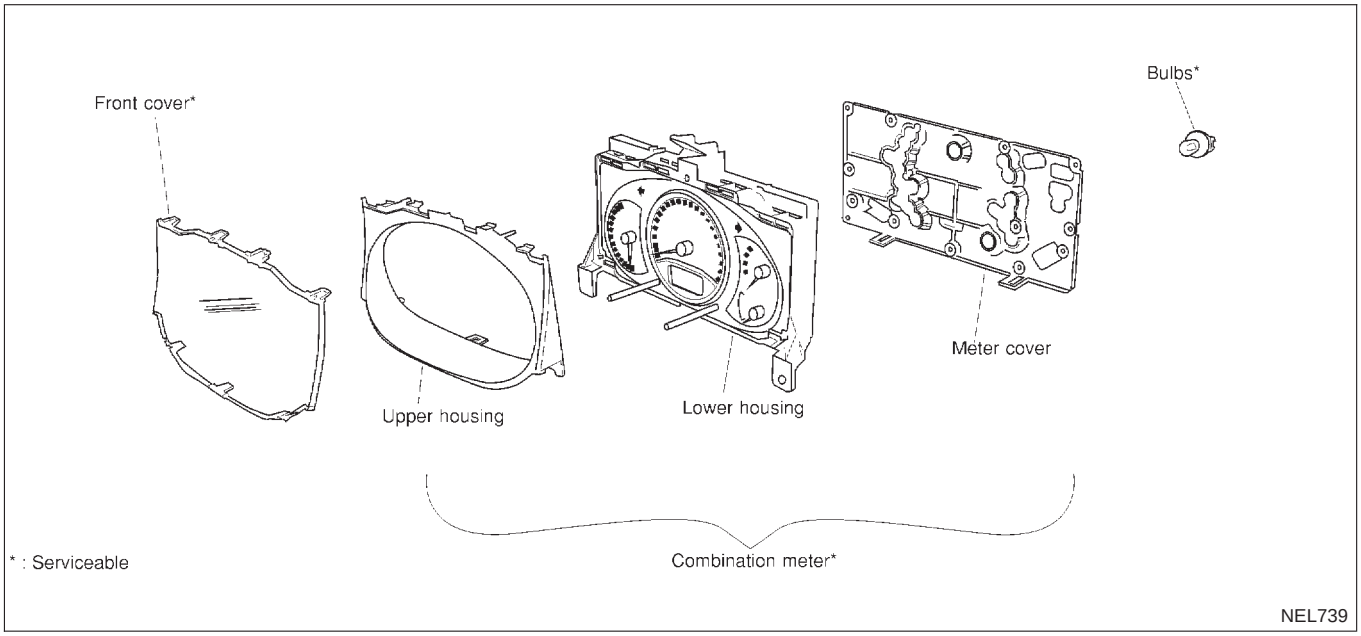
NLEL0444S03



YEL489C

Construction

NLEL0445

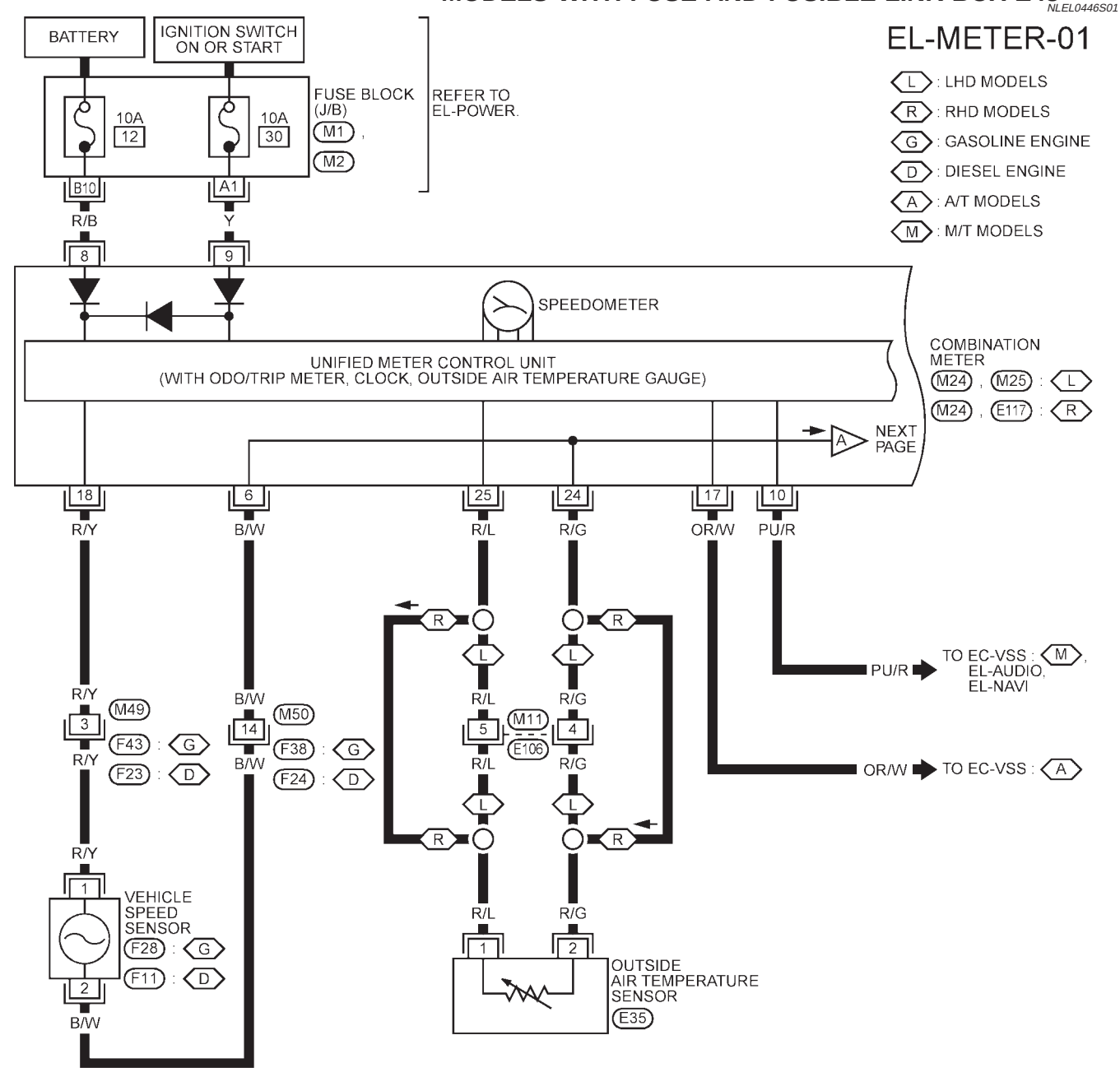


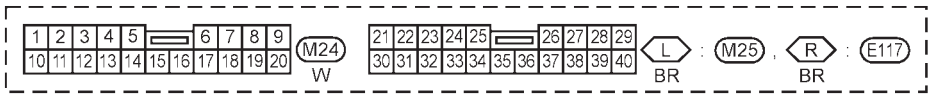
Wiring Diagram — METER —

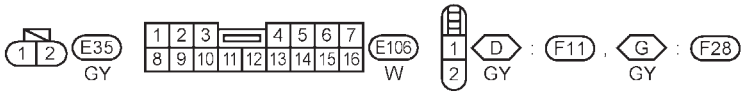
NLEL0446

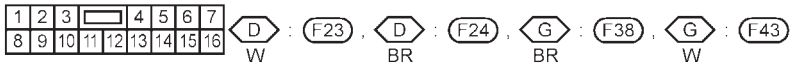
MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0446S01





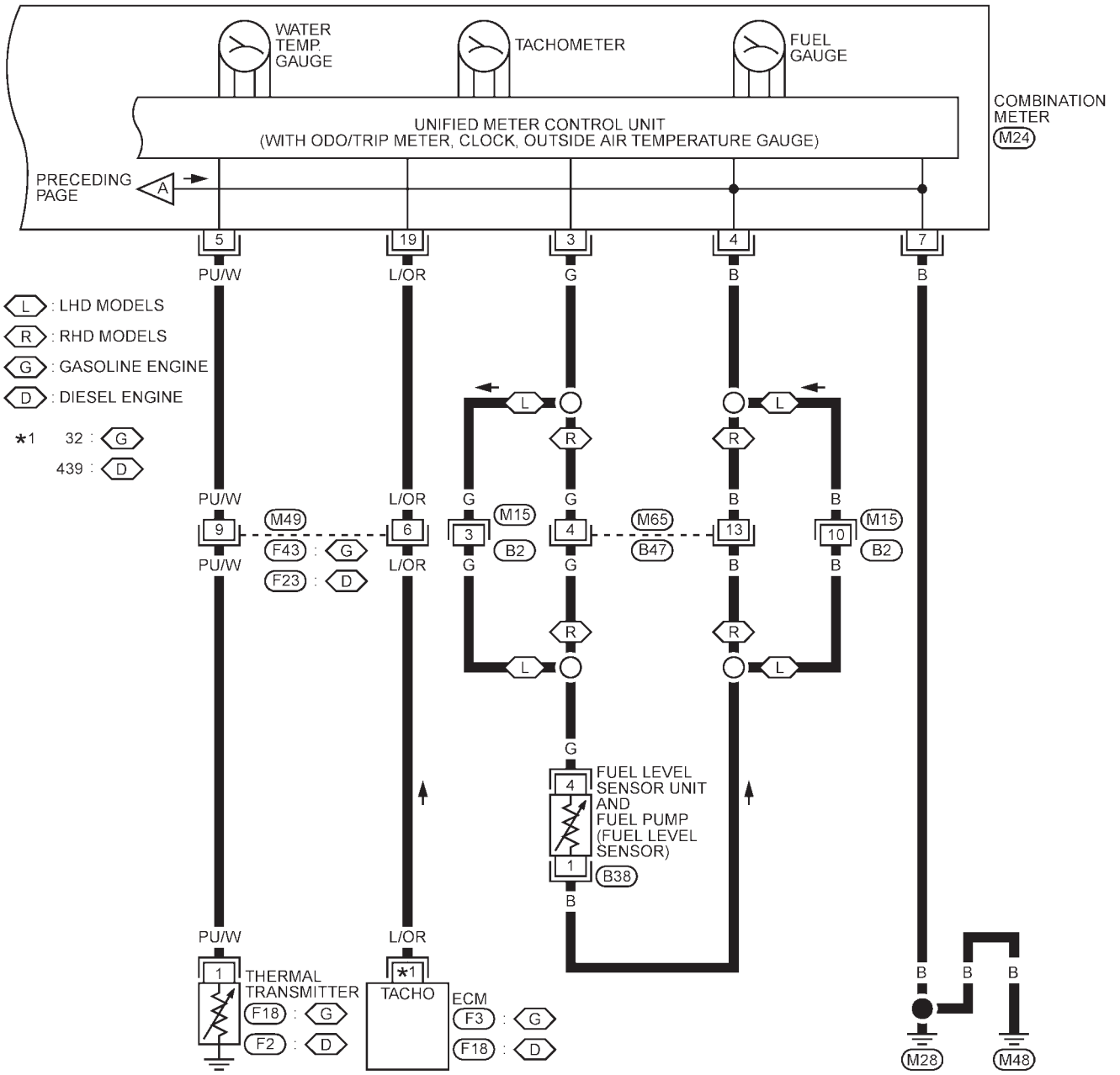


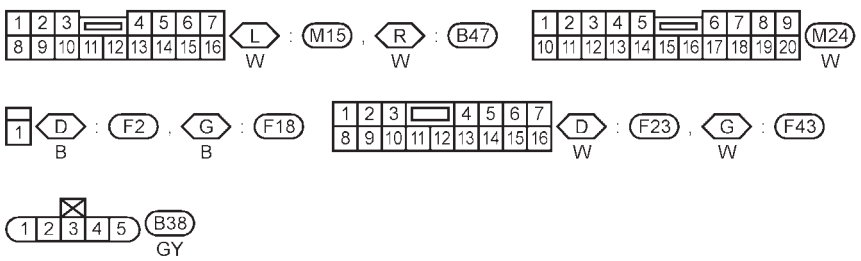


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL894B

EL-METER-02



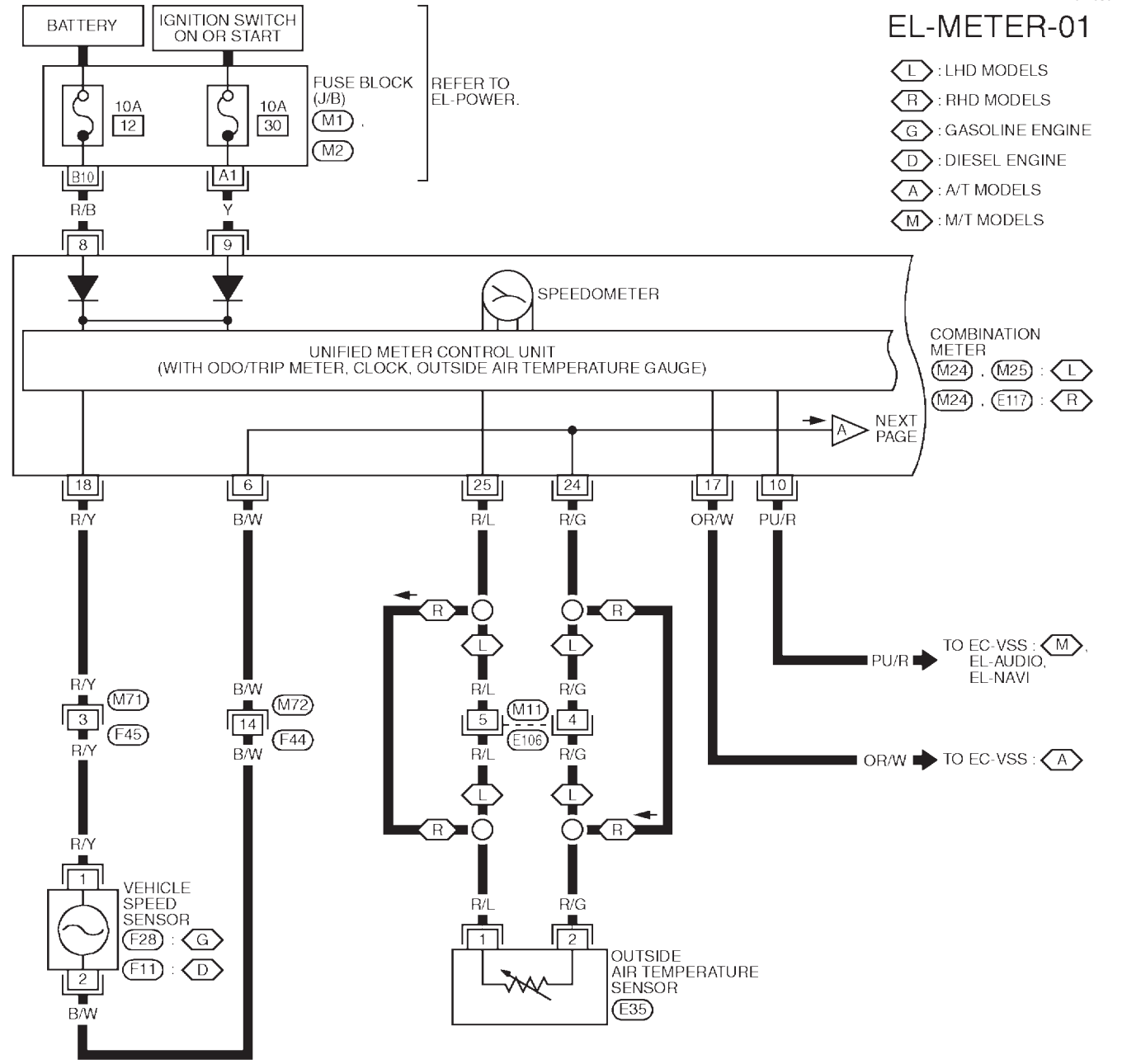


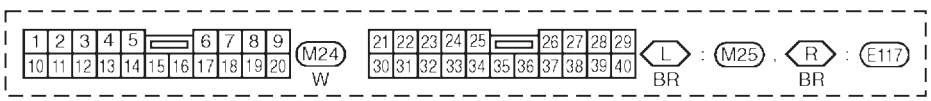
REFER TO THE FOLLOWING.
F3 , F18 -ELECTRICAL UNITS

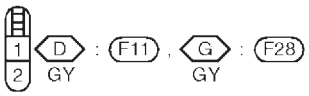
YEL895B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0446S02



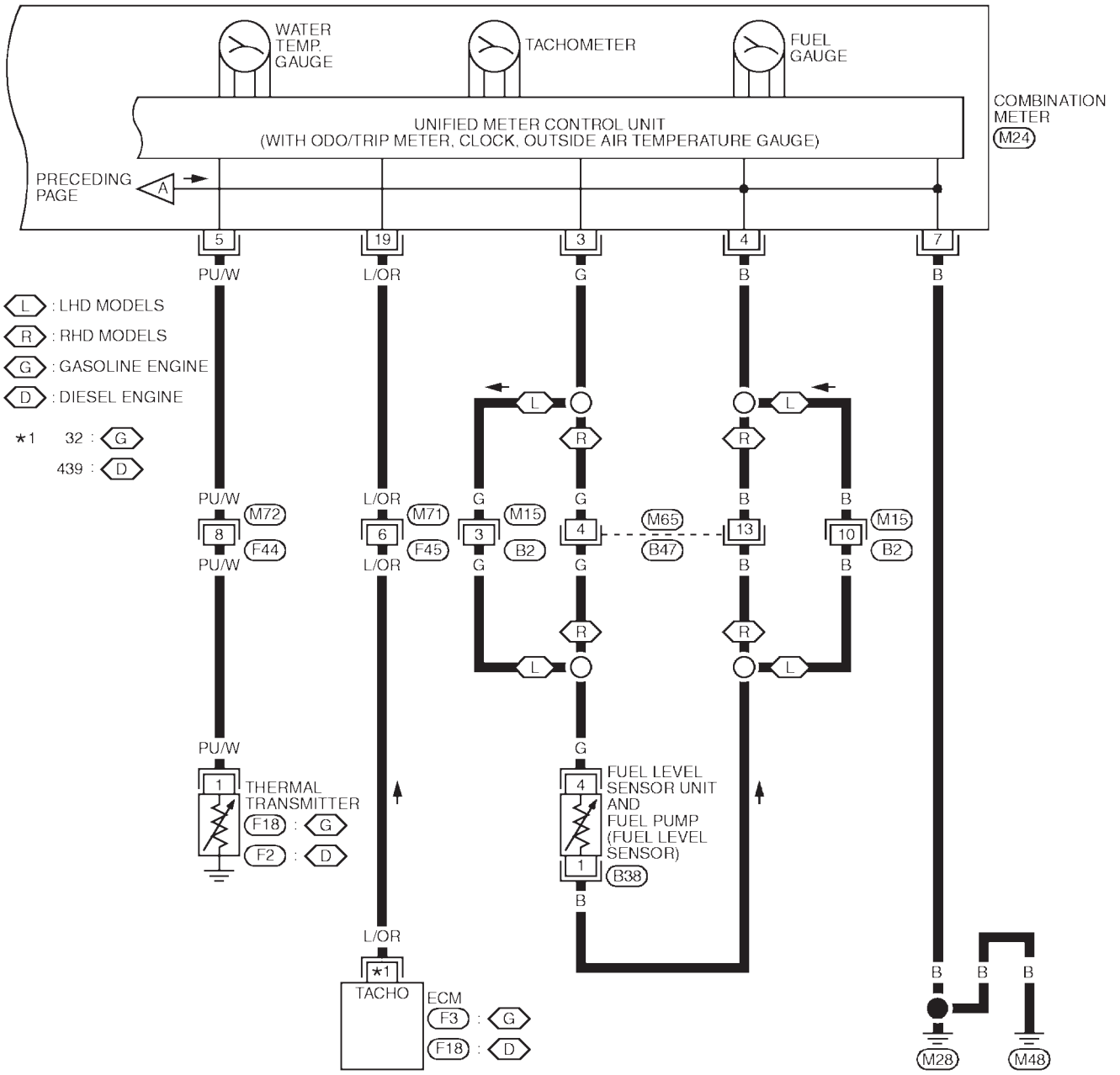


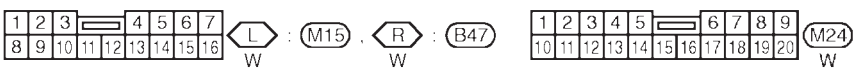


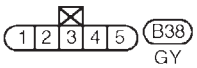
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL419C

EL-METER-02







REFER TO THE FOLLOWING.
F3 , F18 -ELECTRICAL UNITS

YEL420C

Combination Meter Self-Diagnosis

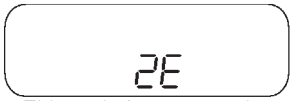
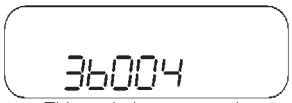
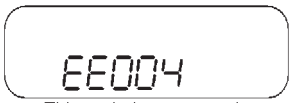
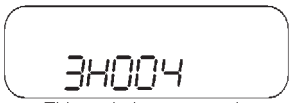
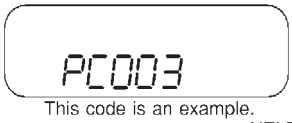
NLEL0447

PERFORMING SELF-DIAGNOSIS MODE

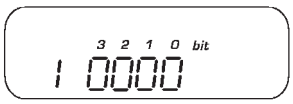
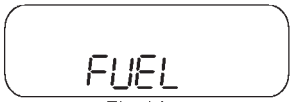
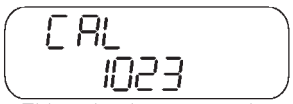
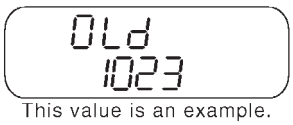
NLEL0447S01

1. Turn the ignition switch to the “LOCK” position.
2. Press both reset buttons on the combination meter and keep them depressed.
3. Turn the ignition switch to the “ON” position, while keeping the reset buttons pressed.
4. Release both reset buttons then self-diagnosis will start. The sequence (A to L) is activated by press the either reset buttons.

NOTE:
If either reset button is not pressed for 20 seconds at each step or if the ignition switch is turned OFF, the self-diagnosis mode is exited.

	Check items	Display	Remarks
A)	Odometer segment test	 SEL434X	All odo trip meter segments are ON.
B)	Work instruction code	 This code is an example. SEL435X	This information is not used for service. Please skip this step.
C)	Software code	 This code is an example. NEL735	This information is not used for service. Please skip this step.
D)	EEPROM code	 This code is an example. NEL736	This information is not used for service. Please skip this step.
E)	Hardware code	 This code is an example. NEL737	This information is not used for service. Please skip this step.
F)	PCB code	 This code is an example. NEL738	This information is not used for service. Please skip this step.
G)	Meter/gauge test (Sweeping movement)	 Flashing SEL440X	Tachometer, speedometer, fuel level gauge and water temperature gauge have sweeping movement test. (The meter/gauges operate MIN. → MAX., MAX. → MIN. for 2 times) The odo trip meter segment flashes during the sweep movement.

Combination Meter Self-Diagnosis (Cont'd)

	Check items	Display	Remarks
H)	Error 1 (Bit 0 - Bit 3)	 SEL441X	The segment of each bit displays "0", meaning no failure. If the bit(s) displays figures other than "0", the item of the bit has failed. For details, refer to "Failure chart for Error 1 and Error E" below.
I)	Error E (Bit 4 - Bit 7)	 SEL442X	
J)	Fuel warning lamp test	 Flashing SEL443X	Fuel warning lamp is on and odo trip meter segment "FUEL" flashes.
K)	Fuel gauge calibration (CAL)	 This value is an example. SEL444X	This information is not used for service. Please skip this step.
L)	Fuel gauge calibration (OLD)	 This value is an example. SEL445X	This information is not used for service. Please skip this step.

Failure Chart for "Error 1" and "Error E"

NLEL0447S0101

Bit	Detectable items	Description of the failure	Displayed figure on the bit	
			Failure	No failure
0	Speedometer input signal	No input signal When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure. (If input signal is detected later, then the judgement will be canceled immediately.)	1	0
		Abnormal input signal When any signal of frequency which would not exist in normal conditions is detected, it should be judged as signal failure.	2	
1	Tachometer input signal	No input signal When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure. (If input signal is detected later, then the judgement will be canceled immediately.)	1	0
		Abnormal input signal When any signal of frequency which would not exist in normal conditions is detected, it should be judged as signal failure.	2	

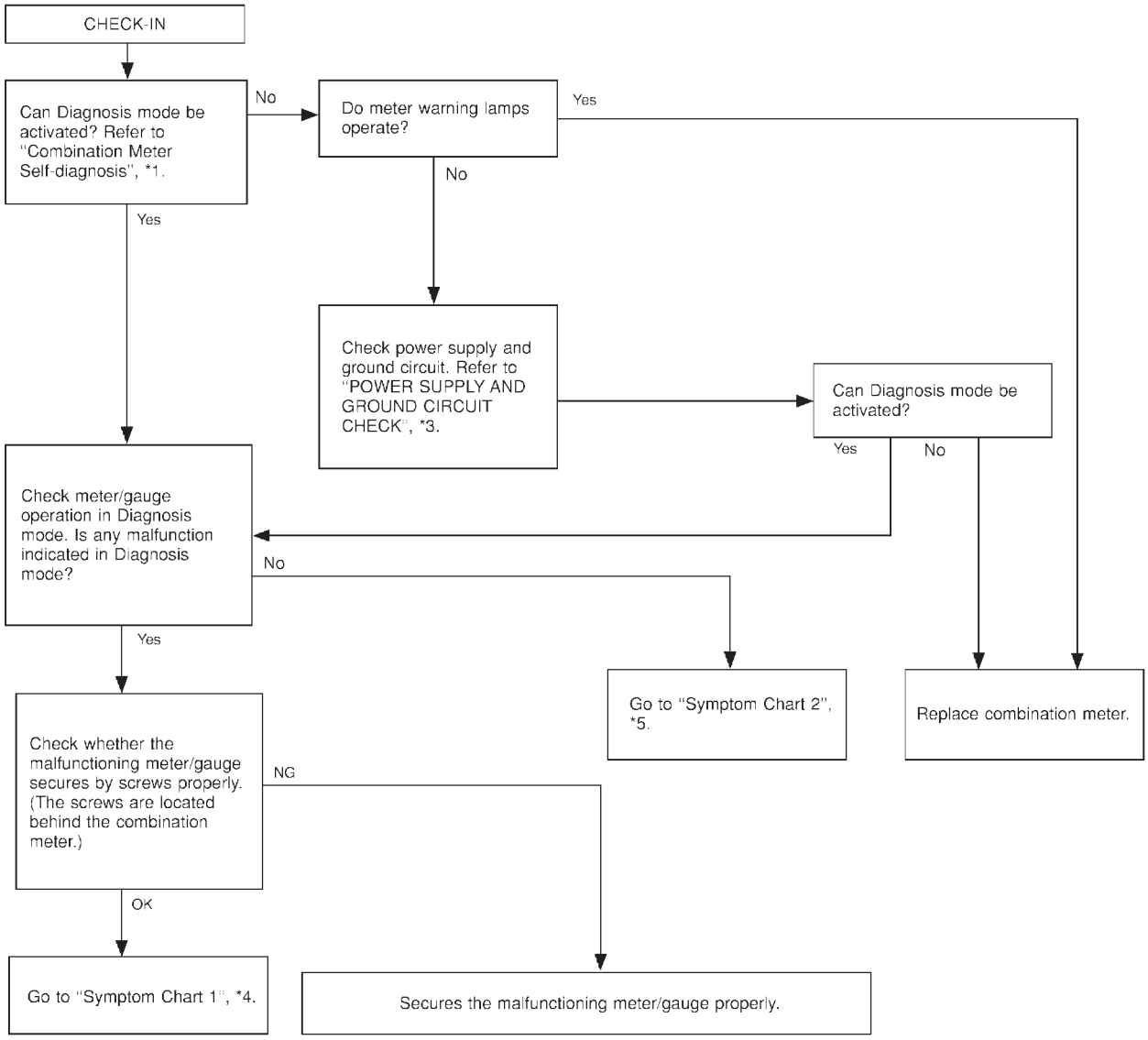
Bit	Detectable items	Description of the failure		Displayed figure on the bit	
				Failure	No failure
2	Fuel level input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.		1	0
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.		2	
3	Water temperature input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.		1	0
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.		2	
4	Outside air temperature input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.		1	0
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.		2	
5	Reset buttons	Short circuit for reset buttons When the short circuit is continuously detected for 5 minutes or more, it should be judged as short-circuit failure.	Right side reset button has failed.	1	0
			Left side reset button has failed.	2	
			Both reset buttons have failed.	3	
6	—	—		0	0
7	CPU	EEPROM failure		1	0
		CPU RAM failure		2	

Trouble Diagnoses

NLEL0448

PRELIMINARY CHECK

NLEL0448S01



NEL741

*1: Combination Meter Self-Diagnosis (EL-141)

*3: POWER SUPPLY AND GROUND CIRCUIT CHECK (EL-146)

*4: Symptom Chart 1 (EL-145)

*5: Symptom Chart 2 (EL-145)

SYMPTOM CHART

NLEL0448S02

Symptom Chart 1 (Malfunction is Indicated in Diagnosis Mode)

NLEL0448S0201

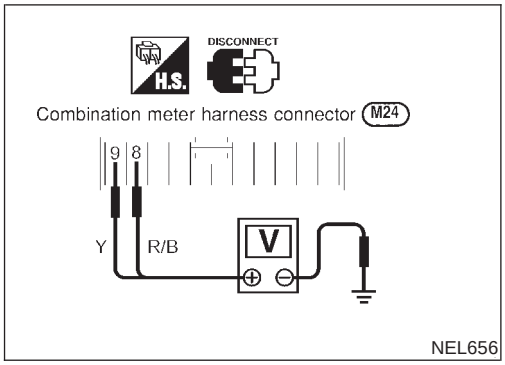
Symptom	Possible causes	Repair order
Odo/trip meter indicates malfunction in Diagnosis mode.	Unified meter control unit	Replace combination meter. (The clear lens and bulbs are reusable)
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of speedometer/ tachometer/fuel gauge/ water temp. gauge indicates malfunction in Diagnosis mode.	1. Meter/Gauge 2. Unified meter control unit	

Symptom Chart 2 (No Malfunction is Indicated in Diagnosis Mode)

NLEL0448S0202

Symptom	Possible causes	Repair order
One of speedometer/ tachometer/fuel gauge/ water temp. gauge is malfunctioning.	1. Sensor signal - Vehicle speed signal - Engine revolution signal - Fuel gauge - Water temp. gauge 2. Unified meter control unit	1. Check the sensor for malfunctioning meter/gauge. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-147.) INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-148.) INSPECTION/FUEL LEVEL SENSOR UNIT (Refer to EL-149.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-150.) 2. Replace combination meter. (The clear lens and bulbs are reusable)
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		
Outside air temperature indication is malfunctioning	1. Outside air temperature sensor signal 2. Unified meter control unit	1. Check the sensor. INSPECTION/OUTSIDE AIR TEMPERATURE SENSOR (Refer to EL-154) 2. Replace combination meter. (The clear lens and bulbs are reusable)

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-144.



POWER SUPPLY AND GROUND CIRCUIT CHECK

=NLEL0448S03

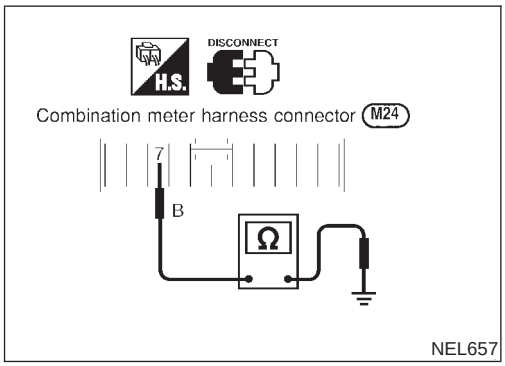
Power Supply Circuit Check

NLEL0448S0301

Terminals		Ignition switch position		
(+)	(−)	OFF	ACC	ON
8	Ground	Battery voltage	Battery voltage	Battery voltage
9	Ground	0V	0V	Battery voltage

If NG, check the following.

- 10A fuse [No. 12, located in fuse block (J/B)]
- 10A fuse [No. 30, located in fuse block (J/B)]
- Harness for open or short between fuse and combination meter



Ground Circuit Check

NLEL0448S0302

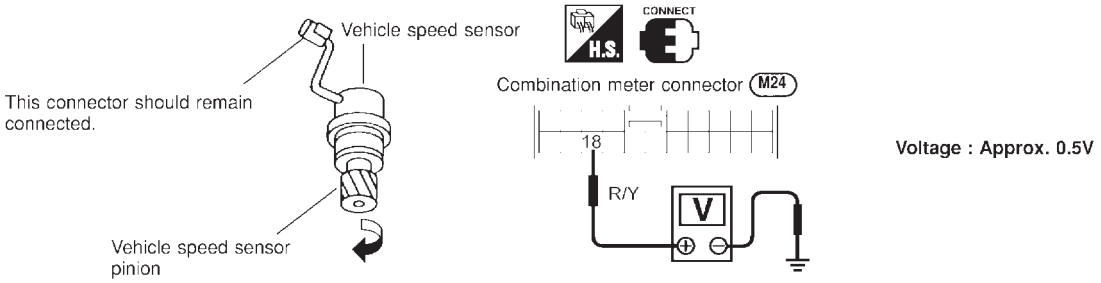
Terminals	Continuity
7 - Ground	Yes

INSPECTION/VEHICLE SPEED SENSOR

=NLEL0448S04

1	CHECK VEHICLE SPEED SENSOR OUTPUT

1. Remove vehicle speed sensor from transmission.
2. Check voltage between combination meter terminal 18 and ground while quickly turning speed sensor pinion.



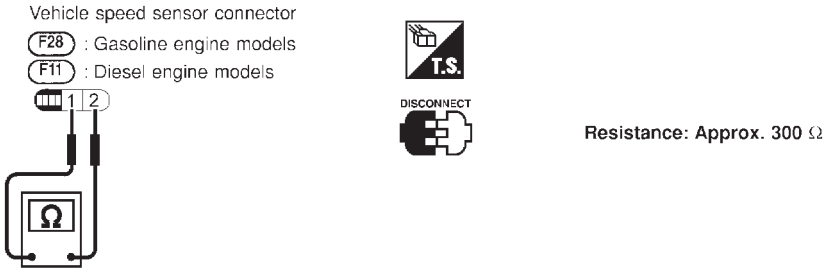
NEL658

OK or NG

OK	▶	Vehicle speed sensor is OK.
NG	▶	GO TO 2.

2	CHECK VEHICLE SPEED SENSOR

Check resistance between vehicle speed sensor terminals 1 and 2.



NEL659

OK or NG

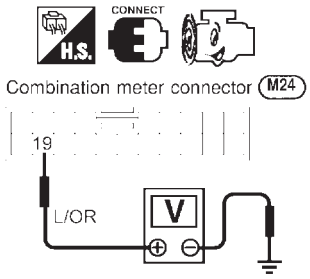
OK	▶	**Check the following.** ● Harness between combination meter and vehicle speed sensor ● Vehicle speed sensor ground circuit
NG	▶	Replace vehicle speed sensor.

INSPECTION/ENGINE REVOLUTION SIGNAL

=NLEL0448S05

1	CHECK ECM OUTPUT

1. Start engine.
2. Check voltage between combination meter terminals 19 and ground at idle and 2,000 rpm.



Higher rpm = Higher voltage
Lower rpm = Lower voltage
Voltage should change with rpm.

NEL660

OK or NG

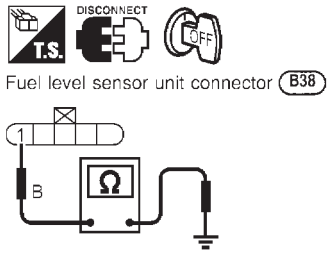
OK	▶	Engine revolution signal is OK.
NG	▶	Harness for open or short between ECM and combination meter

INSPECTION/FUEL LEVEL SENSOR UNIT

=NLEL0448S06

1	CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT

Check harness continuity between fuel level sensor unit connector terminal 1 and ground.



Continuity should exist.

NEL661

OK or NG

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

2	CHECK FUEL LEVEL SENSOR UNIT

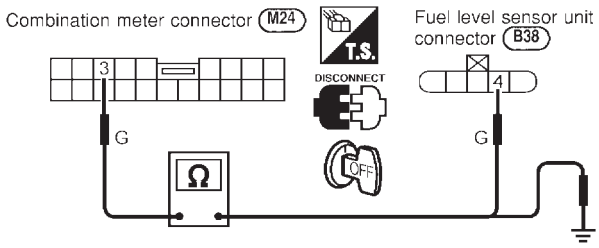
Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-153).

OK or NG

OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

3	CHECK HARNESS FOR OPEN OR SHORT

1. Disconnect combination meter connector and fuel level sensor unit connector.
2. Check continuity between combination meter terminal 3 and fuel level sensor unit connector terminal 4.
   Continuity should exist.
3. Check continuity between combination meter terminal 3 and ground.
   Continuity should not exist.



NEL662

OK or NG

OK	▶	Fuel level sensor unit is OK.
NG	▶	Repair harness or connector.

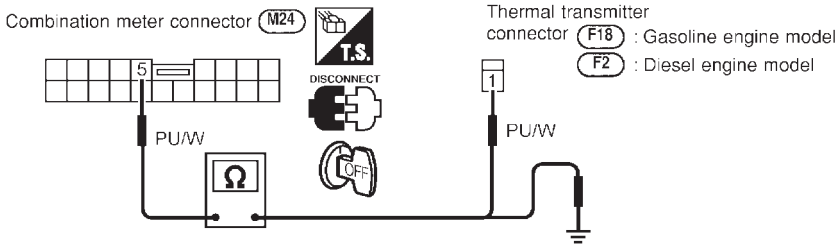
INSPECTION/THERMAL TRANSMITTER

=NLEL0448S07

1	CHECK THERMAL TRANSMITTER	
Refer to "THERMAL TRANSMITTER CHECK" (EL-153).		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Replace.

2	CHECK HARNESS FOR OPEN OR SHORT	

1. Disconnect combination meter connector and thermal transmitter connector.
2. Check continuity between combination meter terminal 5 and thermal transmitter terminal 1.
   Continuity should exist.
3. Check continuity between combination meter terminal 5 and ground.
   Continuity should not exist.



NEL663

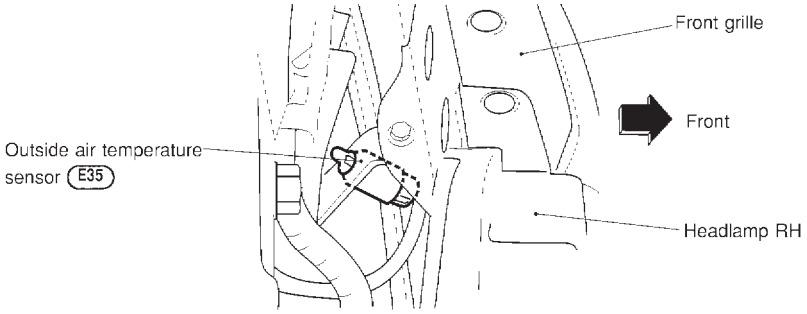
OK or NG		
OK	▶	Thermal transmitter is OK.
NG	▶	Repair harness or connector.

INSPECTION/OUTSIDE AIR TEMPERATURE SENSOR

=NLEL0448S11

1	CHECK OUTSIDE AIR TEMPERATURE SENSOR CONDITION

Make sure that the sensor is free of dust and dirt, etc.



NEL711

OK or NG

OK	▶	GO TO 2.
NG	▶	Clean the surface of the sensor.

2	CHECK OUTSIDE AIR TEMPERATURE SENSOR

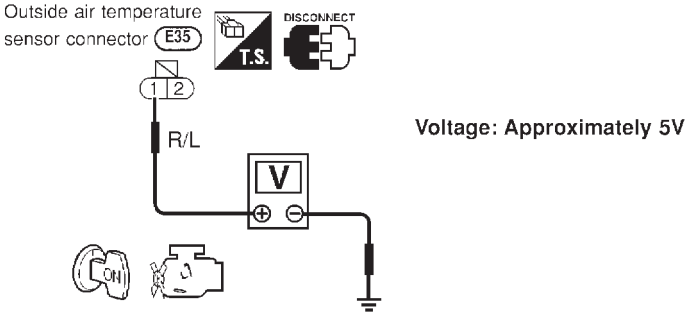
Refer to "OUTSIDE AIR TEMPERATURE SENSOR CHECK" (EL-154).

OK or NG

OK	▶	GO TO 3.
NG	▶	Replace outside air temperature sensor.

3	CHECK POWER SUPPLY

1. Turn ignition switch "OFF".
2. Disconnect outside air temperature sensor harness connector.
3. Turn ignition switch "ON".
4. Check voltage between the terminal 1 and ground.



Voltage: Approximately 5V

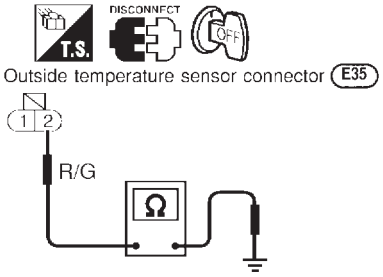
NEL709

OK or NG

OK	▶	GO TO 4.
NG	▶	• Check the harness or connectors for open or short. • Check combination meter. If NG, repair or replace it.

4	CHECK GROUND CIRCUIT

1. Turn ignition switch "OFF".
2. Check harness continuity between the terminal 2 and ground.

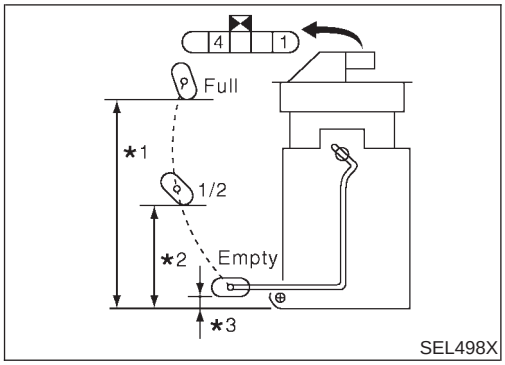


Continuity should exist.

NEL710

OK or NG

OK	▶	Outside air temperature sensor is OK.
NG	▶	Check the harness or connectors for open or short. If NG, repair it.



SEL498X

Electrical Components Inspection

=NLEL0449

FUEL LEVEL SENSOR UNIT CHECK

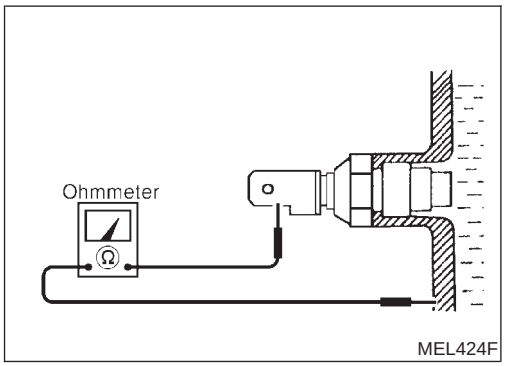
NLEL0449S02

- For removal, refer to FE-6, FE-19 “FUEL SYSTEM”.

Check the resistance between terminals 4 and 1.

Ohmmeter		Float position mm (in)			Resistance value Ω
(+)	(−)				
4	1	*1	Full	139.5 - 145.5 (5.49 - 5.73)	Approx. 4 - 6
		*2	1/2	86.7 - 90.7 (3.41 - 3.57)	32 - 33
		*3	Empty	10.1 - 12.1 (0.40 - 0.48)	80 - 83

*1 and *3: When float rod is in contact with stopper.



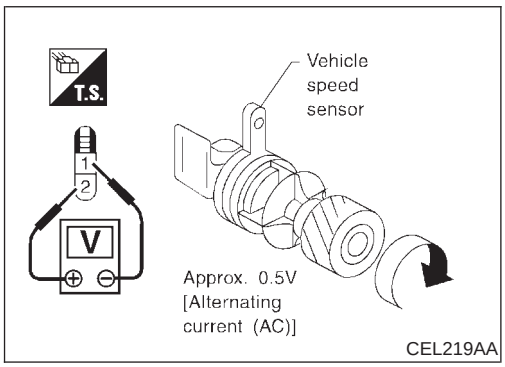
MEL424F

THERMAL TRANSMITTER CHECK

NLEL0449S03

Check the resistance between the terminals of thermal transmitter and body ground.

Water temperature	Resistance
65°C (149°F)	Approx. 1,179 - 1,417Ω
91°C (196°F)	Approx. 474 - 568Ω

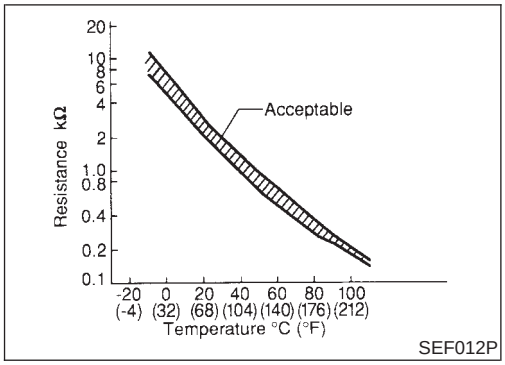


CEL219AA

VEHICLE SPEED SENSOR SIGNAL CHECK

NLEL0449S04

1. Remove vehicle speed sensor from transmission.
2. Turn vehicle speed sensor pinion quickly and measure voltage across 1 and 2.



OUTSIDE AIR TEMPERATURE SENSOR CHECK

=NLEL0449S05

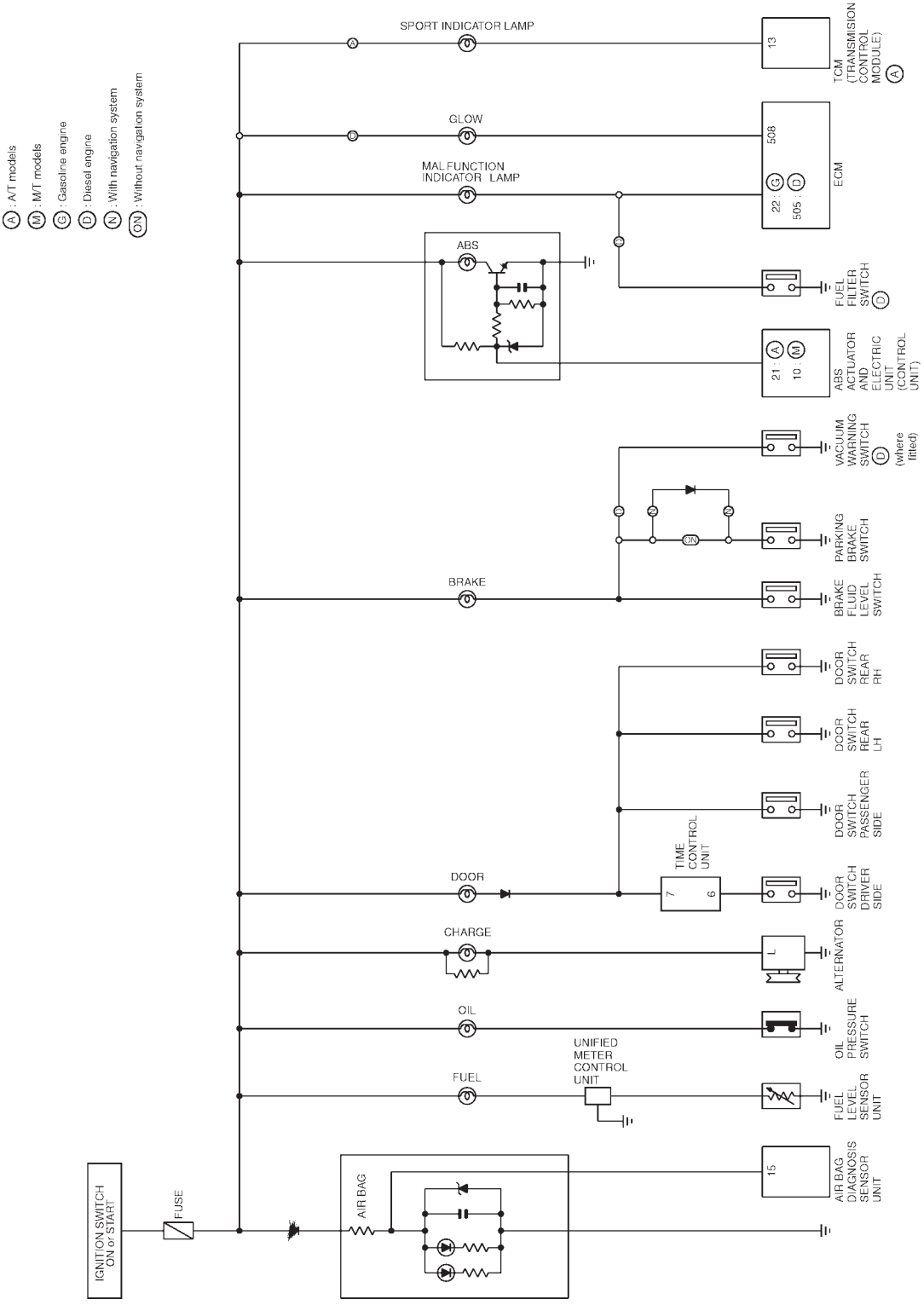
Check the resistance between the terminals of outside air temperature sensor.

<Reference data>

Outside air temperature °C (°F)	Resistance kΩ
−20 (−4)	10.5 - 10.8
0 (32)	6.1 - 6.24
20 (68)	3.0 - 3.1
50 (122)	0.85 - 1.04

Schematic

NLEL0450



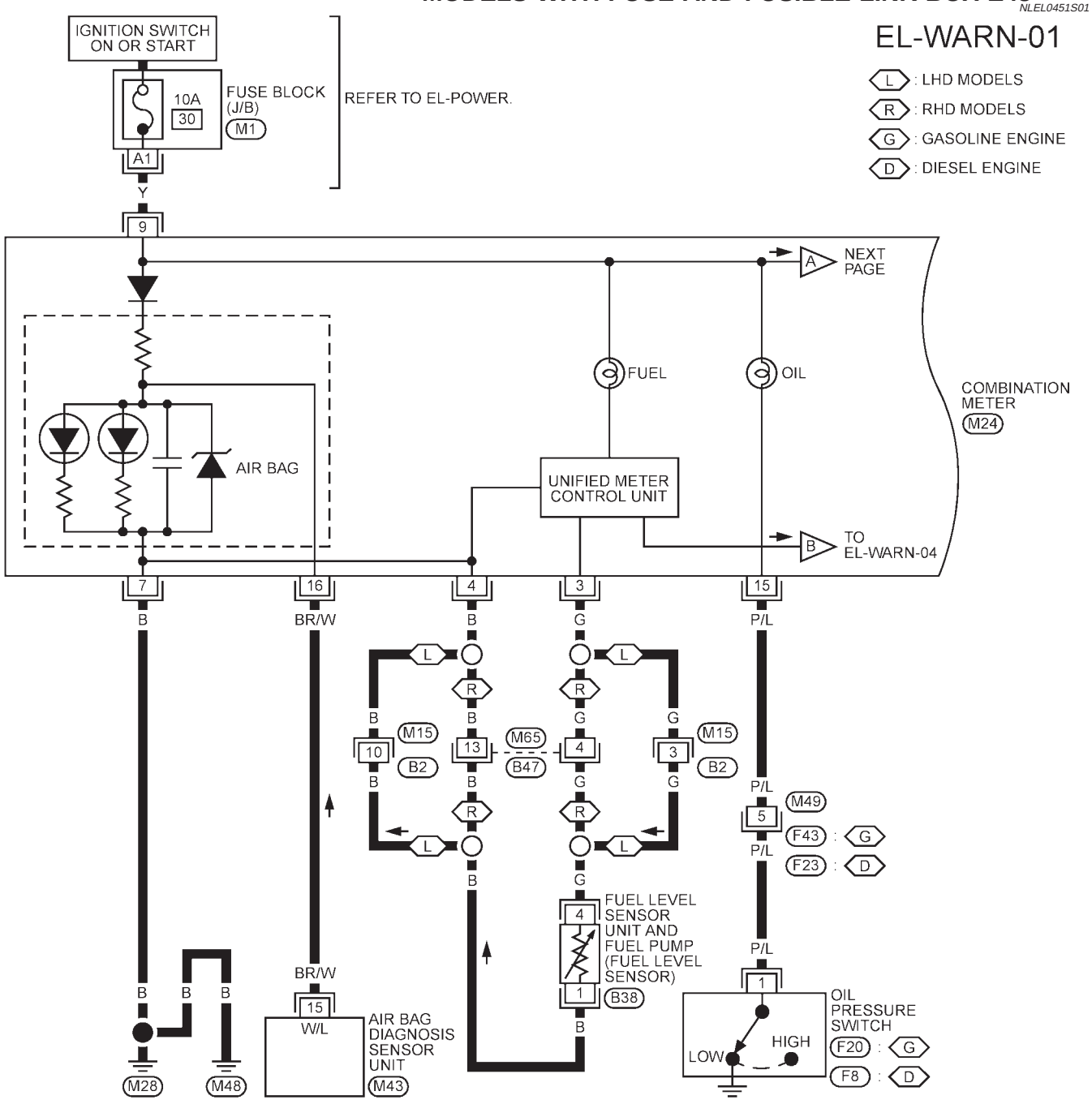
NEL786

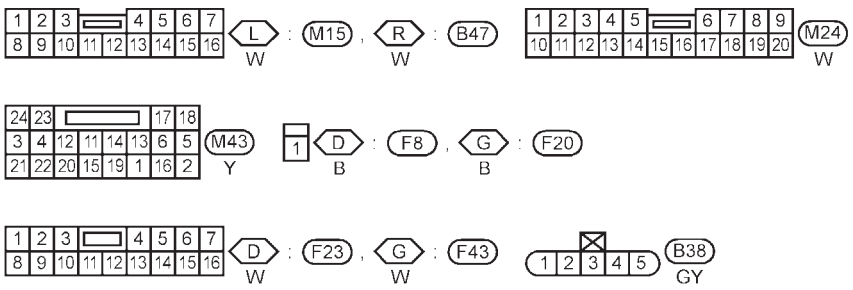
Wiring Diagram — WARN —

NLEL0451

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0451S01





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

YEL897B

EL-WARN-02

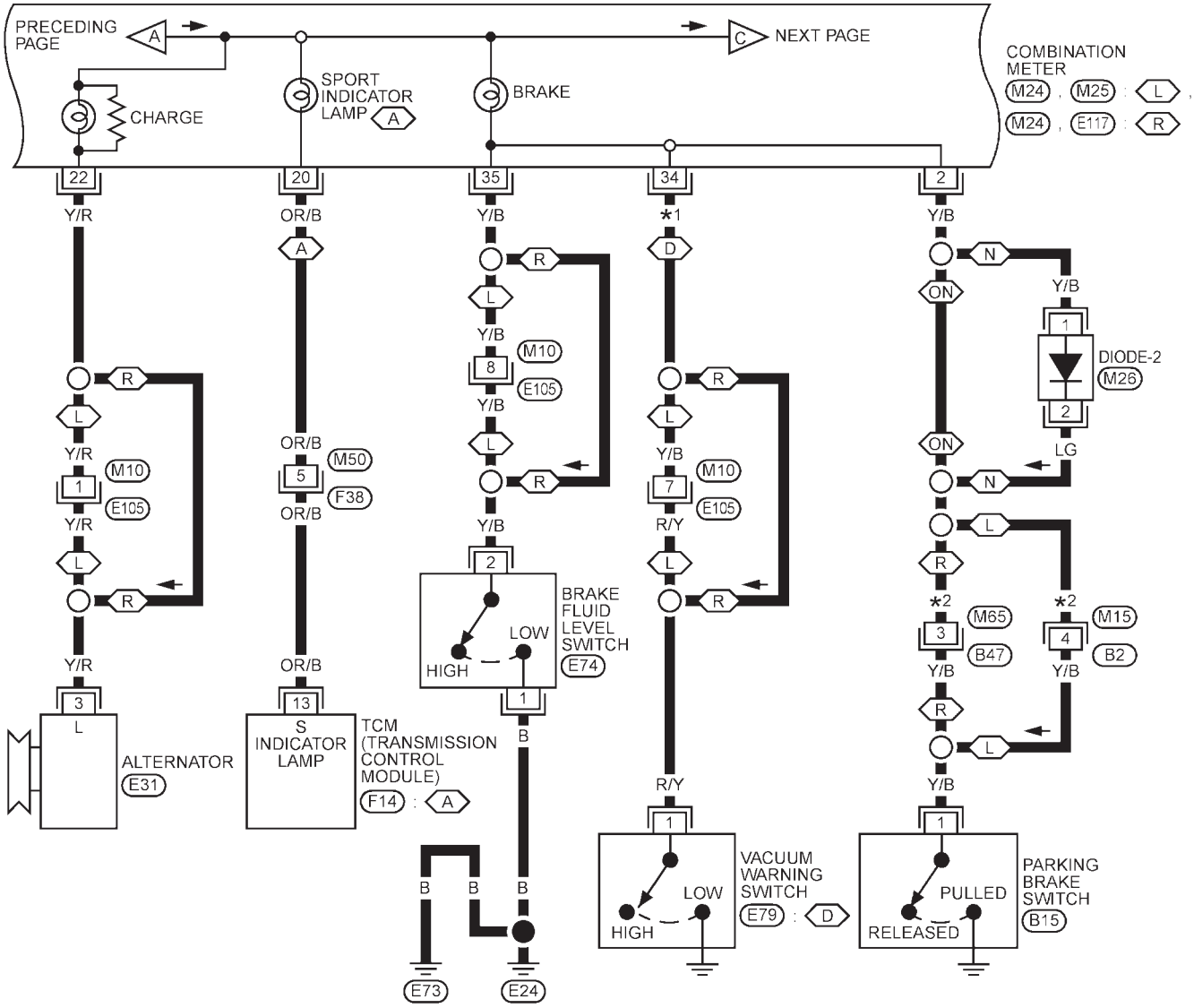
*1 Y/B : L
R/Y : R

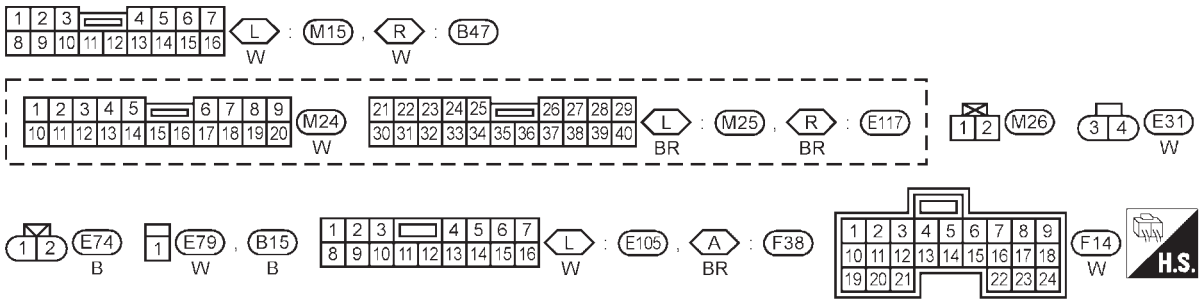
*2 LG : N
Y/B : ON

L : LHD MODELS
R : RHD MODELS

A : A/T MODELS
D : DIESEL ENGINE

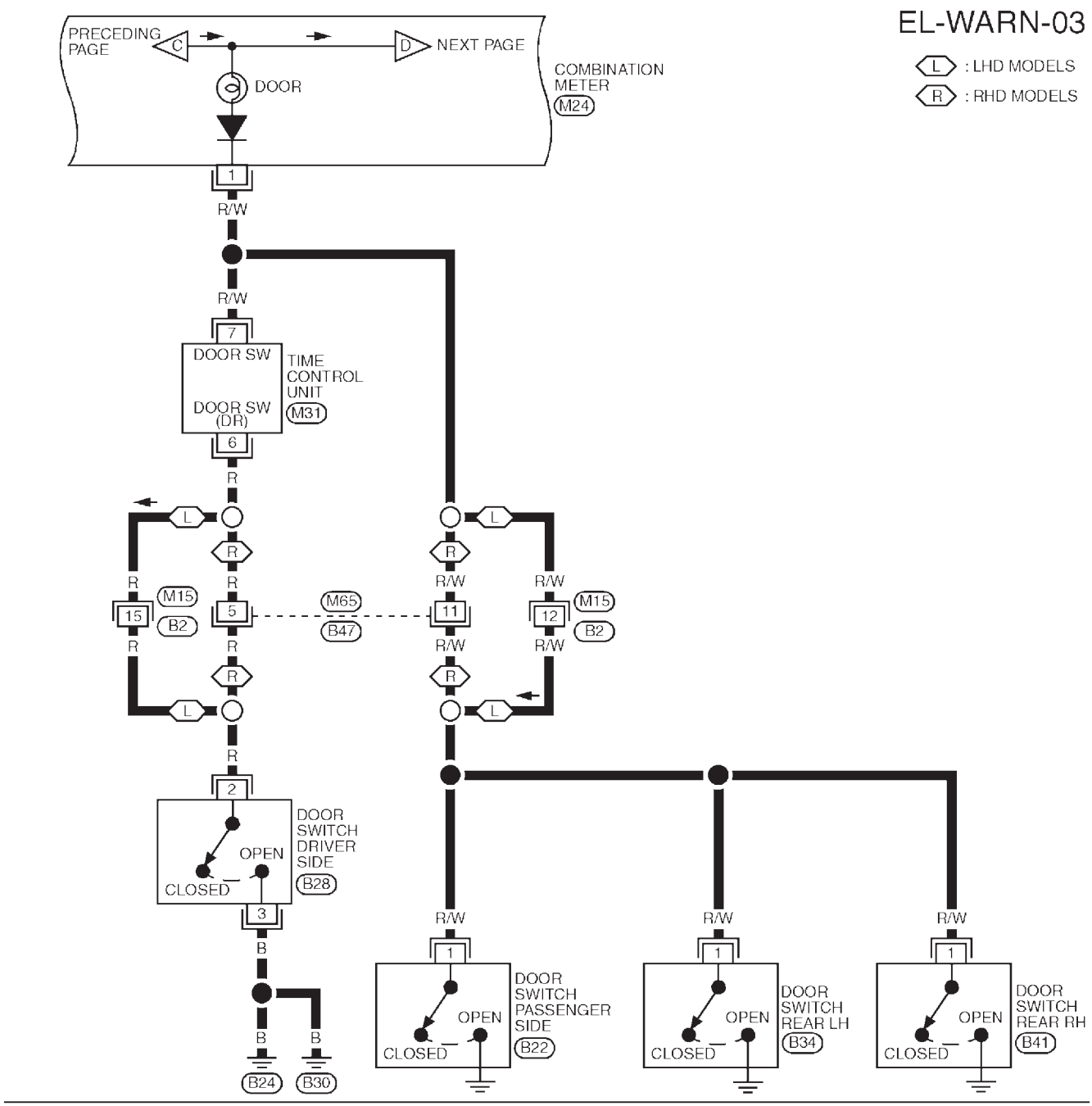
N : WITH NAVIGATION SYSTEM
ON : WITHOUT NAVIGATION SYSTEM

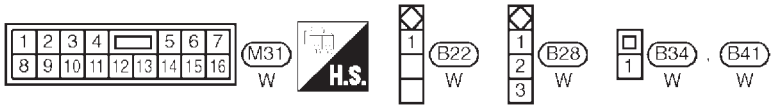




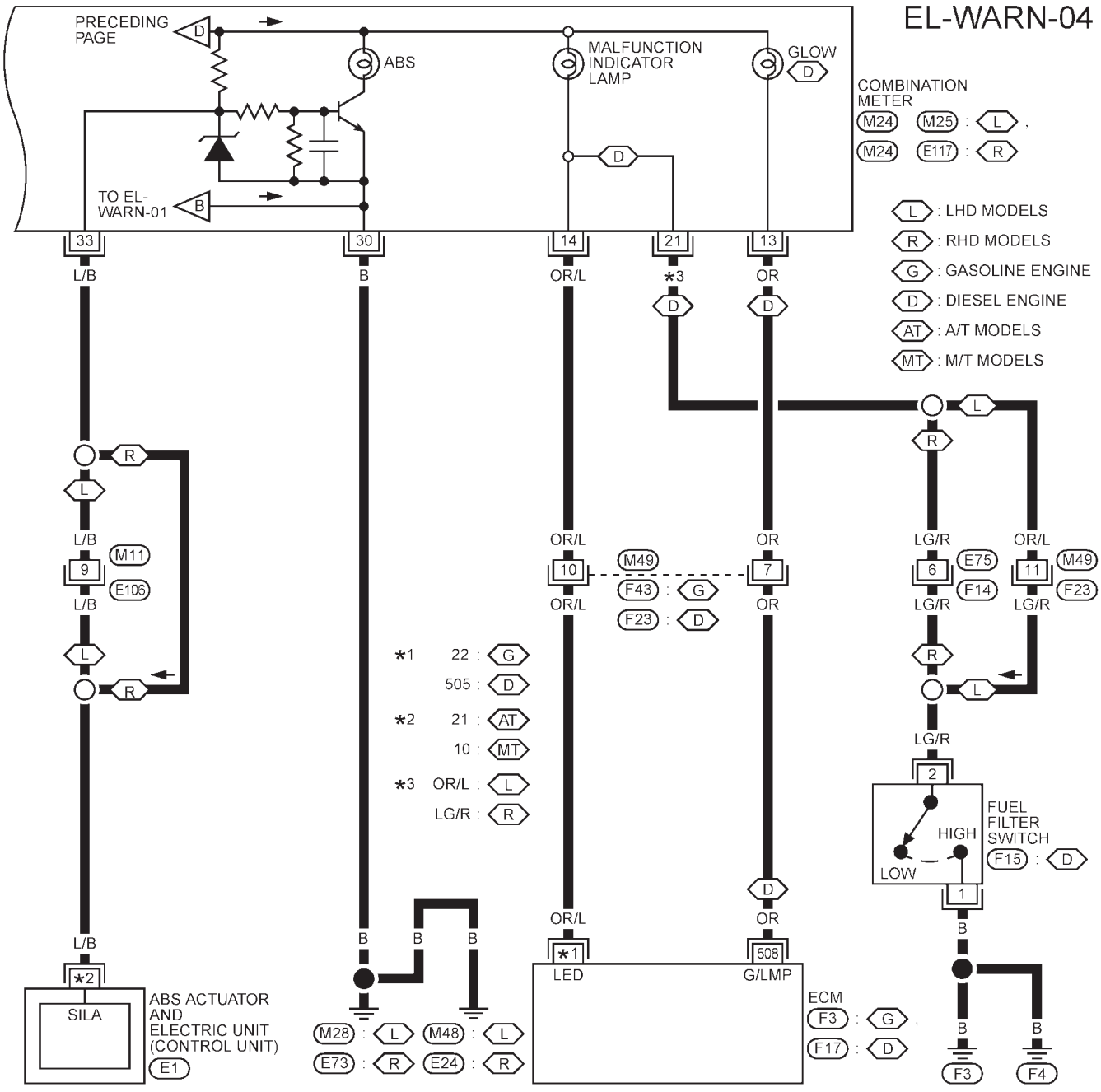
YEL898B

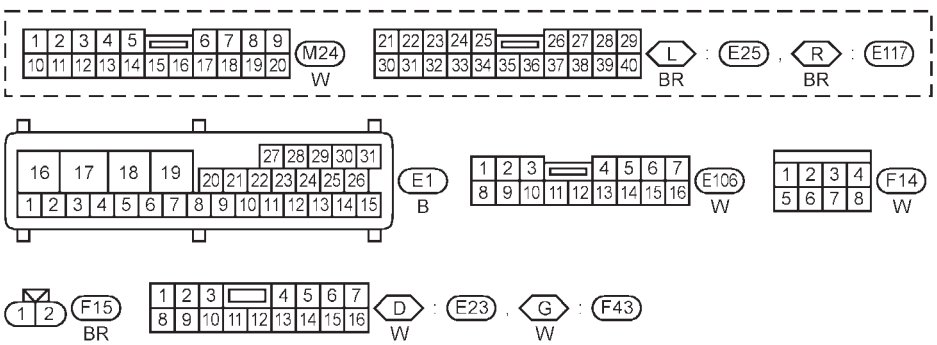
Wiring Diagram — WARN — (Cont'd)





YEL899B





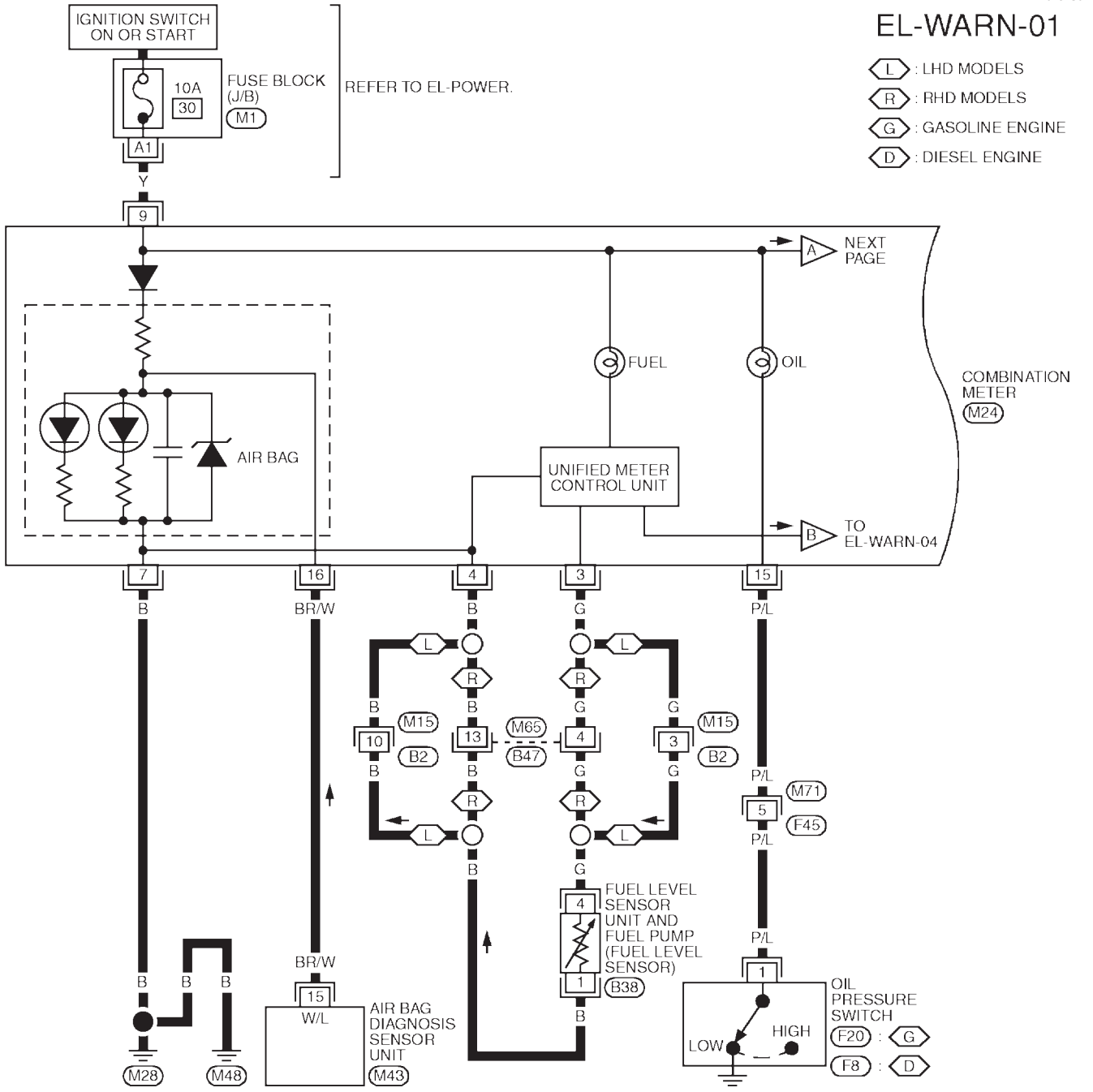
REFER TO THE FOLLOWING.
F3 , F17 -ELECTRICAL UNITS

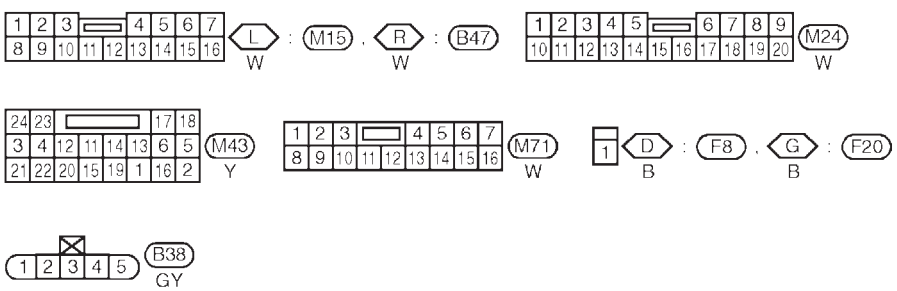
YEL900B

Wiring Diagram — WARN — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0451S02





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

YEL422C

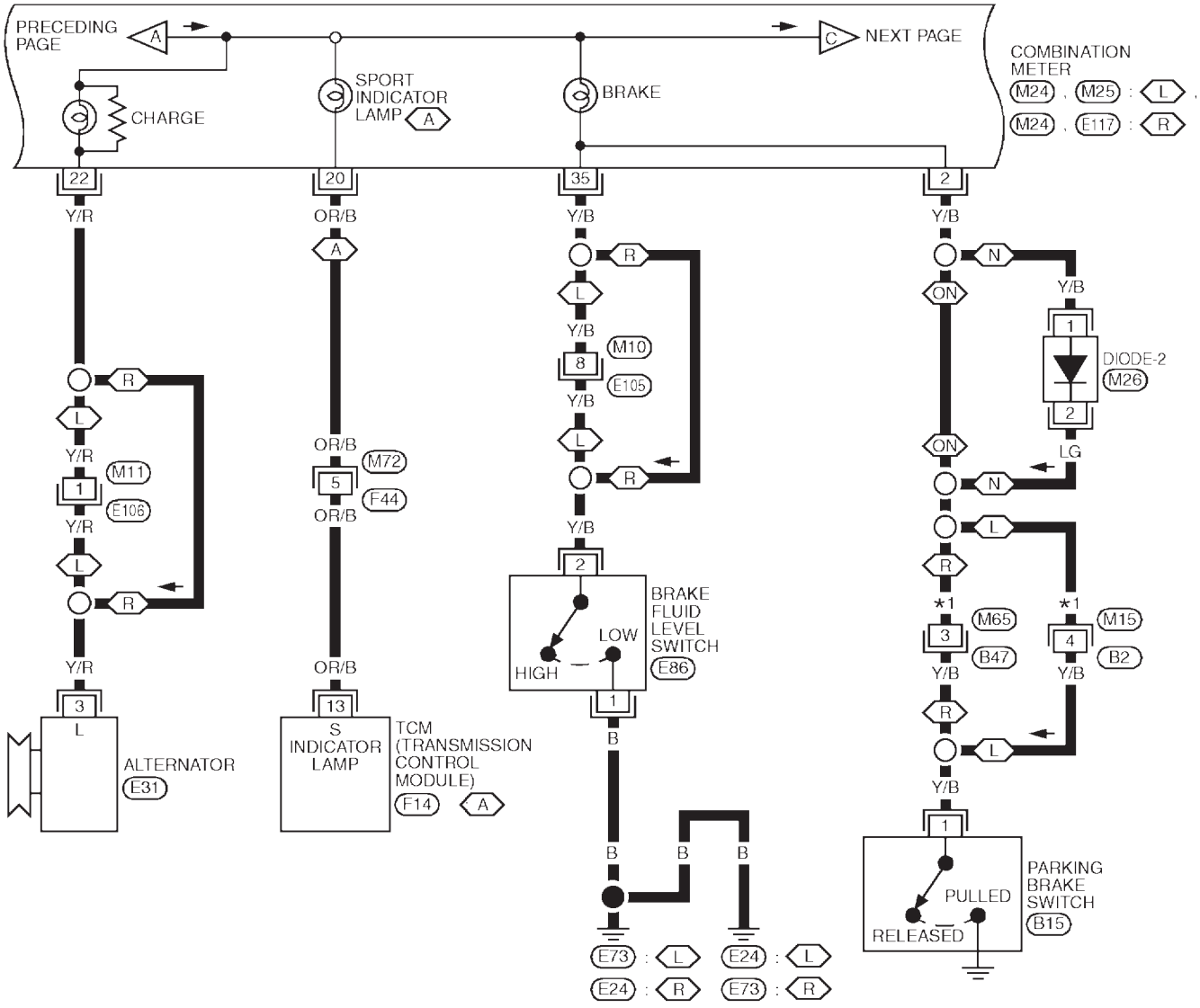
EL-WARN-02

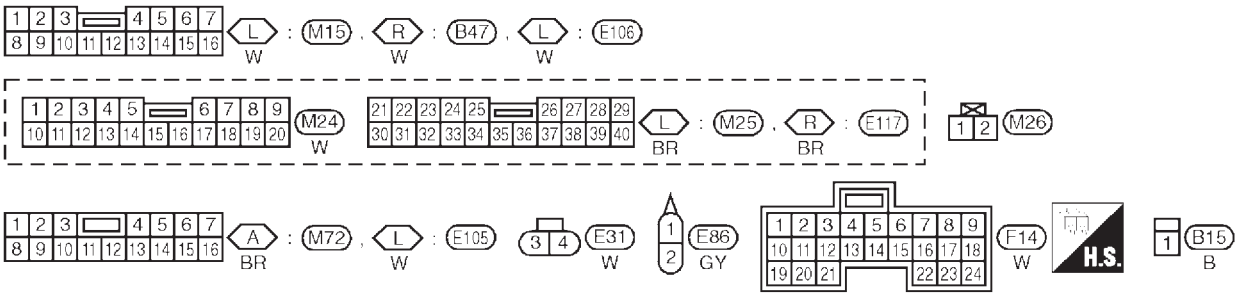
*1 LG : N, Y/B : ON

L : LHD MODELS, R : RHD MODELS

A : A/T MODELS

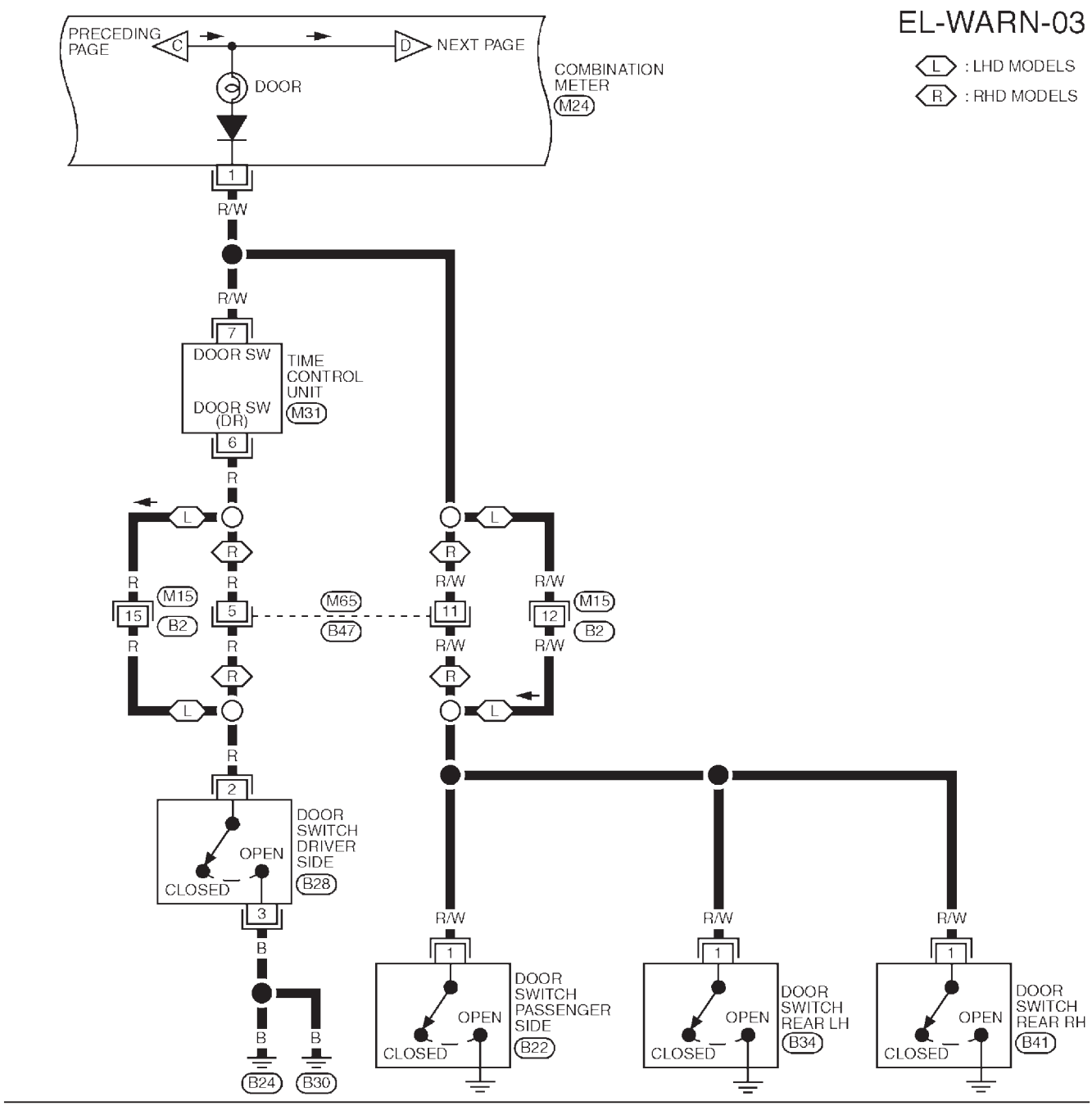
N : WITH NAVIGATION SYSTEM, ON : WITHOUT NAVIGATION SYSTEM

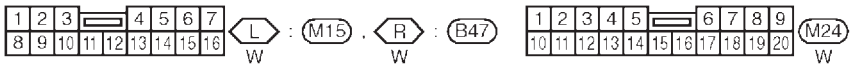


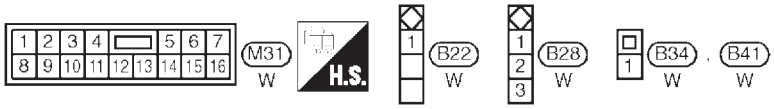


YEL423C

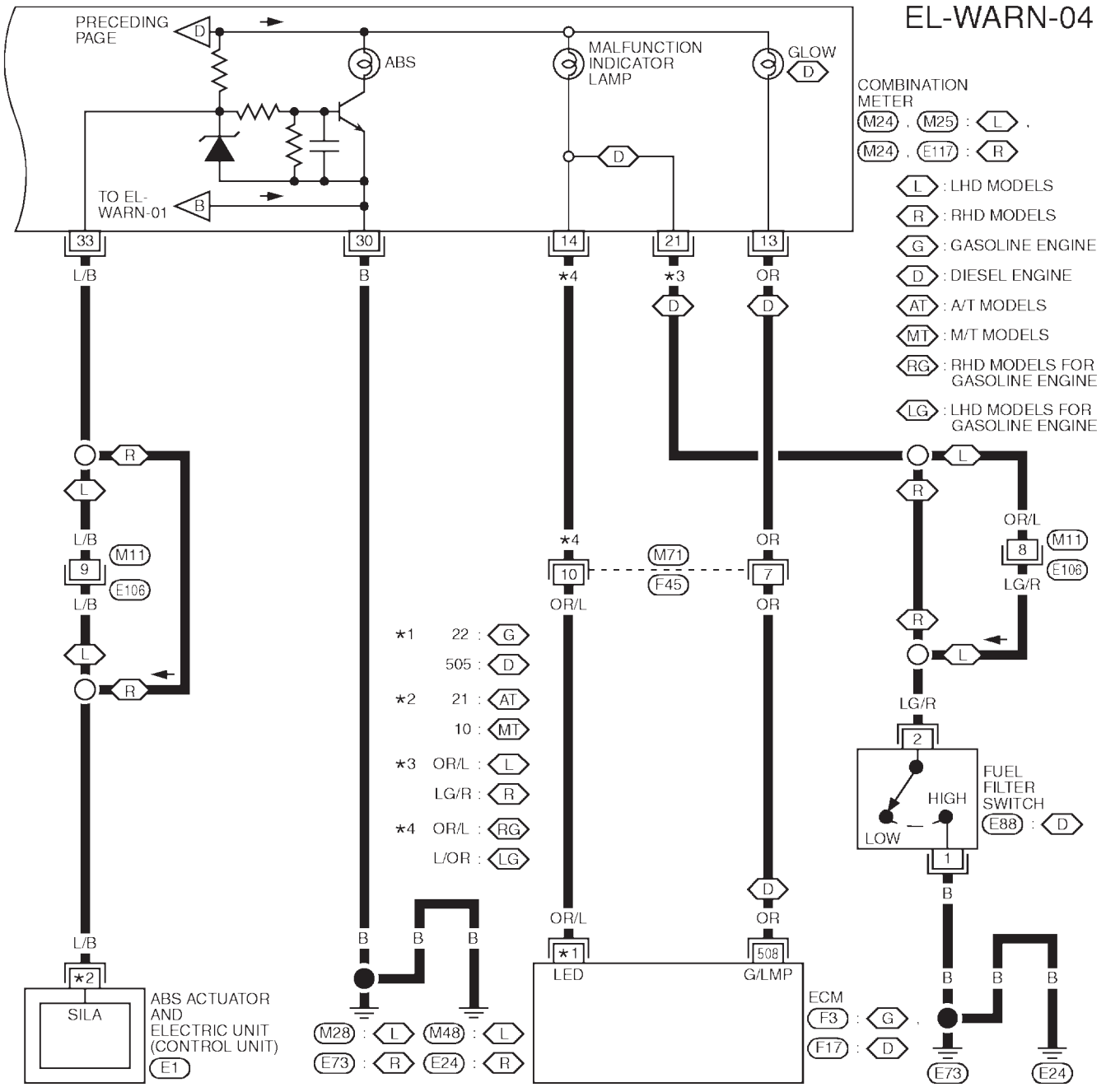
Wiring Diagram — WARN — (Cont'd)





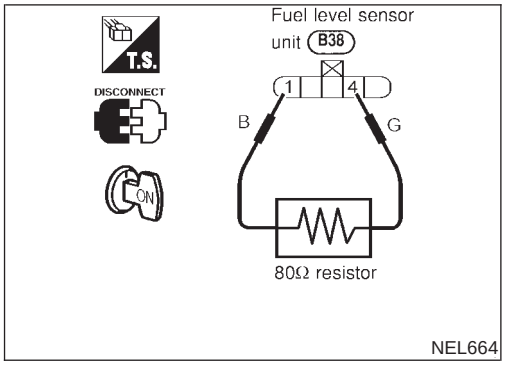


YEL899B



REFER TO THE FOLLOWING.
F3 , F17 -ELECTRICAL UNITS

YEL424C



NEL664

Electrical Components Inspection

NLEL0051

FUEL WARNING LAMP OPERATION CHECK

NLEL0051S01

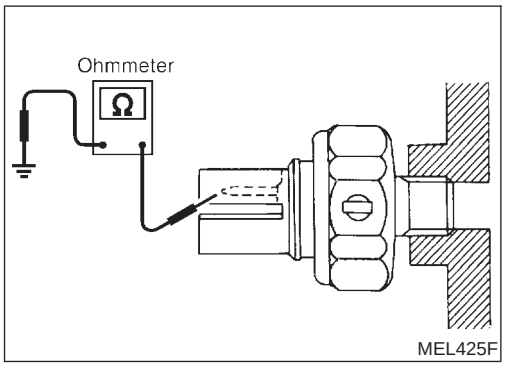
1. Turn ignition switch “OFF”.
2. Disconnect fuel level sensor unit harness connector B38.
3. Connect a resistor (80Ω) between fuel level sensor unit harness connector terminals 4 and 1.
4. Turn ignition switch “ON”.

The fuel warning lamp should come on.

NOTE:

For models with E-OBD system Only

ECM might store the DTC P0180 during this inspection. If the DTC is stored in ECM memory, erase the DTC after reconnecting the fuel level sensor unit and fuel pump harness connector. Refer to EC-69, EC-597 “HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION”, “Emission-related Diagnostic Information”, “ON BOARD DIAGNOSTIC SYSTEM DESCRIPTION”.



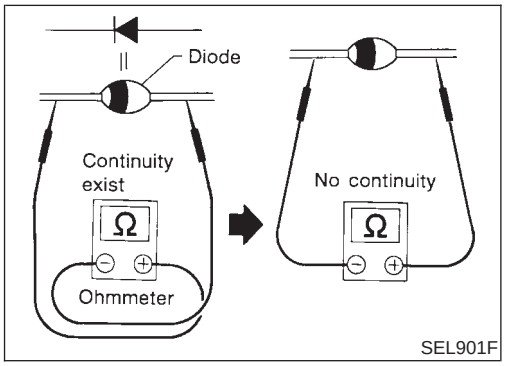
MEL425F

OIL PRESSURE SWITCH CHECK

NLEL0051S02

	Oil pressure kPa (bar, kg/cm^2, psi)	Continuity
Engine running	More than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1 - 3)	No
Engine not running	Less than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1 - 3)	Yes

Check the continuity between the terminals of oil pressure switch and body ground.



SEL901F

DIODE CHECK

NLEL0051S03

- Check continuity using an ohmmeter.
- Diode is functioning properly if test results are as shown in the figure at left.
- Check diodes at the combination meter harness connector instead of on the combination meter assembly. Refer to EL-156, “WARNING LAMP” wiring diagrams.

NOTE:

Specification may vary depending on the type of tester. Before performing this inspection, be sure to refer to the instruction manual for the tester to be used.

Component Parts and Harness Connector Location

NLEL0452

For details, refer to “ELECTRICAL UNIT LOCATION” (EL-442) and “HARNESS LAYOUT” (EL-452).

System Description

NLEL0453

The warning chime is controlled by the time control unit.
The warning chime is located in the time control unit.
Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9.
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 1.
- through 10A fuse (No. 38, located in the fuse and fusible link box)
- to lighting switch terminal 11.

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

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

Ground is supplied to time control unit terminal 16 through body grounds M28 and M48.
When a signal, or combination of signals, is received by the time control unit, the warning chime will sound.

IGNITION KEY WARNING CHIME

NLEL0453S01

With the key in the ignition switch in the OFF position, the driver’s door open and driver’s door locked, the warning chime will sound. Power is supplied

- from key switch terminal 2
- to time control unit terminal 22.

Ground is supplied

- from body grounds B24 and B30
- through front door switch (driver side) terminals 3 and 2
- to time control unit terminal 6, and

Ground is interrupted,

- from body grounds M28 and M48
- to time control unit terminal 35

LIGHT WARNING CHIME

NLEL0453S02

With ignition switch OFF, driver’s door open, and lighting switch in 1ST or 2ND position, warning chime will sound. Power is supplied.

- from lighting switch terminal 12
- to time control unit terminal 10

Ground is supplied

- from front door switch (driver side) terminal 2
- to time control unit terminal 6.

Front door switch (driver side) terminal 3 is grounded through body grounds B24 and B30.

TRAILER DIRECTION INDICATOR WARNING CHIME

NLEL0453S04

This warning chime will be sounded while the direction indicator (turn signal lamp) is in operation with towing the trailer.
This is an audible feedback (warning chime) to the driver.
If no audible feedback is heard while towing the trailer and operating the turn signal, this indicates the bulb failure of the trailer.

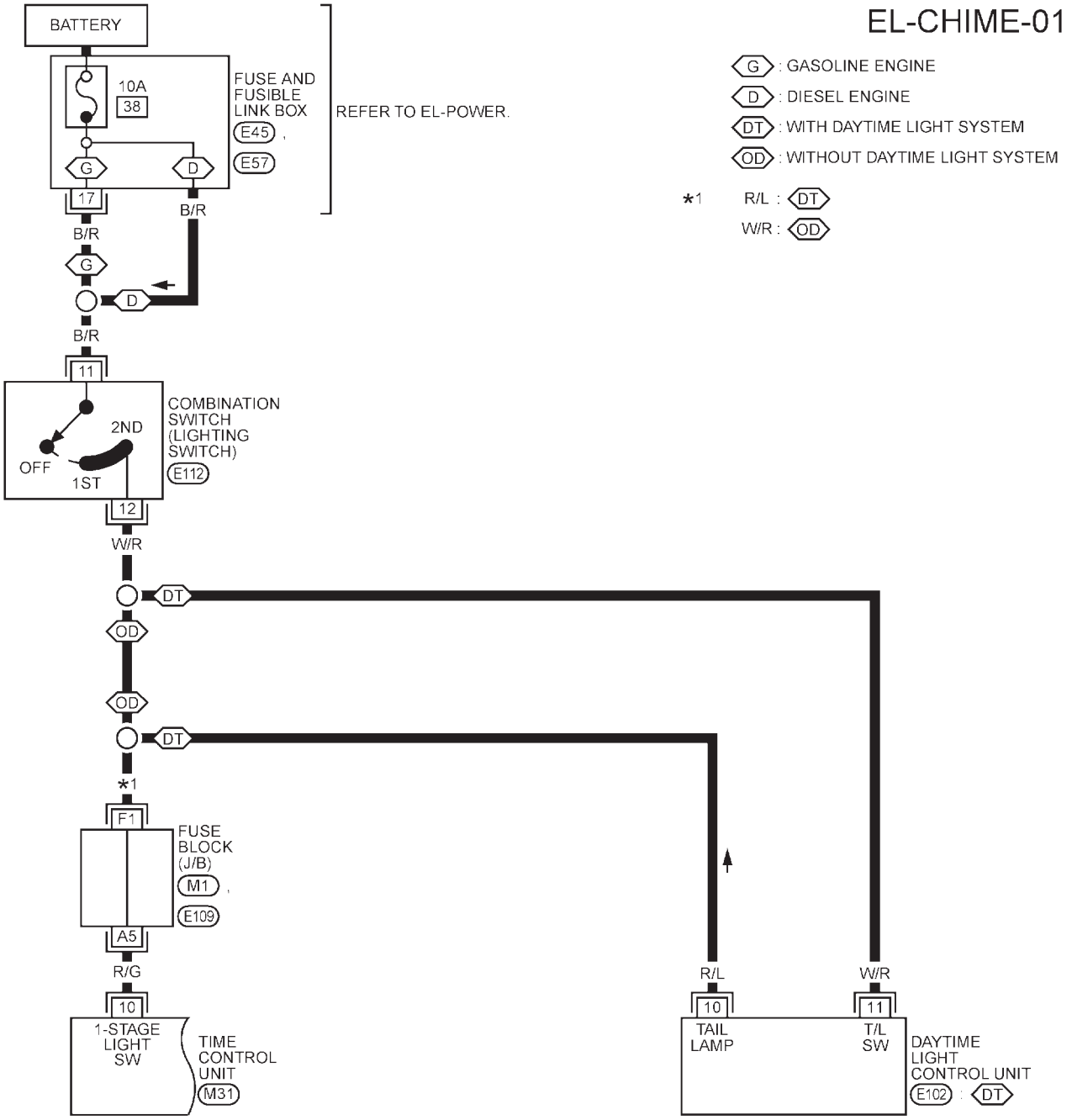
Time control unit will detect the additional electrical load of a turn signal lamp for trailer automatically. Then the chime will be sounded by the time control unit internally with the operation of the turn signal.

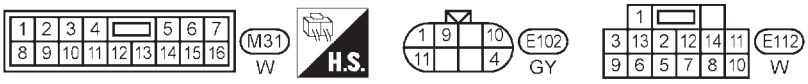
Wiring Diagram — CHIME —

NLEL0454

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

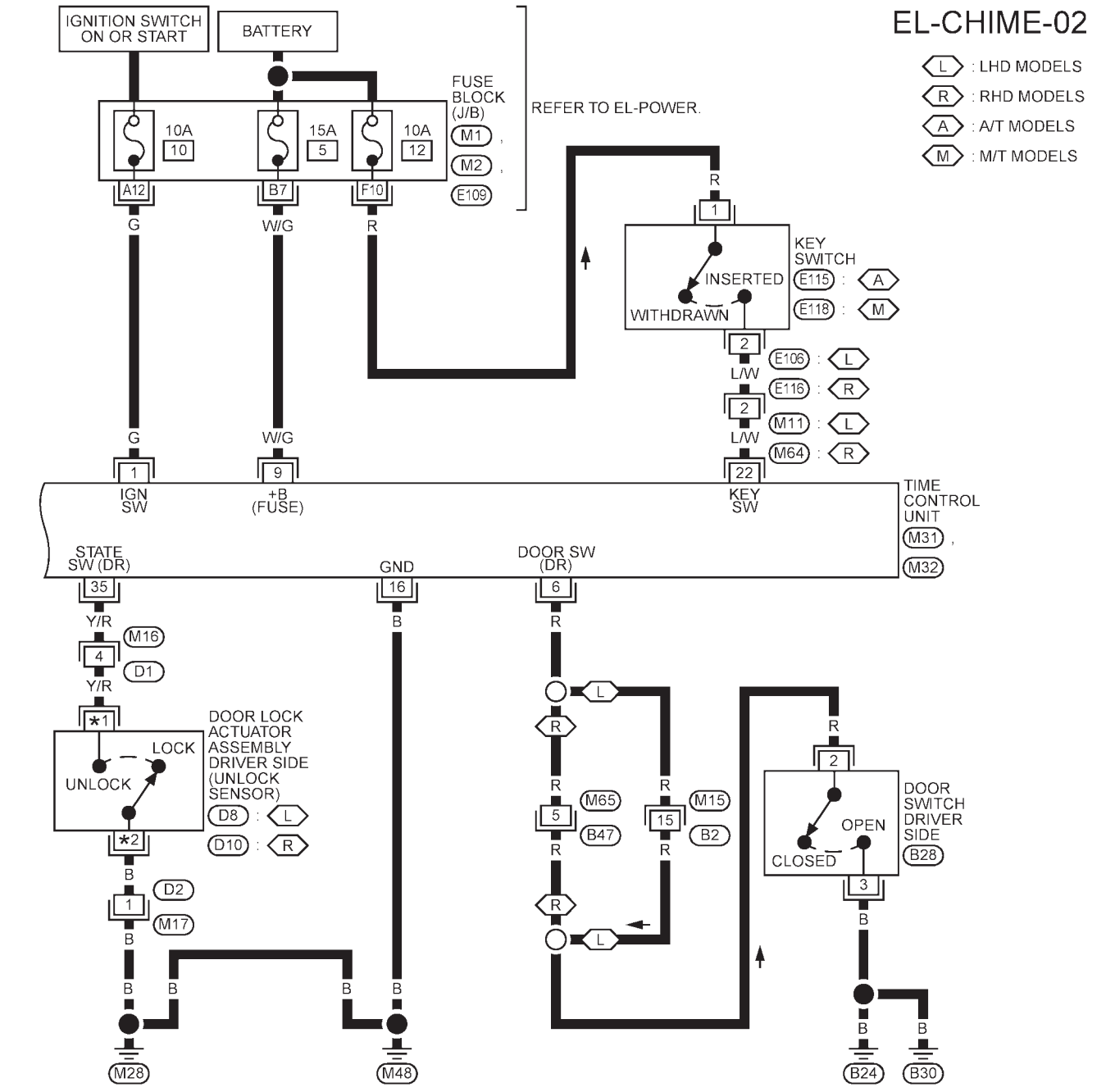
NLEL0454S01

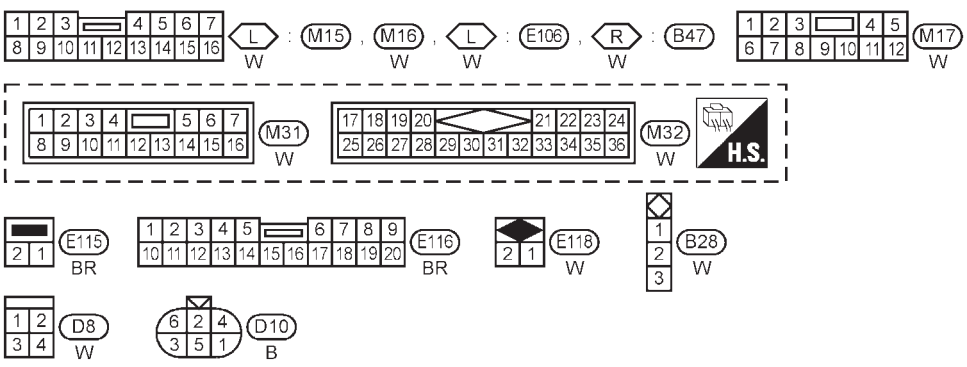




REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK- JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

YEL901B



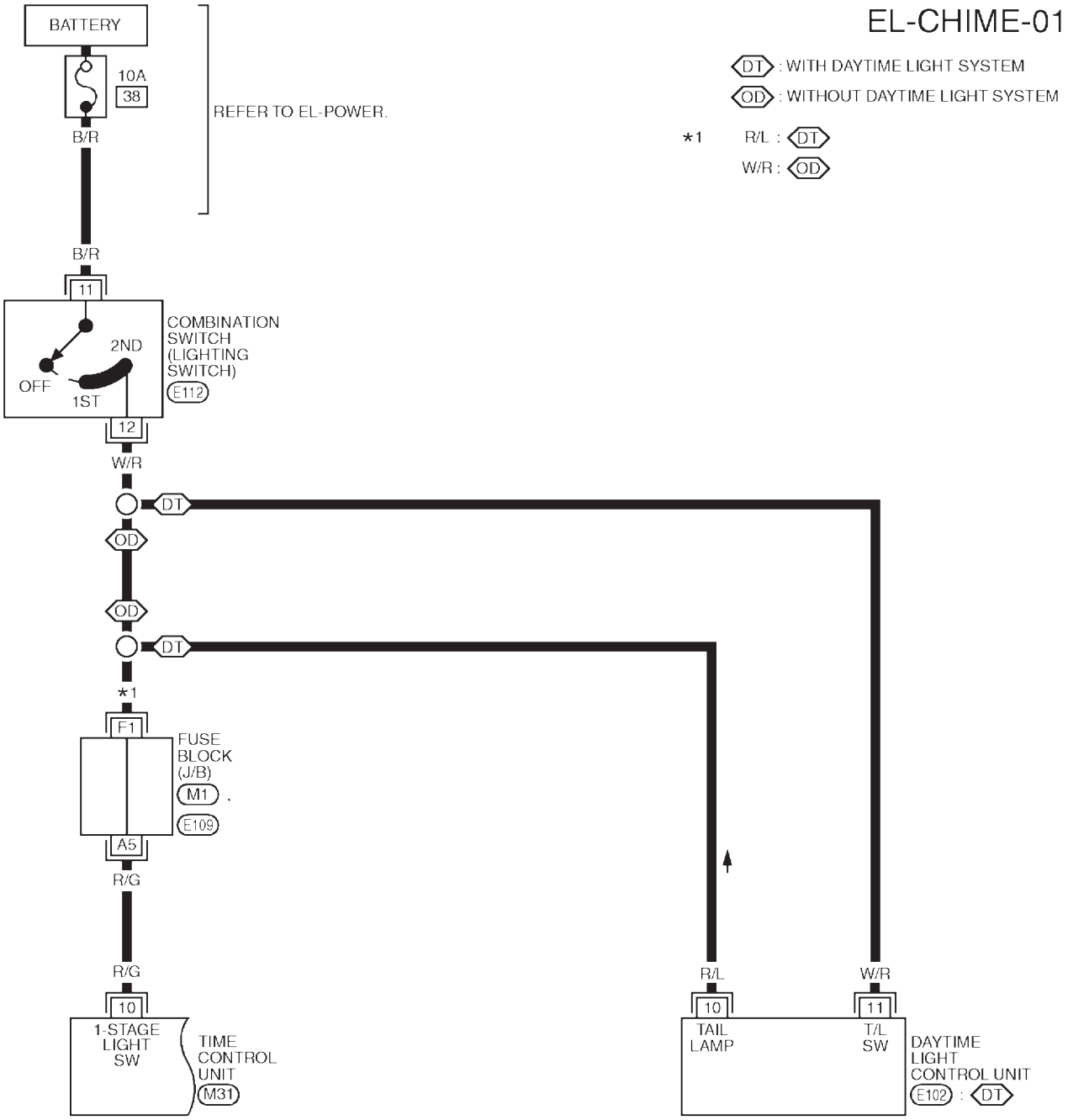


REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL902B

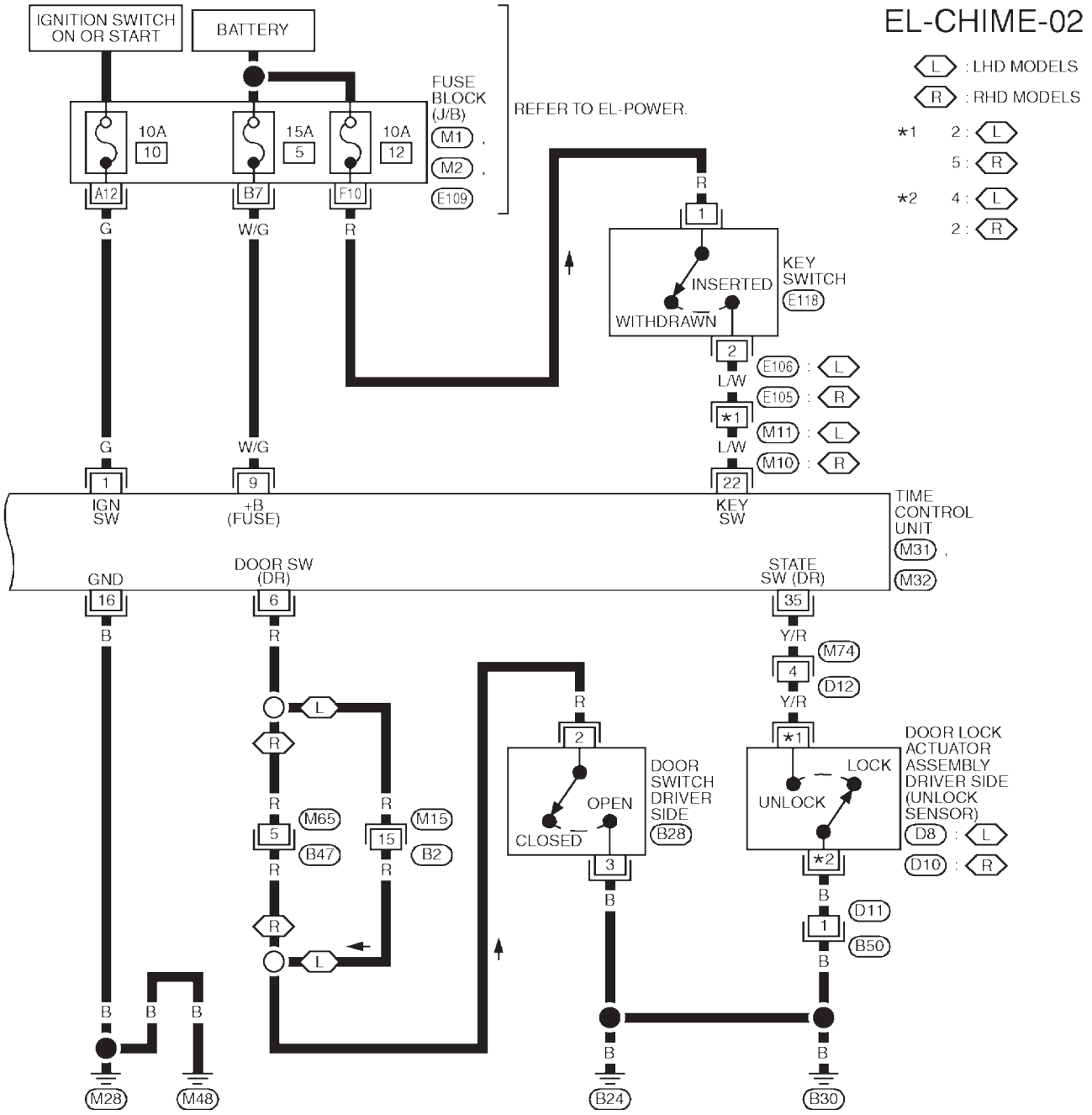
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

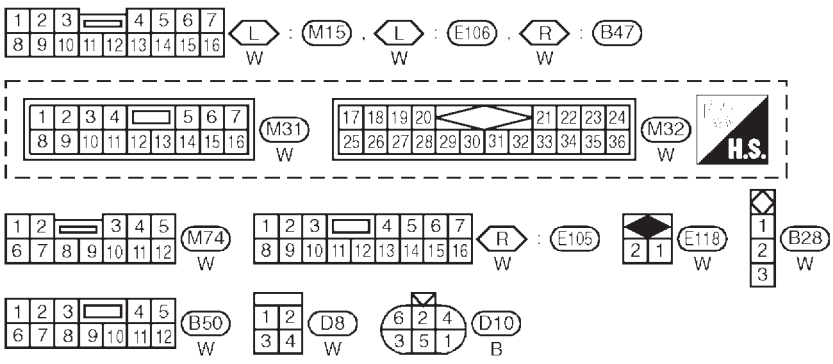
NLEL0454S02



REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL425C





REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL426C

Trouble Diagnoses

NLEL0455

SYMPTOM CHART

NLEL0455S01

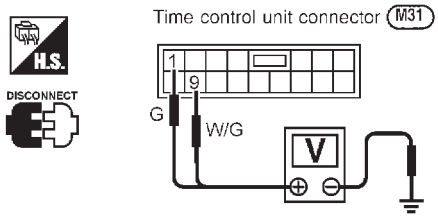
REFERENCE PAGE (EL-)	170	171	172	173	174
SYMPTOM	POWER SUPPLY AND GROUND CIRCUIT CHECK	DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 3 (DOOR UNLOCK SENSOR CHECK)	DIAGNOSTIC PROCEDURE 4
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X	X	X
All warning chimes do not activate.	X				X

POWER SUPPLY AND GROUND CIRCUIT CHECK

NLEL0455S02

Power Supply Circuit Check

NLEL0455S0201

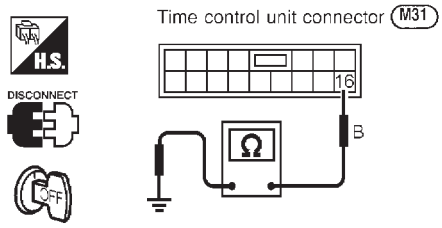


Terminals		Ignition swtich position		
(+)	(−)	OFF	ACC	ON
9	Ground	Battery voltage	Battery voltage	Battery voltage
1	Ground	0V	0V	Battery voltage

NEL665

Ground Circuit Check

NLEL0455S0202



Continuity should exist.

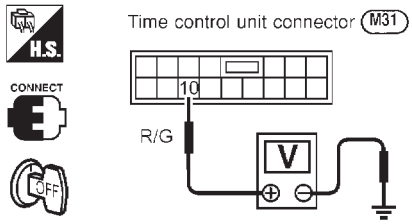
NEL666

DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)

=NLEL0455S03

1	CHECK LIGHTING SWITCH INPUT SIGNAL

Check voltage between time control unit terminal 10 and ground.



Voltage [V]:
Condition of lighting switch: 1st or 2nd
Approx. 12
Condition of lighting switch: OFF

NEL667

OK or NG

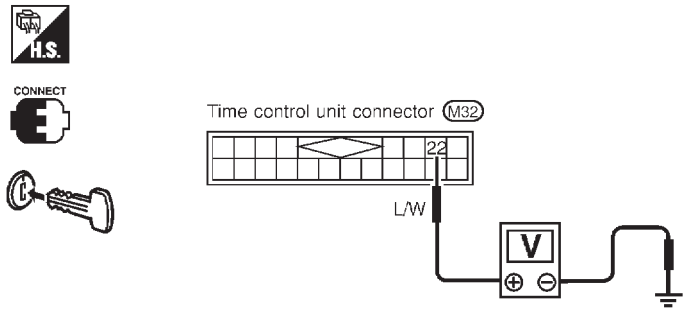
OK	▶	Lighting switch is OK.
NG	▶	**Check the following.** ● 10A fuse (No. 38, located in the fuse and fusible link box) ● Harness for open or short between time control unit and lighting switch/daytime light control unit ● Lighting switch

DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)

=NLEL0455S04

1	CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit terminal 22 and ground.



Voltage [V]:
Condition of switch: Key is inserted.
Approx. 12
Condition of switch: Key is removed
0

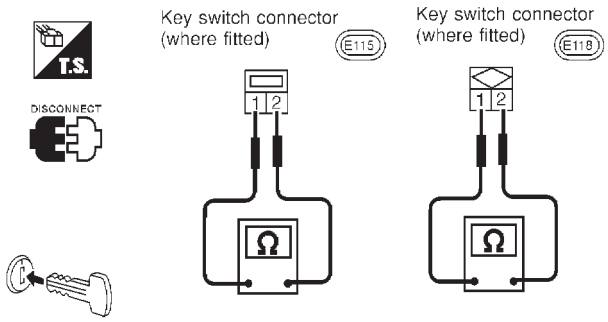
NEL653

OK or NG

OK	▶	Key switch is OK.
NG	▶	GO TO 2.

2	CHECK KEY SWITCH (INSERT)

Check continuity between terminals 1 and 2.



NEL787

OK or NG

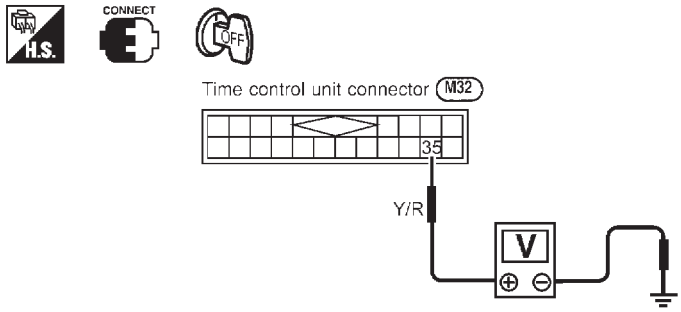
OK	▶	**Check the following.** ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between time control unit and key switch
NG	▶	Replace key switch.

DIAGNOSTIC PROCEDURE 3 (DOOR UNLOCK SENSOR CHECK)

NLEL0455S05

1	CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between time control unit terminal 35 and ground.



Terminals		Condition (Driver's door)	Voltage [V]
(+)	(–)		
35	Ground	Locked	Approx. 5
		Unlocked	0

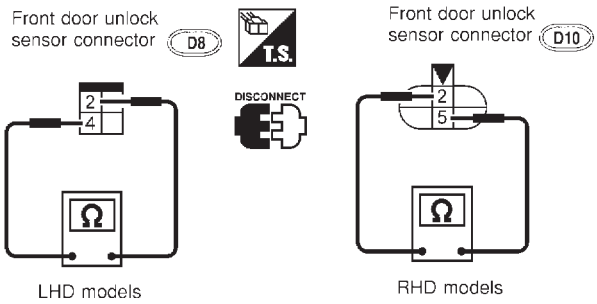
NEL649

OK or NG

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

2	CHECK DOOR UNLOCK SENSOR

1. Disconnect door unlock sensor connector.
2. Check continuity between door unlock sensor terminals.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

NEL650

OK or NG

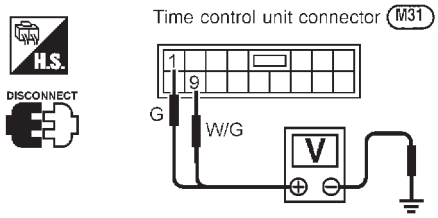
OK	▶	**Check the following.** ● Door unlock sensor ground circuit ● Harness for open or short between time control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

DIAGNOSTIC PROCEDURE 4

NLEL0455S06

1	CHECK IGNITION ON SIGNAL

Check voltage between time control unit terminal 1 or 9 and ground.



Terminals		Ignition swtich position		
(+)	(−)	OFF	ACC	ON
9	Ground	Battery voltage	Battery voltage	Battery voltage
1	Ground	0V	0V	Battery voltage

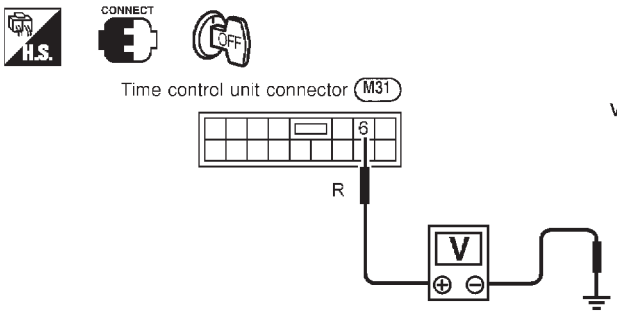
NEL665

OK or NG

OK	▶	GO TO 2.
NG	▶	**Check the following.** ● 10A fuse [No. 10, located in fuse block (J/B)] ● 15A fuse [No. 5, located in the fuse block (J/B)] ● Harness for open or short between time control unit and fuse

2	CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between time control unit terminal 6 and ground.



Voltage [V]:
Condition of driver's door: CLOSED
Approx. 5
Condition of driver's door: OPEN
0

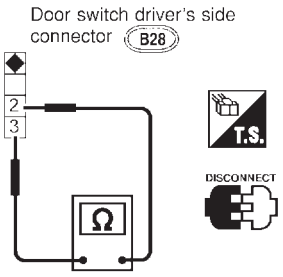
NEL647

OK or NG

OK	▶	System is OK.
NG	▶	Check voltage between time control unit terminal 6 and body ground with disconnecting front door switch (driver side). If approx. 5V is supplied, GO TO 3. If approx. 5V is not supplied, replace time control unit.

3	CHECK DRIVER SIDE DOOR SWITCH

Check continuity between terminals 2 and 3.



Continuity:
Door switch is pushed
No
Door switch is released
Yes

NEL648

OK or NG

OK	▶	**Check the following.** ● Driver side door switch ground circuit and condition ● Harness for open or short between time control unit and driver side door switch
NG	▶	Replace driver side door switch.

System Description

NLEL0456

WIPER OPERATION

NLEL0456S01

The wiper switch is controlled by a lever built into the combination switch.
There are three wiper switch positions:

- LO speed
- HI speed
- INT (Intermittent)

Power is supplied at all time

- through 30A fuse
- to front wiper relay-1 terminal 5, and
- through 40A fusible link
- through ignition switch terminal 1 and 3 when the switch is in the ON or START position
- to front wiper relay-1 terminal 1.

Ground is supplied

- to front wiper relay-1 terminal 2
- through body grounds E24 and E73

With power and ground supplied, the front wiper relay-1 is energized.

Low and High Speed Wiper Operation

NLEL0456S0101

Ground is supplied to wiper and washer switch terminal 17 through body grounds E30 and E73.
When the wiper switch is placed in the LO position, ground is supplied

- through terminal 14 of the front wiper and washer switch
- to front wiper motor terminal 4.

With power and ground supplied, the wiper motor operates at low speed.
When the wiper switch is placed in the HI position, ground is supplied

- through terminal 16 of the front wiper and washer switch
- to wiper motor terminal 5.

With power and ground supplied, the wiper motor operates at high speed.

Auto Stop Operation

NLEL0456S0102

With wiper switch turned OFF, wiper motor will continue to operate until wiper arms reach windshield base.
When wiper arms are not located at base of windshield with wiper switch OFF, ground is provided

- from terminal 14 of the front wiper and washer switch
- to front wiper motor terminal 4, in order to continue wiper motor operation at low speed.

Ground is also supplied

- through terminal 13 of the front wiper and washer switch
- to front wiper relay-2 terminal 3
- through terminal 4 of the front wiper relay-2.
- to front wiper motor terminal 2
- through terminal 3 of front wiper motor
- through body grounds E24 and E73.

When wiper arms reach base of windshield, front wiper motor terminals 2 and 3 are connected instead of terminals 2 and 1. Wiper motor will then stop wiper arms at the STOP position.

Intermittent Operation

NLEL0456S0103

The front wiper motor operates the wiper arms one time at low speed at a set interval of approximately 1 to 13 seconds. This feature is controlled by the wiper amplifier (INT SW) combined with front wiper switch.
When the wiper switch is placed in the INT position, ground is supplied to wiper amplifier (WIPER SW INT) and (ACC).
The desired interval time is input to wiper amplifier (INT VR) from wiper volume switch combined with front wiper and washer switch.
Then intermittent ground is supplied

- from body grounds E24 and E73
- through terminal 5 of front wiper relay-2,
- through terminal 3 of front wiper relay-2,

- through terminal 13 of front wiper switch and,
- through terminal 14 of front wiper switch
- to terminal 4 of front wiper motor.

The desired interval time is input

- to front wiper relay-2 terminal 1
- from terminal 20 of front wiper switch

WASHER OPERATION

NLEL0456S02

With the ignition switch in the ON or START position and the lever is pulled to the WASH/F position, power is supplied

- through 10A fuse [No. 27, located in the fuse block (J/B)]
- to front wiper switch terminal 5.
- through front wiper switch terminal 3
- to front washer motor terminal 1.

When the lever is pulled to the WASH/F position, ground is supplied

- from body grounds E24 and E73
- through terminal 4 of the front wiper switch
- through terminal 18 of the front wiper switch
- to front washer motor terminal 2.

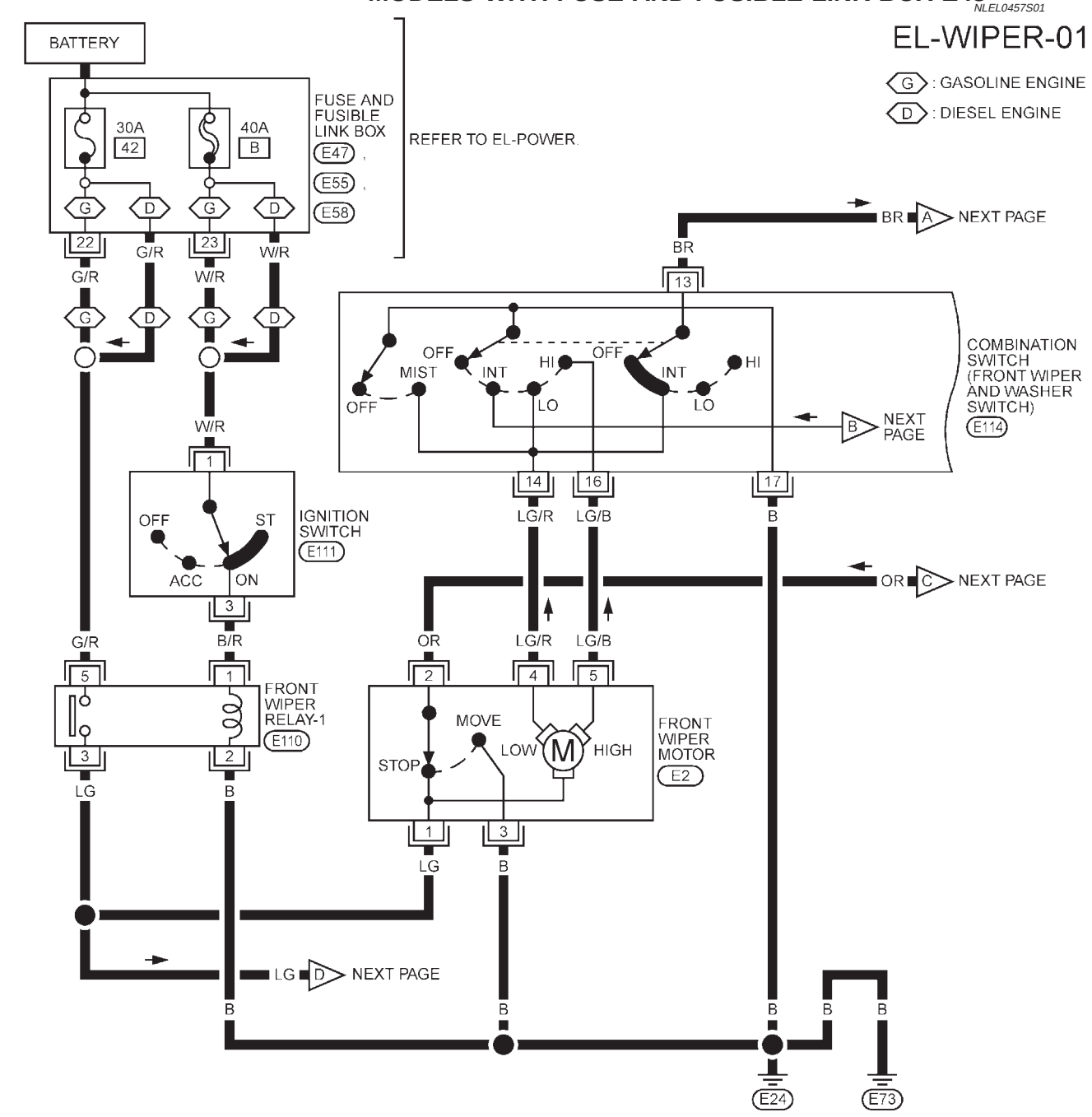
With power and ground supplied, the washer motor operates.
When the lever is pulled to the WASH position for one second or more, the wiper motor operates at low speed for approximately 3 seconds to clean windshield. This feature is controlled by the wiper amplifier in the same manner as the intermittent operation.

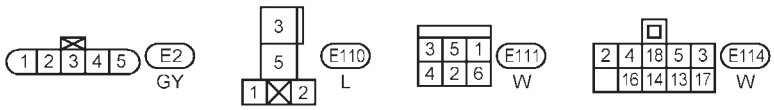
Wiring Diagram — WIPER —

NLEL0457

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

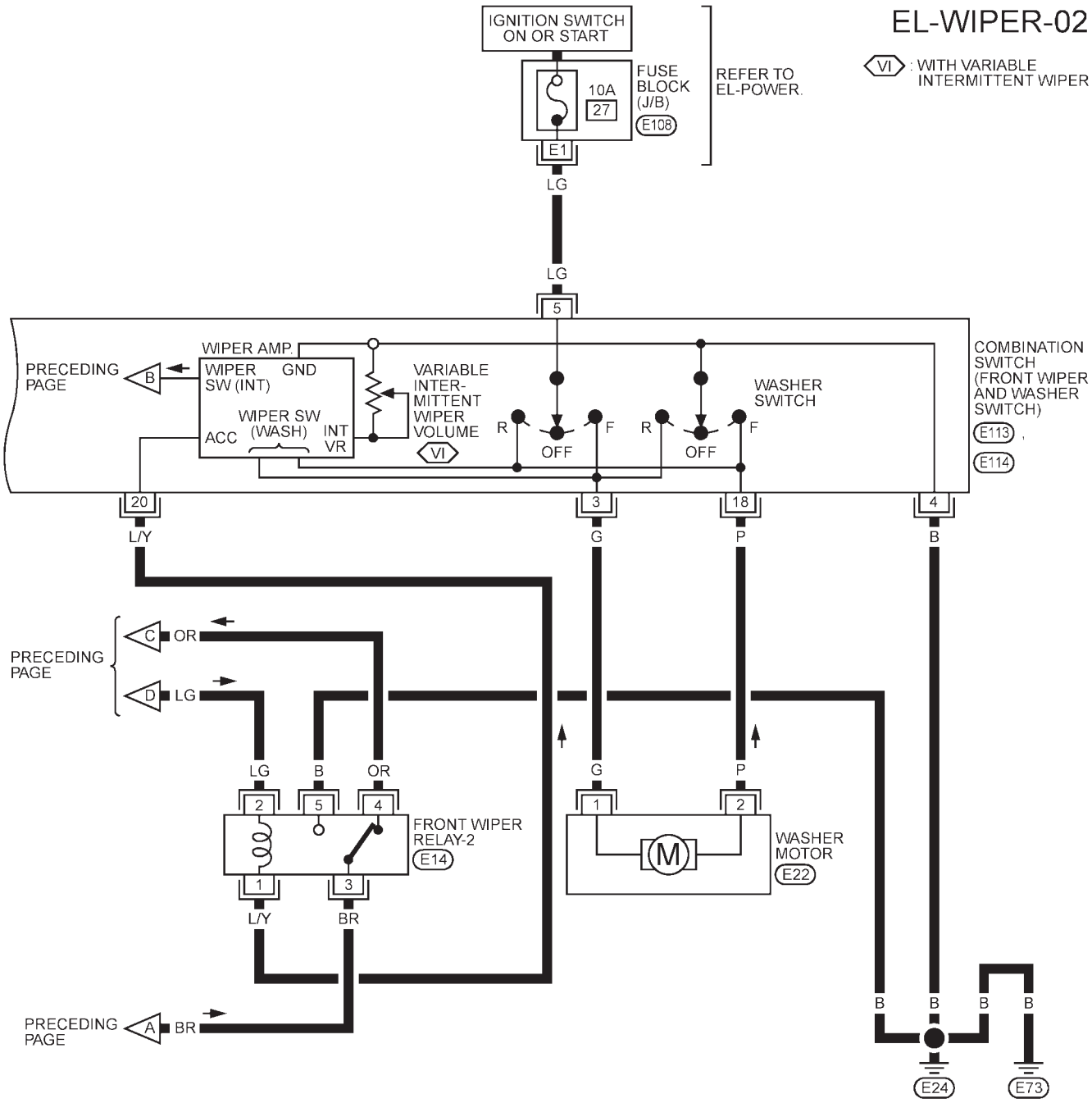
NLEL0457S01

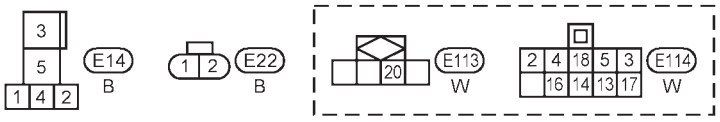




REFER TO THE FOLLOWING.
E47 , E55 , E58
-FUSE AND FUSIBLE LINK BOX

YEL903B





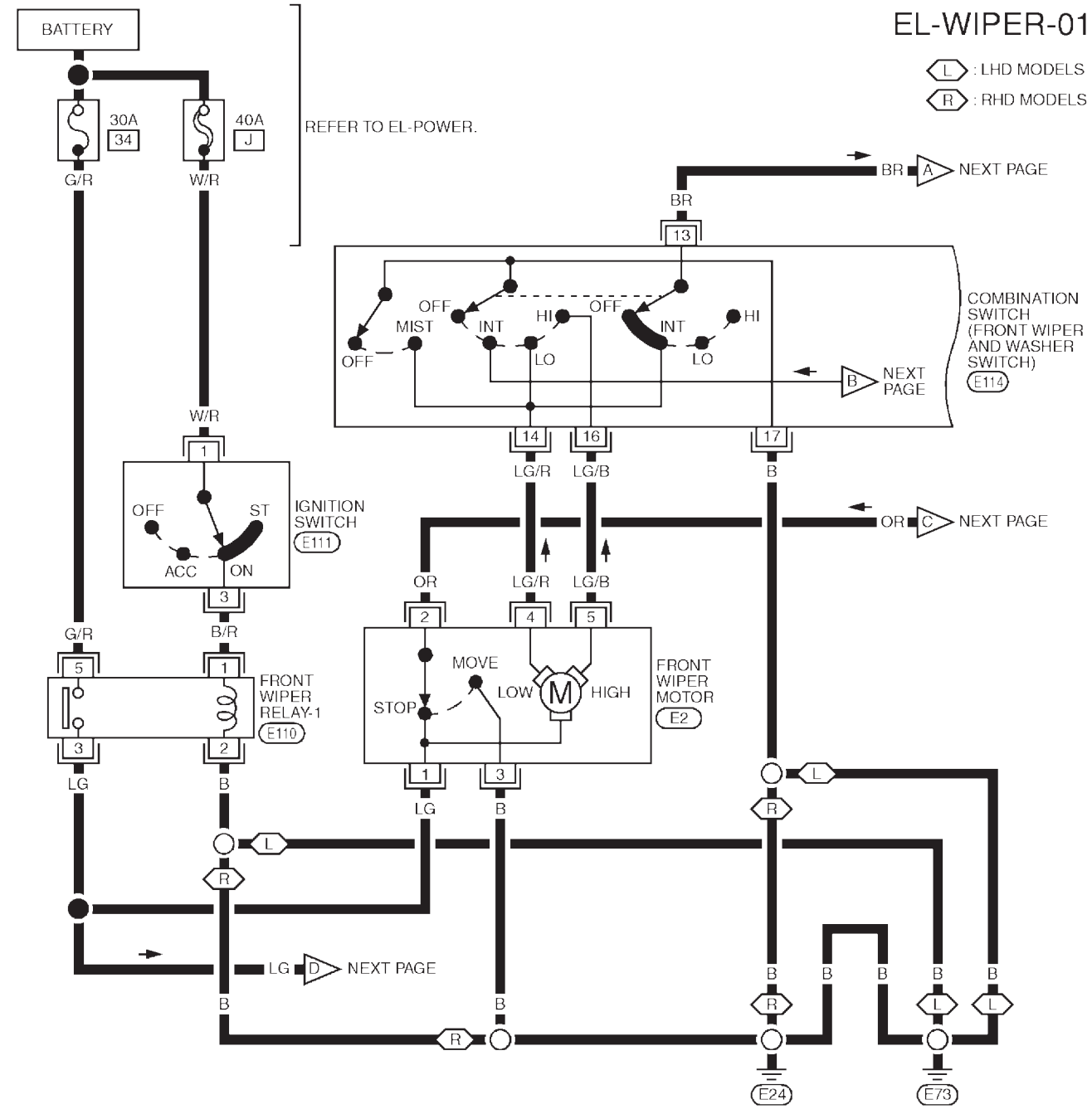
REFER TO THE FOLLOWING.
E108 -FUSE BLOCK-JUNCTION BOX (J/B)

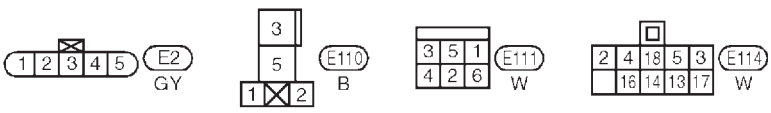
YEL904B

Wiring Diagram — WIPER — (Cont'd)

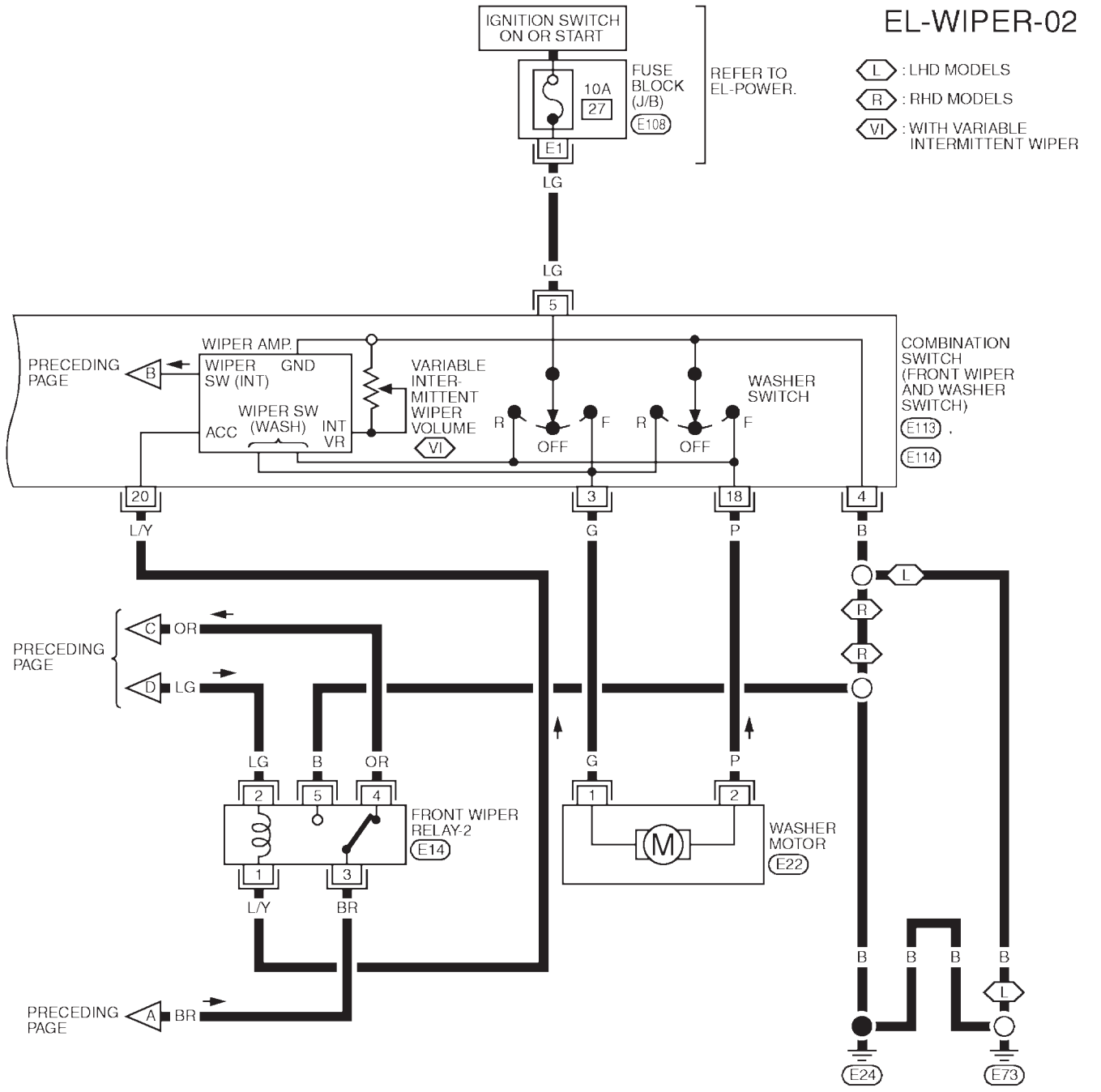
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

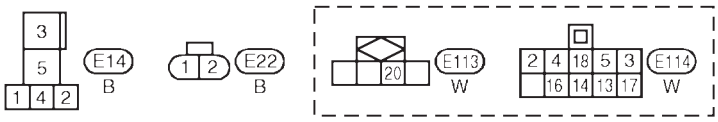
NLEL0457S02





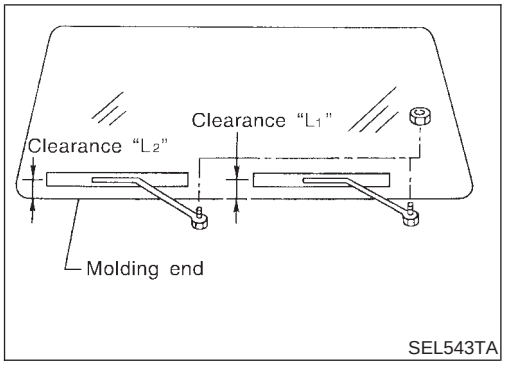
YEL427C





REFER TO THE FOLLOWING.
E108 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL428C



SEL543TA

Removal and Installation

NLEL0060

WIPER ARMS

NLEL0060S01

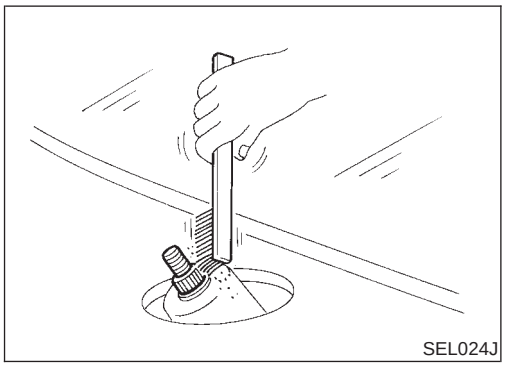
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L_1" & "L_2" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L_1" & "L_2".

Clearance "L_1": 20.4 - 34.4 mm (0.803 - 1.354 in)

Clearance "L_2": 61.8 - 75.8 mm (2.433 - 2.984 in)

- Tighten wiper arm nuts to specified torque.

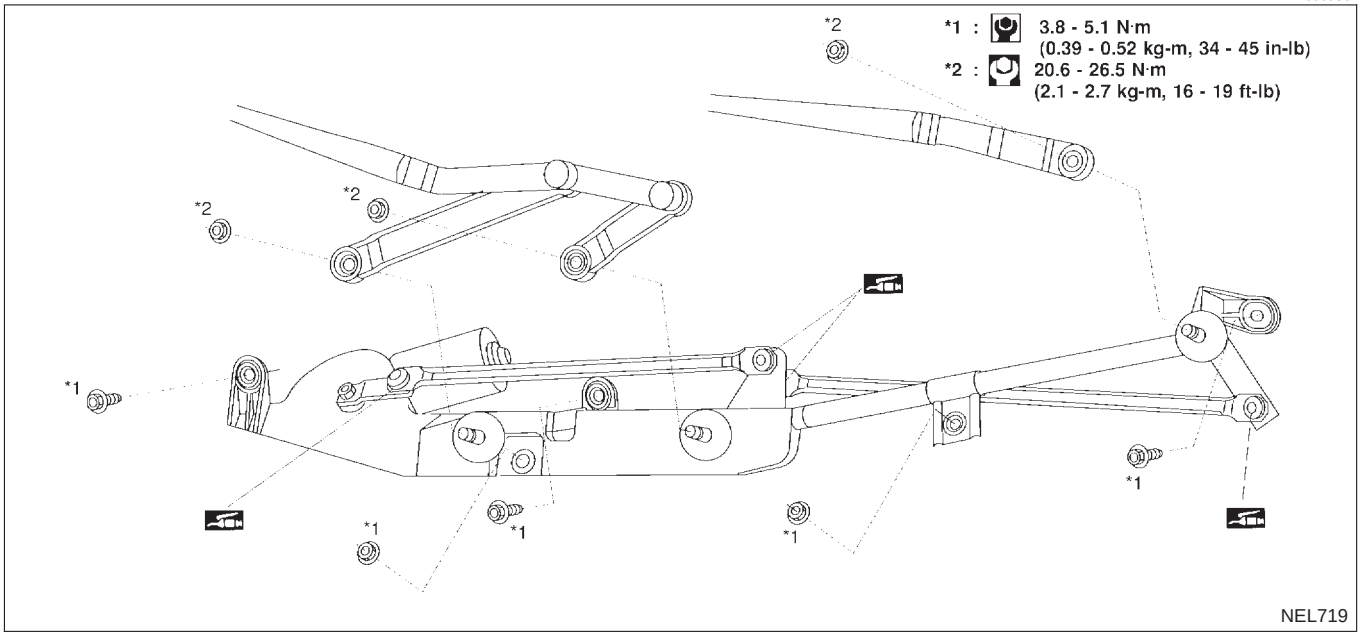
Front wiper: 21 - 26 N·m (2.1 - 2.7 kg-m, 16 - 19 ft-lb)


SEL024J

- **Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.**

WIPER LINKAGE

NLEL0060S02



NEL719

Removal

NLEL0060S0201

1. Remove wiper arms and cowl top cover.
2. Remove wiper motor connector.
3. Remove 5 screws and 3 nuts.
4. Remove wiper linkage.

Be careful not to break ball joint rubber boot.

Installation

NLEL0060S0202

- Grease ball joint portion before installation.

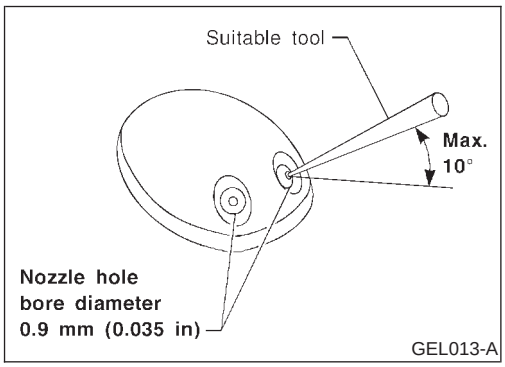
1. Installation is the reverse order of removal.

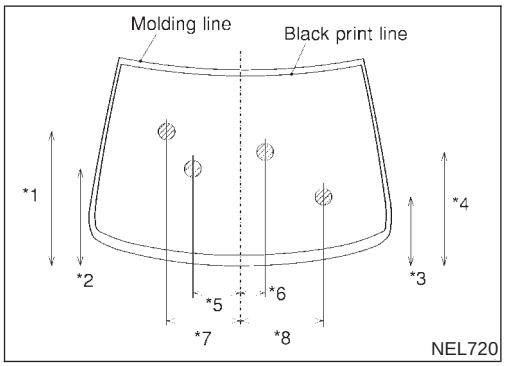
Washer Nozzle Adjustment

NLEL0061

- Adjust washer nozzle with suitable tool as shown in the figure at left.

Adjustable range: ±10° (In any direction)





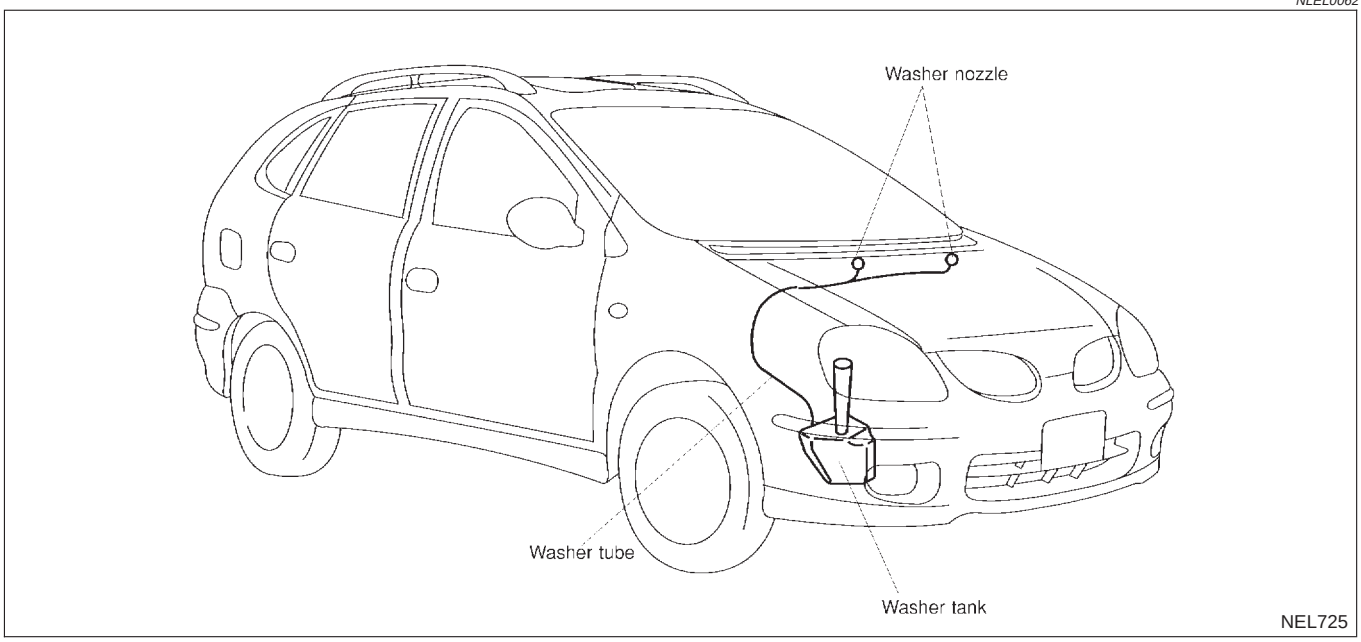
Unit: mm (in)

*1	646.9 (25.47)	*5	230.1 (9.06)
*2	470.2 (18.51)	*6	16.8 (0.66)
*3	332.9 (13.11)	*7	356.5 (14.04)
*4	550.9 (21.69)	*8	394.8 (15.54)

*: The diameters of these circles are less than 80 mm (3.15 in).

