# ELECTRICAL SYSTEM

# SECTION EL

**When you read wiring diagrams:**
**● Read GI section, “HOW TO READ WIRING DIAGRAMS”.**

## CONTENTS

# CONTENTS (Cont'd)



**WIRING DIAGRAM REFERENCE CHART**

# Description

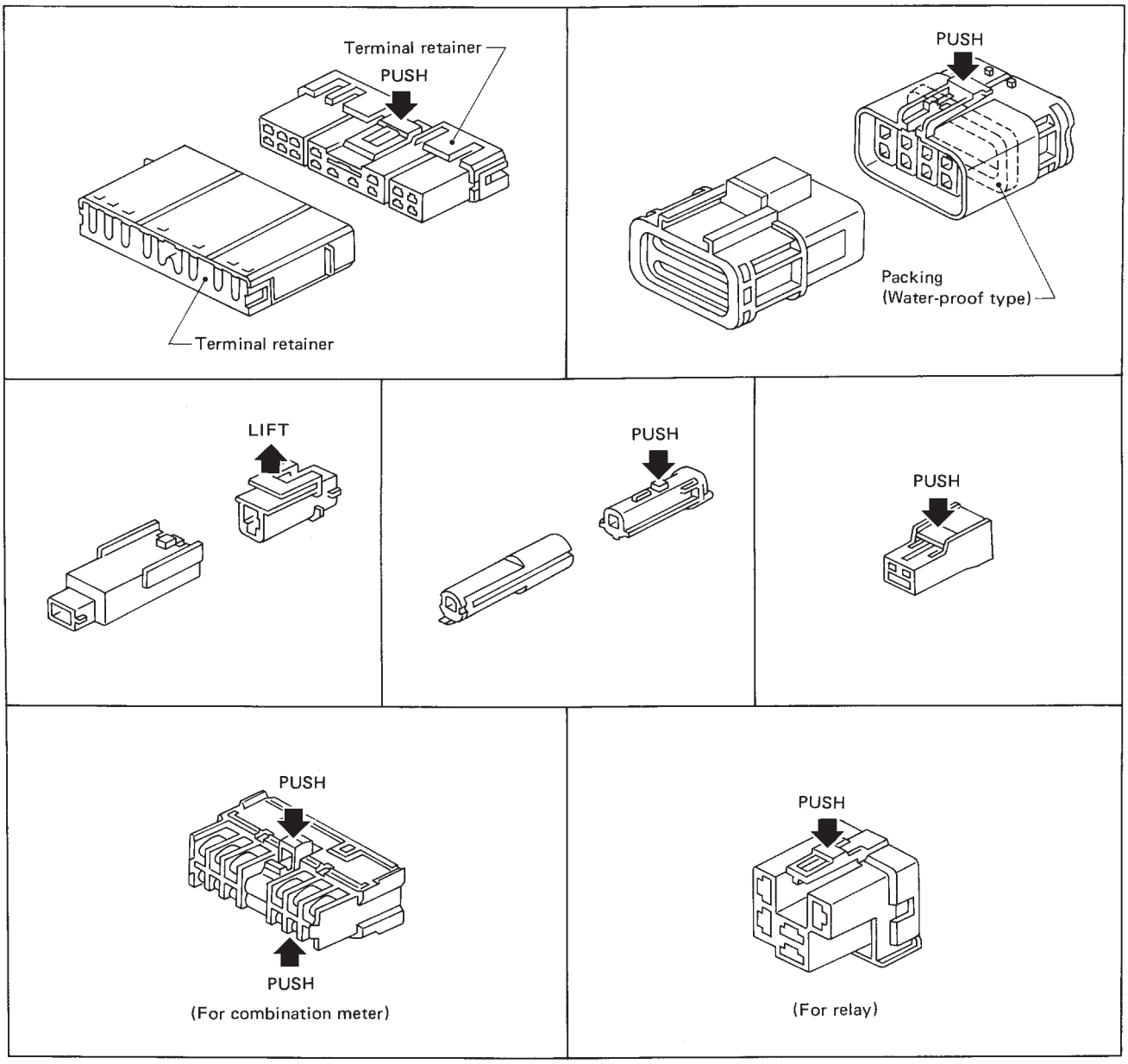
## HARNESS CONNECTOR

- All harness connectors have been modified to prevent accidental looseness or disconnection.
- The connectors can be disconnected by pushing or lifting the locking section.

**CAUTION:**

**Do not pull the harness when disconnecting the connector.**

[Example]

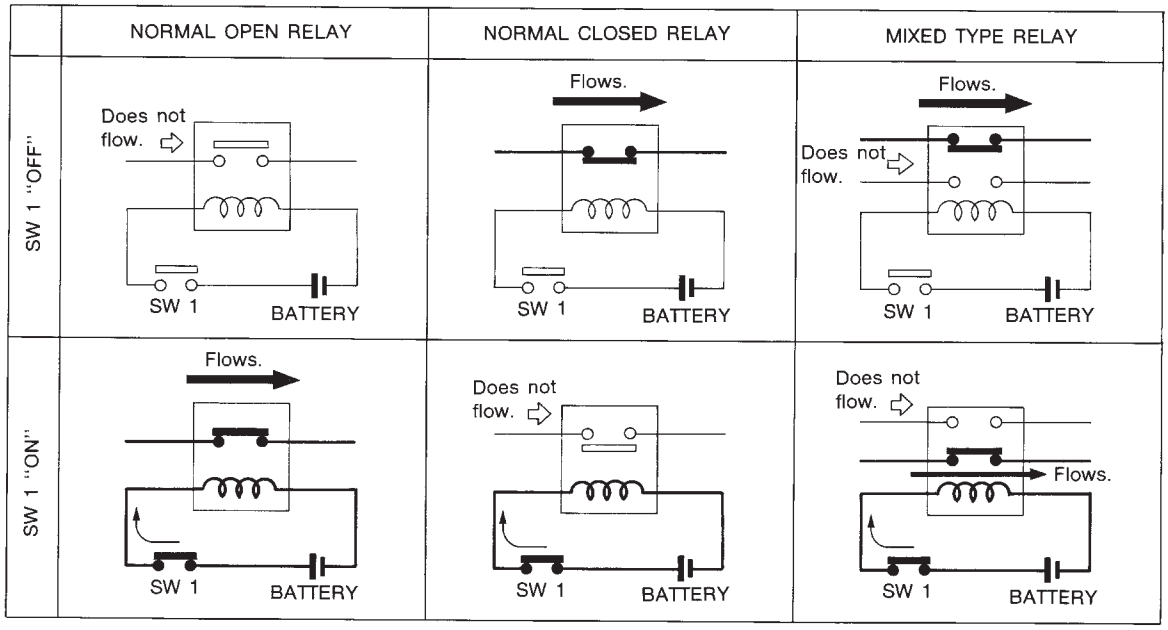



SEL769D

# Description

## NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

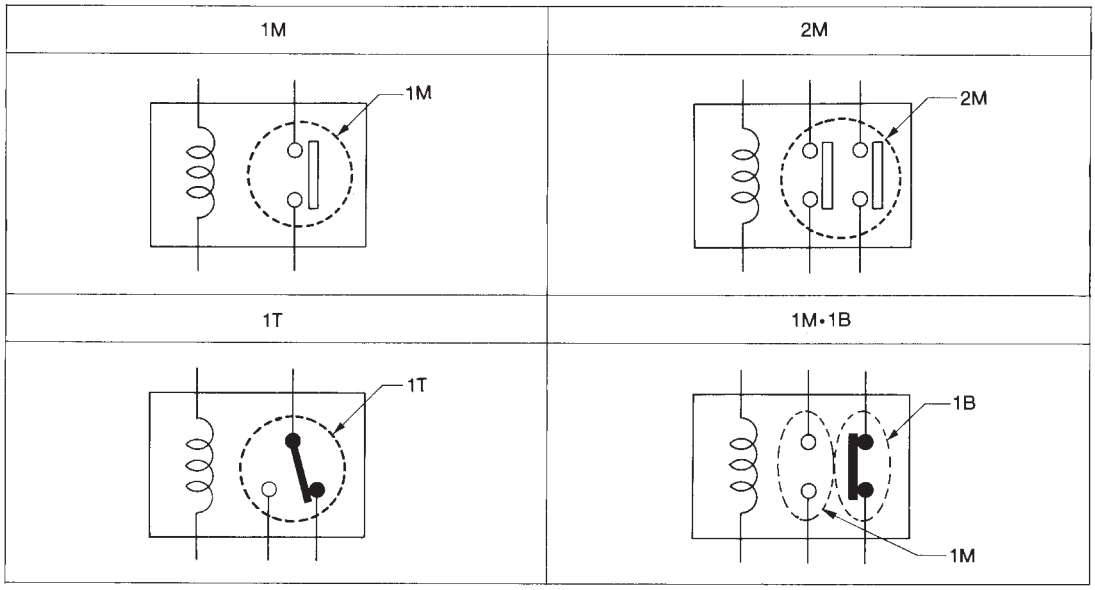
Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.




SEL881H

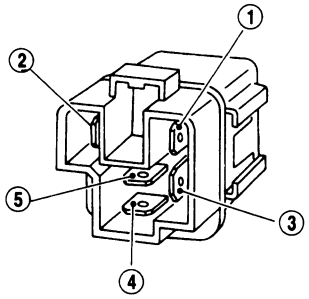
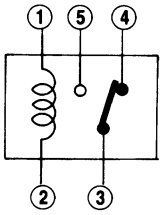
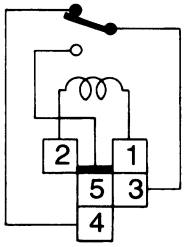
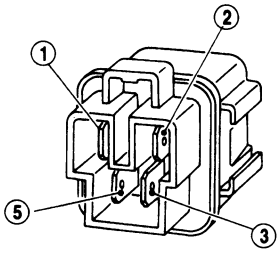
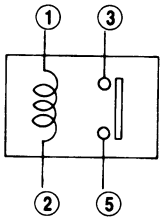
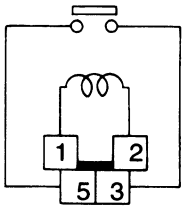
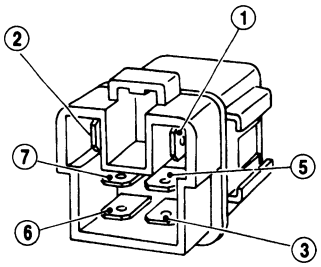
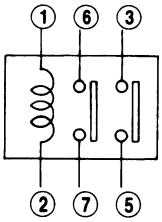
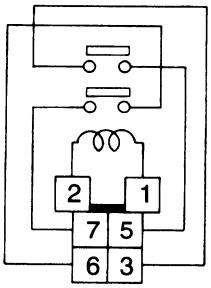
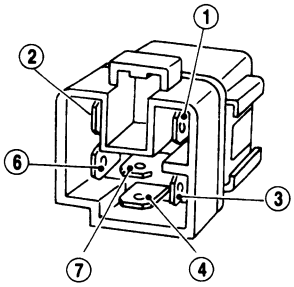
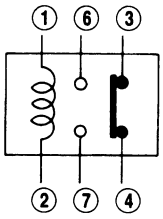
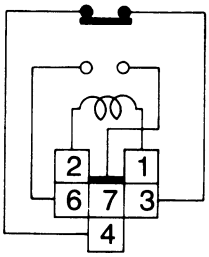
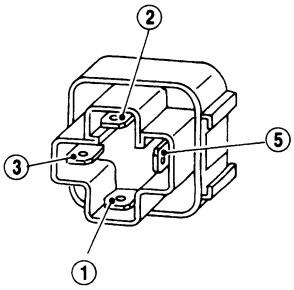
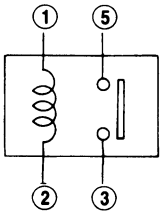
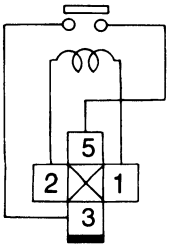
## TYPE OF STANDARDIZED RELAYS

| | | | |
|---|---|---|---|
| 1M | ..... 1 Make | 2M | ..... 2 Make |
| 1T | ..... 1 Transfer | 1M·1B | ..... 1 Make 1 Break |



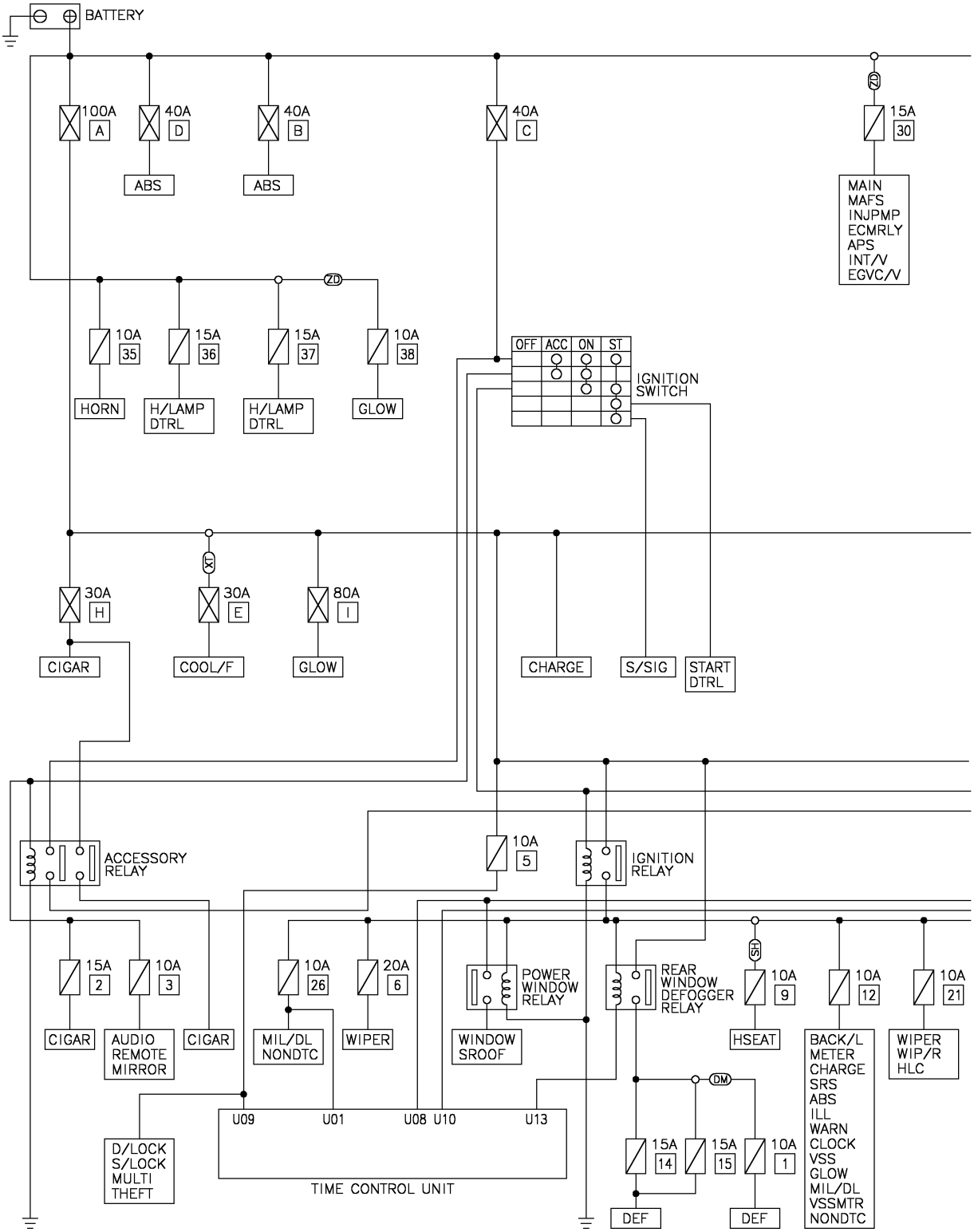

SEL882H

## Description (Cont'd)

| Type | Outer view | Circuit | Connector symbol and connection | Case color |
|---|---|---|---|---|
| 1T |  |  |  | BLACK |
| 1M |  |  |  | BLUE or GREEN |
| 2M |  |  |  | BROWN |
| 1M·1B |  |  |  | GRAY |
| 1M |  |  |  | BLACK |

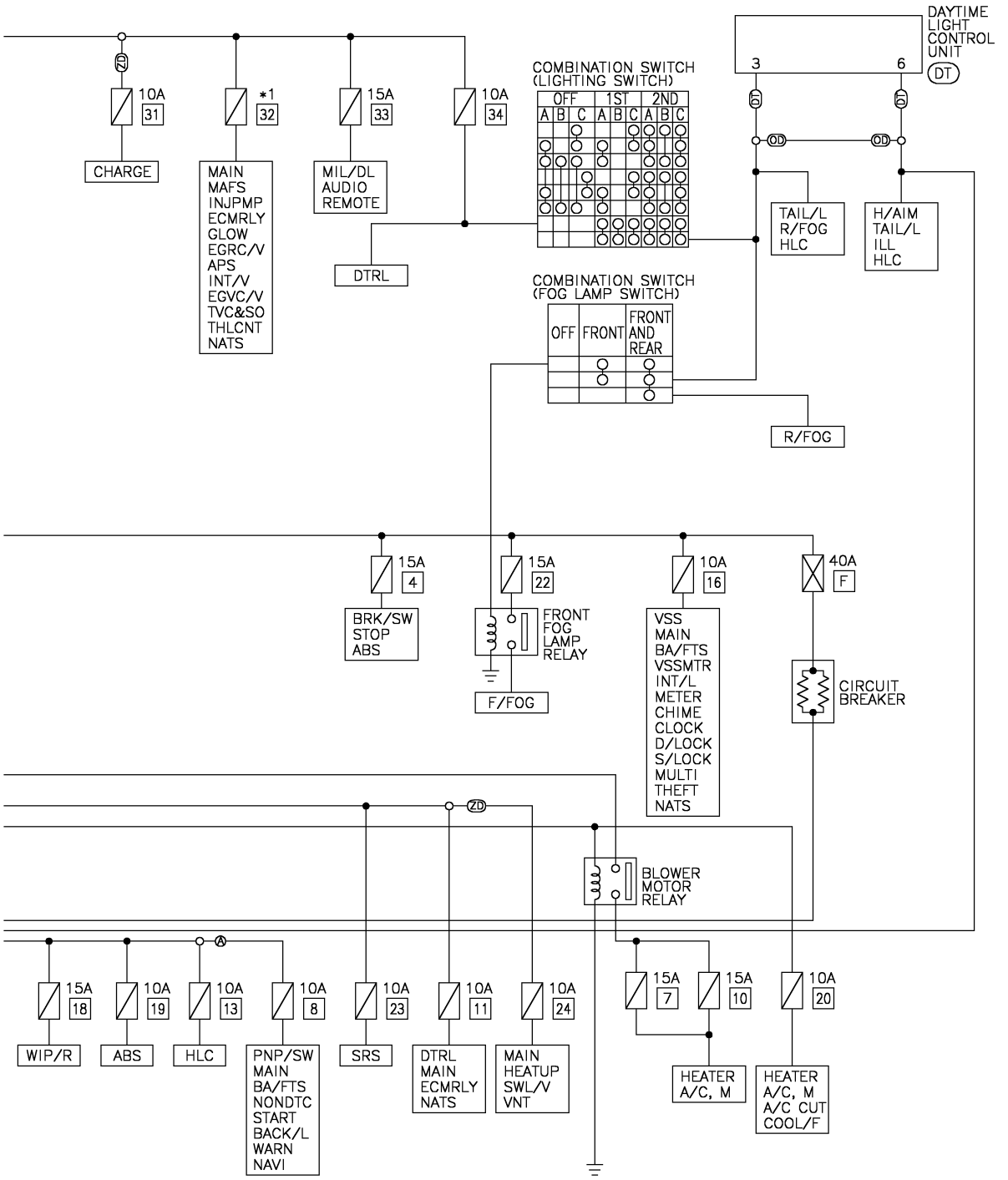
MEL202B

## Schematic



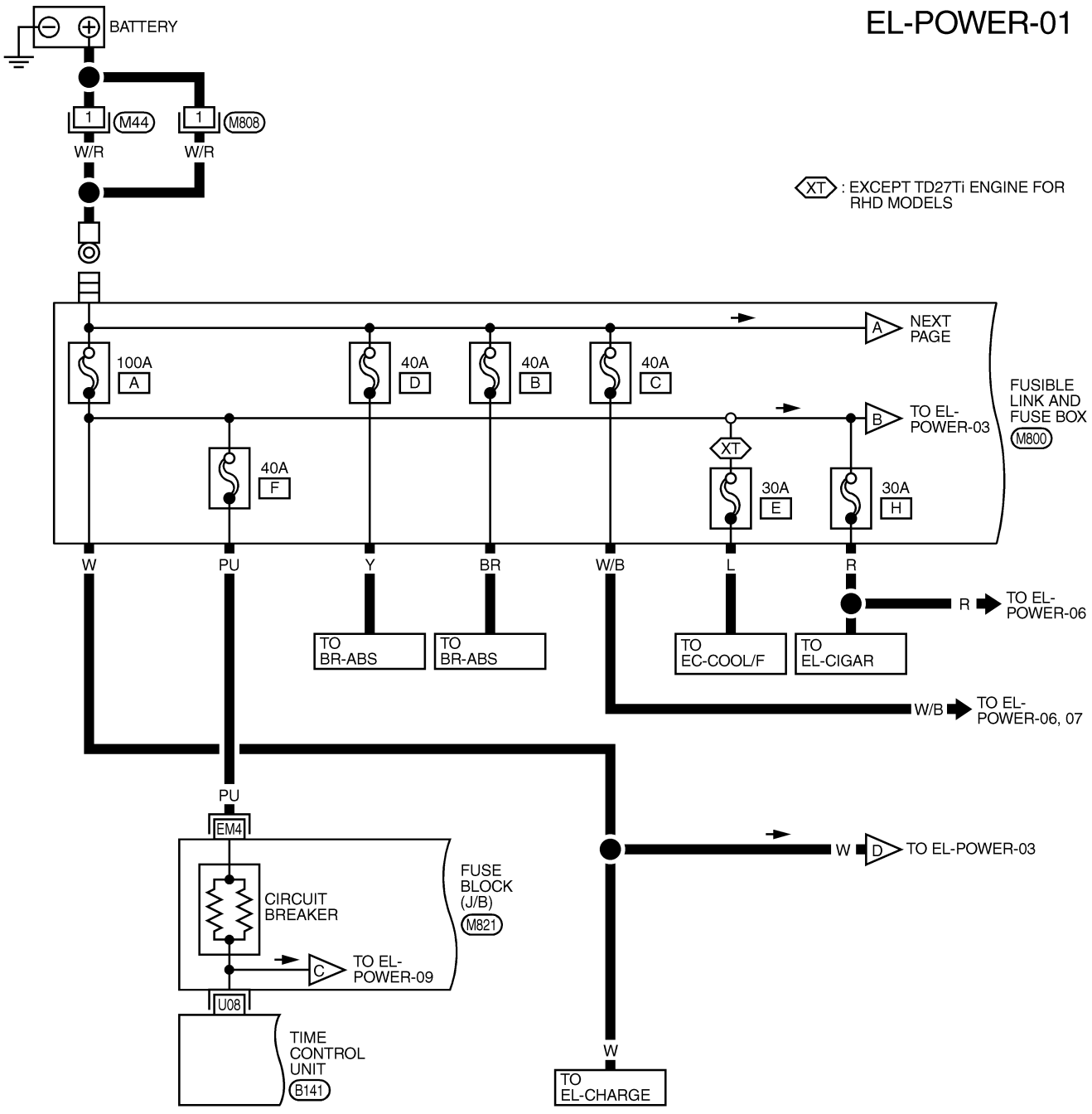

YEL199D

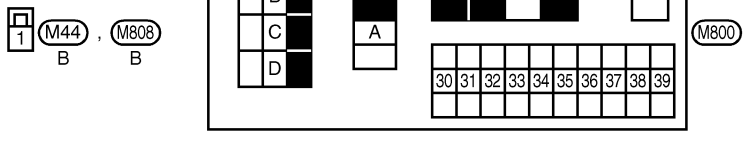
## Schematic (Cont'd)




YEL200D

## Wiring Diagram — POWER —





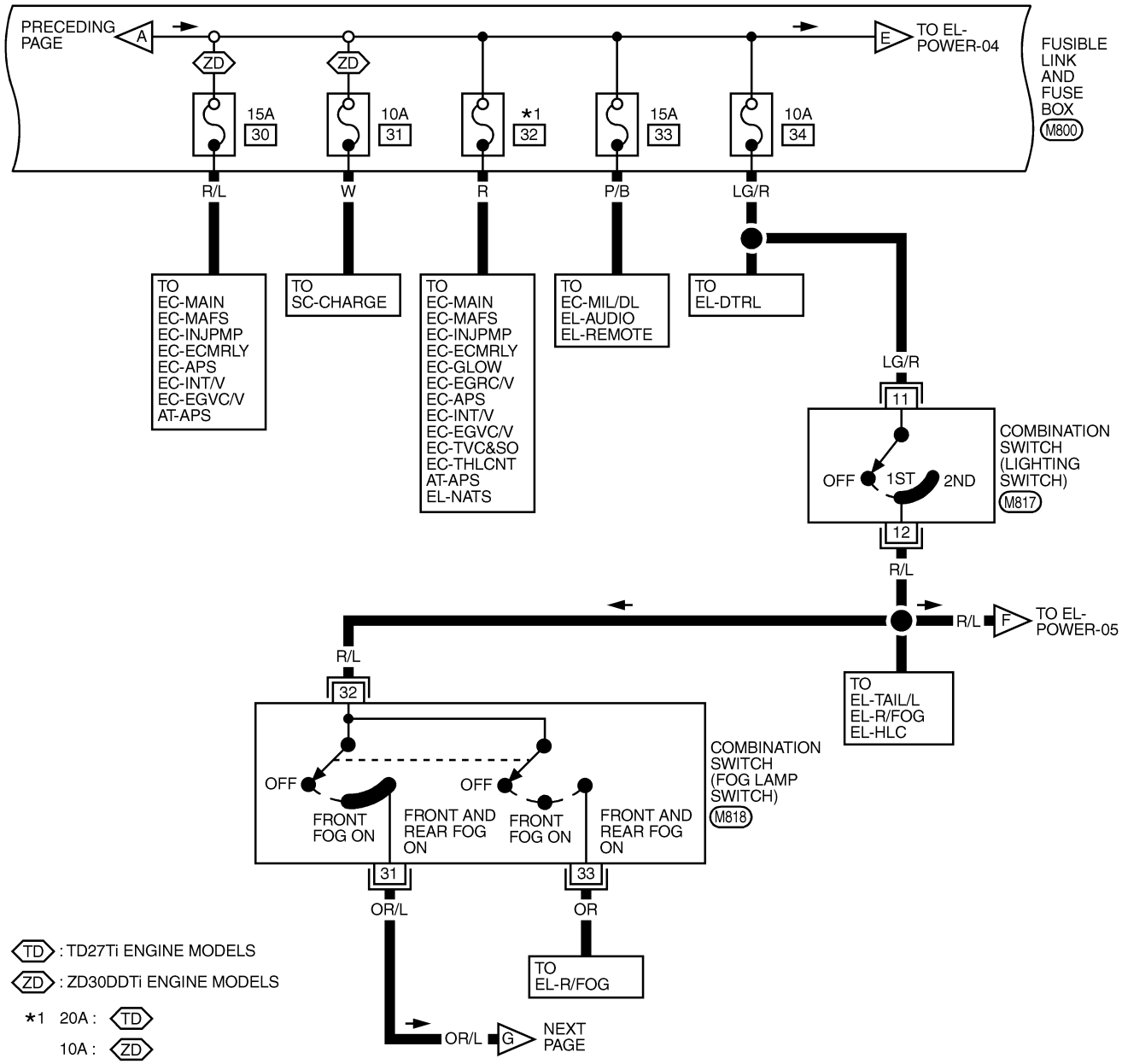
∗ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

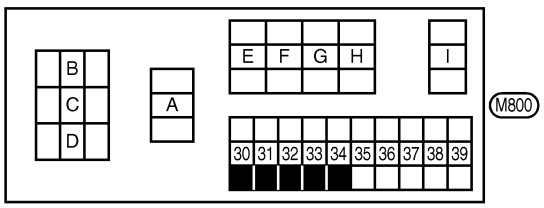
REFER TO THE FOLLOWING.
M821 -FUSE BLOCK- JUNCTION BOX (J/B)

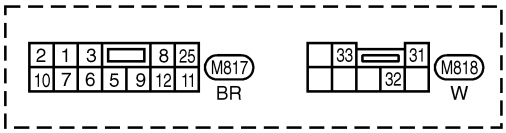
YEL201D

## Wiring Diagram — POWER — (Cont'd)

EL-POWER-02



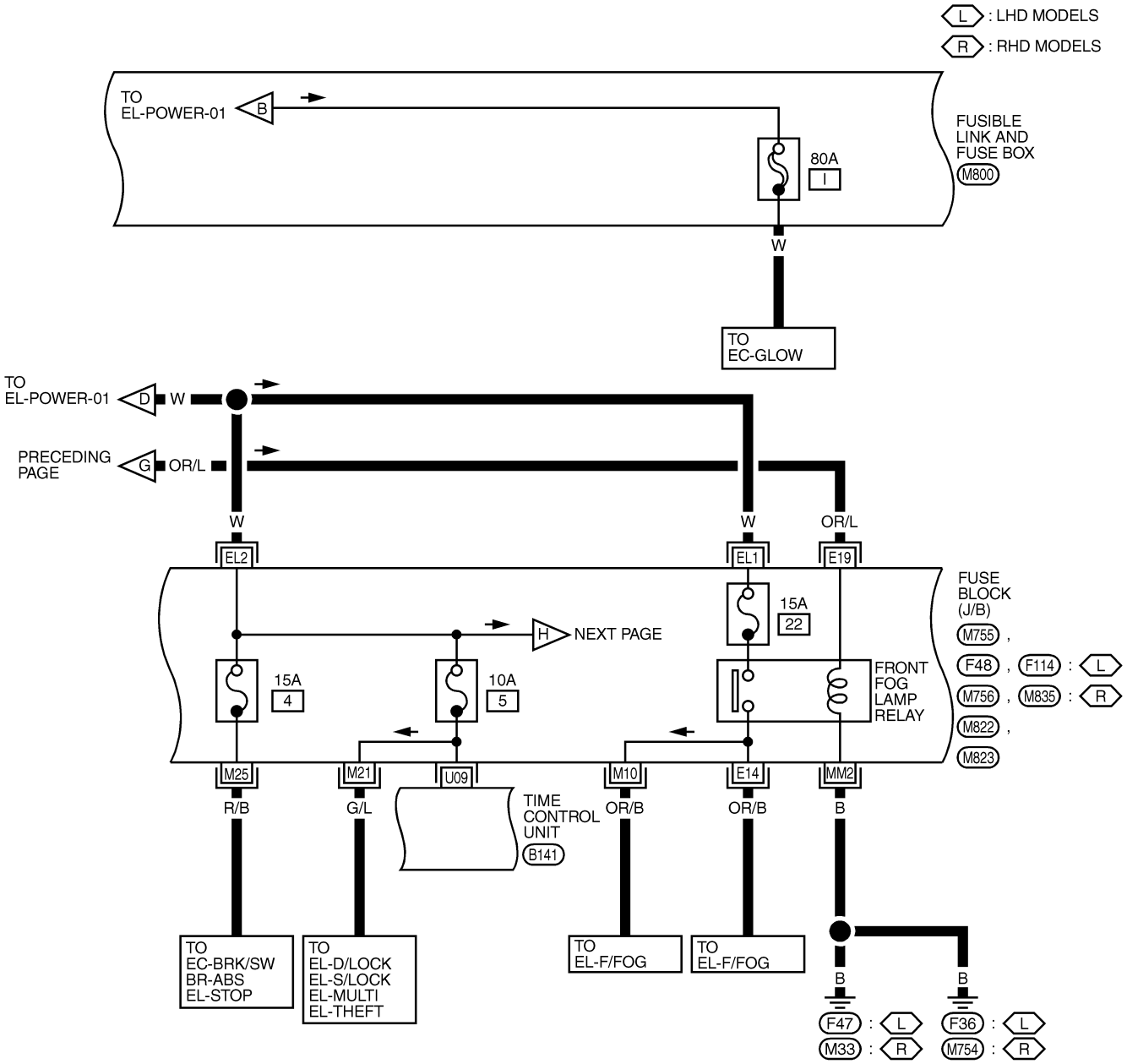



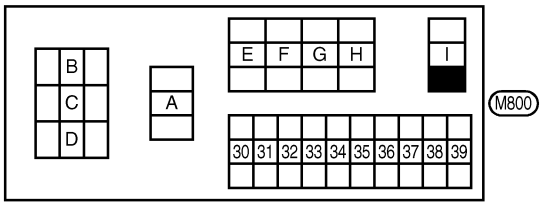




YEL202D

## Wiring Diagram — POWER — (Cont'd)

EL-POWER-03





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

REFER TO THE FOLLOWING.

M755 , M756 , M822 , M823 , M835 , F48 , F114

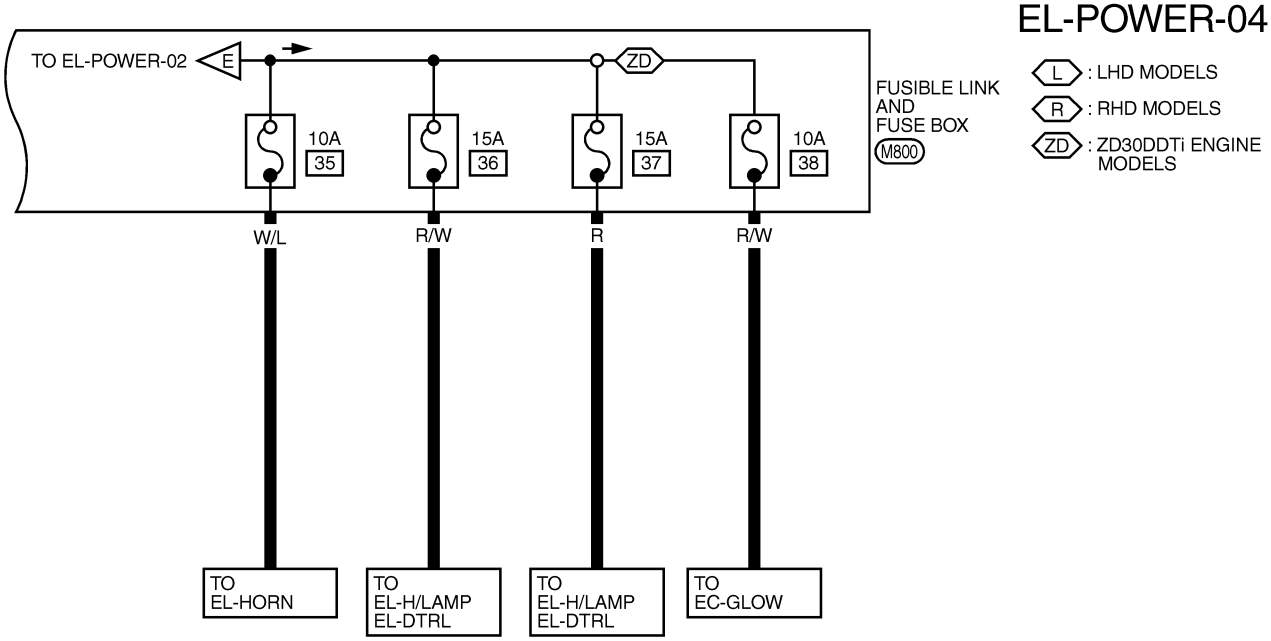
-FUSE BLOCK- JUNCTION BOX (J/B)

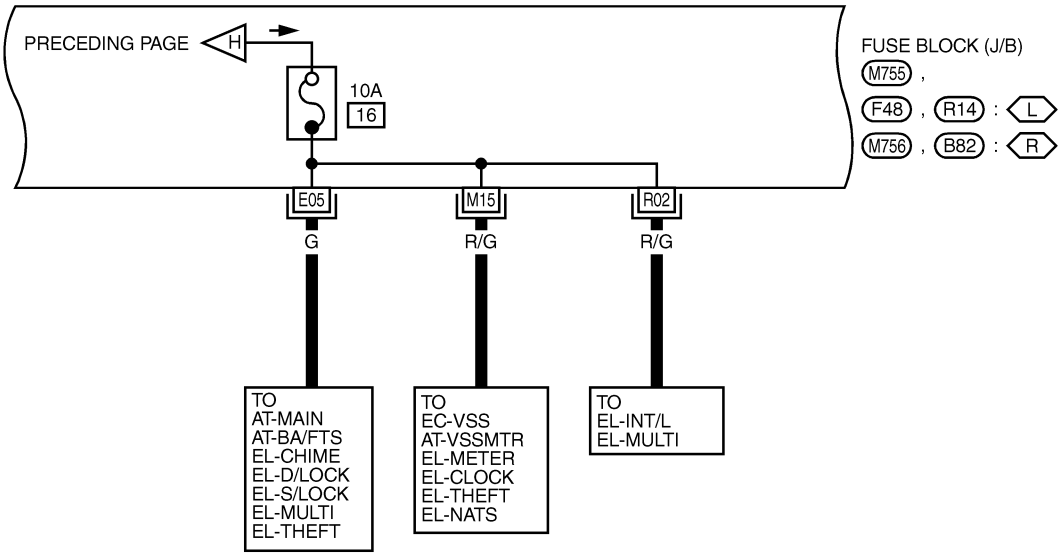
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 26 |

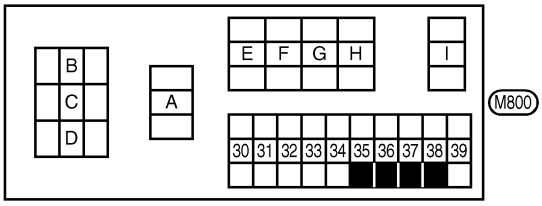
YEL203D

## Wiring Diagram — POWER — (Cont'd)

EL-POWER-04




REFER TO THE FOLLOWING.

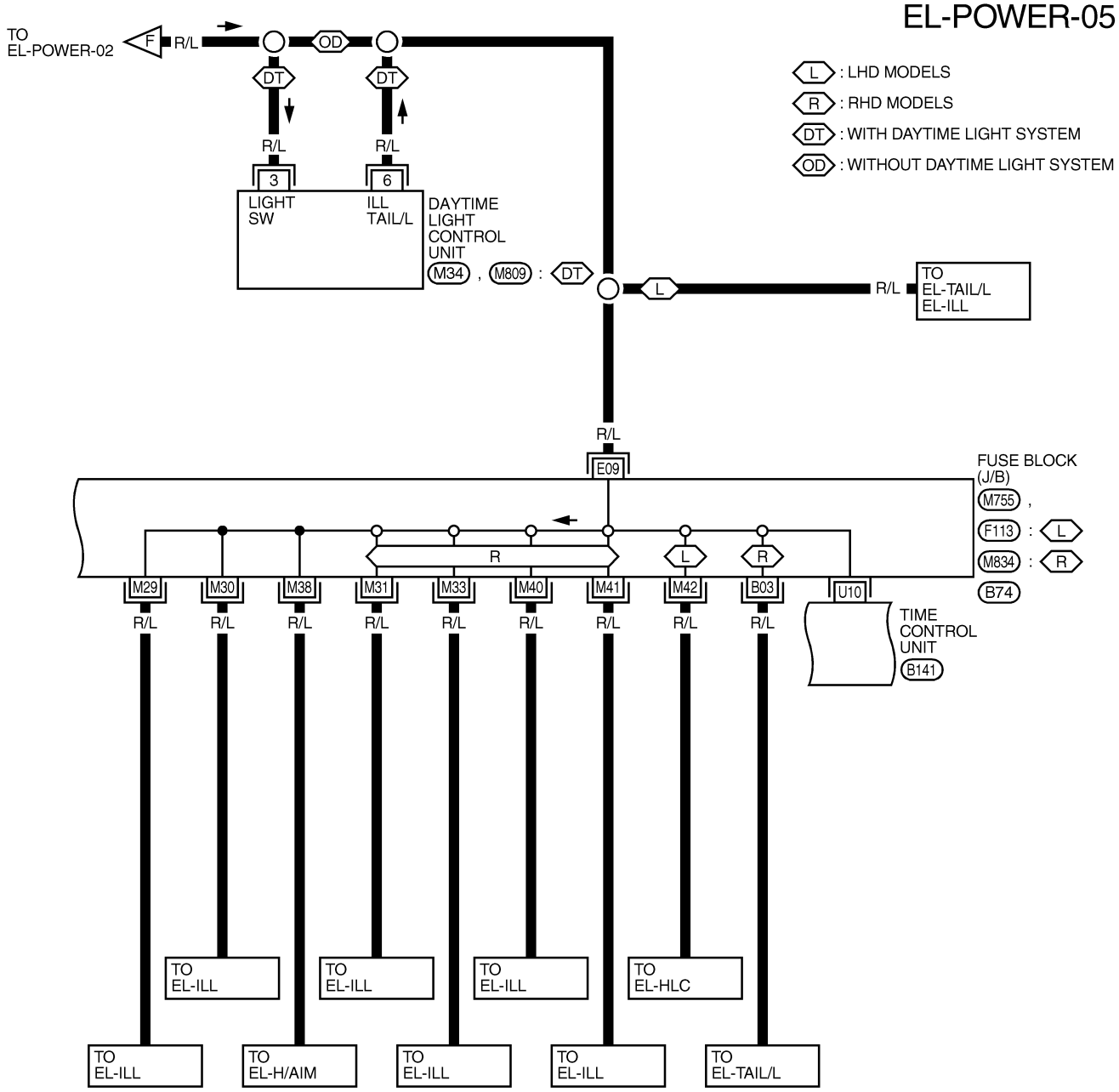
M755 , M756 , F48 , B82 ,
R14 -FUSE BLOCK-
JUNCTION BOX (J/B)

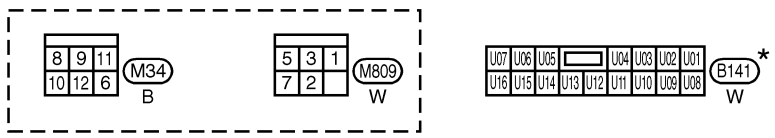
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 26 |

YEL204D

## Wiring Diagram — POWER — (Cont'd)

EL-POWER-05



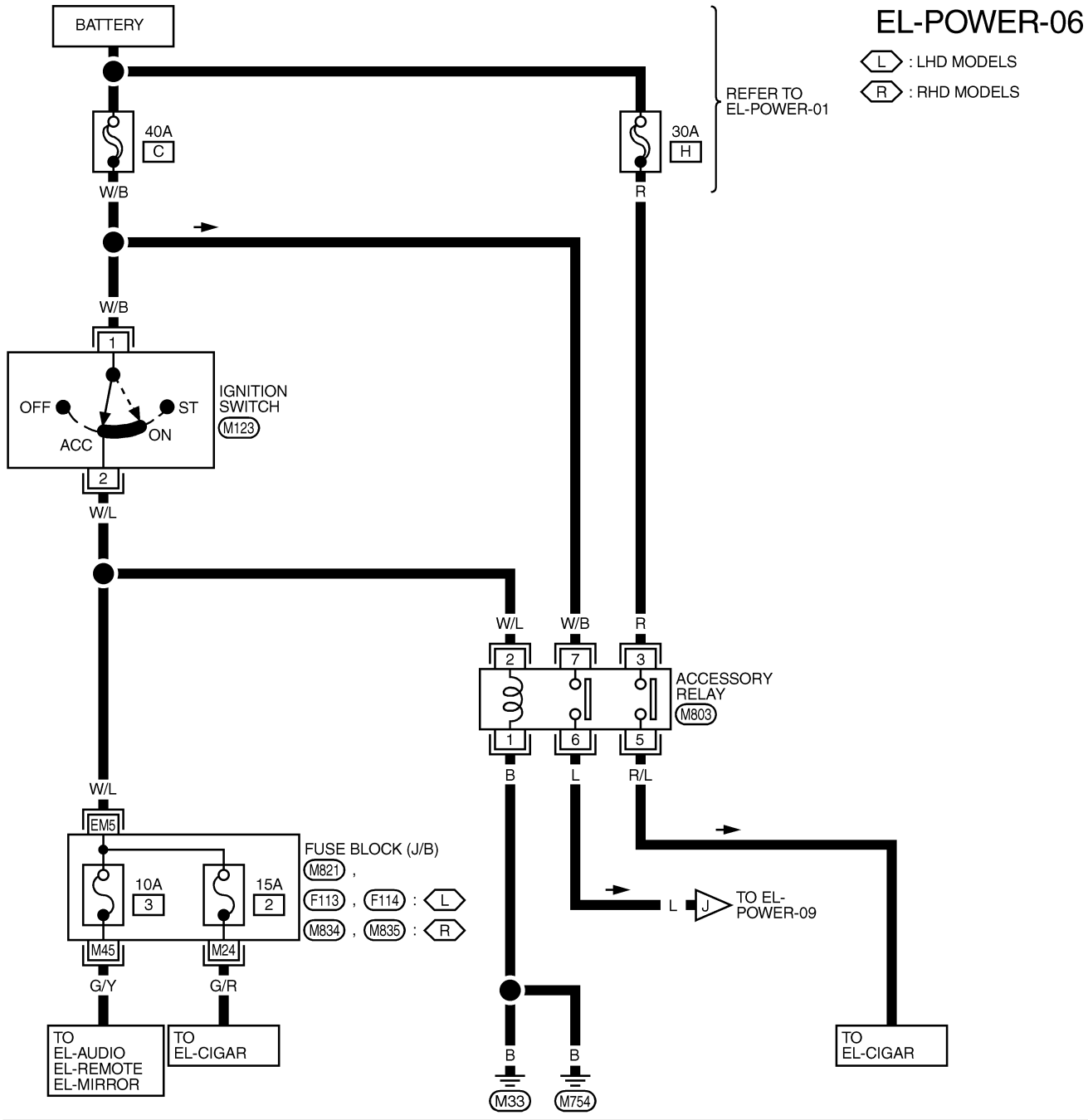



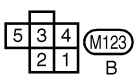

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

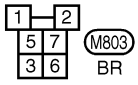
REFER TO THE FOLLOWING.
M755 , M834 , F113 , B74
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL205D

## Wiring Diagram — POWER — (Cont'd)



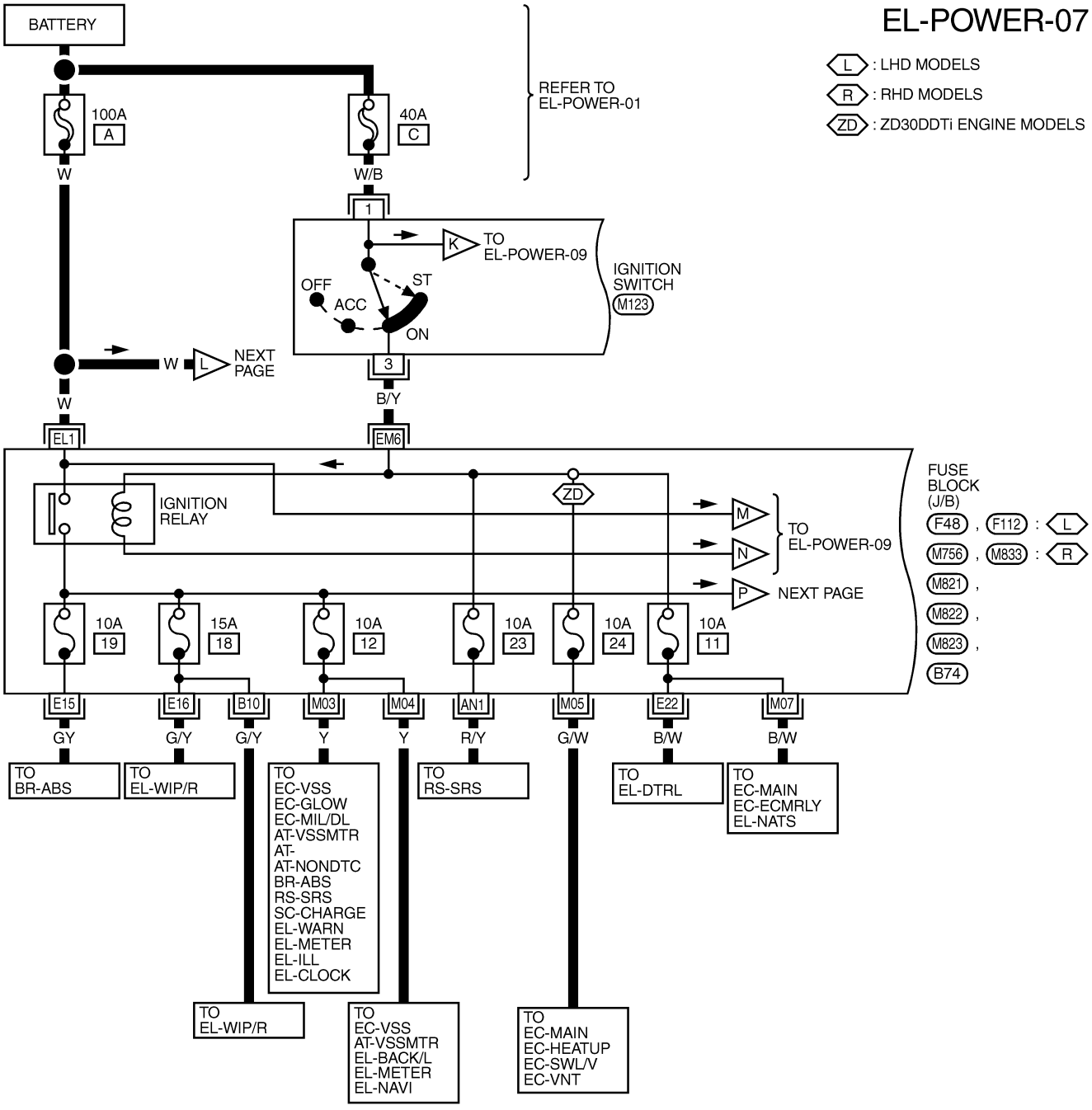

REFER TO THE FOLLOWING.

M821, M834, M835, F113, F114 -FUSE BLOCK- JUNCTION BOX (J/B)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 26 |

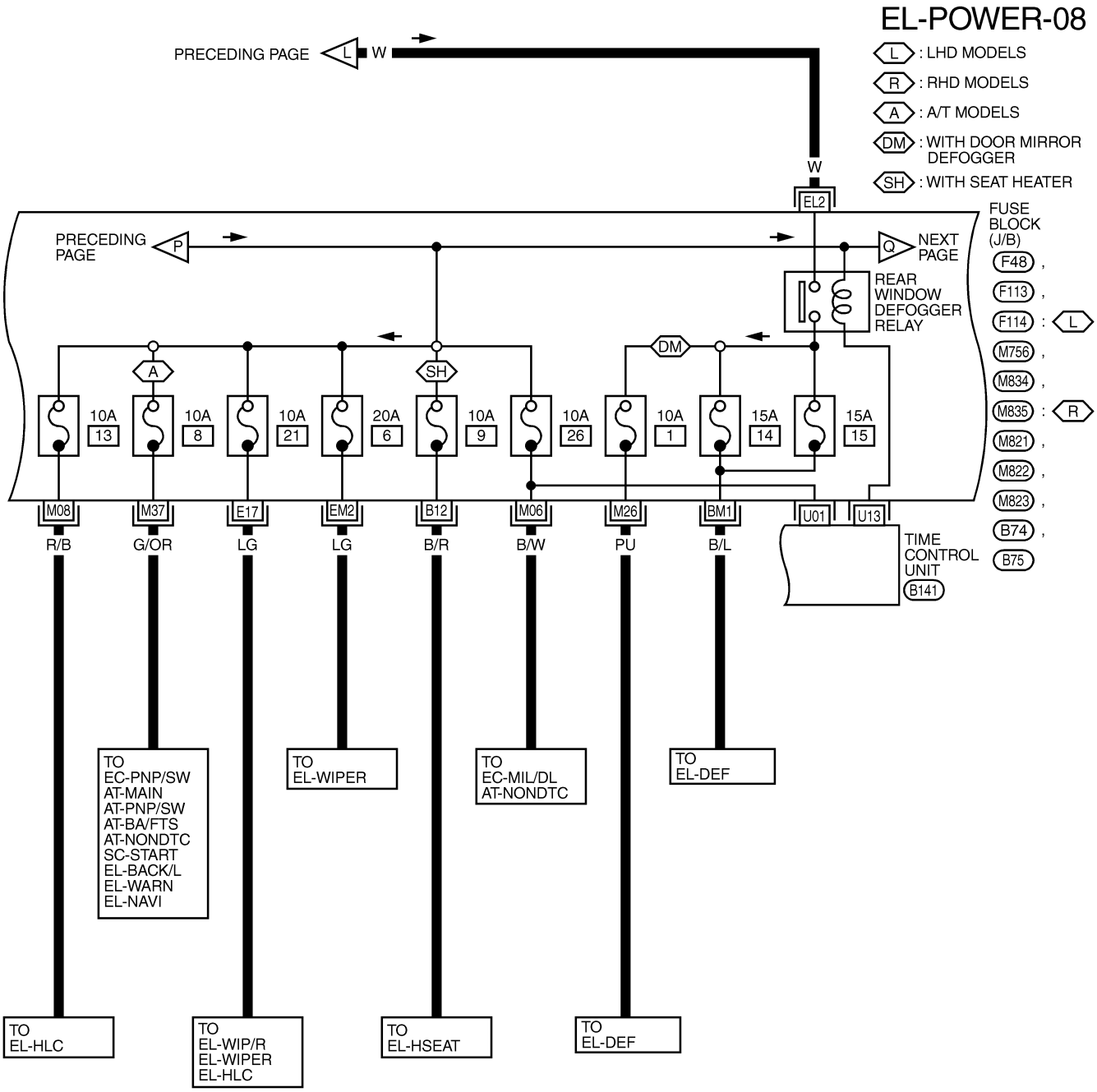
YEL206D

## Wiring Diagram — POWER — (Cont'd)




YEL207D

## Wiring Diagram — POWER — (Cont'd)





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

REFER TO THE FOLLOWING.

M756 , M821 , M822 , M823 , M834 , M835 , F48 , F113 , F114 , B74 , B75

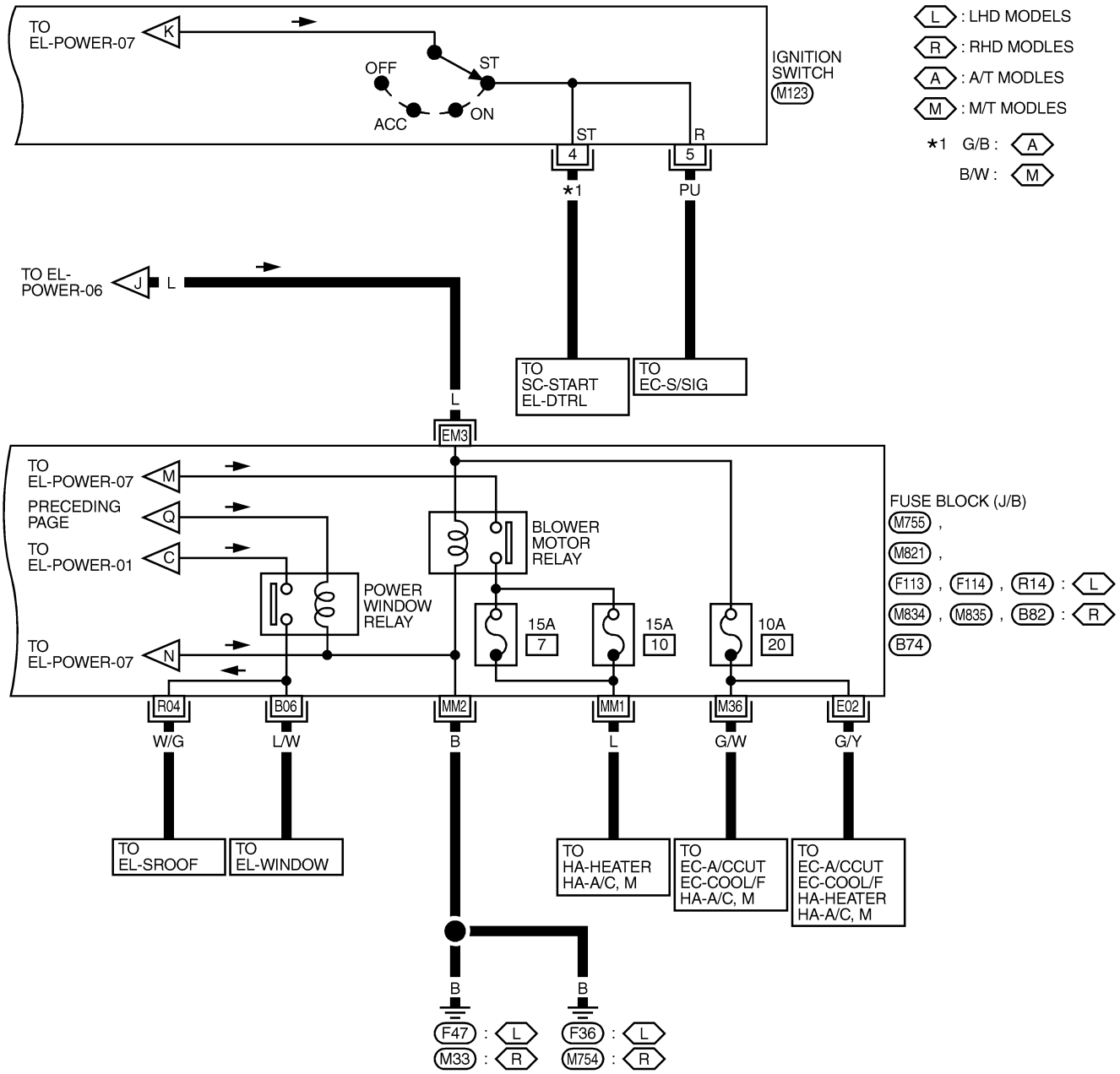
-FUSE BLOCK- JUNCTION BOX ( J/B)

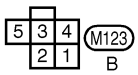
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 26 |

YEL208D

## Wiring Diagram — POWER — (Cont'd)

EL-POWER-09



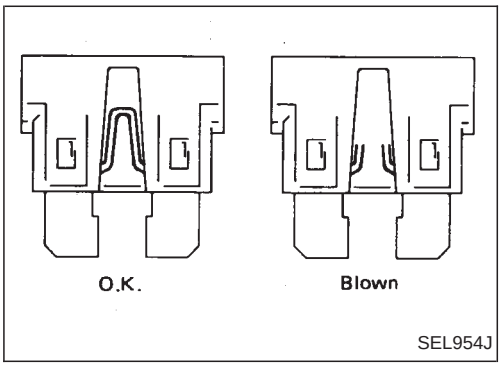




REFER TO THE FOLLOWING.