Washer Tube Layout

NLEL0062

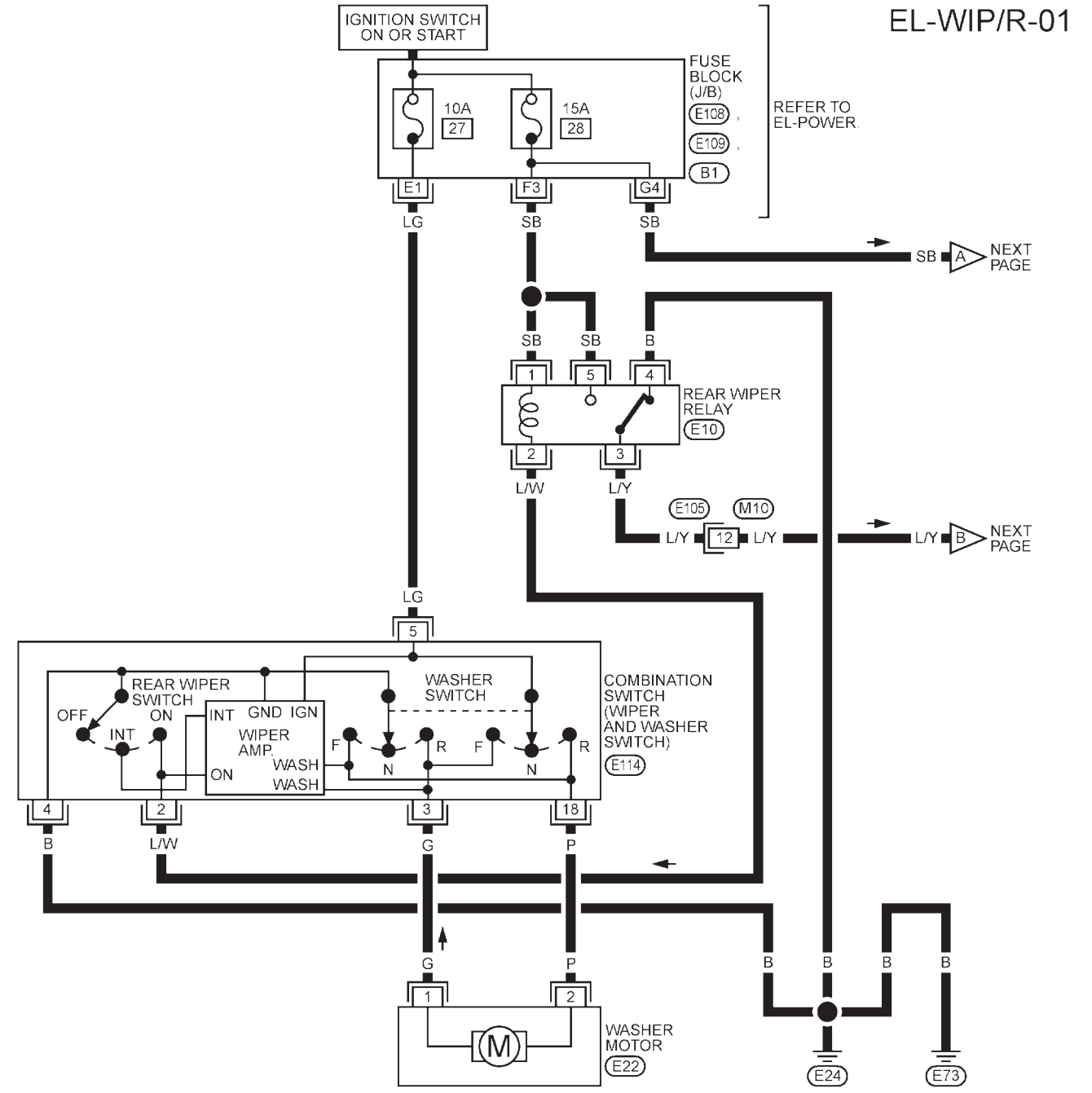


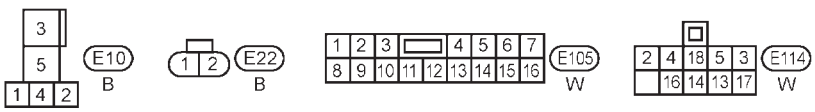
Wiring Diagram — WIP/R —

NLEL0458

MODELS WITH INTERMITTENT REAR WIPER

NLEL0458S01



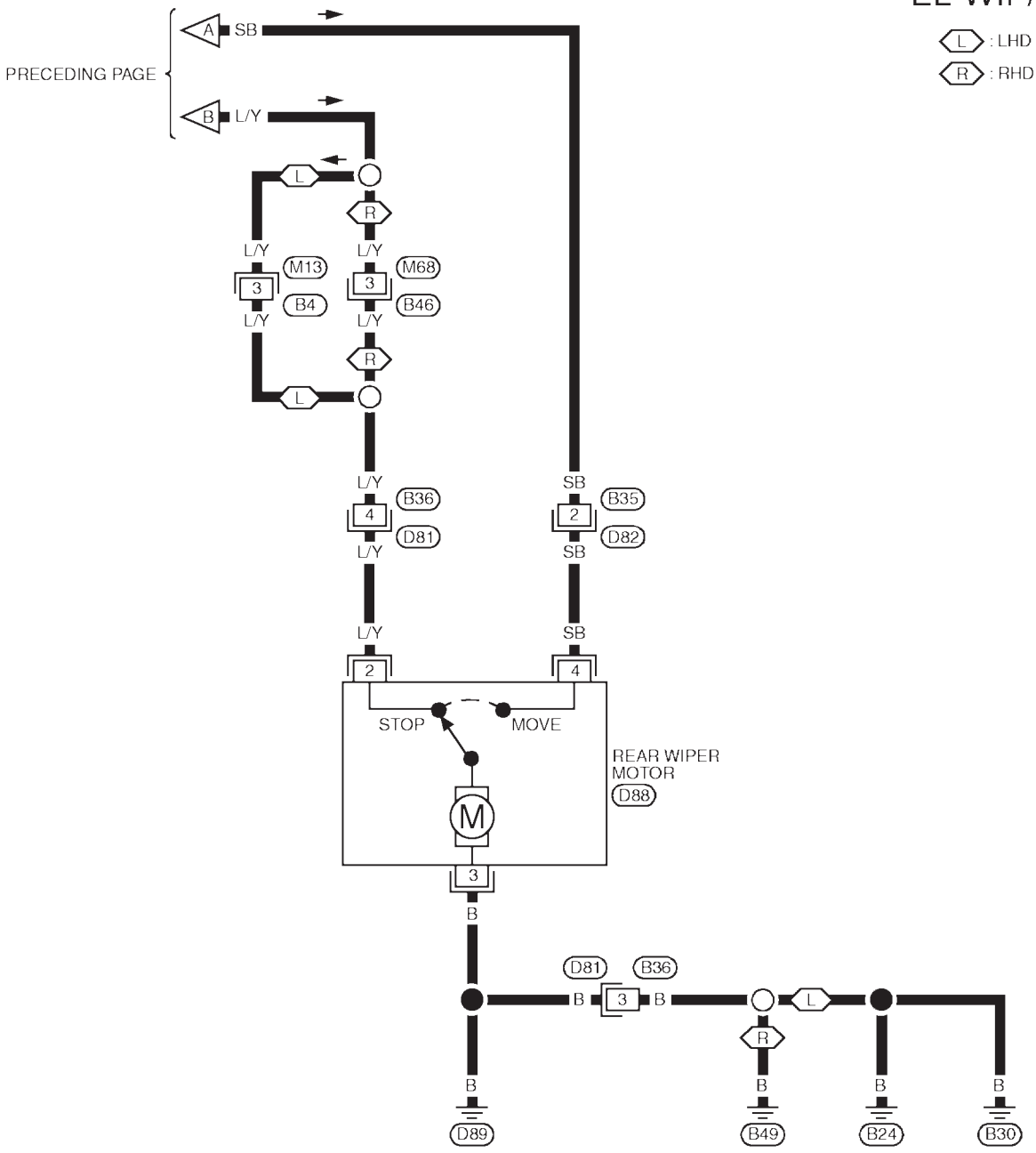


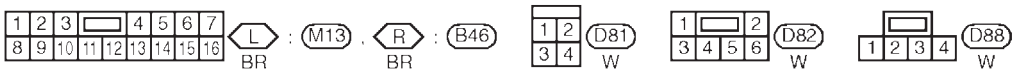
REFER TO THE FOLLOWING.
E108 , E109 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL905B

EL-WIP/R-02

L : LHD MODELS
R : RHD MODELS



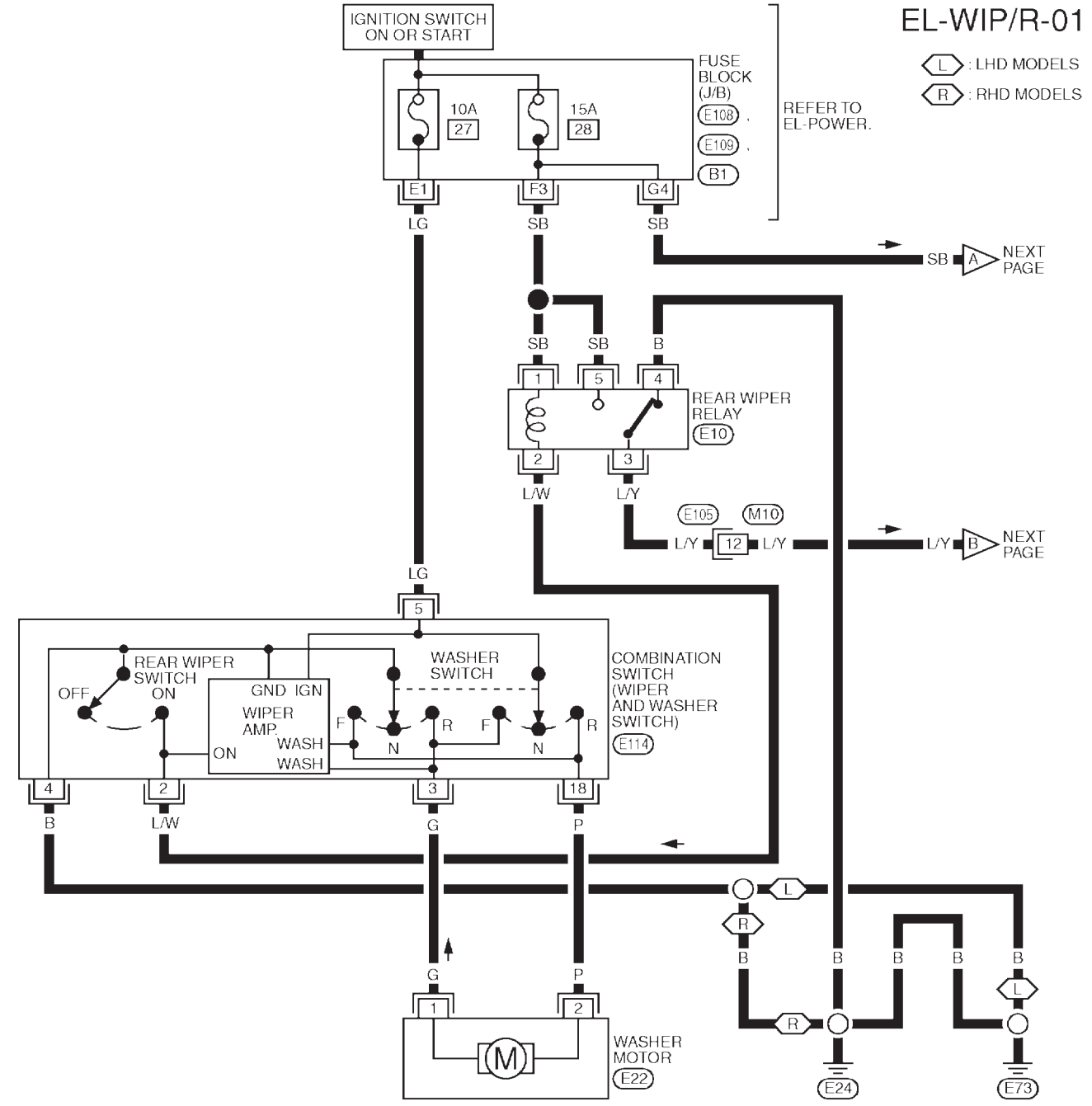


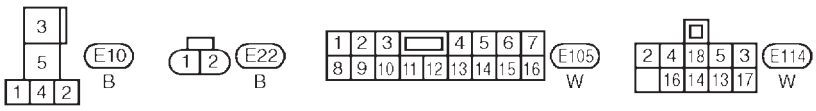
YEL906B

Wiring Diagram — WIP/R — (Cont'd)

MODELS WITHOUT INTERMITTENT REAR WIPER

NLEL0458S02



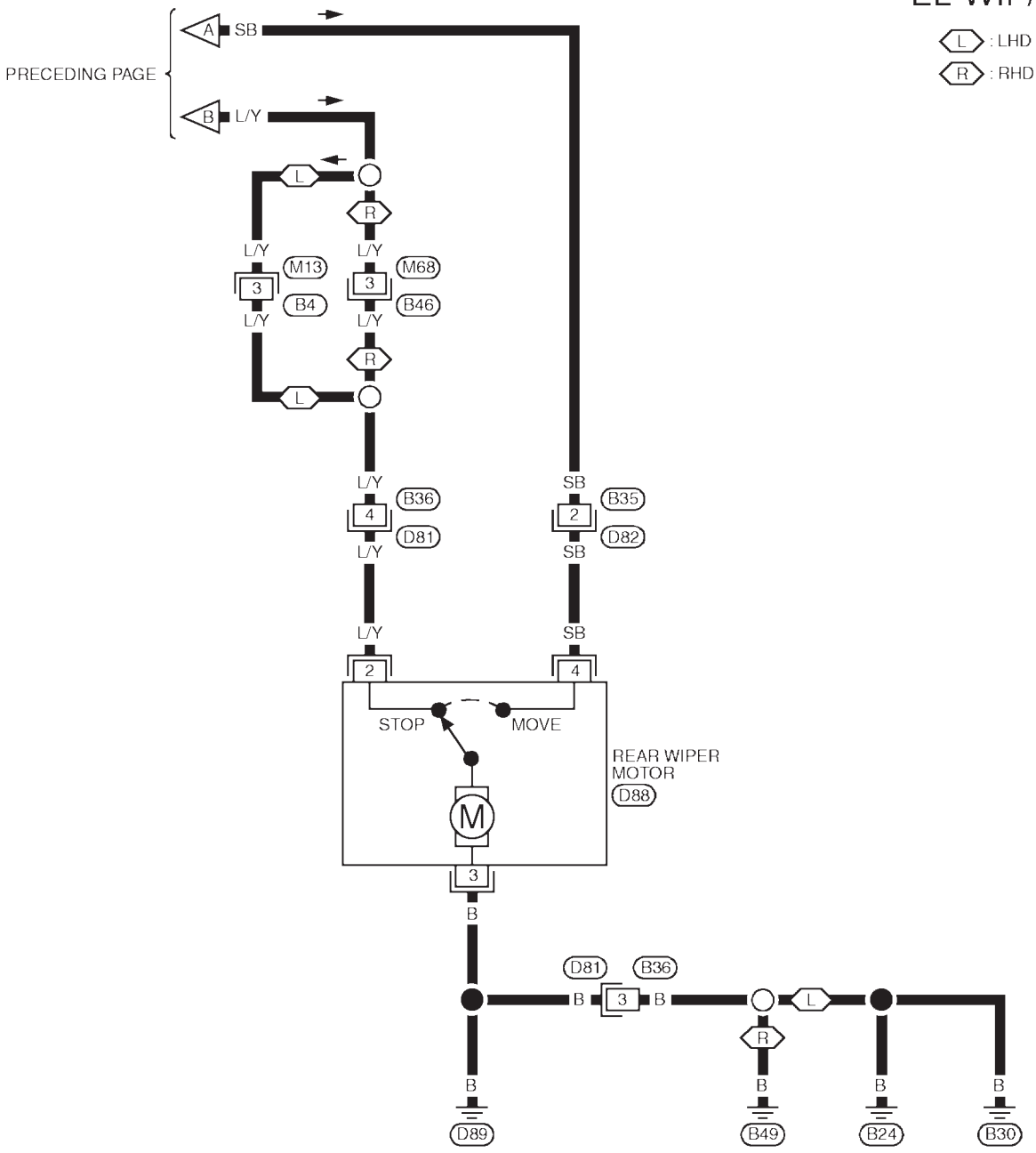


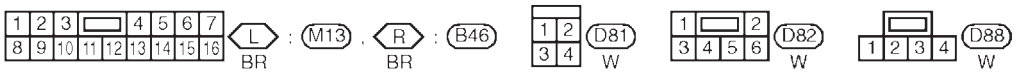
REFER TO THE FOLLOWING.
E108 , E109 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL429C

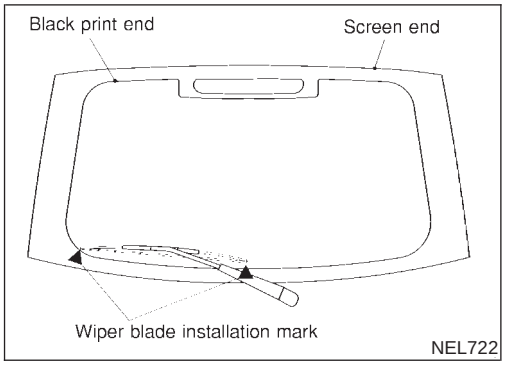
EL-WIP/R-02

L : LHD MODELS
R : RHD MODELS





YEL906B



Removal and Installation

NLEL0301

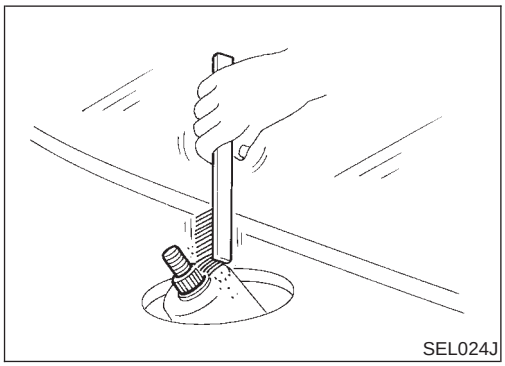
WIPER ARMS

NLEL0301S01

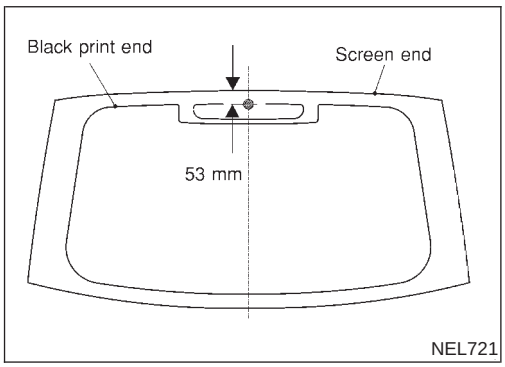
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it “OFF” (Auto Stop).
2. Lift the blade up and then set it down onto glass surface. Set the black center to clearance “E” immediately before tightening the nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it “OFF”.
4. Ensure that wiper blades stop on the lowest heat wire.

- **Tighten windshield wiper arm nuts to specified torque.**

  : 12.7 - 17.6 N·m (1.3 - 1.8 kg-m, 10 - 13 ft-lb)



- **Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.**



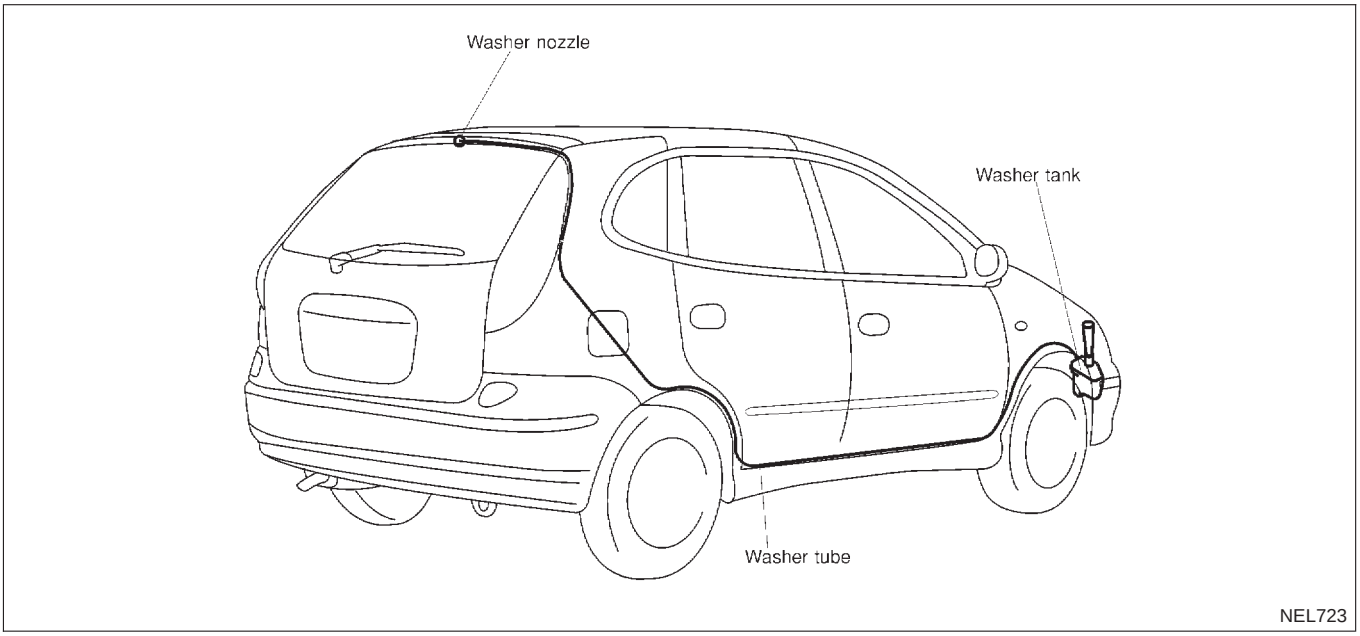
Washer Nozzle Adjustment

NLEL0302

The diameter of the washer spit circle is less than 30 mm (1.18 in).

Washer Tube Layout

NLEL0303

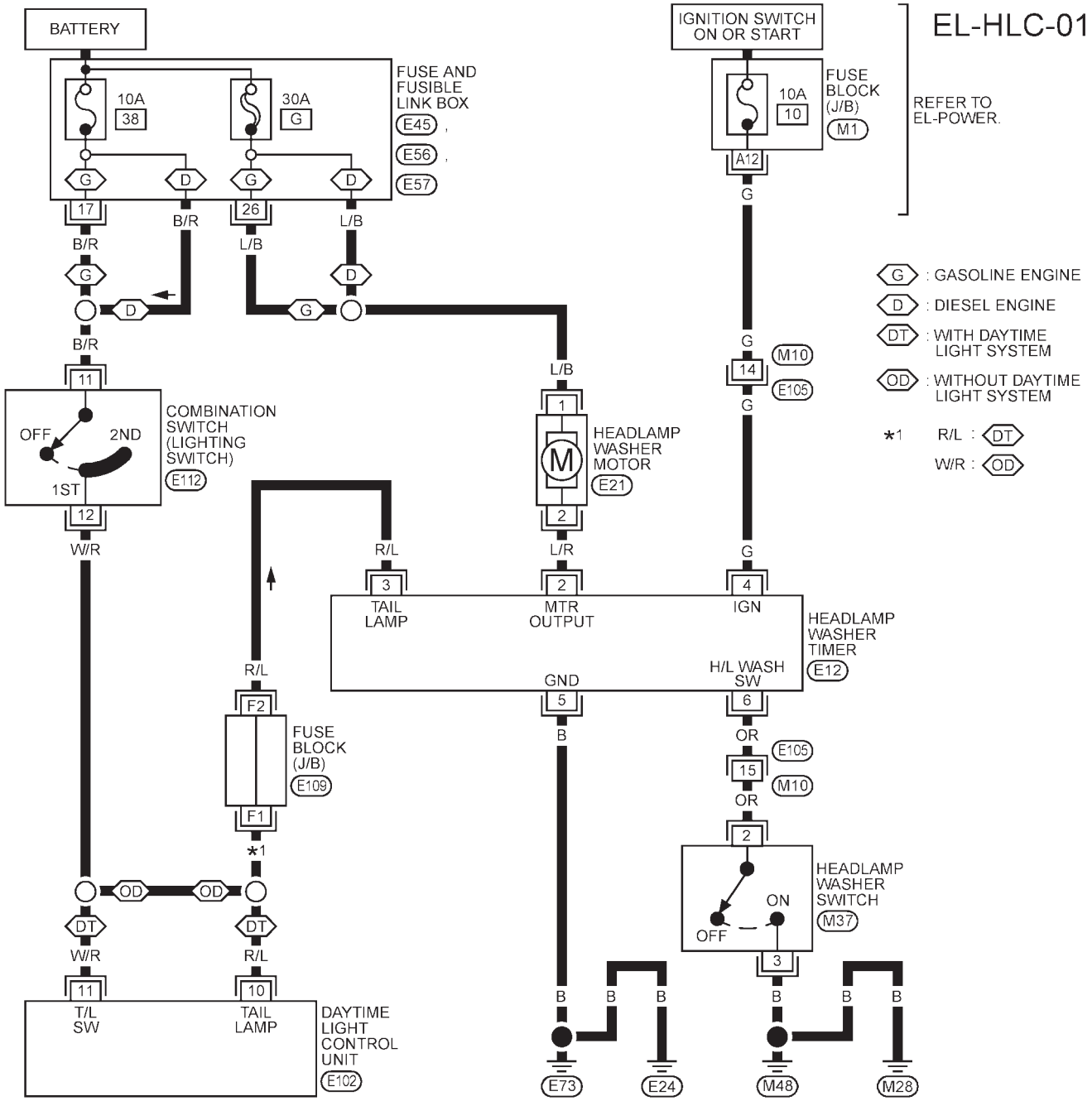


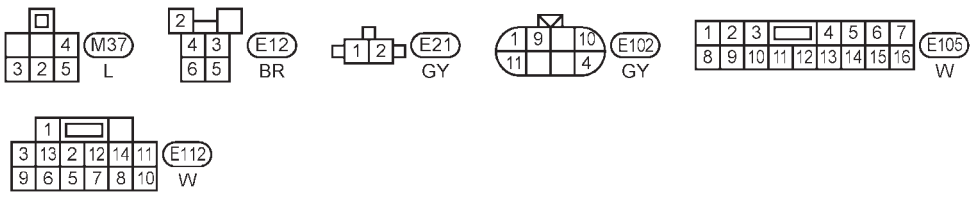
Wiring Diagram — HLC —

NLEL0459

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0459S01



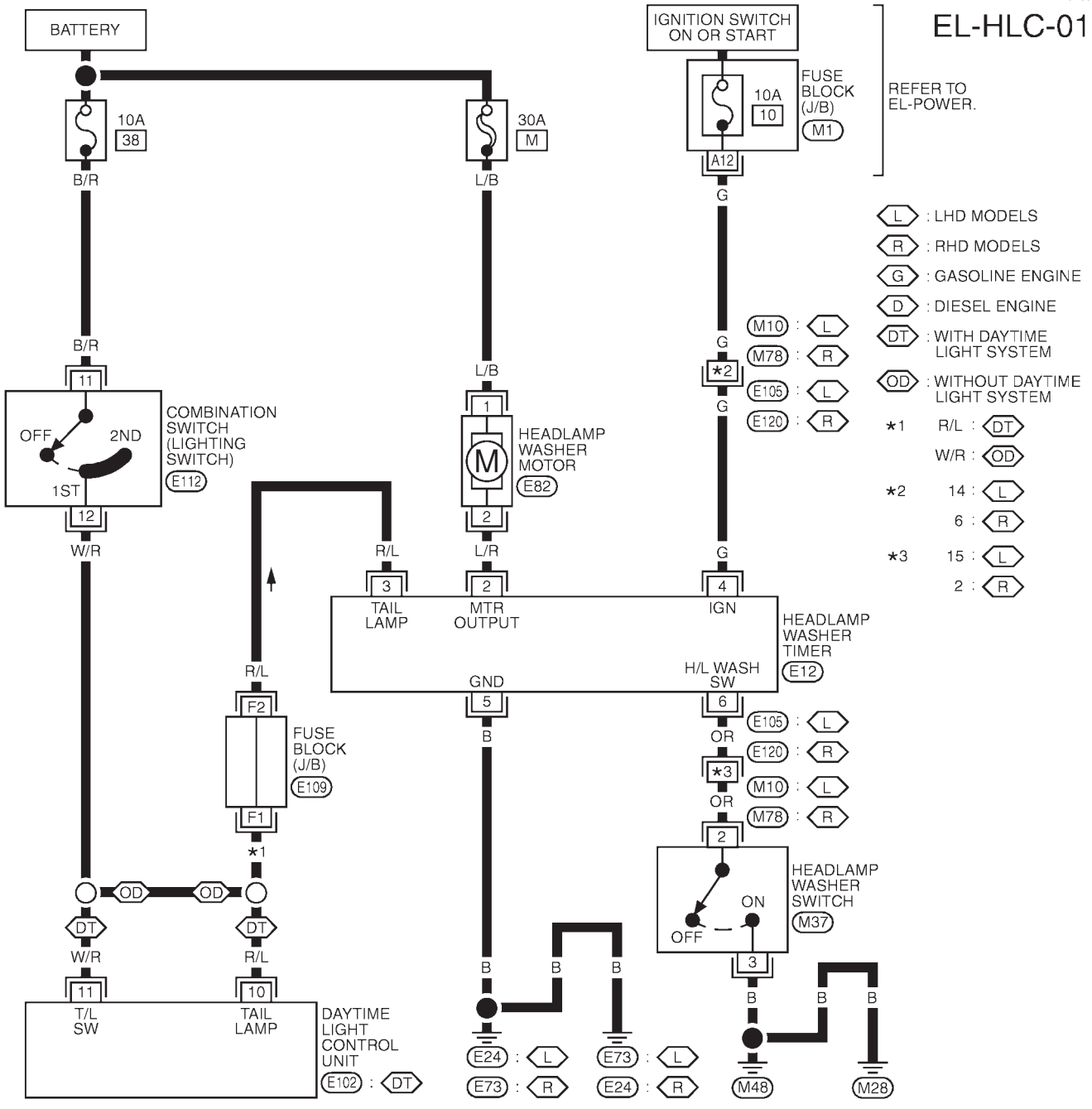


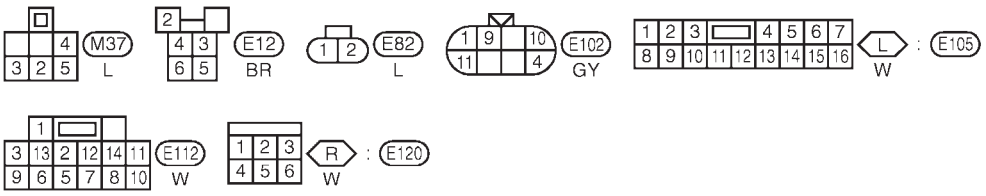
REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK- JUNCTION BOX (J/B)
E45 , E56 , E57 -FUSE AND FUSIBLE LINK BOX

YEL907B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0459S02



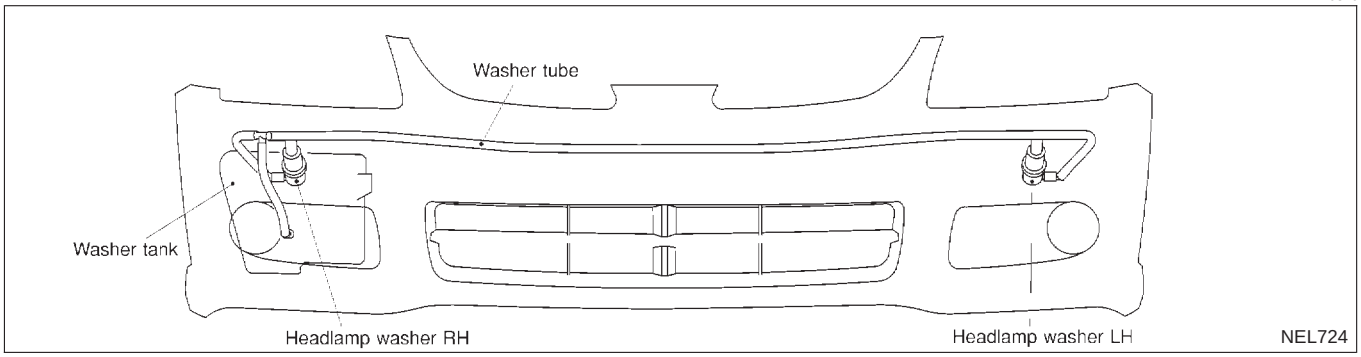


REFER TO THE FOLLOWING.
M1 , E109 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL430C

Washer Tube Layout

NLEL0376

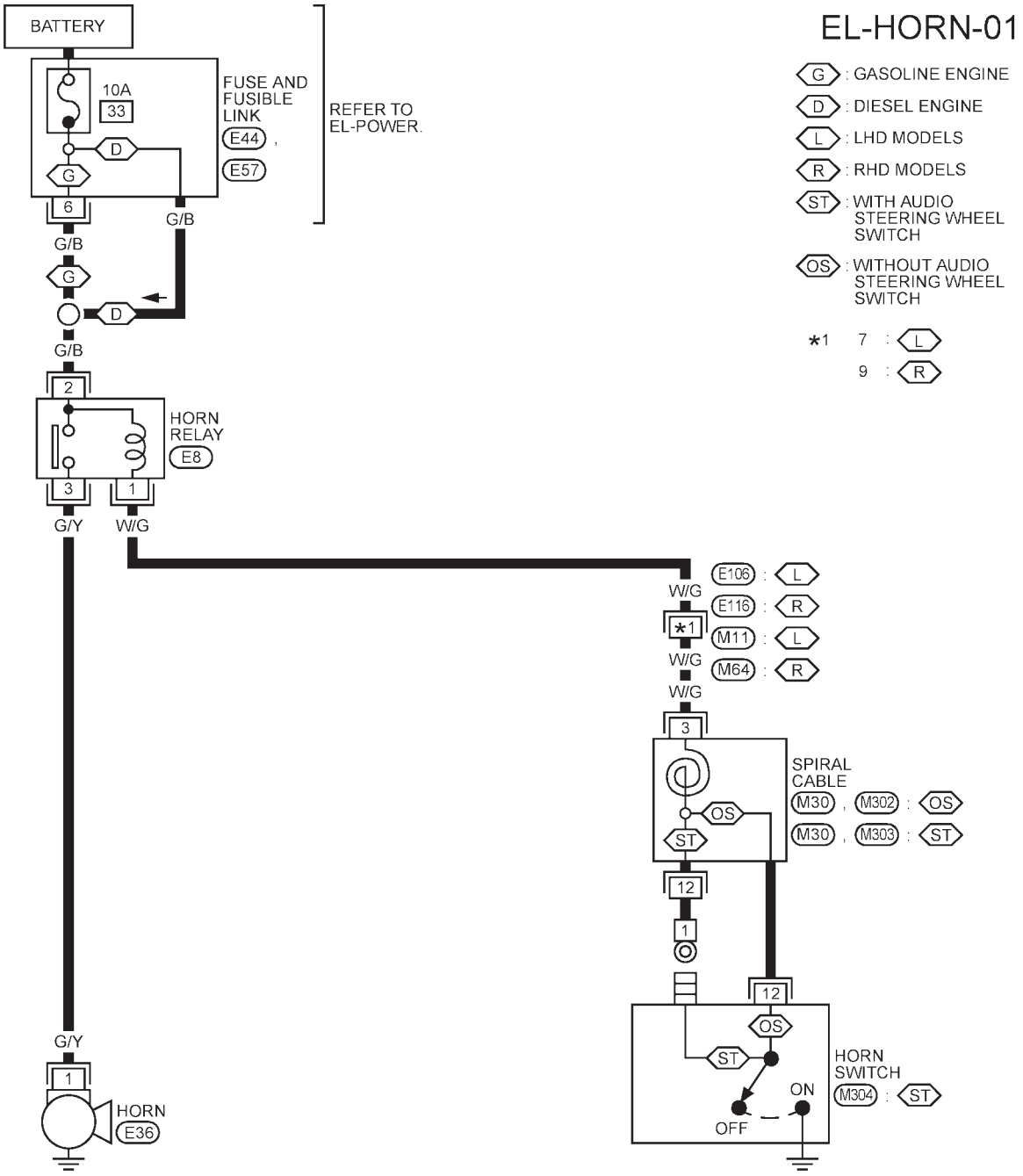


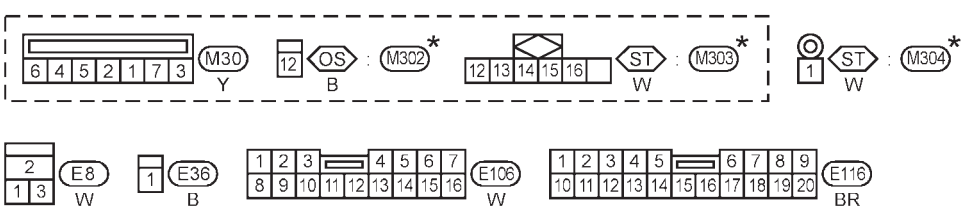
Wiring Diagram — HORN —

NLEL0460

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0460S01





REFER TO THE FOLLOWING.
E44 , E57 -FUSE AND FUSIBLE LINK BOX

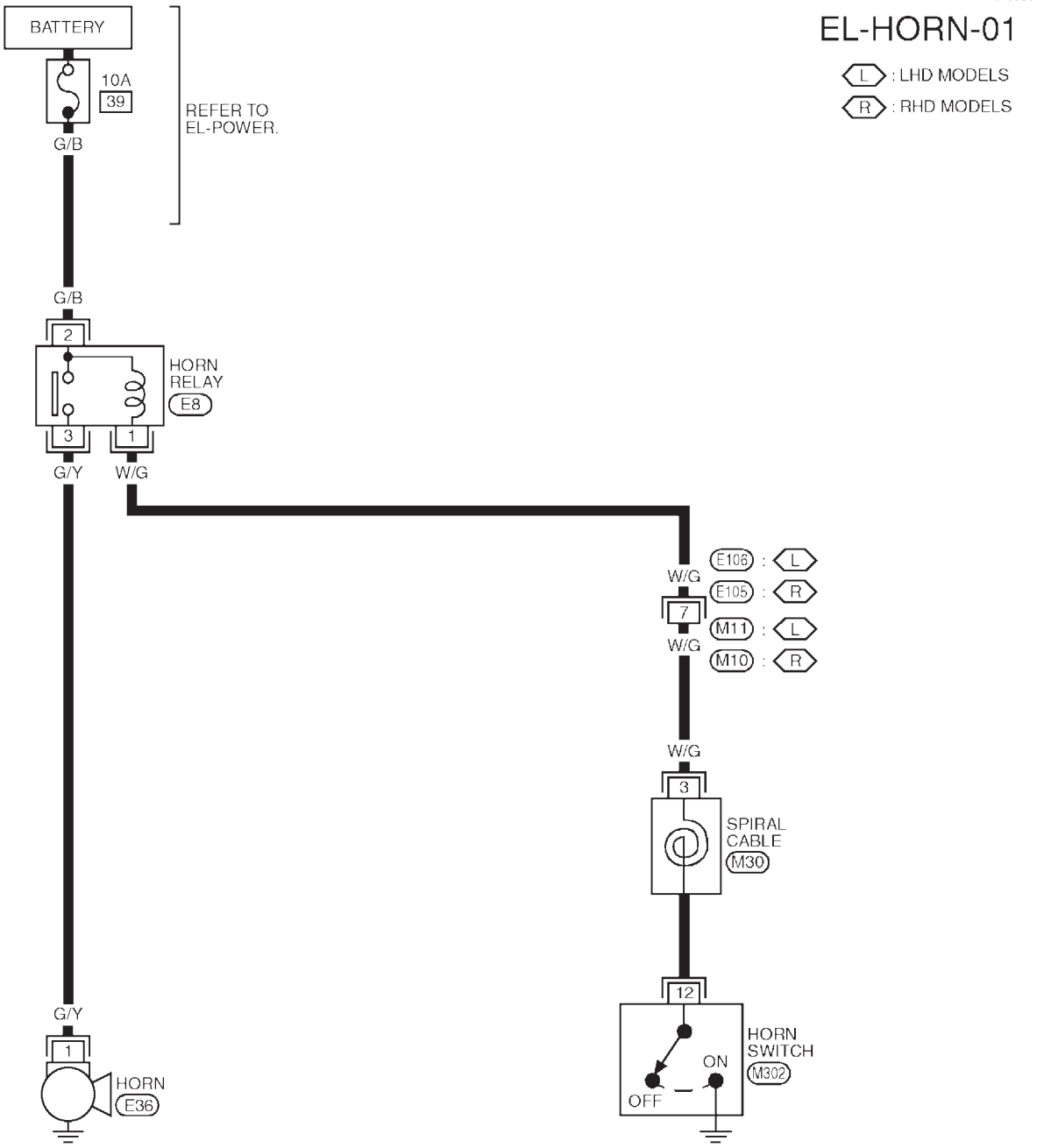
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" , EL SECTION.

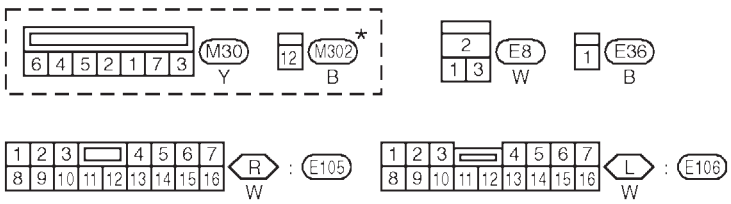
YEL908B

Wiring Diagram — HORN — (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0460S02



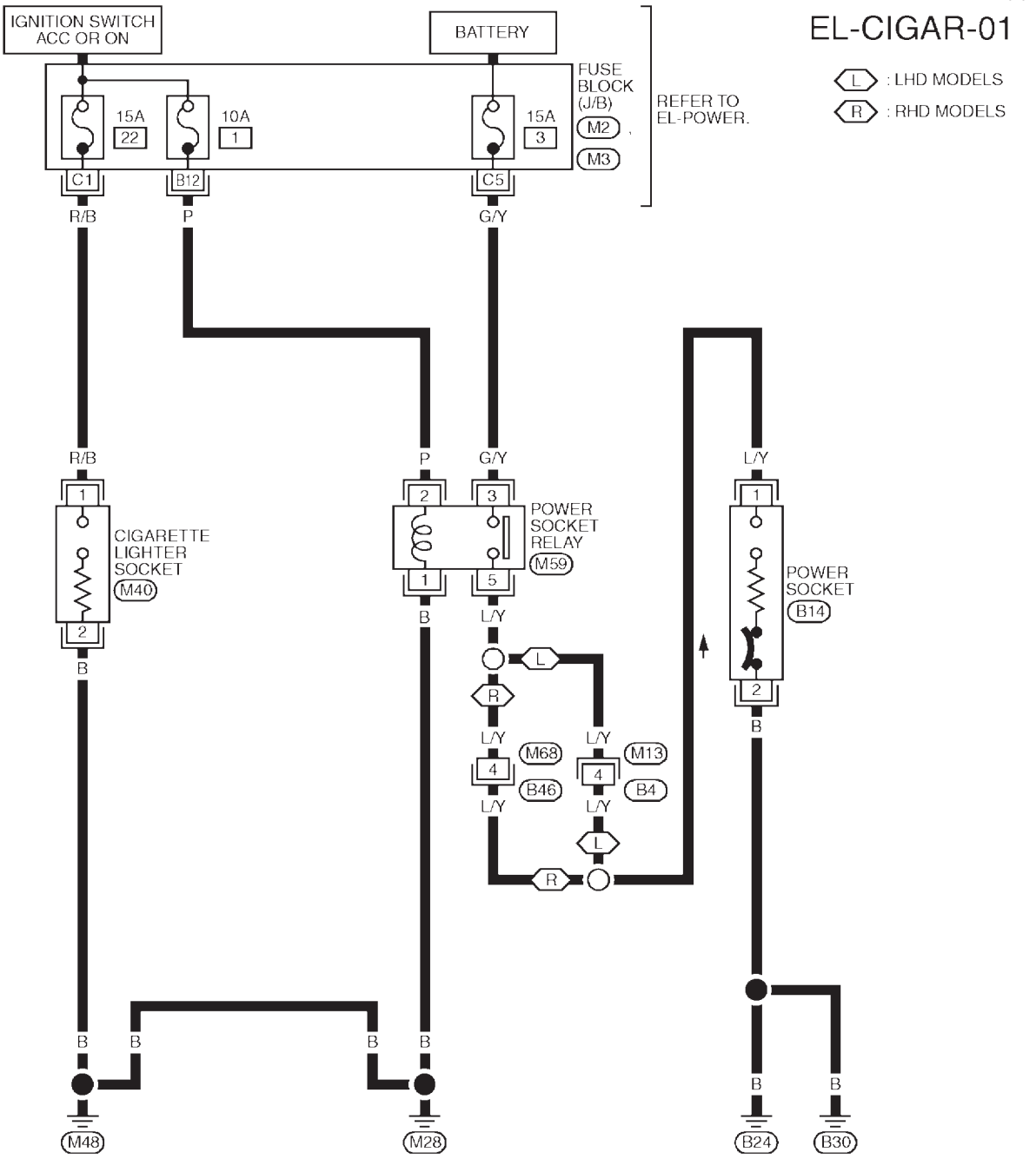


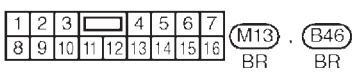
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" , EL SECTION.

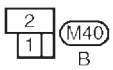
YEL431C

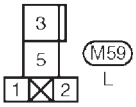
Wiring Diagram — CIGAR —

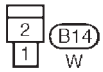
NLEL0461











REFER TO THE FOLLOWING.
M2 , M3
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL909B

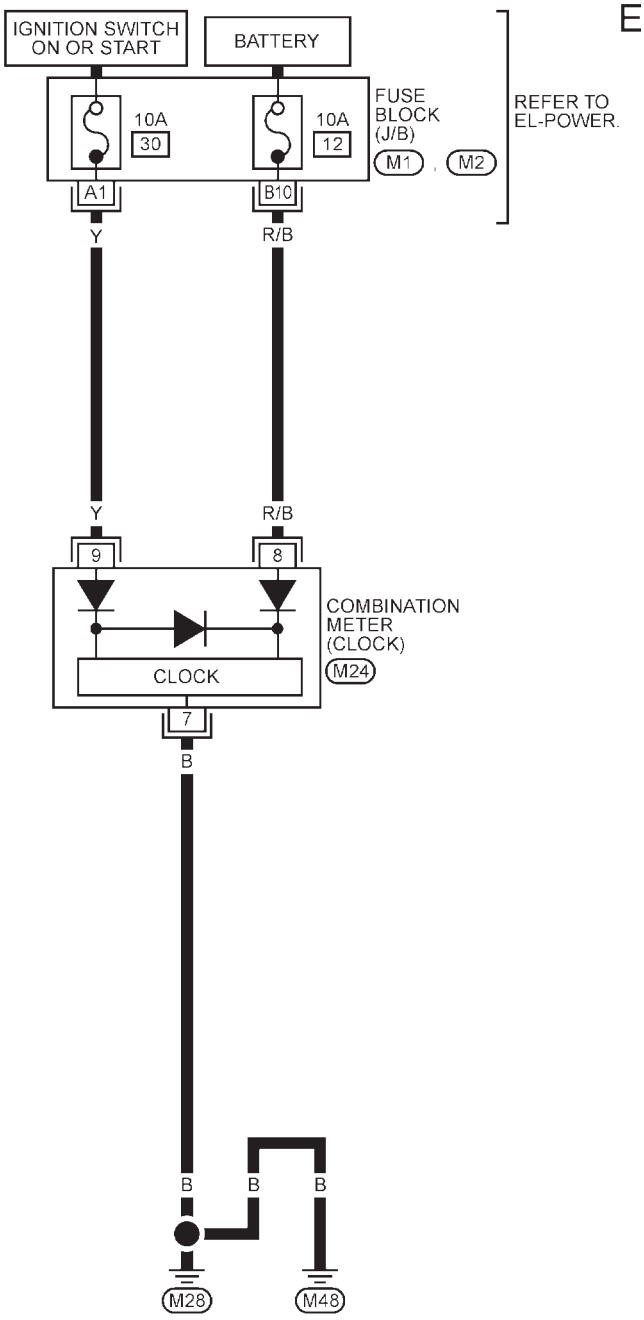
Wiring Diagram — CLOCK —

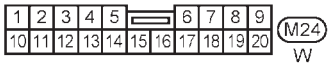
NLEL0462

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0462S01

EL-CLOCK-01





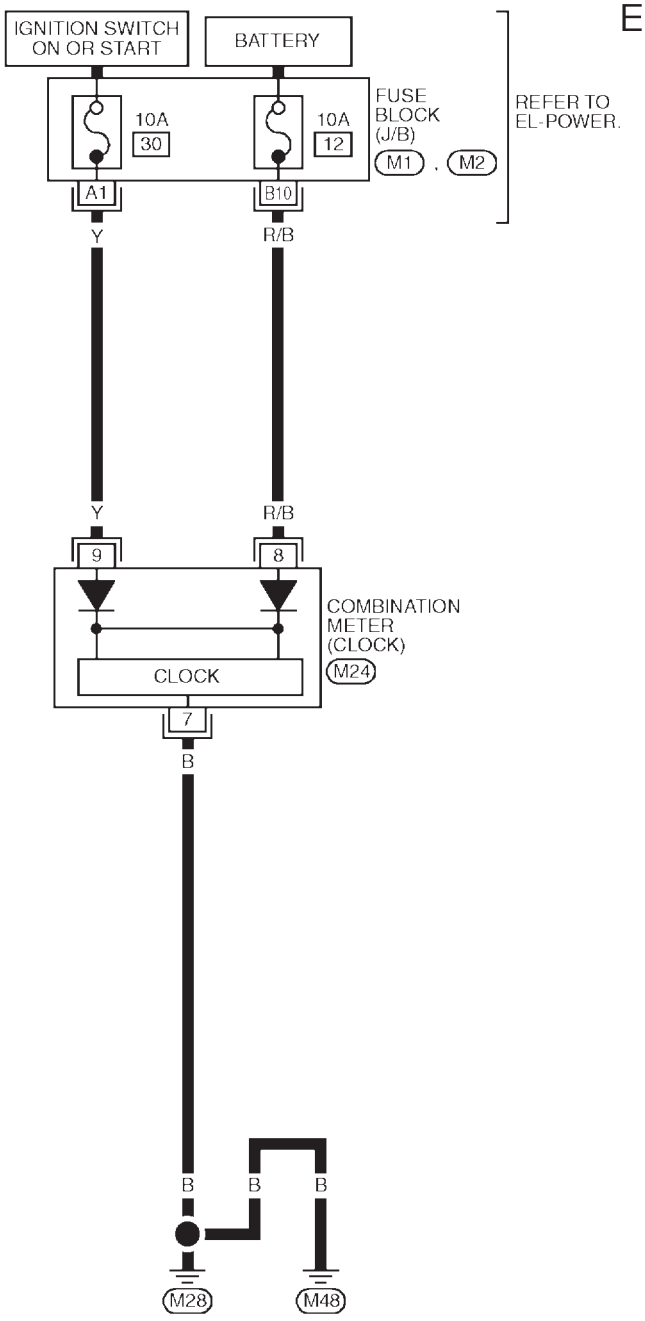
REFER TO THE FOLLOWING.
M1 , M2
-FUSE BLOCK-
JUNCTION BOX (J/B)

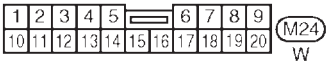
YEL910B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0462S02

EL-CLOCK-01





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

YEL543C

System Description

=NLEL0463

The rear window defogger system is controlled by the time control unit. The rear window defogger operates only for approximately 15 minutes.
Power is supplied at all times

- through 15A fuse [No. 7, located in the fuse block (J/B)]
- to rear window defogger relay terminal 5 (B8 relay models) or 3 (B7 relay models)
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to rear window defogger relay terminal 6 (B6 relay models).
- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to time control unit terminal 9.

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

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to the rear window defogger relay terminal 1 and
- to time control unit terminal 1.

Ground is supplied to terminal 5 of the rear window defogger switch through body grounds M28 and M48.
When the rear defogger switch is turned ON, ground is supplied

- through terminal 3 of the rear defogger switch
- to time control unit terminal 3.

Terminal 13 of time control unit then supplies ground to the rear window defogger relay terminal 2.
With power and ground supplied, the rear window defogger relay is energized.
Power is supplied

- through terminals 5 and 7 of the rear window defogger relay (B7 relay models) or
- through terminal 3 of the rear window defogger relay (B8 relay models)
- to the rear window defogger (and door mirror defogger).

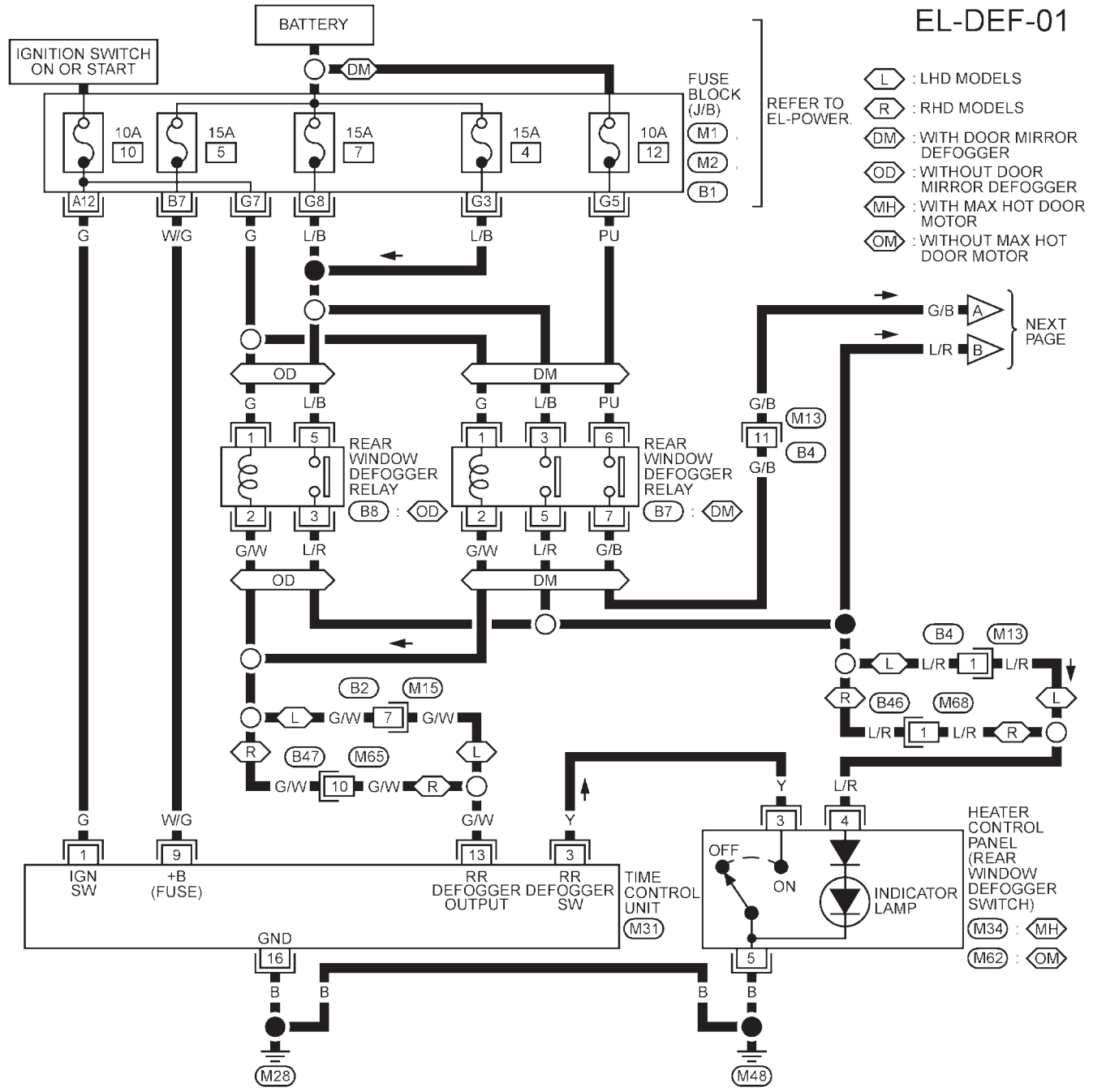
The rear window defogger has an independent ground.
With power and ground supplied, the rear window defogger filaments heat and defog the rear window.
When the system is activated, the rear window defogger indicator illuminates in the rear window defogger switch.

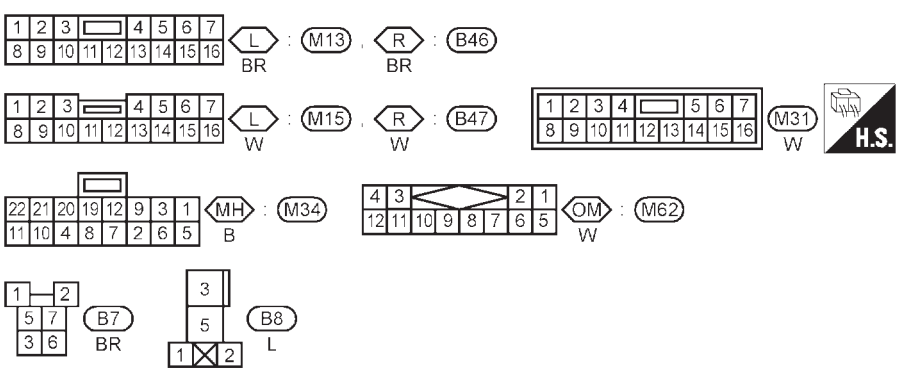
Wiring Diagram — DEF —

=NLEL0464

TYPE-1

NLEL0464S03

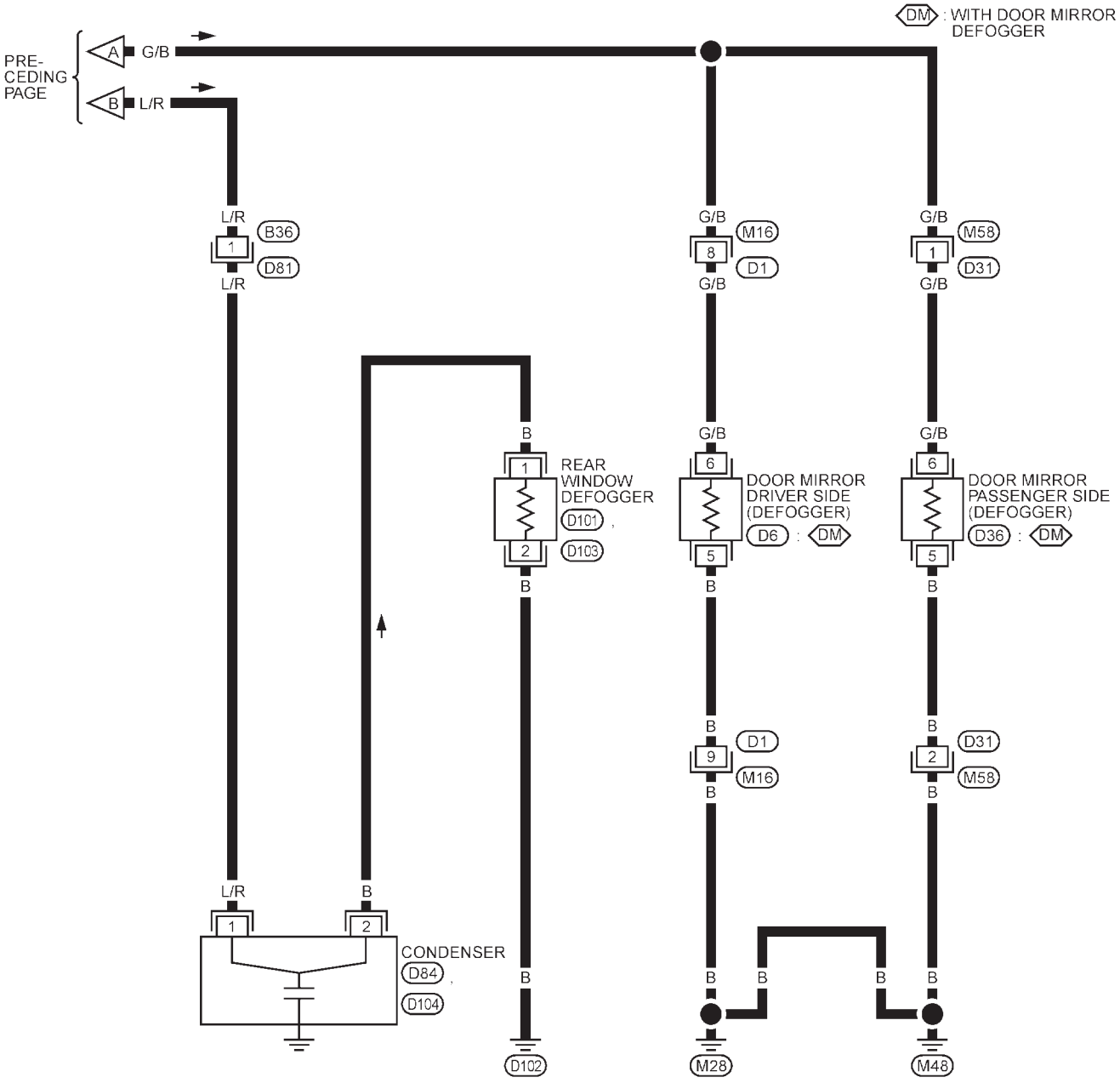


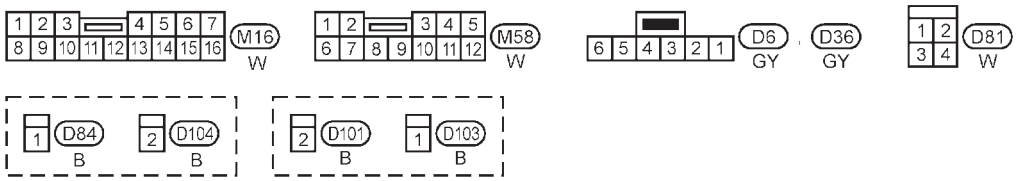


REFER TO THE FOLLOWING.
M1 , M2 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL911B

EL-DEF-02

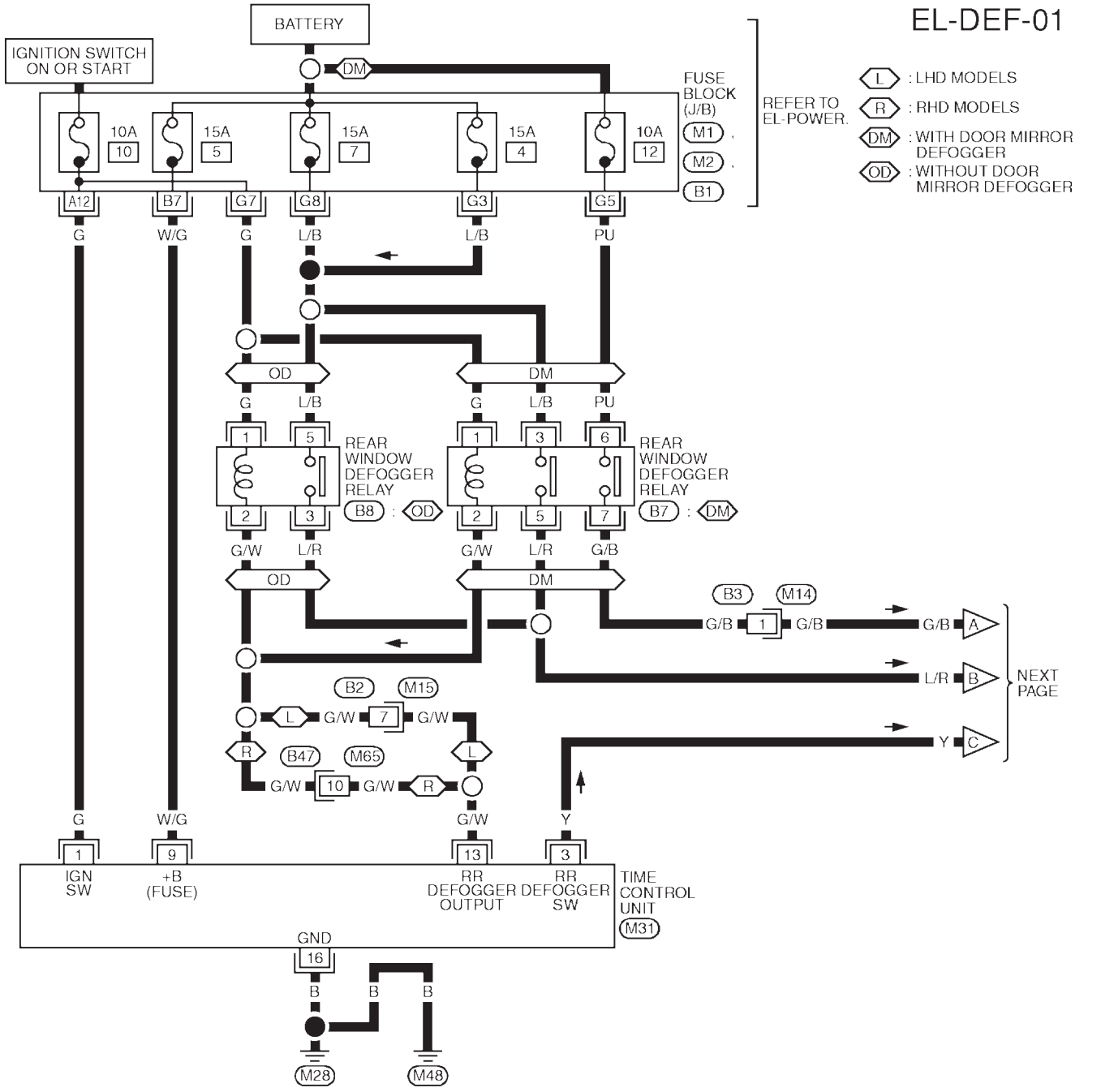


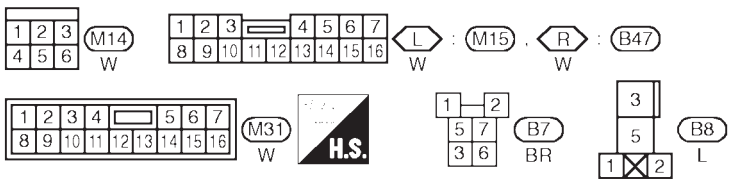


YEL912B

TYPE-2

NLEL0464S04

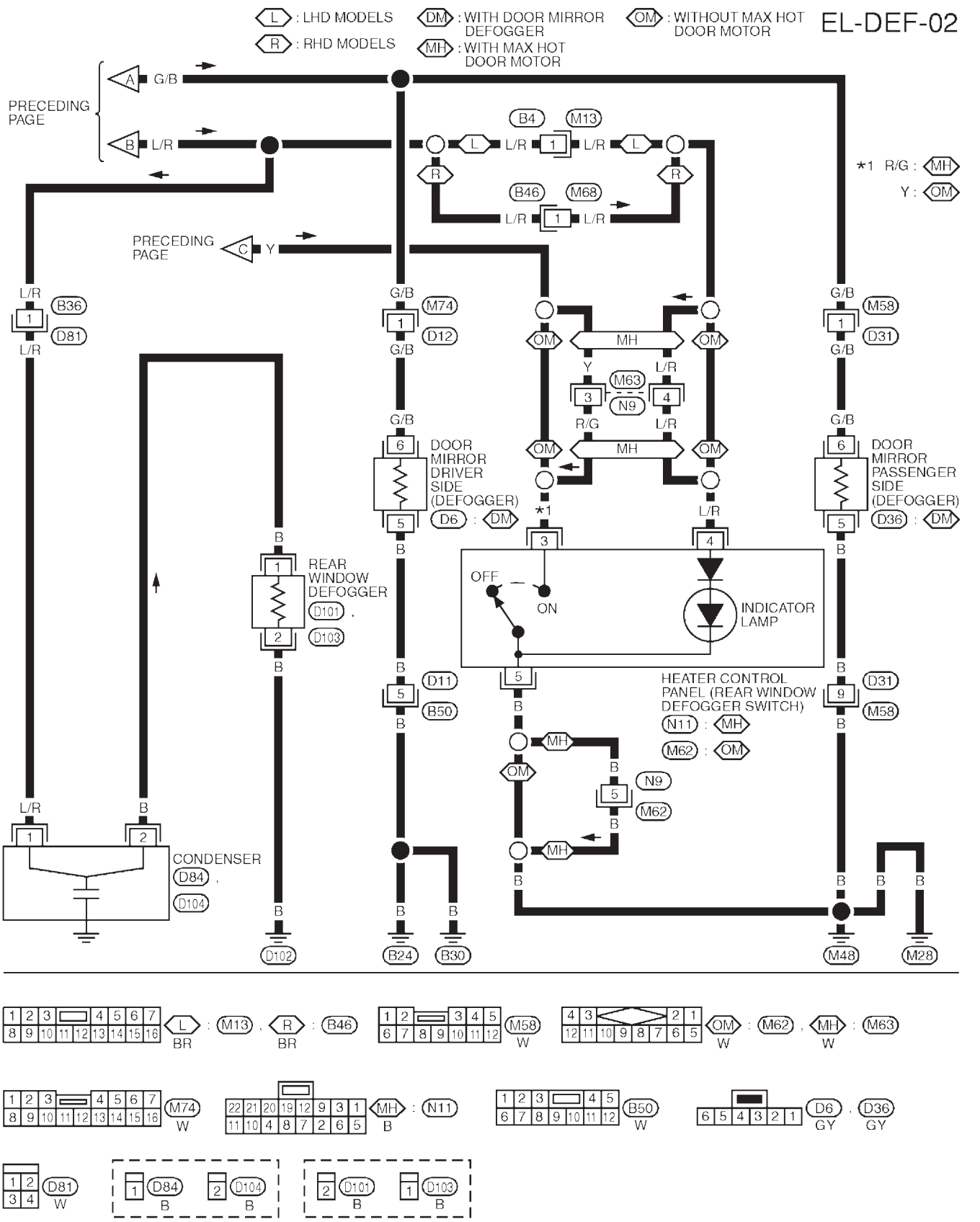




REFER TO THE FOLLOWING.
M1 , M2 , B1
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL432C

Wiring Diagram — DEF — (Cont'd)



YEL433C

Trouble Diagnoses

NLEL0465

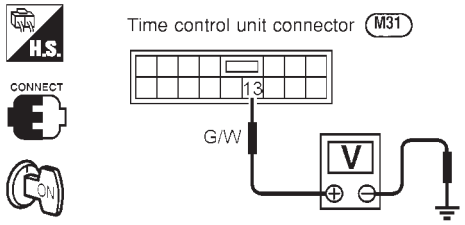
DIAGNOSTIC PROCEDURE

NLEL0465S01

SYMPTOM: Rear window defogger does not activate, or does not go off after activating.

1	CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL

1. Turn ignition switch to ON position.
2. Check voltage between time control unit harness terminal 13 and ground.



Voltage [V]:
Rear window defogger switch is "OFF"
Approx. 12
Rear window defogger switch is "ON".
0

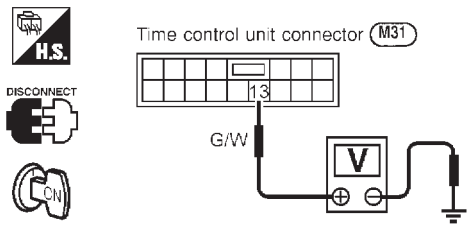
NEL668

OK or NG

OK	▶	**Check the following.** ● Rear window defogger relay (Refer to EL-205.) ● Rear window defogger circuit ● Rear window defogger filament (Refer to EL-206.)
NG	▶	GO TO 2.

2	CHECK DEFOGGER RELAY COIL SIDE CIRCUIT

1. Disconnect control unit connector.
2. Turn ignition switch to ON position.
3. Check voltage between time control unit terminal 13 and ground.



Battery voltage should exist.

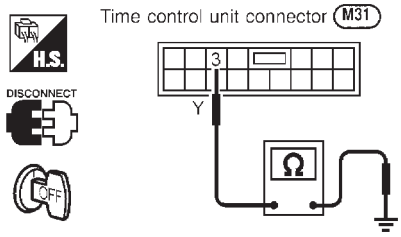
NEL669

OK or NG

OK	▶	GO TO 3.
NG	▶	**Check the following.** ● 10A fuse [No. 10, located in the fuse block (J/B)] ● Rear window defogger relay ● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay ● Harness for open or short between rear window defogger relay and time control unit

3	CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL

Check continuity between time control unit terminal 3 and ground.



Continuity:
Rear window defogger switch is pushed.
Continuity should exist.
Rear window defogger switch is released.
Continuity should not exist.

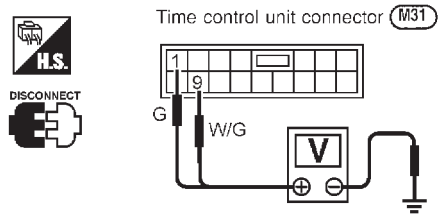
NEL670

OK or NG

OK	▶	GO TO 4.
NG	▶	**Check the following.** ● Rear window defogger switch (Refer to EL-205.) ● Harness for open or short between time control unit and rear window defogger switch ● Rear window defogger switch ground circuit

4	CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL

Check voltage between time control unit terminals 1 or 9 and ground.



Terminals		Ignition swtich position		
(+)	(−)	OFF	ACC	ON
9	Ground	Battery voltage	Battery voltage	Battery voltage
1	Ground	0V	0V	Battery voltage

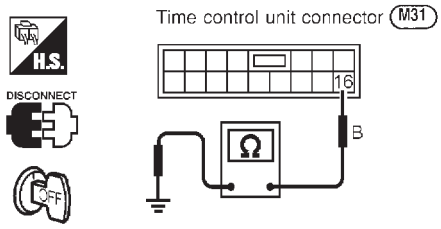
NEL665

OK or NG

OK	▶	GO TO 5.
NG	▶	**Check the following.** ● 10A fuse or 15A fuse [No. 10 or No. 5, located in the fuse block (J/B)] ● Harness for open or short between time control unit and fuse

5	CHECK CONTROL UNIT GROUND CIRCUIT

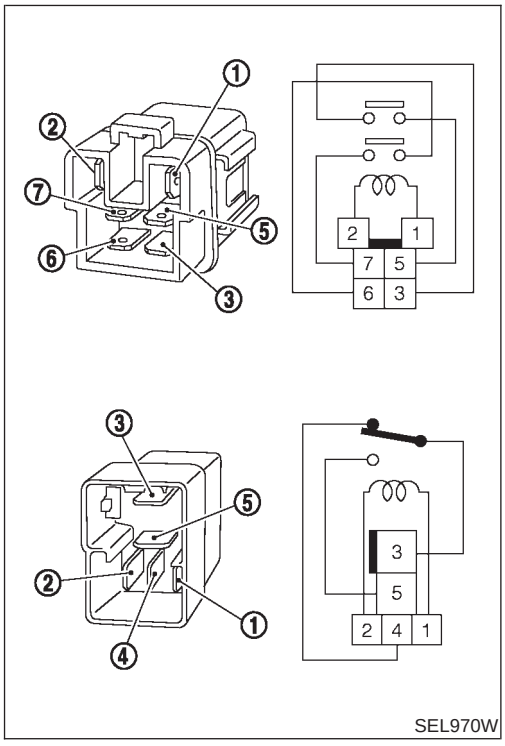
Check continuity between time control unit terminal 16 and ground.



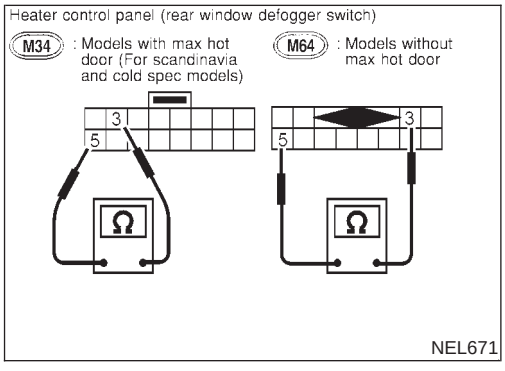
Continuity should exist.

NEL666

Yes	▶	Replace time control unit.
No	▶	Repair harness or connectors.



SEL970W



NEL671

Electrical Components Inspection

NLEL0076

REAR WINDOW DEFOGGER RELAY

NLEL0076S01

Check continuity between terminals 3 and 5, 6 and 7.

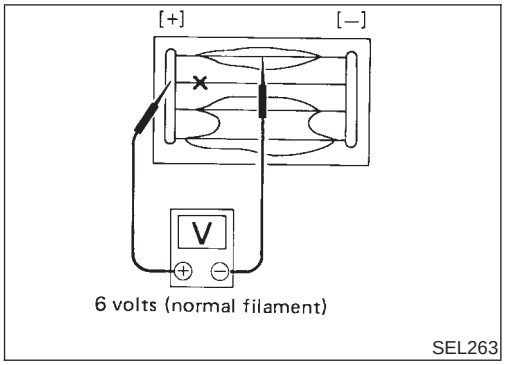
Condition	Continuity
12V direct current supply between terminals 1 and 2	Yes
No current supply	No

REAR WINDOW DEFOGGER SWITCH

NLEL0076S02

Check continuity between terminals when rear window defogger switch is pushed and released.

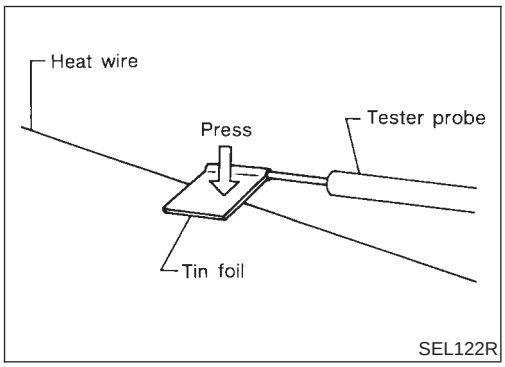
Terminals	Condition	Continuity
3 - 5	Rear window defogger switch is pushed.	Yes
	Rear window defogger switch is released.	No



Filament Check

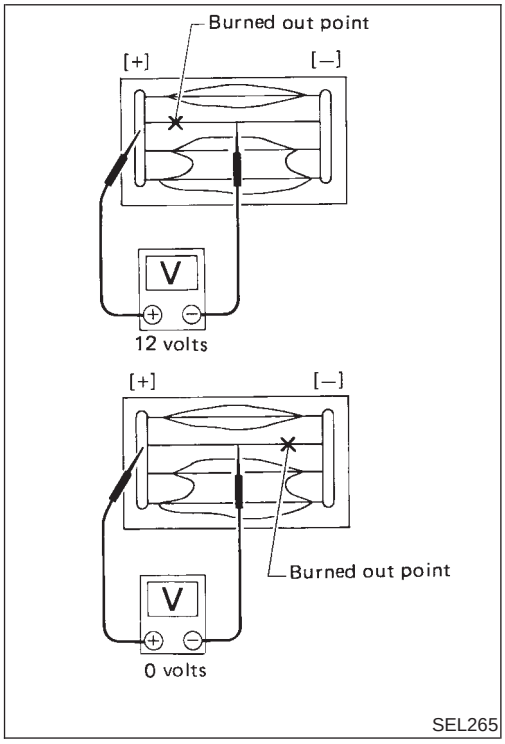
=NLEL0077

1. Attach probe circuit tester (in volt range) to middle portion of each filament.

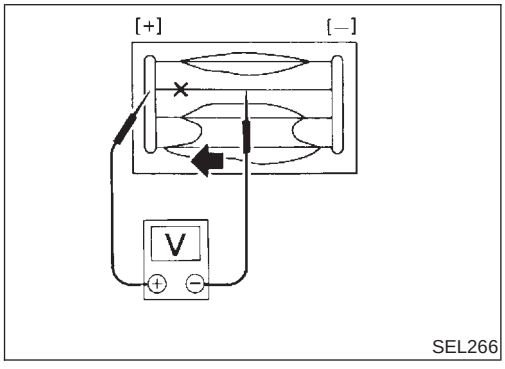


- **When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.**

2. If a filament is burned out, circuit tester registers 0 or 12 volts.



3. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



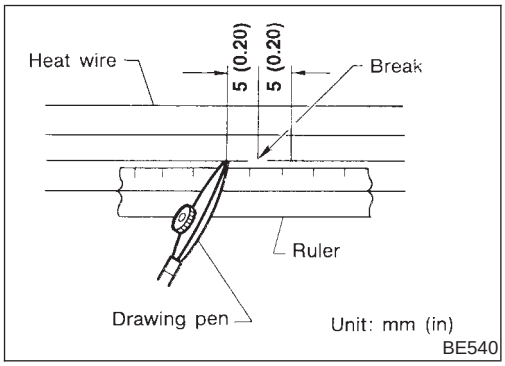
Filament Repair

NLEL0078

REPAIR EQUIPMENT

NLEL0078S01

1) Conductive silver composition (Dupont No. 4817 or equivalent)
2) Ruler 30 cm (11.8 in) long
3) Drawing pen
4) Heat gun
5) Alcohol
6) Cloth



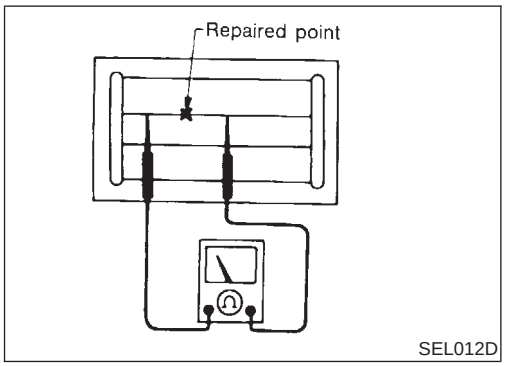
REPAIRING PROCEDURE

NLEL0078S02

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

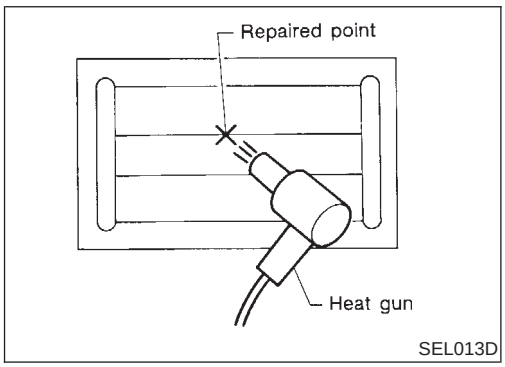
Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.

System Description

=NLEL0497

Refer to Owner's Manual for audio system operating instructions.
Power is supplied at all times

- through 15A fuse
- to audio unit terminal 9
- to CD auto changer terminal 32.

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

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to audio unit terminal 3,
- to CD auto changer terminal 36 and

Ground is supplied through the case of the audio unit.
Audio signals are supplied

- through audio unit terminals 7, 10, 11, 12, 13, 14, 15, 16
- to terminals 1 and 2 of front door speaker LH and RH,
- to terminals 1 and 2 of rear door speaker LH and RH and
- to terminals 1 and 2 of pillar tweeter LH and RH (with 6 speakers)

When the navigation system is triggered,
power is supplied

- through navi control unit terminal 46
- to speaker relay terminal 2

Ground is supplied

- through navi control unit terminal 44
- to speaker relay terminal 1

With power and ground supplied, the relay is energized, and then audio signal is interrupted to front door speaker RH (LHD models) or LH (RHD models), and pillar tweeter RH (LHD models) or LH (RHD models)
For detailed, refer to "NAVIGATION SYSTEM".

NATS AUDIO LINK

NLEL0497S01

Description

NLEL0497S0101

The link with the NATS IMMU implies that the audio unit can basically only be operated if connected to the matching NATS IMMU to which the audio unit was initially fitted on the production line.
Since radio operation is impossible after the link with the NATS is disrupted theft of the audio unit is basically useless since special equipment is required to reset the audio unit.

Initialization process for audio units that are linked to the NATS IMMU

New audio units will be delivered to the factories in the "NEW" state, i.e. ready to be linked with the vehicle's NATS. When the audio unit in "NEW" state is first switched on at the factory, it will start up communication with the vehicle's immobiliser control unit (IMMU) and send a code (the "audio unit Code") to the IMMU. The IMMU will then store this code, which is unique to each audio unit, in its (permanent) memory.
Upon receipt of the code by the IMMU, the NATS will confirm correct receipt of the audio unit code to the audio unit. Hereafter, the audio unit will operate as normal.
During the initialisation process, "NEW" is displayed on the audio unit display. Normally though, communication between audio unit and IMMU takes such a short time (300 ms) that the audio unit seems to switch on directly without showing "NEW" on its display.

Normal operation

Each time the audio unit is switched on afterwards, the audio unit code will be verified between the audio unit and the NATS before the audio unit becomes operational. During the code verification process, "WAIT" is shown on the audio unit display. Again, the communication takes such a short time (300 ms) that the audio unit seems to switch on directly without showing "WAIT" on its display.

When the radio is locked

In case of a audio unit being linked with the vehicle's NATS (immobilizer system), disconnection of the link between the audio unit and the IMMU will cause the audio unit to switch into the lock ("SECURE") mode in which the audio unit is fully inoperative. Hence, repair of the audio unit is basically impossible, unless the audio unit is reset to the "NEW" state for which special decoding equipment is required.
Clarion has provided their authorized service representatives with so called "decoder boxes" which can bring the audio unit back to the "NEW" state, enabling the audio unit to be switched on after which repair can be

carried out. Subsequently, when the repaired audio unit is delivered to the final user again, it will be in the "NEW" state as to enable re-linking the audio unit to the vehicle's immobiliser system. As a result of the above, repair of the audio unit can only be done by an authorized Clarion representative.

Service instruction

Item	Radio linked with IMMU and/or SECU
Battery disconnection	No additional action required
Radio needs repair	Repair needs to be done by authorised representative of radio manufacturer since radio cannot be operated unless it is reset to NEW state, using special decoding equipment
Replacement of radio by new part	Radio is delivered in NEW state. If possible, the radio will automatically link up with the immobiliser system. If this appears not possible, CATS code needs to be manually input
Transferring radio to another vehicle / replacement of radio by an "old" part	Radio needs to be reset to NEW state by authorised representative of radio manufacturer
Replacement of IMMU by new part	Radio will request for CATS code input prior to establishing the link with the IMMU
Replacement of IMMU by old part	If a radio code has already been stored in memory of the IMMU, the radio cannot be linked to it. After switching on the radio, it will display "SECURE" after 1 minute. Operation can only be established after resetting the ratio by an authorised representative of radio manufacturer
No communication from IMMU to radio	Radio will display "SECURE" after 180 attempts to communicate with IMMU. Further use of radio impossible until communication is established again, or after radio is reset by authorised representative of (radio) manufacturer

CATS code input procedure

1. Radio displays "CODE IN" after the power is switched ON.
2. Enter CATS code (4–digits) by pressing the preset buttons (using 1 to 4).
   Press the preset buttons for the necessary amount of times for the number of each digits.
   e.g. CATS code is "5432"
   Press No. 1 preset button for 5 times
   Press No. 2 preset button for 4 times
   Press No. 3 preset button for 3 times
   Press No. 4 preset button for 2 times
3. Press the ⏏ button.
4. If the code is OK, the radio will power ON.
   If the code is NG, the radio will be locked up as below. After the lock up, the radio will display "CODE IN" again.
   1st to 3rd attempt: The radio will be locked for 10 seconds after each attempt
   4th to 20th attempt: The radio will be locked for 60 minutes after each attempt
   Over 20th attempt: The radio will be locked completely

SPEED DEPENDENT VOLUME CONTROL

NLEL0497S02

Description

NLEL0497S0201

If activated, the radio output volume will be automatically adjusted to compensate for increasing driving noises at higher driving speeds.
The radio receives a speed signal from the vehicle speed sensor (VSS) and selects the output volume.

PERSONAL AUDIO SETTINGS

NLEL0497S03

Description

NLEL0497S0301

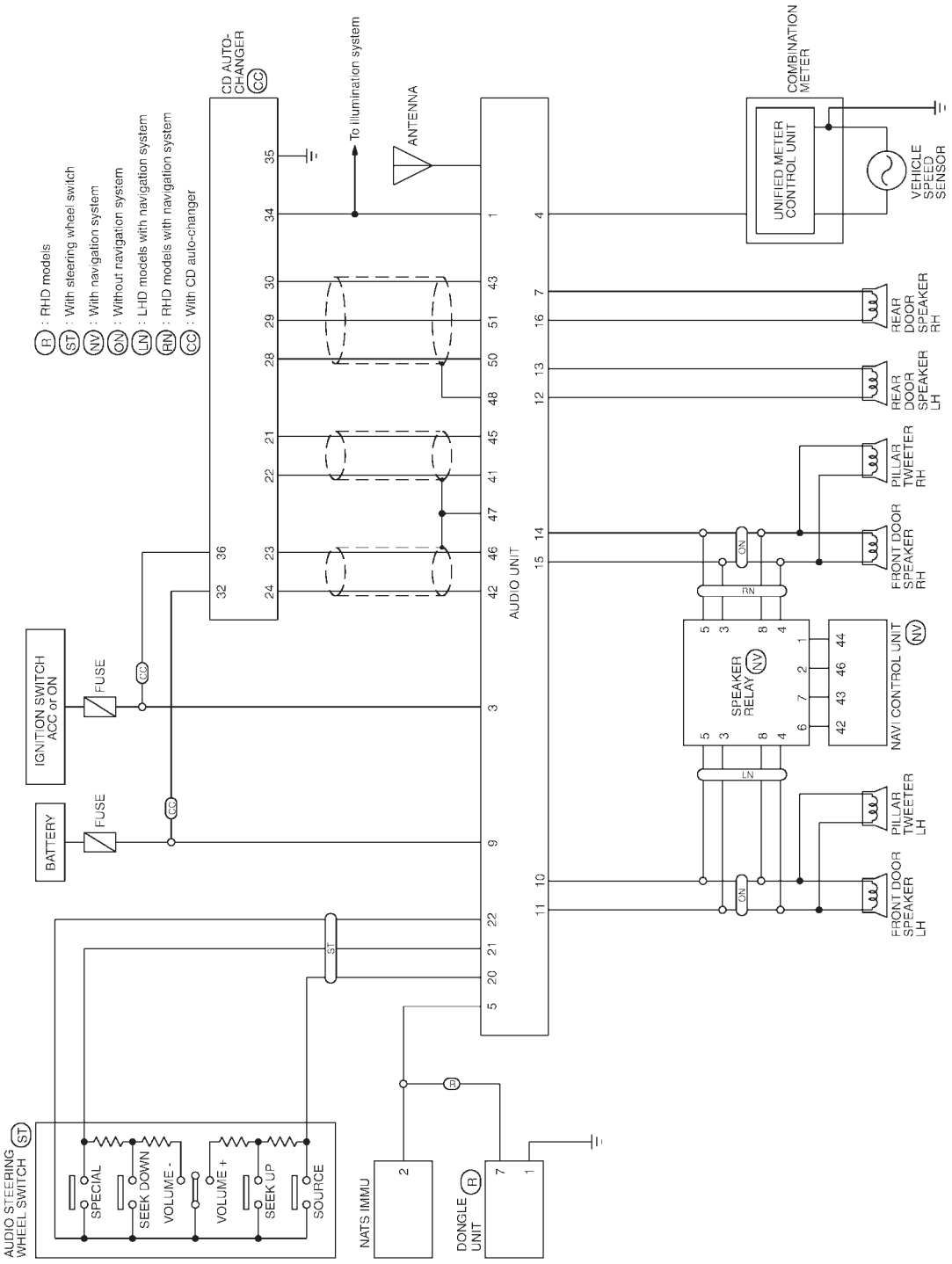
The radio is designed to store several settings (volume, bass, treble, preset stations and level of speed dependent volume control) with every NATS ignition key used. Up to a maximum of 4 NATS keys can be registered. During the communication as mentioned under "NATS audio link", the radio will recognize the used ignition key and select the accompanying settings.

Schematic

WHERE FITTED-1

NLEL0466

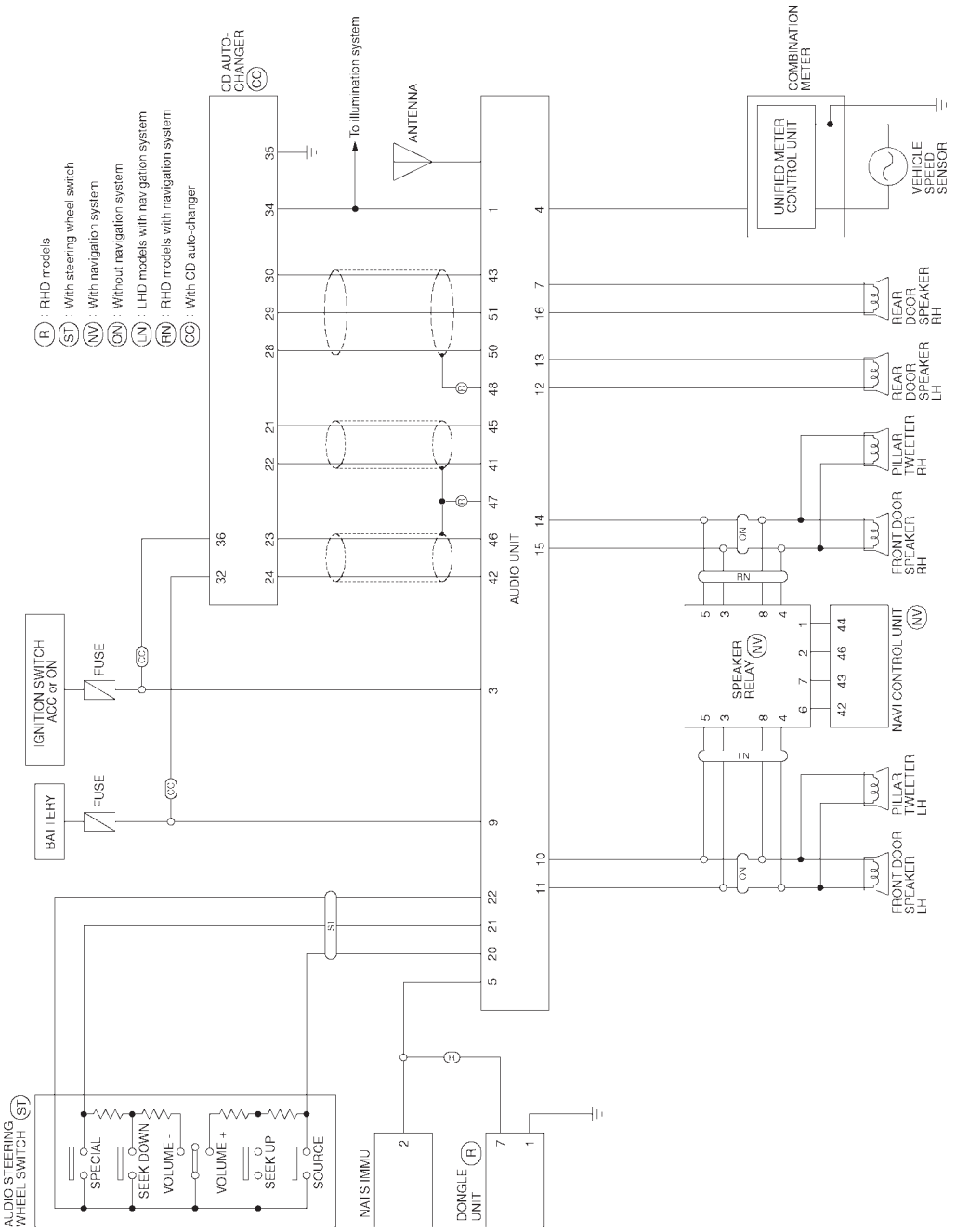
NLEL0466S01



YEL913B

WHERE FITTED-2

NLEL0466S02



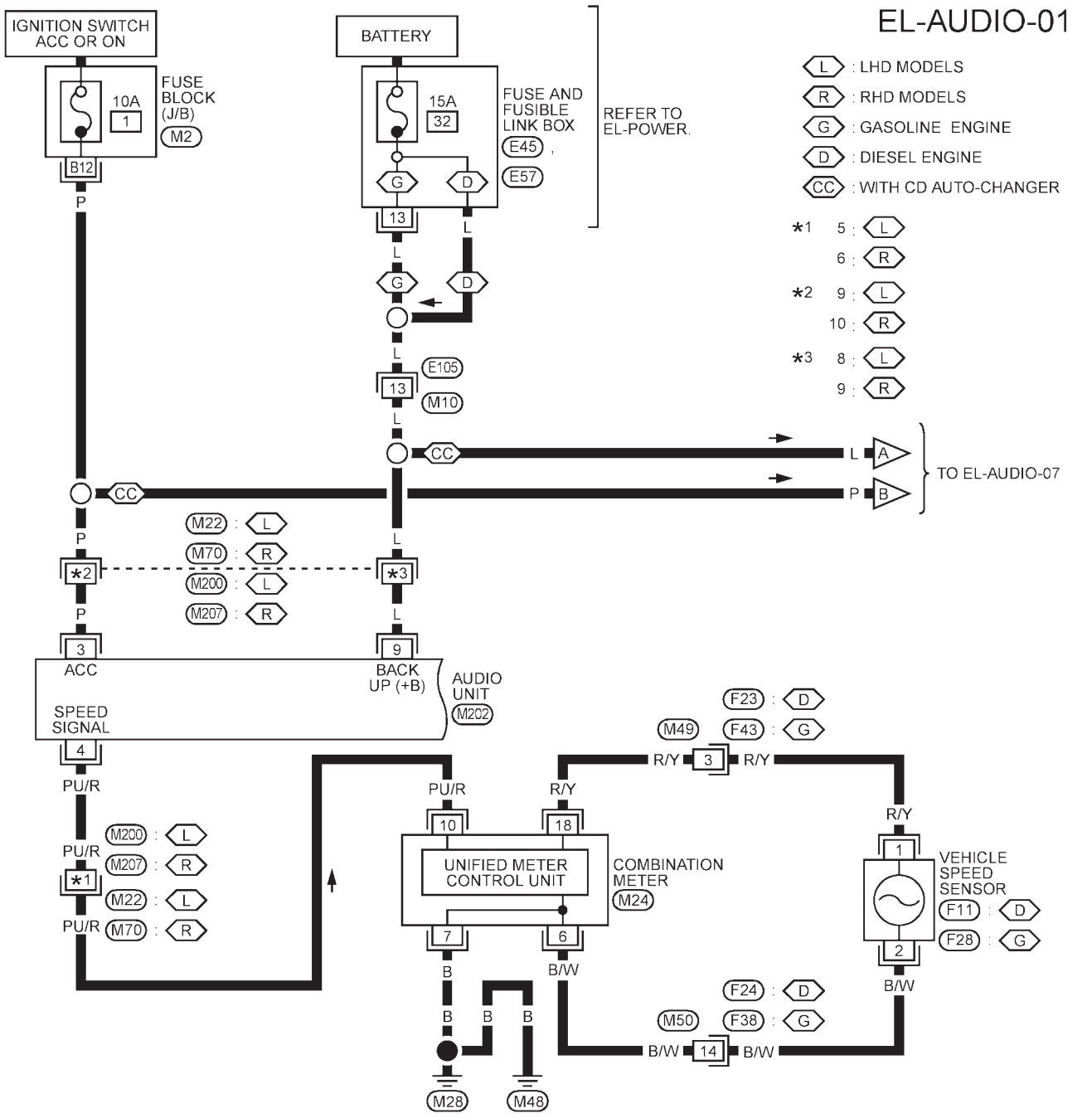
YEL434C

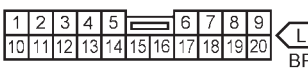
Wiring Diagram — AUDIO —

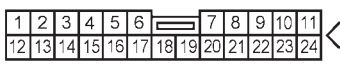
NLEL0467

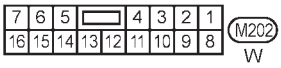
MODELS WITH FUSE AND FUSIBLE LINK BOX E43

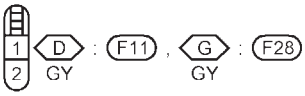
NLEL0467S03





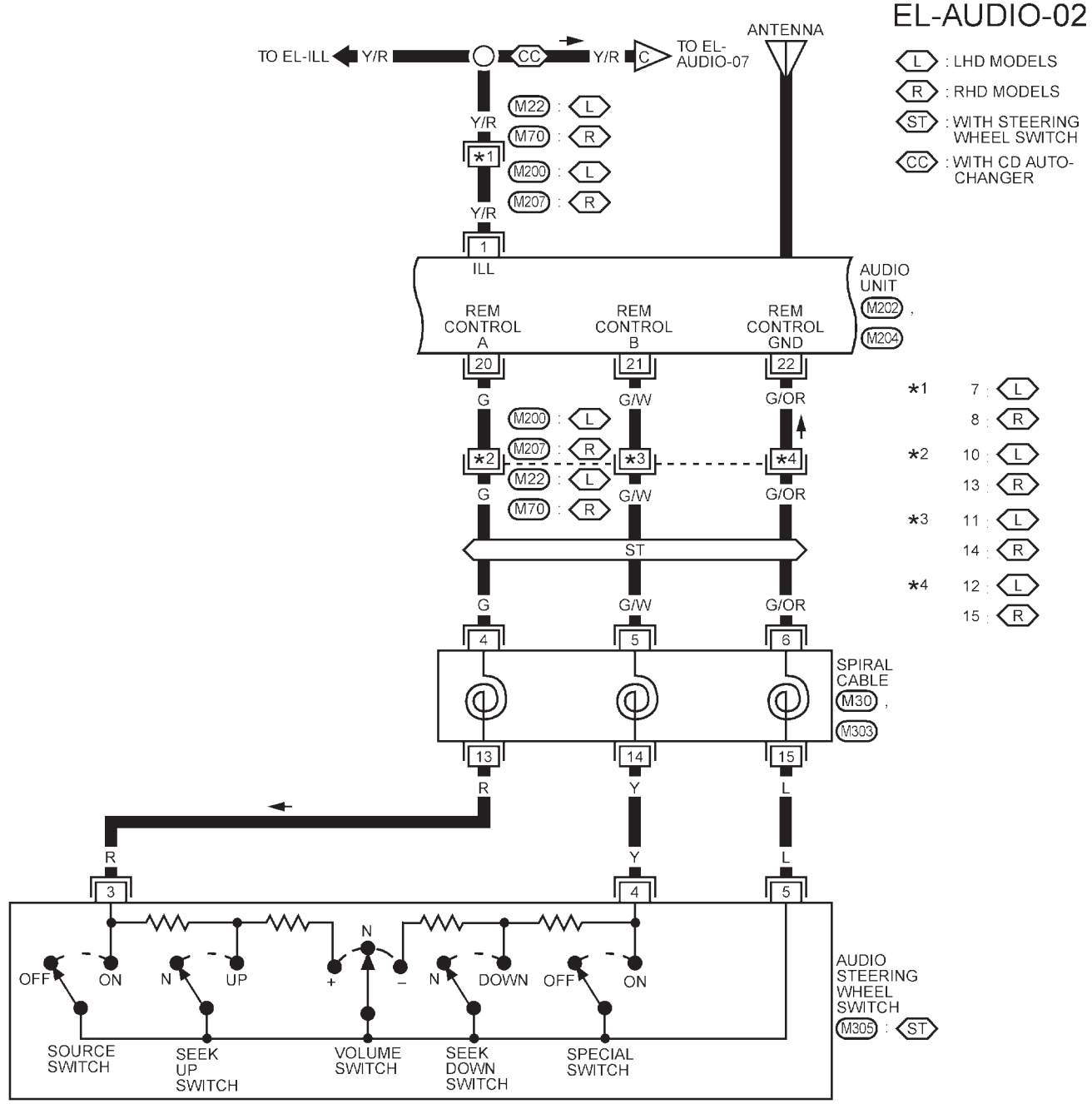


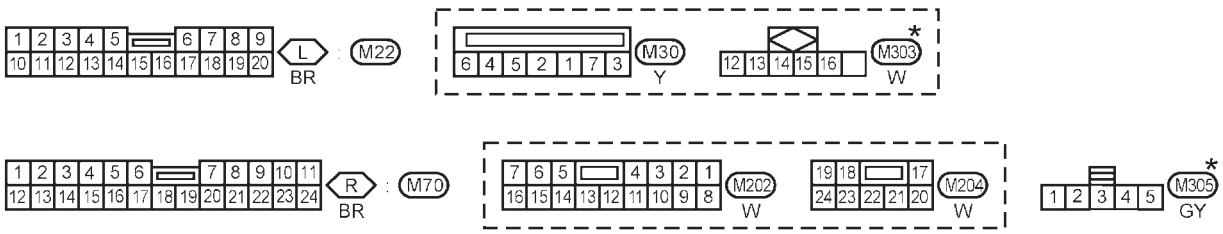




REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)
E45, E57 -FUSE AND FUSIBLE LINK BOX

YEL914B

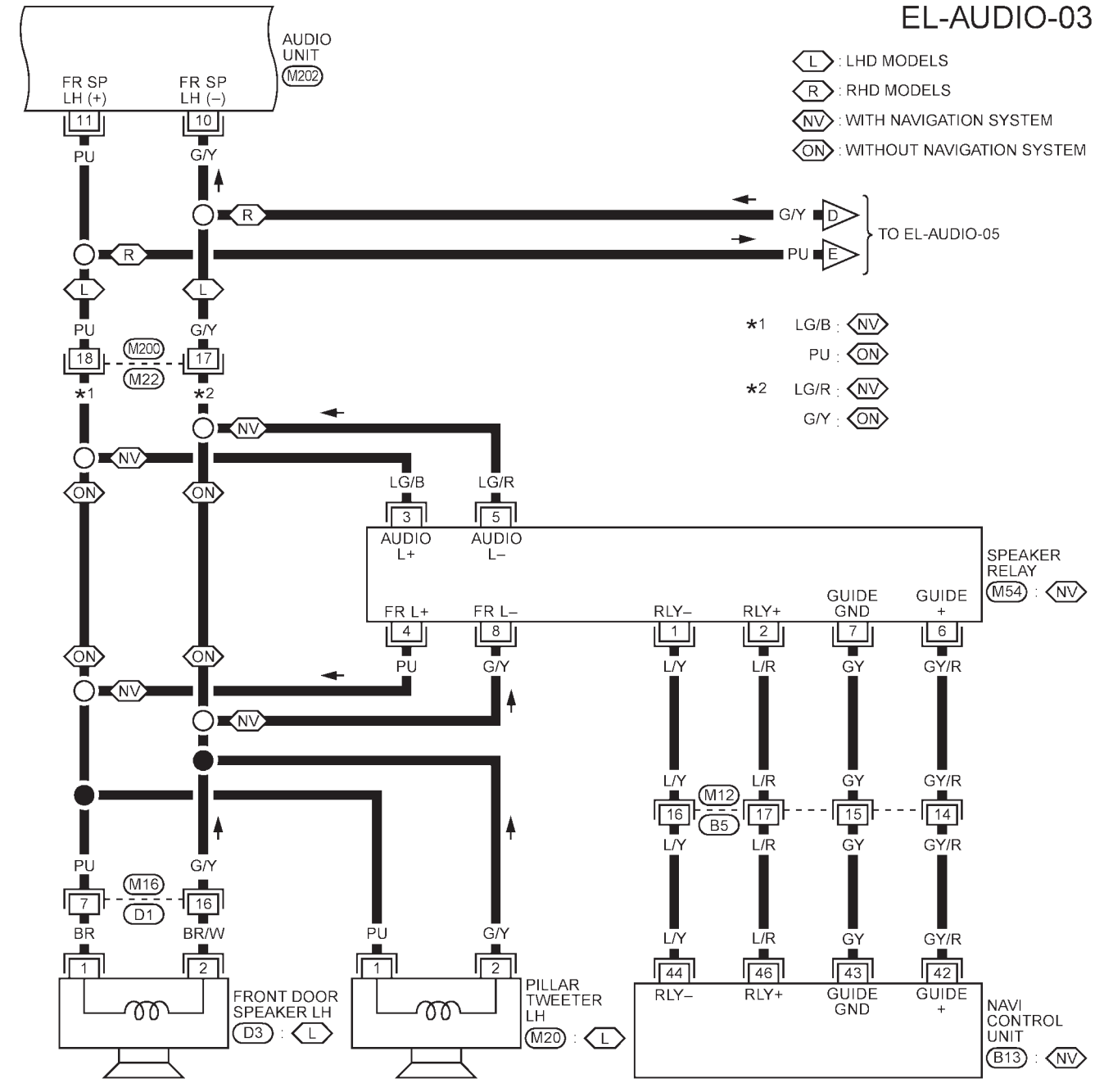


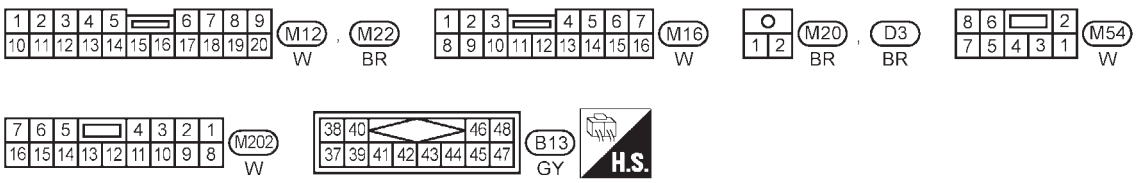


* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

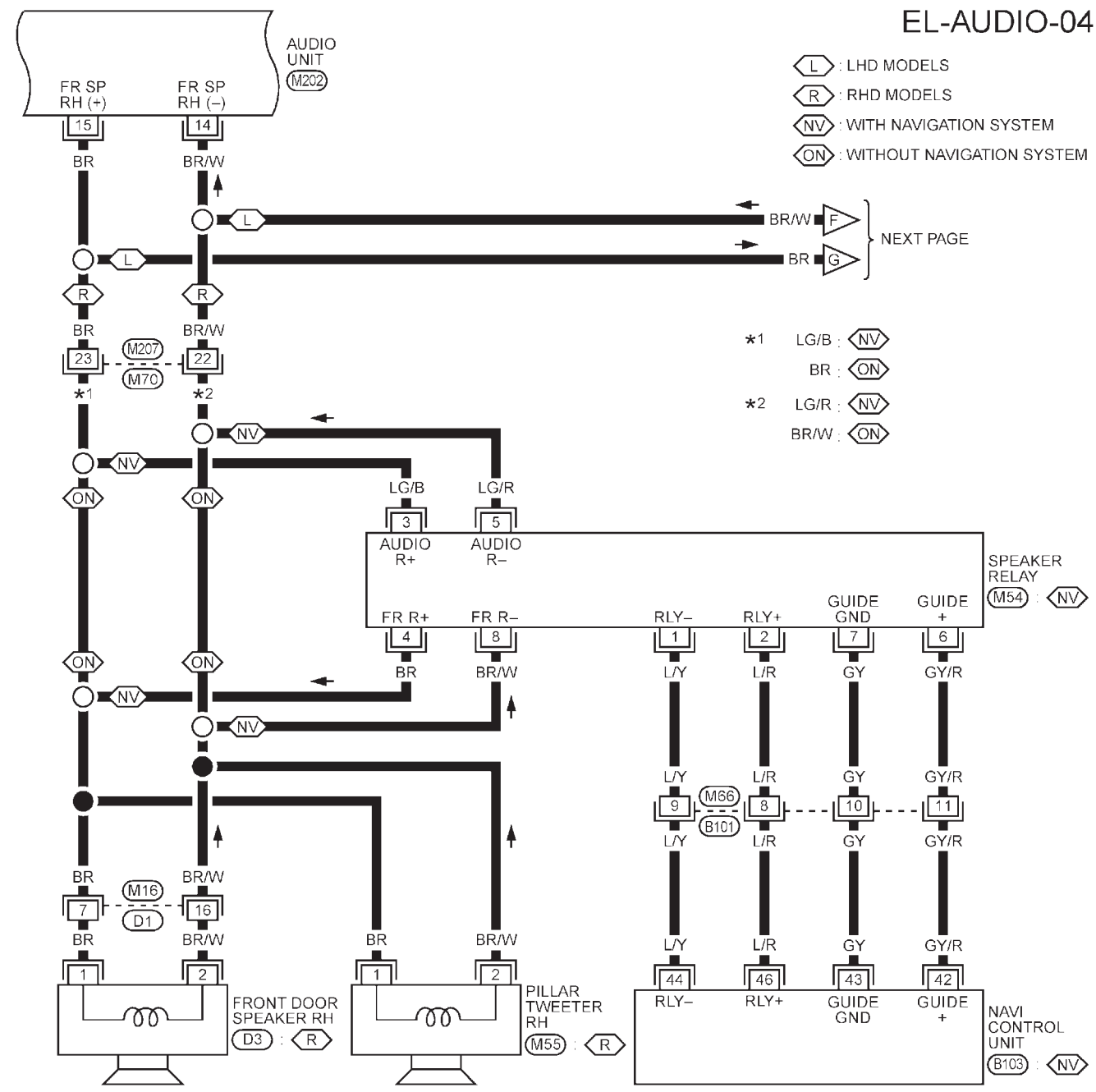
YEL915B

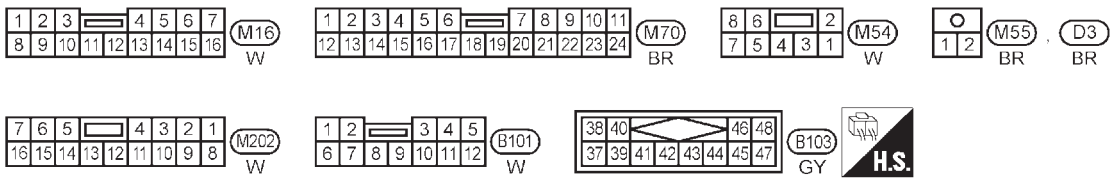
Wiring Diagram — AUDIO — (Cont'd)





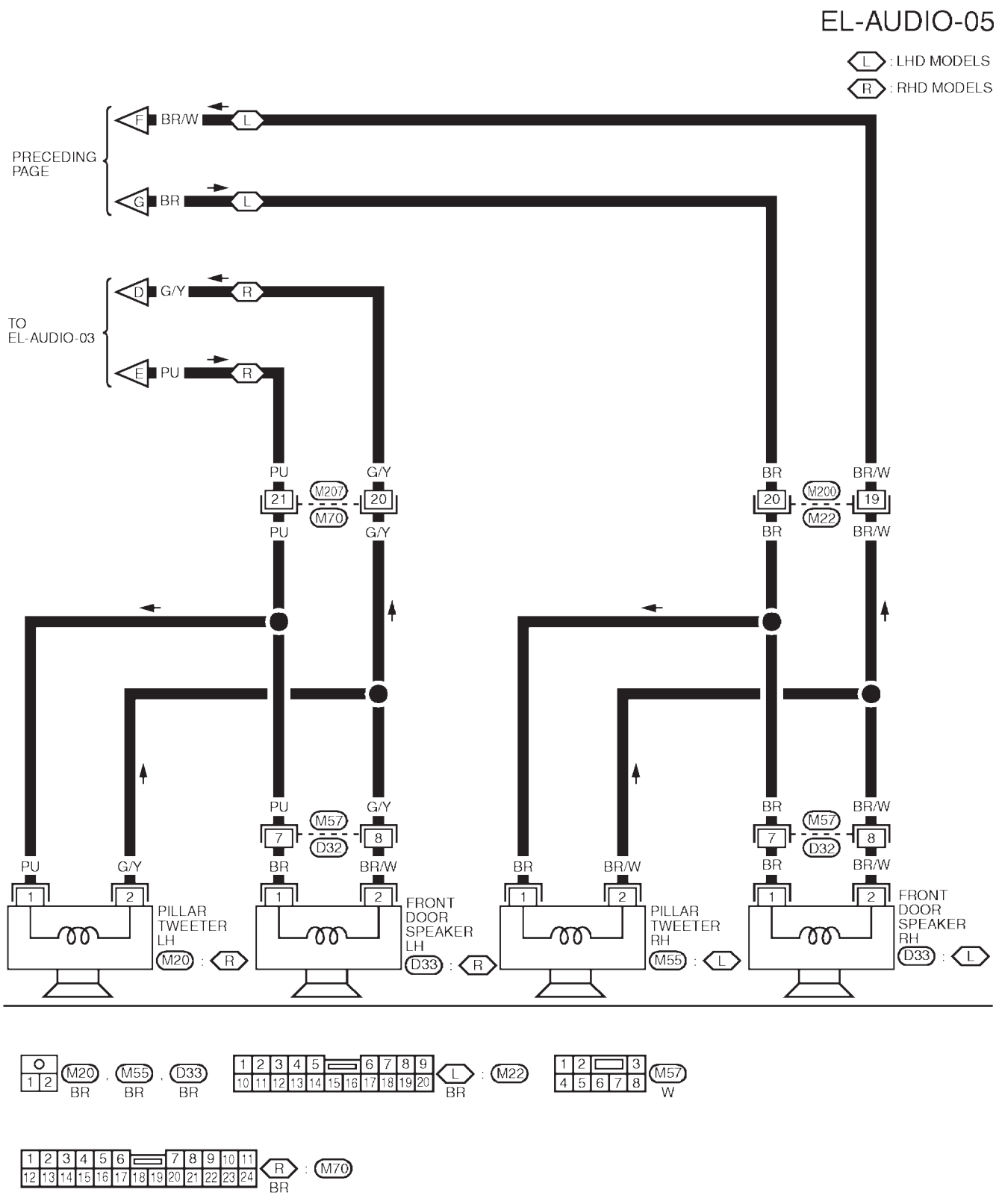
YEL916B


EL-AUDIO-04
L : LHD MODELS
R : RHD MODELS
NV : WITH NAVIGATION SYSTEM
ON : WITHOUT NAVIGATION SYSTEM
AUDIO UNIT M202
FR SP RH (+)
FR SP RH (–)
NEXT PAGE
*1 LG/B : NV
BR : ON
*2 LG/R : NV
BR/W : ON
SPEAKER RELAY M54 : NV
AUDIO R+
AUDIO R–
FR R+
FR R–
RLY–
RLY+
GUIDE GND
GUIDE +
FRONT DOOR SPEAKER RH D3 : R
PILLAR TWEETER RH M55 : R
NAVI CONTROL UNIT B103 : NV

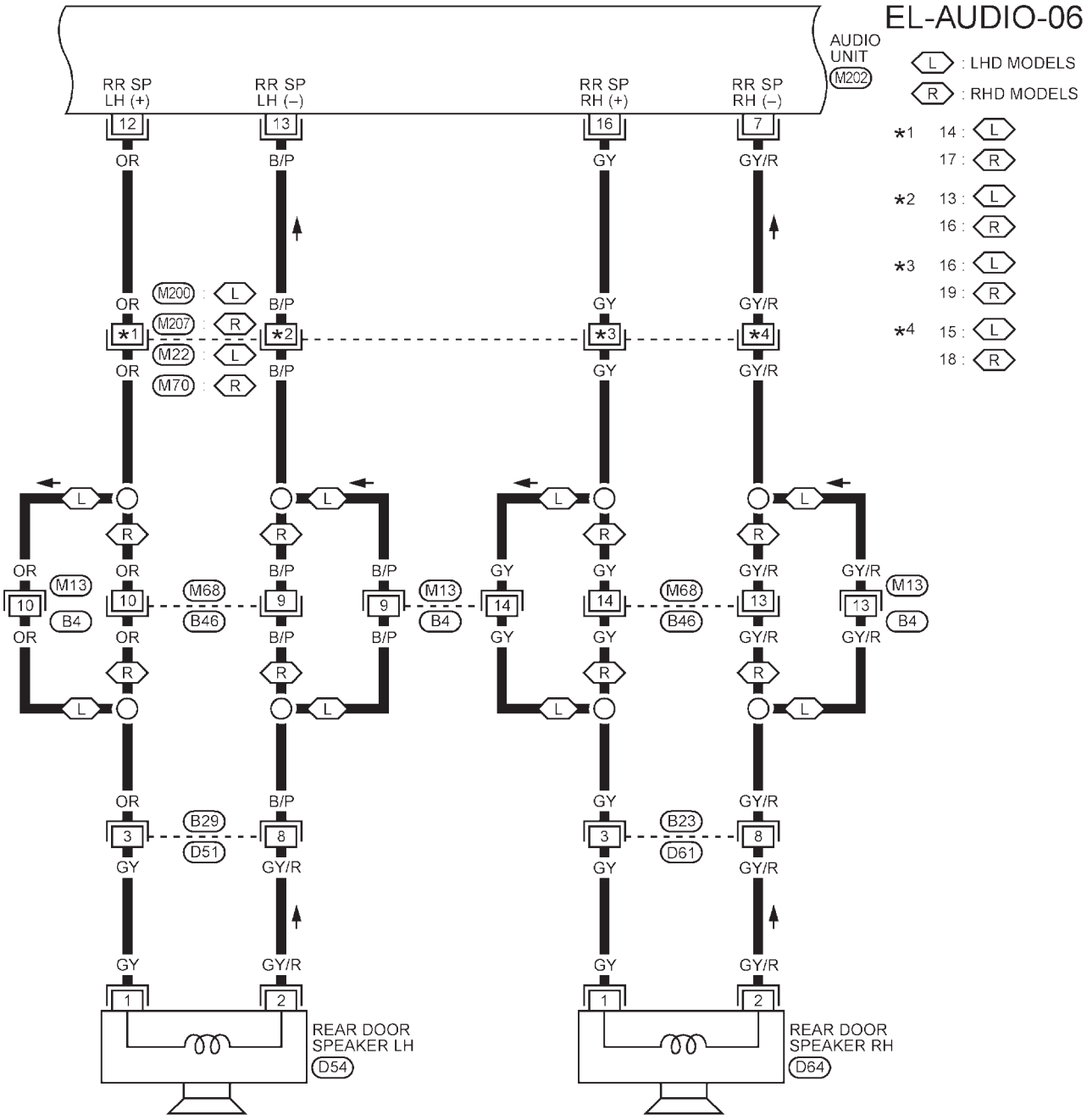

M16 W
M70 BR
M54 W
M55 BR
D3 BR
M202 W
B101 W
B103 GY
H.S.

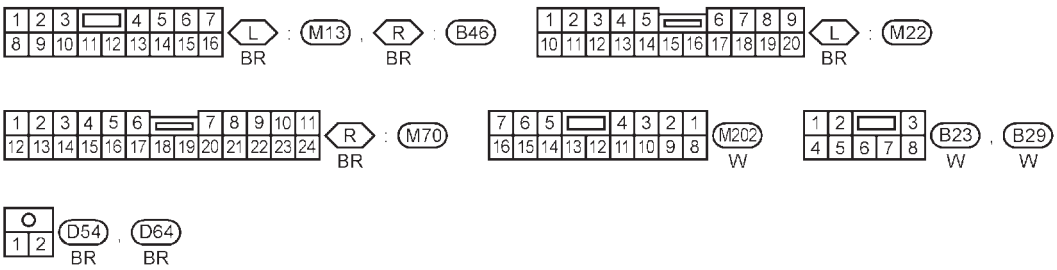
YEL917B

Wiring Diagram — AUDIO — (Cont'd)



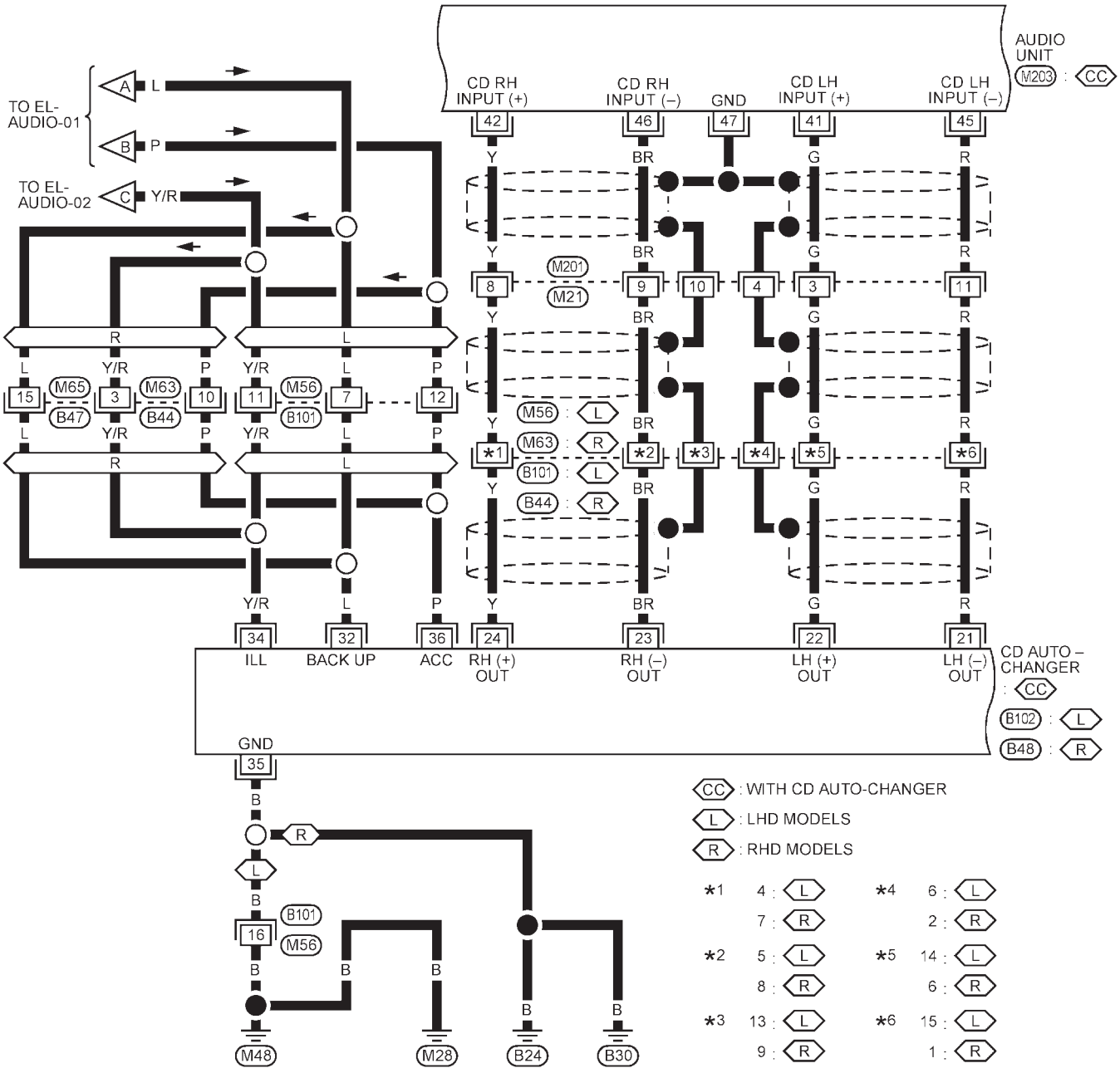
YEL918B

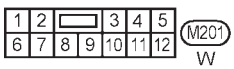

EL-AUDIO-06
AUDIO UNIT
M202
L : LHD MODELS
R : RHD MODELS
*1 14 : L
17 : R
*2 13 : L
16 : R
*3 16 : L
19 : R
*4 15 : L
18 : R
RR SP LH (+)
RR SP LH (–)
RR SP RH (+)
RR SP RH (–)
12
13
16
7
OR
B/P
GY
GY/R
M200 : L
M207 : R
M22 : L
M70 : R
*1
*2
*3
*4
M13
B4
M68
B46
B29
D51
B23
D61
REAR DOOR SPEAKER LH
D54
REAR DOOR SPEAKER RH
D64

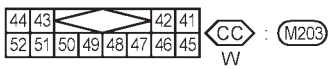

L : M13 , R : B46
BR
L : M22
BR
R : M70
BR
M202
W
B23 , B29
W
D54 , D64
BR

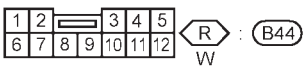
YEL919B

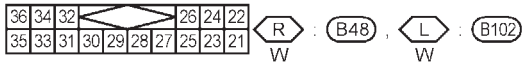
EL-AUDIO-07



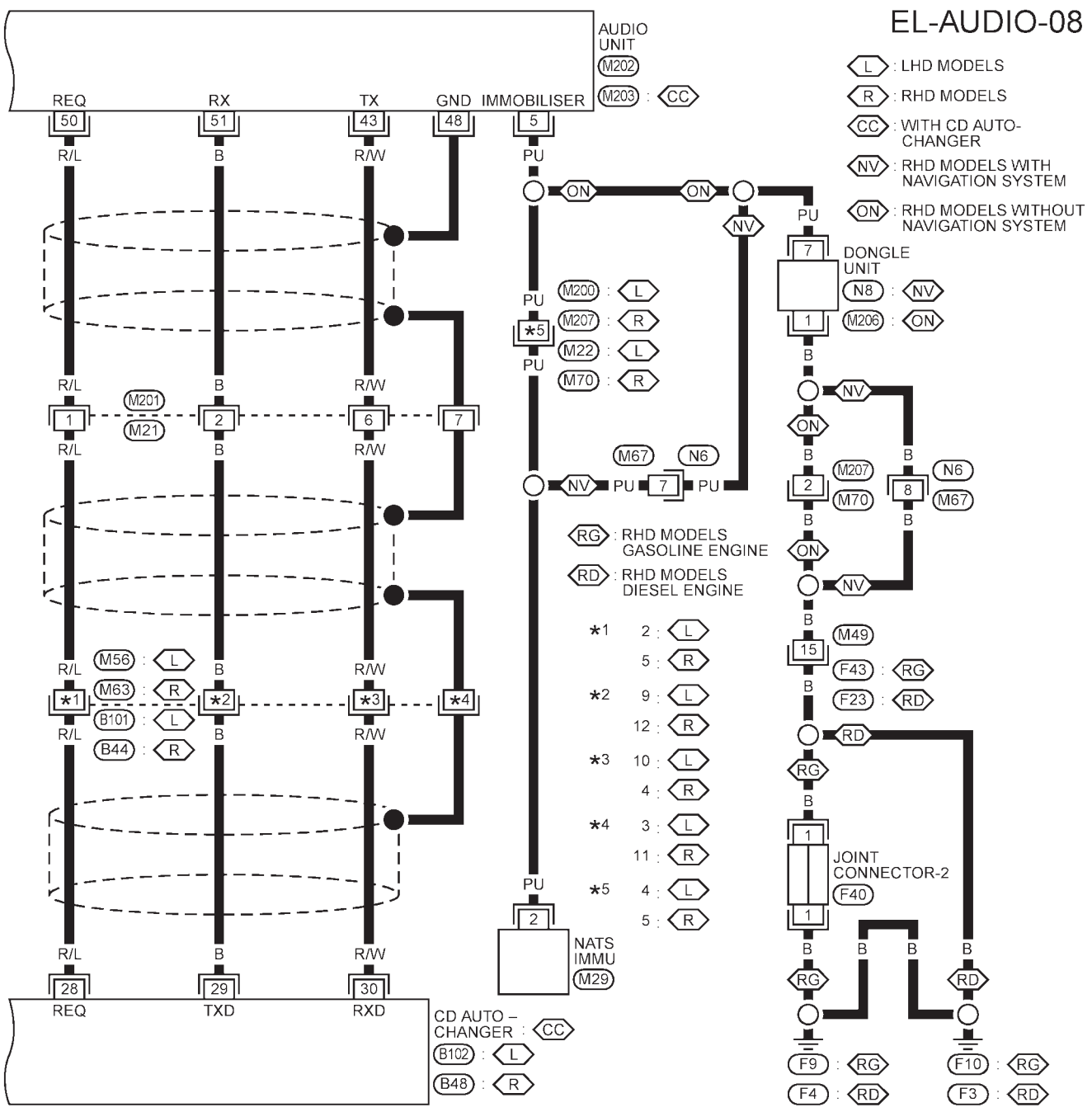


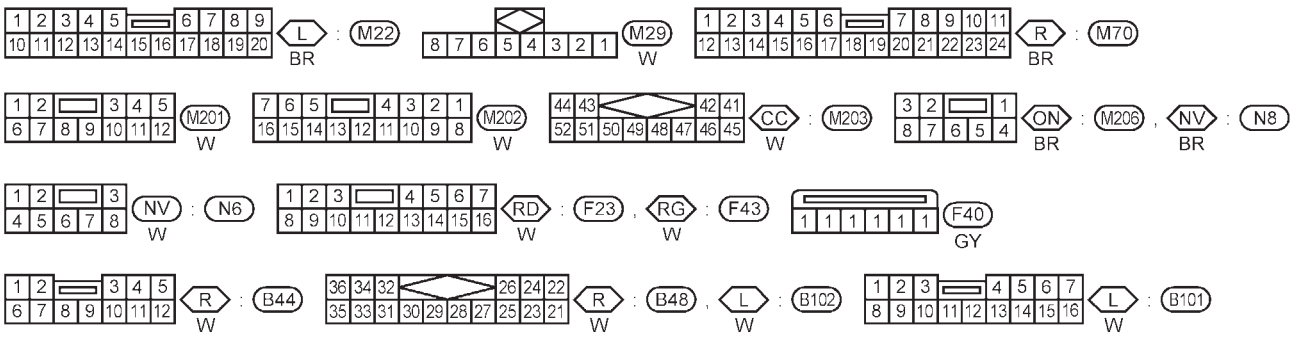






YEL920B


EL-AUDIO-08
AUDIO UNIT
M202
M203 : CC
REQ
RX
TX
GND
IMMOBILISER
50
51
43
48
5
R/L
B
R/W
PU
ON
NV
L : LHD MODELS
R : RHD MODELS
CC : WITH CD AUTO-CHANGER
NV : RHD MODELS WITH NAVIGATION SYSTEM
ON : RHD MODELS WITHOUT NAVIGATION SYSTEM
DONGLE UNIT
N8 : NV
M206 : ON
M200 : L
M207 : R
M22 : L
M70 : R
M201
M21
M67
N6
RG : RHD MODELS GASOLINE ENGINE
RD : RHD MODELS DIESEL ENGINE
M56 : L
M63 : R
B101 : L
B44 : R
*1
*2
*3
*4
*5
2 : L
5 : R
9 : L
12 : R
10 : L
4 : R
3 : L
11 : R
4 : L
5 : R
M49
F43 : RG
F23 : RD
JOINT CONNECTOR-2
F40
NATS IMMU
M29
28
29
30
TXD
RXD
CD AUTO – CHANGER : CC
B102 : L
B48 : R
F9 : RG
F4 : RD
F10 : RG
F3 : RD


M22
M29
M70
M201
M202
M203
ON : M206 , NV : N8
NV : N6
F23 , RG : F43
F40
R : B44
R : B48 , L : B102
L : B101

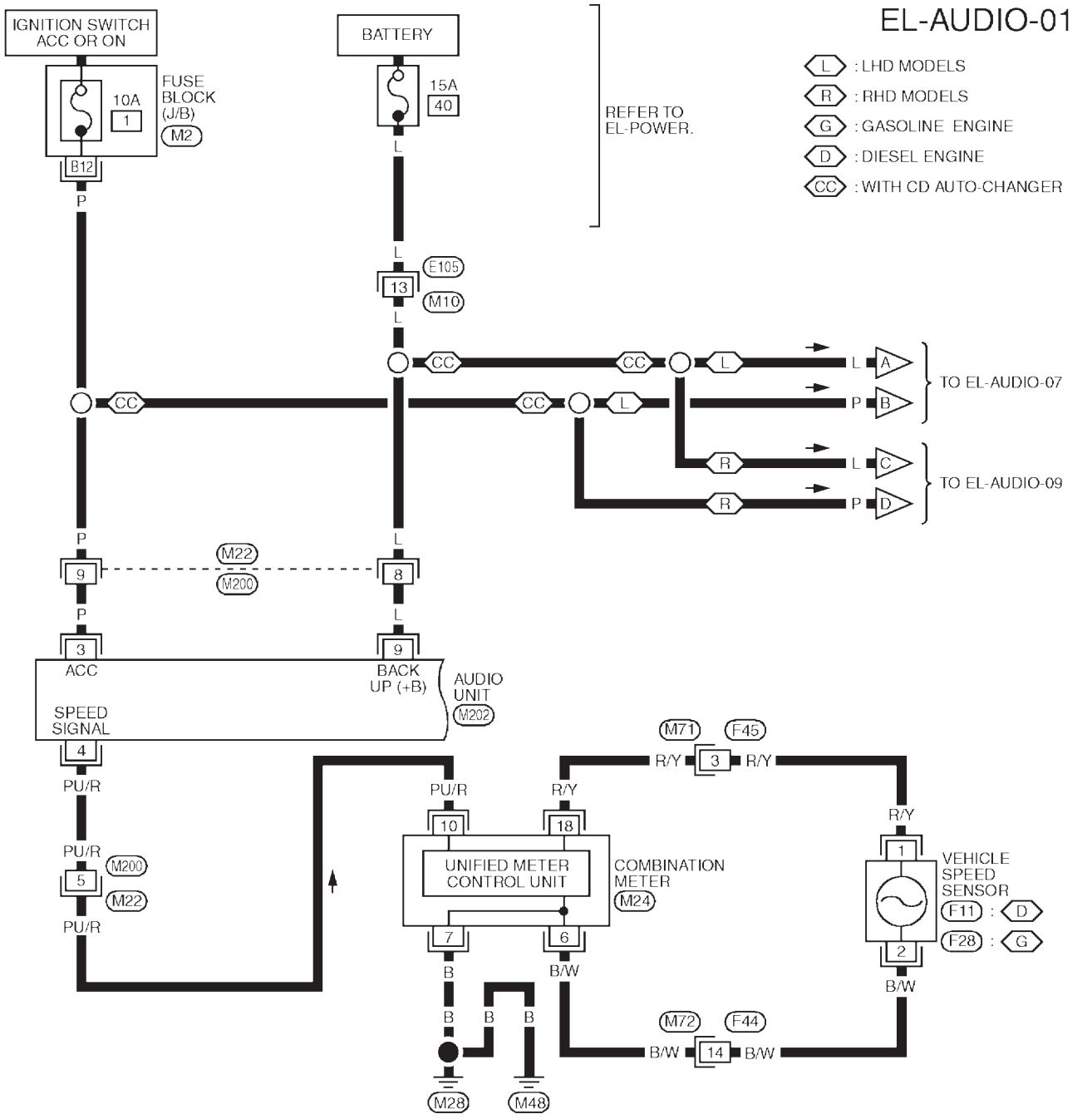
YEL921B

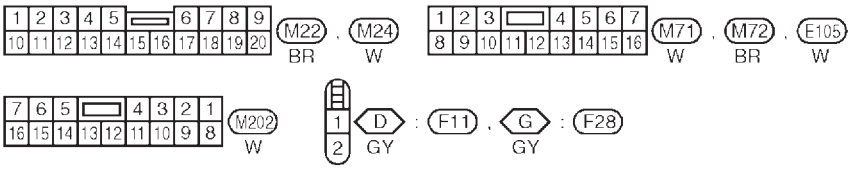
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0467S04

LHD and RHD models

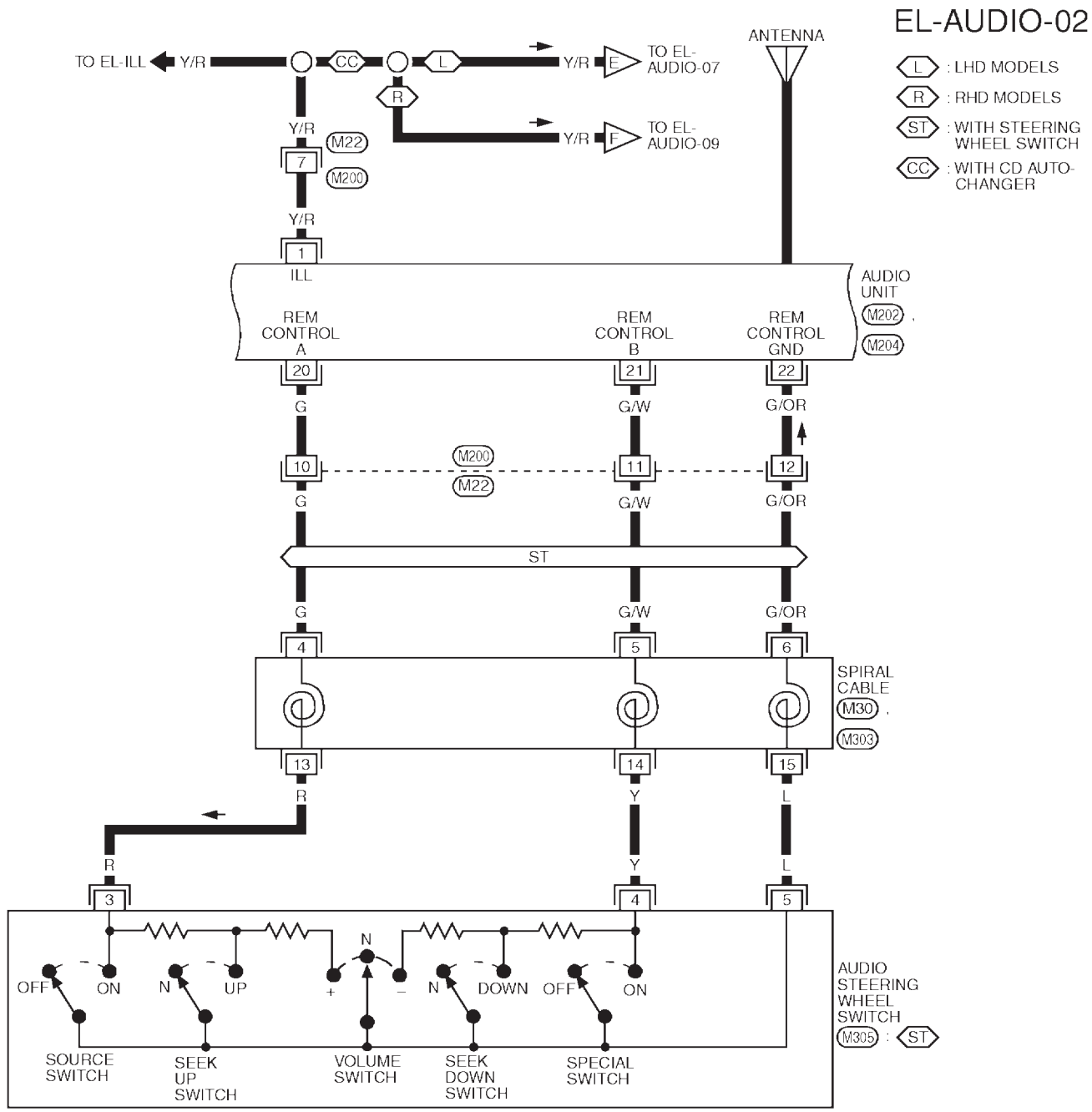
NLEL0467S0401





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

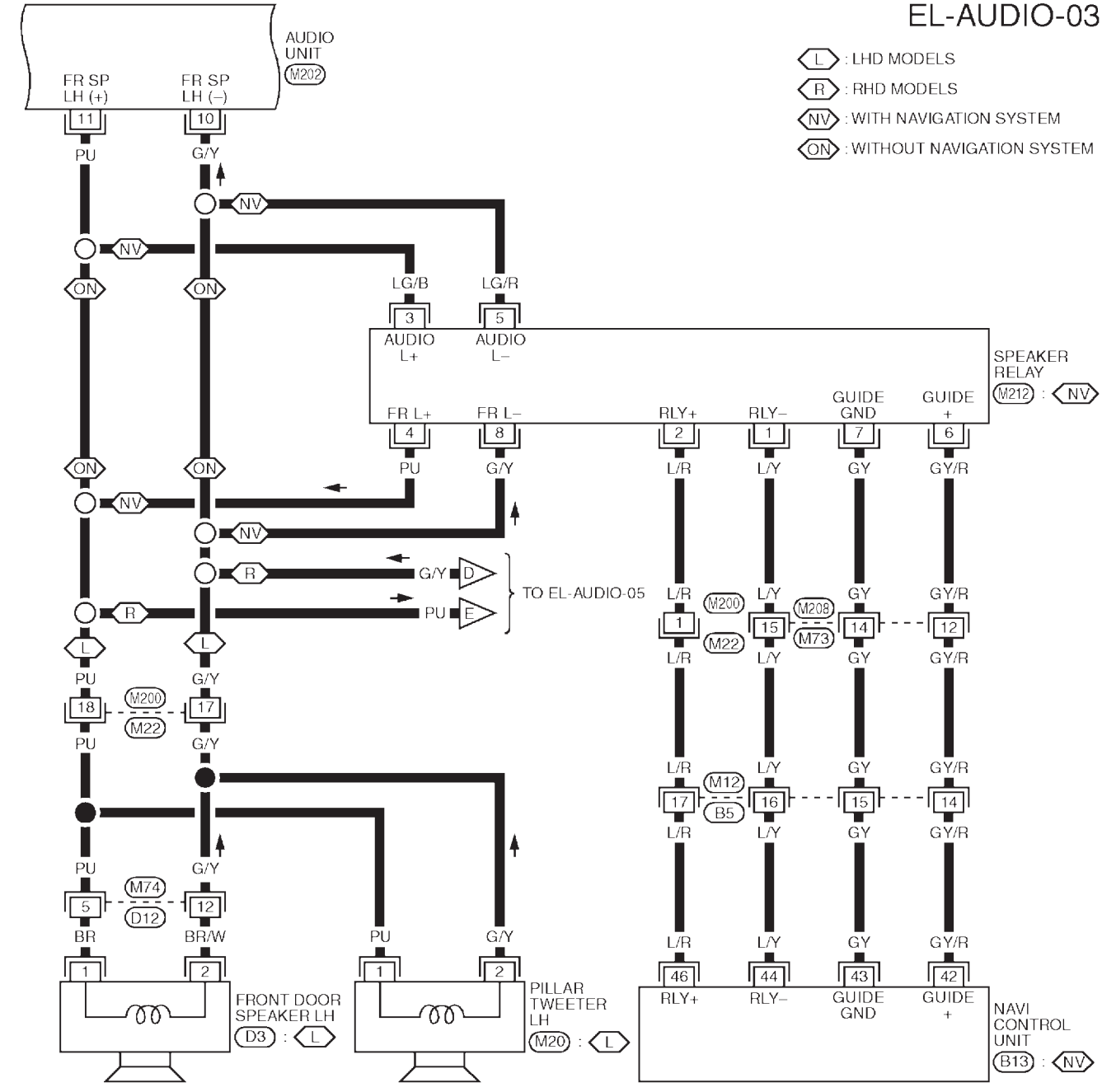
YEL435C

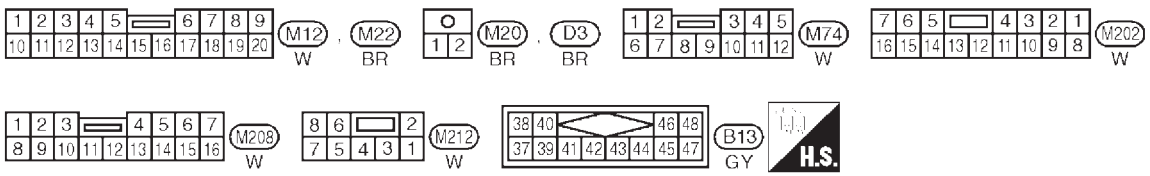


★ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

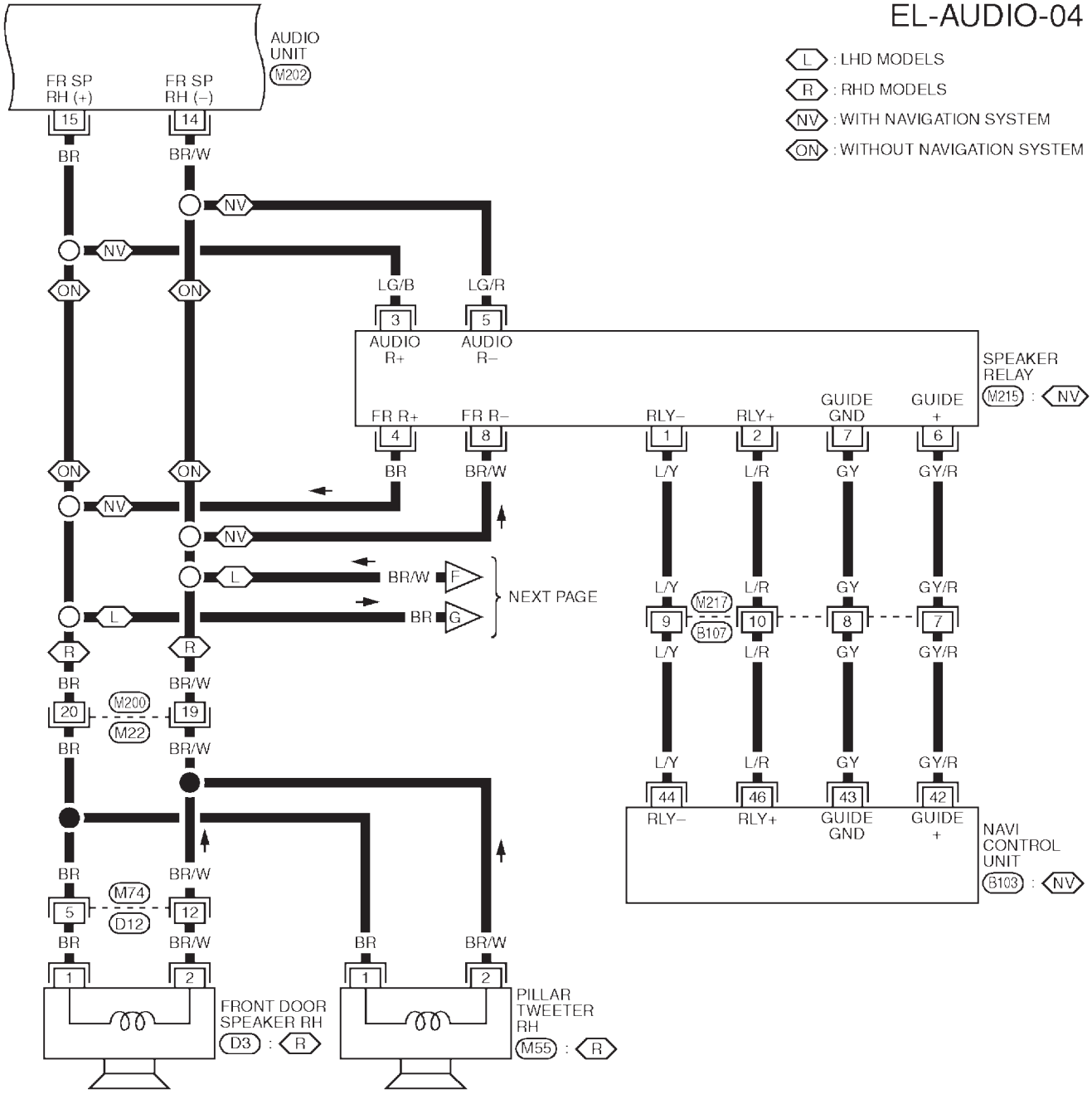
YEL436C

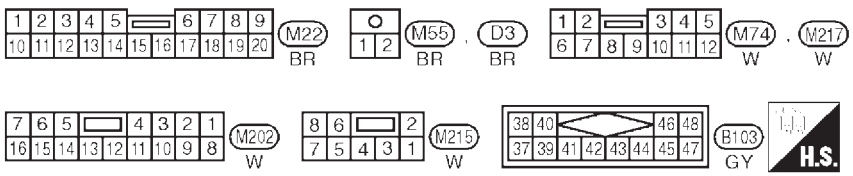
Wiring Diagram — AUDIO — (Cont'd)



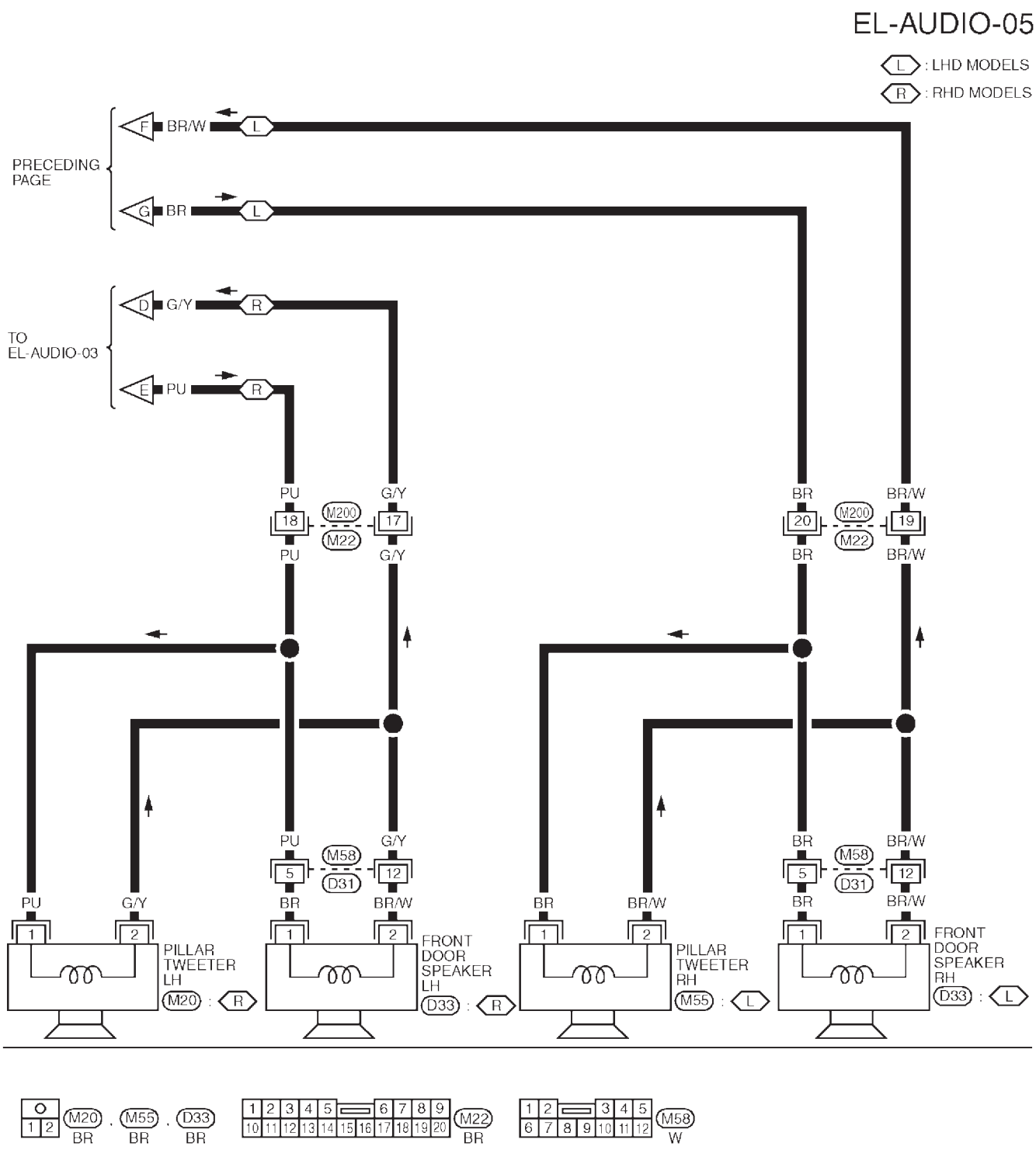


YEL437C

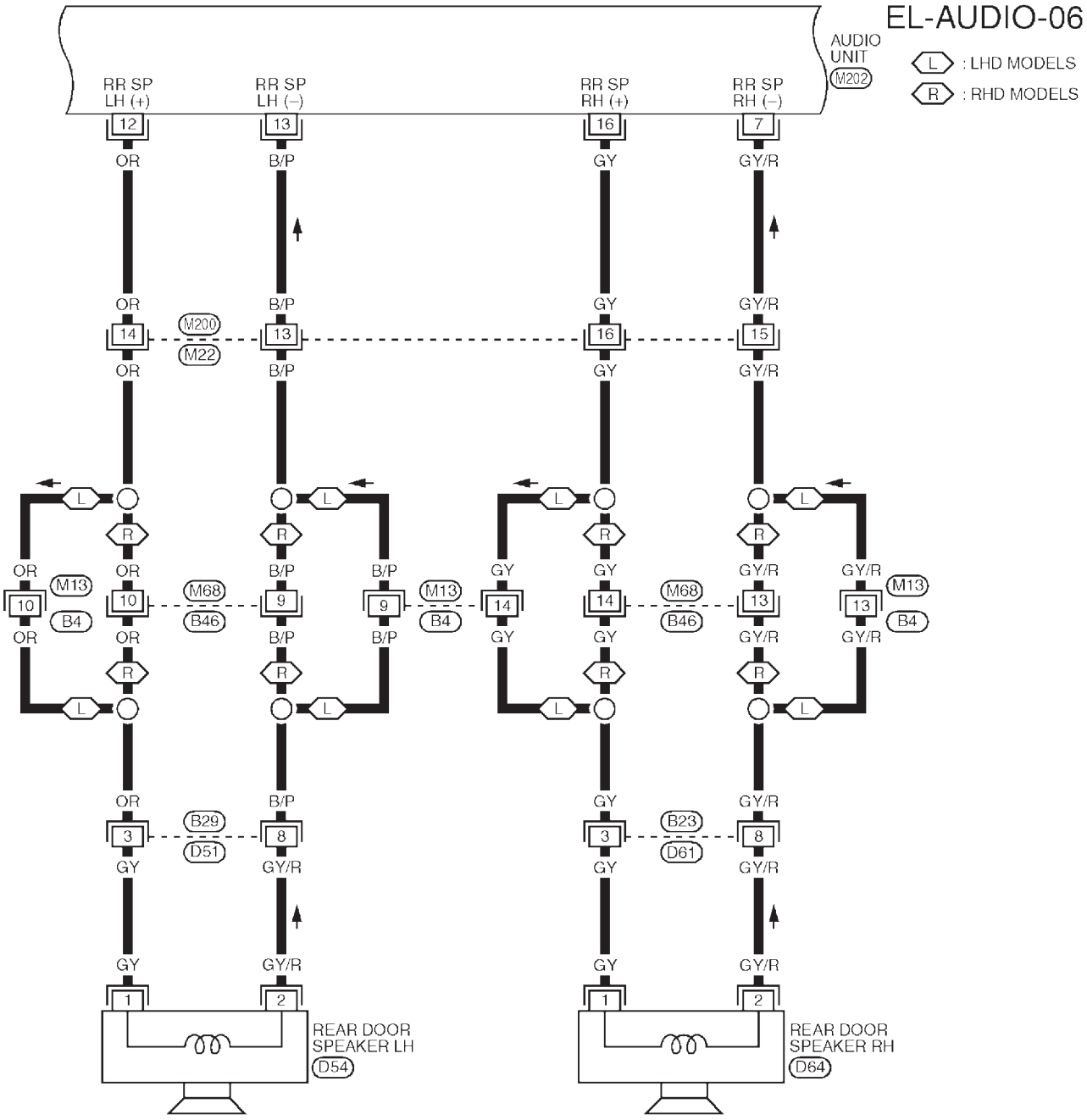

EL-AUDIO-04
L : LHD MODELS
R : RHD MODELS
NV : WITH NAVIGATION SYSTEM
ON : WITHOUT NAVIGATION SYSTEM
AUDIO UNIT
M202
FR SP RH (+)
FR SP RH (–)
15
14
BR
BR/W
NV
ON
LG/B
LG/R
3
5
AUDIO R+
AUDIO R–
SPEAKER RELAY
M215
NV
FR R+
FR R–
RLY–
RLY+
GUIDE GND
GUIDE +
4
8
1
2
7
6
BR
BR/W
L/Y
L/R
GY
GY/R
L
R
BR/W
BR
F
G
NEXT PAGE
M217
B107
9
10
8
7
20
19
M200
M22
M74
D12
5
12
44
46
43
42
NAVI CONTROL UNIT
B103
1
2
FRONT DOOR SPEAKER RH
D3
PILLAR TWEETER RH
M55

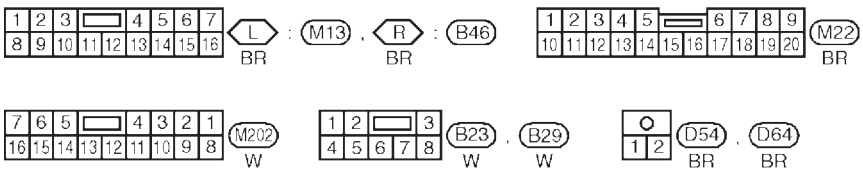

M22
BR
M55
BR
D3
BR
M74
W
M217
W
M202
W
M215
W
B103
GY
H.S.

YEL438C


EL-AUDIO-05
L : LHD MODELS
R : RHD MODELS
PRECEDING PAGE
F BR/W L
G BR L
TO EL-AUDIO-03
D G/Y R
E PU R
PU G/Y BR BR/W
M200 M22
18 17 20 19
PU G/Y BR BR/W
M58 D31
5 12 5 12
PU G/Y BR BR/W BR BR/W BR BR/W
1 2 1 2 1 2 1 2
PILLAR TWEETER LH M20 : R
FRONT DOOR SPEAKER LH D33 : R
PILLAR TWEETER RH M55 : L
FRONT DOOR SPEAKER RH D33 : L
M20 BR
M55 BR
D33 BR
M22 BR
M58 W

YEL439C


EL-AUDIO-06
AUDIO UNIT
M202
L : LHD MODELS
R : RHD MODELS
RR SP LH (+)
RR SP LH (−)
RR SP RH (+)
RR SP RH (−)
12
13
16
7
OR
B/P
GY
GY/R
14
15
M200
M22
L
R
10
M13
B4
M68
B46
9
B/P
13
B29
D51
B23
D61
3
8
GY
GY/R
1
2
REAR DOOR SPEAKER LH
D54
REAR DOOR SPEAKER RH
D64

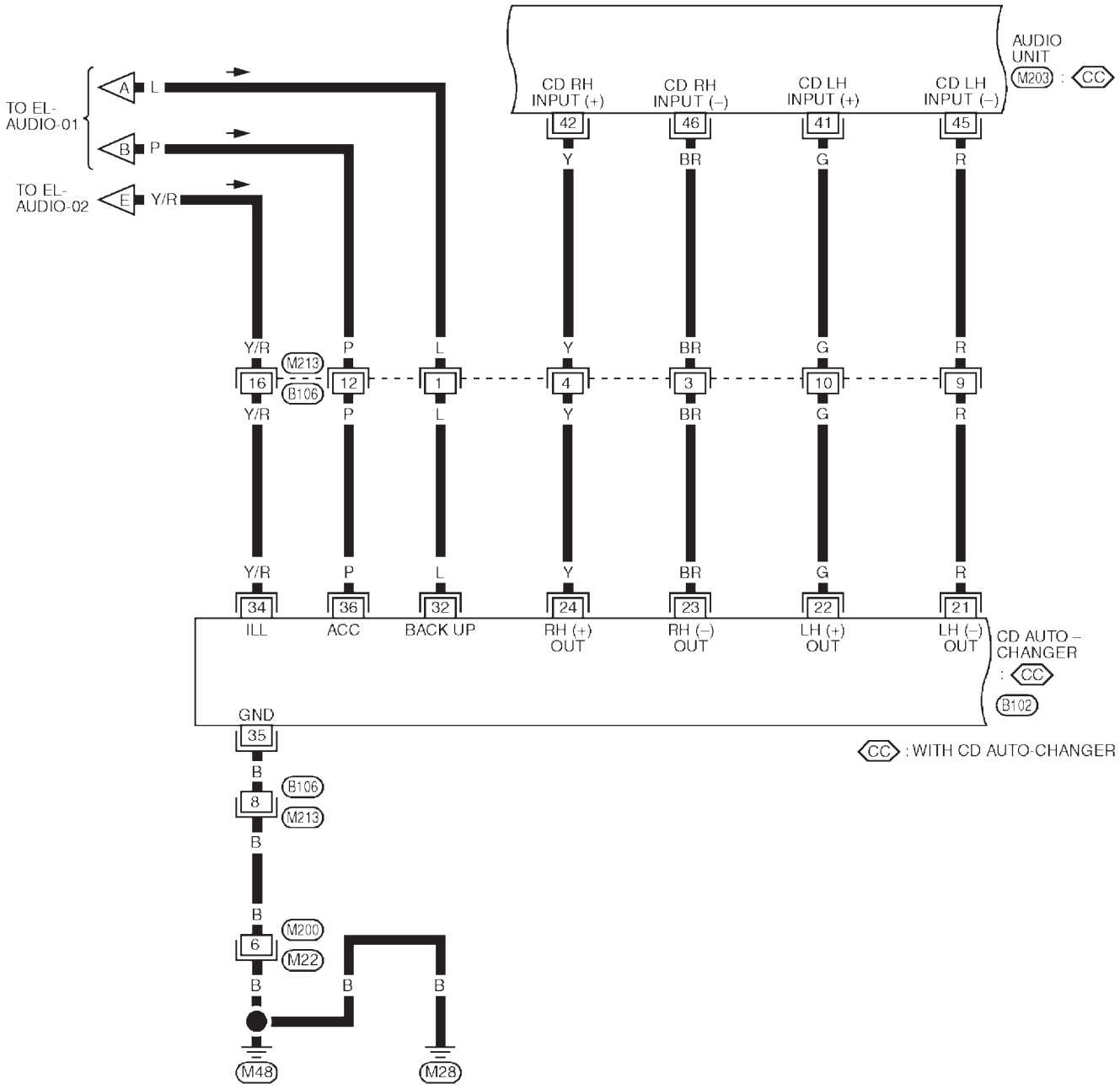

L
BR
M13
R
BR
B46
M22
BR
M202
W
B23
B29
W
W
D54
D64
BR
BR

YEL440C

LHD models

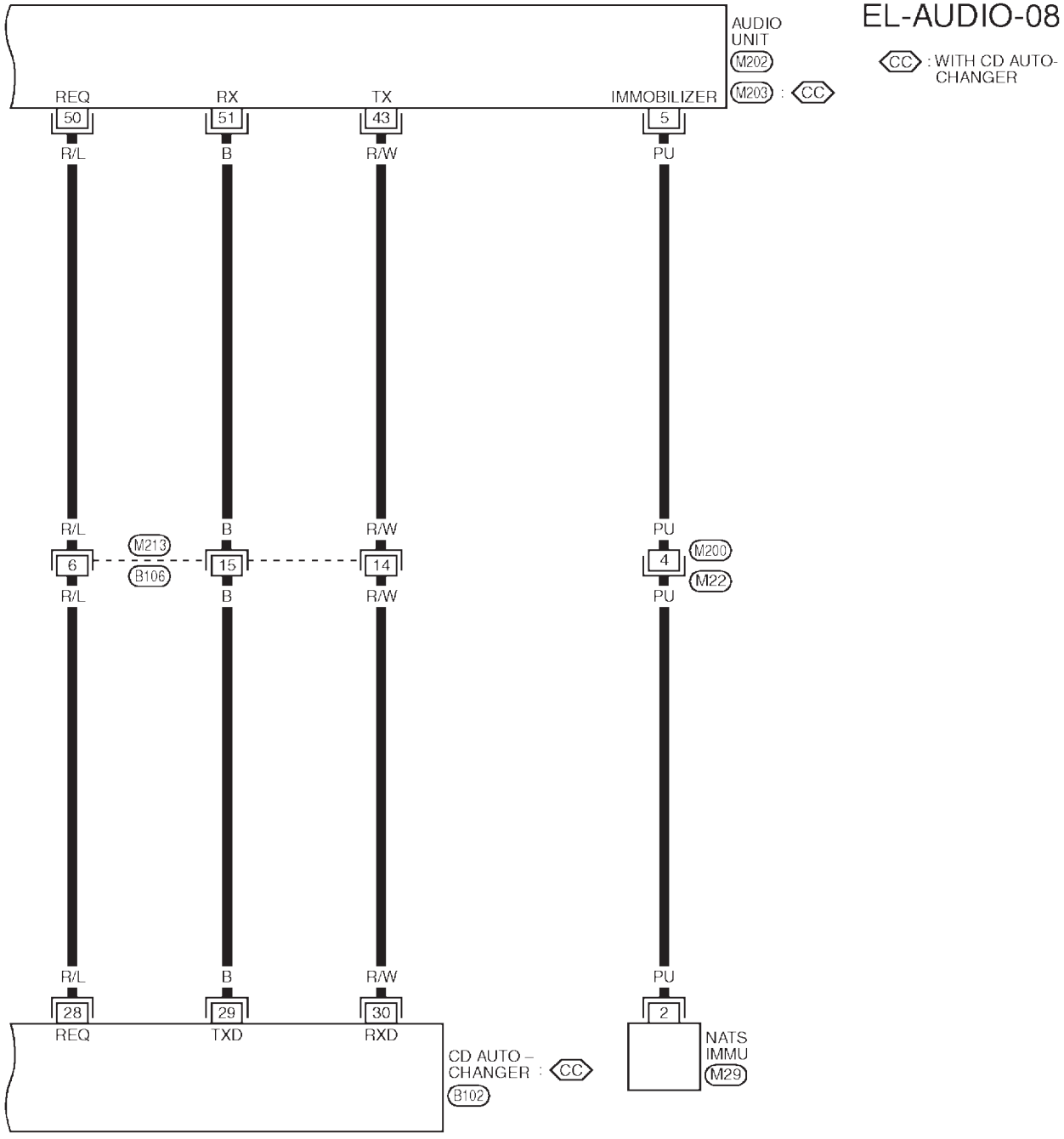
NLEL0467S0402

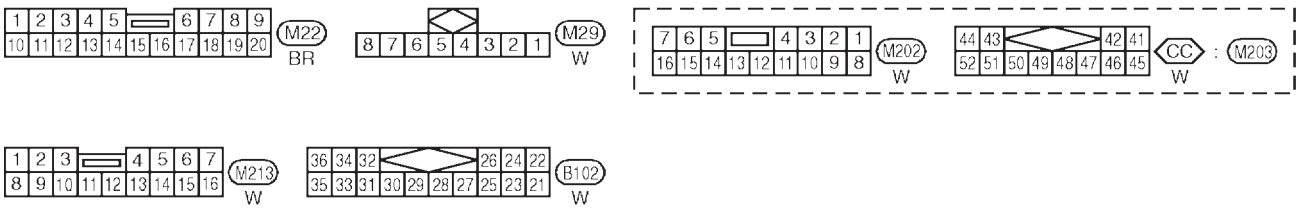
EL-AUDIO-07



YEL441C

EL-AUDIO-08



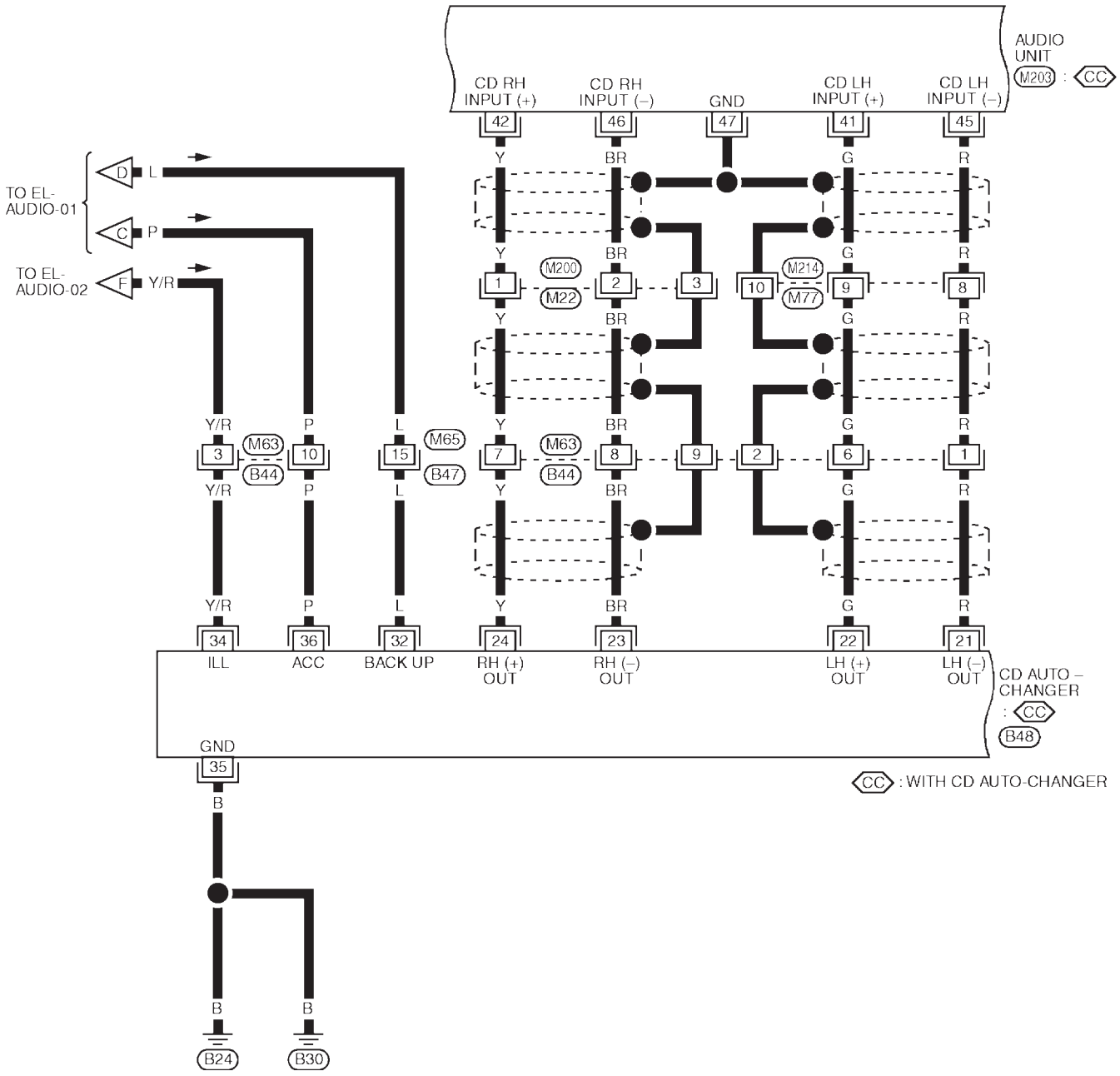


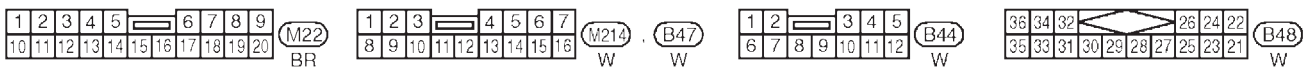
YEL442C

RHD models

NLEL0467S0403

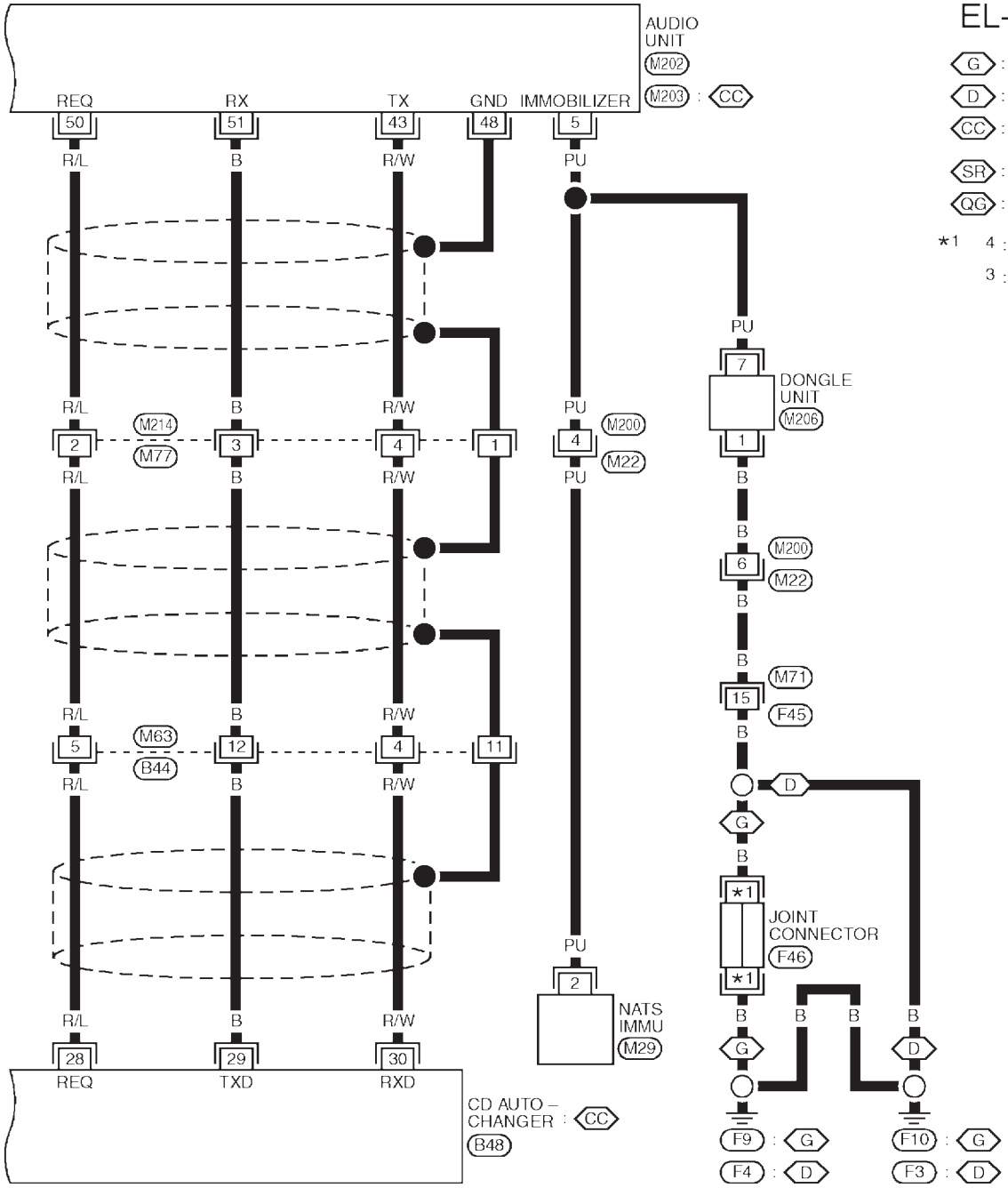
EL-AUDIO-09

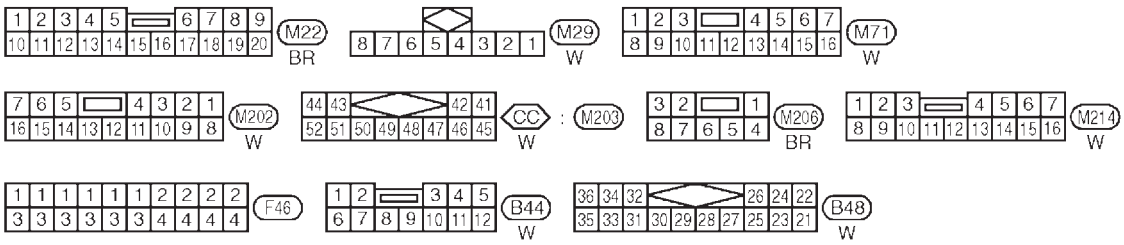




YEL443C

EL-AUDIO-10





YEL444C

Trouble Diagnoses

NLEL0385

AUDIO UNIT

NLEL0385S05

Symptom	Possible causes	Repair order
Audio unit inoperative (no digital display and no sound from speakers).	1. 10A fuse 2. Poor audio unit case ground 3. Audio unit	1. Check 10A fuse [No. 1, located in fuse block (J/B)]. Turn ignition switch ON and verify that battery positive voltage is present at terminal 3 of audio unit. 2. Check audio unit case ground. 3. Remove audio unit for repair.
Audio unit presets are lost when ignition switch is turned OFF.	1. 15A fuse 2. Audio unit	1. Check 15A fuse and verify that battery positive voltage is present at terminal 9 of audio unit. 2. Remove audio unit for repair.
Individual rear speaker is noisy or inoperative.	1. Each speaker 2. Output circuit to each speaker	1. Check speaker. 2. Check the output circuits to each speaker ● between audio unit and speaker amp. ● between speaker amp. and each speaker.
AM/FM stations are weak or noisy.	1. Roof antenna 2. Audio unit ground 3. Audio unit	1. Check roof antenna. 2. Check audio unit ground condition. 3. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with engine running.	1. Poor audio unit ground 2. Loose or missing ground bonding straps 3. Ignition condenser or rear window defogger noise suppressor condenser 4. Ignition coil or secondary wiring 5. Audio unit	1. Check audio unit ground. 2. Check ground bonding straps. 3. Replace ignition condenser or rear window defogger noise suppressor condenser. 4. Check ignition coil and secondary wiring. 5. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	1. Poor audio unit ground 2. Antenna 3. Accessory ground 4. Faulty accessory	1. Check audio unit ground. 2. Check antenna. 3. Check accessory ground. 4. Replace accessory.

CD AUTOCHANGER

NLEL0385S06

Testing Magazines and Discs

NLEL0385S0601

1. Confirm discs are installed correctly into the magazine (not upside down).
2. Visually inspect/compare the customer's discs with each other and other discs. Identify any of the following conditions:

- Discs with a large outside diameter. [Normal size is 120 mm (4.72 in).]
- Discs with rough or lipped edges.
- Discs with excessive thickness [Normal size is 1.2 mm (0.047 in).]
- Discs with scratches, abrasions, or pits on the surface.
- Discs with grease/oil, fingerprints, foreign material.
- Discs are warped due to excessive heat exposure.

3. Slide/place the discs in and out of the various magazine positions. Identify any discs and/or positions that require additional force for placement/ejection. If interference (sticking, excessive tensions) is found, replace the magazine or the discs.

NOTE:

- **Discs which are marginally out of specification (ex. dirty, scratched and so on) may play correctly on a home stereo.**
  However, when used in the automotive environment skipping may occur due to the added vehicle movement and/or vibration due to road conditions. Autochangers should not be replaced when discs are at fault.
- **Use a soft damp cloth to wipe the discs starting from the center outward in radial direction. Never use chemical cleaning solutions to clean the discs.**

Locking CD Changer Unit Mechanism

NLEL0385S0602

CAUTION:

- **Prior to removing a malfunctioning CD changer unit that will be shipped for repair, the changer mechanism MUST BE LOCKED to prevent the mechanism from being damaged during shipping.**

- **If a CD is jammed or unable to be removed from the unit, do NOT lock the changer mechanism. If the unit is to be shipped for repair, carefully package the unit to prevent vibration and shock.**

1. Eject and remove any CDs from the CD changer unit.
2. Turn ignition switch OFF. Wait until CD changer unit display is off and mechanism stops moving (mechanism sound stops).
3. Press any one of the disc selection buttons once. When a display shows on the CD changer unit, press the same disc selection button again within 5 seconds.

- The changer mechanism will lock itself within 10 seconds.

4. After mechanism stops moving (mechanism sound stops), disconnect the CD changer unit connectors.
5. Remove CD changer unit.

NOTE:

- Do not disconnect battery cable (any power supply) until completion of mechanism movement.
- If the ignition switch is turned ON or ACC position after the damper locking, it will be unlocked automatically and the damper locking procedure will be required again.

After installing a new or remanufactured CD changer unit, switching the CD changer unit ON will automatically unlock the mechanism. A special unlocking procedure is not required.

Inspection

=NLEL0221

AUDIO UNIT

NLEL0221S01

All voltage inspections are made with:

- Ignition switch ON or ACC
- Audio unit ON
- Audio unit connected (If audio unit is removed for inspection, supply a ground to the case using a jumper wire.)

ANTENNA

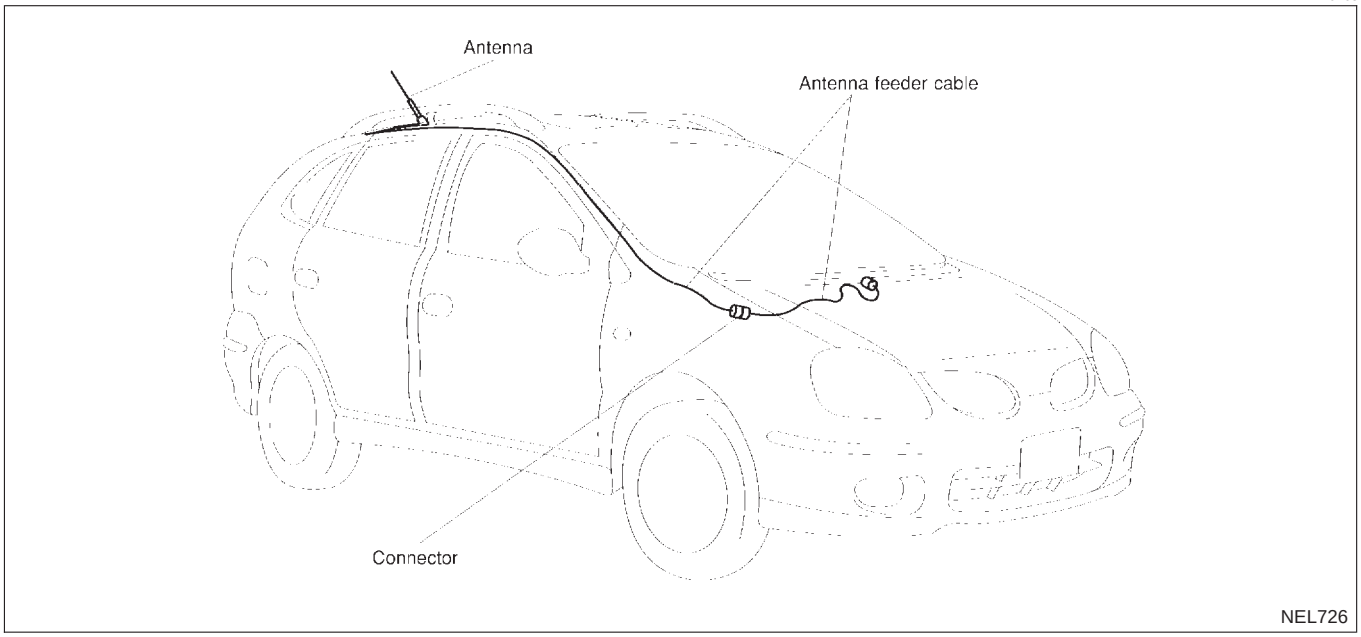
NLEL0221S02

Using a jumper wire, clip an auxiliary ground between antenna and body.

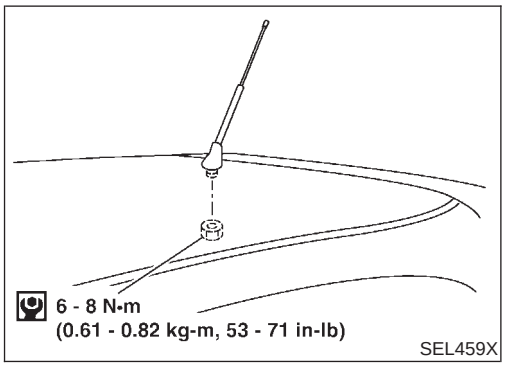
- If reception improves, check antenna ground (at body surface).
- If reception does not improve, check main feeder cable for short circuit or open circuit.

Location of Antenna

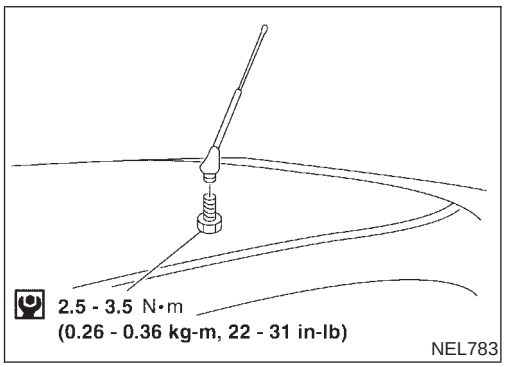
NLEL0468



NEL726



SEL459X



NEL783

Antenna Rod Replacement

NLEL0469

REMOVAL

NLEL0469S01

Models with the fixing nut

NLEL0469S0101

1. Remove rear portion of head lining.
2. Remove antenna base fixing nut and antenna base.

Models with the fixing bolt

NLEL0469S0102

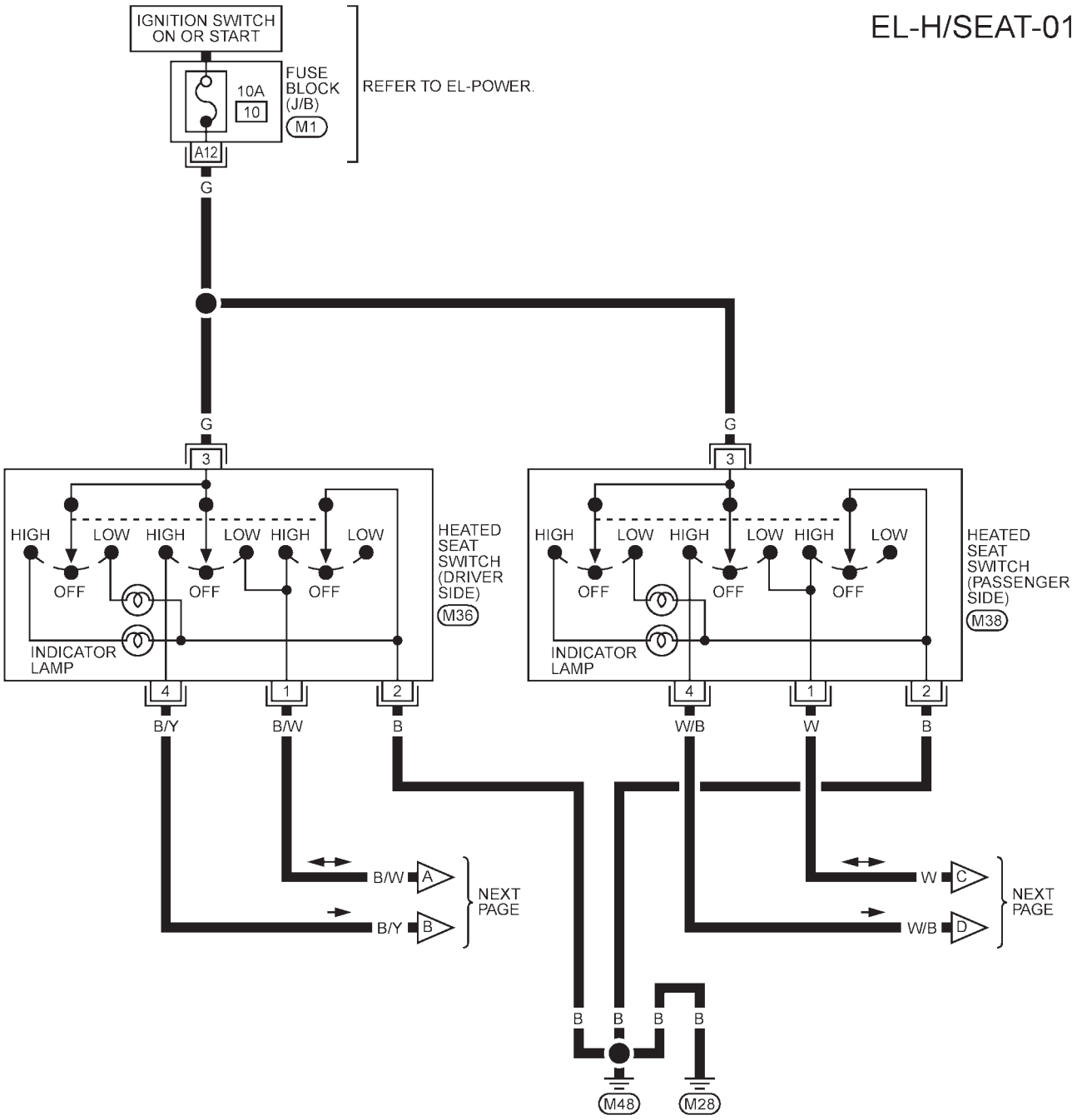
1. Remove rear portion of head lining.
2. Remove antenna base fixing bolt and antenna base.

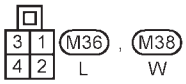
Wiring Diagram — H/SEAT —

NLEL0471

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0471S02

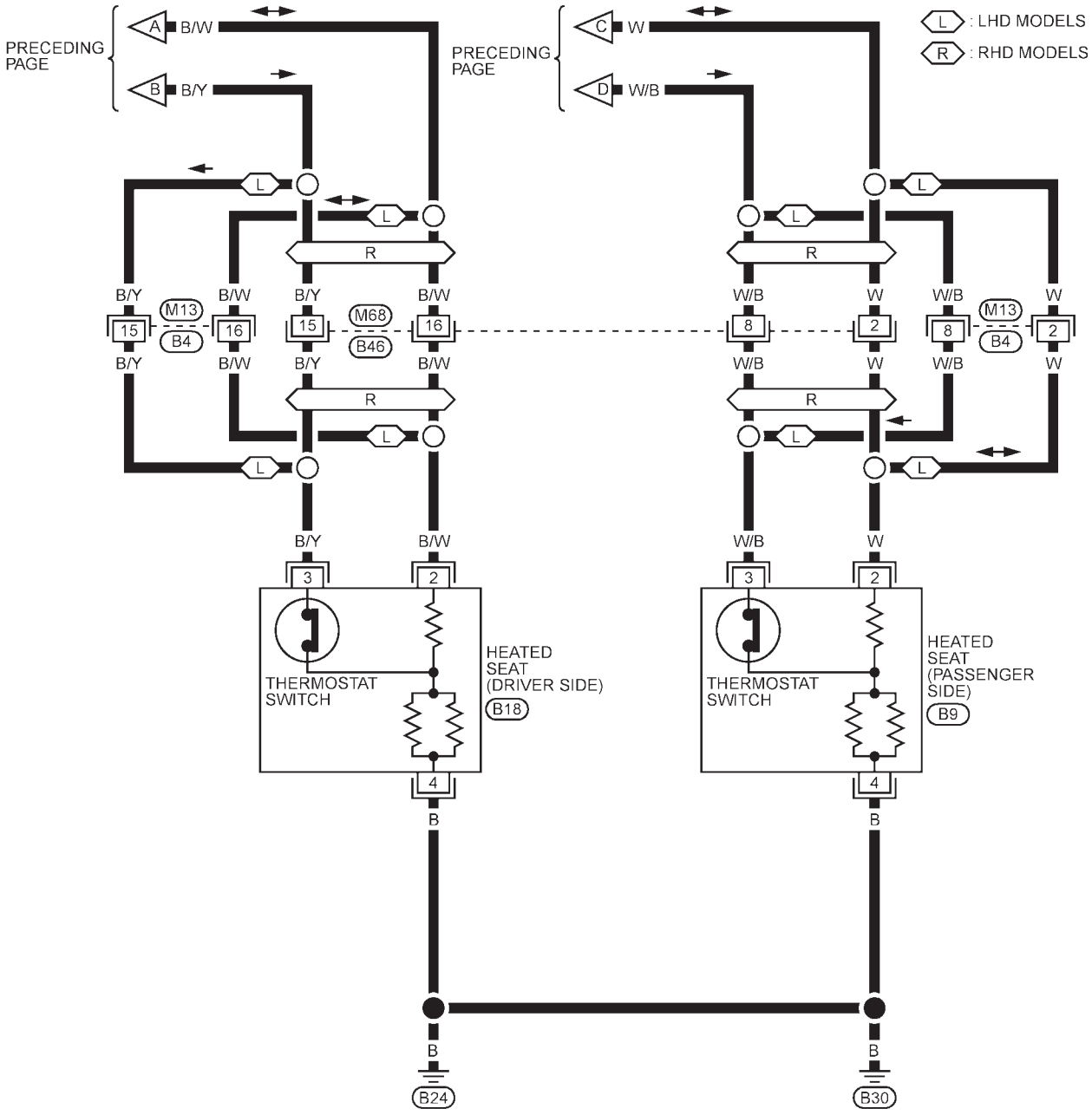


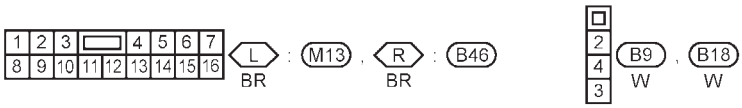


REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL922B

EL-H/SEAT-02

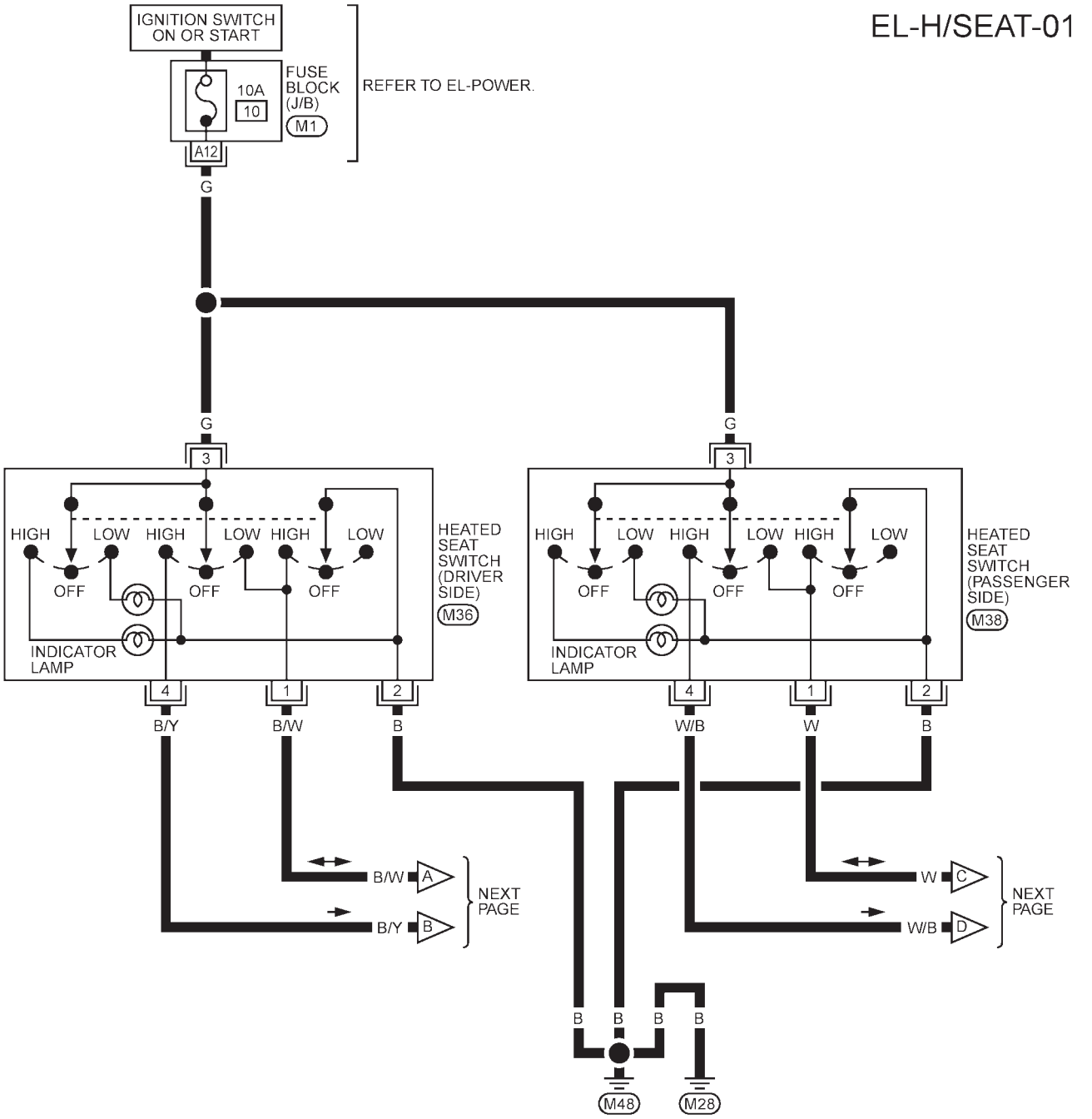


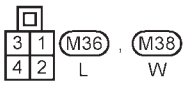


YEL923B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0471S01

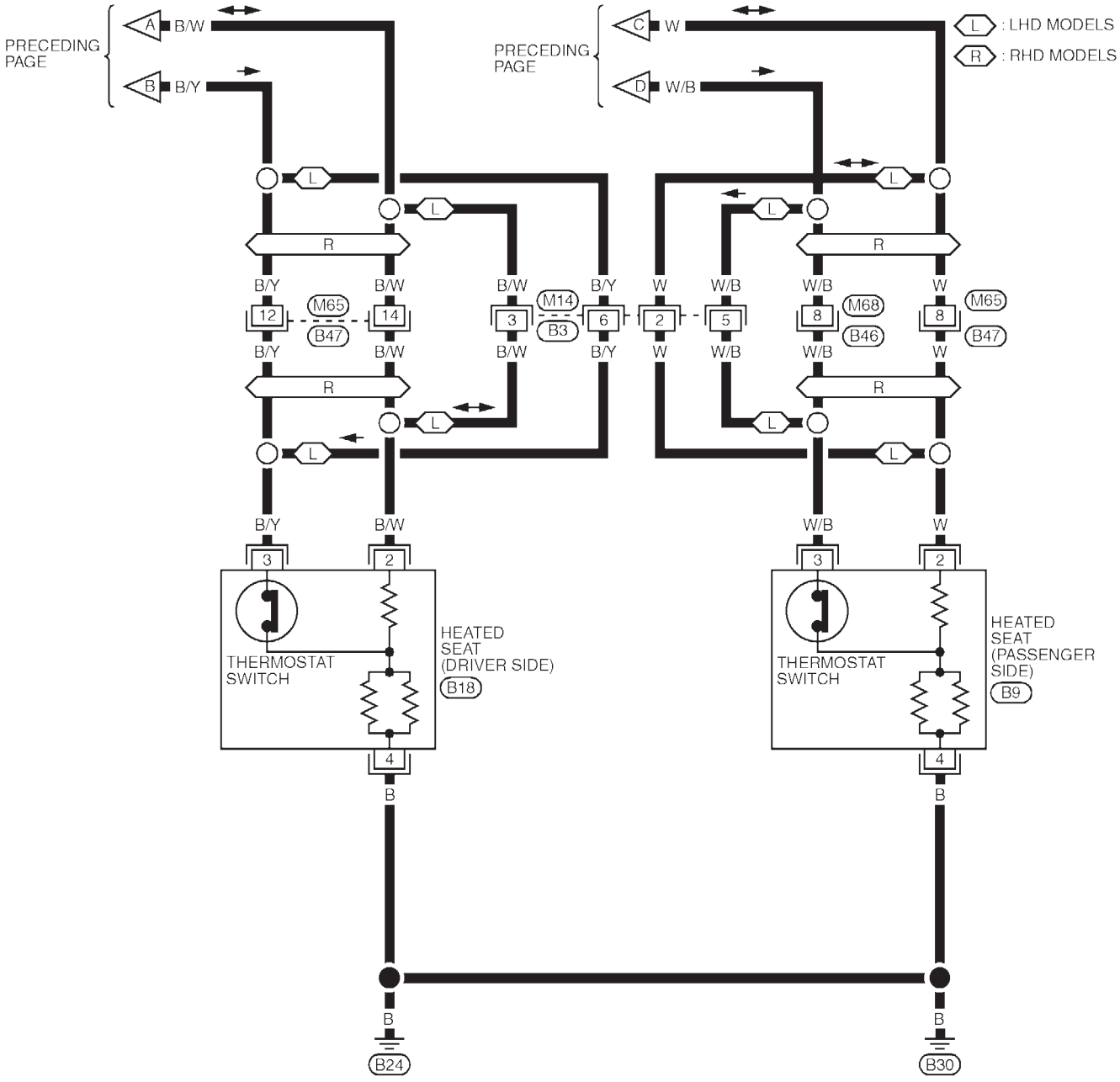


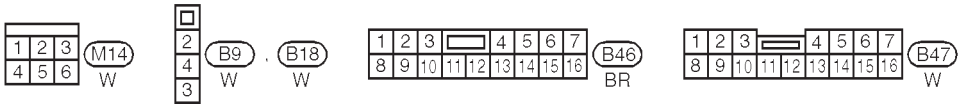


REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL922B

EL-H/SEAT-02





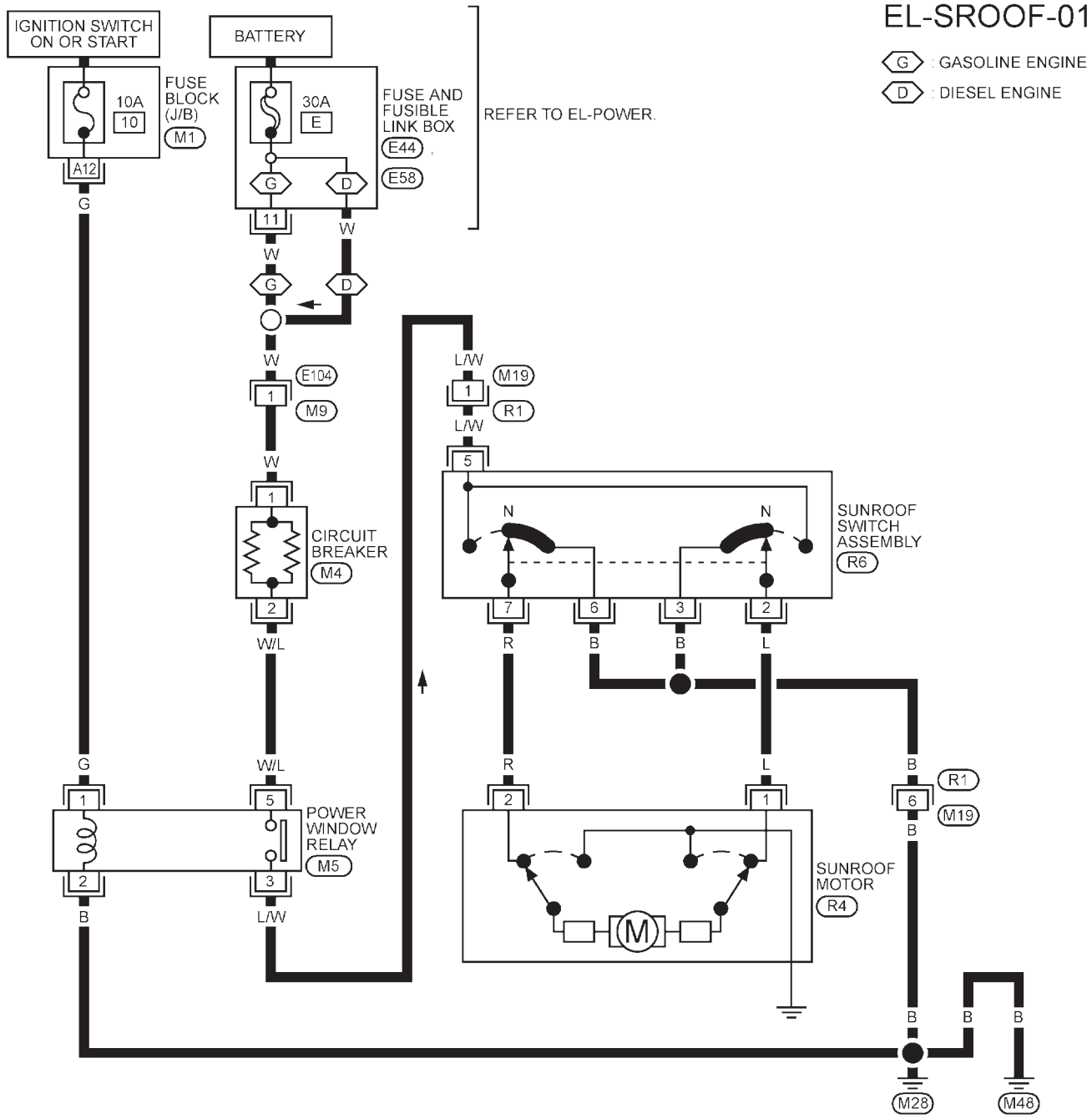
YEL445C

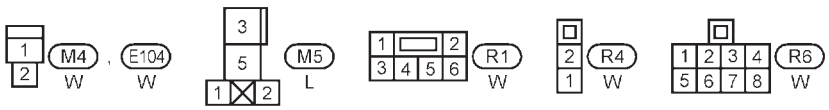
Wiring Diagram — SROOF —

NLEL0089

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0089S01



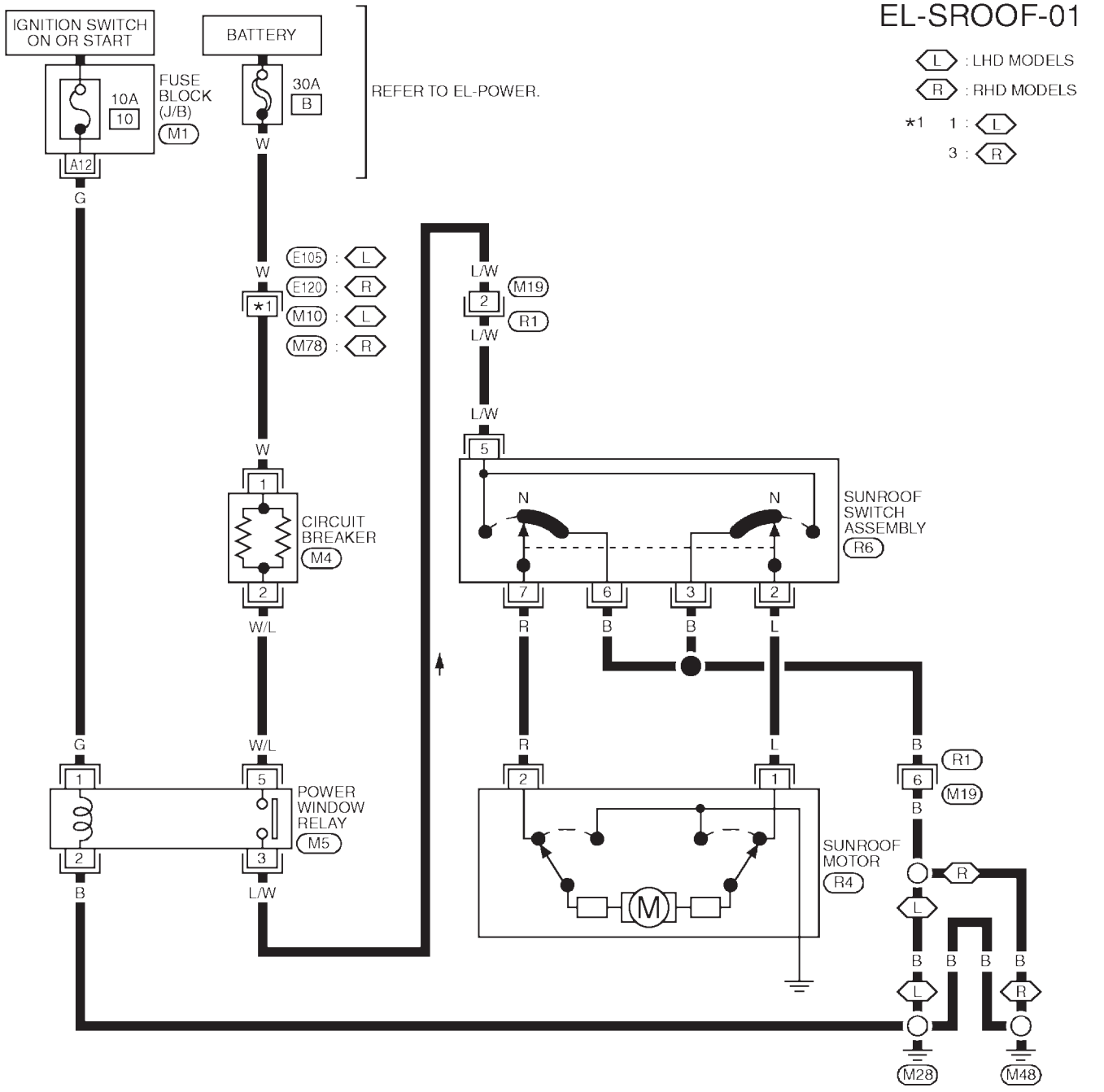


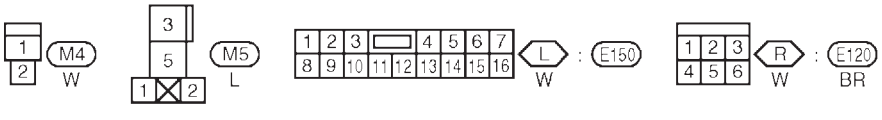
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)
E44 , E58 -FUSE AND FUSIBLE LINK BOX

YEL924B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0089S02





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

YEL446C

Trouble Diagnoses

NLEL0225

Symptom	Possible cause	Repair order
Power sunroof cannot be operated using any switch.	1. 10A fuse, 30A fusible link and M4 circuit breaker 2. Sunroof motor ground circuit 3. Sunroof switch 4. Sunroof switch circuit 5. Sunroof motor	1. Check 10A fuse [No. 10, located in fuse block (J/B)], 30A fusible link and M4 circuit breaker. Verify battery positive voltage is present at terminal 5 of sunroof motor. And then turn ignition switch “ON” and verify battery positive voltage is present at terminal 5 of sunroof switch. 2. Check sunroof motor ground circuit. 3. Check sunroof switch. 4. Check harness between sunroof switch and sunroof motor. 5. Check sunroof motor.
Power sunroof cannot be operated using one of the sunroof switches.	1. Sunroof switch 2. Sunroof switch circuit	1. Check sunroof switch. 2. Check the harness between sunroof motor and sunroof switch.

Wiring Diagram — MIRROR —

NLEL0472

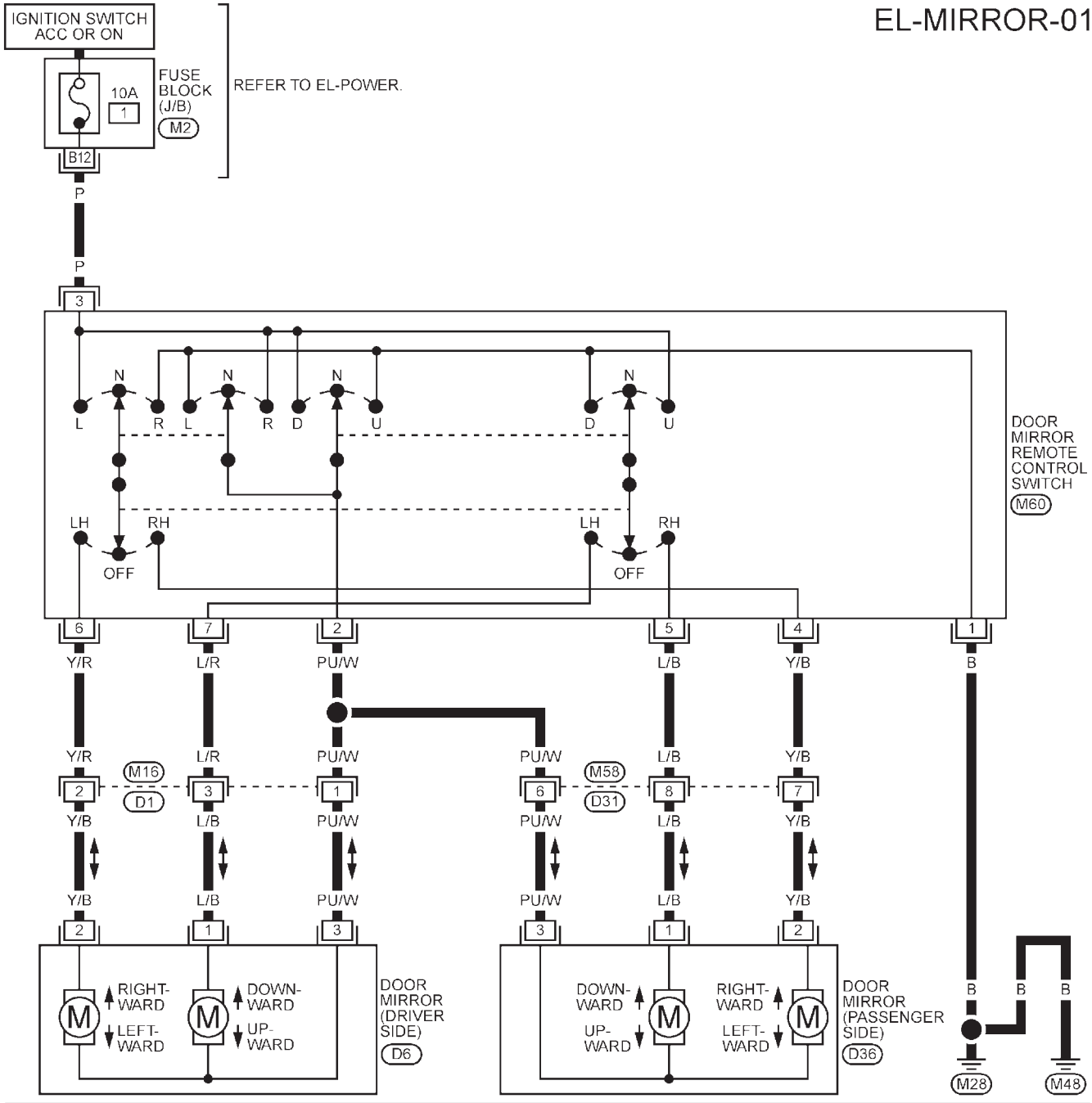
NLEL0472S03

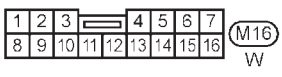
NLEL0472S0304

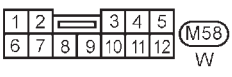
MODELS WITH FUSE AND FUSIBLE LINK BOX E43

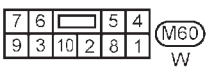
LHD models

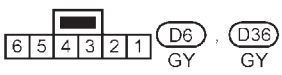
EL-MIRROR-01











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

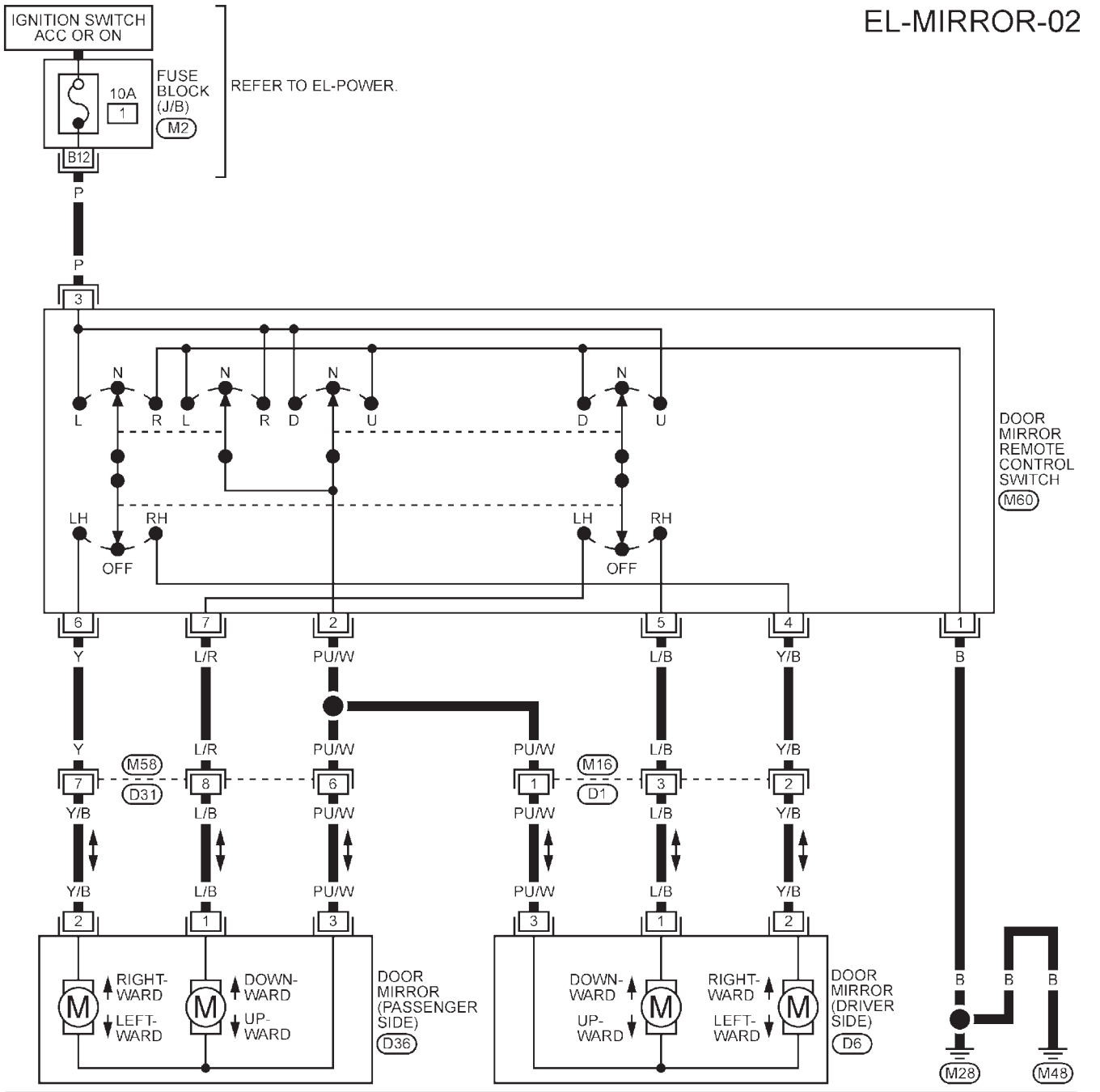
YEL925B

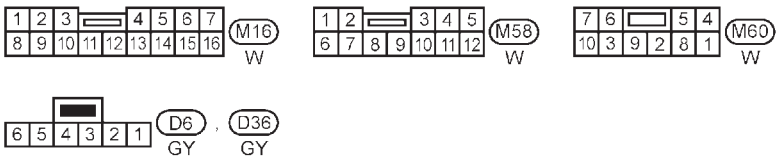
Wiring Diagram — MIRROR — (Cont'd)

RHD models

NLEL0472S0305

EL-MIRROR-02





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

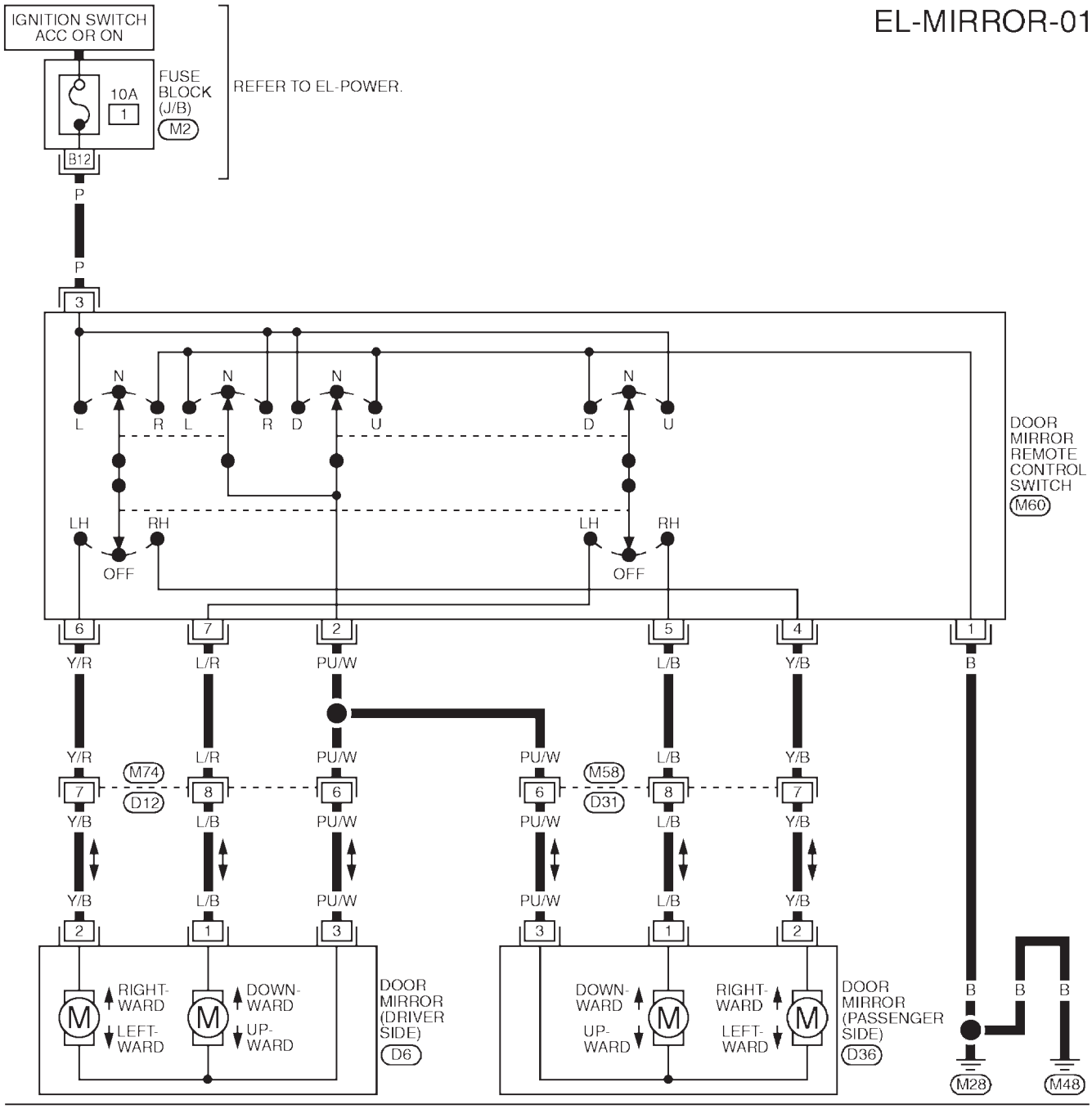
YEL926B

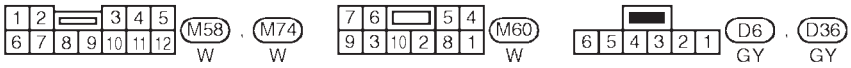
MODELS WITH FUSE AND FUSIBLE LINK BOX E90
LHD models

NLEL0472S04

NLEL0472S0404

EL-MIRROR-01





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

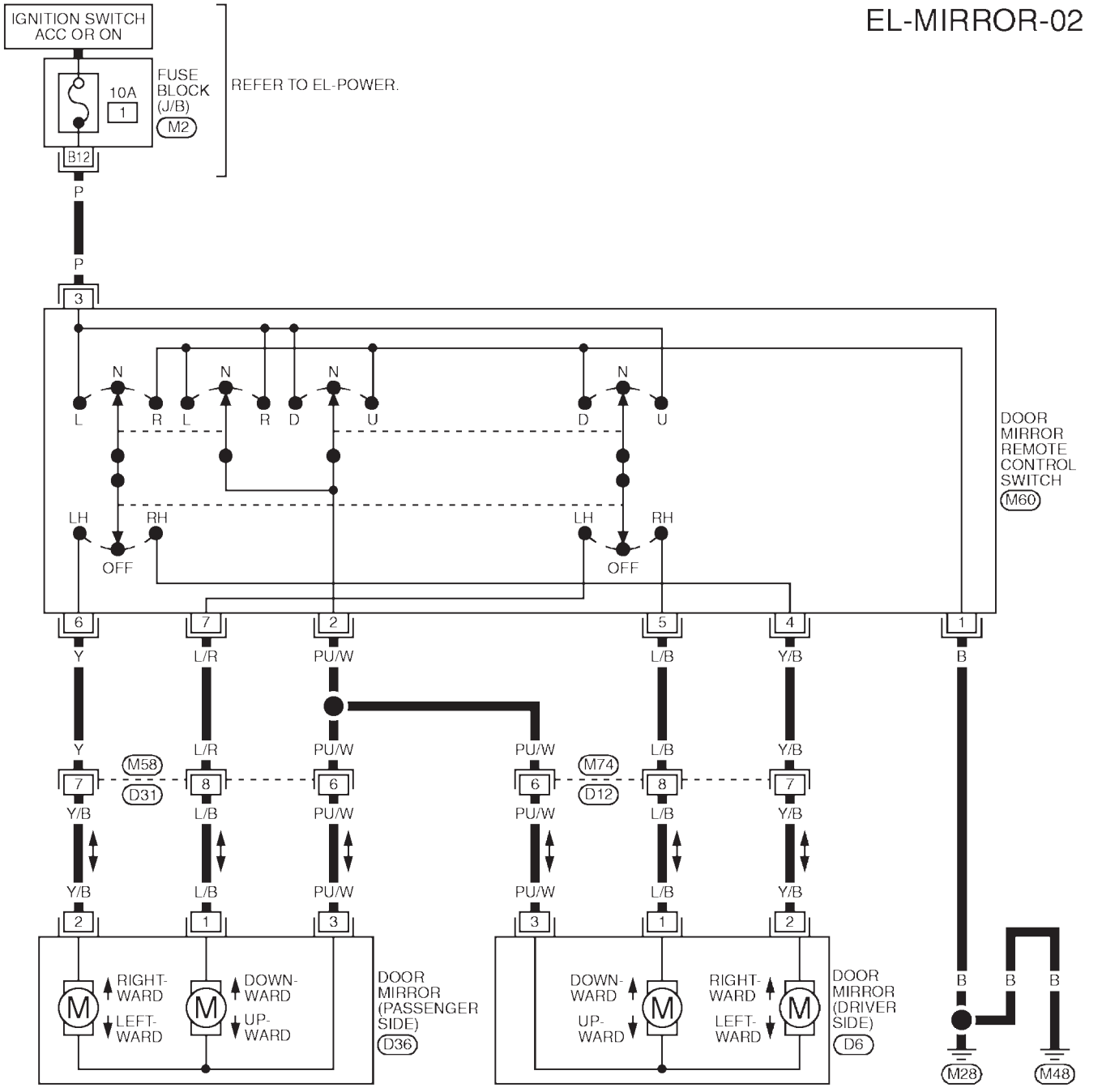
YEL447C

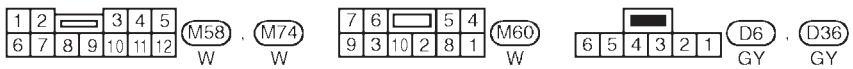
Wiring Diagram — MIRROR — (Cont'd)

RHD models

NLEL0472S0405

EL-MIRROR-02





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

YEL448C

System Description

=NLEL0498

Power is supplied at all times
- from 30A fusible link
- to circuit breaker terminal 1
- through circuit breaker terminal 2
- to power window relay terminal 5

With ignition switch in ON or START position, power is supplied
- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to power window relay terminal 1

Ground is supplied to power window relay terminal 2
- through body grounds M28 and M48.

The power window relay is energized and power is supplied
- through power window relay terminal 3
- to power window main switch terminal 1,
- to front power window sub-switch terminal 5,
- to rear power window sub-switch LH and RH terminals 5 (models with rear power window).

MANUAL OPERATION

NLEL0498S01

Front Door (Driver Side)

NLEL0498S0101

Ground is supplied
- to power window main switch terminal 3
- through body grounds M28 and M48.

WINDOW UP
When the driver's window switch in the power window main switch is pressed in the up position, power is supplied
- through power window main switch terminal 9
- to driver side power window regulator terminal 1.

Ground is supplied
- through power window main switch terminal 2
- to driver side power window regulator terminal 8.

Then, the motor raises the window until the switch is released.
WINDOW DOWN
When the driver's window switch in the power window main switch is pressed in the down position, power is supplied
- through power window main switch terminal 8
- to driver side power window regulator terminal 2.

Ground is supplied
- to driver side power window regulator terminal 1
- through power window main switch terminal 9.

Then, the motor lowers the window until the switch is released.

Front Door (Passenger Side)

NLEL0498S0102

Ground is supplied
- to power window main switch terminal 3
- through body grounds M28 and M48.

NOTE:
Numbers in parentheses are terminal numbers, when power window switch is pressed in the UP and DOWN positions respectively.

POWER WINDOW MAIN SWITCH OPERATION
Power is supplied
- through power window main switch (5, 6)
- to front power window sub-switch (3, 4).

The subsequent operation is the same as the front power window sub-switch operation.
FRONT POWER WINDOW SUB-SWITCH OPERATION
Power is supplied

- through front power window sub-switch (1, 2)
- to front passenger side power window regulator (1, 2).

Ground is supplied

- to front passenger side power window regulator (2, 1)
- through front power window sub-switch (2, 1)
- to front power window sub-switch (4, 3)
- through power window main switch (6, 5).

Then, the motor raises or lowers the window until the switch is released.

Rear Door

NLEL0498S0103

Rear door windows will raise and lower in the same manner as passenger's door window.

POWER WINDOW LOCK

NLEL0498S02

The power window lock is designed to lock operation of all windows except for driver's door window.
When the lock switch is pressed to lock position, ground of the sub-switches in the power window main switch is disconnected. This prevents the power window motors from operating.

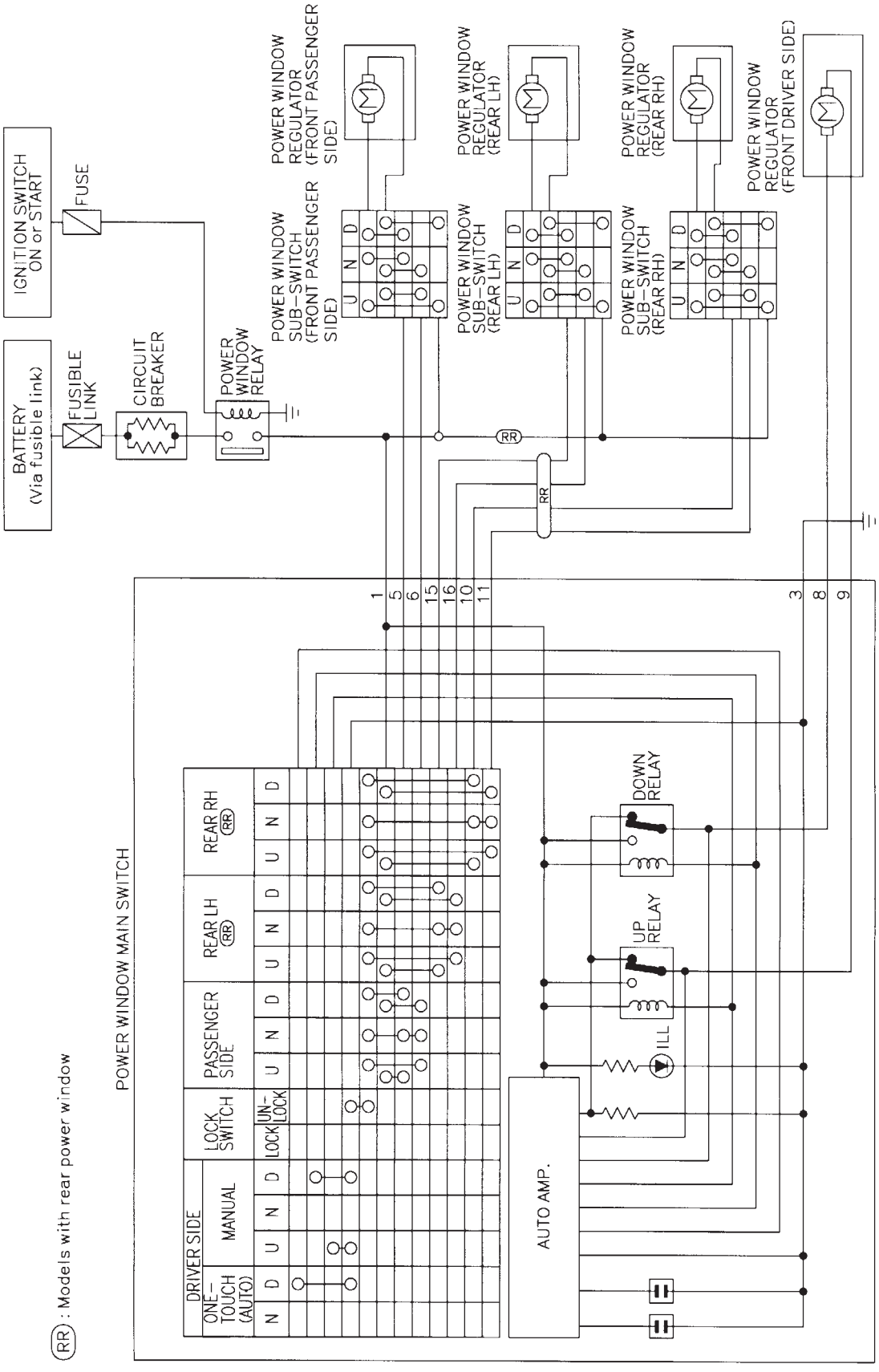
AUTO OPERATION

NLEL0498S03

The power window AUTO feature enables the driver to open the driver's window without holding the window switch in the down position.
The AUTO feature operates on the driver's window.

Schematic

NLEL0499



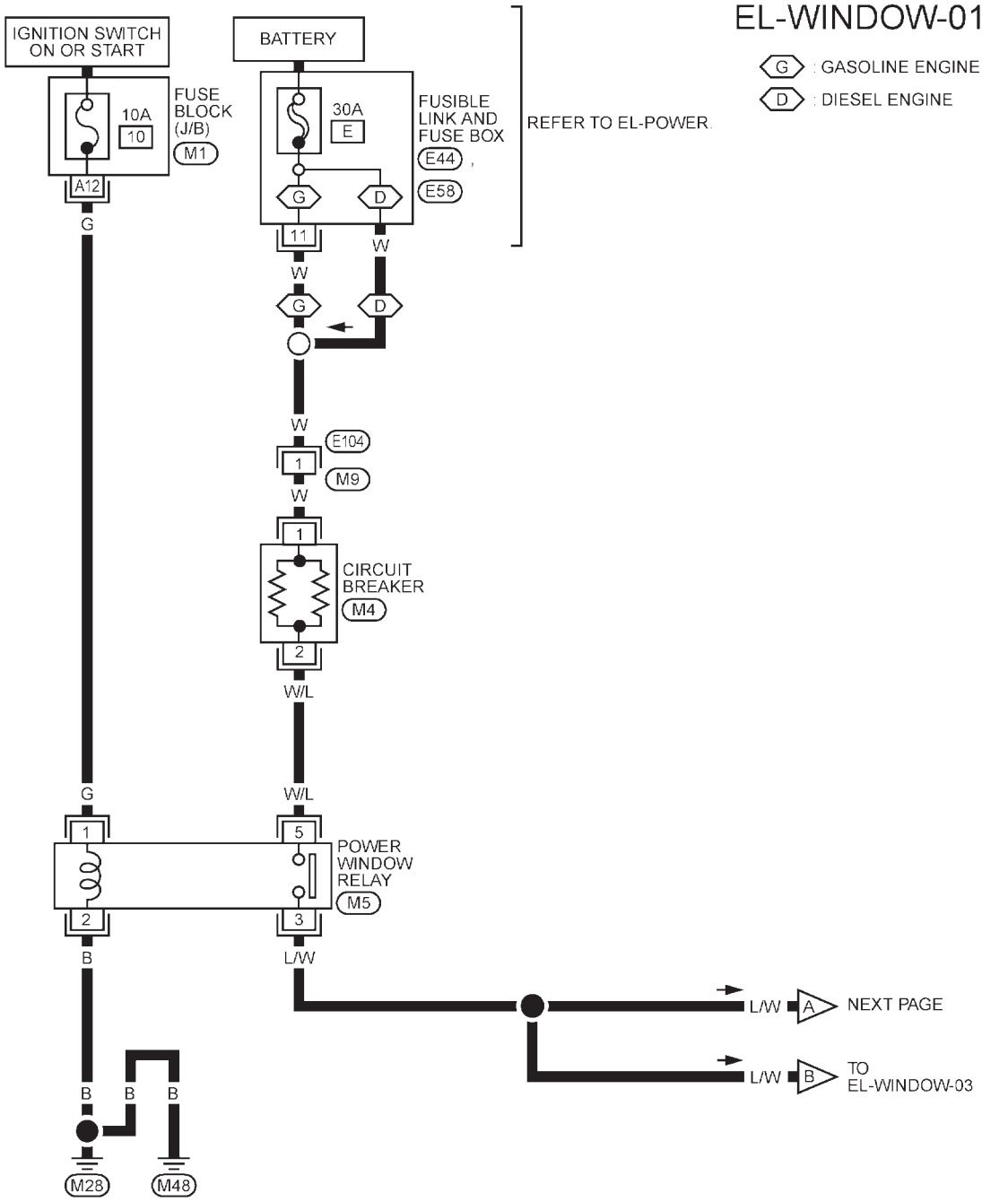
MEL916L

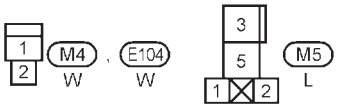
Wiring Diagram — WINDOW —

NLEL0500

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

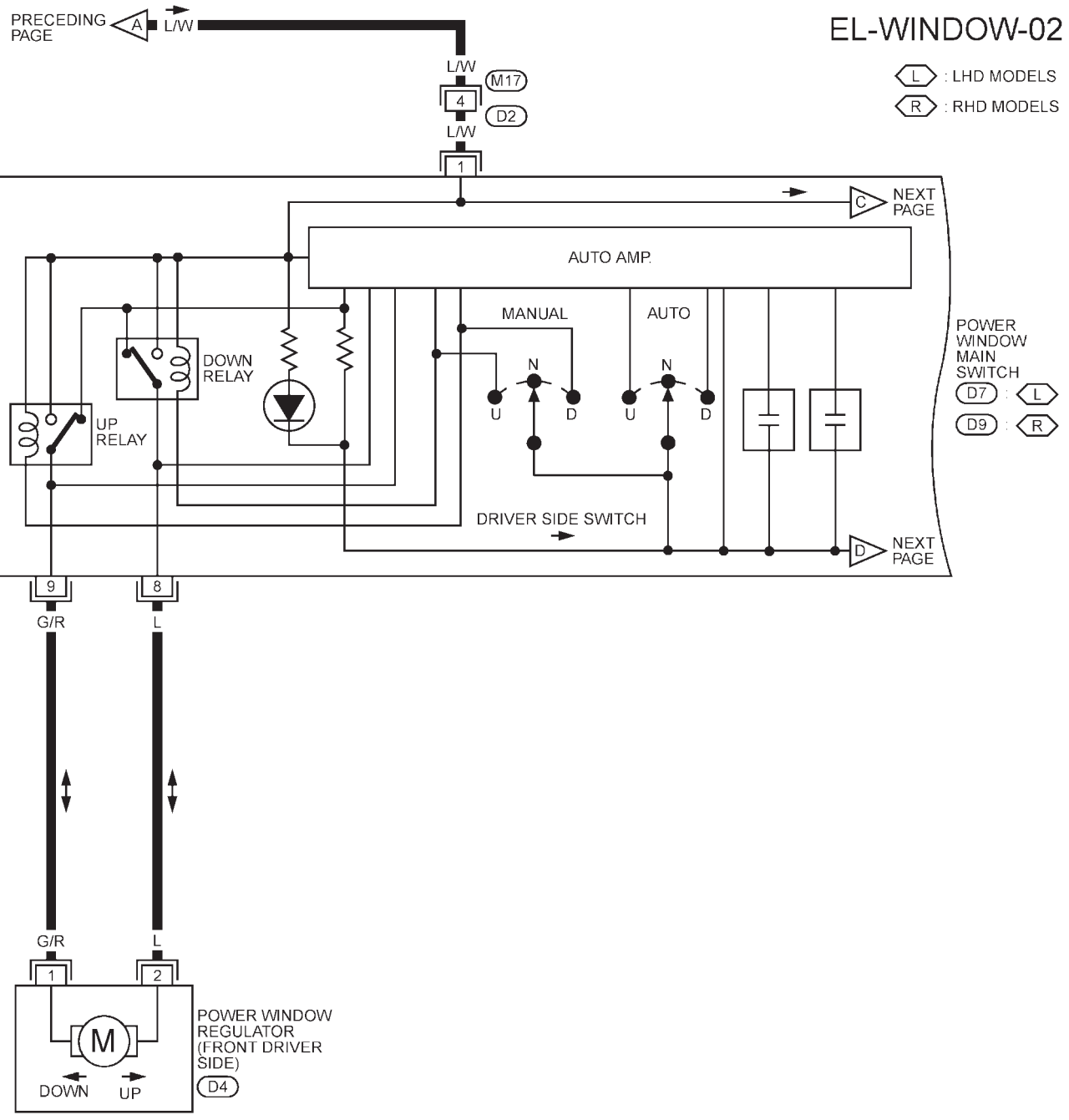
NLEL0500S01

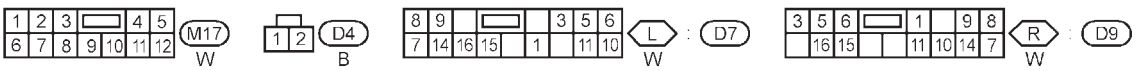




REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)
E44, E58 -FUSIBLE LINK AND FUSE BOX

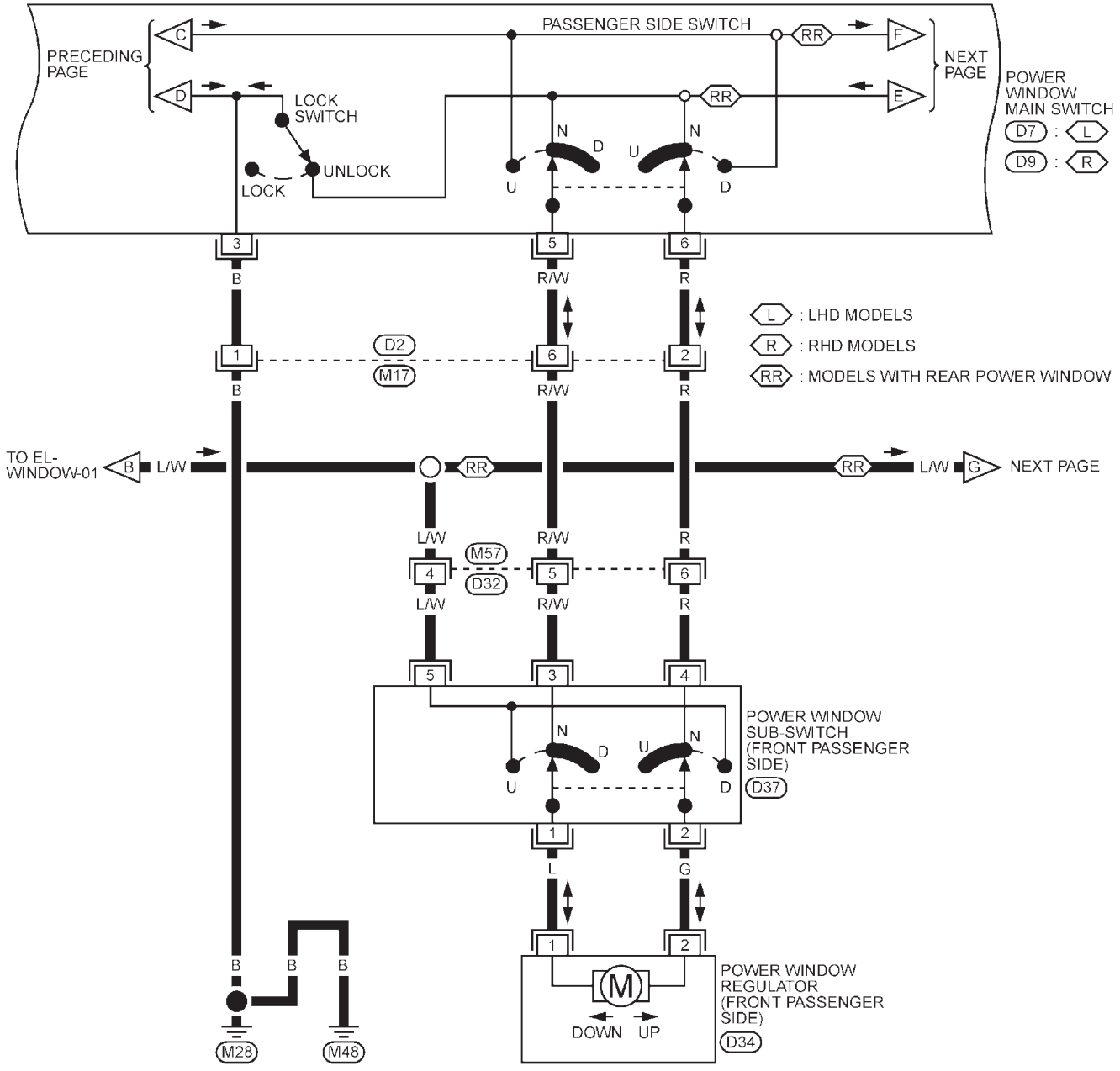
YEL927B

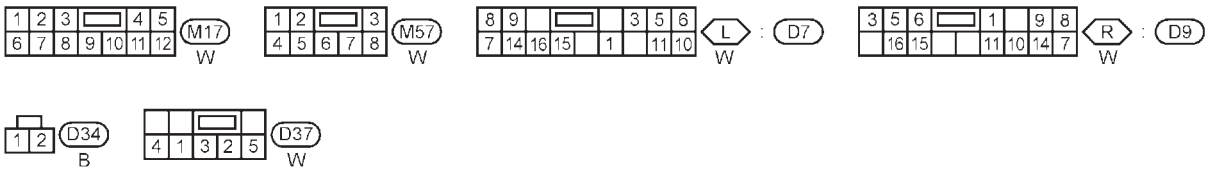

EL-WINDOW-02
L : LHD MODELS
R : RHD MODELS
PRECEDING PAGE
A
L/W
L/W
M17
4
D2
L/W
1
C
NEXT PAGE
AUTO AMP.
MANUAL
AUTO
DOWN RELAY
UP RELAY
N
U
D
N
U
D
POWER WINDOW MAIN SWITCH
D7 : L
D9 : R
DRIVER SIDE SWITCH
D
NEXT PAGE
9
8
G/R
L
G/R
L
1
2
M
DOWN
UP
POWER WINDOW REGULATOR (FRONT DRIVER SIDE)
D4


M17
W
D4
B
L
W
D7
R
W
D9

YEL928B

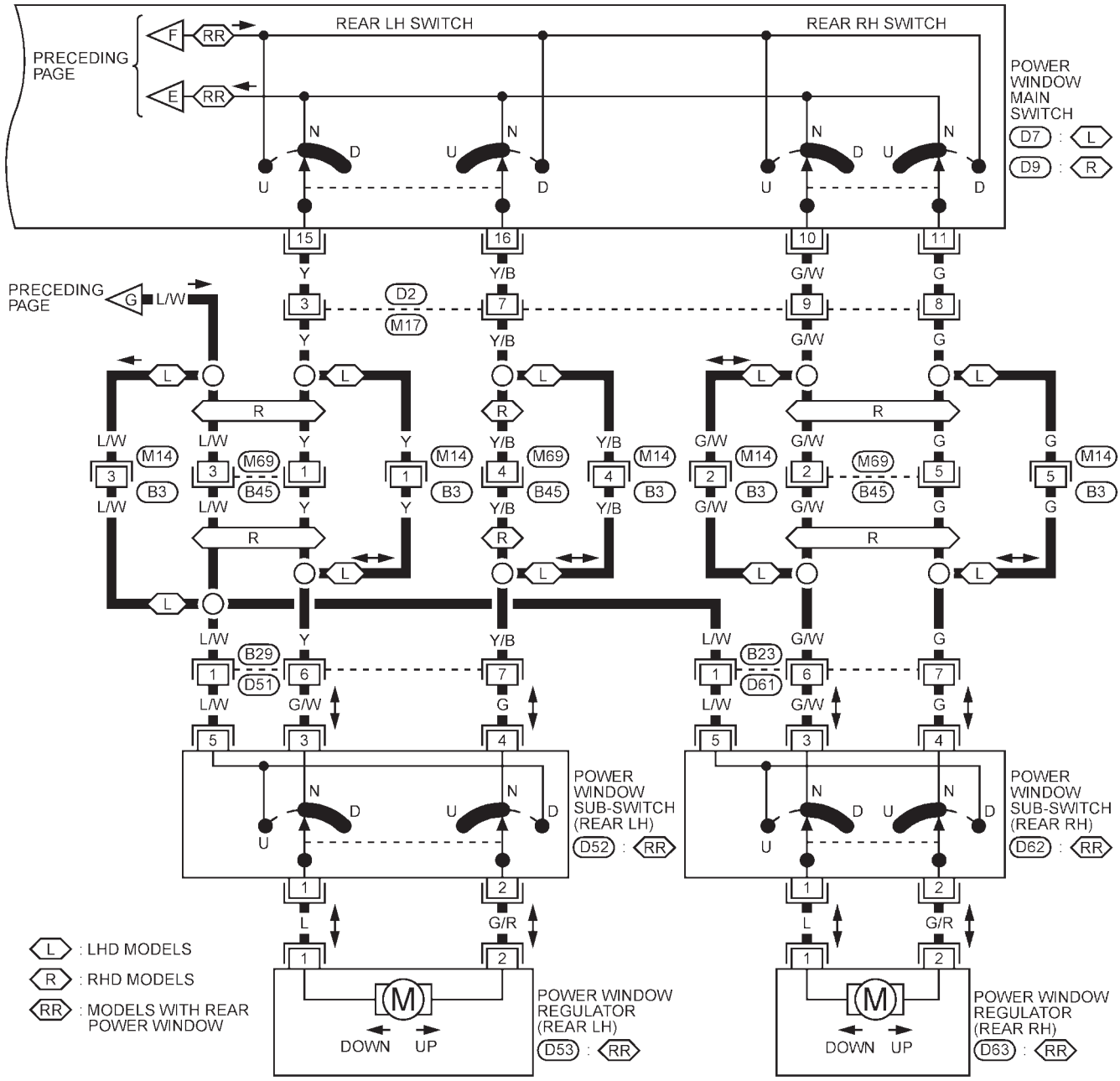
EL-WINDOW-03

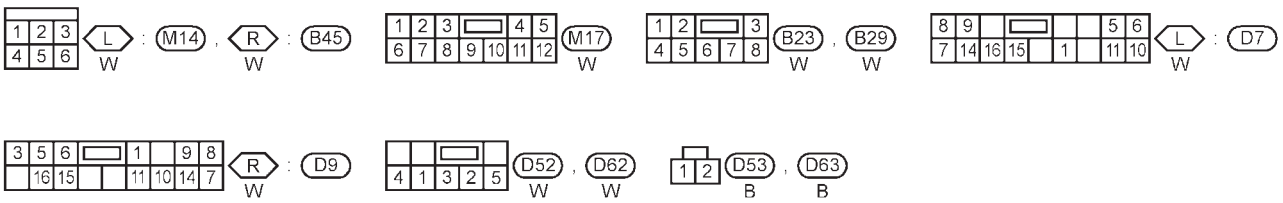




YEL929B

EL-WINDOW-04

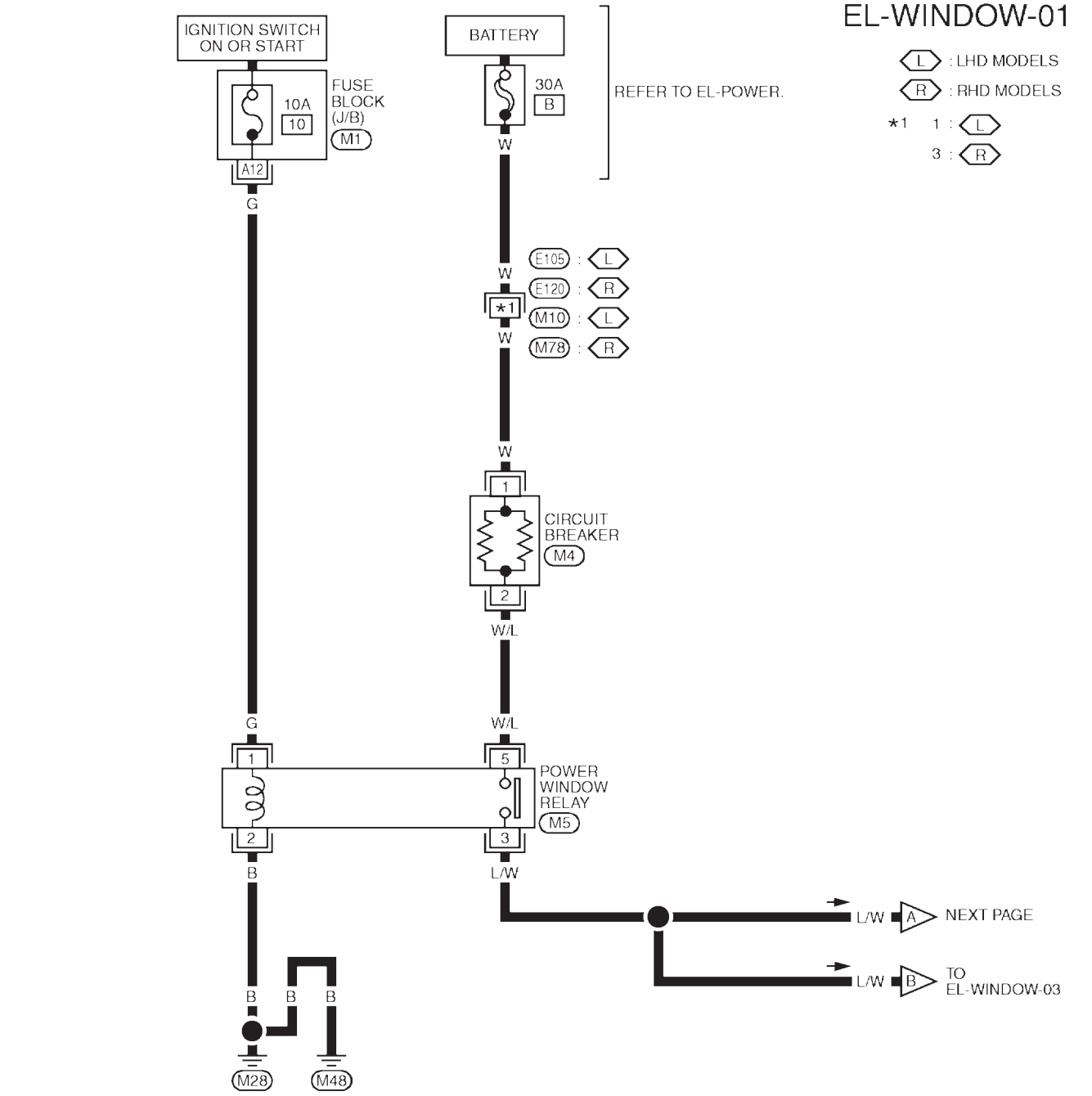


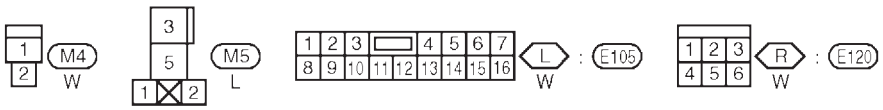


YEL930B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

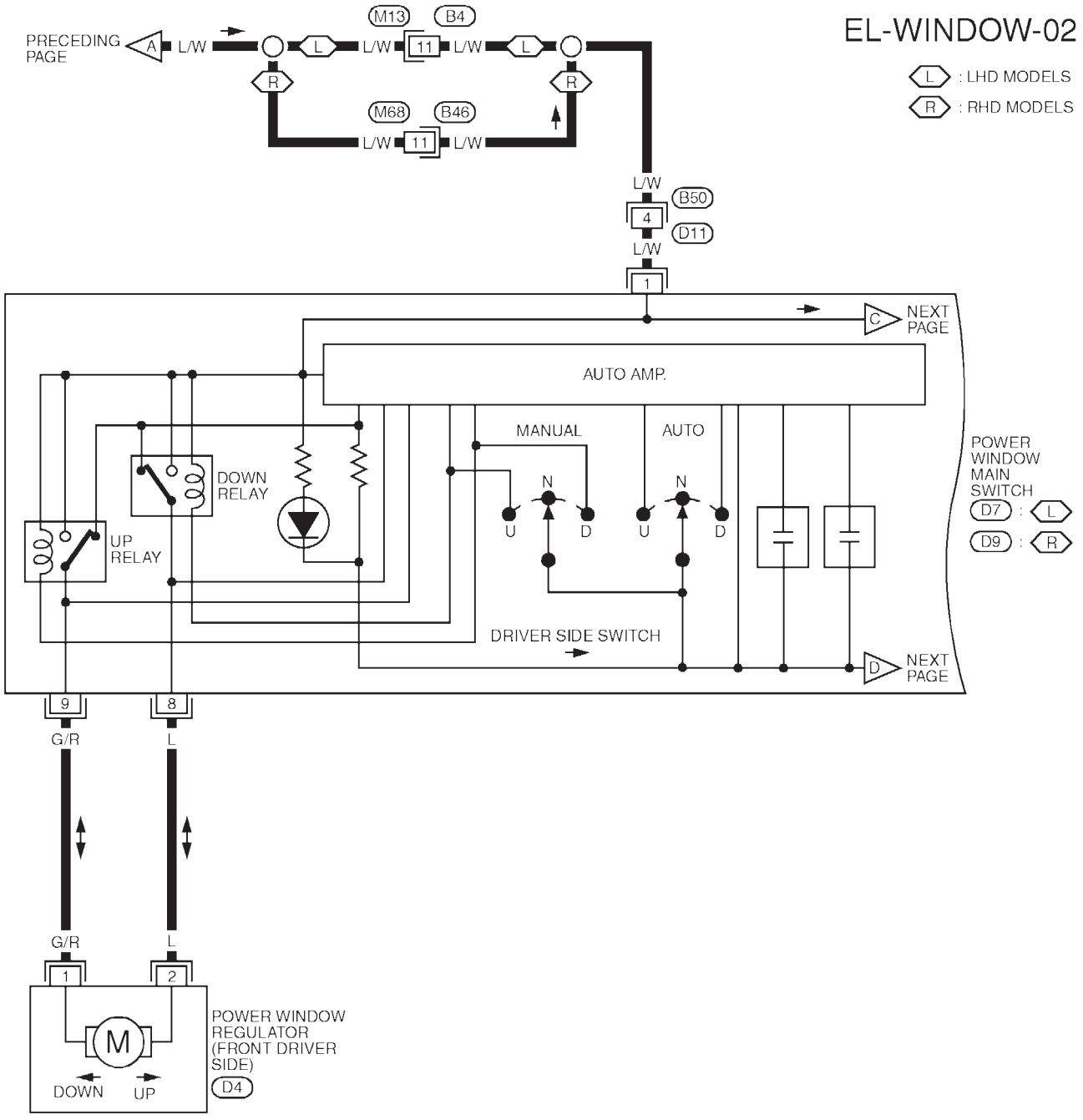
NLEL0500S02

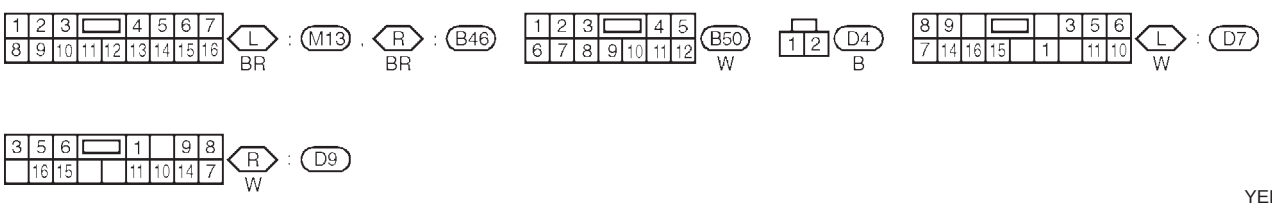




REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-
JUNCTION BOX (J/B)

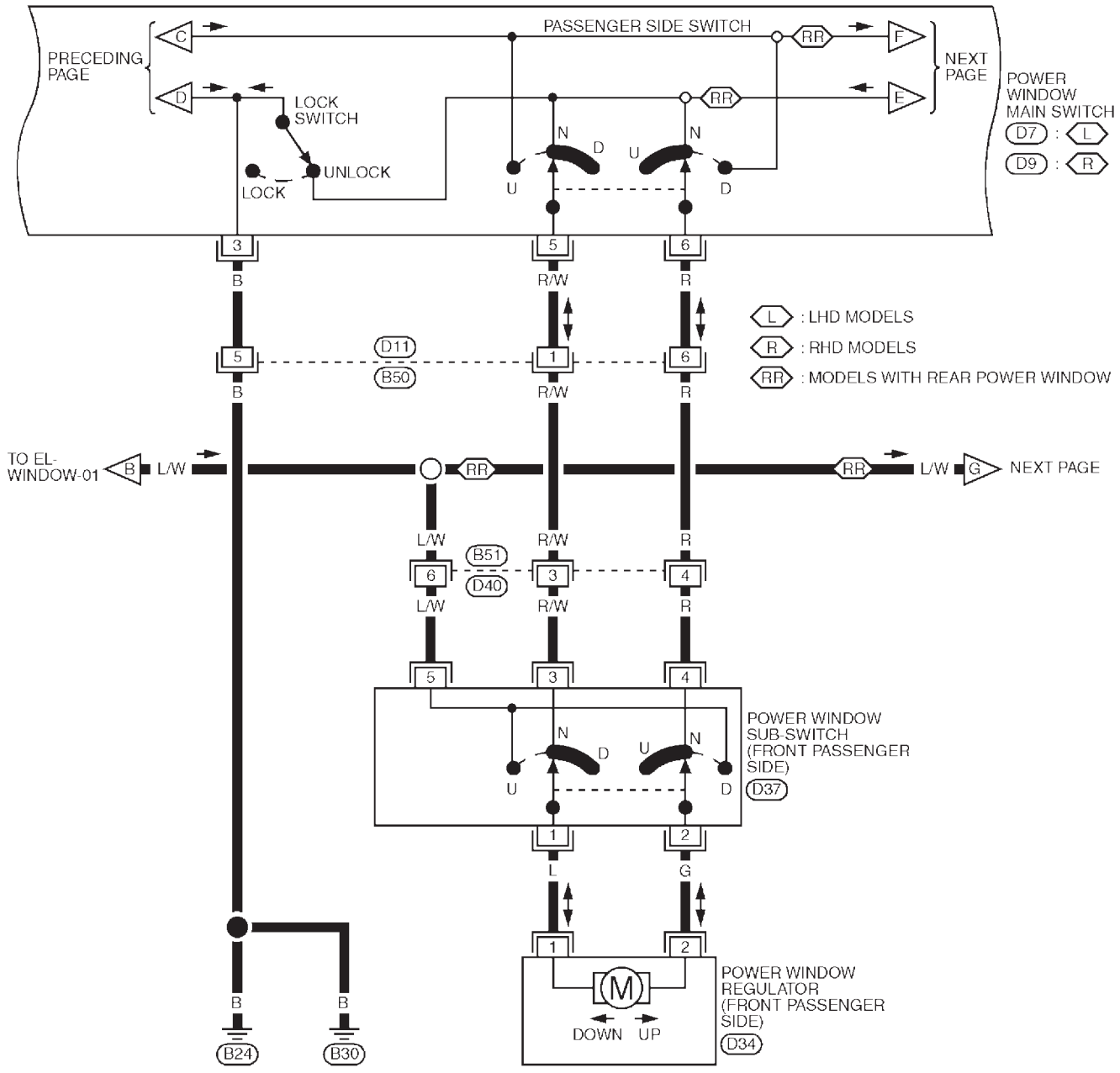
YEL449C

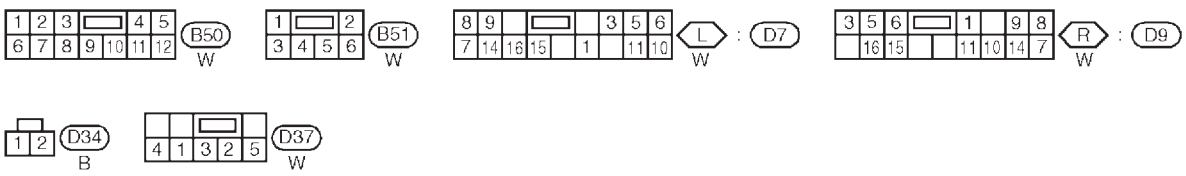

EL-WINDOW-02
L : LHD MODELS
R : RHD MODELS
PRECEDING PAGE
A
L/W
M13
B4
11
L
R
M68
B46
B50
4
D11
1
NEXT PAGE
C
AUTO AMP.
MANUAL
AUTO
N
U
D
DOWN RELAY
UP RELAY
DRIVER SIDE SWITCH
POWER WINDOW MAIN SWITCH
D7 : L
D9 : R
D
9
8
G/R
L
2
M
DOWN
UP
POWER WINDOW REGULATOR (FRONT DRIVER SIDE)
D4


L : M13 , R : B46
BR
BR
B50
W
D4
B
L : D7
W
R : D9
W

YEL450C

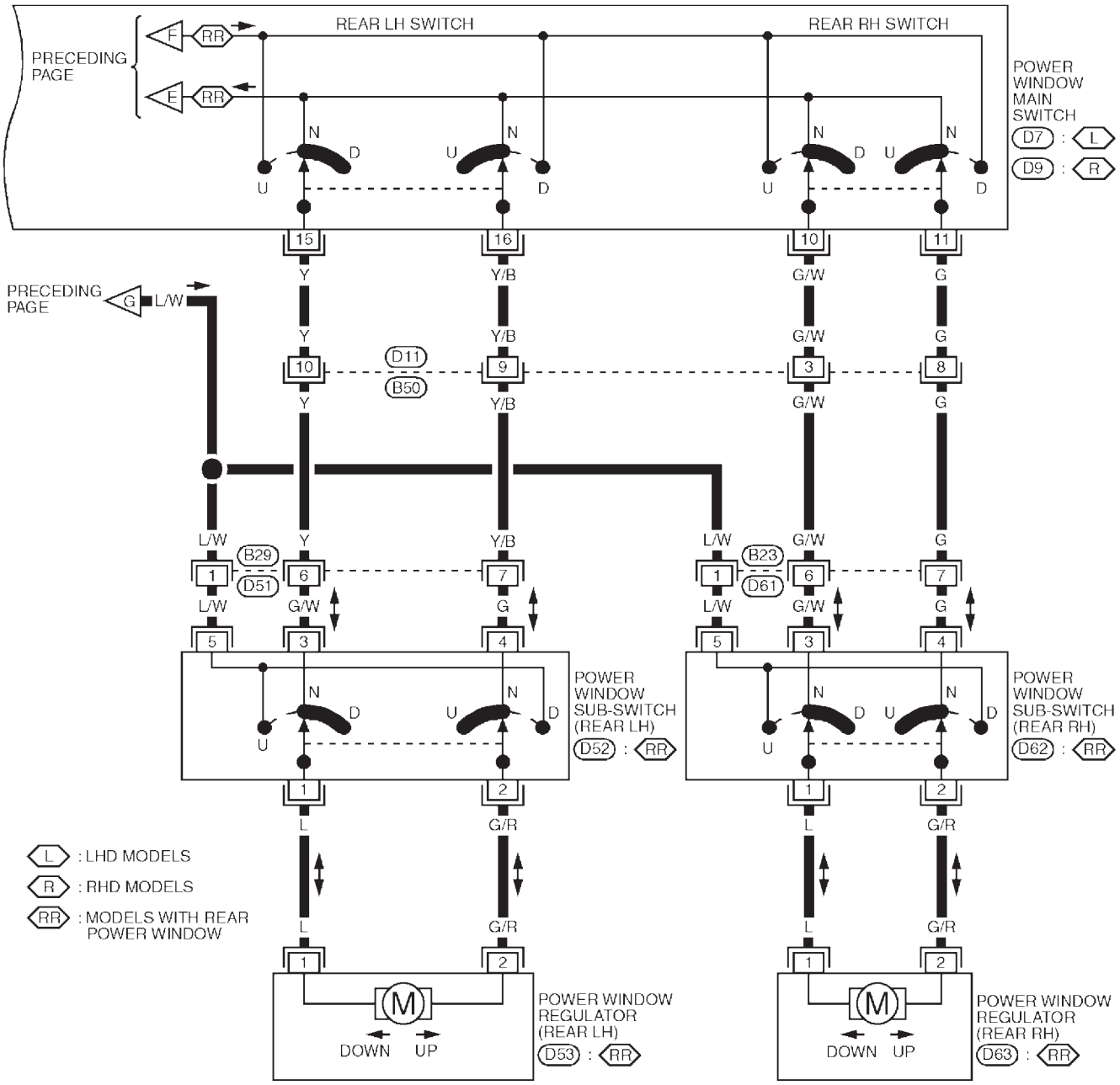
EL-WINDOW-03

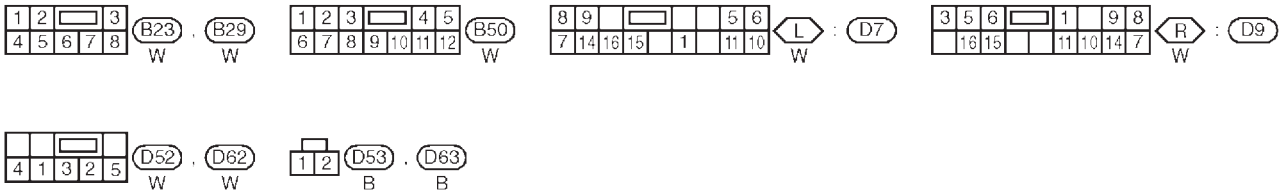




YEL451C

EL-WINDOW-04





YEL452C

Trouble Diagnoses

NLEL0501

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	1. 10A fuse 2. 30A fusible link, M4 circuit breaker 3. Power window relay 4. Ground circuit 5. Power window main switch	1. Check 10A fuse [No. 10, located in fuse block (J/B)] Turn ignition switch “ON” and verify positive battery voltage is present at terminal 1 of power window relay. 2. Check 30A fusible link and M4 circuit breaker. Verify positive battery voltage is present at terminal 5 of power window relay. 3. Check power window relay. 4. Check the following: a. Check ground circuit of power window main switch. b. Check power window relay ground circuit. 5. Check power window main switch.
Driver side power window cannot be operated but other windows can be operated.	1. Driver side power window regulator circuit 2. Driver side power window regulator 3. Power window main switch	1. Check harness between power window main switch and driver side power window regulator for open or short circuit. 2. Check driver side power window regulator. 3. Check power window main switch.
One or more power windows except driver’s side window cannot be operated.	1. Power window sub-switches 2. Power window regulators 3. Power window main switch 4. Power window circuit	1. Check power window sub-switch. 2. Check power window regulator. 3. Check power window main switch. 4. Check the following. a. Check harness between the power window relay terminal 3 and power window sub-switch terminal 5. b. Check harnesses between power window main switch and power window sub-switch for open/short circuit. c. Check harnesses between power window sub-switch and power window regulator for open/short circuit.
Power windows except driver’s side window cannot be operated using power window main switch but can be operated by power window sub-switch.	1. Power window main switch	1. Check power window main switch.
Driver side power window automatic operation does not function properly.	1. Power window main switch	1. Check power window main switch.

Component Parts and Harness Connector Location/LHD Models

NLEL0526

For details, refer to “ELECTRICAL UNIT LOCATION” (EL-442) and “HARNESS LAYOUT” (EL-452).

System Description/LHD Models

NLEL0502

OPERATION

NLEL0502S02

Power door lock/unlock operation by door key cylinder

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

Power door lock/unlock operation by multi-remote controller (If equipped)

- Pressing multi-remote controller LOCK button will lock all doors.
- Pressing multi-remote controller UNLOCK button once will unlock driver door. Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

Power door lock/unlock operation by lock/unlock switch

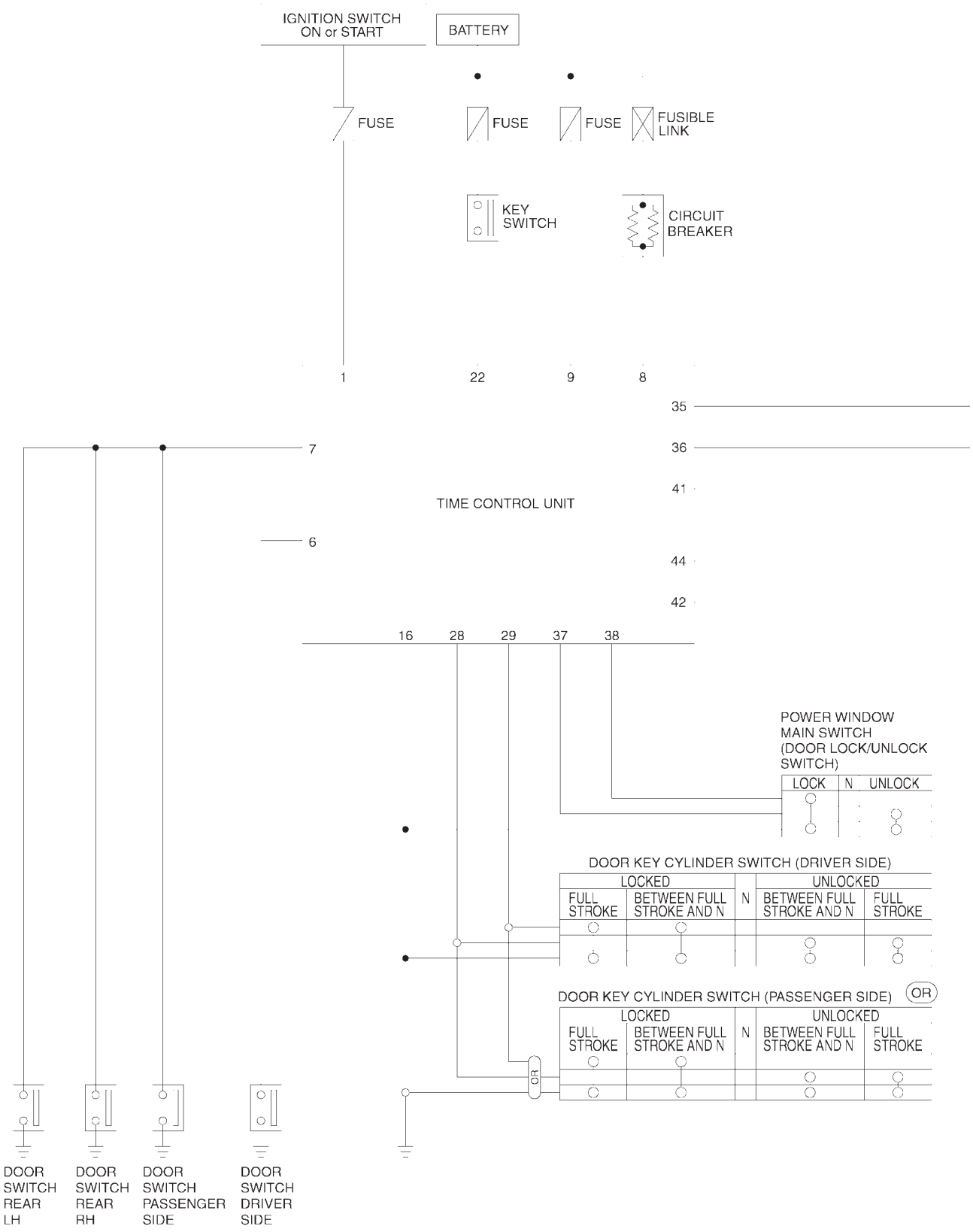
- With lock/unlock switch on driver door trim setting to LOCK will lock all doors.
- With lock/unlock switch on driver door trim setting to UNLOCK will unlock all doors.

Key reminder system

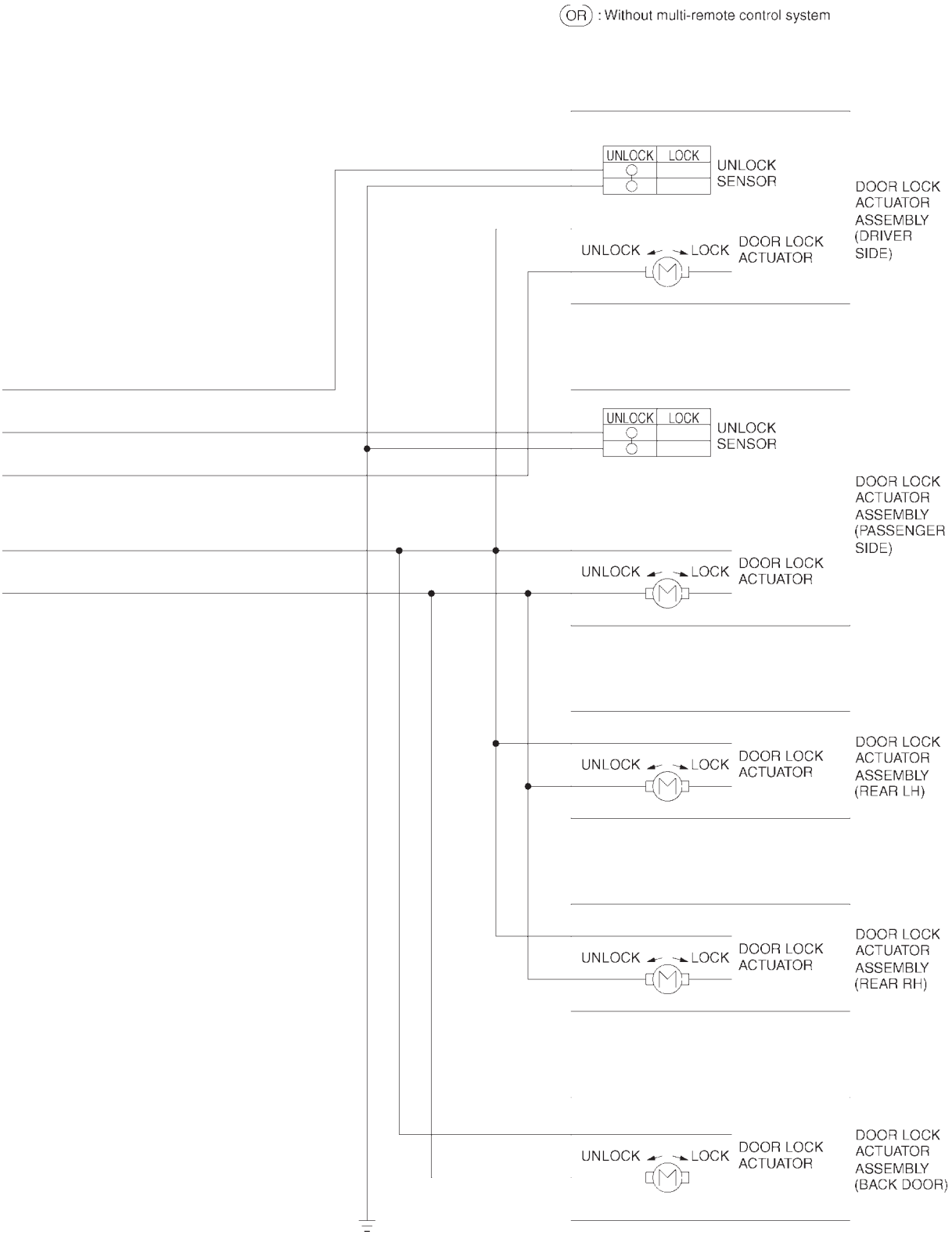
- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock knob, key or multi-remote controller to “LOCK” locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

Schematic/LHD Models

NLEL0503



YEL453C


OR : Without multi-remote control system
UNLOCK
LOCK
UNLOCK SENSOR
DOOR LOCK ACTUATOR ASSEMBLY (DRIVER SIDE)
UNLOCK
LOCK
DOOR LOCK ACTUATOR
UNLOCK
LOCK
UNLOCK SENSOR
DOOR LOCK ACTUATOR ASSEMBLY (PASSENGER SIDE)
UNLOCK
LOCK
DOOR LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (REAR LH)
UNLOCK
LOCK
DOOR LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (REAR RH)
UNLOCK
LOCK
DOOR LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (BACK DOOR)

YEL454C

Wiring Diagram — D/LOCK —/LHD Models

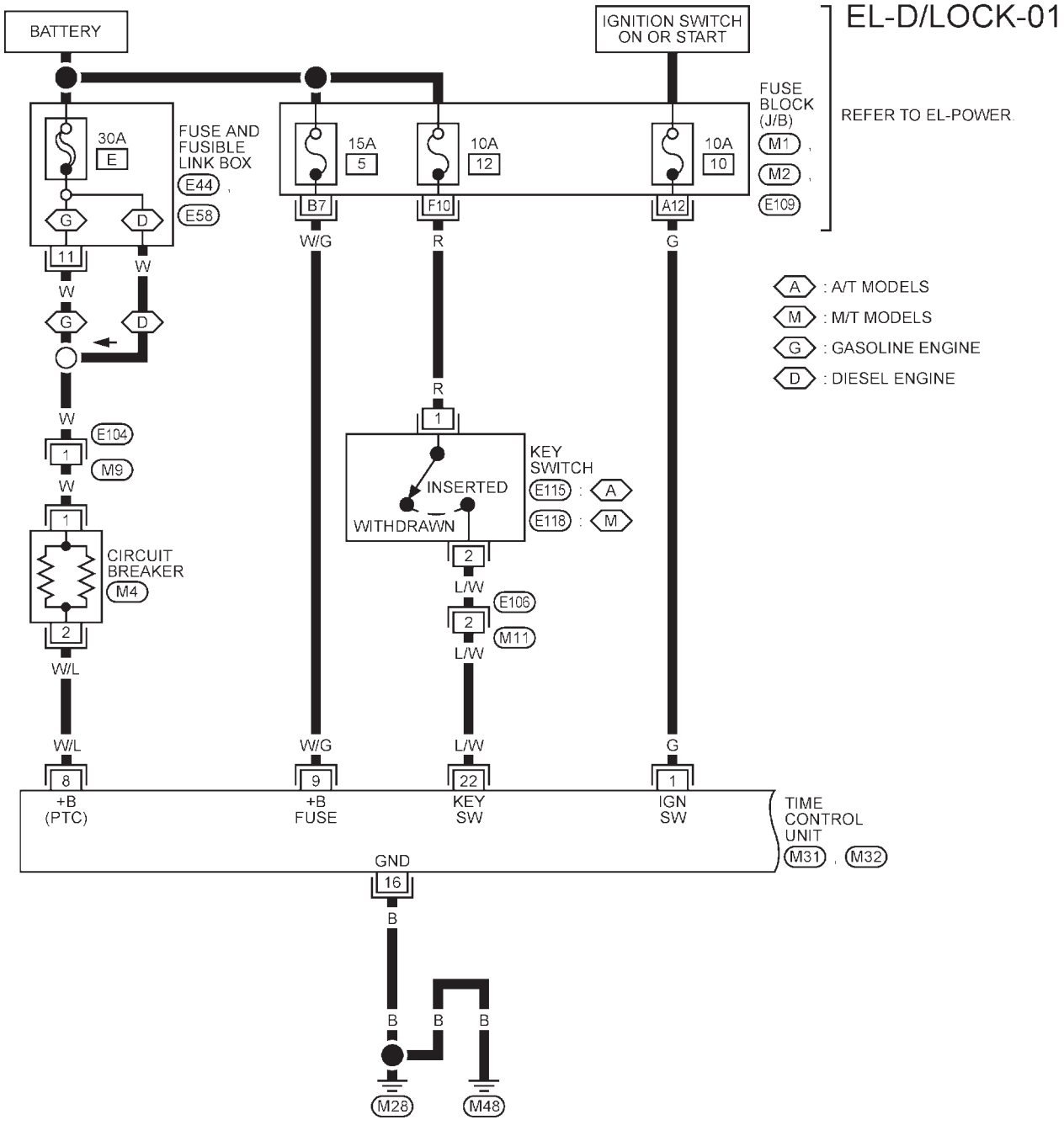
NLEL0504

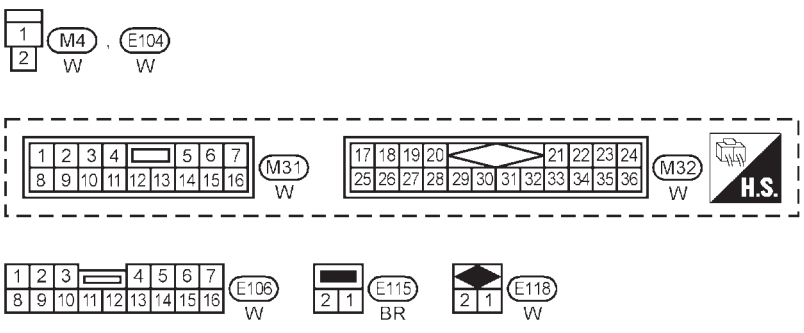
NLEL0504S11

NLEL0504S1104

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

Fig. 1





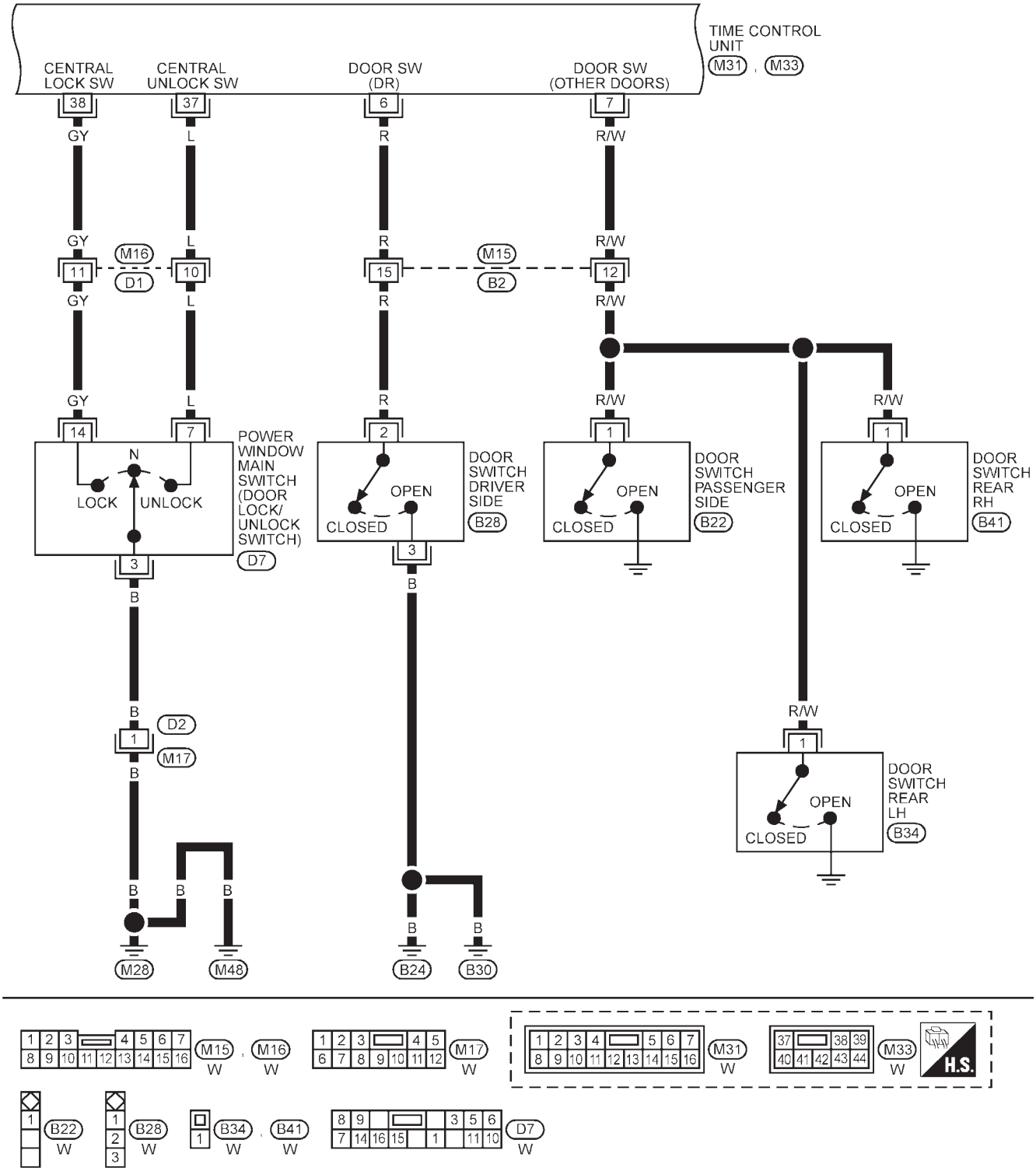
REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)
E44 , E58 -FUSE AND
FUSIBLE LINK BOX

YEL933B

Fig. 2

NLEL0504S1105

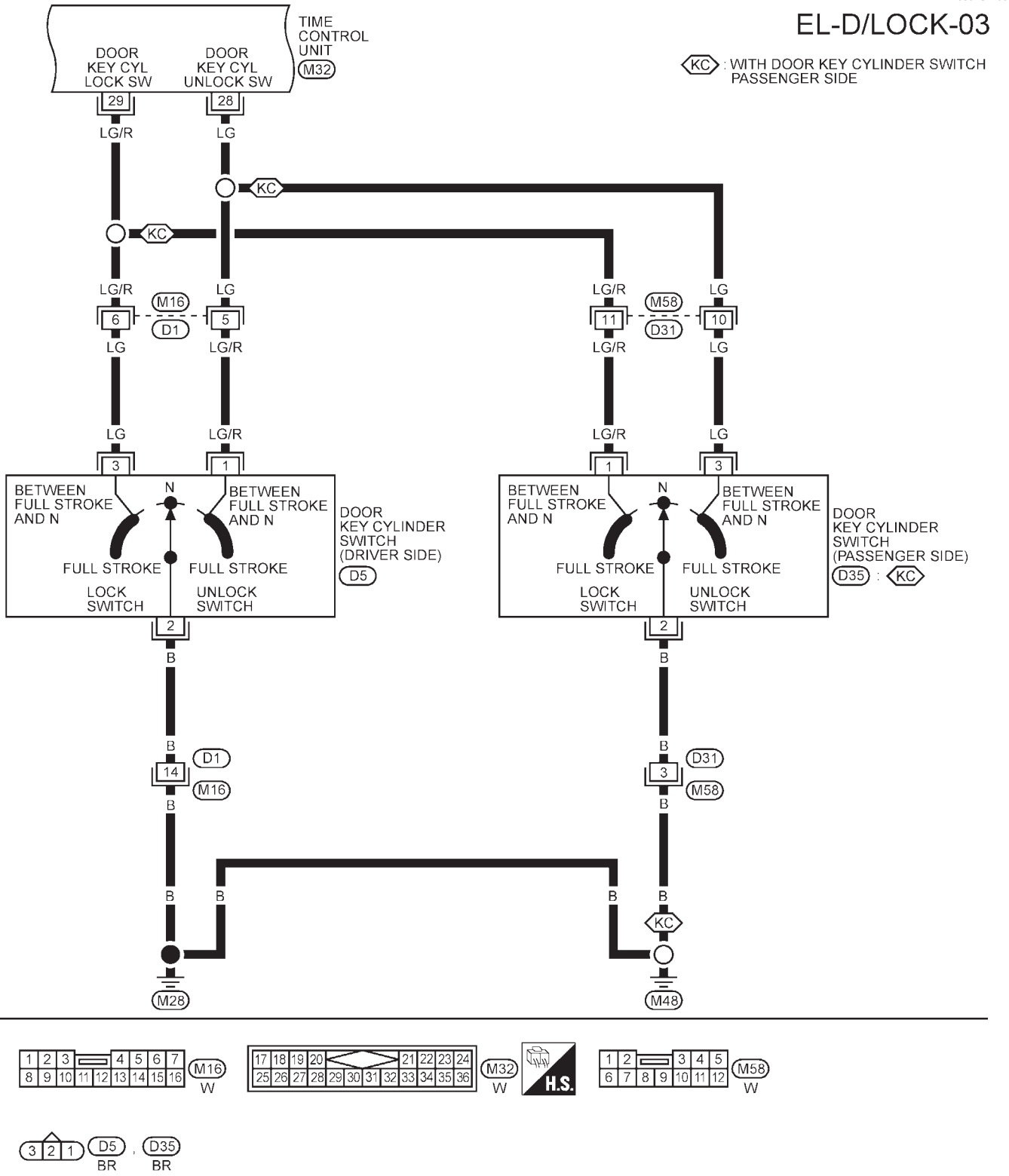
EL-D/LOCK-02



YEL934B

Fig. 3

NLEL0504S1106

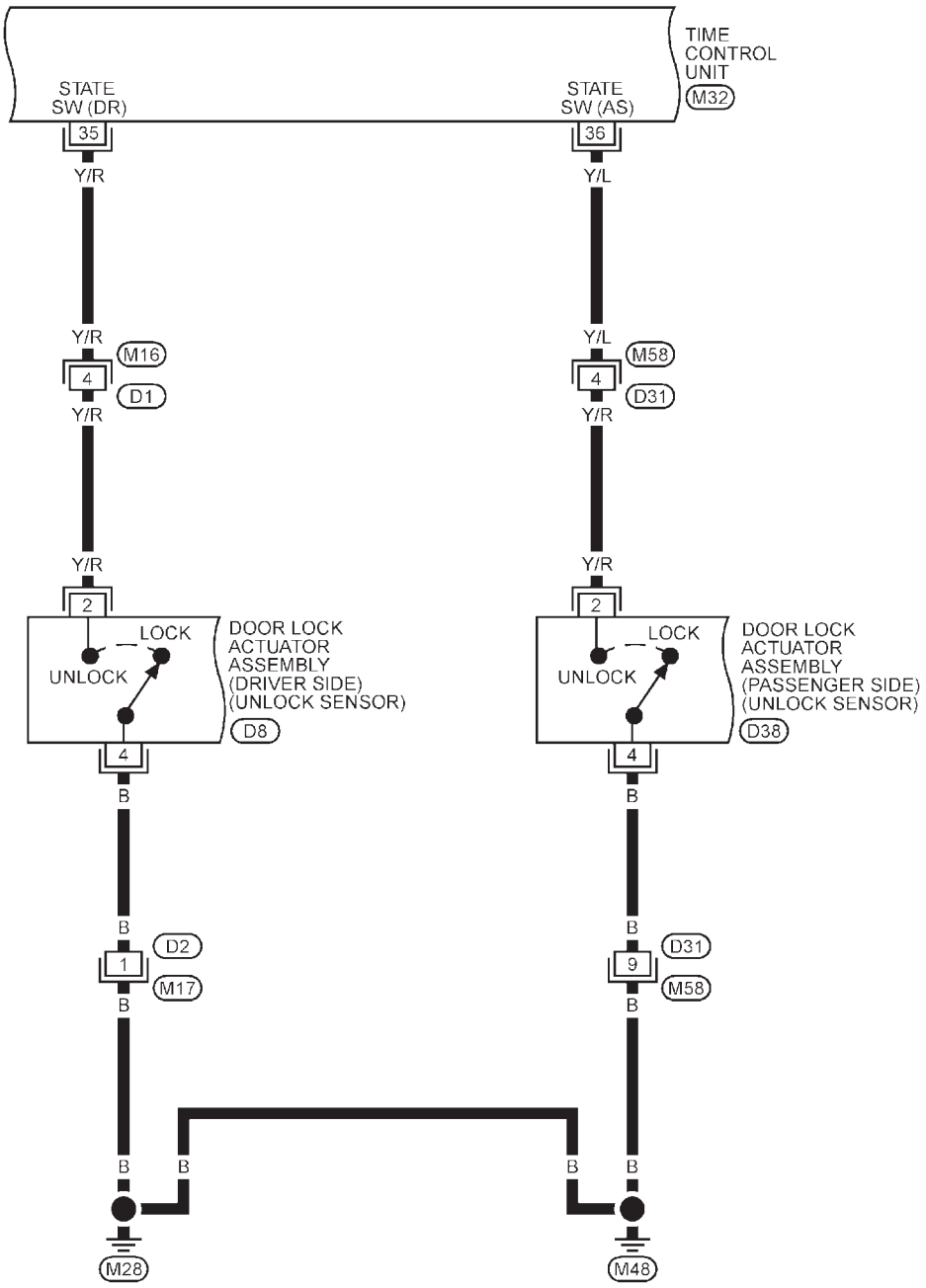


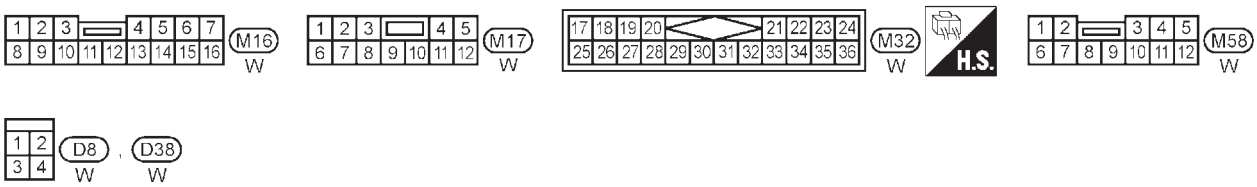
YEL935B

Fig. 4

NLEL0504S1107

EL-D/LOCK-04



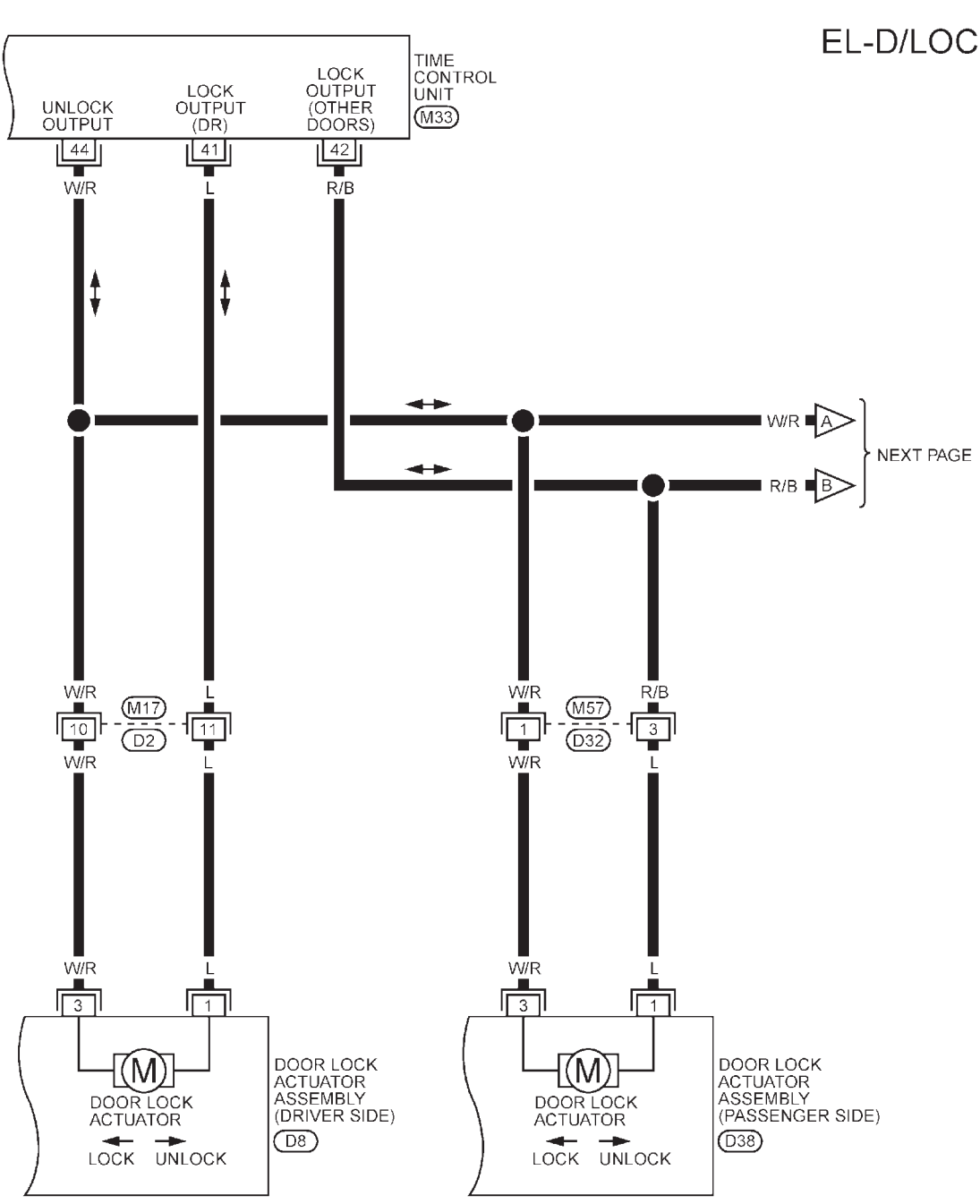


YEL936B

Wiring Diagram — D/LOCK —/LHD Models (Cont'd)