M755 , M821 , M834 , M835 ,
F113 , F114 , B74 , B82 ,
R14 -FUSE BLOCK- JUNCTION BOX (J/B)

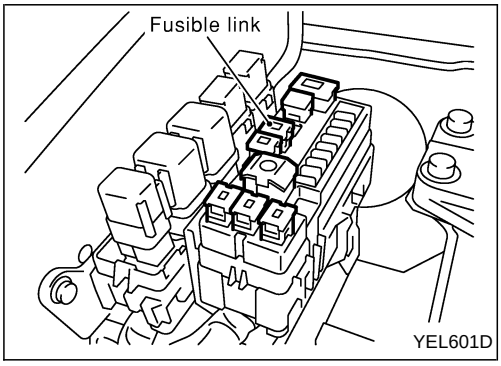
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 26 |

YEL209D




## Fuse

a. If fuse is blown, be sure to eliminate cause of problem before installing new fuse.
b. Use fuse of specified rating. Never use fuse of more than specified rating.
c. Do not install fuse in oblique direction; always insert it into fuse holder properly.
d. Remove fuse for clock if vehicle is not used for a long period of time.

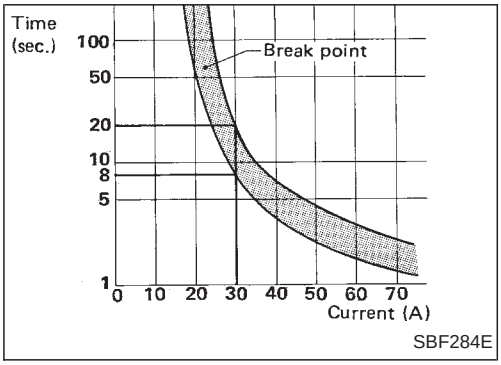



## Fusible Link

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

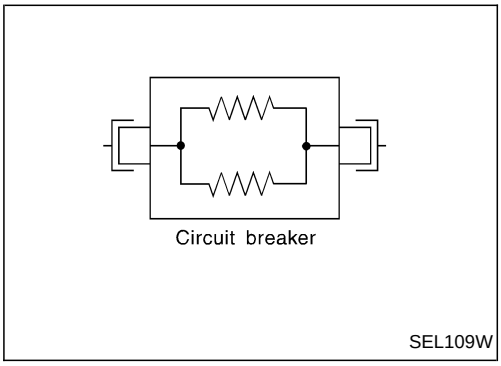
**CAUTION:**

- **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 periphery of fusible link with vinyl tape. Extreme care should be taken with this link to ensure that it does not come into contact with any other wiring harness or vinyl or rubber parts.**




## Circuit Breaker Inspection

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




### CIRCUIT BREAKER (PTC THERMISTOR TYPE)

The PTC thermistor generates heat in response to current flow. The temperature (and resistance) of the thermistor 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.

## EFC HARNESS LHD MODELS

| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| F129/F128 | 4WD SWITCH (TD27Ti) | E150 | EL-WARN |
| | BRAKE SWITCH | F101 | EC-BRK/SW |
| | DATA LINK CONNECTOR | F115 | EC-MIL/DL |
| | ECM | F134 | EC-MAIN, EC-VSS, EC-BRK/SW, EC-MIL/DL |
| | NATS IMMU (TD27Ti) | F58 | EL-NATS |
| | VEHICLE SPEED SENSOR | E140 | EC-VSS, EL-METER |
| F47/F36 | AIR BAG DIAGNOSIS SENSOR UNIT | B106 | RS-SRS |
| | BRAKE FLUID LEVEL SWITCH | F3 | EL-WARN |
| | COMBINATION METER | F118 | EC-VSS, AT-VSSMTR, EL-H/LAMP, EL-DTRL, EL-F/FOG, EL-R/FOG, EL-ILL, EL-TURN, EL-METER, EL-WARN, EL-CLOCK, BR-ABS, RS-SRS |
| | COOLING FAN MOTOR | F40 | EC-COOL/F |
| | DATA LINK CONNECTOR | F115 | EC-MIL/DL, AT-NONDTC |
| | FRONT FOG LAMP LH | F44 | EL-F/FOG |
| | FRONT TURN SIGNAL LAMP LH | F37 | EL-TURN, EL-THEFT |
| | FUSE BLOCK (J/B) | F114 | EL-F/FOG, EL-INT/L, EL-TURN, EL-CHIME, EL-DEF, EL-SROOF, EL-WINDOW, EL-D/LOCK, EL-S/LOCK, EL-MULTI, EL-THEFT, HA-A/C, M, HA-HEATER |
| | HAZARD SWITCH (TYPE 1) | F140 | EL-TURN |
| | HAZARD SWITCH (TYPE 2) | F152 | EL-TURN |
| | HEADLAMP AIMING MOTOR LH | F43 | EL-H/AIM |
| | HEADLAMP CLEANER MOTOR | F103 | EL-HLC |
| | HEADLAMP LH | F42 | EL-H/LAMP, EL-DTRL |
| | HEADLAMP RELAY LH | F111 | EL-H/LAMP, EL-DTRL |
| | PARKING LAMP LH | F41 | EL-TAIL/L |
| | SIDE TURN SIGNAL LAMP LH | F104 | EL-TURN, EL-THEFT |
| F53 | AUDIO UNIT (TYPE 1) | F139 | EL-ILL, EL-AUDIO |
| | AUDIO UNIT (TYPE 2) | F153 | EL-ILL, EL-AUDIO, EL-REMOTE |
| | CD AUDIO CHANGER | F155 | EL-AUDIO |
| F2 | ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) | F29 | BR-ABS |

## EFC HARNESS RHD MODELS

| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| F47/F36 | FRONT FOG LAMP LH | F44 | EL-F/FOG |
| | FRONT TURN SIGNAL LAMP LH | F37 | EL-TURN, EL-THEFT |
| | HEADLAMP AIMING MOTOR LH | F43 | EL-H/AIM |
| | HEADLAMP CLEANER MOTOR | F103 | EL-HLC |
| | HEADLAMP LH | F42 | EL-H/LAMP |
| | HEADLAMP RELAY LH | F111 | EL-H/LAMP |
| | PARKING LAMP LH | F41 | EL-TAIL/L |
| | SIDE TURN SIGNAL LAMP LH | F104 | EL-TURN, EL-THEFT |
| F2 | ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) | F29 | BR-ABS |

## MAIN HARNESS LHD MODELS

| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| M754/M33 | A/C CONTROL PANEL (FAN SWITCH) | M770 | EC-A/CCUT, HA-A/C, M, HA-HEATER |
| | A/C CONTROL PANEL | M771 | EL-ILL, EL-DEF, HA-A/C, M, HA-HEATER |
| | A/T MODE SWITCH | M732 | AT-NONDTC |
| | ACCESSORY RELAY | M803 | EL-CIGAR |
| | AMBIENT LIGHT CONSOLE | M769 | EL-ILL |
| | ASHTRAY ILLUMINATION | M137 | EL-ILL |
| | CIGARETTE LIGHTER SOCKET | M141 | EL-CIGAR |
| | COMBINATION SWITCH (TURN SIGNAL SWITCH) | M817 | EL-TURN |
| | COMBINATION SWITCH (WIPER AND WASHER SWITCH) | M816 | EL-WIPER, EL-WIP/R, EL-HLC |
| | COOLING FAN MOTOR | M19 | EC-COOL/F |
| | DAYTIME LIGHT CONTROL UNIT | M34 | EL-DTRL |
| | FRONT FOG LAMP RH | M38 | EL-F/FOG |
| | FRONT WIPER MOTOR | M27 | EL-WIPER |
| | FRONT TURN SIGNAL LAMP RH | M39 | EL-TURN, EL-THEFT |
| | FUEL FILTER SWITCH | M26 | EC-MIL/DL, EL-WARN |
| | GLOVE BOX LAMP SWITCH | M143 | EL-ILL |
| | HEADLAMP AIMING MOTOR RH | M41 | EL-H/AIM |
| | HEADLAMP RELAY RH | M824 | EL-H/LAMP, EL-DTRL |
| | HEADLAMP RH | M42 | EL-H/LAMP, EL-DTRL |
| | HOOD SWITCH | M84 | EL-THEFT |
| | PARK/NEUTRAL POSITION RELAY | M729 | EC-PNP/SW, SC-START |
| | PARKING LAMP RH | M43 | EL-TAIL/L |
| | REAR FOG LAMP RELAY | M820 | EL-R/FOG |
| | SIDE TURN SIGNAL LAMP RH | M801 | EL-TURN, EL-THEFT |

## MAIN HARNESS RHD MODELS

| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| M846/M845 | 4WD SWITCH (TD27Ti) | E150 | EL-WARN |
| | BRAKE SWITCH | M750 | EC-BRK/SW |
| | DATA LINK CONNECTOR | M832 | EC-MIL/DL |
| | DONGLE CONTROL UNIT (TD27Ti) | M720 | EL-AUDIO, EL-NATS |
| | ECM | M852 | EC-MAIN, EC-VSS, EC-BRK/SW, EC-MIL/DL |
| | NATS IMMU (TD27Ti) | M831 | EL-NATS |
| | VEHICLE SPEED SENSOR | E140 | EC-VSS, EL-METER |
| M754/M33 | A/C CONTROL PANEL (FAN SWITCH) | M770 | EC-A/CCUT, HA-A/C, M, HA-HEATER |
| | A/C CONTROL PANEL | M771 | EL-ILL, EL-DEF, HA-A/C, M, HA-HEATER |
| | A/T MODE SWITCH | M732 | AT-NONDTC |
| | ACCESSORY RELAY | M803 | EL-CIGAR |
| | AIR BAG DIAGNOSIS SENSOR UNIT | B106 | RS-SRS |
| | AMBIENT LIGHT CONSOLE | M769 | EL-ILL |
| | ASHTRAY ILLUMINATION | M137 | EL-ILL |
| | BRAKE FLUID LEVEL SWITCH | M507 | EL-WARN |
| | CIGARETTE LIGHTER SOCKET | M141 | EL-CIGAR |
| | COMBINATION METER | M837 | EC-VSS, AT-VSSMTR, EL-H/LAMP, EL-F/FOG, EL-R/FOG, EL-ILL, EL-TURN, EL-METER, EL-WARN, EL-CLOCK, BR-ABS, RS-SRS |
| | COMBINATION SWITCH (TURN SIGNAL SWITCH) | M817 | EL-TURN |
| | COMBINATION SWITCH (WIPER AND WASHER SWITCH) | M816 | EL-WIPER, EL-WIP/R, EL-HLC |
| | COOLING FAN MOTOR | M19 | EC-COOL/F |
| | DATA LINK CONNECTOR | M832 | EC-MIL/DL, AT-NONDTC |
| | FRONT FOG LAMP RH | M38 | EL-F/FOG |
| | FRONT TURN SIGNAL LAMP RH | M39 | EL-TURN, EL-THEFT |
| | FRONT WIPER MOTOR | M502 | EL-WIPER |
| | FUSE BLOCK (J/B) | M835 | EL-F/FOG, EL-INT/L, EL-TURN, EL-CHIME, EL-DEF, EL-SROOF, EL-WINDOW, EL-S/LOCK, EL-MULTI, EL-THEFT, HA-A/C, M, HA-A/C, M, HA-HEATER |
| | GLOVE BOX LAMP SWITCH | M143 | EL-ILL |
| | HAZARD SWITCH (TYPE 1) | M855 | EL-TURN |
| | HAZARD SWITCH (TYPE 2) | M873 | EL-TURN |
| | HEADLAMP AIMING MOTOR RH | M41 | EL-H/AIM |
| | HEADLAMP RELAY RH | M824 | EL-H/LAMP |
| | HEADLAMP RH | M42 | EL-H/LAMP |
| | HOOD SWITCH | M84 | EL-THEFT |
| | PARK/NEUTRAL POSITION RELAY | M729 | EC-PNP/SW, SC-START |
| | PARKING LAMP RH | M43 | EL-TAIL/L |
| | REAR FOG LAMP RELAY | M820 | EL-R/FOG |
| | SIDE TURN SIGNAL LAMP RH | M801 | EL-TURN, EL-THEFT |
| | ULTRASONIC CANCEL SWITCH | M117 | EL-THEFT |
| M761 | AUDIO UNIT (TYPE 1) | M854 | EL-ILL, EL-AUDIO |
| | AUDIO UNIT (TYPE 2) | M874 | EL-ILL, EL-AUDIO, EL-REMOTE |
| | CD AUTO CHANGER | M876 | EL-AUDIO |

## ENGINE ROOM HARNESS LHD MODELS

| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| E222/E224 | 4WD SWITCH (ZD30DDTi) | E212 | EL-WARN |
| | ACCELERATOR SWITCH | F94 | EC-AAC/SW |
| | DATA LINK CONNECTOR | F115 | EC-MIL/DL |
| | ECM | F123 | EC-MAIN, EC-MAFS, EC-VSS, EC-APS, EC-CKPS, EC-MIL/DL |
| | ELECTRONIC CONTROL FUEL INJECTION | E232 | EC-INJPMP |
| | HEAT UP SWITCH | F116 | EC-HEATUP |
| | MASS AIR FLOW SENSOR | F91 | EC-MAFS |
| | NATS IMMU (ZD30DDTi) | F58 | EL-NATS |
| | PARK/NEUTRAL POSITION SWITCH | E213 | EC-PNP/SW |
| | SHIELD WIRE (ACCELERATOR POSITION SENSOR) | F96 | EC-APS, AT-TPS |
| | SHIELD WIRE (CHARGE AIR PRESSURE SENSOR) | E223 | EC-BOOST |
| | SHIELD WIRE [CRANKSHAFT POSITION SENSOR (TDC)] | E229 | EC-CKPS |
| | TCM (TRANSMISSION CONTROL MODULE) | M814 | AT-MAIN |
| | TRANSFER NEUTRAL POSITION SWITCH | E213 | EL-WARN |
| | VEHICLE SPEED SENSOR | E209 | EC-VSS, AT-VSSMTR, EL-METER |
| E154 | ALTERNATOR (TD27Ti) | E153 | SC-CHARGE |
| E203/E221 | ALTERNATOR (ZD30DDTi) | E214 | SC-CHARGE |

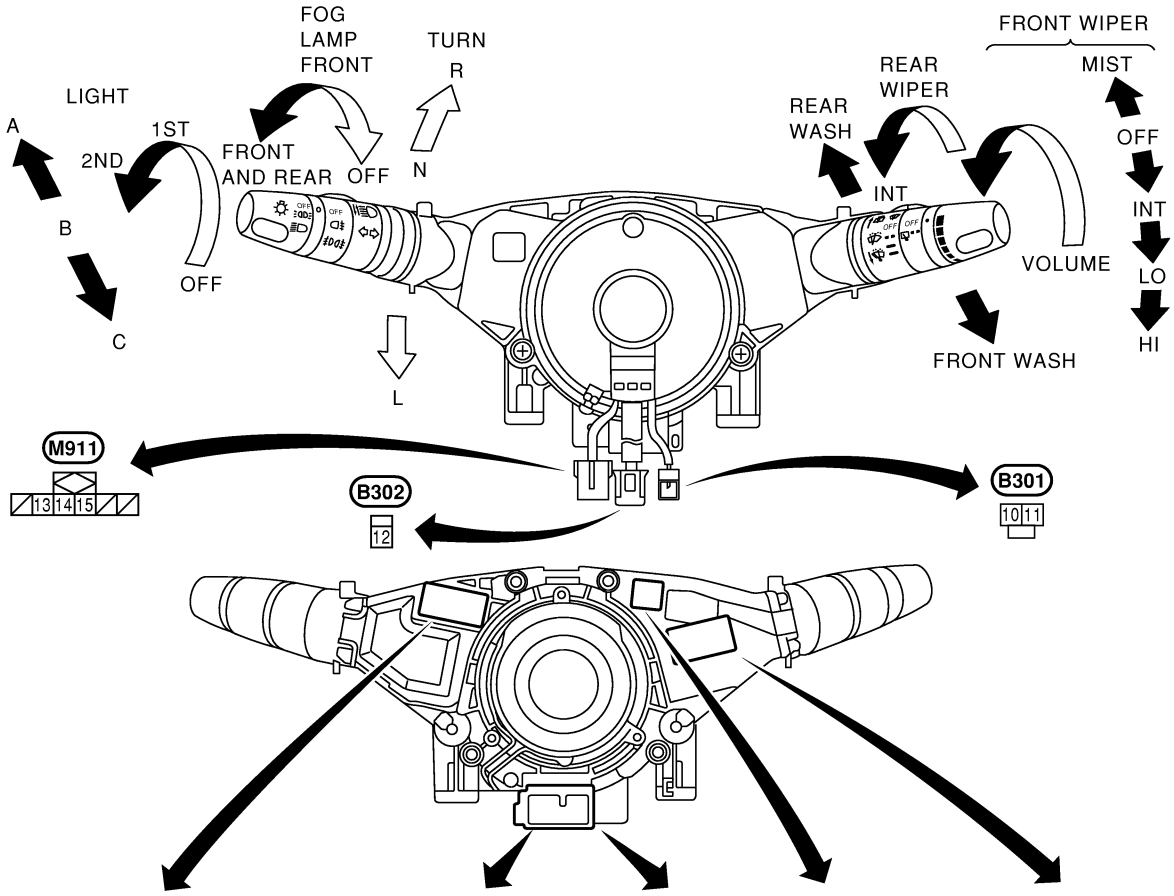
## ENGINE ROOM HARNESS RHD MODELS

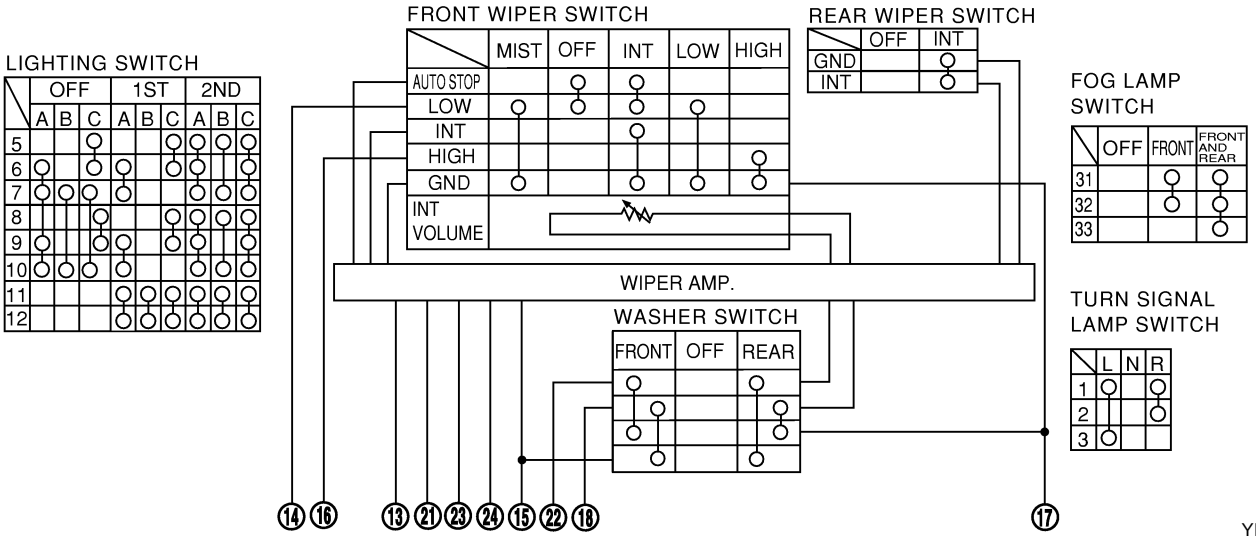
| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| E222/E224 | 4WD SWITCH (ZD30DDTi) | E212 | EL-WARN |
| | ACCELERATOR SWITCH | M193 | EC-AAC/SW |
| | DATA LINK CONNECTOR | M832 | EC-MIL/DL |
| | DONGLE CONTROL UNIT (ZD30DDTi) | M720 | EL-AUDIO, EL-NATS |
| | ECM | M841 | EC-MAIN, EC-MAFS, EC-VSS, EC-APS, EC-CKPS, EC-MIL/DL |
| | ELECTRONIC CONTROL FUEL INJECTION PUMP | E232 | EC-INJPMP |
| | MASS AIR FLOW SENSOR | F91 | EC-MAFS |
| | NATS IMMU (ZD30DDTi) | M831 | EL-NATS |
| | PARK/NEUTRAL POSITION SWITCH | E213 | EC-PNP/SW |
| | SHIELD WIRE (ACCELERATOR POSITION SENSOR) | M191 | EC-APS, AT-TPS |
| | SHIELD WIRE (CHARGE AIR PRESSURE SENSOR) | E223 | EC-BOOST |
| | SHIELD WIRE [CRANKSHAFT POSITION SENSOR (TDC)] | E229 | EC-CKPS |
| | TCM (TRANSMISSION CONTROL MODULE) | M814 | AT-MAIN |
| | TRANSFER NEUTRAL POSITION SWITCH | E213 | EL-WARN |
| | VEHICLE SPEED SENSOR | E209 | EC-VSS, AT-VSSMTR, EL-METER |
| E154 | ALTERNATOR (TD27Ti) | E153 | SC-CHARGE |
| E203/E221 | ALTERNATOR (ZD30DDTi) | E214 | SC-CHARGE |

## BODY HARNESS

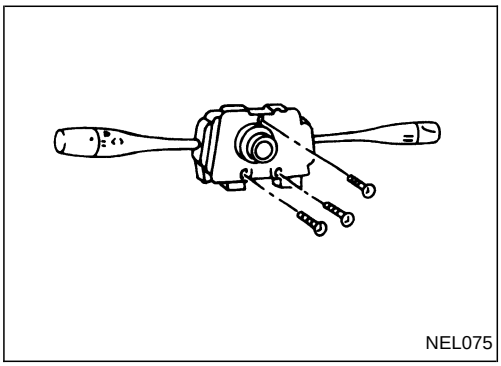
| GROUND | CONNECT TO | CONN. NO. | CELL CODE |
|---|---|---|---|
| B10/B18 | A/T CONTROL DEVICE | B63 | AT-NONDTC, EL-ILL |
| | DOOR MIRROR SWITCH | B78 | EL-MIRROR |
| | DOOR MIRROR LH | D39 | EL-DEF |
| | DOOR MIRROR RH | D68 | EL-DEF |
| | FRONT DOOR LOCK ACTUATOR LH | D42 | EL-D/LOCK, EL-THEFT |
| | FRONT DOOR LOCK ACTUATOR LH | D36 | EL-S/LOCK, EL-MULTI, EL-THEFT |
| | FRONT DOOR LOCK ACTUATOR RH | D80 | EL-D/LOCK, EL-THEFT |
| | FRONT DOOR LOCK ACTUATOR RH | D41 | EL-S/LOCK, EL-MULTI, EL-THEFT |
| | FRONT POWER SOCKET | B65 | EL-CIGER |
| | FRONT SIDE AIR BAG MODULE LH | B99 | RS-SRS |
| | FRONT SIDE AIR BAG MODULE RH | B107 | RS-SRS |
| | FUEL LEVEL SENSOR UNIT (TD27Ti) | C9 | EL-METER, EL-WARN |
| | FUEL LEVEL SENSOR UNIT (ZD30DDTi) | C11 | EL-METER, EL-WARN |
| | HEATED SEAT LH | B17 | EL-HSEAT |
| | HEATED SEAT RH | B24 | EL-HSEAT |
| | HEATED SEAT SWITCH LH | B19 | EL-HSEAT |
| | HEATED SEAT SWITCH RH | B22 | EL-HSEAT |
| | HIGH-MOUNTED STOP LAMP | T8 | EL-STOP/L |
| | KEY CYLINDER SWITCH LH | D8 | EL-S/LOCK, EL-THEFT |
| | KEY CYLINDER SWITCH RH | D61 | EL-S/LOCK, EL-THEFT |
| | LICENSE PLATE LAMP LH | C5 | EL-TAIL/L |
| | LICENSE PLATE LAMP RH | C6 | EL-TAIL/L |
| | POWER SOCKET RELAY | B92 | EL-CIGER |
| | POWER WINDOW MAIN SWITCH (LHD MODELS) | D40 | EL-WINDOW, EL-D/LOCK, EL-S/LOCK, EL-MULTI, EL-THEFT |
| | POWER WINDOW MAIN SWITCH (RHD MODELS) | D69 | EL-WINDOW, EL-S/LOCK, EL-MULTI, EL-THEFT |
| | REAR COMBINATION LAMP LH | C4 | EL-TAIL/L, EL-BACK/L, EL-R/FOG, EL-TURN, EL-THEFT |
| | REAR COMBINATION LAMP RH | C7 | EL-TAIL/L, EL-BACK/L, EL-R/FOG, EL-TURN, EL-THEFT |
| | REAR DOOR LOCK ACTUATOR LH | D56 | EL-S/LOCK, EL-MULTI, EL-THEFT |
| | REAR DOOR LOCK ACTUATOR RH | D76 | EL-S/LOCK, EL-MULTI, EL-THEFT |
| | REAR POWER SOCKET | B66 | EL-CIGER |
| | REAR WINDOW DEFOGGER | T6 | EL-DEF |
| | REAR WIPER MOTOR | T4 | EL-WIP/R |
| | STOP LAMP LH | B14 | EL-STOP/L |
| | STOP LAMP RH | B30 | EL-STOP/L |
| | THEFT WARNING HORN | B112 | EL-THEFT |
| | ULTRASONIC CANCEL SWITCH | B77 | EL-THEFT |
| B96 | SHIELD WIRE (AIR BAG DIAGNOSIS SENSOR UNIT) | B100 | RS-SRS |
| B109 | SHIELD WIRE (AIR BAG DIAGNOSIS SENSOR UNIT) | B105 | RS-SRS |

## Check




YEL278D


NEL075

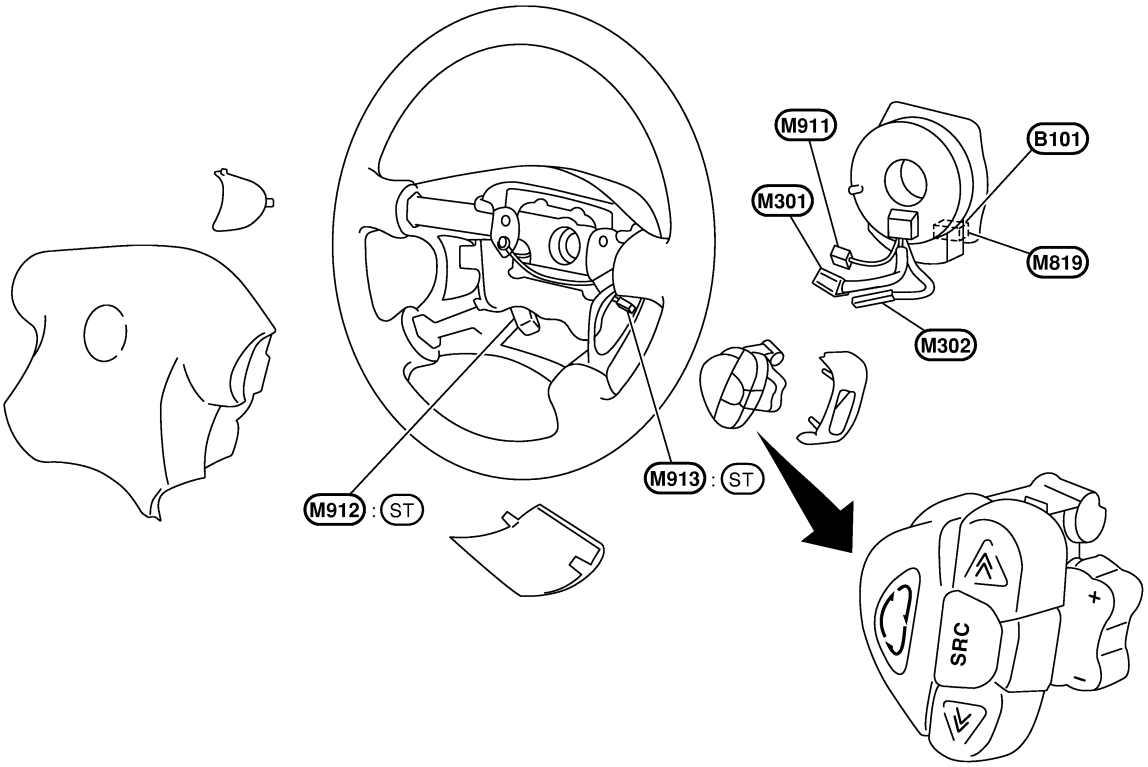
## Replacement

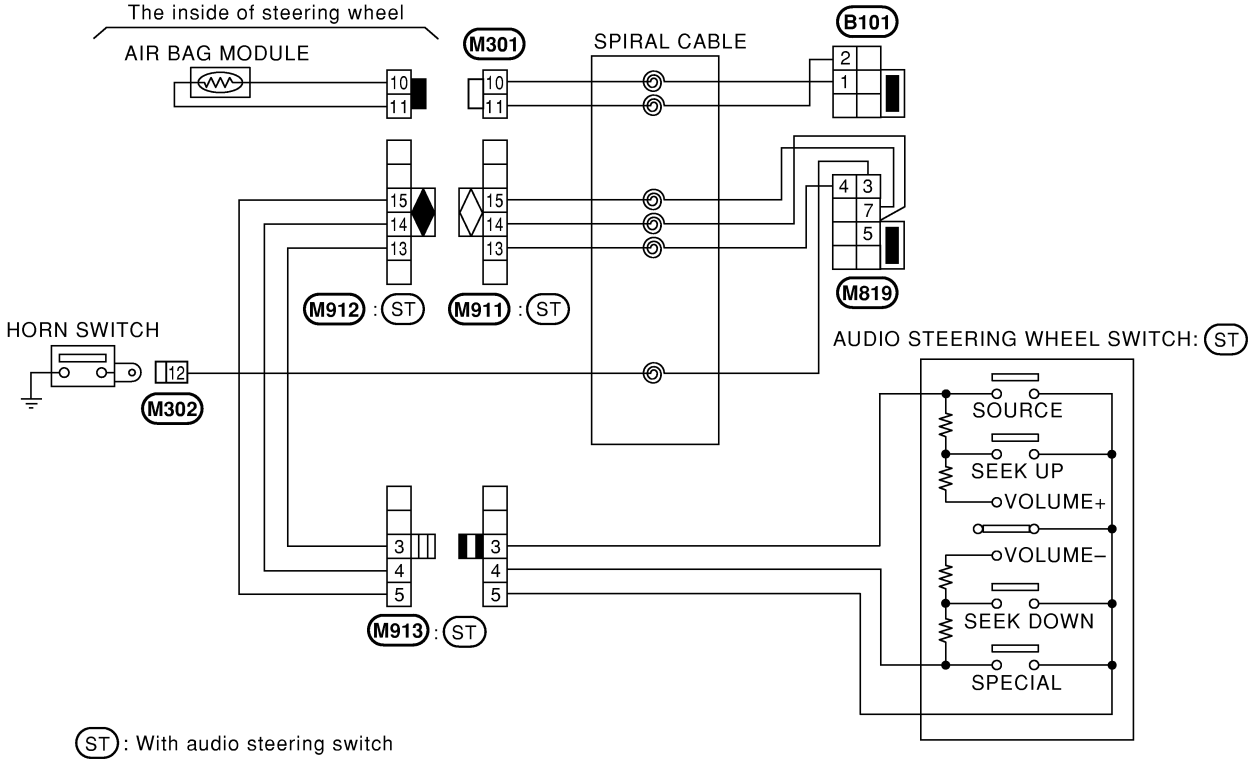
- To remove combination switch base, remove base attaching screws.

**CAUTION:**

**For removal of the airbag module steering wheel and spiral cable, refer to BT-section.**

## Check

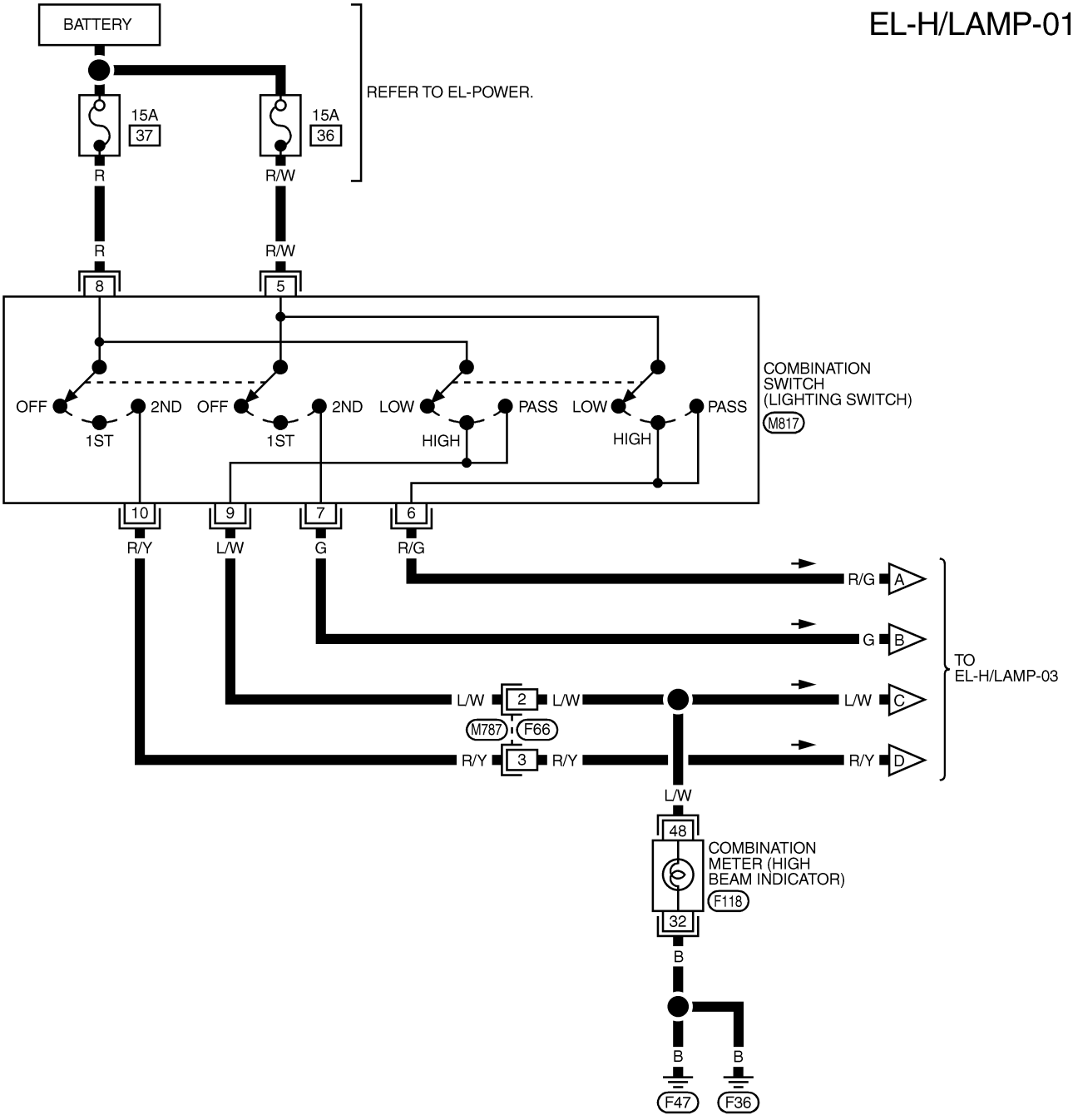



YEL279D

## Wiring Diagram — H/LAMP —

### LHD MODELS

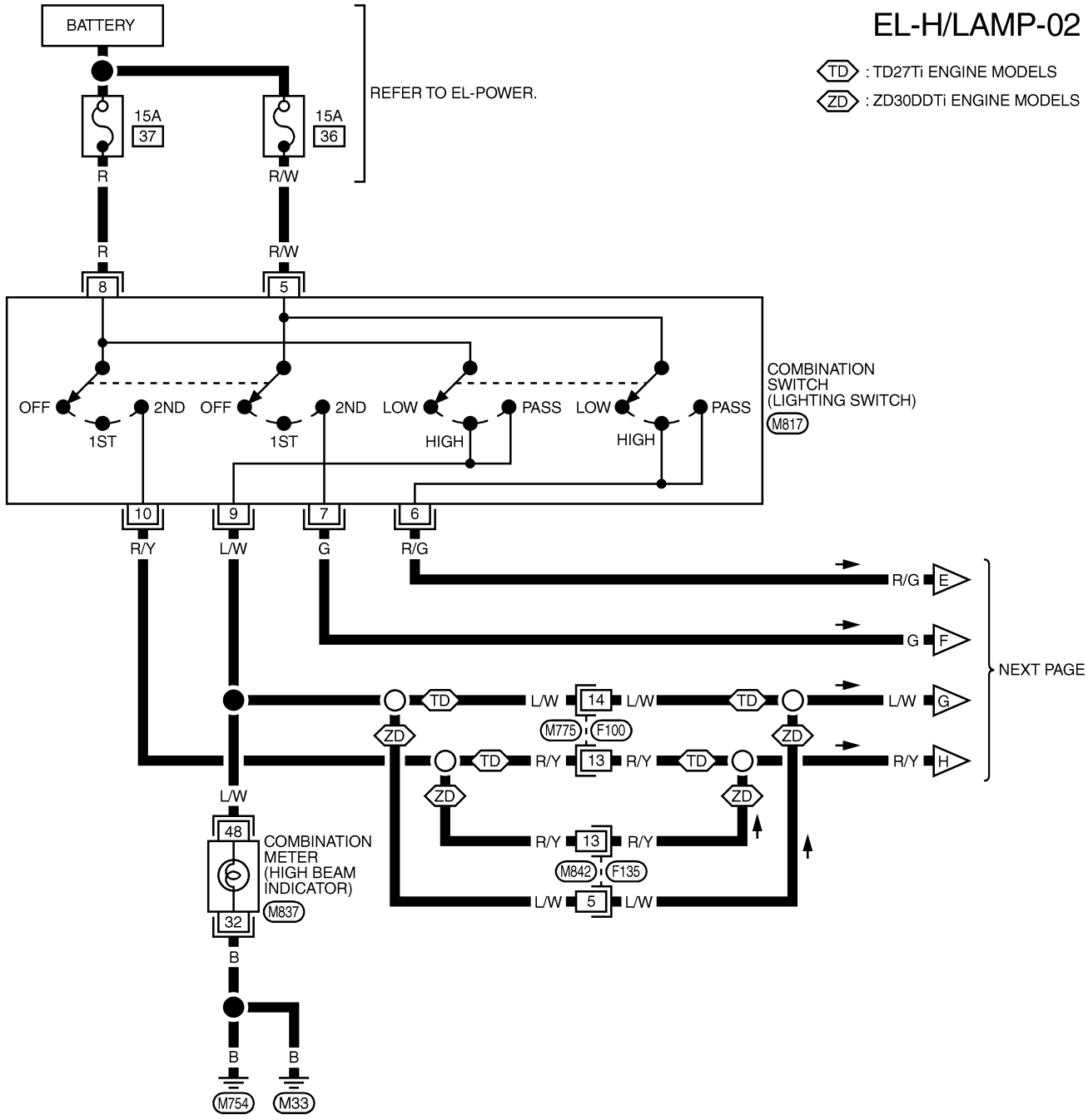


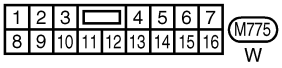


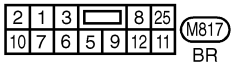
YEL058D

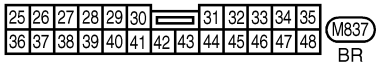
## Wiring Diagram — H/LAMP — (Cont'd)

### RHD MODELS



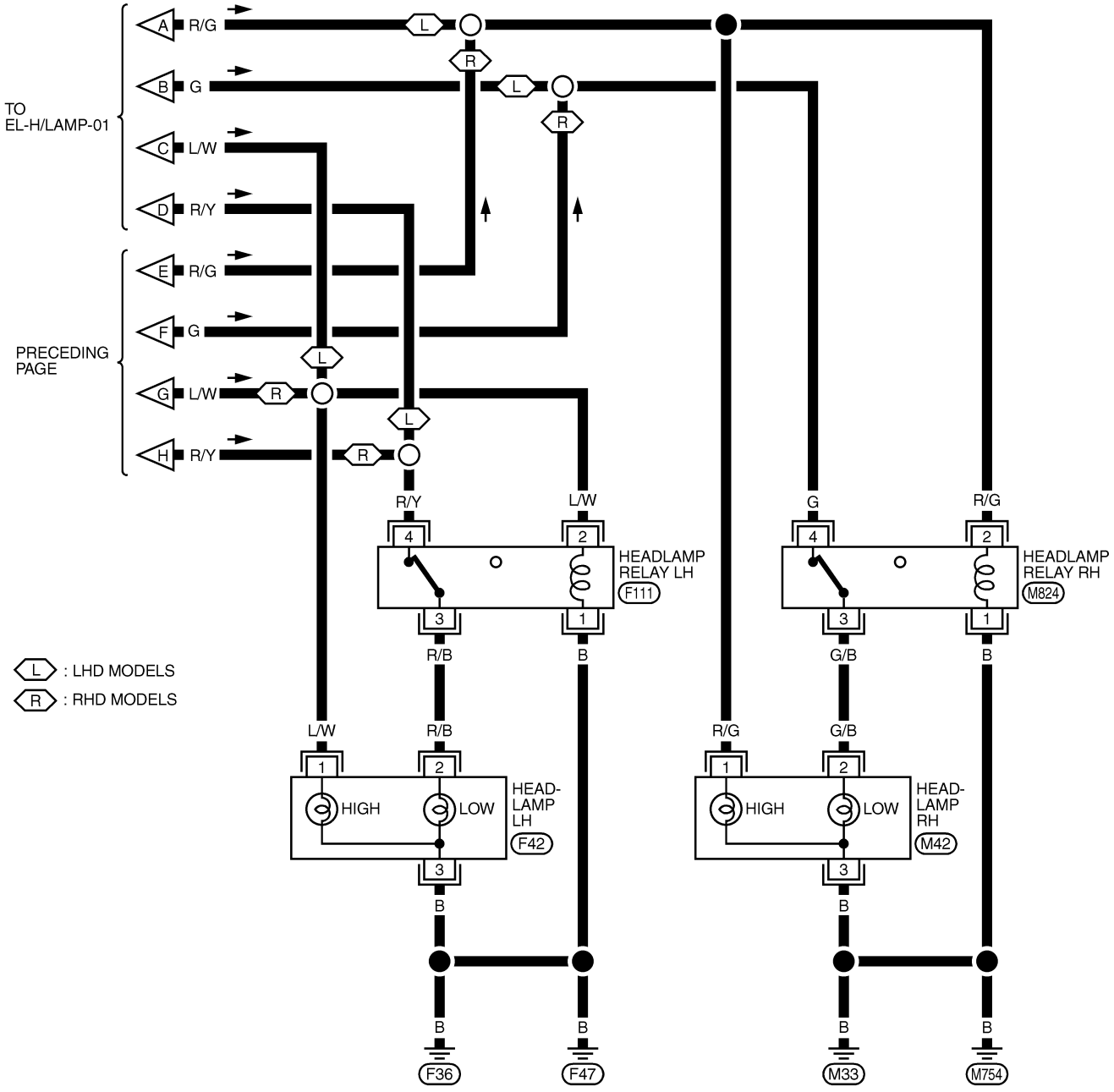



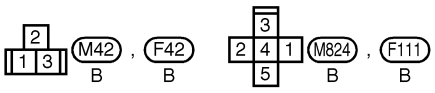

REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)

YEL059D

## Wiring Diagram — H/LAMP — (Cont'd)

EL-H/LAMP-03




YEL060D

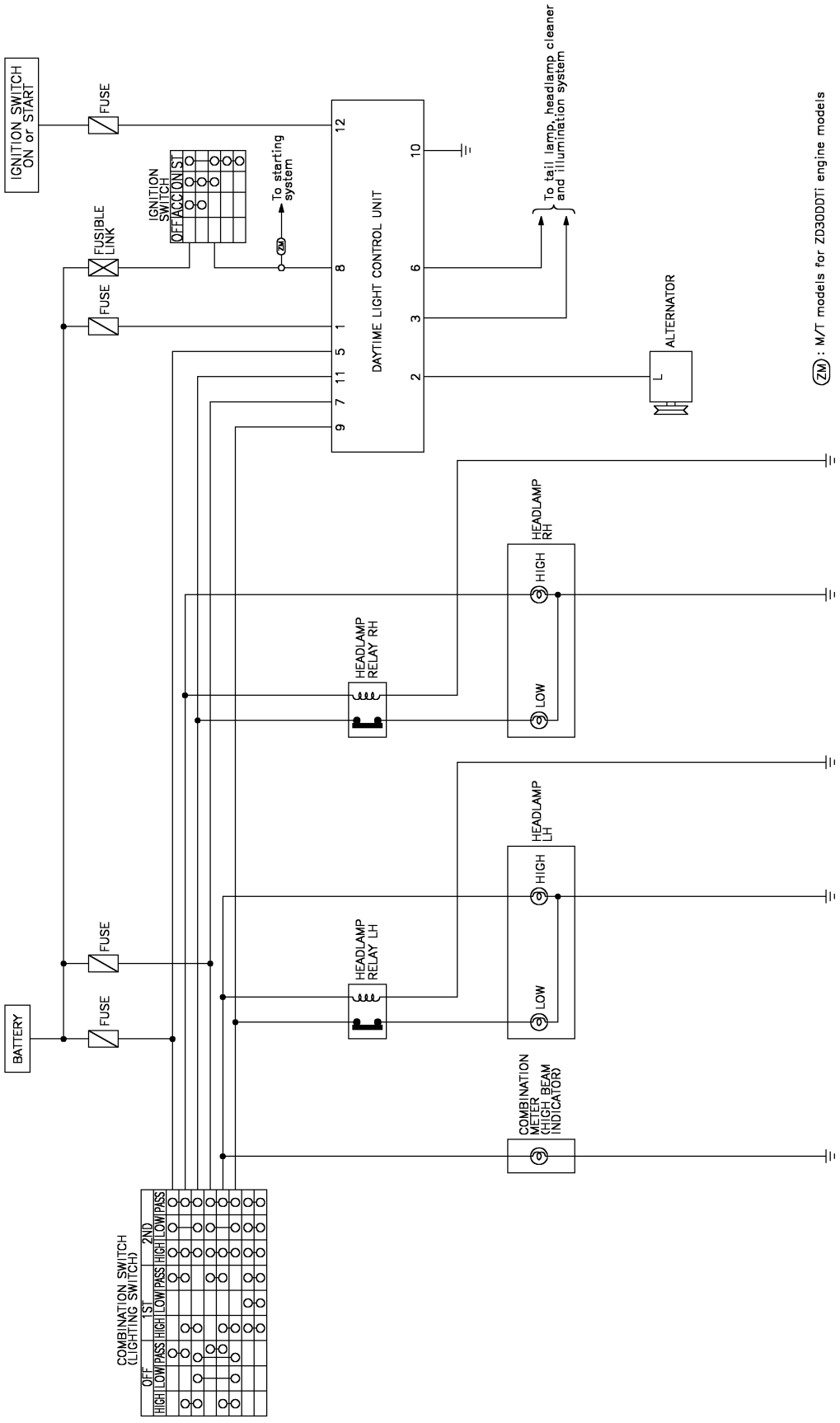
## Operation

After starting the engine with the lighting switch in the “OFF” position, the headlamp low beam and clearance, tail, license and instrument illumination lamps automatically turn on. Lighting switch operations other than the above are the same as conventional light systems.

| Engine | | With engine stopped | | | | | | | | | With engine running | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lighting switch | | OFF | | | 1ST | | | 2ND | | | OFF | | | 1ST | | | 2ND | | |
| | | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C |
| Headlamp | High beam | X | X | ◯ | X | X | ◯ | ◯ | X | ◯ | X | X | ◯ | X | X | ◯ | ◯ | X | ◯ |
| | Low beam | X | X | X | X | X | X | X | ◯ | X | ◯ | ◯ | ◯ | X | X | X | X | ◯ | X |
| Clearance and tail lamp | | X | X | X | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| License and instrument illumination lamp | | X | X | X | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

◯: Lamp “ON”
X: Lamp “OFF”
□: Added functions

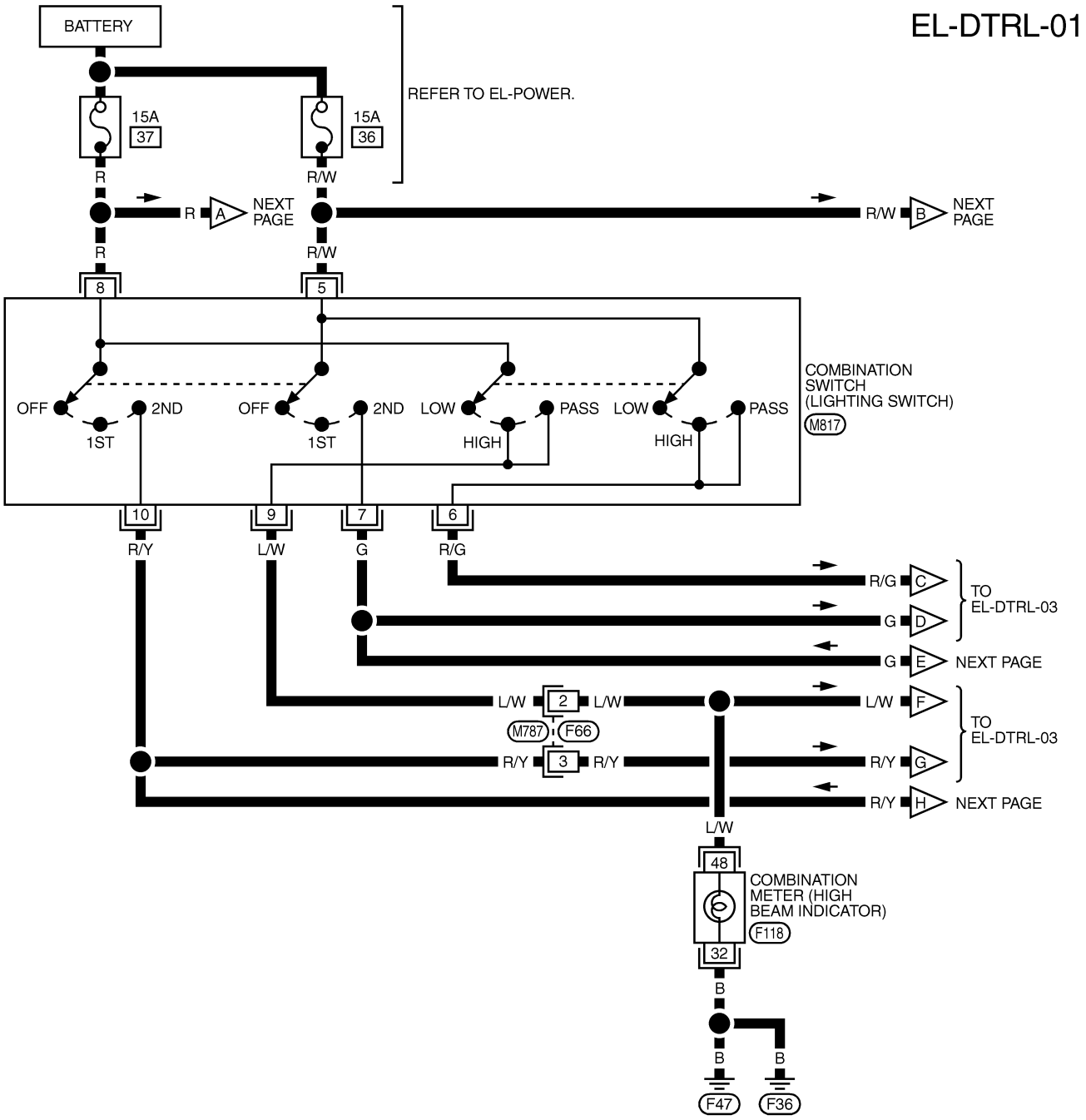
## Schematic




YEL061D

## Wiring Diagram — DTRL —

### TD27Ti ENGINE MODELS

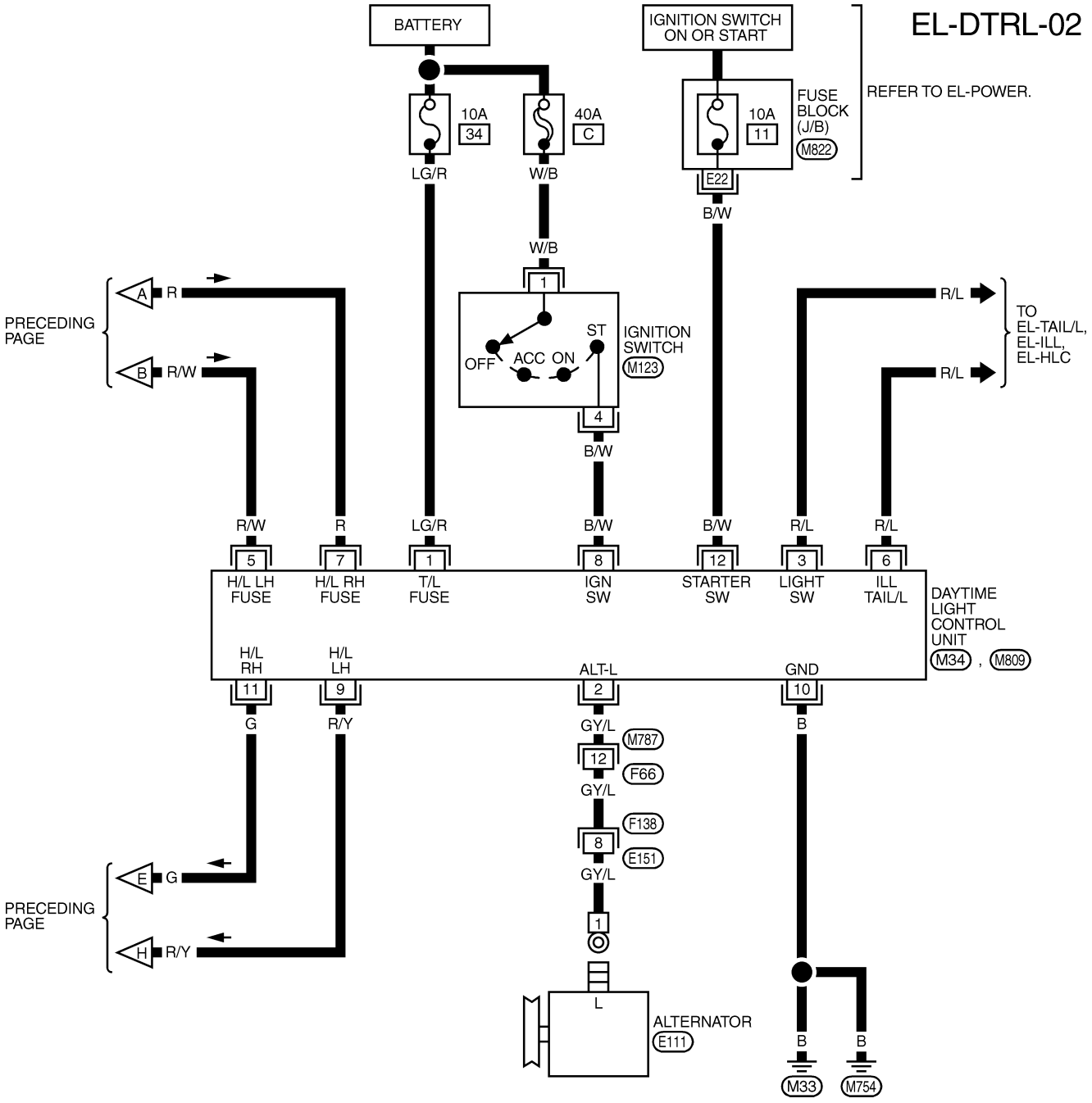


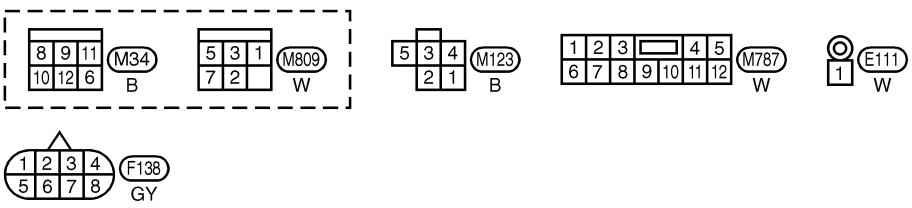


YEL062D

## Wiring Diagram — DTRL — (Cont'd)

### TD27Ti ENGINE MODELS



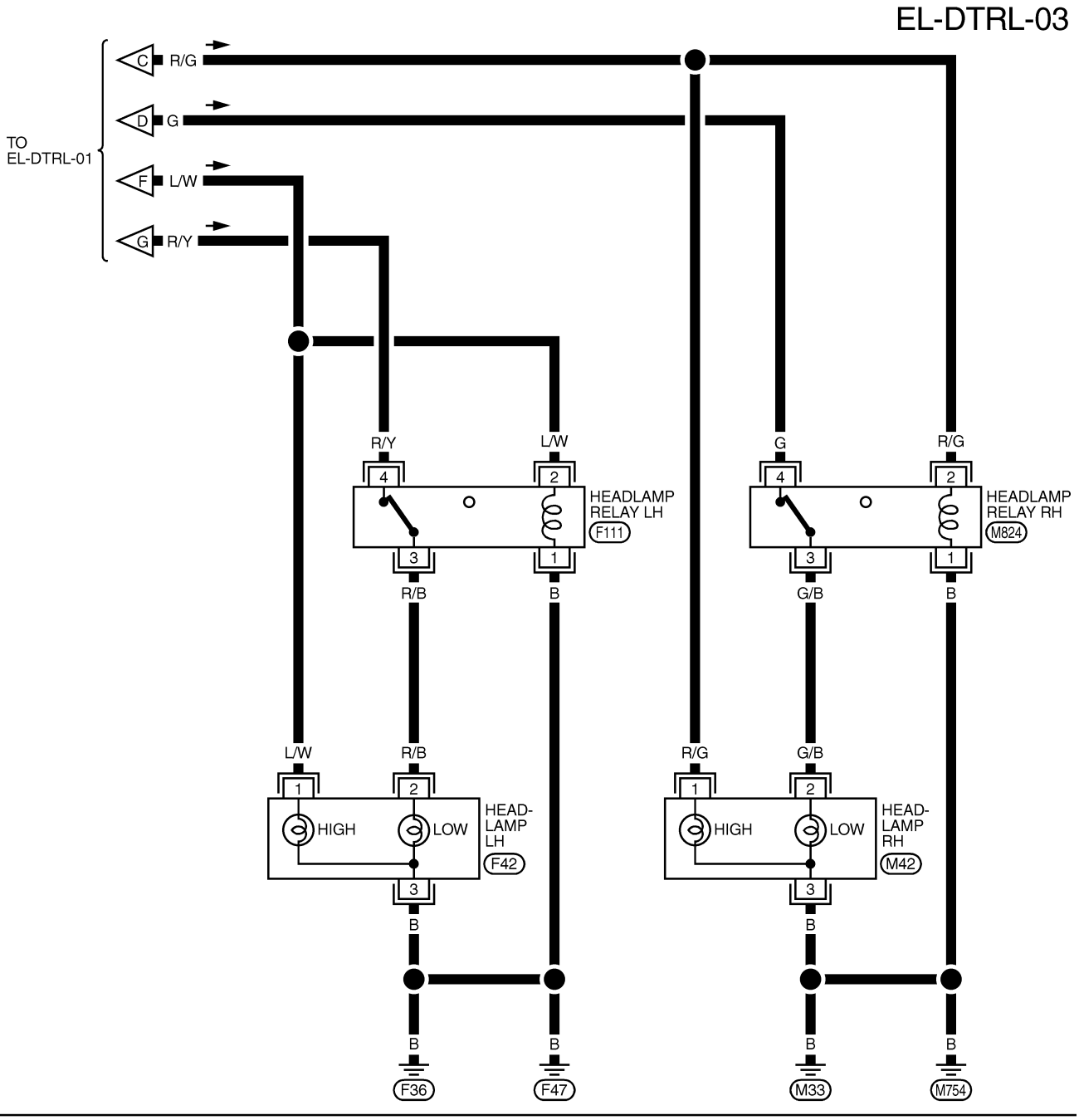



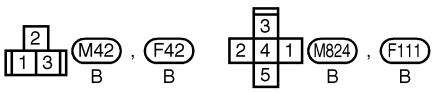

REFER TO THE FOLLOWING.
M822 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL063D

## Wiring Diagram — DTRL — (Cont'd)

### TD27Ti ENGINE MODELS

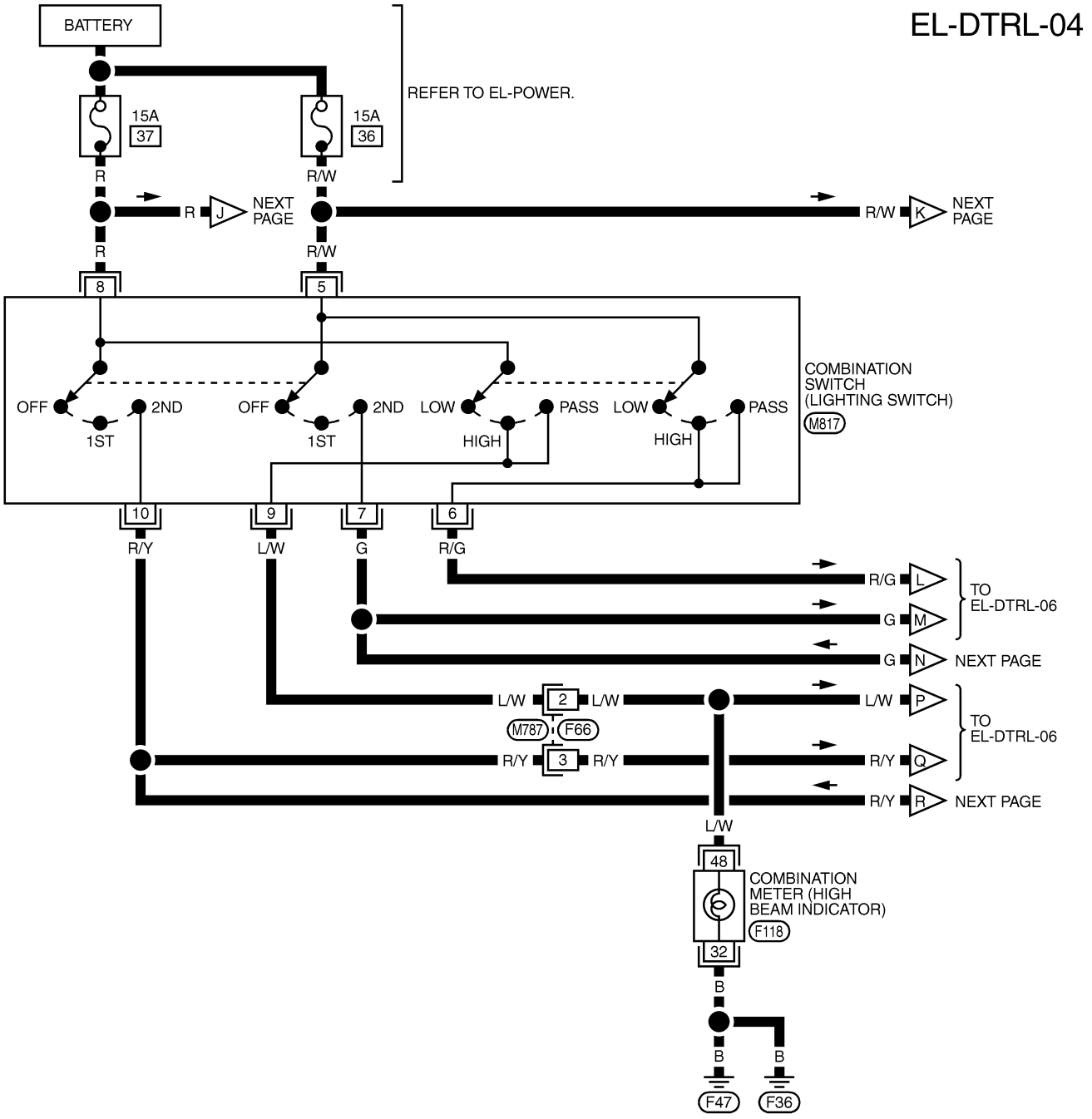



YEL064D

## Wiring Diagram — DTRL — (Cont'd)

### ZD30DDTi ENGINE MODELS

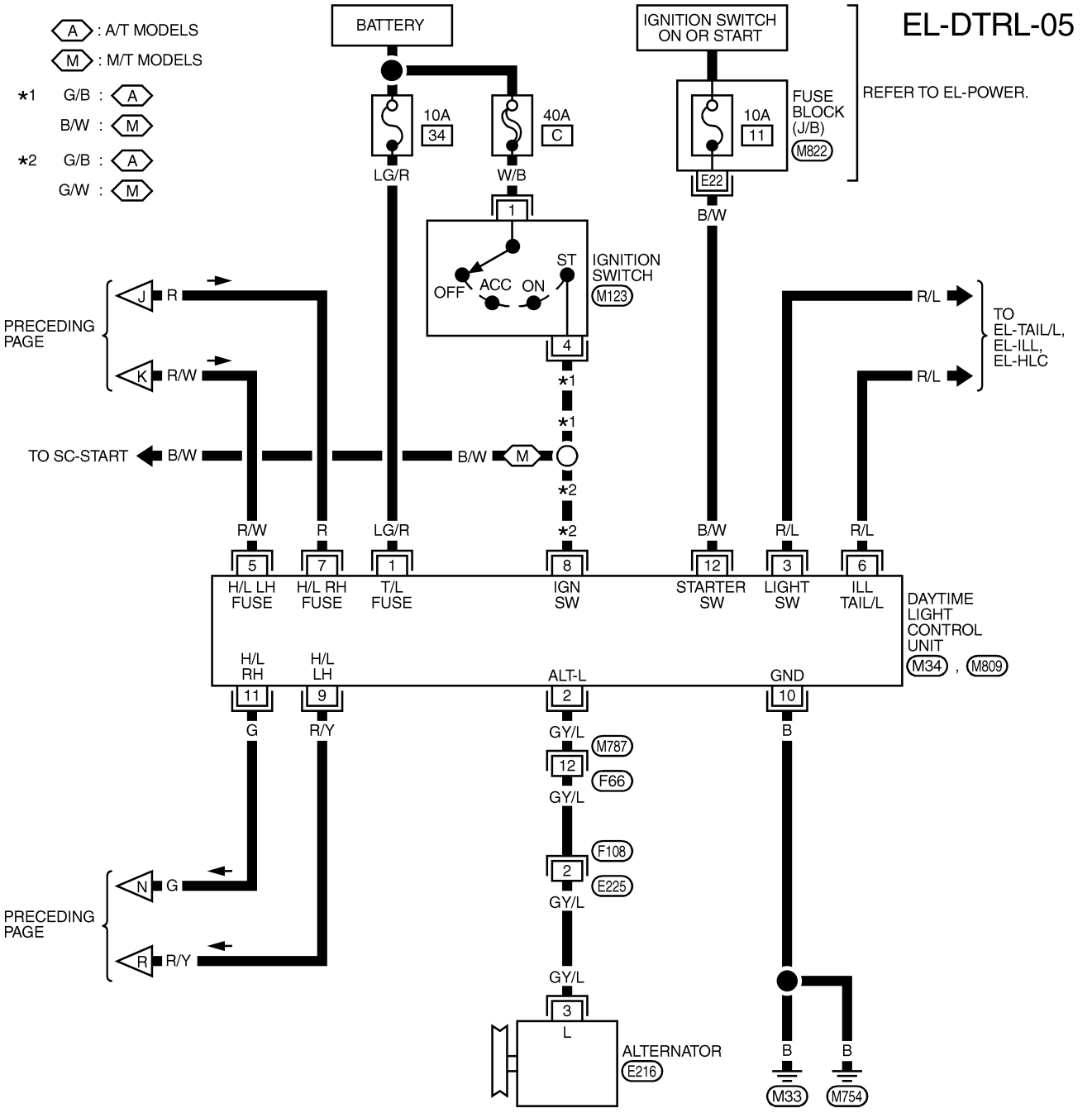


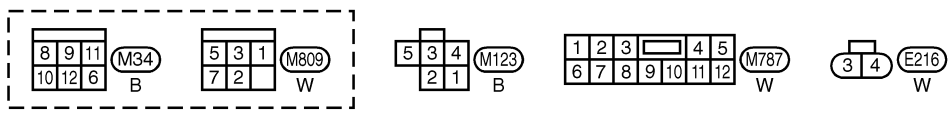


YEL065D

## Wiring Diagram — DTRL — (Cont'd)

### ZD30DDTi ENGINE MODELS



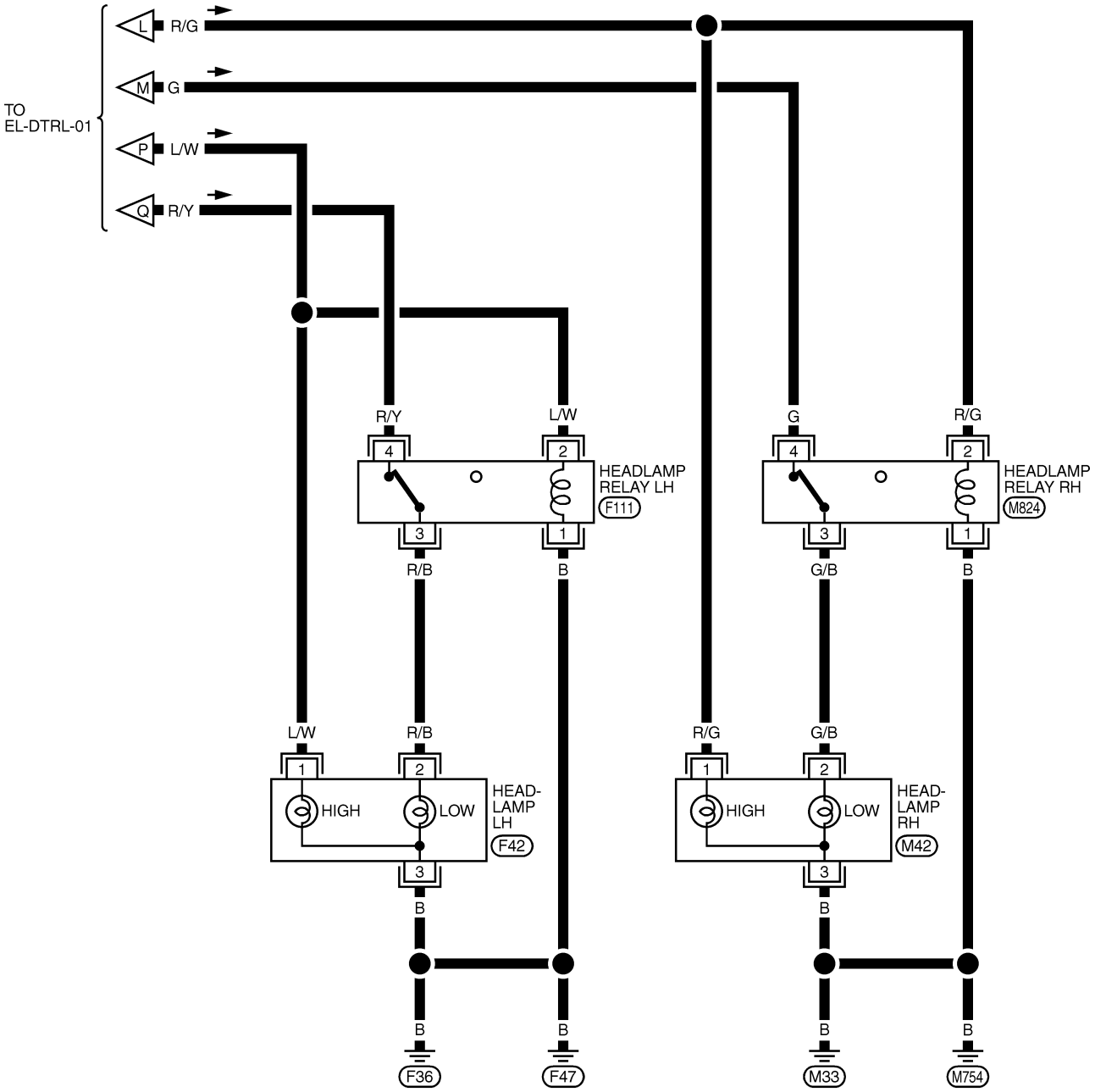

REFER TO THE FOLLOWING.
F108 -SUPER MULTIPLE JUNCTION (SMJ)
M822 -FUSE BLOCK-JUNCTION BOX (J/B)

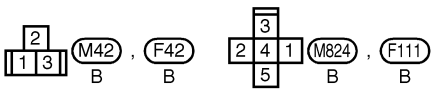
YEL066D

## Wiring Diagram — DTRL — (Cont'd)

### ZD30DDTi ENGINE MODELS

EL-DTRL-06

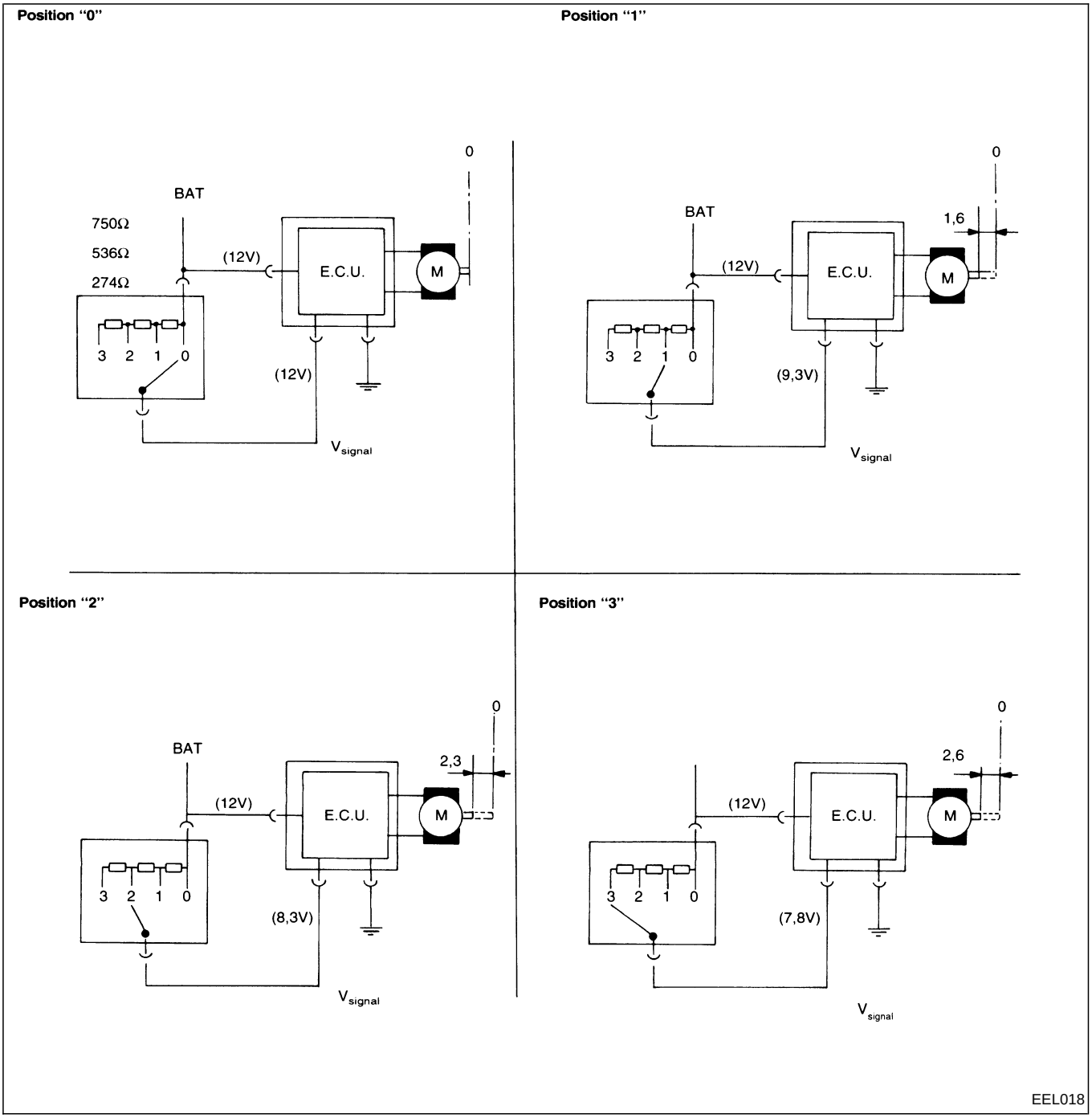


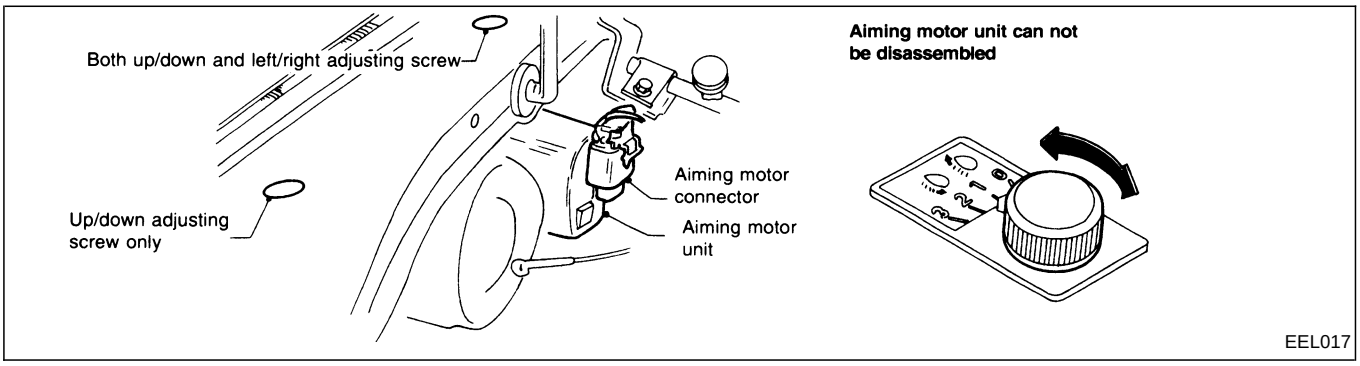

YEL067D

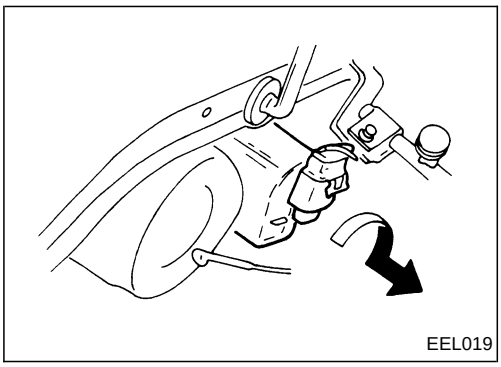
## Description

- The vertical direction of the headlamp projection can be adjusted from inside the vehicle to prevent the headlamp beam axis from facing upward due to a change in the number of occupants and load conditions in the vehicle.
- A little Electronic Control Unit (ECU) is incorporated in each actuator (one for each headlamp), which compares a signal voltage ($V_{signal}$), coming from the headlamp aiming switch, with battery voltage (12V). The signal voltage varies with the position of the switch.
  Related to the difference in voltage the actuator rod will move more or less and adjust the headlamp beam angle accordingly.



## Description (Cont'd)



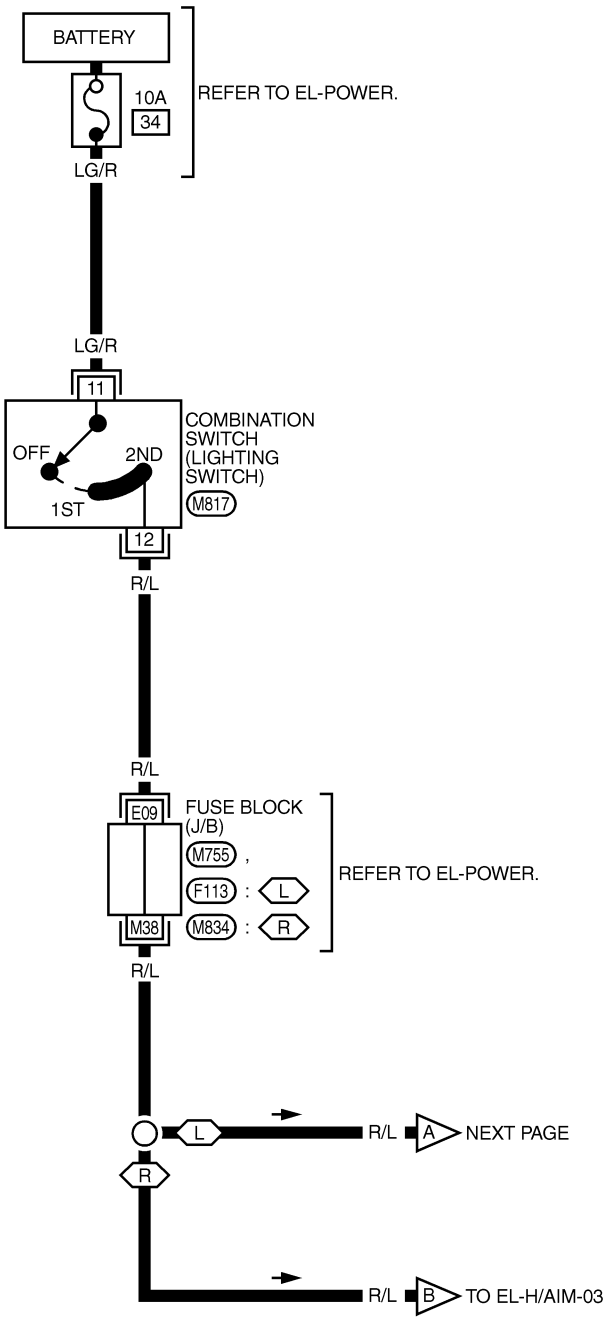

### Replacing Headlamp Aiming Actuator

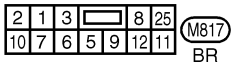
Headlamp aiming actuator can not be disassembled.
To remove aiming actuator, turn it 90° to the center of the vehicle (left and right symmetrical) and pull outward.

## Wiring Diagram — H/AIM —

EL-H/AIM-01

L : LHD MODELS
R : RHD MODELS



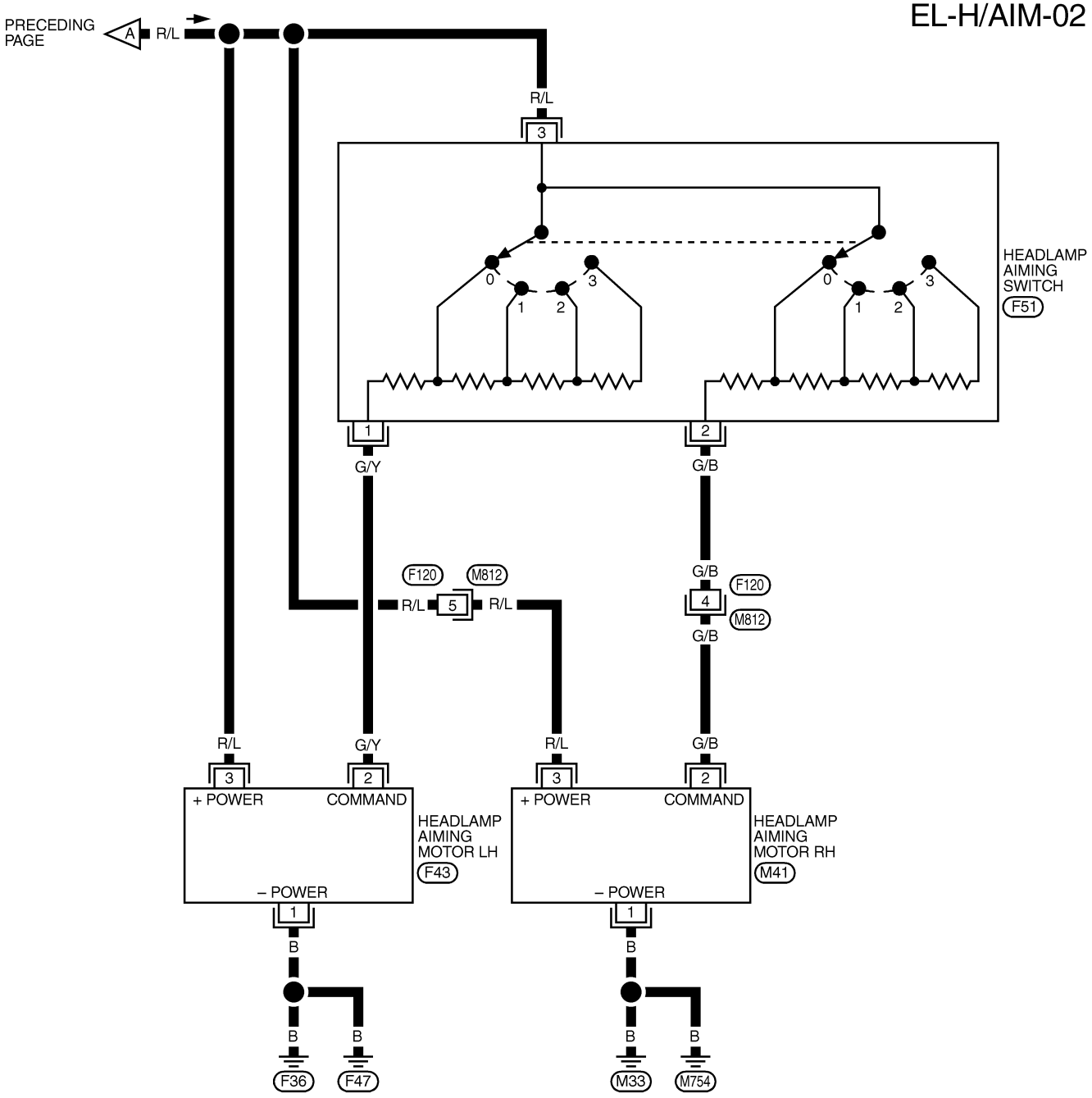

REFER TO THE FOLLOWING.
M755 , M834 , F113
-FUSE BLOCK-
JUNCTION BOX (J/B)

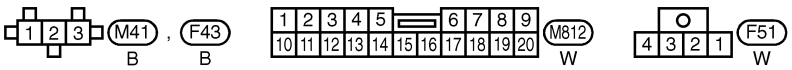
YEL068D

## Wiring Diagram — H/AIM — (Cont'd)

### LHD MODELS

EL-H/AIM-02

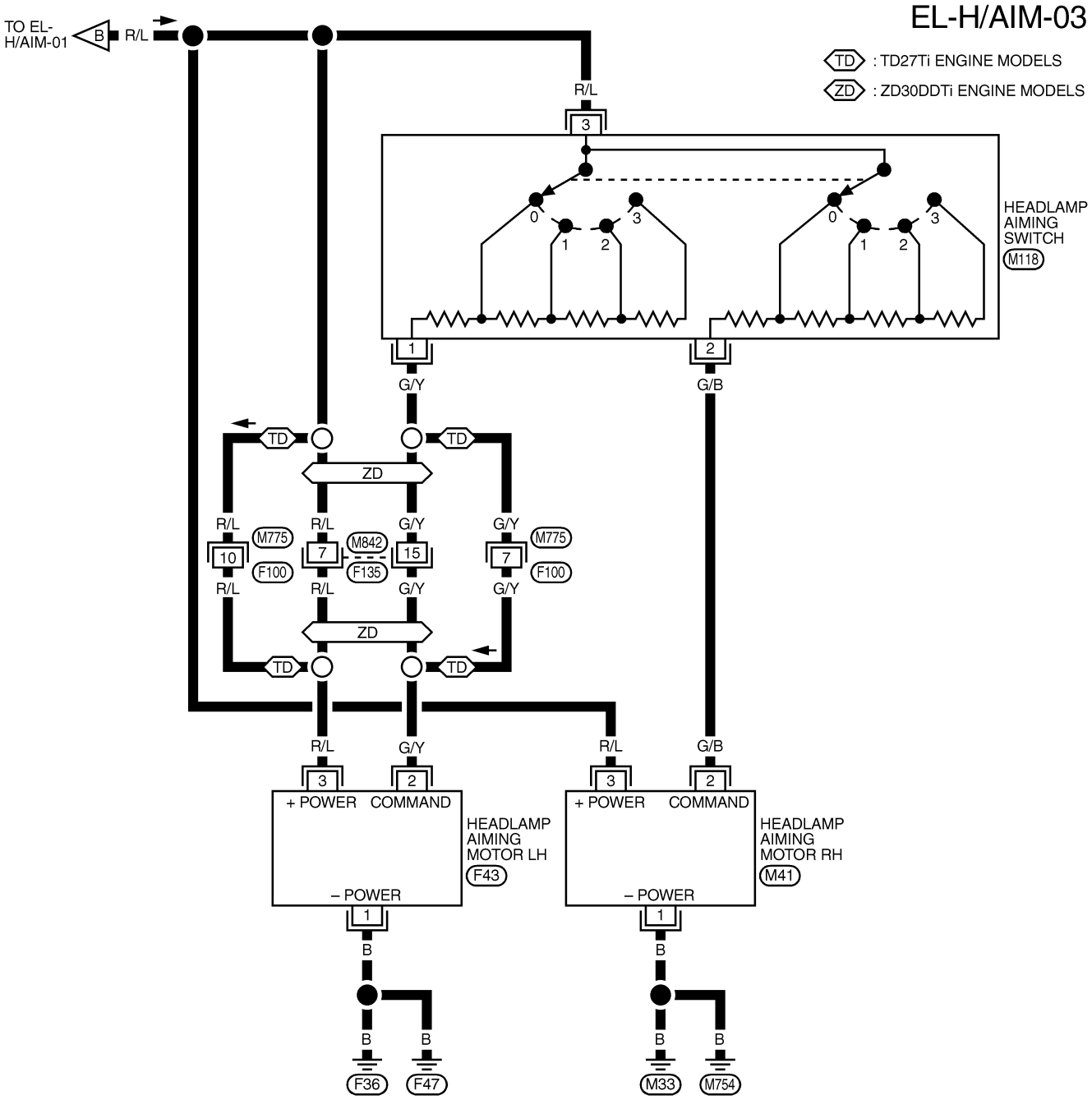


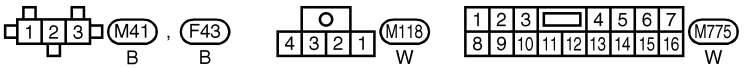




YEL069D

## Wiring Diagram — H/AIM — (Cont'd)

### RHD MODELS

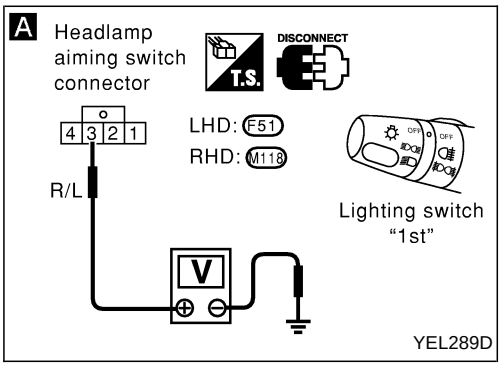


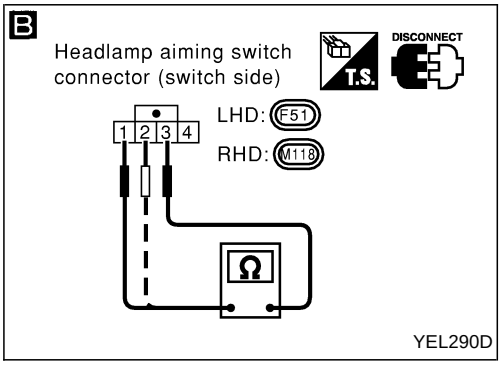

REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)

YEL070D

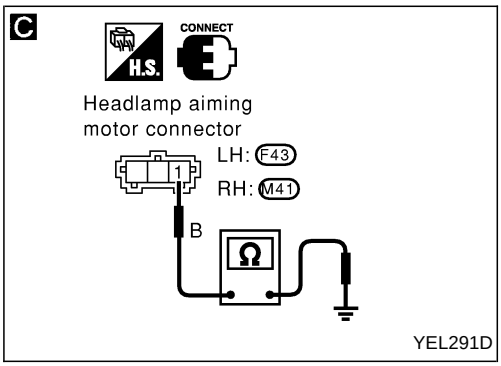
A



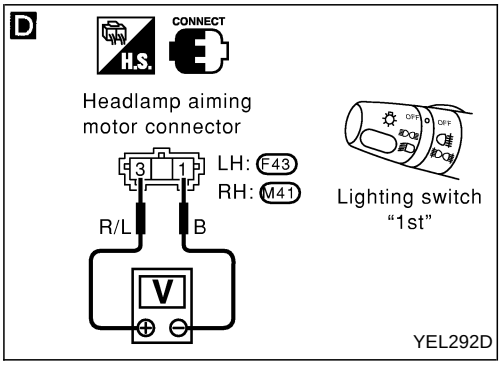

B




C




D




# Trouble Diagnoses

## SYMPTOM: Headlamp aiming does not operate.

**A**

POWER SUPPLY CIRCUIT CHECK
(For aiming switch)
- Disconnect headlamp aiming switch connector.
- Turn lighting switch to 1st. position.

Check if voltage between headlamp aiming switch connector terminal ③ and body ground.

| Voltmeter terminals | | Voltage [V] |
|---|---|---|
| (+) | (−) | |
| ③ | Ground | Approx. 12 |

NG → Check the following:
- 10A fuse at fuse block (Refer to "POWER SUPPLY ROUTING", EL-6).
- Condition and operation of ignition switch.
- Battery charge condition.

If NG, replace 10A fuse, recharge battery or repair ignition switch.

OK ↓

**B**

AIMING SWITCH CHECK
Check resistance between headlamp aiming switch connector (switch side) terminals ①/② and ③ at each switch position.

| Switch position | Ohmmeter terminals | |
|---|---|---|
| | ① / ② | ③ |
| 0 | below 10Ω | |
| 1 | 743 — 757Ω | |
| 2 | 1,274 — 1,298Ω | |
| 3 | 1,545 — 1,575Ω | |

NG → Replace headlamp aiming switch

OK ↓

**C**

GROUND CIRCUIT CHECK FOR AIMING MOTOR
- Connect headlamp aiming switch connector.

Check continuity between headlamp aiming motor connector terminal ① and body ground.

**Continuity exists ... OK**

NG → Repair harness or connectors between aiming motor and body ground.

OK ↓

**D**

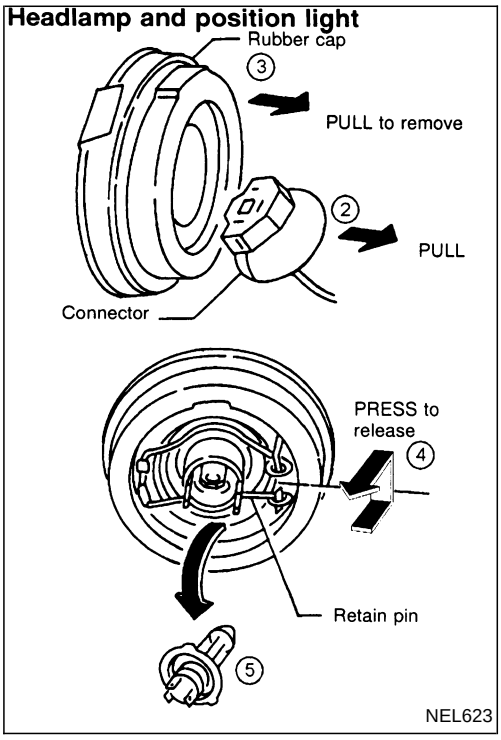
POWER SUPPLY CIRCUIT CHECK
(For aiming motor unit)
- Turn lighting switch to 1st. position

Check if 12 volts exist between headlamp aiming motor connector terminals ① and ③.

NG → Check harness between headlamp aiming switch and aiming motor unit.

OK ↓

Replace aiming motor unit.




## Bulb Replacement

The headlamp is a semi-sealed beam type which uses a replacable 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. Disconnect the harness connector from the back side of the bulb.
3. Pull off the rubber cap.
4. Press end of the retaining pin together to release bulb.
5. Remove the headlamp bulb. Do not shake or rotate the bulb when removing it.
6. Install the new bulb in reverse order of removal.

**CAUTION:**

- **Do not leave the bulb out of the headlamp reflector for a long period of time as dust, moisture, smoke, etc. may enter the headlamp body and affect the performance of the headlamp. Thus, the headlamp bulb should not be removed from the headlamp reflector until just before a replacement bulb is to be installed.**

## Aiming Adjustment

When performing headlamp aiming adjustment, use an aiming machine, aiming wall screen or headlamp tester. For operating instructions, of any aimer, it should be in good repair, calibrated and used according to respective operation manuals supplied with the unit.

If any aimer is not available, aiming adjustment can be done as follows:

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

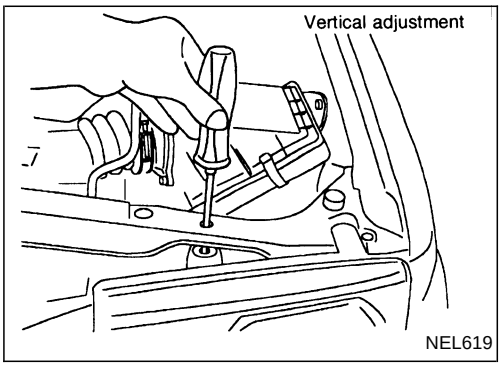
**CAUTION:**

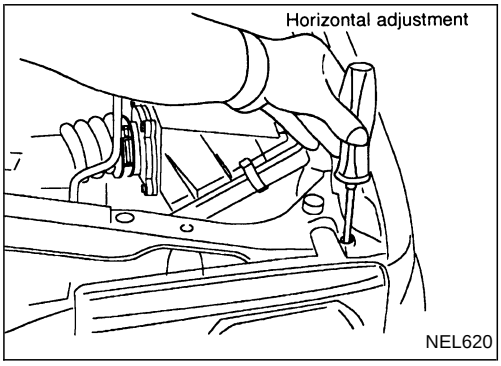
**a. Keep all tires inflated to correct pressures.**
**b. Place vehicle and tester on one and same flat surface.**
**c. See that there is noload in vehicle other than coolant, engine oil filled up to correct level, full fuel tank and the driver (or equivalent weight placed in driver's position).**

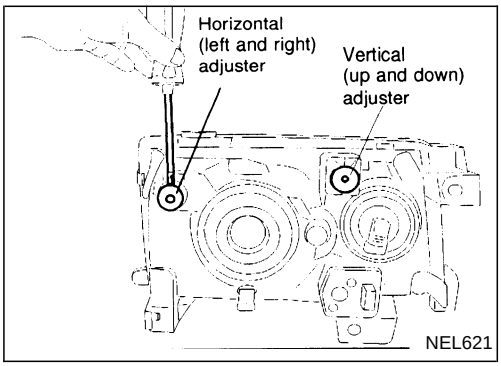
**CAUTION:**

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

## Aiming Adjustment (Cont'd)



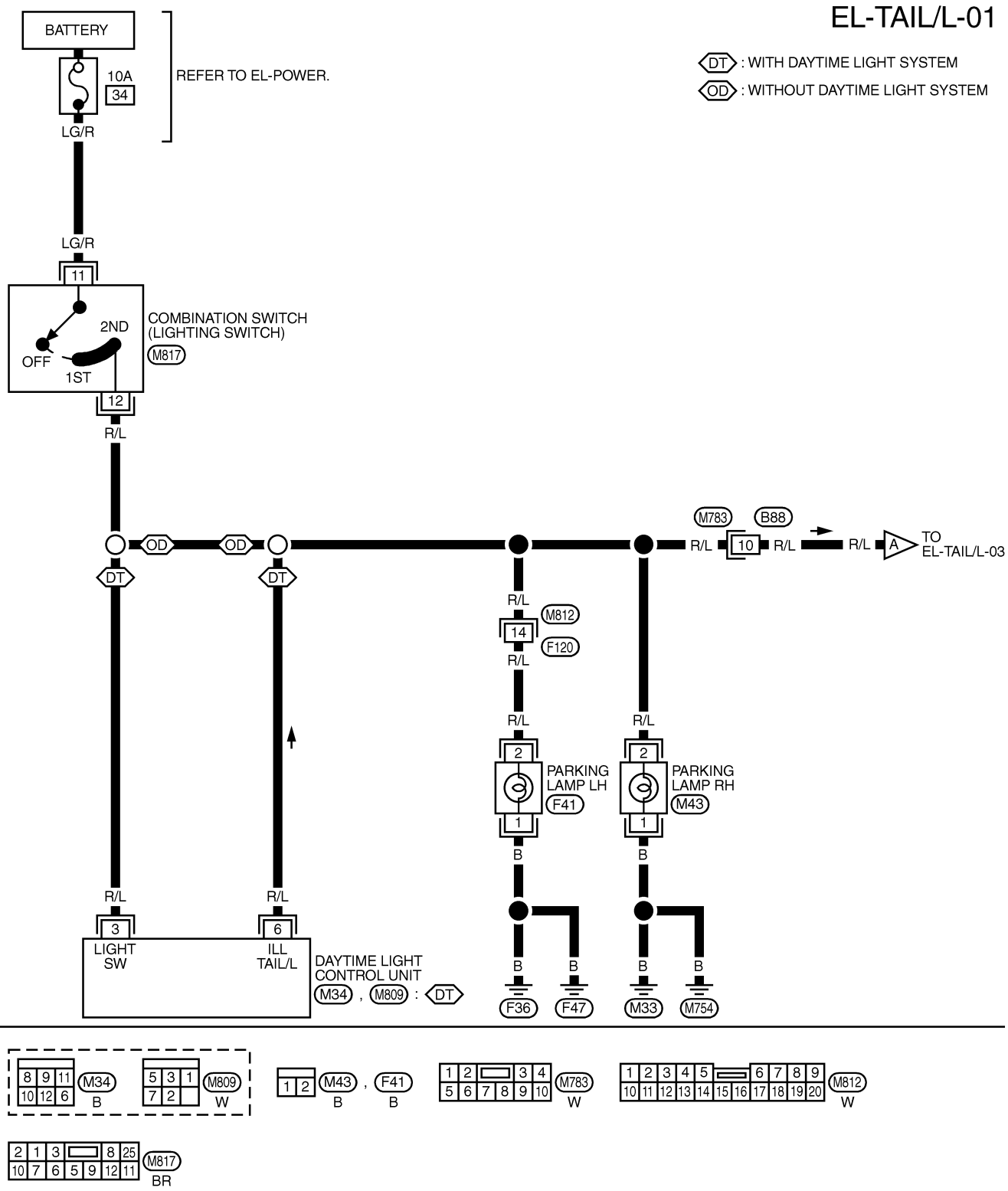

### LOW BEAM

1. Turn headlamp low beam on.
2. Use aiming adjusters to perform aiming adjustment with screw driver ⊕ as shown in figures.

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

## Wiring Diagram — TAIL/L —

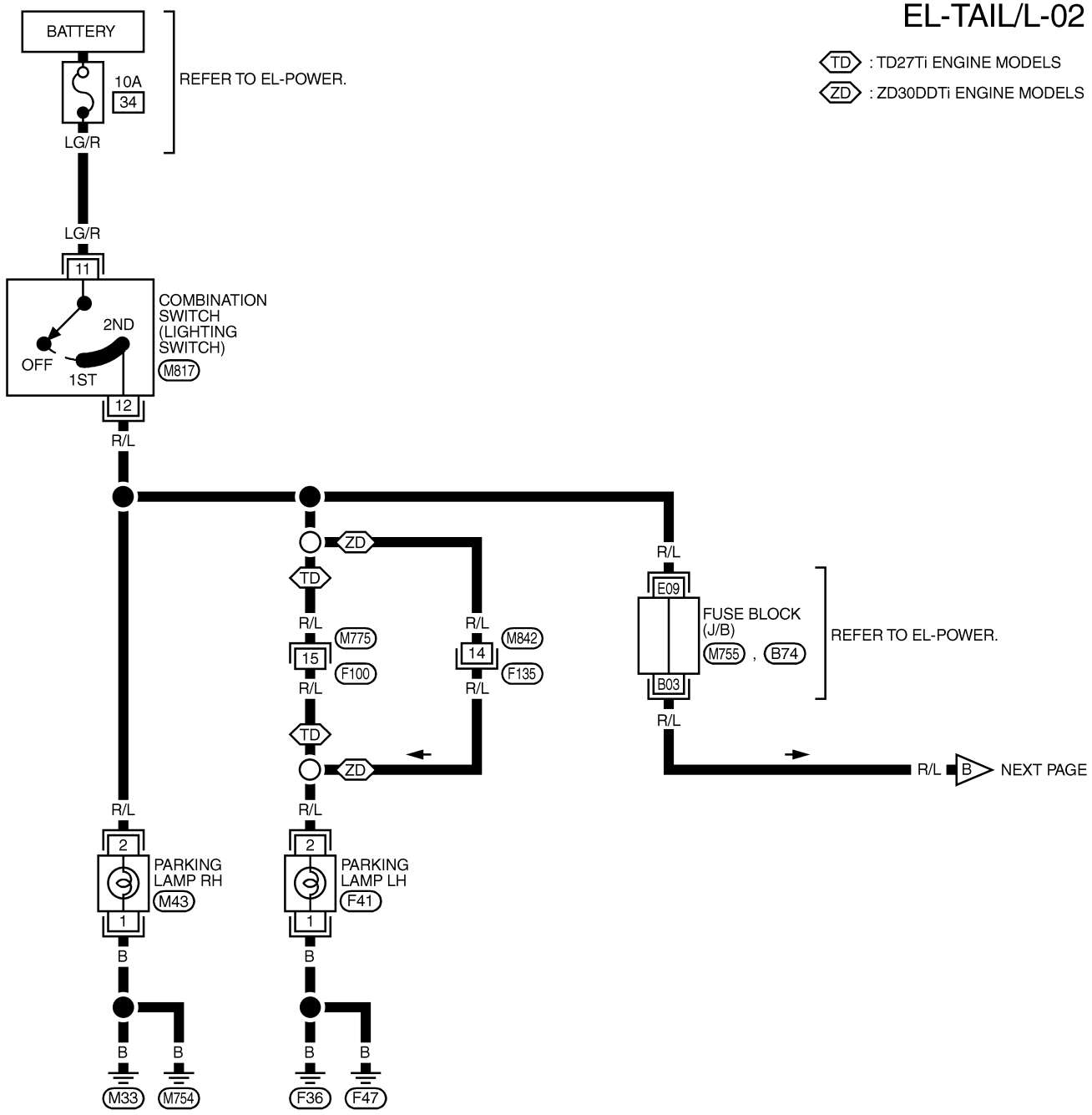
### LHD MODELS




YEL071D

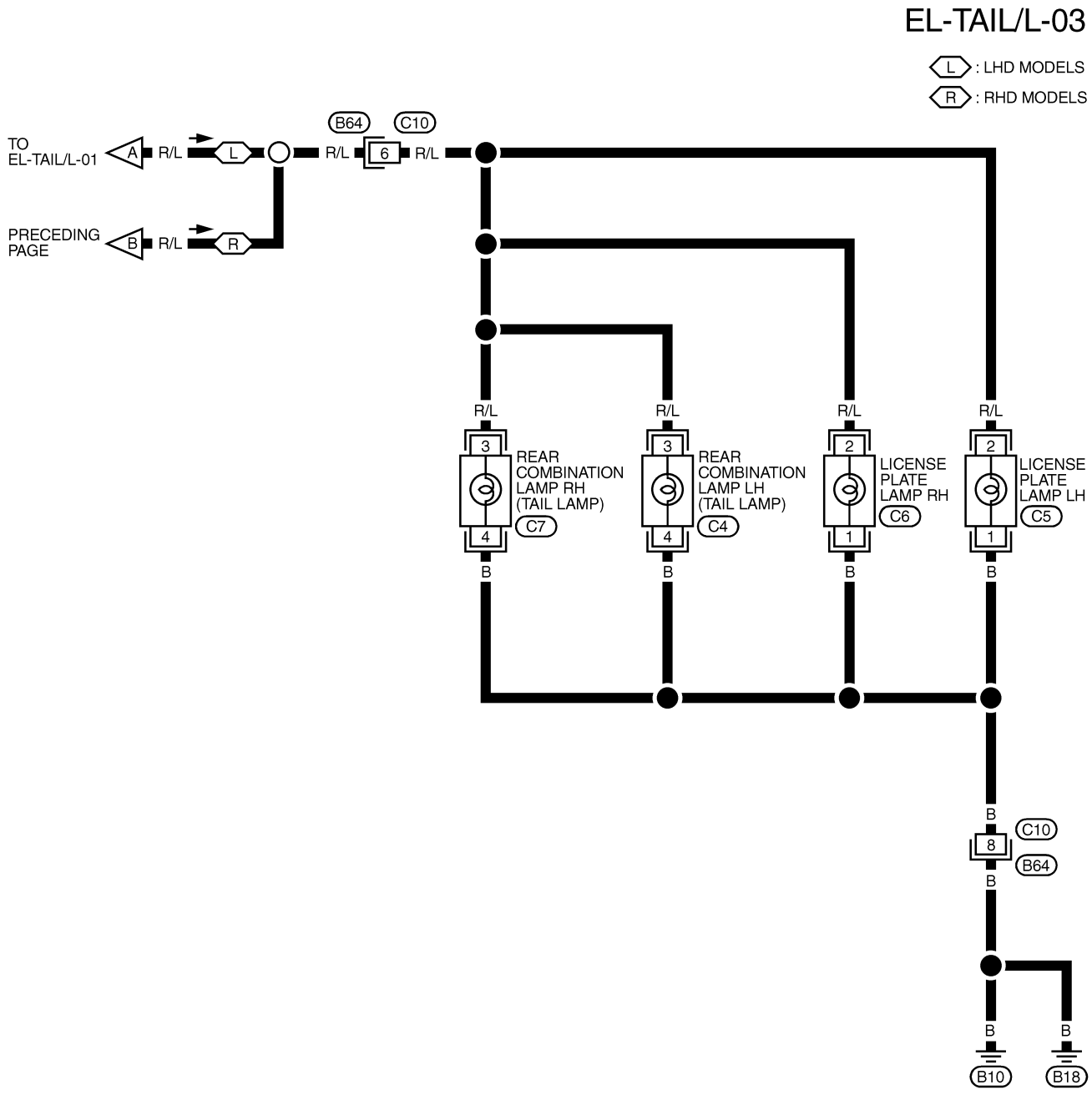
## Wiring Diagram — TAIL/L — (Cont'd)

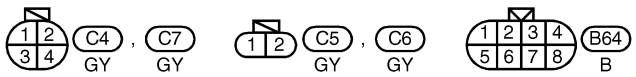
### RHD MODELS




YEL072D

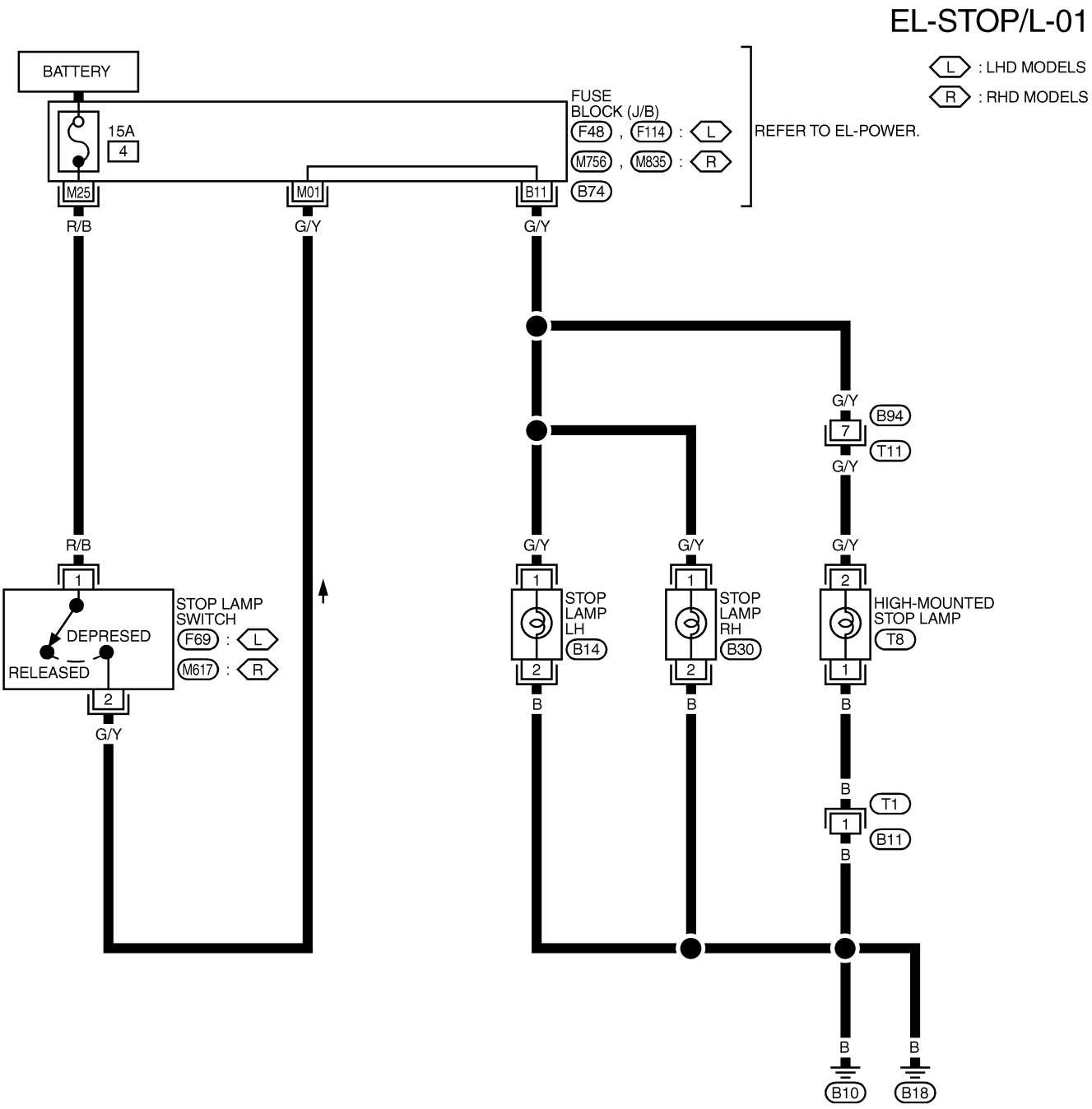
## Wiring Diagram — TAIL/L — (Cont'd)