Fig. 5

NLEL0504S1108

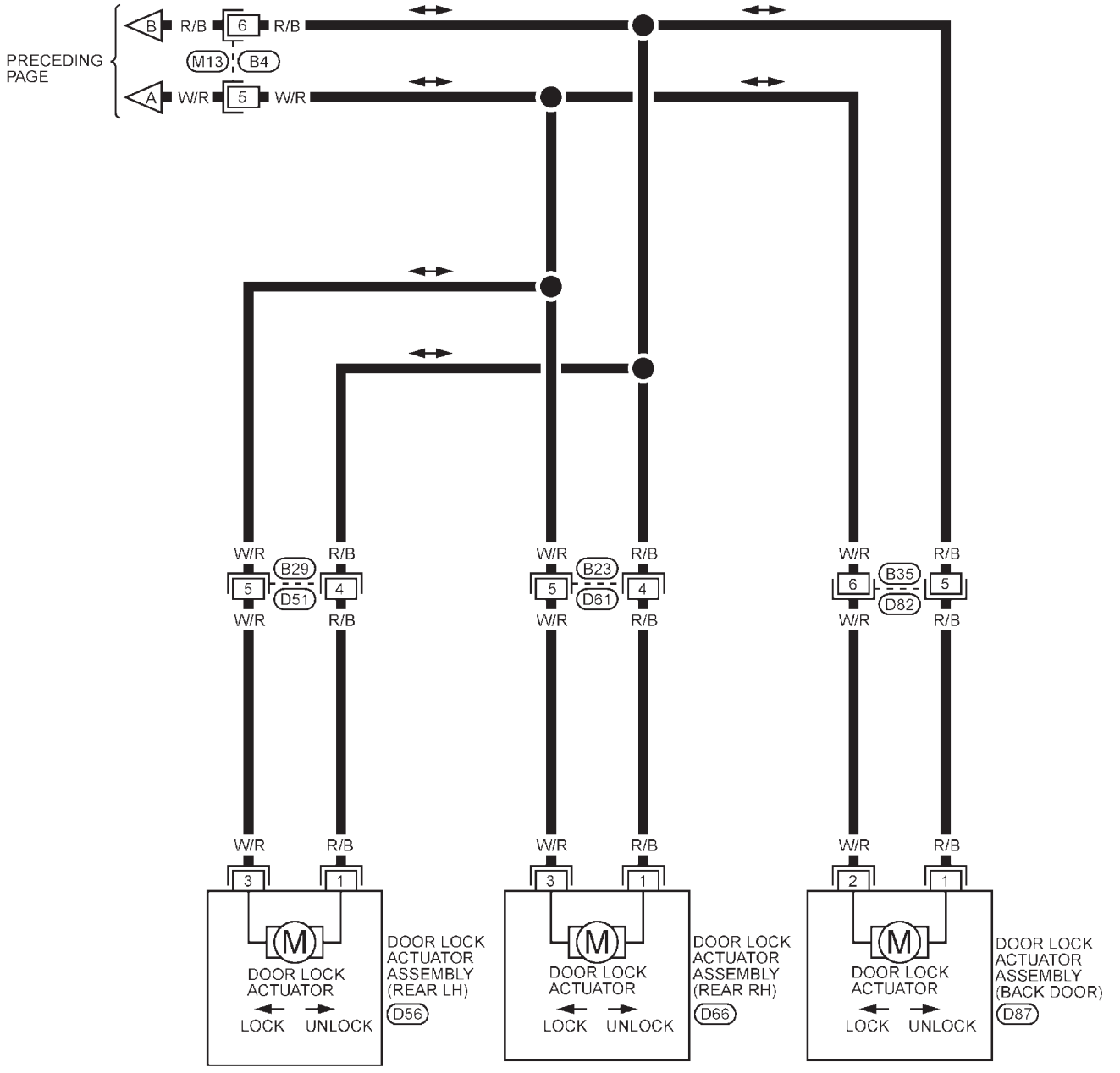


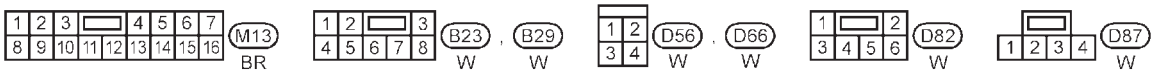
YEL937B

Fig. 6

NLEL0504S1109

EL-D/LOCK-06





YEL938B

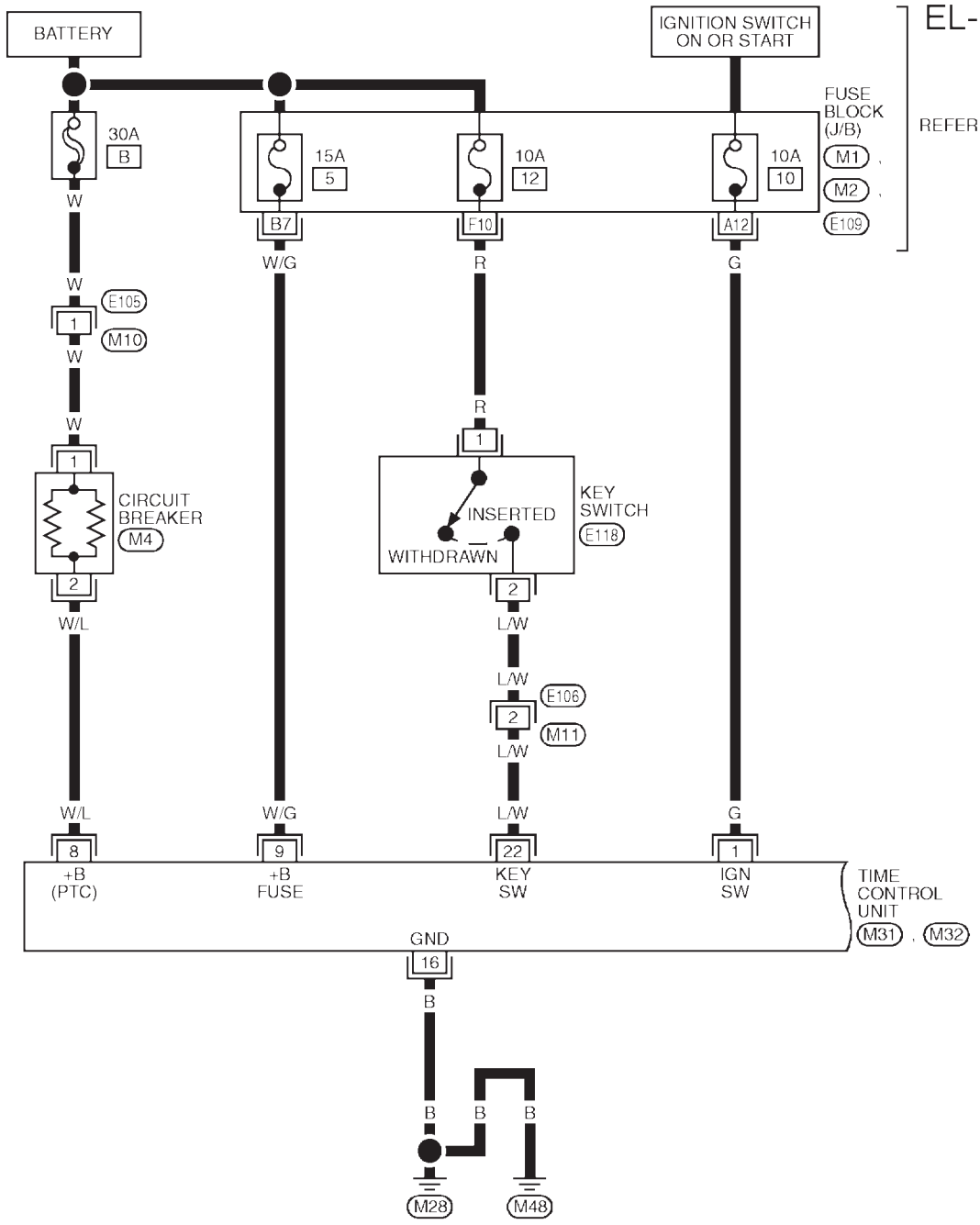
Wiring Diagram — D/LOCK —/LHD Models (Cont'd)

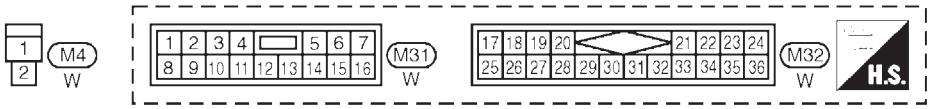
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

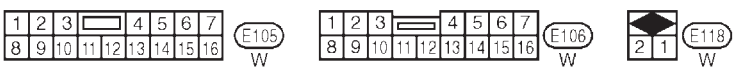
Fig. 1

NLEL0504S13

NLEL0504S1301







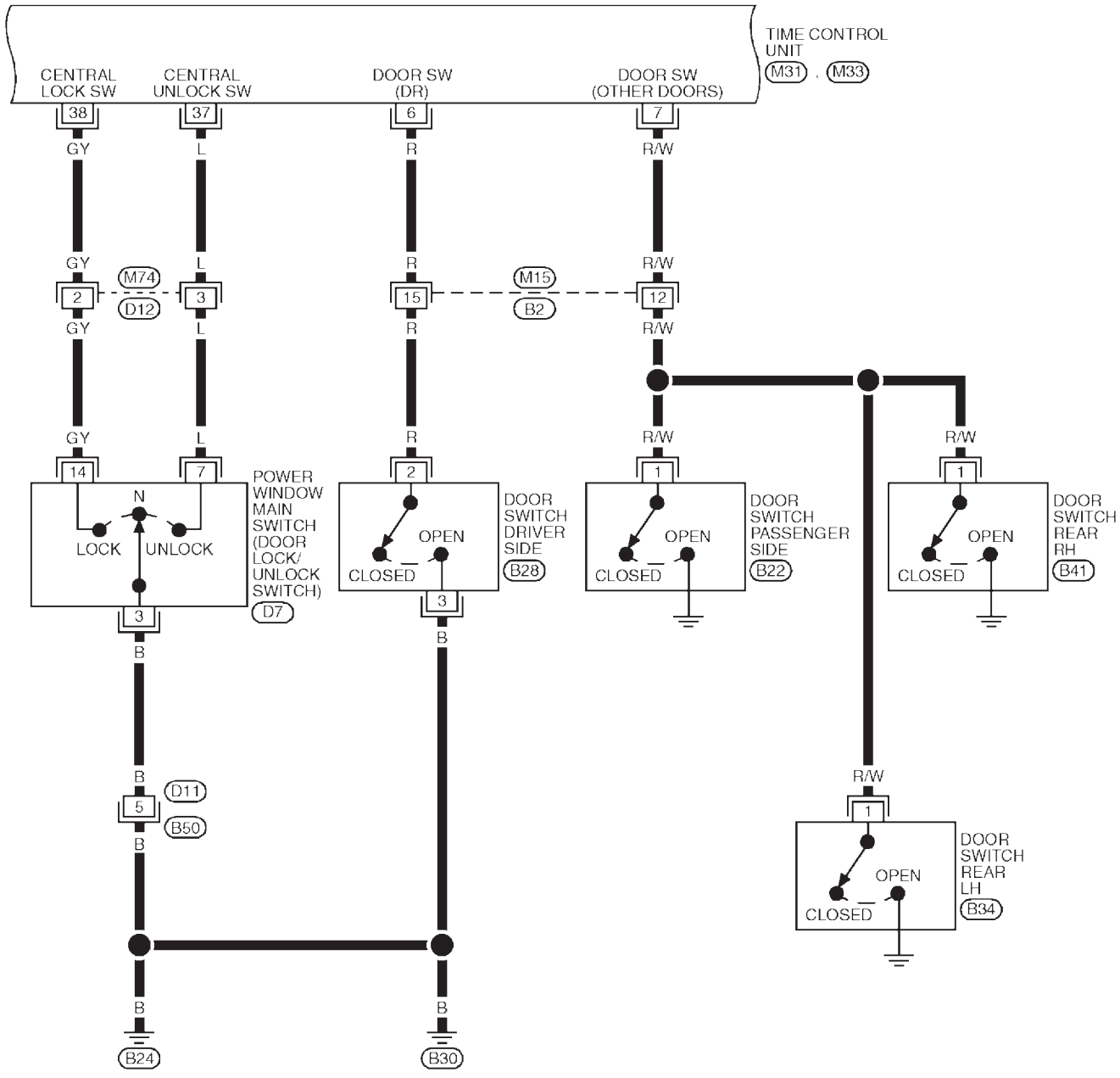
REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

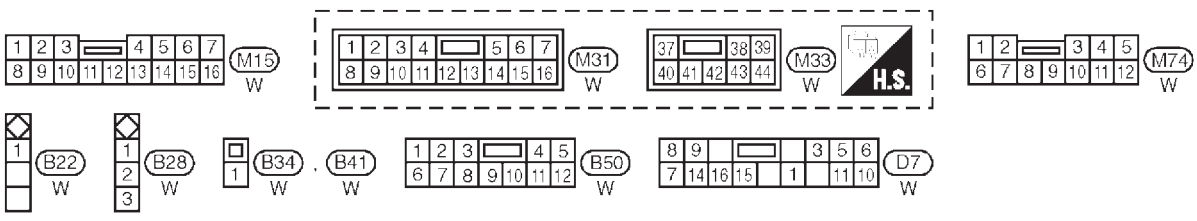
YEL455C

Fig. 2

NLEL0504S1302

EL-D/LOCK-02



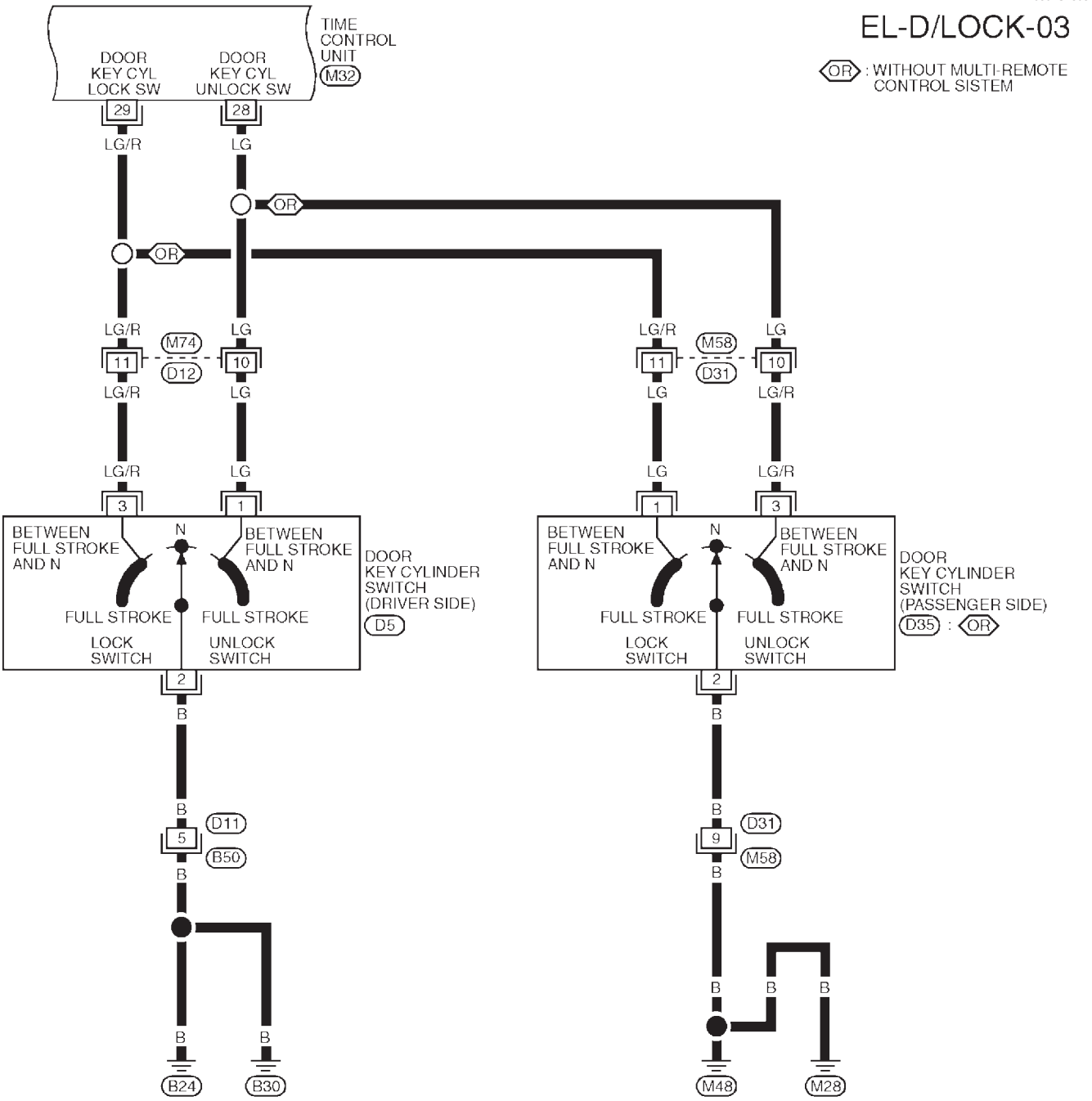


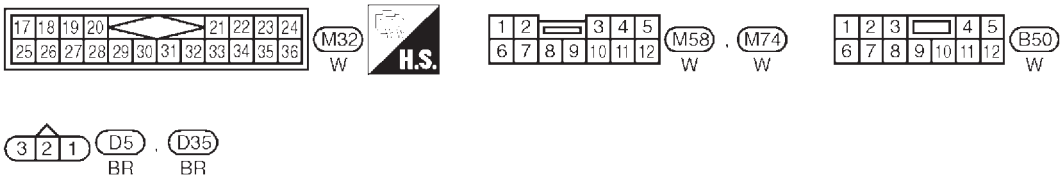
YEL456C

Wiring Diagram — D/LOCK —/LHD Models (Cont'd)

Fig. 3

NLEL0504S1303



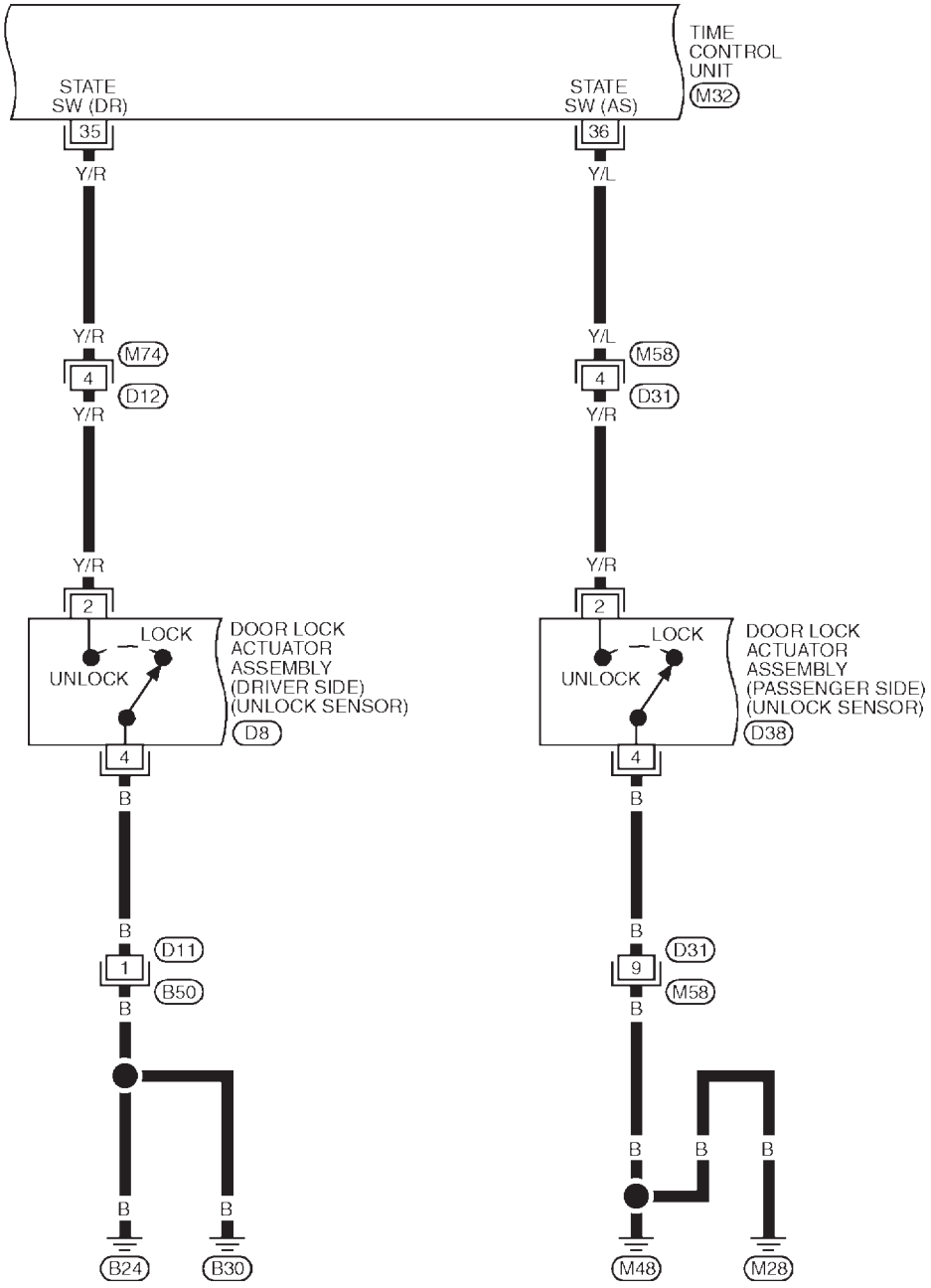


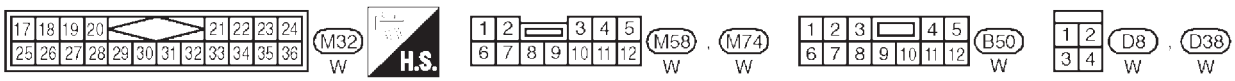
YEL457C

Fig. 4

NLEL0504S1304

EL-D/LOCK-04





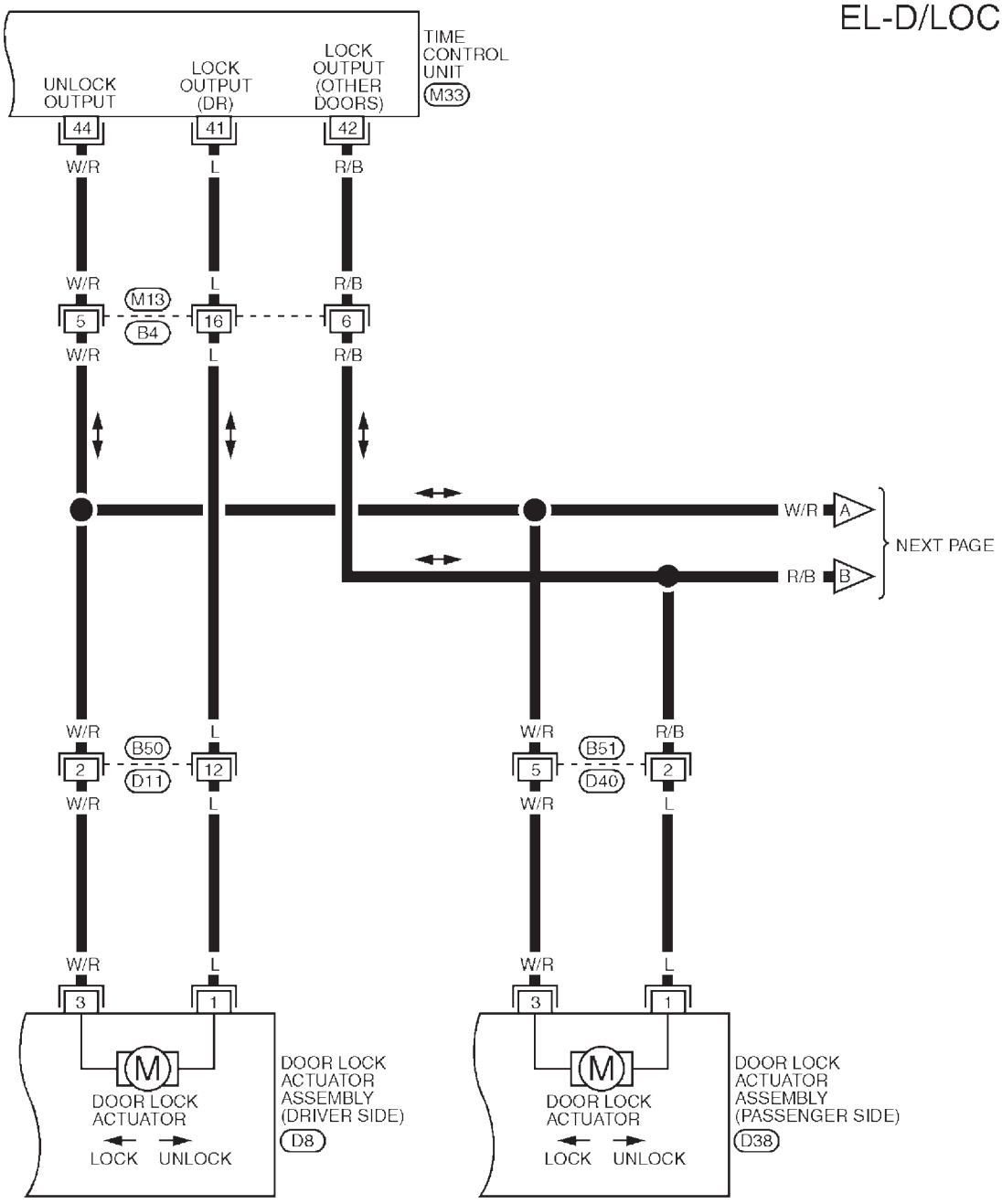
YEL458C

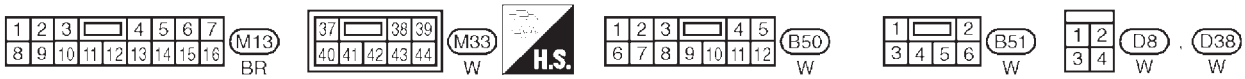
Wiring Diagram — D/LOCK —/LHD Models (Cont'd)

Fig. 5

NLEL0504S1305

EL-D/LOCK-05

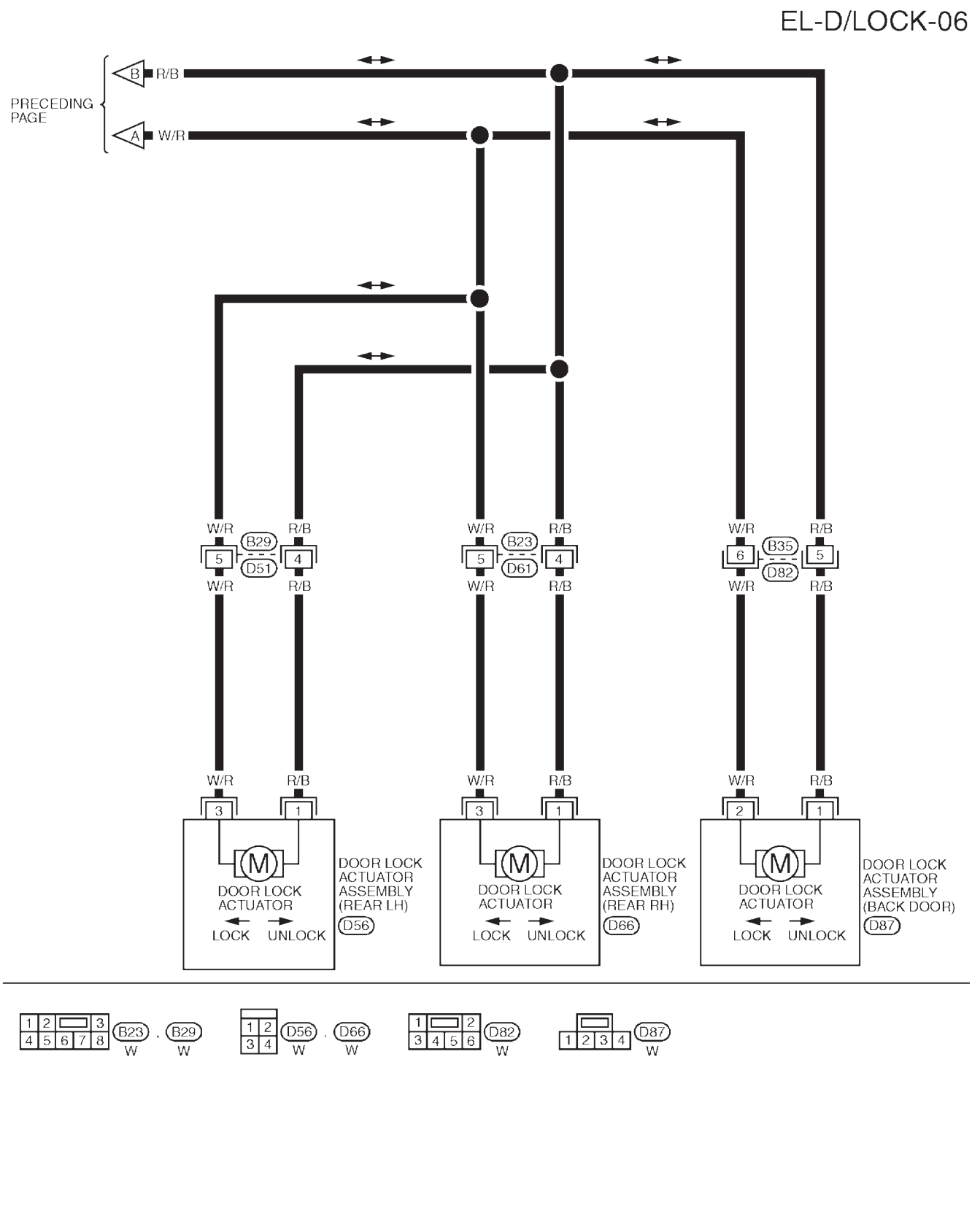




YEL459C

Fig. 6

NLEL0504S1306



YEL460C

Trouble Diagnoses/LHD Models

NLEL0505

SYMPTOM CHART

NLEL0505S02

REFERENCE PAGE (EL-)		273	274	275	276	277	278	279
SYMPTOM		Main power supply and ground circuit check	Door lock/unlock switch check	Door key cylinder switch check	Door lock actuator check	Door switch check	Door unlock sensor check	Key switch check
1	Power door lock does not operate using any switch.	X			X			
2	Power door lock does not operate with lock/ unlock switch.		X					
3	Power door lock does not operate with door key cylinder switch.			X				
4	Specific door lock actuator does not operate.				X			
5	*Key reminder system does not operate.					X	X	X

X: Applicable

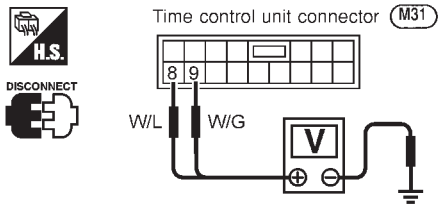
*: Make sure the power door lock system operates properly.

MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

=NLEL0505S03

Main Power Supply Circuit Check

NLEL0505S0301

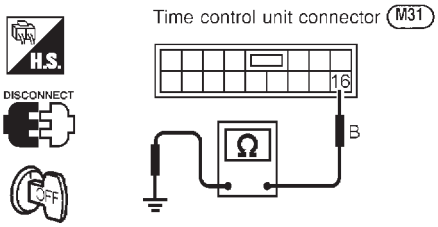


Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
8	Ground	Battery voltage		
9				

NEL672

Ground Circuit Check

NLEL0505S0302



Continuity should exist.

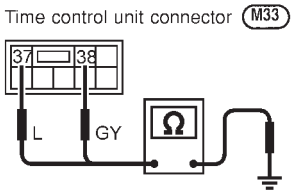
NEL666

DOOR LOCK/UNLOCK SWITCH CHECK

=NLEL0505S04

1 **CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL**

1. Disconnect time control unit harness connector.
2. Check continuity between time control unit harness connector terminal 37 or 38 and ground.



Terminals	Door lock/unlock switch condition	Continuity
38 - Ground	Lock	Yes
	N and Unlock	No
37 - Ground	Unlock	Yes
	N and Lock	No

NEL674

Refer to wiring diagram.

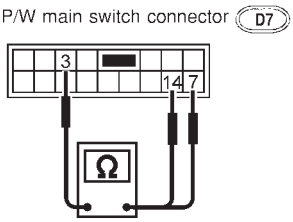
OK or NG

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

2 **CHECK DOOR LOCK/UNLOCK SWITCH**

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

- Power window main switch (Door lock/unlock switch)



Condition	Terminals		
	3	14	7
Lock	○	○	
N	No continuity		
Unlock	○		○

NEL675

OK or NG

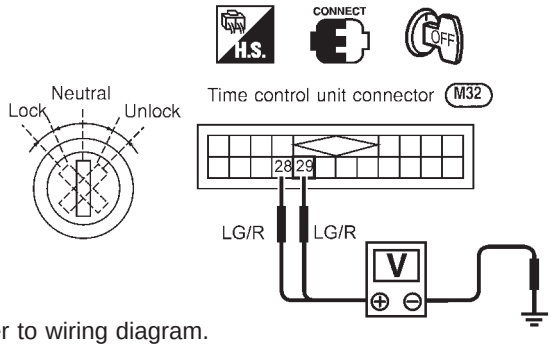
OK	▶	**Check the following.** ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and time control unit connector
NG	▶	Replace door lock/unlock switch.

DOOR KEY CYLINDER SWITCH CHECK

NLEL0505S05

1 **CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)**

Check voltage between time control unit harness connector terminals 28 or 29 and ground.



Terminals (+)	Terminals (-)	Key position	Voltage [V]
29	Ground	Neutral/Unlock	Approx. 5
		Lock	0
28	Ground	Neutral/Lock	Approx. 5
		Unlock	0

NEL676

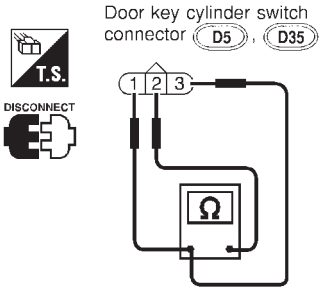
Refer to wiring diagram.

OK or NG

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

2 **CHECK DOOR KEY CYLINDER SWITCH**

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



Terminals	Key position	Continuity
① - ② (Driver side)	Unlock	Yes
② - ③ (Passenger side)	Neutral/Lock	No
① - ② (Passenger side)	Lock	Yes
② - ③ (Driver side)	Neutral/Unlock	No

NEL677

OK or NG

OK	▶	**Check the following.** ● Door key cylinder switch ground circuit ● Harness for open or short between time control unit and door key cylinder switch
NG	▶	Replace door key cylinder switch.

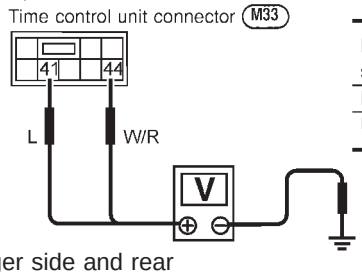
DOOR LOCK ACTUATOR CHECK

NLEL0505S06

1 CHECK DOOR LOCK ACTUATOR OUTPUT SIGNAL

Check voltage for door lock actuator.

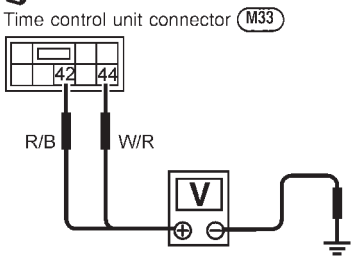
- Door lock actuator driver's side



Door lock/unlock switch condition	Terminals (+)	Terminals (-)	Voltage [V]
Lock	41	Ground	Approx. 12
Unlock	44	Ground	

NEL678

- Door lock actuator passenger side and rear



Door lock/unlock switch condition	Terminals (+)	Terminals (-)	Voltage [V]
Lock	42	Ground	Approx. 12
Unlock	44	Ground	

NEL679

Refer to wiring diagram.

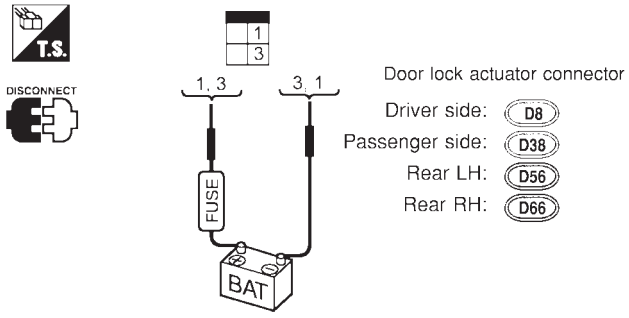
OK or NG

OK	▶	GO TO 2.
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)

2	CHECK DOOR LOCK ACTUATOR

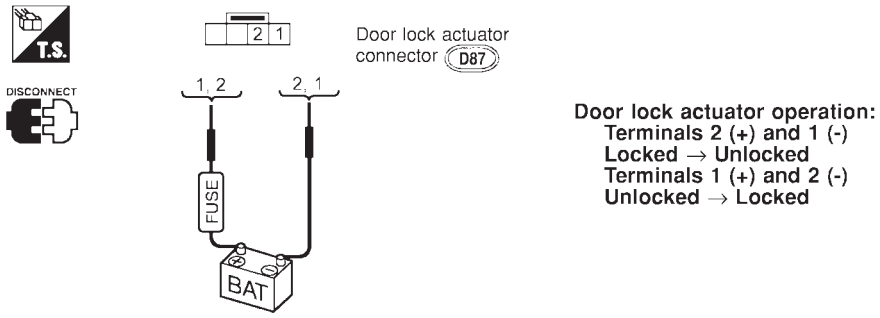
1. Disconnect door lock actuator harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

- Front and rear door



NEL680

- Back door



NEL681

OK or NG

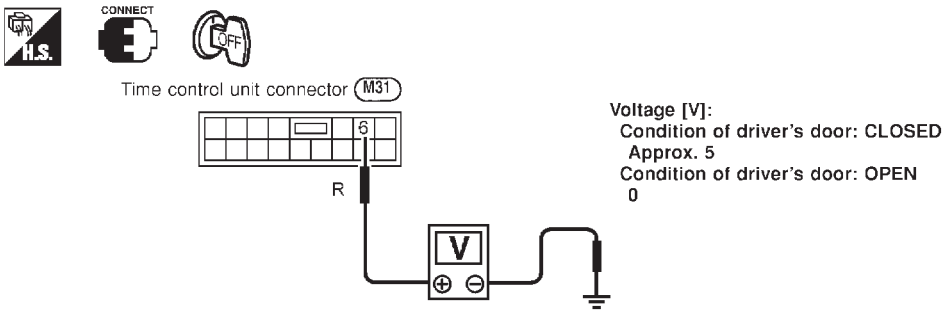
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.
NG	▶	Replace door lock actuator.

DOOR SWITCH CHECK

NLEL0505S08

1	CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector terminals 6 and ground.



NEL647

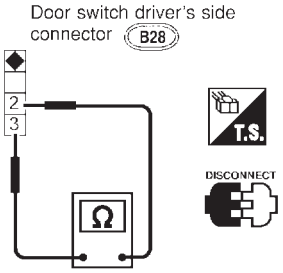
Refer to wiring diagram.

OK or NG

OK	▶	Door switch is OK.
NG	▶	GO TO 2.

2	CHECK DOOR SWITCH

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminals.



Continuity:
Door switch is pushed
No
Door switch is released
Yes

NEL648

OK or NG

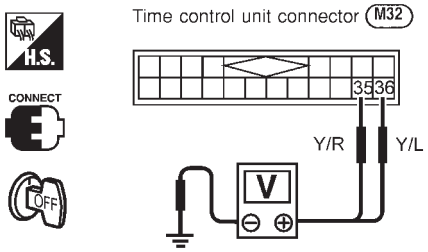
OK	▶	**Check the following.** ● Door switch ground circuit or door switch ground condition ● Harness for open or short between smart entrance control unit and door switch
NG	▶	Replace door switch.

DOOR UNLOCK SENSOR CHECK

NLEL0505S09

1	CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between time control unit terminal 35 or 36 and ground.



Terminals (+)	Terminals (-)	Condition (Driver's or passenger door)	Voltage [V]
35	Ground	Locked	Approx. 5
		Unlocked	0
36	Ground	Locked	Approx. 5
		Unlocked	0

NEL682

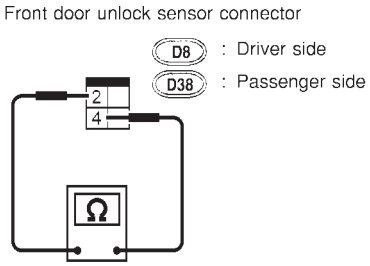
Refer to wiring diagram.

OK or NG

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

2	CHECK DOOR UNLOCK SENSOR

1. Disconnect door unlock sensor connector.
2. Check continuity between door unlock sensor terminals 2 and 4.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

NEL683

OK or NG

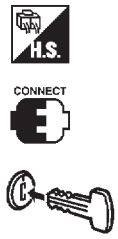
OK	▶	**Check the following.** ● Door unlock sensor ground circuit ● Harness for open or short between time control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

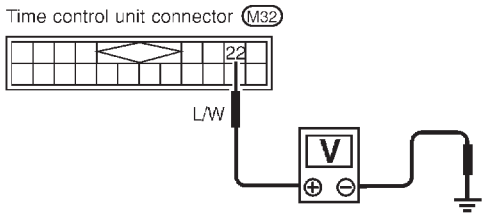
KEY SWITCH (INSERT) CHECK

NLEL0505S11

1	CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit terminal 22 and ground.





Voltage [V]:
Condition of switch: Key is inserted.
Approx. 12
Condition of switch: Key is removed
0

NEL653

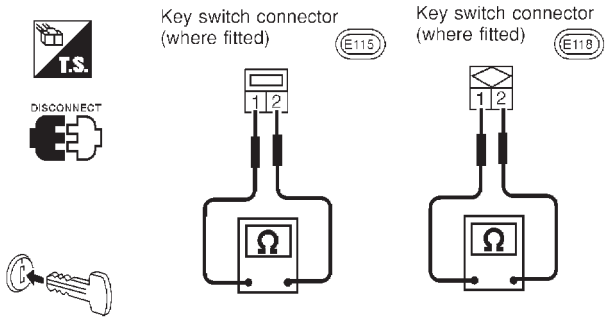
Refer to wiring diagram.

OK or NG

OK	▶	Key switch is OK.
NG	▶	GO TO 2.

2	CHECK KEY SWITCH (INSERT)

Check continuity between key switch terminals 1 and 2.



NEL787

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 time control unit and key switch
NG	▶	Replace key switch.

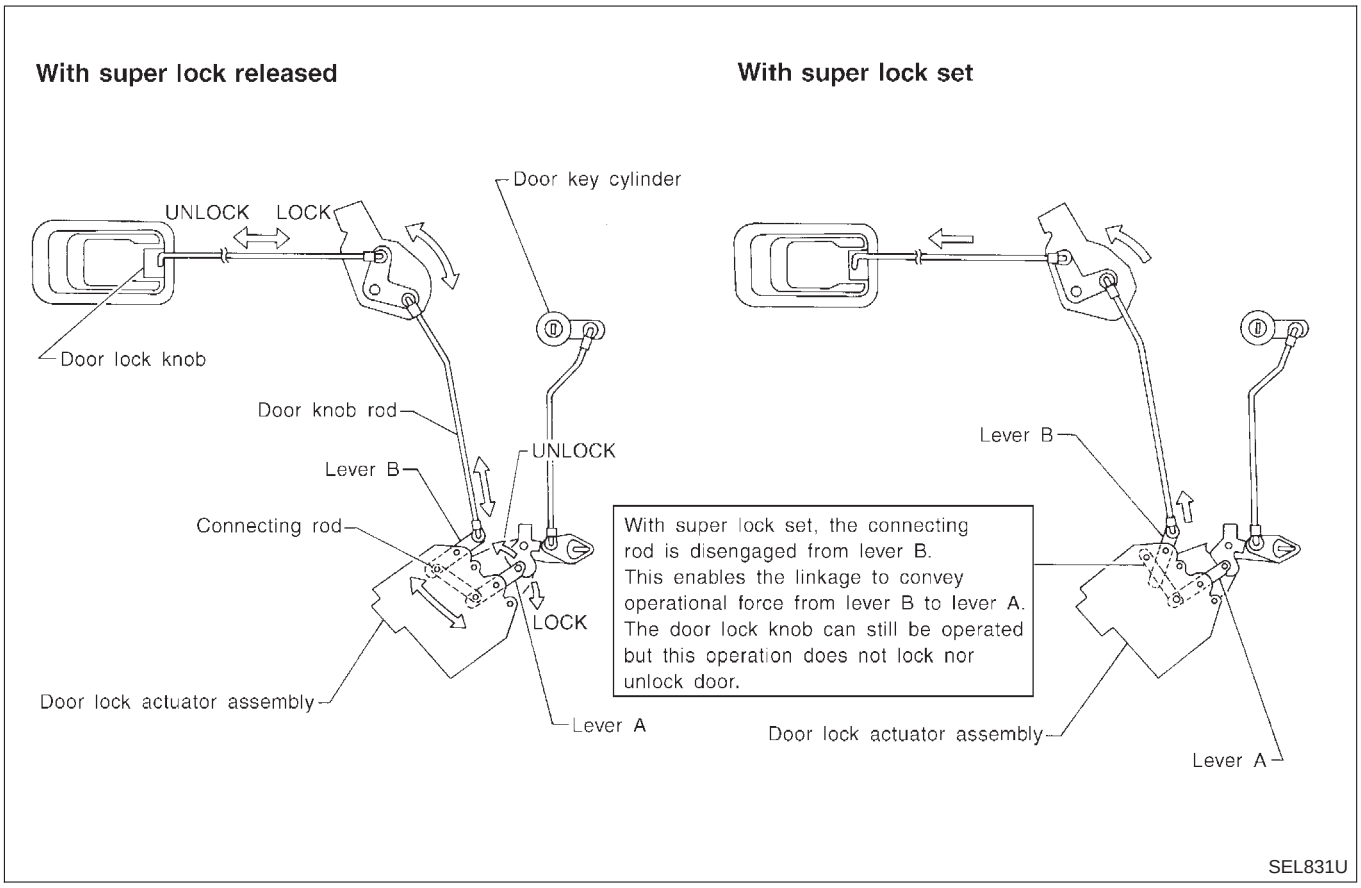
System Description/RHD Models

NLEL0395

OUTLINE

NLEL0395S01

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



OPERATION

NLEL0395S02

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

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

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

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

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

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

Power door lock/unlock operation by lock/unlock switch

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

Lock/unlock switch operation cannot control super lock.
Key reminder system

- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock

knob, key or multi-remote controller to "LOCK" locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

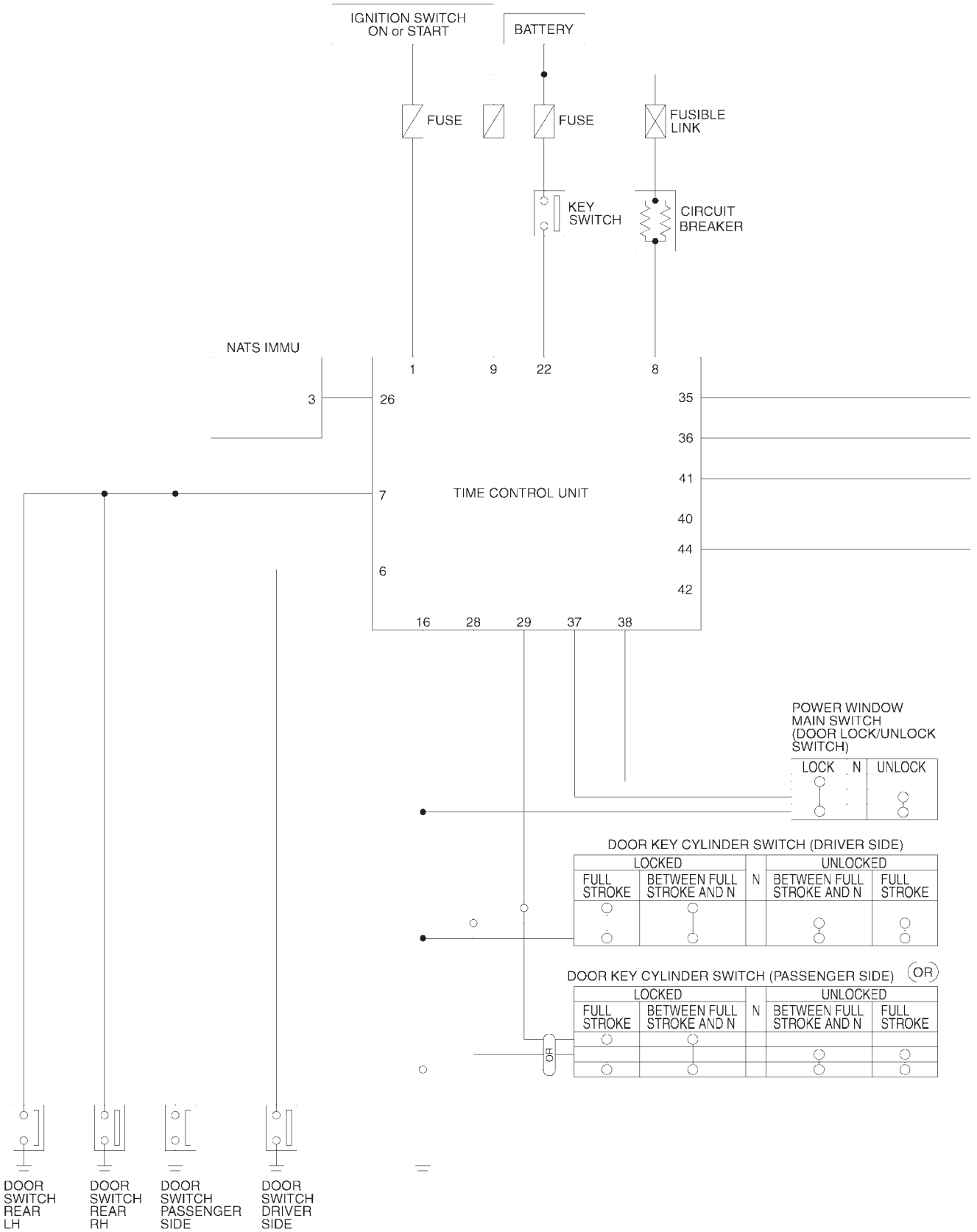
System initialization

- System initialization is required when battery cables are reconnected. Conduct the following to release super lock once;
  — insert the key into the ignition key cylinder and turn it to ON.
  — LOCK/UNLOCK operation using door key cylinder or multi-remote controller.

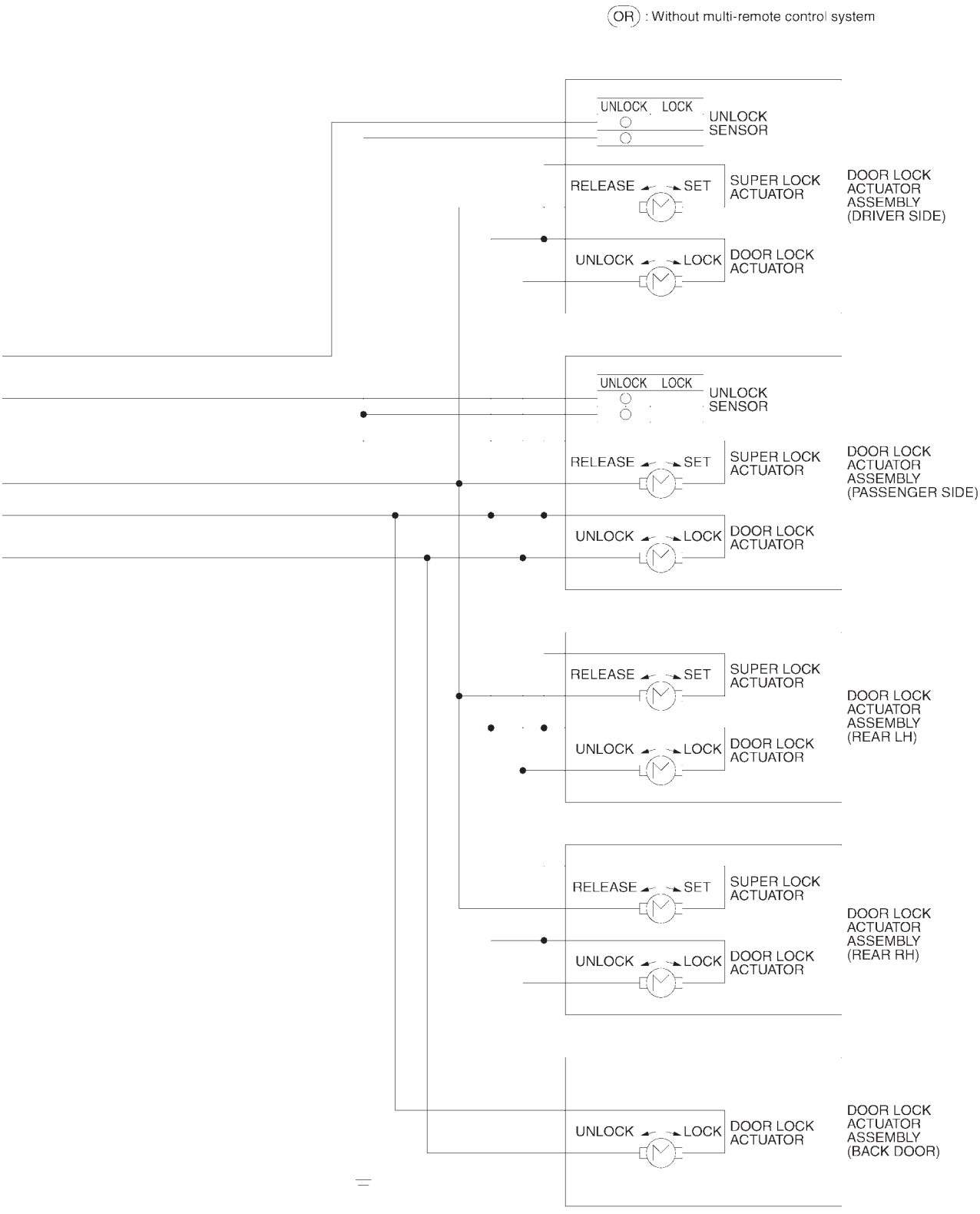
NOTE:

Schematic/RHD Models

NLEL0475



YEL461C


OR : Without multi-remote control system
UNLOCK
LOCK
UNLOCK SENSOR
RELEASE
SET
SUPER LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (DRIVER SIDE)
UNLOCK
LOCK
DOOR LOCK ACTUATOR
UNLOCK SENSOR
SUPER LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (PASSENGER SIDE)
DOOR LOCK ACTUATOR
SUPER LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (REAR LH)
SUPER LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (REAR RH)
DOOR LOCK ACTUATOR
DOOR LOCK ACTUATOR ASSEMBLY (BACK DOOR)

YEL462C

Wiring Diagram — S/LOCK —/RHD Models

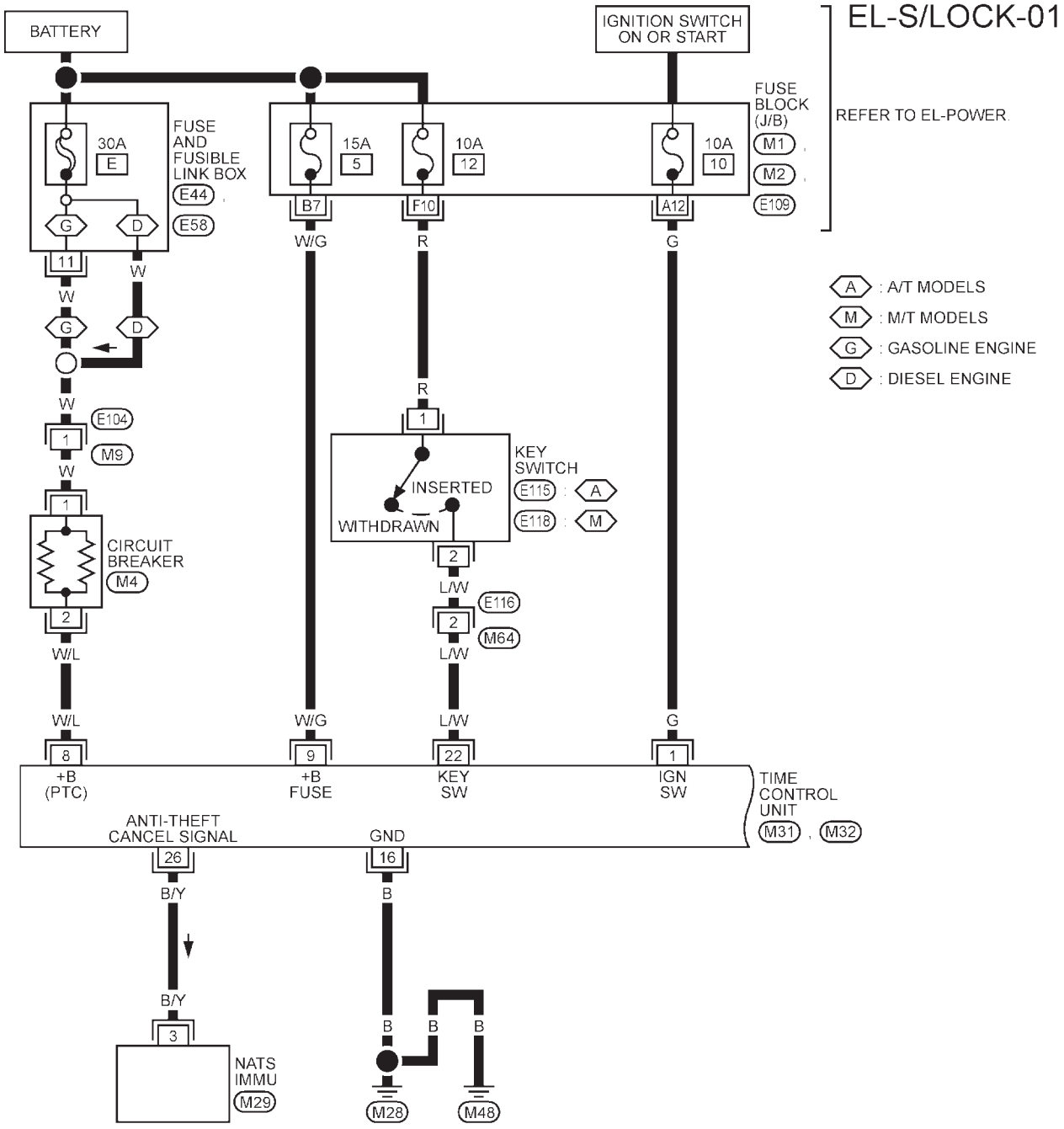
NLEL0476

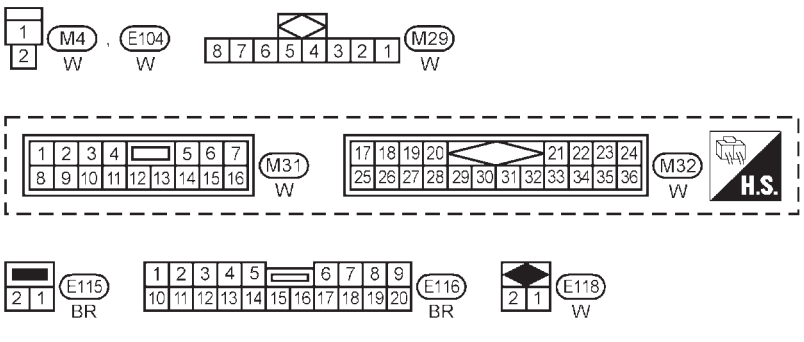
NLEL0476S10

NLEL0476S1001

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

Fig. 1



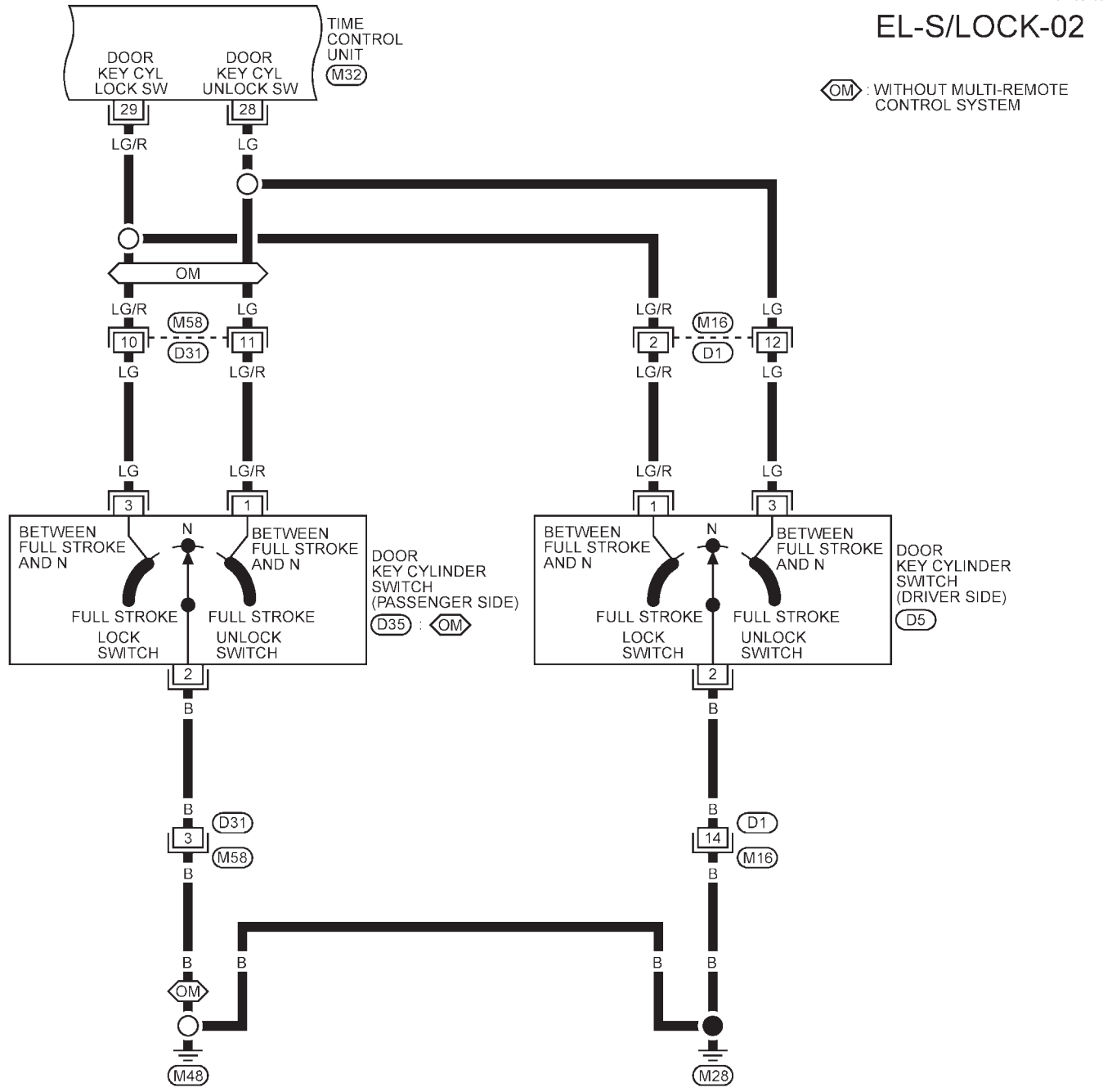


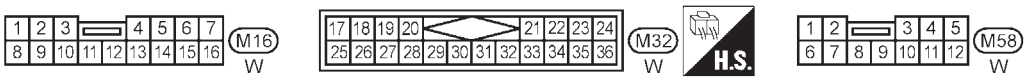
REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)
E44 , E58 -FUSE AND FUSIBLE LINK BOX

YEL941B

Fig. 2

NLEL0476S1002





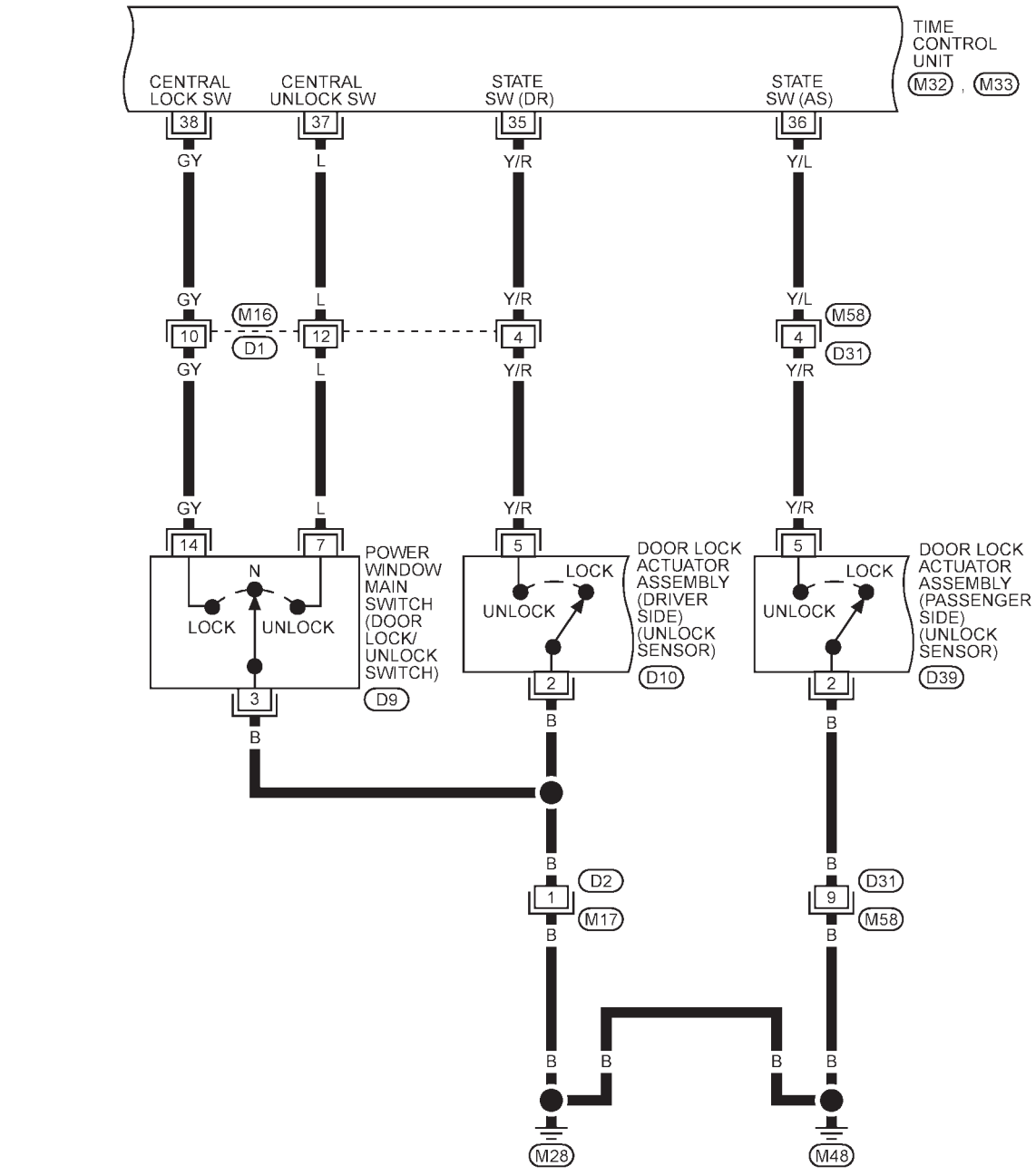
YEL942B

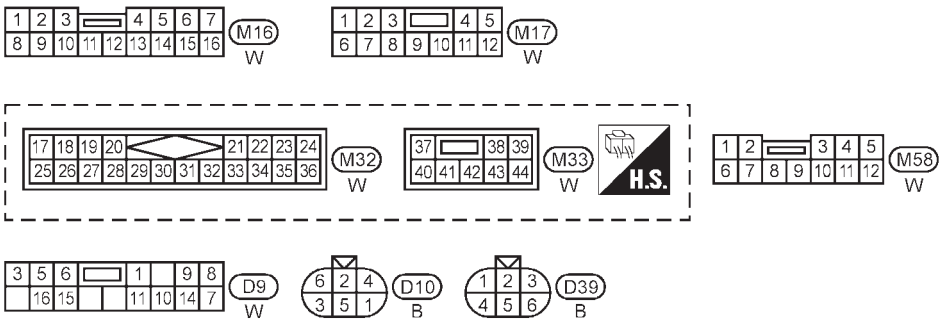
Wiring Diagram — S/LOCK —/RHD Models (Cont'd)

Fig. 3

NLEL0476S1003

EL-S/LOCK-03



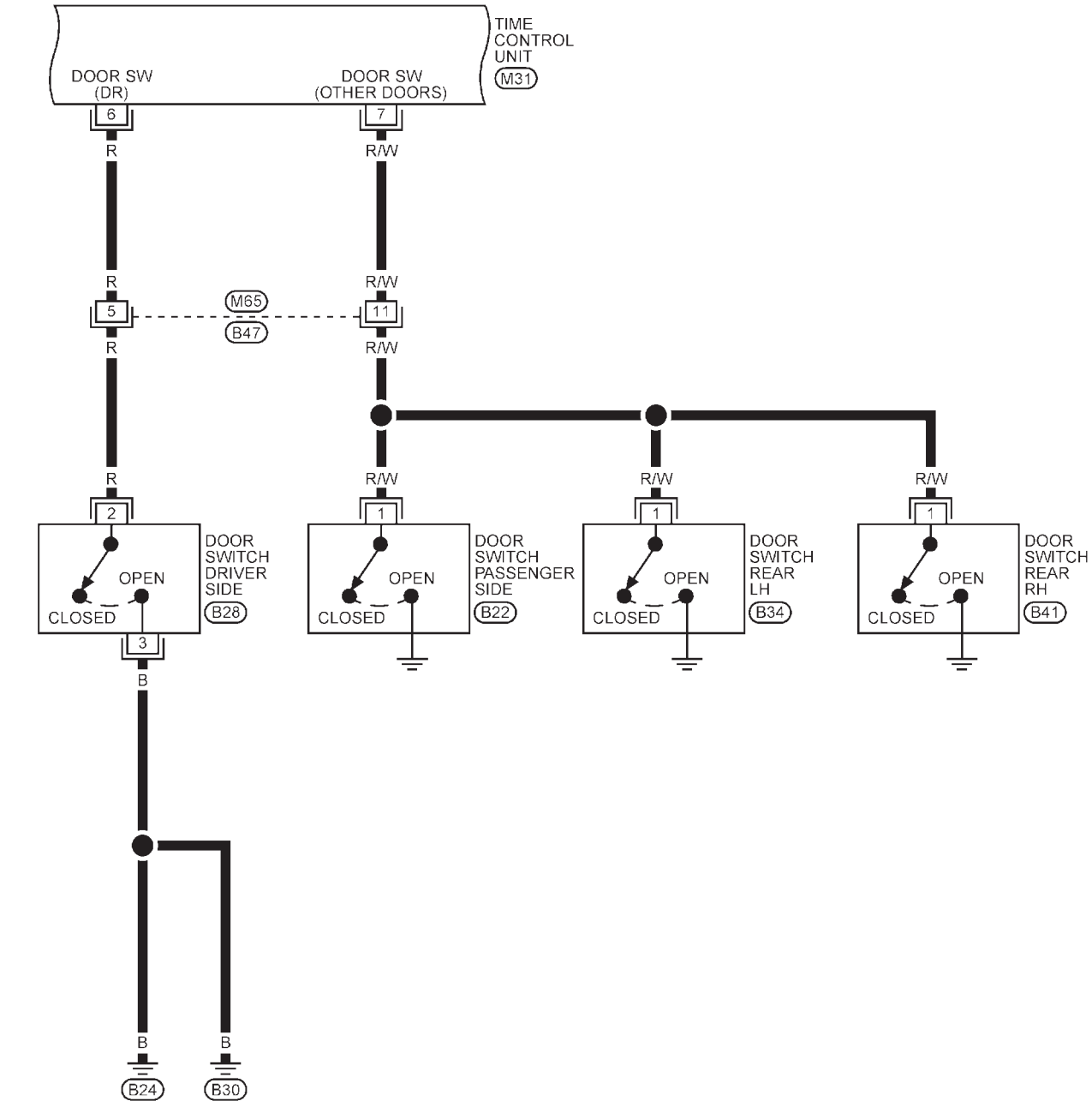


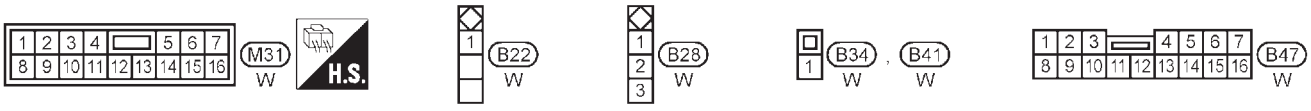
YEL943B

Fig. 4

NLEL0476S1004

EL-S/LOCK-04



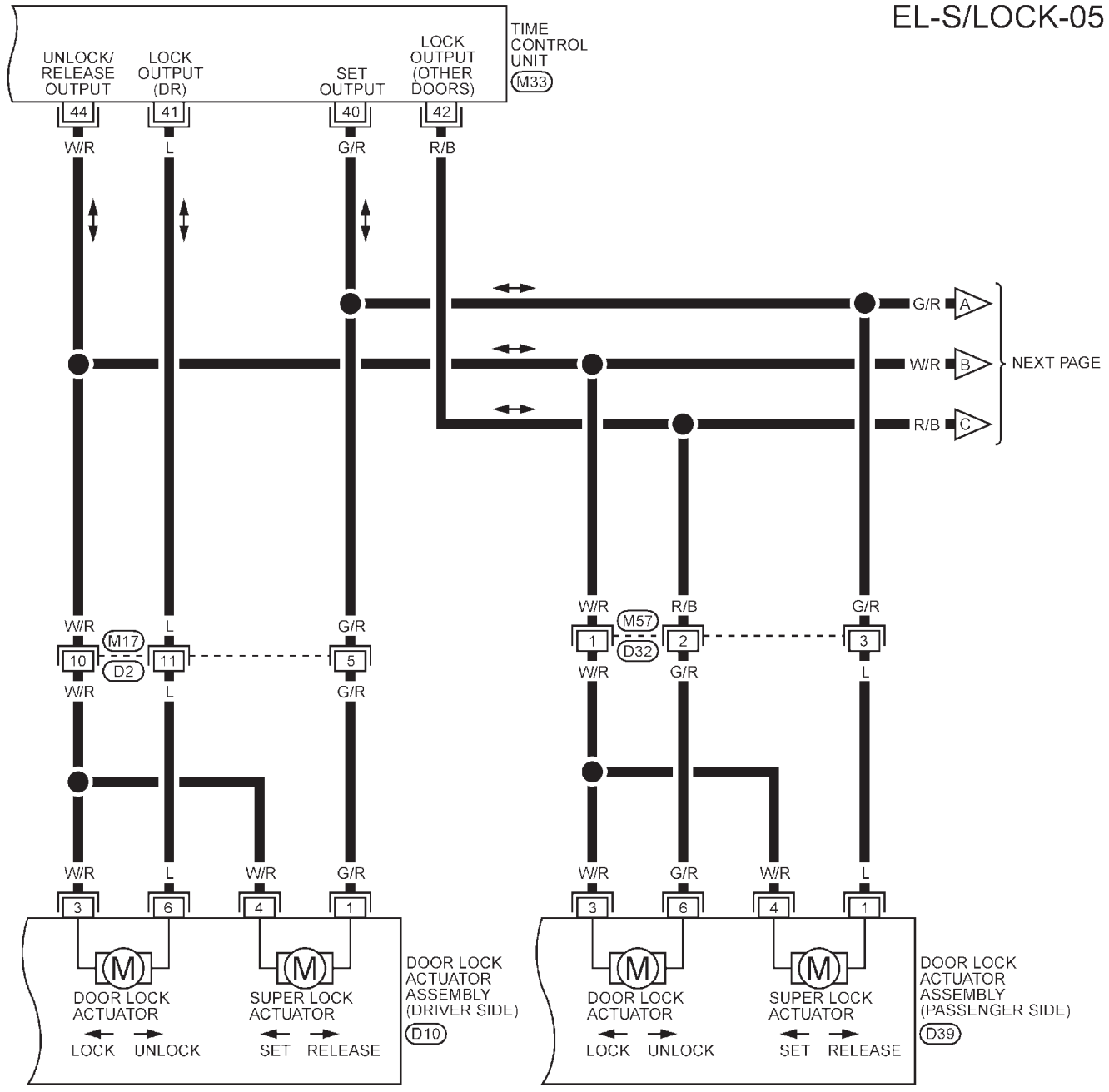


YEL984B

Wiring Diagram — S/LOCK —/RHD Models (Cont'd)

Fig. 5

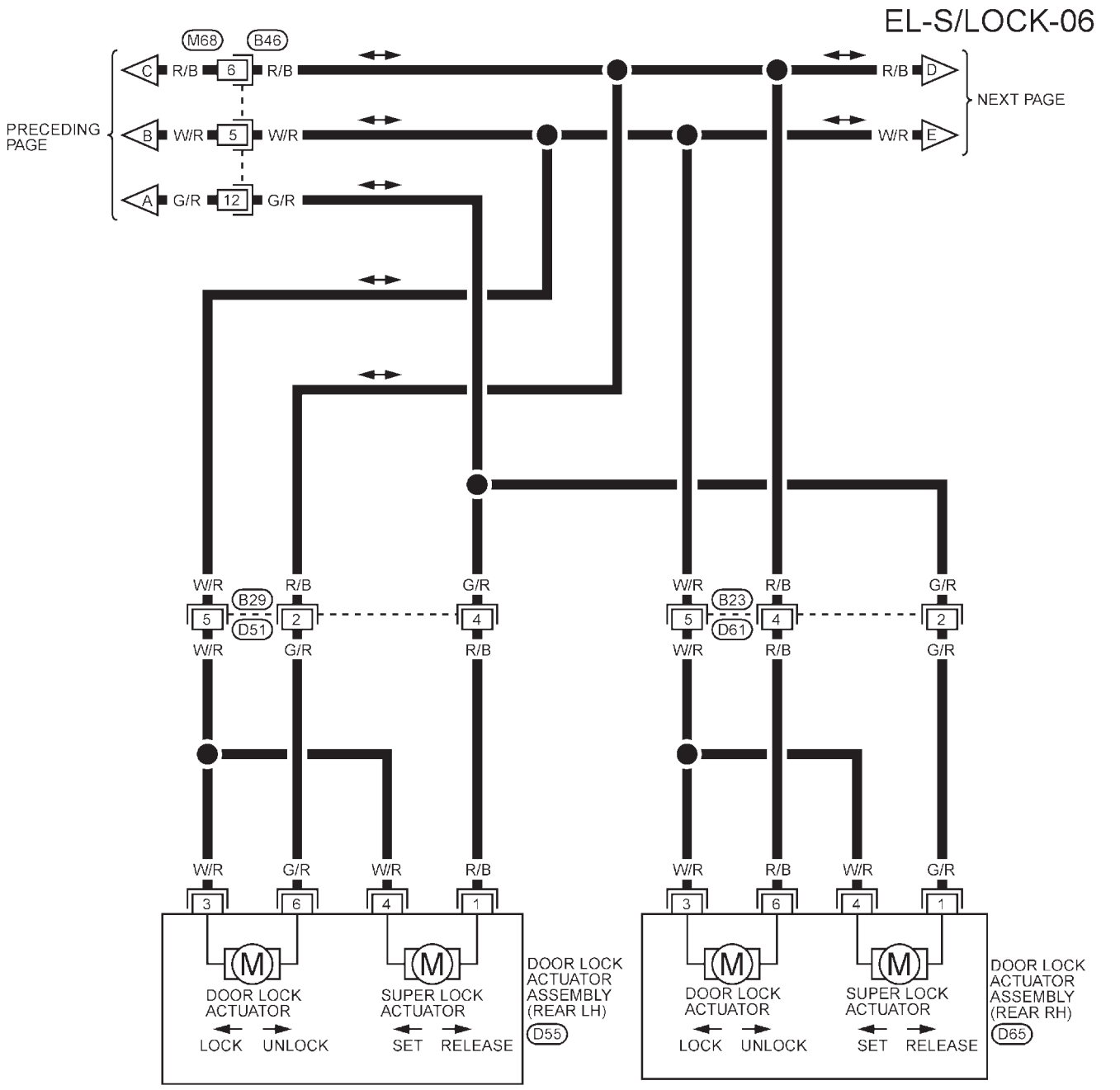
NLEL0476S1005

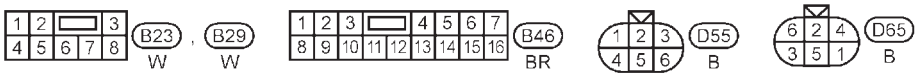


YEL944B

Fig. 6

NLEL0476S1006



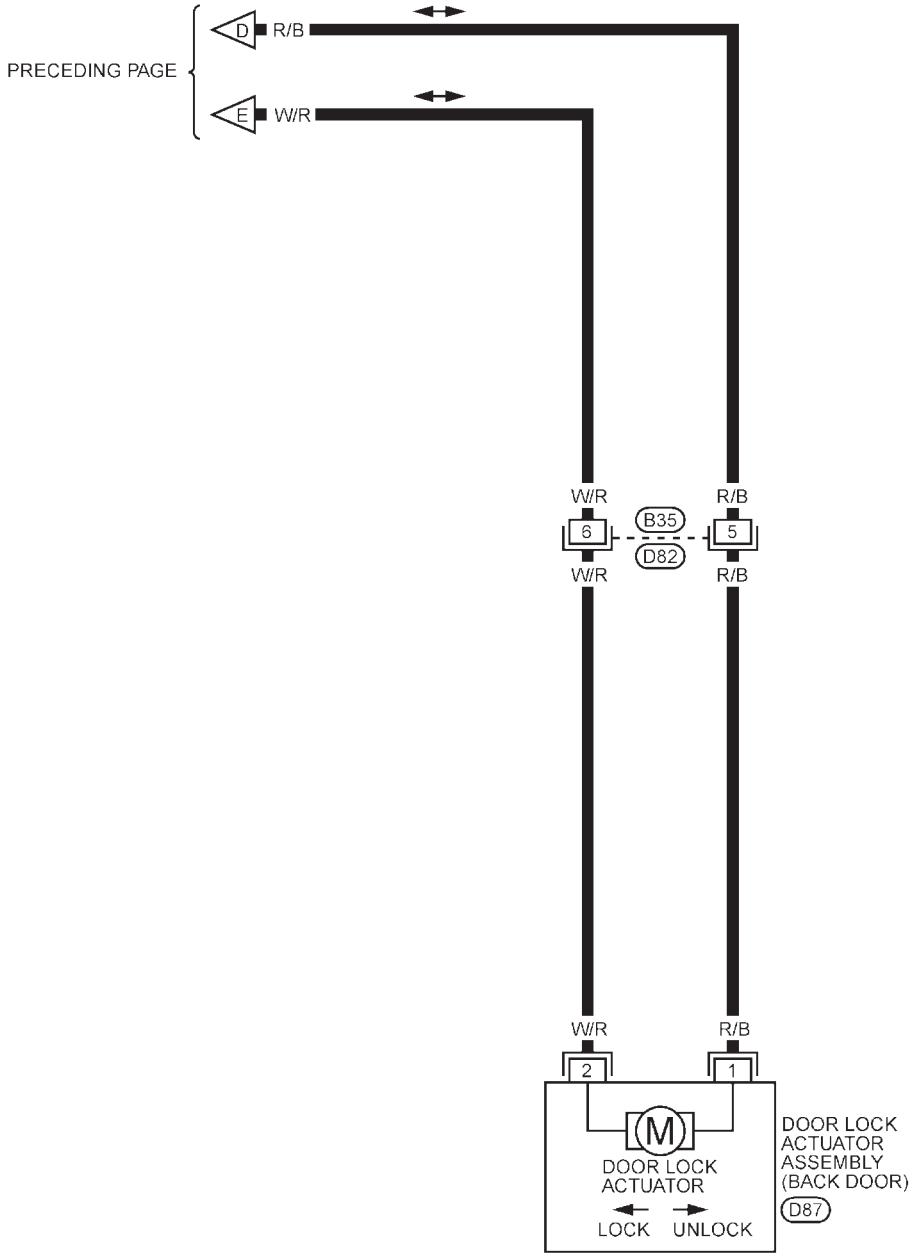


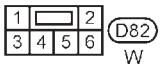
YEL945B

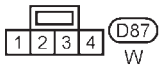
Fig. 7

NLEL0476S1010

EL-S/LOCK-07







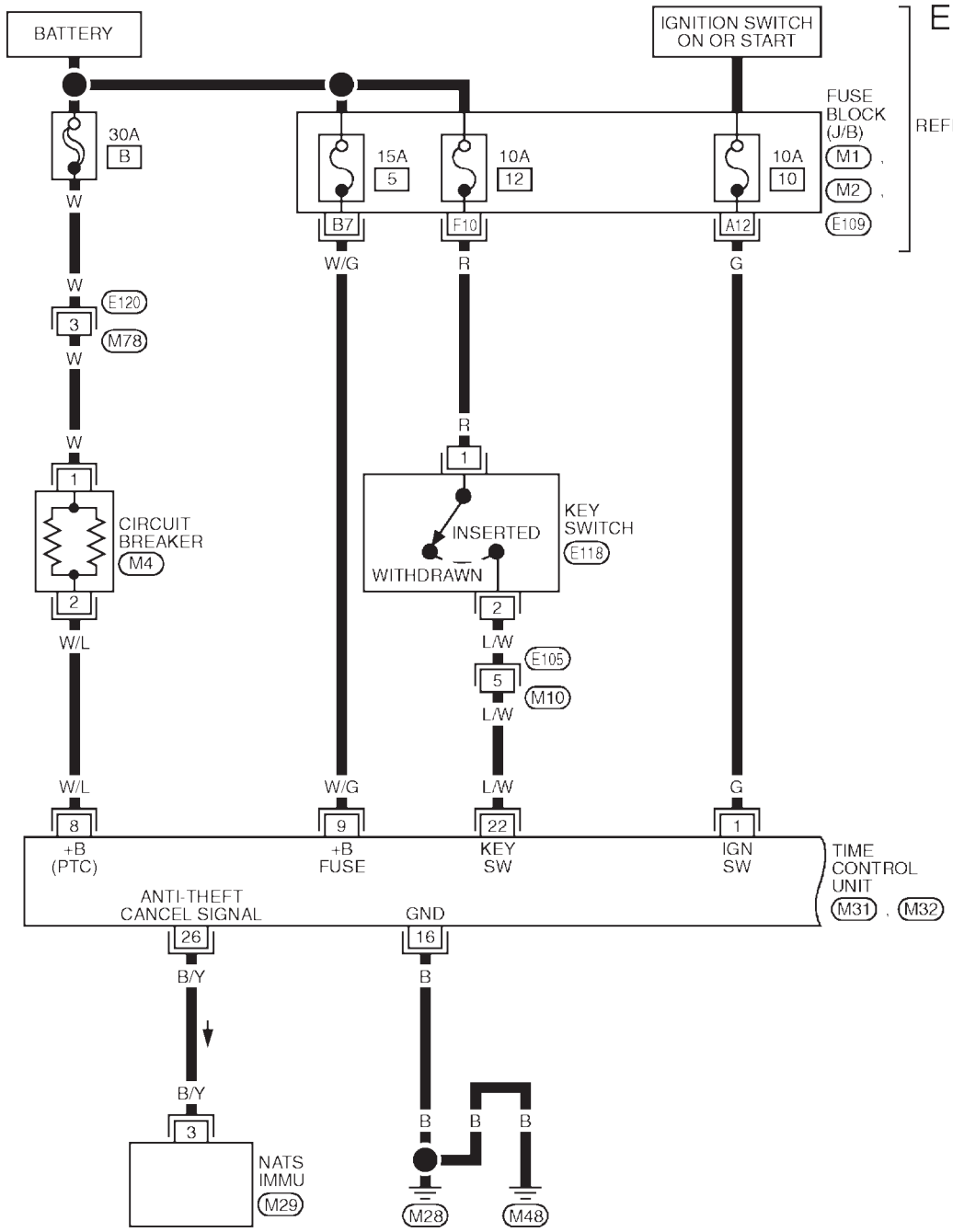
YEL946B

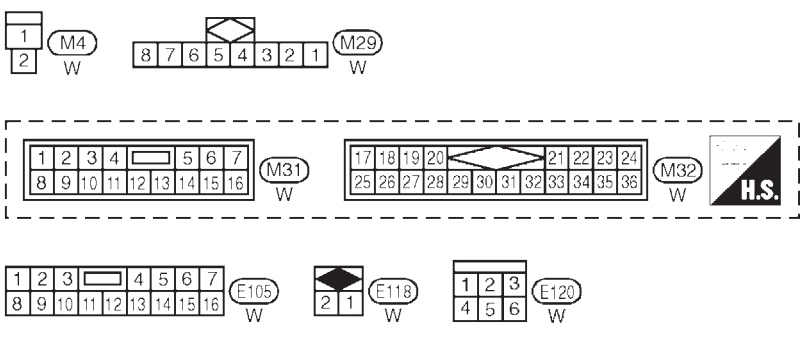
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0476S11

Fig. 1

NLEL0476S1101





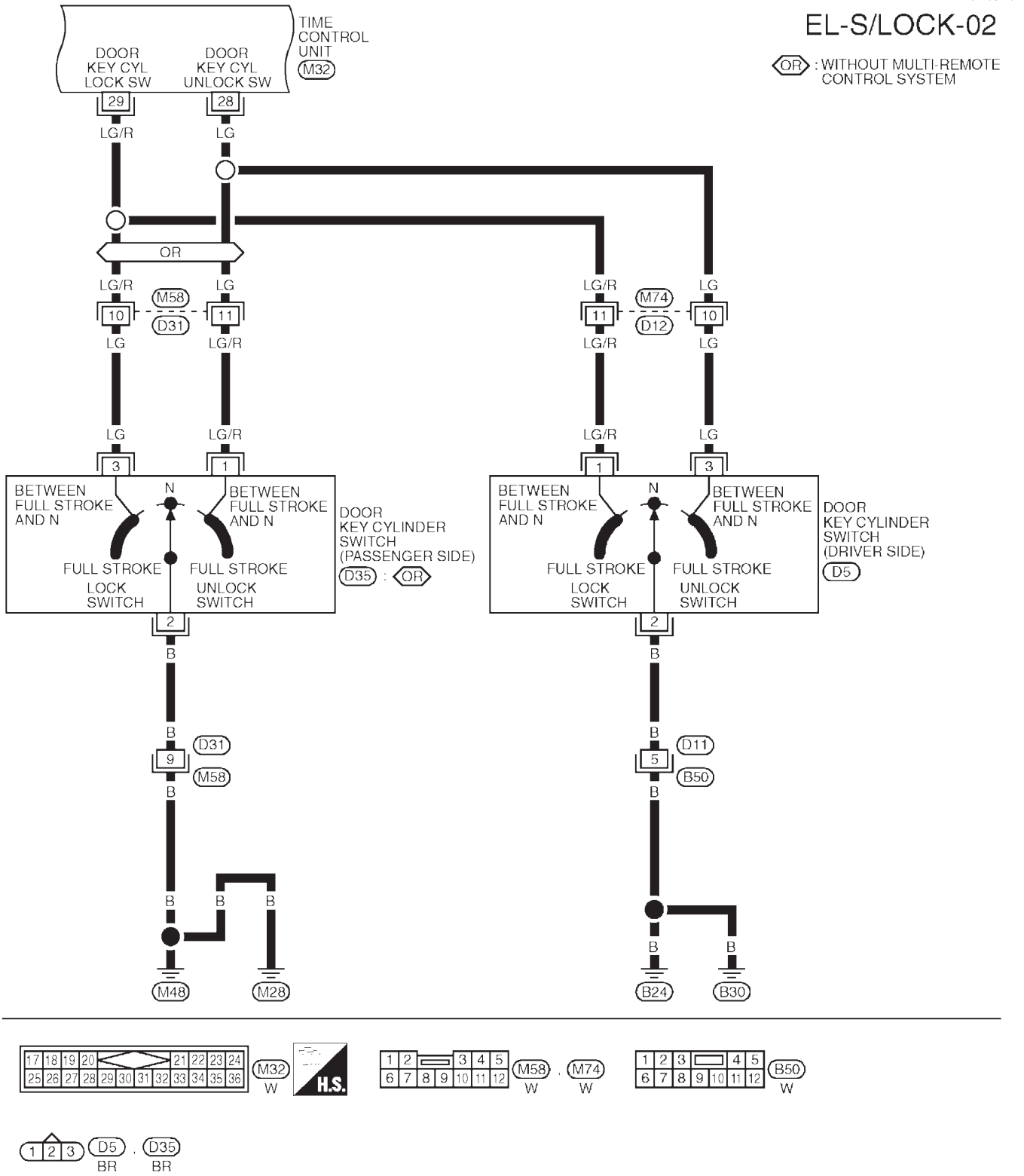
REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL463C

Wiring Diagram — S/LOCK —/RHD Models (Cont'd)

Fig. 2

NLEL0476S1102

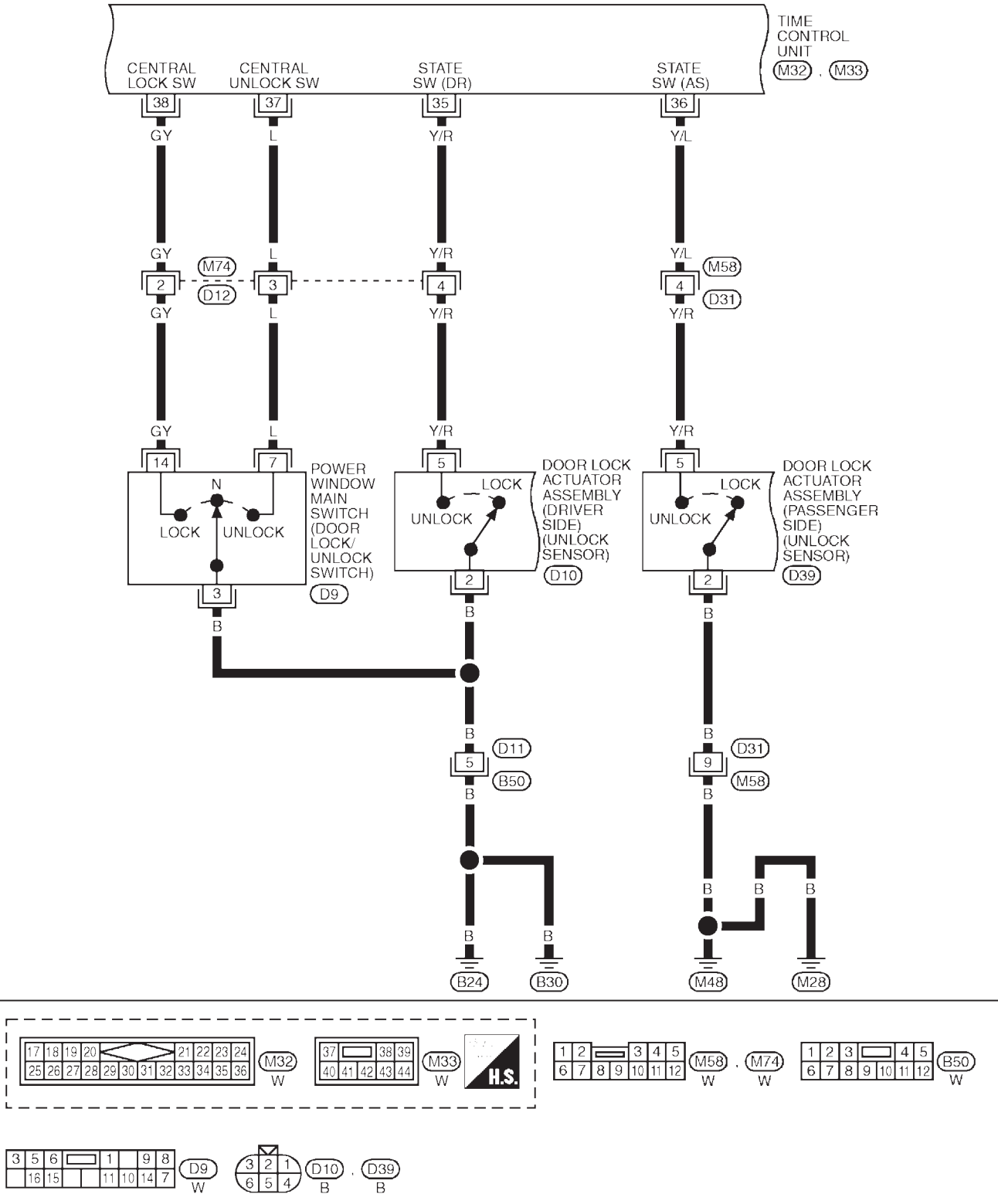


YEL464C

Fig. 3

NLEL0476S1103

EL-S/LOCK-03

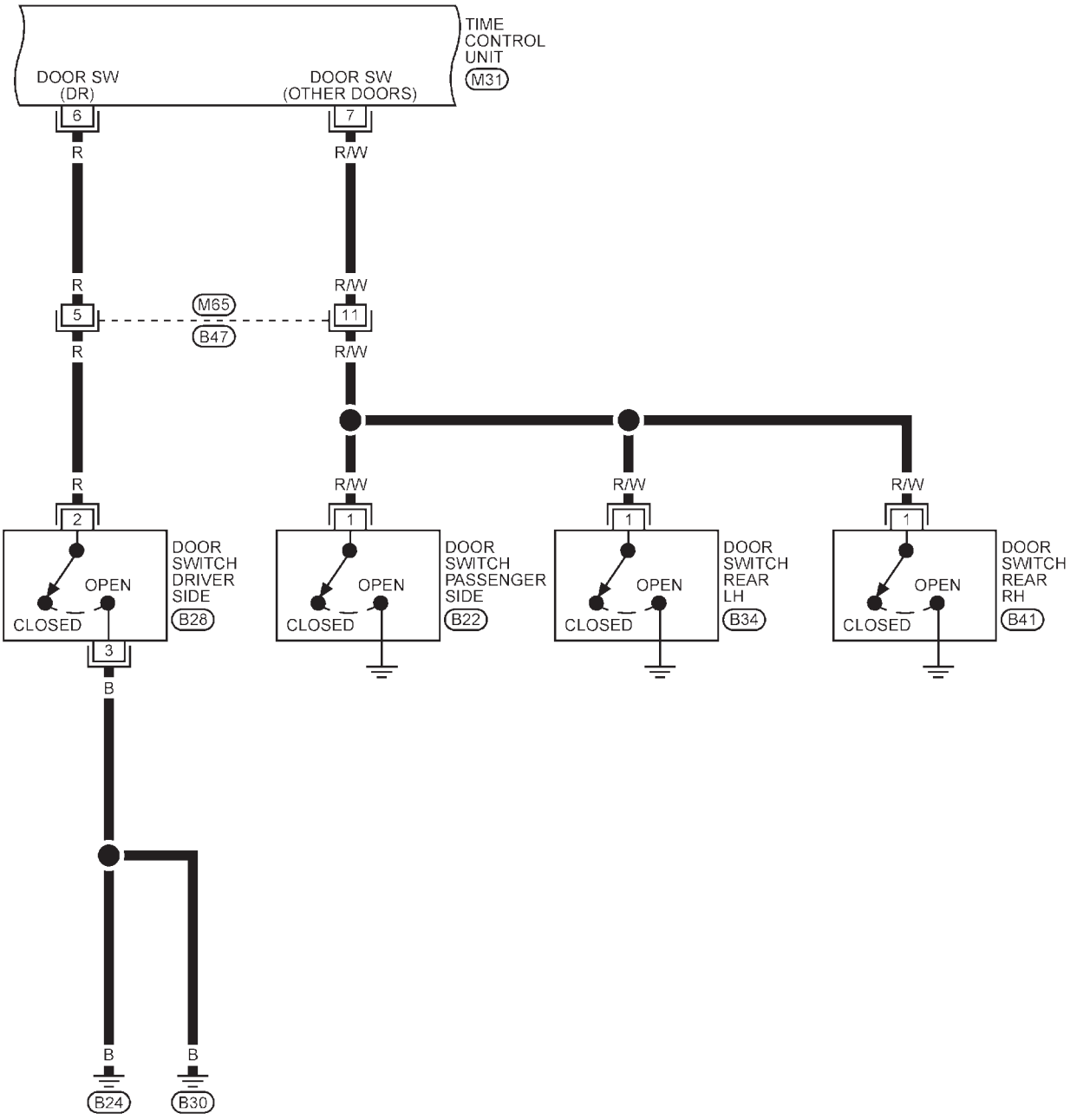


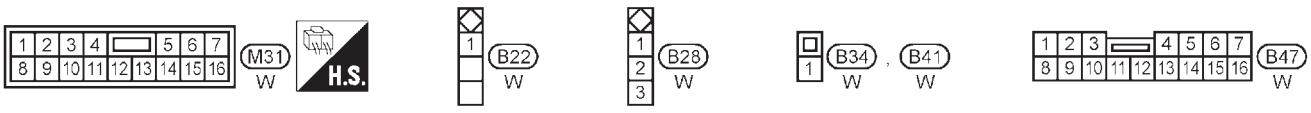
YEL465C

Fig. 4

NLEL0476S1104

EL-S/LOCK-04

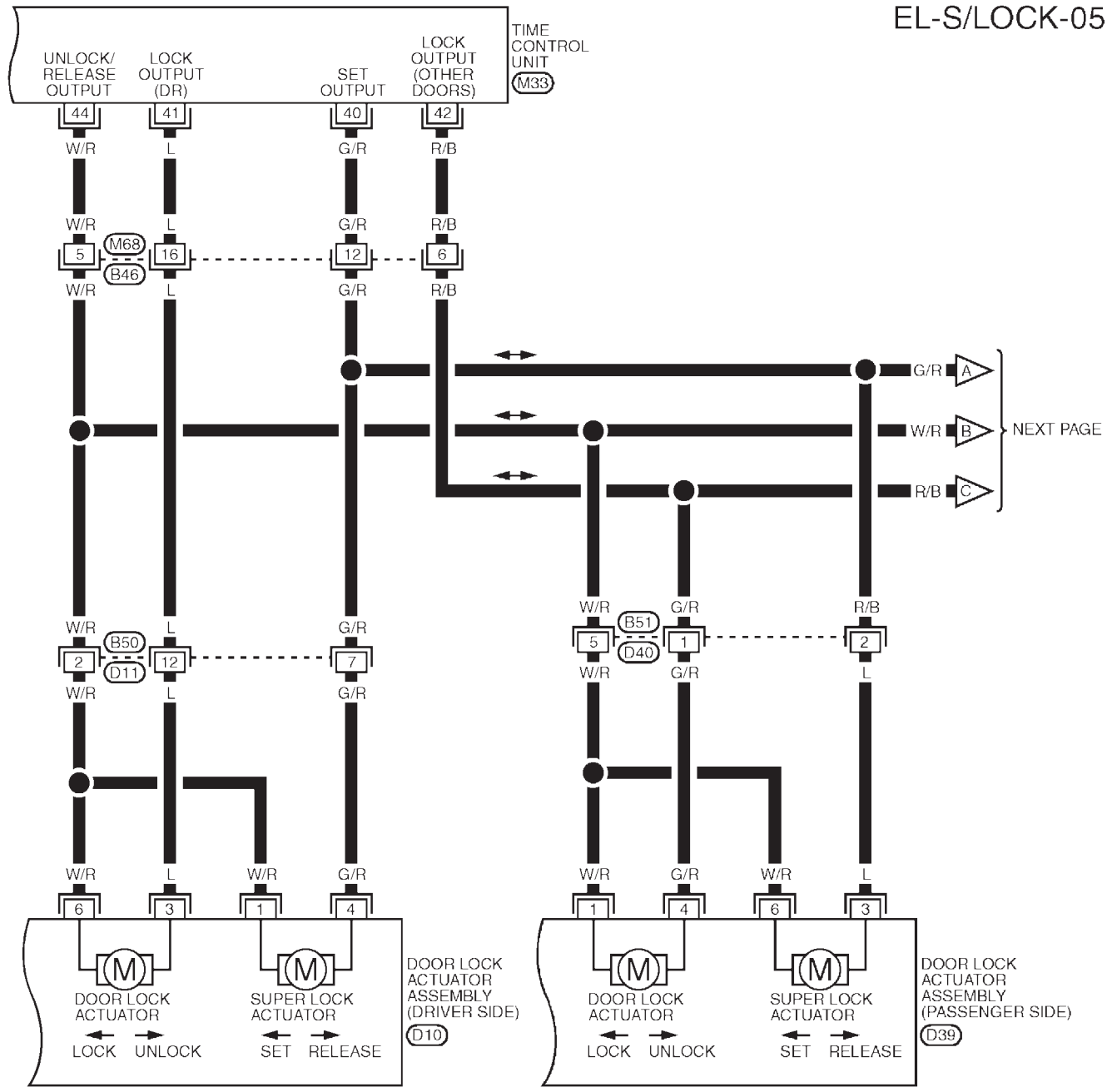


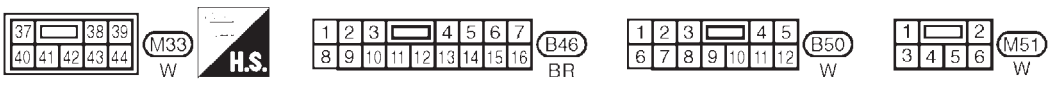


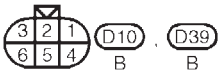
YEL984B

Fig. 5

NLEL0476S1105



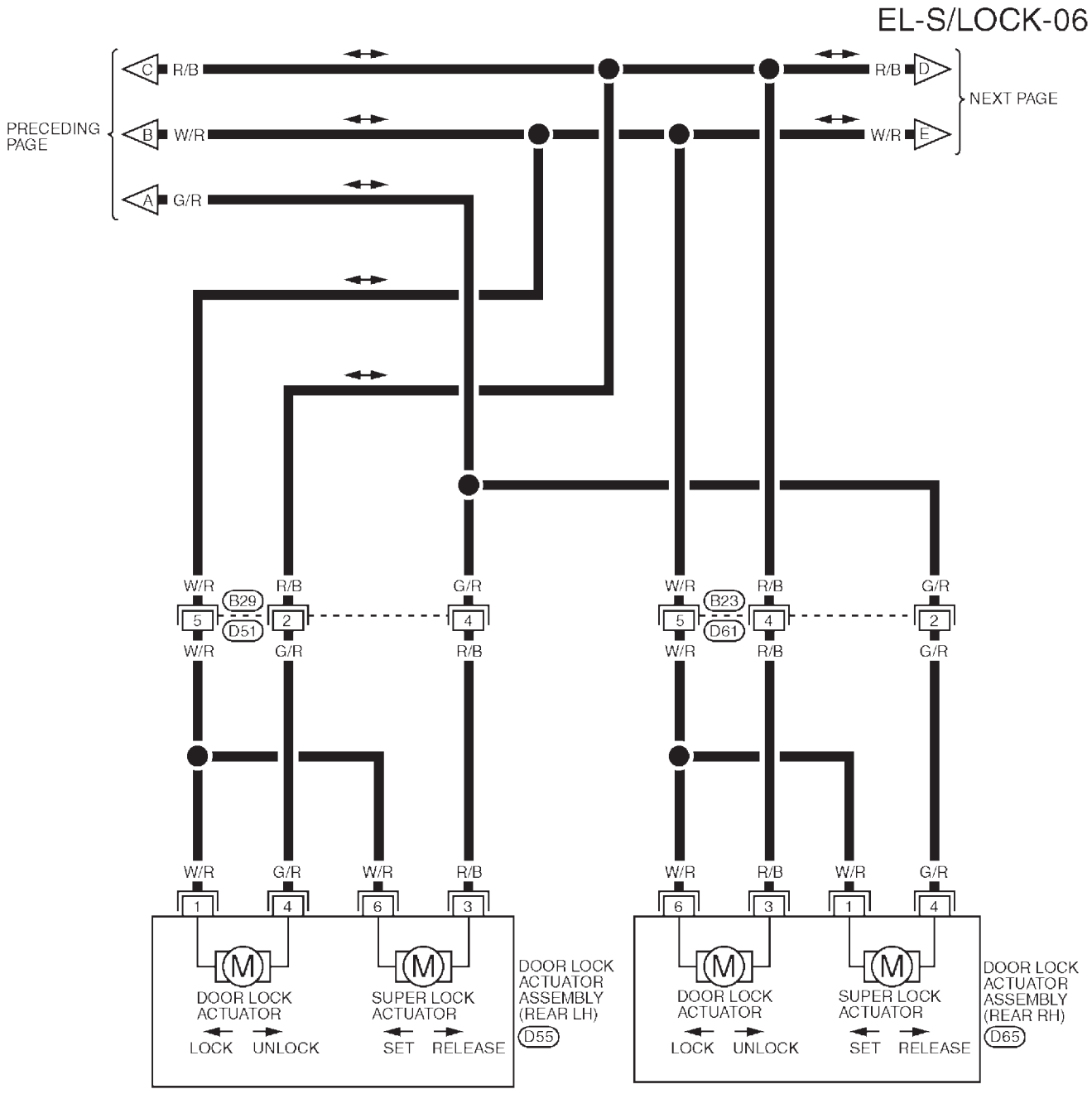


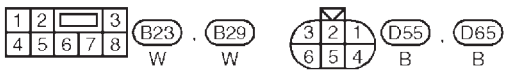


YEL466C

Fig. 6

NLEL0476S1106



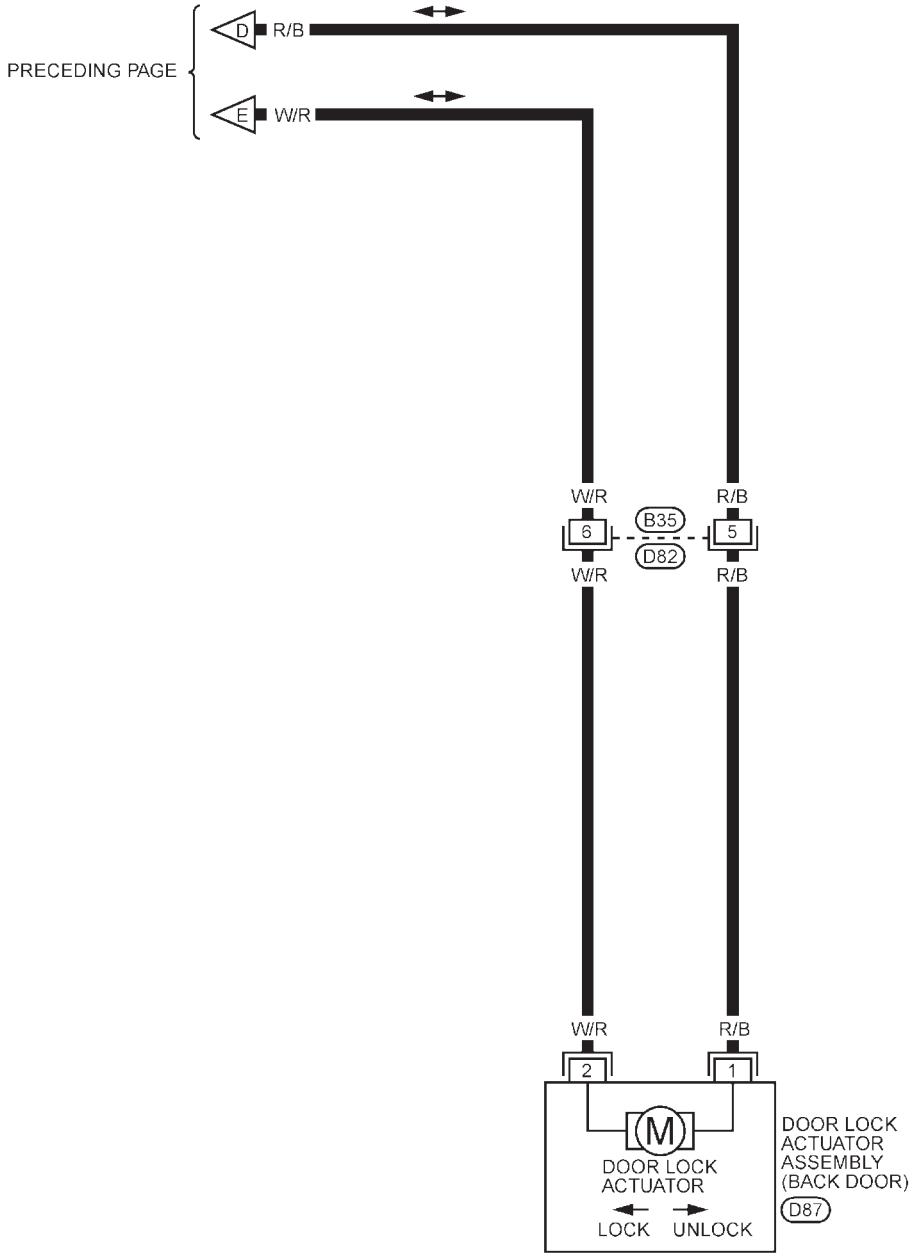


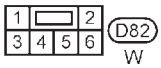
YEL467C

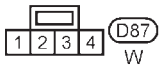
Fig. 7

NLEL0476S1110

EL-S/LOCK-07







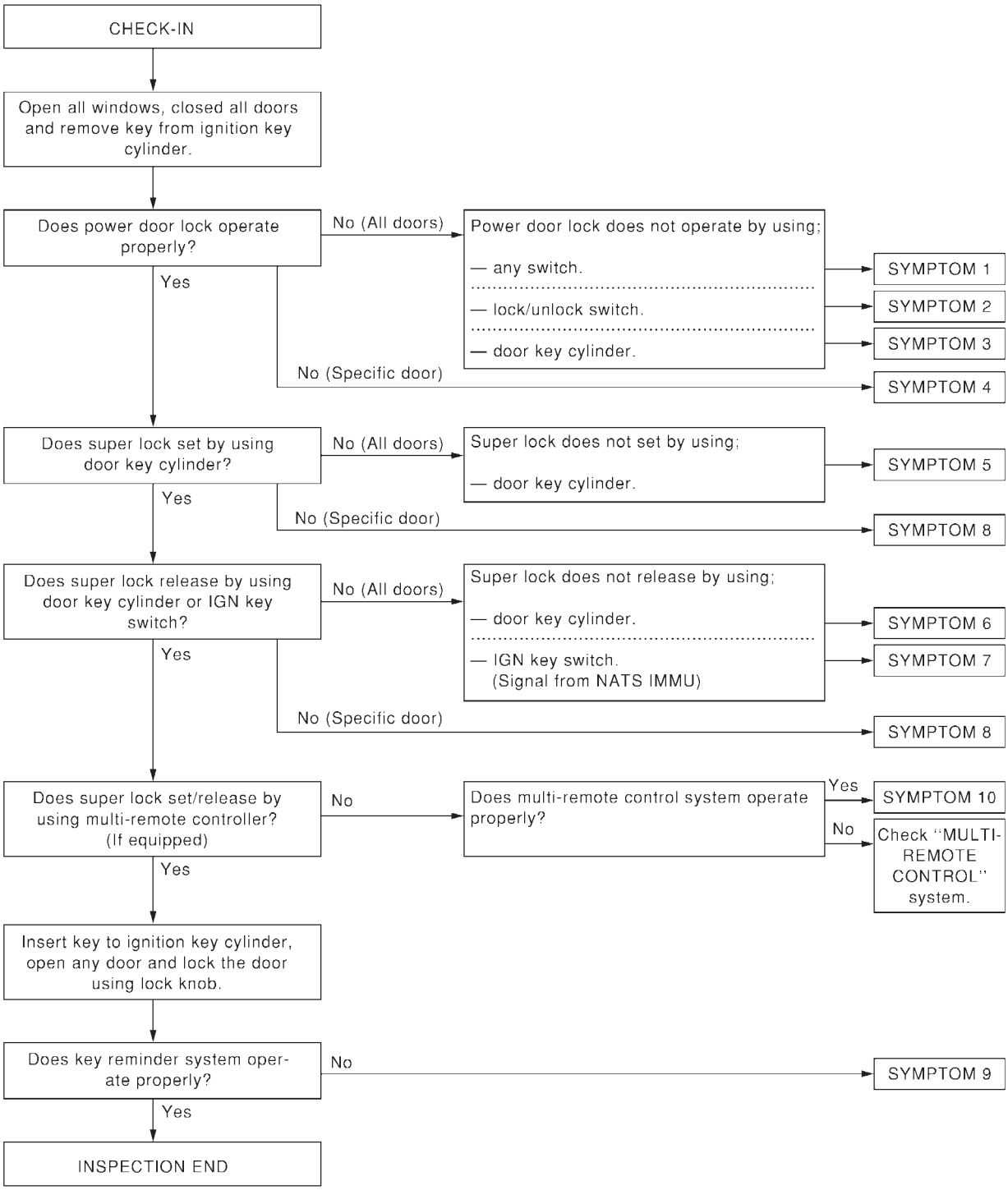
YEL946B

Trouble Diagnoses/RHD Models

NLEL0477

PRELIMINARY CHECK

NLEL0477S01



SEL062X

After performing preliminary check, go to SYMPTOM CHART.
Before starting trouble diagnoses below, perform preliminary check, EL-300.
Symptom numbers in the symptom chart correspond with those of Preliminary check.

SYMPTOM CHART

NLEL0477S02

REFERENCE PAGE (EL-)		302	303	304	305	307	309	310	311	312	313	313
SYMPTOM		Main power supply and ground circuit check	Door lock/unlock switch check	Door key cylinder switch check	Door lock actuator check	Super lock actuator check	Door switch check	Door unlock sensor check	NATS release signal check	Key switch check	Ignition switch "ON" circuit check	Remote controller signal check
1	Power door lock does not operate using any switch.	X			X							
2	Power door lock does not operate with lock/unlock switch.		X									
3	Power door lock does not operate with door key cylinder switch.			X								
4	Specific door lock actuator does not operate.				X							
5	Super lock cannot be set by door key cylinder.			X		X				X	X	
6	*Super lock cannot be released by door key cylinder.			X		X						
7	*Super lock cannot be released by ignition key switch. (Signal from NATS IMMU)					X			X		X	
8	Specific super lock actuator does not operate.					X						
9	*Key reminder system does not operate.						X	X		X		
10	Super lock cannot be set/released by using multi-remote controller.											X

X: Applicable

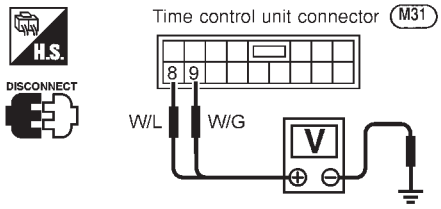
*: Make sure the power door lock system operates properly.

MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

NLEL0477S03

Main Power Supply Circuit Check

NLEL0477S0301

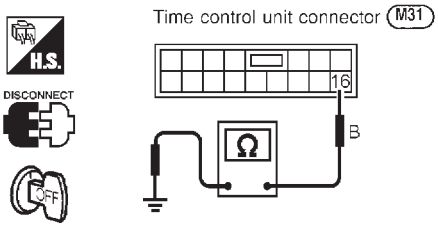


Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
8	Ground	Battery voltage		
9				

NEL672

Ground Circuit Check

NLEL0477S0302



Continuity should exist.

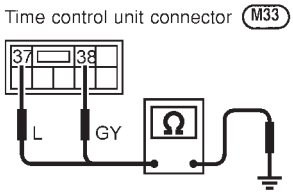
NEL666

DOOR LOCK/UNLOCK SWITCH CHECK

=NLEL0477S04

1 **CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL**

1. Disconnect time control unit harness connector.
2. Check continuity between time control unit harness connector terminal 37 or 38 and ground.



Terminals	Door lock/unlock switch condition	Continuity
38 - Ground	Lock	Yes
	N and Unlock	No
37 - Ground	Unlock	Yes
	N and Lock	No

NEL674

Refer to wiring diagram.

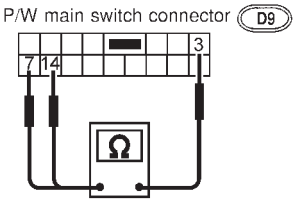
OK or NG

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

2 **CHECK DOOR LOCK/UNLOCK SWITCH**

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

● Power window main switch (Door lock/unlock switch)



Condition	Terminals		
	3	14	7
Lock	○	○	
N	No continuity		
Unlock	○		○

NEL684

OK or NG

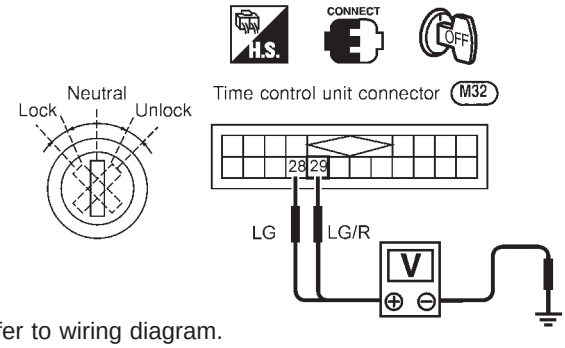
OK	▶	**Check the following.** ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and time control unit connector
NG	▶	Replace door lock/unlock switch.

DOOR KEY CYLINDER SWITCH CHECK

NLEL0477S05

1	CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

Check voltage between time control unit harness connector terminals 28 or 29 and ground.



Terminals (+)	Terminals (-)	Key position	Voltage [V]
29	Ground	Neutral/Unlock	Approx. 5
		Lock	0
28	Ground	Neutral/Lock	Approx. 5
		Unlock	0

NEL685

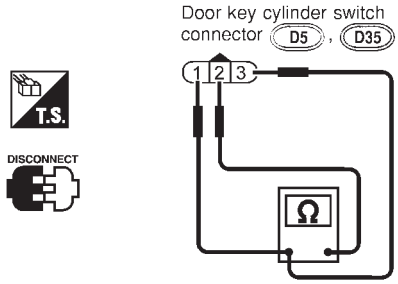
Refer to wiring diagram.

OK or NG

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

2	CHECK DOOR KEY CYLINDER SWITCH

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



Terminals	Key position	Continuity
① - ② (Driver side)	Neutral/Unlock	No
② - ③ (Passenger side)	Lock	Yes
① - ② (Passenger side)	Neutral/Lock	No
② - ③ (Driver side)	Unlock	Yes

NEL686

OK or NG

OK	▶	**Check the following.** ● Door key cylinder switch ground circuit ● Harness for open or short between time control unit and door key cylinder switch
NG	▶	Replace door key cylinder switch.

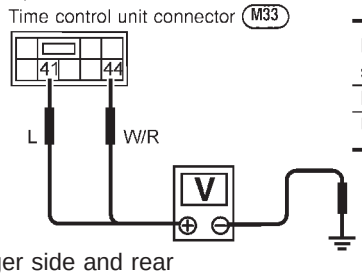
DOOR LOCK ACTUATOR CHECK

NLEL0477S06

1 CHECK DOOR LOCK ACTUATOR OUTPUT SIGNAL

Check voltage for door lock actuator.

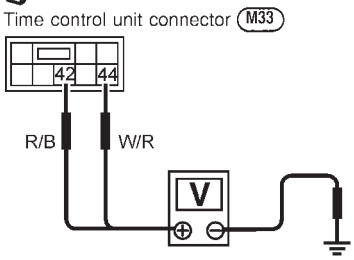
- Door lock actuator driver's side



Door lock/unlock switch condition	Terminals (+)	Terminals (-)	Voltage [V]
Lock	41	Ground	Approx. 12
Unlock	44	Ground	

NEL678

- Door lock actuator passenger side and rear



Door lock/unlock switch condition	Terminals (+)	Terminals (-)	Voltage [V]
Lock	42	Ground	Approx. 12
Unlock	44	Ground	

NEL679

Refer to wiring diagram.

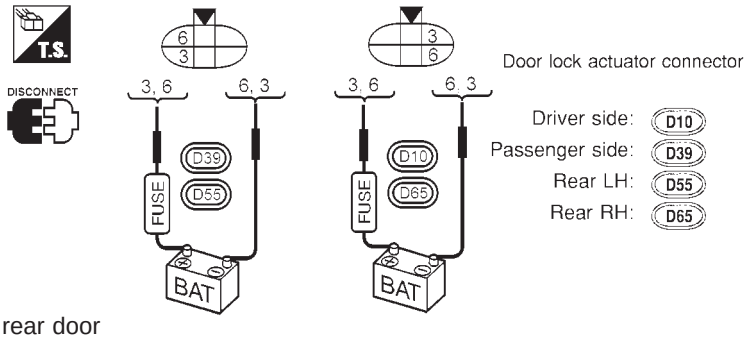
OK or NG

OK	▶	GO TO 2.
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)

2	CHECK DOOR LOCK ACTUATOR

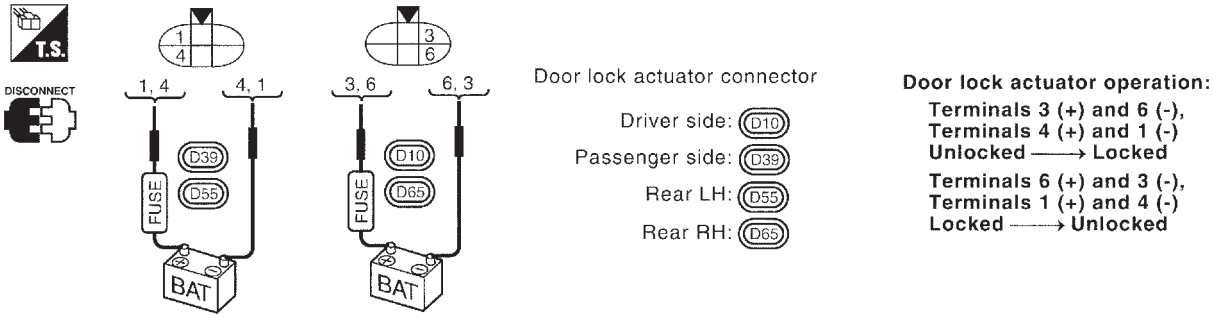
1. Disconnect door lock actuator harness connector.
2. Apply 12V direct current to door lock actuator and check operation.

a. Front and rear door
(Models with fuse and fusible link box E43)



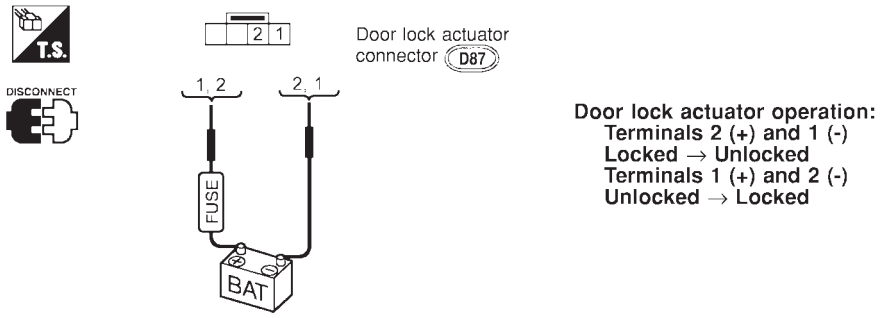
NEL687

b. Front and rear door
(Models with fuse and fusible link box E90)



NEL774

c. Back door



NEL681

OK or NG

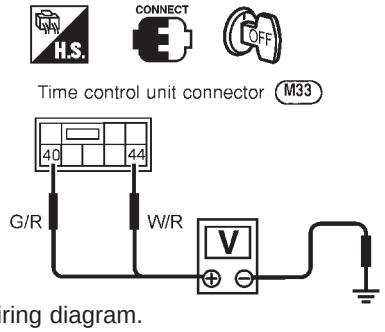
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.
NG	▶	Replace door lock actuator.

SUPER LOCK ACTUATOR CHECK

NLEL0477S07

1	CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR

Check voltage for super lock actuator.



Door key cylinder switch condition	Terminals		voltage [V]
	(+)	(-)	
Lock (Set)	40	Ground	Approx. 12
Unlock (Released)	44	Ground	

NEL688

Refer to wiring diagram.

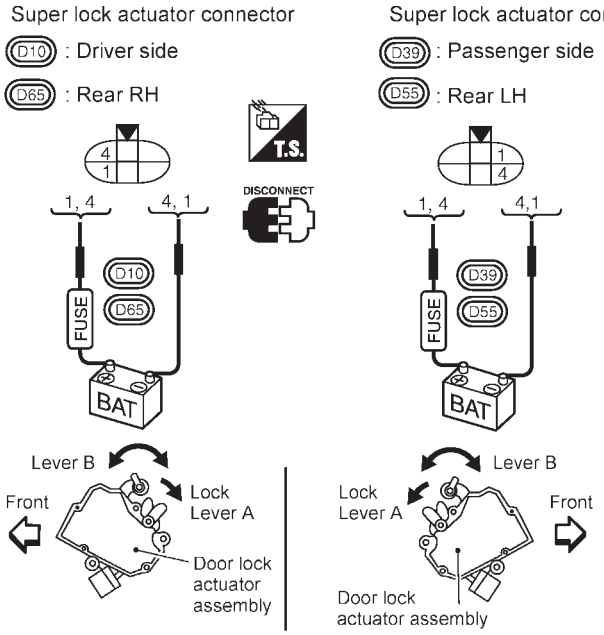
OK or NG

OK	▶	GO TO 2.
NG	▶	Replace time control unit. (Before replacing the unit, perform "DOOR KEY CYLINDER SWITCH CHECK".)

2 CHECK SUPER LOCK ACTUATOR

1. Disconnect door lock actuator assembly connector.
2. Set lever A in lock position.
3. Apply 12V direct current to door lock actuator assembly and check operation.

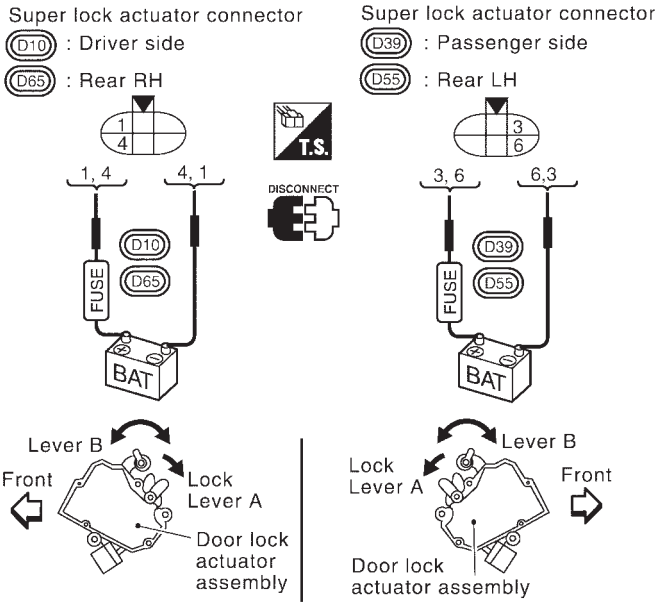
Models with fuse and fusible link box E43



Super lock actuator operation	Terminals (+)	Terminals (-)	Connection from lever B to lever A
Released → Set	1	4	Disconnect
Set → Released	4	1	Connect

NEL689

Models with fuse and fusible link box E90



Super lock actuator operation	Terminals (+)	Terminals (-)	Connection from lever B to lever A
Released → Set	1, 3	4, 6	Disconnect
Set → Released	4, 6	1, 3	Connect

NEL775

OK or NG

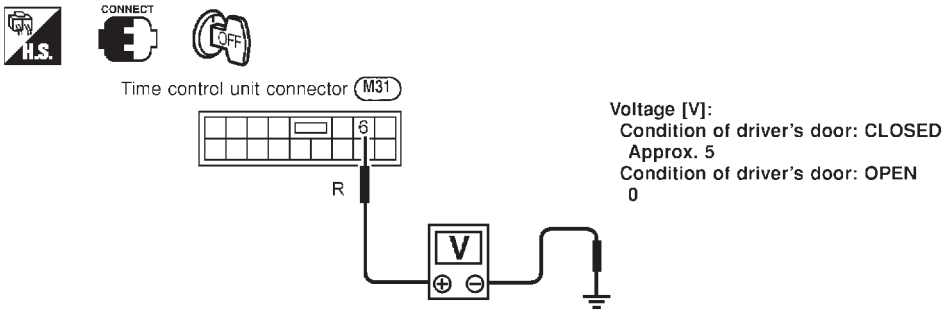
OK	▶	Check harness for open or short between time control unit and super lock actuator.
NG	▶	Replace super lock actuator.

DOOR SWITCH CHECK

NLEL0477S08

1	CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between time control unit harness connector terminals 6 and ground.



NEL647

Refer to wiring diagram.

OK or NG

OK	▶	Door switch is OK.
NG	▶	GO TO 2.

2	CHECK DOOR SWITCH

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminals.

NEL648

OK or NG

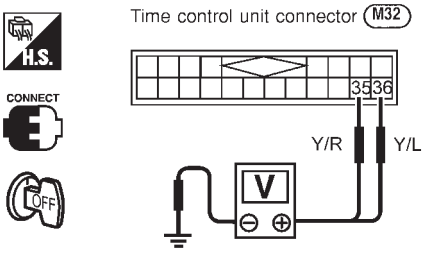
OK	▶	**Check the following.** ● Door switch ground circuit or door switch ground condition ● Harness for open or short between smart entrance control unit and door switch
NG	▶	Replace door switch.

DOOR UNLOCK SENSOR CHECK

NLEL0477S13

1	CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

Check voltage between time control unit terminal 35 or 36 and ground.



Terminals (+)	Terminals (-)	Condition (Driver's or passenger door)	Voltage [V]
35	Ground	Locked	Approx. 5
		Unlocked	0
36	Ground	Locked	Approx. 5
		Unlocked	0

NEL682

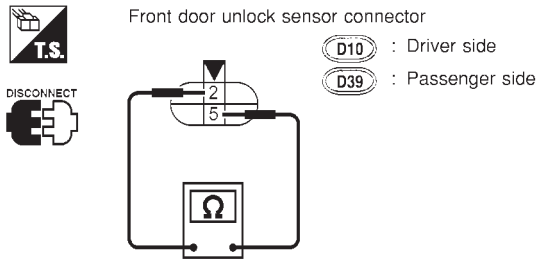
Refer to wiring diagram.

OK or NG

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

2	CHECK DOOR UNLOCK SENSOR

1. Disconnect door unlock sensor connector.
2. Check continuity between door unlock sensor terminals 2 and 5.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

NEL690

OK or NG

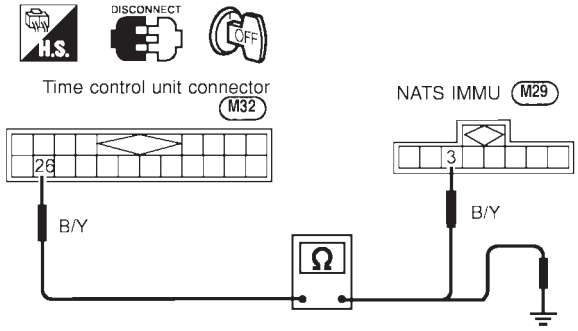
OK	▶	**Check the following.** ● Door unlock sensor ground circuit ● Harness for open or short between time control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

NATS RELEASE SIGNAL CHECK

NLEL0477S09

1	CHECK NATS SIGNAL CIRCUIT

1. Disconnect battery cable (−) terminal.
2. Disconnect time control unit connector and NATS IMMU connector.



Check continuity between time control unit terminal 26 and NATS IMMU terminal 3.
Continuity should exist.

Check continuity between time control unit terminal 26 and ground.
Continuity should not exist.

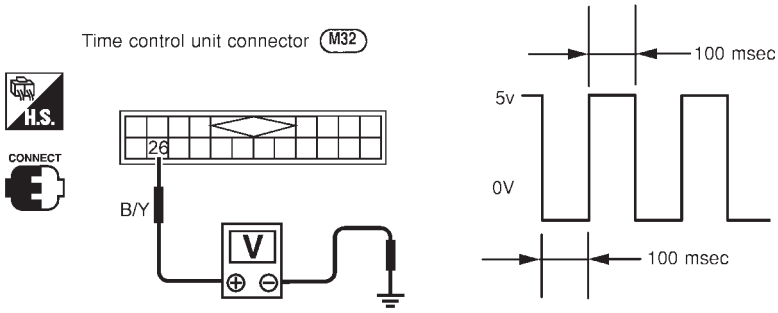
NEL691

OK or NG

OK	▶	GO TO 2.
NG	▶	Repair harness.

2	CHECK NATS RELEASE SIGNAL

1. Connect time control unit connector and NATS IMMU connector.
2. Connect battery cable (−) terminal.
3. Check voltage between time control unit terminal 26 and ground.



Ignition switch condition	Voltage [V]
OFF	5
More than 17 seconds after ignition switch is turned to ON	
For 17 seconds after ignition switch is turned to ON	Pulse

NEL692

OK or NG

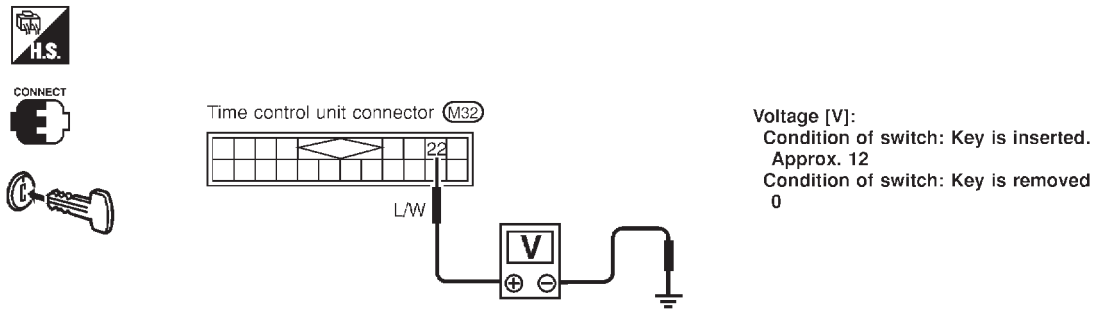
OK	▶	Replace super lock control unit.
NG	▶	Check NATS system.

KEY SWITCH (INSERT) CHECK

NLEL0477S10

1	CHECK KEY SWITCH INPUT SIGNAL

Check voltage between time control unit terminal 22 and ground.



Voltage [V]:
Condition of switch: Key is inserted.
Approx. 12
Condition of switch: Key is removed
0

NEL653

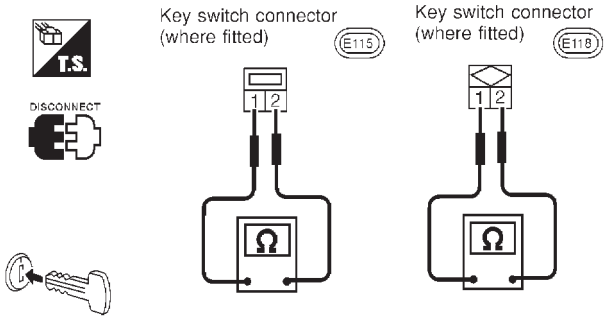
Refer to wiring diagram.

OK or NG

OK	▶	Key switch is OK.
NG	▶	GO TO 2.

2	CHECK KEY SWITCH (INSERT)

Check continuity between key switch terminals 1 and 2.



NEL787

OK or NG

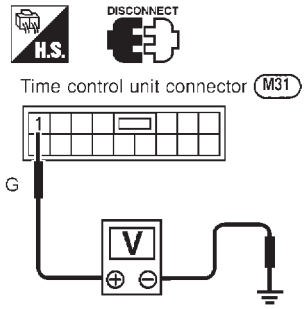
OK	▶	**Check the following.** ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between time control unit and key switch
NG	▶	Replace key switch.

IGNITION SWITCH "ON" CIRCUIT CHECK

NLEL0477S11

1 **CHECK IGNITION ON SIGNAL**

Check voltage between time control unit terminal 1 and ground.



Terminals		Ignition swtich position		
(+)	(–)	OFF	ACC	ON
1	Ground	0V	0V	Battery voltage

NEL646

OK or NG

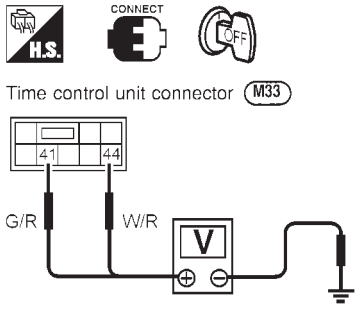
OK	▶	Ignition switch "ON" circuit is OK.
NG	▶	**Check the following.** ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between time control unit and fuse

REMOTE CONTROLLER SIGNAL CHECK

NLEL0477S12

1 **CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR BY MULTI-REMOTE CONTROLLER**

1. Withdraw key from ignition key cylinder.
2. Check voltage between time control unit terminal 40 or 44 and ground.



Multi-remote controller condition	Terminals		voltage [V]
	(+)	(-)	
Lock (Set)	40	Ground	Approx. 12
Unlock (Released)	44	Ground	

NEL693

OK or NG

OK	▶	System is OK.
NG	▶	Replace time control unit. (Before replacing the unit, make sure the remote controller ID registration for time control unit and the remote controller battery once again.)

System Description

NLEL0480

FUNCTION

NLEL0480S01

Multi-remote control system has the following function.

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

LOCK OPERATION

NLEL0480S02

To lock door by multi-remote controller, the key switch must be at OFF.
When the LOCK signal is input to time control unit (the antenna of the system is combined with time control unit)
Then time control unit controls to lock doors and set super lock (models with super lock).

UNLOCK OPERATION

NLEL0480S03

When the UNLOCK signal is input to time control unit (the antenna of the system is combined with time control unit)
Time control unit controls to unlock driver's door and release super lock (models with super lock).
Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

HAZARD REMINDER

NLEL0480S04

When the doors are locked or unlocked by multi-remote controller, supply power to turn lamps hazard reminder flashes as follows

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

MULTI-REMOTE CONTROLLER ID CODE ENTRY

NLEL0480S05

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

- Ignition switch (ON)
- Signal from remote controller

For detailed procedure, refer to "ID Code Entry Procedure" in EL-324.

Wiring Diagram — MULTI —

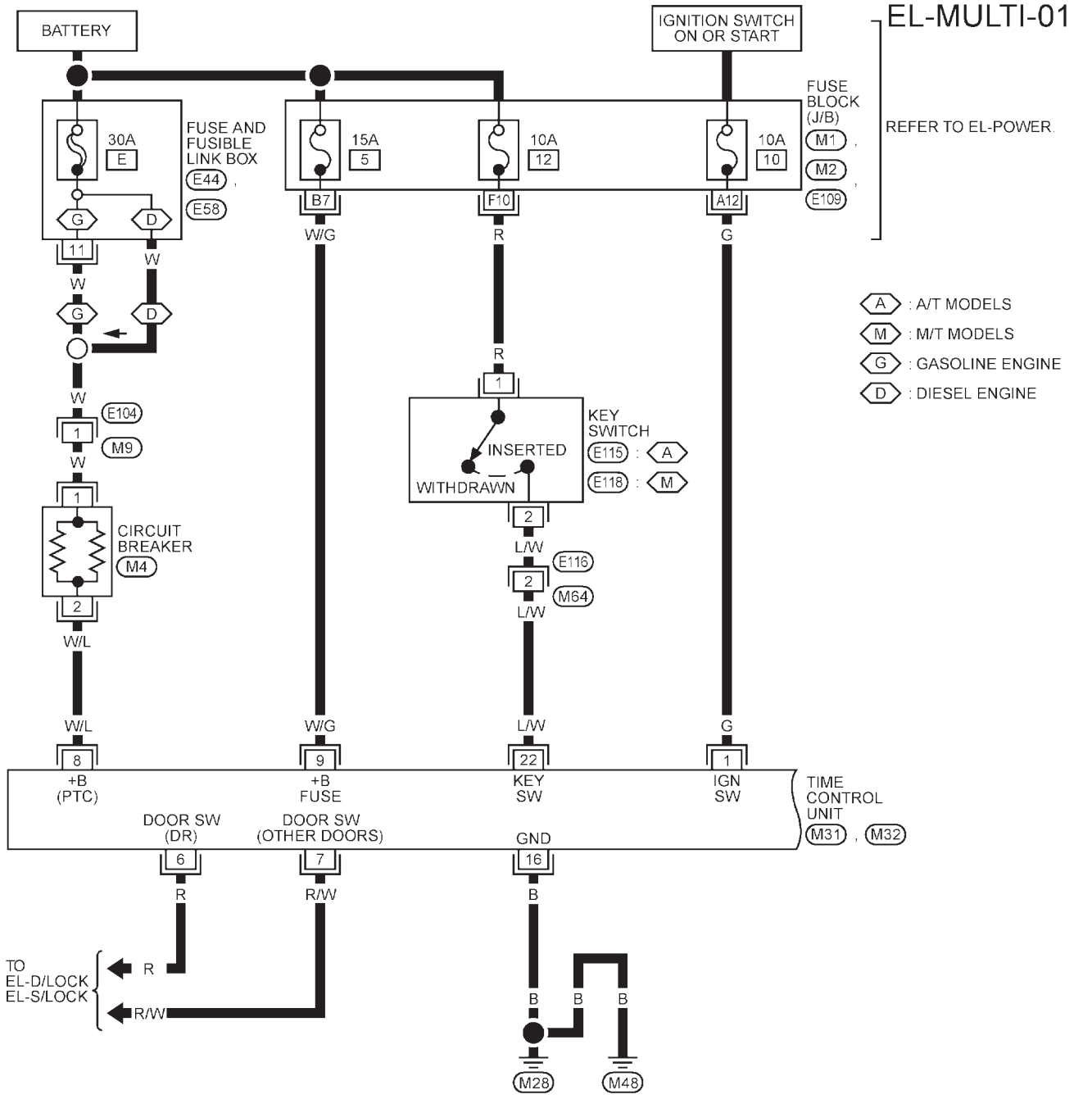
NLEL0481

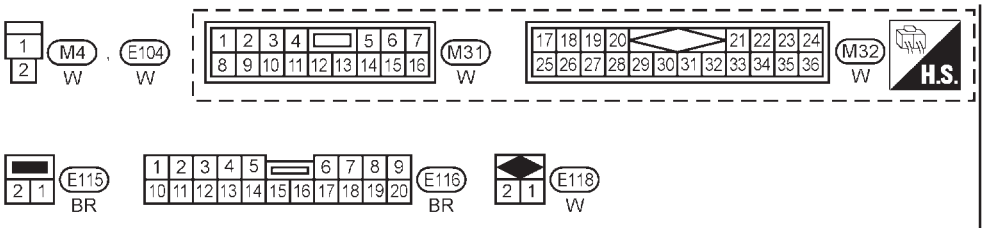
NLEL0481S03

NLEL0481S0301

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

Fig. 1



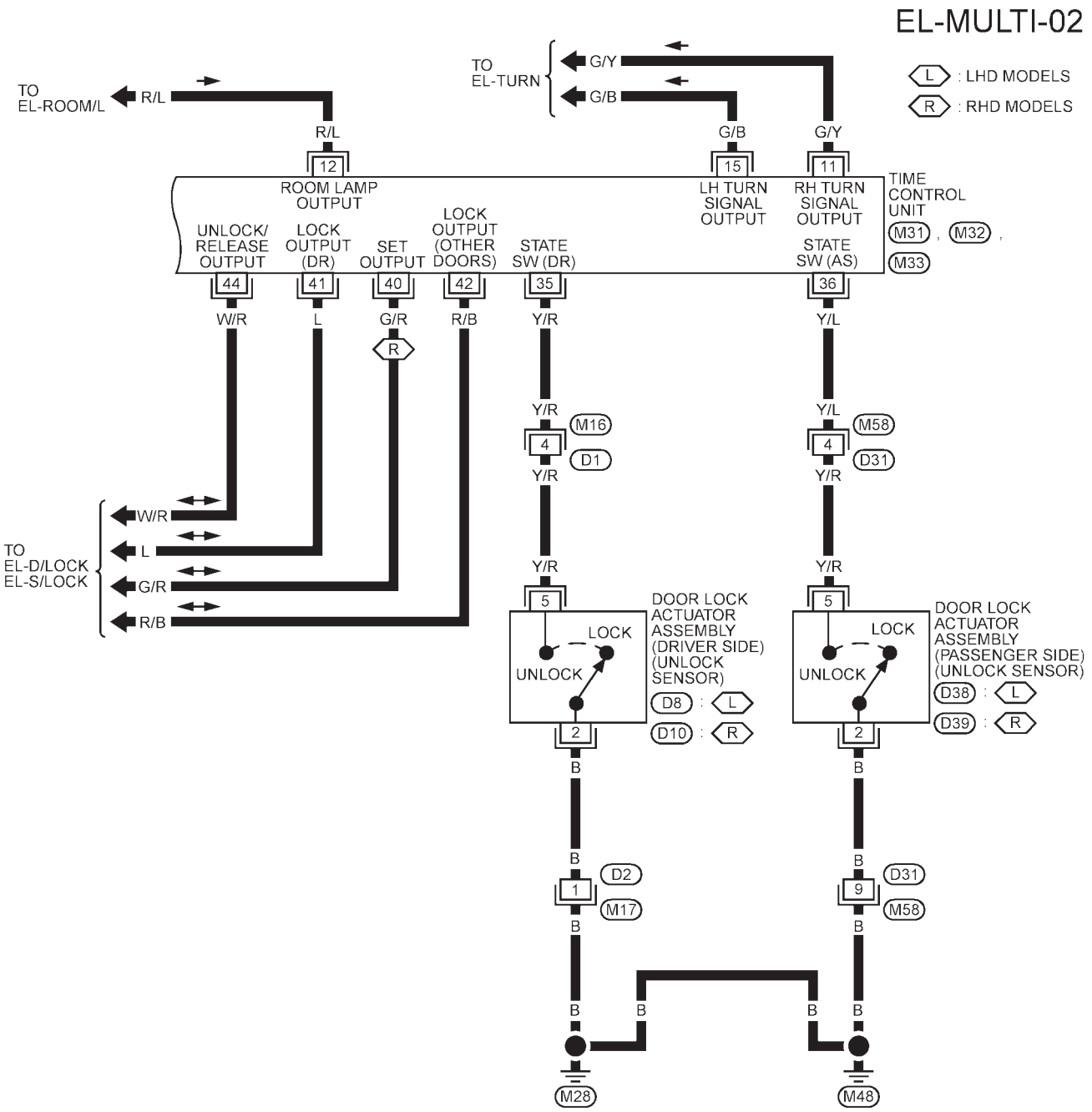


REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)
E44 , E48 -FUSE AND
FUSIBLE LINK BOX

YEL947B

Fig. 2

NLEL0481S0302



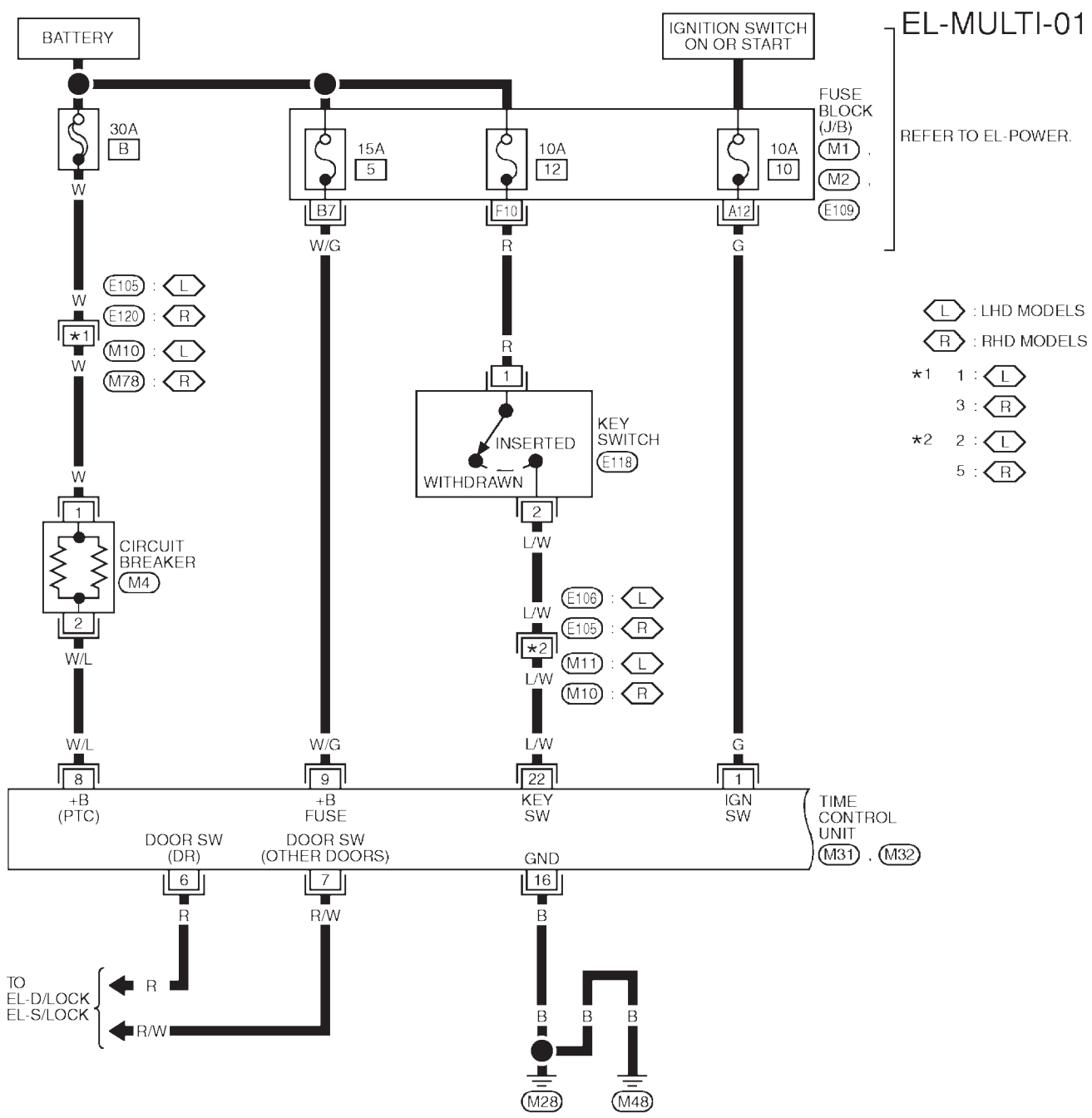
YEL948B

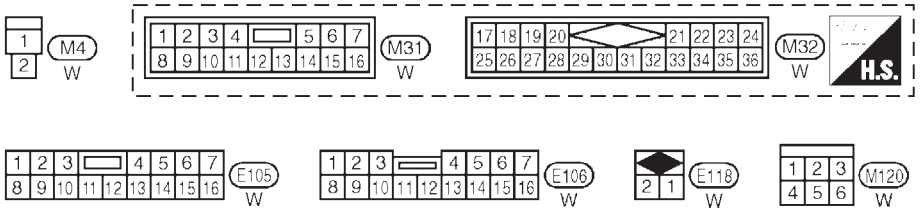
MODELS WITH FUSE AND FUSIBLE LINK BOX E90

Fig. 1

NLEL0481S05

NLEL0481S0501





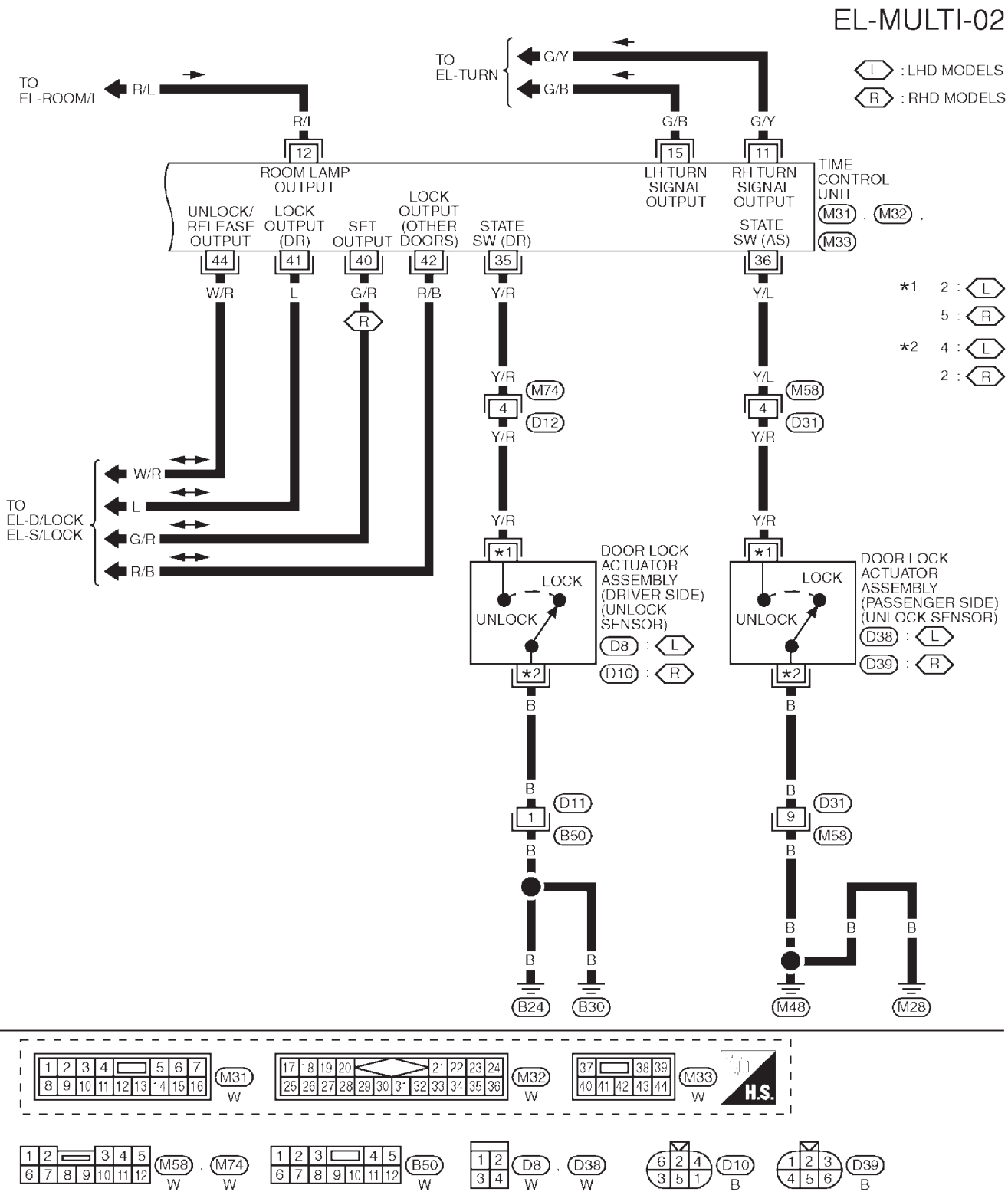
REFER TO THE FOLLOWING.
M1 , M2 , E109
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL484C

Wiring Diagram — MULTI — (Cont'd)

Fig. 2

NLEL0481S0502



YEL485C

Trouble Diagnoses

NLEL0482

SYMPTOM CHART

NLEL0482S01

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

Symptom	Diagnoses/service procedure	Reference page (EL-)
No doors can be locked or unlocked by remote control operation. (Make sure that power door lock operates properly. If NG, check power door lock.)	1. Remote controller battery check	320
	2. Power supply and ground circuit for time control unit check	321
	3. Replace remote controller. Refer to ID Code Entry Procedure.	324
The new ID of remote controller cannot be entered.	1. Remote controller battery check	320
	2. Power supply and ground circuit for time control unit check	321
	3. Ignition “ON” power supply circuit for time control unit	322
	4. Replace remote controller. Refer to ID Code Entry Procedure.	324
Hazard reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery	320
	2. Hazard reminder check	322
	3. Replace remote controller. Refer to ID Code Entry Procedure.	324

REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

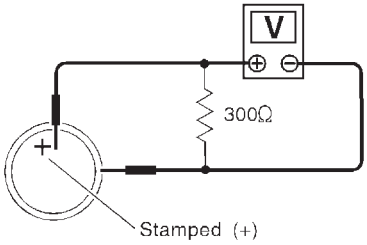
=NLEL0482S02

1	CHECK REMOTE CONTROLLER BATTERY

Remove battery (refer to EL-325) and measure voltage across battery positive and negative terminals, (+) and (−) with using 300Ω resistor as shown in figure.