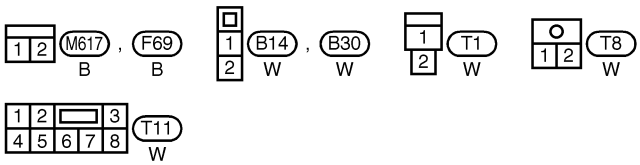



YEL073D

## Wiring Diagram — STOP/L —



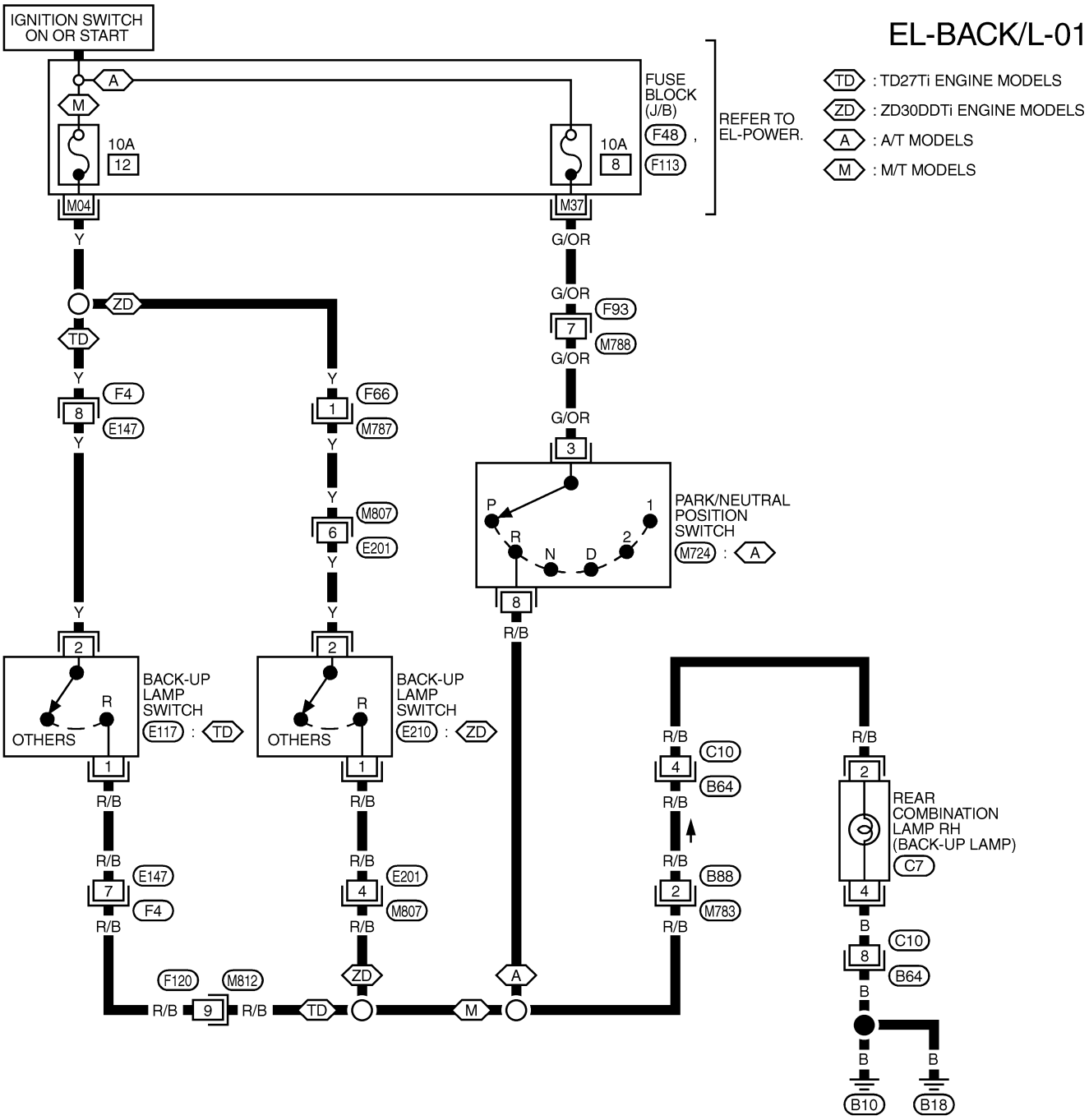



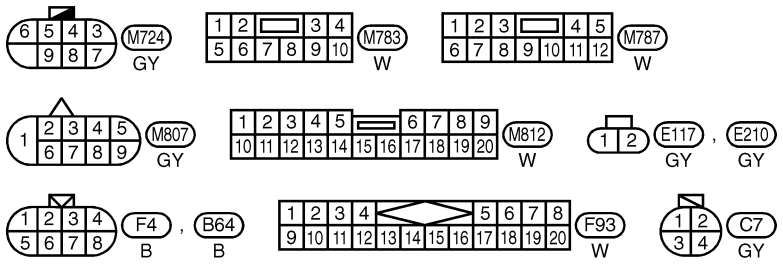

REFER TO THE FOLLOWING.
M756 , M835 , F48 , F114 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL074D

## Wiring Diagram — BACK/L —

### LHD MODELS



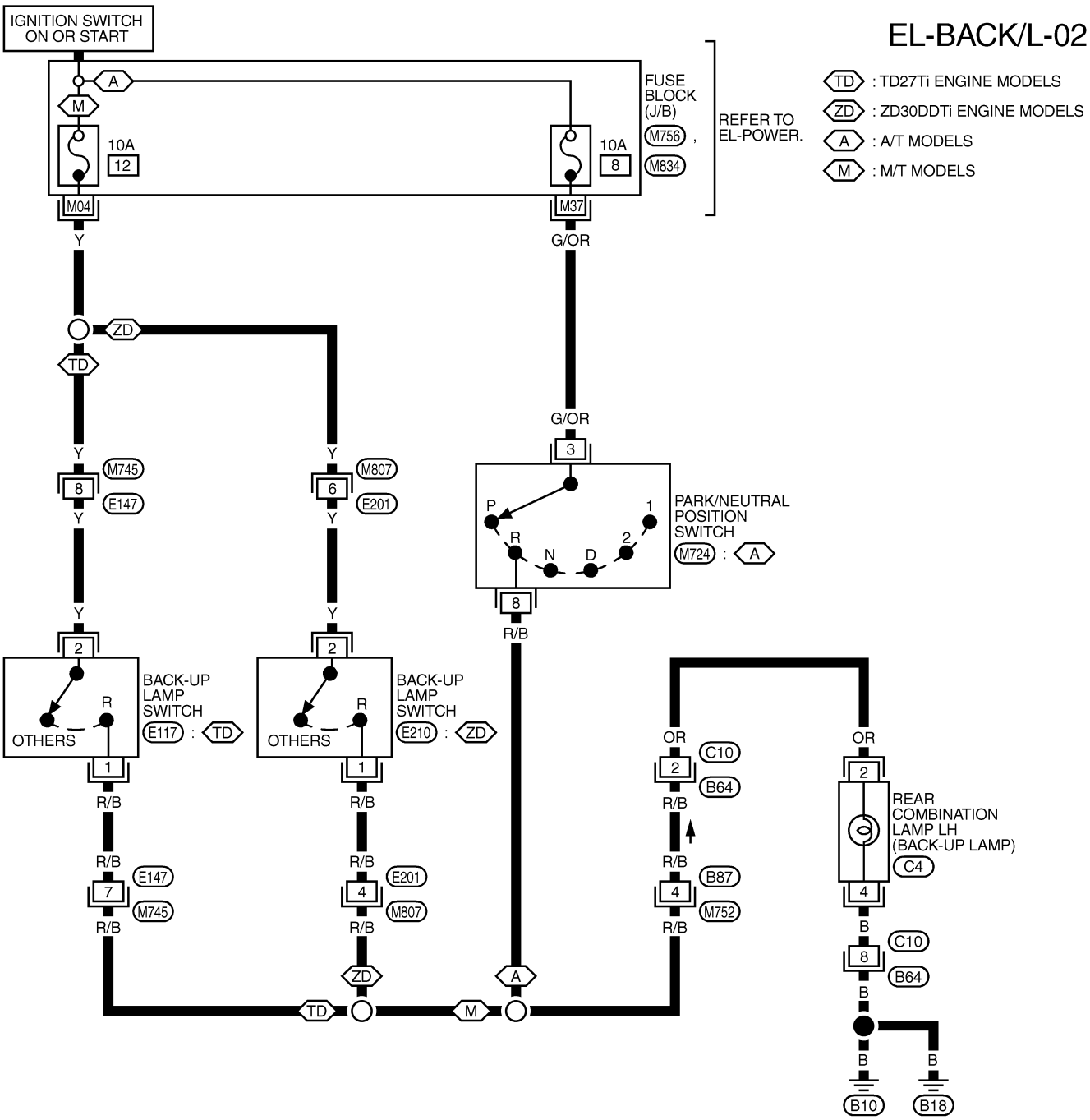




REFER TO THE FOLLOWING.
F48 , F113 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL075D

## Wiring Diagram — BACK/L — (Cont'd)

### RHD MODELS



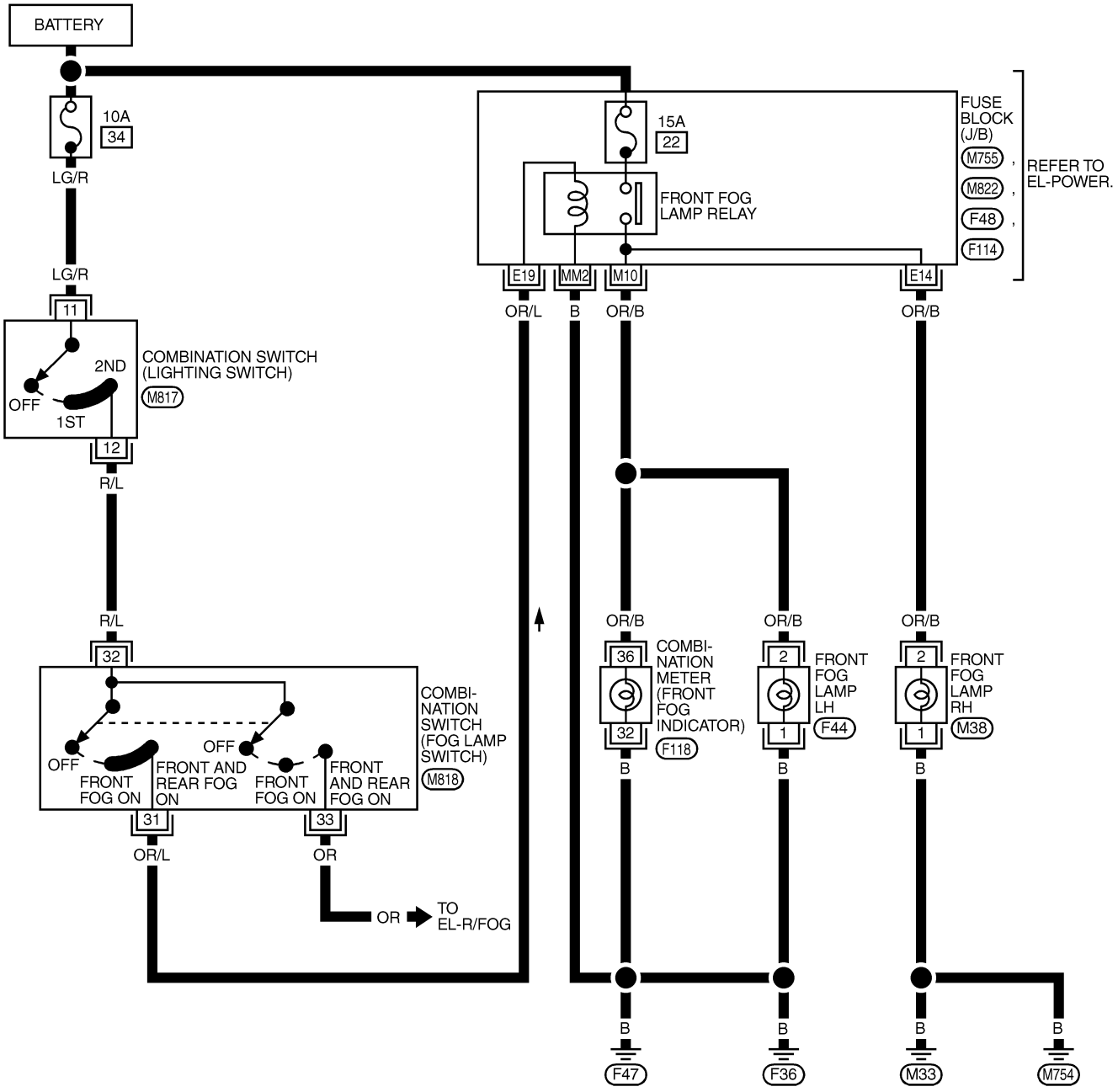

REFER TO THE FOLLOWING.
M756 , M834 -FUSE BLOCK-JUNCTION BOX (J/B)

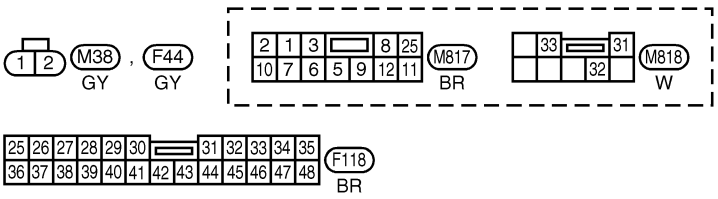
YEL076D

## Wiring Diagram — F/FOG —

### LHD MODELS

EL-F/FOG-01



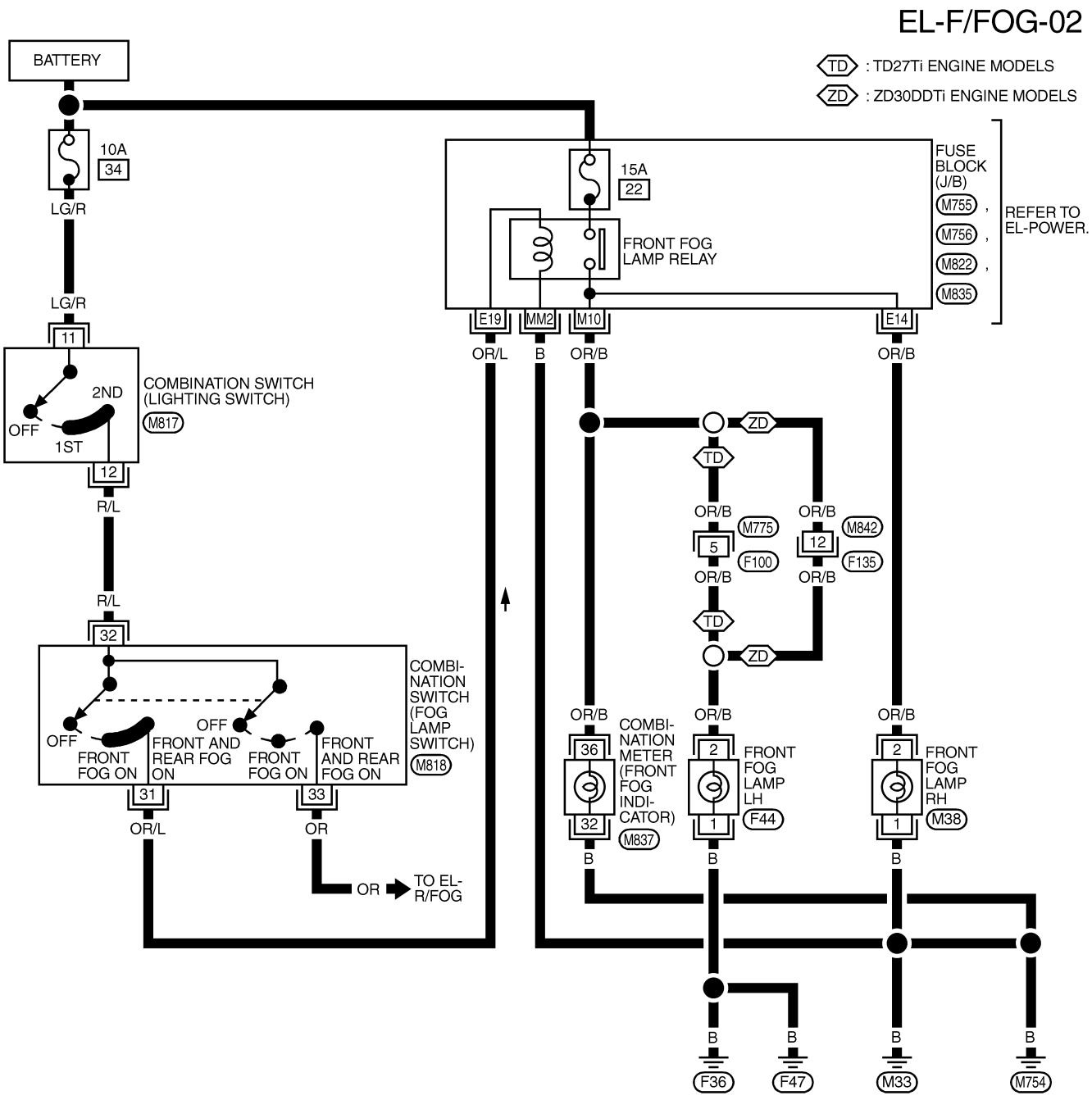



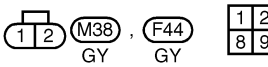

REFER TO THE FOLLOWING.
M755 , M822 , F48 , F114
-FUSE BLOCK-
JUNCTION BOX (J/B)

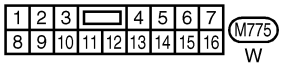
YEL077D

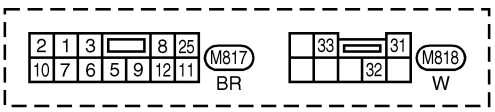
## Wiring Diagram — F/FOG — (Cont'd)

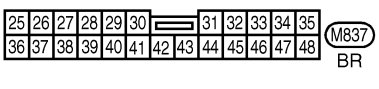
### RHD MODELS




REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M755 , M756 , M822 , M835
-FUSE BLOCK-
JUNCTION BOX (J/B)

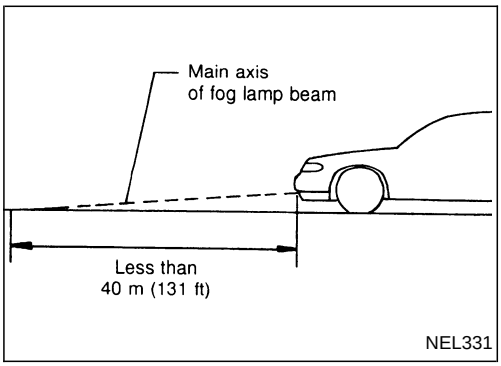
YEL078D

## Front Fog Lamp Aiming Adjustment

When performing fog lamp aiming adjustment, use an aiming machine, aiming wall screen or headlamp tester. The aimer should be in good operational condition, calibrated and used according to the relevant operation manuals supplied with the unit.
If an aimer is not available, aiming adjustment can be done as follows:
**For details, refer to the regulations in your own country.**

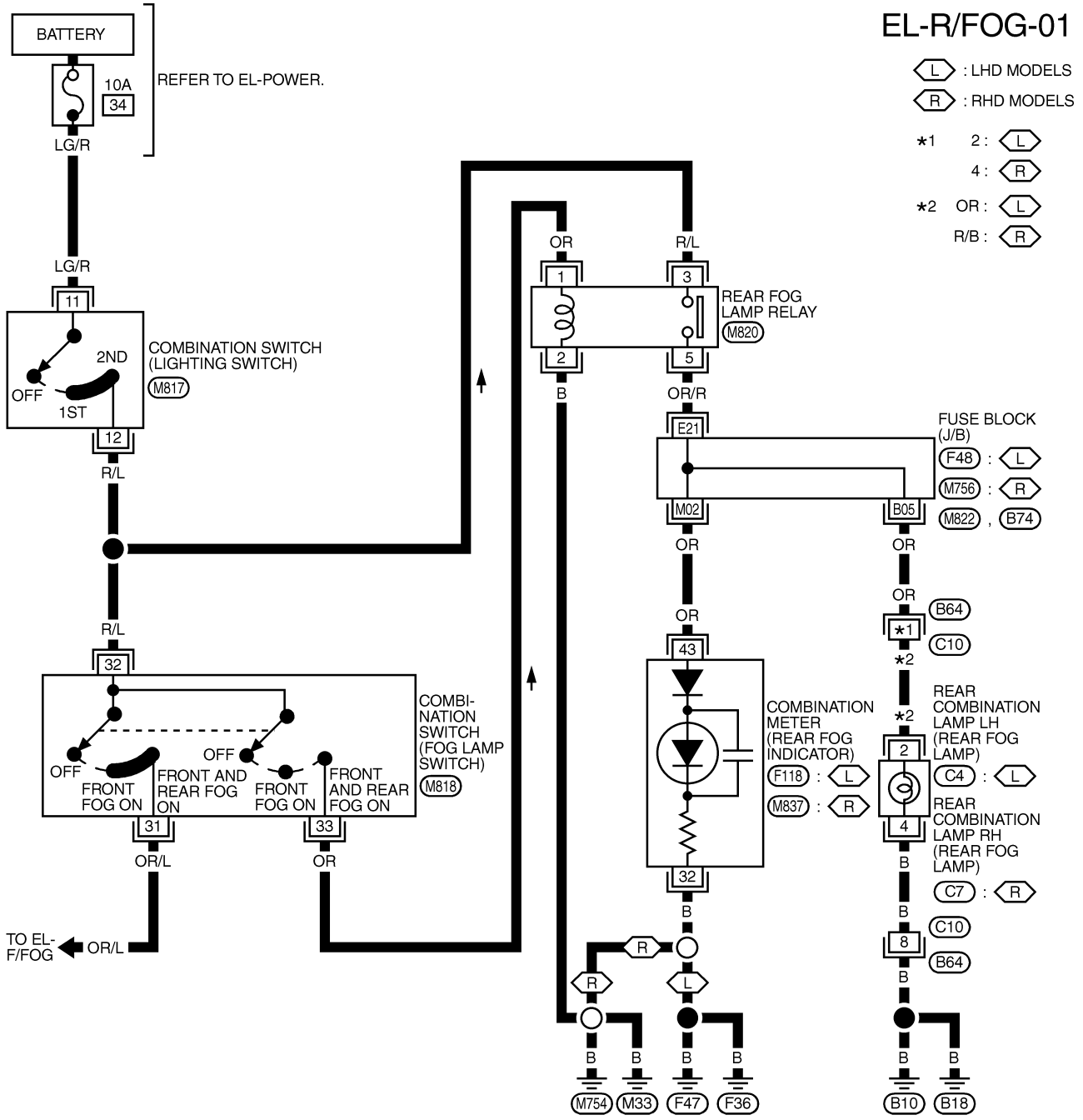
**CAUTION:**
- **Keep all tires inflated to correct pressures.**
- **Place vehicle and tester on one and the same flat surface.**
- **Ensure that there is no-load in the vehicle other than coolant, engine oil (filled up to correct level), full fuel tank and the driver (or equivalent weight placed in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

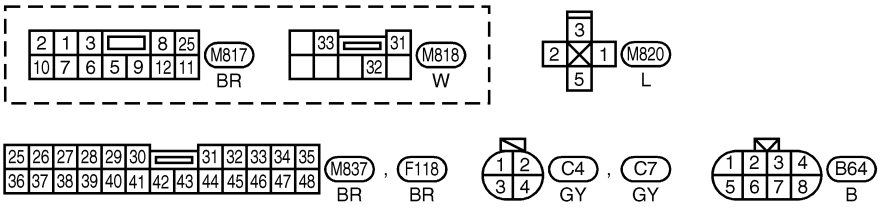
For details of front fog lamp aiming adjustment, refer to "Aiming Adjustment", EL-43.




Check the distance between the vehicle and the ground illumination point of the main axis of the fog lamp beam. Keep the distance to approximately 40 m (131 ft).

## Wiring Diagram — R/FOG —

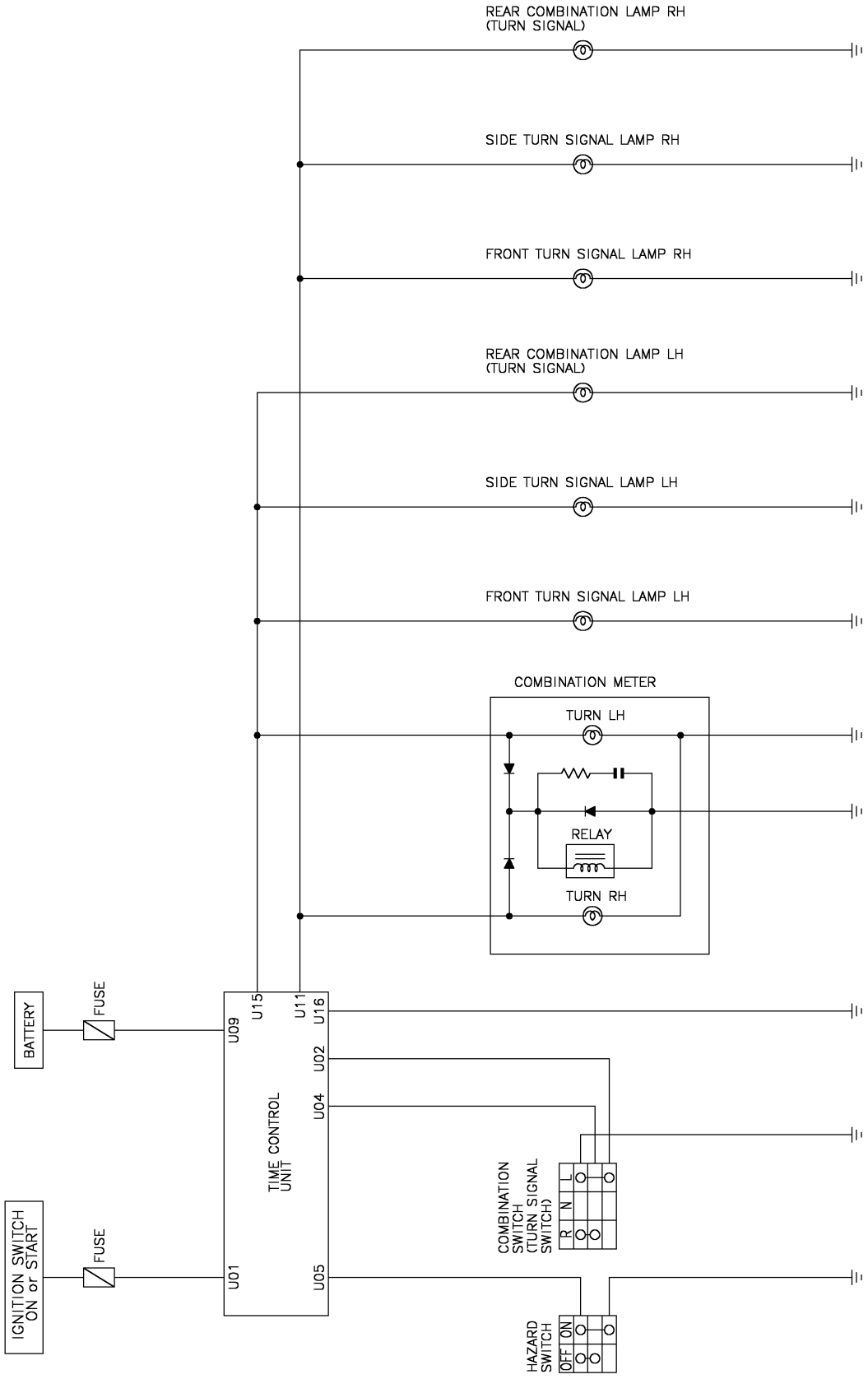



REFER TO THE FOLLOWING.
M756 , M822 , F48 , B74
-FUSE BLOCK-
JUNCTION BOX (J/B)

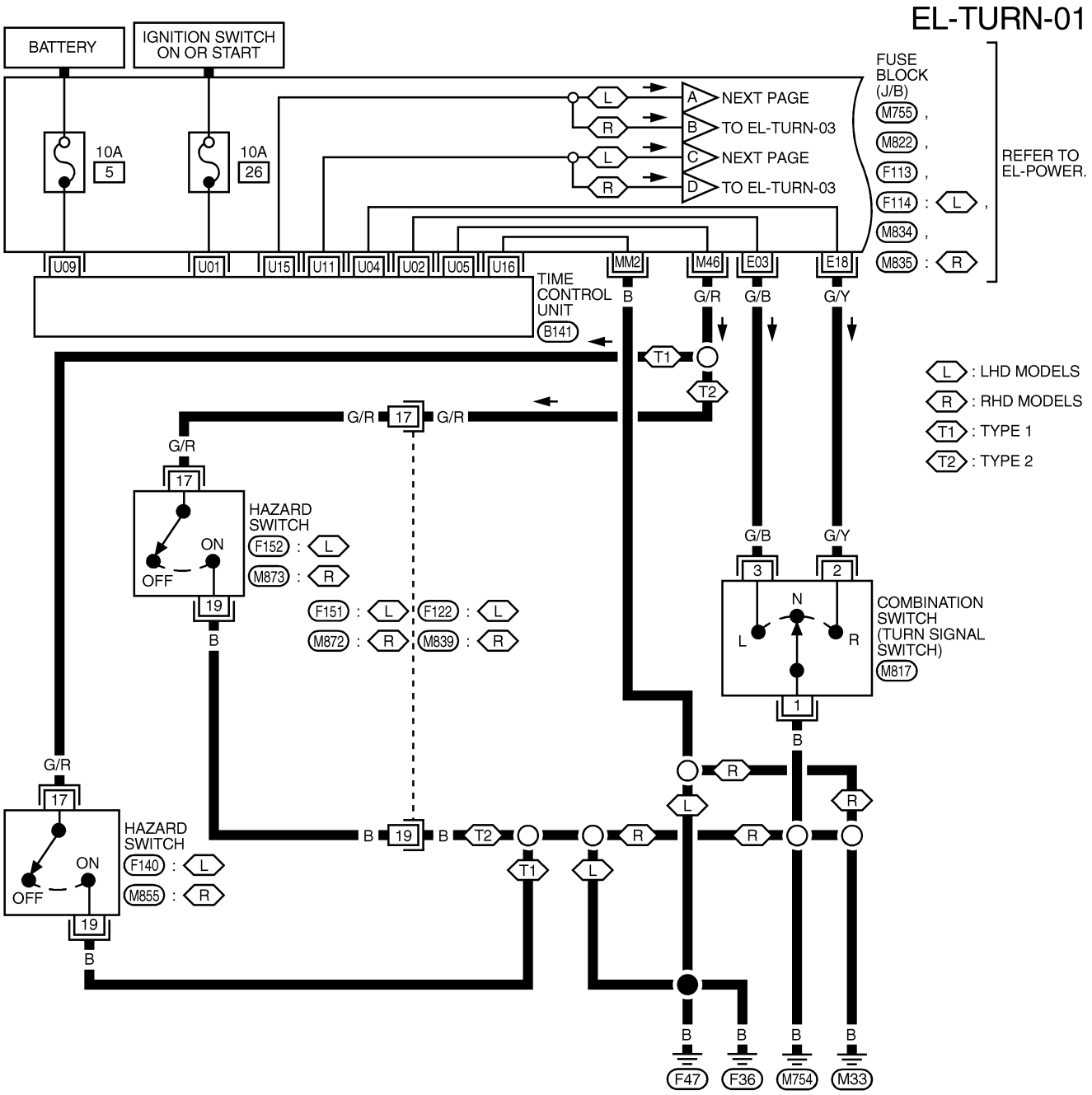
YEL079D

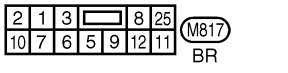
## Schematic

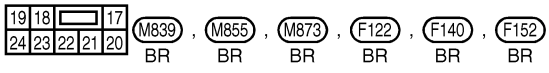



YEL089D

## Wiring Diagram — TURN —





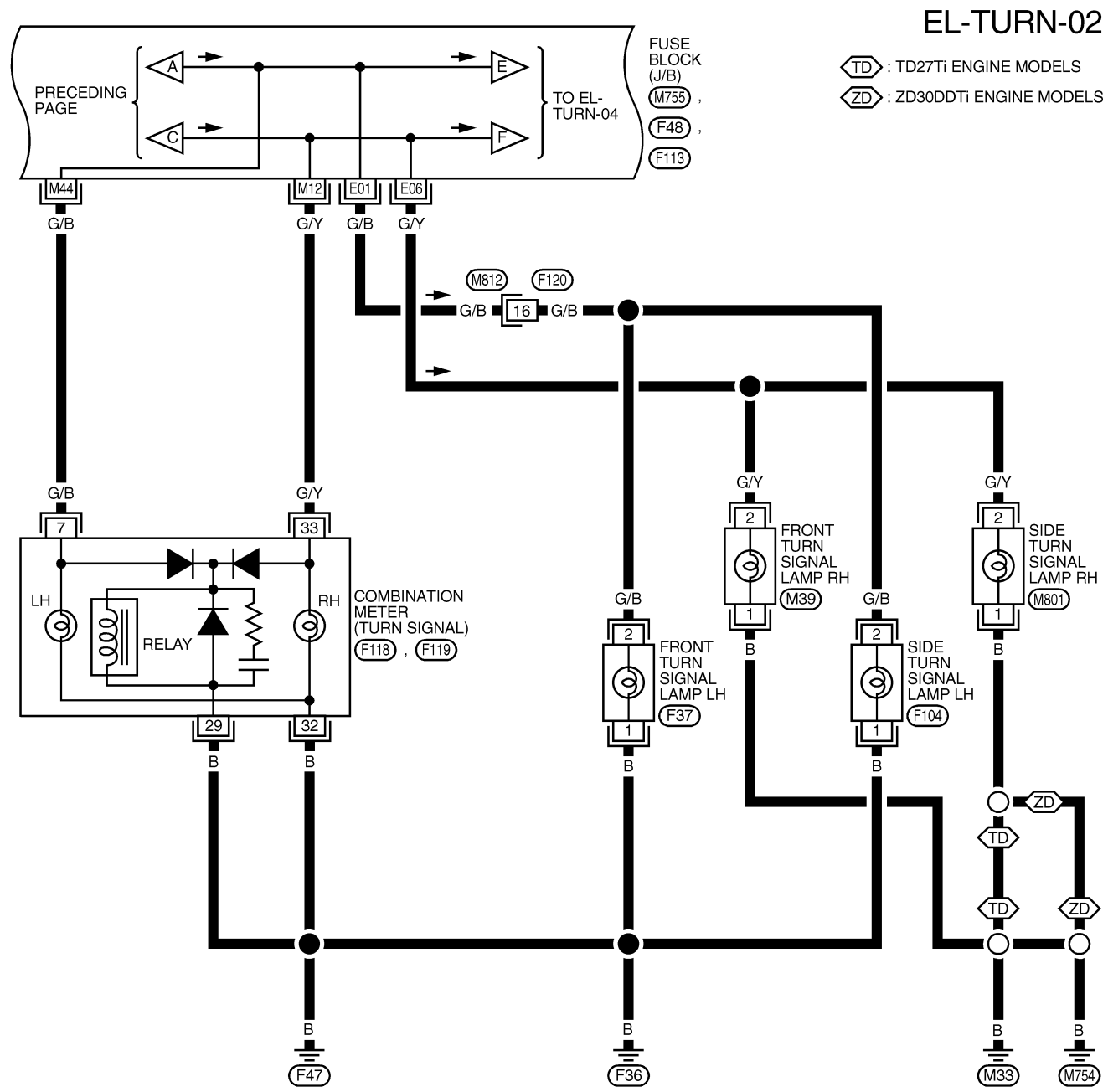
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" , EL SECTION.

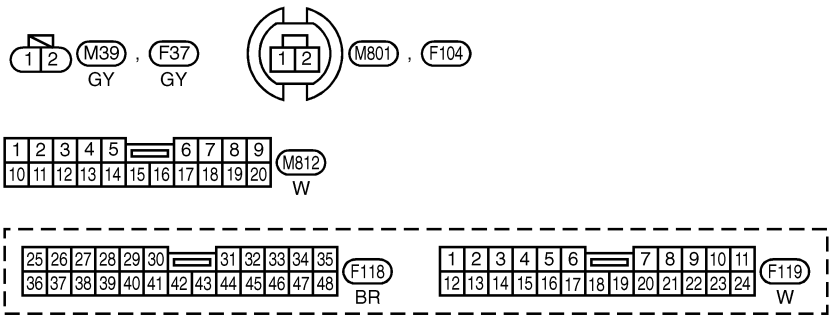
REFER TO THE FOLLOWING.
M755 , M822 , M834 , M835 , F113 , F114 -FUSE BLOCK- JUNCTION BOX (J/B)

YEL090D

## Wiring Diagram — TURN — (Cont'd)

### LHD MODELS



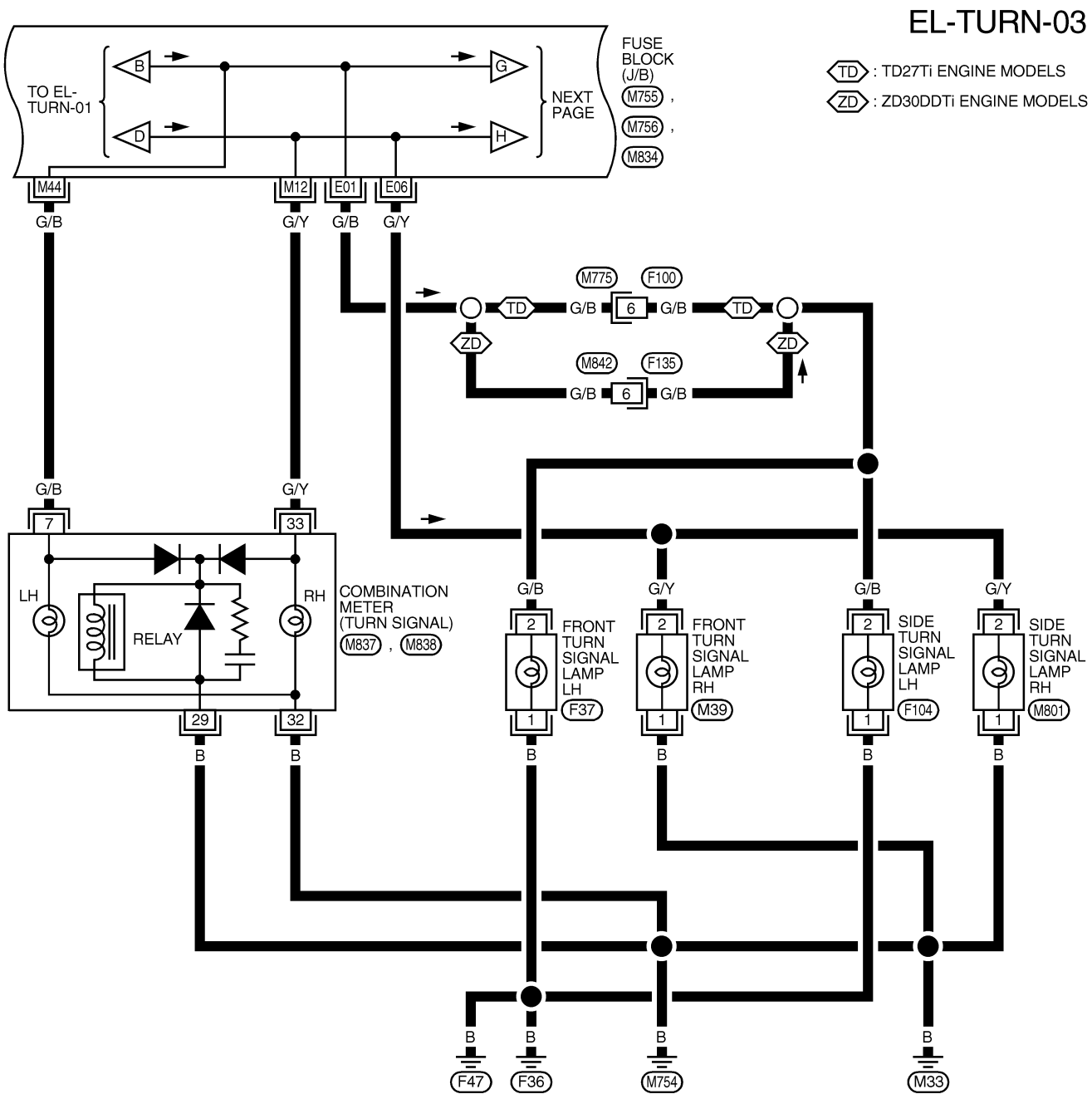



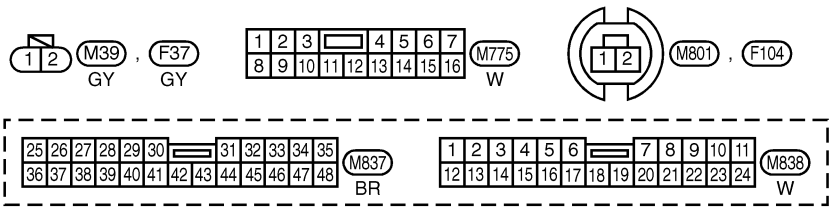

REFER TO THE FOLLOWING.
M755 , F48 , F113
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL091D

## Wiring Diagram — TURN — (Cont'd)

### RHD MODELS

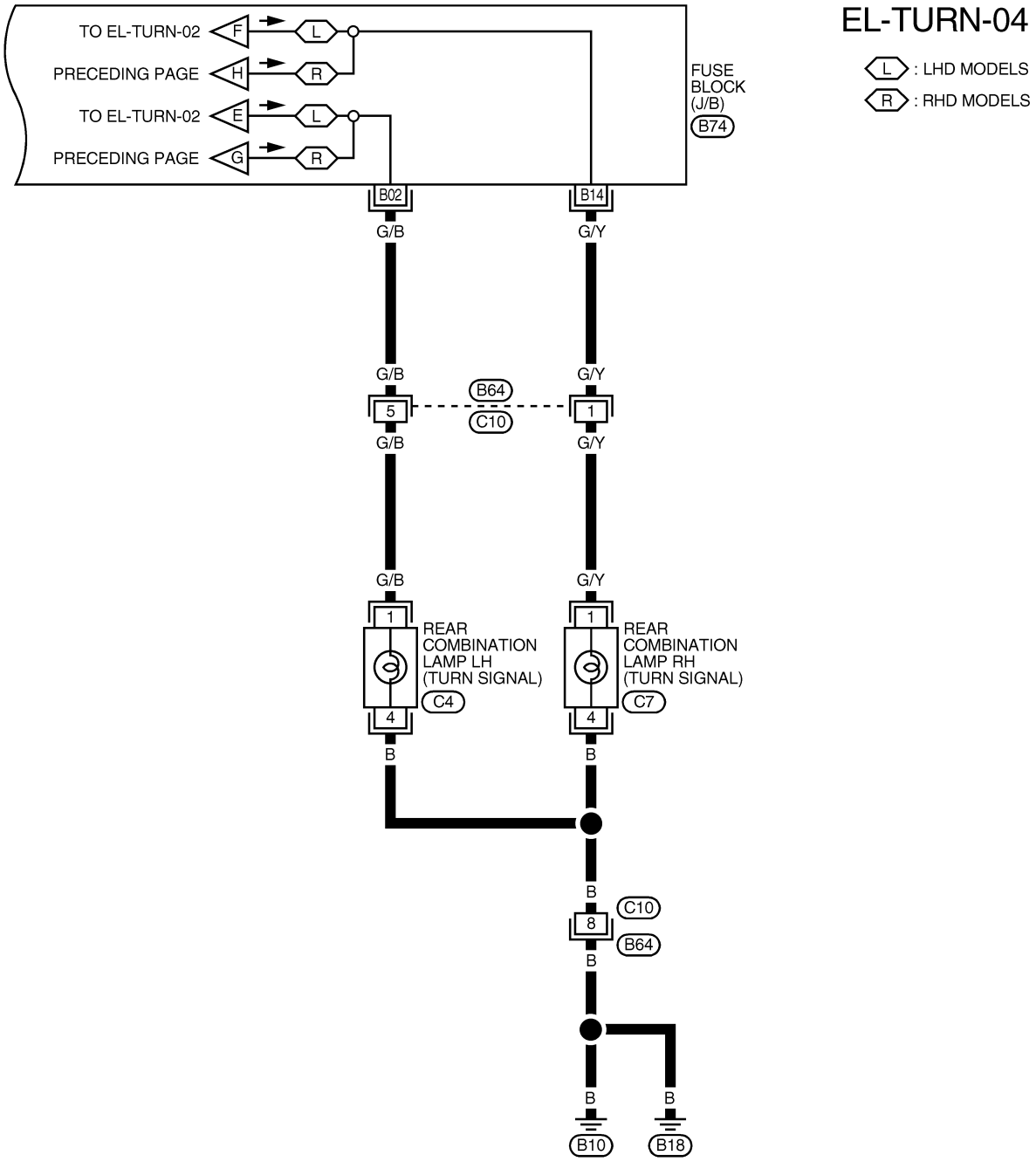



REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M755 , M756 , M834
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL092D

## Wiring Diagram — TURN — (Cont'd)




C4 GY , C7 GY

B64 B

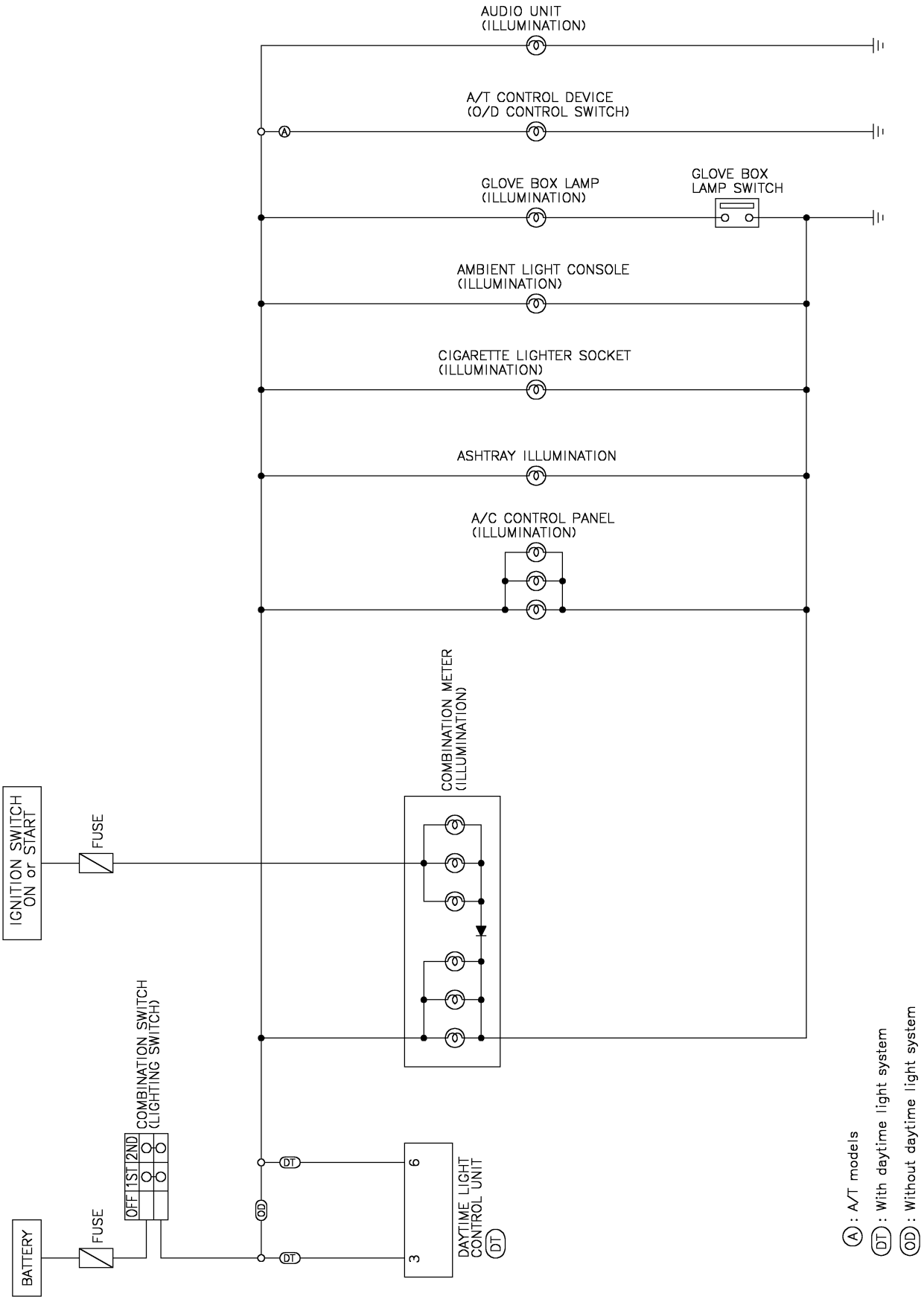
REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL093D

## Bulb Specifications

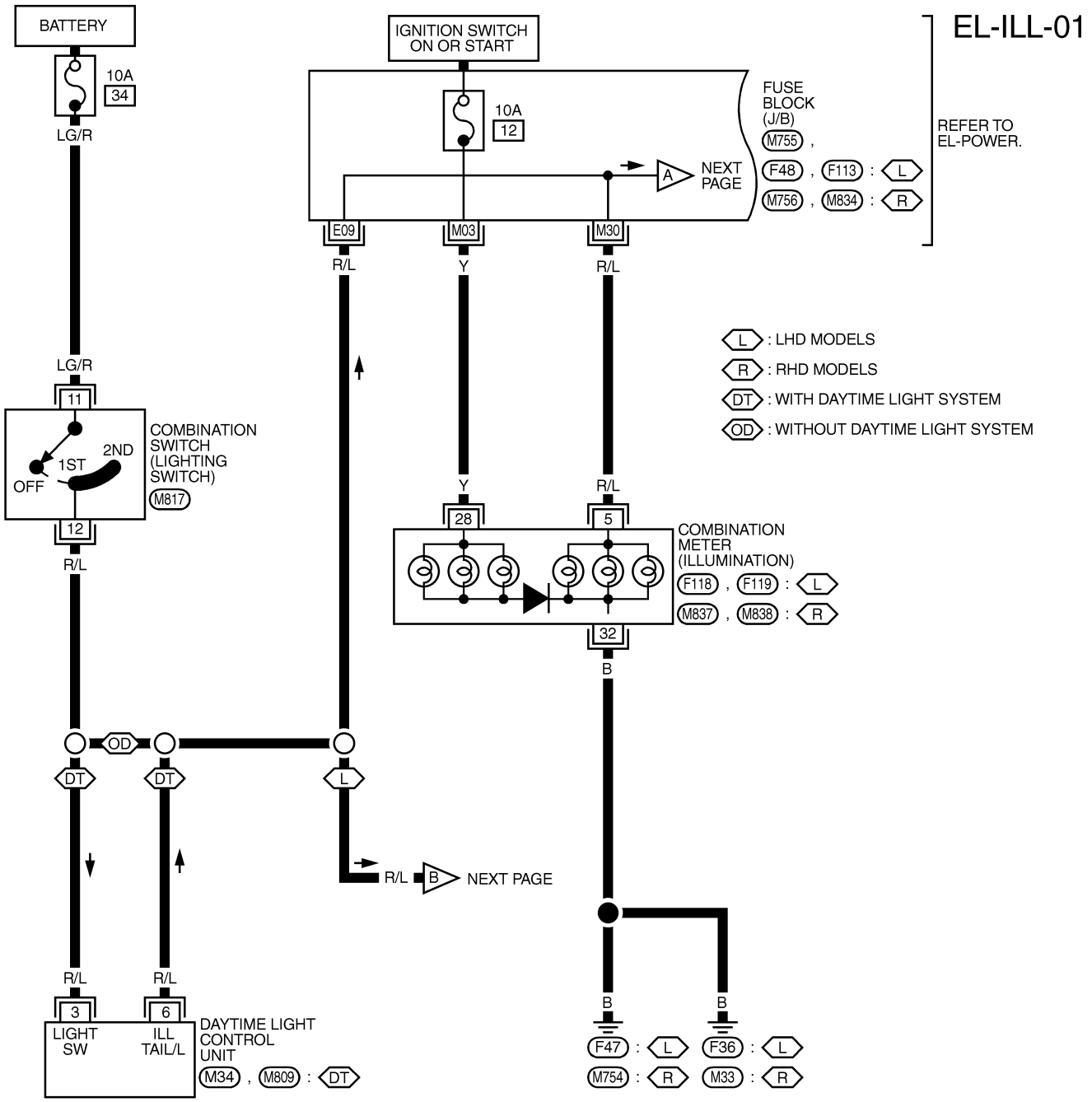
| | Wattage (12 volt) |
|---|---|
| Headlamp (Semi-sealed beam) | |
| High/Low | 60/55 Type H4 |
| Front fog lamp | 51 Type HB4 |
| Front turn signal lamp | 21 |
| Front clearance lamp | 5 |
| Side turn signal lamp | 5 |
| Rear combination lamp | |
| Turn signal | 21 |
| Stop/tail lamp | 21/10 |
| Back-up | 21 |
| Rear fog | 21 |
| License plate lamp | 5 |
| Interior lamp (Front) | 10 |
| Map lamp | 5 |
| Interior lamp (Rear) | 5 |

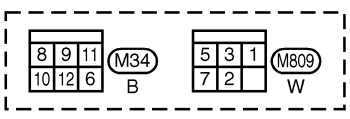
## Schematic

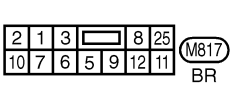


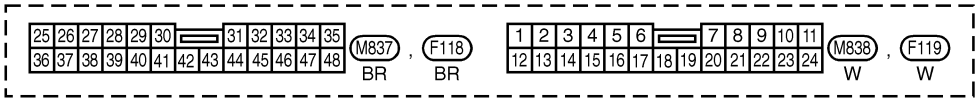

YEL080D

## Wiring Diagram — ILL —



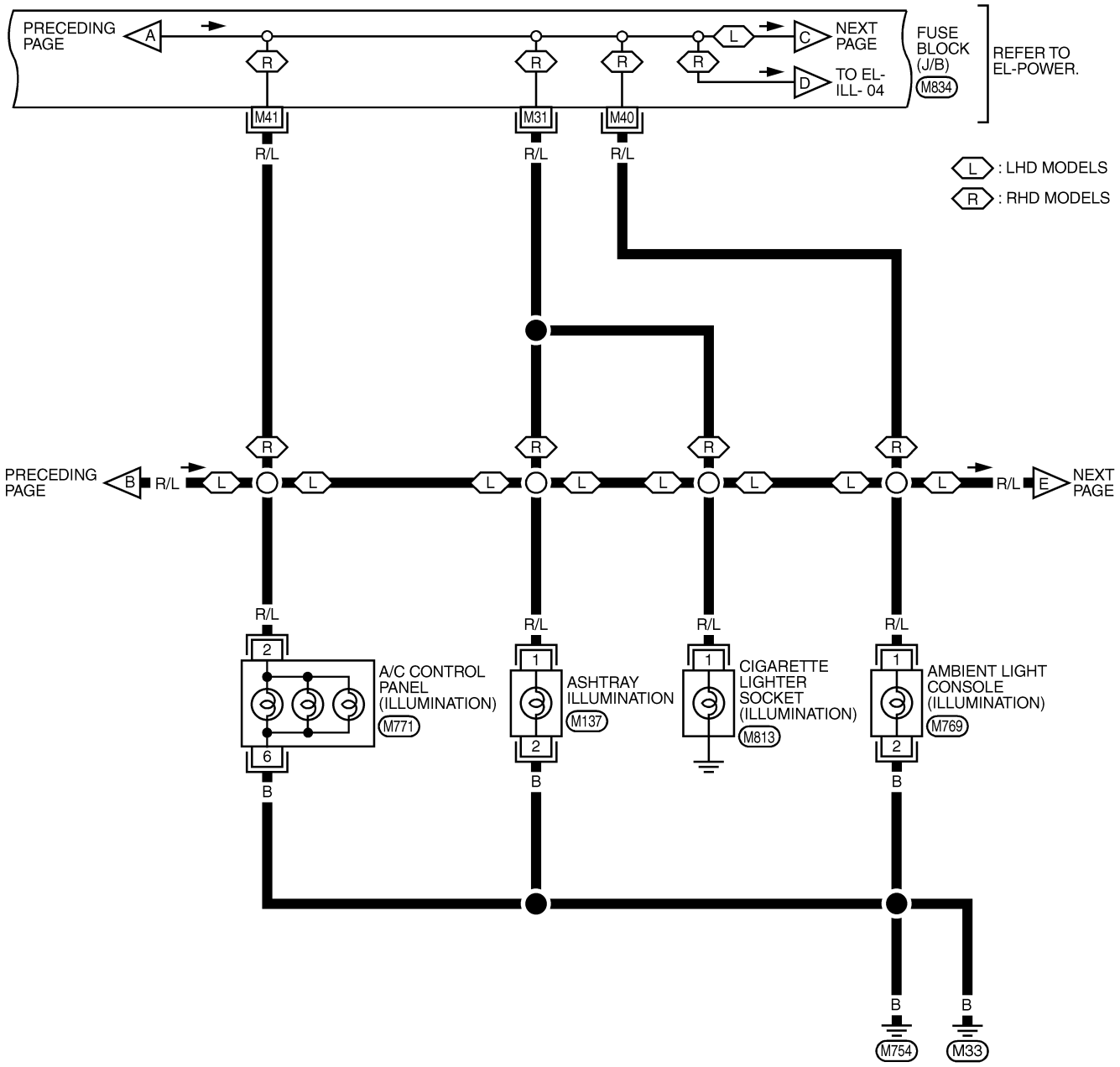



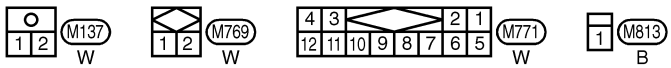

REFER TO THE FOLLOWING.
M755 , M756 , F48 , F113 ,
M834
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL081D