Voltage [V]:
2.5 - 3.0

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



SEL237W

OK or NG

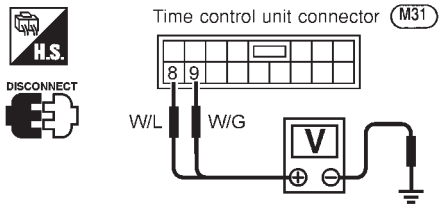
OK	▶	Check remote controller battery terminals for corrosion or damage.
NG	▶	Replace battery.

POWER SUPPLY AND GROUND CIRCUIT CHECK

=NLEL0482S03

1	CHECK MAIN POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT

1. Disconnect time control unit harness connector.
2. Check voltage between time control unit harness connector terminal 8, 9 and ground.



Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
8	Ground	Battery voltage		
9				

NEL672

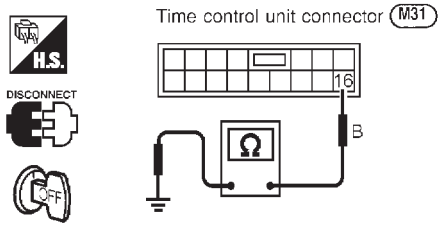
Refer to wiring diagram in EL-315.

OK or NG

OK	▶	GO TO 2.
NG	▶	**Check the following.** ● 15A fuse [No. 5, located in fuse block (J/B)] ● Harness for open or short between time control unit and fuse

2	CHECK GROUND CIRCUIT FOR TIME CONTROL UNIT

Check continuity between time control unit harness connector terminal 16 and ground.



Continuity should exist.

NEL666

Refer to wiring diagram in EL-315.

OK or NG

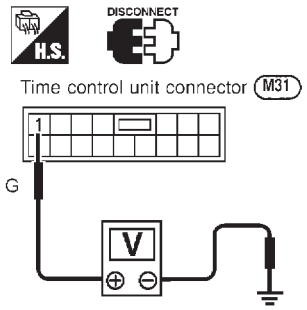
OK	▶	Power supply and ground circuits are OK.
NG	▶	Check ground harness.

IGNITION "ON" POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT

=NLEL0482S17

1	CHECK IGNITION "ON" POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT

1. Disconnected time control unit harness connector.
2. Check voltage between time control unit terminal 1 and ground.



Terminals		Ignition swtich position		
(+)	(–)	OFF	ACC	ON
1	Ground	0V	0V	Battery voltage

NEL646

OK or NG

OK	▶	Ignition "ON" power supply circuit is OK.
NG	▶	**Check the following.** ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between time control unit and fuse.

HAZARD REMINDER CHECK

NLEL0482S18

1	CHECK HAZARD WARNING LAMP

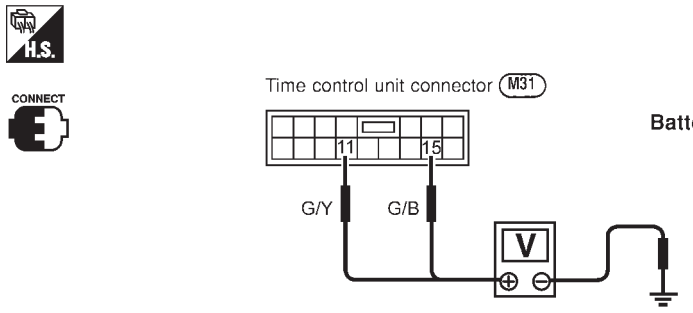
Check if hazard warning lamp flashes with hazard switch.

Does hazard warning lamp operate?

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

2	CHECK HAZARD REMINDER OPERATION

Check the following at when push the multi-remote control switch.
Check voltage between terminal 11 and ground.
Check voltage between terminal 15 and ground.



Battery voltage should exist.

NEL694

OK or NG

OK	▶	System is OK.
NG	▶	Replace time control unit. (Before replacing the unit, make sure the remote controller ID registration for time control unit and the remote controller battery once again.)

ID Code Entry Procedure

=NLEL0483

Activation of the registration mode:

The vehicle must have been unlocked by either the multi-remote controller or a transponder OK signal (TPOK) from the vehicle's immobilizer.

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

↓

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

↓

After 2 seconds the registration mode is activated. The turn signal lamps will flash twice.

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

↓ OK

Proceed with the registration mode.

NOTE

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

↓

Registration mode

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

↓

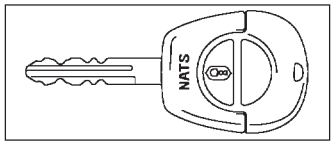
Press the "LOCK" button 3 times.

↓

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

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

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



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

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

No ↓

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

Turn the ignition switch to the ON position.

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

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

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

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

↓

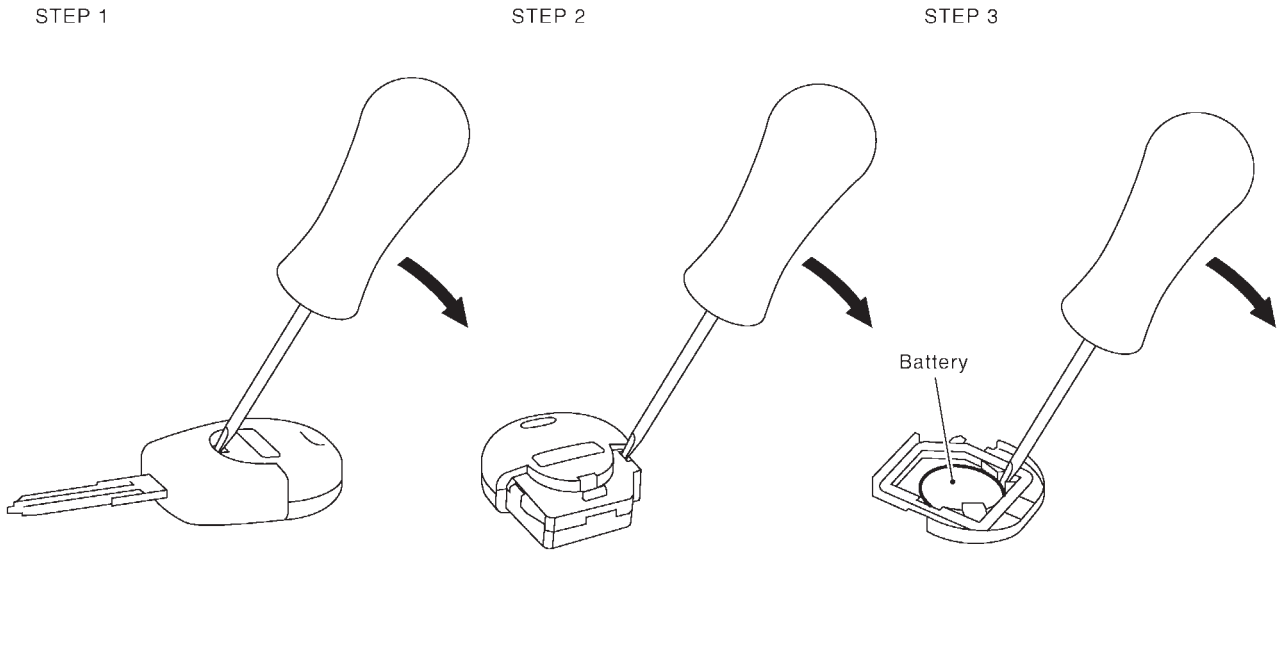
End

SEL497X

Remote Controller Battery Replacement

NLEL0484

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



SEL241X

Description

=NLEL0485

The TCU has the following functions.

INTERIOR LAMP TIMER

NLEL0485S01

The interior lamp timer is controlled by the TCU.
For further information, refer to “INTERIOR ROOM LAMP” (EL-116).

IGNITION KEY WARNING CHIME, LIGHT WARNING CHIME AND TRAILER DIRECTION INDICATOR WARNING CHIME

NLEL0485S02

The ignition key and light warning chime are controlled by the TCU.
For further information, refer to “WARNING CHIME” (EL-165).

REAR WINDOW DEFOGGER TIMER

NLEL0485S03

The rear window defogger and door mirror defogger system are controlled by the TCU.
For further information, refer to “REAR WINDOW DEFOGGER” (EL-198).

POWER DOOR LOCK (SUPER LOCK)

NLEL0485S04

The power door lock (super lock) is controlled by the TCU.
For further information, refer to “POWER DOOR LOCK — Super Lock —” (EL-281).

MULTI-REMOTE CONTROL SYSTEM

NLEL0485S05

The multi-remote control system is controlled by the TCU.
For further information, refer to “MULTI-REMOTE CONTROL SYSTEM” (EL-314).

FUNCTION

NLEL0485S06

- The TCU has the following control function.

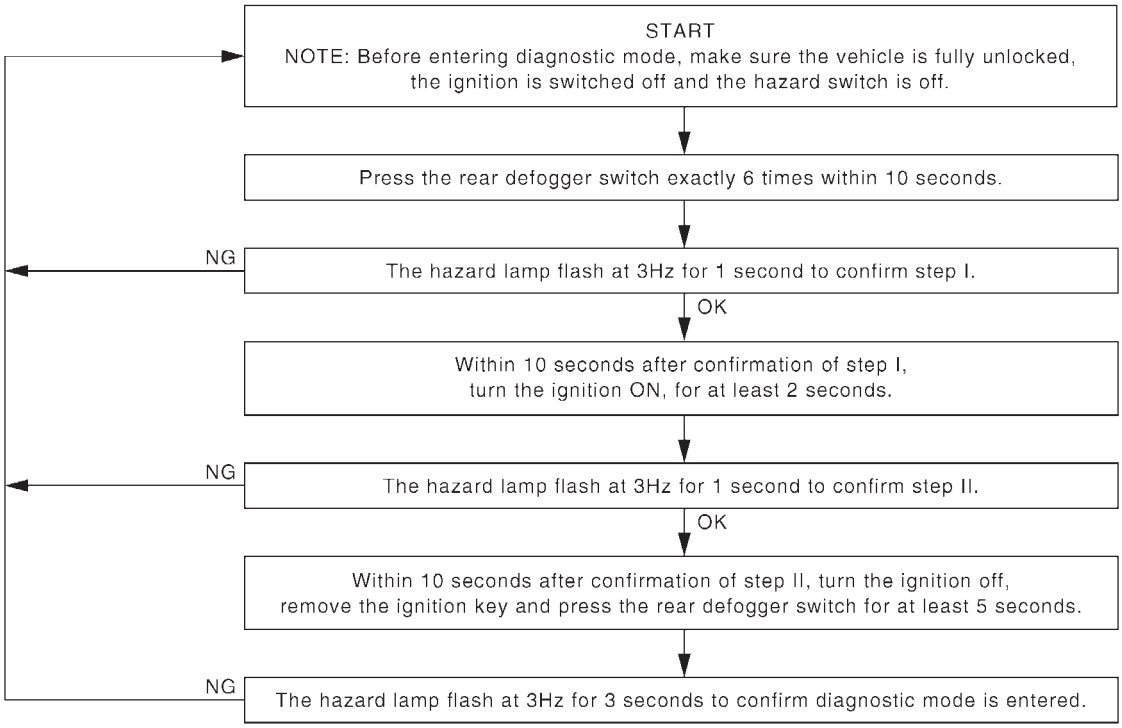
Item	Details of control
Direction indicators	Switches the director indicators (Left, Right or All) when the combination switch or hazard switch is operated.
Light warning chime	Sounds warning chime when driver’s door is opened with light switch in the 1st or 2nd position and ignition switch “OFF”.
Ignition key warning chime	Sounds warning chime when driver’s door is opened with key in ignition and the driver door lock knob (unlock sensor) is moved from the “unlock” position to the “lock” position.
Trailer direction indicator warning chime	Sounds warning chime when operating direction indicator (turn signal) and towing a trailer.
Rear window defogger timer	Turn off rear window defogger and door mirror heater, if equipped, about 15 minutes after the rear window defogger switch is turned “ON”.
Battery saver	Shuts off interior lamp in 30 minutes if any door is left open when ignition switch is “OFF”. The battery saver will reset if ignition switch is cycled or any door is opened or closed.
Interior lamp timer	Keep interior lamp illuminated for about 30 seconds when: ● driver’s door is unlocked, ● the ignition is switched off, ● driver’s door is opened and then closed. The timer is cancelled, and interior lamp turns off when: ● driver’s door is locked, or ● ignition switch is turned “ON”.
Power door lock	Centrally locks and unlocks the vehicle
Super lock	Activates and de-activates the super lock system.

Trouble Diagnoses

=NLEL0486

The Timer Control Unit includes software to help during development testing, manufacturing and service. It allows the technician to put it into Diagnostic Mode. In this mode, all switch inputs can be tested for continuity.

When the timer control unit is in Diagnostic Mode, the control unit tests the component and indicate the result by the hazard lamp flashing.



SEL496X

Trouble Diagnoses (Cont'd)

CHECKS

=NLEL0486S15

Once in Diagnostic Mode, the following inputs can be tested.

USER ACTION	TCU Reaction	COMPONENT TESTED
Driver's door opened from closed (all other doors closed)	Hazards flash once	Driver's door open signal
Passenger or rear door opened from closed (all other doors closed)	Hazard flash once	Door open signal for opened door
Driver's door locked from unlocked	Hazard flash once	Driver's door unlock sensor signal
Passenger door locked from unlocked	Hazard flash once	Assist door unlock sensor signal
Hazard switch is pressed from off	Hazard flash once	Hazard switch signal
Turn signal switch is moved to left from off	Hazard flash once	Left turn signal
Turn signal switch is moved to right from off	Hazards flash once	Right turn signal
Key turned to lock position in door	Hazard flash once*	Key cylinder lock switch signal
Lighting switch turned 1st position or 2nd position from off	Hazard flash once	Tail lamp signal
Key put in ignition from out	Hazard flash once	Key in detect signal
Door lock/unlock switch is pressed	Hazard flash once	Central door lock/unlock signal

*) Hazard may flash a second time because of Driver's door status signal change. The min. delay time between flash actions is 100 ms.

In case the system does not operate as described above, check the concerned circuit for open or short. After completion, the Diagnostic Mode can be switched off by pressing the rear defogger switch or by turning the ignition to "ON". The hazard lamp will flash at 3 Hz for 3 seconds to confirm that Diagnostic Mode has been switched off.

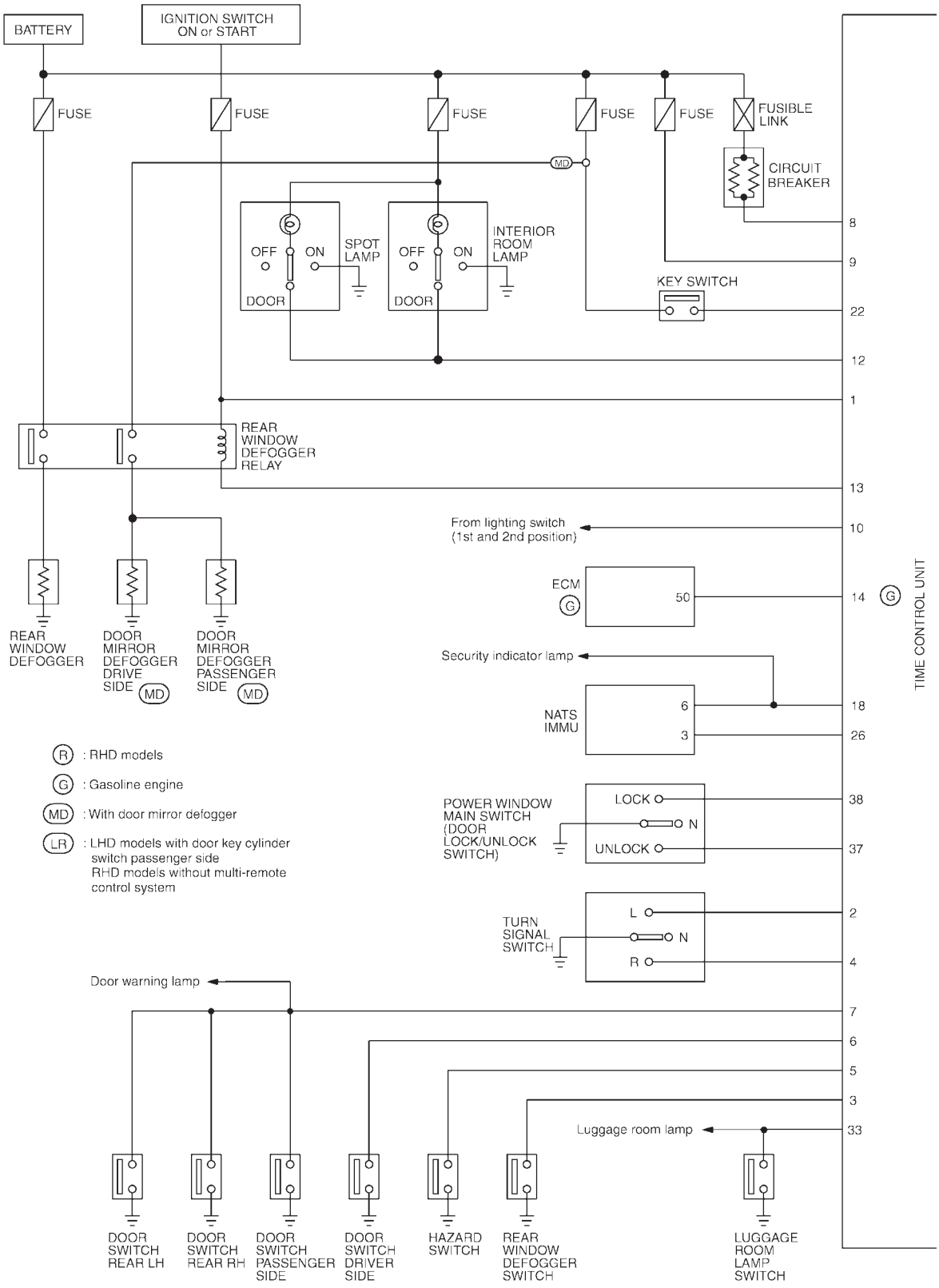
NOTE:

Schematic

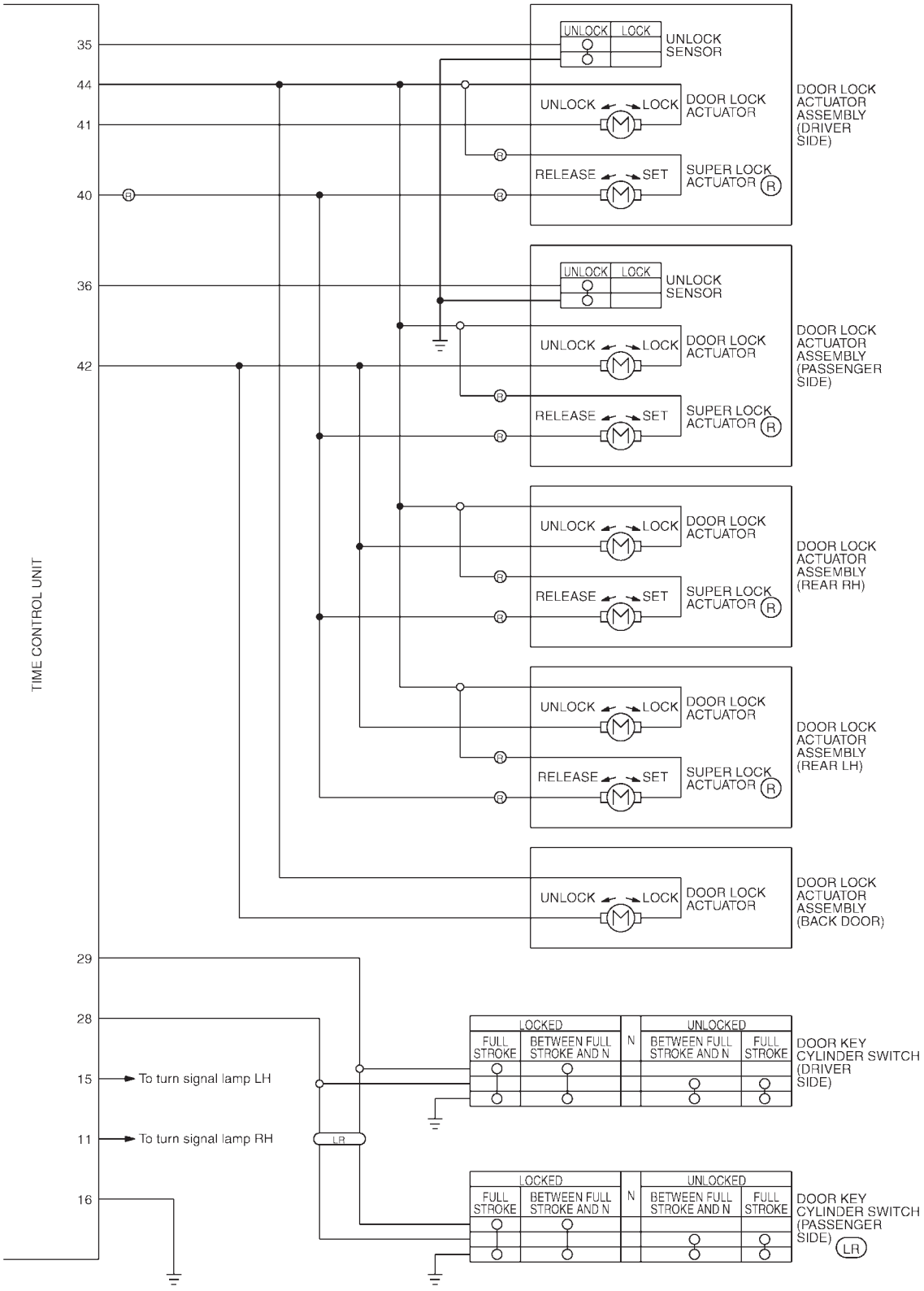
NLEL0506

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0506S01



YEL949B

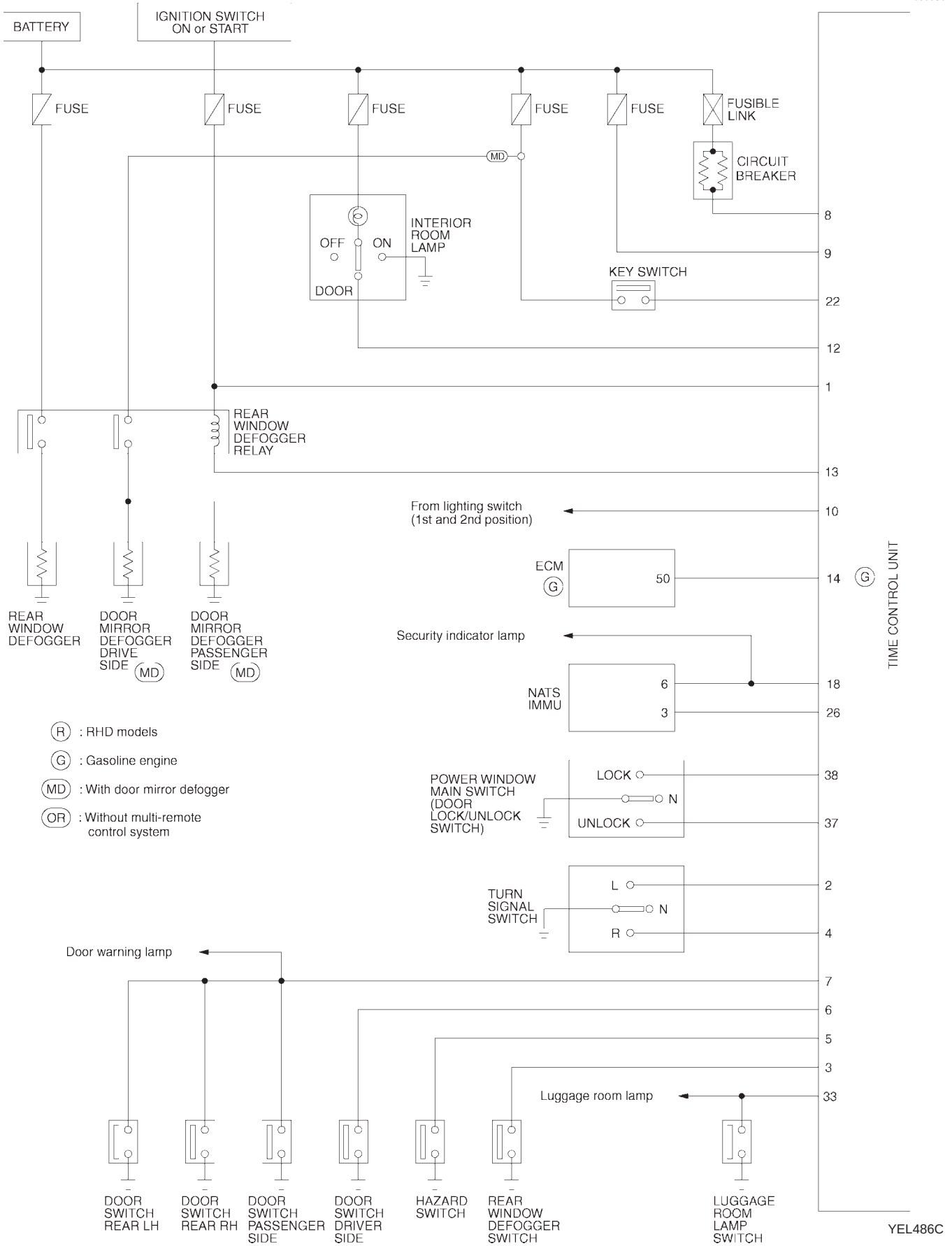

TIME CONTROL UNIT
35
44
41
40
36
42
29
28
15
11
16
To turn signal lamp LH
To turn signal lamp RH
UNLOCK
LOCK
UNLOCK SENSOR
DOOR LOCK ACTUATOR
SUPER LOCK ACTUATOR
RELEASE
SET
DOOR LOCK ACTUATOR ASSEMBLY (DRIVER SIDE)
DOOR LOCK ACTUATOR ASSEMBLY (PASSENGER SIDE)
DOOR LOCK ACTUATOR ASSEMBLY (REAR RH)
DOOR LOCK ACTUATOR ASSEMBLY (REAR LH)
DOOR LOCK ACTUATOR ASSEMBLY (BACK DOOR)
LOCKED
UNLOCKED
FULL STROKE
BETWEEN FULL STROKE AND N
N
DOOR KEY CYLINDER SWITCH (DRIVER SIDE)
DOOR KEY CYLINDER SWITCH (PASSENGER SIDE)
LR

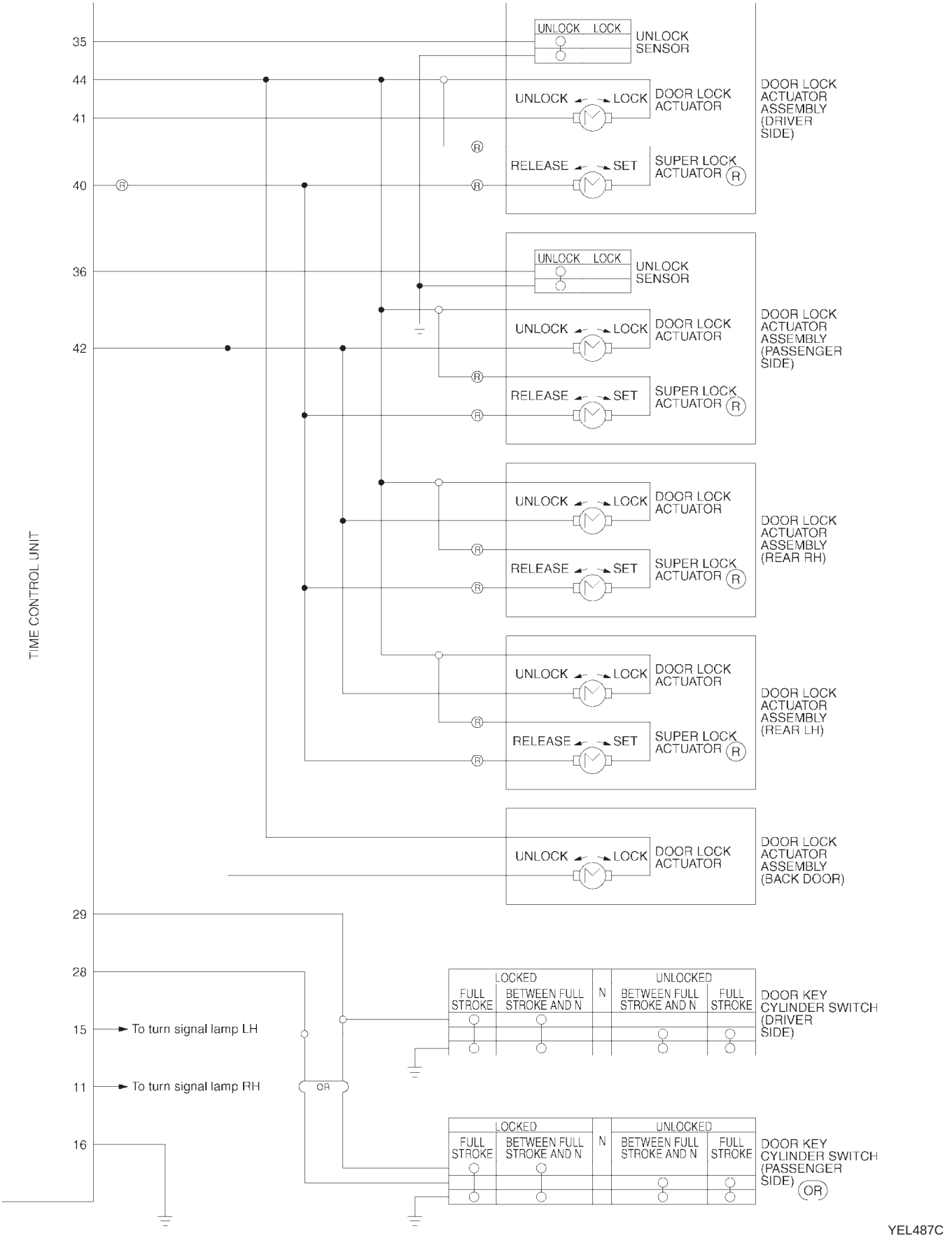
YEL950B

Schematic (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0506S02




TIME CONTROL UNIT
35
44
41
40
36
42
29
28
15
11
16
UNLOCK
LOCK
UNLOCK SENSOR
DOOR LOCK ACTUATOR
SUPER LOCK ACTUATOR (R)
DOOR LOCK ACTUATOR ASSEMBLY (DRIVER SIDE)
DOOR LOCK ACTUATOR ASSEMBLY (PASSENGER SIDE)
DOOR LOCK ACTUATOR ASSEMBLY (REAR RH)
DOOR LOCK ACTUATOR ASSEMBLY (REAR LH)
DOOR LOCK ACTUATOR ASSEMBLY (BACK DOOR)
RELEASE
SET
To turn signal lamp LH
To turn signal lamp RH
OR
LOCKED
UNLOCKED
FULL STROKE
BETWEEN FULL STROKE AND N
N
DOOR KEY CYLINDER SWITCH (DRIVER SIDE)
DOOR KEY CYLINDER SWITCH (PASSENGER SIDE) (OR)

YEL487C

Component Parts and Harness Connector Location

=NLEL0406

For details, refer to “ELECTRICAL UNIT LOCATION” (EL-442) and “HARNESS LAYOUT” (EL-452).

System Description

NLEL0407

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

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

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

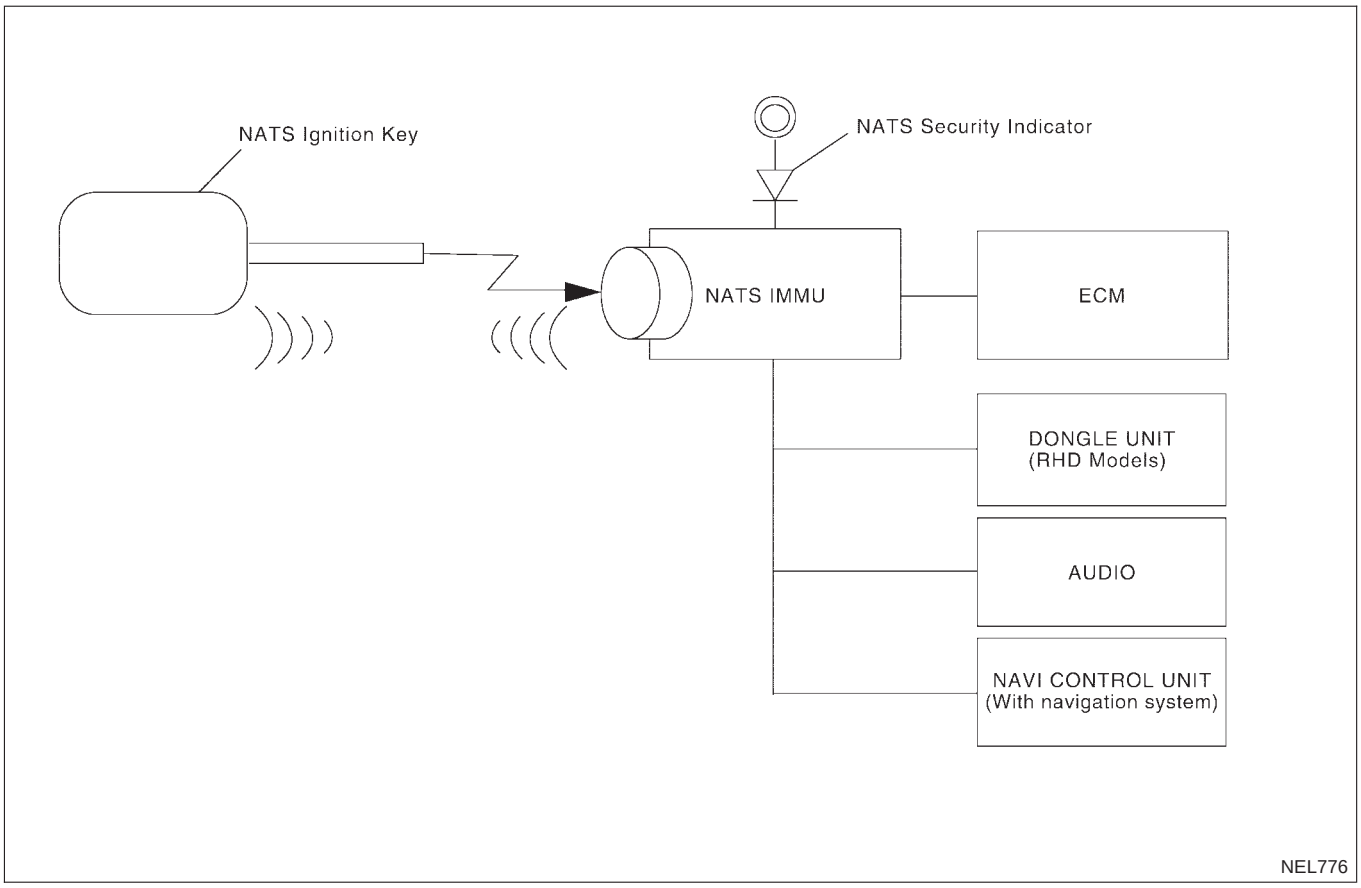
- NATS trouble diagnoses, system initialization and additional registration of other NATS ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NATS software.
  Regarding the procedures of NATS initialization and NATS ignition key ID registration, refer to CONSULT-II operation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

System Composition

=NLEL0408

The immobilizer function of the NATS consists of the following:

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

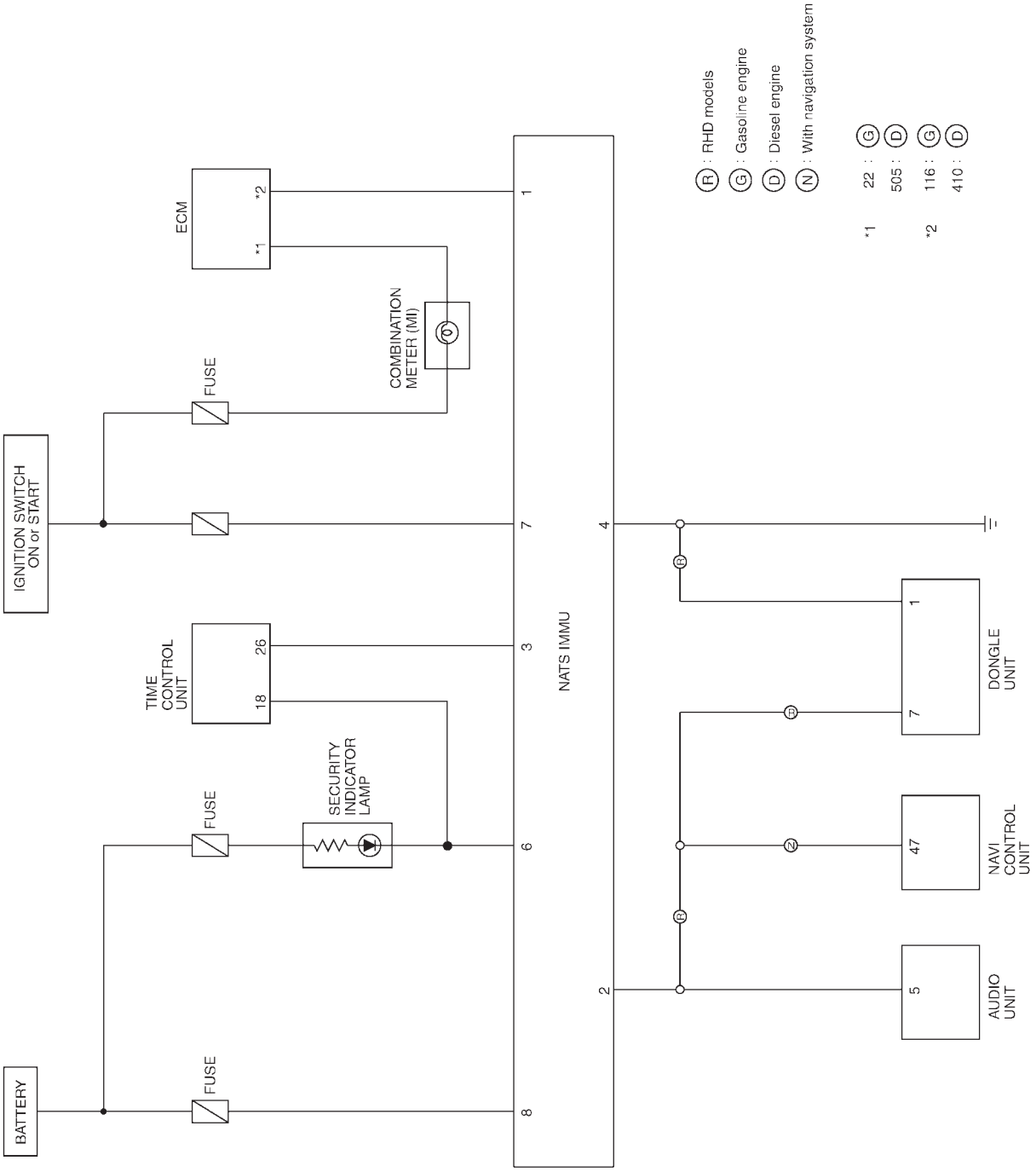


Schematic

NLEL0509

MODELS WITH NATS SECURITY INDICATOR ON DASH BOARD

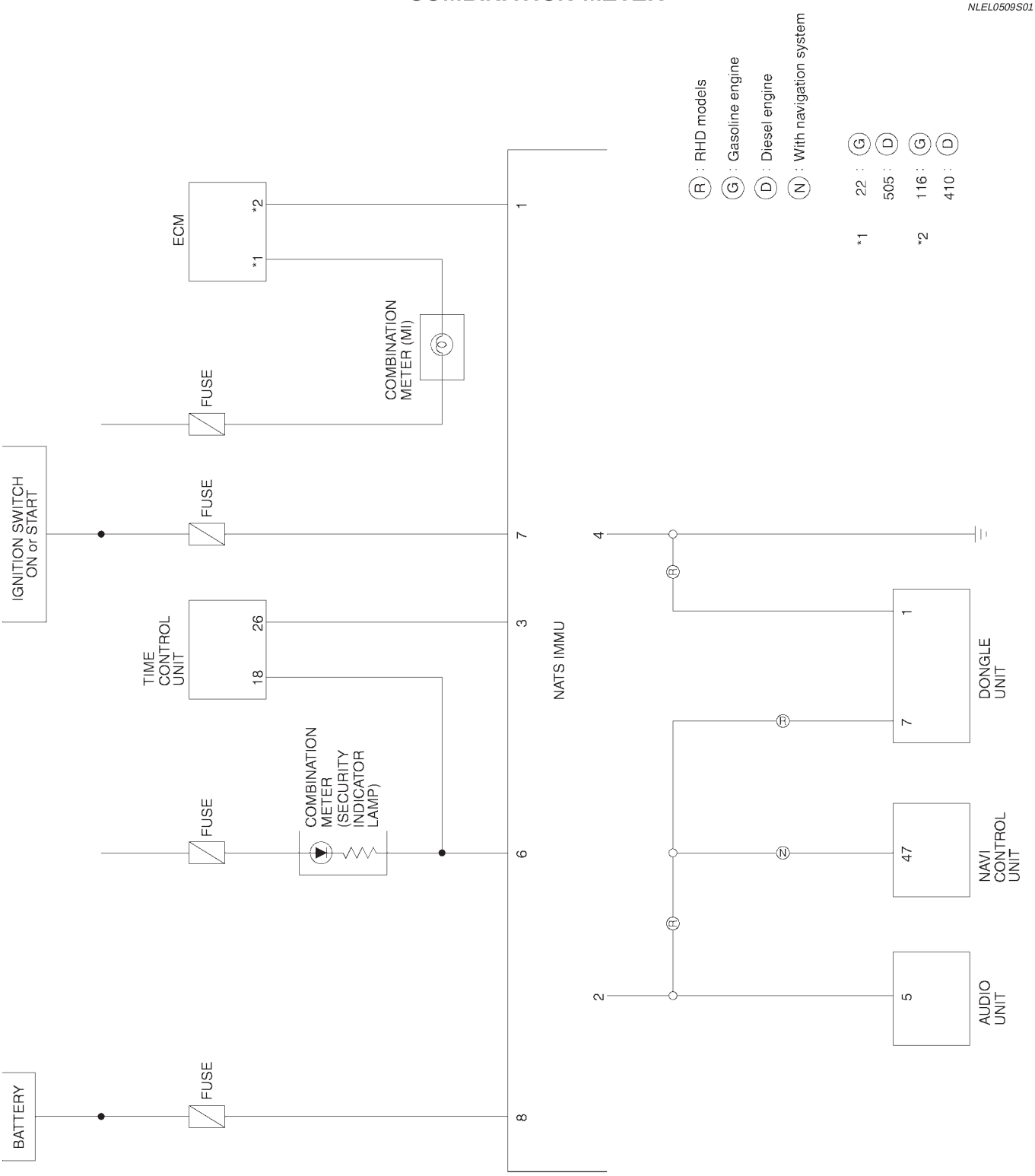
NLEL0509S02



YEL951B

MODELS WITH NATS SECURITY INDICATOR IN COMBINATION METER

NLEL0509S01



YEL468C

Wiring Diagram — NATS —

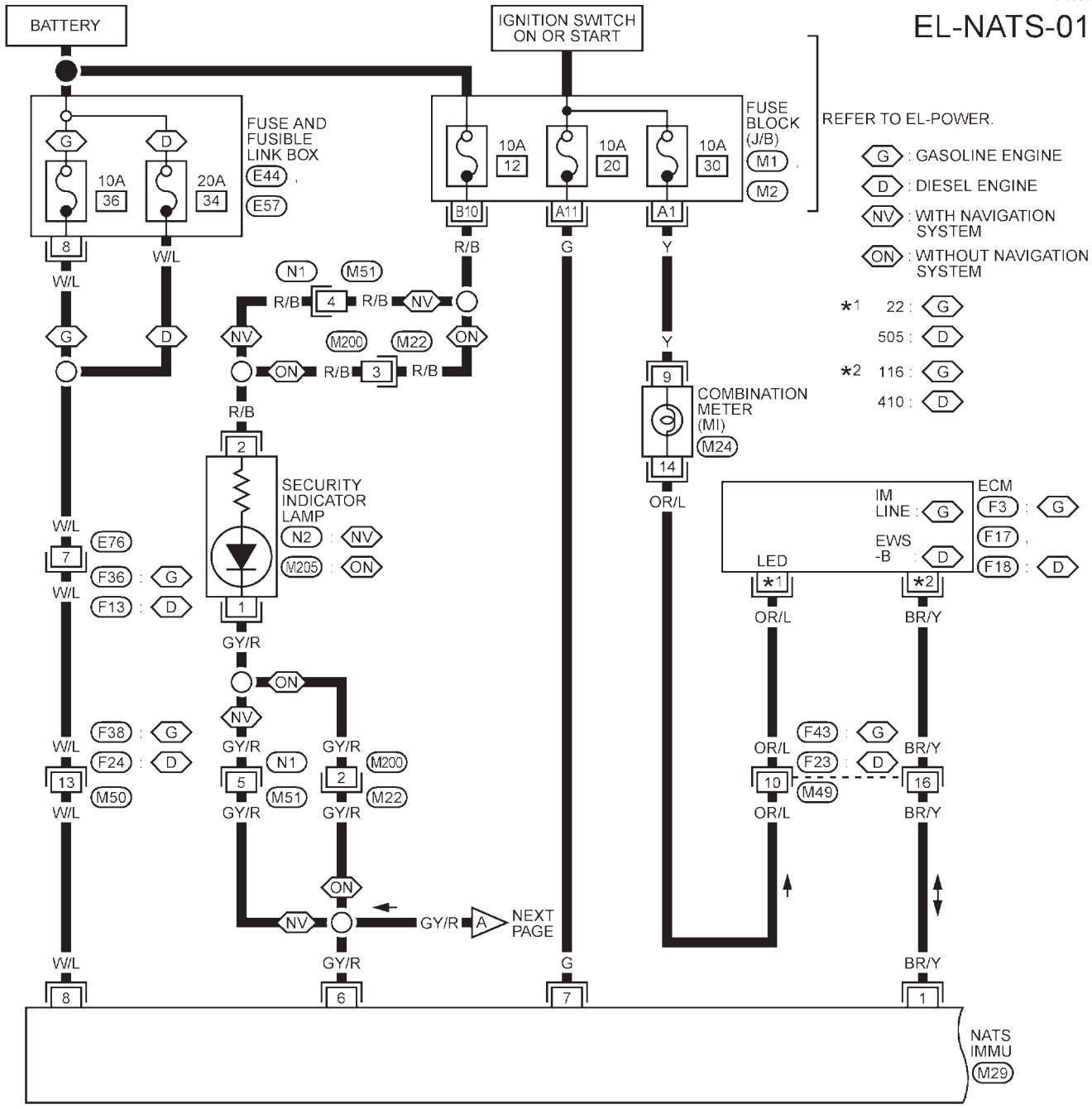
NLEL0409

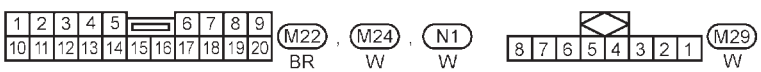
NLEL0409S04

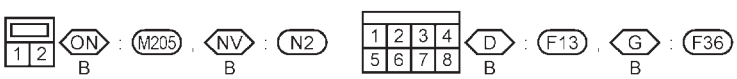
NLEL0409S0401

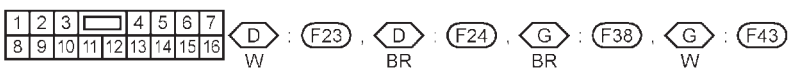
MODELS WITH NATS SECURITY INDICATOR ON DASH BOARD

LHD Models



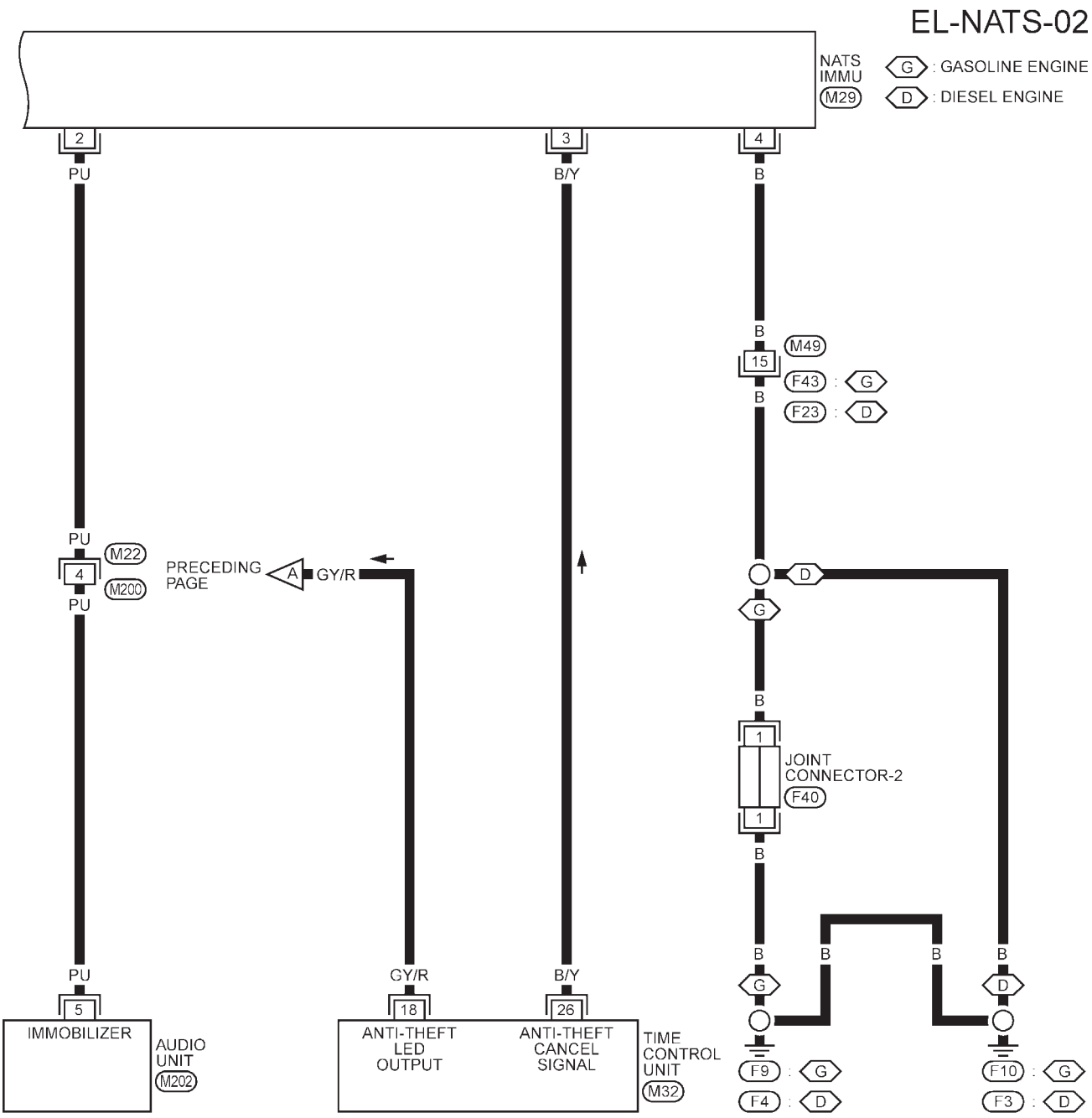






REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK- JUNCTION BOX (J/B)
E44 , E57 -FUSE AND FUSIBLE LINK BOX
F3 , F17 , F18 -ELECTRICAL UNITS

YEL952B

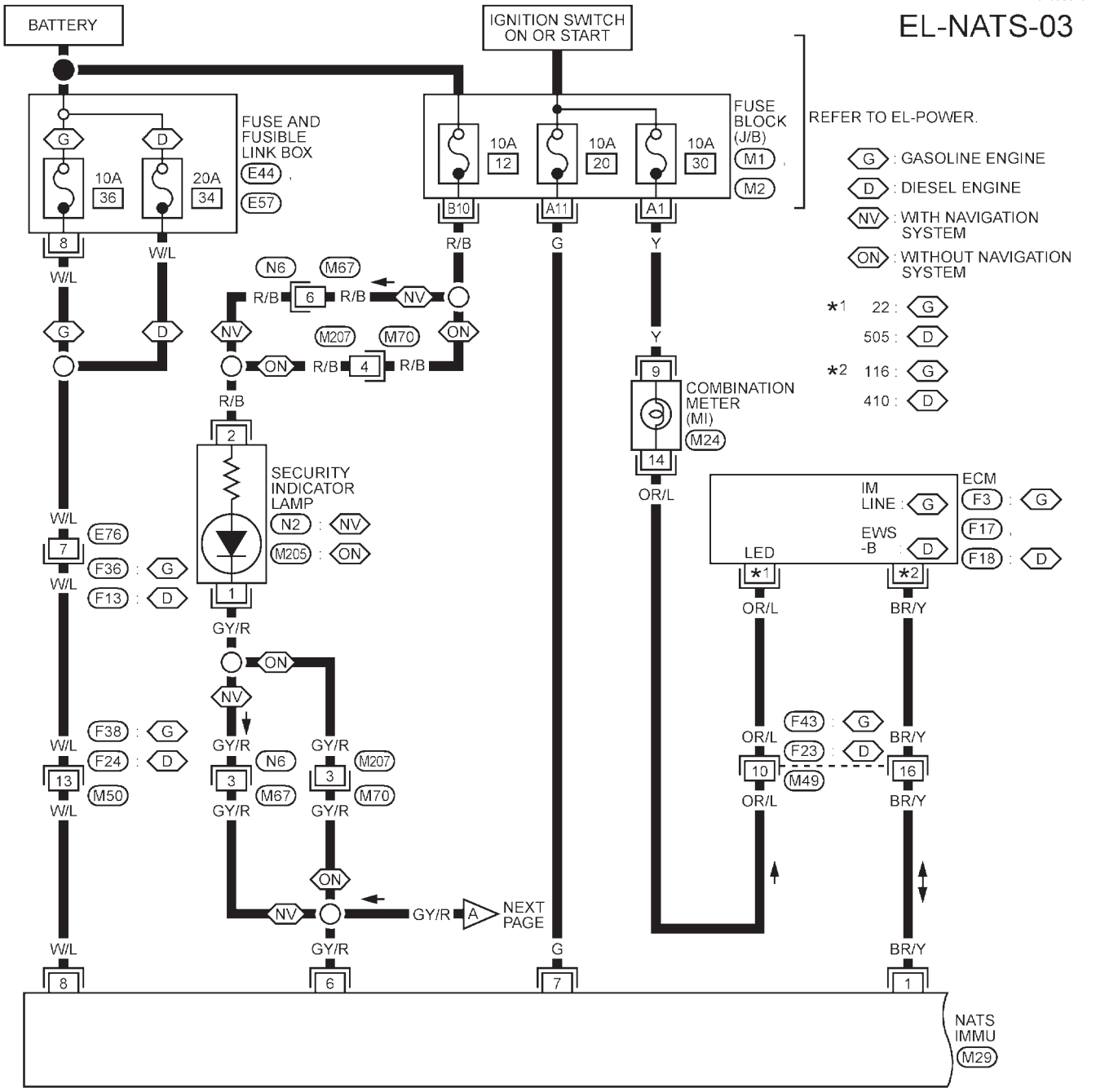

EL-NATS-02
NATS IMMU
M29
G : GASOLINE ENGINE
D : DIESEL ENGINE
2
3
4
PU
B/Y
B
B
M49
15
F43 : G
F23 : D
PU
M22
4
M200
PU
PRECEDING PAGE
A
GY/R
D
G
B
1
JOINT CONNECTOR-2
F40
1
B
B
B
B
B
G
D
F9 : G
F4 : D
F10 : G
F3 : D
PU
5
IMMOBILIZER
AUDIO UNIT
M202
GY/R
18
ANTI-THEFT LED OUTPUT
B/Y
26
ANTI-THEFT CANCEL SIGNAL
TIME CONTROL UNIT
M32
M22
BR
M29
W
M32
W
H.S.
M202
W
D : F23 , G : F43
W
W
F40
GY

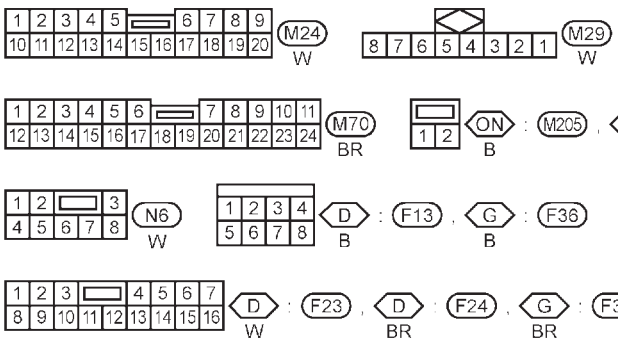
YEL953B

Wiring Diagram — NATS — (Cont'd)

RHD Models

NLEL0409S0402



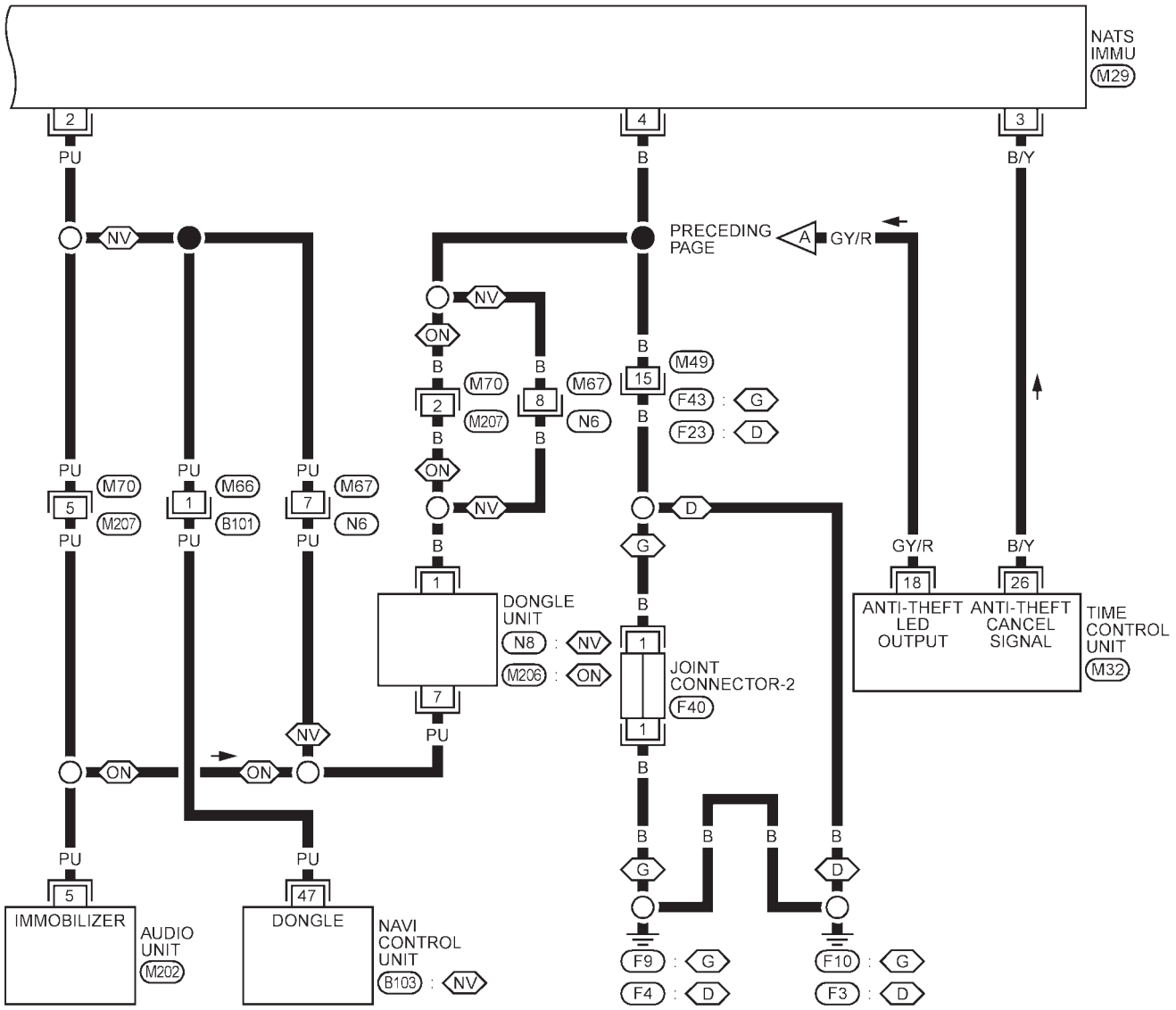


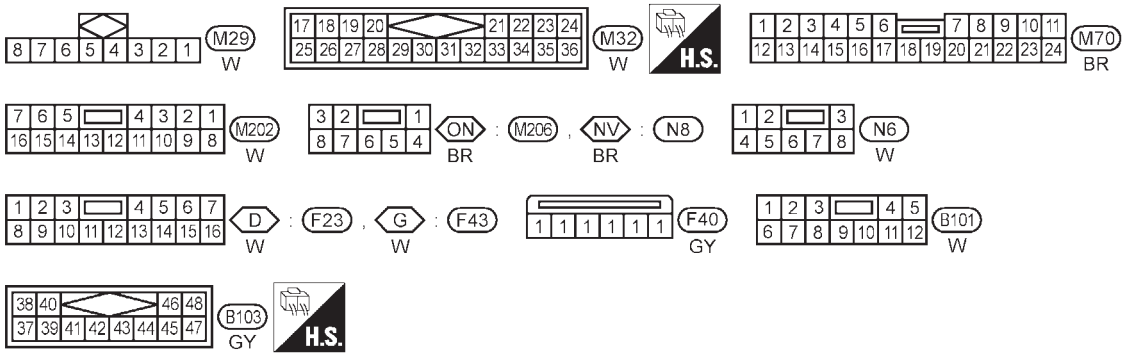
REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
E44 , E57 -FUSE AND FUSIBLE LINK BOX
F3 , F17 , F18 -ELECTRICAL UNITS

YEL954B

EL-NATS-04

G : GASOLINE ENGINE
D : DIESEL ENGINE
NV : WITH NAVIGATION SYSTEM
ON : WITHOUT NAVIGATION SYSTEM





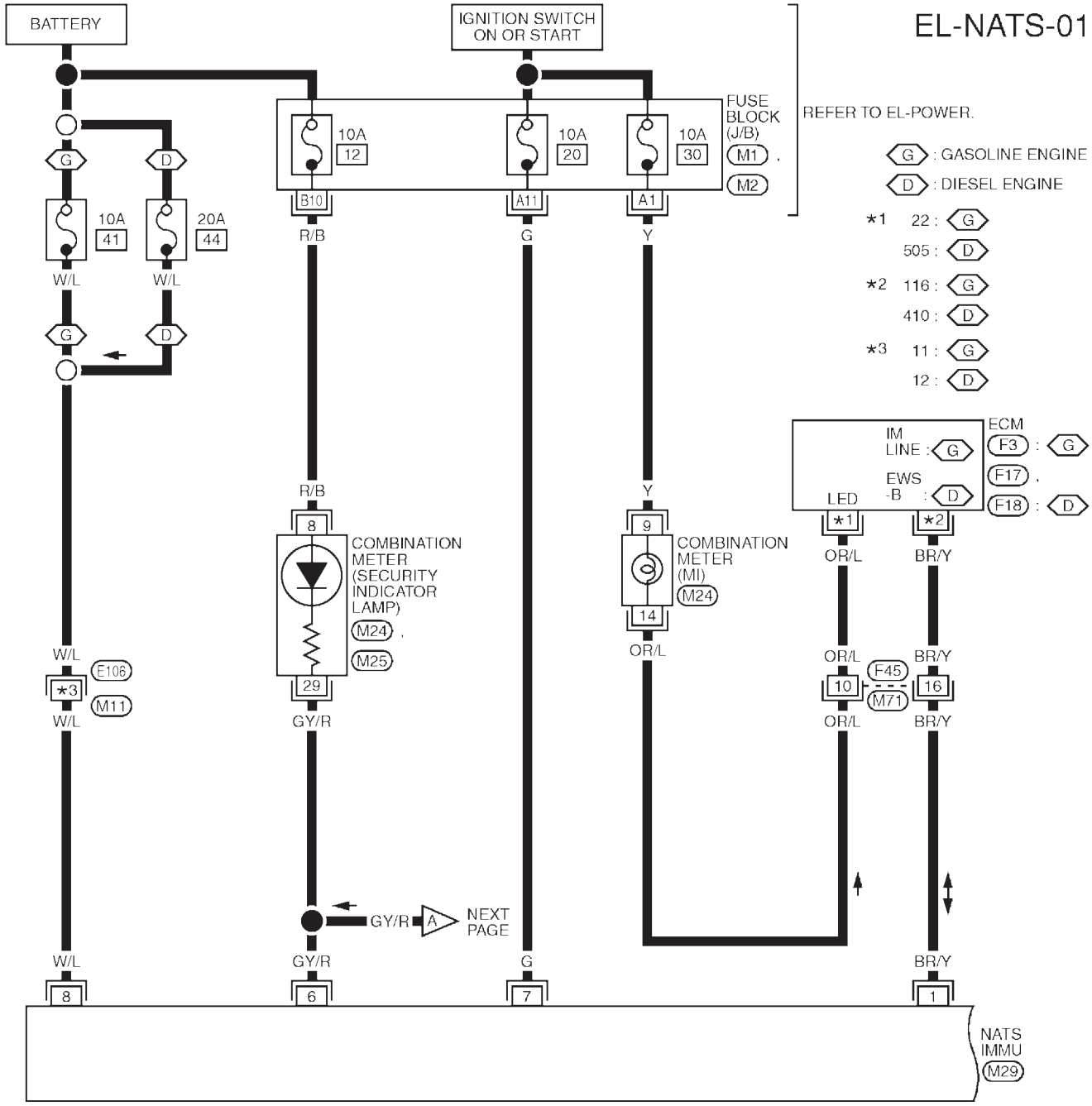
YEL955B

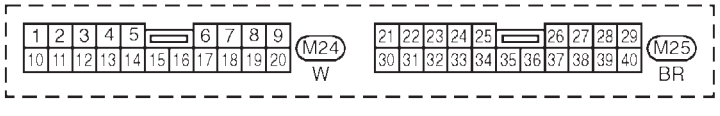
MODELS WITH NATS SECURITY INDICATOR IN COMBINATION METER

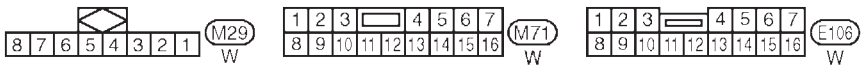
LHD Models

NLEL0409S05

NLEL0409S0501

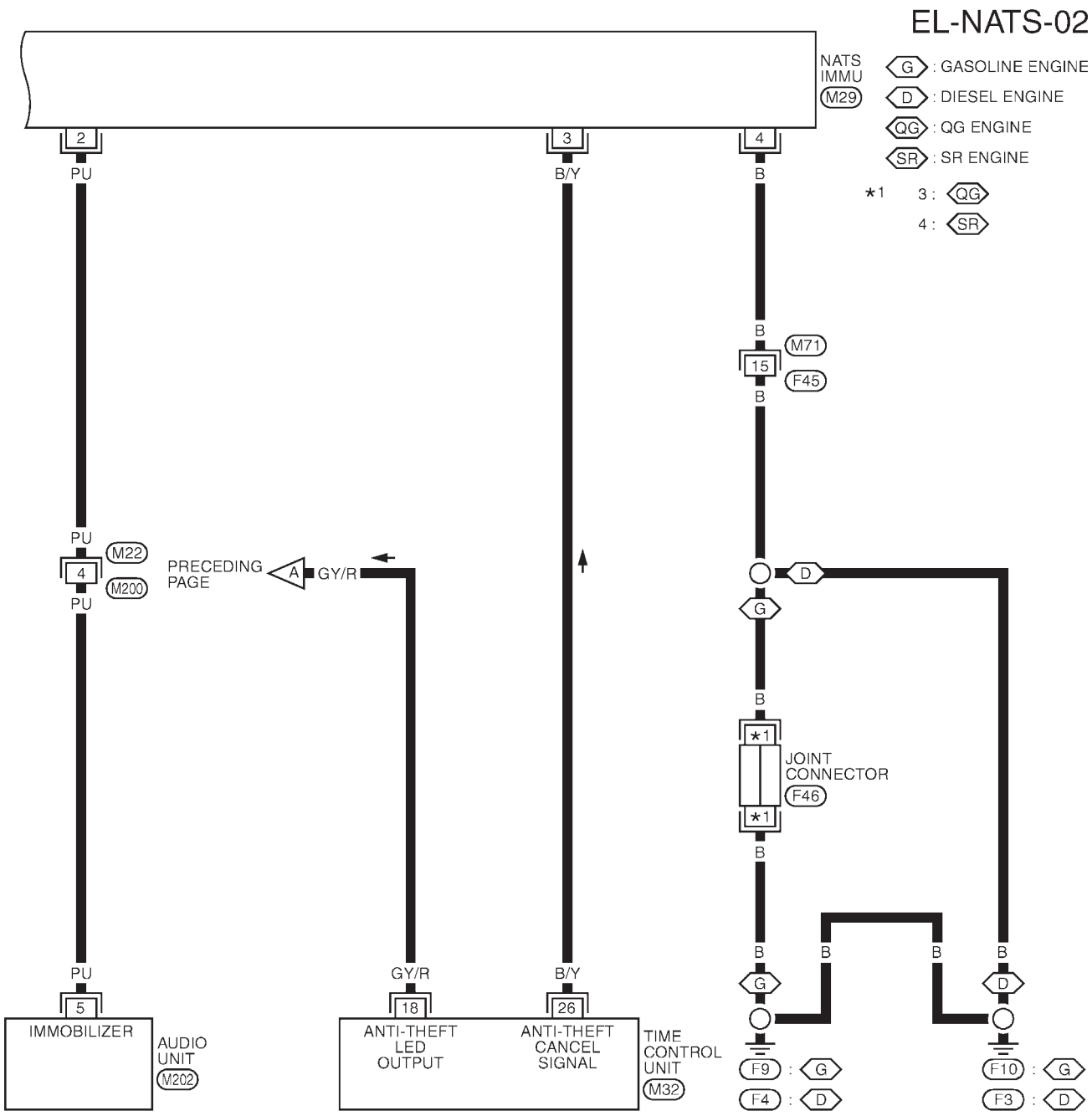


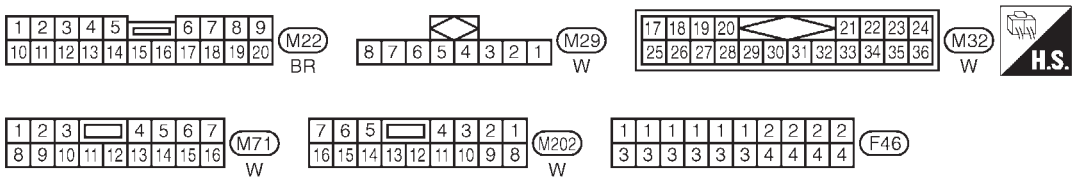




REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
F3 , F17 , F18 -ELECTRICAL UNITS

YEL469C

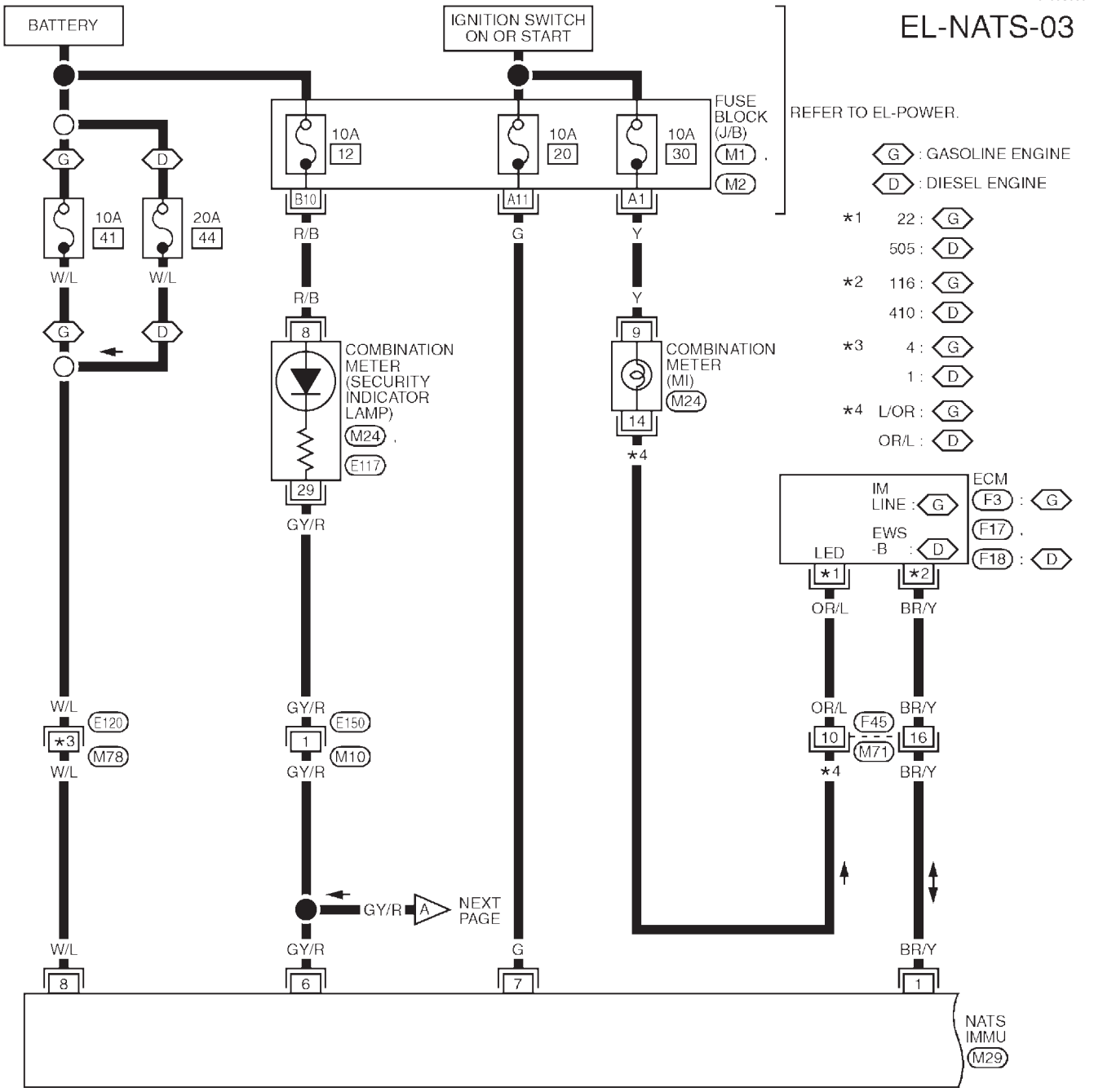

EL-NATS-02
NATS IMMU
M29
2
3
4
PU
B/Y
B
G : GASOLINE ENGINE
D : DIESEL ENGINE
QG : QG ENGINE
SR : SR ENGINE
*1 3 : QG
4 : SR
B
M71
15
F45
B
PU
M22
4
M200
PU
PRECEDING PAGE
A
GY/R
D
G
B
*1
JOINT CONNECTOR
F46
*1
B
PU
5
IMMOBILIZER
AUDIO UNIT
M202
GY/R
18
ANTI-THEFT LED OUTPUT
B/Y
26
ANTI-THEFT CANCEL SIGNAL
TIME CONTROL UNIT
M32
B
B
B
B
G
D
F9 : G
F4 : D
F10 : G
F3 : D

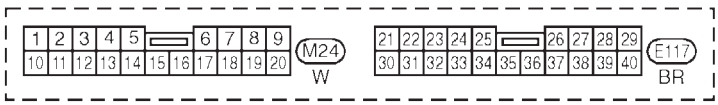

M22
BR
M29
W
M32
W
H.S.
M71
W
M202
W
F46

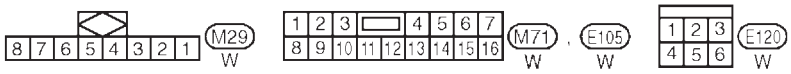
YEL470C

RHD Models

NLEL0409S0502



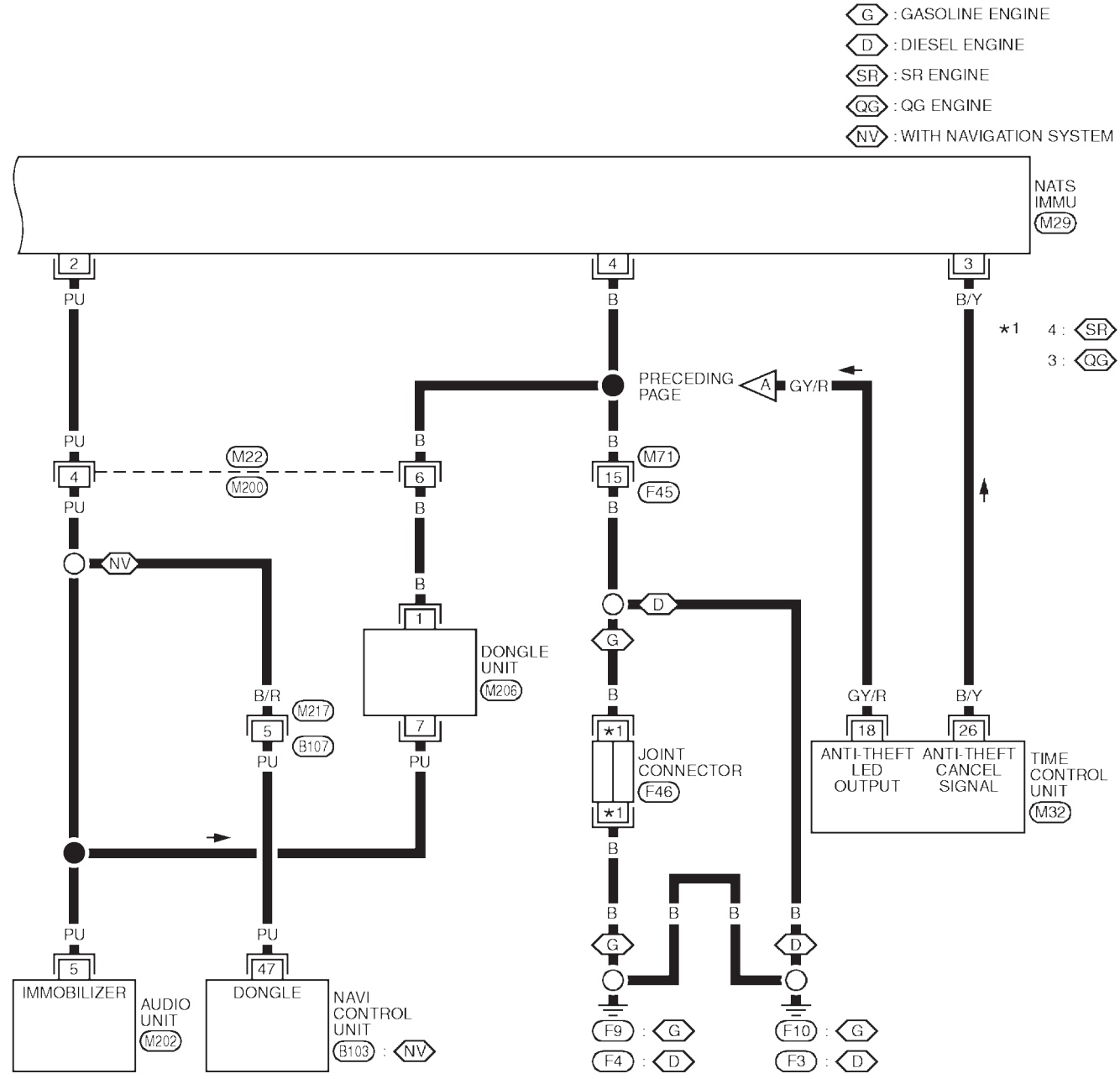


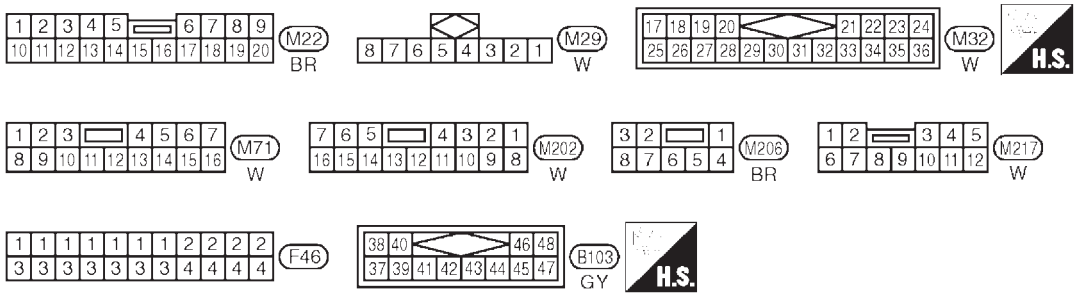


REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
F3, F17, F18 -ELECTRICAL UNITS

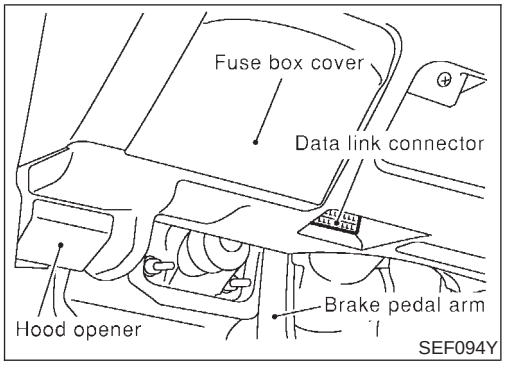
YEL471C

EL-NATS-04





YEL472C



SEF094Y

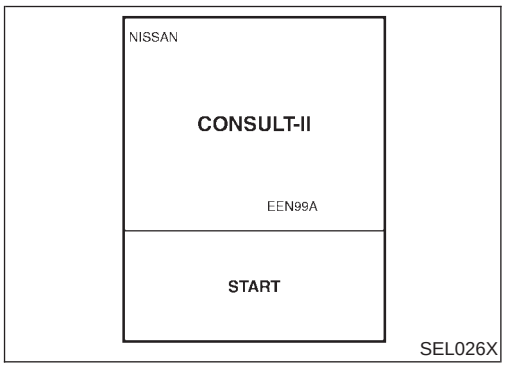
CONSULT-II

NLEL0410

CONSULT-II INSPECTION PROCEDURE

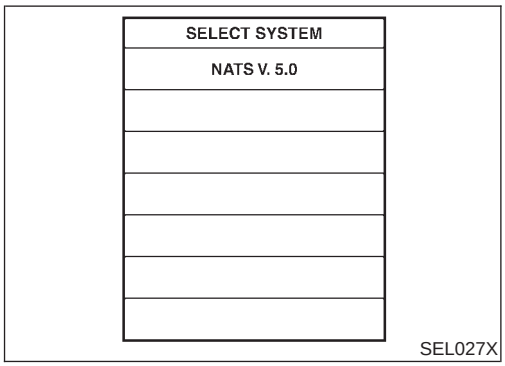
NLEL0410S01

1. Turn ignition switch OFF.
2. Insert NATS program card into CONSULT-II.
   ⬅ : Program card
   NATS (AEN00B)
3. Connect CONSULT-II to data link connector.



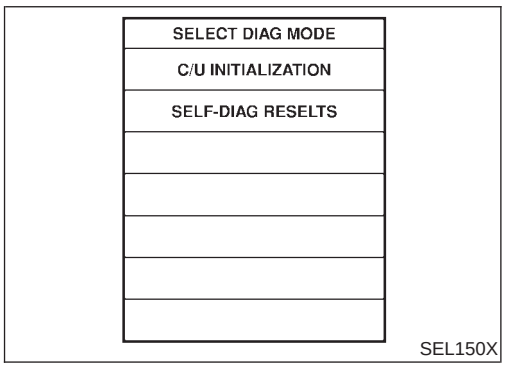
SEL026X

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



SEL027X

6. Select “NATS V.5.0”.



SEL150X

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

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

CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NLEL0410S02

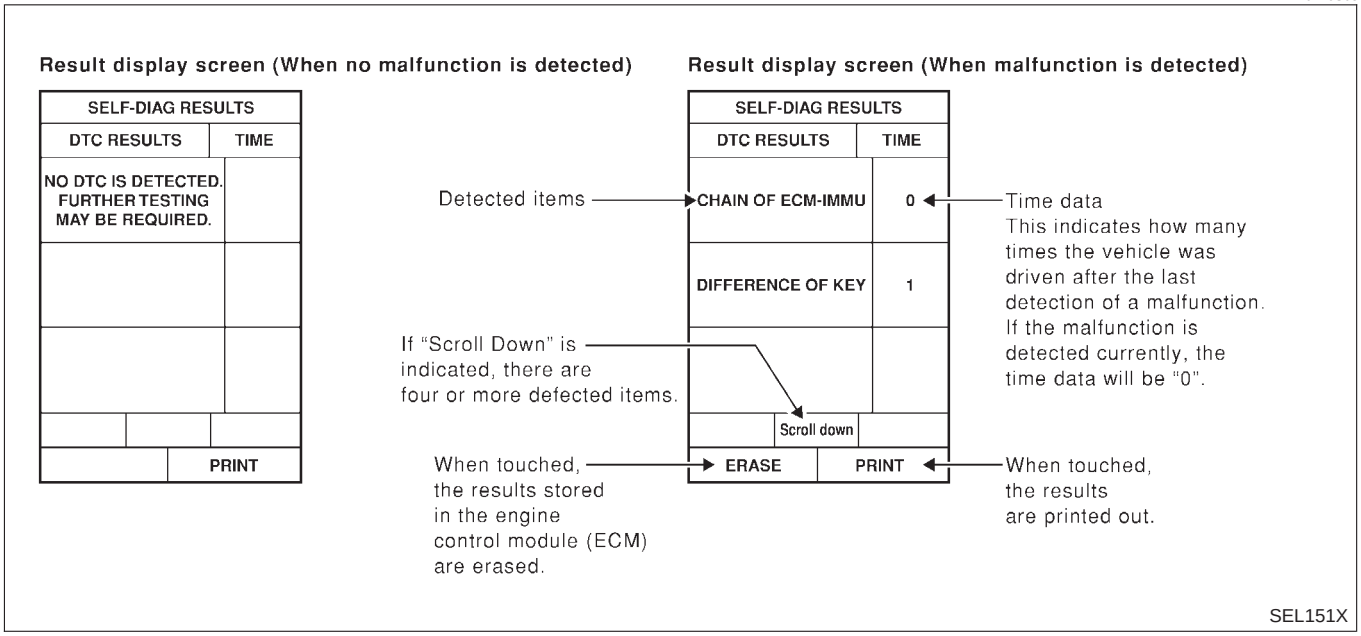
CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [NATS ignition key/IMMU/ECM/Dongle unit]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart EL-347.

NOTE:

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

HOW TO READ SELF-DIAGNOSTIC RESULTS

NLEL0410S03



SEL151X

NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

NLEL0410S04

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE"	Malfunction is detected when	Reference page
ECM INT CIRC-IMMU	NATS MALFUNCTION P1613	The malfunction of ECM internal circuit of IMMU communication line is detected.	EL-352
CHAIN OF ECM-IMMU	NATS MALFUNCTION P1612	Communication impossible between ECM and IMMU (In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.)	EL-353
DIFFERENCE OF KEY	NATS MALFUNCTION P1615	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	EL-357
CHAIN OF IMMU-KEY	NATS MALFUNCTION P1614	IMMU cannot receive the key ID signal.	EL-358

CONSULT-II (Cont'd)

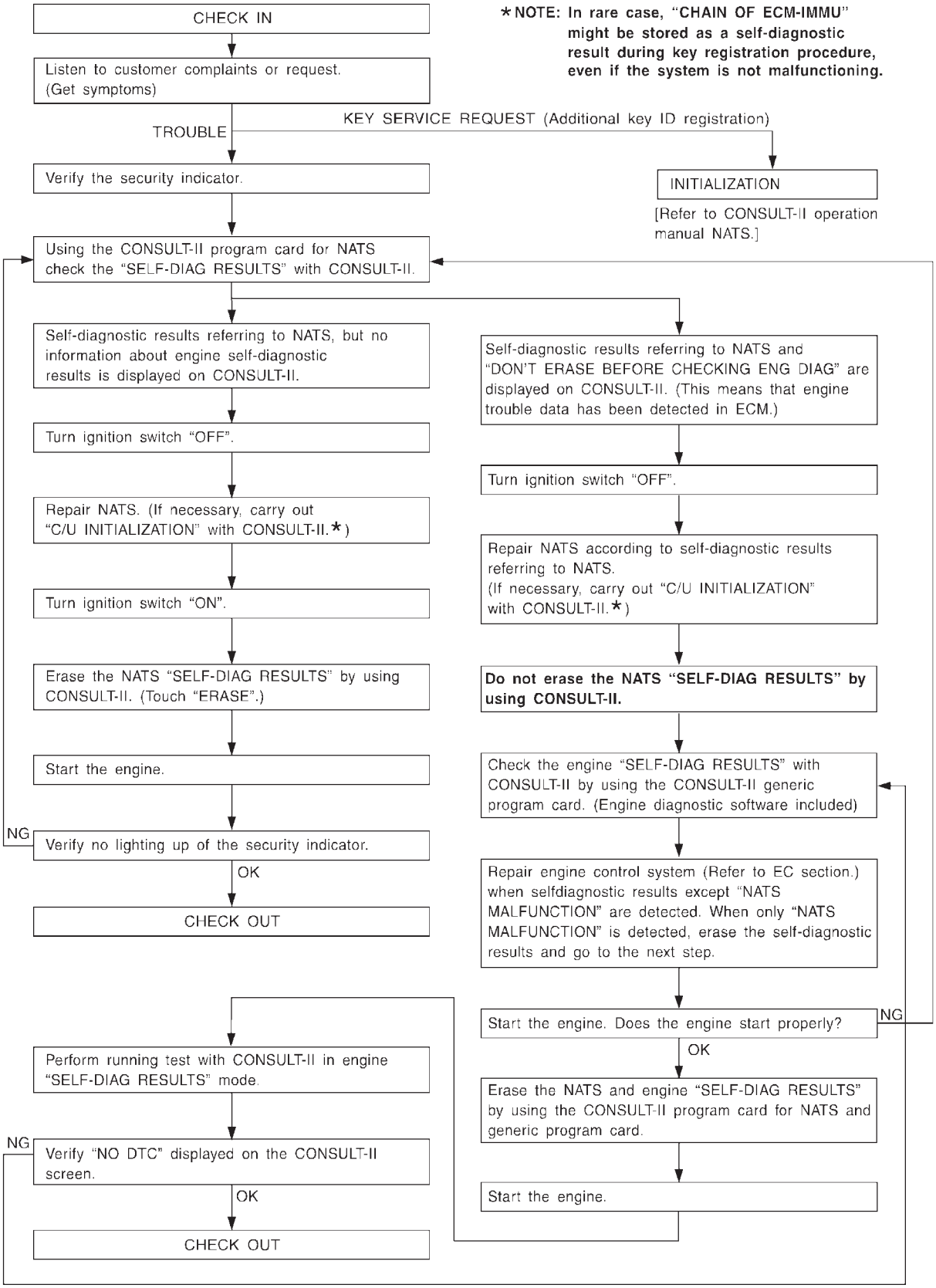
Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE"	Malfunction is detected when	Reference page
ID DISCORD, IMM-ECM	NATS MALFUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	EL-360
LOCK MODE	NATS MALFUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. ● Unregistered ignition key is used. ● IMMU or ECM's malfunctioning.	EL-365
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NATS trouble code has been detected in ECM.	EL-349

Trouble Diagnoses

WORK FLOW

NLEL0411

NLEL0411S01



SEL729WE

SYMPTOM MATRIX CHART 1
(Self-diagnosis related item)

NLEL0411S02

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
● Security indicator lighting up* ● Engine cannot be started	ECM INT CIRC-IMMU	PROCEDURE 1 (EL-352)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-353)	In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of IMMU circuit	C1
			Open circuit in ignition line of IMMU circuit	C2
			Open circuit in ground line of IMMU circuit	C3
			Open circuit in communication line between IMMU and ECM	C4
			Short circuit between IMMU and ECM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM communication line and ground line	C4
			ECM	B
			IMMU	A
	DIFFERENCE OF KEY	PROCEDURE 3 (EL-357)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-358)	Malfunction of key ID chip	E
			IMMU	A
			Open circuit in ground line of dongle unit circuit	C6
			Open or short circuit in line between IMMU and dongle unit	C5
			Dongle unit	G
	ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-360)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE	PROCEDURE 7 (EL-365)	LOCK MODE	D
● MIL staying ON ● Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-349)	Engine trouble data and NATS trouble data have been detected in ECM	—

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

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

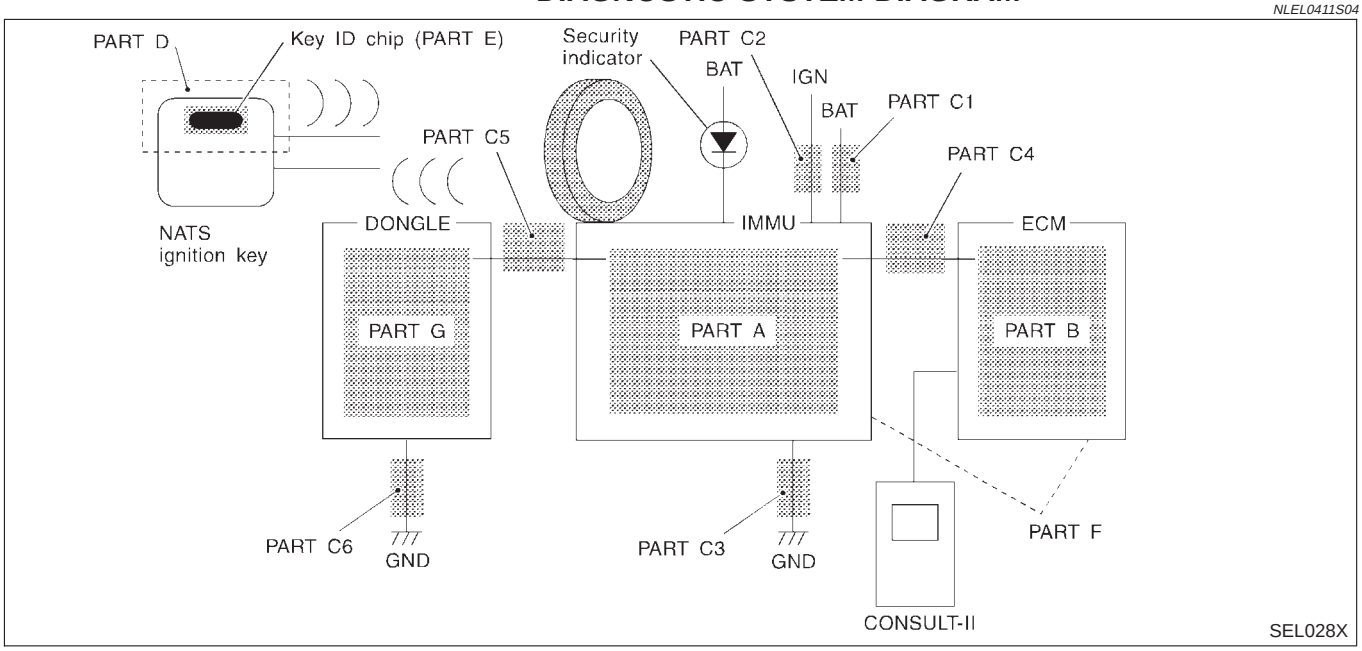
SYMPTOM MATRIX CHART 2
(Non self-diagnosis related item)

NLEL0411S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security ind. does not light up.	PROCEDURE 6 (EL-361)	Security ind.	—
		Open circuit between Fuse and IMMU	—
		Continuation of initialization mode	—
		IMMU	A
Security ind. does not blink just after initialization even if the vehicle is equipped with dongle unit.	PROCEDURE 8 (EL-368)	NATS might be initialized without connecting dongle unit properly.	—
		Open circuit in ground line of dongle unit circuit	C6
Security ind. does not blink just after ignition switch is turned to ON when some malfunction related to NATS is detected even if the vehicle is equipped with dongle unit.		Open or short circuit in communication line between IMMU and dongle unit	C5
		Dongle unit	G

DIAGNOSTIC SYSTEM DIAGRAM

NLEL0411S04



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

SEL152X

DIAGNOSTIC PROCEDURE 1

NLEL0411S05

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

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

DIAGNOSTIC PROCEDURE 2

=NLEL0411S06

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS

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

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

SELF DIAG RESULTS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU	0

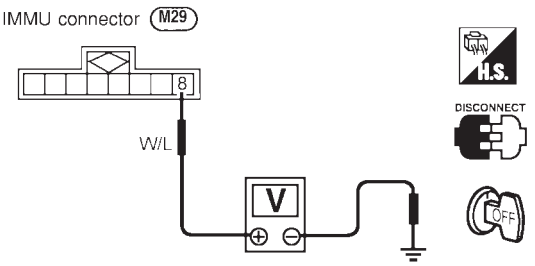
SEL366X

Is CONSULT-II screen displayed as above?

Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

2	CHECK POWER SUPPLY CIRCUIT FOR IMMU

1. Disconnect IMMU connector.
2. Check voltage between terminal 8 of IMMU and ground with CONSULT-II or tester.



Battery voltage should exist.

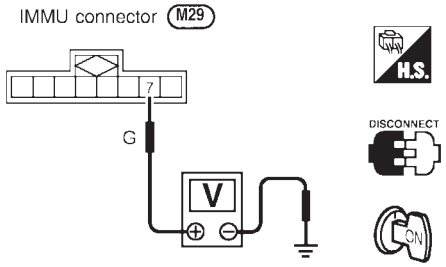
NEL695

OK or NG

OK	▶	GO TO 3.
NG	▶	**Check the following** ● 10A fuse — (Gasoline engine) ● 20A fuse — (Diesel engine) ● Harness for open or short between fuse and IMMU connector **Ref. Part No. C1**

3	CHECK IGN SW. ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between terminal 7 of IMMU and ground with CONSULT-II or tester.



Battery voltage should exist.

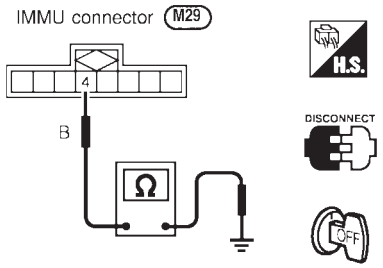
NEL696

OK or NG

OK	▶	GO TO 4.
NG	▶	**Check the following** ● 10A fuse [No. 20, located in the fuse block (J/B)] ● Harness for open or short between fuse and IMMU connector **Ref. part No. C2**

4	CHECK GROUND CIRCUIT FOR IMMU

1. Turn ignition OFF.
2. Check harness continuity between IMMU terminal 4 and ground.



Continuity should exist.

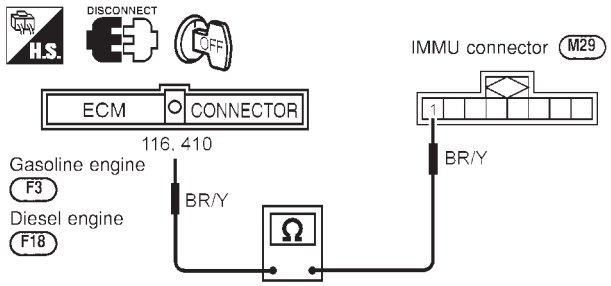
NEL697

OK or NG

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

5	CHECK COMMUNICATION LINE OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check harness continuity between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) and IMMU terminal 1.



Continuity should exist.

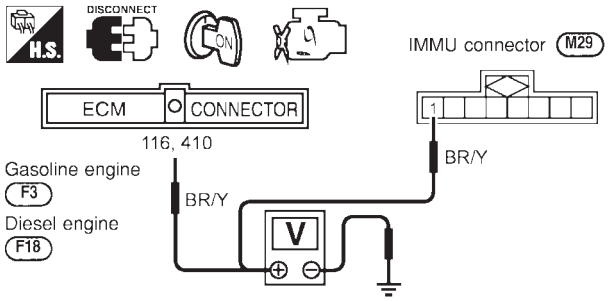
NEL698

OK or NG

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

6	CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT

1. Turn ignition ON.
2. Check voltage between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) or IMMU terminal 1 and ground.



Voltage: 0V

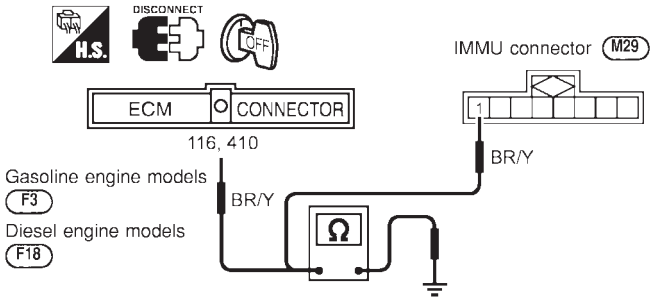
NEL699

OK or NG

OK	▶	GO TO 7.
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. **Ref. part No. C4**

7	CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) or IMMU terminal 1 and ground.



Continuity should not exist.

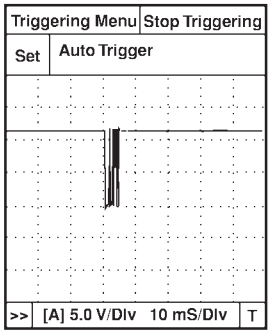
NEL700

OK or NG

OK	▶	GO TO 8.
NG	▶	Communication line is short-circuited with ground line. Repair harness or connectors. **Ref. part No. C4**

8	SIGNAL FROM ECM TO IMMU CHECK

1. Check the signal between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) and ground with CONSULT-II or oscilloscope when ignition switch is turned "ON".
2. Make sure signals which are shown in the figure below can be detected during 750 msec. just after ignition switch is turned "ON".



SEL730W

OK or NG

OK	▶	IMMU is malfunctioning. Replace IMMU. **Ref. part No. A** Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual NATS".
NG	▶	ECM is malfunctioning. Replace ECM. **Ref. part No. B** Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual NATS".

DIAGNOSTIC PROCEDURE 3

=NLEL0411S07

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS

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

SELF DIAG RESULTS	
DTC RESULTS	TIME
DIFFERENCE OF KEY	0

SEL367X

Is CONSULT-II screen displayed as above?

Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

2	PERFORM INITIALIZATION WITH CONSULT-II

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

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

SEL297W

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

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

Yes	▶	Ignition key ID was unregistered. **Ref. part No. D**
No	▶	IMMU is malfunctioning. Replace IMMU. **Ref. part No. A** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

DIAGNOSTIC PROCEDURE 4

=NLEL0411S08

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS

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

SELF DIAG RESULTS	
DTC RESULTS	TIME
CHAIN OF IMMU-KEY	0

SEL368X

Is CONSULT-II screen displayed as above?

Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

2	CHECK NATS IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

Yes	▶	Ignition key ID chip is malfunctioning. Replace the ignition key. **Ref. part No. E** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS".
No	▶	**Models without dongle unit** IMMU is malfunctioning. Replace IMMU. **Ref. part No. A** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS". **Models with dongle unit** GO TO 3.

3	CHECK HARNESS CONNECTOR CONNECTION

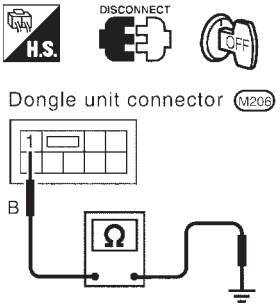
Check harness connector connection between M31 and M102.

Does the engine start?

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

4	CHECK GROUND CIRCUIT FOR DONGLE UNIT

Check continuity between dongle unit terminal 1 and ground.



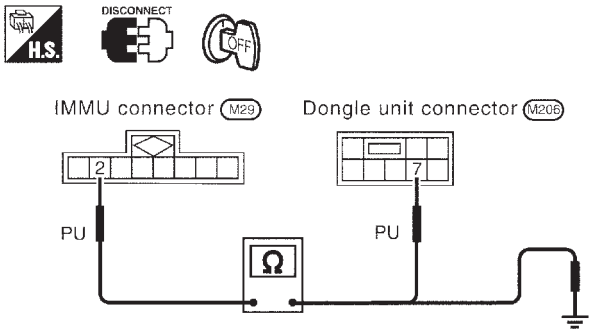
Continuity should exist.

NEL777

Yes or No

Yes	▶	GO TO 5.
No	▶	Repair harness.

5	CHECK INTERFACE CIRCUIT



Check continuity between IMMU terminal 2 and dongle unit terminal 7 (Open circuit check).
Continuity should exist.

Check continuity between IMMU terminal 2 and ground (Short circuit check).
Continuity should not exist.

NEL778

Yes or No

Yes	▶	**Dongle unit is malfunctioning.** 1. Replace dongle unit. 2. Perform initialization with CONSULT-II. For the initialization procedure, refer to "CONSULT-II operation manual NATS.
No	▶	Repair harness.

DIAGNOSTIC PROCEDURE 5

=NLEL0411S09

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS

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

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

SEL369X

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

Is CONSULT-II screen displayed as above?

Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

2	PERFORM INITIALIZATION WITH CONSULT-II

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

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

SEL297W

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

Can the system be initialized?

Yes	▶	Start engine. (END) (System initialization had not been completed. **Ref. part No. B**)
No	▶	ECM is malfunctioning. Replace ECM. **Ref. part No. B** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

DIAGNOSTIC PROCEDURE 6 (MODELS WITH NATS SECURITY INDICATOR ON DASH BOARD)

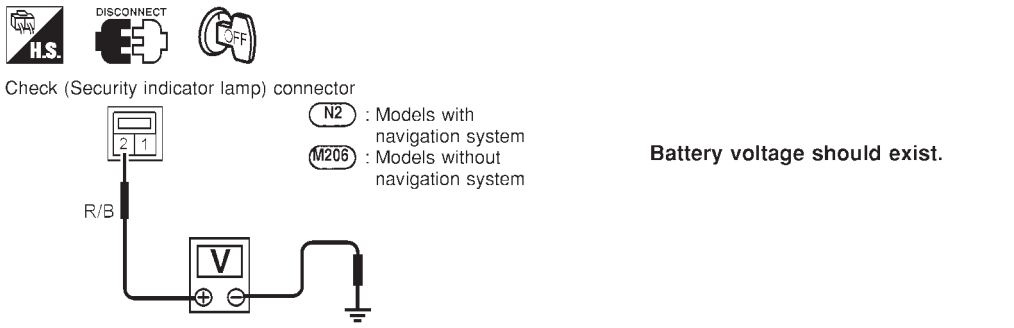
=NLEL0411S10

"SECURITY INDICATOR LAMP DOES NOT LIGHT UP"

1	CHECK FUSE
Check 10A fuse [No. 12, located in the fuse block (J/B)]. **Is 10A fuse OK?**	
Yes ▶	GO TO 2.
No ▶	Replace fuse.

2	CHECK SECURITY INDICATOR LAMP
1. Install 10A fuse. 2. Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS". 3. Turn ignition switch OFF. 4. Start engine and turn ignition switch OFF. 5. Check the security indicator lamp lighting. **Security indicator lamp should be light up.** **OK or NG**	
OK ▶	INSPECTION END
NG ▶	GO TO 3.

3	CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT
1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp connector terminal 2 and ground.	
OK ▶	GO TO 4.
NG ▶	Check harness for open or short between fuse and security indicator lamp.



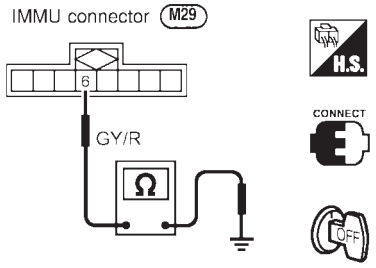
Battery voltage should exist.

NEL703

4	CHECK SECURITY INDICATOR LAMP
Check security Indicator Lamp. **Is security indicator lamp OK?**	
Yes ▶	GO TO 5.
No ▶	Replace security indicator lamp.

5	CHECK IMMU FUNCTION

1. Connect IMMU connector.
2. Disconnect security indicator lamp connector.
3. Check continuity between IMMU terminal 6 and ground.



Continuity should exist intermittently.

NEL704

OK or NG

OK	▶	Check harness for open or short between security indicator lamp and IMMU.
NG	▶	IMMU is malfunctioning. Replace IMMU. **Ref. part No. A** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

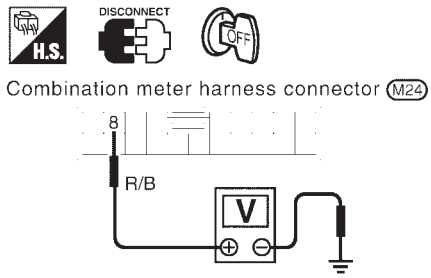
DIAGNOSTIC PROCEDURE 6 (MODELS WITH NATS SECURITY INDICATOR IN COMBINATION METER)

=NLEL0411S16

"SECURITY INDICATOR LAMP DOES NOT LIGHT UP"

1	CHECK FUSE	
Check 10A fuse [No. 12, located in the fuse block (J/B)].		
Is 10A fuse OK?		
Yes	▶	GO TO 2.
No	▶	Replace fuse.

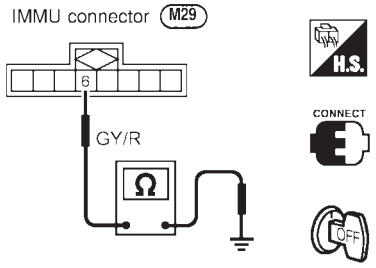
2	CHECK SECURITY INDICATOR LAMP	
1. Install 10A fuse. 2. Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS". 3. Turn ignition switch OFF. 4. Start engine and turn ignition switch OFF. 5. Check the security indicator lamp lighting. **Security indicator lamp should be light up.**		
OK or NG		
OK	▶	INSPECTION END
NG	▶	GO TO 3.

3	CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT	
1. Disconnect security indicator lamp connector. 2. Check voltage between combination meter (security indicator lamp) connector terminal 8 and ground.		
 NEL782	**Battery voltage should exist.**	
OK or NG		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and combination meter (security indicator lamp).

4	CHECK SECURITY INDICATOR LAMP	
Check security Indicator Lamp (Bulb). (Security indicator lamp is locating on combination meter).		
Is security indicator lamp OK?		
Yes	▶	GO TO 5.
No	▶	Replace security indicator lamp (Bulb).

5	CHECK IMMU FUNCTION

1. Connect IMMU connector.
2. Disconnect combination meter (security indicator lamp) connector.
3. Check continuity between IMMU terminal 6 and ground.



Continuity should exist intermittently.

NEL704

OK or NG

OK	▶	Check harness for open or short between combination meter (security indicator lamp) and IMMU.
NG	▶	IMMU is malfunctioning. Replace IMMU. **Ref. part No. A** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

DIAGNOSTIC PROCEDURE 7

=NLEL0411S11

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS

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

SELF DIAG RESULTS	
DTC RESULTS	TIME
LOCK MODE	0

SEL371X

Is CONSULT-II screen displayed as above?

Yes	▶	GO TO 2.
No	▶	GO TO SYMPTOM MATRIX CHART 1.

2	ESCAPE FROM LOCK MODE

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

Does engine start?

Yes	▶	System is OK. (Now system is escaped from "LOCK MODE".)
No	▶	GO TO 3.

3	CHECK IMMU ILLUSTRATION

Check IMMU installation. Refer to "How to Replace IMMU" in EL-369.

OK or NG

OK	▶	GO TO 4.
NG	▶	Reinstall IMMU correctly.

4	PERFORM INITIALIZATION WITH CONSULT-II

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

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

SEL297W

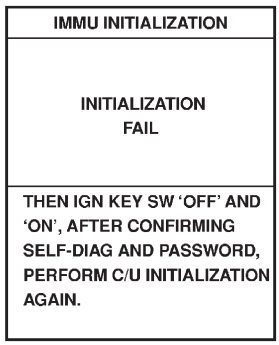
NOTE:
If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.

Can the system be initialized?

Yes	▶	System is OK.
No	▶	GO TO 5.

5	PERFORM INITIALIZATION WITH CONSULT-II AGAIN

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



SEL297W

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

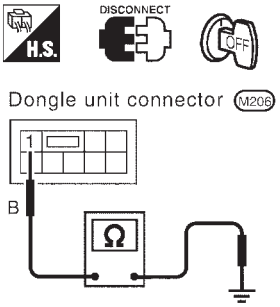
Can the system be initialized?

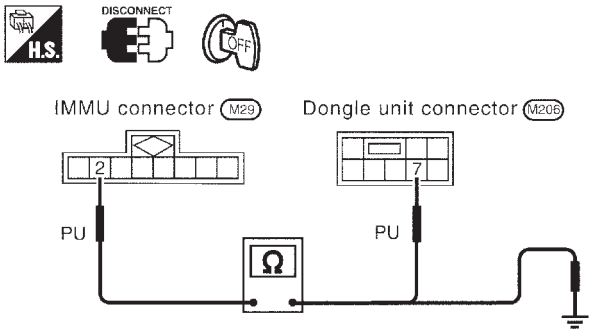
Yes	▶	System is OK. (IMMU is malfunctioning. **Ref. part No. A**)
No	▶	ECM is malfunctioning. Replace ECM. **Ref. part No. B** Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

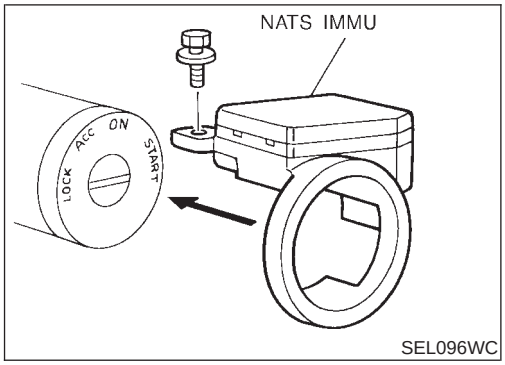
DIAGNOSTIC PROCEDURE 8

=NLEL0411S14

1	CHECK HARNESS CONNECTOR CONNECTION	
Perform initialization with CONSULT-II. Check harness connector connection between M31 and M102. Then initialize NATS. For the initialization operation, refer to "CONSULT-II operation NATS". **Does the security indicator blink just after initialization?**		
Yes	▶	System is OK. (The malfunction is caused by improper connector connection.)
No	▶	GO TO 2.

2	CHECK GROUND CIRCUIT FOR DONGLE UNIT	
Check continuity between dongle unit terminal 1 and ground.  **Continuity should exist.** NEL777 **Yes or No**		
Yes	▶	GO TO 3.
No	▶	Repair harness.

3	CHECK INTERFACE CIRCUIT	
 Check continuity between IMMU terminal 2 and dongle unit terminal 7 (Open circuit check). **Continuity should exist.** Check continuity between IMMU terminal 2 and ground (Short circuit check). **Continuity should not exist.** NEL778 **Yes or No**		
Yes	▶	**Dongle unit is malfunctioning.** 1. Replace dongle unit. 2. Perform initialization with CONSULT-II. For the initialization procedure, refer to "CONSULT-II Operation Manual NATS".
No	▶	Repair harness.



How to Replace NATS IMMU

NLEL0412

NOTE:

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

Precautions

NLEL0510

WARNING:

Do not attempt to disassemble the monitor. Parts of the monitor have high voltages that can result in severe and dangerous electric shock.

CAUTION:

- **Do not reverse battery connections.**
- **Do not attach unauthorized parts.**
- **Protect the unit from severe impact.**

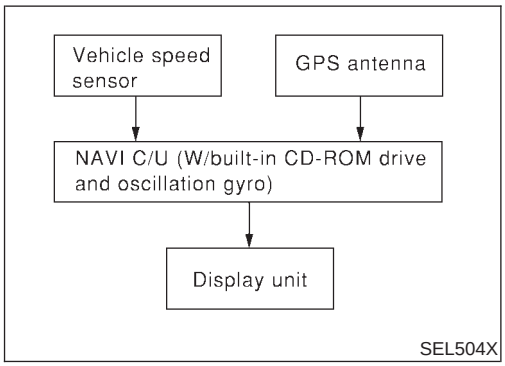
NOTE:

Before beginning repair, determine whether or not the unit is defective. Refer to “This Condition Is Not Abnormal” (EL-432).

Component Parts Location

NLEL0511

For details, refer to “ELECTRICAL UNIT LAYOUT” (EL-442) and “HARNESS LAYOUT” (EL-452).



System Description

NLEL0512

OUTLINE

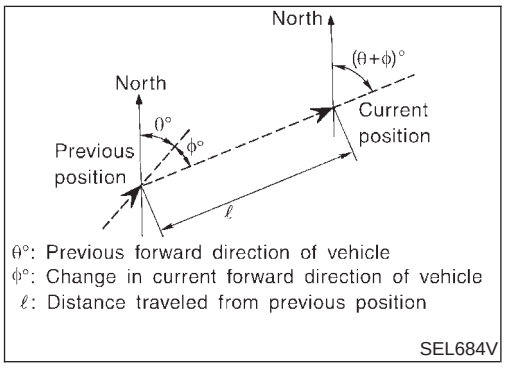
NLEL0512S01

The Navigation System (Multi-AV System) relies upon three sensing devices in order to determine vehicle location at regular time intervals.

1. Vehicle speed sensor: Determines the distance the vehicle has traveled.
2. Gyro (Angular velocity sensor): Determines vehicle steering angle and directional change.
3. GPS antenna (GPS data): Determines vehicle forward movement and direction.

The data provided by the three sensing functions together with a comparison of the mapping information read from the CD-ROM drive permit accurate determination of the vehicle’s current location and subsequent course (map matching). The information appears on a liquid crystal display.

This comparison of GPS data (vehicle position sensing) and map matching permits precise determination of vehicle location.



Position Sensor Operating Principles

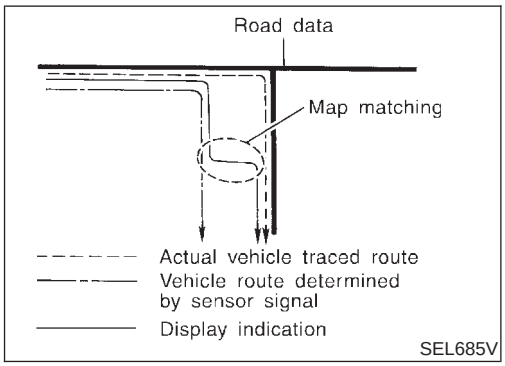
NLEL0512S0101

The sensor determines current vehicle location by calculating the previously sensed position, the distance traveled from this position, and the directional changes occurring during this travel.

1. Distance traveled
   The distance traveled is calculated using signals received from the vehicle speed sensor. The sensor automatically compensates for the slightly reduced wheel and tire diameter resulting from tire wear.
2. Forward movement (Direction)
   Changes in the direction of forward movement are calculated by the gyro (angular velocity sensor) and the GPS antenna

(GPS data). Each of these functions has its advantage and disadvantages. Depending upon conditions, one function takes precedence over the other to accurately determine the direction of forward movement.

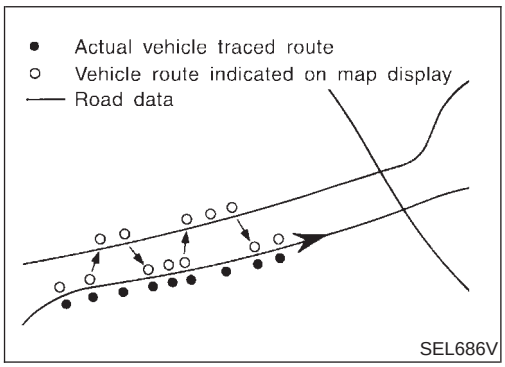
Function type	Advantage	Disadvantage
Gyro (Angular velocity sensor)	● Able to accurately detect minute changes in steering angle and direction.	● Calculation errors may accumulate over a long period of continuous vehicle travel.
GPS antenna (GPS data)	● Able to sense vehicle travel in four general directions (North, South, East, and West)	● Unable to detect direction of vehicle travel at low vehicle speeds.



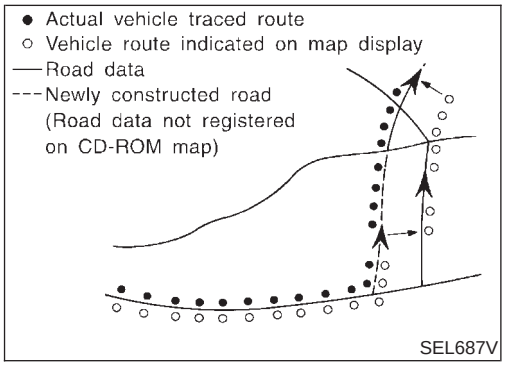
Map Matching

NLEL0512S0102

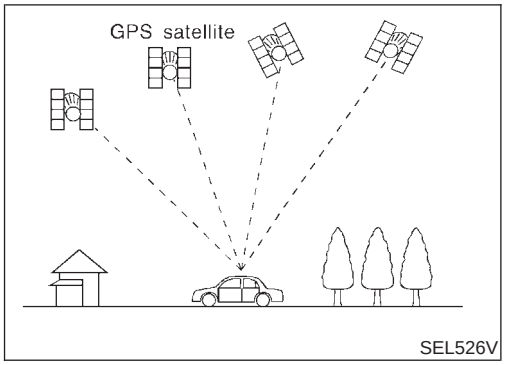
Map matching allows the driver to compare the sensed vehicle location data with the road map contained in the CD-ROM drive. Vehicle position is marked on the CD-ROM map. This permits the driver to accurately determine his/her present position on the highway and to make appropriate course decisions.
When GPS data reception is poor during travel, the vehicle position is not amended. At this time, manual manipulation of the CD-ROM map position marker is required.



Map matching permits the driver to make priority judgments about possible appropriate roads other than the one currently being traveled.
If there is an error in the distance or direction of travel, there will also be an error in the relative position of other routes. When two routes are closely parallel to one another, the indicated position for both routes will be nearly the same priority. This is so that, slight changes in the steering direction may cause the marker to indicate both routes alternately.



Newly constructed roads may not appear on the CD-ROM map. In this case, map matching is not possible. Changes in the course of a road will also prevent accurate map matching.
When driving on a road not shown on the CD-ROM map, the position marker used for map matching may indicate a different route. Even after returning to a route shown on the map, the position marker may jump to the position currently detected.



GPS (Global Positioning System)

NLEL0512S0103

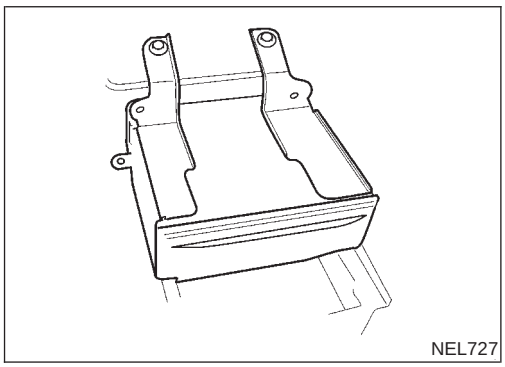
GPS is the global positioning system developed and operated by the US Department of Defense. GPS satellites (NAVSTAR) transmit radio waves and orbit around the earth at an altitude of approximately 21,000 km (13,000 miles).

GPS receiver calculates the three-dimensional position of the vehicle (latitude, longitude, and altitude from the sea level) by the time difference of the radio wave arriving from more than four GPS satellites (three-dimensional positioning).

When the radio wave is received from only three GPS satellites, the two-dimensional position (latitude and longitude) is calculated, using the altitude from the sea level data calculated by using four GPS satellites (two-dimensional positioning).

Positioning capability is degraded in the following cases.

- In two-dimensional positioning, when the vehicle's altitude from the sea level changes, the precision becomes lower.
- The location detection performance can have an error of about 100 m (300 ft) even in three-dimensional positioning with high precision. Because the precision is influenced by the location of GPS satellites used for positioning, the location detection performance may drop depending on the location of GPS satellites.
- When the radio wave from GPS satellites cannot be received, for example, when the vehicle is in a tunnel, in a parking lot inside building, under an elevated superhighway or near strong power lines, the location may not be detected. Turbulent/electric weather conditions may also affect positioning performance. If something is placed on the antenna, the radio wave from GPS satellites may not be received.



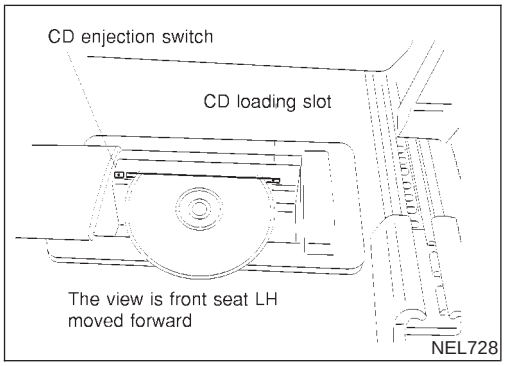
COMPONENT DESCRIPTION

NLEL0512S02

NAVI Control Unit

NLEL0512S0201

- The gyro (angular speed sensor) and the CD-ROM drive are built-in units that control the navigation functions.
- Signals are received from the gyro, the vehicle speed sensor, and the GPS antenna. Vehicle location is determined by combining this data with the data contained in the CD-ROM map. Locational information is shown on liquid crystal display panel.



CD-ROM Driver

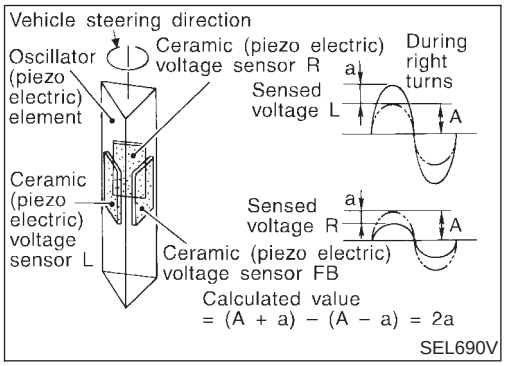
NLEL0512S0202

Maps, traffic control regulations, and other pertinent information can be easily red from the CD-ROM disc.

Map CD-ROM

NLEL0512S0203

- The map CD-ROM has maps, traffic control regulations, and other pertinent information.
- To improve CD-ROM map matching and route determination functions, the CD-ROM uses an exclusive Nissan format. Therefore, the use of a CD-ROM provided by other manufacturers cannot be used.



SEL690V

Gyro (Angular Speed Sensor)

NLEL0512S0204

- The oscillator gyro sensor is used to detect changes in vehicle steering angle.
- The oscillator gyro periodically senses oscillatory variation at the oscillation terminals. This variation is caused by changes in the vehicle angular velocity. Voltage variations are sensed by ceramic voltage sensors at the left and right sides of the terminals. Vehicle angular velocity corresponds directly with these changes in voltage.
- The gyro is built into the navigation (NAVI) control unit.

MAP DISPLAY

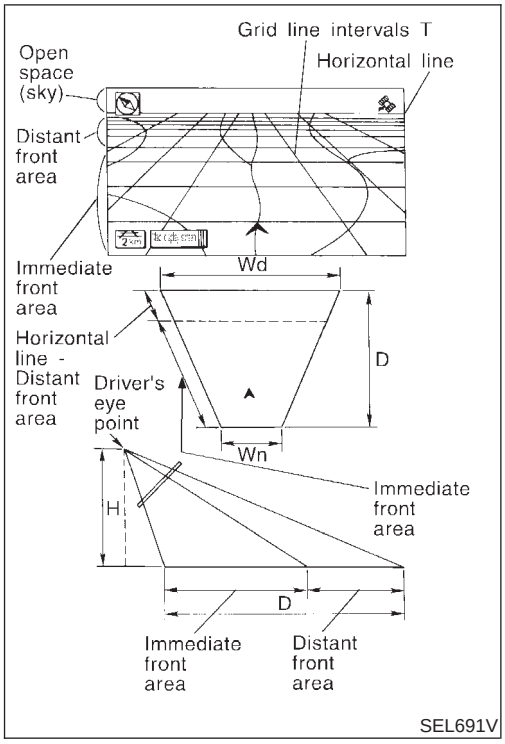
BIRDVIEW®

SEL524X

BIRDVIEW®

NLEL0512S0205

The BIRDVIEW® provides a detailed and easily seen display of road conditions covering the vehicle's immediate to distant area.



Description

NLEL0512S0206

- Display area: Trapezoidal representation showing approximate distances (Wn, D, and Wd).
- Ten horizontal grid lines indicate display width while six vertical grid lines indicate display depth and direction.
- Drawing line area shows open space, depth, and immediate front area. Each area is to a scale of approximately 5:6:25.
- Pushing the "ZOOM IN" button during operation displays the scale change and the view point height on the left side of the screen.
  The height of the view point increases or decreases when "ZOOM" or "WIDE" is selected with the joystick.

MAP DISPLAY

=NLEL0512S03

SEL525X

Function of each icon is as follows:

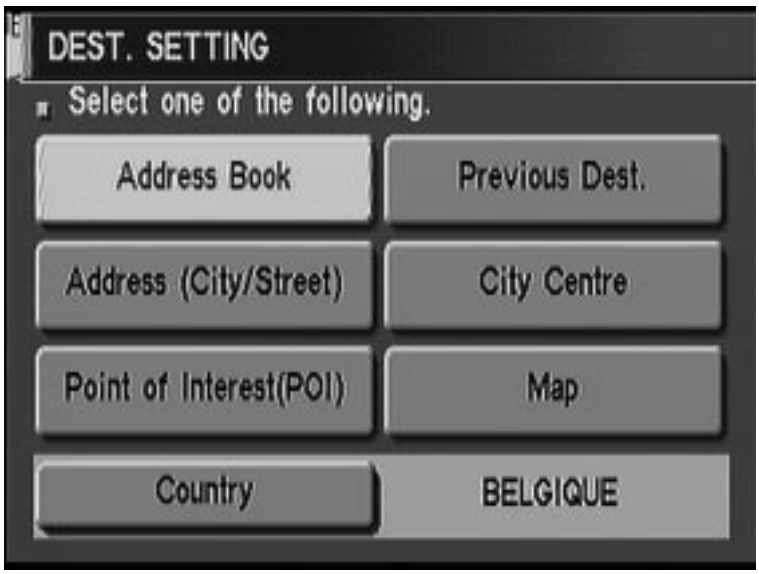
1) Azimuth indication
2) Position marker
   The tip of the arrow shows the current position. The shaft of the arrow indicates the direction in which the vehicle is traveling.
3) GPS reception signal (indicates current reception conditions)
4) Distance display (shows the distance in a reduced scale)

FUNCTION OF PANEL SWITCH

=NLEL0512S04

Display with Pushed "DEST" Switch

NLEL0512S0401



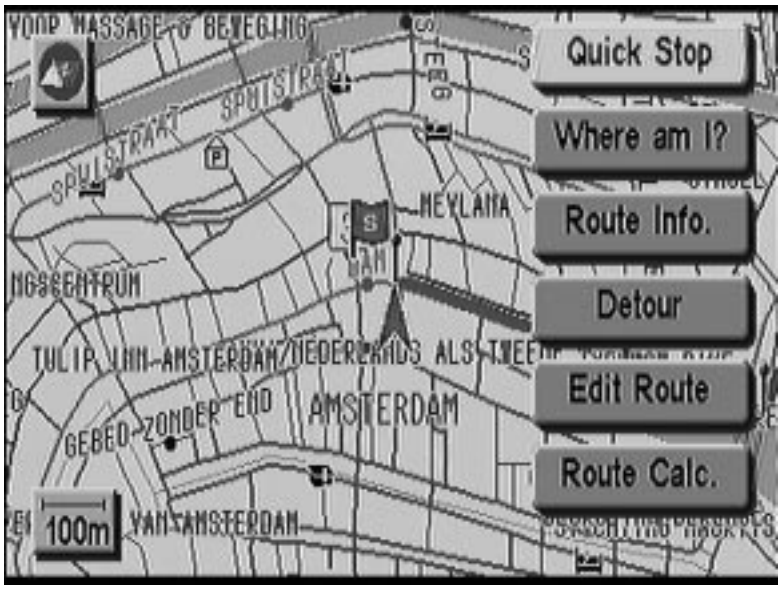
SEL615X

The function of each icon is as follows:

Icon	Description
Address Book	Favorite areas can be saved to memory.
Address (City/Street)	The information can be searched from the address.
Point of Interest (POI)	The information of favorite areas can be searched.
Previous Dest.	The previous ten destinations stored in memory are displayed.
City Centre	The information can be searched from city name.
Map	The information can be searched from the map.
Country	When two or more countries are included in a map CD-ROM, the destination can be searched for under the country name.

Display with Pushed "ROUTE" Switch

=NLEL0512S0402



SEL526X

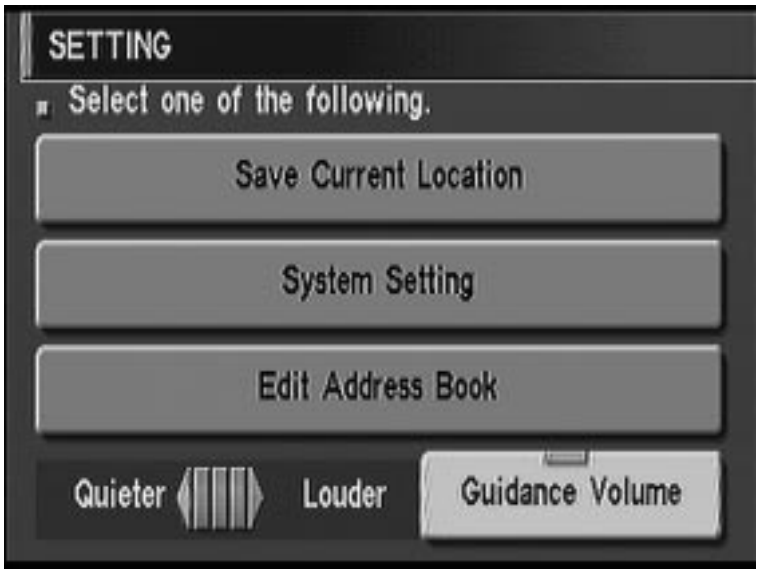
The function of each icon is as follows:

Icon	Description
Quick Stop	Select facility is set as destination or waypoint. (Route guidance has been turned OFF or the destination has been reached.)
Where am I?	Next current and previous street names can be displayed.
Route Info.*	The following items can be set. ● Complete Route ● Turn List ● Route Simulation (Displayed only when the destination area has been set.)
Detour*	Based on the selected distance, an alternative route is searched. [Displayed only when the recommended route (not its reverse) is followed.]
Edit Route*	Change the destination or add the transit points of the route set in the route guide. (Displayed only when the automatic reroute function has been turned OFF and the recommended route is not followed.)
Route Calc.	Search for a recommended route between the vehicle's current location and the destination area. (Displayed only when the destination area has been set.)

*: When destinations have been entered, route guidance OFF or destination have been reached, "Route Info.", "Detour", "Edit Route" and "Route Clac." are not displayed.

Display with Pushed "SETTING" Switch

=NLEL0512S0403



SEL614X

The function of each icon is as follows:

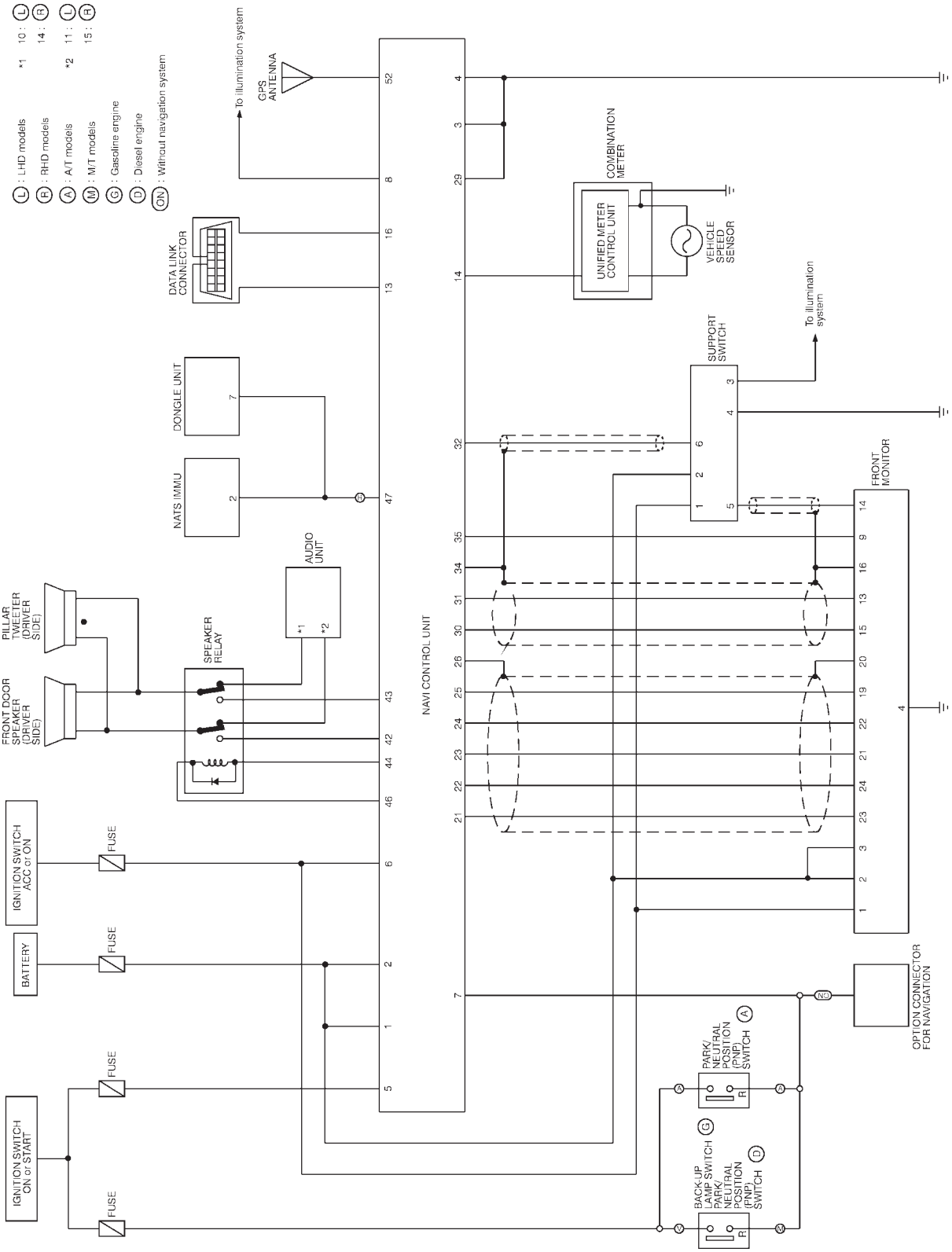
Icon	Description
Save Current Location	The current location can be stored in the Address Book.
System Setting	Many adjustments and settings can be made for maximum driving pleasure and convenience.
Edit Address Book	The Address Book data can be edited.
Guidance Volume	The volume and/or on/off of voice prompt can be controlled by the joystick.