## Wiring Diagram — ILL — (Cont'd)

EL-ILL-02



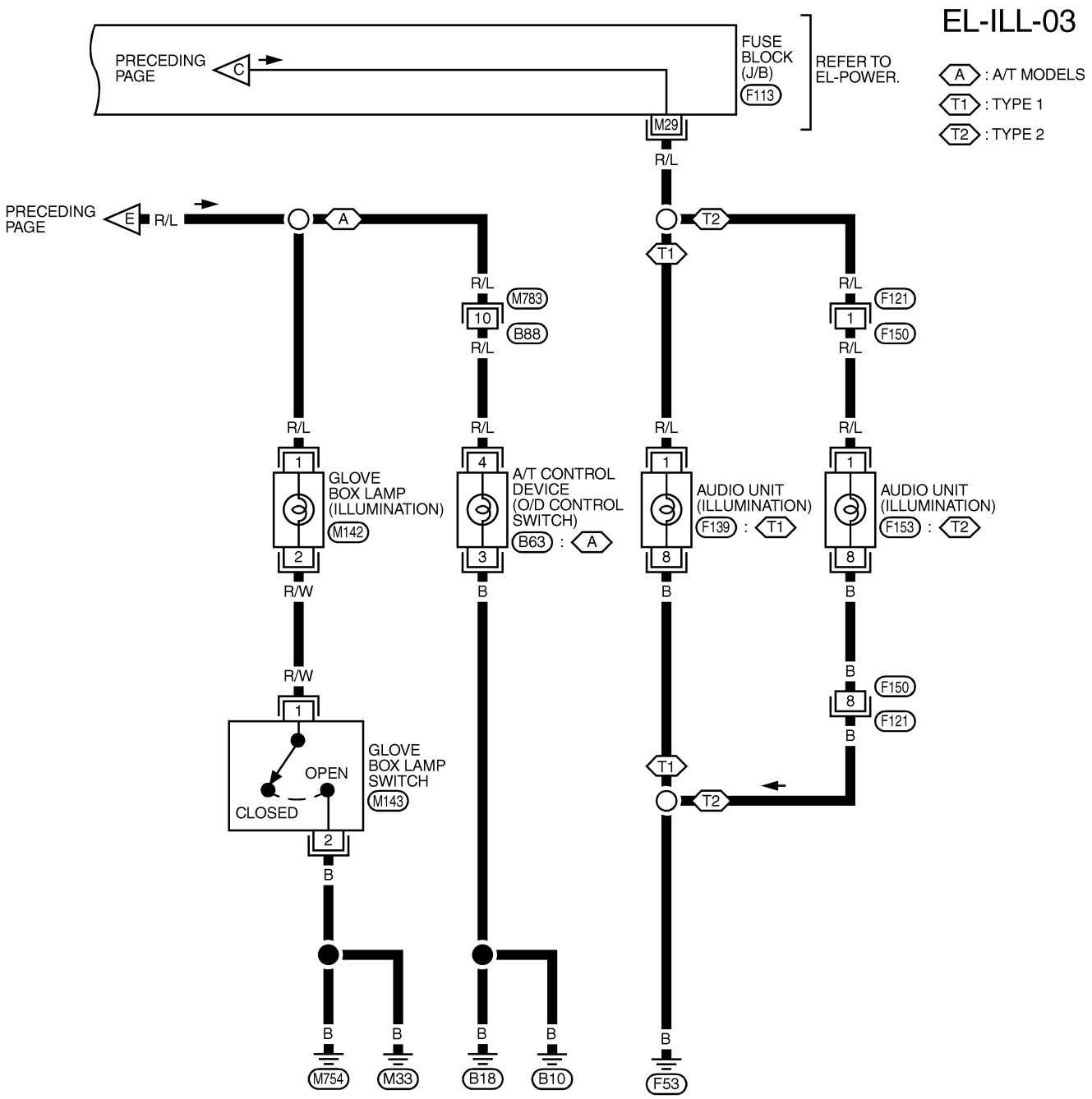



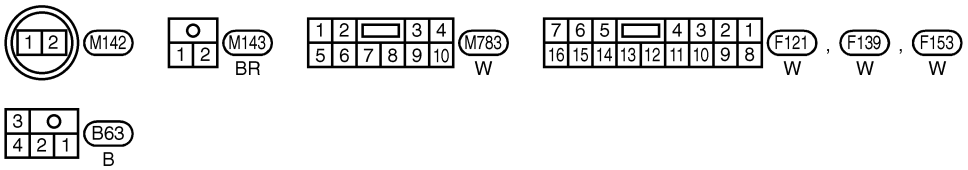

REFER TO THE FOLLOWING.
M834 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL082D

## Wiring Diagram — ILL — (Cont'd)

### LHD MODELS



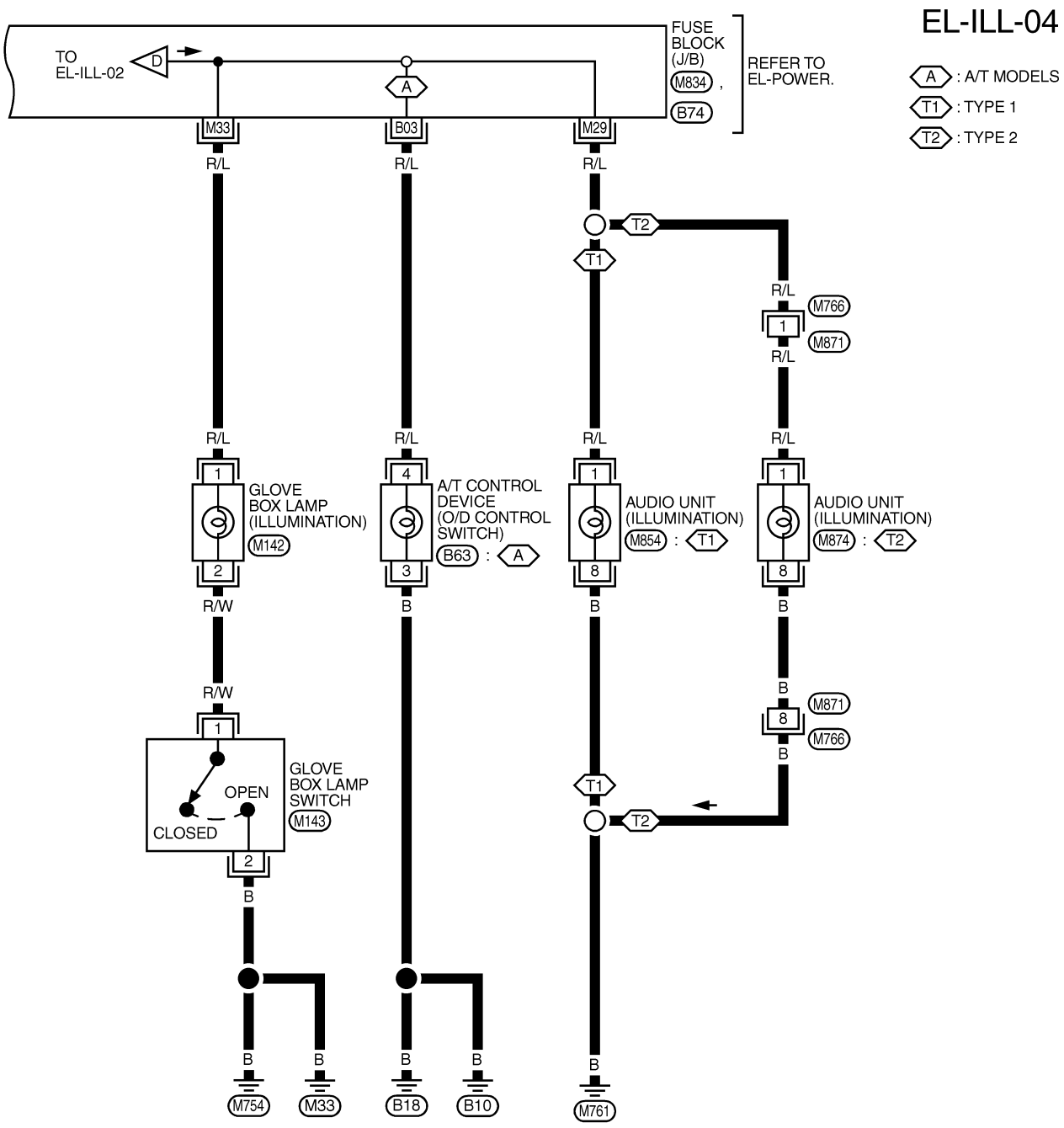



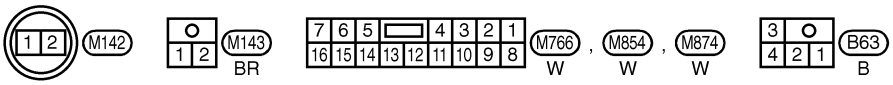

REFER TO THE FOLLOWING.
F113 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL083D

## Wiring Diagram — ILL — (Cont'd)

### RHD MODELS



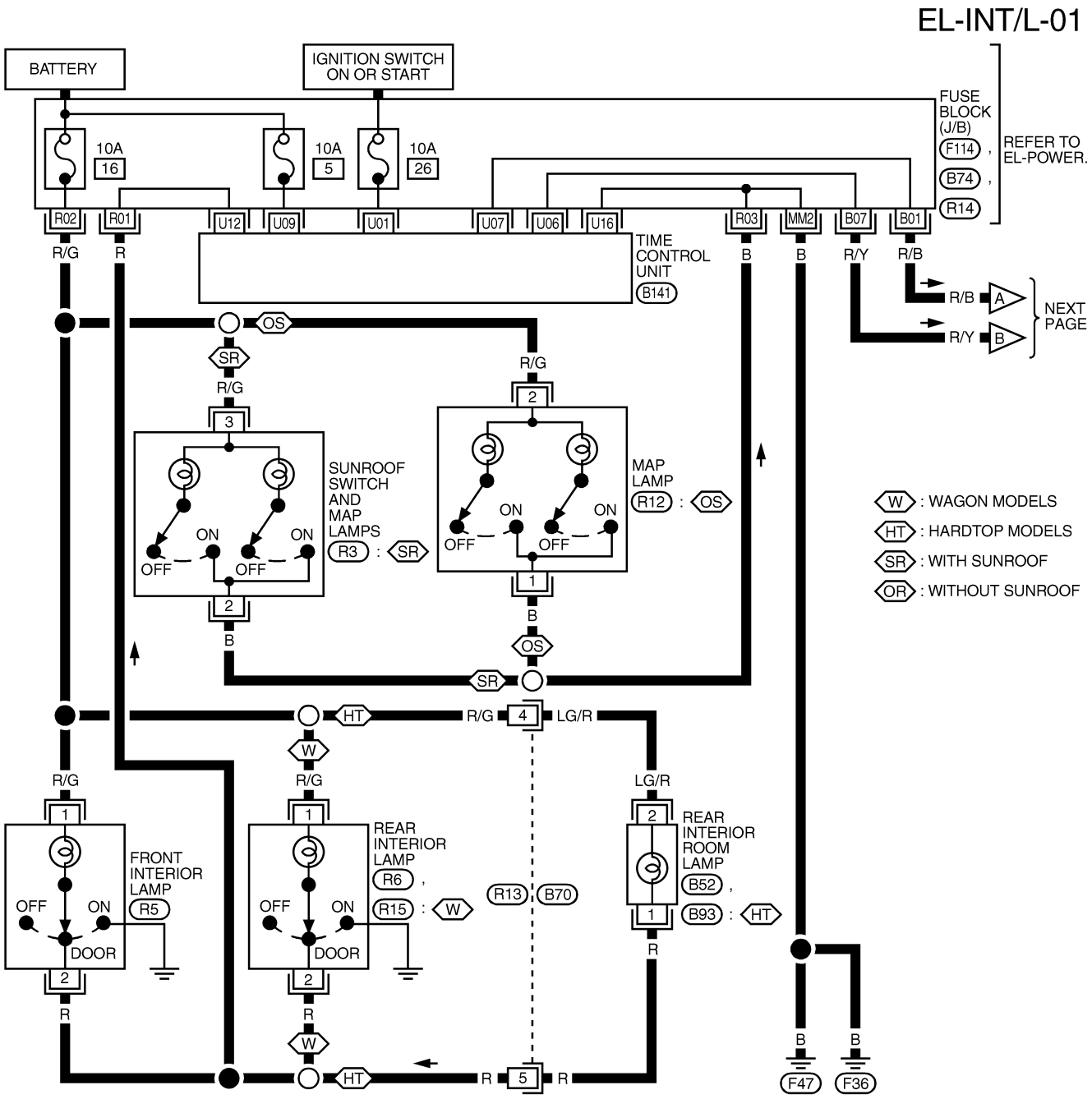



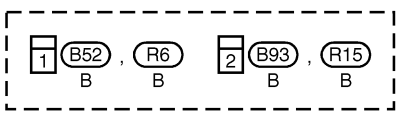

REFER TO THE FOLLOWING.
M834 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

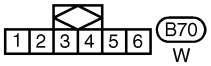
YEL084D

## Wiring Diagram — INT/L —

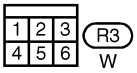
### LHD MODELS

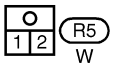


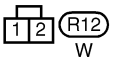







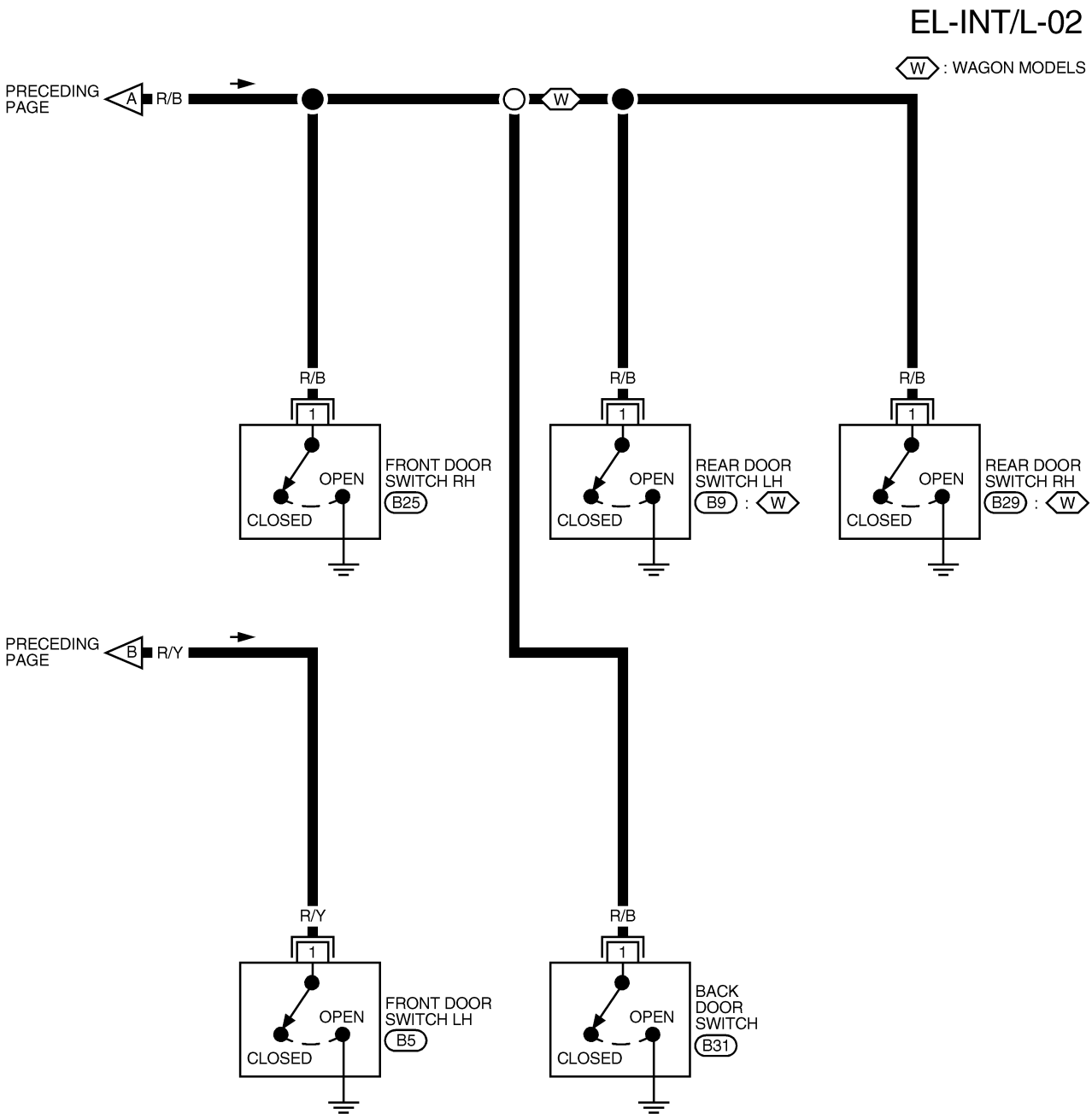

REFER TO THE FOLLOWING.
F114 , B74 , R14
-FUSE BLOCK-
JUNCTION BOX (J/B)

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

YEL085D

## Wiring Diagram — INT/L — (Cont'd)

### LHD MODELS

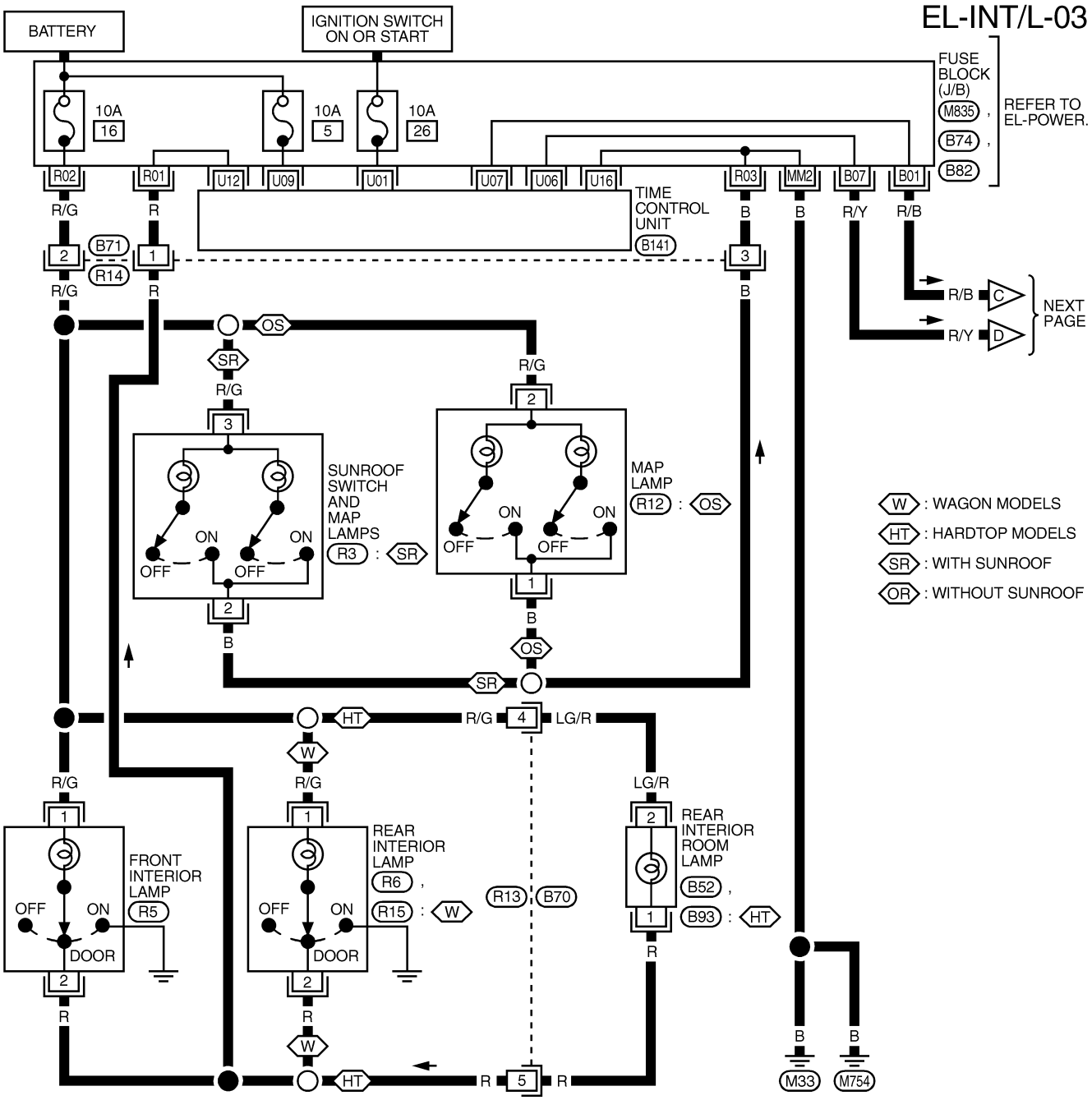


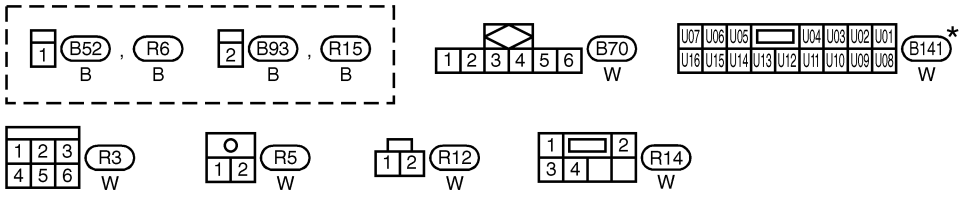

1 B5 BR , B9 BR , B25 BR , B29 BR , B31 BR

YEL086D

## Wiring Diagram — INT/L — (Cont'd)

### RHD MODELS



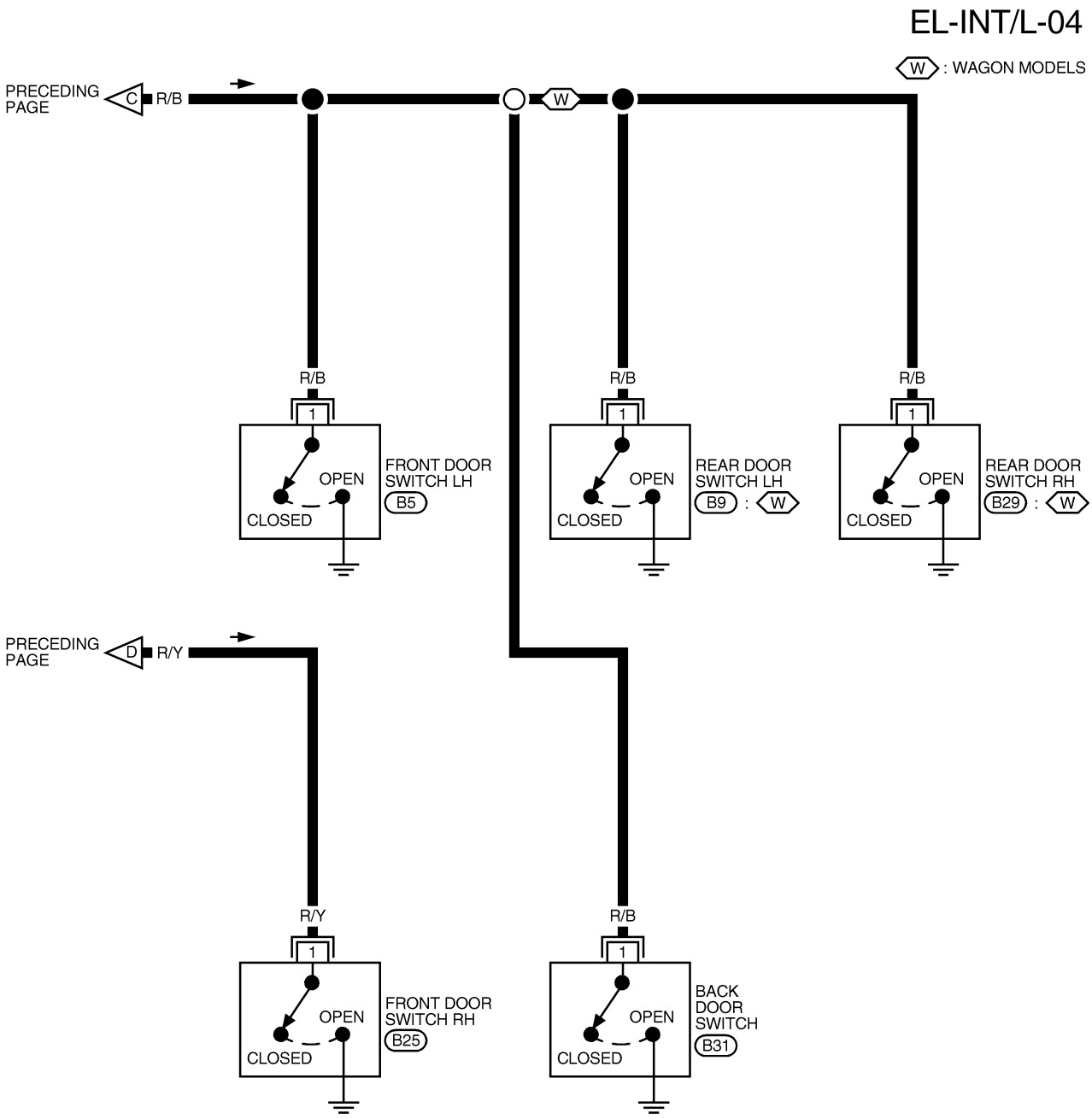

REFER TO THE FOLLOWING.
M835, B74, B82
-FUSE BLOCK-
JUNCTION BOX (J/B)

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

YEL087D

## Wiring Diagram — INT/L — (Cont'd)

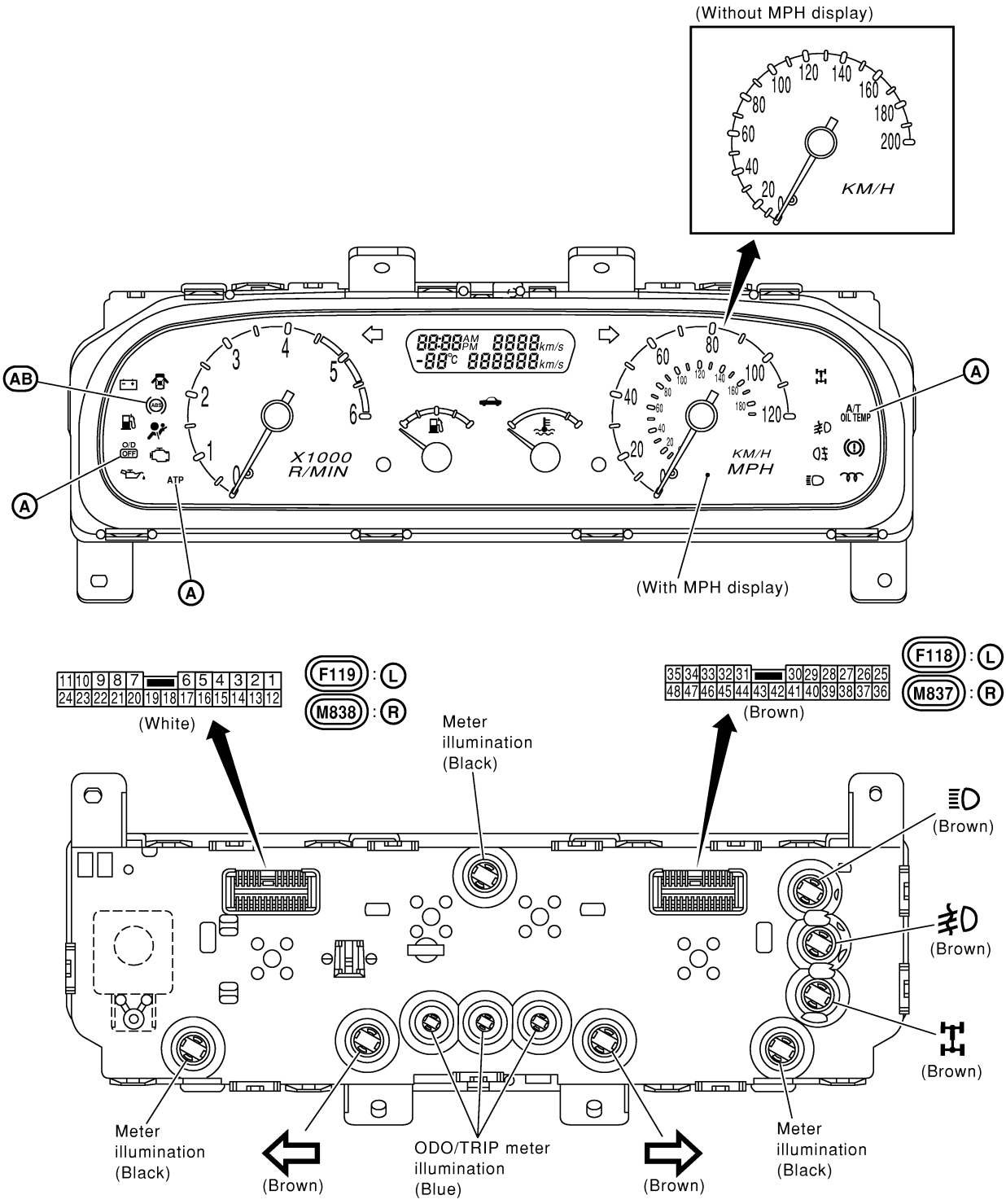
### RHD MODELS




1 B5 BR , B9 BR , B25 BR , B29 BR , B31 BR

YEL088D

## Combination Meter



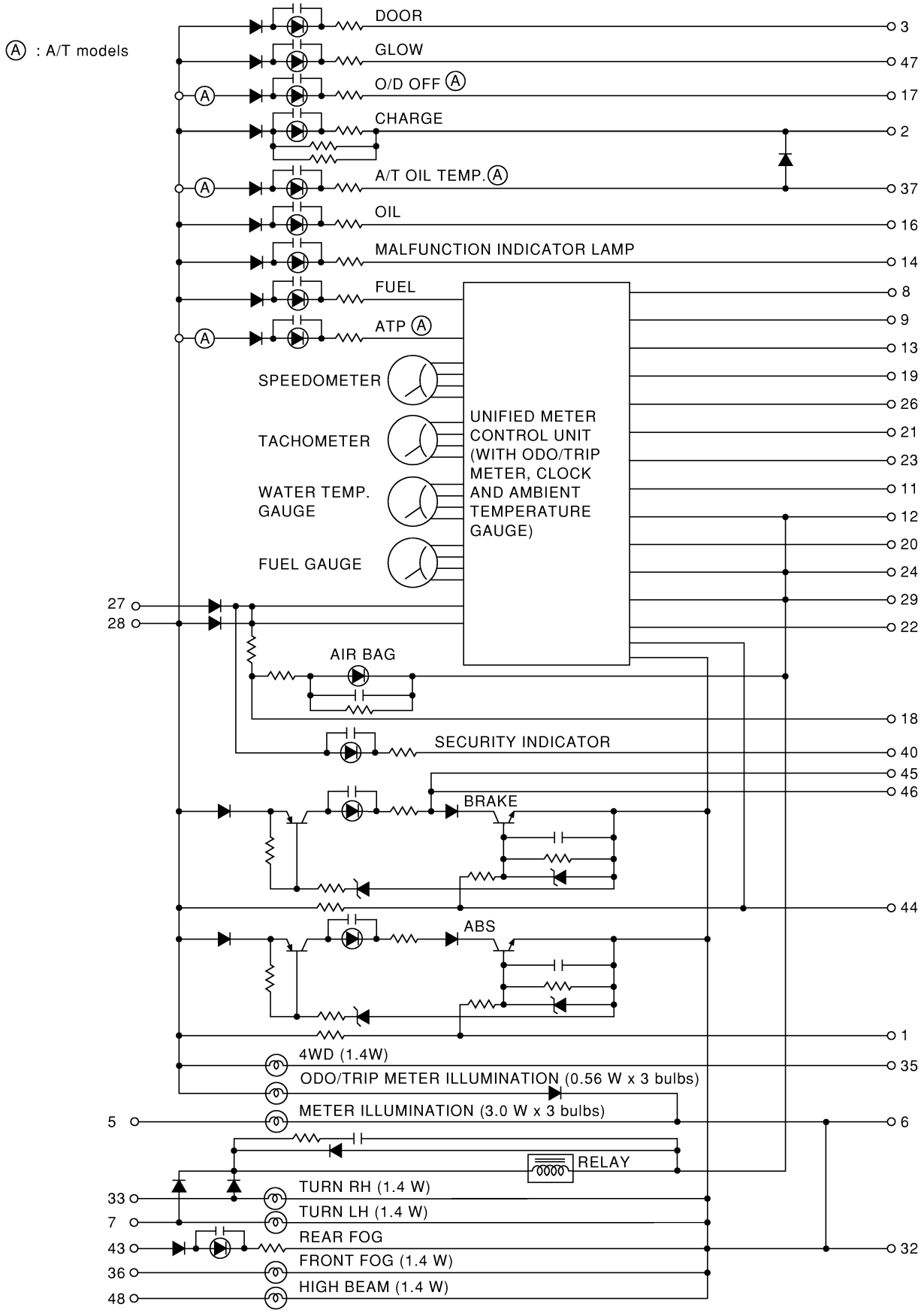

| Bulb socket color | Bulb wattage |
|---|---|
| Brown | 1.4 W |
| Black | 3.0 W |
| Blue | 0.56 W |

( ): Warning bulb socket color

(L) : LHD models
(R) : RHD models
(A) : A/T models
(AB) : With ABS

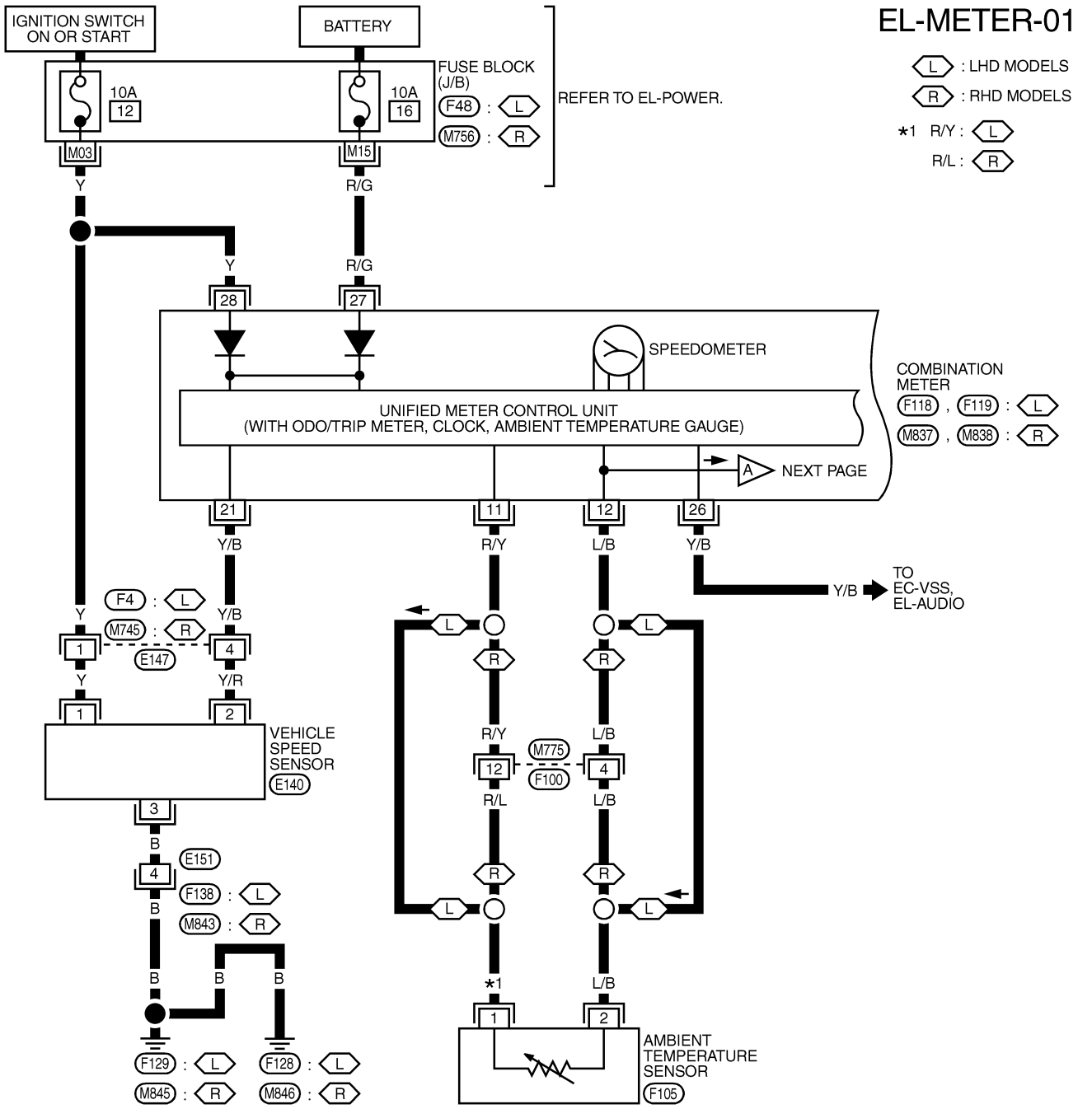
YEL281D

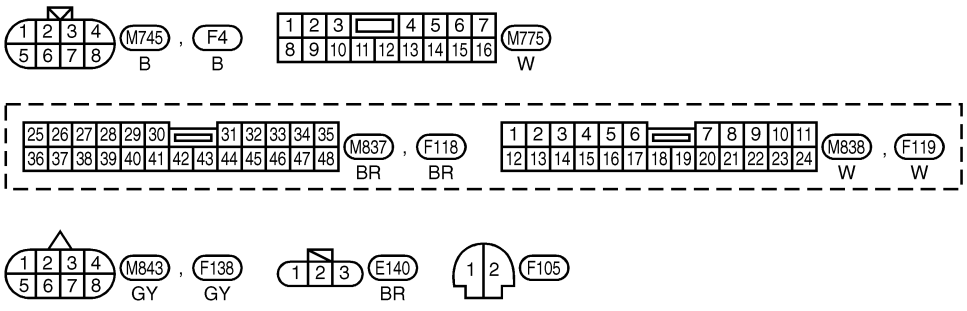
## Schematic


Ⓐ : A/T models
DOOR
GLOW
O/D OFF Ⓐ
CHARGE
A/T OIL TEMP. Ⓐ
OIL
MALFUNCTION INDICATOR LAMP
FUEL
ATP Ⓐ
SPEEDOMETER
TACHOMETER
WATER TEMP. GAUGE
FUEL GAUGE
UNIFIED METER CONTROL UNIT (WITH ODO/TRIP METER, CLOCK AND AMBIENT TEMPERATURE GAUGE)
AIR BAG
SECURITY INDICATOR
BRAKE
ABS
4WD (1.4W)
ODO/TRIP METER ILLUMINATION (0.56 W x 3 bulbs)
METER ILLUMINATION (3.0 W x 3 bulbs)
RELAY
TURN RH (1.4 W)
TURN LH (1.4 W)
REAR FOG
FRONT FOG (1.4 W)
HIGH BEAM (1.4 W)
3
47
17
2
37
16
14
8
9
13
19
26
21
23
11
12
20
24
29
22
18
40
45
46
44
1
35
6
32
27
28
5
33
7
43
36
48
YEL280D

## Wiring Diagram — METER —

### TD27Ti ENGINE MODELS



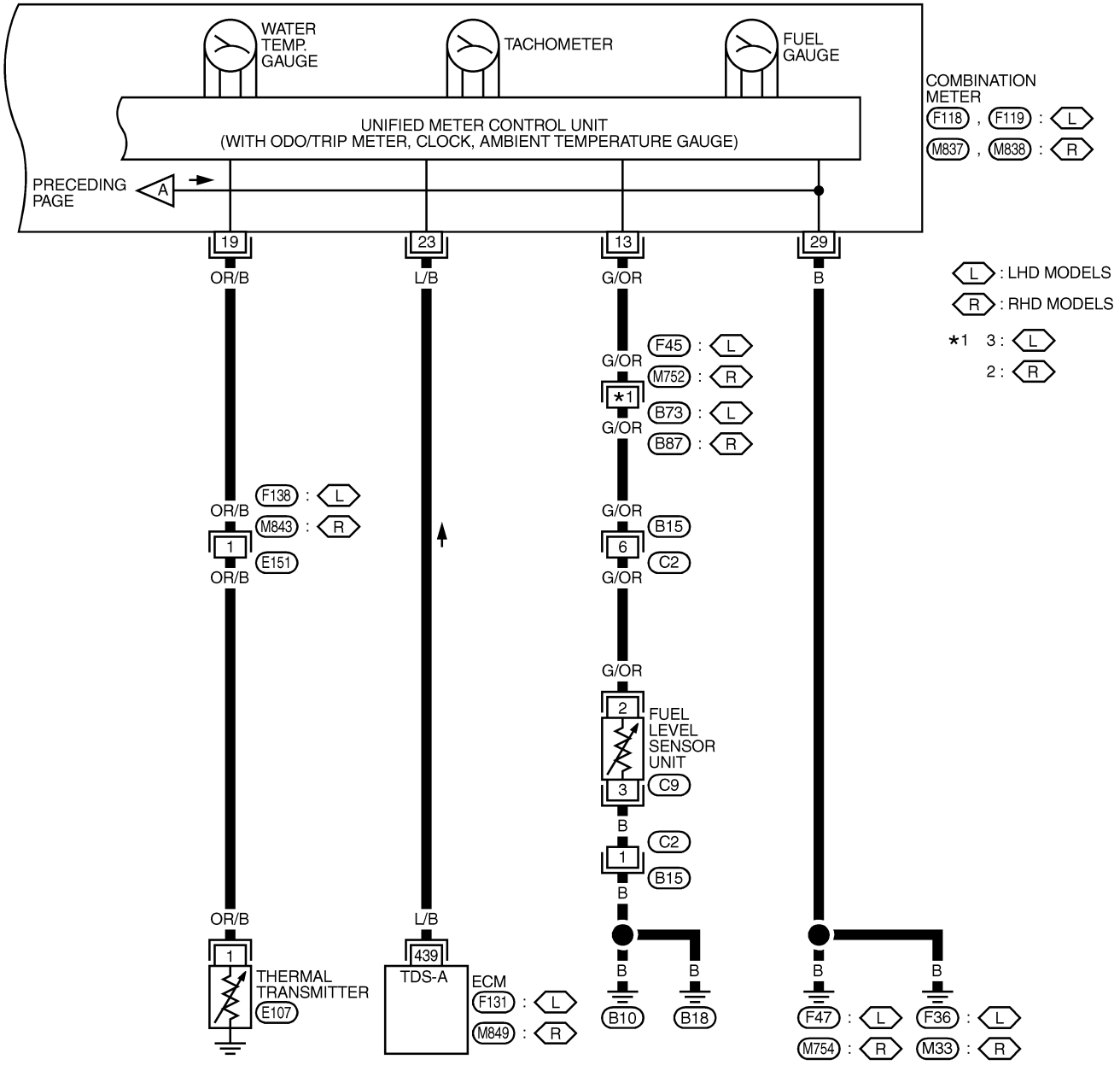

REFER TO THE FOLLOWING.
M756 , F48 -FUSE BLOCK-JUNCTION BOX (J/B)

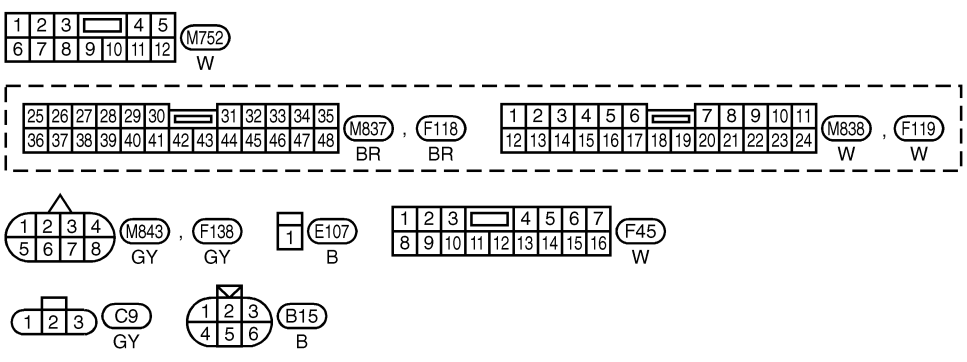
YEL094D

## Wiring Diagram — METER — (Cont'd)

### TD27Ti ENGINE MODELS

EL-METER-02



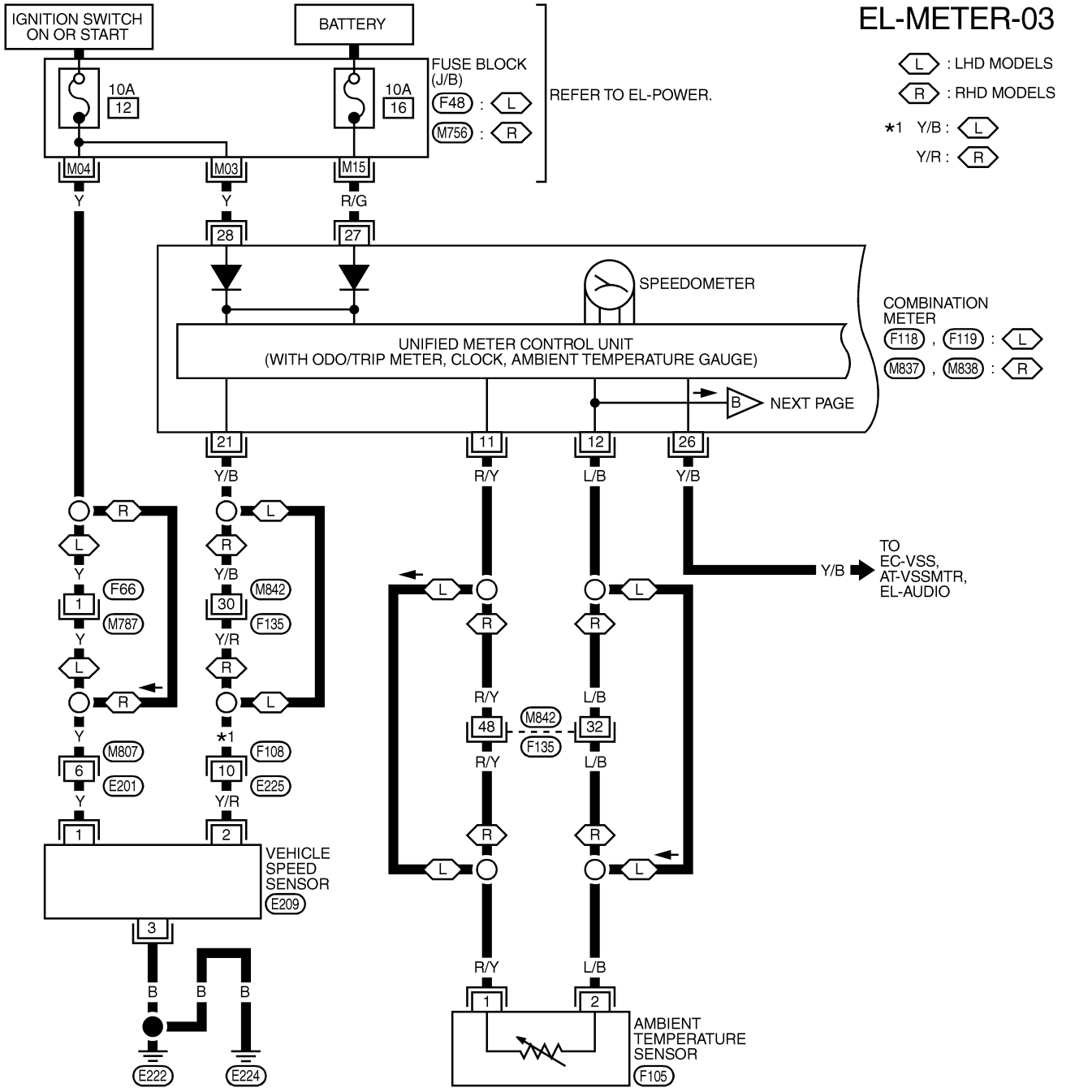



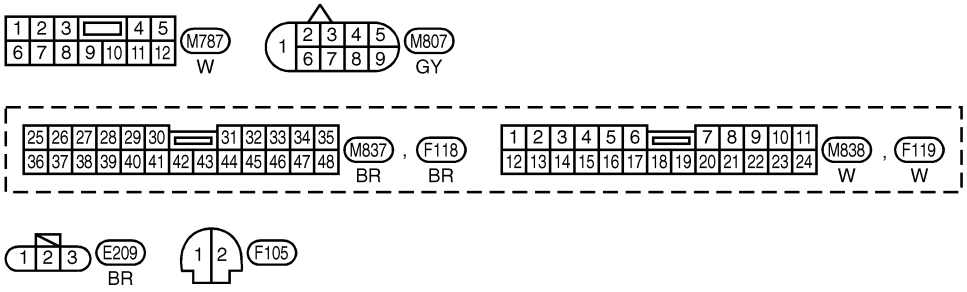

REFER TO THE FOLLOWING.
M849 , F131 -ELECTRICAL UNITS

YEL095D

## Wiring Diagram — METER — (Cont'd)

### ZD30DDTi ENGINE MODELS



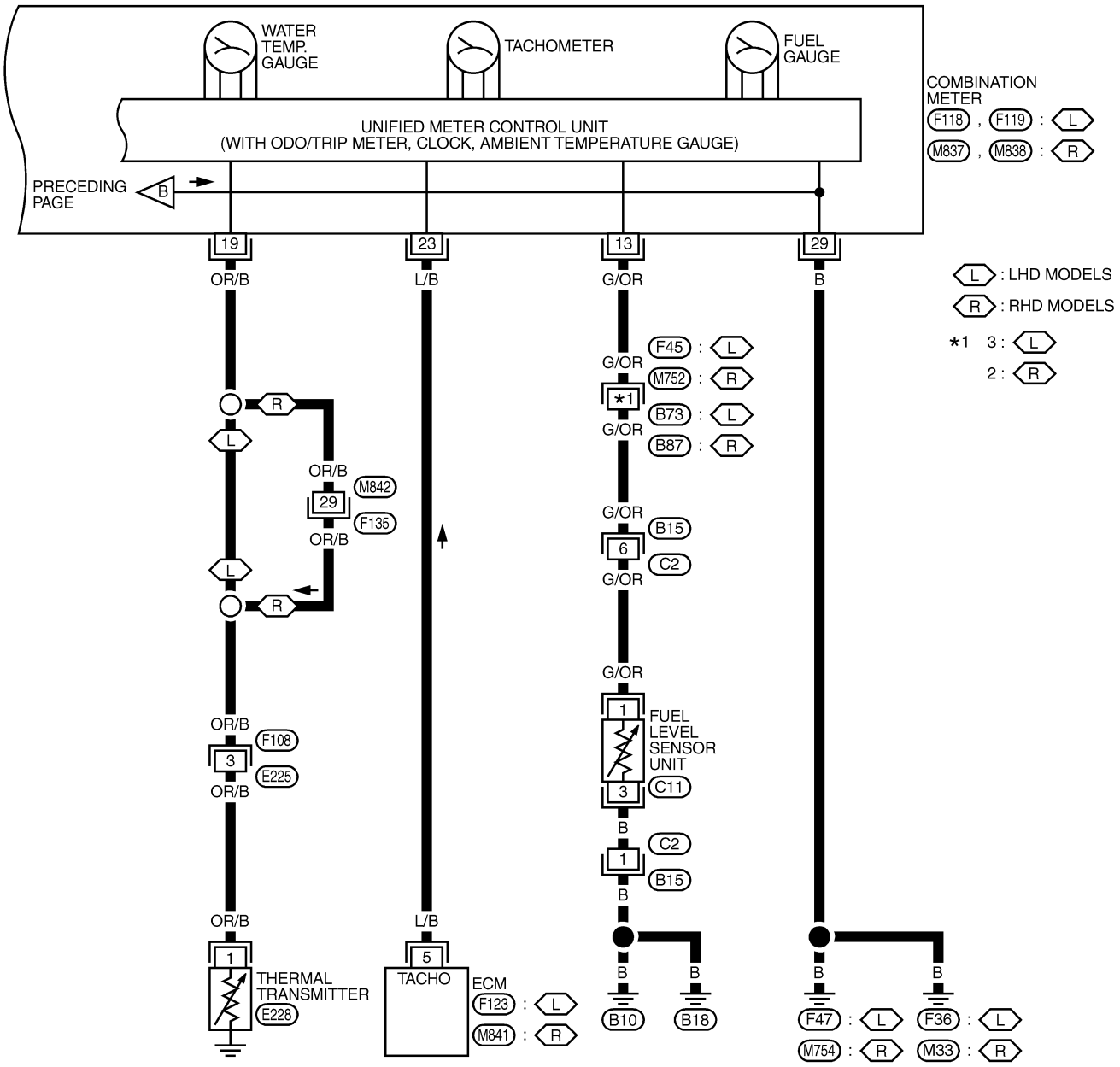

REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M756 , F48 -FUSE BLOCK-JUNCTION BOX (J/B)

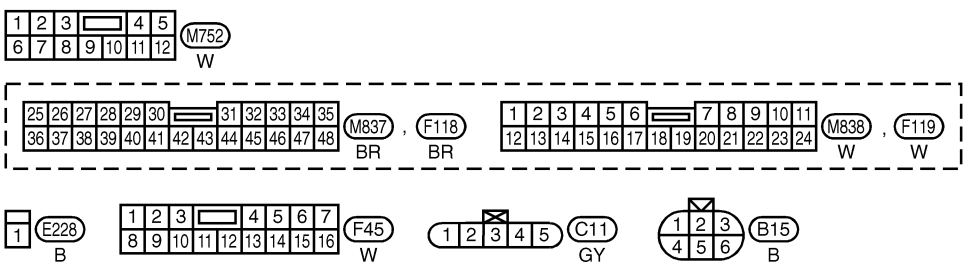
YEL096D

## Wiring Diagram — METER — (Cont'd)

### ZD30DDTi ENGINE MODELS

EL-METER-04




REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M841 , F123 -ELECTRICAL UNITS

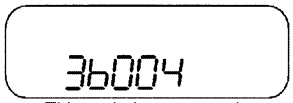
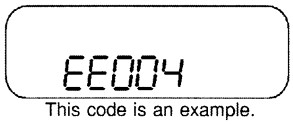
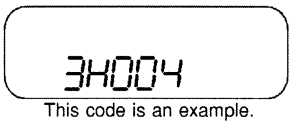
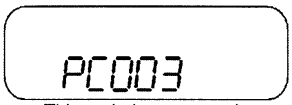
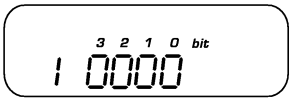
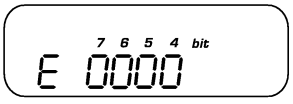
YEL097D

## Combination Meter Self-Diagnosis

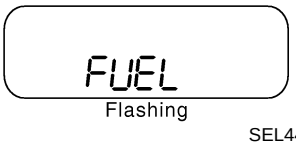
### PERFORMING SELF-DIAGNOSIS MODE

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 I) 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.

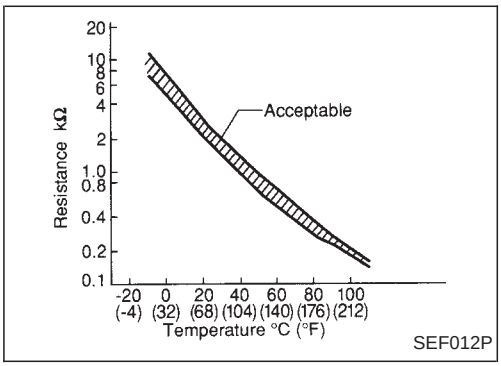
| | Check items | Display | Remarks |
|---|---|---|---|
| A) | Odometer segment test | | All odo trip meter segments are ON. |
| B) | Software code |  This code is an example. NEL735 | This information is not used for service. Please skip this step. |
| C) | EEPROM code |  This code is an example. NEL736 | This information is not used for service. Please skip this step. |
| D) | Hardware code |  This code is an example. NEL737 | This information is not used for service. Please skip this step. |
| E) | PCB code |  This code is an example. NEL738 | This information is not used for service. Please skip this step. |
| F) | 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. |
| G) | 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. |
| H) | Error E (Bit 4 - Bit 7) |  SEL442X | |

## Combination Meter Self-Diagnosis (Cont'd)

| | Check items | Display | Remarks |
|---|---|---|---|
| I) | Fuel warning lamp test |  Flashing SEL443X | Fuel warning lamp is on and odo trip meter segment "FUEL" flashes. |

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

| Bit | Detectable items | Description of the failure | | Displayed figure on the bit | |
|---|---|---|---|---|---|
| | | | | Failure | No failure |
| 0 | Speedometer input signal | No input signal<br>When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure.<br>(If input signal is detected later, then the judgement will be canceled immediately.) | | 1 | 0 |
| | | Abnormal input signal<br>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<br>When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure.<br>(If input signal is detected later, then the judgement will be canceled immediately.) | | 1 | 0 |
| | | Abnormal input signal<br>When any signal of frequency which would not exist in normal conditions is detected, it should be judged as signal failure. | | 2 | |
| 2 | Fuel level input signal | Short circuit<br>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<br>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<br>When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure. | | 1 | 0 |
| 4 | Outside air temperature input signal | Short circuit<br>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<br>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<br>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 | |



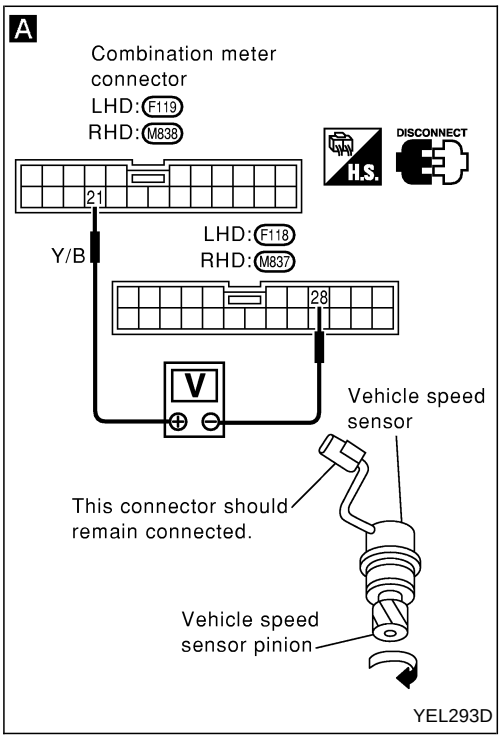

## Components Inspection

### AMBIENT TEMPERATURE SENSOR

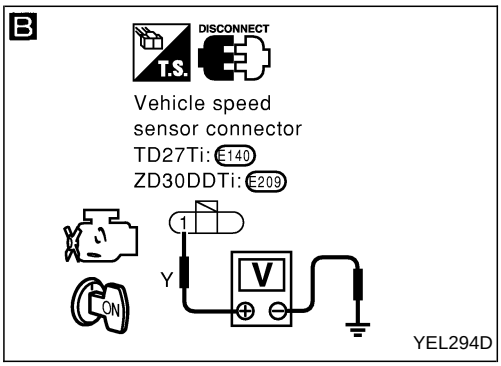
<Reference data>

| Intake 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 |

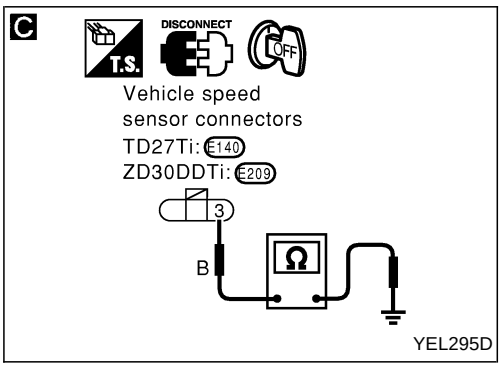
A



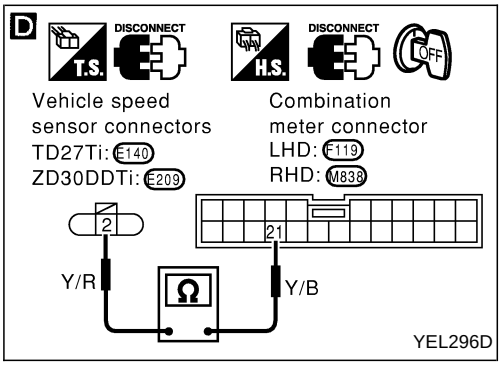

B




C




D




# Trouble Diagnoses

## INSPECTION/VEHICLE SPEED SENSOR

A

CHECK VEHICLE SPEED SENSOR OUTPUT.
1) Remove vehicle speed sensor from transmission.
2) Check voltage between combination meter terminals ㉑ and ㉘ while quickly turning speed sensor pinion.

NG → Vehicle speed sensor is OK.

OK ↓

B

CHECK POWER SOURCE.
- Re-install vehicle speed sensor.
- Turn ignition switch to “ON” position.

Check voltage between vehicle speed sensor connector terminal ① and ground.
**Battery voltage should exist.**

NG → Check harness for open or short between speedometer and vehicle speed sensor.

OK ↓

C

CHECK GROUND CIRCUIT OF VEHICLE SPEED SENSOR
- Turn ignition switch to the “LOCK” position.

Disconnect vehicle speed sensor connector.
Check continuity between vehicle speed sensor harness connector terminal ③ and body ground.
**Continuity should exist.**

NG → Repair harness or connector

OK ↓

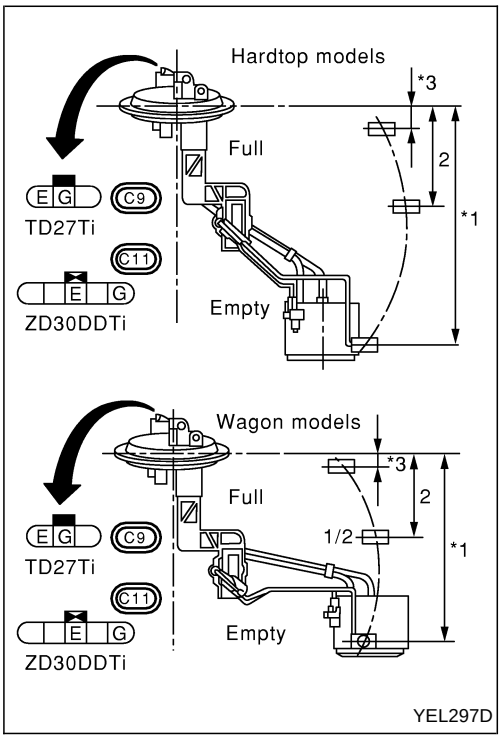
D

Check continuity between speedometer harness connector terminal ㉑ and vehicle speed sensor connector terminal ② .
**Continuity should exist.**

NG → Repair harness and connector.

OK ↓

Replace vehicle speed sensor.



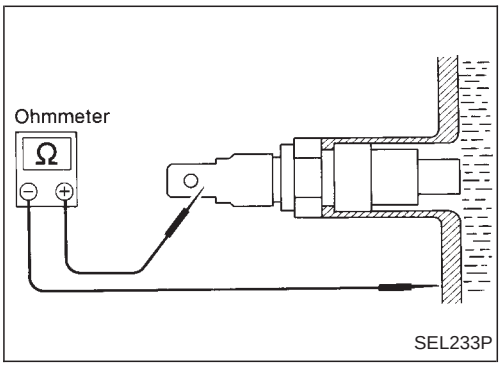

## Fuel Tank Gauge Unit Check

- For removal, refer to FE section.

Check the resistance between terminals (G) and (E).

| Ohmmeter | | Float position mm (in) | | | | | | Resistance value (Ω) |
|---|---|---|---|---|---|---|---|---|
| | | | | TD27Ti | | ZD30DDTi | | |
| (+) | (−) | | | Hardtop models | Wagon models | Hardtop models | Wagon models | |
| G | E | *3 | Full | 36 (1.42) | 25 (0.98) | 37 (1.46) | 27 (1.06) | Approx. 7 |
| | | 2 | 1/2 | 159 (6.26) | 120 (4.72) | 160 (6.30) | 120 (4.72) | 96 - 108 |
| | | *1 | Empty | 286 (11.26) | 218 (8.58) | 282 (11.10) | 220 (8.66) | 280 - 290 |

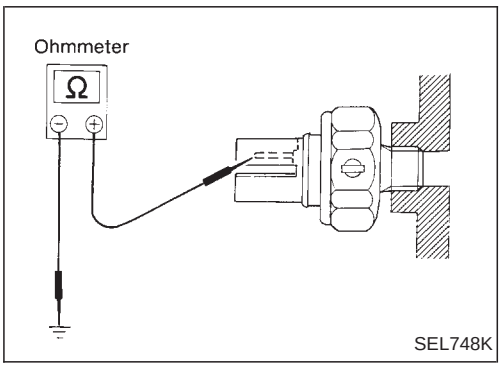
Values *1 and *3: with the dipstick float at its lower or upper limit.




## Thermal Transmitter Check

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

| Water temperature | Resistance |
|---|---|
| 65°C (149°F) | Approx. 951 - 1,109Ω |
| 91°C (196°F) | Approx. 431 - 510Ω |

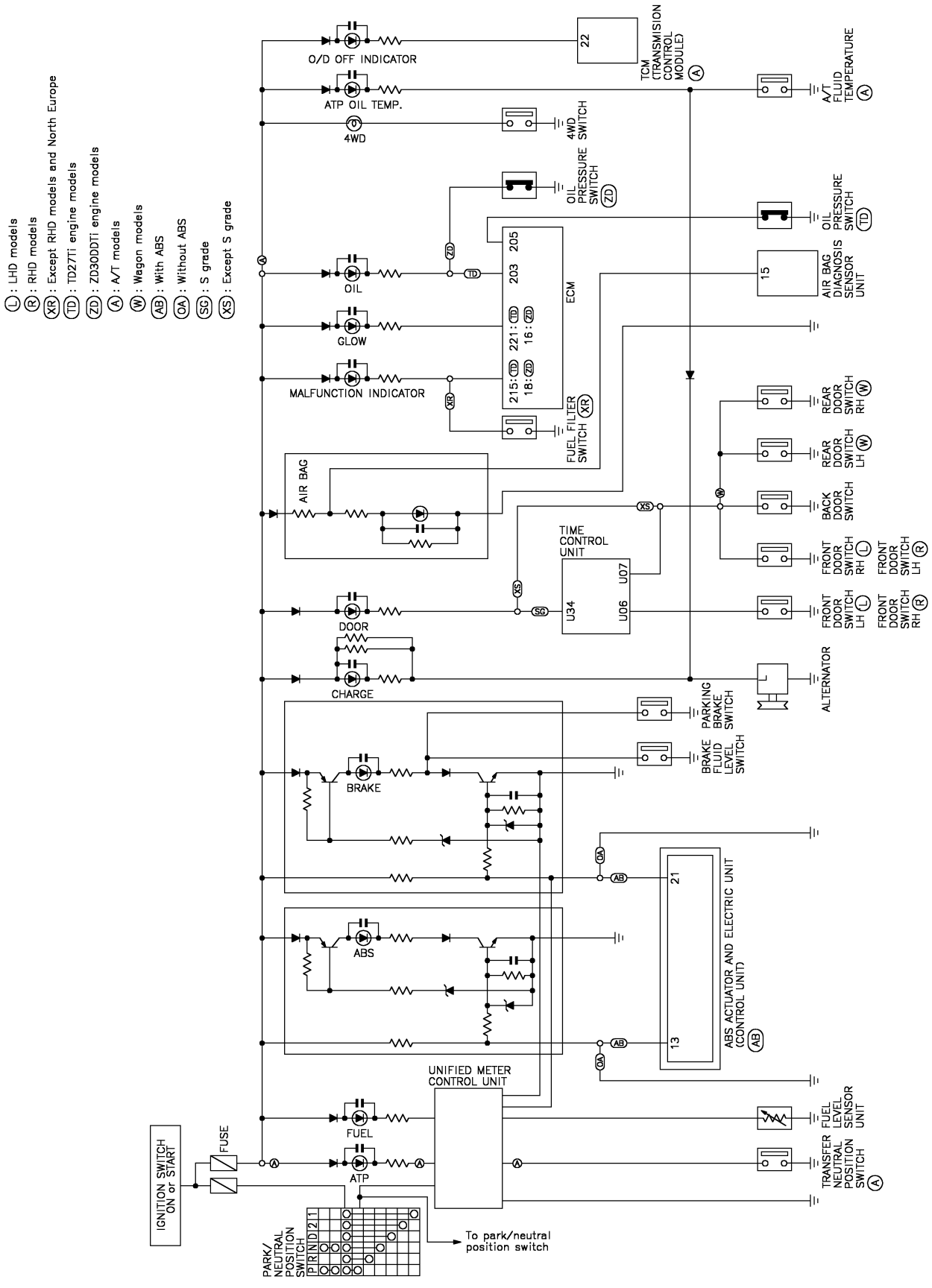



## Oil Pressure Switch Check

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

| | Oil pressure kPa (bar, kg/cm$^2$, psi) | Continuity |
|---|---|---|
| Engine start | More than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1.4 - 2.8) | NO |
| Engine stop | Less than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1.4 - 2.8) | YES |

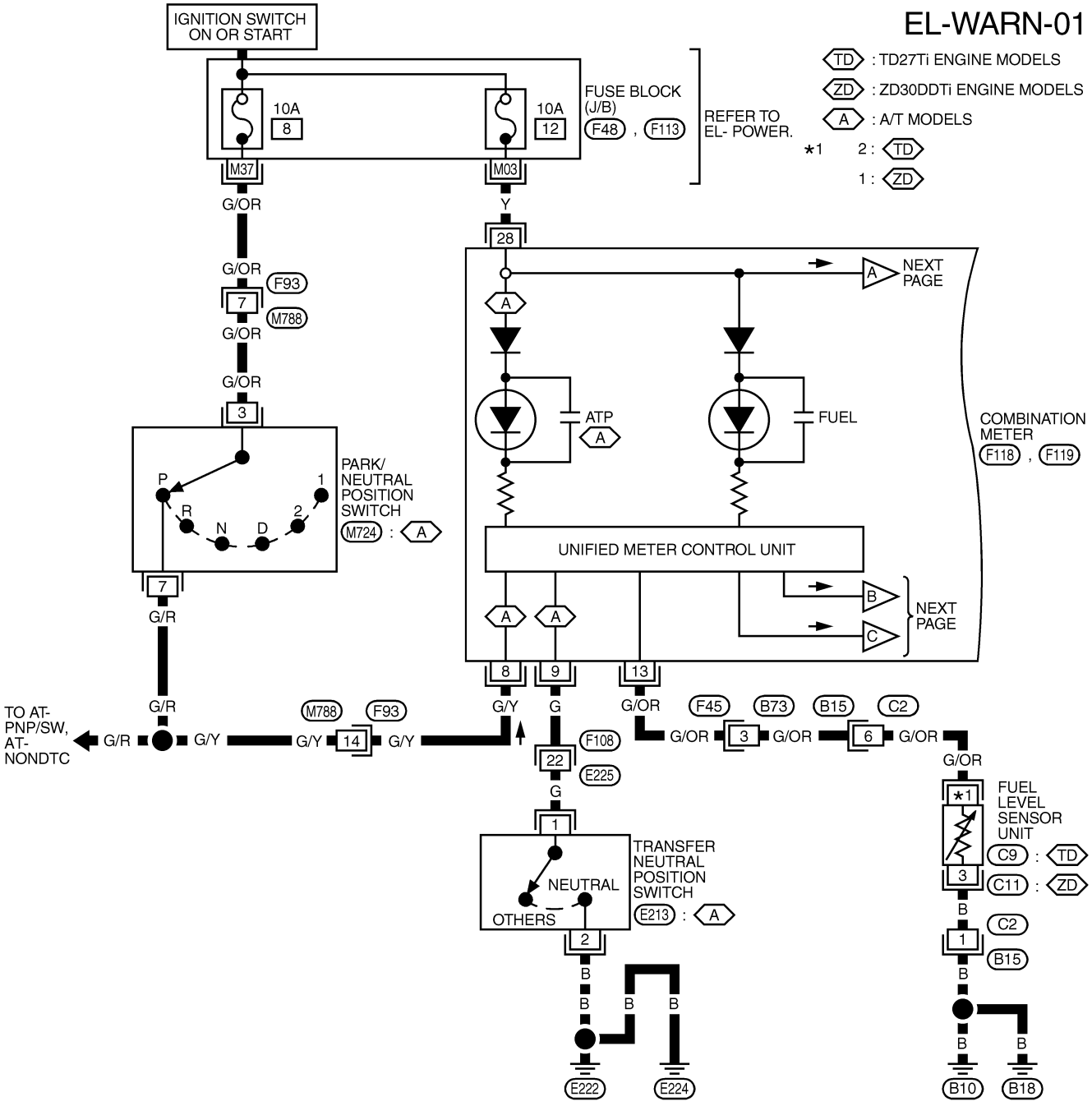
## Schematic

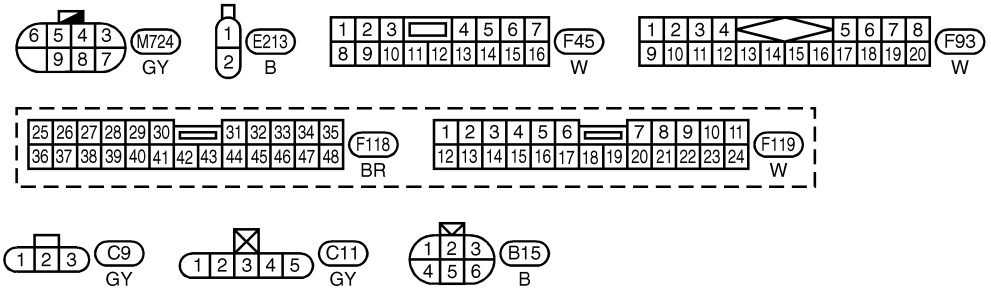



YEL098D

## Wiring Diagram — WARN —

### LHD MODELS



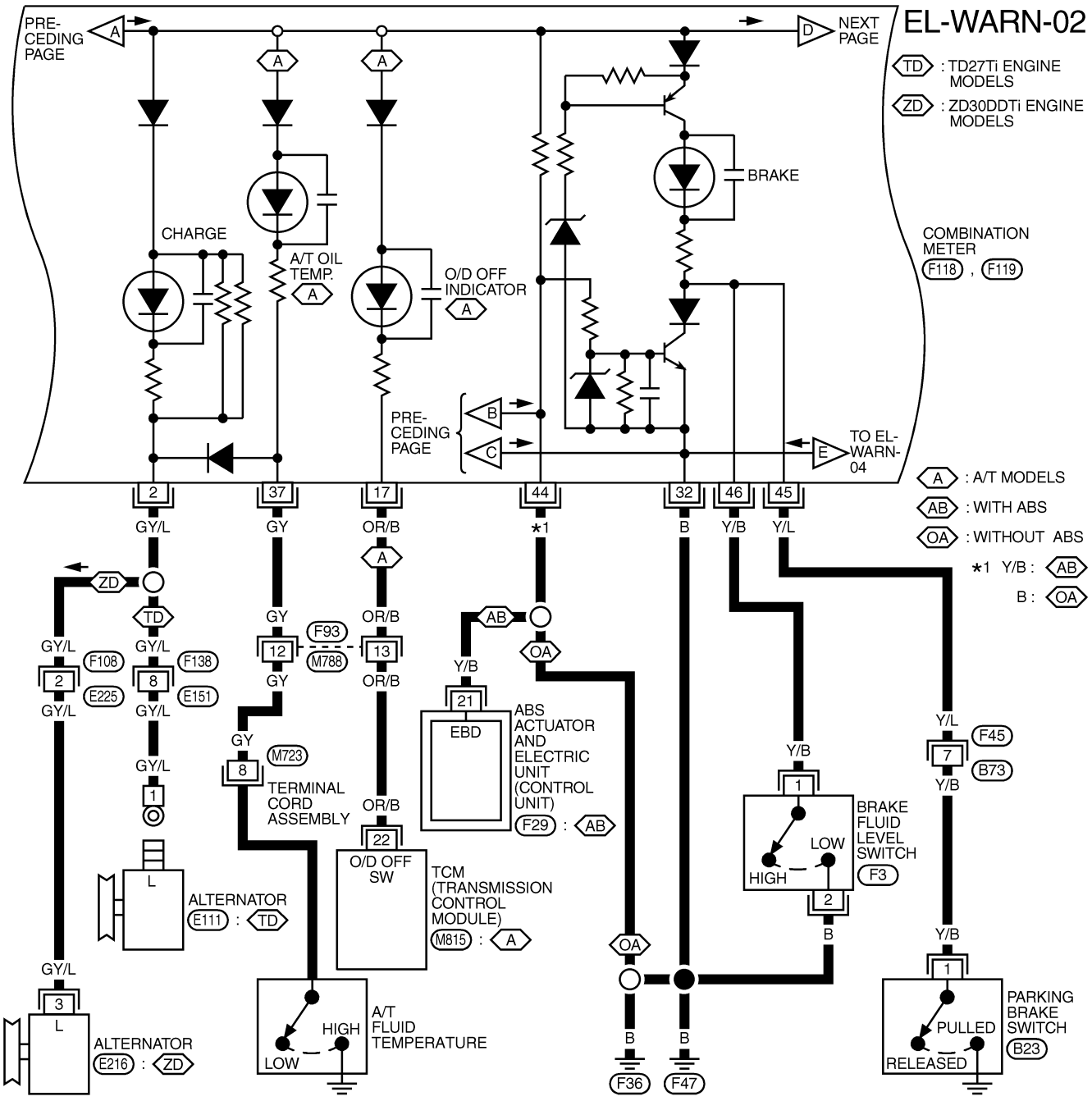



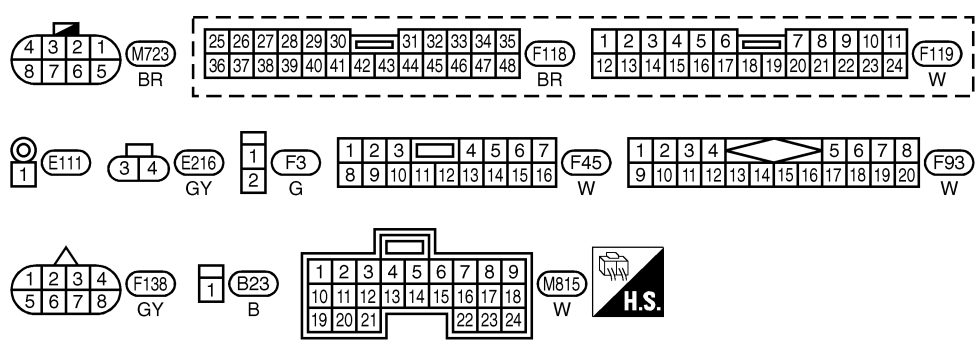

REFER TO THE FOLLOWING.
F108 , -SUPER MULTIPLE JUNCTION (SMJ)
F48 , F113 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL099D

## Wiring Diagram — WARN — (Cont'd)

### LHD MODELS



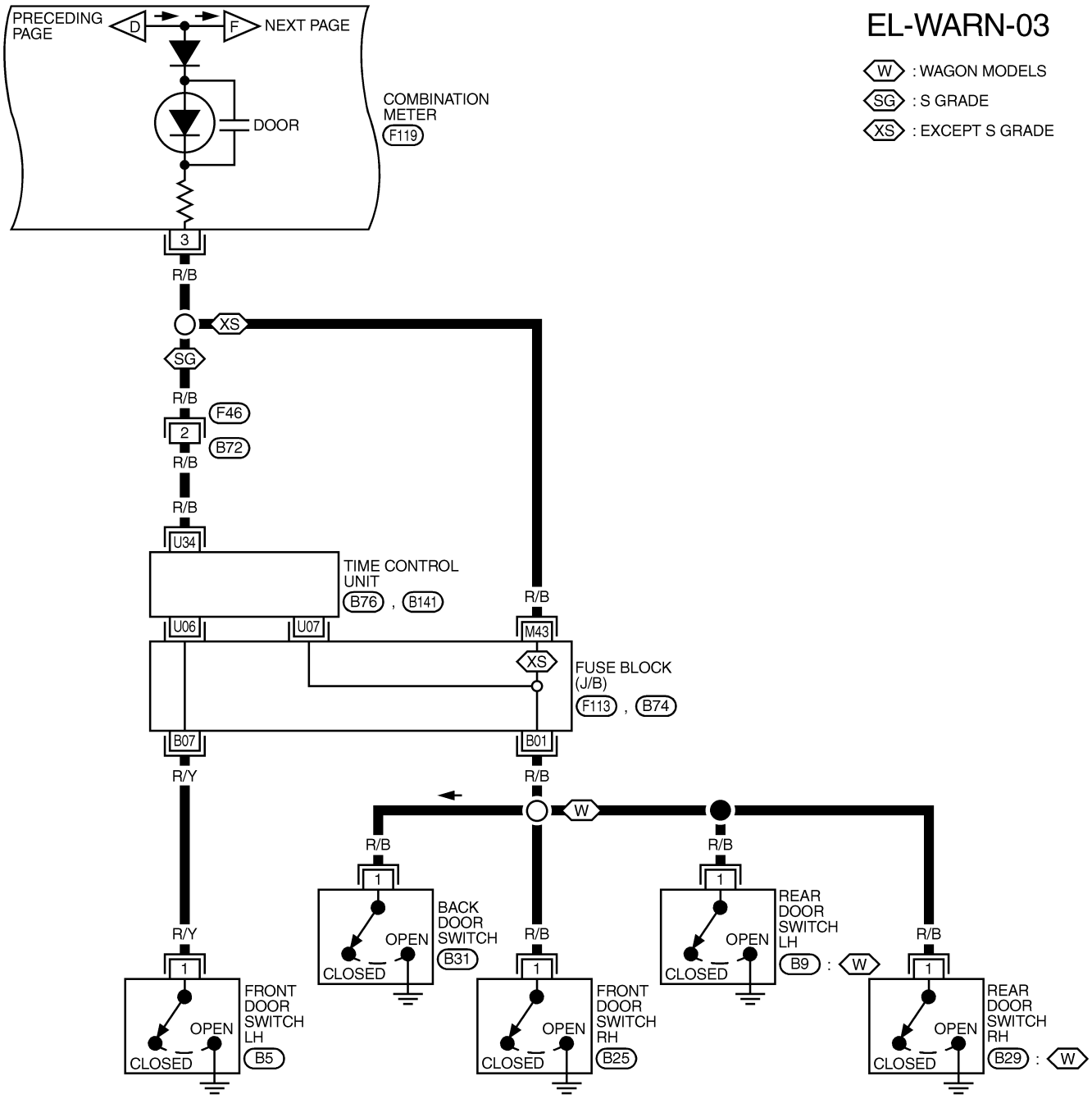



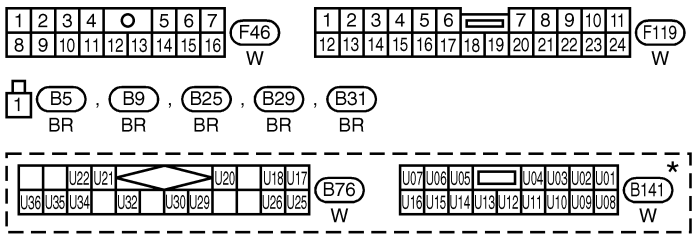

REFER TO THE FOLLOWING.
F108 -SUPER MULTIPLE JUNCTION (SMJ)
F29 -ELECTRICAL UNITS

YEL100D

## Wiring Diagram — WARN — (Cont'd)

### LHD MODELS



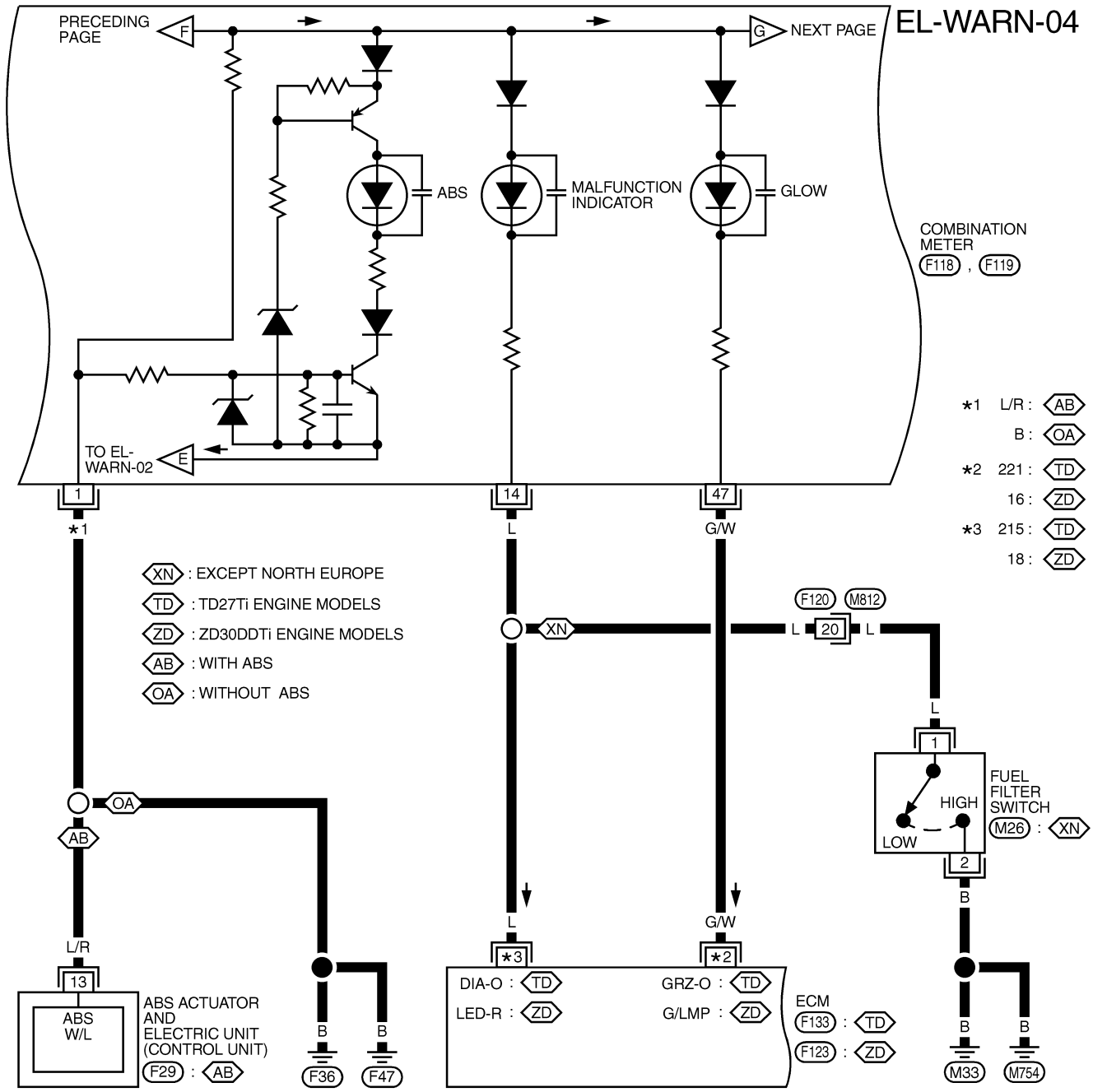

* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

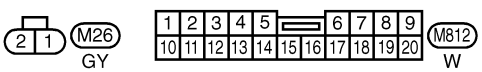
REFER TO THE FOLLOWING.
F113 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

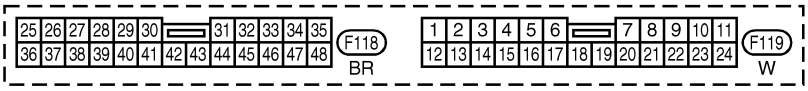
YEL101D

## Wiring Diagram — WARN — (Cont'd)

### LHD MODELS



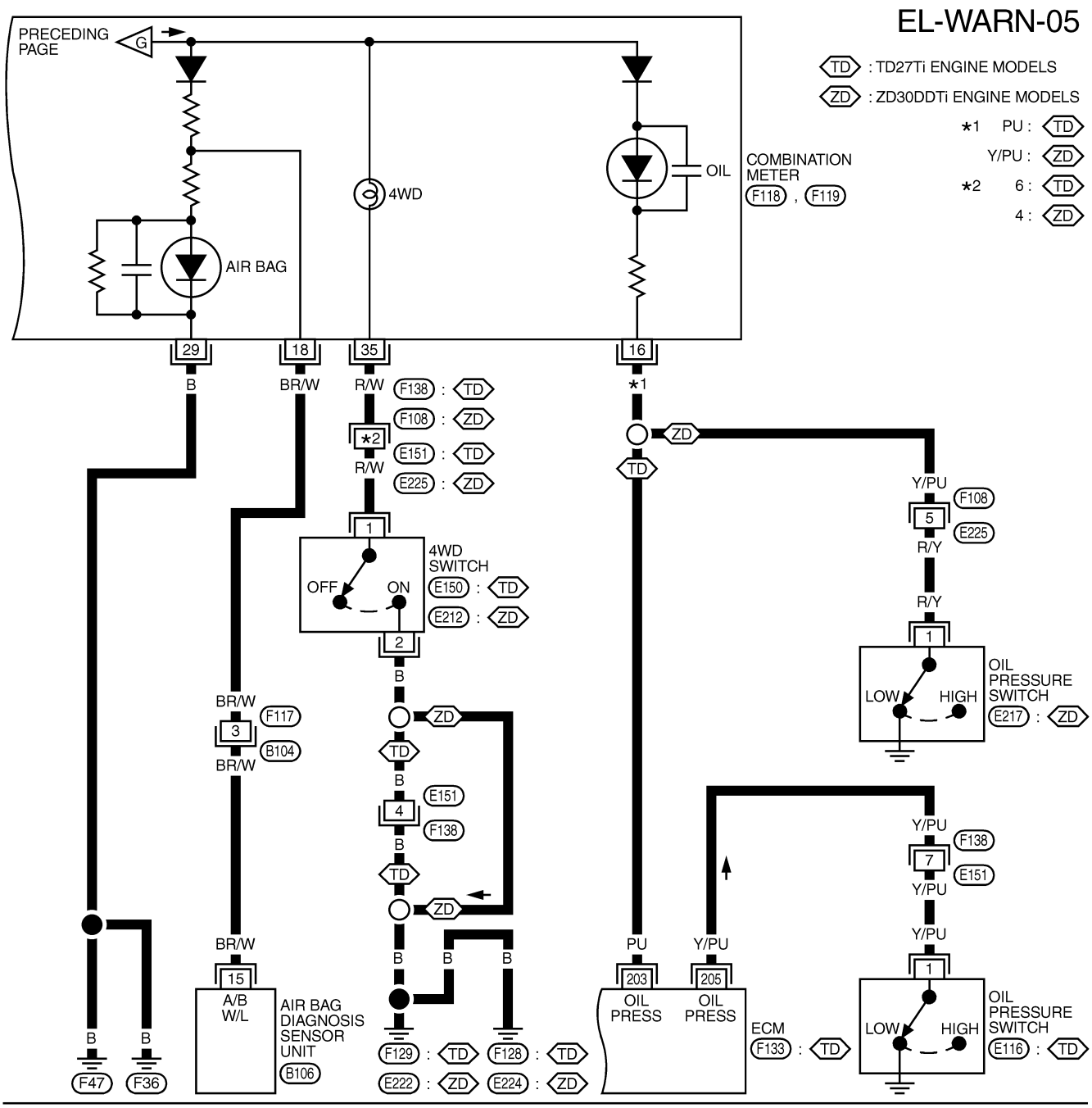



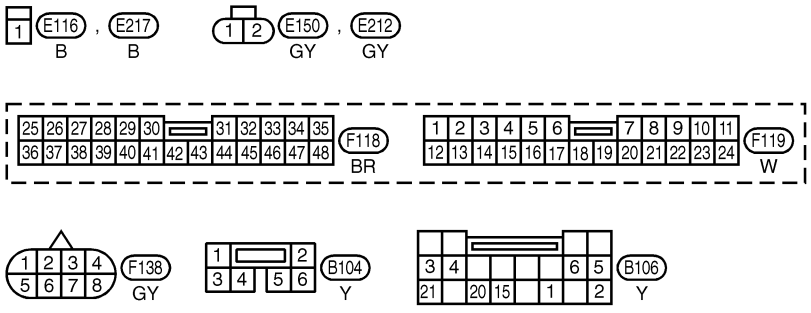

REFER TO THE FOLLOWING.
F29 , F133 , F123
-ELECTRICAL UNITS

YEL102D

## Wiring Diagram — WARN — (Cont'd)

### LHD MODELS



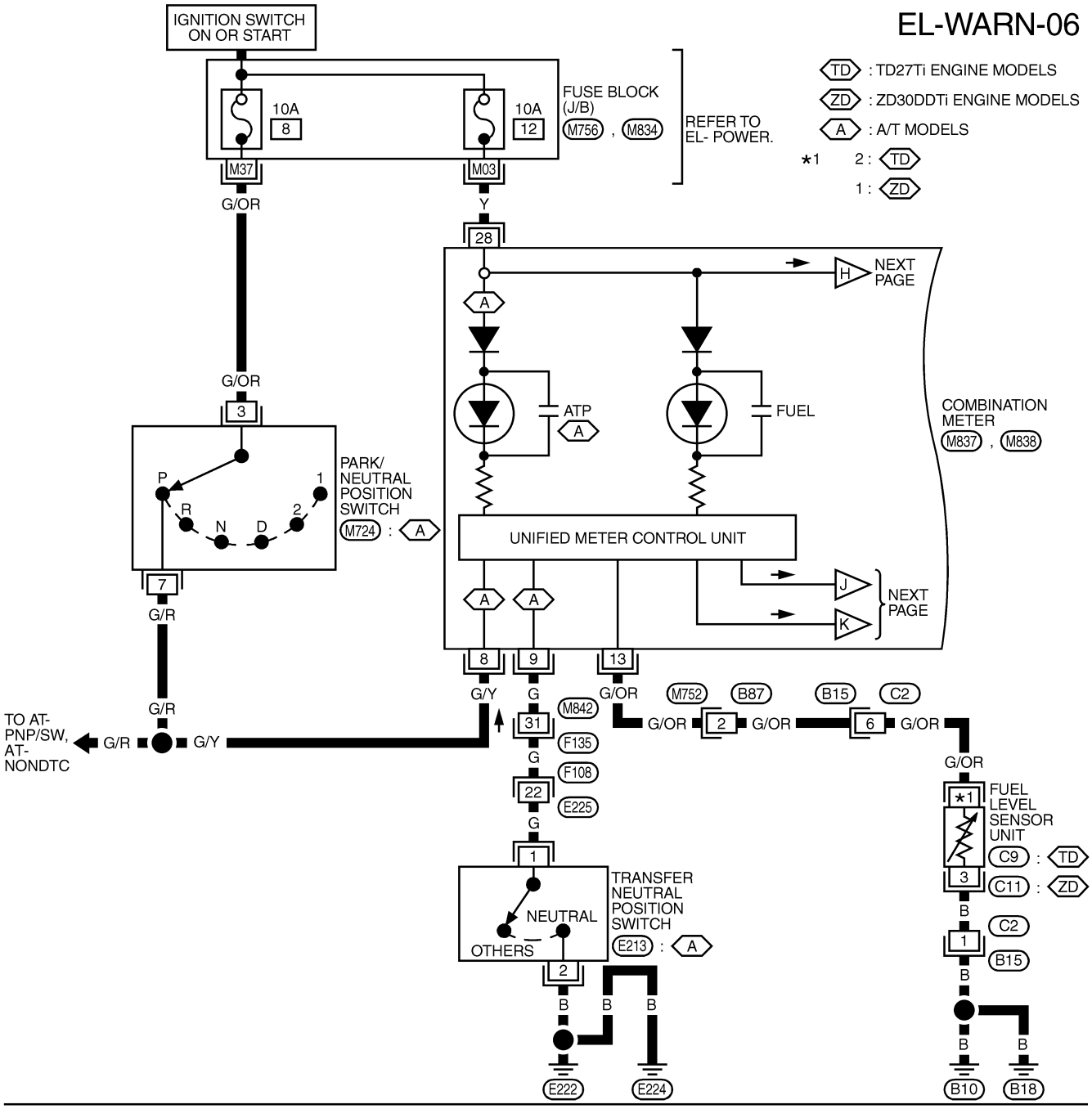



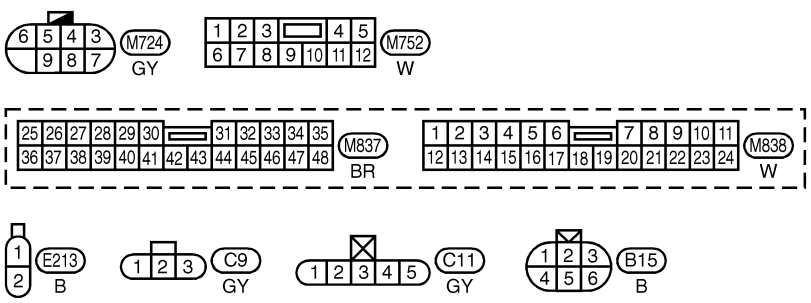

REFER TO THE FOLLOWING.
F108 -SUPER MULTIPLE JUNCTION (SMJ)
F133 -ELECTRICAL UNITS

YEL103D

## Wiring Diagram — WARN — (Cont'd)

### RHD MODELS



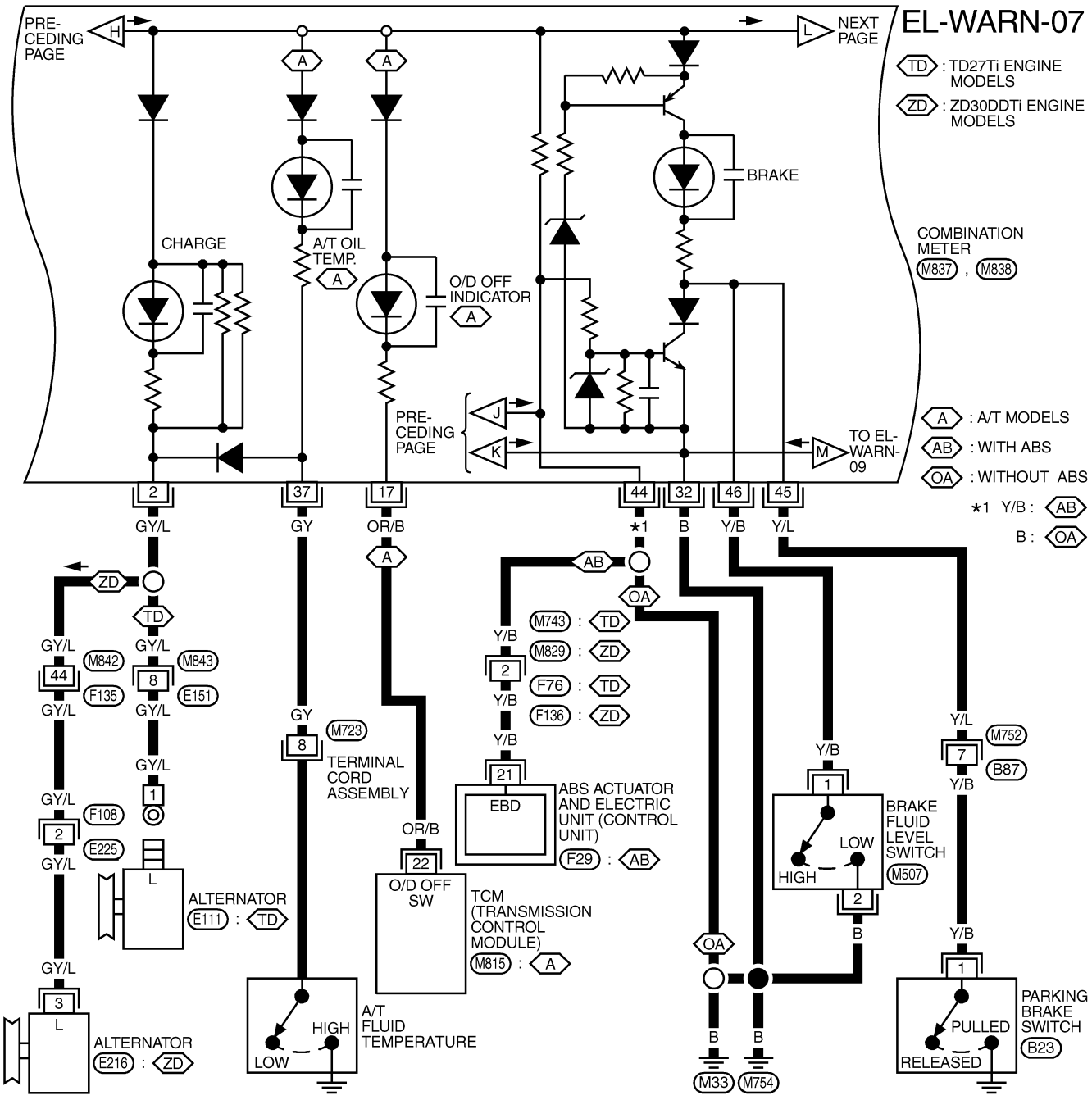



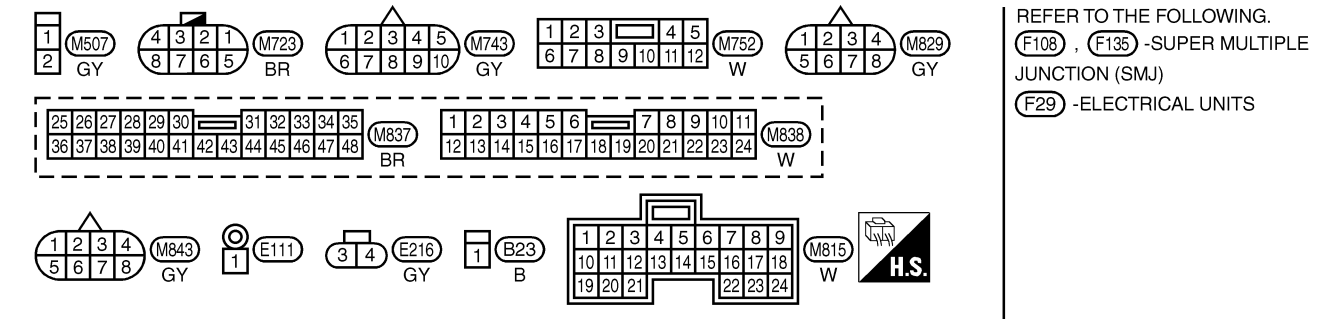

REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M756 , M834 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL104D

## Wiring Diagram — WARN — (Cont'd)

### RHD MODELS



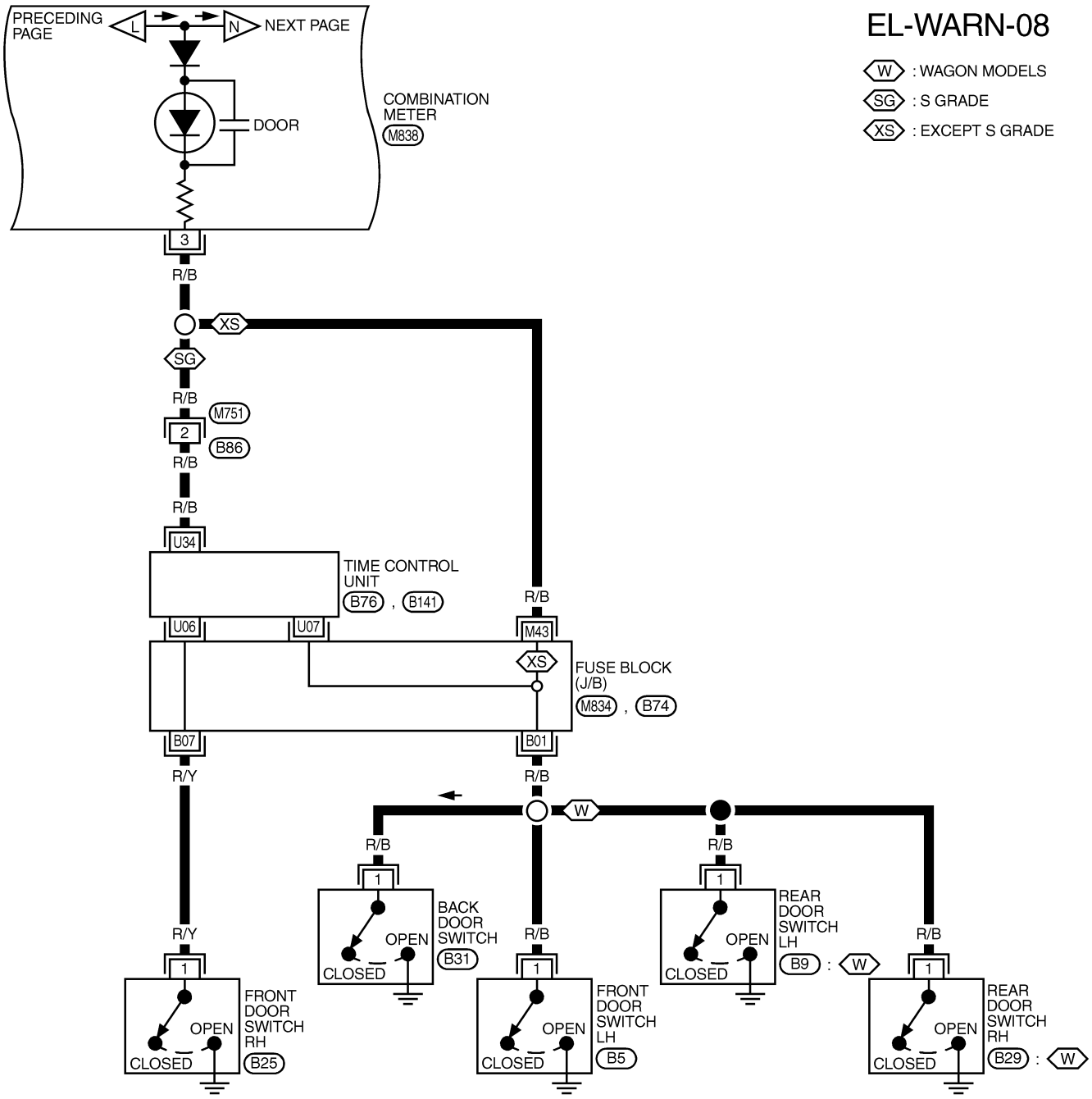




REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
F29 -ELECTRICAL UNITS

YEL105D

## Wiring Diagram — WARN — (Cont'd)

### RHD MODELS



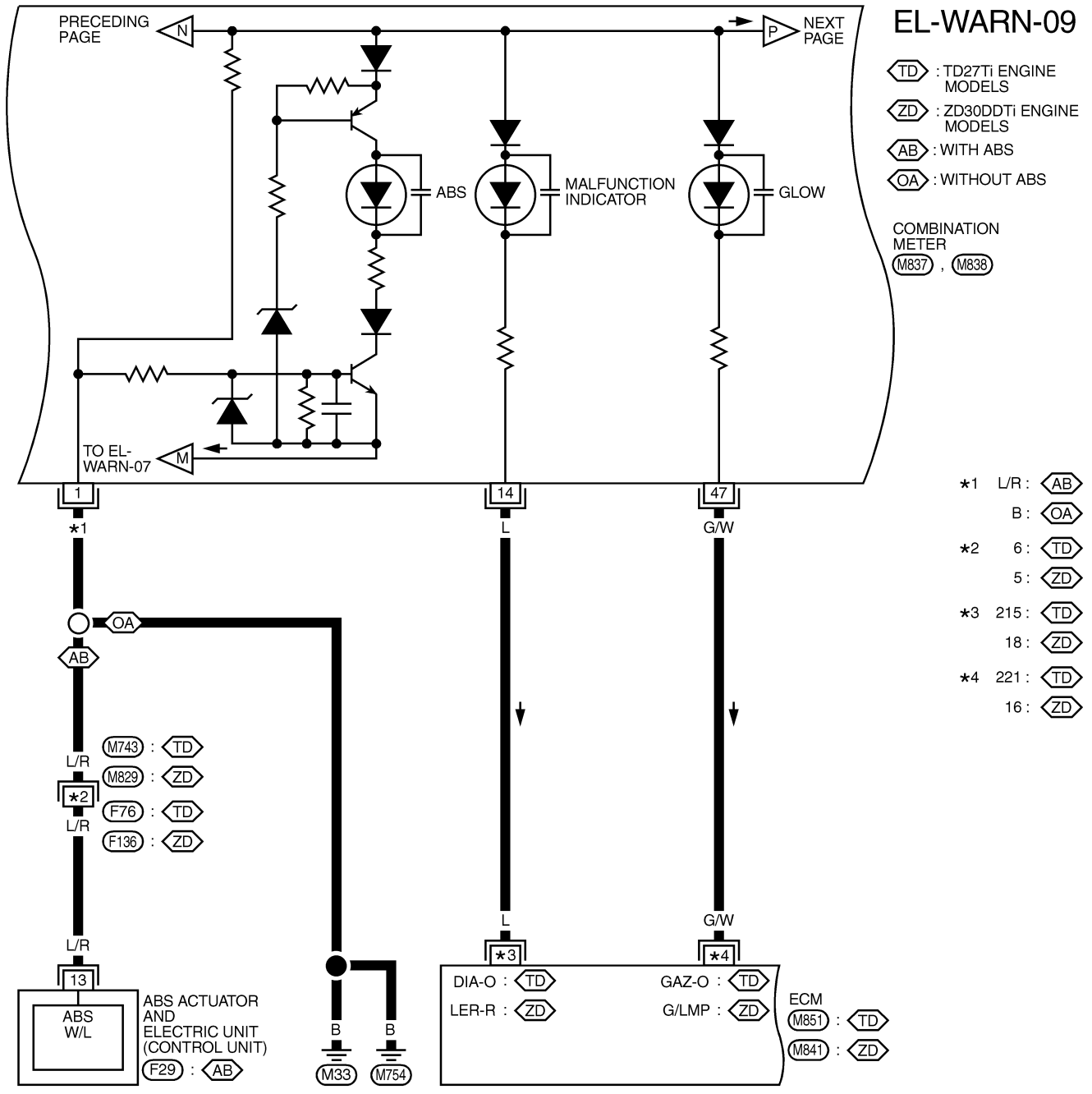

REFER TO THE FOLLOWING.
M834 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

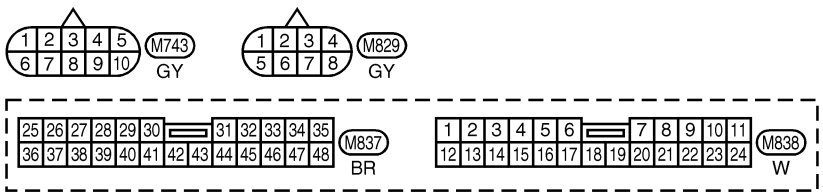
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL106D

## Wiring Diagram — WARN — (Cont'd)

### RHD MODELS



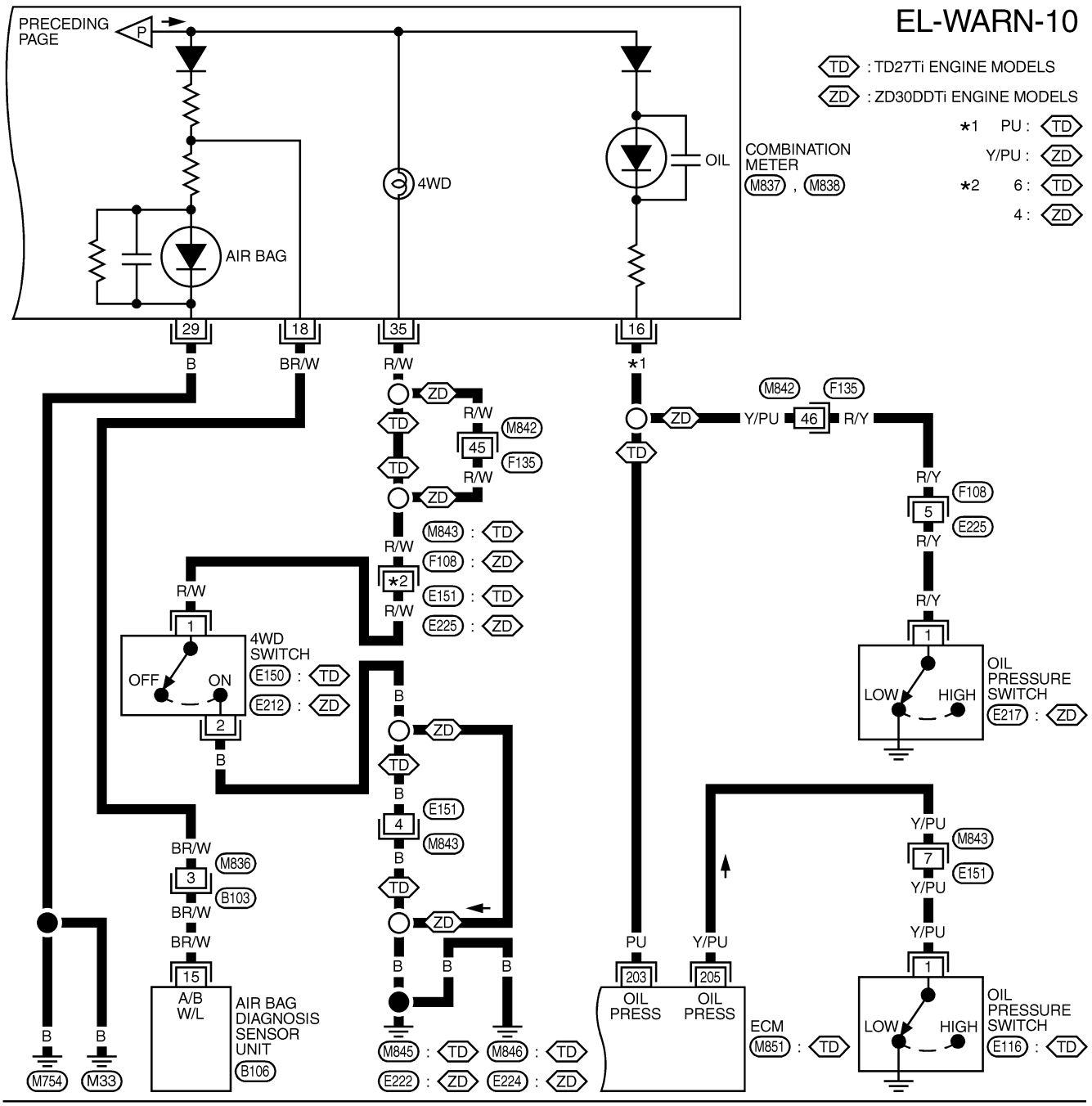




REFER TO THE FOLLOWING.
M841 , M851 , F29
-ELECTRICAL UNITS

YEL107D

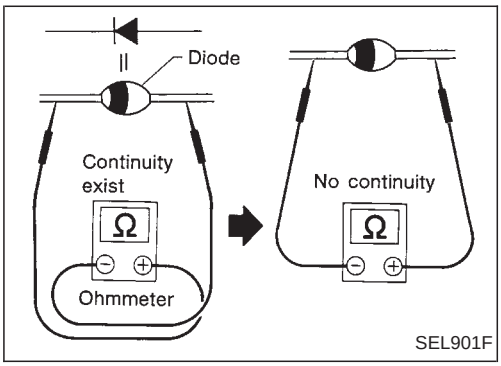
## Wiring Diagram — WARN — (Cont'd)

### RHD MODELS




REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M851 -ELECTRICAL UNITS

YEL108D

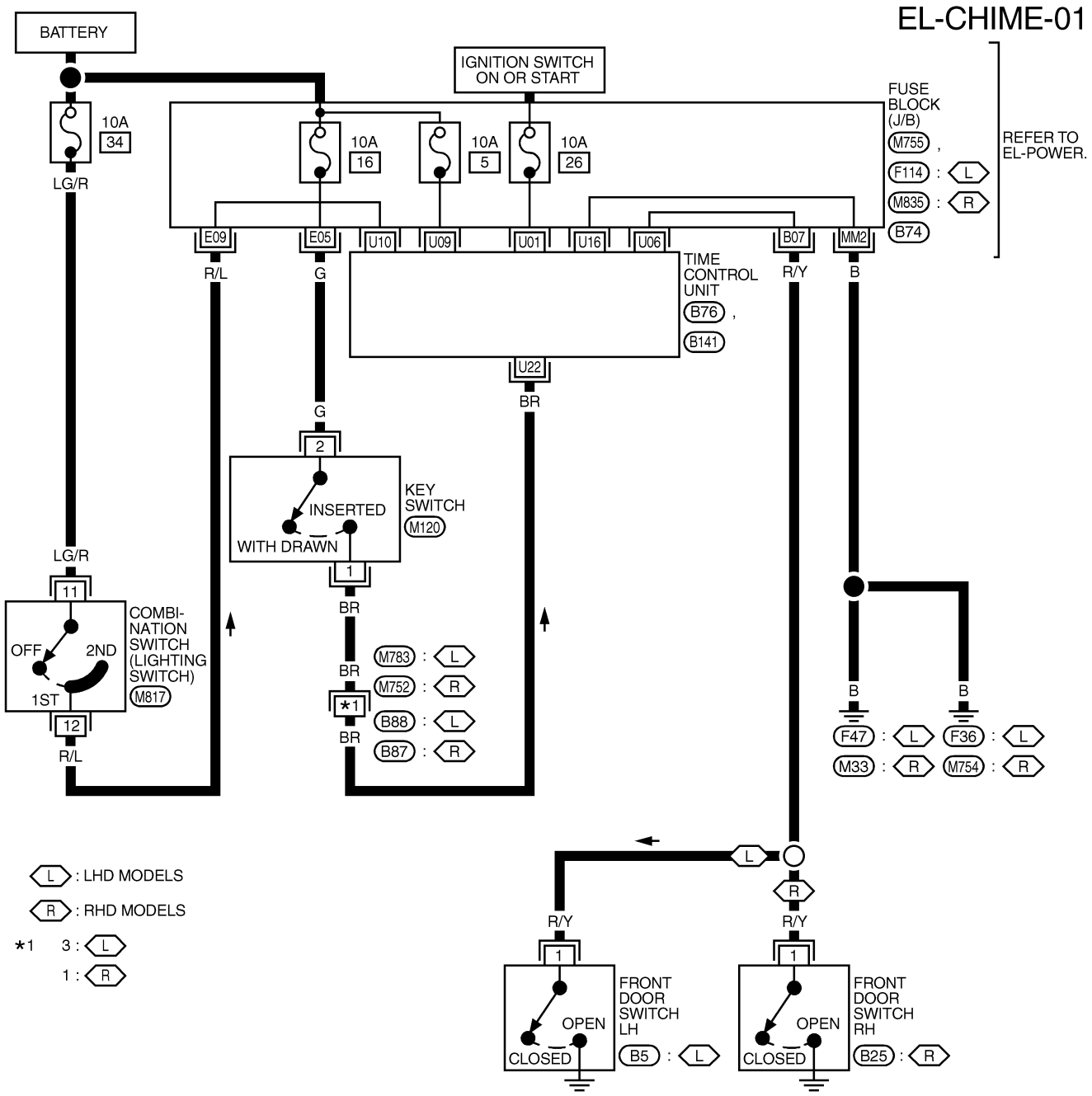


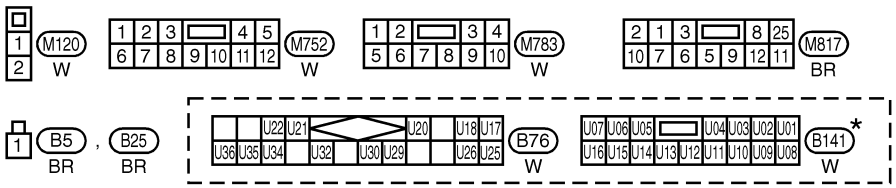

## Diode Check

- 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 “Warning Lamp/Wiring Diagram”, EL-82.