Schematic

NLEL0513

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

NLEL0513S01

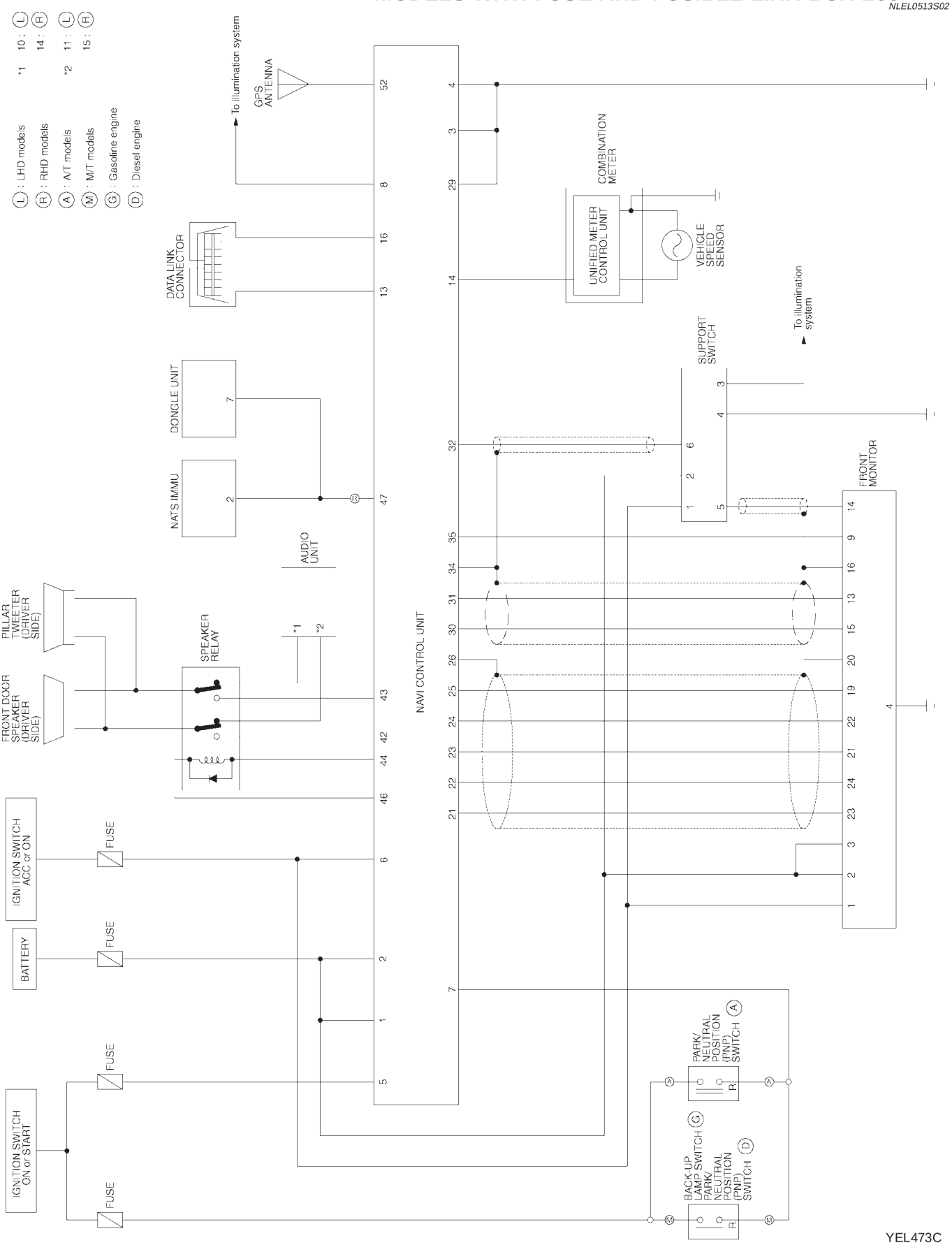


YEL956B

Schematic (Cont'd)

MODELS WITH FUSE AND FUSIBLE LINK BOX E90

NLEL0513S02



Wiring Diagram — NAVI —

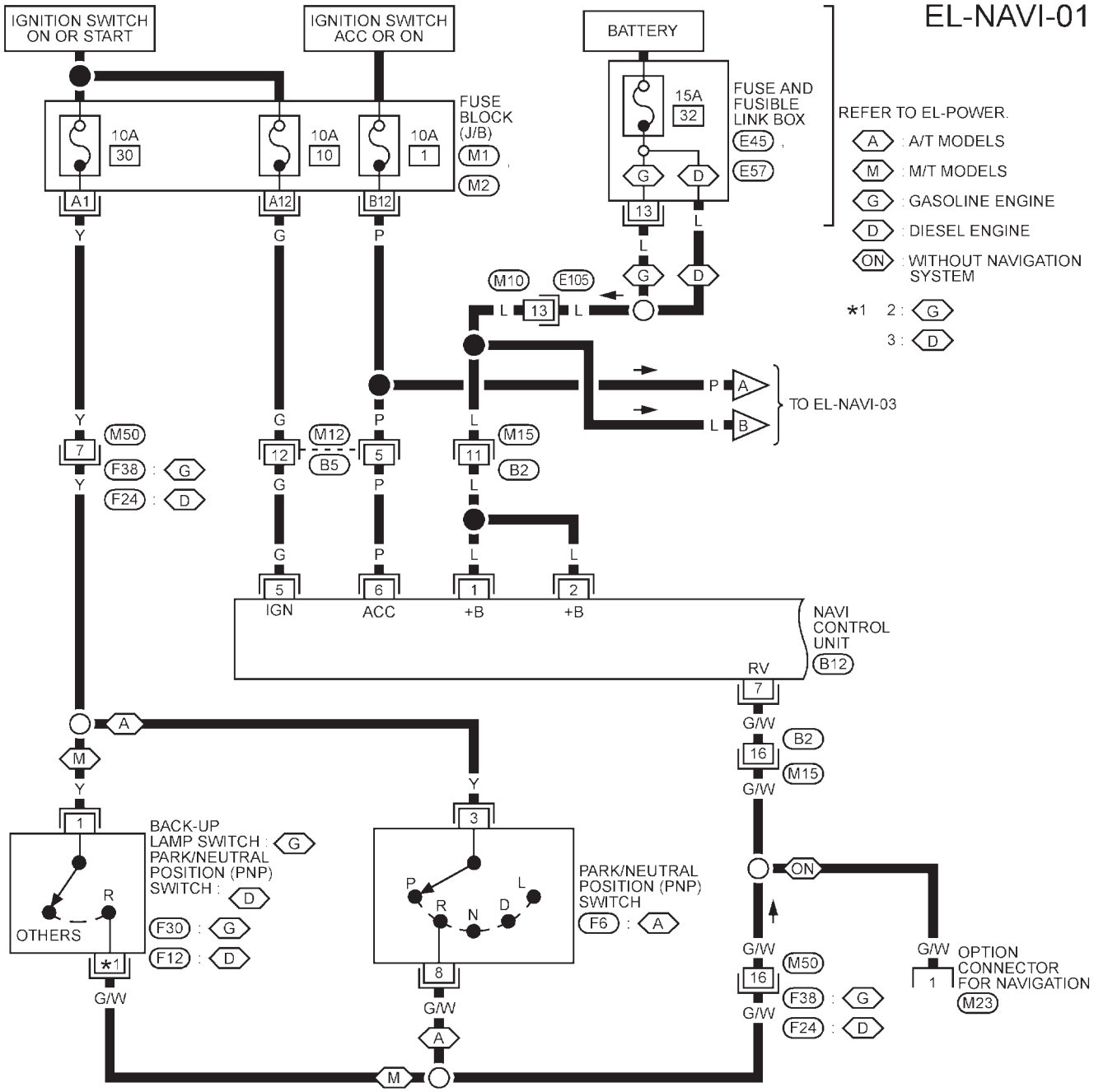
NLEL0514

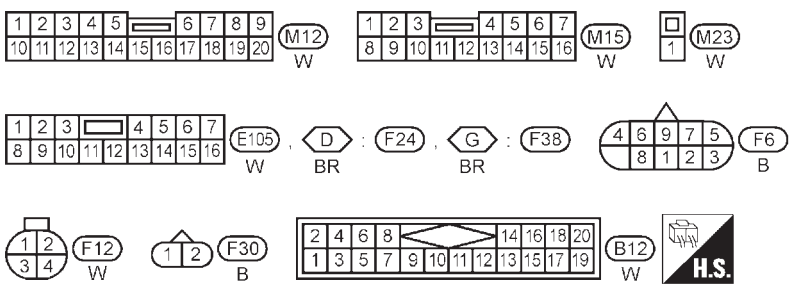
NLEL0514S05

NLEL0514S0501

MODELS WITH FUSE AND FUSIBLE LINK BOX E43

LHD Models

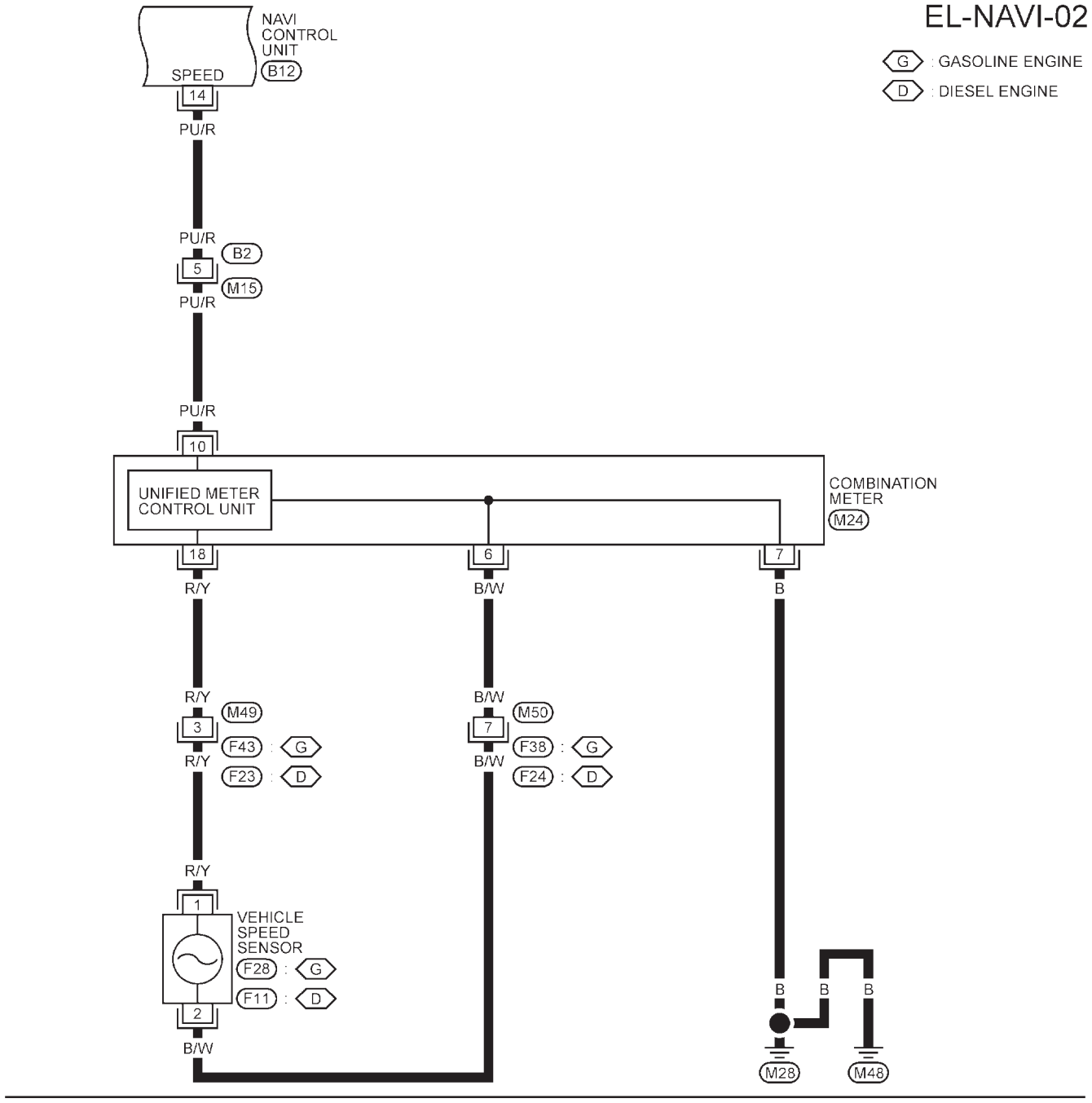


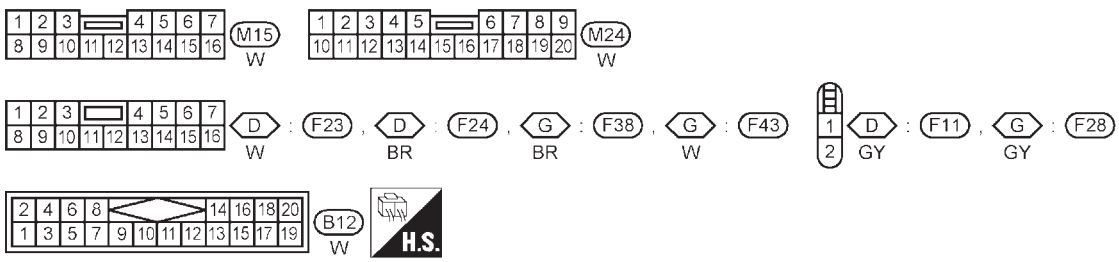


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

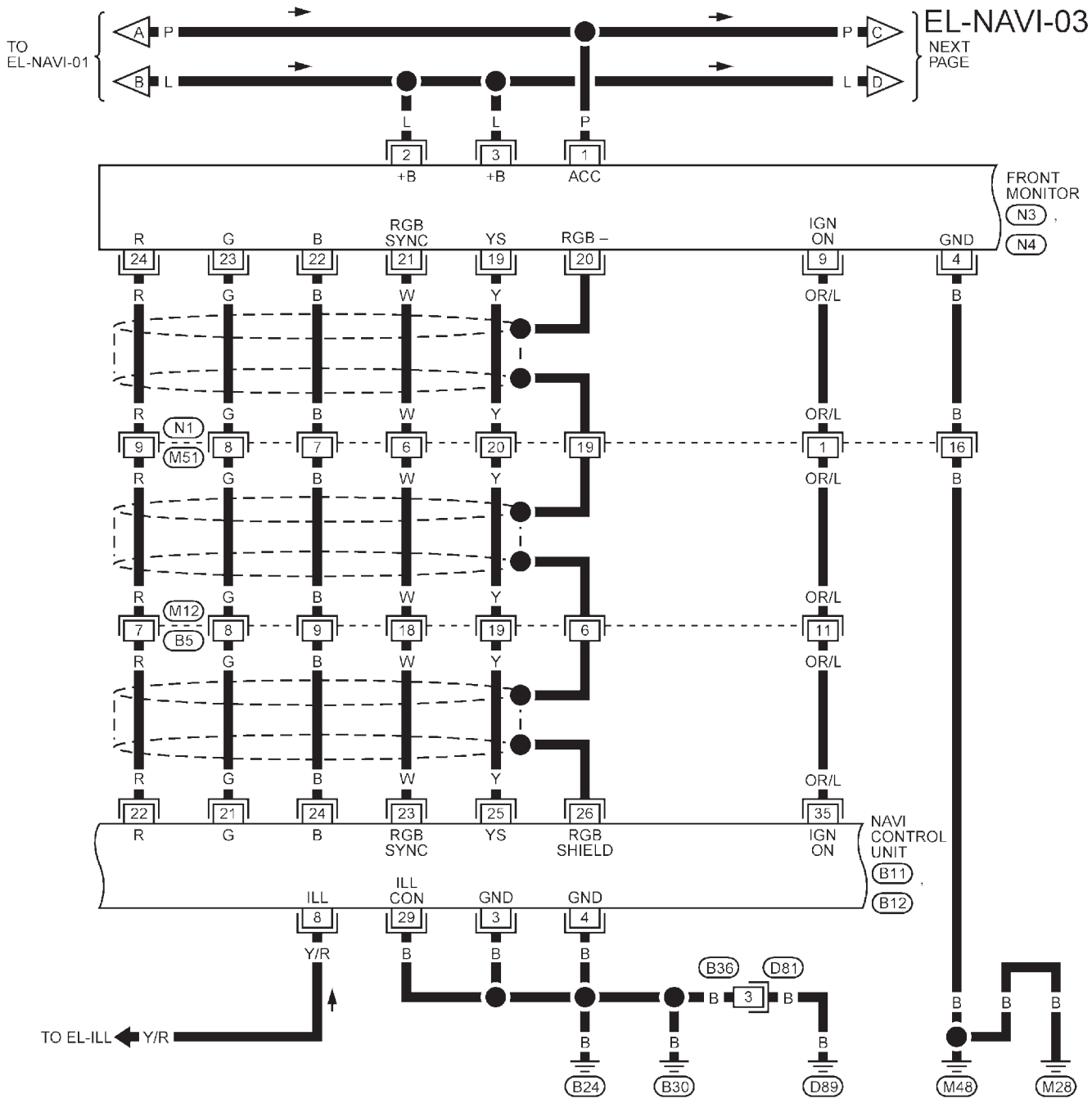
YEL957B

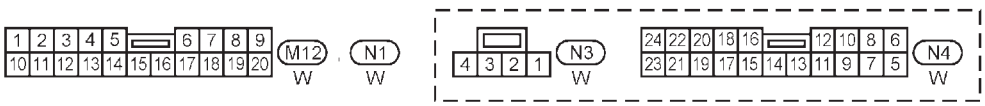
Wiring Diagram — NAVI — (Cont'd)

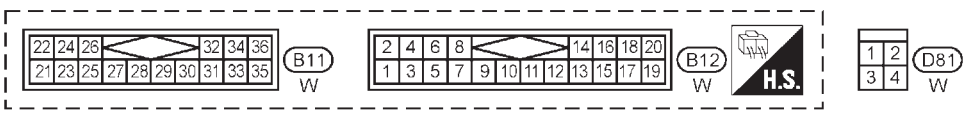




YEL958B

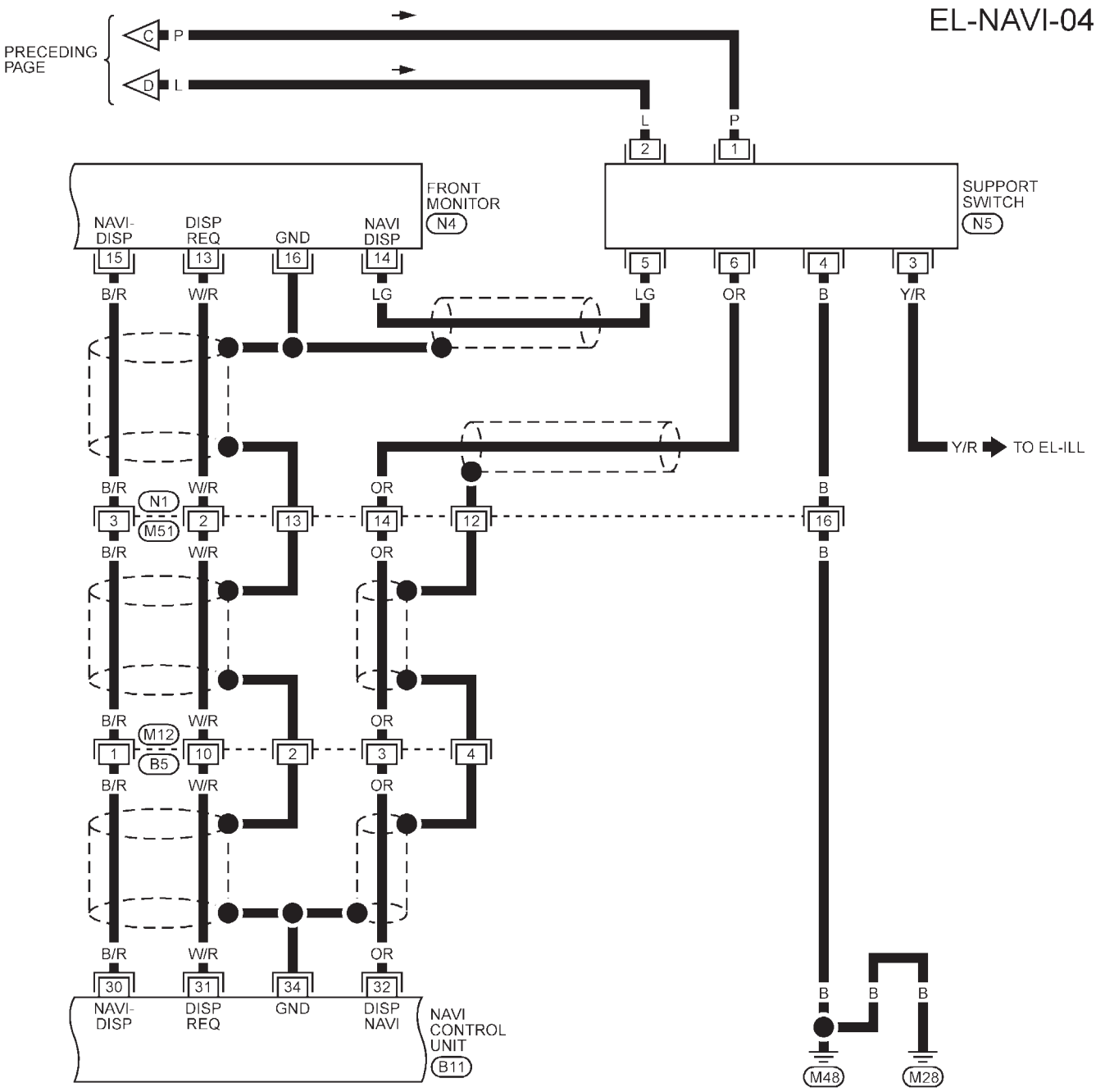

TO EL-NAVI-01
A P
B L
P C
L D
EL-NAVI-03
NEXT PAGE
L 2 +B
L 3 +B
P 1 ACC
FRONT MONITOR
N3
N4
R 24
G 23
B 22
RGB SYNC 21
YS 19
RGB – 20
IGN ON 9
GND 4
N1
M51
M12
B5
NAVI CONTROL UNIT
B11
B12
R
G
B
W
Y
OR/L
ILL 8
ILL CON 29
GND 3
GND 4
Y/R
TO EL-ILL Y/R
B36
D81
B24
B30
D89
M48
M28

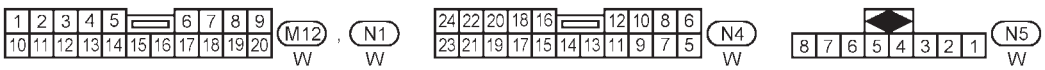

M12
W
N1
W
N3
W
N4
W

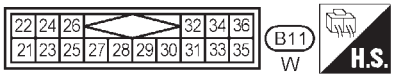

B11
W
B12
W
H.S.
D81
W

YEL959B

Wiring Diagram — NAVI — (Cont'd)

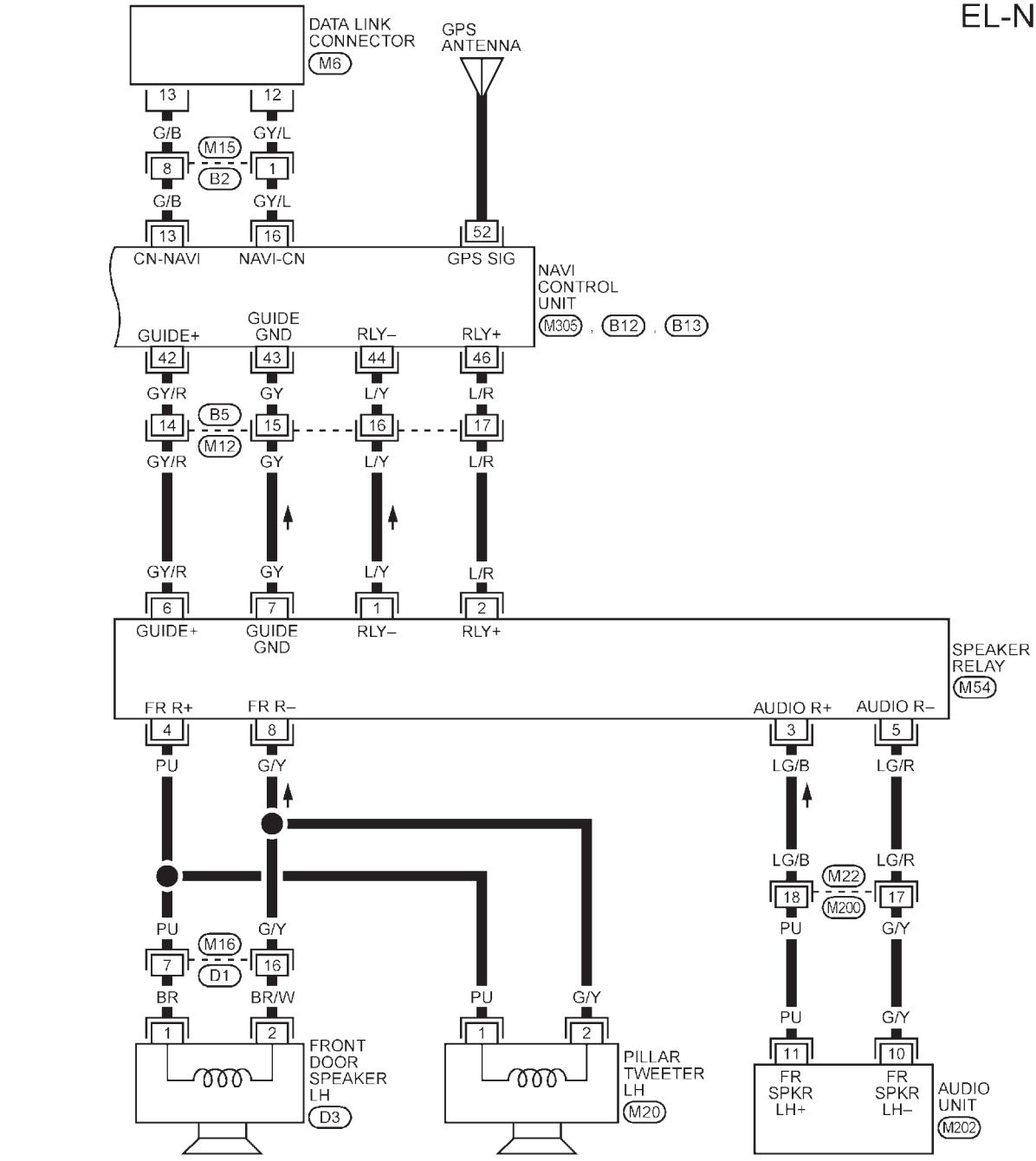


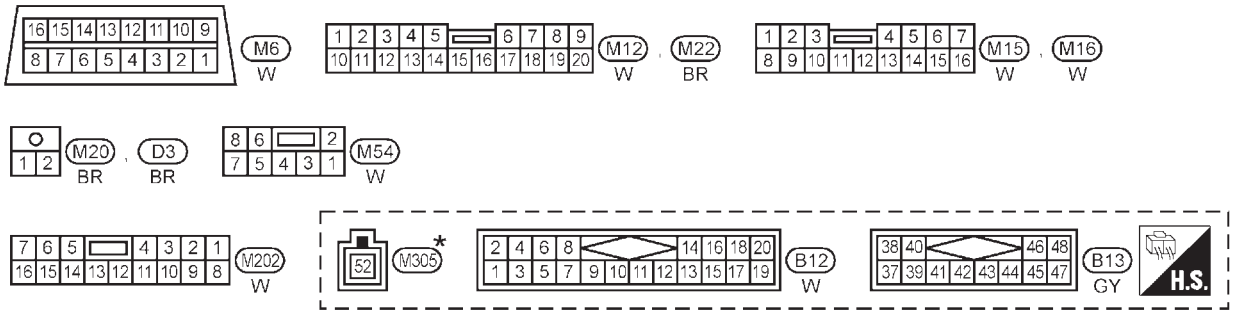




YEL960B

EL-NAVI-05





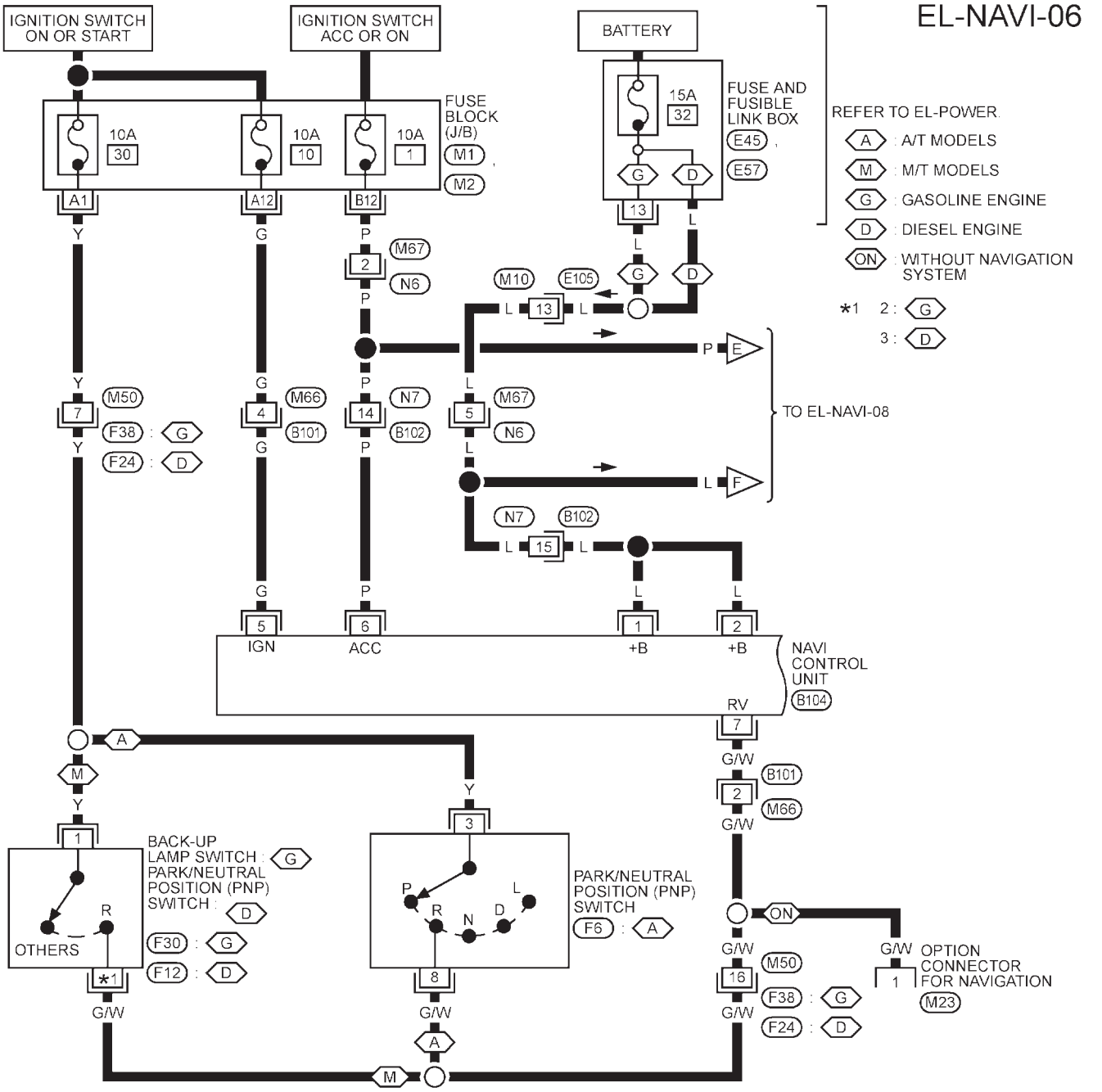
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

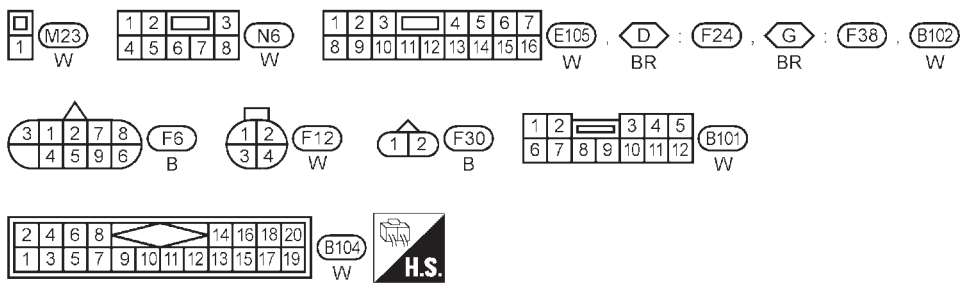
YEL961B

Wiring Diagram — NAVI — (Cont'd)

RHD Models

NLEL0514S0502

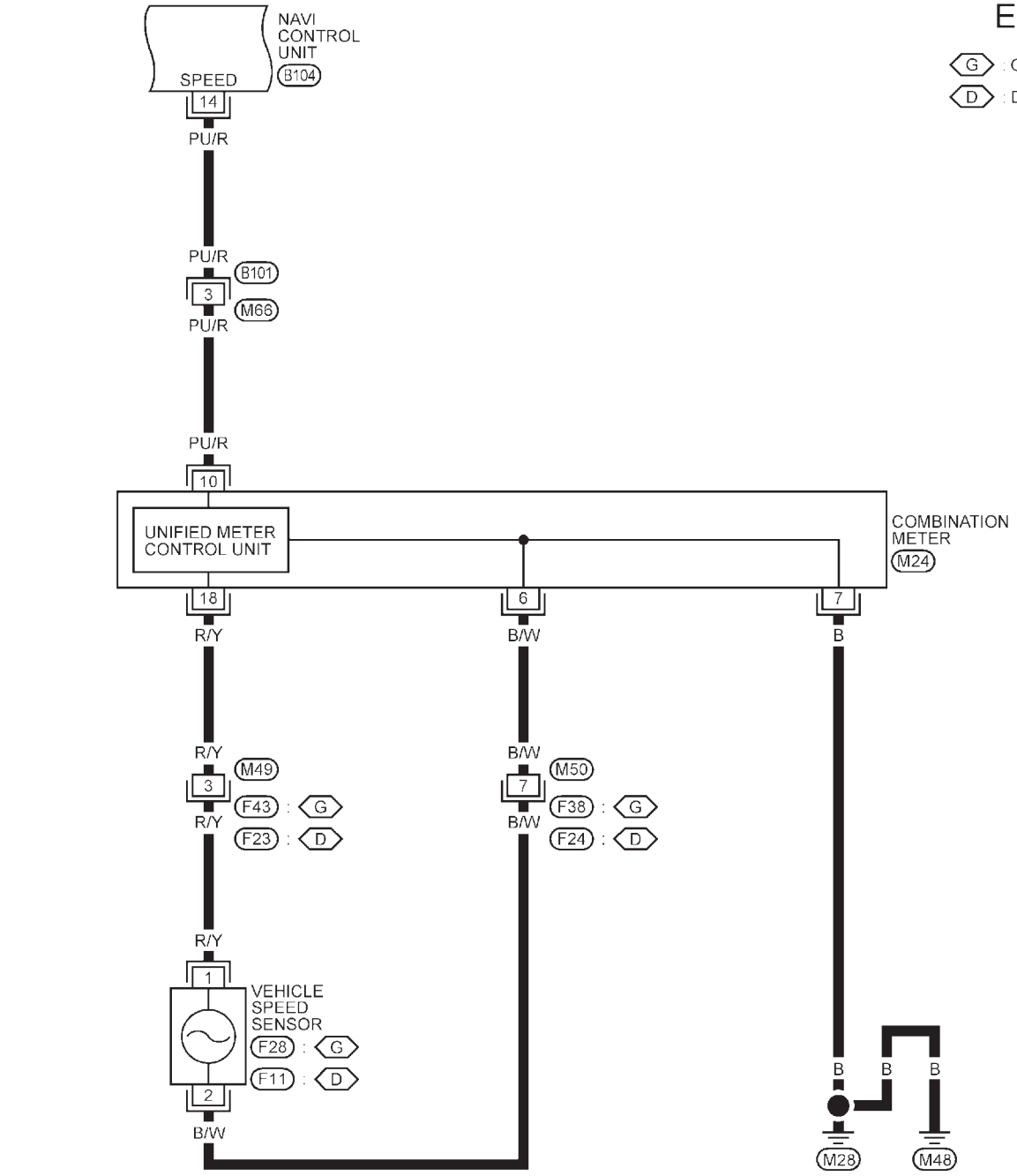


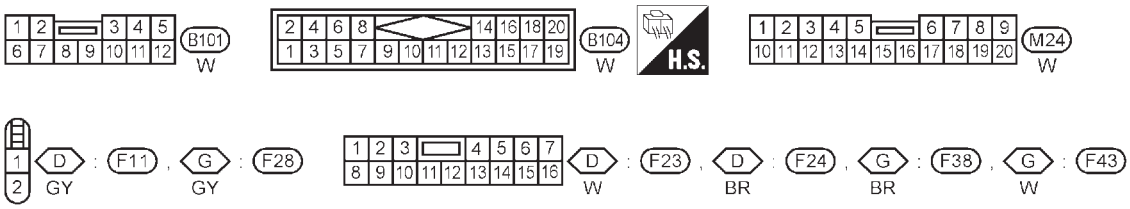


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
E45 , E57 -FUSE AND FUSIBLE LINK BOX

YEL962B

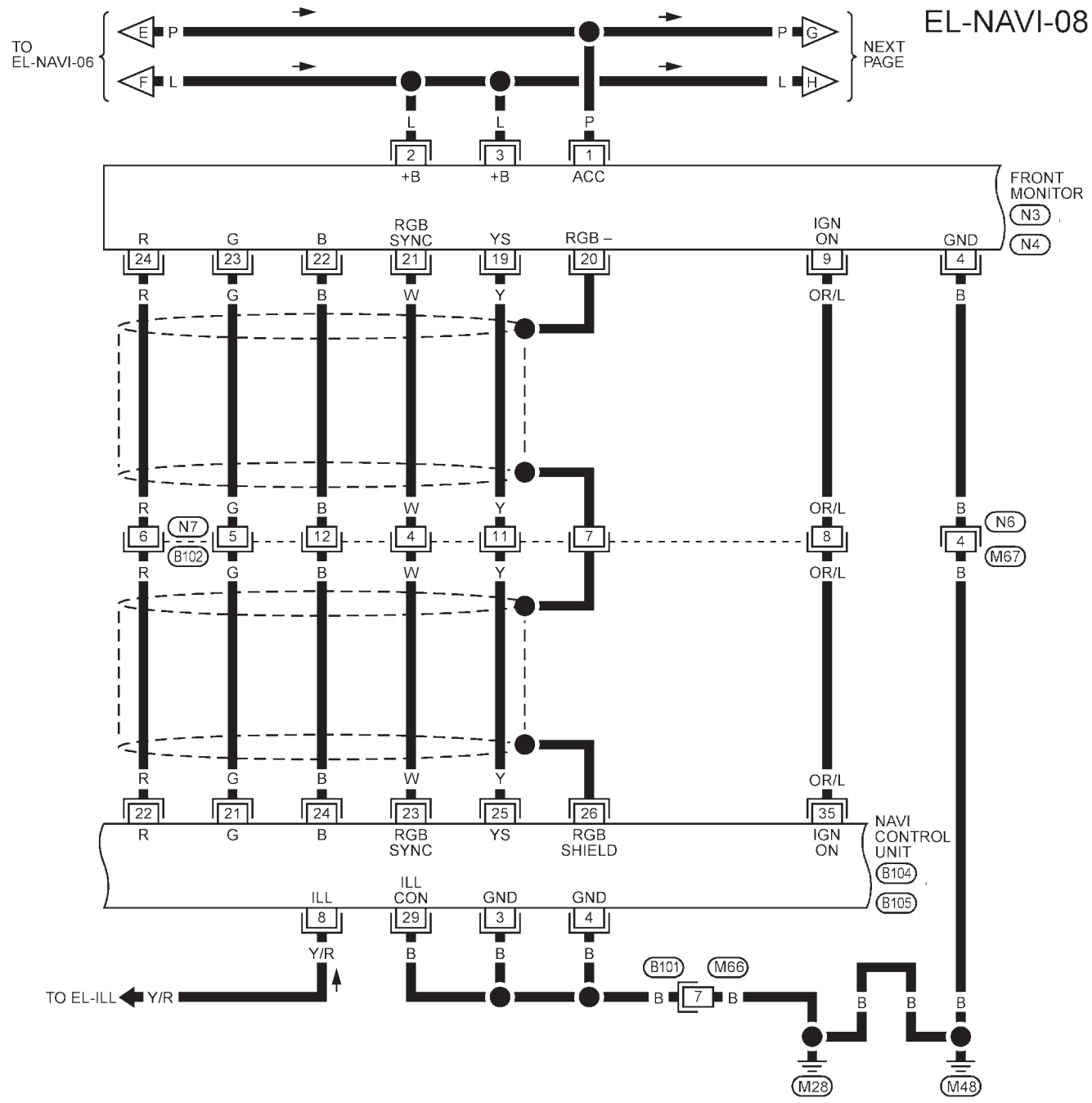
EL-NAVI-07

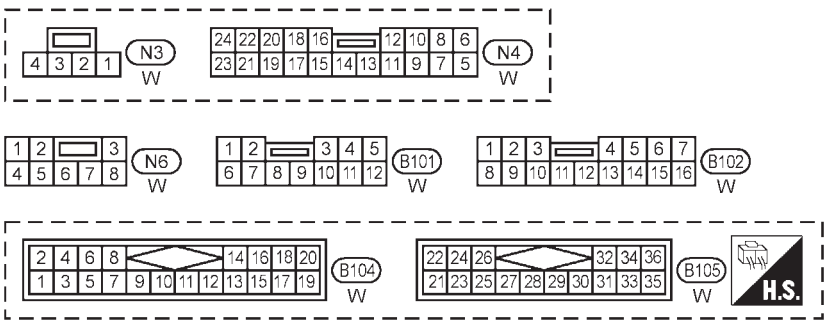




YEL963B

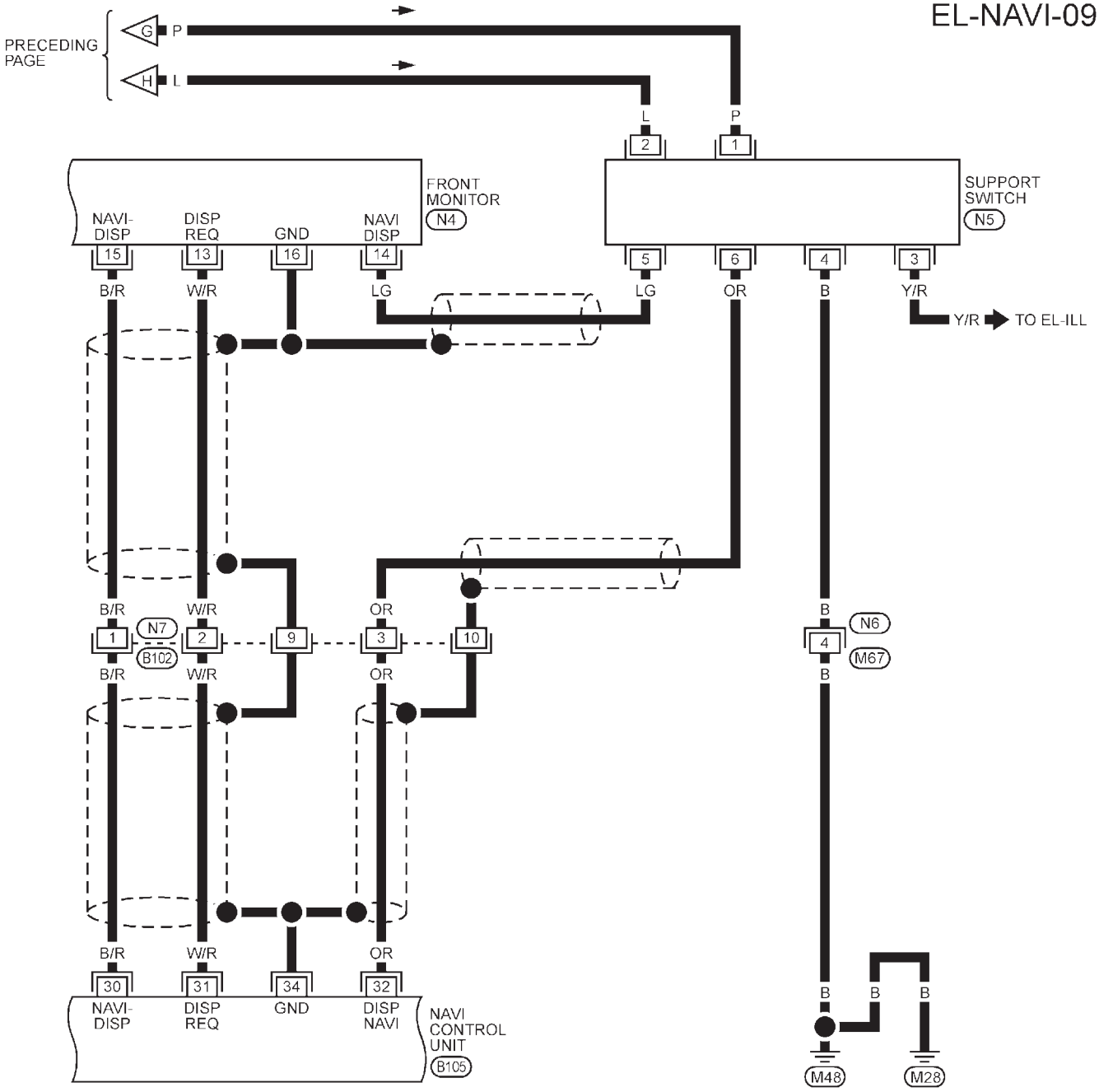
Wiring Diagram — NAVI — (Cont'd)

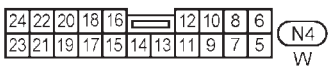


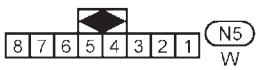


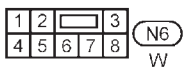
YEL964B

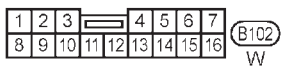
EL-NAVI-09

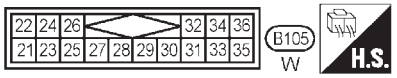








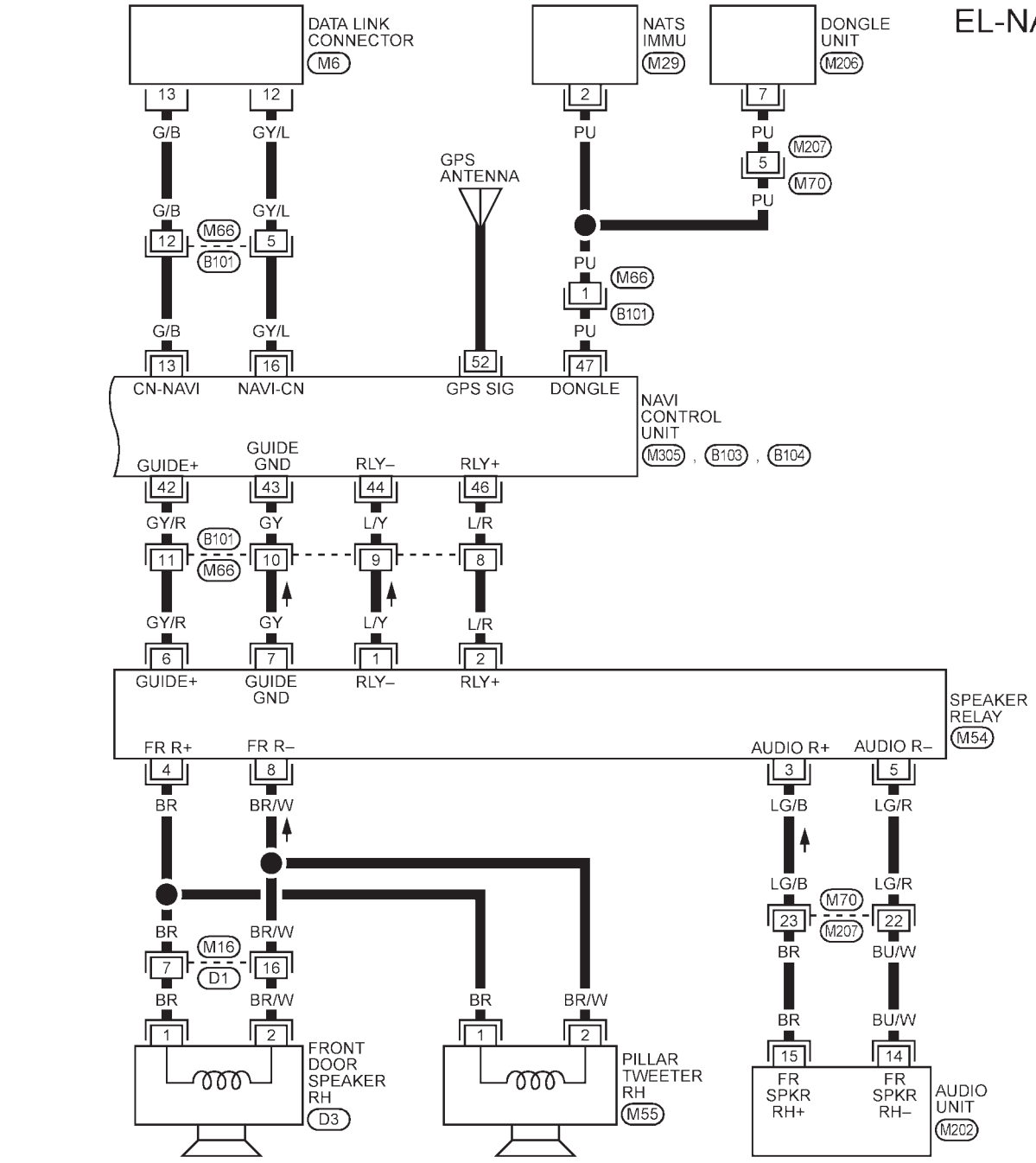


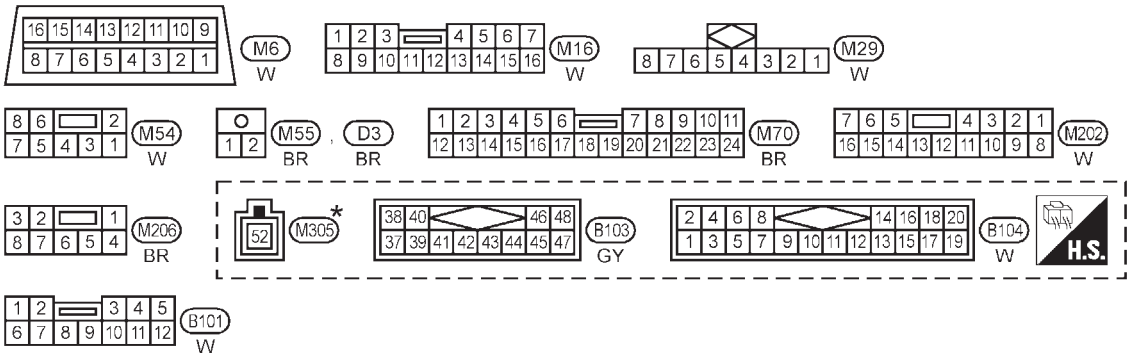


YEL965B

Wiring Diagram — NAVI — (Cont'd)

EL-NAVI-10





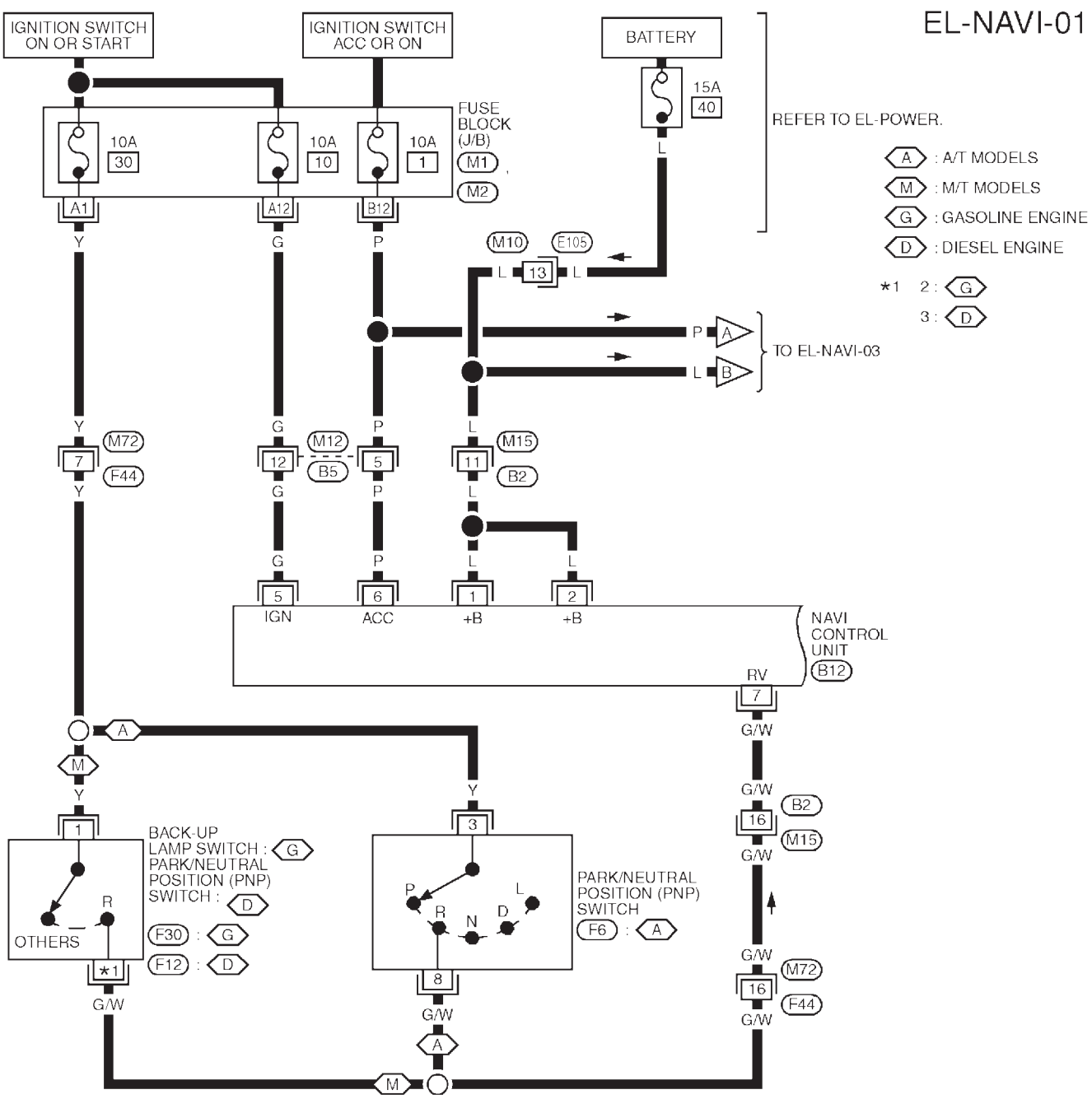
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

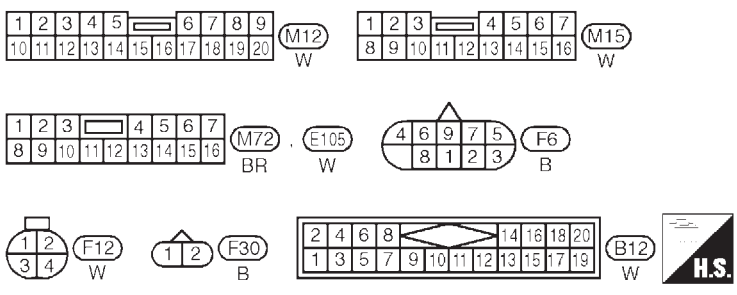
YEL966B

MODELS WITH FUSE AND FUSIBLE LINK BOX E90
LHD Models

NLEL0514S06

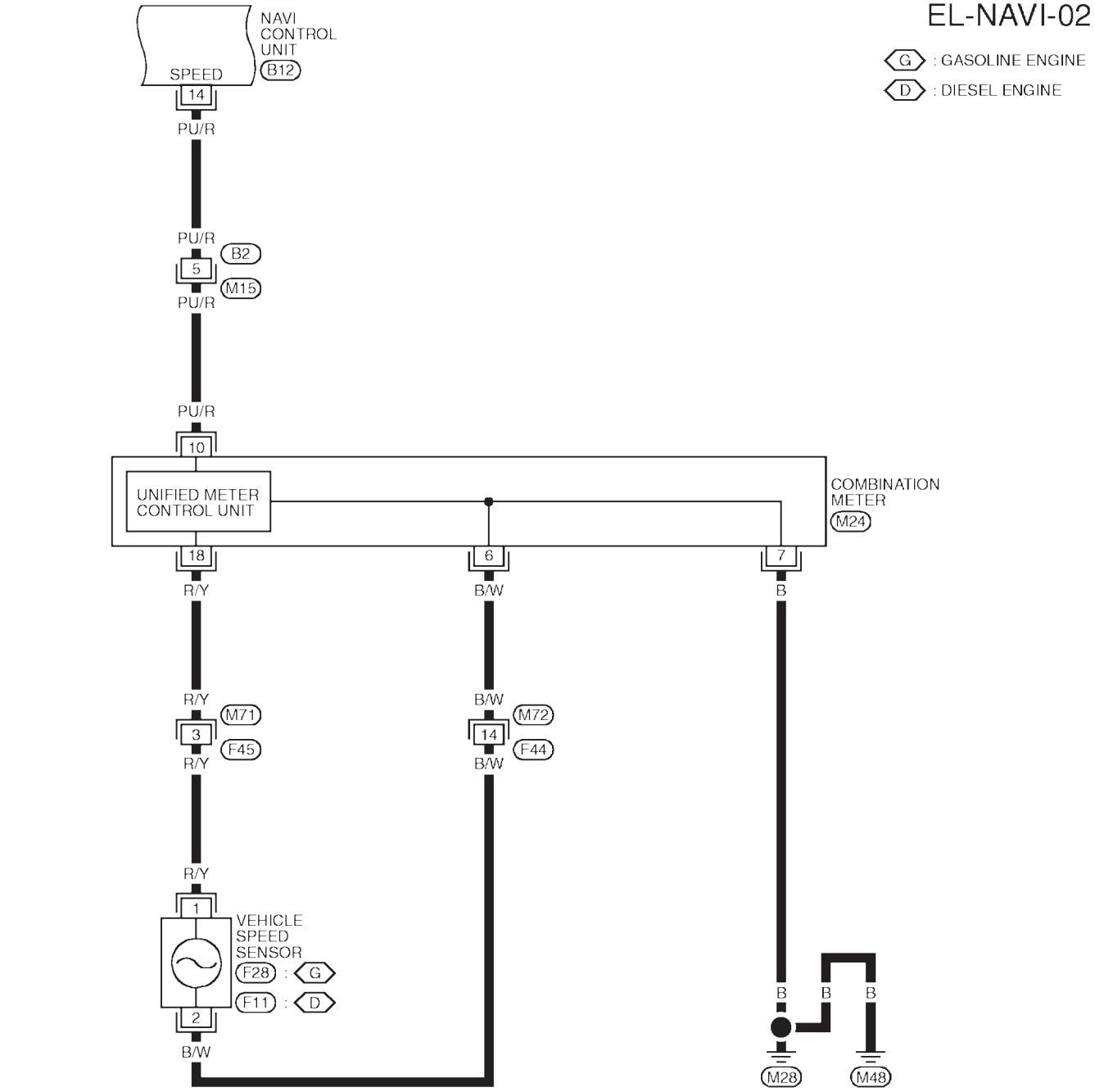
NLEL0514S0601

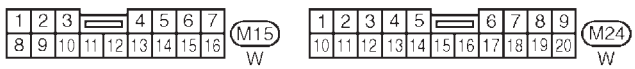


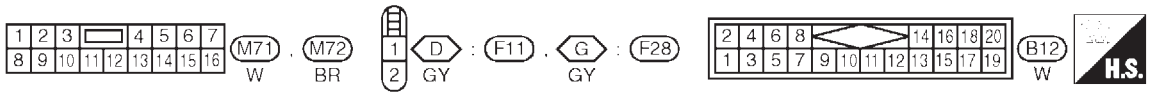


REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)

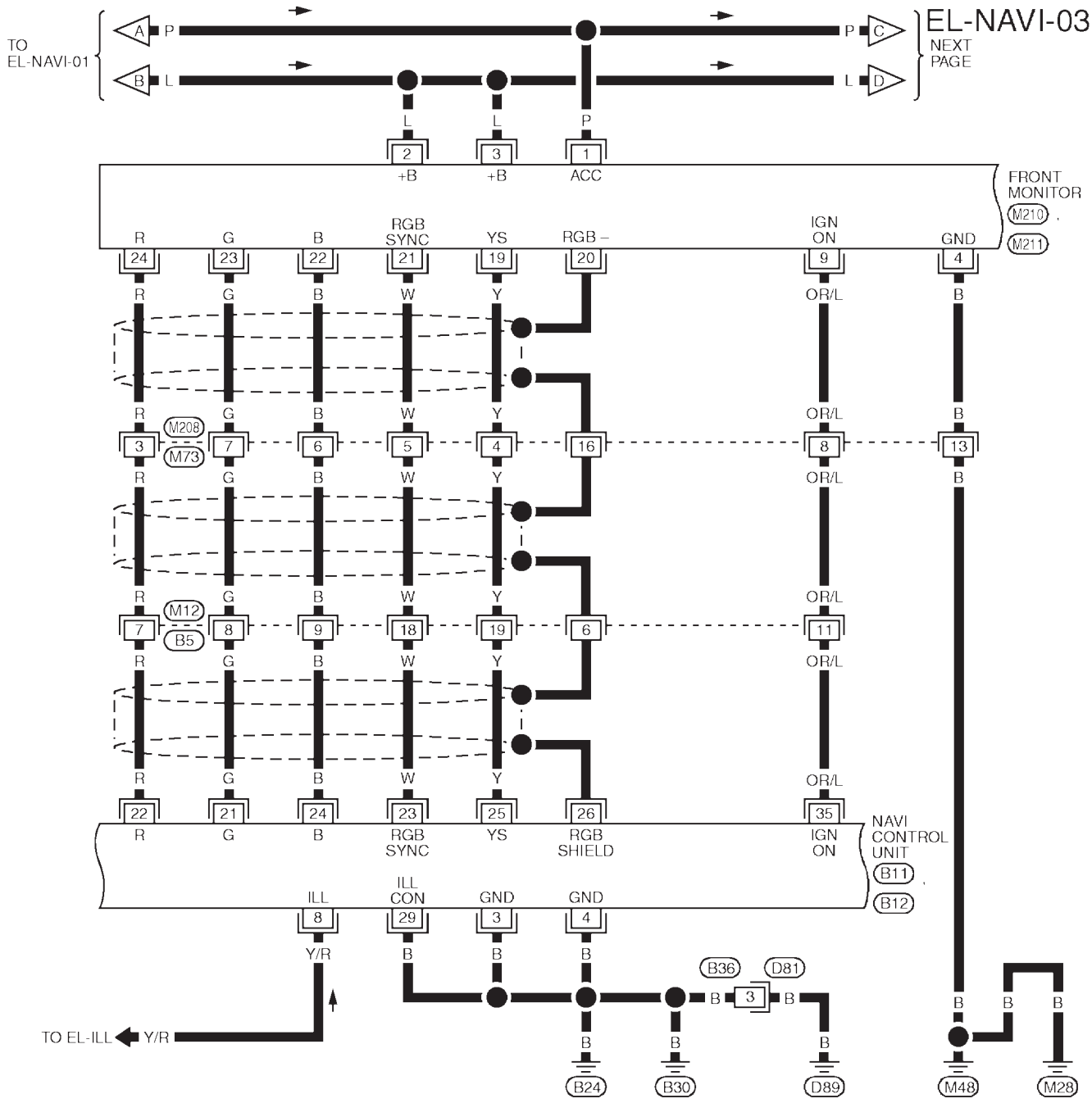
YEL474C

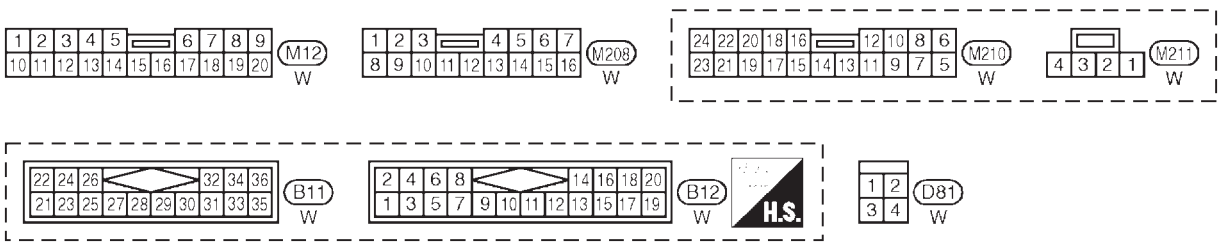

EL-NAVI-02
G : GASOLINE ENGINE
D : DIESEL ENGINE
NAVI CONTROL UNIT
B12
SPEED
14
PU/R
PU/R
B2
5
M15
PU/R
PU/R
10
UNIFIED METER CONTROL UNIT
COMBINATION METER
M24
18
6
7
R/Y
B/W
B
R/Y
M71
3
F45
R/Y
B/W
M72
14
F44
B/W
R/Y
1
VEHICLE SPEED SENSOR
F28 : G
F11 : D
2
B/W
B
B
B
M28
M48


M15
W
M24
W


M71
W
M72
BR
D
GY
F11
G
GY
F28
B12
W
H.S.

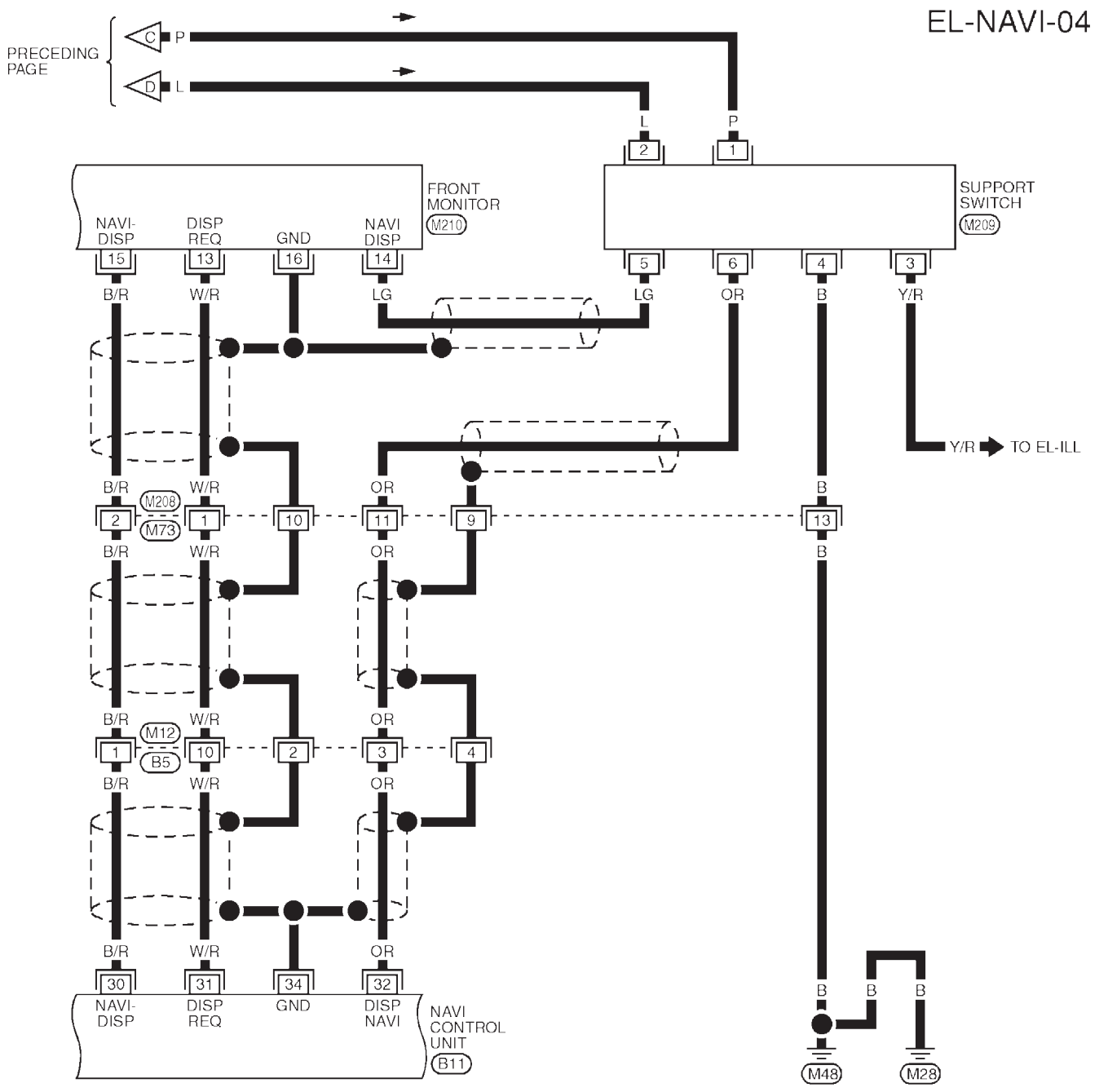
YEL475C

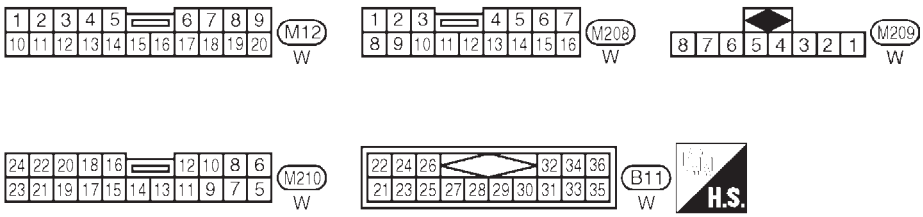

TO EL-NAVI-01
A P
B L
EL-NAVI-03
NEXT PAGE
P C
L D
L 2 +B
L 3 +B
P 1 ACC
FRONT MONITOR
M210
M211
R 24
G 23
B 22
RGB SYNC 21
YS 19
RGB – 20
IGN ON 9
GND 4
M208
M73
M12
B5
NAVI CONTROL UNIT
B11
B12
ILL 8
ILL CON 29
GND 3
GND 4
Y/R
TO EL-ILL
B36
D81
B24
B30
D89
M48
M28


M12
M208
M210
M211
B11
B12
H.S.
D81
W

YEL476C

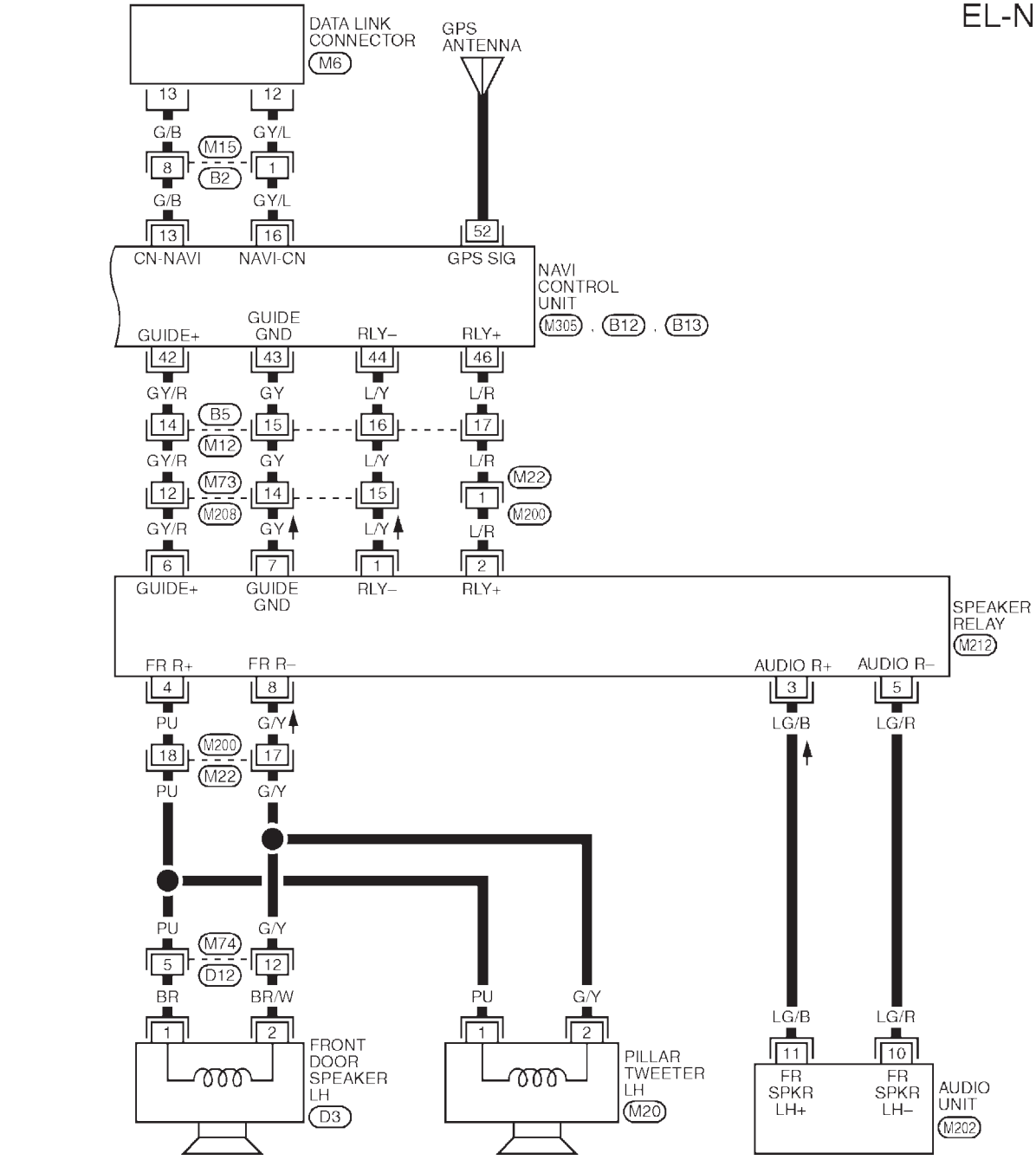
Wiring Diagram — NAVI — (Cont'd)

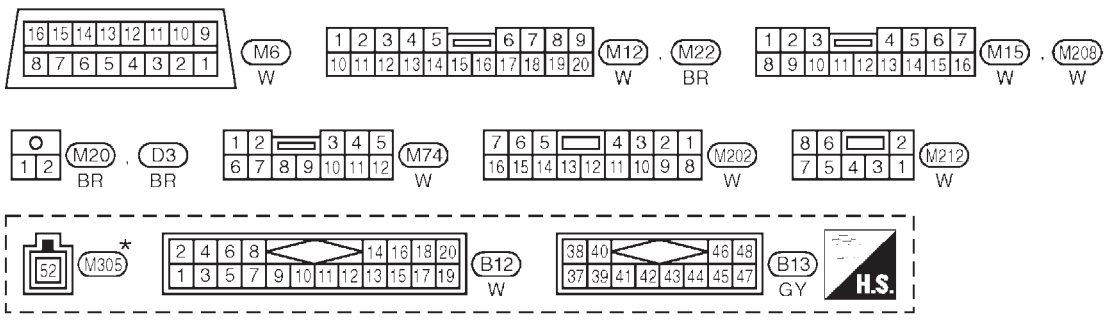




YEL477C

EL-NAVI-05



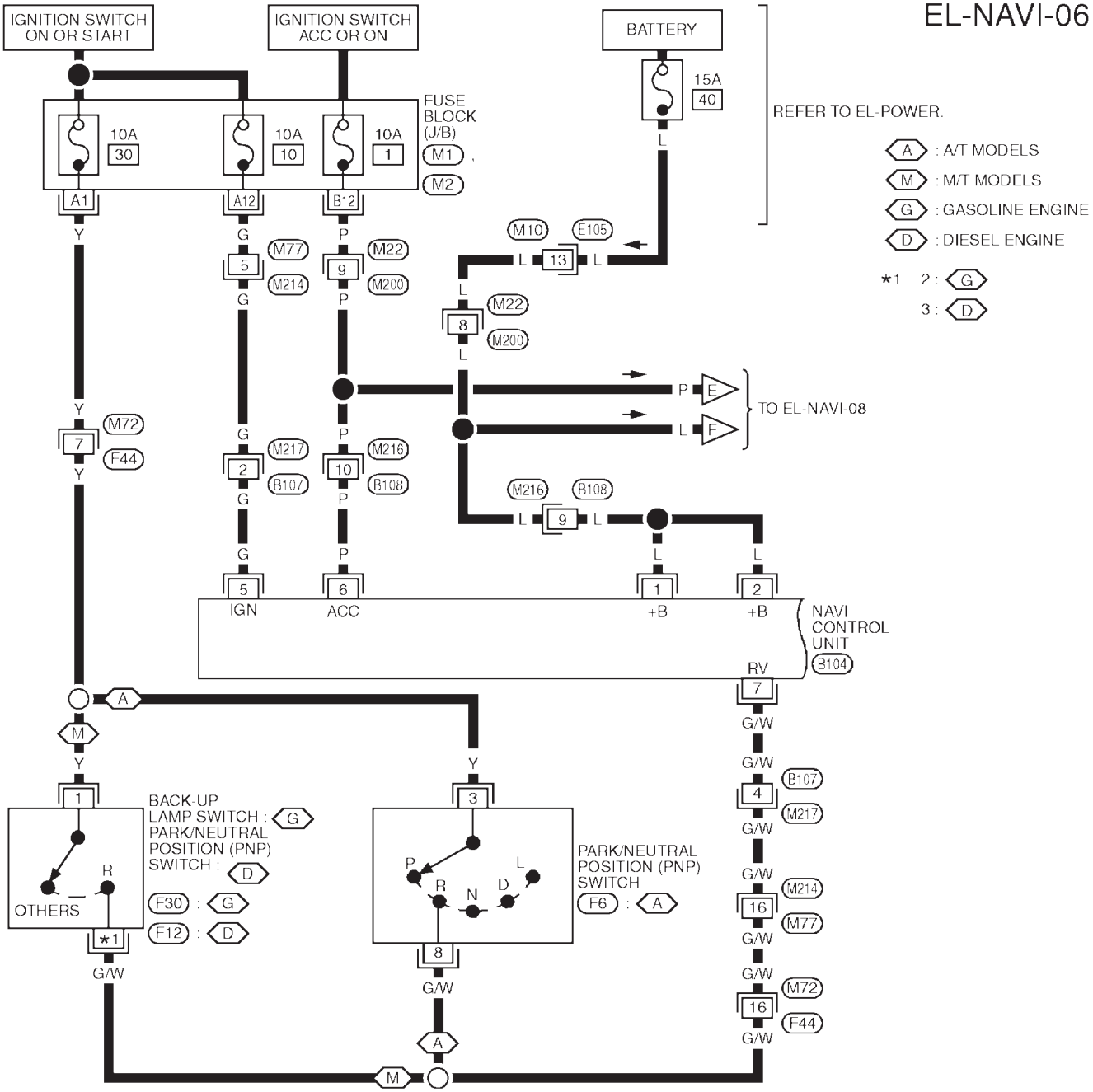


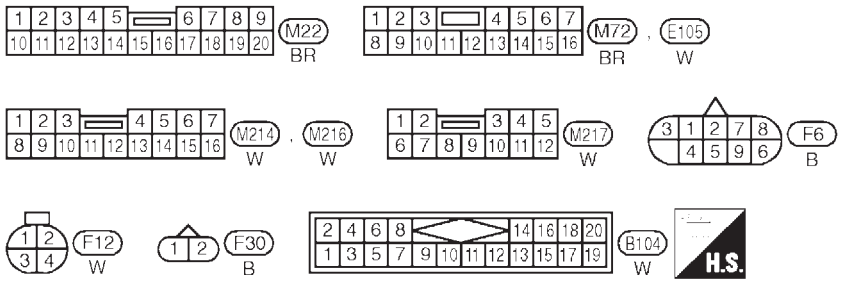
★ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL478C

RHD Models

NLEL0514S0602

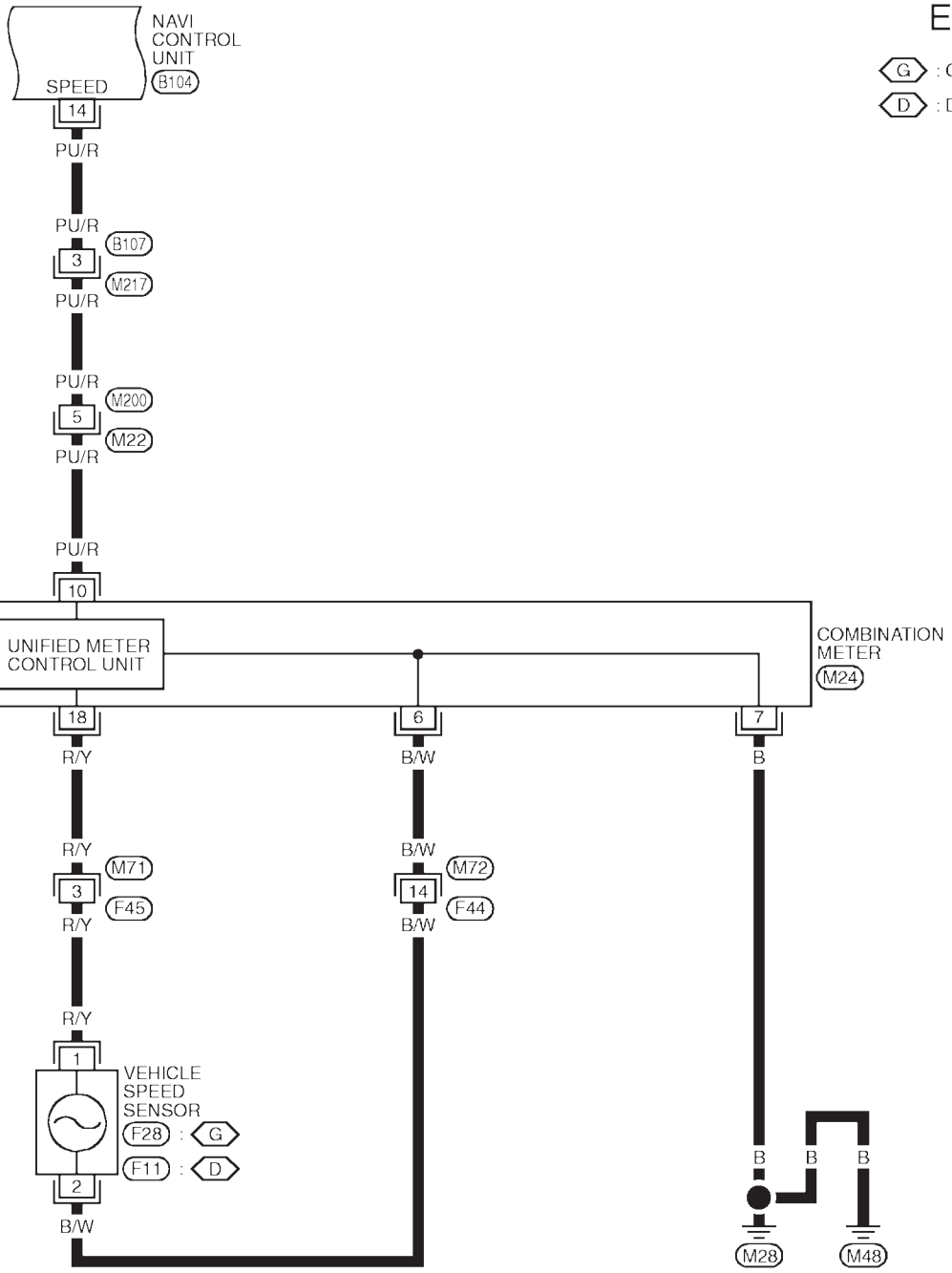


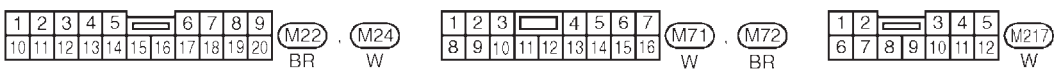


REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL479C

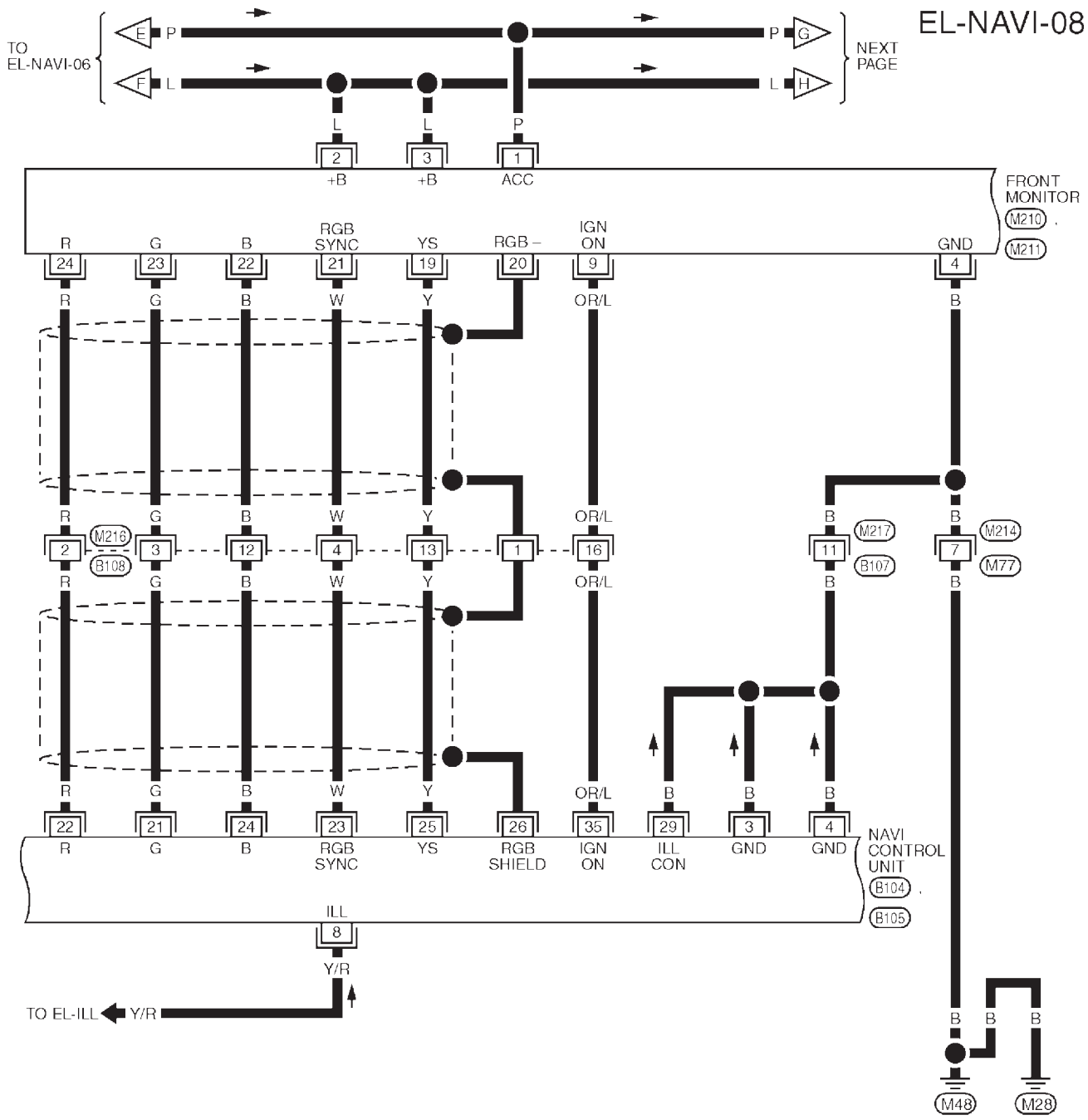
EL-NAVI-07

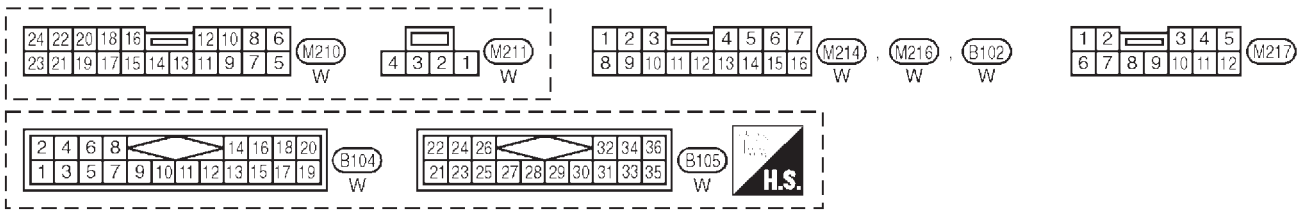




YEL480C

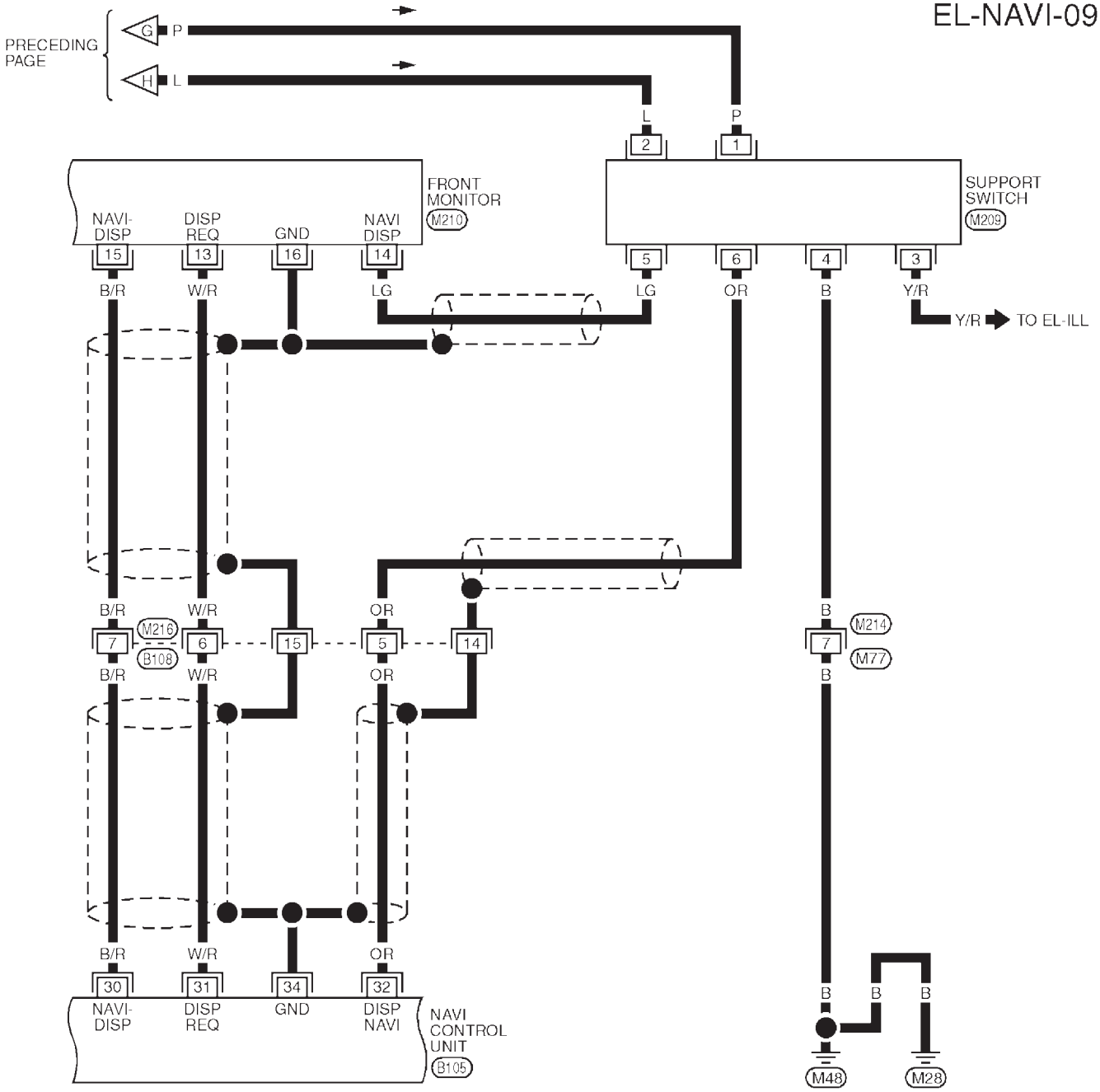
Wiring Diagram — NAVI — (Cont'd)

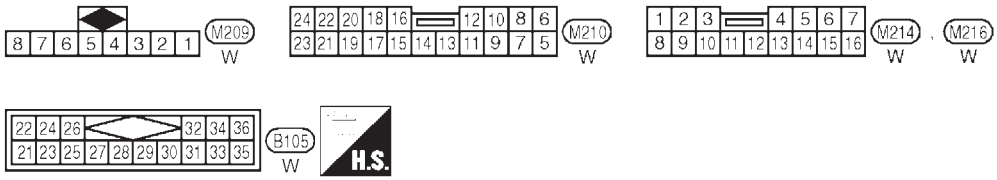




YEL481C

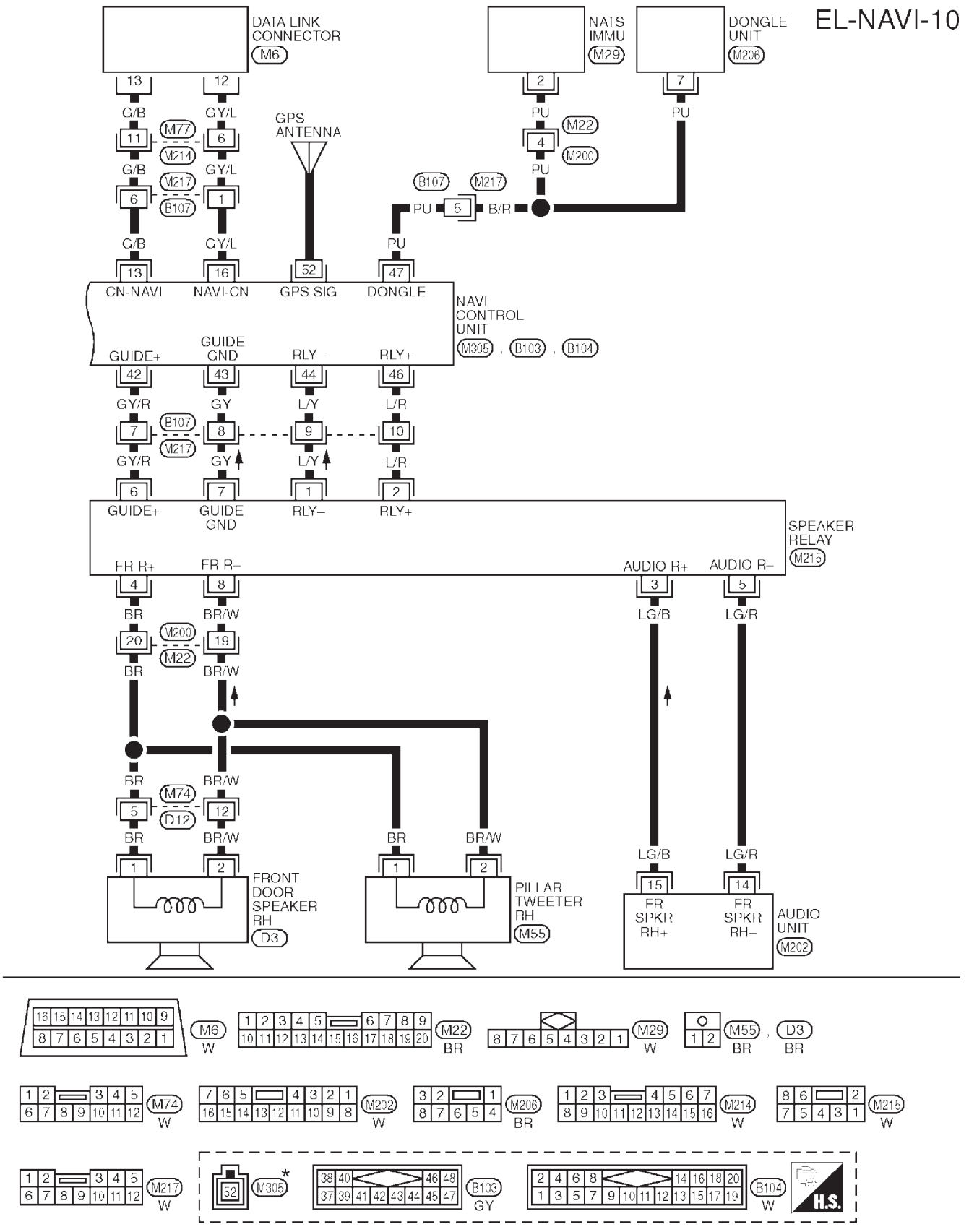
EL-NAVI-09





YEL482C

Wiring Diagram — NAVI — (Cont'd)



★ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL483C

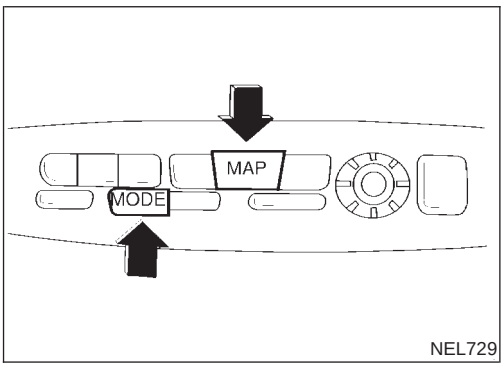
Self-diagnosis Mode

NLEL0515

APPLICATION ITEMS

NLEL0515S01

Mode			Description	Reference page
Self Diagnosis			Self-diagnosis for Navigation, Display and GPS Antenna connection.	EL-402
Confirmation/ adjustment	Diagnose the Display		Color and gray gradation of display can be checked in this mode.	EL-410
	Diagnosis for Signals from the Car		Several input signals to NAVI control unit, can be monitored in this mode.	EL-408
	Navigation	Check the map CD-ROM version	The version (parts number) of inserted CD-ROM can be checked in this model.	EL-409
		Error history	Diagnosis results previously stored in the memory (before turning ignition switch ON) are displayed in this mode. Time and location when/where the errors occurred are also displayed.	EL-404
		Longitude & Latitude	Display the map. Use the joystick to adjust position. Longitude and latitude will be displayed.	EL-411
		Adjust the Angle	Turning angle of the vehicle on the display can be adjusted in this mode.	EL-412
		Speed Calibration	Under ordinary conditions, the navigation system distance measuring function will automatically compensate for minute decreases in wheel and tire diameter caused by tire wear or low pressure. Speed calibration immediately restores system accuracy in cases such as when distance calibration is needed because of the use of tire chains in inclement weather.	EL-413
	Initialize Location		This mode is for initializing the current location. Use when the vehicle is transported a long distance by a trailer, etc.	EL-414



NEL729

HOW TO PERFORM SELF-DIAGNOSIS MODE

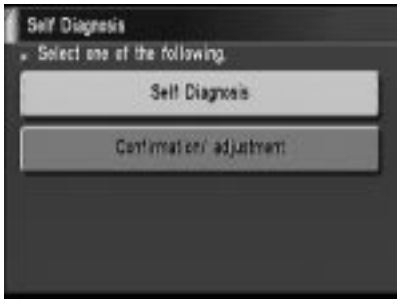
NLEL0515S02

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both of “MAP” and “MODE” switches at the same time for more than five seconds.

SEL527X

4. Select “Self Diagnosis” or “Confirmation/ adjustment”.

- For further procedure, refer to the following pages which describe each application item of the self-diagnosis mode.



SEL527X

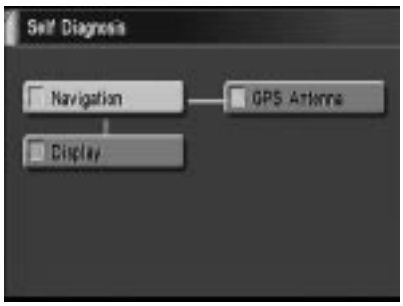
"Self Diagnosis"

NLEL0515S0201

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Self Diagnosis".

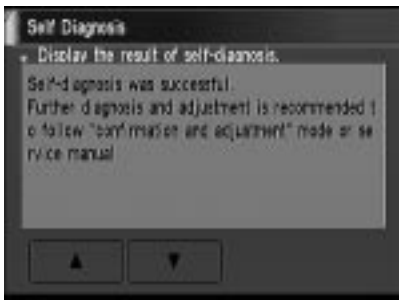
SEL528X

5. Self-diagnosis will be performed.



SEL529X

6. Diagnosis results will be displayed. Diagnosis results are indicated by display color. For details refer to EL-403, "SELF-DIAGNOSIS RESULTS".



SEL530X

To obtain detailed diagnosis results on the screen, touch "Navigation" or "Display" or "GPS Antenna".

SELF-DIAGNOSIS RESULTS

=NLEL0515S03

Diagnosed item	Displayed color	Detailed result	Description	Diagnoses/service procedure **Recheck system at each check or replacement (When malfunction is eliminated, further repair work is not required.)**
"GPS Antenna" (GPS antenna connection)	Green	—	GPS antenna is connected to NAVI control unit correctly.	—
	Yellow	Connection to the following unit is abnormal. See the Service Manual for further diagnosis.	GPS antenna connection error is detected.	1. Check GPS antenna feeder cable connection at NAVI control unit. 2. Visually check GPS antenna feeder cable. If NG, replace GPS antenna assembly. 3. Replace GPS antenna.
"Navigation"	Green	—	No failure is detected.	—
	Red	[*** is abnormal.]	NAVI control unit is malfunctioning.	Replace NAVI control unit.
	Gray	Self-diagnosis for CD-ROM DRIVER of NAVI was not conducted due to no insertion of CD-ROM.	Any CD-ROM is not inserted or NAVI control unit is malfunctioning.	1. Confirm that map CD-ROM is not inserted into NAVI control unit. 2. Replace NAVI control unit.
	Yellow	CD-ROM or CD-ROM DRIVER of NAVI is abnormal. See the Service Manual for further diagnosis.	NAVI control unit judges that inserted CD-ROM is malfunctioning. Map CD-ROM or CD-ROM driver of the unit is malfunctioning.	1. Confirm the disc is installed correctly (not up side down.) 2. Perform "Check the Map CD-ROM version MODE" in EL-409 to confirm whether correct CD-ROM is inserted or not. 3. Check the disc surface. Are there any scratches, abrasions or pits on the surface? 4. Replace the CD-ROM. 5. Replace NAVI control unit.
		CD-ROM is abnormal. Please check the disc.	Inserted map CD-ROM can not be read. Map CD-ROM or CD-ROM driver of the unit is malfunctioning.	
		Connection to the following unit is abnormal. See the Service Manual for further diagnosis.	GPS antenna connection error is detected.	1. Check GPS antenna feeder cable connection at NAVI control unit. 2. Visually check GPS antenna feeder cable. If NG, replace GPS antenna assembly. 3. Replace GPS antenna.

NOTE:
Connection between NAVI control unit and display unit should be normal. Therefore, "Display connection error" will not occur when the display can be opened or closed properly.

Confirmation/Adjustment Mode

=NLEL0516

"ERROR HISTORY" MODE

NLEL0516S01

Description

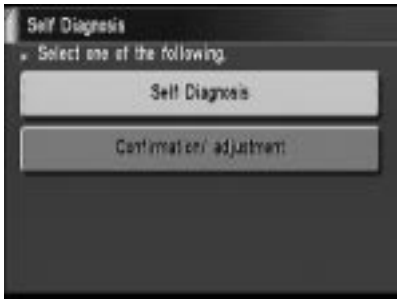
NLEL0516S0101

In this mode, historical errors of the system are displayed with the following data.

- How many times the error was detected
- The last time data when the error was detected
- The last place where the error was detected

NOTE:

- **The number of errors can be counted up to 50 times. More than 51 times will be indicated as 50 times.**
- **Malfunction of the GPS board (inside the NAVI control unit) will result in the display of incorrect time data.**
- **When an error occurs, an incorrect position marker appears on the display. The accuracy of the display data (position marker) will be affected.**



SEL527X

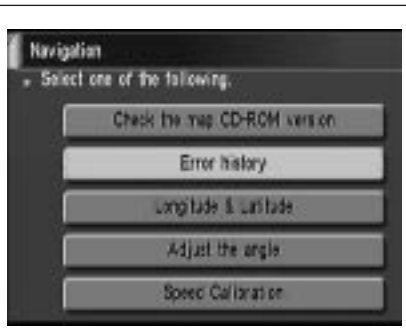
How to Perform

NLEL0516S0102

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switch at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

SEL531X

5. Select "Navigation".



SEL532X

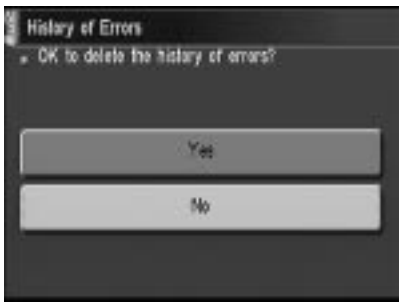
6. Select "Error history".

SEL533X

7. If trouble items are displayed with time count, repair/replace the system according to "Error history" TABLE, EL-406.

SEL534X

8. If necessary, touch error item to display the time when the error was detected and the place where the error was detected.



SEL535X

9. After repairing the system, erase the diagnosis memory.

NOTE:
When the NAVI control unit must be replaced, do not erase the diagnosis memory for further inspection of malfunctions.

1) Start the engine.
2) Push both "Map" and "MODE" switches at the same time for more than 5 seconds.
3) Select "Confirmation/ adjustment".
4) Select "Navigation".
5) Select "Error history".
6) Select "Delete".
7) Select "Yes".

Confirmation/Adjustment Mode (Cont'd)

"HISTORY OF ERRORS" TABLE

=NLEL0516S02

Detected items	Description	Diagnosis/service procedure	Reference page
Gyro sensor disconnected	Communications malfunction between NAVI control unit and internal gyro	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-401
Connection problem of speed sensor	Input malfunction of NAVI control unit and speed sensor	Check vehicle speed sensor signal in "Diagnosis for signals from the car" mode. If the input signal is not detected correctly, check harness for open or short between combination meter and NAVI control unit.	EL-408
GPS disconnected	Communications malfunction between NAVI control unit and GPS board	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-401
GPS transmission cable malfunction			
GPS input line connection error			
GPS TCXO over	The transmission circuit of the GPS board frequency synchronization oscillator (inside the NAVI control unit) is sending an oscillation frequency that is greater or less than the set value.	A location error occurs. Strong electromagnetic wave interference may have occurred. The GPS antenna may be in a very hot or very cold environment. This is usually a temporary malfunction.	—
GPS TCXO under			
GPS ROM malfunction	Internal malfunction of GPS board RAM or ROM inside the NAVI control unit.	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-401
GPS RAM malfunction			
GPS RTC malfunction	Malfunction of GPS board clock IC inside the NAVI control unit.		
GPS antenna disconnected	—	Perform self-diagnosis to confirm GPS antenna connection. If no failure is detected, a momentary and/or temporary malfunction may have been caused by a strong impact.	EL-401
Low voltage of GPS	Power supply voltage for GPS board inside the NAVI control unit is low.	1. Check power supply circuits for NAVI control unit.	EL-429
		2. Perform self-diagnosis to confirm GPS antenna connection.	EL-401
		3. If above diagnosis results are OK, a momentary and/or temporary malfunction may have been caused by a strong impact.	—
CD-ROM communication error	CD-ROM driver malfunction (inside the NAVI control unit)	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-401

Detected items	Description	Diagnosis/service procedure	Reference page
Loading mechanism malfunction	—	Check that whether the disc can be inserted and ejected correctly. If the loading function does not operate correctly, replace NAVI control unit.	—
CD-ROM reading error	It is confirmed that the appropriate CD-ROM disc is positioned in the CD-ROM loader. However, no data can be read.	Perform self-diagnosis to confirm whether the inserted disc is malfunctioning or not.	EL-401
Malfunctioning of error correction for CD-ROM	Erroneous data is read from the CD-ROM. The errors cannot be corrected.		
CD-ROM focus error	CD-ROM data reading beam is out of focus.	Rough road driving might create CD skipping like music CD audio unit.	—
CD-ROM malfunction	—	Perform self-diagnosis to confirm whether the inserted disc is malfunctioning or not.	EL-401

"DIAGNOSIS FOR SIGNALS FROM THE CAR" MODE

=NLEL0516S03

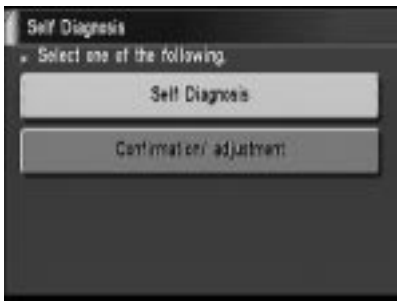
Description

NLEL0516S0301

In "Diagnosis for Signals from the Car" mode, following input signals to the NAVI control unit can be checked on the display.

Item	Indication	Vehicle condition
Vehicle Speed*	ON	Vehicle speed is greater than 0 km/h (0 MPH).
	OFF	Vehicle speed is 0 km/h (0 MPH).
Light	ON	Lighting switch is in 1st or 2nd position.
	OFF	Lighting switch is in "OFF" position.
IGN	ON	Ignition switch is in "ON" position.
	OFF	Ignition switch is in "ACC" position.
Reverse*	ON	Selector/shift lever is in "Reverse" position.
	OFF	Selector/shift lever is in other than "Reverse" position.

*: When ignition switch is in "ACC" position, indication will be changed to "-".



SEL527X

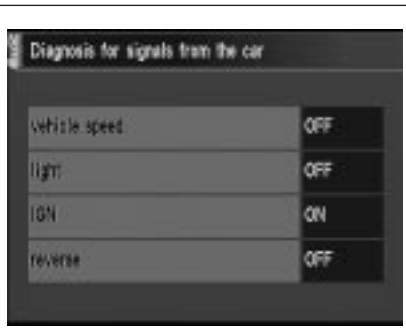
How to Perform

NLEL0516S0302

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

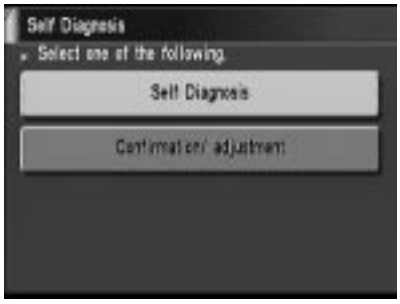
SEL531X

5. Select "Diagnosis for Signals from the Car".



SEL542X

6. Then "Diagnosis for Signals from the Car" mode is performed.



SEL527X

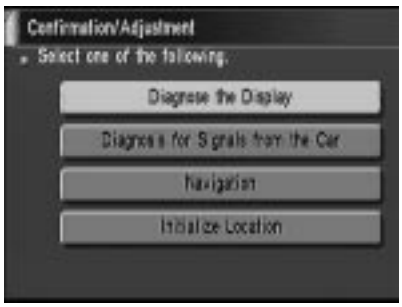
"CHECK THE MAP CD-ROM VERSION" MODE

=NLEL0516S04

How to Perform

NLEL0516S0401

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

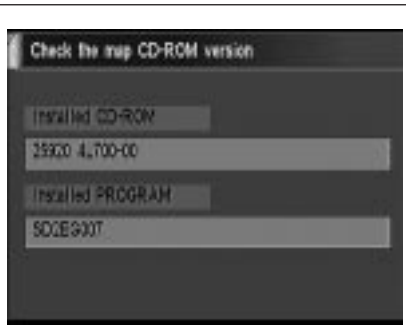


SEL531X

5. Select "Navigation".

SEL532X

6. Select "Check the map CD-ROM version".



SEL536X

7. The version (parts number) of CD-ROM loaded to the NAVI control unit will be displayed.

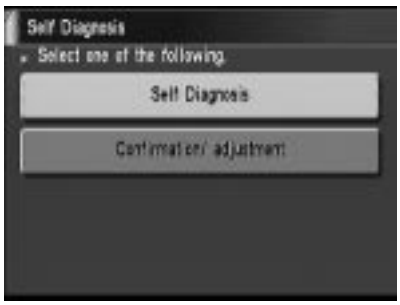
"DIAGNOSE THE DISPLAY" MODE

=NLEL0516S05

Description

NLEL0516S0501

Use the "Diagnose the Display" mode to check the display color brightness and shading. The NAVI control unit must be replaced if the color brightness and shading are abnormal.

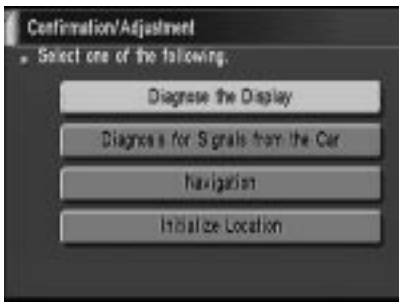


SEL527X

How to Perform

NLEL0516S0502

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".



SEL531X

5. Select "Diagnose the Display".

SEL540X

6. Select "Display color spectrum bar" or "Display gradation bar".
7. Then color bar/gray scale will be displayed.

SEL541X

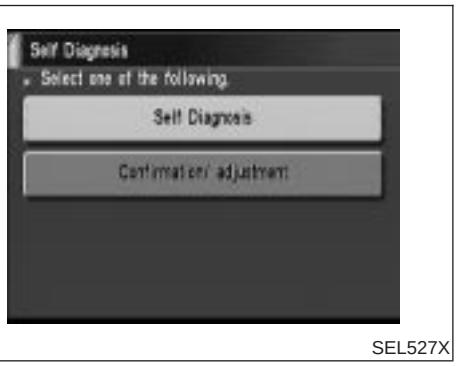
"LONGITUDE & LATITUDE" MODE

NLEL0516S06

Description

NLEL0516S0601

The "Longitude & Latitude" is used to confirm the longitude and latitude of some optional area point.



SEL527X

How to Perform

NLEL0516S0602

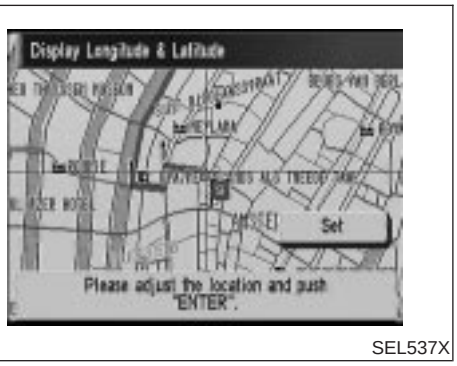
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

SEL531X

5. Select "Navigation".

SEL532X

6. Select "Longitude & Latitude".



SEL537X

7. Adjust the pointer with using the joystick and touch "Set".
8. The longitude and latitude are displayed.

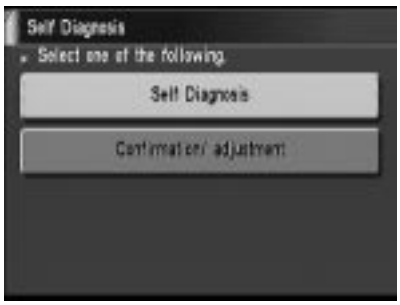
"ADJUST THE ANGLE" MODE

NLEL0516S07

Description

NLEL0516S0701

If the display indicates a larger or smaller turning angle than the actual turning angle, the gyro (angular speed sensor) sensing values must be checked.
In case that the vehicle on the display makes larger angle turn than reality, touch "–". In case that the vehicle on the display makes smaller angle turn than reality, touch "+".



SEL527X

How to Perform

NLEL0516S0702

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

SEL531X

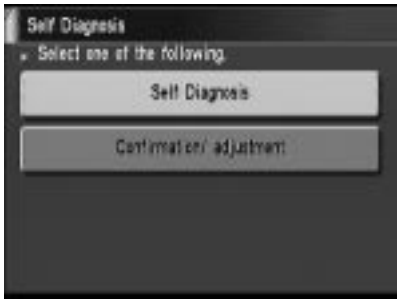
5. Select "Navigation".

SEL532X

6. Select "Adjust the angle".

SEL538X

7. Select "Left Turn" to adjust the angle to the left. Touch "Right Turn" to adjust the angle to the right.
8. Select "+" to increase the angle change coefficient or "–" to reduce the angle change coefficient.
9. Select "Set" to save the changed values in memory.
10. Then the vehicle turning angle on the display has adjusted.



SEL527X

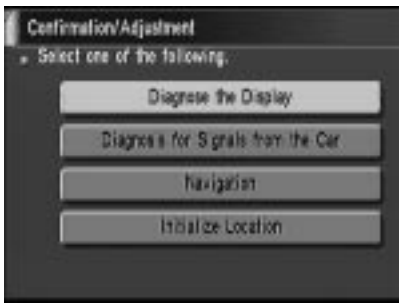
"SPEED CALIBRATION" MODE

NLEL0516S08

How to Perform

NLEL0516S0801

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".

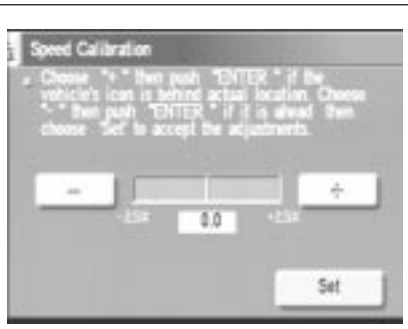


SEL531X

5. Select "Navigation".

SEL532X

6. Touch "Speed Calibration".



SEL539X

7. Touch "+" or "−" to adjust the distance change coefficient.
- To make the distance change coefficient smaller, touch "−".
- To make the distance change coefficient larger, touch "+".

8. Select "Set".

"INITIALIZE LOCATION" MODE

=NLEL0516S09

This procedure is for initializing the current location. Perform "Initialize Location" when the vehicle has been transported a long distance by trailer, etc.
Map with grey background appears and the vehicle location cannot be adjusted by scrolling the display when the vehicle location in the memory is out of the area of the inserted map data.
Perform "Initialize Location" when this occurs.

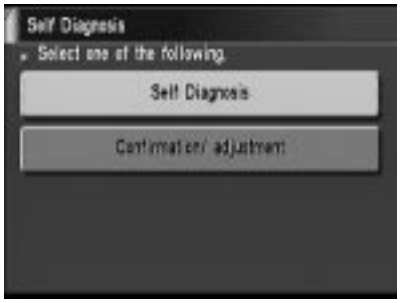
NOTE:

- **Only initialize the system when the NAVI control unit is replaced. If the system is initialized in other cases, it may cause inaccurate positioning of the position marker for a while.**
- **Initialize the system outside for receiving the radio wave from the GPS satellite.**

How to Perform

NLEL0516S0901

1. Switch the navigation system mode to self-diagnosis by pushing both "MAP" and "MODE" switches at the same time for more than 5 seconds.

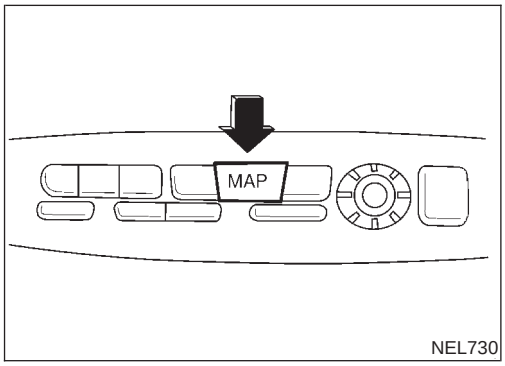


SEL527X

2. Select "Confirmation/ adjustment".

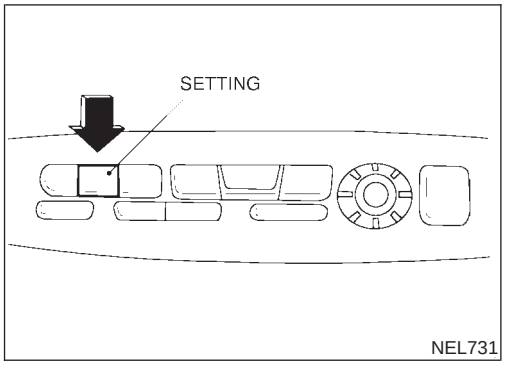
SEL531X

3. Select "Initialize Location". Then the previous screen is displayed.



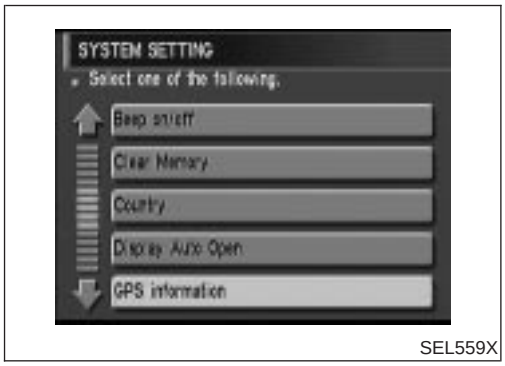
NEL730

4. Push "MAP" switch.



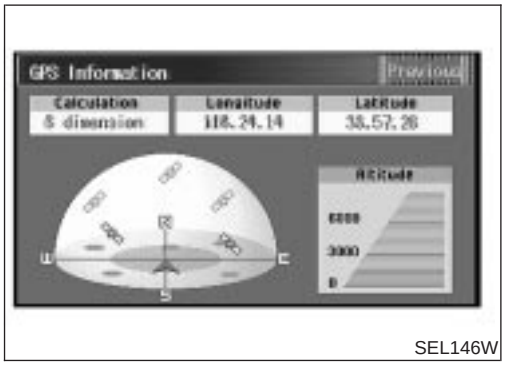
NEL731

5. Push "SETTING" switch.
6. Select "System Setting".



SEL559X

7. Select "GPS Information".



SEL146W

8. More than one GPS satellite icon turns green. (It may take 1 to 15 minutes.)

NOTE:
Drive the vehicle for a while* in order to change the receiving condition of the radio wave from the GPS satellite if the GPS icon does not turn green.
*** The driving distance which is necessary depends on the receiving condition of the radio wave from the GPS satellite.**

9. Push "MAP" switch and check the following.
- Confirm that the GPS icon on the map turns green.
- Then the position marker should show the current location.
- Position marker rotates corresponding to the movement of the vehicle.

10. Initialization is completed.

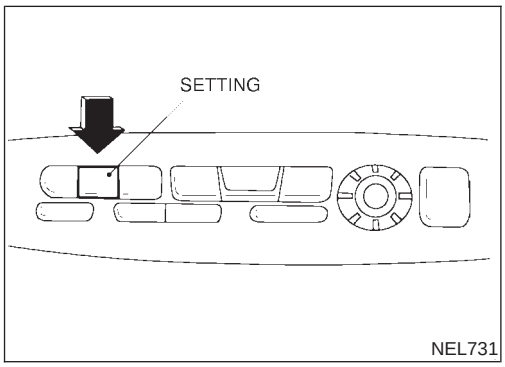
Control Panel Mode

=NLEL0517

APPLICATION ITEMS

NLEL0517S01

Mode	Description	Reference page
Display Auto Open	Display can be set to open by either of the following controls. ● Display will be opened when OPEN/CLOSE SW is selected with Key SW positioned ACC. ● Display will be automatically opened when Key SW is turned from OFF to ACC.	EL-417
GPS Information	The GPS data includes longitude, latitude and altitude (distance above sea level) of the present vehicle position, and current date and time for the area in which the vehicle is being driven. Also indicated are the GPS reception conditions and the GPS satellite position.	EL-417
Language	Language can be selected for the display and voice guidance. Use the program CD-ROM disk to change the language.	EL-418
Quick Stop Customer Setting	One facility of your selection can be added to your Quick Stop.	EL-418
Route Priorities	Priorities of search request and automatic re-searching can be set for route search.	EL-418
Tracking	Tracking to the present vehicle position can be displayed.	EL-419
Display Setting	The following display settings can be customized. ● Display color (Day mode or Night mode) ● Brightness of display	EL-419
Heading	Heading of the map display can be customized for either north heading or the actual driving direction of the vehicle.	EL-420
Nearby Display Icons	Icons of facilities can be displayed. Facilities to be displayed can be selected from the variety selections.	EL-420
Adjust Current Location	Current location of position marker can be adjusted. Direction of position marker also can be calibrated when heading direction of the vehicle on the display is not matched with the actual direction.	EL-421
Avoid Area Setting	A particular area can be avoided when routing.	—
Beep On/Off	Beep sounds which corresponds to the system operation can be activated/deactivated.	EL-421
Clear Memory	Address book, Previous destination or Avoid area can be deleted.	EL-422
Country	When two or more countries are included in one CD-ROM disk, the destination can be selected from the country name.	EL-422



HOW TO PERFORM CONTROL PANEL MODE

NLEL0517S02

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.

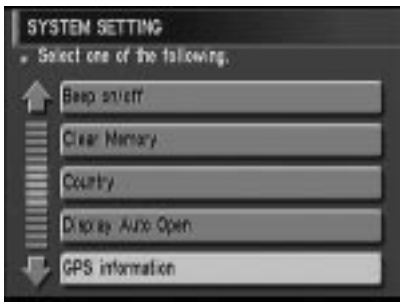
● For further procedures, refer to the following pages which describe each application item of the control panel mode.

SEL619X

"DISPLAY AUTO OPEN" MODE

NLEL0517S03

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".



SEL620X

5. Select "Display Auto Open".

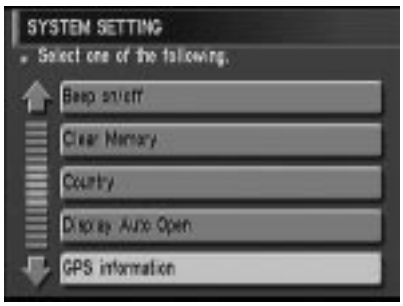
SEL621X

6. Select "Auto" or "Manual" icon.
   - To manually open the display, select "Manual".
   - To automatically open the display, select "Auto".
7. Push "MAP" switch, then the display will go back to the current location map.

"GPS INFORMATION" MODE

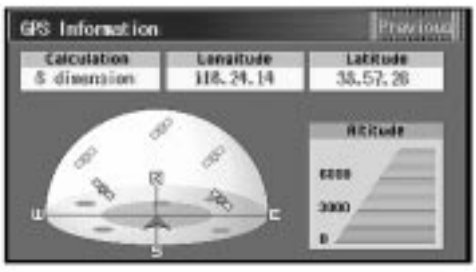
NLEL0517S04

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "GPS information".

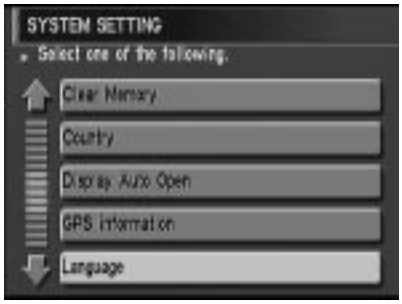


SEL559X

6. Then GPS information will be displayed.



SEL146W



SEL565X

"LANGUAGE" MODE

=NLEL0517S05

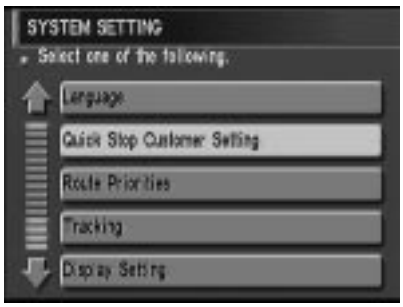
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Language".

SEL566X

6. Select "English" or "German" icon.
- When display indicates English, select "English".
- When display indicates German, select "German".

7. Push "MAP" switch, then the display will go back to the current location map.

NOTE:
Use the program CD-ROM disk to change the language.



SEL543X

"QUICK STOP CUSTOMER SETTING" MODE

NLEL0517S06

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Quick Stop Customer Setting".

SEL544X

6. Select an item from the list.

SEL545X

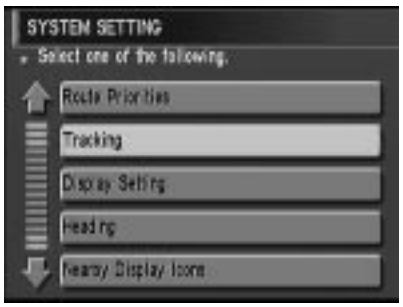
"ROUTE PRIORITIES" MODE

NLEL0517S07

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Route Priorities".

SEL546X

6. Select an item from the list.

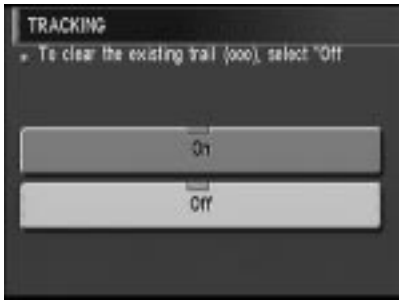


SEL547X

"TRACKING" MODE

NLEL0517S08

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Tracking".



SEL548X

6. Select "On" or "Off" icon.
- To leave no trail on the map, select "Off".
- To leave a trail in the map, select "On".

7. Push "MAP" switch, then the display will go back to the current location map.

NOTE:
When a trail display is turned OFF, trail data is erased from the memory.

SEL560X

"DISPLAY SETTING" MODE

NLEL0517S09

Display Color Setting

NLEL0517S0901

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Color". Display color will change to Day mode/Night mode.
6. Select "MAP" switch, then the display will go back to the current location map.

NOTE:
- **Display color can be changed independently when lighting switch is turned on and off.**
- **Initial setting of the color is as follows:**
  When lighting switch is turned off: Day mode
  When lighting switch is turned on: Night mode
  Day mode: White background
  Night mode: Black background

SEL561X

Control Panel Mode (Cont'd)

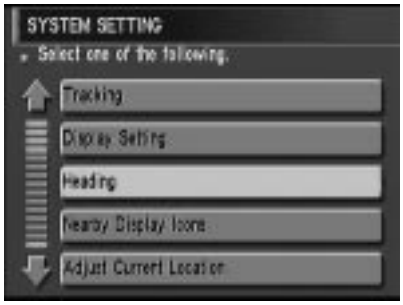
SEL562X

Brightness Setting

NLEL0517S0902

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Bright" or "Dark" to adjust the brightness of display.
6. Select "MAP" switch, then the display will go back to the current location map.

NOTE:
Display brightness can be adjusted independently when lighting switch is turned on and off.

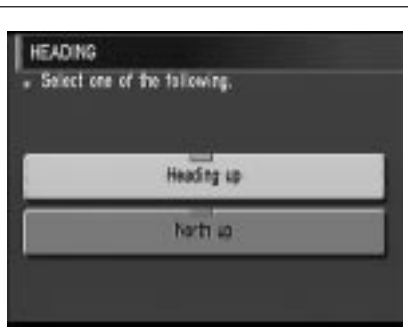


SEL549X

"HEADING" MODE

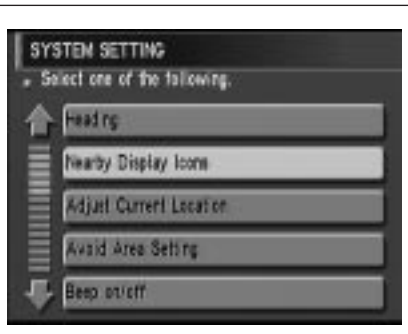
NLEL0517S10

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Heading".



SEL550X

6. Select "Heading up" or "North up" icon.
   - To display North up, select "North up".
   - To display the car heading up, select "Heading up".
7. Push "MAP" switch, then the display will go back to the current location map.



SEL551X

"NEARBY DISPLAY ICONS" MODE

NLEL0517S11

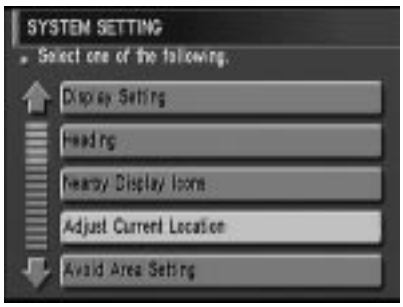
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Nearby Display Icons".

SEL552X

6. Select and touch an item on the list.
7. Push "MAP" switch, then the display will go back to the current location map.

"ADJUST CURRENT LOCATION" MODE

NLEL0517S12



SEL553X

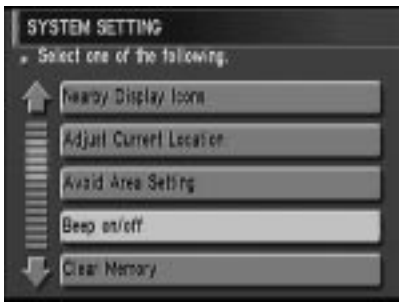
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Adjust Current Location".

SEL554X

6. Select "↶" or "↷" to calibrate the heading direction. (Arrow marks will rotate corresponding to the calibration key.)
7. Select "Set". Then the vehicle mark will be matched to the arrow mark.
8. Display will show "Heading direction has been calibrated" and then go back to the current location map.

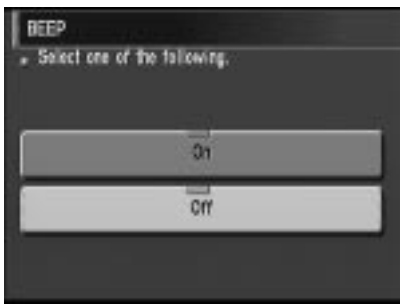
"BEEP ON/OFF" MODE

NLEL0517S13



SEL555X

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Touch "Beep On/Off".



SEL556X

6. Select "On" or "Off" icon.

- If you want the beep sound, select "On".
- If you do not want the beep sound, select "Off".

7. Push "PREVIOUS" switch, then the display will go back to the current location map.

Control Panel Mode (Cont'd)

SEL557X

"CLEAR MEMORY" MODE

=NLEL0517S14

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Clear Memory".

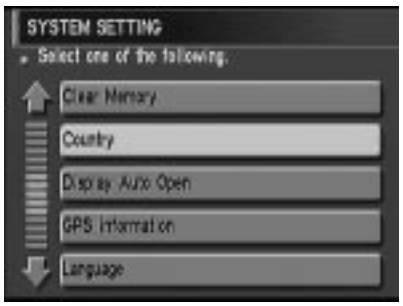
SEL558X

6. To delete all the stored places in "Address Book", "Avoid Area" and "Previous Dest", select "Yes".

"COUNTRY" MODE

NLEL0517S15

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Country".



SEL567X

6. Select and touch an item on the list.

SEL653X

Guide Volume Setting

=NLEL0518

DESCRIPTION

NLEL0518S01

Following voice guidance setting can be changed.

- Voice guidance activation/deactivation
- Voice volume of the guidance

SEL563X

ACTIVATION/DEACTIVATION SETTING

NLEL0518S02

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. The voice prompt can be turned on/off by pressing the “Guidance Volume” button.

SEL563X

VOICE VOLUME SETTING

NLEL0518S03

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Volume of the voice can be controlled by bending the joystick to left/right.

Anti-theft System

=NLEL0519

RHD MODELS

NLEL0519S01

Description

By integrating the Navigation System in the vehicle's interior and linking it to the vehicle's immobilizer system, the possibility of the Navigation unit being stolen is effectively reduced. Each time the Navigation System is switched on, the Navigation System will start up communication with the vehicle's immobilizer control unit (IMMU) and verify an identification code. If communication cannot be established, or the verified code is incorrect, the Navigation System will lock up showing "ANTI-THEFT FUNCTION" on the Navigation display.

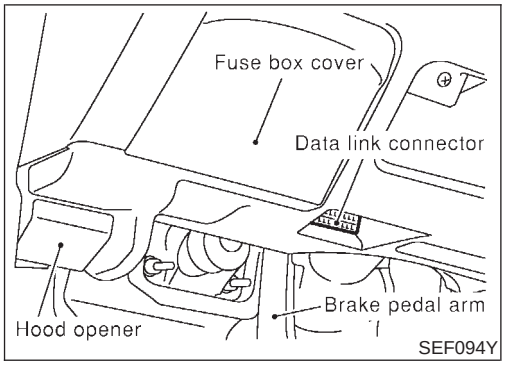
The 4-digit PIN must be entered when the display shows "enter your PIN" at the time the vehicle is purchased. The 4–digit PIN is required to input after disconnecting and reconnecting of battery cable or connectors for Navigation system.

LHD MODELS

NLEL0519S02

Description

The 4-digit PIN must be entered when the display shows "enter your PIN" at the time the vehicle is purchased. The 4–digit PIN is required to input after disconnecting and reconnecting of battery cable or connectors for Navigation system.



SEF094Y

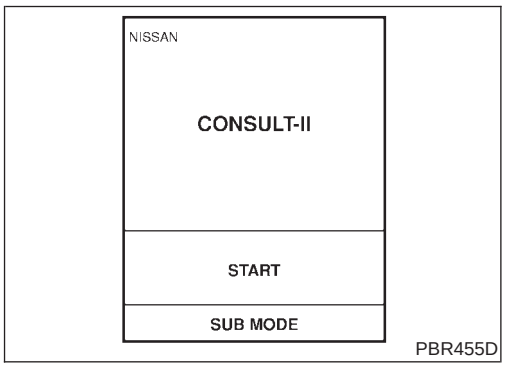
CONSULT-II

=NLEL0520

CONSULT-II INSPECTION PROCEDURE

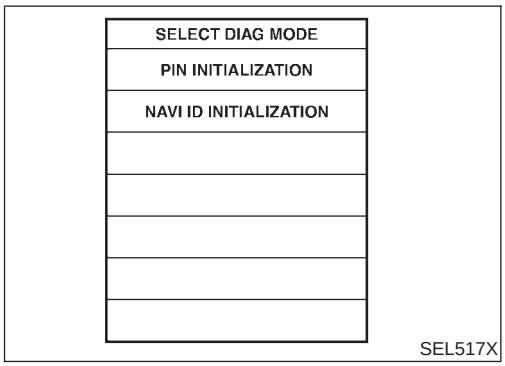
NLEL0520S01

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



PBR455D

3. Insert NVIS (NATS) program card into CONSULT-II.
   ⬅ : **Program card**
   NATS-AEN00B
4. Turn ignition switch ON.
5. Touch “START”.



SEL517X

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

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

CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NLEL0520S02

CONSULT-II DIAGNOSTIC TEST MODE	Description
PIN INITIALIZATION	Navigation system will be locked when the vehicle’s owner enters the wrong PIN five consecutive times. To release the lock, use “PIN INITIALIZATION”.
NAVI ID INITIALIZATION	In normal times regulation codes are being communicated between Navigation Control Unit and Dongle Control Unit. Use “NAVI ID INITIALIZATION” to match the codes when either one has been replaced due to breakdown or etc.

NOTE:
When any initialization is performed, all NAVI ID and PIN previously registered will be erased and then must be registered again.

Trouble Diagnoses

SYMPTOM CHART

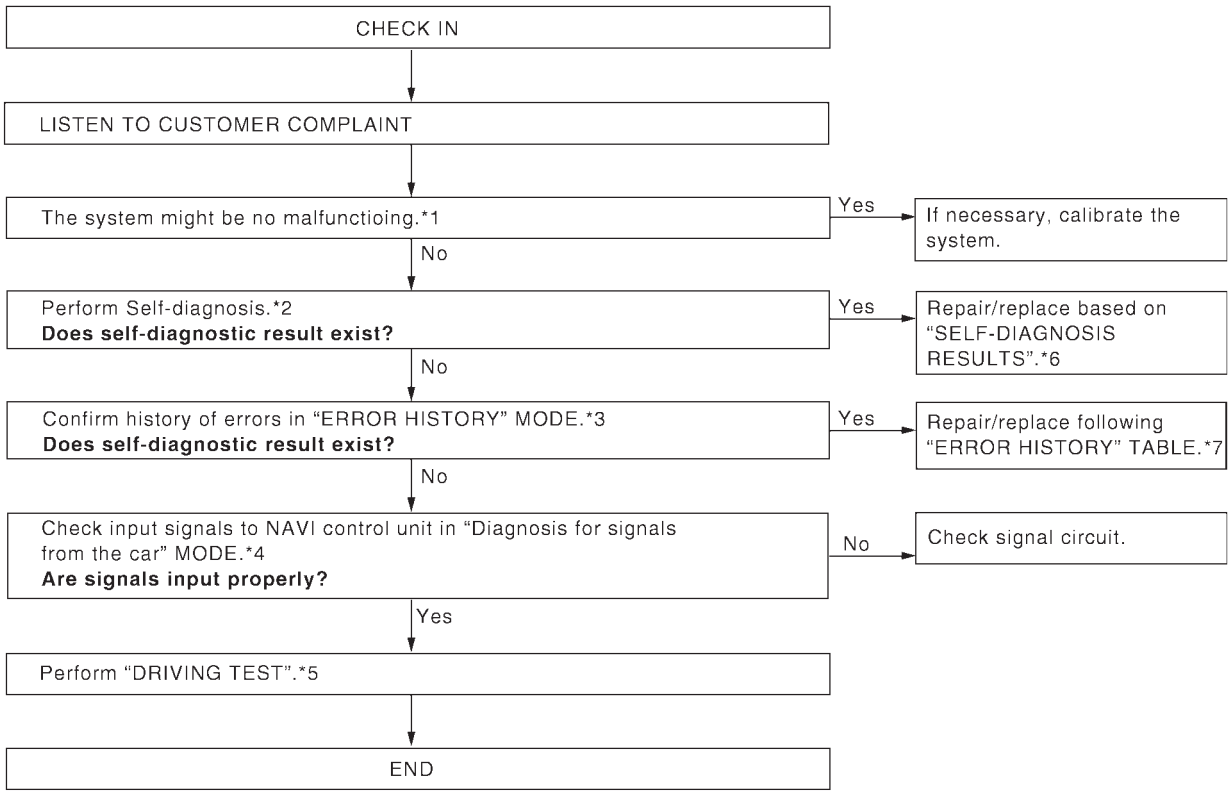
=NLEL0521

NLEL0521S01

Symptom	Diagnoses/service procedure	Reference page
Any function of the system does not operate.	Check power supply and ground circuit for NAVI control unit.	EL-429
Strange screen color or unusual screen brightness.	1. Check “Display Setting” MODE.	EL-419
	2. Check display in “Diagnose the Display” MODE.	EL-410
The display is not dimmed when turning lighting switch to ON.	1. Check “Display Setting” MODE.	EL-419
	2. Check lighting switch signal input to NAVI control unit correctly in “Diagnosis for the signals from the car” MODE.	EL-408
No navigation guide voice are heard from front driver side speaker.	1. Check “Guide Volume Setting”.	EL-423
	2. Check speaker relay.	EL-430
Beep does not sound when the system guides route.	Check “Beep On/Off” MODE.	EL-421
Position marker does not trace along the route being traveled.	Go to “WORK FLOW FOR NAVIGATION INSPECTION”.	EL-427
Position marker does not indicate forward or backward movement.	Check reverse signal input to NAVI control unit correctly by “Diagnosis for the signals from the car” MODE.	EL-408
Radio wave of GPS cannot be received. (GPS marker on the display does not become green color.)	1. Is there anything obstructing the GPS antenna on the rear parcel finisher? (GPS antenna located under the rear parcel finisher.)	—
	2. Check GPS radio wave receive condition in “GPS Information MODE”.	EL-417
	3. Check GPS antenna in “Self Diagnosis” MODE.	EL-402
Heading direction of position marker does not match vehicle direction.	1. Perform “Adjust Current Location” MODE.	EL-421
	2. Go to “WORK FLOW FOR NAVIGATION INSPECTION”.	EL-427
Stored location in the address book and other memory functions are lost when battery is disconnected or becomes discharged.	Stored location in the address book and other memory functions may be lost if the battery is disconnected or becomes discharged. If this should occur, charge or replace the battery as necessary and re-enter the information.	—
Map appears grey and cannot be scrolled.	The current location in the memory is out of the map data area. Perform “Initialize Location”.	EL-414

WORK FLOW FOR NAVIGATION INSPECTION

=NLEL0521S02



SEL519X

*1: EL-432
*2: EL-401
*3: EL-404
*4: EL-408
*5: EL-428
*6: EL-403
*7: EL-406

DRIVING TEST

=NLEL0521S03

During the driving test, diagnose the system by checking the difference of symptoms with each sensor ON or OFF.

Test Pattern 1

NLEL0521S0301

Test method in which current position adjustment is not made according to GPS data.

- Remove the GPS antenna connector from the NAVI control unit. Drive the vehicle.
  Before driving the vehicle, perform "Adjust Current Location" MODE (EL-421).

Test Pattern 2

NLEL0521S0302

Test procedure in which map matching is not used.

- Before driving the vehicle, perform "Adjust Current Location" MODE (EL-421). With the ignition switch OFF and the map CD-ROM removed from the NAVI control unit, drive the vehicle. After driving the vehicle, reinstall the map CD-ROM. Compare the saved driving tracks for the vehicle's current location with roads on the map.

Example

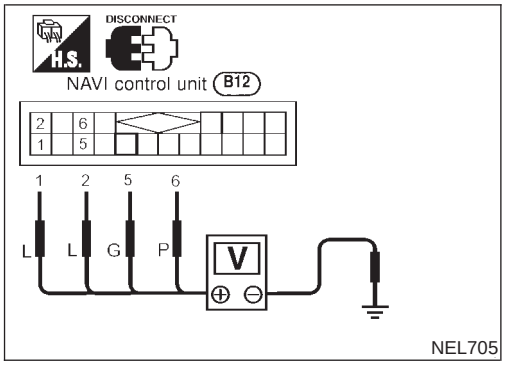
NLEL0521S0303

<The position marker consistently indicates the wrong position when driving in the same area. Determine if this is the result of the map matching function or the GPS function.>
→ Perform test pattern 1.
<To verify the accuracy of the road configuration shown on the display>
→ Perform test patterns 1 and 2.

- Compare the map and the saved driving tracks. The precision of the saved driving tracks is within several hundred meters.

<To make distance calibration and adjustments>
→ Perform test patterns 1 and 2.

- Make adjustments by driving the vehicle over a known course (highway or other road where distances are clearly marked). Calibrate the distance against the known distance. Use the formula below.
  Calibration value = Screen display distance/Actual distance



POWER SUPPLY AND GROUND CIRCUIT CHECK FOR NAVI CONTROL UNIT

=NLEL0521S04

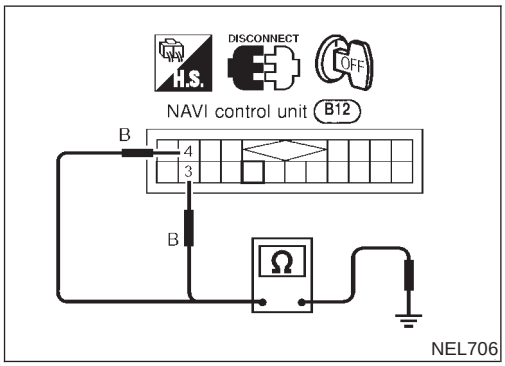
Power Supply Circuit Check

NLEL0521S0401

Terminal		Ignition switch		
(+)	(−)	OFF	ACC	ON
1	Ground	Battery voltage	Battery voltage	Battery voltage
2	Ground	Battery voltage	Battery voltage	Battery voltage
5	Ground	0V	0V	Battery voltage
6	Ground	0V	Battery voltage	Battery voltage

If NG, check the following.

- 10A fuse [No. 1, located in the fuse block (J/B)]
- 10A fuse [No. 10, located in the fuse block (J/B)]
- 15A fuse
- Harness for open or short between fuse and NAVI control unit



Ground Circuit Check

NLEL0521S0402

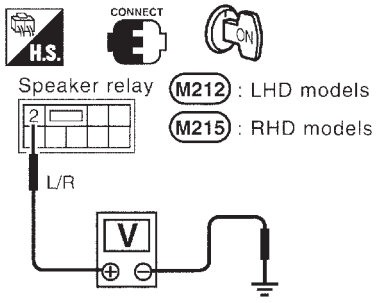
Terminals	Continuity
3 - Ground	Yes
4 - Ground	Yes

SPEAKER RELAY CHECK

=NLEL0521S05

1	CHECK RELAY ON SIGNAL

1. Push "VOICE" button.
2. Check voltage between speaker relay terminal 2 and ground.



Condition	Voltage (V)
When volume adjustment icon is touched.	Approx. 5 (for 3 sec.)
Other than above.	0

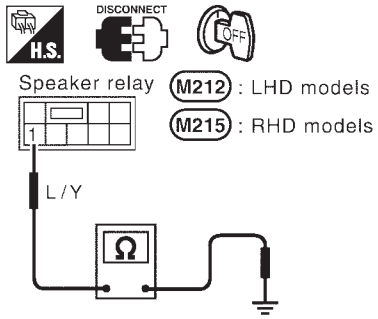
NEL779

OK or NG

OK	▶	GO TO 2.
NG	▶	Check harness for open or short between NAVI control unit terminal 46 and speaker relay terminal 2.

2	CHECK GROUND CIRCUIT FOR SPEAKER RELAY

1. Disconnect speaker relay.
2. Check continuity between speaker relay terminal 1 and ground.



Continuity should exist.

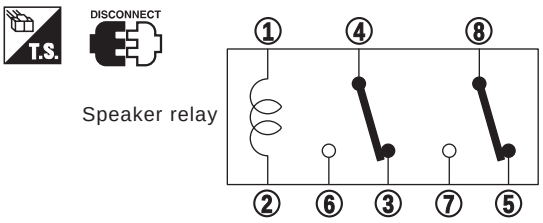
NEL780

OK or NG

OK	▶	GO TO 3.
NG	▶	Repair harness.

3	CHECK SPEAKER RELAY

Check continuity speaker relay terminals in the condition below.



Condition	Terminal					
	③	④	⑤	⑥	⑦	⑧
5V direct current applied between terminal ① and ②		○		○	○	○
Other than above	○	○	○		○	○

SEL624X

OK or NG

OK	▶	GO TO 4.
NG	▶	Replace speaker relay.

4	CHECK SPEAKER OPERATION

Does front LH speaker sound when audio operates?

Yes or No

Yes	▶	Check harness for open or short between speaker relay terminals 6, 7 and also between NAVI control unit terminals 42 and 43.
No	▶	Check the following. ● Speaker ● Harness for open or short between audio and speaker relay

This Condition Is Not Abnormal

=NLEL0522

EXAMPLE OF BASIC OPERATIONAL ERRORS

NLEL0522S01

Symptom	Possible cause	Repair order
No image is displayed.	Monitor brightness control is set to full dark.	Readjust monitor brightness.
Map does not appear on display.	Map CD is not inserted or inserted upside down.	Insert the map CD with the label facing up.
	Map mode is turned OFF.	Press the “MAP” button.
No guide tone is heard.	Voice guide adjustment OFF/Volume is set to the lowest or highest level.	Adjust the voice guide level.
Voice guide volume is too high or too low.		
Dark display/Slow image movement	Low vehicle interior temperature	Wait until vehicle interior temperature rises to appropriate level.
Small black or white dots appear on the screen.	Unique liquid crystal display phenomena	No problem
“Unable to read CD” message appears only during specified operation.	Map CD surface is tainted/CD surface is partially scratched.	Check map CD surface. If dirty, wipe clean with a soft cloth.
		If map CD surface is damaged, replace the CD.

Area place names are not displayed.

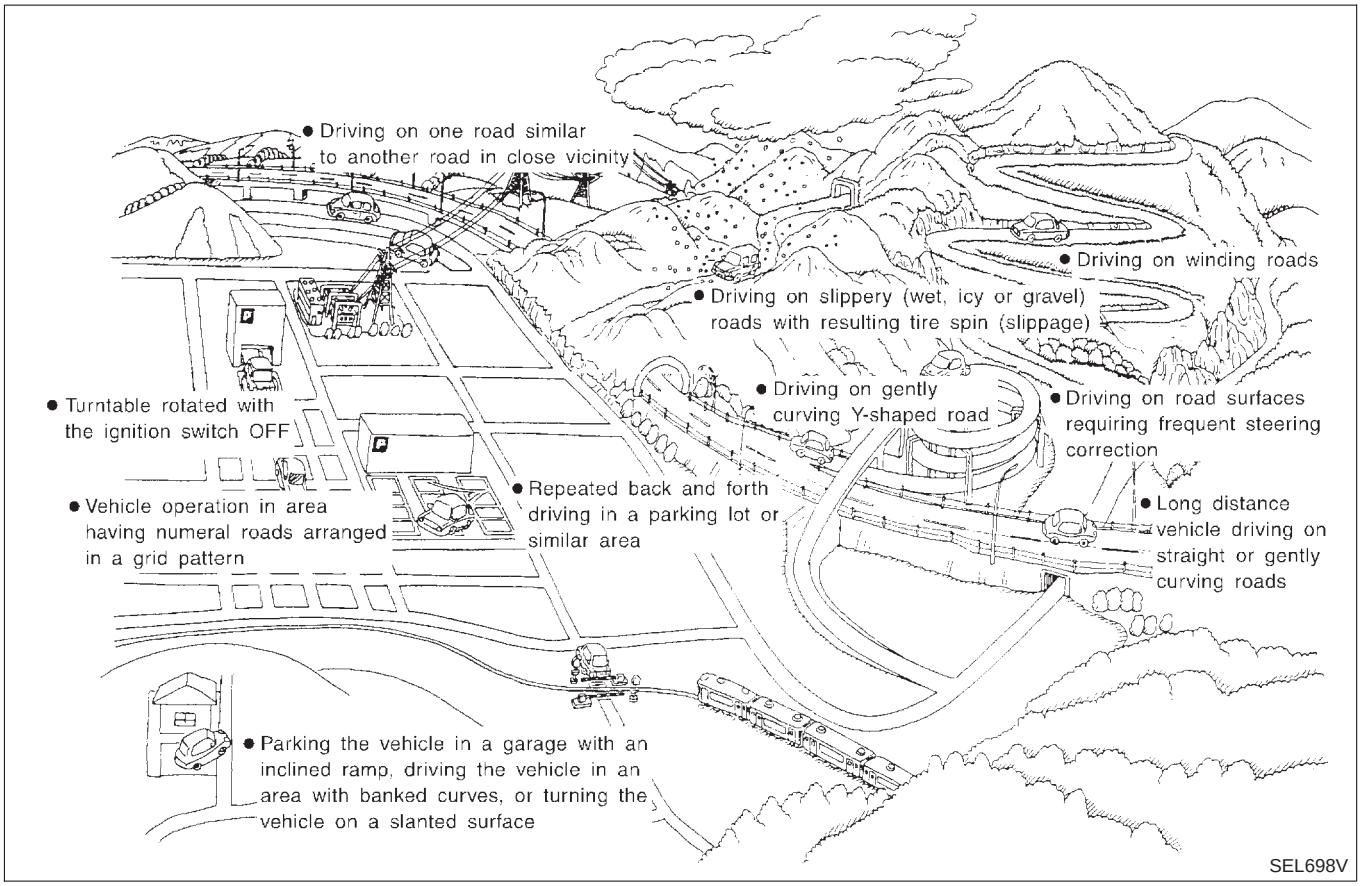
If area place names do not appear on the map display, these names may not be available. Use the BIRDVIEW® flat surface map display function. Display output may differ. Note the items related to BIRDVIEW® below.

- Priority is given to the display of place names in the direction of vehicle travel.
- Extended display of vehicle travel distance for both surfaces and steering angle (flat directional changes). This phenomenon disappears after the display image has been replaced by another one.
- The names of route and area might vary between the immediate front area and distance front area.
- Alphanumeric display characters are limited to maintain display simplicity and clarity. Display details may differ with time and place.
- Identical place and road names may appear on the display at more than one location.

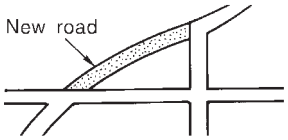
EXAMPLE OF CURRENT VEHICLE POSITION MARKER ERROR

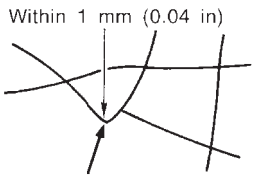
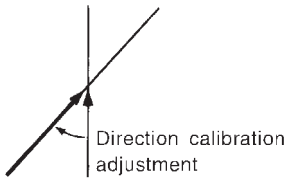
=NLEL0522S02

The navigation system reads the vehicle distance and steering angle data. Because the vehicle is moving, there will be an error in the current position indication. After the error appears, drive the vehicle for a short distance. Stop the vehicle. If the position marker does not return to its original position, perform "Adjust Current Location" MODE (EL-421).

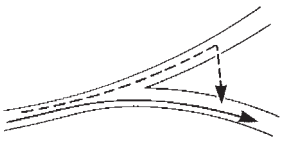
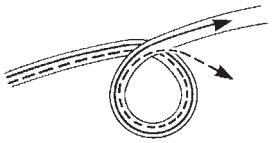
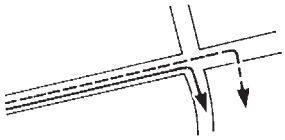
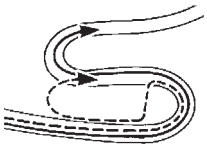
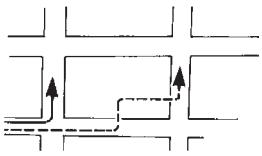
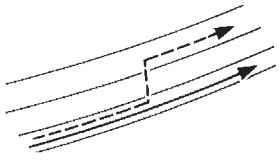


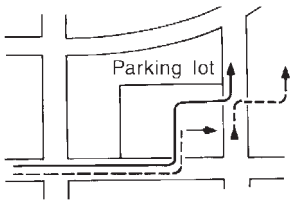
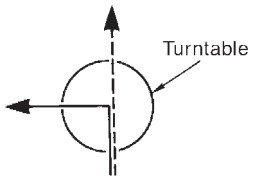
This Condition Is Not Abnormal (Cont'd)

Possible cause		Drive condition	Service procedure
Area	Slippery road surface	On wet, icy, or gravel road where frequent wheel slippage occurs, distance calculations may be erroneous. The position marker may show the vehicle to be in inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Adjust Current Location" MODE (EL-421). If necessary, perform "Speed Calibration" (EL-413).
	Slanted area	Hilly areas where the road has banked curves. When the vehicle enters these banked curves, there may be an error in steering angle measurement. The position marker may show the vehicle to be in inaccurate position.	
Map data	Map display for a given road does not appear.  SEL699V	When the vehicle is driven on a newly constructed road that does not appear on the existing map. Map marking and calibration are not possible. The position marker may indicate inaccurate position in close proximity to the actual position. Subsequently, when the vehicle is driven on a road which is available as map data, the position marker may still indicate an inaccurate position.	
	The vehicle is driven on a road whose course has been altered (usually to improve the road or to eliminate some hazard).  SEL700V	When the map data shown on the display and the actual conditions are different. Map matching will not be possible. The position marker may indicate inaccurate position in close proximity to the actual position. If the vehicle is driven on the indicated road, further errors may occur.	
Vehicle	Use of tire chains (Stormy weather)	Tire chains will affect distance sensing. The position marker may indicate inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Speed Calibration" (EL-413). After removing the tire chains, sensing accuracy may recover by itself.

Possible cause		Drive condition	Service procedure
Operation	Driving immediately after starting engine.	The gyro (angular velocity sensor) needs about 15 seconds after the engine is started to precisely sense the angular velocity. Directional sensing errors will occur if the vehicle is moved immediately after starting the engine. The position marker may indicate inaccurate position.	Wait a few moments between starting the engine and actually driving the vehicle.
	Continuous driving for long distances (non-stop)	When the vehicle is driven continuously without stopping over a long distance, errors in directional sensing may occur. The position marker may indicate inaccurate position.	Stop the vehicle. Perform "Speed Calibration" (EL-413).
	Rough or violent driving	Wheel spinning (peeling out) or similar rough driving techniques can adversely affect sensing accuracy. The position marker may indicate inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Adjust Current Location" MODE (EL-421).
Positional calibration procedures	Positional calibration precision  SEL701V	If current vehicle location is roughly set, the system may be unable to locate the road that the vehicle is traveling on. (This is especially true in an area where there are many roads.)	Perform "Adjust Current Location" MODE (EL-421) within a precision standard of 1 mm (0.04 in) on the display. **NOTE:** During calibration, use the most detailed map possible.
	Position calibration direction  SEL702V	When calibrating the position, check the vehicle direction. If the vehicle direction is not correct, subsequent precision of current location will be affected.	Perform "Adjust Current Location" MODE, refer to EL-421.

This Condition Is Not Abnormal (Cont'd)

Possible cause: —: Vehicle running ---: Indication		Drive condition	Service procedure
Road shapes	Y-intersection  SEL703V	In Y-intersections with a very gradual change in course, a directional sensing may be inaccurate. This may result in the position marker giving the wrong road indication.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Store place". If required, also perform "Adjust Current Location" MODE (EL-421).
	Spiral road  SEL704V	On loop bridges and similar structures which result in a large and continuous turn, turning angle may be sensed inaccurately. As a result, the position marker may separate from the route on the map.	
	Straight road  SEL705V	In long distance driving on a straight road or road with very gradual curves, map marking inaccuracies may occur. In such cases, the position marker may stray from the route being traveled during subsequent turns due to inaccurate distance calculation.	
	Winding road  SEL706V	Directional sensing precision errors may occur when traveling on winding roads. During map matching, the position marker may stray to an adjacent road having a similar shape. Subsequent position marker error may occur.	
	Grid-like road shape  SEL707V	Directional sensing and distance sensing, precision errors may occur because of many roads having a similar shape in the immediate area. During map matching, the position marker may stray to an adjacent road having a similar shape. Subsequent position marker error may occur.	
	Parallel roads  SEL708V	When driving on a parallel road, map matching errors may occur. Subsequent position marker error may also occur.	

	Possible cause: —: Vehicle running ---: Indication	Drive condition	Service procedure
Location	Parking lot or similar area  SEL709V	When the vehicle is driven in a parking lot or similar area, such as in an area not normally marked as a road on map, during map matching, the system may select nearby roads. This error may continue after the vehicle exits the parking area and begins to run on ordinary roads. Vehicle operation in a parking area may involve frequent turns and up and/or down operation. Directional sensing errors may occur leading to subsequent route and position mistakes.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Store place". If required, also perform "Adjust Current Location" MODE (EL-421).
	Turntable  SEL710V	When the ignition switch is OFF (the usual situation when the vehicle is on a turntable), the navigation system receives no data from the gyro (angular velocity sensor). When the turntable rotates, no directional change is sensed. During subsequent vehicle operation, directional and route errors may occur.	

Position marker displays a completely different location

In circumstances such as those described below, GPS signal reception conditions may result in an erroneous position of the position marker. Perform "Adjust Current Location" MODE (EL-421).

NOTE:

- When GPS satellite signal reception conditions are poor, the position of position marker may be erroneous. If correction is not made immediately, the position marker error will be compounded and a completely different location will be indicated. In an area where GPS satellite signal reception conditions are good, the system can be returned to normal operation.
- The vehicle is driven aboard a car ferry or is towed for some distance with the ignition switch OFF. Vehicle movement is not sensed. Current location calculations do not occur and current location data does not appear on the display screen. Use GPS to accurately determine actual vehicle position. The system can be returned to normal operation when the GPS satellite signal reception conditions are good.

Position marker jumps

In circumstances such as those described below, the position marker may jump as a result of automatic current location corrections made by the system.

During map matching

- During map matching, the position marker may jump from one spot to another. In this case, it may be corrected to a wrong road or to an area where no road exist.

GPS location correcting

- Vehicle current location is sensed using the GPS data. Positional calibration is performed. The position marker continues to be in the wrong position. It may jump about from one area of the screen to another. In this case, it may be corrected to a wrong road or to an area where no road exist.

Position marker indicates that the vehicle is in the middle of an ocean or large river

The navigation system does not distinguish between land and water surfaces. In some cases, a position marker error may cause the display to show the vehicle above a water surface.

Position of position marker varies when the vehicle is repeatedly operated on the same road

Driving lane and steering wheel movement results in a variety of different positions of the position mark when traveling on the same road based on sensing results by the GPS antenna and gyro (angular velocity sensor).

Slow locational correction using map matching

- The map matching function requires verification of local data. To make the map matching function, some distance needs to be driven.
- The map matching function may not provide accurate performance in an area where there are numerous parallel roads. Until the system judges the road characteristics, an incorrect position may be shown.

This Condition Is Not Abnormal (Cont'd)

GPS signal reception conditions are good. However, the position mark does not return to its proper position.

- The system senses the vehicle location with an error of approximately 100 m (328 ft). Due to the limitation of precision, the position marker may be inaccurate even if the GPS signal reception condition is good.
- The navigation system uses GPS data to determine vehicle location. GPS data is compared with other locational sensing data during the map matching process. The system decides which data is more precise and uses that data.
- When the vehicle is stationary, GPS data cannot be used to make system corrections.

Area designations on the map display and the BIRDVIEW® display differ.
To prevent the display from becoming congested, alphanumeric information is abridged.
[No problem]
Correct position of your vehicle is not displayed.
Vehicle position changed after ignition key was turned to the OFF position (Vehicle is transported on car ferry, car train, or by some other means).
[Operate vehicle for short time under GPS receiving conditions.]
The display does not change to night-time mode even though the light switch has been turned ON.
Lights have been turned on. In "DISPLAY CHANGE" mode, night-time mode on display has been switched to day-time mode and still is.
[Turn lights on again. Set the display to night-time mode. Refer to EL-419.]
Map does not scroll even though the position of your vehicle is changed.
Present area does not appear on the display.
[Press the "MAP" switch.]
Vehicle position marker does not appear.
Present area does not appear on the display.
[Press the "MAP" switch.]
The map surface precision display (GPS satellite marker) still remains gray.
Vehicle is parked inside a building or in the shadow of a large building. This intercepts the GPS signal.
[Move the vehicle to a more open position.]
GPS signal is not received because objects are placed on the rear parcel shelf.
[Remove objects from the rear parcel shelf.]
GPS satellite position is bad.
[Wait until GPS satellite position improves.]
Vehicle position precision is bad.
The map surface precision display (GPS satellite marker) still remains gray.
[Refer to "The map surface precision display (GPS satellite marker) still remains gray" item (Symptoms)]
Vehicle speed and elapsed distance is calculated from the vehicle speed pulse. This pulse is dependent upon tire size. If tire chains are used on the vehicle, accuracy will be affected (pulse rate will be too fast or too slow). The same is true if the system installed to your vehicle is removed and installed on another vehicle.
[Drive the vehicle at a speed higher than 30 km/h (19 MPH) for approximately 30 minutes. Automatic readjustment should occur. If it does not (remains too fast or too slow), distance calibration is required. Or, drive the vehicle for a short distance. Perform "SPEED CALIBRATION" (EL-413). After removing the tire chains, sensing accuracy may recover by itself.]
Bad map data or system defect (same error consistently occurs in the same area)

ROUTE SEARCH/ROUTE GUIDE

NLEL0522S03

- If the present location or the destination location is displayed in the avoid area, it is not possible to search routes.
- If the avoid area is set to wide range area, it may not be possible to find appropriate routes or search for alternate routes.
- The automatic re-route calculates a return to the original route. Because of this, it may not be possible to search appropriate new routes. If you deviate from the original route and wish to select an appropriate new route, touch "Route Calculation".
- The automatic re-route function may sometimes require considerable time.
- Displayed route number and directional information at a highway junction may differ from the information posted on the actual road signs.
- Displayed street name information at a highway exit may differ from the information posted on the actual road signs.
- Street name information displayed on the enlarged intersection map may differ from the information posted on the actual road signs.

- The enlarged intersection map may display a "Unknown street" message at some street intersections.
- Because of road configuration, etc. the guide may finish early. If this occurs, follow the marker to reach your destination.
- Destination area side information (left side and right side) may differ from actual conditions because of data error.

Unable to Set Destination, Way Point, and/or menu items

NLEL0522S0301

Symptom	Possible cause	Repair order
Unable to search way points in re-search mode	A way point already crossed or determined to have been crossed.	If you desire to pass through a way point for a second time, reperform route edit.
Turn list is not displayed.	Route search does not occur.	Set designation areas and perform route search.
	Car marker does not appear on recommended route.	Drive on the recommended route.
	Route guide is canceled.	Turn the route guide ON. (Push "VOICE" switch)
Automatic search does not function.	Vehicle is not running on search object route (road indicated by orange, brown or red line).	Drive the vehicle on the search object route or perform a manual route search. Note that all routes will be re-searched at this time.
Unable to select detour route.	Vehicle is not running on recommended route.	Use the "RE-ROUTE" mode to search again or return to the recommended route.
Detour route search results are identical to previous search.	All possible conditions were considered, but results are the same.	This is not abnormal.
Unable to set a way point.	More than five way points have been previously set (and not cleared).	More than five way points cannot be specified at the same time. Break down into smaller segments and perform search.
Unable to select starting point during route edit.	Starting point will normally be your present location during route edit.	This is not abnormal.
Cannot select certain menu items.	While vehicle is running.	Park the vehicle in a safe area and perform operation.

Voice Guide Information

NLEL0522S0302

Symptom	Possible cause	Repair order
Voice guide does not function.	Voice guide is only available at certain intersections (marked with ⚲). In some cases, the guide is not available even when the vehicle makes a turn.	This is not abnormal.
	Vehicle is not running on recommended route.	Return to recommended route or reperform route search.
	Voice guide is OFF.	Set voice guide to the ON position.
	Route guide is canceled.	Turn the route guide ON.
The guide content does not correspond to actual conditions.	The content of the voice guide may vary depending on the type of junction.	Operate vehicle following the traffic rules and regulation.

Route Search Information

NLEL0522S0303

Symptom	Possible cause	Repair order
Proceeding in desired direction. However, route search in desired direction does not function.	Unable to find appropriate route in the desired direction.	This is not abnormal.

This Condition Is Not Abnormal (Cont'd)

Symptom	Possible cause	Repair order
No route is displayed.	No object route is searched near destination area.	Adjust position to wide road (brown) near destination area. In an area where traffic direction is displayed separately, pay close attention to the direction of travel. Set the destination area and the way point over the road.
	Starting point and destination areas are very near.	Move destination areas away from starting point on the screen.
Recommended route which has been passed disappears from the display.	The recommended route is divided into individual control segments. When way point 1 is passed, the data from the starting point to the way point 1 is erased.	This is not abnormal.
Search recommends roundabout route.	There may be special conditions for roads near the starting point and destination area (one-way traffic, etc.). A roundabout route may be displayed.	Slightly change starting point and destination area settings.
Landmark display does not show actual conditions.	Mistaken or missing map data may result in erroneous display.	Change map CD.
Recommended route drawn slightly away from starting point, way points, and destination area.	Course search data may not exist for closely positioned starting point, way points, and destination area shown on the map. Route guide starting point, way point, and destination point may be separated.	Set the destination area to the general route (indicated by a thick brown line). However, even if the selected route is a major one, appropriate route search data may not be available.

LOCATION OF CAR MARKER

NLEL0522S04

- If the vehicle has been parked in a multi-level parking facility or underground parking facility, the car marker position may be inaccurate immediately after exiting the parking facility.
- The GPS accuracy is within ±100 m (300 ft). Even when receiving conditions are excellent, further positional correction may not occur.

STREET INDICATION

NLEL0522S05

- Street names displayed on the map may differ from the actual street names.
- A "Unknown street" message may appear on the map in place of street name information.

RESEARCH

NLEL0522S06

- Position may be searched by house number. However, the displayed position and street may differ from the actual position and street.
- When position is searched using POI, the displayed position may differ from the actual position.
- Some data may not be available for new buildings and other structures in a map.

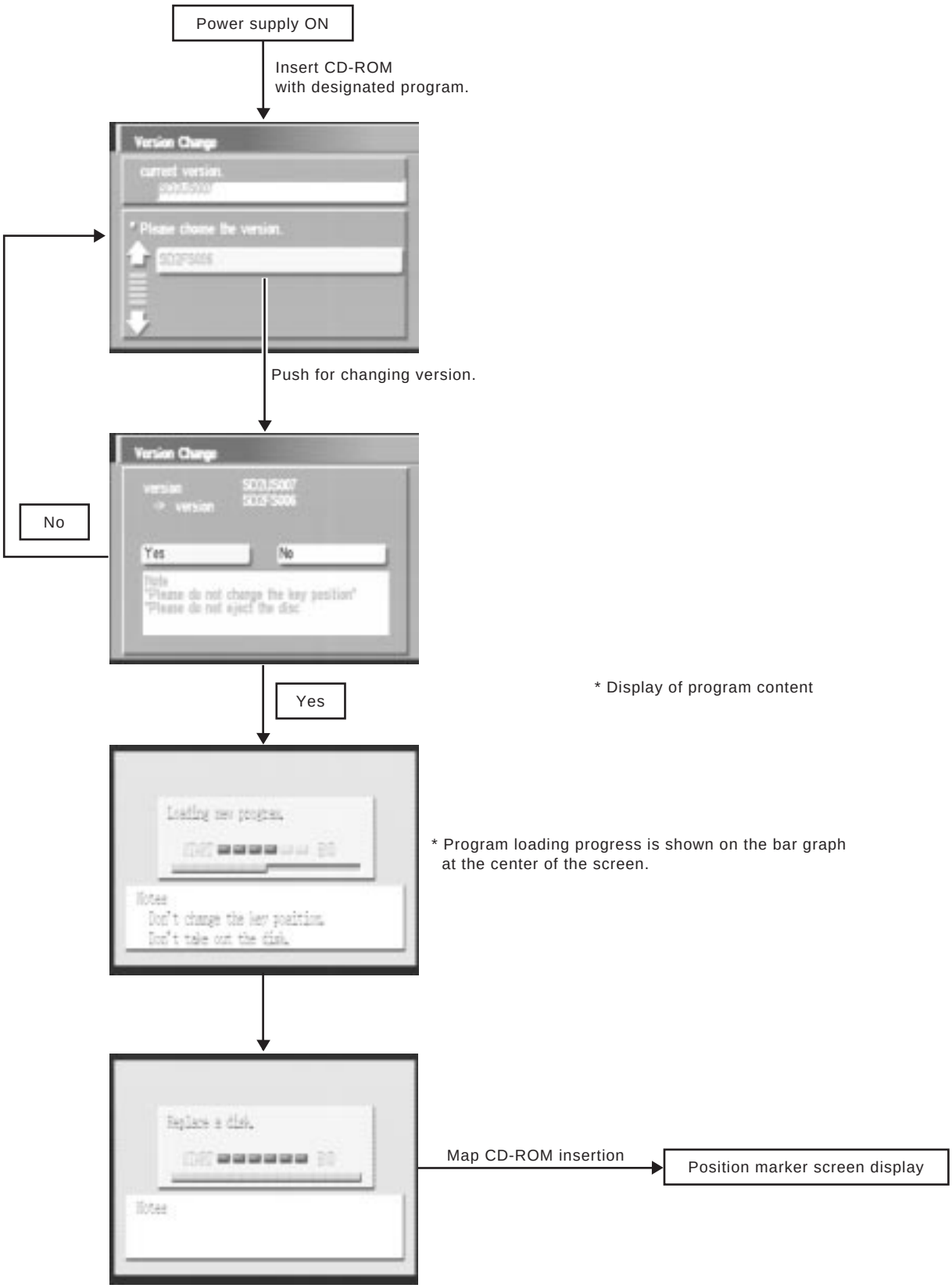
GPS ANTENNA

NLEL0522S07

- Do not place metal objects above the GPS antenna mounted on the rear parcel shelf. This will cause interference with signal reception.
- Do not place mobile telephones or vehicle radio transceivers in close proximity to the GPS antenna mounted on the rear parcel shelf. This may cause interference with signal reception.

Program Loading

NLEL0523



Note: Load the program only after the engine has been started.

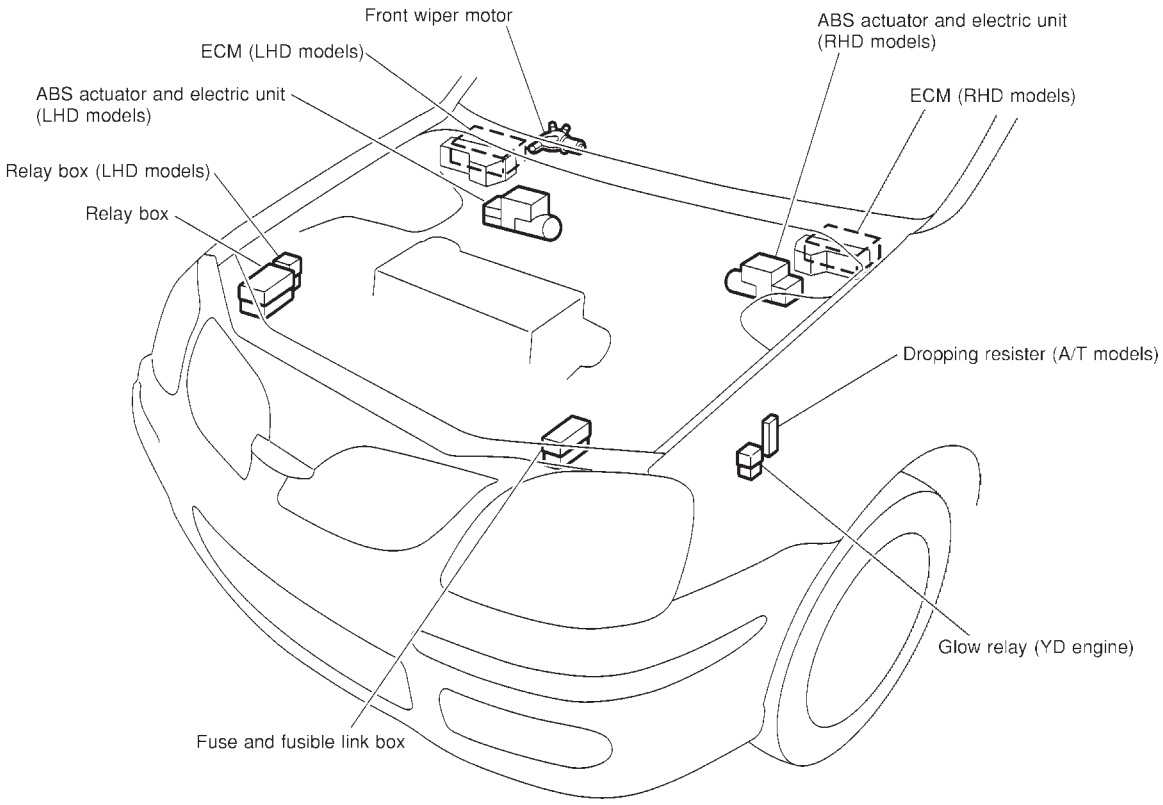
SEL564X

Engine Compartment

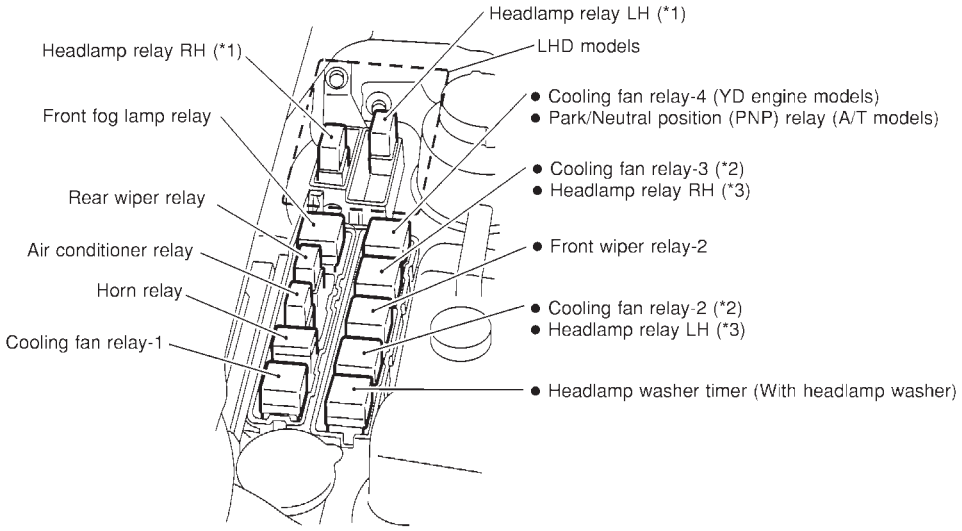
NLEL0129

MODELS WITH ECM IN ENGINE COMPARTMENT

NLEL0129S03



RELAY BOX



*1: SR engine models
YD engine models with daytime light switch

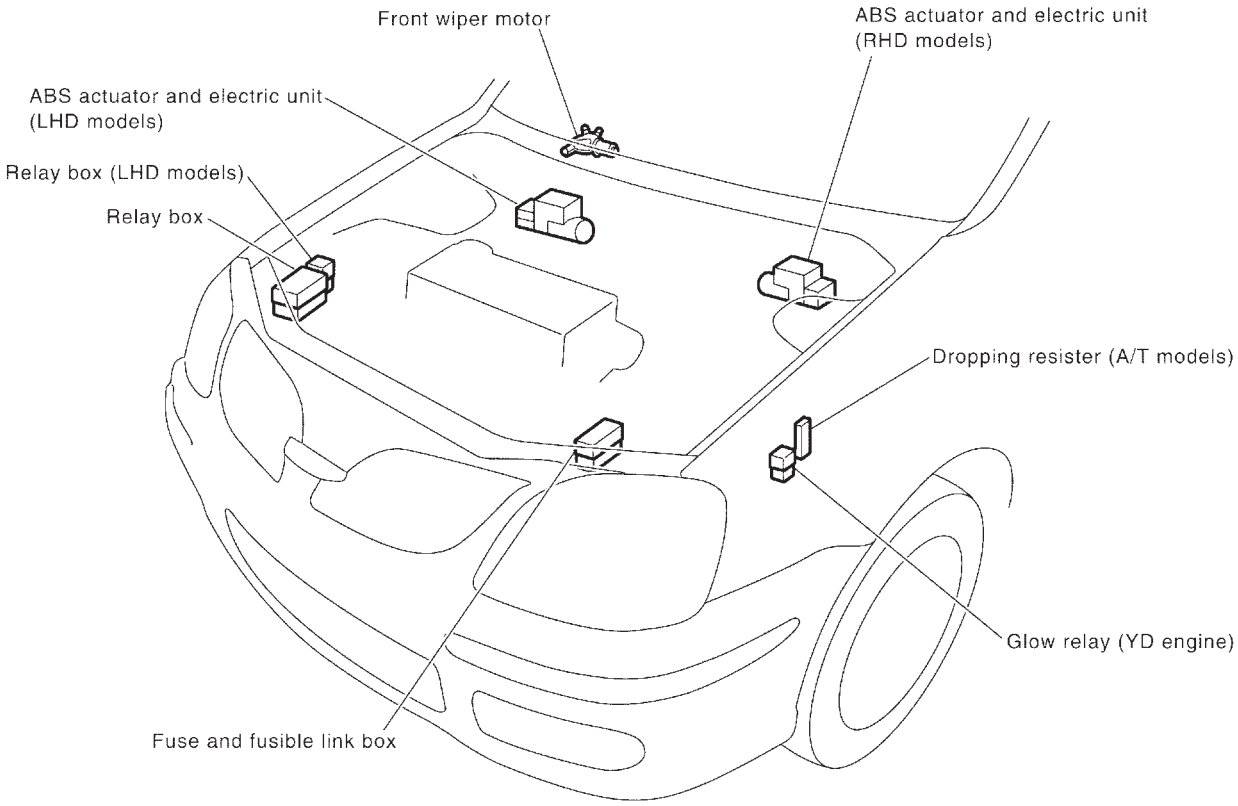
*2: SR engine and YD engine models

*3: QG engine models with daytime light system

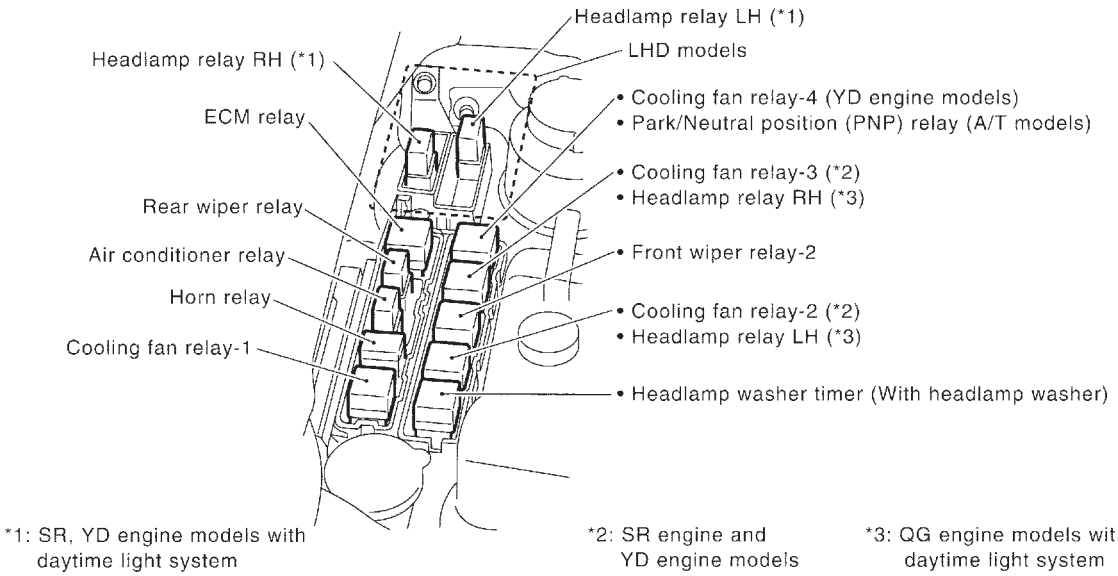
YEL003C

MODELS WITH ECM IN CABIN

NLEL0129S04



RELAY BOX



*1: SR, YD engine models with daytime light system

*2: SR engine and YD engine models

*3: QG engine models with daytime light system

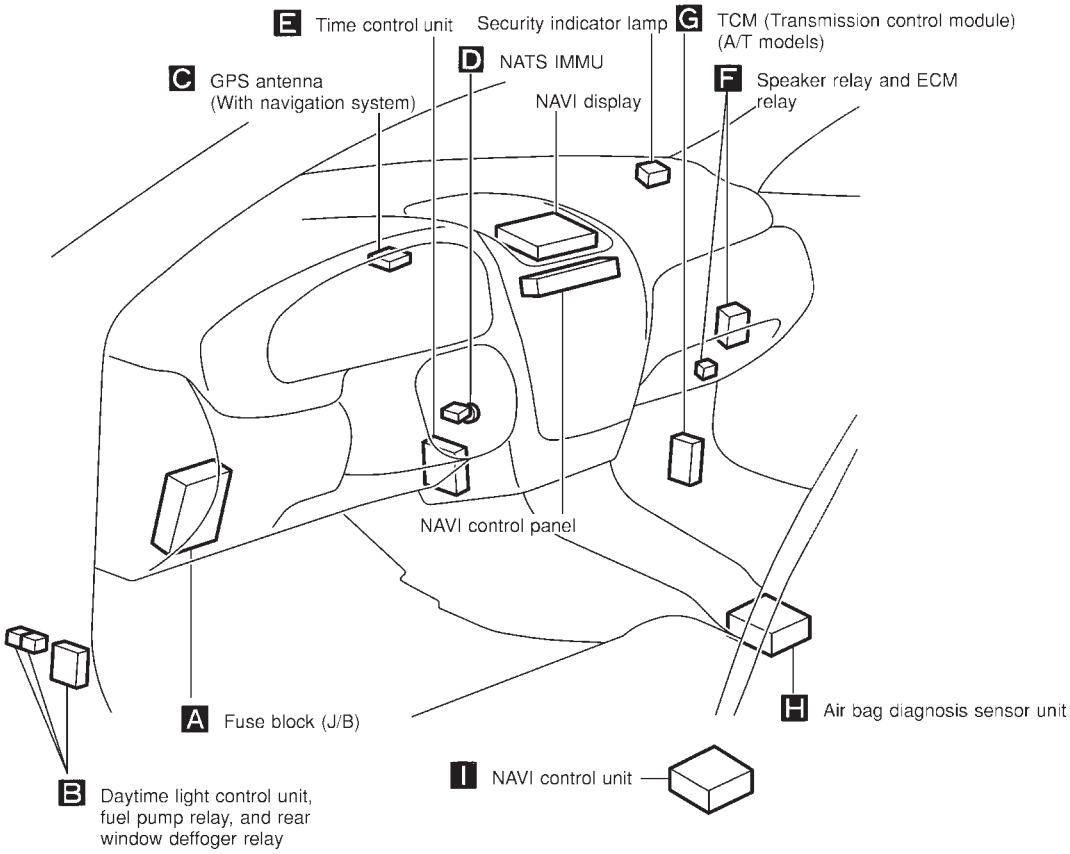
YEL492C

Passenger Compartment/LHD Models

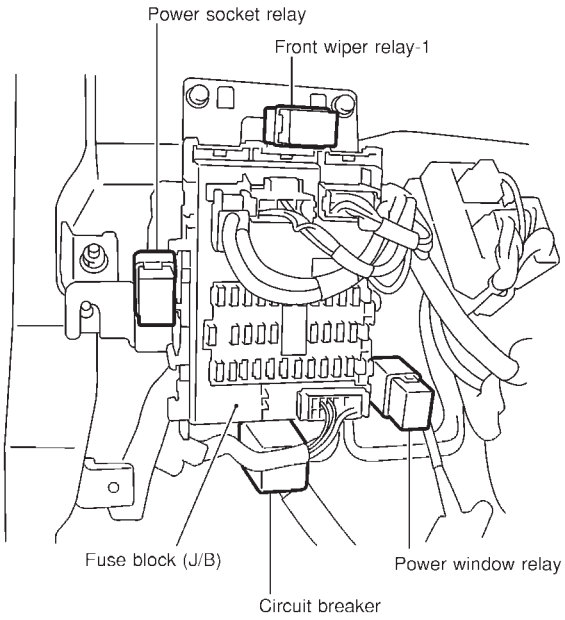
NLEL0130

NLEL0130S05

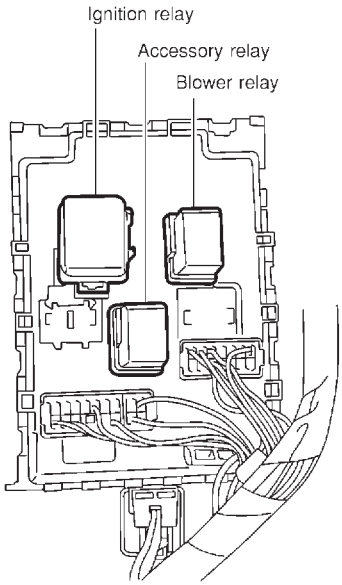
MODELS WITH ECM IN ENGINE COMPARTMENT



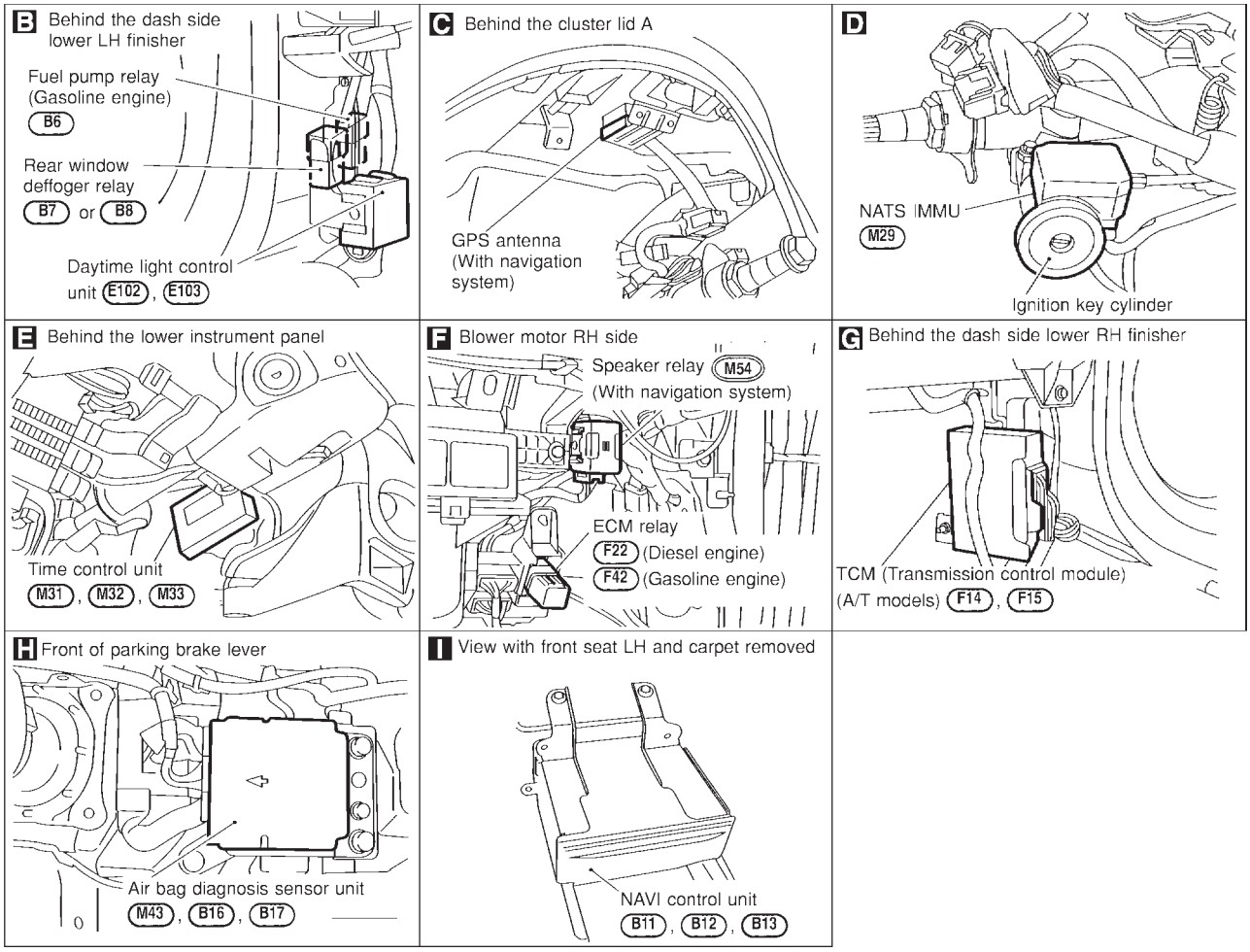
A Insturument panel LH side



The back of the fuse block (J/B)



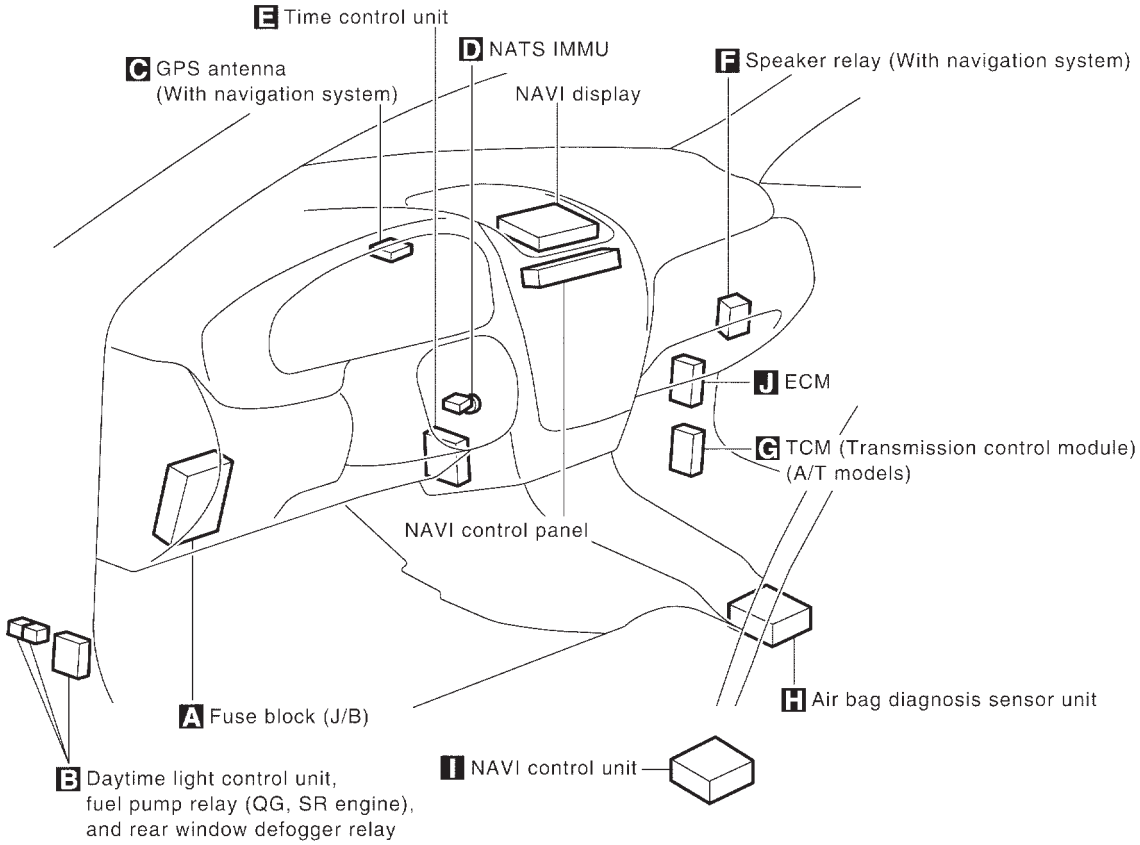
YEL004C


B Behind the dash side lower LH finisher
Fuel pump relay (Gasoline engine) B6
Rear window deffoger relay B7 or B8
Daytime light control unit E102, E103
C Behind the cluster lid A
GPS antenna (With navigation system)
D
NATS IMMU M29
Ignition key cylinder
E Behind the lower instrument panel
Time control unit M31, M32, M33
F Blower motor RH side
Speaker relay M54 (With navigation system)
ECM relay
F22 (Diesel engine)
F42 (Gasoline engine)
G Behind the dash side lower RH finisher
TCM (Transmission control module) (A/T models) F14, F15
H Front of parking brake lever
Air bag diagnosis sensor unit M43, B16, B17
I View with front seat LH and carpet removed
NAVI control unit B11, B12, B13

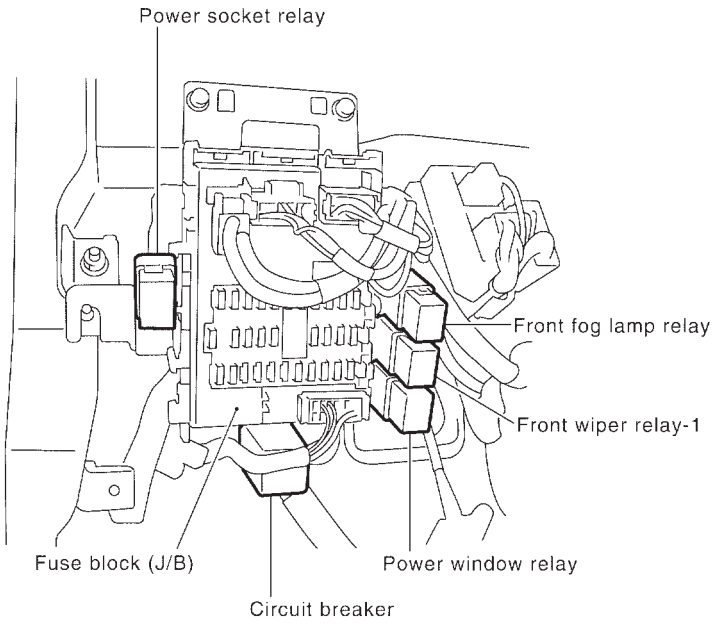
YEL005C

MODELS WITH ECM IN CABIN

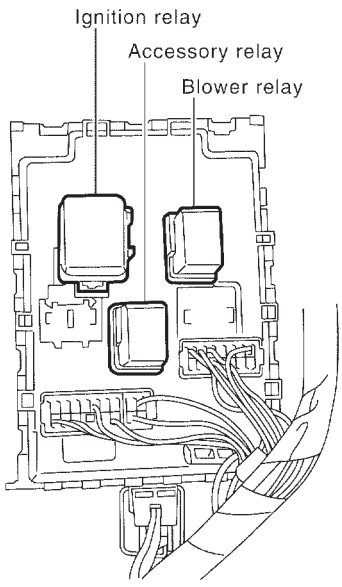
NLEL0130S06



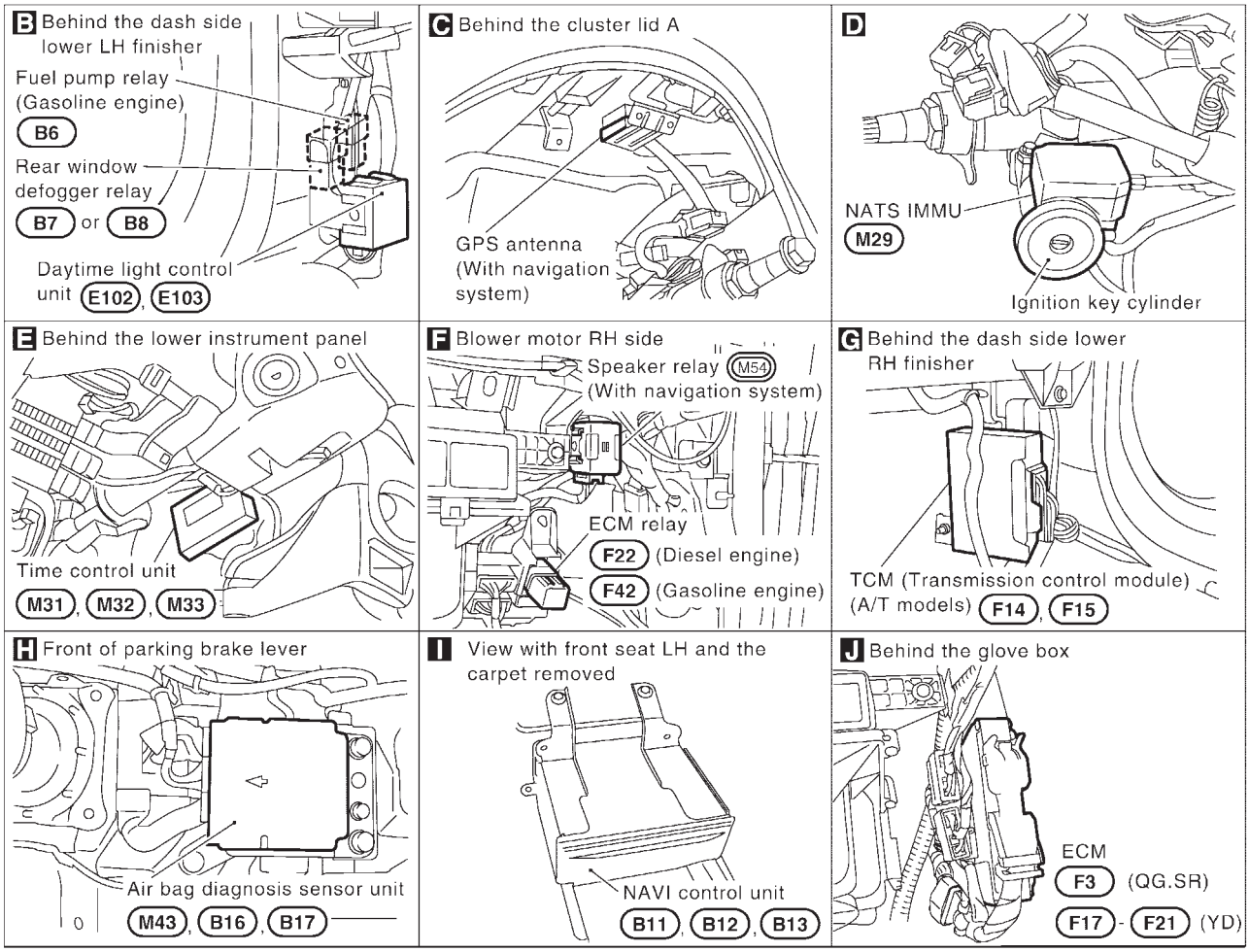
A Instrument panel LH side



The back of the fuse block (J/B)



YEL493C


B Behind the dash side lower LH finisher
Fuel pump relay (Gasoline engine)
B6
Rear window defogger relay
B7 or B8
Daytime light control unit E102, E103
C Behind the cluster lid A
GPS antenna (With navigation system)
D
NATS IMMU
M29
Ignition key cylinder
E Behind the lower instrument panel
Time control unit
M31, M32, M33
F Blower motor RH side
Speaker relay M54
(With navigation system)
ECM relay
F22 (Diesel engine)
F42 (Gasoline engine)
G Behind the dash side lower RH finisher
TCM (Transmission control module)
(A/T models) F14, F15
H Front of parking brake lever
Air bag diagnosis sensor unit
M43, B16, B17
I View with front seat LH and the carpet removed
NAVI control unit
B11, B12, B13
J Behind the glove box
ECM
F3 (QG.SR)
F17 - F21 (YD)

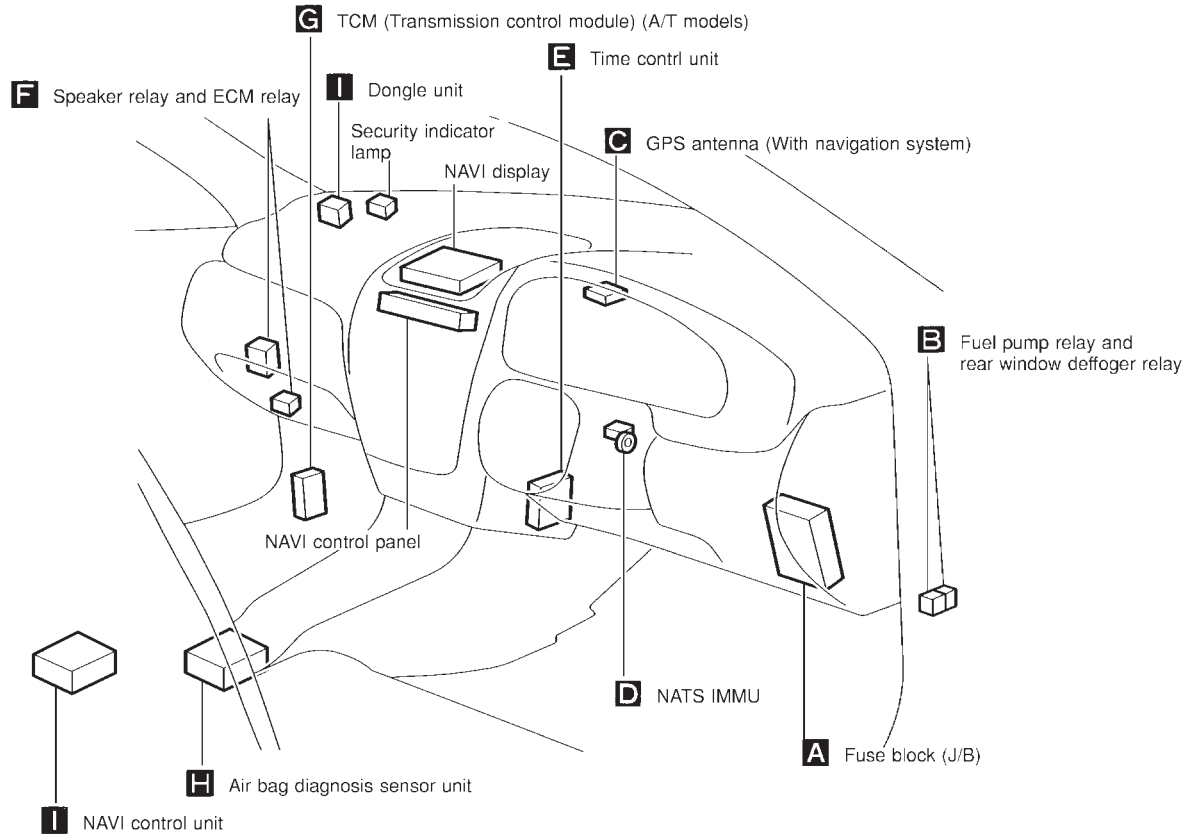
NEL785

Passenger Compartment/RHD Models

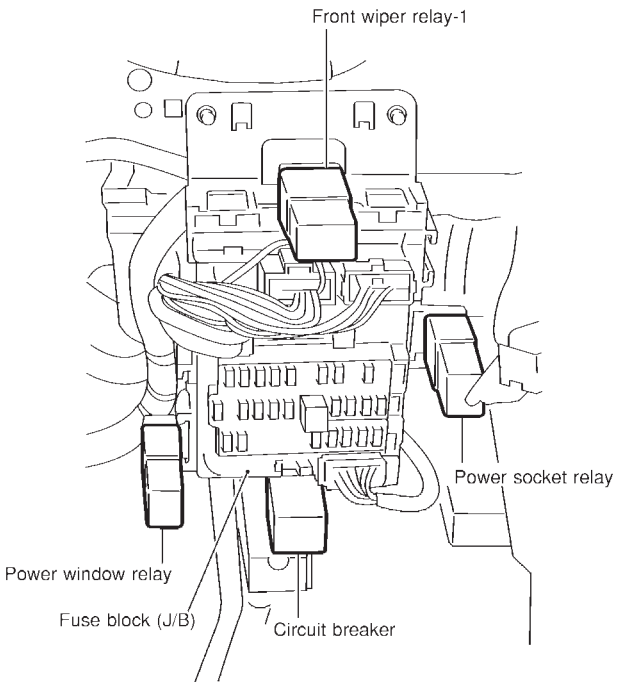
NLEL0345

MODELS WITH ECM IN ENGINE COMPARTMENT

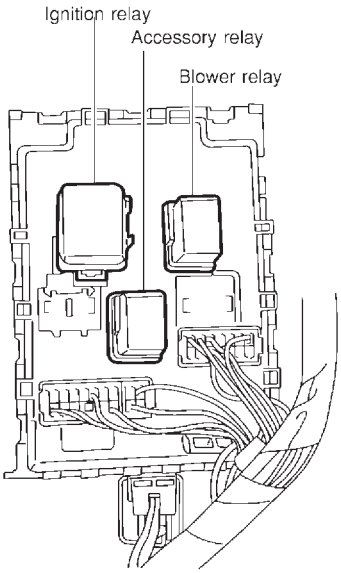
NLEL0345S01



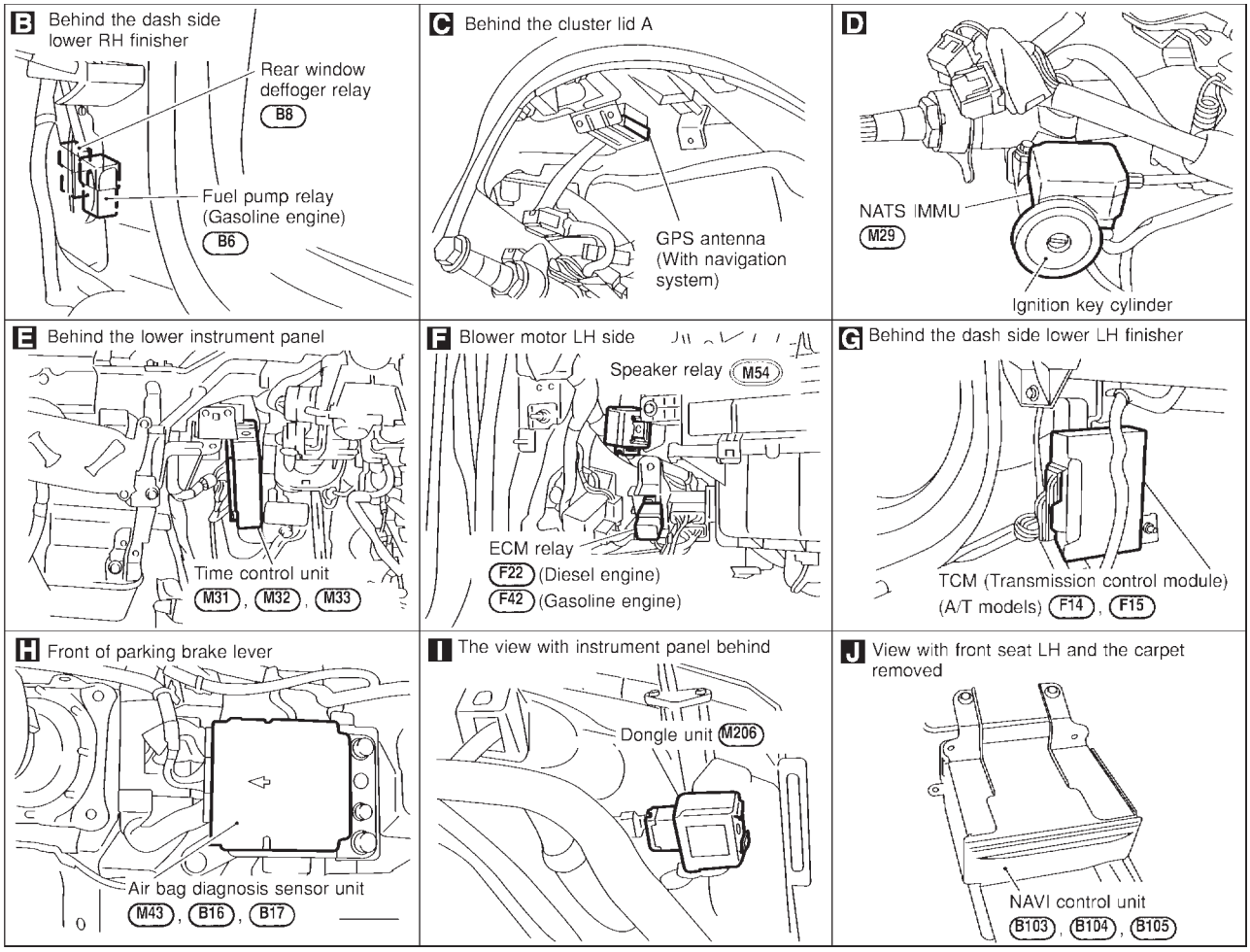
A Insturument panel RH side



The back of the fuse block (J/B)



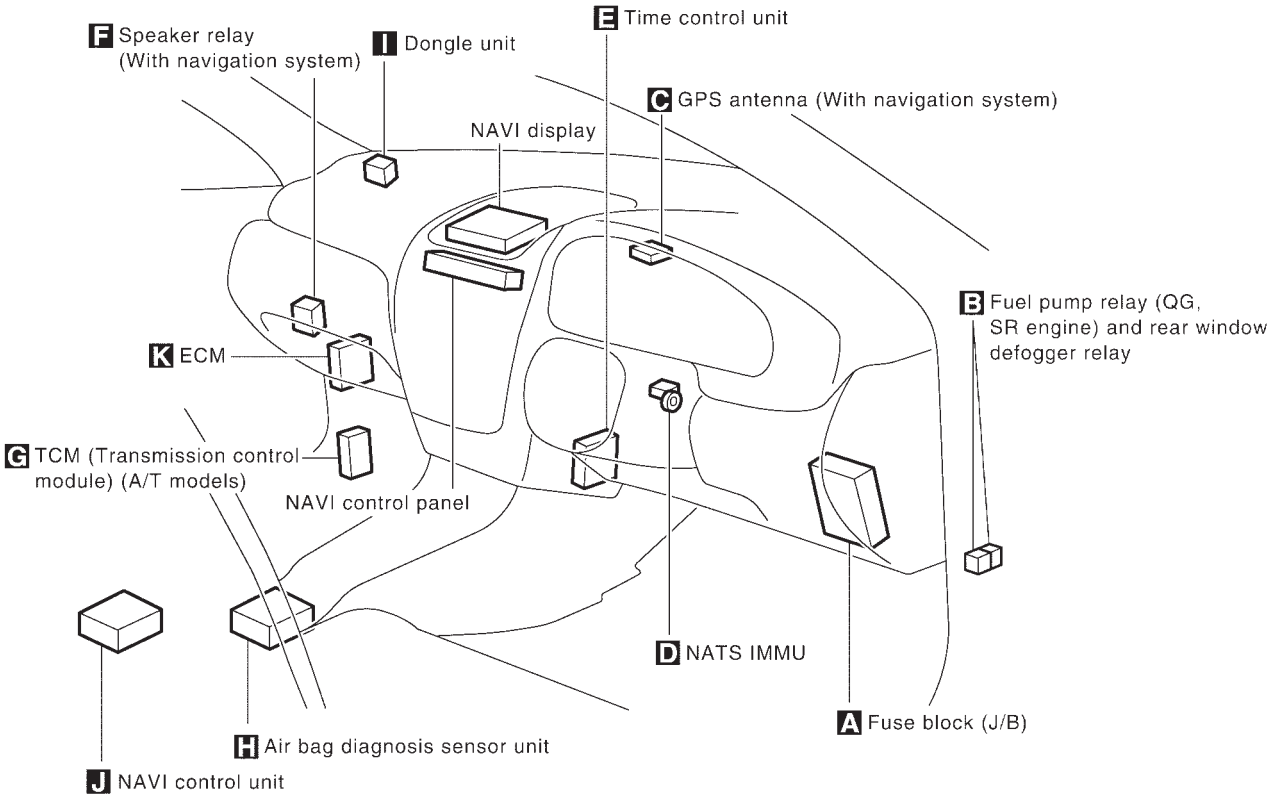
YEL006C

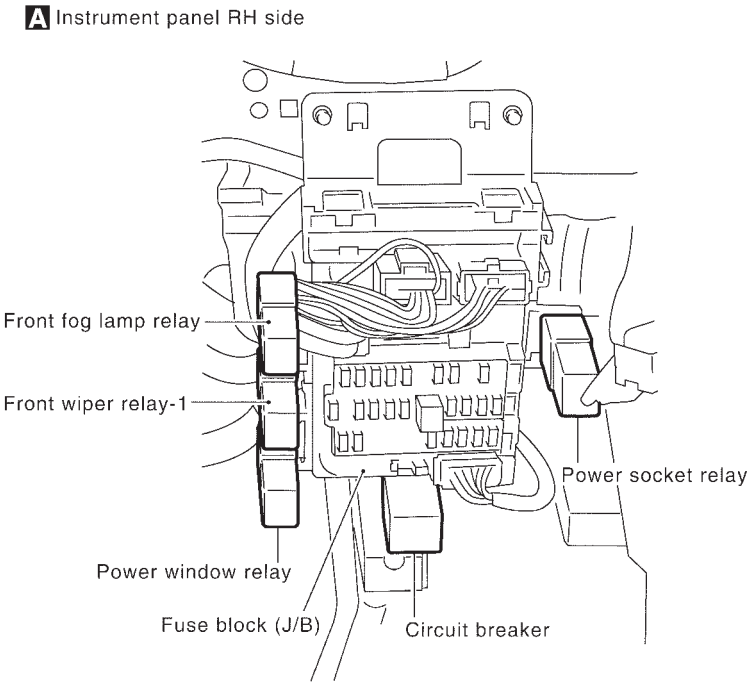

B Behind the dash side lower RH finisher
Rear window defogger relay
B8
Fuel pump relay (Gasoline engine)
B6
C Behind the cluster lid A
GPS antenna (With navigation system)
D
NATS IMMU
M29
Ignition key cylinder
E Behind the lower instrument panel
Time control unit
M31, M32, M33
F Blower motor LH side
Speaker relay M54
ECM relay
F22 (Diesel engine)
F42 (Gasoline engine)
G Behind the dash side lower LH finisher
TCM (Transmission control module)
(A/T models) F14, F15
H Front of parking brake lever
Air bag diagnosis sensor unit
M43, B16, B17
I The view with instrument panel behind
Dongle unit M206
J View with front seat LH and the carpet removed
NAVI control unit
B103, B104, B105

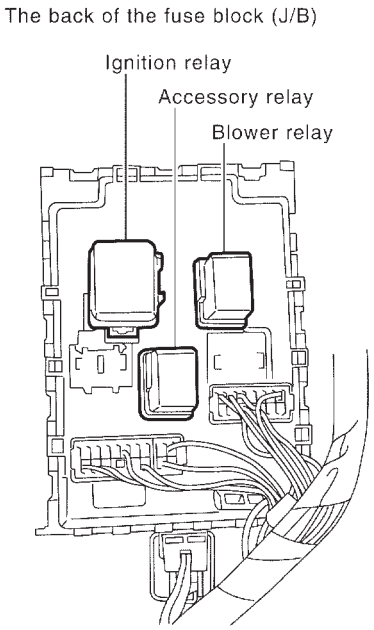
YEL007C

MODELS WITH ECM IN CABIN

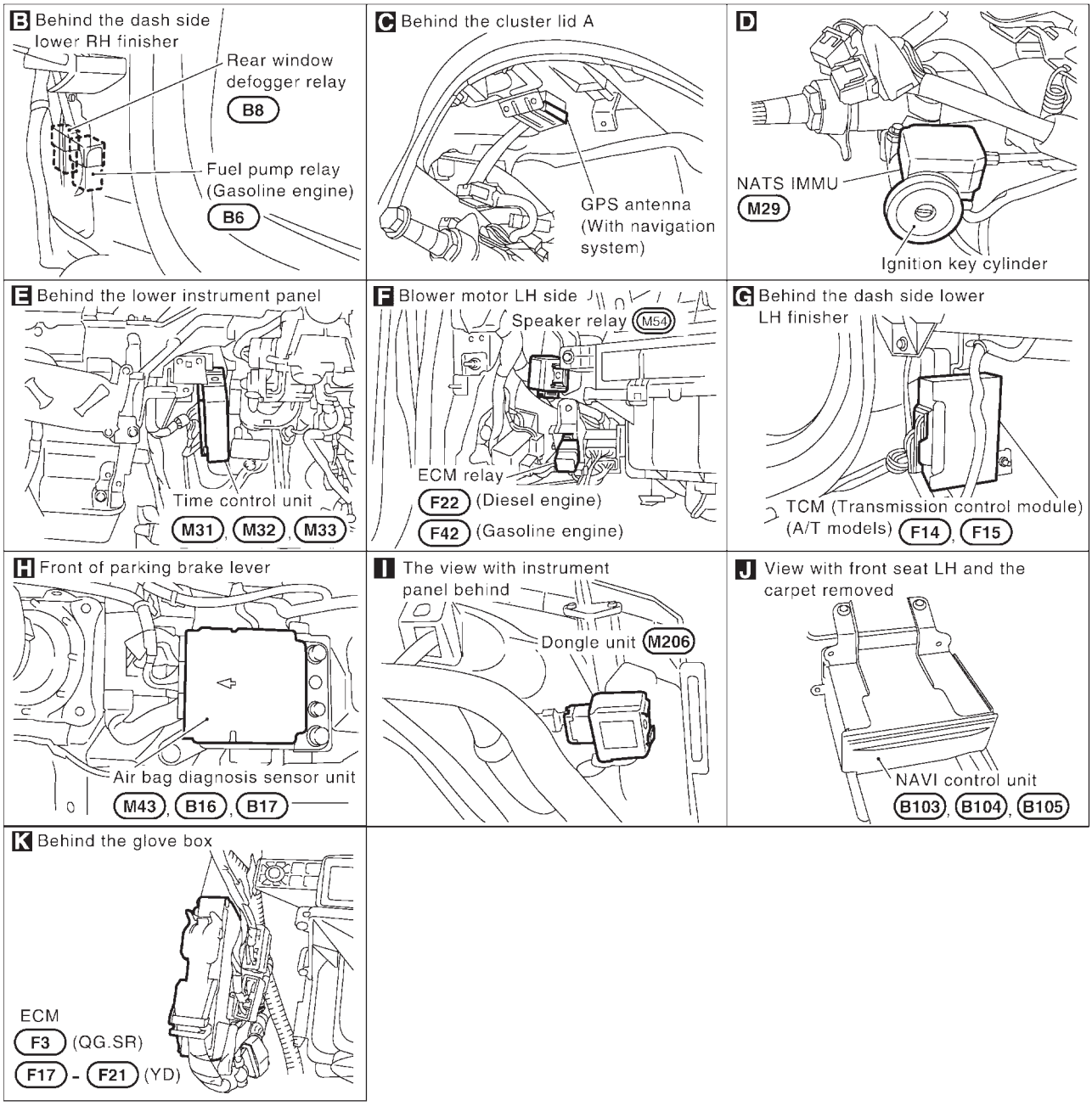
NLEL0345S02







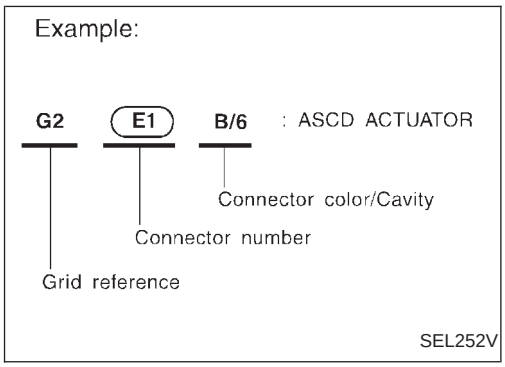
YEL495C


B Behind the dash side lower RH finisher
Rear window defogger relay
B8
Fuel pump relay (Gasoline engine)
B6
C Behind the cluster lid A
GPS antenna (With navigation system)
D
NATS IMMU
M29
Ignition key cylinder
E Behind the lower instrument panel
Time control unit
M31, M32, M33
F Blower motor LH side
Speaker relay M54
ECM relay
F22 (Diesel engine)
F42 (Gasoline engine)
G Behind the dash side lower LH finisher
TCM (Transmission control module) (A/T models) F14, F15
H Front of parking brake lever
Air bag diagnosis sensor unit
M43, B16, B17
I The view with instrument panel behind
Dongle unit M206
J View with front seat LH and the carpet removed
NAVI control unit
B103, B104, B105
K Behind the glove box
ECM
F3 (QG.SR)
F17 - F21 (YD)

NEL784

How to Read Harness Layout

NLEL0131



The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- Main Harness
- Engine Room Harness (Engine Compartment)
- Engine Control Harness
- Body Harness

TO USE THE GRID REFERENCE

NLEL0131S01

1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the drawing, find the crossing of the grid reference letter column and number row.
4. Find the connector number in the crossing zone.
5. Follow the line (if used) to the connector.

CONNECTOR SYMBOL

NLEL0131S02

Main symbols of connector (in Harness Layout) are indicated in the below.

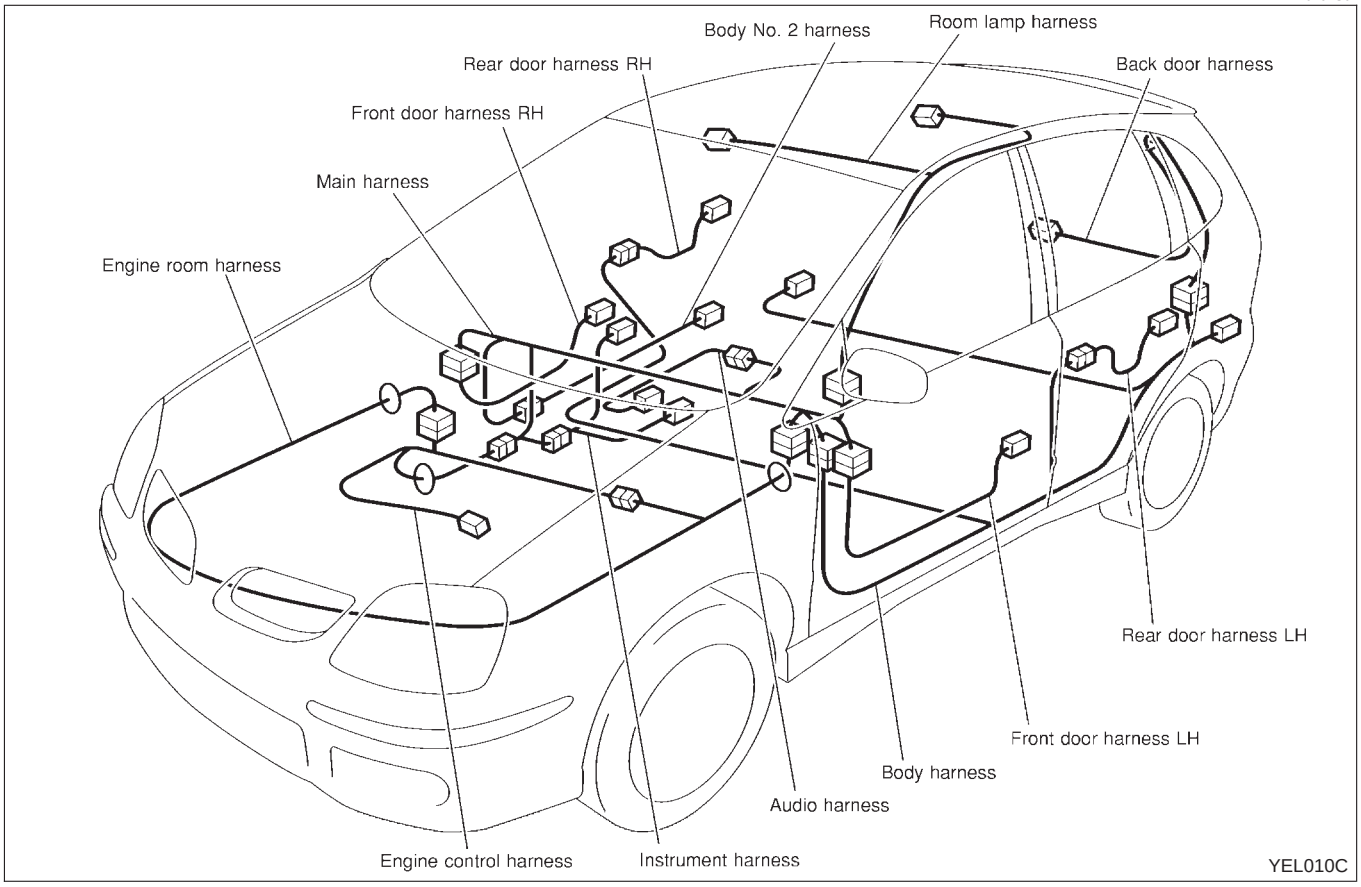
Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
• Cavity: Less than 4 • Relay connector				
• Cavity: From 5 to 8				
• Cavity: More than 9				
• Ground terminal etc.	—			

Outline

NLEL0491

LHD MODELS

NLEL0491S01

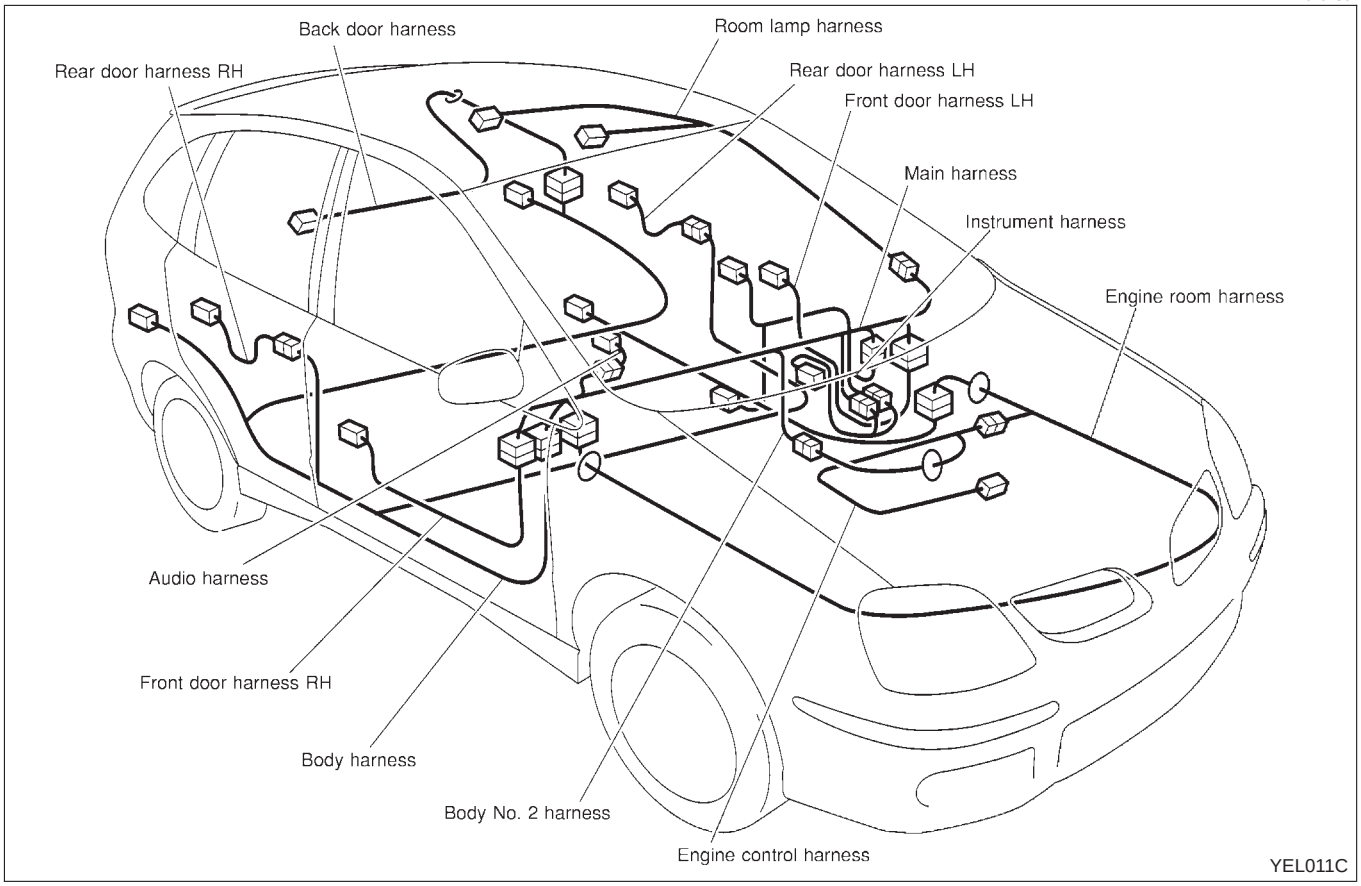


NOTE:
For detailed ground distribution information, refer to “Ground Distribution”, “GROUND”, EL-33.

Outline (Cont'd)

RHD MODELS

NLEL0491S02



NOTE:
For detailed ground distribution information, refer to "Ground Distribution", "GROUND", EL-33.

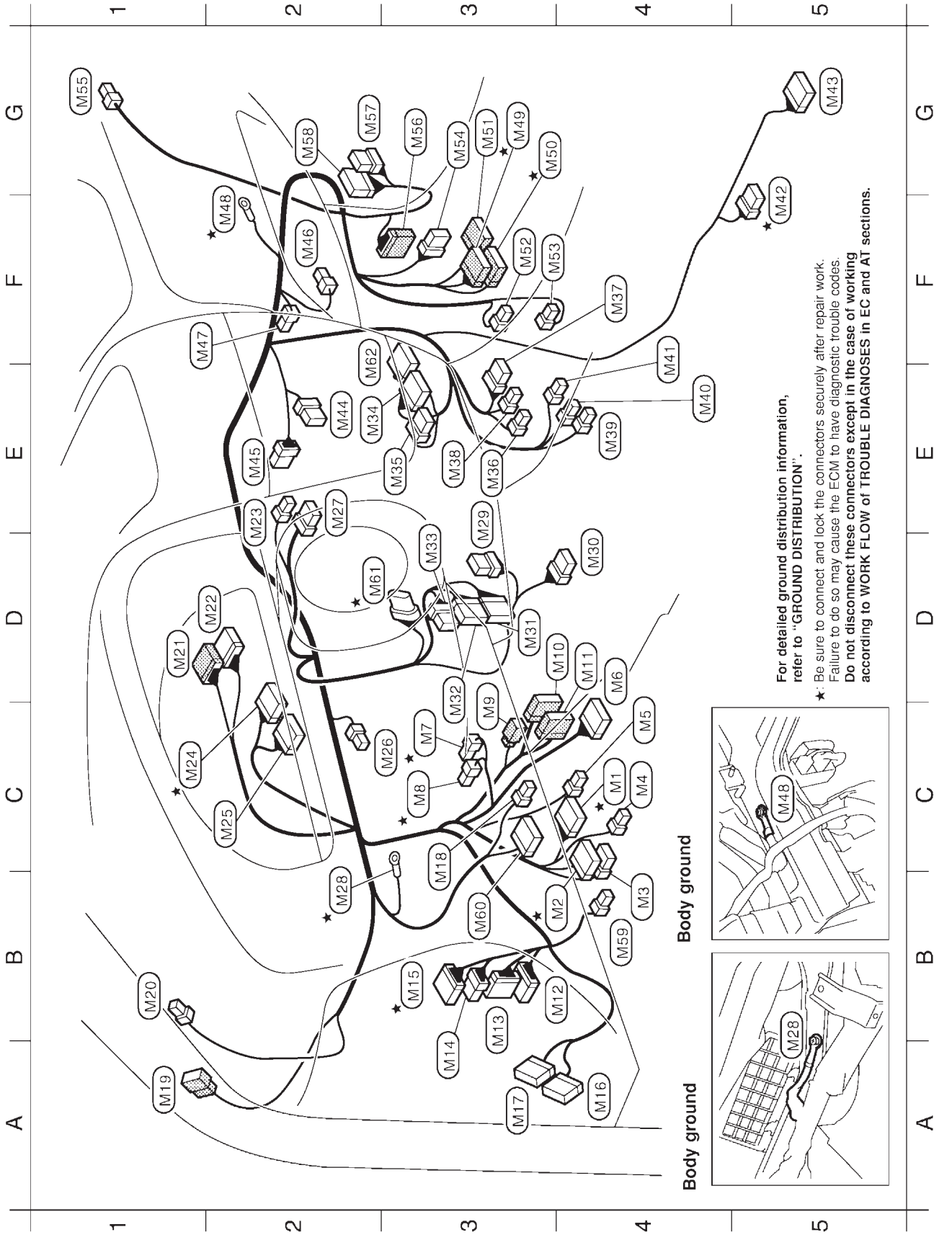
NOTE:

Main Harness

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0347

NLEL0347S01



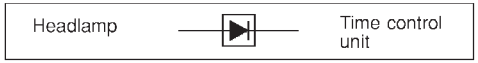
YEL012C

C4 *M1 W/16 : Fuse block (J/B)
B3 *M2 W/12 : Fuse block (J/B)
B4 M3 W/6 : Fuse block (J/B)
C4 M4 W/2 : Circuit breaker
C4 M5 L/4 : Power window relay
D4 M6 W/16 : Data link connector
C3 *M7 BR/2 : Brake pedal position switch (YD engine)
C3 *M8 B/2 : Stop lamp switch
C3 M9 W/2 : To E104
D3 M10 W/16 : To E105
D4 M11 W/16 : To E106
B3 M12 W/20 : To B5
B3 M13 BR/16 : To B4
A3 M14 W/6 : To B3
B3 *M15 W/16 : To B2
A4 M16 W/16 : To D1
A3 M17 W/12 : To D2
C3 M18 W/4 : Head lamp aiming switch
A1 M19 W/6 : To R1
B1 M20 BR/2 : Piller tweeter LH
D1 M21 W/12 : To M201
D1 M22 BR/20 : To M200
E2 M23 W/1 : Option connector for navigation system (Without navigation system)
C1 *M24 W/20 : Combination meter
C2 M25 BR/20 : Combination meter
C2 M26 -/2 : Diode-2 (With navigation system)
E2 M27 W/8 : Hazard switch
B2 *M28 — : Body ground
E3 M29 W/8 : NATS IMMU
D4 M30 Y/7 : Spiral cable (Via sub-harness)
D3 M31 W/16 : Time control unit
D3 M32 W/20 : Time control unit
D3 M33 W/8 : Time control unit
E2 M34 B/16 : Heater control panel (A/C switch·DEF switch) (With max hot door motor)
E3 M35 W/6 : Heater control panel (Fan switch)
E3 M36 L/4 : Heated seat switch (Driver side) (With heated seat)
F4 M37 L/6 : Headlamp washer switch (With headlamp washer)
E3 M38 W/4 : Heated seat switch (Passenger side) (With heated seat)
E4 M39 B/1 : Cigarette lighter illumination
E4 M40 B/2 : Cigarette lighter socket
F4 M41 W/2 : Ashtray illumination
F5 *M42 W/8 : A/T device (A/T models)
G5 M43 Y/20 : Air bag diagnosis sensor unit
E2 M44 B/6 : Intake door motor
E2 M45 W/8 : Max hot door motor
F2 M46 Y/2 : Front passenger air bag module (squid)
F1 M47 W/2 : Diode-1 (Except YD engine)
F2 *M48 — : Body ground
G3 *M49 W/16 : To F43 (QG, SR engine) To F23 (YD engine)
G3 *M50 BR/16 : To F38 (QG, SR engine) To F24 (YD engine)
G3 M51 W/20 : To N1
F3 M52 BR/4 : Fan resistor
F3 M53 W/2 : Blower motor
G3 M54 W/8 : Speaker relay (With navigation system)
G1 M55 BR/2 : Piller tweeter RH
G3 M56 W/16 : To B101
G2 M57 W/8 : To D32
G2 M58 W/12 : To D31
B4 M59 L/4 : Power socket relay
B3 M60 W/10 : Door mirror remote control switch
D2 *M61 -/5 : Accelerator unit (YD engine)
F2 M62 W/12 : Heater control panel (A/C switch·DEF switch) (Without max hot door motor)

*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

Diode-2 M26

Diode-1 M47

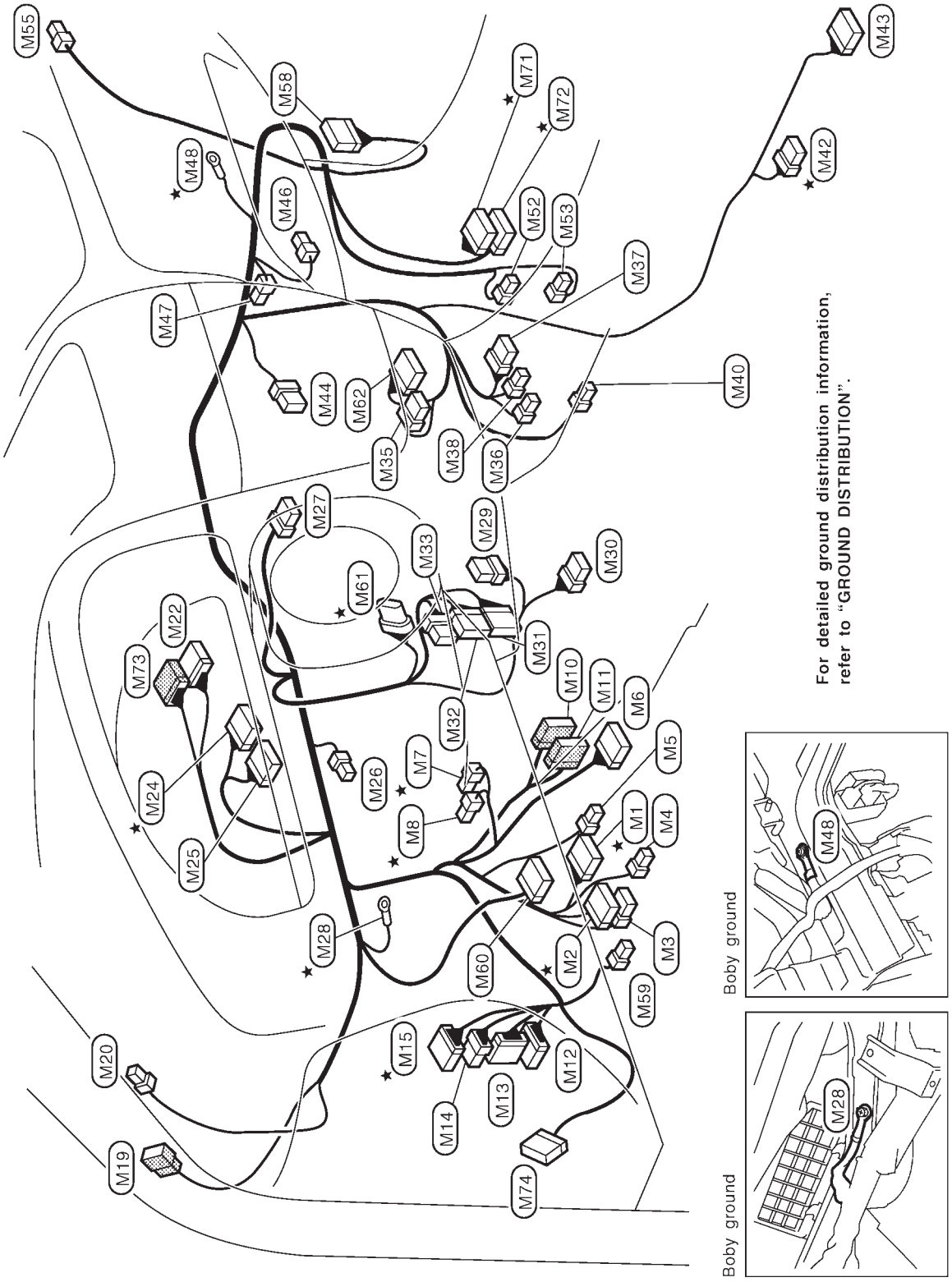


YEL013C

Main Harness (Cont'd)

LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0347S04

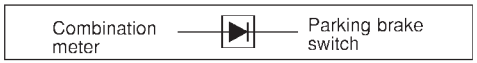


YEL511C

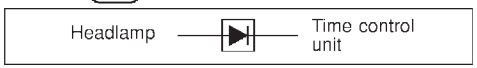
C4	*M1	W/16	: Fuse block (J/B)
B3	*M2	W/12	: Fuse block (J/B)
B4	M3	W/6	: Fuse block (J/B)
C4	M4	W/2	: Circuit breaker
C4	M5	L/4	: Power window relay
D4	M6	W/16	: Data link connector
C3	*M7	BR/2	: Brake pedal position switch (YD engine)
C3	*M8	B/2	: Stop lamp switch
D3	M10	W/16	: To E105
D4	M11	W/16	: To E106
B3	M12	W/20	: To B5
B3	M13	BR/16	: To B4
A3	M14	W/6	: To B3
B3	*M15	W/16	: To B2
A1	M19	W/6	: To R1
B1	M20	BR/2	: Piller tweeter LH
D1	M22	BR/20	: To M200
C1	*M24	W/20	: Combination meter
C2	M25	BR/20	: Combination meter
C2	M26	-/2	: Diode-2 (With navigation system)
E2	M27	W/8	: Hazard switch
B2	*M28	—	: Body ground
E3	M29	W/8	: NATS IMMU
D4	M30	Y/7	: Spiral cable (Via sub-harness)
D3	M31	W/16	: Time control unit
D3	M32	W/20	: Time control unit
D3	M33	W/8	: Time control unit
E3	M35	W/6	: Heater control panel (Fan switch)
E3	M36	L/4	: Heated seat switch (Driver side) (With heated seat)
F4	M37	L/6	: Headlamp washer switch (With headlamp washer)
E3	M38	W/4	: Heated seat switch (Passenger side) (With heated seat)
E4	M40	B/2	: Cigarette lighter socket
F5	*M42	W/8	: A/T device (A/T models)
G5	M43	Y/20	: Air bag diagnosis sensor unit
E2	M44	B/6	: Intake door motor
F2	M46	Y/2	: Front passenger air bag module (squid)
F1	M47	W/2	: Diode-1 (Except YD engine)
F2	*M48	—	: Body ground
F3	M52	BR/4	: Fan resistor
F3	M53	W/2	: Blower motor
G1	M55	BR/2	: Piller tweeter RH
G2	M58	W/12	: To D31
B4	M59	L/4	: Power socket relay
B3	M60	W/10	: Door mirror remote control switch
D2	*M61	-/5	: Accelerator unit (YD engine)
E2	M62	W/12	: Heater control panel (A/C switch·DEF switch) (Without max hot door motor)
C2	M63	W/12	: To N9 (With max hot door motor)
G3	M71	W/16	: To F45
G3	M72	BR/16	: To F44
D1	M73	W/16	: To M208
A3	M74	W/12	: To D12

*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

Diode-2 M26



Diode-1 M47

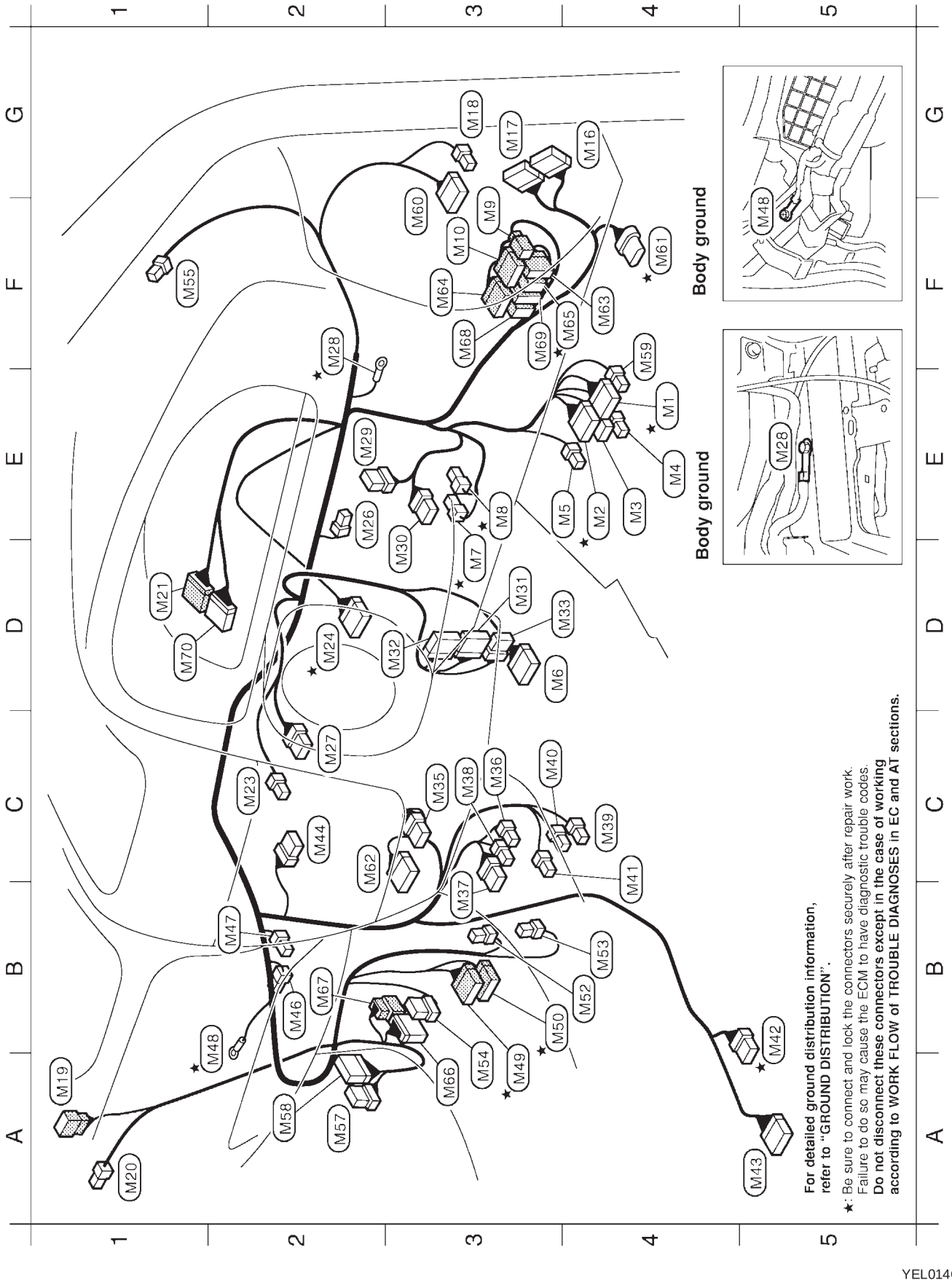


YEL512C

Main Harness (Cont'd)

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0347S02



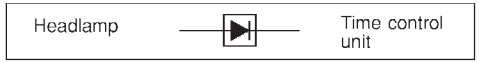
YEL014C

F4 *M1 W/16 : Fuse block (J/B)
E3 *M2 W/12 : Fuse block (J/B)
E4 M3 W/6 : Fuse block (J/B)
E4 M4 W/2 : Circuit breaker
E4 M5 L/4 : Power window relay
D3 M6 W/16 : Data link connector
D3 *M7 BR/2 : Brake pedal position switch (YD engine)
E3 *M8 B/2 : Stop lamp switch
F3 M9 W/2 : To E104
F3 M10 W/16 : To E105
G4 M16 W/16 : To D1
G3 M17 W/12 : To D2
G3 M18 W/4 : Head lamp aiming switch
A1 M19 W/6 : To R1
A1 M20 BR/2 : Piller tweeter LH
D1 M21 W/12 : To M201
C2 M23 W/1 : Option connector for navigation system (Without navigation system)
D2 *M24 W/20 : Combination meter
E2 M26 -/2 : Diode-2 (With navigation system)
C2 M27 W/8 : Hazard switch
F2 *M28 — : Body ground
E2 M29 W/8 : NATS IMMU
D3 M30 Y/7 : Spiral cable (Via sub-harness)
D3 M31 W/16 : Time control unit
D3 M32 W/20 : Time control unit
D3 M33 W/8 : Time control unit
C3 M35 W/6 : Heater control panel (Fan switch)
C3 M36 L/4 : Heated seat switch (Driver side) (With heated seat)
B3 M37 L/6 : Headlamp washer switch (With headlamp washer)
C3 M38 W/4 : Heated seat switch (Passenger side) (With heated seat)
C4 M39 B/1 : Cigarette lighter illumination
C3 M40 B/2 : Cigarette lighter socket
C4 M41 W/2 : Ashtray illumination
B5 *M42 W/8 : A/T device (A/T models)
A5 M43 Y/20 : Air bag diagnosis sensor unit
C2 M44 B/6 : Intake door motor
B2 M46 Y/2 : Front passenger air bag module (squid)
B2 M47 W/2 : Diode-1 (Except YD engine)
A1 *M48 — : Body ground
A3 *M49 W/16 : To F43 (QG, SR engine)
To F23 (YD engine)
B3 *M50 BR/16 : To F38 (QG, SR engine)
To F24 (YD engine)
B4 M52 BR/4 : Fan resistor
B4 M53 W/2 : Blower motor
A3 M54 W/8 : Speaker relay (With navigation system)
F1 M55 BR/2 : Piller tweeter RH
A2 M57 W/8 : To D32
A2 M58 W/12 : To D31
F4 M59 L/4 : Power socket relay
G3 M60 W/10 : Door mirror remote control switch
F4 *M61 -/5 : Accelerator unit (YD engine)
C2 M62 W/12 : Heater control panel (A/C switch·DEF switch) (Without max hot door motor)
F3 M63 W/12 : To B44
F3 M64 BR/20 : To E116
F3 *M65 W/16 : To B47
A3 M66 W/12 : To B101
B2 M67 W/8 : To N6
E3 M68 BR/16 : To B46
F3 M69 W/6 : To B45
D1 M70 BR/24 : To M207

*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

Diode-2 M26

Diode-1 M47

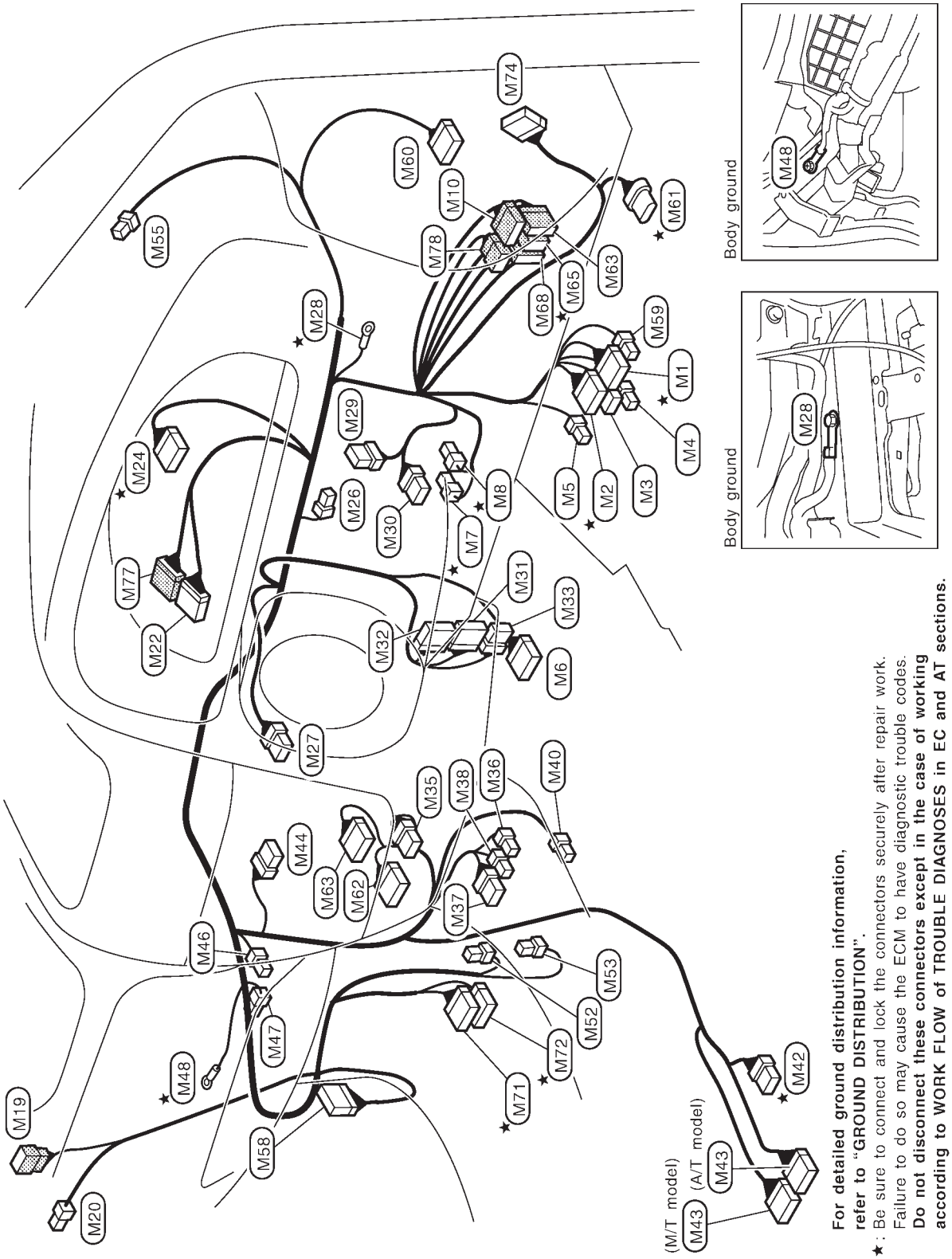


YEL015C

Main Harness (Cont'd)

RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0347S05



For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

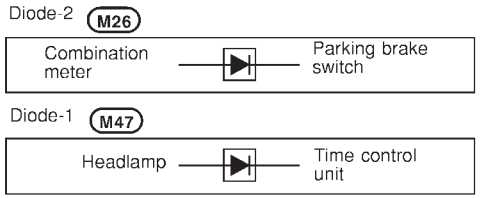
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

YEL513C

F4 *M1 W/16 : Fuse block (J/B)
E3 *M2 W/12 : Fuse block (J/B)
E4 M3 W/6 : Fuse block (J/B)
E4 M4 W/2 : Circuit breaker
E4 M5 L/4 : Power window relay
D3 M6 W/16 : Data link connector
D3 *M7 BR/2 : Brake pedal position switch (YD engine)
E3 *M8 B/2 : Stop lamp switch
F3 M10 W/16 : To E105
A1 M19 W/6 : To R1
A1 M20 BR/2 : Piller tweeter LH
D1 M22 BR/20 : To M200
D2 *M24 W/20 : Combination meter
E2 M26 -/2 : Diode-2 (With navigation system)
C2 M27 W/8 : Hazard switch
F2 *M28 — : Body ground
E2 M29 W/8 : NATS IMMU
D3 M30 Y/7 : Spiral cable (Via sub-harness)
D3 M31 W/16 : Time control unit
D3 M32 W/20 : Time control unit
D3 M33 W/8 : Time control unit
C3 M35 W/6 : Heater control panel (Fan switch)
C3 M36 L/4 : Heated seat switch (Driver side) (With heated seat)
B3 M37 L/6 : Headlamp washer switch (With headlamp washer)
C3 M38 W/4 : Heated seat switch (Passenger side) (With heated seat)
C3 M40 B/2 : Cigarette lighter socket
B5 *M42 W/8 : A/T device (A/T models)
A4 M43 Y/20 : Air bag diagnosis sensor unit
C2 M44 B/6 : Intake door motor
B2 M46 Y/2 : Front passenger air bag module (squid)
B2 M47 W/2 : Diode-1 (Except YD engine)
A1 *M48 — : Body ground
B4 M52 BR/4 : Fan resistor
B4 M53 W/2 : Blower motor
F1 M55 BR/2 : Piller tweeter RH
A2 M58 W/12 : To D31
F4 M59 L/4 : Power socket relay
G3 M60 W/10 : Door mirror remote control switch
F4 *M61 -/5 : Accelerator unit (YD engine)
C2 M62 W/12 : Heater control panel (A/C switch·DEF switch)
F3 M63 W/12 : To B44
F3 *M65 W/16 : To B47
E3 M68 BR/16 : To B46
A3 M71 W/16 : To F45
B3 M72 BR/16 : To F44
G3 M74 W/12 : To D12
D1 M77 W/16 : To M214
F3 M78 W/6 : To E120

*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

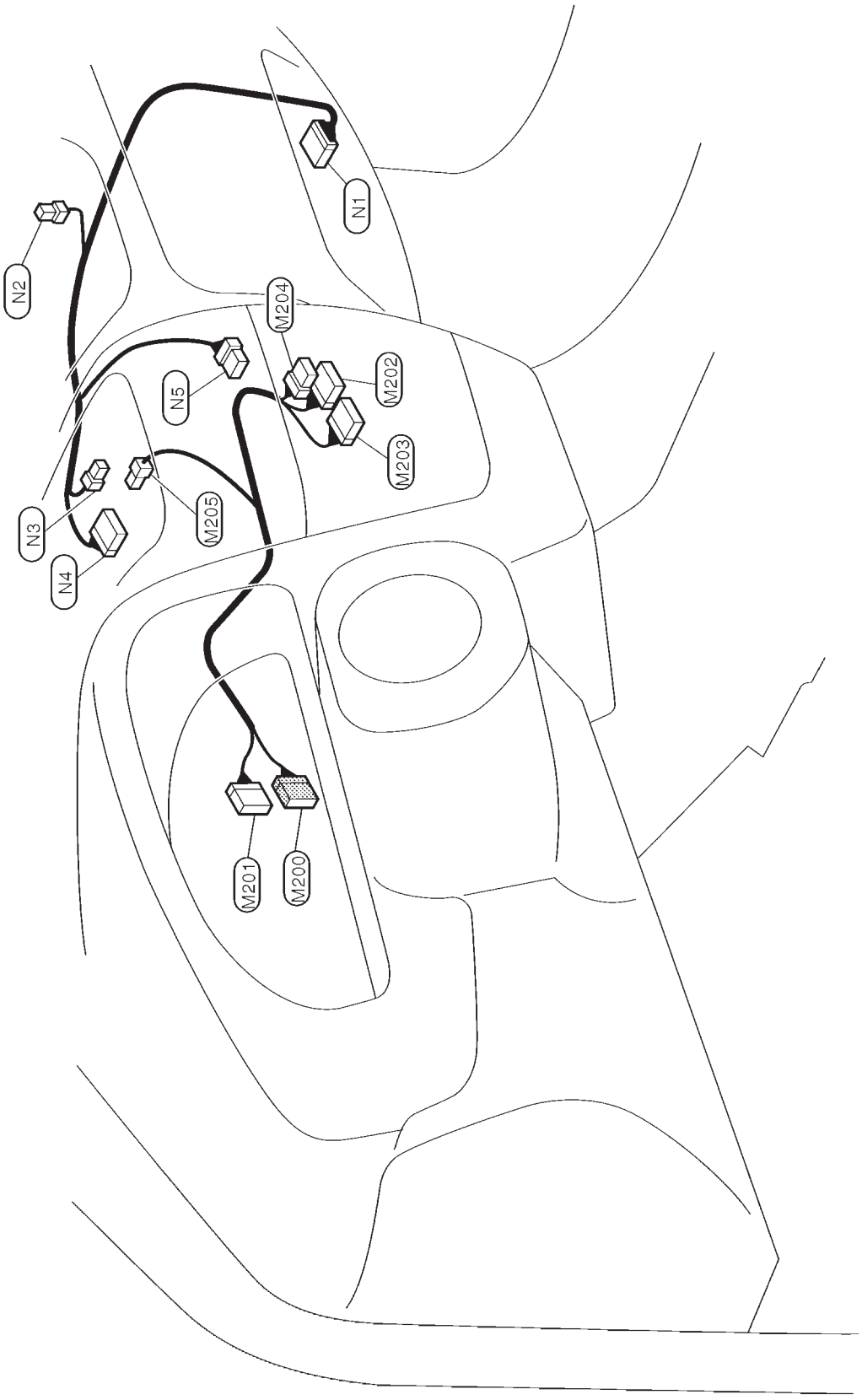


Instrument Harness and Audio Harness

NLEL0134

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0134S01



Instrument harness

- (N1) W/20 : To (M51)
- (N2) B/2 : Security indicator lamp (With NATS IMMU and navigation system)
- (N3) W/4 : Front monitor
- (N4) W/4 : Front monitor
- (N5) W/8 : NAVI control panel (With navigation system)

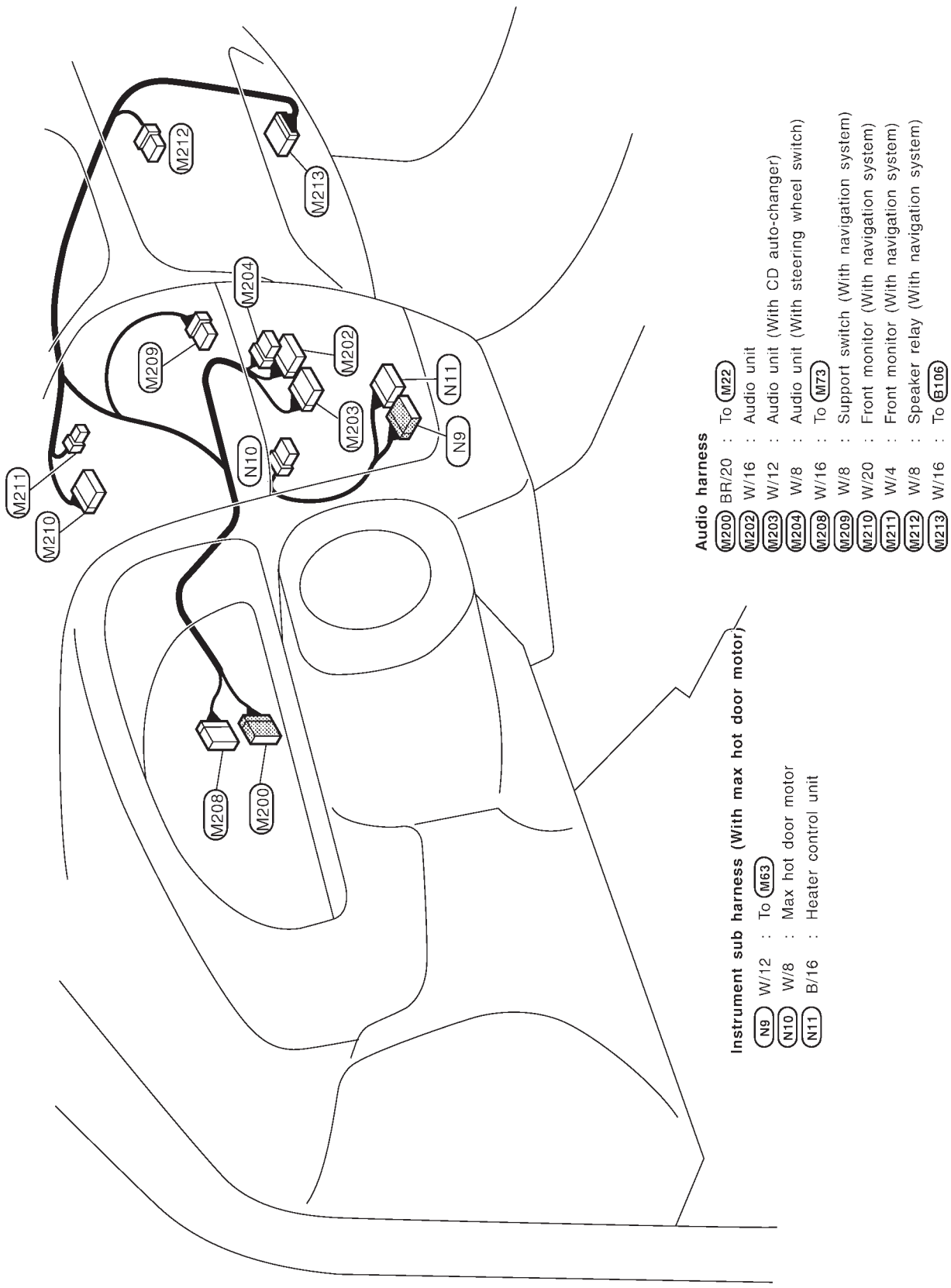
Audio harness

- (M200) BR/20 : To (M22)
- (M201) W/12 : To (M21)
- (M202) W/16 : Audio unit
- (M203) W/12 : Audio unit (With CD auto-changer)
- (M204) W/8 : Audio unit (With sttering wheel switch)
- (M205) B/2 : Security indicator lamp (With NATS IMMU for without navigation system)

YEL016C

LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0134S05



Audio harness

- M200 BR/20 : To M22
- M202 W/16 : Audio unit
- M203 W/12 : Audio unit (With CD auto-changer)
- M204 W/8 : Audio unit (With steering wheel switch)
- M208 W/16 : To M73
- M209 W/8 : Support switch (With navigation system)
- M210 W/20 : Front monitor (With navigation system)
- M211 W/4 : Front monitor (With navigation system)
- M212 W/8 : Speaker relay (With navigation system)
- M213 W/16 : To B106

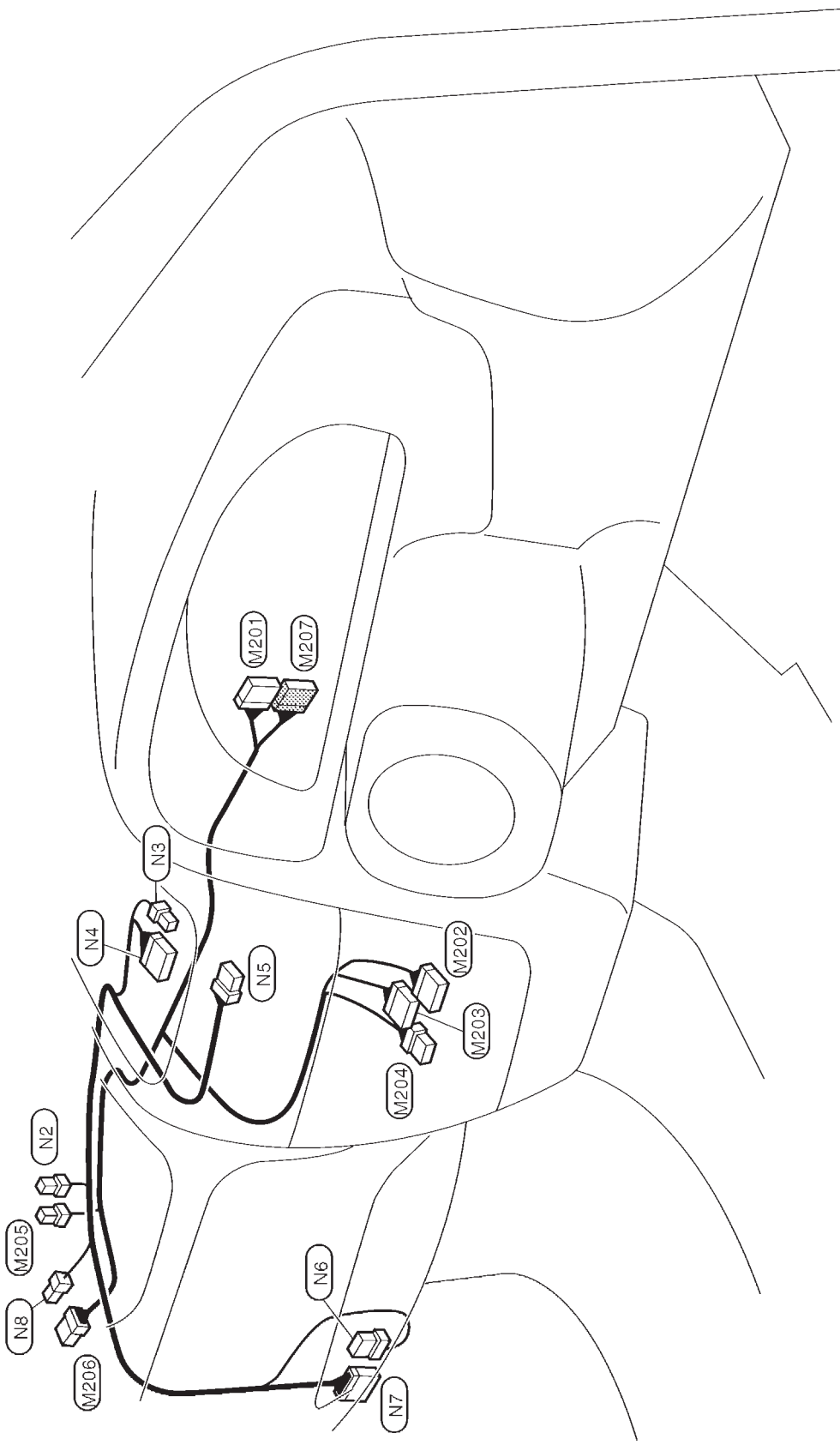
Instrument sub harness (With max hot door motor)

- N9 W/12 : To M63
- N10 W/8 : Max hot door motor
- N11 B/16 : Heater control unit

YEL533C

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0134S03



Instrument harness

- N2 B/2 : Security indicator lamp
- N3 W/4 : Front monitor (With NATS IMMU and navigation system)
- N4 W/4 : Front monitor
- N5 W/8 : NAVI control panel (With navigation system)
- N6 W/8 : To M67
- N7 W/16 : To B102
- N8 BR/8 : Dongle unit (With NATS IMMU and navigation system)

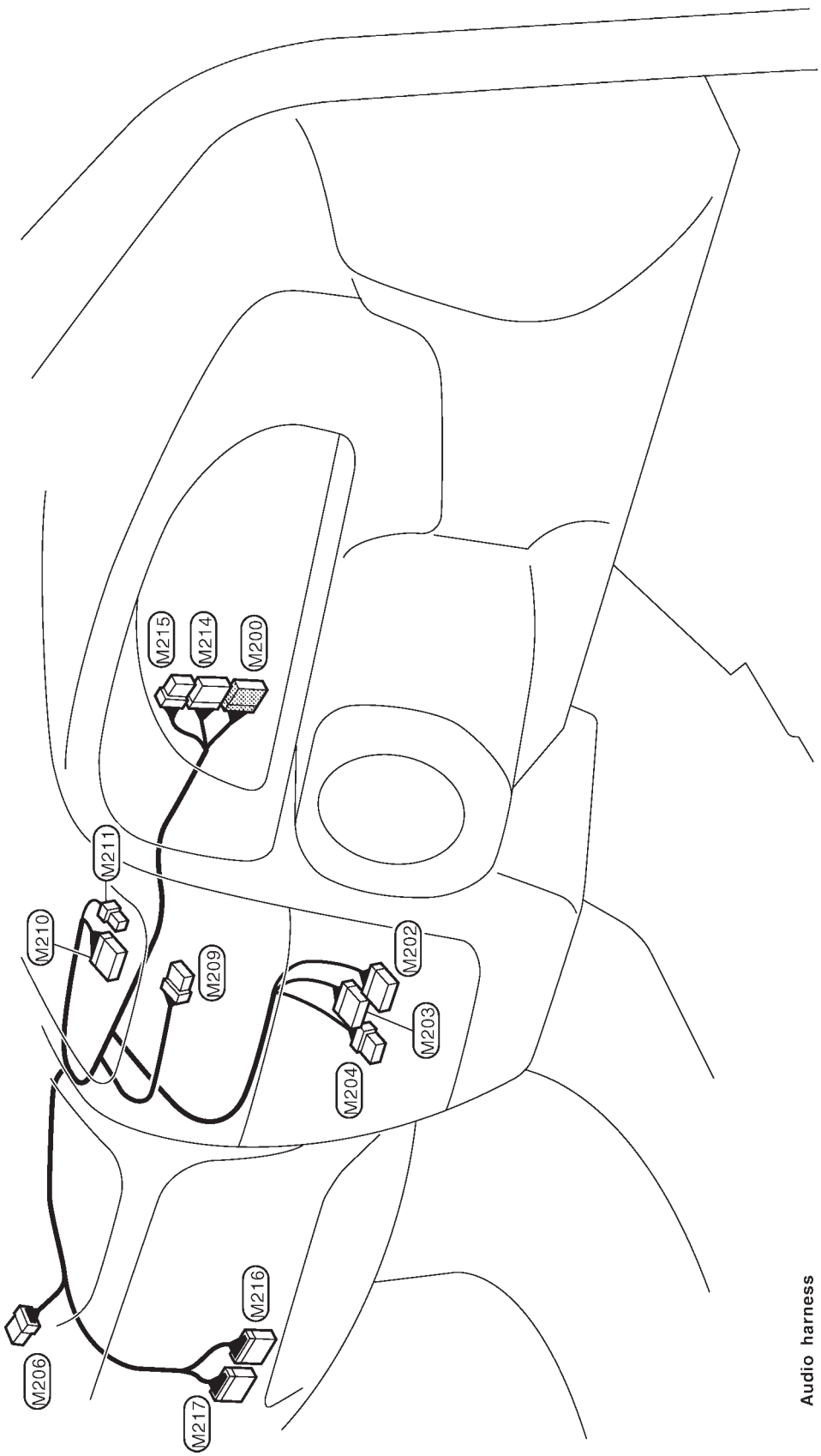
Audio harness

- M201 W/12 : To M21
- M202 W/16 : Audio unit
- M203 W/12 : Audio unit (With CD auto-changer)
- M204 W/8 : Audio unit (With steering wheel switch)
- M205 B/2 : Security indicator lamp (With NATS IMMU for without navigation system)
- M206 BR/8 : Dongle unit (With NATS IMMU for without navigation system)
- M207 BR/24 : To M70

YEL017C

RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0134S06



Audio harness

- M200 BR/20 : To M22
- M202 W/16 : Audio unit
- M203 W/12 : Audio unit (With CD auto-changer)
- M204 W/8 : Audio unit (With steering wheel switch)
- M206 BR/8 : Dongle unit
- M209 W/8 : Support switch (With navigation system)
- M210 W/20 : Front monitor (With navigation system)
- M211 W/4 : Front monitor (With navigation system)

- M214 W/16 : To M77
- M215 W/8 : Speaker relay (With navigation system)
- M216 W/16 : To B108
- M217 W/12 : To B107

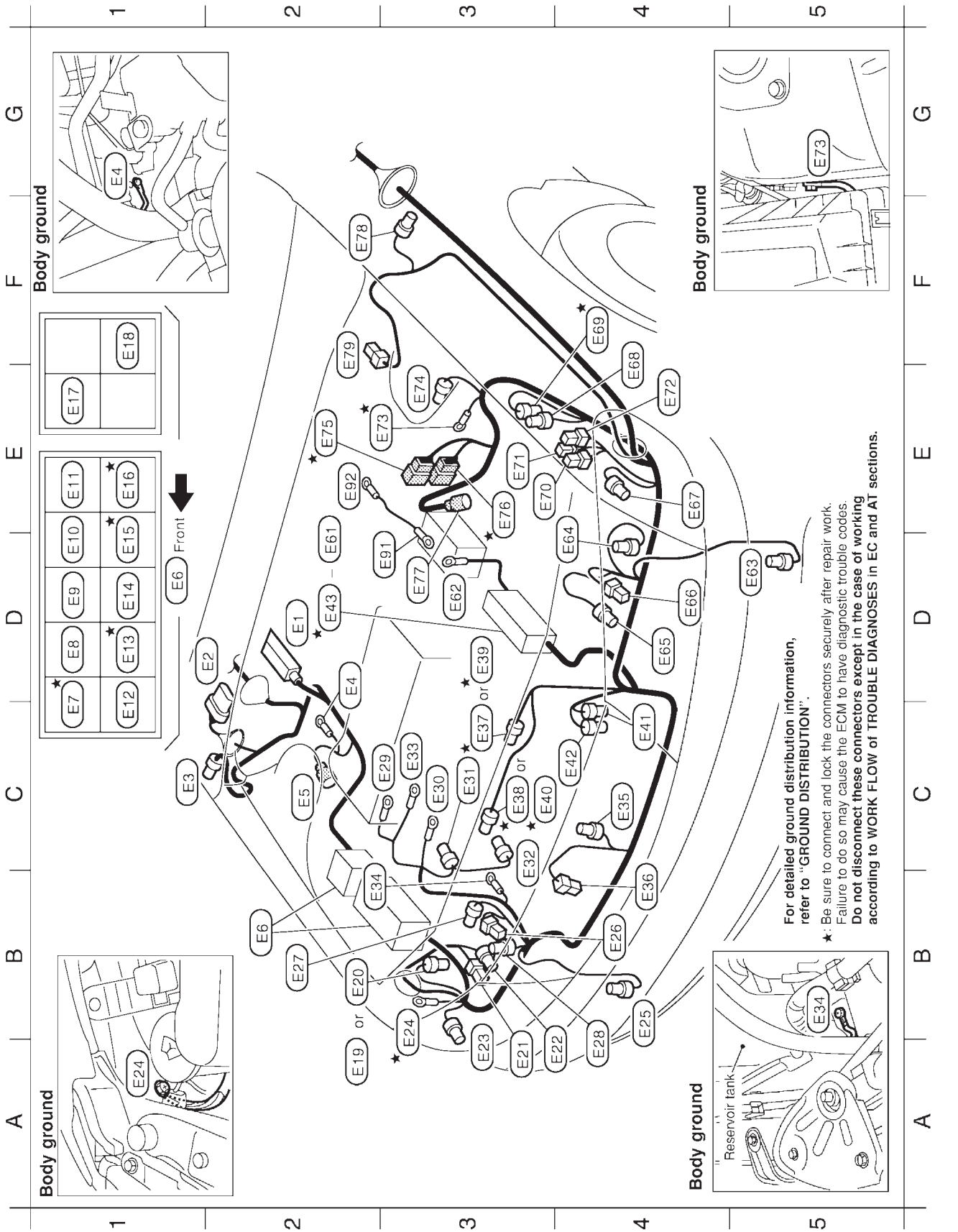
YEL534C

Engine Room Harness

NLEL0342

ENGINE COMPARTMENT — LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0342S01



YEL018C

D2 (E8) B/31 : ABS actuator and electric unit (Control ABS)
D1 (E2) GY/5 : Front wiper motor
C1 (E3) B/2 : Side turn signal lamp RH
D2 (E4) — : Body ground
C2 (E5) GY/2 : Front wheel sensor RH
B2 *(E6) — : Relay box
D1 (E7) BR/6 : Cooling fan relay-1 (QG engine)
B4 : Cooling fan relay-1 (SR, YD engine)
D1 (E8) W/3 : Horn relay
D1 (E9) L/4 : Air conditioner relay (With A/C)
D1 (E10) B/5 : Relay wiper relay
E1 (E11) L/4 : Front fog lamp relay
D1 (E12) BR/6 : Headlamp washer timer (With headlamp washer)
D1 (E13) B/5 : Cooling fan relay-2 (SR, YD engine)
D1 (E13) L/5 : Headlamp relay LH (QG engine with daytime light system)
D1 (E14) B/5 : Front wiper relay-2
D1 *(E15) B/4 : Cooling fan relay-3 (SR, YD engine)
D1 (E15) L/4 : Headlamp relay RH (QG engine with daytime light system)
E1 (E16) L/4 : Park/neutral position (PNP) relay (A/T models)
E1 *(E16) B/5 : Cooling fan relay-4 (YD engine)
E1 (E17) L/4 : Headlamp relay RH (SR, YD engine with daytime light system)
F1 (E18) L/4 : Headlamp relay LH (SR, YD engine with daytime light system)
A2 (E19) B/1 : Not used (QG, SR engine) (With dealer fitted air conditioner)
B2 (E20) B/2 : Not used (YD engine) (With dealer fitted air conditioner)
A3 (E21) GY/2 : Headlamp washer motor (With headlamp washer)
A3 (E22) B/2 : Washer motor
A3 (E23) GY/2 : Front turn signal lamp RH
B3 *(E24) — : Body ground
B4 (E25) L/2 : Front fog lamp RH
B4 (E26) B/2 : Parking lamp RH
B2 (E27) GY/3 : Headlamp RH
B4 (E28) B/3 : Headlamp aiming motor RH
C3 (E29) — : Alternator (E)
C3 (E30) — : Alternator (B)
C3 (E31) W/2 : Alternator (S,L)
C3 (E32) B/1 : Compressor (With A/C)
C3 (E33) — : Glow plug (YD engine)
B3 (E34) — : Body ground
C4 (E35) GY/2 : Outside air temperature sensor
B4 (E36) B/1 : Horn
C3 *(E37) B/2 : Cooling fan motor-1 (QG engine)
C3 *(E38) B/2 : Cooling fan motor-2 (QG engine)
D3 *(E39) B/2 : Cooling fan motor-1 (SR, YD engine)
C3 *(E40) B/2 : Cooling fan motor-2 (SR,YD engine)
C4 (E41) B/3 : Refrigerant pressure sensor (QG, SR engine with A/C)
C4 (E42) B/2 : Dual pressure switch (YD engine with A/C)
D2 *(E43) — : Fuse and fusible link box
D2 (E44) B/6 : Fuse and fusible link box (*1)
D2 *(E45) W/6 : Fuse and fusible link box (*1)
D2 (E46) W/4 : Fuse and fusible link box (*1)
D2 (E47) G/2 : Fuse and fusible link box (*1)
D2 (E48) B/1 : Fuse and fusible link box (*1)
D2 (E49) B/1 : Fuse and fusible link box (*1)
D2 (E50) B/1 : Fuse and fusible link box (*1)
D2 (E51) B/2 : Fuse and fusible link box (*2)
D2 (E52) B/1 : Fuse and fusible link box (*2)
D2 (E53) — : Fuse and fusible link box (*2)
D2 (E54) — : Fuse and fusible link box (*2)
D2 *(E55) W/3 : Fuse and fusible link box (*2)
D2 *(E56) W/4 : Fuse and fusible link box (*2)
D2 *(E57) W/6 : Fuse and fusible link box (*2)
D2 *(E58) B/6 : Fuse and fusible link box (*2)
D2 (E59) W/1 : Fuse and fusible link box (*2)
D2 (E60) — : Fuse and fusible link box (*3)
D2 (E61) — : Fuse and fusible link box (*3)
D3 (E62) — : Battery (+)
D5 (E63) L/2 : Front fog lamp LH
D4 (E64) B/3 : Headlamp aiming motor LH
D4 (E65) GY/3 : Headlamp LH
D4 (E66) B/2 : Parking lamp LH
E4 (E67) GY/2 : Front turn signal lamp LH
F4 (E68) GY/2 : Not used (With dealer fitted theft warning system)
F4 *(E69) GY/2 : Intake air temperature sensor (QG, SR engine)
E3 (E70) G/2 : Glow relay (YD engine)
E3 (E71) W/1 : Glow relay (YD engine)
E4 (E72) W/1 : Glow relay (YD engine)
E2 *(E73) — : Body ground
E3 (E74) B/2 : Brake fluid level switch
E2 *(E75) W/8 : To (F35) (QG, SR engine) To (F14) (YD engine)
E3 *(E76) B/8 : To (F36) (QG, SR engine) To (F13) (YD engine)
D3 (E77) BR/2 : Front wheel sensor LH
F2 (E78) B/2 : Side tur signal lamp LH
F2 (E79) W/1 : Vacuum warning switch (YD engine)

Battery cable

D2 (E91) — : Battery (–)
E2 (E92) — : Body ground

*1 : QG engine except cold area
*2 : QG engine cold area and SR engine
*3 : YD engine

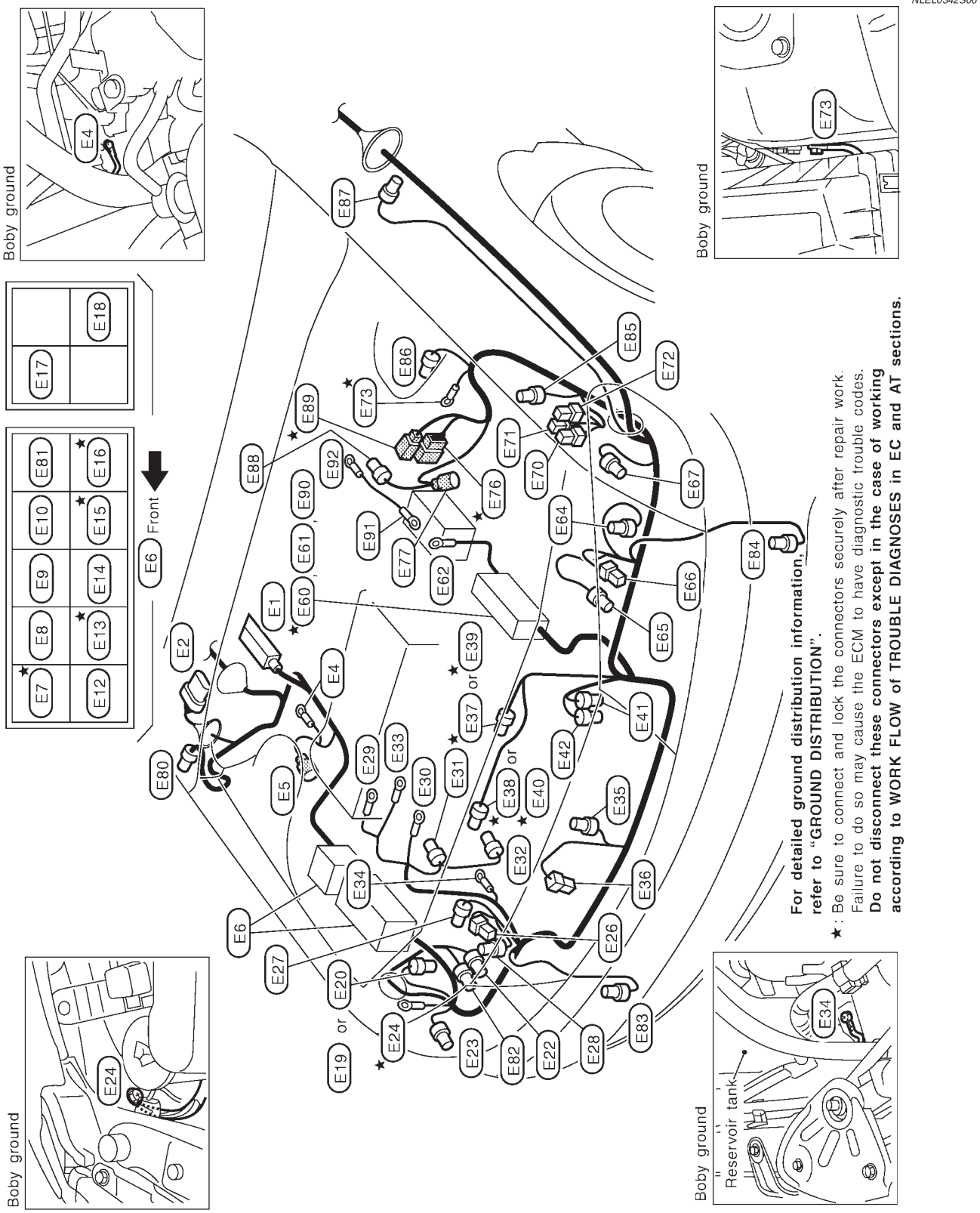
*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.**

YEL019C

Engine Room Harness (Cont'd)

ENGINE COMPARTMENT — LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0342S06



YEL515C

D2 (E1) B/31 : ABS actuator and electric unit (Control ABS)
D1 (E2) GY/5 : Front wiper motor
D2 (E4) — : Body ground
C2 (E5) GY/2 : Front wheel sensor RH
B2 *(E6) — : Relay box
D1 (E7) BR/6 : Cooling fan relay-1 (QG engine)
B/4 : Cooling fan relay-1 (SR, YD engine)
D1 (E8) W/3 : Horn relay
D1 (E9) L/4 : Air conditioner relay (With A/C)
D1 (E10) B/5 : Rear wiper relay
D1 (E12) BR/6 : Headlamp washer timer (With headlamp washer)
D1 (E13) B/5 : Cooling fan relay-2 (SR, YD engine)
D1 (E13) L/5 : Headlamp relay LH (QG engine with daytime light system)
D1 (E14) B/5 : Front wiper relay-2
D1 *(E15) B/4 : Cooling fan relay-3 (SR, YD engine)
D1 (E15) L/4 : Headlamp relay RH (QG engine with daytime light system)
E1 (E16) L/4 : Park/neutral position (PNP) relay (A/T models)
E1 *(E16) B/5 : Cooling fan relay-4 (YD engine)
E1 (E17) L/4 : Headlamp relay RH (SR, YD engine with daytime light system)
F1 (E18) L/4 : Headlamp relay LH (SR, YD engine with daytime light system)
A2 (E19) B/1 : Not used (QG, SR engine) (With dealer fitted air conditioner)
B2 (E20) B/2 : Not used (YD engine) (With dealer fitted air conditioner)
A3 (E22) B/2 : Washer motor
A3 (E23) GY/2 : Front turn signal lamp RH
B3 *(E24) — : Body ground
B4 (E26) B/2 : Parking lamp RH
B2 (E27) GY/3 : Headlamp RH
B4 (E28) B/3 : Headlamp aiming motor RH
C3 (E29) — : Alternator (E)
C3 (E30) — : Alternator (B)
C3 (E31) W/2 : Alternator (S,L)
C3 (E32) B/1 : Compressor (With A/C)
C3 (E33) — : Glow plug (YD engine)
B3 (E34) — : Body ground
C4 (E35) GY/2 : Outside air temperature sensor
B4 (E36) B/1 : Horn
C3 *(E37) B/2 : Cooling fan motor-1 (QG engine)
C3 *(E38) B/2 : Cooling fan motor-2 (QG engine)
D3 *(E39) B/2 : Cooling fan motor-1 (SR, YD engine)
C3 *(E40) B/2 : Cooling fan motor-2 (SR,YD engine)
C4 (E41) B/3 : Refrigerant pressure sensor (QG, SR engine with A/C)
C4 (E42) B/2 : Dual pressure switch (YD engine with A/C)
D2 (E60) — : Fuse and fusible link box (*3)
D2 (E61) — : Fuse and fusible link box (*3)
D3 (E62) — : Battery (+)
D4 (E64) B/3 : Headlamp aiming motor LH
D4 (E65) GY/3 : Headlamp LH
D4 (E66) B/2 : Parking lamp LH
E4 (E67) GY/2 : Front turn signal lamp LH
E3 (E70) G/2 : Glow relay (YD engine)
E3 (E71) W/1 : Glow relay (YD engine)
E4 (E72) W/1 : Glow relay (YD engine)
E2 *(E73) — : Body ground
E3 *(E76) B/8 : To (F36) (QG, SR engine)
To (F13) (YD engine)
D3 (E77) BR/2 : Front wheel sensor LH
C1 (E80) -/2 : Side turn signal lamp RH
F1 (E81) BR/6 : ECM relay
A3 (E82) L/2 : Headlamp washer motor (With headlamp washer)
B4 (E83) -/2 : Front fog lamp RH
D5 (E84) -/2 : Front fog lamp LH
F4 (E85) W/2 : Not used (With dealer fitted theft warning system)
E3 (E86) GY/2 : Brake fluid level switch
F2 (E87) -/2 : Side turn signal lamp LH
E2 (E88) BR/2 : Fuel filter switch (YD engine)
E2 (E89) W/4 : To (F47) (SR engine)
D2 *(E90) — : Fuse and fusible link box

Battery cable

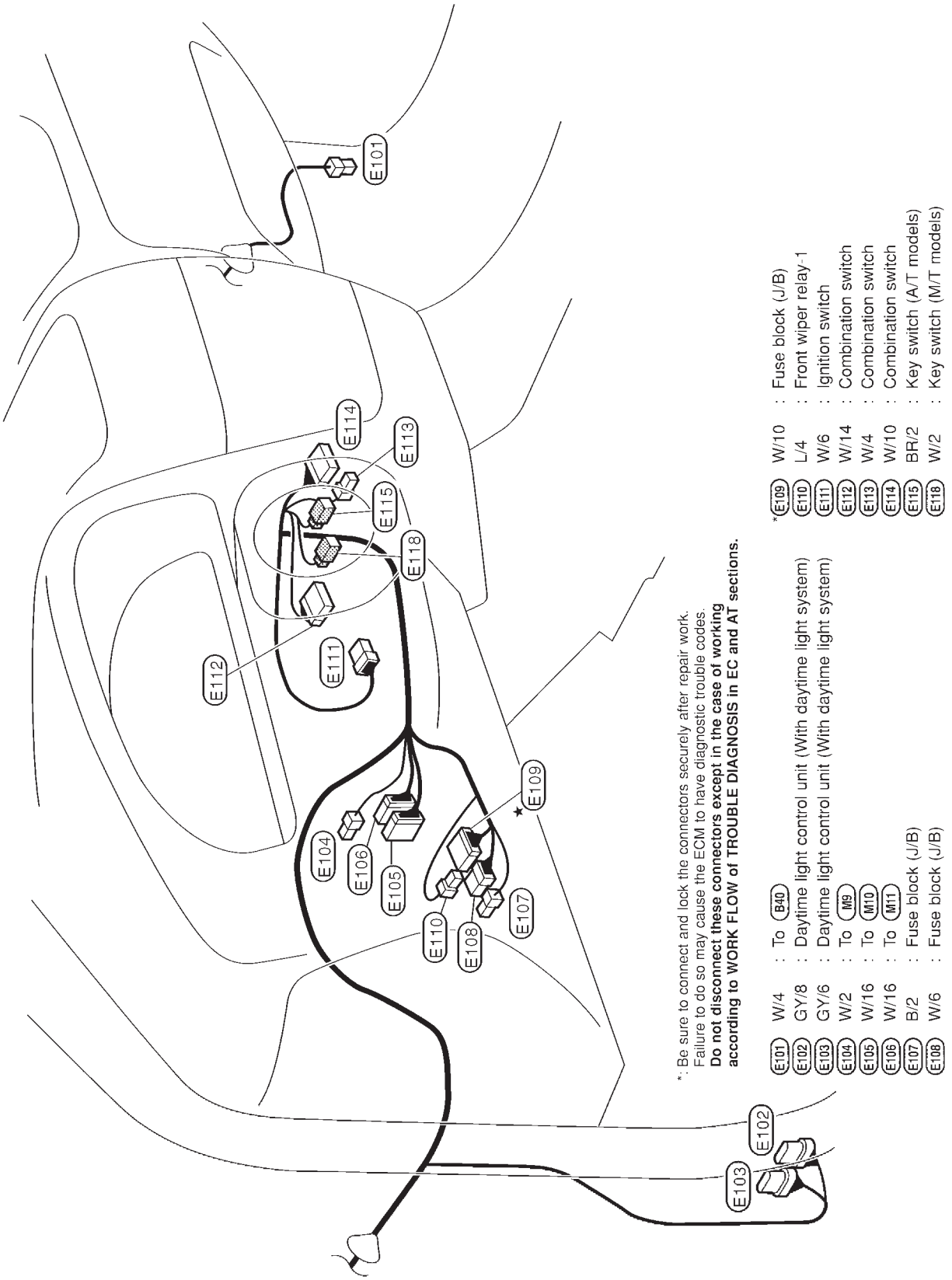
D2 (E91) — : Battery (–)
E2 (E92) — : Body ground

*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.**

YEL516C

PASSENGER COMPARTMENT — LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0342S04



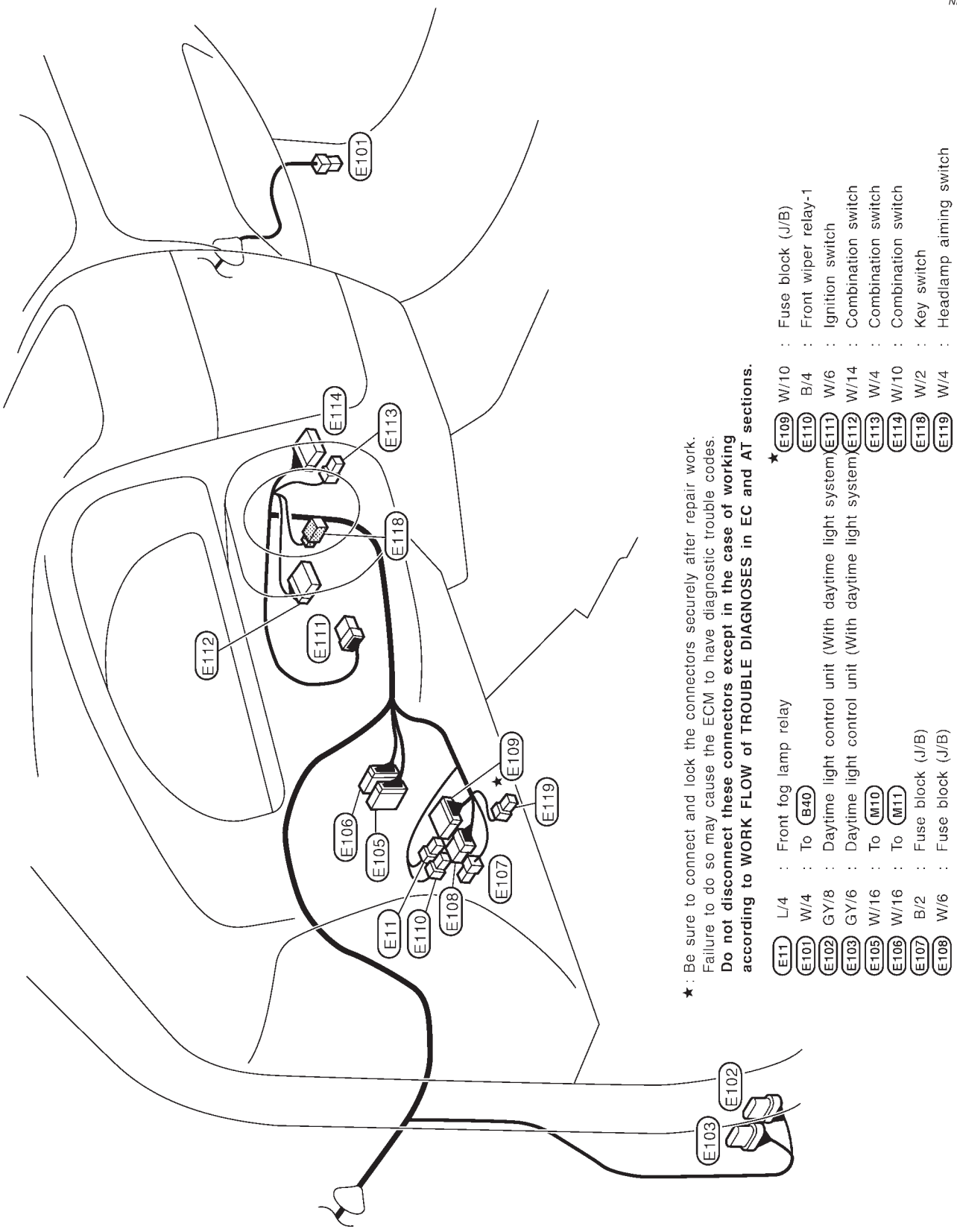
*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.**

E101	W/4	: To	B40
E102	GY/8	: Daytime light control unit (With daytime light system)	
E103	GY/6	: Daytime light control unit (With daytime light system)	
E104	W/2	: To	M9
E105	W/16	: To	M10
E106	W/16	: To	M11
E107	B/2	: Fuse block (J/B)	
E108	W/6	: Fuse block (J/B)	
*E109	W/10	: Fuse block (J/B)	
E110	L/4	: Front wiper relay-1	
E111	W/6	: Ignition switch	
E112	W/14	: Combination switch	
E113	W/4	: Combination switch	
E114	W/10	: Combination switch	
E115	BR/2	: Key switch (A/T models)	
E118	W/2	: Key switch (M/T models)	

YEL020C

PASSENGER COMPARTMENT — LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0342S07



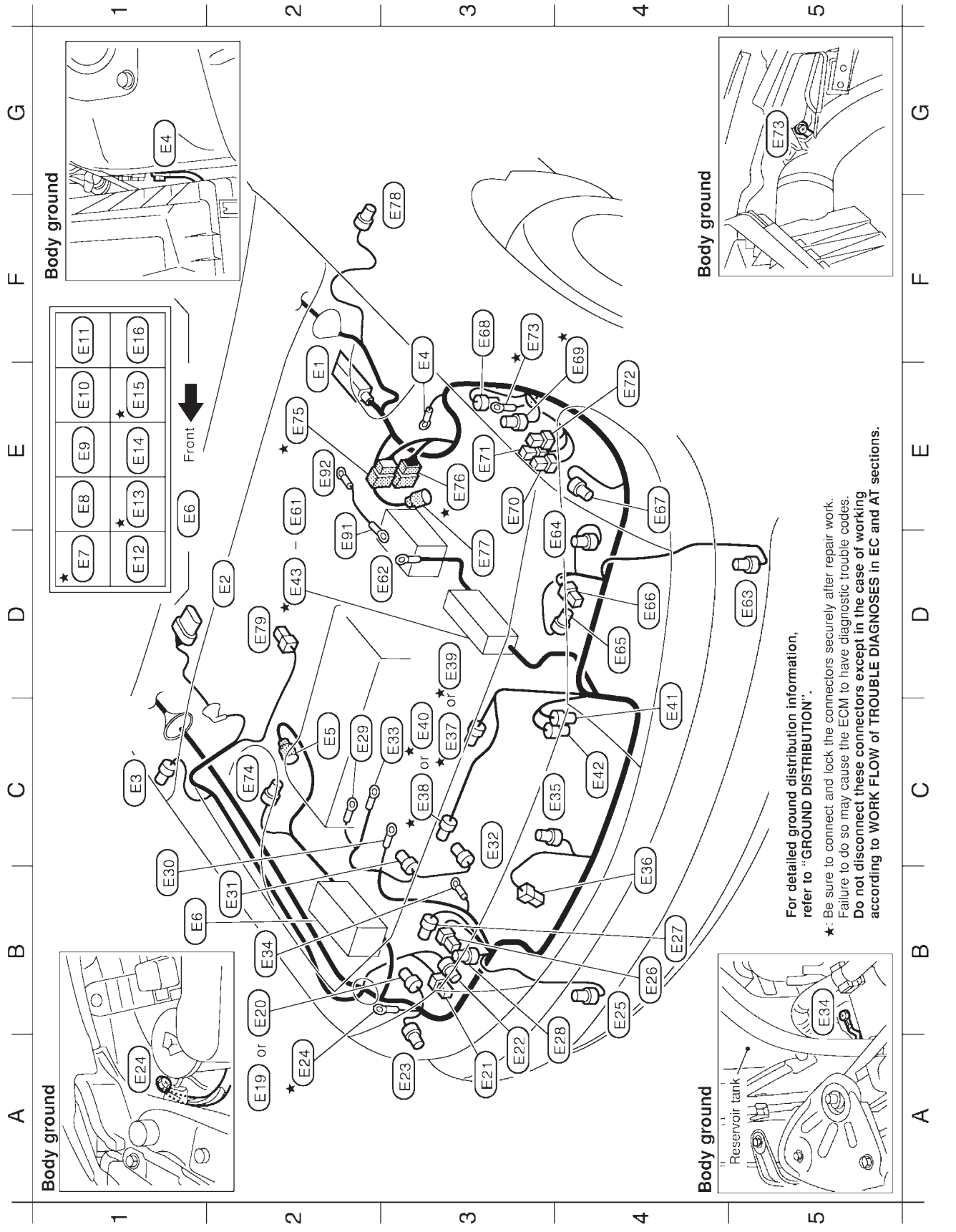
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

E11	L/4	: Front fog lamp relay	★ E109	W/10	: Fuse block (J/B)
E101	W/4	: To B40	E110	B/4	: Front wiper relay-1
E102	GY/8	: Daytime light control unit (With daytime light system)	E111	W/6	: Ignition switch
E103	GY/6	: Daytime light control unit (With daytime light system)	E112	W/14	: Combination switch
E105	W/16	: To M10	E113	W/4	: Combination switch
E106	W/16	: To M11	E114	W/10	: Combination switch
E107	B/2	: Fuse block (J/B)	E118	W/2	: Key switch
E108	W/6	: Fuse block (J/B)	E119	W/4	: Headlamp aiming switch

YEL517C

ENGINE COMPARTMENT — RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0342S03



YEL021C

F2	E8	B/31	: ABS actuator and electric unit (Control ABS)
D2	E2	GY/5	: Front wiper motor
C1	E3	B/2	: Side turn signal lamp RH
F3	E4	—	: Body ground
C2	E5	GY/2	: Front wheel sensor RH
B1	※E6	—	: Relay box
D1	E7	BR/6	: Cooling fan relay-1 (QG engine)
		B4	: Cooling fan relay-1 (SR, YD engine)
E1	E8	W/3	: Horn relay
E1	E9	L/4	: Air conditioner relay (With A/C)
E1	E10	B/5	: Relay wiper relay
F1	E11	L/4	: Front fog lamp relay
D1	E12	BR/6	: Headlamp washer timer (With headlamp washer)
E1	E13	B/5	: Cooling fan relay-2 (SR, YD engine)
E1	E14	B/5	: Front wiper relay-2
E1	※E15	B/4	: Cooling fan relay-3 (SR, YD engine)
F1	E16	L/4	: Park/neutral position (PNP) relay (A/T models)
		B/5	: Cooling fan relay-4 (YD engine)
A2	E19	B/1	: Not used (QG, SR engine) (With dealer fitted air conditioner)
B2	E20	B/2	: Not used (YD engine) (With dealer fitted air conditioner)
A3	E21	GY/2	: Headlamp washer motor (With headlamp washer)
A3	E22	B/2	: Washer motor
A3	E23	GY/2	: Front turn signal lamp RH
A2	※E24	—	: Body ground
B4	E25	L/2	: Front fog lamp RH
B4	E26	B/2	: Parking lamp RH
B2	E27	GY/3	: Headlamp RH
A4	E28	B/3	: Headlamp aiming motor RH
C2	E29	—	: Alternator (E)
B1	E30	—	: Alternator (B)
B2	E31	W/2	: Alternator (S,L)
C3	E32	B/1	: Compressor (With A/C)
C3	E33	—	: Glow plug (YD engine)
B2	E34	—	: Body ground
C3	E35	GY/2	: Outside air temperature sensor
B4	E36	B/1	: Horn
C3	※E37	B/2	: Cooling fan motor-1 (QG engine)
C3	※E38	B/2	: Cooling fan motor-2 (QG engine)
D3	※E39	B/2	: Cooling fan motor-1 (SR, YD engine)
C3	※E40	B/2	: Cooling fan motor-2 (SR,YD engine)
C4	E41	B/3	: Refrigerant pressure sensor (QG, SR engine)
C4	E42	B/2	: Dual pressure switch (YD engine with A/C)
D2	※E43	—	: Fuse and fusible link box
D2	E44	B/6	: Fuse and fusible link box (*1)
D2	※E45	W/6	: Fuse and fusible link box (*1)
D2	E46	W/4	: Fuse and fusible link box (*1)
D2	E47	G/2	: Fuse and fusible link box (*1)
D2	E48	B/1	: Fuse and fusible link box (*1)
D2	E49	B/1	: Fuse and fusible link box (*1)
D2	E50	B/1	: Fuse and fusible link box (*1)
D2	E51	B/2	: Fuse and fusible link box (*2)
D2	E52	B/1	: Fuse and fusible link box (*2)
D2	E53	—	: Fuse and fusible link box (*2)
D2	E54	—	: Fuse and fusible link box (*2)
D2	※E55	W/3	: Fuse and fusible link box (*2)
D2	※E56	W/4	: Fuse and fusible link box (*2)
D2	※E57	W/6	: Fuse and fusible link box (*2)
D2	※E58	B/6	: Fuse and fusible link box (*2)
D2	E59	W/1	: Fuse and fusible link box (*2)
D2	E60	—	: Fuse and fusible link box (*3)
E2	E61	—	: Fuse and fusible link box (*3)
D3	E62	—	: Battery (+)
D5	E63	L/2	: Front fog lamp LH
E4	E64	B/3	: Headlamp aiming motor LH
D4	E65	GY/3	: Headlamp LH
D4	E66	B/2	: Parking lamp LH
E4	E67	GY/2	: Front turn signal lamp LH
F3	E68	GY/2	: Not used (With dealer fitted theft warning system)
F4	※E69	GY/2	: Intake air temperature sensor (QG, SR engine)
E3	E70	G/2	: Glow relay (YD engine)
E3	E71	W/1	: Glow relay (YD engine)
F4	E72	W/1	: Glow relay (YD engine)
F3	※E73	—	: Body ground
C2	E74	B/2	: Brake fluid level switch
E2	※E75	W/8	: To F35 (QG, SR engine) To F14 (YD engine)
E3	※E76	B/8	: To F36 (QG, SR engine) To F13 (YD engine)
D3	E77	BR/2	: Front wheel sensor LH
F3	E78	B/2	: Side tur signal lamp LH
D2	E79	W/1	: Vacuum warning switch (YD engine)