**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.**

## Wiring Diagram — CHIME —



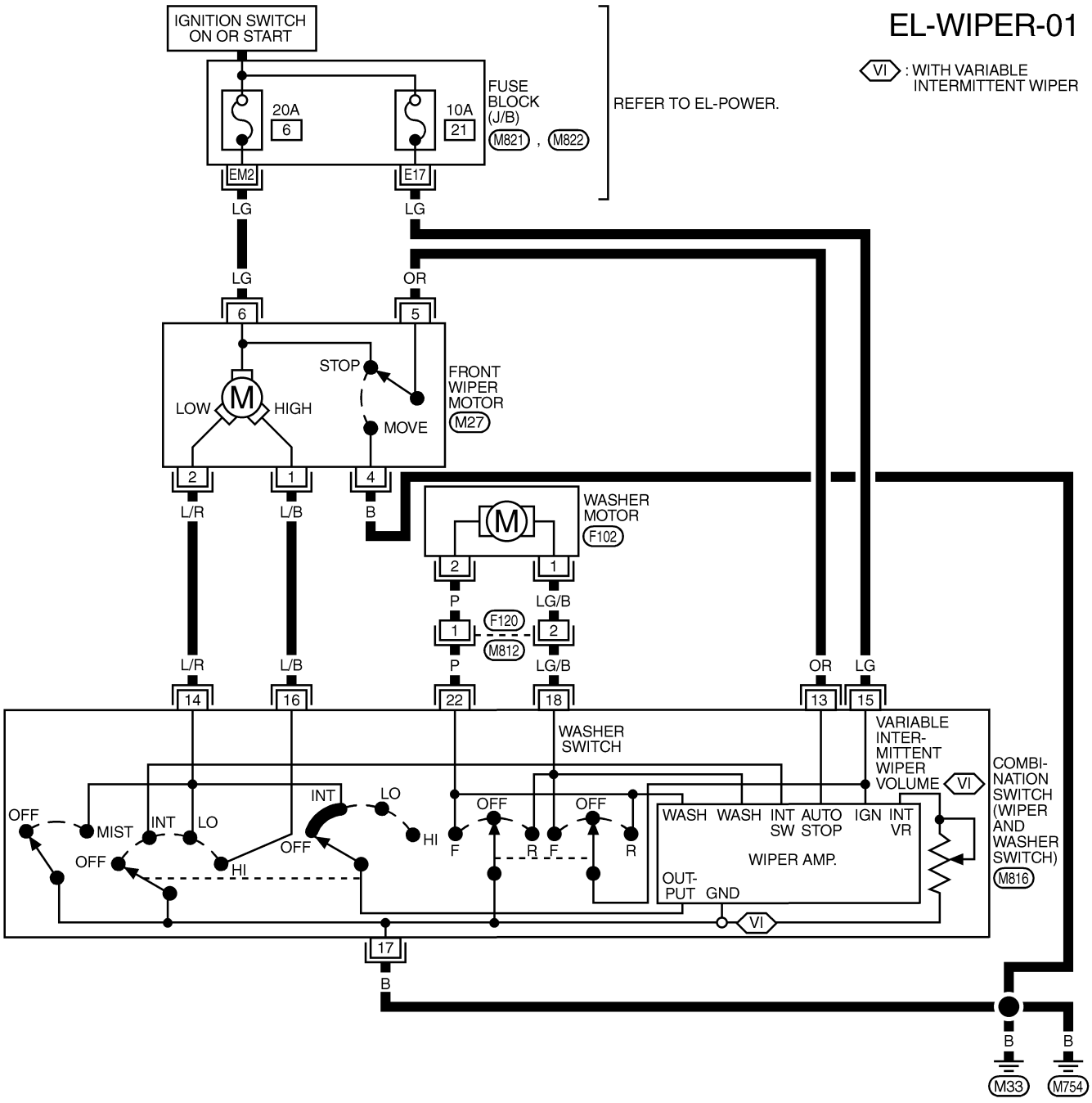

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

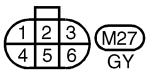
REFER TO THE FOLLOWING.
M755 , M835 , F114 , B74
-FUSE BLOCK-
JUNCTION BOX (J/B)

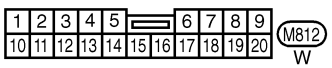
YEL109D

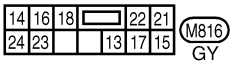
## Wiring Diagram — WIPER —

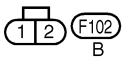
### LHD MODELS



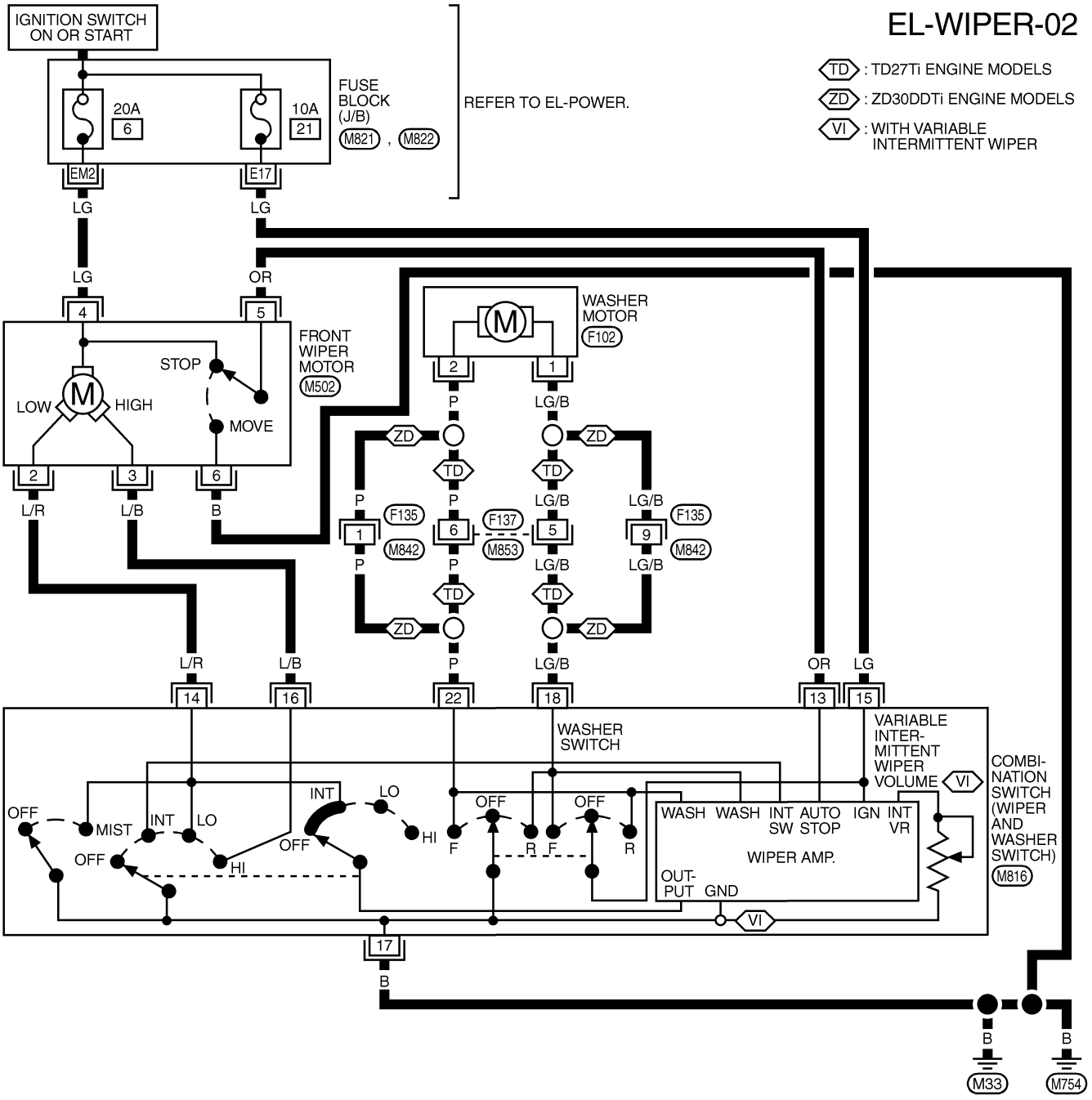




REFER TO THE FOLLOWING.
M821 , M822 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL110D

## Wiring Diagram — WIPER — (Cont'd)

### RHD MODELS




M502 W , M853 W

M816 GY

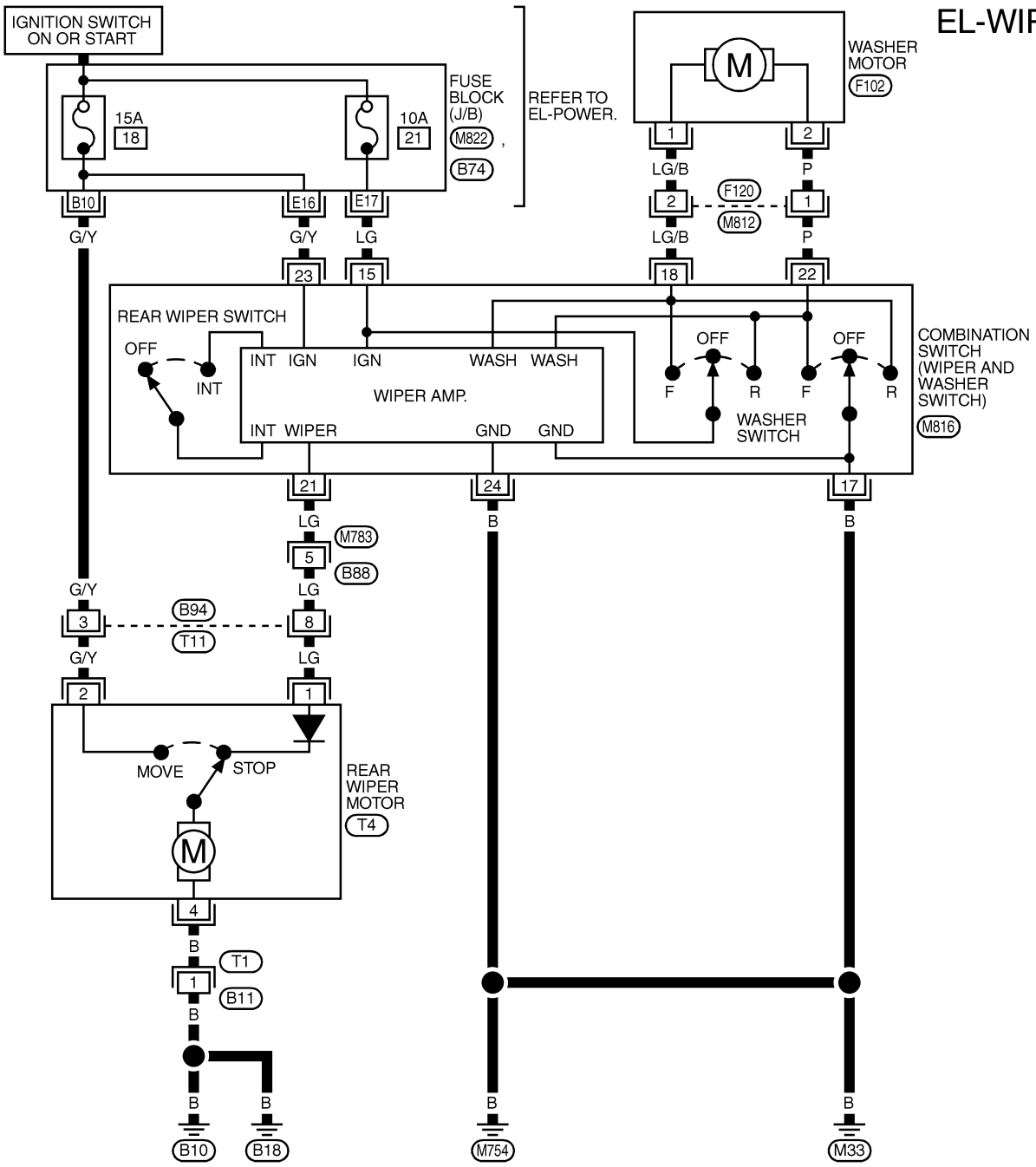
F102 B

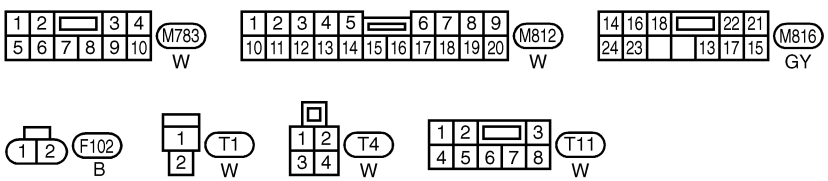
REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M821 , M822 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL111D

## Wiring Diagram — WIP/R —

### LHD MODELS



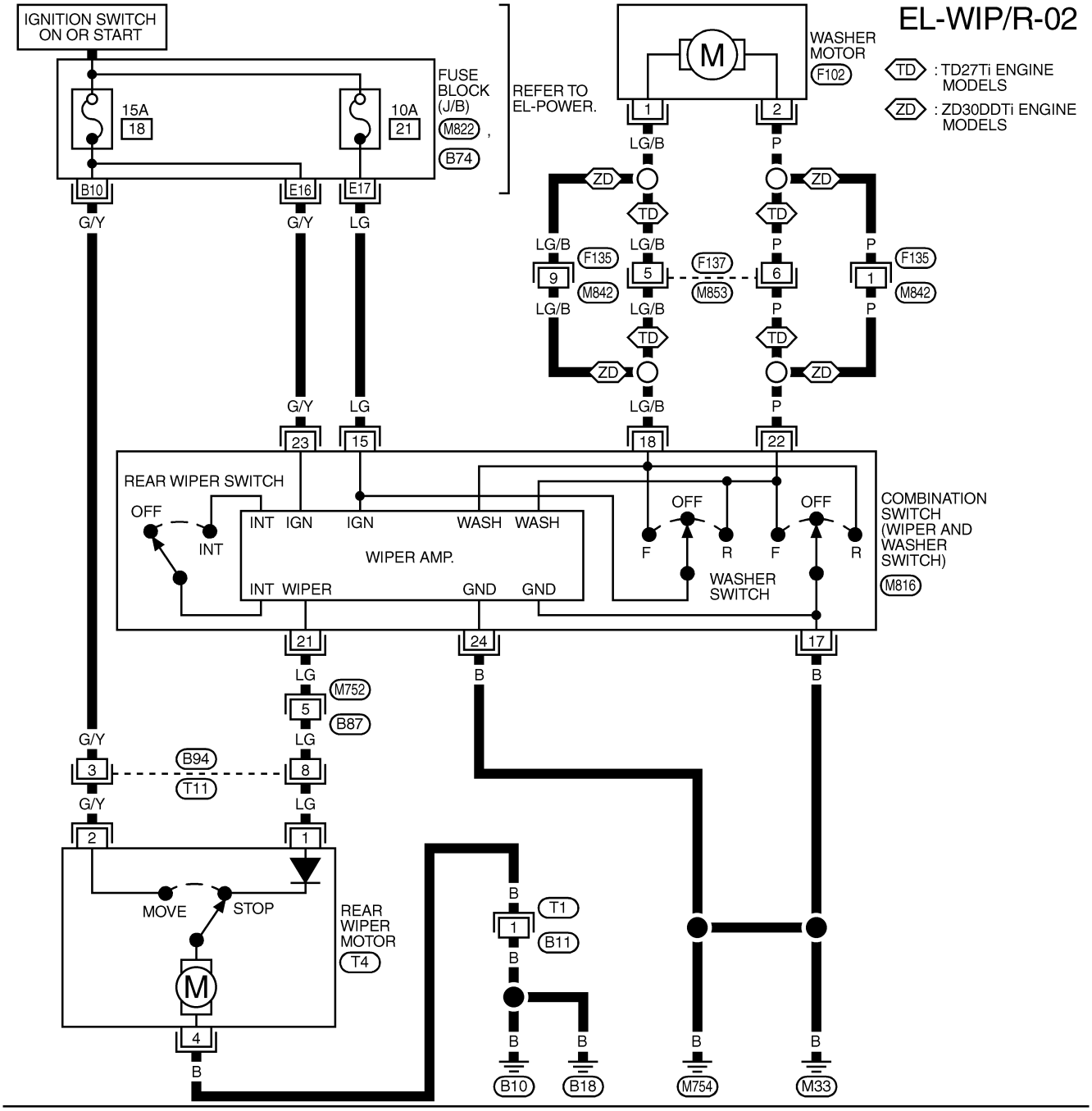



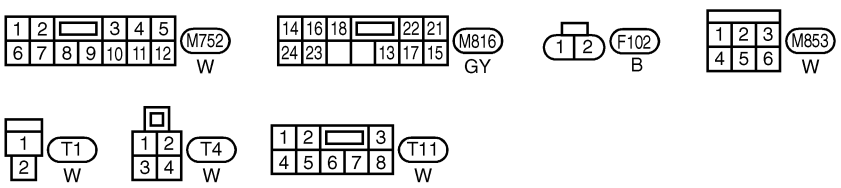

REFER TO THE FOLLOWING.
M822 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL112D

## Wiring Diagram — WIP/R — (Cont'd)

### RHD MODELS




REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M822 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

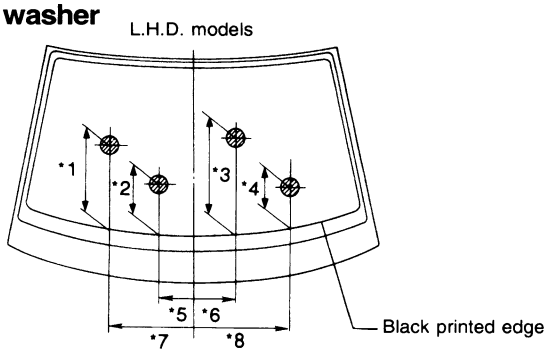
YEL113D

## Installation

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 “C” or “D” 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 “C” or “D”.
   **Clearance “C”: 25 - 35 mm (0.98 - 1.38 in)**
   **Clearance “D”: 25 - 35 mm (1.0 - 1.4 in)**

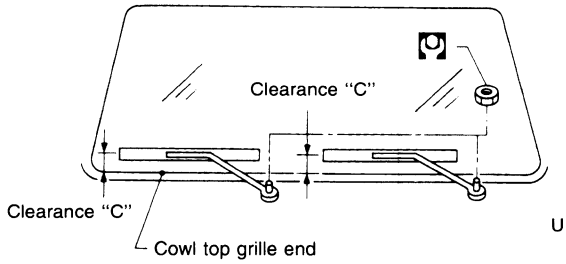
- Tighten windshield wiper arm nuts to specified torque.
  **Front wiper:**
  **: 20 - 30 N·m (2.1 - 3.0 kg-m, 15 - 22 ft-lb)**
  **Rear wiper:**
  **: 11.0 - 16.0 N·m**
  **(1.12 - 1.63 kg-m, 8.1 - 11.8 ft-lb)**

**Front wiper and washer**




***1: 344 (13.54)**
***2: 210 (8.27)**
***3: 401 (15.79)**
***4: 166 (6.54)**
***5: 117 (4.61)**
***6: 200 (7.87)**
***7: 317 (12.48)**
***8: 426 (16.77)**

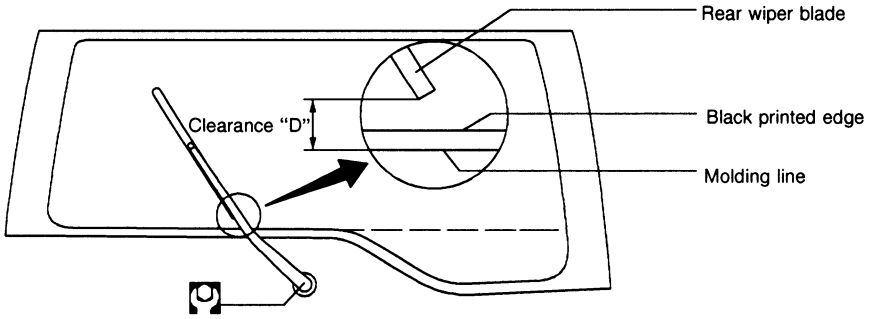
**All the diameters of these circles are less than 80 (3.15).**




Unit: mm (in)

YEL077

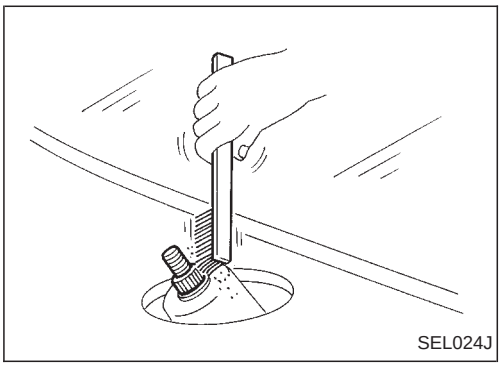
**Rear wiper**




Unit: mm (in)

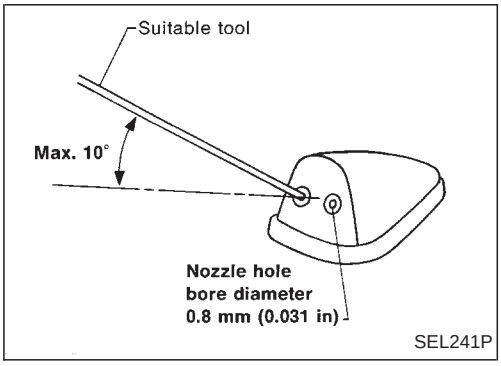
NEL628

## Installation (Cont'd)


SEL024J

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

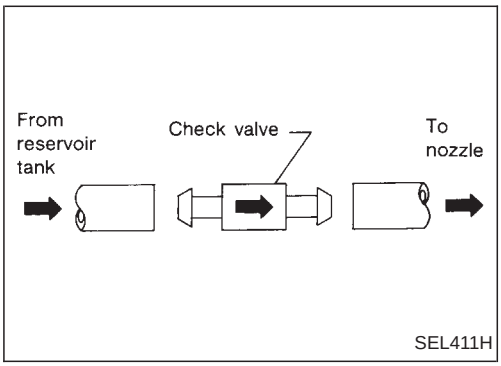
## Washer Nozzle Adjustment



SEL241P

- Adjust washer nozzle with suitable tool as shown in the figure at left.
  **Adjustable range: ±10°**

## Check Valve

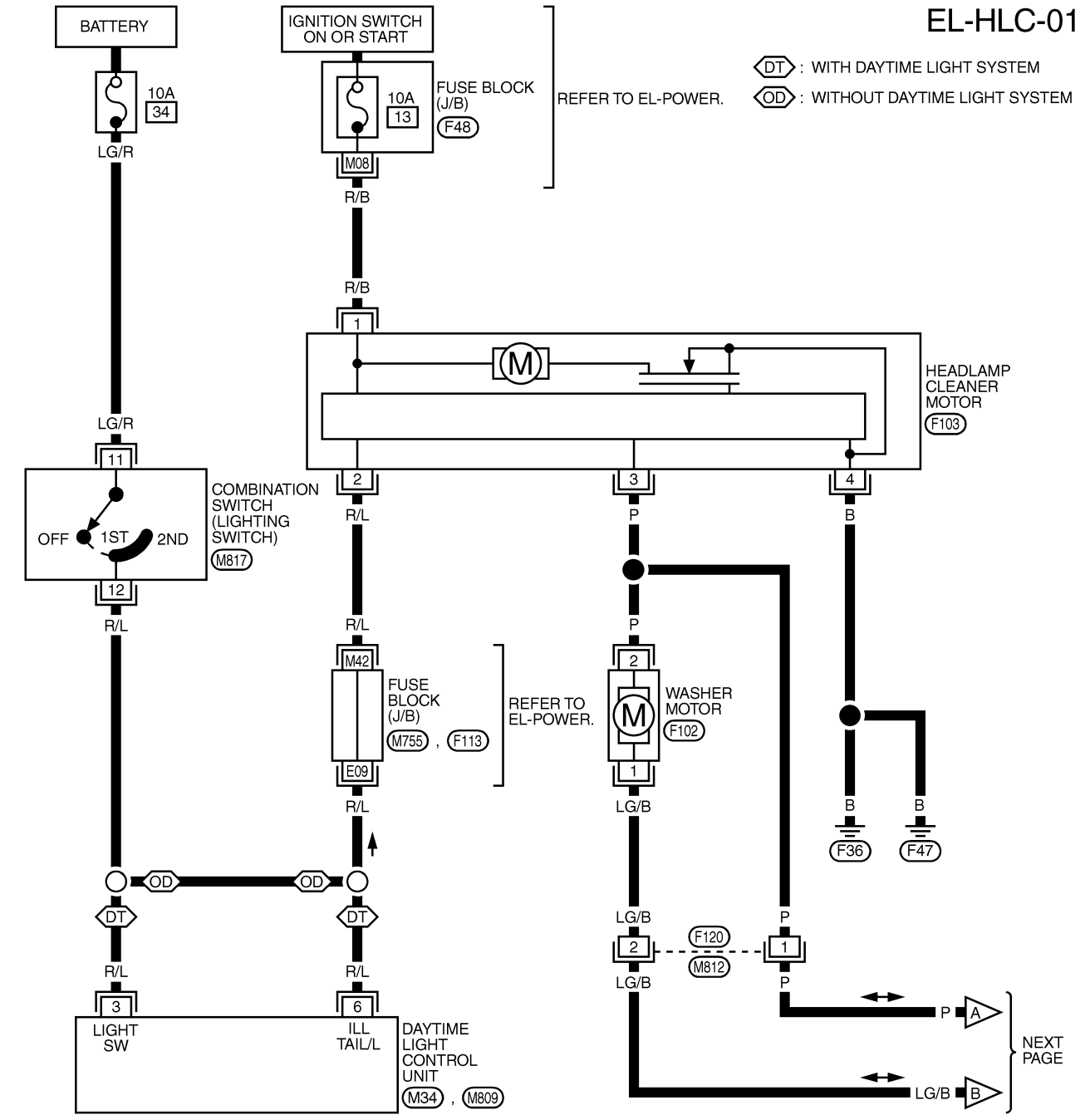


SEL411H

- A check valve is provided in the washer fluid line. Be careful not to connect check valve to washer tube in the wrong direction.

## Wiring Diagram — HLC —

### LHD MODELS

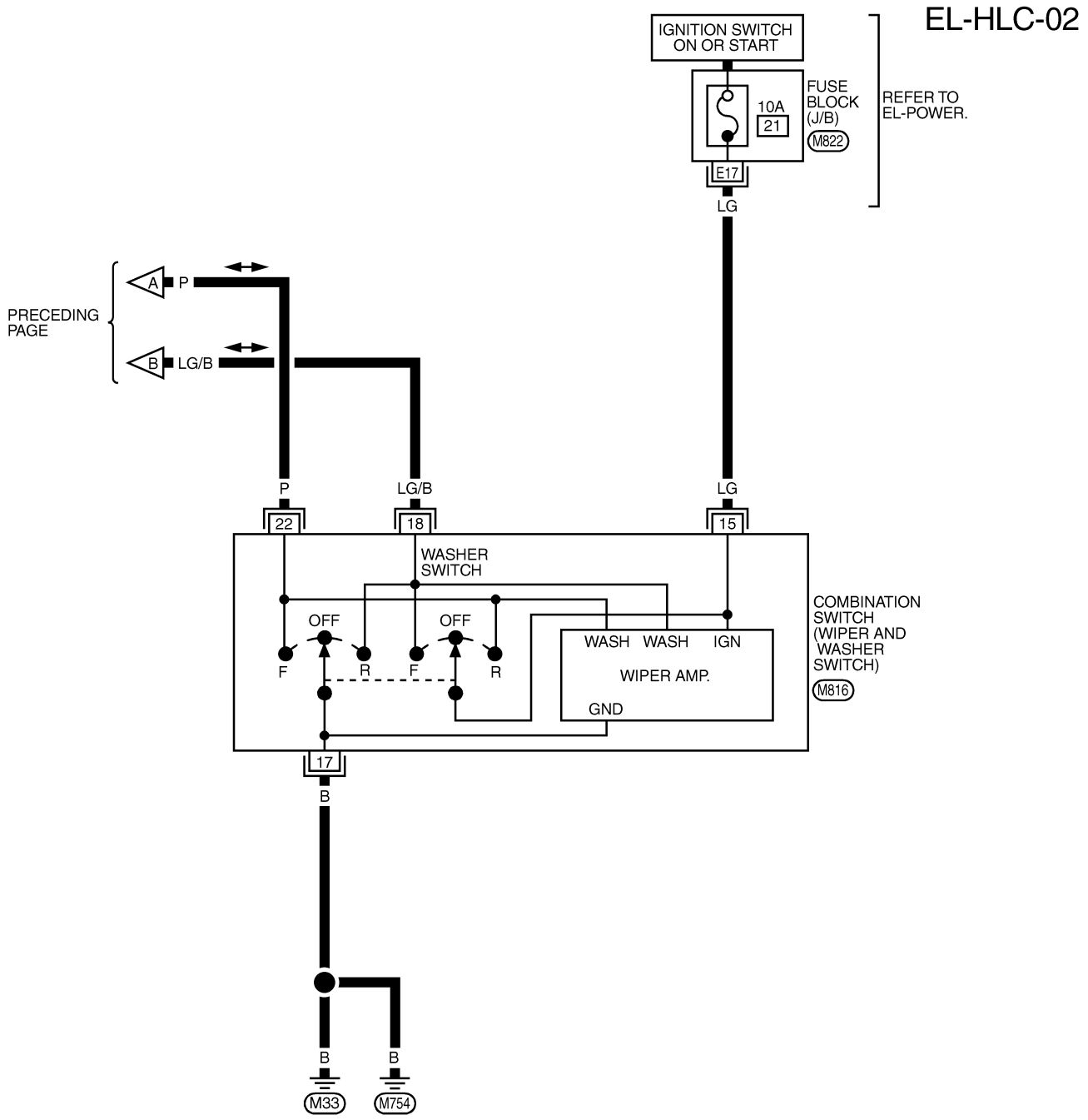


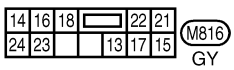

REFER TO THE FOLLOWING.
M755 , F48 , F113
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL114D

## Wiring Diagram — HLC — (Cont'd)

### LHD MODELS



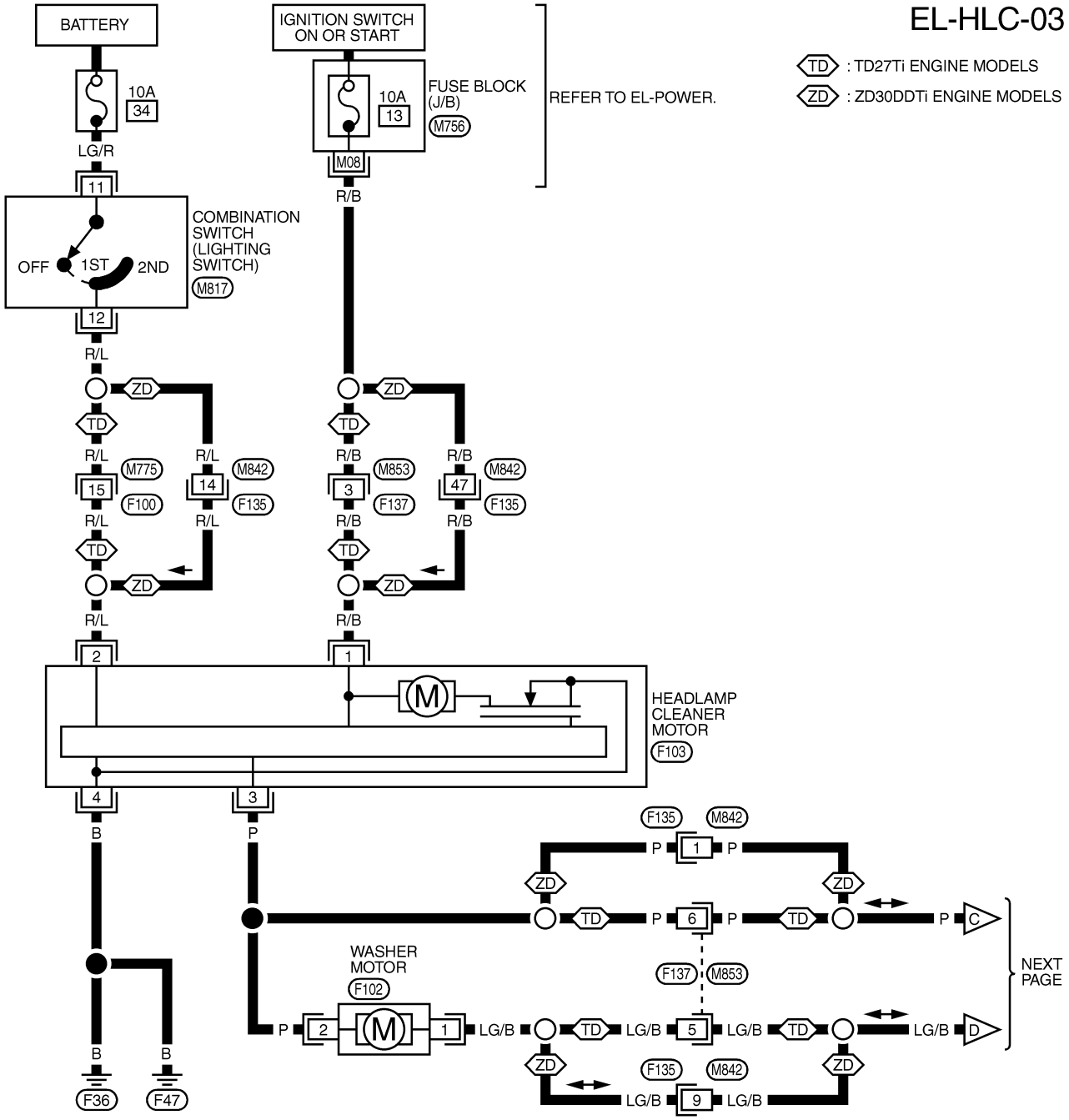



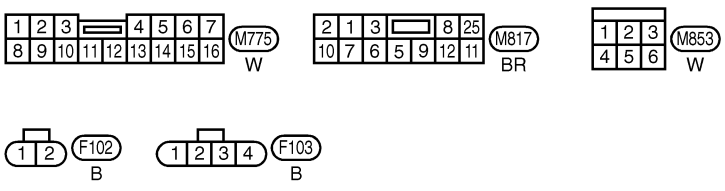

REFER TO THE FOLLOWING.
M822 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL115D

## Wiring Diagram — HLC — (Cont'd)

### RHD MODELS



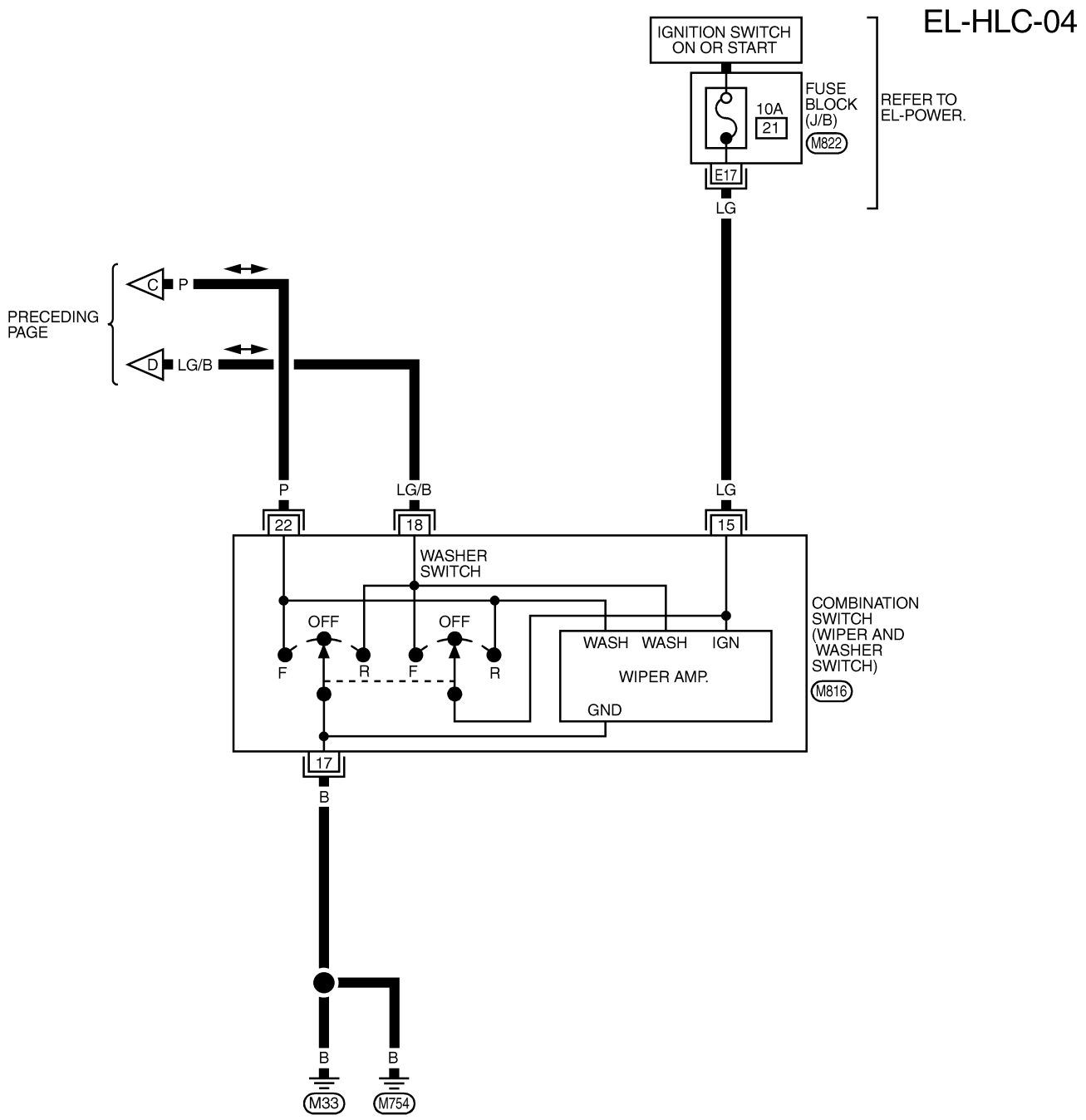



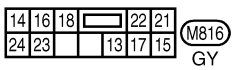

REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M756 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL116D

## Wiring Diagram — HLC — (Cont'd)

### RHD MODELS



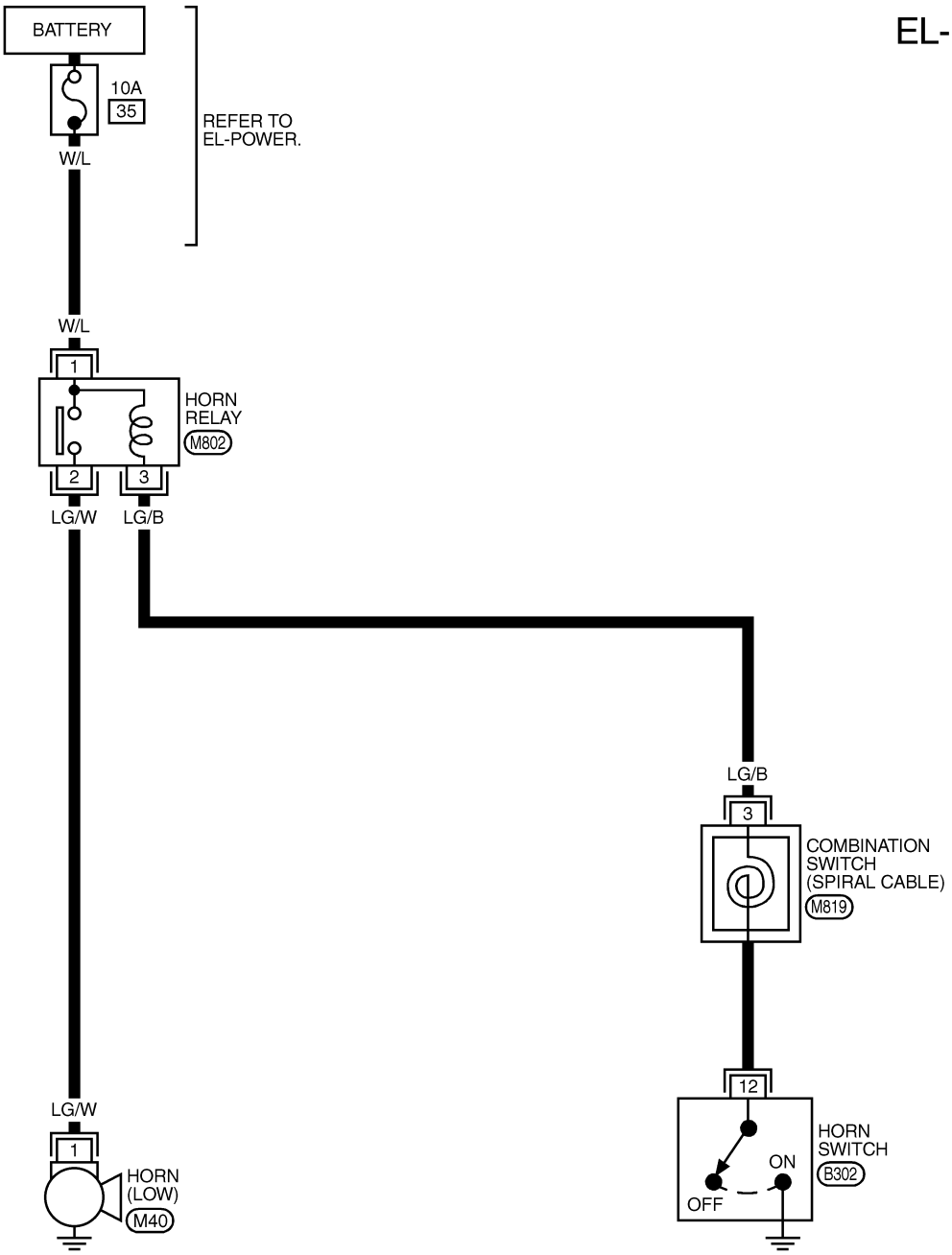



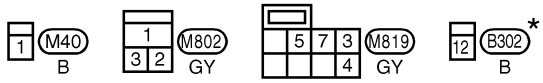

REFER TO THE FOLLOWING.
M822 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL117D

## Wiring Diagram — HORN —

EL-HORN-01

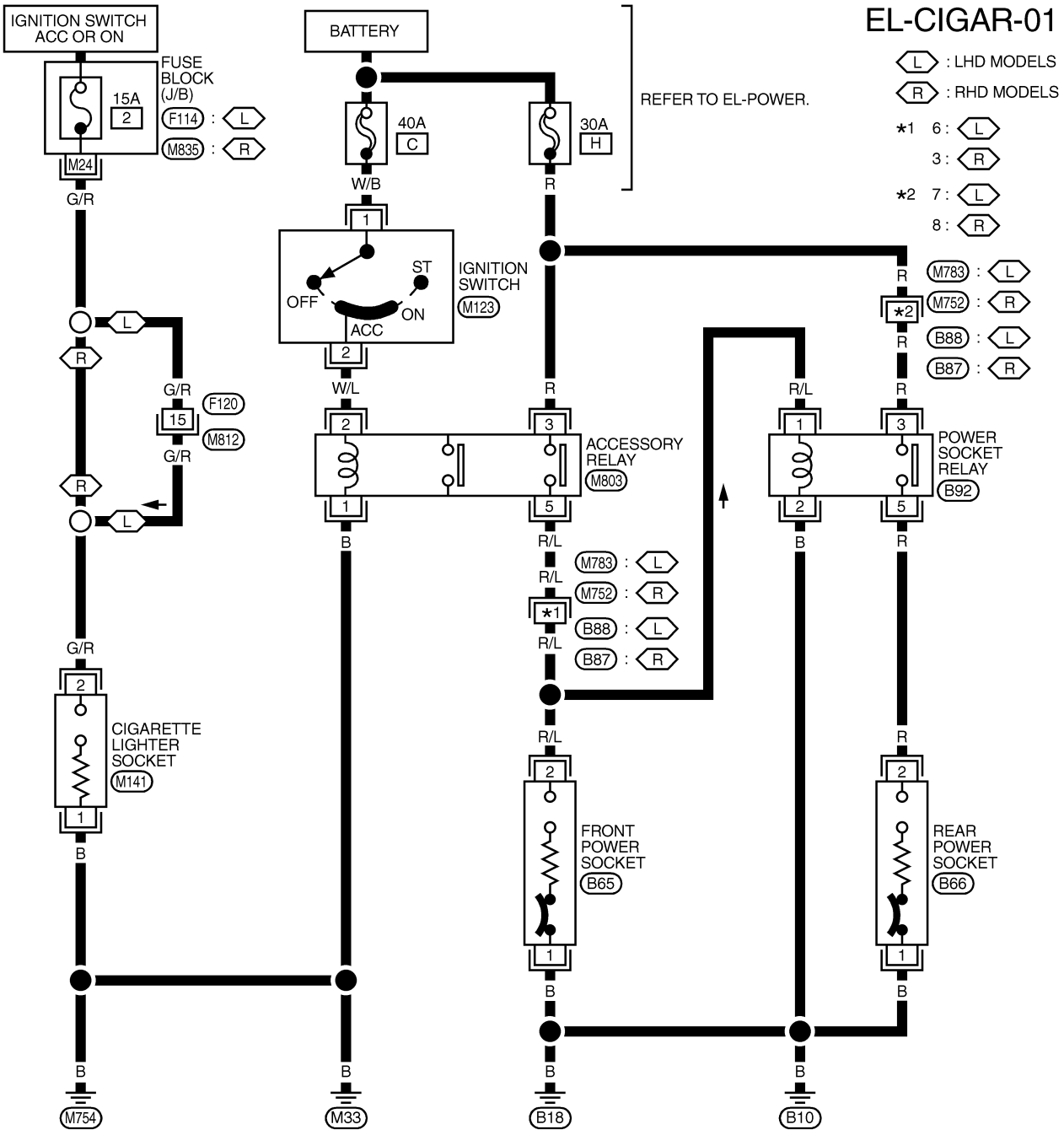


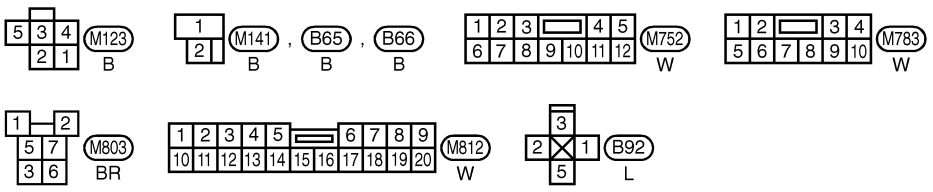




* : THIS CONNECTOR IS NOT SHOWN IN “HARNESS LAYOUT” , EL SECTION.

YEL118D

## Wiring Diagram — CIGAR —

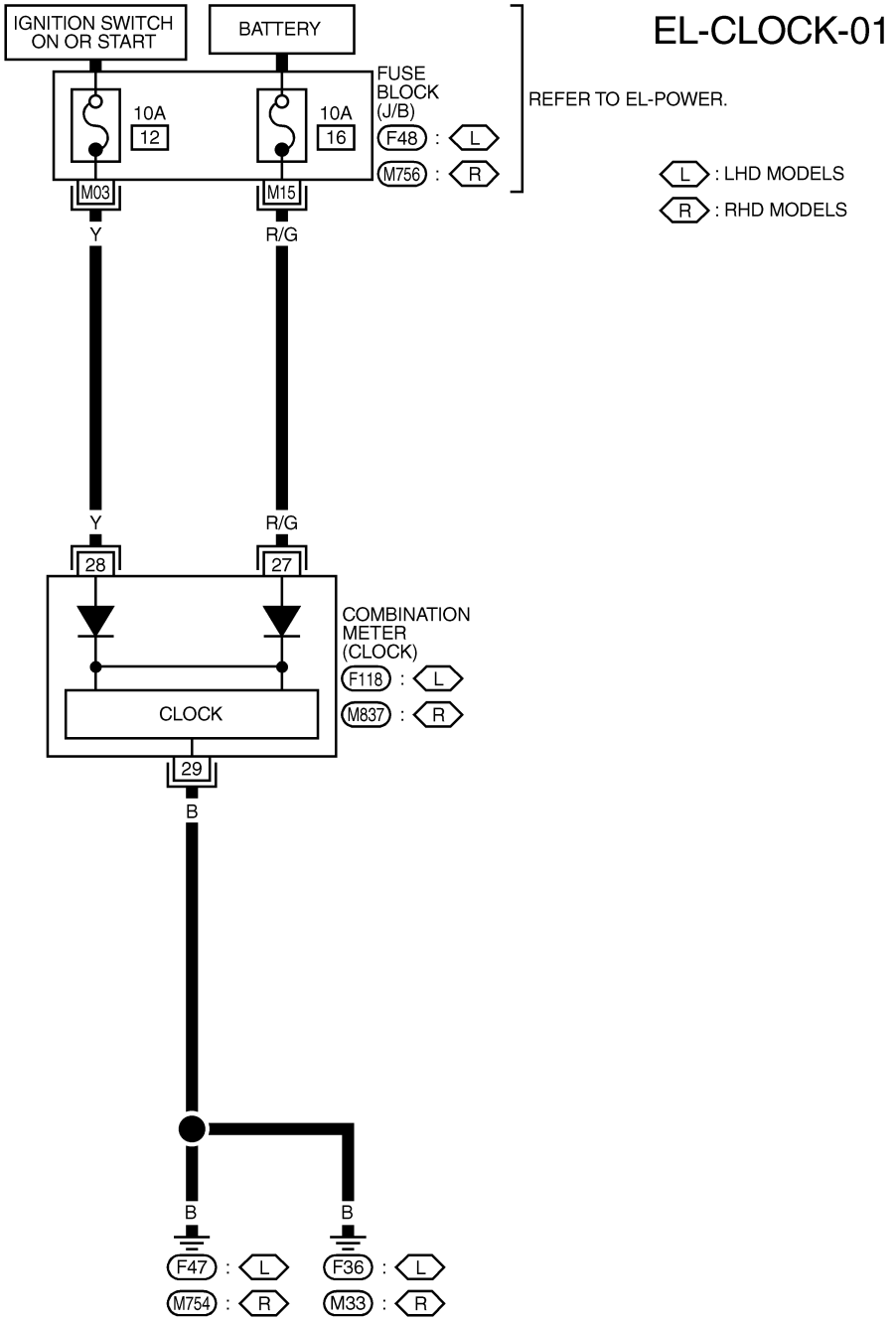


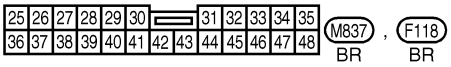




REFER TO THE FOLLOWING.
M835 , F114 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL119D

## Wiring Diagram — CLOCK —

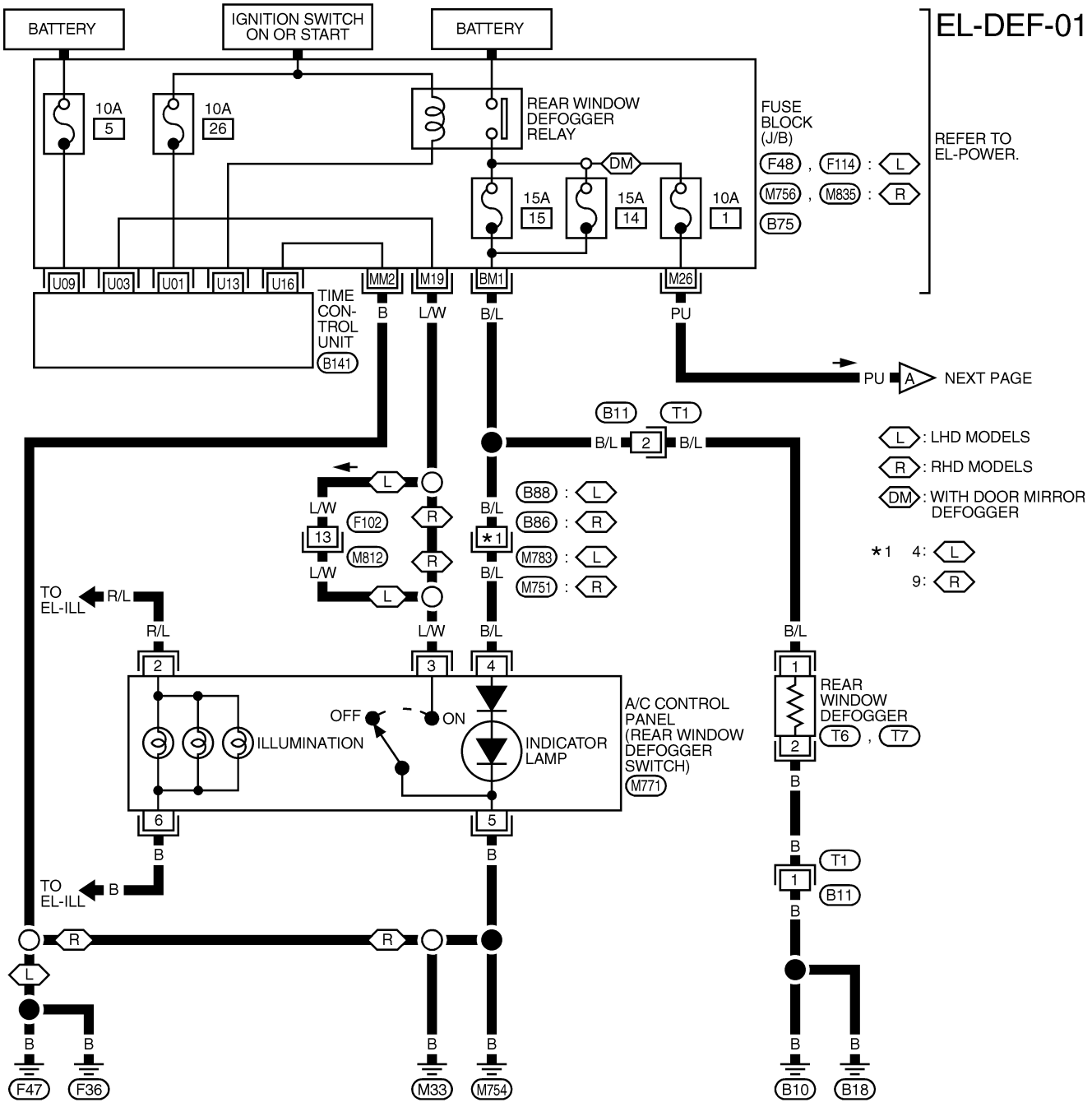


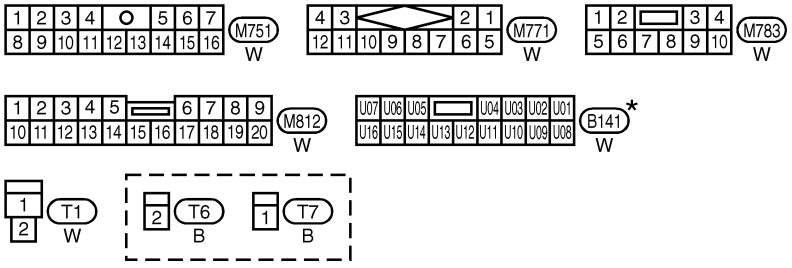




REFER TO THE FOLLOWING.
M756 , F48
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL198D

## Wiring Diagram — DEF —



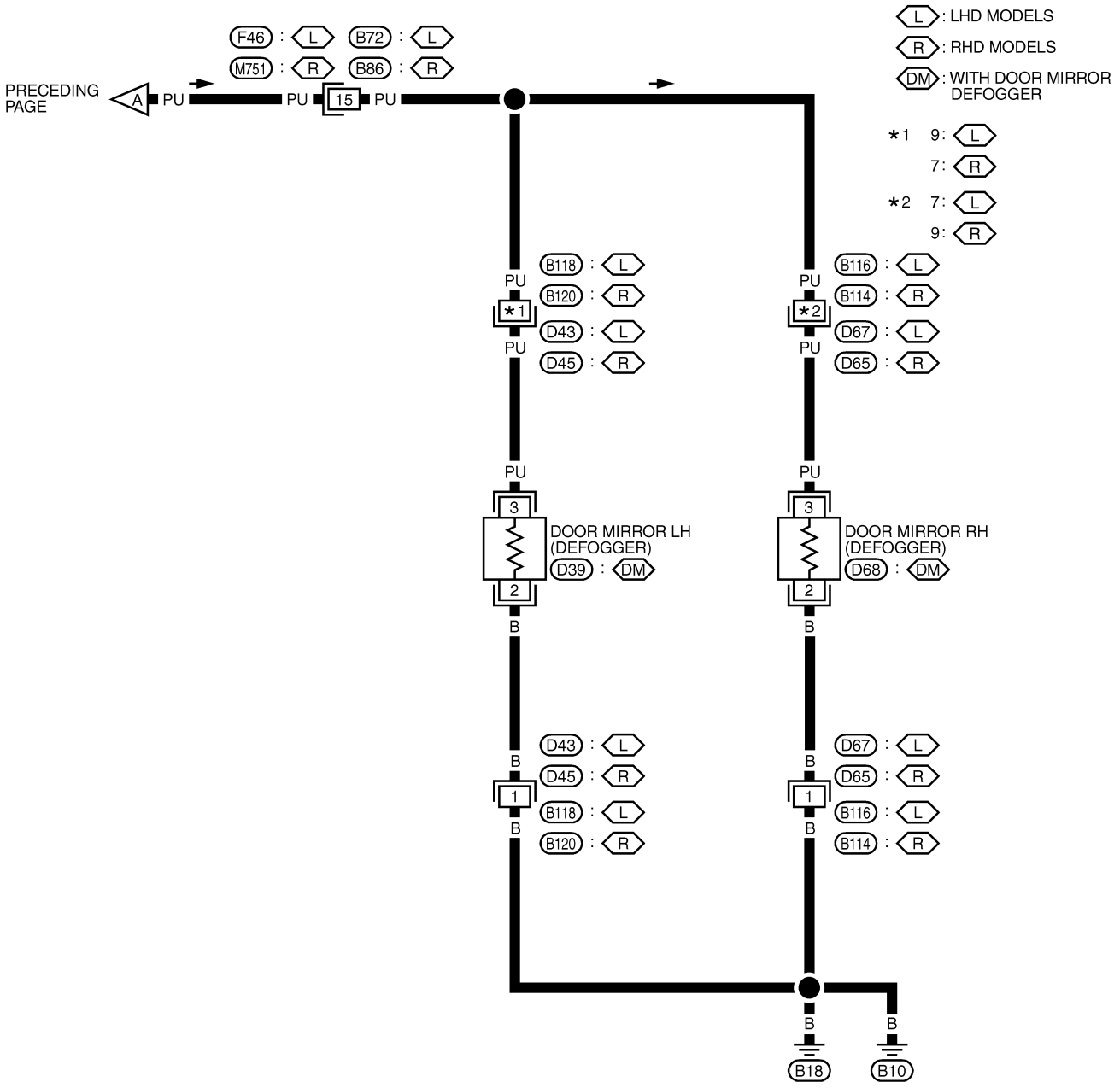

REFER TO THE FOLLOWING.
M756 , M835 , F48 , F114 ,
B75 -FUSE BLOCK-JUNCTION BOX (J/B)

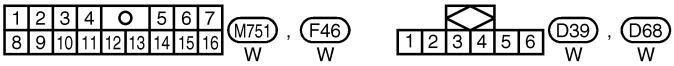
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

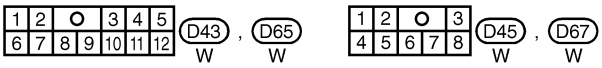
YEL120D

## Wiring Diagram — DEF — (Cont'd)

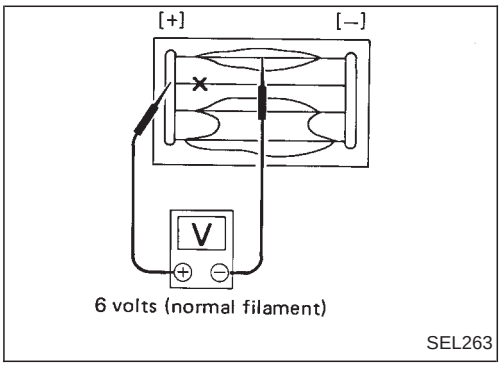
EL-DEF-02



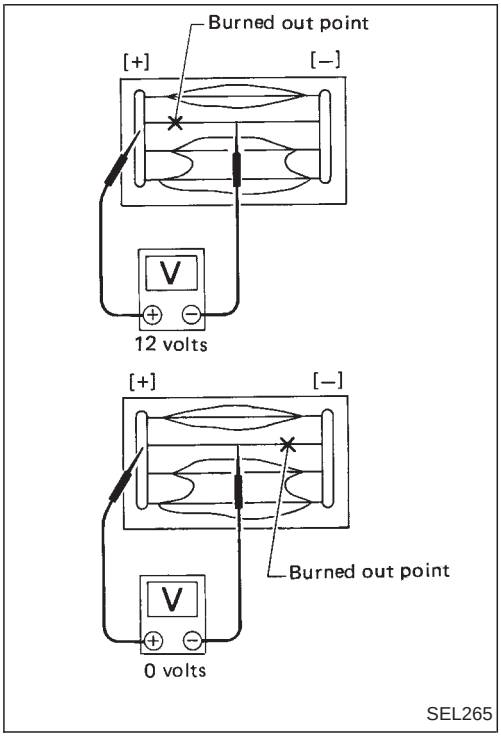




YEL121D

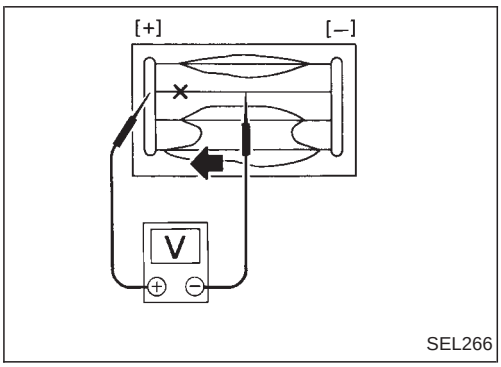



## Filament Check

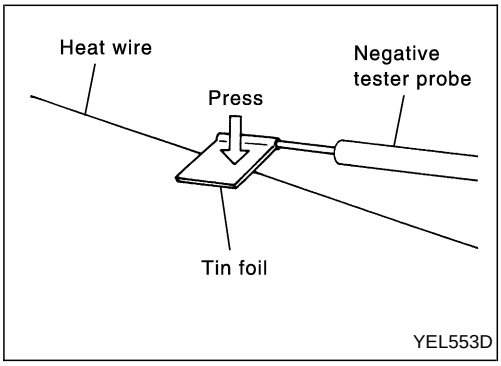
1. Attach probe circuit tester (in volt range) to middle portion of each filament.
   **6 volts = Normal filament**




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 to determine point where tester needle swings abruptly.