Battery cable

D2	E91	—	: Battery (–)
E2	E92	—	: Body ground

*1 : QG engine except cold area
*2 : QG engine cold area and SR engine
*3 : YD engine

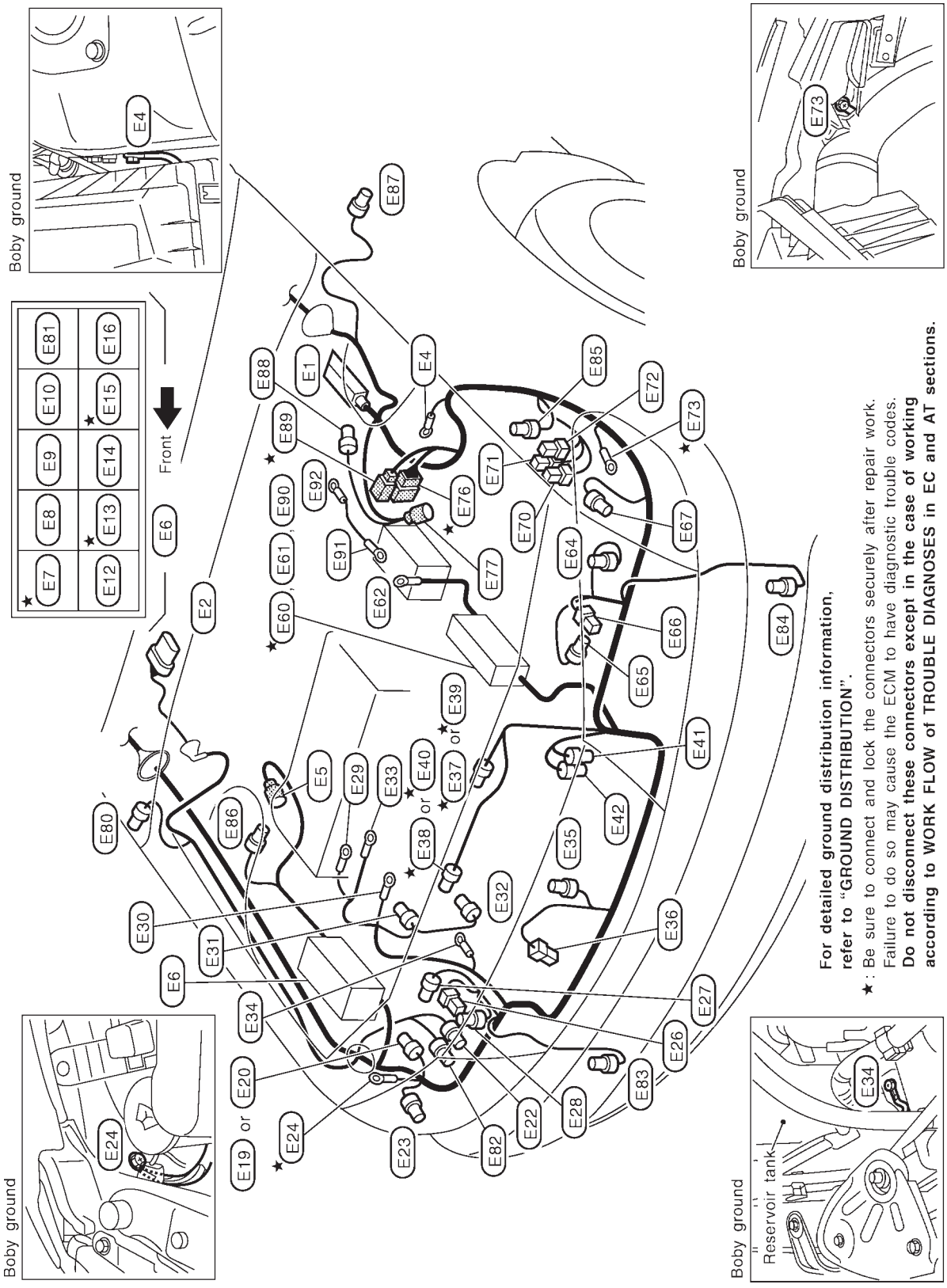
※: Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

YEL022C

Engine Room Harness (Cont'd)

ENGINE COMPARTMENT — RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0342S08



For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

YEL518C

F2 (E1) B/31 : ABS actuator and electric unit (Control ABS)
D2 (E2) GY/5 : Front wiper motor
F3 (E4) — : Body ground
C2 (E5) GY/2 : Front wheel sensor RH
B1 *(E6) — : Relay box
D1 (E7) BR/6 : Cooling fan relay-1 (QG engine)
B/4 : Cooling fan relay-1 (SR, YD engine)
E1 (E8) W/3 : Horn relay
E1 (E9) L/4 : Air conditioner relay (With A/C)
E1 (E10) B/5 : Rear wiper relay
D1 (E12) BR/6 : Headlamp washer timer (With headlamp washer)
E1 (E13) B/5 : Cooling fan relay-2 (SR, YD engine)
E1 (E14) B/5 : Front wiper relay-2
E1 *(E15) B/4 : Cooling fan relay-3 (SR, YD engine)
F1 (E16) L/4 : Park/neutral position (PNP) relay (A/T models)
F1 (E16) B/5 : Cooling fan relay-4 (YD engine)
A2 (E19) B/1 : Not used (QG, SR engine) (With dealer fitted air conditioner)
B2 (E20) B/2 : Not used (YD engine) (With dealer fitted air conditioner)
A3 (E22) B/2 : Washer motor
A3 (E23) GY/2 : Front turn signal lamp RH
A2 *(E24) — : Body ground
B4 (E26) B/2 : Parking lamp RH
B2 (E27) GY/3 : Headlamp RH
A4 (E28) B/3 : Headlamp aiming motor RH
C2 (E29) — : Alternator (E)
B1 (E30) — : Alternator (B)
B2 (E31) W/2 : Alternator (S,L)
C3 (E32) B/1 : Compressor (With A/C)
C3 (E33) — : Glow plug (YD engine)
B2 (E34) — : Body ground
C3 (E35) GY/2 : Outside air temperature sensor
B4 (E36) B/1 : Horn

C3 *(E37) B/2 : Cooling fan motor-1 (QG engine)
C3 *(E38) B/2 : Cooling fan motor-2 (QG engine)
D3 *(E39) B/2 : Cooling fan motor-1 (SR, YD engine)
C3 *(E40) B/2 : Cooling fan motor-2 (SR,YD engine)
C4 (E41) B/3 : Refrigerant pressure sensor (QG, SR engine with A/C)
C4 (E42) B/2 : Dual pressure switch (YD engine with A/C)
D2 (E60) — : Fuse and fusible link box
E2 (E61) — : Fuse and fusible link box
D3 (E62) — : Battery (+)
E4 (E64) B/3 : Headlamp aiming motor LH
D4 (E65) GY/3 : Headlamp LH
D4 (E66) B/2 : Parking lamp LH
E4 (E67) GY/2 : Front turn signal lamp LH
E3 (E70) G/2 : Glow relay (YD engine)
E3 (E71) W/1 : Glow relay (YD engine)
F4 (E72) W/1 : Glow relay (YD engine)
E4 *(E73) — : Body ground
E3 *(E76) B/8 : To (F36) (QG, SR engine)
To (F13) (YD engine)
D3 (E77) BR/2 : Front wheel sensor LH

C1 (E80) -/2 : Side turn signal lamp RH
F1 (E81) BR/6 : ECM relay
A3 (E82) L/2 : Headlamp washer motor (With headlamp washer)
B4 (E83) -/2 : Front fog lamp RH
D5 (E84) -/2 : Front fog lamp LH
F4 (E85) W/2 : Not used (With dealer fitted theft warning system)
C2 (E86) GY/2 : Brake fluid level switch
F3 (E87) -/2 : Side turn signal lamp LH
E2 (E88) BR/2 : Fuel filter switch (YD engine)
E2 (E89) W/4 : To (F47) (SR engine)
D2 *(E90) — : Fuse and fusible link box

Battery cable
D2 (E91) — : Battery (–)
E2 (E92) — : Body ground

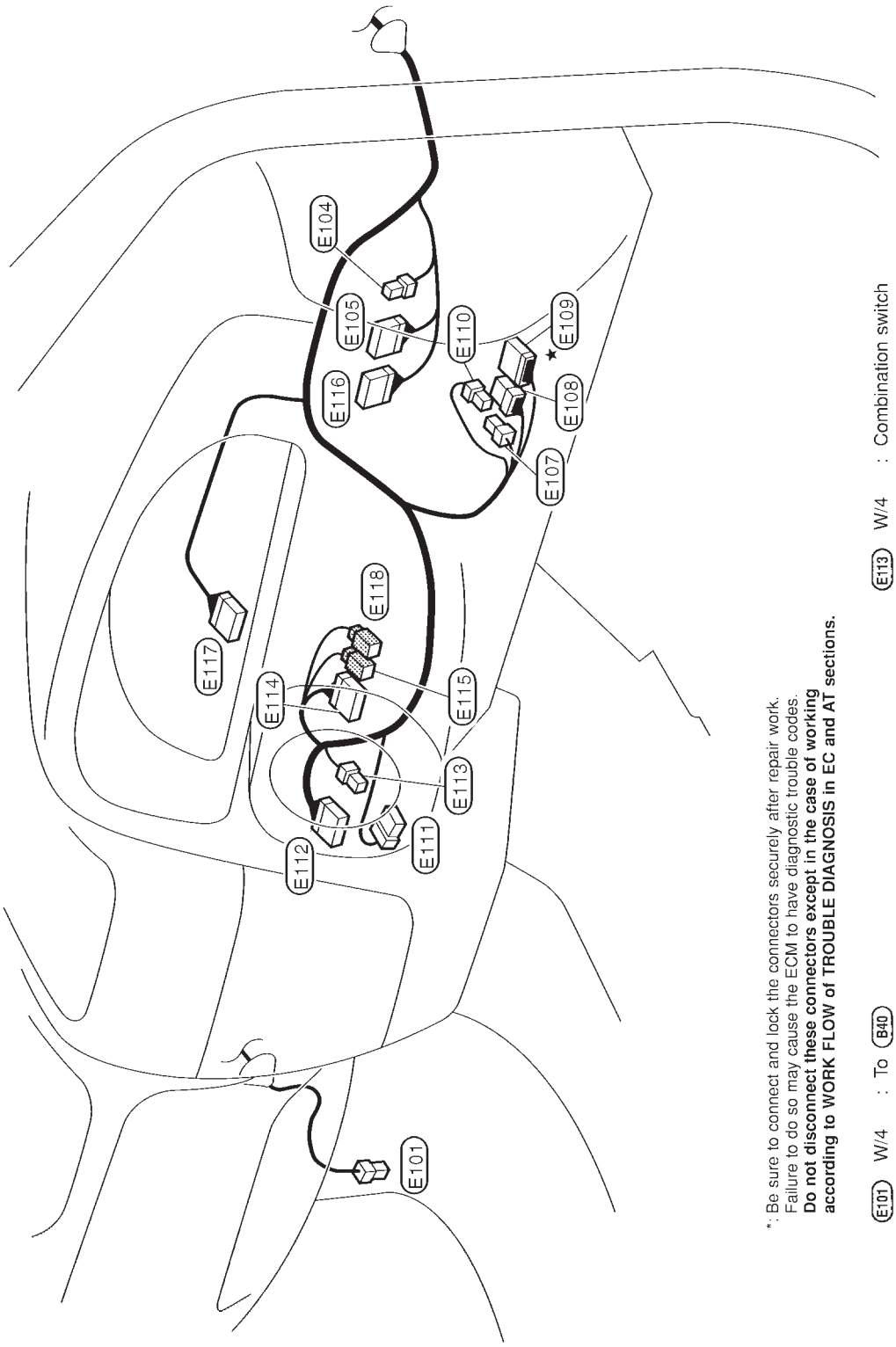
*: Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

YEL519C

Engine Room Harness (Cont'd)

PASSENGER COMPARTMENT — RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0342S05



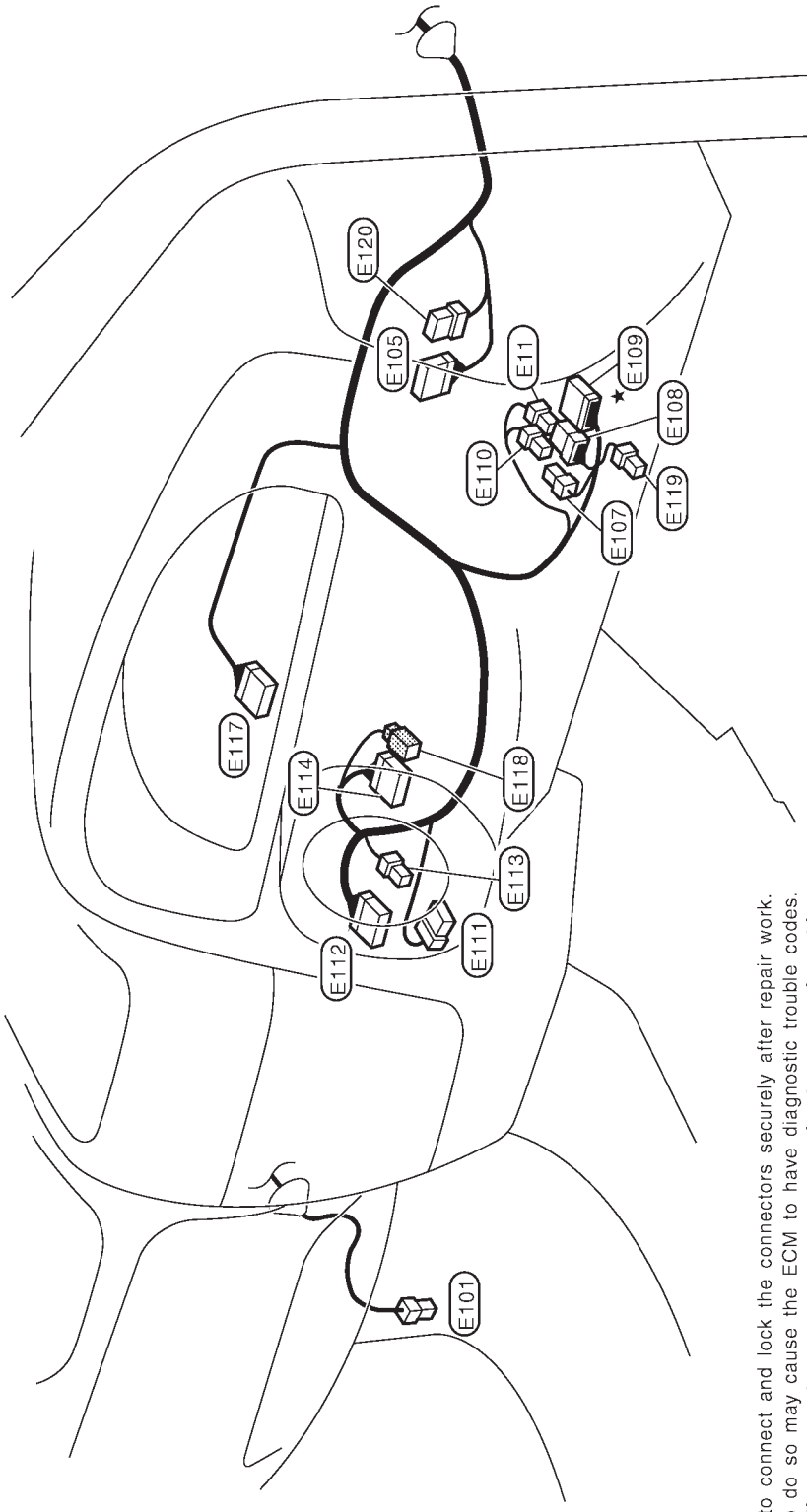
*: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.**

E101	W/4	: To	B40
E104	W/2	: To	M9
E105	W/16	: To	M10
E107	B/2	: Fuse block (J/B)	
E108	W/6	: Fuse block (J/B)	
*E109	W/10	: Fuse block (J/B)	
E110	L/4	: Front wiper relay-1	
E111	W/6	: Ignition switch	
E112	W/14	: Combination switch	
E113	W/4	: Combination switch	
E114	W/10	: Combination switch	
E115	BR/2	: Key switch (A/T models)	
E116	BR/20	: To 64	
E117	BR/20	: Combination meter	
E118	W/2	: Key switch (M/T models)	

YEL023C

PASSENGER COMPARTMENT — RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0342S09



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

E11	L/4	: Front fog lamp relay	E113	W/4	: Combination switch
E101	W/4	: To B40	E114	W/10	: Combination switch
E105	W/16	: To M10	E117	BR/20	: Combination meter
E107	B/2	: Fuse block (J/B)	E118	W/2	: Key switch
E108	W/6	: Fuse block (J/B)	E119	W/4	: Headlamp aiming switch
★ E109	W/10	: Fuse block (J/B)	E120	W/6	: To M78
E110	B/4	: Front wiper relay-1			
E111	W/6	: Ignition switch			
E112	W/14	: Combination switch			

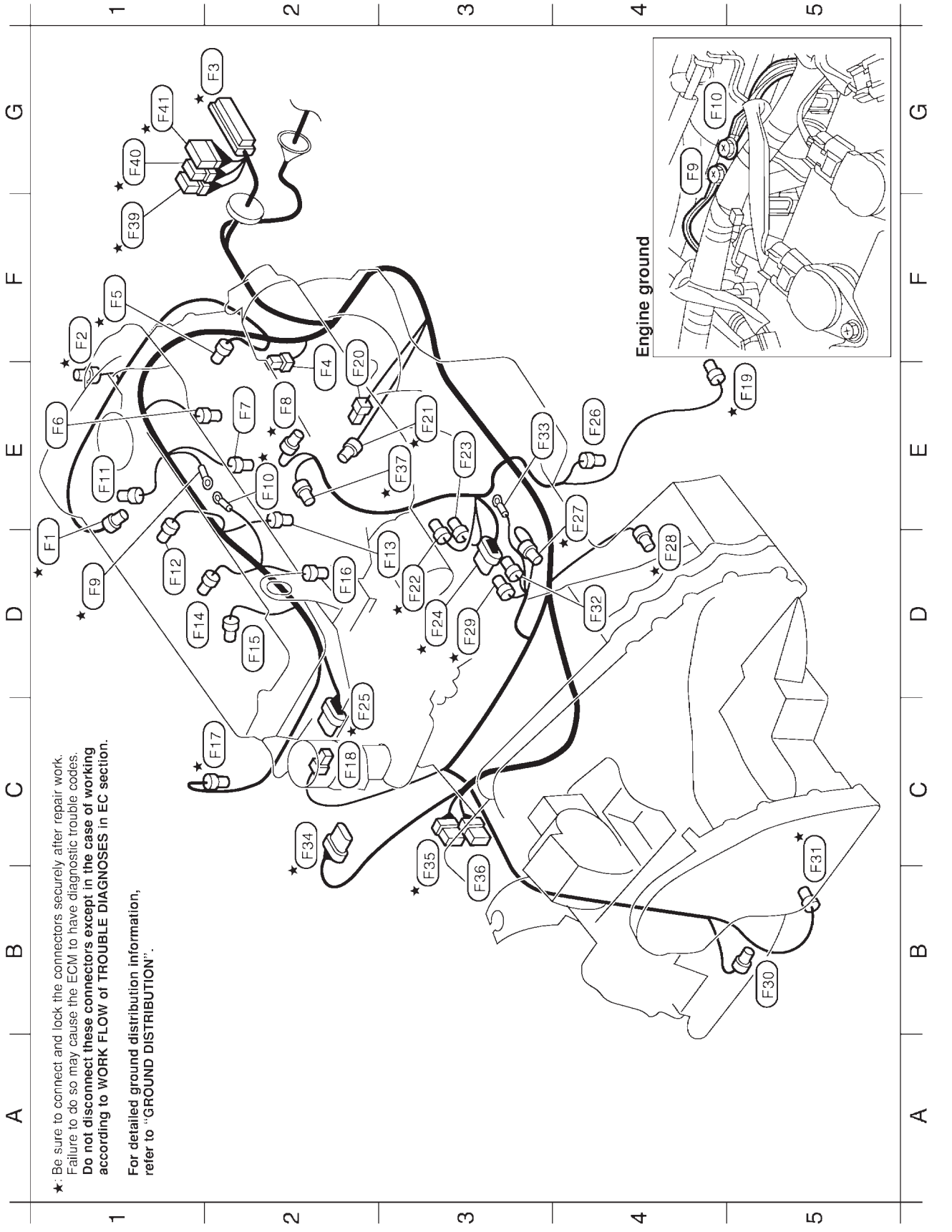
YEL520C

Engine Control Harness/QG Engine Models

NLEL0135

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0135S01



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL024C

D1	*F1	GY/2	:	Engine coolant temperature sensor
F1	*F2	B/3	:	Camshaft position sensor (PHASE)
G2	*F3	GY/95	:	ECM
E2	F4	W/2	:	Condenser
F1	*F5	G/2	:	Intake valve timing control solenoid valve
E1	F6	GY/2	:	Injector No. 1
E2	F7	GY/2	:	Injector No. 2
E2	*F8	L/2	:	EVAP canister purge volume control solenoid valve
D1	*F9	—	:	Engine ground
E2	*F10	—	:	Engine ground
E1	F11	GY/3	:	Ignition coil No. 1
D1	F12	GY/3	:	Ignition coil No. 2
D3	F13	GY/2	:	Injector No. 3
D1	F14	GY/3	:	Ignition coil No. 3
D2	F15	GY/3	:	Ignition coil No. 4
D2	F16	GY/2	:	Injector No. 4
C2	*F17	GY/3	:	Heated oxygen sensor 1 (Front)
C2	F18	B/1	:	Thermal transmitter
E5	*F19	GY/4	:	Heated oxygen sensor 2 (Rear)
E2	F20	B/1	:	Oil pressure switch
E3	*F21	GY/2	:	Knock sensor
D3	*F22	BR/3	:	Throttle position sensor
E3	F23	GY/3	:	Throttle position switch
D3	*F24	GY/6	:	IACV-AAC valve
C2	*F25	GY/6	:	EGR volume control
E4	F26	B/2	:	Power steering oil pressure switch
E4	*F27	B/3	:	Crankshaft position sensor (POS)
D4	*F28	GY/2	:	Vehicle speed sensor
D3	*F29	G/2	:	Swirl control valve control solenoid vale
B5	F30	B/2	:	Back-up lamp switch
B5	*F31	B/2	:	Park/neutral position (PNP) switch
D4	F32	GY/1	:	Starter motor (For cold area)
E3	F33	—	:	Starter motor
C2	*F34	GY/5	:	Mass air flow sensor
B3	*F35	W/8	:	To E75
B3	F36	B/8	:	To E76
E3	*F37	GY/2	:	EGR temperature sensor
	*F38	BR/16	:	To M50
F1	*F39	GY/6	:	Joint connector-1
G1	*F40	GY/6	:	Joint connector-2
G1	*F41	L/12	:	Joint connector-3
	*F42	BR/6	:	ECM relay
	*F43	W/16	:	To M49

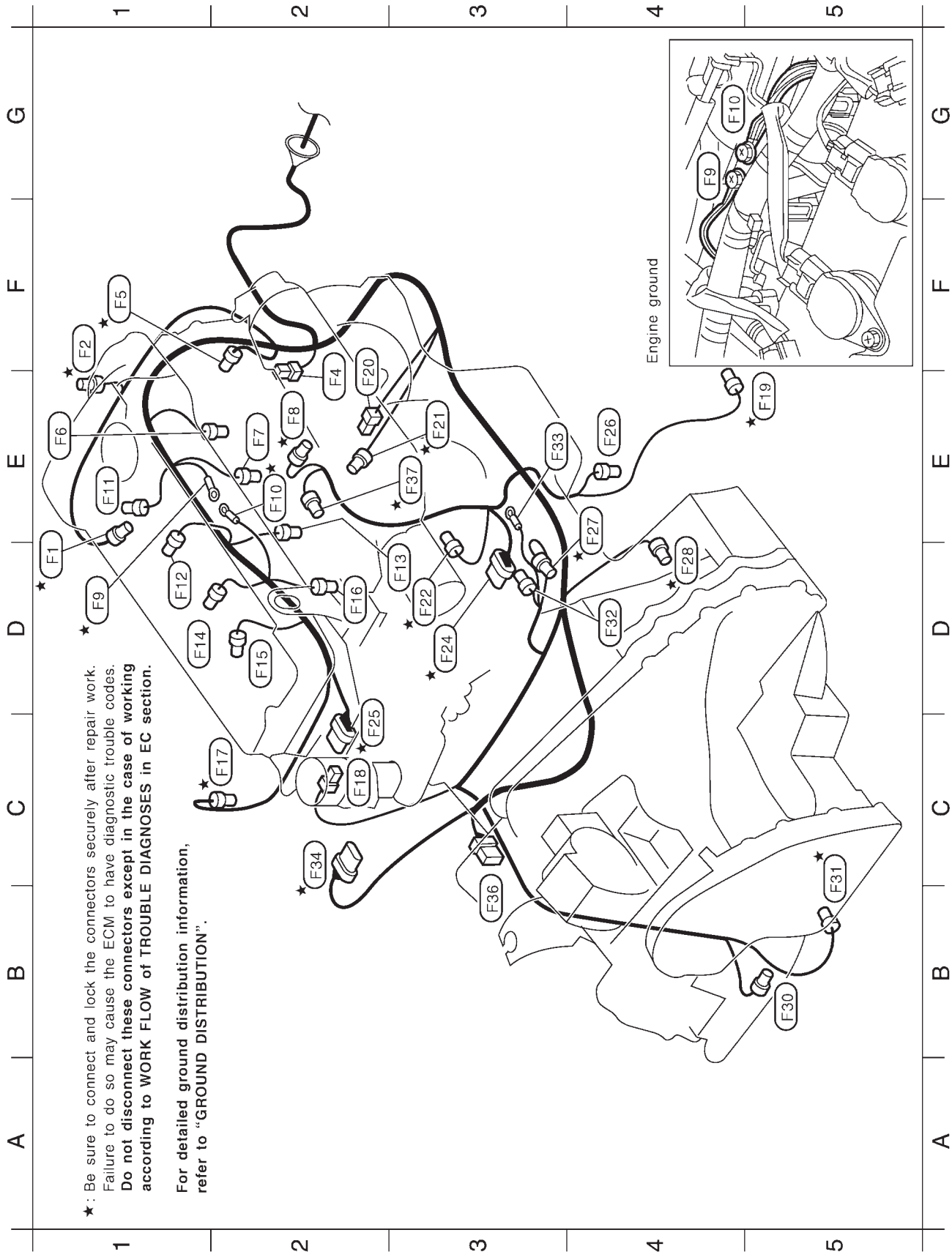
PASSENGER COMPARTMENT

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

YEL025C

LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0135S03



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL521C

D1	★F1	GY/2	:	Engine coolant temperature sensor
F1	★F2	B/3	:	Camshaft position sensor (PHASE)
	★F3	GY/95	:	ECM
E2	F4	W/2	:	Condenser
F1	★F5	G/2	:	Intake valve timing control solenoid valve
E1	F6	GY/2	:	Injector No. 1
E2	F7	GY/2	:	Injector No. 2
E2	★F8	L/2	:	EVAP canister purge volume control solenoid valve
D1	★F9	–	:	Engine ground
E2	★F10	–	:	Engine ground
E1	F11	GY/3	:	Ignition coil No. 1
D1	F12	GY/3	:	Ignition coil No. 2
D3	F13	GY/2	:	Injector No. 3
D1	F14	GY/3	:	Ignition coil No. 3
D2	F15	GY/3	:	Ignition coil No. 4
D2	F16	GY/2	:	Injector No. 4
C2	★F17	GY/3	:	Heated oxygen sensor 1 (Front)
C2	F18	B/1	:	Thermal transmitter
E5	★F19	G/4	:	Heated oxygen sensor 2 (Rear)
E2	F20	B/1	:	Oil pressure switch
E3	★F21	GY/2	:	Knock sensor
D3	★F22	BR/3	:	Throttle position sensor
D3	★F24	GY/6	:	IACV-AAC valve
C2	★F25	GY/6	:	EGR volume control valve
E4	F26	B/2	:	Power steering oil pressure switch
E4	★F27	B/3	:	Crankshaft position sensor (POS)
D4	★F28	GY/2	:	Vehicle speed sensor
B5	F30	B/2	:	Back-up lamp switch
B5	★F31	B/2	:	Park/neutral position (PNP) switch (QG18 engine models)
D4	F32	GY/1	:	Starter motor (For except cold area)
E3	F33	–	:	Starter motor (For cold area)
C2	★F34	GY/5	:	Mass air flow sensor
B3	F36	B/8	:	To E76
E3	★F37	GY/2	:	EGR temperature sensor (QG18 engine models)
	F44	BR/16	:	To M72
	F45	W/16	:	To M71
	F46	L/20	:	Joint connector

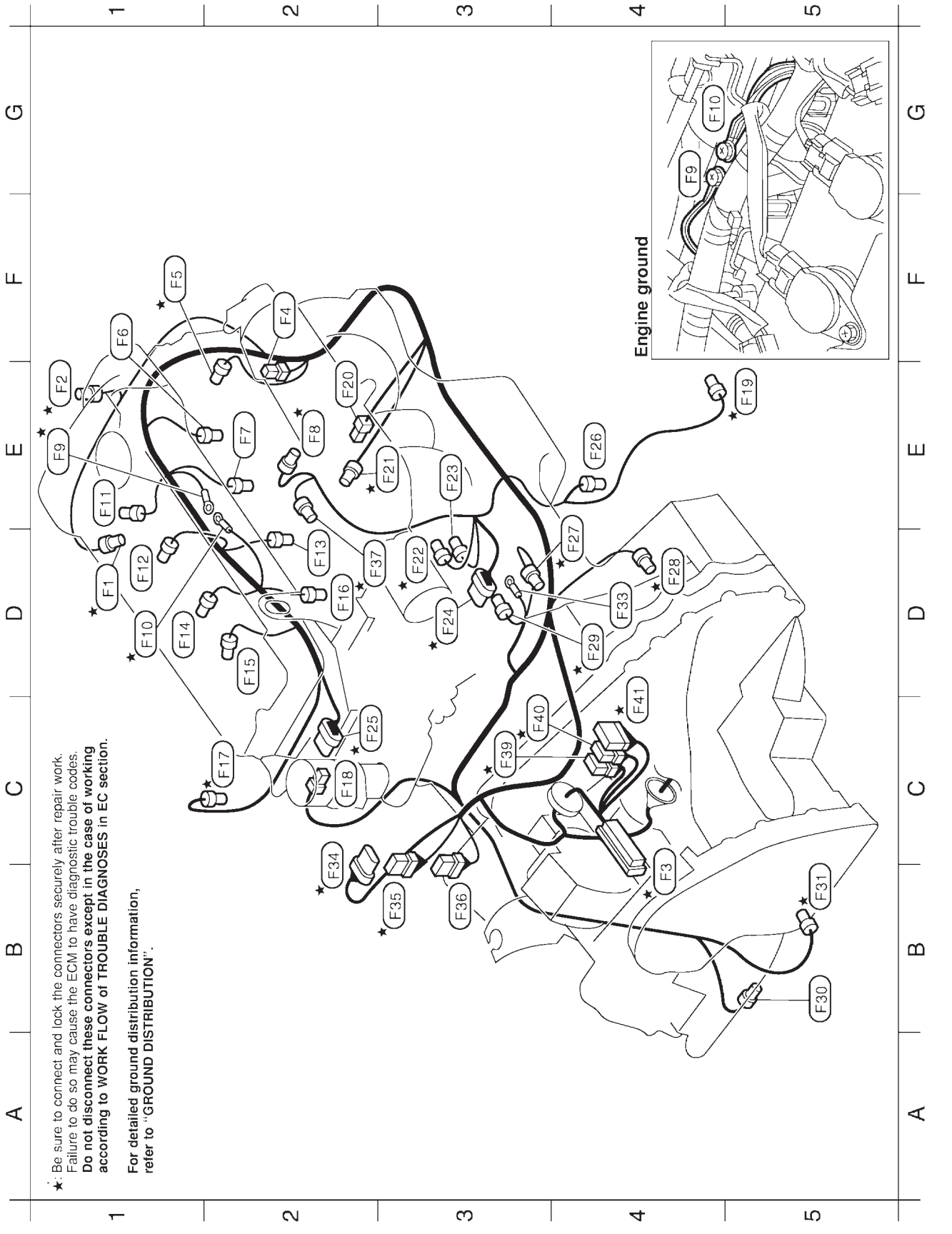
PASSENGER COMPARTMENT

★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

YEL522C

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0135S02



YEL026C

D1	*F1	GY/2	:	Engine coolant temperature sensor
E1	*F2	B/3	:	Camshaft position sensor (PHASE)
B4	*F3	GY/95	:	ECM
F2	F4	W/2	:	Condenser
F1	*F5	G/2	:	Intake valve timing control solenoid valve
F1	F6	GY/2	:	Injector No. 1
E2	F7	GY/2	:	Injector No. 2
E2	*F8	L/2	:	EVAP canister purge volume control solenoid valve
E1	*F9	—	:	Engine ground
D1	*F10	—	:	Engine ground
E1	F11	GY/3	:	Ignition coil No. 1
D1	F12	GY/3	:	Ignition coil No. 2
D2	F13	GY/2	:	Injector No. 3
D1	F14	GY/3	:	Ignition coil No. 3
D2	F15	GY/3	:	Ignition coil No. 4
D2	F16	GY/2	:	Injector No. 4
C2	*F17	GY/3	:	Heated oxygen sensor 1 (Front)
C2	F18	B/1	:	Thermal transmitter
E5	*F19	GY/4	:	Heated oxygen sensor 2 (Rear)
E2	F20	B/1	:	Oil pressure switch
E3	*F21	GY/2	:	Knock sensor
D3	*F22	BR/3	:	Throttle position sensor
E3	F23	GY/3	:	Throttle position switch
D3	*F24	GY/6	:	IACV-AAC valve
C2	*F25	GY/6	:	EGR volume control
E4	F26	B/2	:	Power steering oil pressure switch
D4	*F27	B/3	:	Crankshaft position sensor (POS)
D4	*F28	GY/2	:	Vehicle speed sensor
D4	*F29	G/2	:	Swirl control valve control solenoid vale
B5	F30	B/2	:	Back-up lamp switch
B5	*F31	B/2	:	Park/neutral position (PNP) switch
D4	F33	—	:	Starter motor
B2	*F34	GY/5	:	Mass air flow sensor
B3	*F35	W/8	:	To E75
B3	F36	B/8	:	To E76
D2	*F37	GY/2	:	EGR temperature sensor
	*F38	BR/16	:	To M50
C3	*F39	GY/6	:	Joint connector-1
C3	*F40	GY/6	:	Joint connector-2
C4	*F41	L/12	:	Joint connector-3
	*F42	BR/6	:	ECM relay
	*F43	W/16	:	To M49

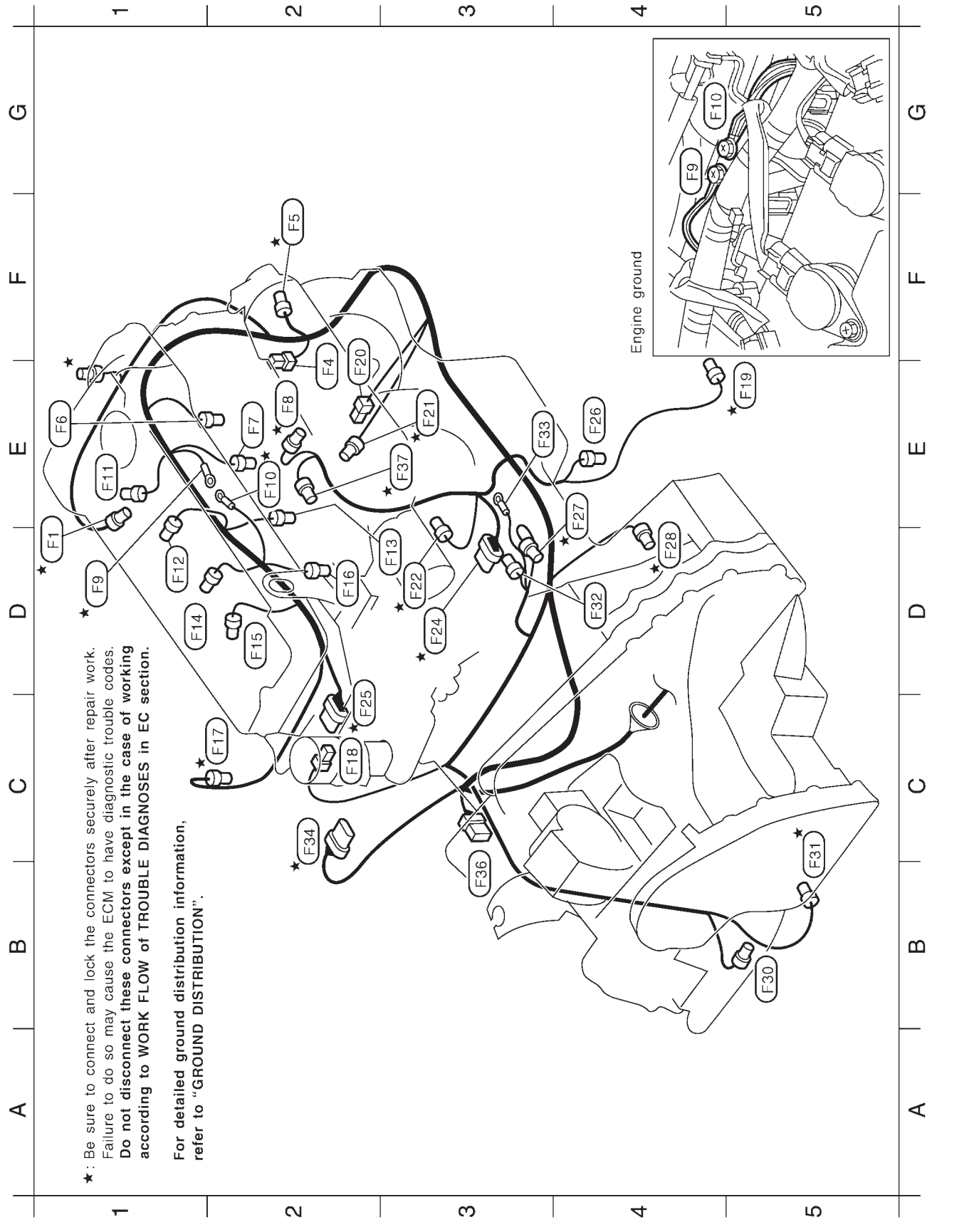
PASSENGER COMPARTMENT

★ : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

YEL027C

RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0135S04



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL523C

D1	★F1	GY/2	:	Engine coolant temperature sensor
F1	★F2	B/3	:	Camshaft position sensor (PHASE)
	★F3	GY/95	:	ECM
E2	F4	W/2	:	Condenser
F2	★F5	G/2	:	Intake valve timing control solenoid valve
E1	F6	GY/2	:	Injector No. 1
E2	F7	GY/2	:	Injector No. 2
E2	★F8	L/2	:	EVAP canister purge volume control solenoid valve
D1	★F9	–	:	Engine ground
E2	★F10	–	:	Engine ground
E1	F11	GY/3	:	Ignition coil No. 1
D1	F12	GY/3	:	Ignition coil No. 2
D3	F13	GY/2	:	Injector No. 3
D1	F14	GY/3	:	Ignition coil No. 3
D2	F15	GY/3	:	Ignition coil No. 4
D2	F16	GY/2	:	Injector No. 4
C2	★F17	GY/3	:	Heated oxygen sensor 1 (Front)
C2	F18	B/1	:	Thermal transmitter
E5	★F19	G/4	:	Heated oxygen sensor 2 (Rear)
E2	F20	B/1	:	Oil pressure switch
E3	★F21	GY/2	:	Knock sensor
D3	★F22	BR/3	:	Throttle position sensor
D3	★F24	GY/6	:	IACV-AAC valve
C2	★F25	GY/6	:	EGR volume control valve
E4	F26	B/2	:	Power steering oil pressure switch
E4	★F27	B/3	:	Crankshaft position sensor (POS)
D4	★F28	GY/2	:	Vehicle speed sensor
B5	F30	B/2	:	Back-up lamp switch
B5	★F31	B/2	:	Park/neutral position (PNP) switch (QG18 engine models)
D4	F32	GY/1	:	Starter motor (For except cold area)
E3	F33	–	:	Starter motor (For cold area)
C2	★F34	GY/5	:	Mass air flow sensor
B3	F36	B/8	:	To E76
E3	★F37	GY/2	:	EGR temperature sensor (QG18 engine models)
	F44	BR/16	:	To E72
	F45	W/16	:	To E71
	F46	L/20	:	Joint connector

PASSENGER COMPARTMENT

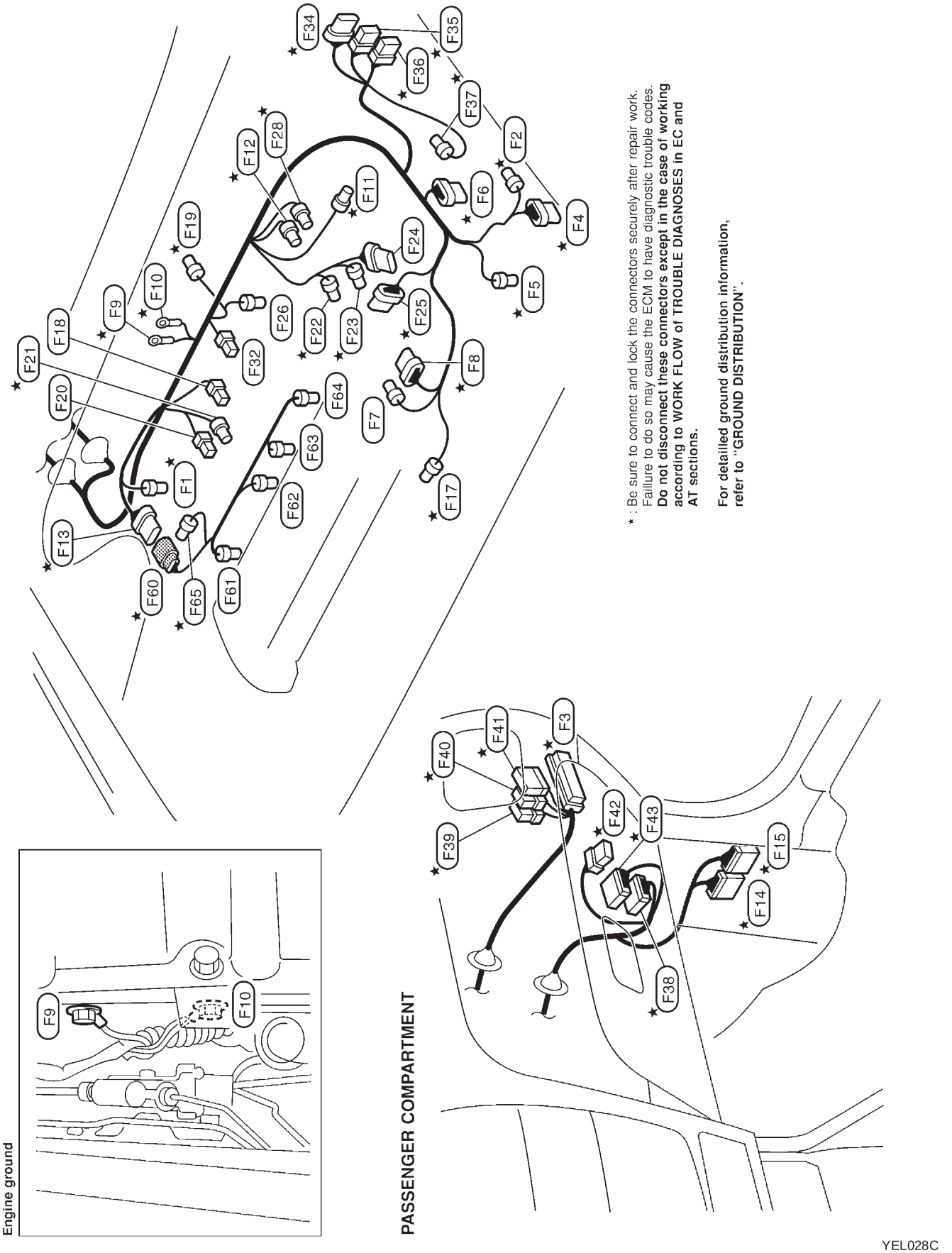
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

Engine Control Harness/SR Engine Models

NLEL0524

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0524S01



★: Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

For detailled ground distribution information, refer to "GROUND DISTRIBUTION".

YEL028C

*F1 GY/2 : Engine coolant temperature sensor
*F2 B/3 : Primary speed sensor
*F3 GY/95 : ECM
*F4 G/10 : Control valve
*F5 GY/2 : Crankshaft position sensor
*F6 B/10 : Park/neutral position (PNP) switch
F7 GY/2 : Distributor
*F8 GY/6 : Distributor
*F9 — : Engine ground
*F10 — : Engine ground
*F11 B/3 : Secondary speed sensor
*F12 GY/2 : Dropping resistor
*F13 G/8 : To F60
*F14 W/24 : TCM (Transmission control module)
*F15 GY/24 : TCM (Transmission control module)
*F17 GY/3 : Heated oxygen sensor 1 (Front)
F18 B/1 : Thermal transmitter
*F19 GY/4 : Heated oxygen sensor 2 (Rear)
F20 B/1 : Oil pressure switch
*F21 GY/2 : Knock sensor
*F22 BR/3 : Throttle position sensor
*F23 GY/3 : Throttle position switch
F24 GY/6 : IACV-AAC valve
*F25 GY/6 : EGR volume control
F26 B/2 : Power steering oil pressure switch
*F28 GY/2 : Vehicle speed sensor
F32 B/1 : Starter motor
*F34 GY/5 : Mass air flow sensor
*F35 W/8 : To E75
*F36 B/8 : To E76
*F37 GY/2 : EGR temperature sensor
*F38 BR/16 : To M50
*F39 GY/6 : Joint connector-1
*F40 GY/6 : Joint connector-2
*F41 L/12 : Joint connector-3
*F42 BR/6 : ECM relay
*F43 W/16 : To M49

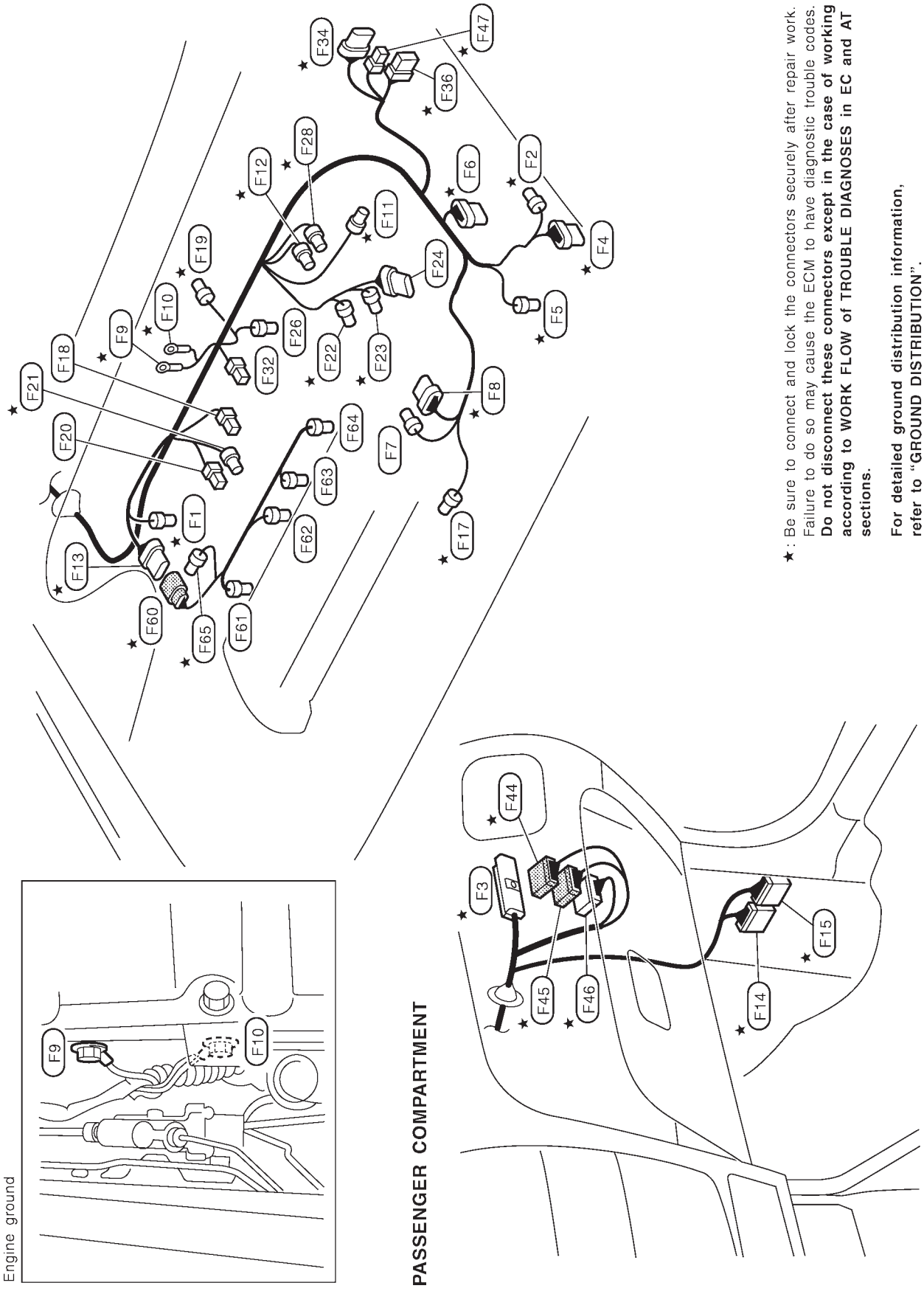
Injector sub-harness

*F60 G/8 : To F13
F61 GY/2 : Injector No. 1
F62 GY/2 : Injector No. 2
F63 GY/2 : Injector No. 3
F64 GY/2 : Injector No. 4
*F65 L/2 : EVAP canister purge volume control solenoid valve

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0524S03



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL525C

*F1	GY/2	:	Engine coolant temperature sensor
*F2	B/3	:	Primary speed sensor
*F3	GY/95	:	ECM
*F4	G/10	:	Control valve
*F5	GY/2	:	Crankshaft position sensor
*F6	B/10	:	Park/neutral position (PNP) switch
F7	GY/2	:	Distributor
*F8	GY/6	:	Distributor
*F9	—	:	Engine ground
*F10	—	:	Engine ground
*F11	B/3	:	Secondary speed sensor
*F12	GY/2	:	Dropping resistor
*F13	G/8	:	To F60
*F14	W/24	:	TCM (Transmission control module)
*F15	GY/24	:	TCM (Transmission control module)
*F17	SB/3	:	Heated oxygen sensor 1 (Front)
F18	B/1	:	Thermal transmitter
*F19	G/4	:	Heated oxygen sensor 2 (Rear)
F20	B/1	:	Oil pressure switch
*F21	GY/2	:	Knock sensor
*F22	BR/3	:	Throttle position sensor
*F23	GY/3	:	Throttle position switch
F24	GY/6	:	IACV-AAC valve
F26	B/2	:	Power steering oil pressure switch
*F28	GY/2	:	Vehicle speed sensor
F32	B/1	:	Starter motor
*F34	GY/5	:	Mass air flow sensor
*F36	B/8	:	To E76
F44	BR/16	:	To E72
F45	W/16	:	To M71
F46	L/20	:	Joint connector
*F47	W/4	:	To E89

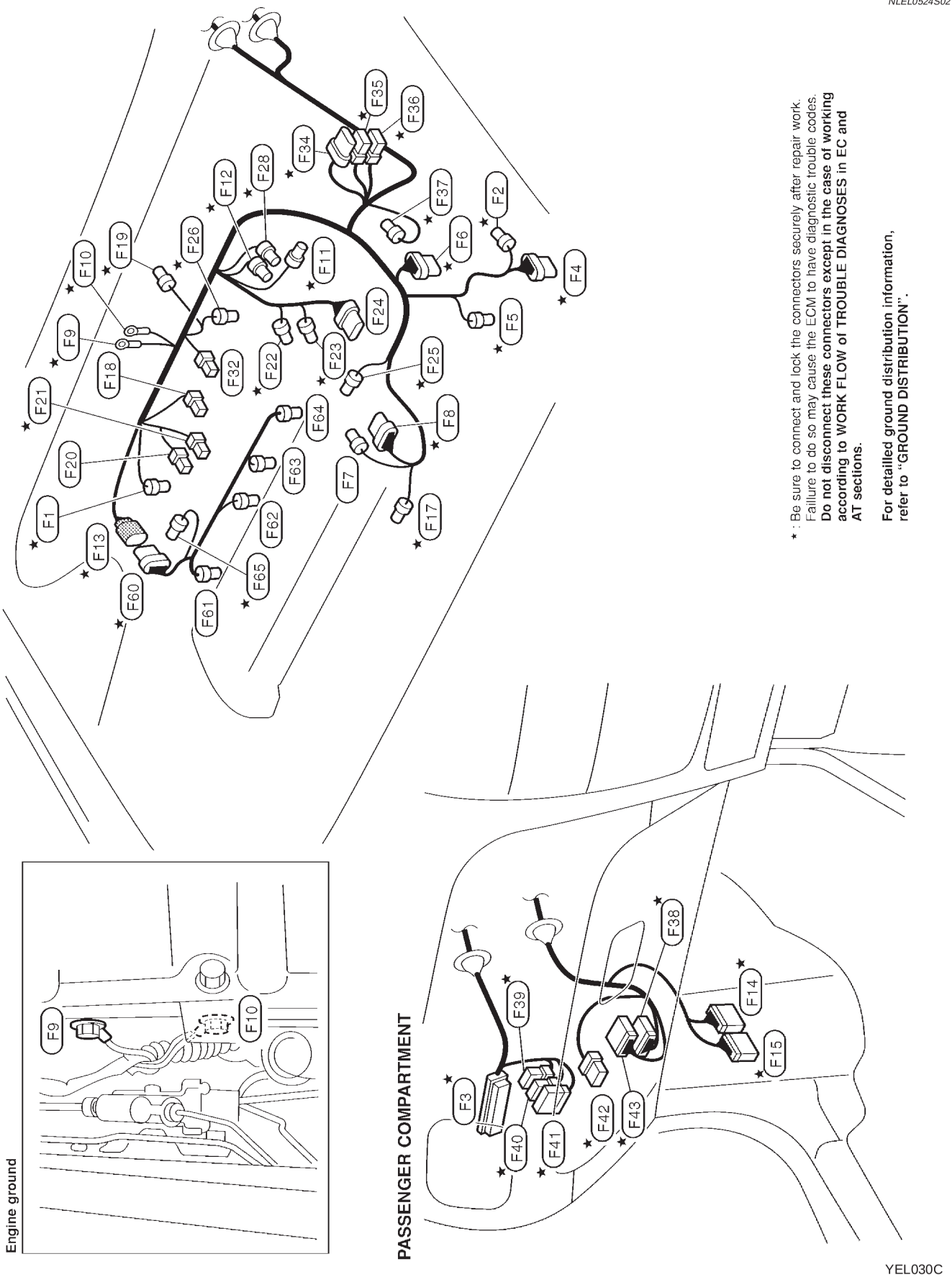
Injector sub-harness

*F60	G/8	:	To F13
F61	GY/2	:	Injector No. 1
F62	GY/2	:	Injector No. 2
F63	GY/2	:	Injector No. 3
F64	GY/2	:	Injector No. 4
*F65	L/2	:	EVAP canister purge volume control solenoid valve

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0524S02



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL030C

*F1 GY/2 : Engine coolant temperature sensor
*F2 B/3 : Primary speed sensor
*F3 GY/95 : ECM
*F4 G/10 : Control valve
*F5 GY/2 : Crankshaft position sensor
*F6 B/10 : Park/neutral position (PNP) switch
F7 GY/2 : Distributor
*F8 GY/6 : Distributor
*F9 — : Engine ground
*F10 — : Engine ground
*F11 B/3 : Secondary speed sensor
*F12 GY/2 : Dropping resistor
*F13 G/8 : To F60
*F14 W/24 : TCM (Transmission control module)
*F15 GY/24 : TCM (Transmission control module)
*F17 GY/3 : Heated oxygen sensor 1 (Front)
F18 B/1 : Thermal transmitter
*F19 GY/4 : Heated oxygen sensor 2 (Rear)
F20 B/1 : Oil pressure switch
*F21 GY/2 : Knock sensor
*F22 BR/3 : Throttle position sensor
*F23 GY/3 : Throttle position switch
F24 GY/6 : IACV-AAC valve
*F25 GY/6 : EGR volume control
F26 B/2 : Power steering oil pressure switch
*F28 GY/2 : Vehicle speed sensor
F32 B/1 : Starter motor
*F34 GY/5 : Mass air flow sensor
*F35 W/8 : To E75
*F36 B/8 : To E76
*F37 GY/2 : EGR temperature sensor
*F38 BR/16 : To M50
*F39 GY/6 : Joint connector-1
*F40 GY/6 : Joint connector-2
*F41 L/12 : Joint connector-3
*F42 BR/6 : ECM relay
*F43 W/16 : To M49

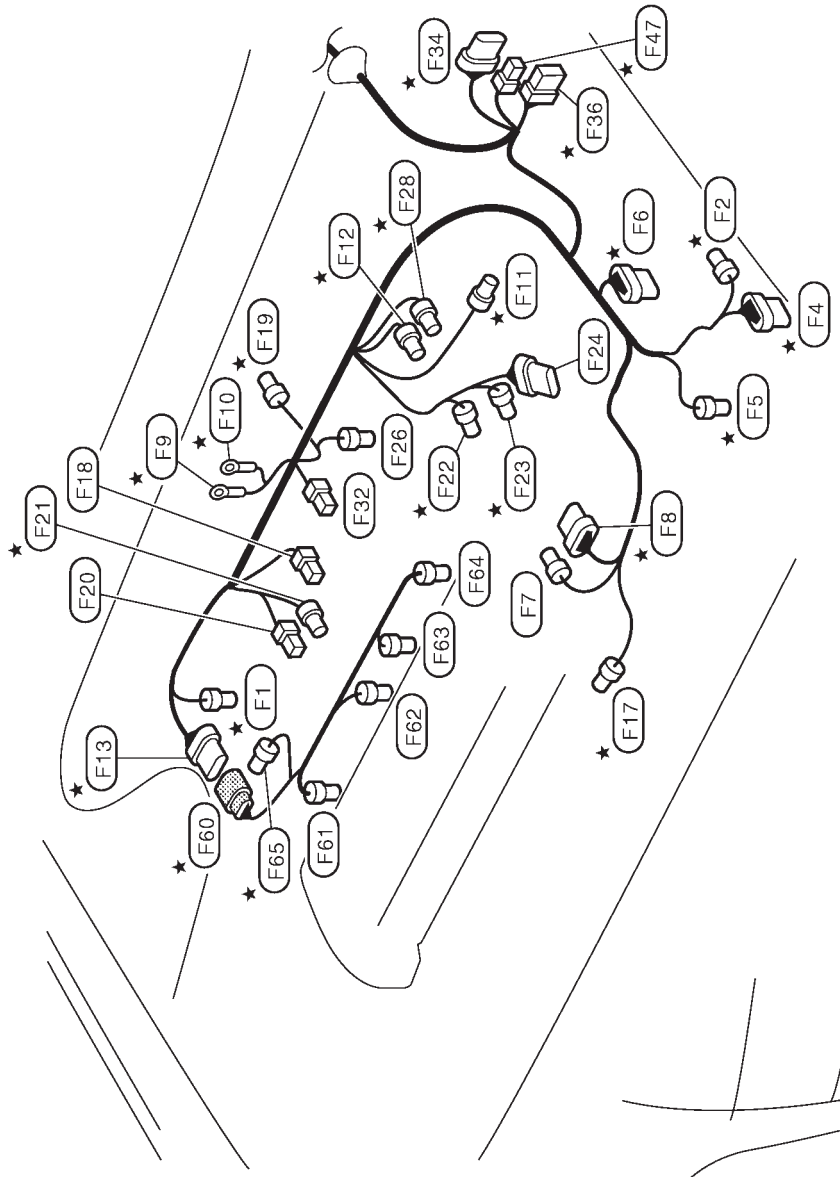
Injector sub-harness

*F60 G/8 : To F13
F61 GY/2 : Injector No. 1
F62 GY/2 : Injector No. 2
F63 GY/2 : Injector No. 3
F64 GY/2 : Injector No. 4
*F65 L/2 : EVAP canister purge volume control solenoid valve

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

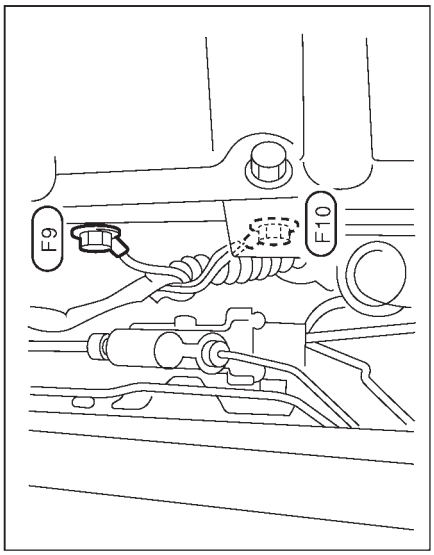
RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0524S04



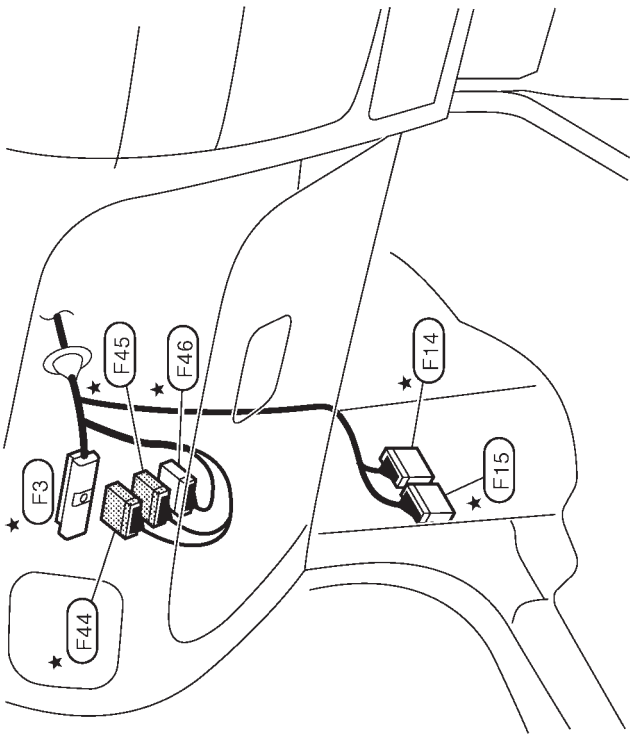
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".



Engine ground

PASSENGER COMPARTMENT



YEL527C

*F1	GY/2	:	Engine coolant temperature sensor
*F2	B/3	:	Primary speed sensor
*F3	GY/95	:	ECM
*F4	G/10	:	Control valve
*F5	GY/2	:	Crankshaft position sensor
*F6	B/10	:	Park/neutral position (PNP) switch
F7	GY/2	:	Distributor
*F8	GY/6	:	Distributor
*F9	—	:	Engine ground
*F10	—	:	Engine ground
*F11	B/3	:	Secondary speed sensor
*F12	GY/2	:	Dropping resistor
*F13	G/8	:	To F60
*F14	W/24	:	TCM (Transmission control module)
*F15	GY/24	:	TCM (Transmission control module)
*F17	SB/3	:	Heated oxygen sensor 1 (Front)
F18	B/1	:	Thermal transmitter
*F19	G/4	:	Heated oxygen sensor 2 (Rear)
F20	B/1	:	Oil pressure switch
*F21	GY/2	:	Knock sensor
*F22	BR/3	:	Throttle position sensor
*F23	GY/3	:	Throttle position switch
F24	GY/6	:	IACV-AAC valve
F26	B/2	:	Power steering oil pressure switch
*F28	GY/2	:	Vehicle speed sensor
F32	B/1	:	Starter motor
*F34	GY/5	:	Mass air flow sensor
*F36	B/8	:	To E76
F44	BR/16	:	To E72
F45	W/16	:	To M71
F46	L/20	:	Joint connector
*F47	W/4	:	To E89

Injector sub-harness

*F60	G/8	:	To F13
F61	GY/2	:	Injector No. 1
F62	GY/2	:	Injector No. 2
F63	GY/2	:	Injector No. 3
F64	GY/2	:	Injector No. 4
*F65	L/2	:	EVAP canister purge volume control solenoid valve

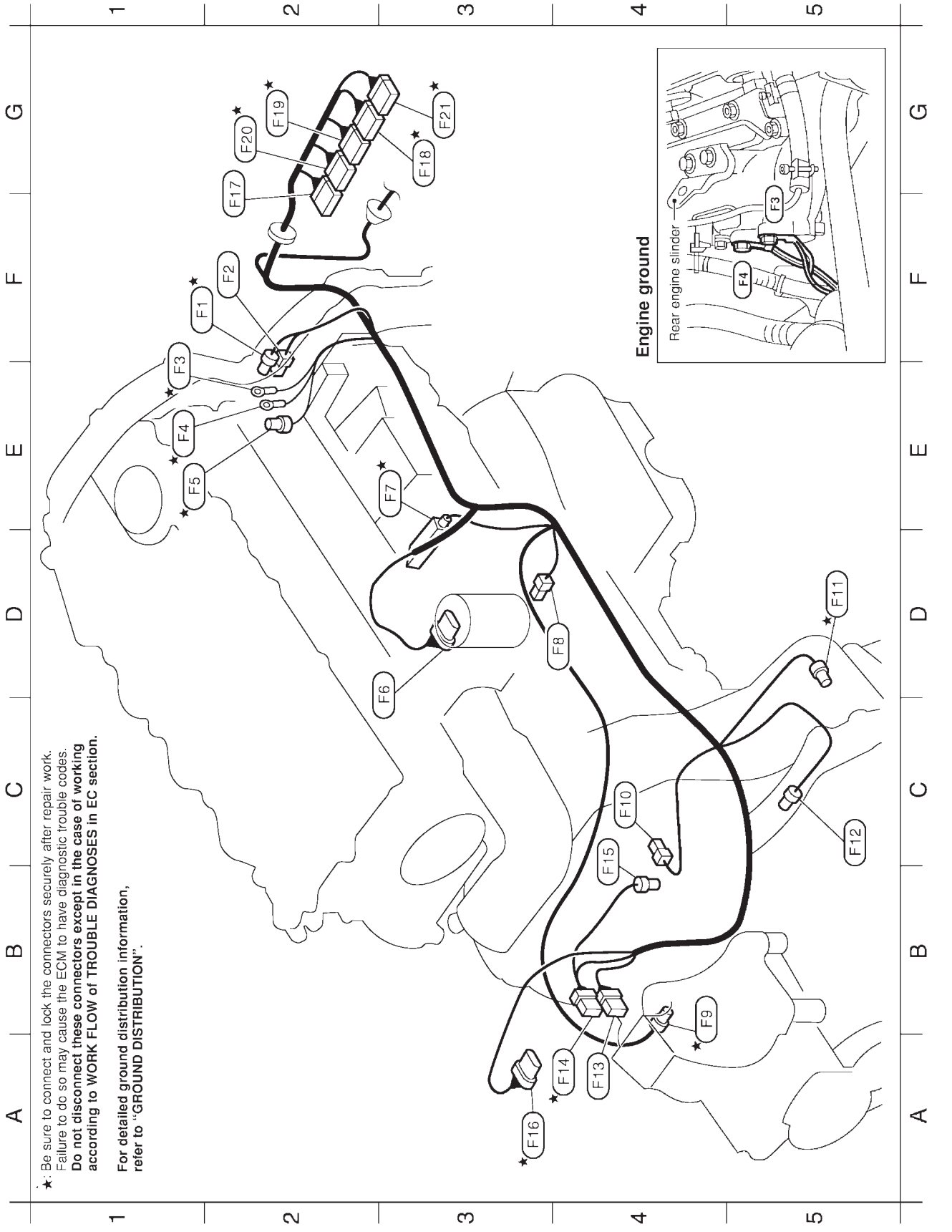
* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

Engine Control Harness/YD Engine Models

NLEL0343

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0343S01



YEL032C

F1	*F1	GY/2	:	Engine coolant temperature sensor
F2	F2	B/1	:	Thermal transmitter
E1	*F3	—	:	Engine ground
E1	*F4	—	:	Engine ground
E1	*F5	G/2	:	Swirl control valve control solenoid valve
D2	F6	GY/6	:	EGR volume control valve
E7	*F7	B/8	:	Electronic control fuel injection pump
D3	F8	B/1	:	Oil pressure switch
B4	*F9	GY/2	:	Crankshaft position sensor (TDC)
C4	F10	B/1	:	Starter motor
D5	*F11	GY/2	:	Vehicle speed sensor
C5	F12	W/4	:	Park/neutral position (PNP) switch
B4	F13	B/8	:	To E76
B3	*F14	W/8	:	To E75
C4	F15	BR/2	:	Fuel filter switch
A3	*F16	GY/5	:	Mass air flow sensor
F2	F17	-/9	:	ECM
F3	*F18	-/40	:	ECM
G2	*F19	-/52	:	ECM
G2	*F20	-/24	:	ECM
G3	*F21	-/9	:	ECM
	*F22	BR/6	:	ECM relay
	*F23	W/16	:	To M49
	*F24	BR/16	:	To M50

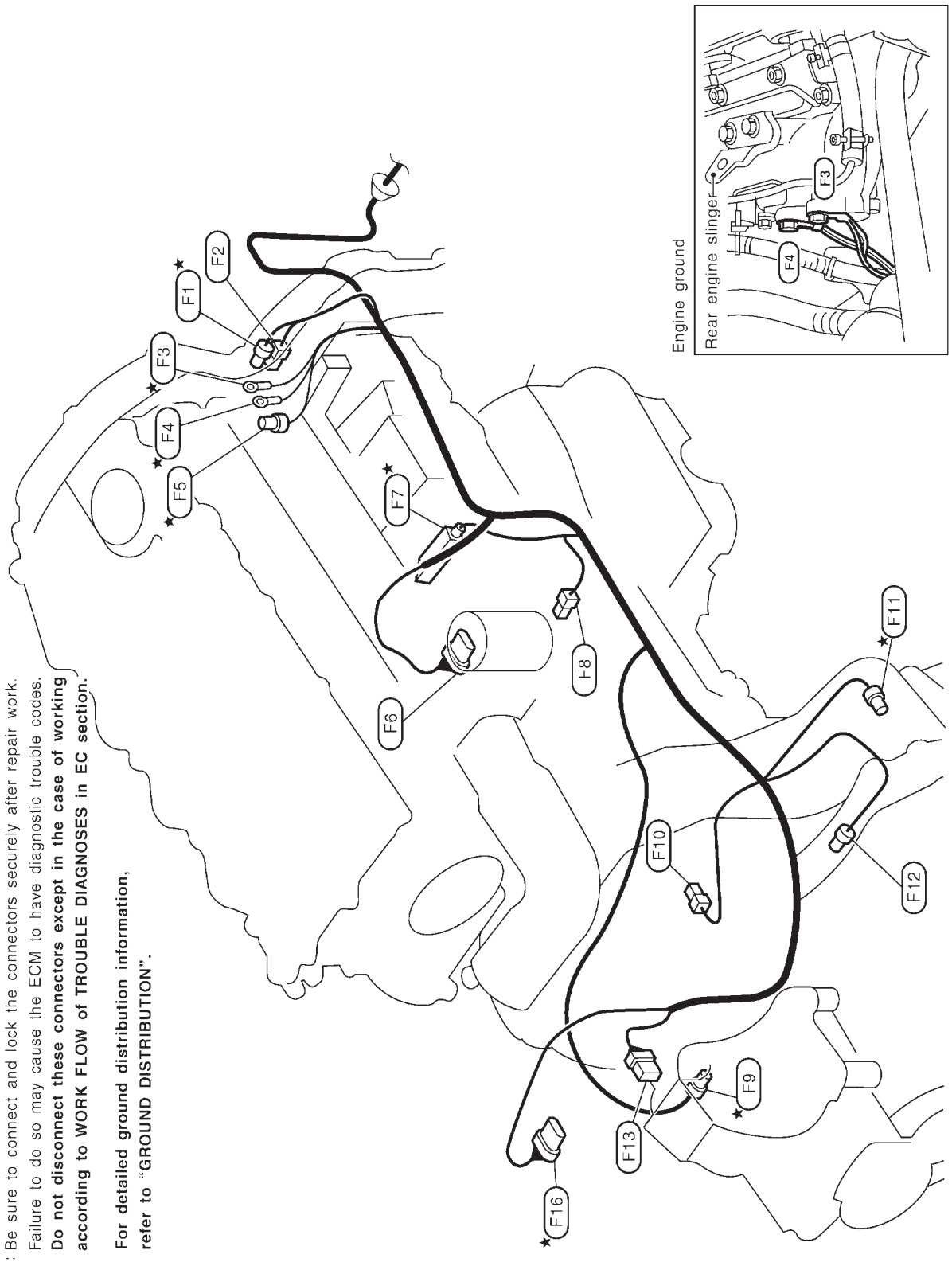
PASSENGER COMPARTMENT

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

YEL033C

LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0343S03



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL529C

F2	★F1	GY/2	:	Engine coolant temperature sensor
F2	F2	B/1	:	Thermal transmitter
E1	★F3	–	:	Engine ground
E1	★F4	–	:	Engine ground
E1	★F5	G/2	:	Swirl control valve control solenoid valve
D2	F6	GY/6	:	EGR volume control valve
E7	★F7	B/8	:	Electronic control fuel injection pump
D4	F8	B/1	:	Oil pressure switch
B4	★F9	GY/2	:	Crankshaft position sensor (TDC)
C4	F10	B/1	:	Starter motor
D5	★F11	GY/2	:	Vehicle speed sensor
C5	F12	W/4	:	Park/neutral position (PNP) switch
B4	F13	B/8	:	To E76
A3	★F16	GY/5	:	Mass air flow sensor
	F17	–/9	:	ECM
	★F18	–/40	:	ECM
	★F19	–/52	:	ECM
	★F20	–/24	:	ECM
	★F21	–/9	:	ECM
	★F44	BR/16	:	To M72
	★F45	W/16	:	To M71

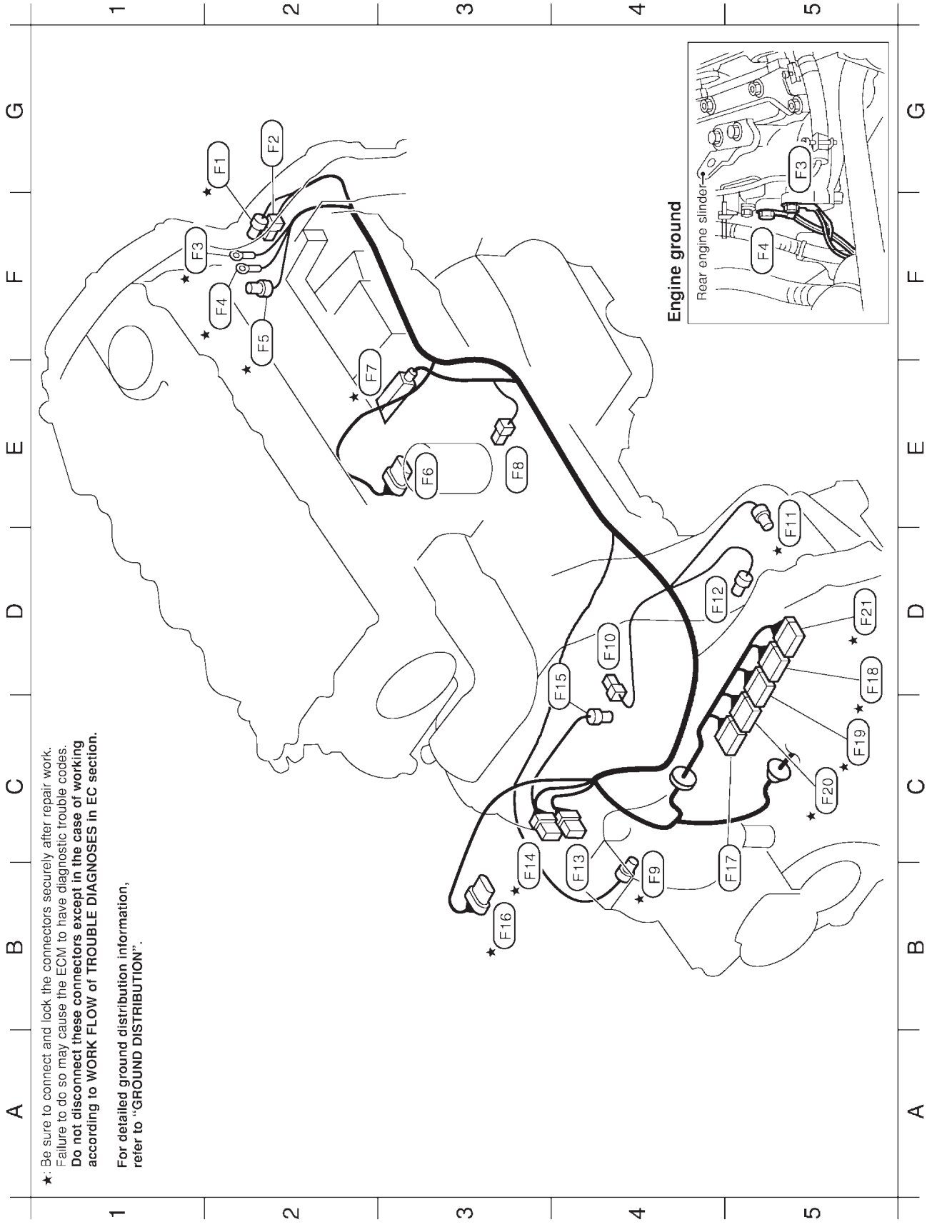
PASSENGER COMPARTMENT

★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

Engine Control Harness/YD Engine Models (Cont'd)

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0343S02



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL034C

G2	*F1	GY/2	:	Engine coolant temperature sensor
G2	F2	B/1	:	Thermal transmitter
F1	*F3	—	:	Engine ground
F2	*F4	—	:	Engine ground
F2	*F5	G/2	:	Swirl control valve control solenoid valve
E3	F6	GY/6	:	EGR volume control valve
E2	*F7	B/8	:	Electronic control fuel injection pump
E3	F8	B/1	:	Oil pressure switch
B4	*F9	GY/2	:	Crankshaft position sensor (TDC)
D4	F10	B/1	:	Starter motor
D5	*F11	GY/2	:	Vehicle speed sensor
D4	F12	W/4	:	Park/neutral position (PNP) switch
B4	F13	B/8	:	To E76
B3	*F14	W/8	:	To E75
D4	F15	BR/2	:	Fuel filter switch
B3	*F16	GY/5	:	Mass air flow sensor
B5	F17	-/9	:	ECM
D5	*F18	-/40	:	ECM
C5	*F19	-/52	:	ECM
C5	*F20	-/24	:	ECM
D5	*F21	-/9	:	ECM
	*F22	BR/6	:	ECM relay
	*F23	W/16	:	To M49
	*F24	BR/16	:	To M50

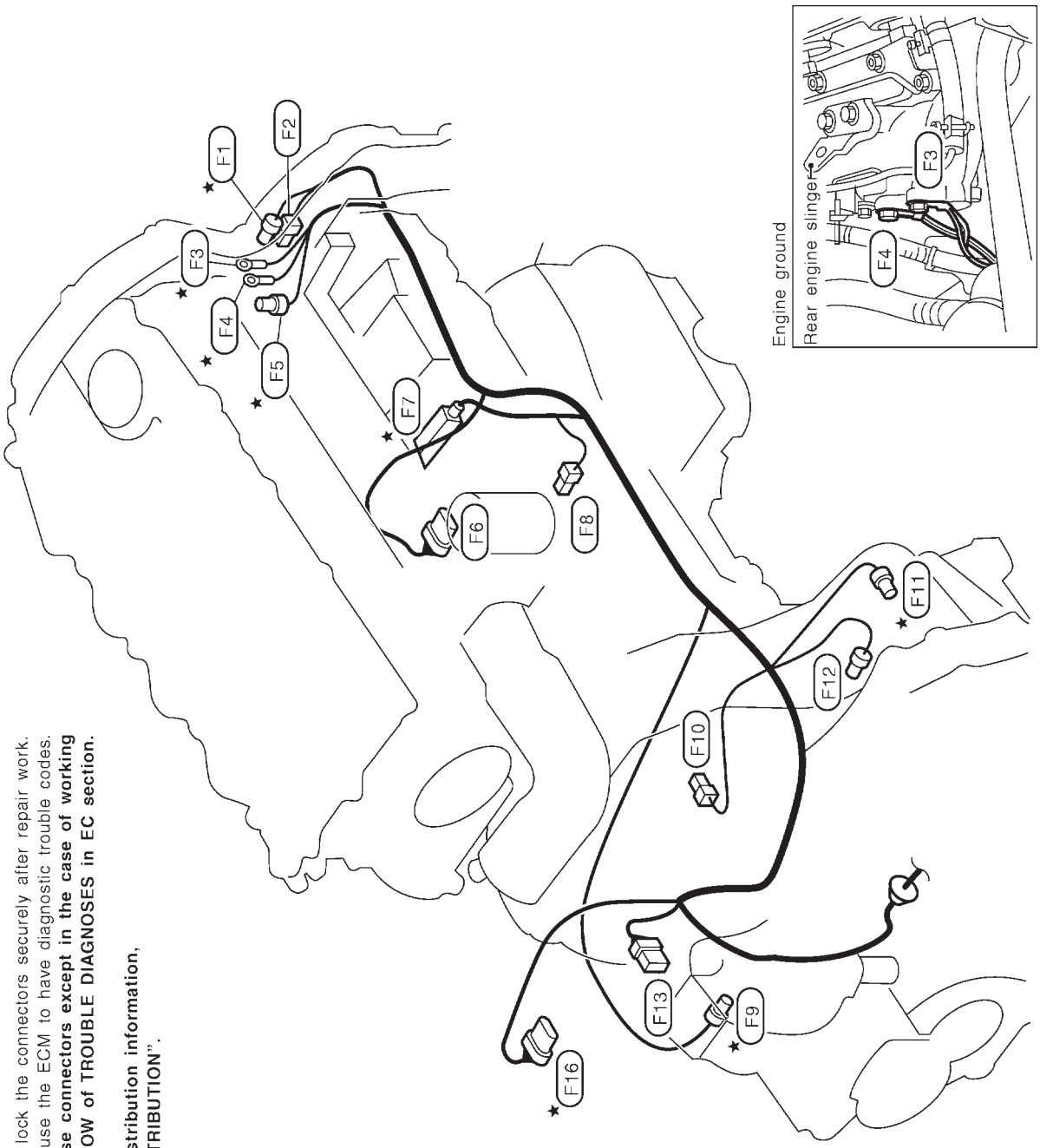
PASSENGER COMPARTMENT

★ : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

YEL035C

RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0343S04



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL531C

G2	★F1	GY/2	:	Engine coolant temperature sensor
G2	F2	B/1	:	Thermal transmitter
F1	★F3	–	:	Engine ground
F2	★F4	–	:	Engine ground
F2	★F5	G/2	:	Swirl control valve control solenoid valve
E3	F6	GY/6	:	EGR volume control valve
E2	★F7	B/8	:	Electronic control fuel injection pump
E3	F8	B/1	:	Oil pressure switch
B4	★F9	GY/2	:	Crankshaft position sensor (TDC)
D4	F10	B/1	:	Starter motor
D5	★F11	GY/2	:	Vehicle speed sensor
D4	F12	W/4	:	Park/neutral position (PNP) switch
B4	F13	B/8	:	To E76
B3	★F16	GY/5	:	Mass air flow sensor
	F17	–/9	:	ECM
	★F18	–/40	:	ECM
	★F19	–/52	:	ECM
	★F20	–/24	:	ECM
	★F21	–/9	:	ECM
	★F44	BR/16	:	To M72
	★F45	W/16	:	To M71

PASSENGER COMPARTMENT

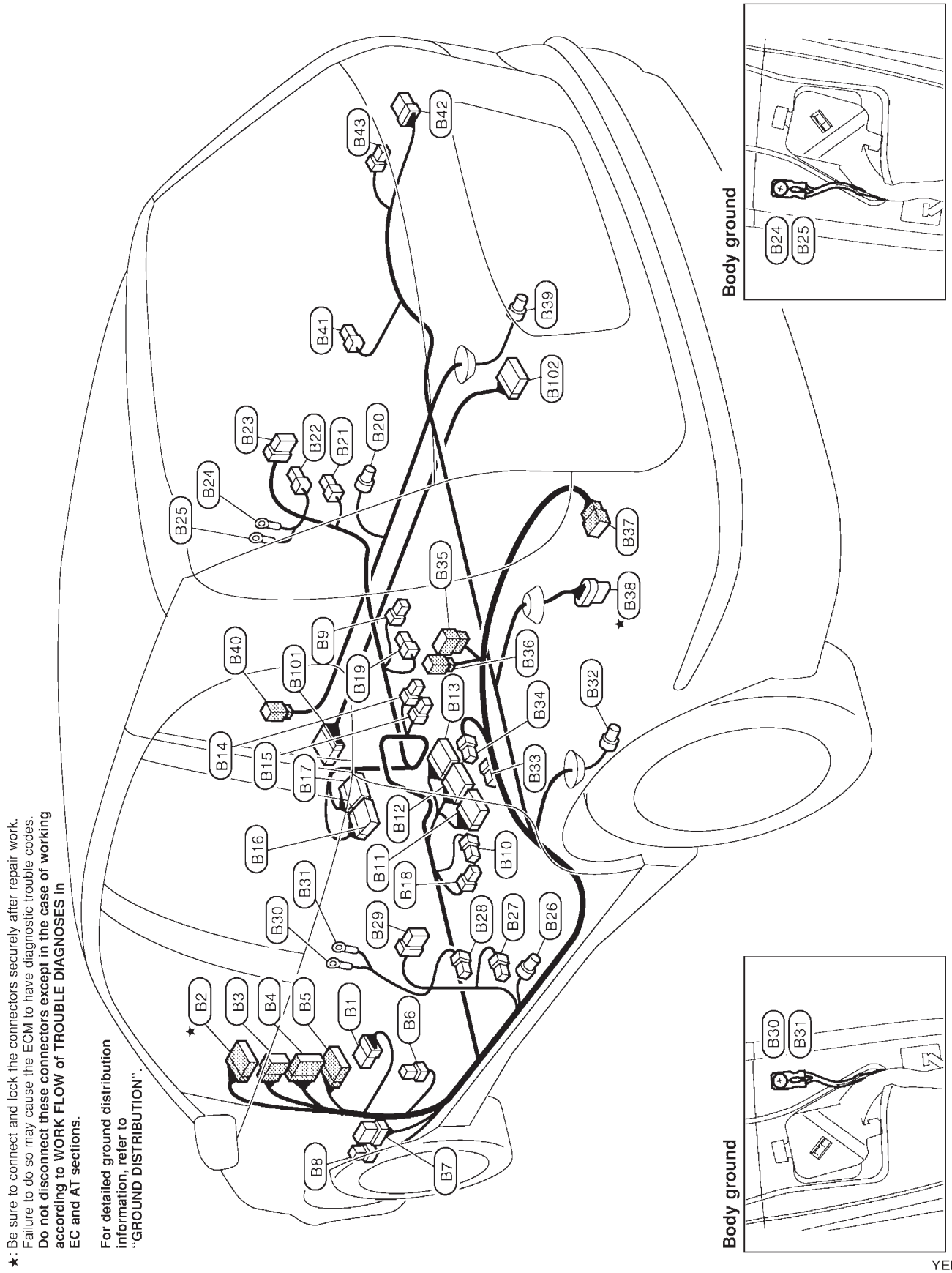
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC section.**

Body Harness

LHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0348

NLEL0348S01



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL036C

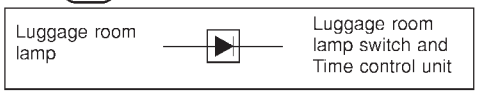
(B1) W/6 : Fuse block (J/B)
*(B2) W/16 : To (M15)
(B3) W/6 : To (M14)
(B4) BR/16 : To (M13)
(B5) W/20 : To (M12)
(B6) L/4 : Fuel pump relay (Except YD engine)
(B7) BR/6 : Rear window defogger relay
(With door mirror defogger)
(B8) L/4 : Rear window defogger relay
(For rear window defogger only)
(B9) W/3 : Heated seat passenger side (For cold area)
(B10) Y/2 : To front LH side air bag module
sub-harness (With side air bag)
(B11) W/16 : NAVI control unit
(With navigation system)
(B12) W/20 : NAVI control unit
(With navigation system)
(B13) GY/12 : NAVI control unit
(With navigation system)
(B14) W/2 : Power socket
(B15) B/1 : Parking brake switch
(B16) Y/12 : Air bag diagnosis sensor unit
(B17) Y/12 : Air bag diagnosis sensor unit
(B18) W/3 : Heated seat driver side (For cold area)
(B19) Y/2 : To front RH side air bag module
sub-harness (With side air bag)
(B20) Y/2 : RH side air bag (Satellite) sensor
(With side air bag)
(B21) W/4 : Front RH seat belt pre-tensioner
(B22) W/3 : Door switch passenger side
(B23) W/8 : To (D61)
(B24) — : Body ground
(B25) — : Body ground (With side air bag)
(B26) Y/2 : LH side air bag (Satellite) sensor
(With side air bag)
(B27) W/4 : Front LH seat belt pre-tensioner
(B28) W/3 : Door switch driver side
(B29) W/8 : To (D51)
(B30) — : Body ground
(B31) — : Body ground (With side air bag)
(B32) BR/2 : Rear wheel sensor LH
(B33) W/2 : Diode
(B34) W/1 : Door switch rear LH
(B35) W/6 : To (D82)
(B36) W/4 : To (D81)
(B37) BR/6 : Rear combination lamp LH
*(B38) GY/5 : Fuel level sensor unit and fuel pump
(B39) GY/2 : Rear wheel sensor RH
(B40) W/4 : To (E101)
(B41) W/1 : Door switch rear RH
(B42) BR/6 : Rear combination lamp RH
(B43) W/2 : Luggage room lamp

Body No. 2 harness

(B101) W/16 : To (M56)
(B102) W/16 : CD auto-changer

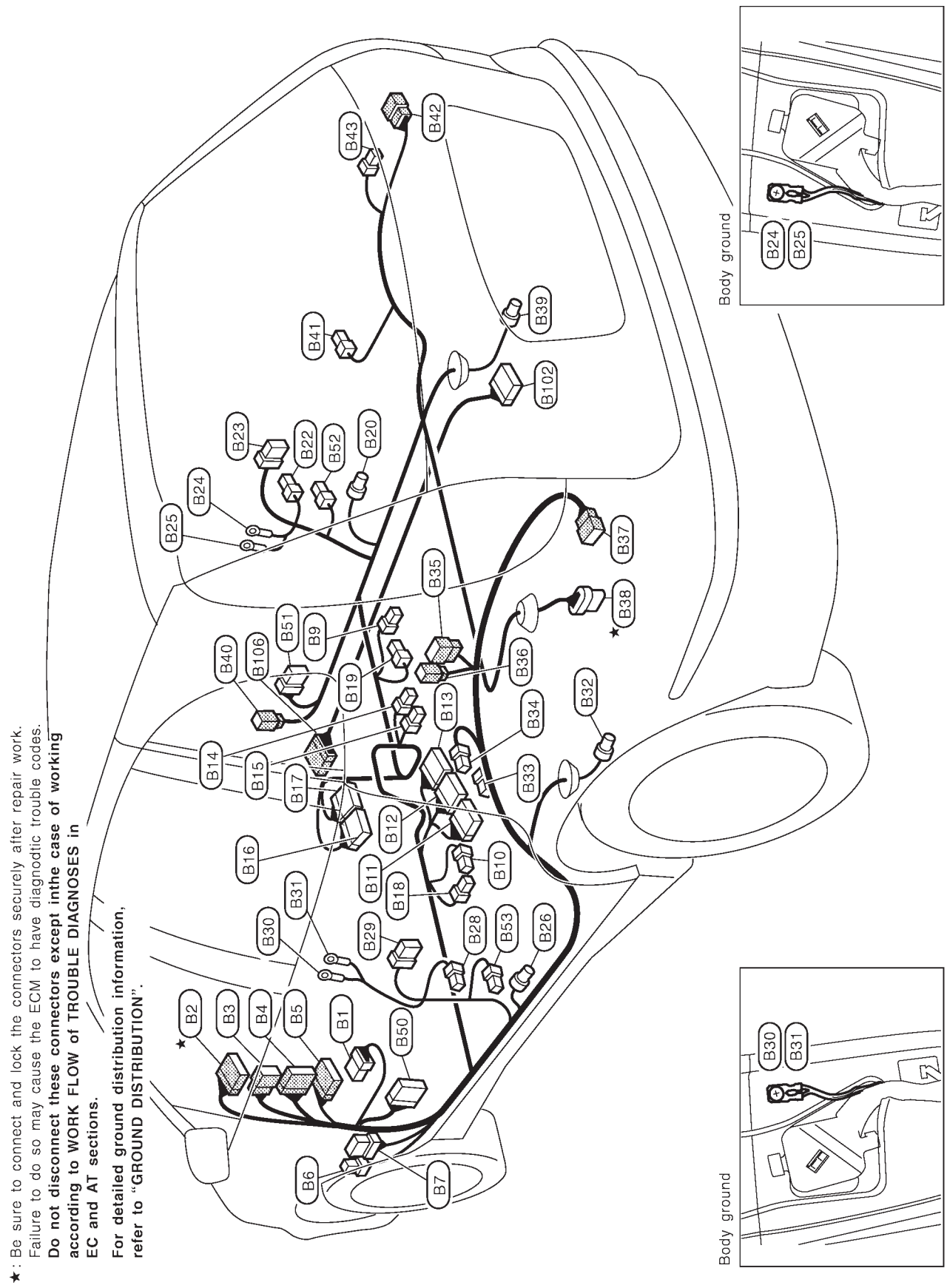
* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

Diode (B33)



LHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0348S05



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnodtic trouble codes.

Do not disconnect these connectors except inthe case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL535C

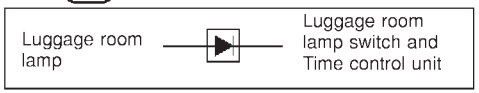
B1	W/6	:	Fuse block (J/B)
*B2	W/16	:	To M15
B3	W/6	:	To M14
B4	BR/16	:	To M13
B5	W/20	:	To M12
B6	L/4	:	Fuel pump relay (Except YD engine)
B7	BR/6	:	Rear window defogger relay (With door mirror defogger)
B9	W/3	:	Heated seat passenger side (For cold area)
B10	Y/2	:	To front LH side air bag module sub-harness (With side air bag)
B11	W/16	:	NAVI control unit (With navigation system)
B12	W/20	:	NAVI control unit (With navigation system)
B13	GY/12	:	NAVI control unit (With navigation system)
B14	W/2	:	Power socket
B15	B/1	:	Parking brake switch
B16	Y/12	:	Air bag diagnosis sensor unit
B17	Y/12	:	Air bag diagnosis sensor unit
B18	W/3	:	Heated seat driver side (For cold area)
B19	Y/2	:	To front RH side air bag module sub-harness (With side air bag)
B20	Y/2	:	RH side air bag (Satellite) sensor (With side air bag)
B22	W/3	:	Door switch passenger side
B23	W/8	:	To D61
B24	—	:	Body ground
B25	—	:	Body ground (With side air bag)
B26	Y/2	:	LH side air bag (Satellite) sensor (With side air bag)
B28	W/3	:	Door switch driver side
B29	W/8	:	To D51
B30	—	:	Body ground
B31	—	:	Body ground (With side air bag)
B32	BR/2	:	Rear wheel sensor LH
B33	W/2	:	Diode
B34	W/1	:	Door switch rear LH
B35	W/6	:	To D82
B36	W/4	:	To D81
B37	BR/6	:	Rear combination lamp LH
*B38	GY/5	:	Fuel level sensor unit and fuel pump
B39	GY/2	:	Rear wheel sensor RH
B40	W/4	:	To E101
B41	W/1	:	Door switch rear RH
B42	BR/6	:	Rear combination lamp RH
B43	W/2	:	Luggage room lamp
B50	W/12	:	To D11
B51	W/6	:	To D40
B52	Y/2	:	Front RH seat belt pre-tensioner
B53	Y/2	:	Front LH seat belt pre-tensioner

Body No. 2 harness

B102	W/16	:	CD auto-changer
B106	W/16	:	To M213

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

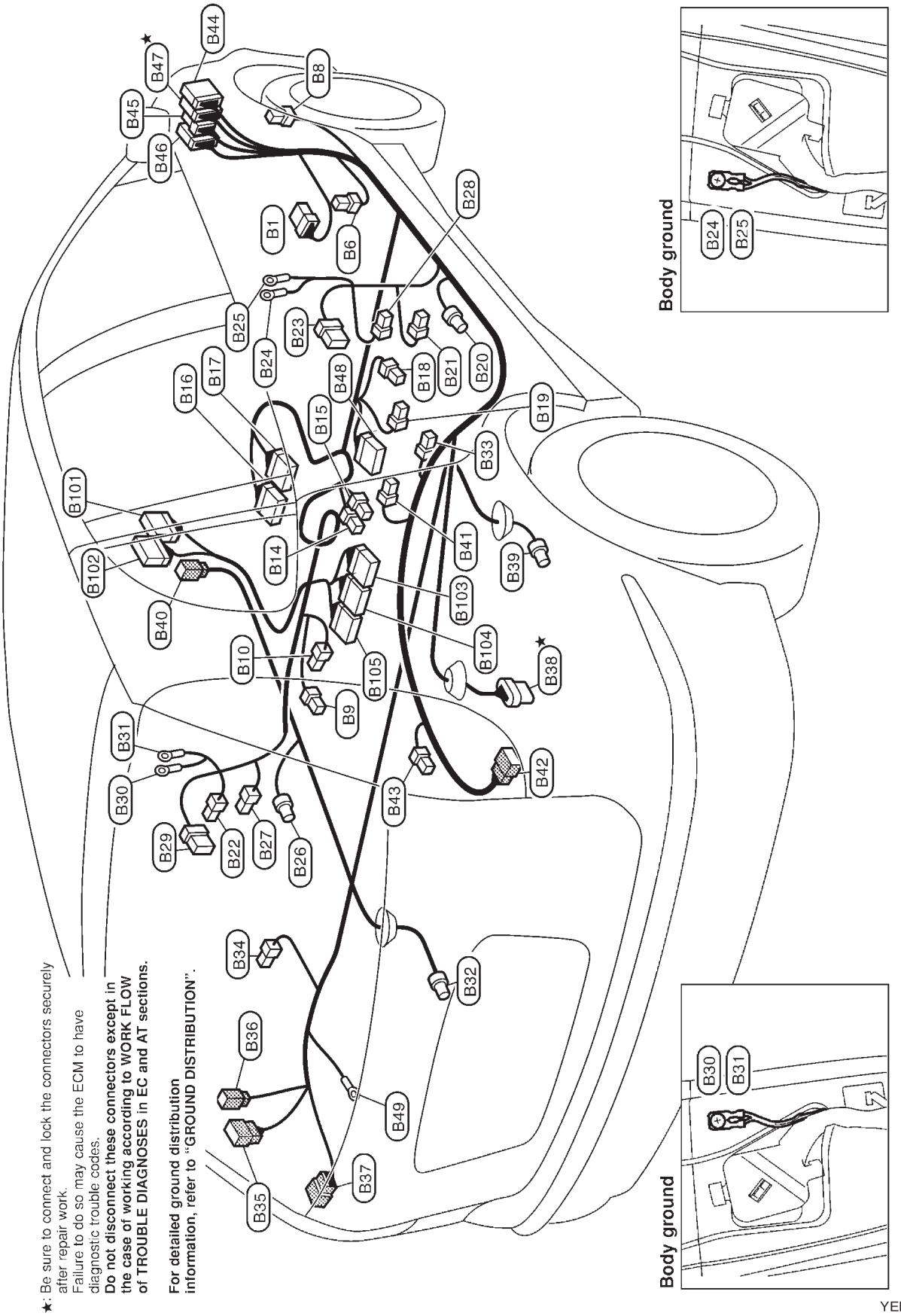
Diode B33



YEL536C

RHD MODELS (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0348S02



★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL038C

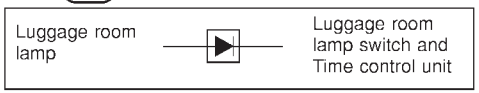
(B1) W/6 : Fuse block (J/B)
(B6) L/4 : Fuel pump relay (Except YD engine)
(B8) L/4 : Rear window defogger relay (For rear window defogger only)
(B9) W/3 : Heated seat passenger side (For cold area)
(B10) Y/2 : To front LH side air bag module sub-harness (With side air bag)
(B14) W/2 : Power socket
(B15) B/1 : Parking brake switch
(B16) Y/12 : Air bag diagnosis sensor unit
(B17) Y/12 : Air bag diagnosis sensor unit
(B18) W/3 : Heated seat driver side (For cold area)
(B19) Y/2 : To front RH side air bag module sub-harness (With side air bag)
(B20) Y/2 : RH side air bag (Satellite) sensor (With side air bag)
(B21) W/4 : Front RH seat belt pre-tensioner
(B22) W/3 : Door switch passenger side
(B23) W/8 : To (D61)
(B24) — : Body ground
(B25) — : Body ground (With side air bag)
(B26) Y/2 : LH side air bag (Satellite) sensor (With side air bag)
(B27) W/4 : Front LH seat belt pre-tensioner
(B28) W/3 : Door switch driver side
(B29) W/8 : To (D51)
(B30) — : Body ground
(B31) — : Body ground (With side air bag)
(B32) BR/2 : Rear wheel sensor LH
(B33) W/2 : Diode
(B34) W/1 : Door switch rear LH
(B35) W/6 : To (D82)
(B36) W/4 : To (D81)
(B37) BR/6 : Rear combination lamp LH
*(B38) GY/5 : Fuel level sensor unit and fuel pump
(B39) GY/2 : Rear wheel sensor RH
(B40) W/4 : To (E101)
(B41) W/1 : Door switch rear RH
(B42) BR/6 : Rear combination lamp RH
(B43) W/2 : Luggage room lamp
(B44) W/12 : To (M63)
(B45) W/6 : To (M69)
(B46) BR/16 : To (M68)
*(B47) W/16 : To (M65)
(B48) W/16 : CD auto-changer
(B49) — : Body ground

Body No. 2 harness

(B101) W/12 : To (M66)
(B102) W/16 : To (N7)
(B103) GY/12 : NAVI control unit
(B104) W/20 : NAVI control unit
(B105) W/16 : NAVI control unit

* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

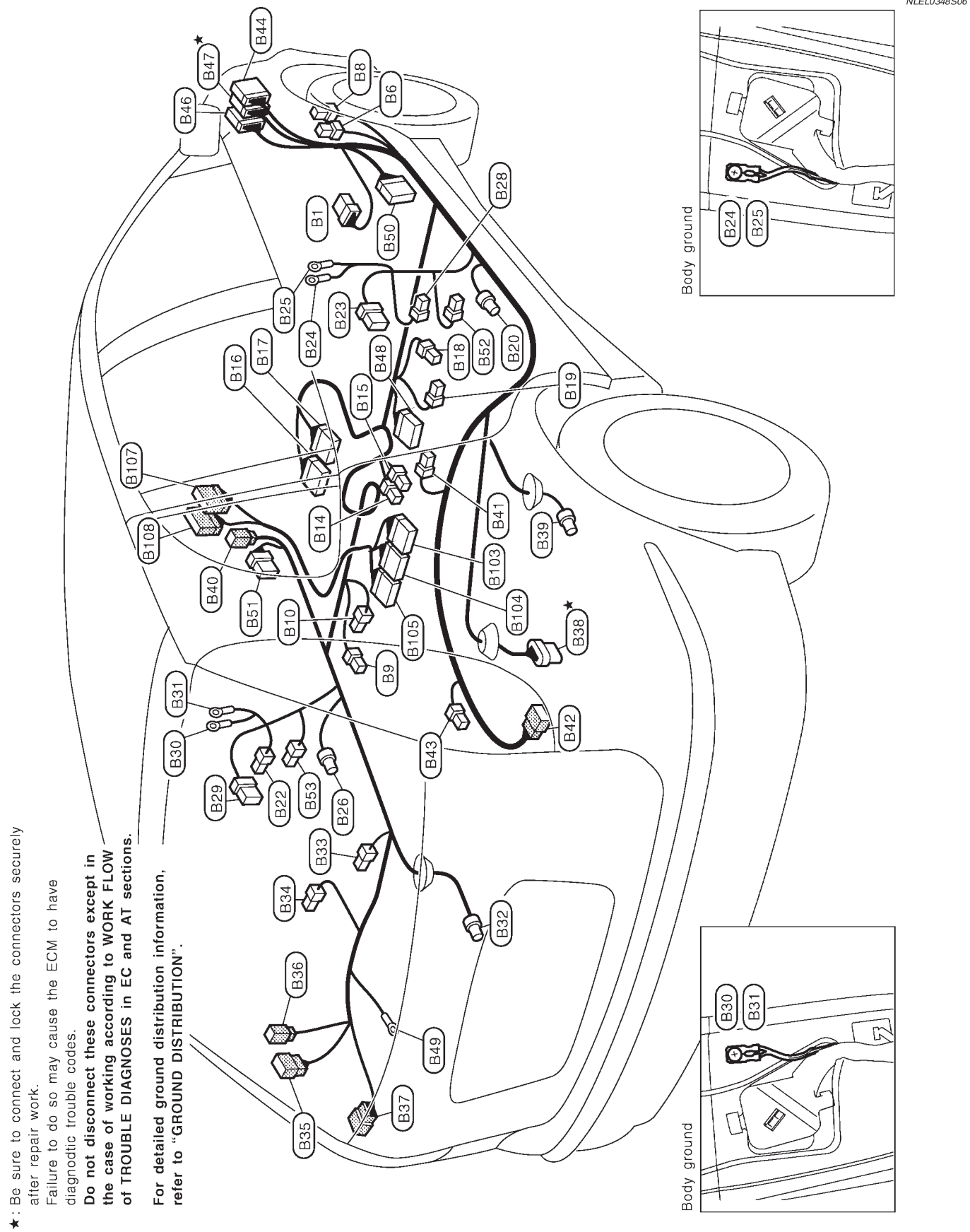
Diode (B33)



Body Harness (Cont'd)

RHD MODELS (MODELS WITH ECM IN CABIN)

NLEL0348S06



★: Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnodtic trouble codes.

Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

YEL537C

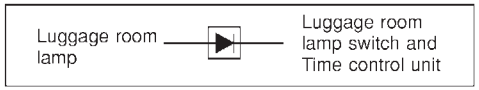
B1	W/6	:	Fuse block (J/B)
B6	L/4	:	Fuel pump relay (Except YD engine)
B8	L/4	:	Rear window defogger relay (For rear window defogger only)
B9	W/3	:	Heated seat passenger side (For cold area)
B10	Y/2	:	To front LH side air bag module sub-harness (With side air bag)
B14	W/2	:	Power socket
B15	B/1	:	Parking brake switch
B16	Y/12	:	Air bag diagnosis sensor unit
B17	Y/12	:	Air bag diagnosis sensor unit
B18	W/3	:	Heated seat driver side (For cold area)
B19	Y/2	:	To front RH side air bag module sub-harness (With side air bag)
B20	Y/2	:	RH side air bag (Satellite) sensor (With side air bag)
B22	W/3	:	Door switch passenger side
B23	W/8	:	To D61
B24	—	:	Body ground
B25	—	:	Body ground (With side air bag)
B26	Y/2	:	LH side air bag (Satellite) sensor (With side air bag)
B28	W/3	:	Door switch driver side
B29	W/8	:	To D51
B30	—	:	Body ground
B31	—	:	Body ground (With side air bag)
B32	BR/2	:	Rear wheel sensor LH
B33	W/2	:	Diode
B34	W/1	:	Door switch rear LH
B35	W/6	:	To D82
B36	W/4	:	To D81
B37	BR/6	:	Rear combination lamp LH
*B38	GY/5	:	Fuel level sensor unit and fuel pump
B39	GY/2	:	Rear wheel sensor RH
B40	W/4	:	To E101
B41	W/1	:	Door switch rear RH
B42	BR/6	:	Rear combination lamp RH
B43	W/2	:	Luggage room lamp
B44	W/12	:	To M63
B46	BR/16	:	To M68
*B47	W/16	:	To M65
B48	W/16	:	CD auto-changer
B49	—	:	Body ground
B50	W/12	:	To D11
B51	W/6	:	To D40
B52	Y/2	:	Front RH seat belt pre-tensioner
B53	Y/2	:	Front LH seat belt pre-tensioner

Body No. 2 harness

B107	W/12	:	To M217
B108	W/16	:	To M216
B103	GY/12	:	NAVI control unit (With navigation system)
B104	W/20	:	NAVI control unit (With navigation system)
B105	W/16	:	NAVI control unit (With navigation system)

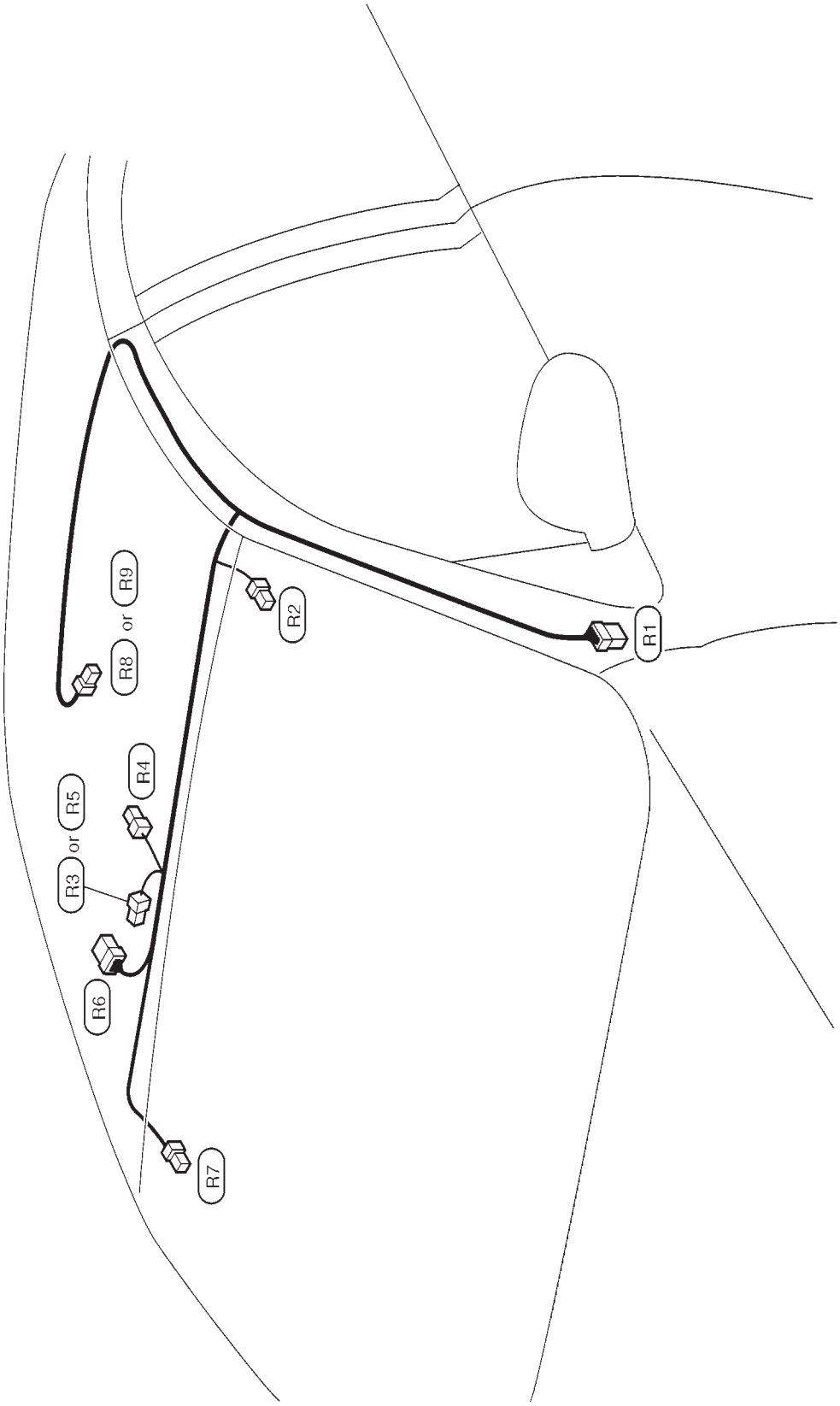
* : Be sure to connect and lock the connectors securely after repair work. Faillure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

Diode B33



Room Lamp Harness

NLEL0140



R1	W/6	: To (M19)
R2	B/2	: Vanity mirror lamp LH (With vanity lamp)
R3	W/2	: Stop lamp
R4	W/2	: Sunroof motor (With sunroof)
R5	W/2	: Stop lamp (Without sunroof)
R6	W/8	: Sunroof switch assembly (With sunroof)
R7	B/2	: Vanity mirror lamp RH (With vanity lamp)
R8	W/3	: Interior room lamp (Without sunroof)
R9	W/3	: Interior room lamp

YEL040C

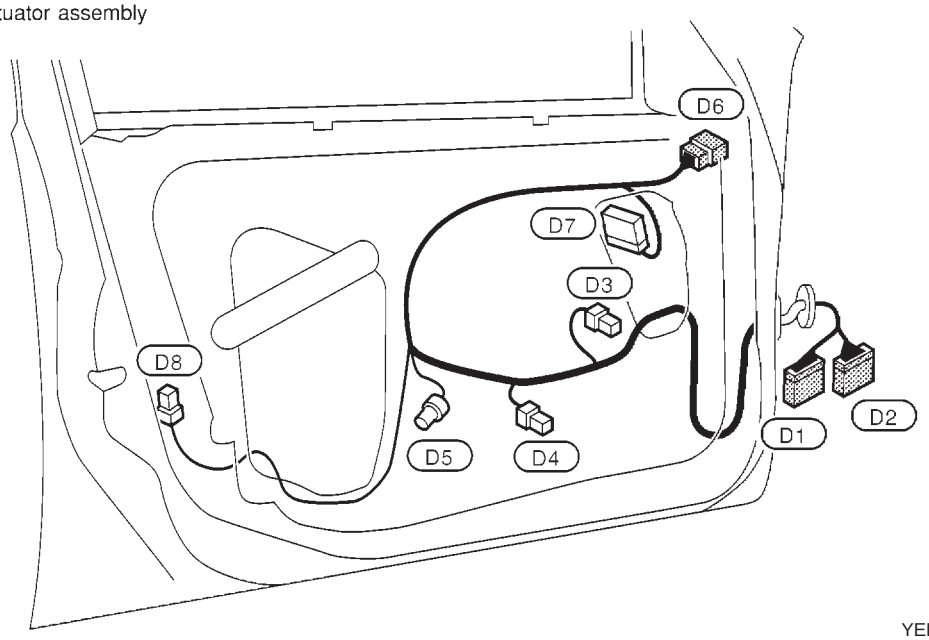
Front Door Harness/LHD Models

NLEL0142

LH SIDE (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0142S07

(D1) W/16 : To (M16)
(D2) W/12 : To (M17)
(D3) BR/2 : Front door speaker LH
(D4) B/2 : Power window regulator
(D5) BR/3 : Door key cylinder switch
(D6) GY/6 : Door mirror (With mirror control system)
(D7) W/16 : Power window main switch
(D8) W/4 : Door lock actuator assembly

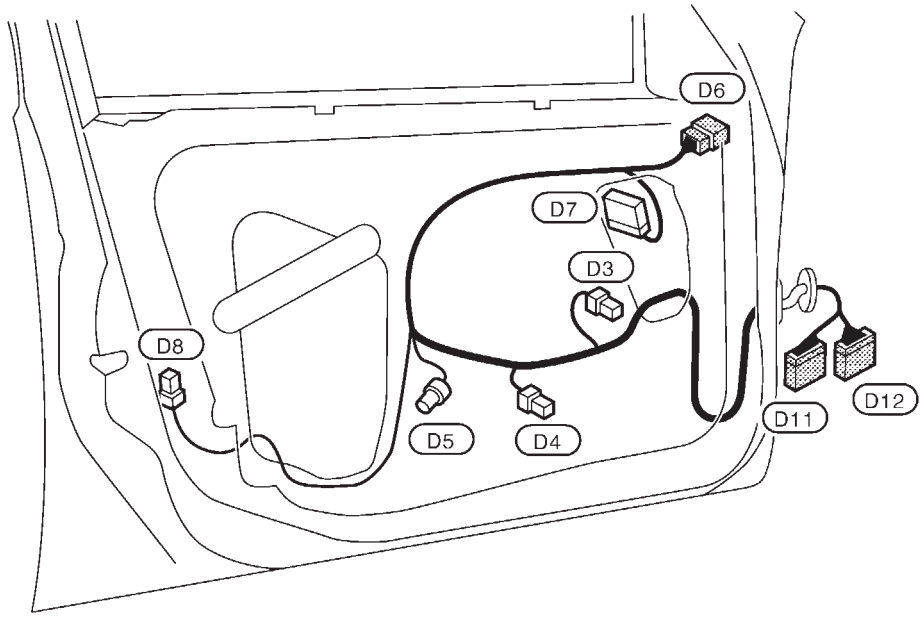


YEL041C

LH SIDE (MODELS WITH ECM IN CABIN)

NLEL0142S08

(D3) BR/2 : Front door speaker LH
(D4) B/2 : Power window regulator
(D5) BR/3 : Door key cylinder switch
(D6) GY/6 : Door mirror
(With mirror control system)
(D7) W/16 : Power window main switch
(D8) W/4 : Door lock actuator assembly
(D11) W/12 : To (B50)
(D12) W/12 : To (M74)

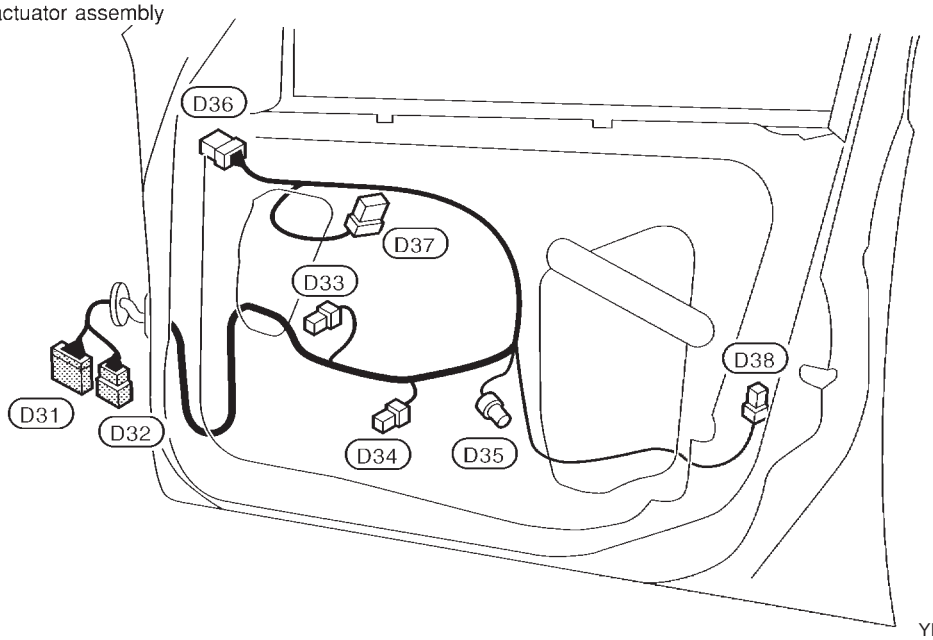


YEL539C

RH SIDE (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0142S06

(D31) W/12 : To (M58)
(D32) W/8 : To (M57)
(D33) BR/2 : Front door speaker RH
(D34) B/2 : Power window regulator
(D35) BR/3 : Door key cylinder switch
(D36) GY/6 : Door mirror (With mirror control system)
(D37) W/8 : Power window sub-switch
(D38) W/4 : Door lock actuator assembly



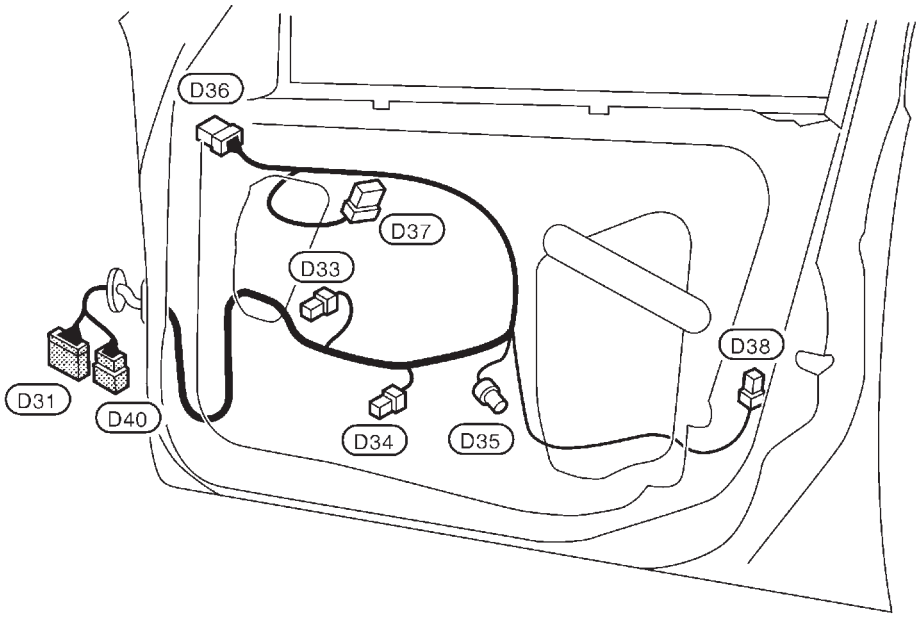
YEL042C

Front Door Harness/LHD Models (Cont'd)

RH SIDE (MODELS WITH ECM IN CABIN)

NLEL0142S09

D31	W/12	:	To M58	D36	GY/6	:	Door mirror (With mirror control system)
D33	BR/2	:	Front door speaker RH	D37	W/8	:	Power window sub-switch
D34	B/2	:	Power window regulator	D38	W/4	:	Door lock actuator assembly
D35	BR/3	:	Door key cylinder switch (Without multiremote control system)	D40	W/8	:	To B51



YEL540C

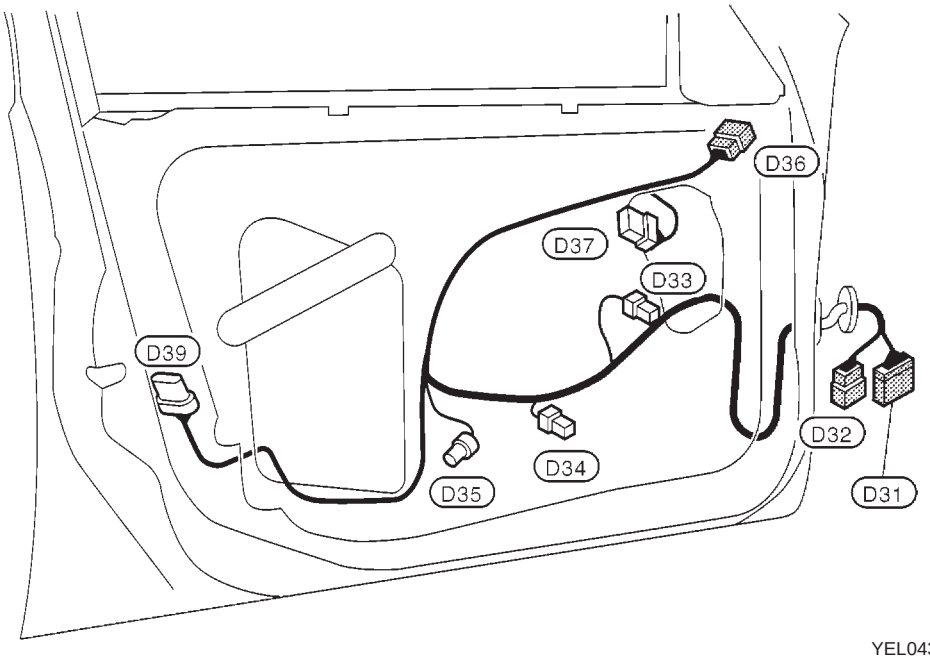
Front Door Harness/RHD Models

NLEL0349

LH SIDE (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0349S01

(D31) W/12 : To (M58)
(D32) W/8 : To (M57)
(D33) BR/2 : Front door speaker LH
(D34) B/2 : Power window regulator
(D35) BR/3 : Door key cylinder switch
(Without multi-remote control system)
(D36) GY/6 : Door mirror (With mirror control system)
(D37) W/8 : Power window sub-switch
(D39) B/6 : Door lock actuator assembly



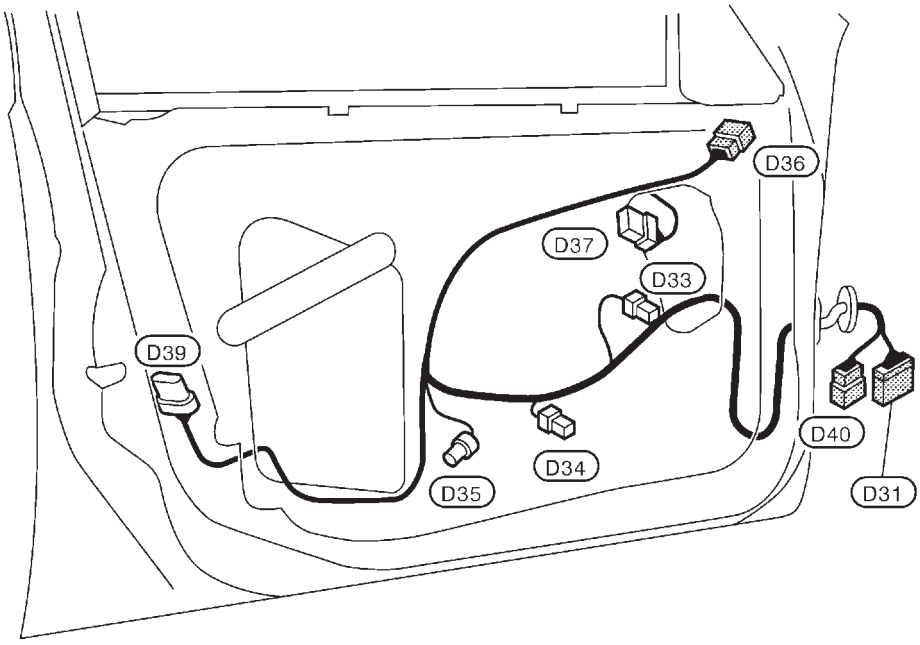
YEL043C

Front Door Harness/RHD Models (Cont'd)

LH SIDE (MODELS WITH ECM IN CABIN)

NLEL0349S04

D31	W/12	:	To M58	D36	GY/6	:	Door mirror (With mirror control system)
D33	BR/2	:	Front door speaker LH	D37	W/8	:	Power window sub-switch
D34	B/2	:	Power window regulator	D39	B/6	:	Door lock actuator assembly
D35	BR/3	:	Door key cylinder switch (Without multi-remote control system)	D40	W/8	:	To B51

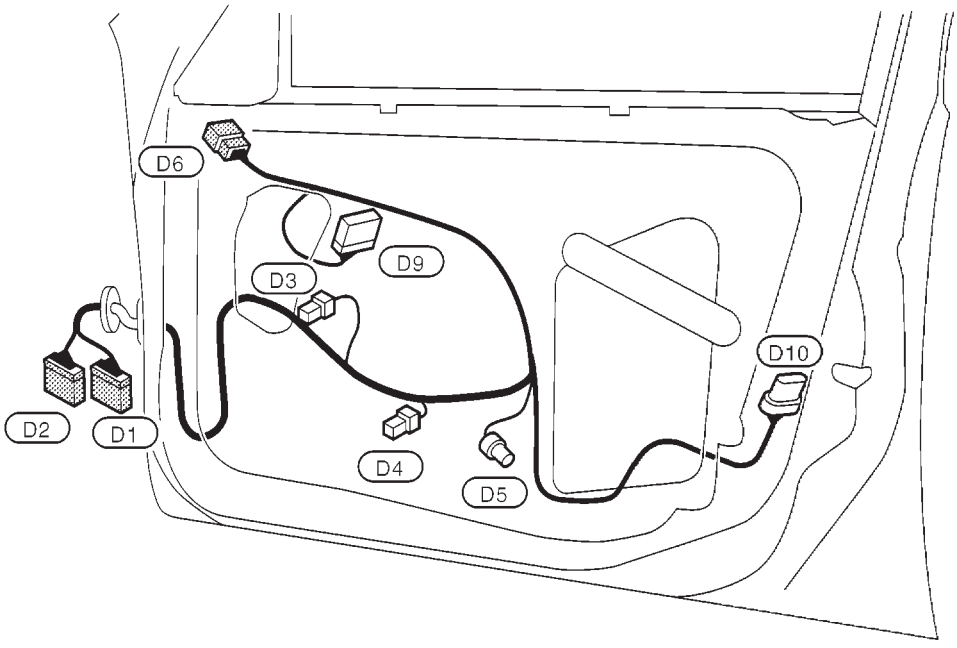


YEL541C

RH SIDE (MODELS WITH ECM IN ENGINE COMPARTMENT)

NLEL0349S03

(D1) W/16 : To (M16)
(D2) W/12 : To (M17)
(D3) BR/2 : Front door speaker RH
(D4) B/2 : Power window regulator
(D5) BR/3 : Door key cylinder switch
(D6) GY/6 : Door mirror (With mirror control system)
(D9) W/16 : Power window main switch
(D10) B/6 : Door lock actuator assembly



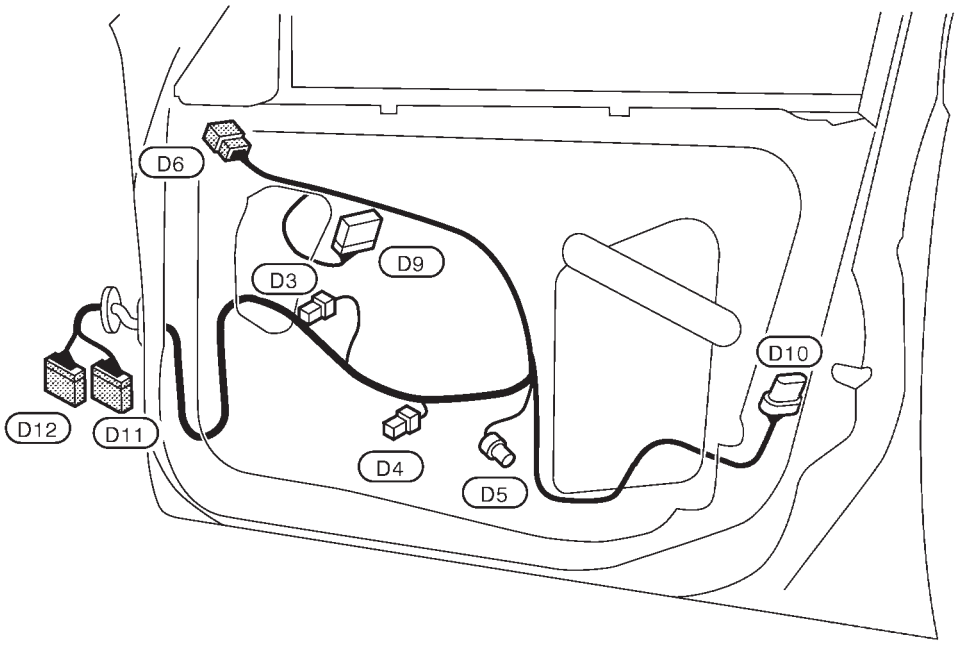
YEL044C

Front Door Harness/RHD Models (Cont'd)

RH SIDE (MODELS WITH ECM IN CABIN)

NLEL0349S05

D3 BR/2 : Front door speaker RH
D4 B/2 : Power window regulator
D5 BR/3 : Door key cylinder switch
D6 GY/6 : Door mirror
(With mirror control system)
D9 W/16 : Power window main switch
D10 B/6 : Door lock actuator assembly
D11 W/12 : To B50
D12 W/12 : To M74



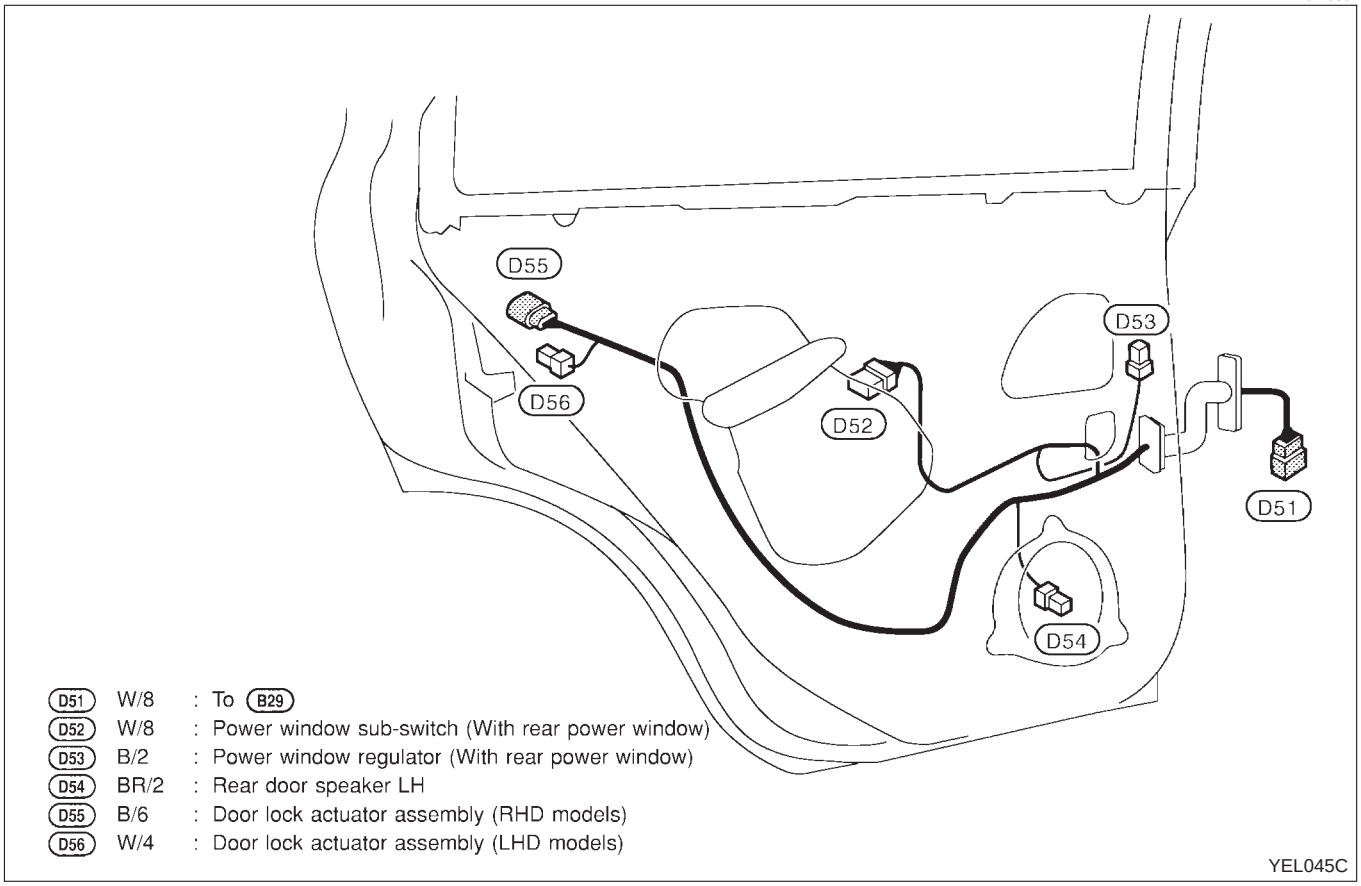
YEL542C

Rear Door Harness

NLEL0416

LH SIDE

NLEL0416S01



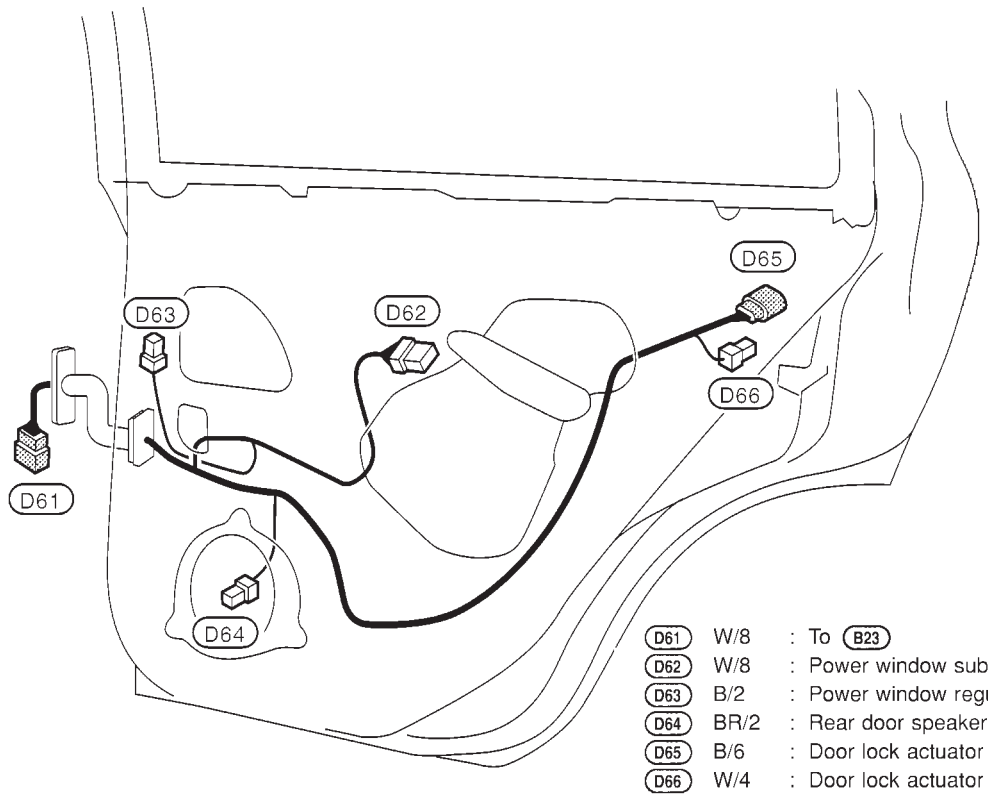
D51	W/8	:	To B29
D52	W/8	:	Power window sub-switch (With rear power window)
D53	B/2	:	Power window regulator (With rear power window)
D54	BR/2	:	Rear door speaker LH
D55	B/6	:	Door lock actuator assembly (RHD models)
D56	W/4	:	Door lock actuator assembly (LHD models)

YEL045C

Rear Door Harness (Cont'd)

RH SIDE

NLEL0416S02



D61	W/8	:	To B23
D62	W/8	:	Power window sub-switch (With rear power window)
D63	B/2	:	Power window regulator (With rear power window)
D64	BR/2	:	Rear door speaker RH
D65	B/6	:	Door lock actuator assembly (RHD models)
D66	W/4	:	Door lock actuator assembly (LHD models)

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Back Door Harness

NLEL0492

D81	W/4	: To B36
D82	W/6	: To B35
D83	W/2	: High-mounted stop lamp
D84	B/1	: Condenser
D85	W/2	: To D121
D86	W/3	: Luggage room lamp switch
D87	W/4	: Door lock actuator assembly
D88	W/4	: Rear wiper motor
D89	—	: Body ground

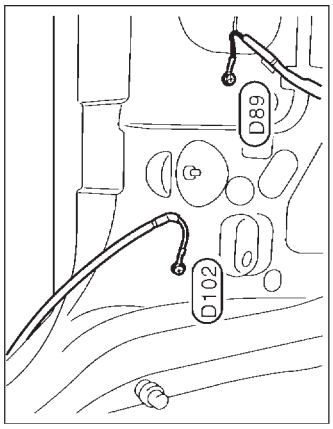
Rear window defogger harness

D101	B/1	: Rear window defogger (–)
D102	—	: Body ground
D103	B/1	: Rear window defogger (+)
D104	B/1	: Condenser

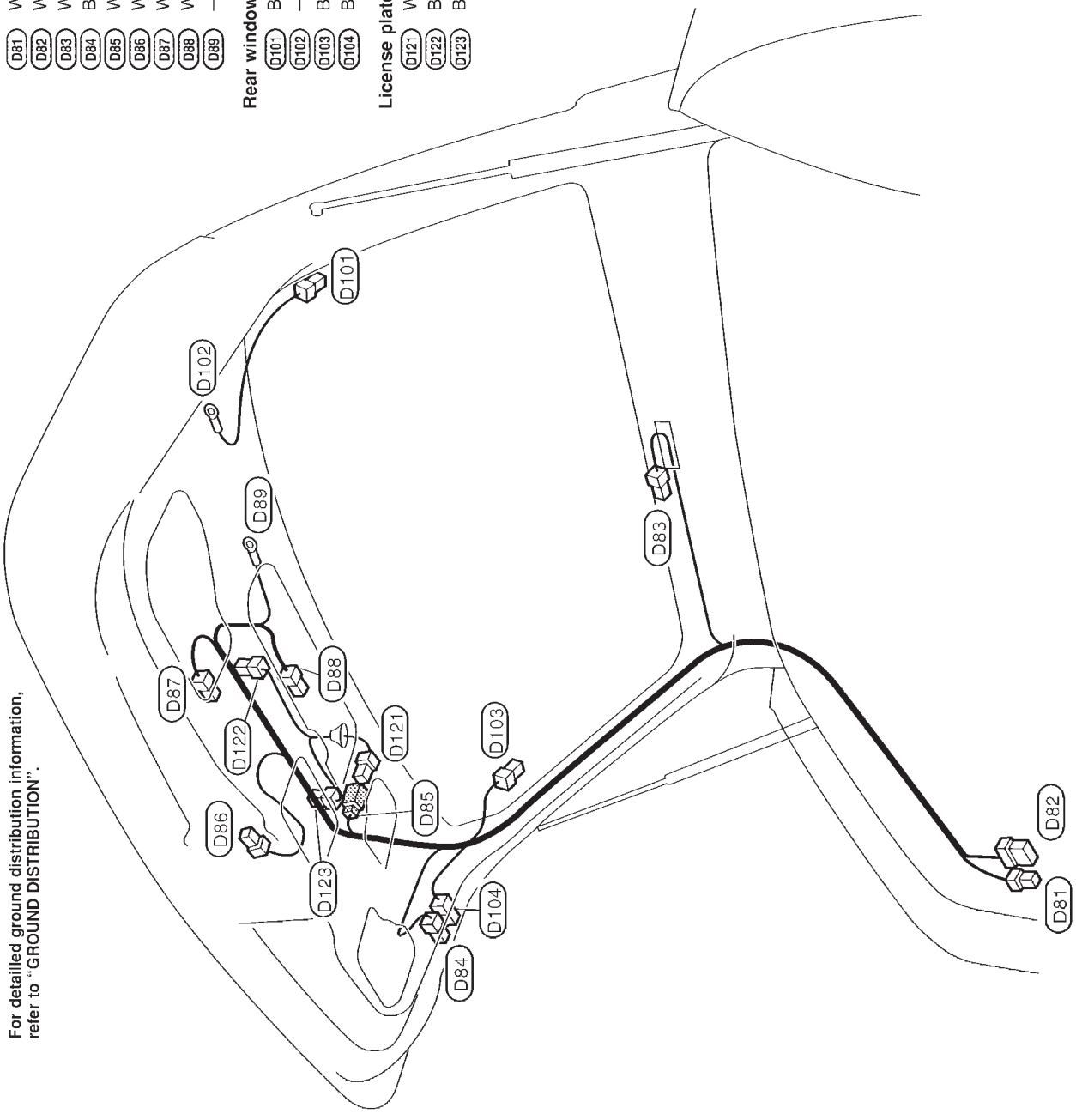
License plate lamp harness

D121	W/2	: To D85
D122	BR/2	: License plate lamp RH
D123	BR/2	: License plate lamp LH

Body ground



For detailled ground distribution information, refer to "GROUND DISTRIBUTION".



YEL047C

BULB SPECIFICATIONS

Headlamp

Headlamp

NLEL0144S03

Item	Wattage (Bulb type)
High/Low (Semi-sealed beam)	55 (H7)/55 (H7)

Exterior Lamp

NLEL0144S01

Item		Wattage (Bulb type)
Front fog lamp		51 (HB4)
Front turn signal lamp		21
Side turn signal lamp		5
Parking lamp		5
Rear combination lamp	Turn signal	16
	Stop/Tail	21/5
	Back-up	18
	Rear fog lamp	21
Rear side marker lamp		3.8
License lamp		5
High-mounted stop lamp		LED (Not serviceable)

Interior Lamp

NLEL0144S02

Item	Wattage (Bulb type)
Interior room lamp	5
Map lamp	5
Rear personal lamp	5
Luggage room lamp	5

WIRING DIAGRAM CODES (CELL CODES)

Use the chart below to find out what each wiring diagram code stands for.
Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
A/C, M	HA	Manual Air Conditioner
A/CCUT	EC	Air Conditioner Control
AAC/V	EC	IDLE AIR CONTROL VALVE (IACV) — AUXIUARY AIR CONTROL (AAC) VALVE
AACVLV	EC	Idle Air Control Valve (IACV) — Auxiuary Air Control (AAC) Valve
ABS	BR	Anti-lock Brake System
APS	EC	Accelerator Position Sensor
ATCONT	EC	A/T Control line
ATDIAG	EC	A/T Diagnosis Communication Line
AUDIO	EL	Audio
BACK/L	EL	Back-up Lamp
BRK/SW	EC	Brake Switch
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
CKPS	EC	Crankshaft Position Sensor
CLOCK	EL	Clock
CMPS	EC	Camshaft Position Sensor (CMPS)
COOL/F	EC	Cooling Fan Motor
D/LOCK	EL	Power Door Lock
DEF	EL	Rear Window Defogger
DTRL	EL	Headlamp — Daytime Light System
ECMRLY	EC	ECM Relay
ECTS	EC	Engine Coolant Temperature Sensor (ECTS)
EGR/TS	EC	EGR Temperature Sensor
EGRC/V	EC	EGR Volume Control Valve
EGRC1	EC	EGR Function (Close)
EGRSYS	EC	EGR Function
EGVC/V	EC	EGR Volume Control Valve
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp
F/PUMP	EC	Fuel Pump
FPS	AT	CVT Fluid Pressure Sensor
FRO2	EC	Heated Oxygen Sensor 1 (Front)
FRO2/H	EC	Heated Oxygen Sensor 1 Heater (Front)
FTS	AT	CVT Fluid Temperature Sensor
FUEL	EC	Fuel Injection System Function
GLOW	EC	Glow Control System
H/AIM	EL	Headlamp — Headlamp Aiming Control —
H/LAMP	EL	Headlamp
H/SEAT	EL	Heated Seat
HEATER	HA	Heater System
HLC	EL	Headlamp Washer
HORN	EL	Horn
IATS	EC	Intake Air Temperature Sensor
IATSEN	EC	Intake Air Temperature Sensor
IGN/SG	EC	Ignition Signal
IGNSYS	EC	Ignition Signal
ILL	EL	Illumination
INJECT	EC	Injector
INJPMP	EC	Injection Pump (Fuel Temperature Sensor)
INT/L	EL	Spot and Laggage Room Lamps
IVC	EC	Intake Valve Timing Control Solenoid Valve
IVC/V	EC	Intake Valve Timing Control Solenoid Valve
KS	EC	Knock Sensor (KS)
LOAD	EC	Electrical Load Signal
LPS	AT	Line Pressure Sensor
LPSV	AT	Line Pressure Solenoid Valve
MAFS	EC	Mass Air Flow Sensor (MAFS)
MAIN	AT	Main Power Supply and Ground Circuit
MAIN	EC	Main Power Supply and Ground Circuit
METER	EL	Meter and Gauges
MIL/DL	EC	MIL and Data Link Connectors
MIRROR	EL	Door Mirror
MULTI	EL	Multi-remote Control System
NATS	EL	NATS (Nissan Anti-Theft System)
NAVI	EL	Navigation System

WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name
NONDTC	AT	Non-detectable Items
O2H1B1	EC	Heated Oxygen Sensor 1 Heater (Front)
O2H2B1	EC	Heated Oxygen Sensor 2 Heater (Rear)
O2S1B1	EC	Heated Oxygen Sensor 1 (Front)
O2S2B1	EC	Heated Oxygen Sensor Heater 2 (Rear)
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE)
PNP/SW	EC	Park/Neutral Position (PNP) Switch
PNP/SW	AT	Park/Neutral Position (PNP) Switch
PNPSW1	EC	Park/Neutral Position (PNP) Switch
POS	EC	Crankshaft Position Sensor (POS)
POWER	EL	Power Supply Routing
PRGVLV	EC	EVAP Canister Purge Volume Control Solenoid Valve
PSSAT	AT	Primary Speed Sensor
PST/SW	EC	Power Steering Oil Pressure Switch
R/FOG	EL	Rear Fog Lamp
ROOM/L	EL	Interior Room Lamp
RP/SEN	EC	Referigerant Pressure Sensor
RRO2	EC	Heated Oxygen Sensor 2 (Rear)
RRO2/H	EC	Heated Oxygen Sensor 2 Heater (Rear)
S/SIG	EC	Start Signal
SHIFT	AT	Shift Lock System
S/LOCK	EL	Power Door Lock — Super Lock —
SROOF	EL	Power Sunroof
SRS	RS	Supplemental Restraint System (SRS)
START	SC	Starting System
STM	AT	Step Motor
STOP/L	EL	Stop Lamp
S/VCSW	EC	Swirl Control Valve Control Vacuum check Switch
SWL/C	EC	Swirl Control Valve Control System
SWL/V	EC	Swirl Control Valve Control Solenoid Valve
TAIL/L	EL	Parking, License and Tail Lamps

Code	Section	Wiring Diagram Name
TCV	AT	Torque Converter Clutch Solenoid Valve
TP/SW	EC	Closed Throttle Position Switch
TPS	AT	Throttle Position Sensor
TPS	EC	Throttle Position Sensor
TURN	EL	Turn Signal and Hazard Warning Lamps
VSS	EC	Vehicle Speed Sensor (VSS)
VSSAT	AT	Secondary Speed Sensor
WARN	EL	Warning Lamps
WINDOW	EL	Power Window
WIP/R	EL	Rear Wiper and Washer
WIPER	EL	Front Wiper and Washer