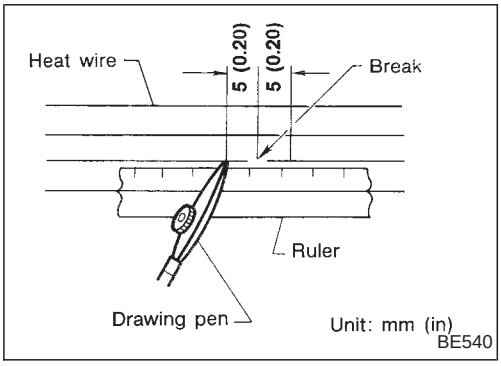



- **When measuring voltage, wind a piece of tin foil around the top of the negative probe and press the foil against the wire with your finger.**

## Filament Repair

### REPAIR EQUIPMENT

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

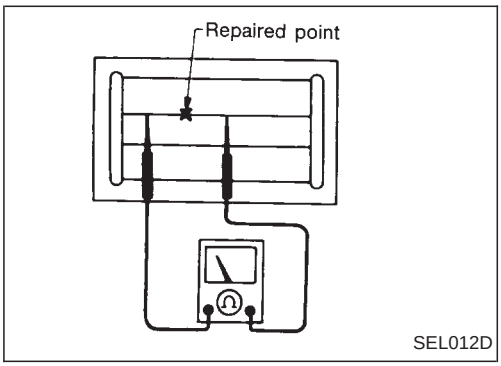



### REPAIRING PROCEDURE

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.

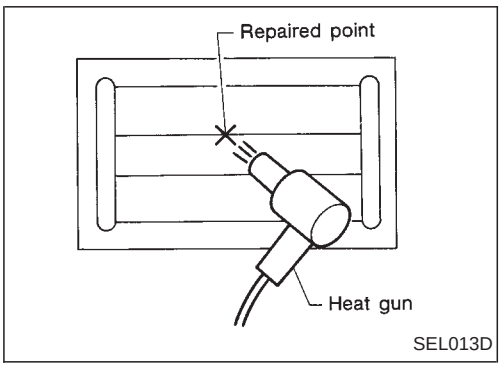
**Shake silver composition container before use.**

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

Refer to Owner's Manual for audio system operating instructions.

## NATS AUDIO LINK

### Description

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 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 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 |

**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

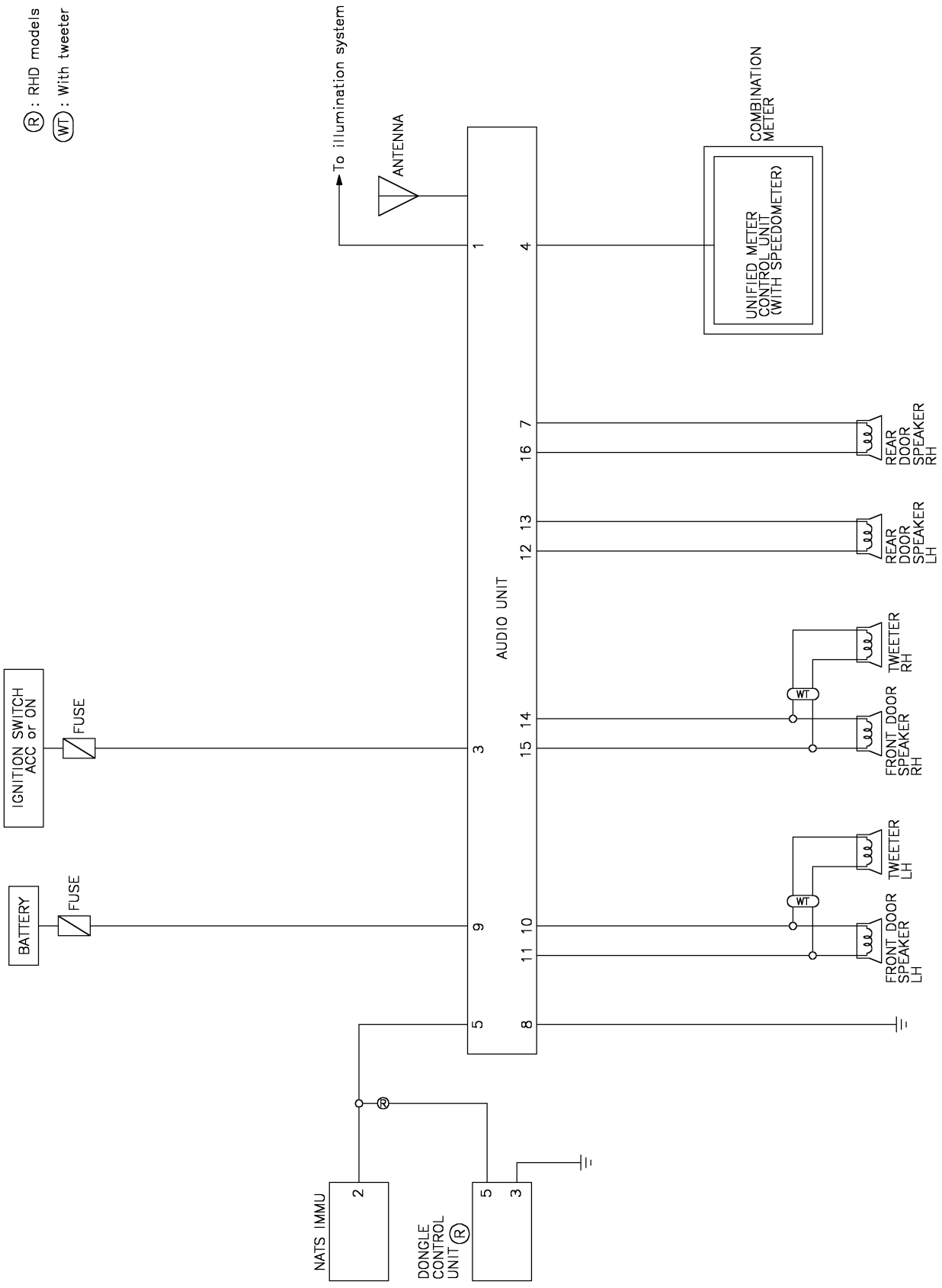
## System Description (Cont'd)

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

## Schematic

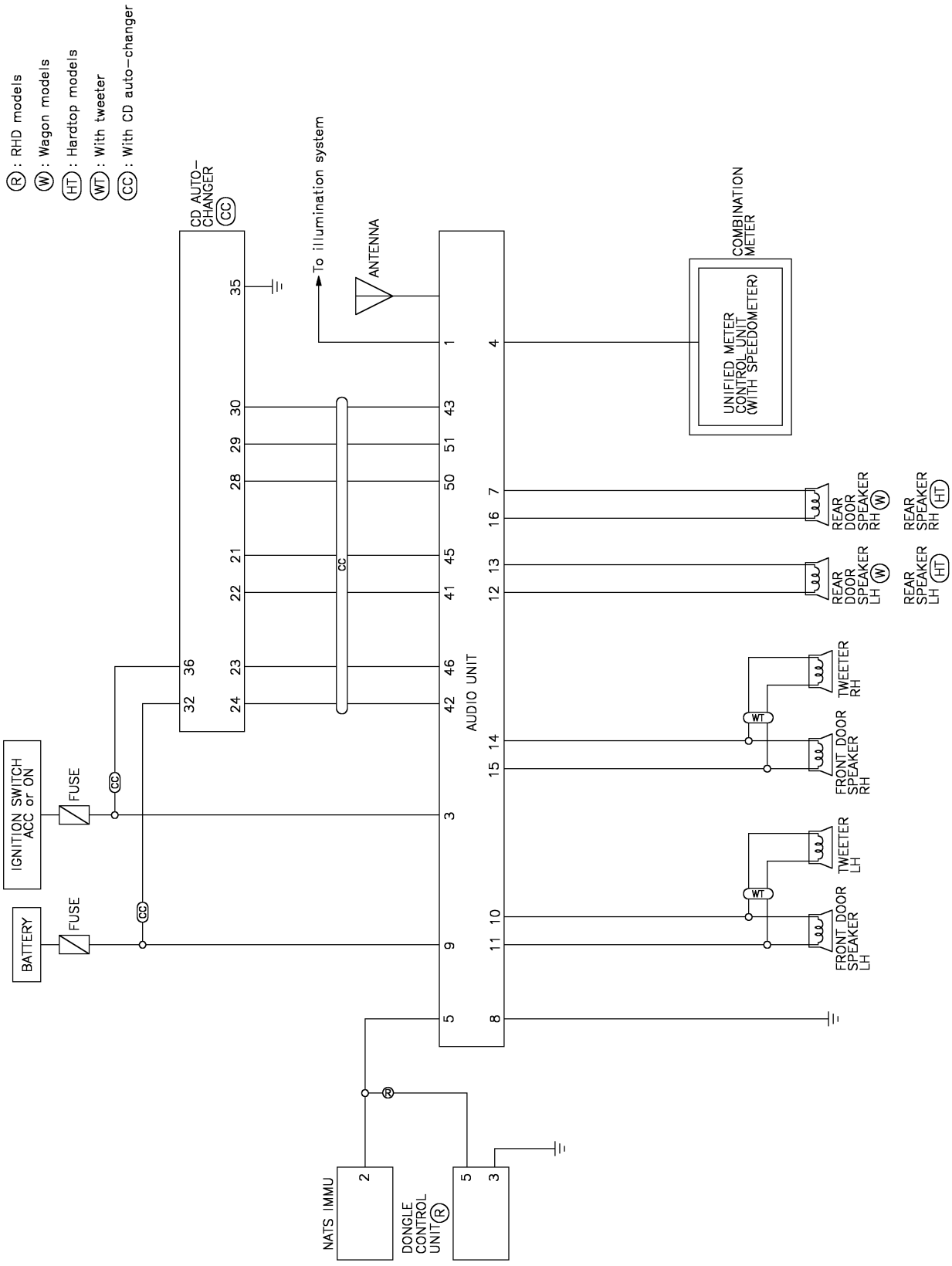
### TYPE 1




YEL122D

## Schematic (Cont'd)

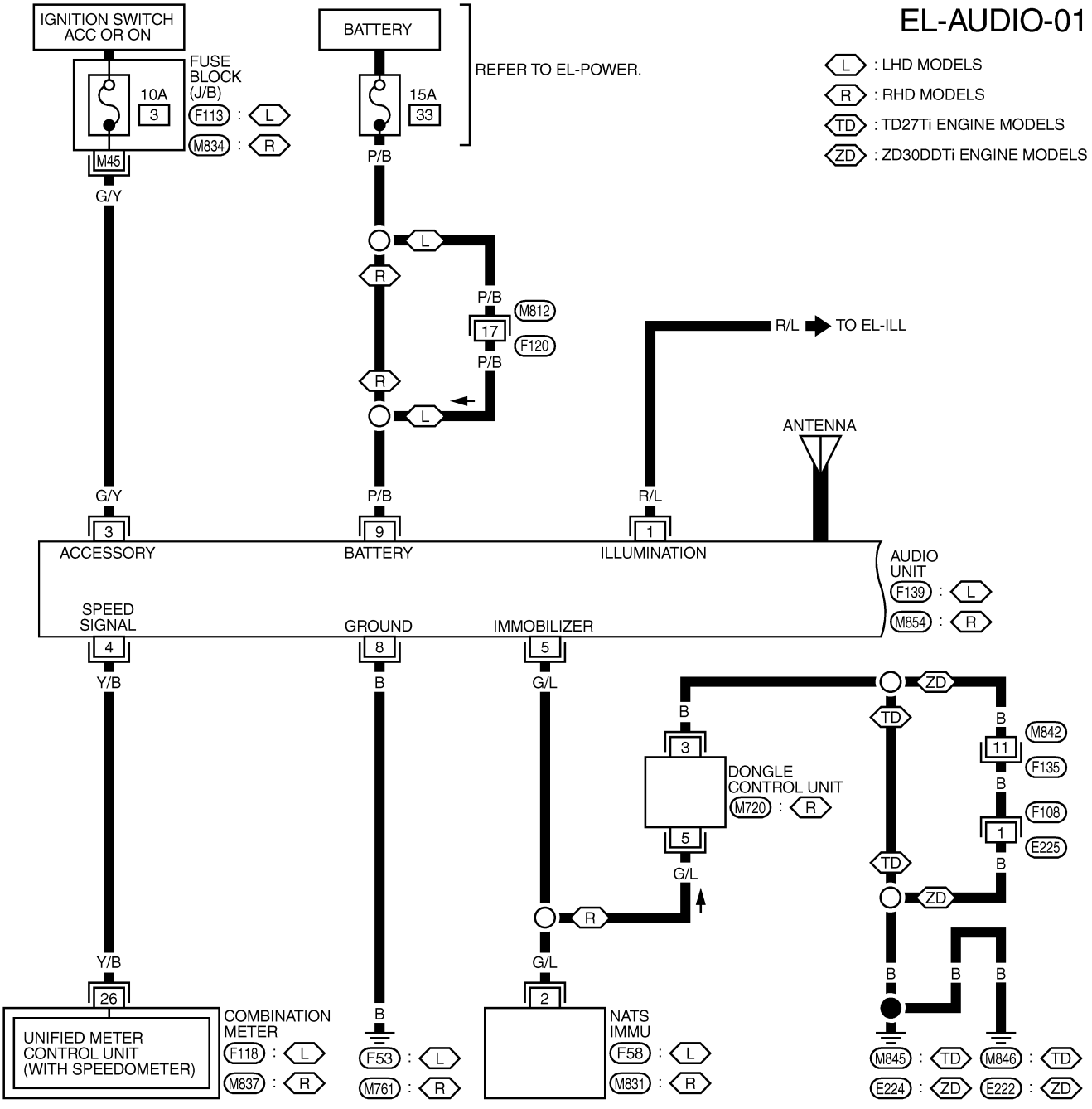
### TYPE 2

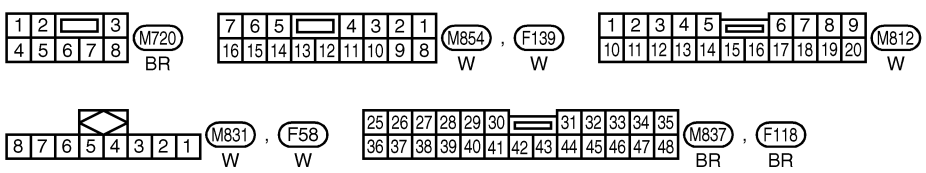



YEL123D

## Wiring Diagram — AUDIO —

### TYPE 1



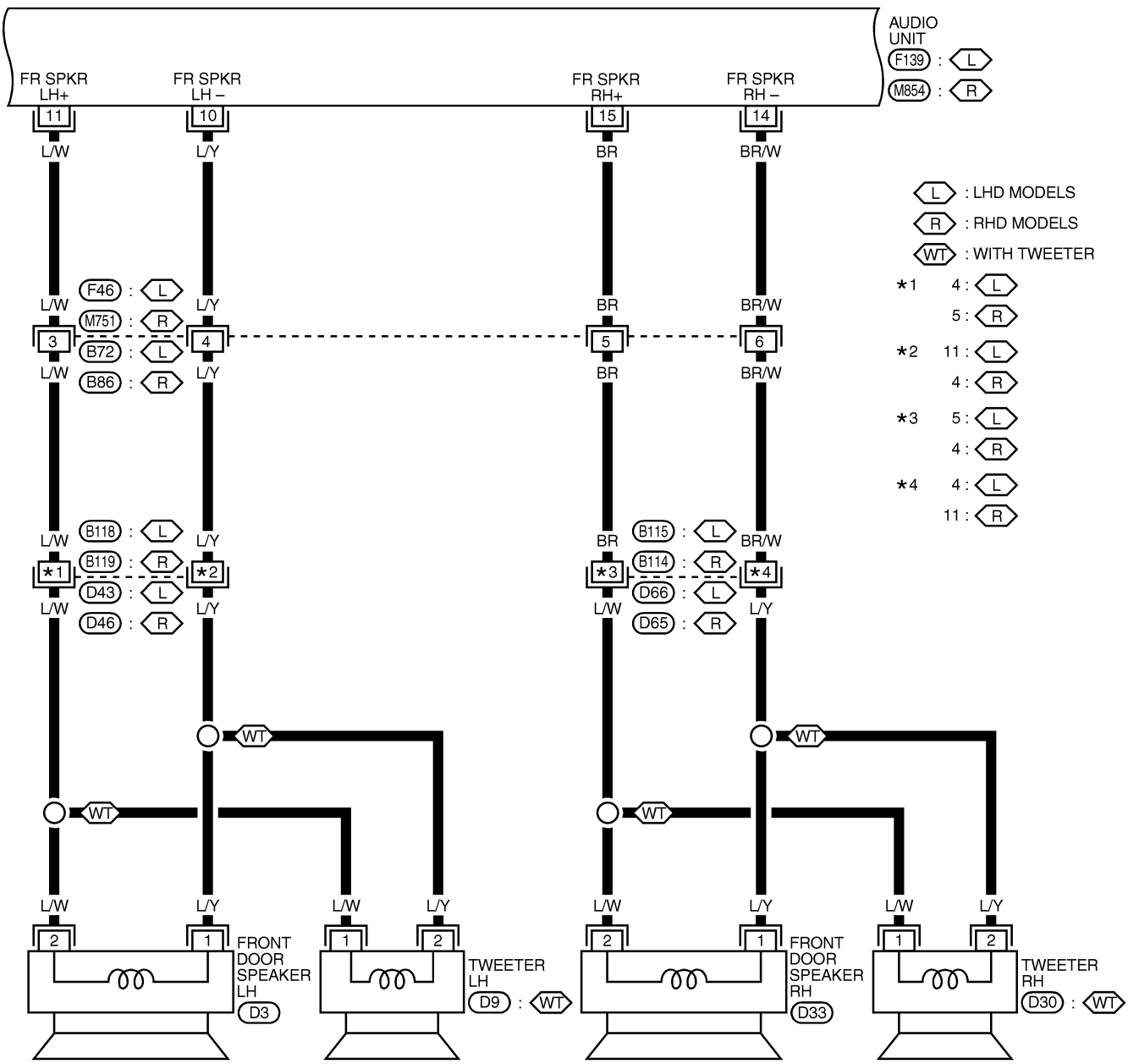

REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M834 , F113 -FUSE BLOCK-JUNCTION BOX (J/B)

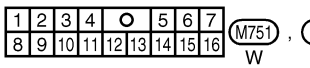
YEL124D

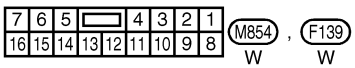
## Wiring Diagram — AUDIO — (Cont'd)

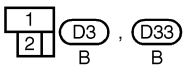
### TYPE 1

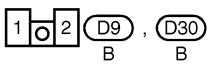
EL-AUDIO-02

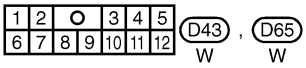


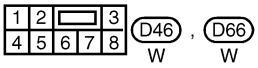



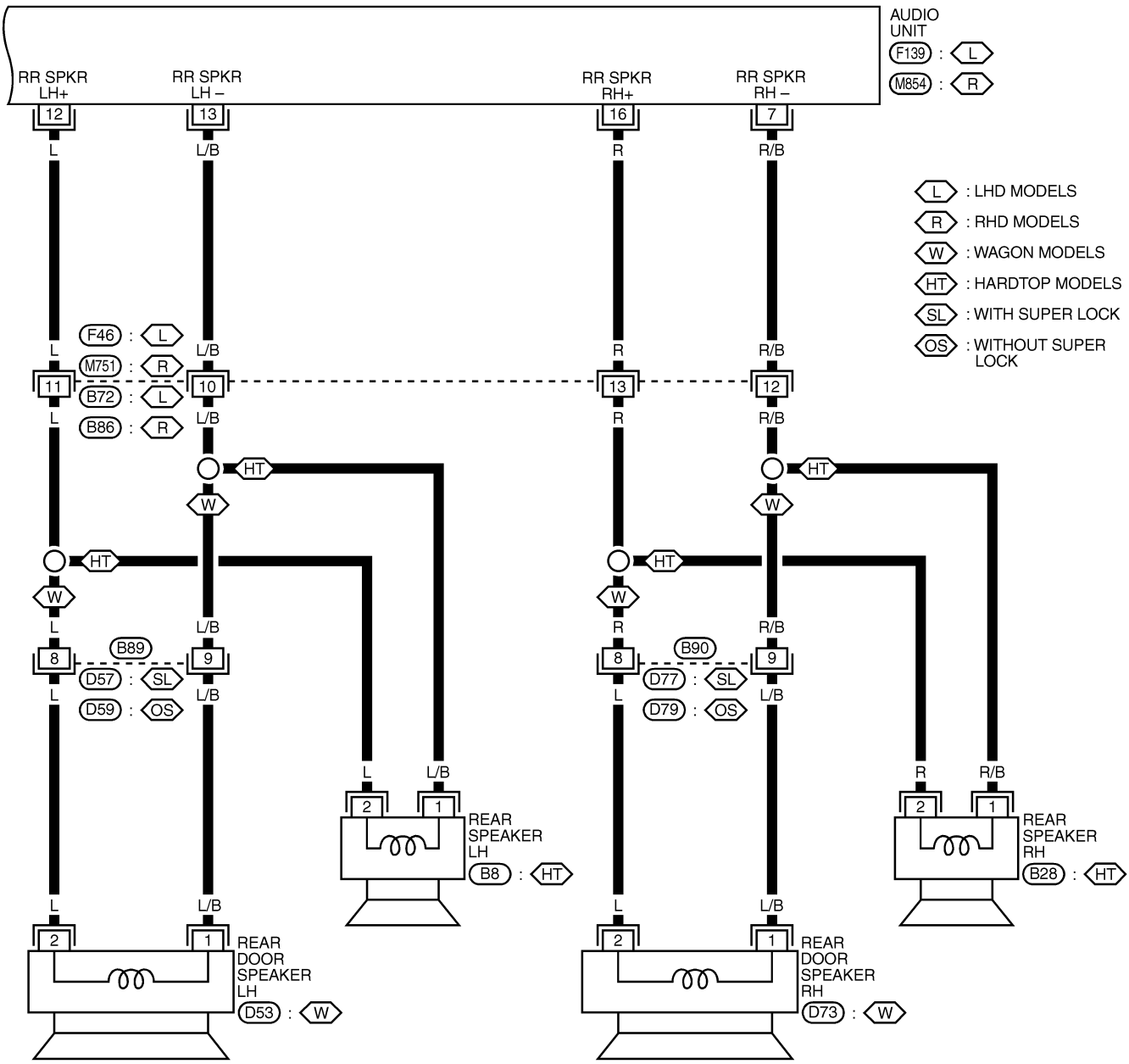



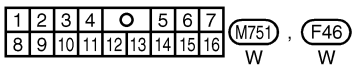

YEL125D

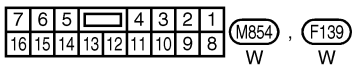
## Wiring Diagram — AUDIO — (Cont'd)

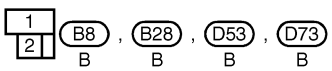
### TYPE 1

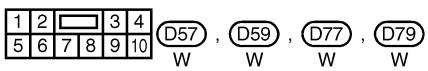
EL-AUDIO-03



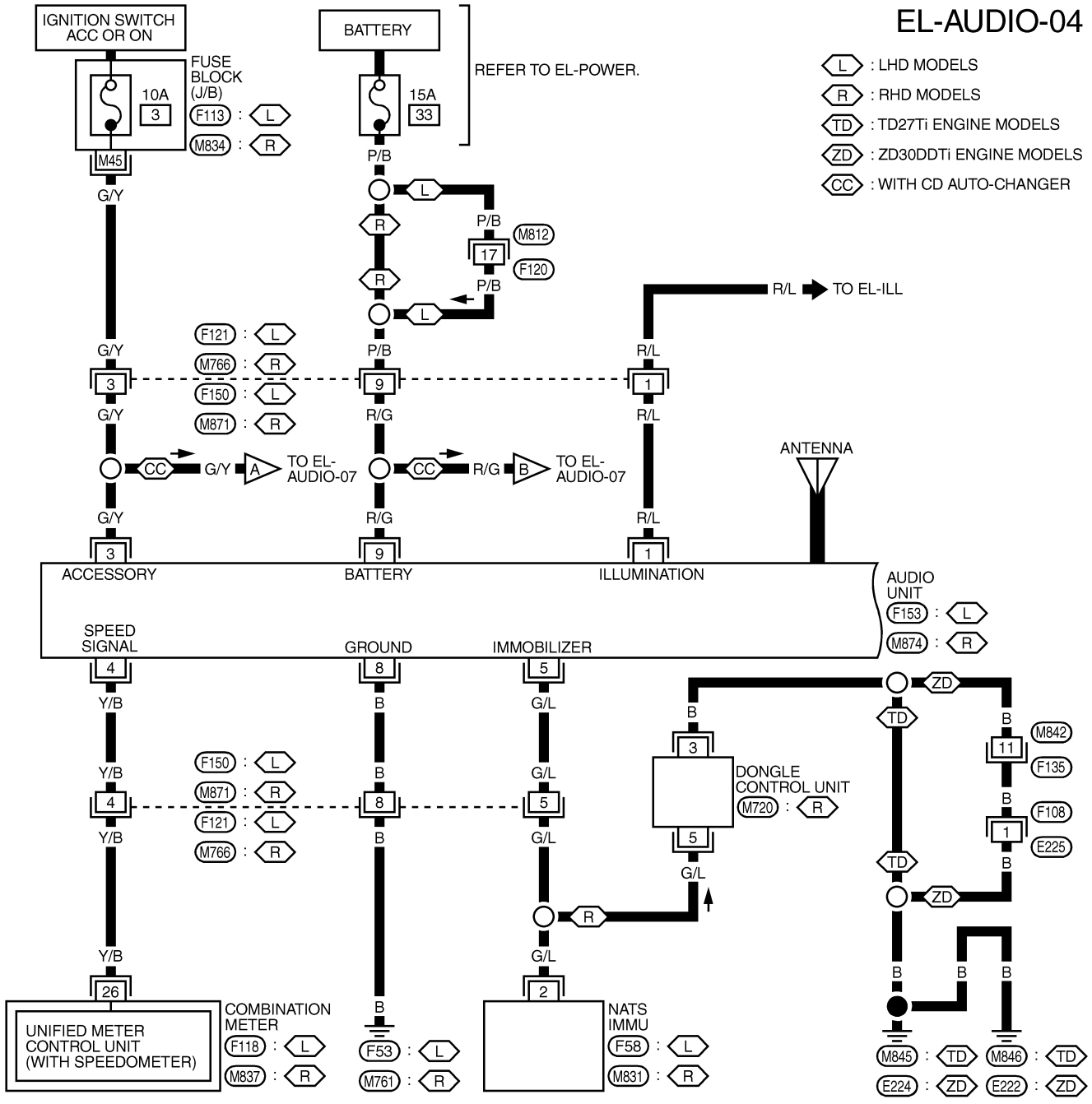



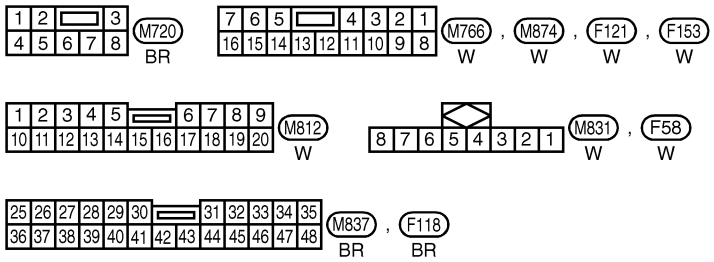




YEL126D

## Wiring Diagram — AUDIO — (Cont'd)

### TYPE 2



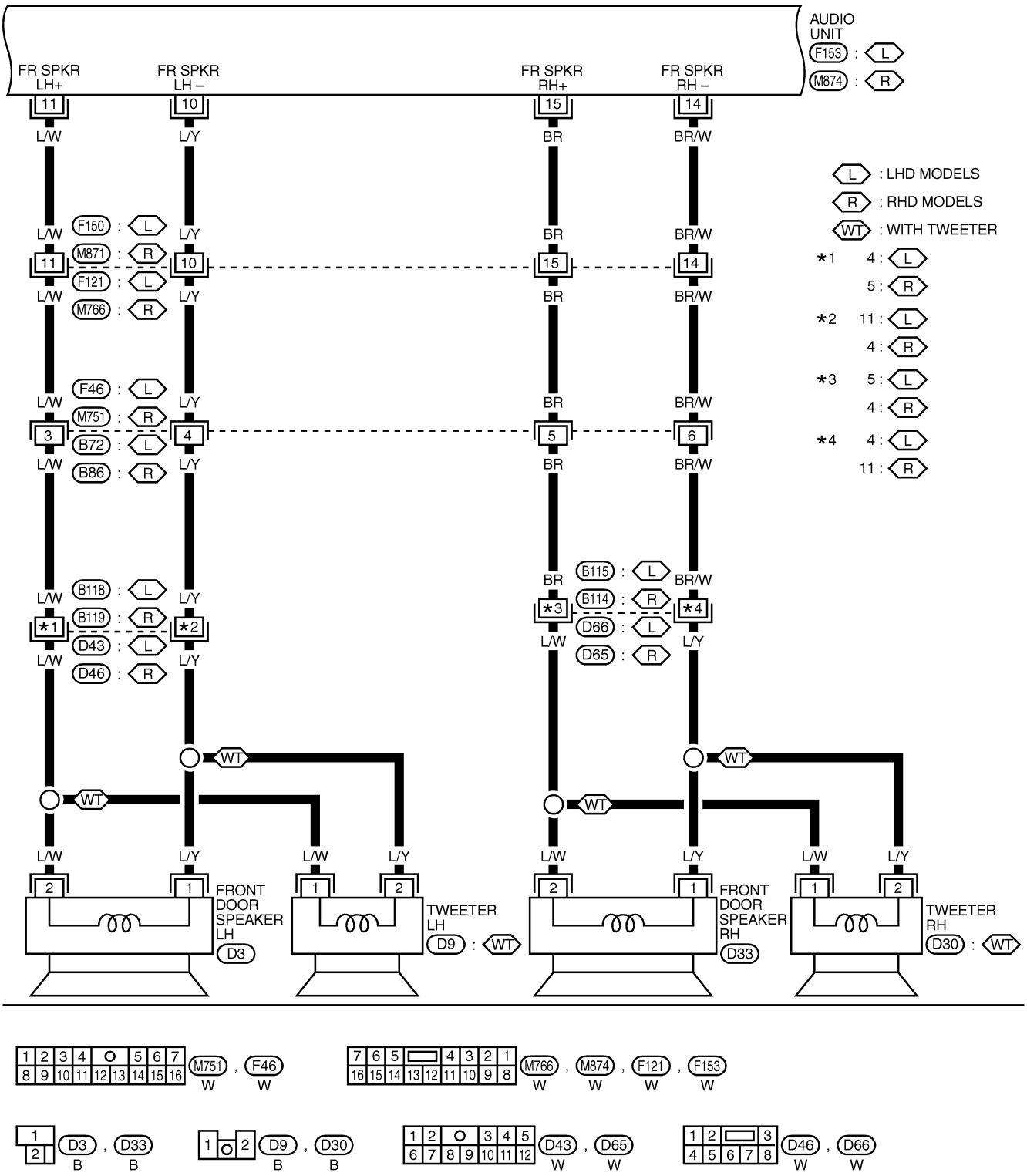

REFER TO THE FOLLOWING.
F108 , F135 -SUPER MULTIPLE JUNCTION (SMJ)
M834 , F113 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL127D

## Wiring Diagram — AUDIO — (Cont'd)

### TYPE 2

EL-AUDIO-05



















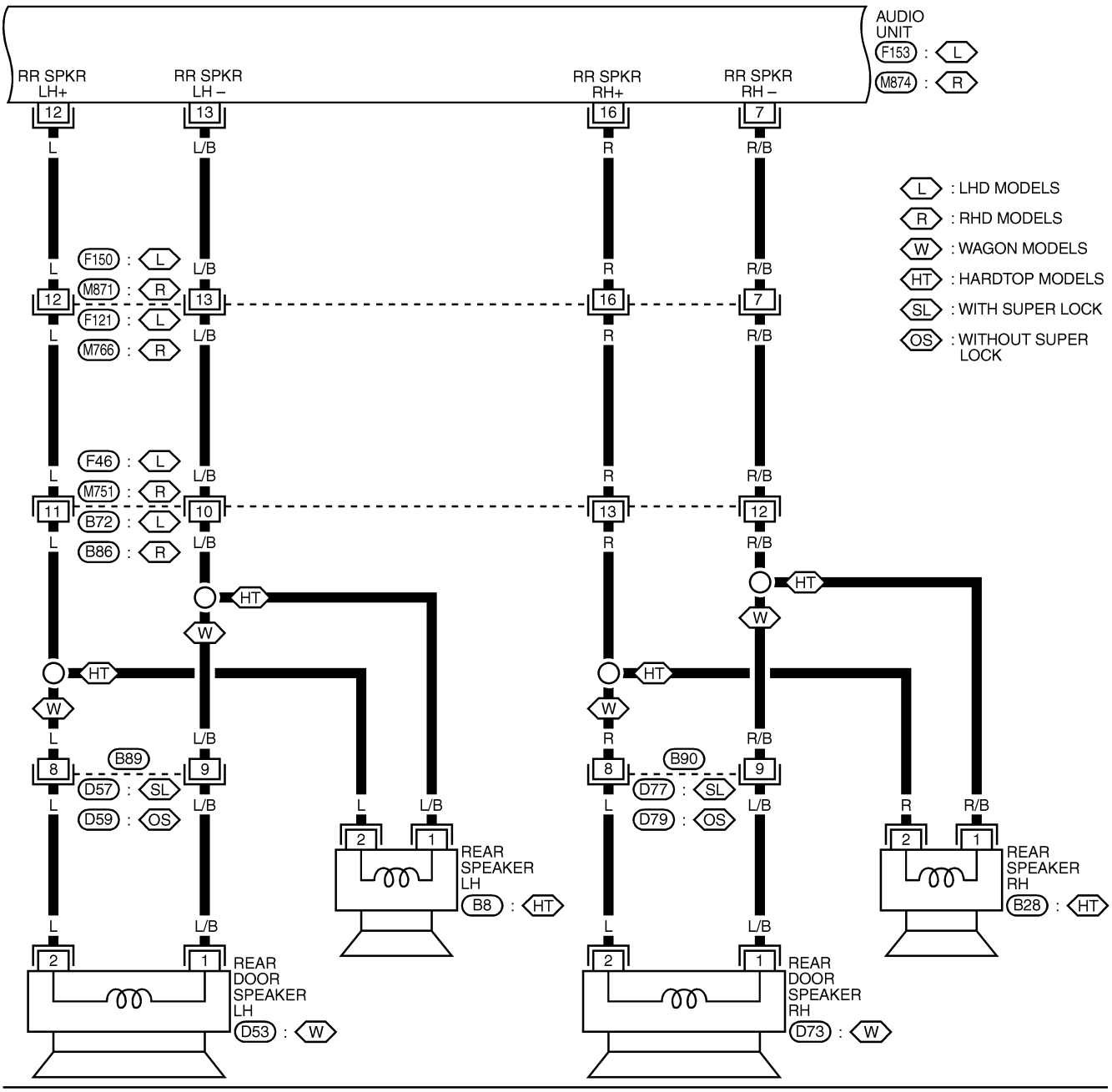


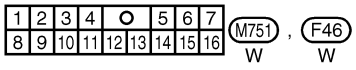

YEL128D

## Wiring Diagram — AUDIO — (Cont'd)

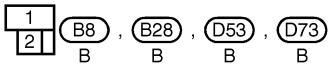
### TYPE 2

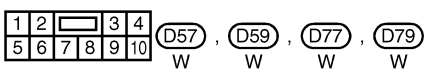
EL-AUDIO-06







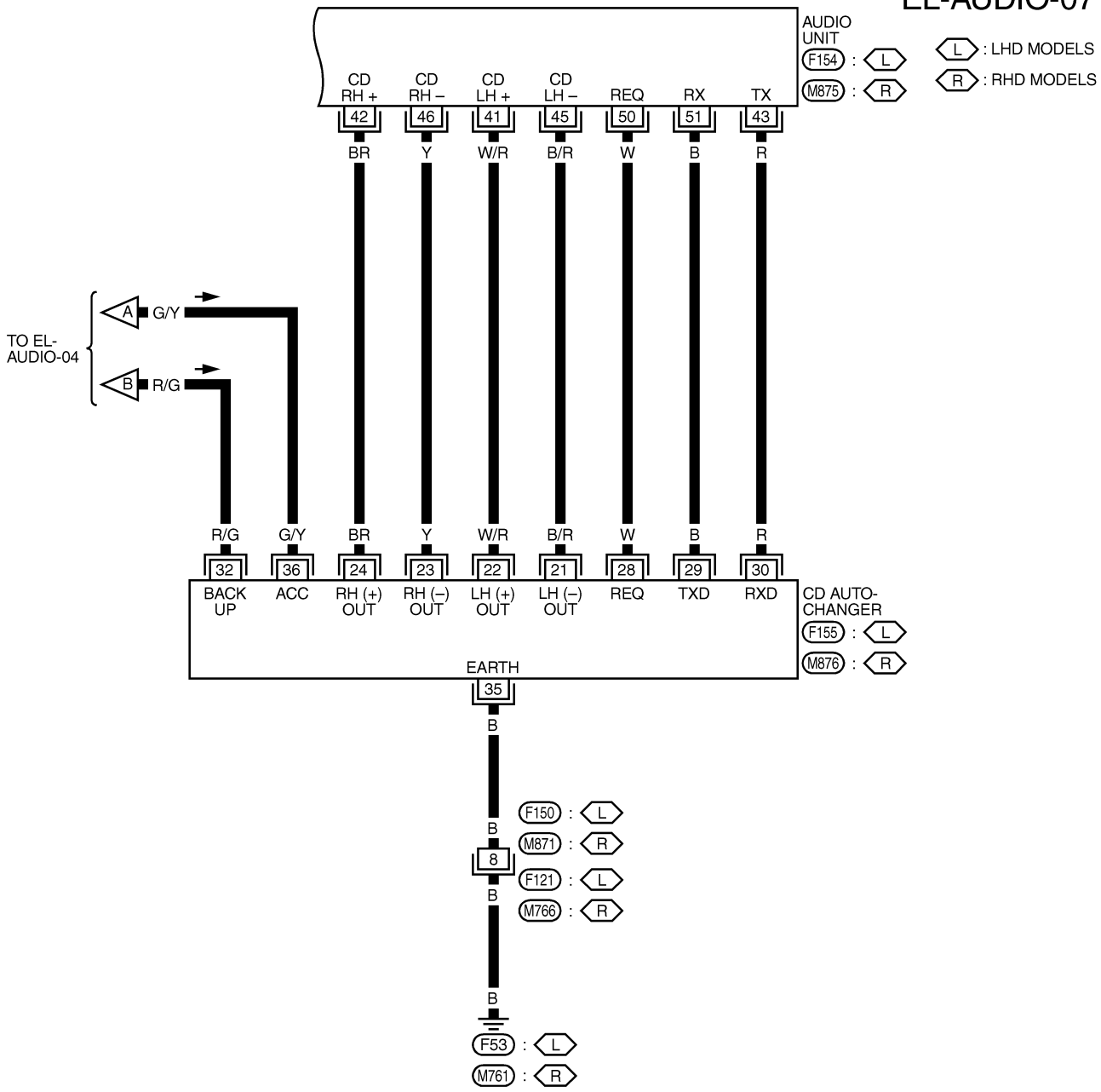



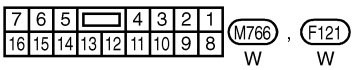

YEL129D

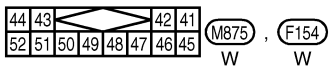
## Wiring Diagram — AUDIO — (Cont'd)

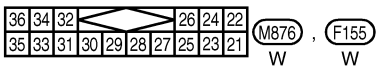
### TYPE 2 (WITH CD AUTO-CHANGER)

EL-AUDIO-07



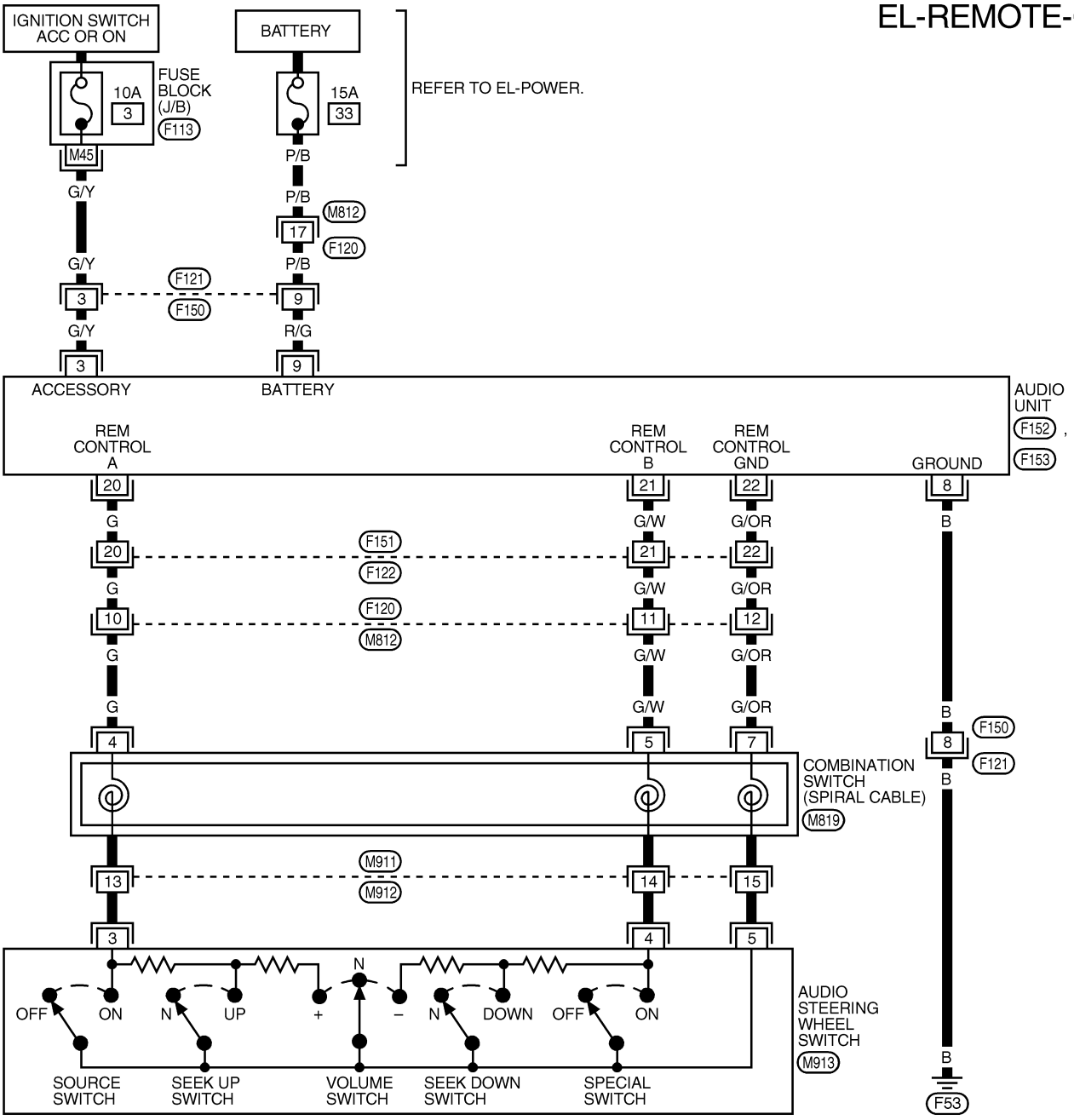



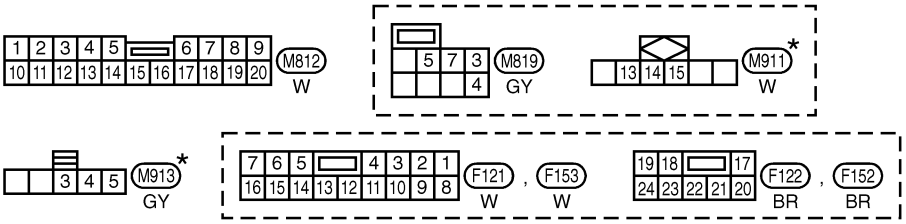

YEL130D

# Wiring Diagram — REMOTE —

## LHD MODELS

EL-REMOTE-01




REFER TO THE FOLLOWING.
F113 -FUSE BLOCK-
JUNCTION BOX (J/B)

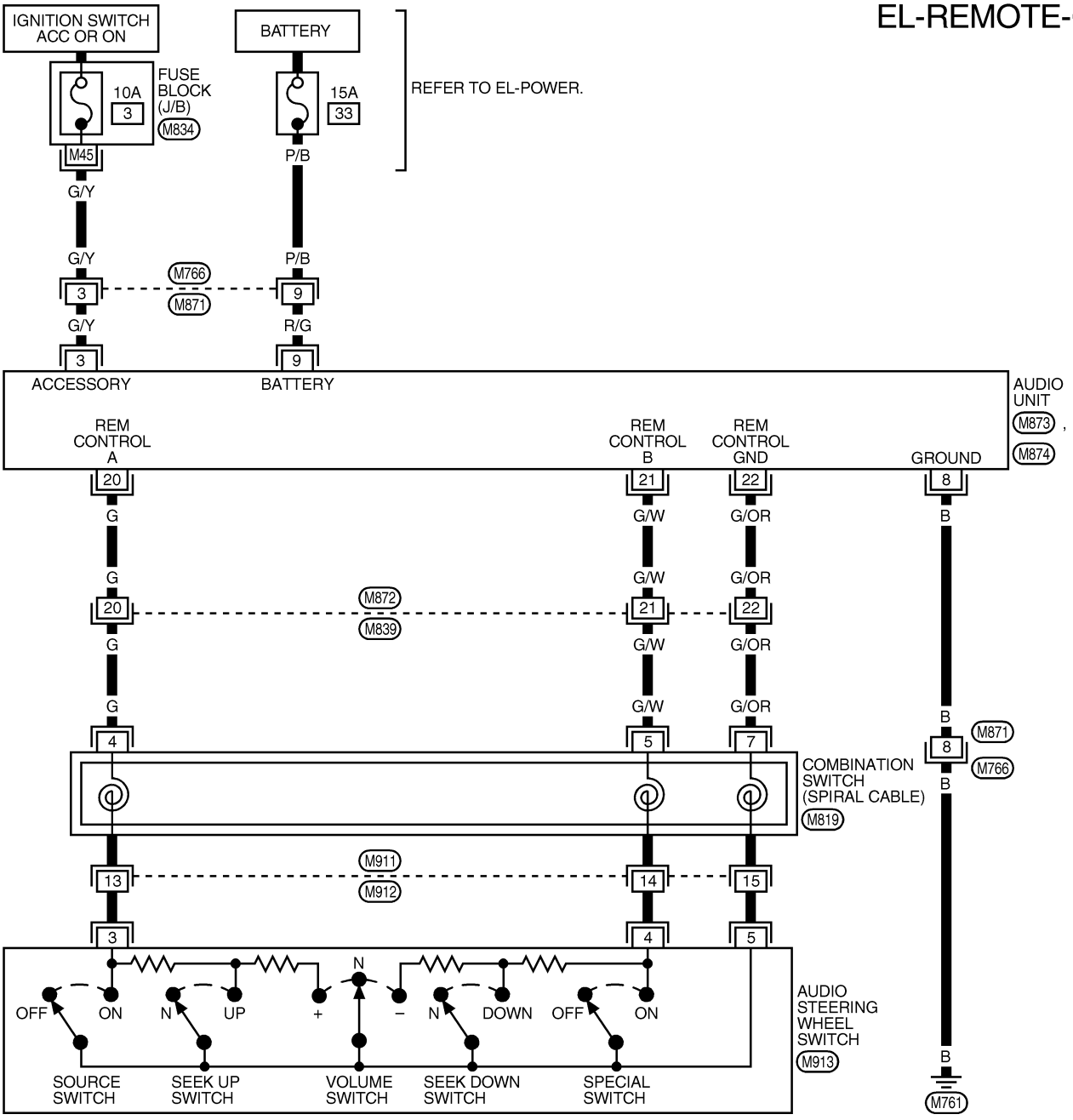
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

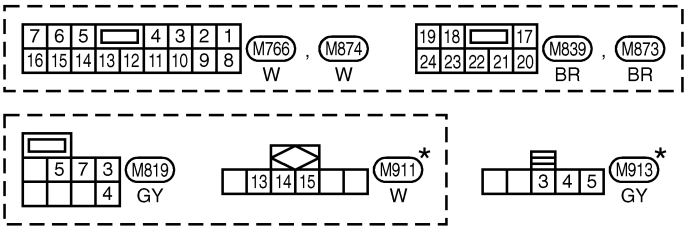
YEL131D

## Wiring Diagram — REMOTE — (Cont'd)

### RHD MODELS

EL-REMOTE-02




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

REFER TO THE FOLLOWING.
M834 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL132D

## Trouble Diagnoses

| Symptom | Possible cause | Repair order |
|---|---|---|
| Radio inoperative (no digital display and no sound from speakers). | 1. 10A Fuse<br><br><br>2. Poor radio case ground<br>3. Radio | 1. Check 10A fuse [No. 3 , located in fuse block (J/B)]. Turn ignition switch ON and verify battery positive voltage is present at terminal ③ of radio.<br>2. Check radio case ground.<br>3. Remove radio for repair. |
| Radio controls are operational, but no sound is heard from any speaker. | 1. Radio output<br>2. Radio | 1. Check radio output voltages.<br>2. Remove radio for repair. |
| Radio presets are lost when ignition switch is turned OFF. | 1. 15A fuse<br><br><br>2. Radio | 1. Check 15A fuse [No. 35 , located in fuse and fusible box] and verify battery positive voltage is present at terminal ⑨ of radio.<br>2. Remove radio for repair. |
| Individual speaker is noisy or inoperative. | 1. Speaker<br>2. Radio output<br>3. Speaker circuit<br><br>4. Radio | 1. Check speaker.<br>2. Check radio output voltages.<br>3. Check wires for open or short between radio and speaker.<br>4. Remove radio for repair. |
| Radio stations are weak or noisy. | 1. Antenna<br>2. Poor radio ground<br>3. Radio | 1. Check antenna.<br>2. Check radio ground.<br>3. Remove radio for repair. |
| Radio generates noise in AM and FM modes with engine running. | 1. Poor radio ground<br>2. Loose or missing ground bonding straps<br>3. Ignition condenser or rear window defogger noise suppressor condenser<br>4. Alternator<br>5. Ignition coil or secondary wiring<br>6. Radio | 1. Check radio ground.<br>2. Check ground bonding straps.<br><br>3. Replace ignition condenser or rear window defogger noise suppressor condenser.<br><br>4. Check alternator<br>5. Check ignition coil and secondary wiring.<br>6. Remove radio for repair. |
| Radio generates noise in AM and FM modes with accessories on (switch pops and motor noise). | 1. Poor radio ground<br>2. Antenna<br>3. Accessory ground<br>4. Faulty accessory | 1. Check radio ground.<br>2. Check antenna.<br>3. Check accessory ground.<br>4. Replace accessory. |

## Trouble Diagnoses (Cont'd)

### CD AUTOCHANGER

| Symptom | Possible cause | Repair order |
|---|---|---|
| No play of the CD after CD play button is pushed. | 1. Radio (The radio is not working.)<br>2. Harness connection (Magazine does not eject.)<br>3. Discs<br>4. Magazine does not eject or a disc remains in CD player.<br>5. Changer | 1. Remove the radio for repair.<br>2. Check harness connection.<br>3. Inspect disc. (Refer to testing magazines and discs.)<br>4. Reset the changer. (Disconnect harness connector at the changer and reconnect after 30 sec.)<br>5. Remove the changer for repair. |
| CD skipping. | 1. Rough road driving<br>2. Discs<br>3. Bracket<br>4. Changer | 1. System is not malfunctioning.<br>2. Inspect discs. (Refer to testing magazines and discs.)<br>3. Check and repair bracket and installation of changer.<br>4. Remove the changer for repair. |
| Error code [NO DISC] is shown on the radio after CD play button is pressed. | 1. Magazine setting<br>2. Magazine<br>3. Changer | 1. Confirm the magazine is pushed completely.<br>2. Inspect magazine. (Refer to testing magazines and discs.)<br>3. Remove the changer for repair. |

### Testing magazines and discs

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 automative 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.**

## Inspection

### SPEAKER

1. Disconnect speaker harness connector.
2. Measure the resistance between speaker terminals ① and ②.

- The resistance should be 2 - 4Ω.

3. Using jumper wires, momentarily connect a 9V battery between speaker terminals ① and ②.

- A momentary hum or pop should be heard.

### ANTENNA

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

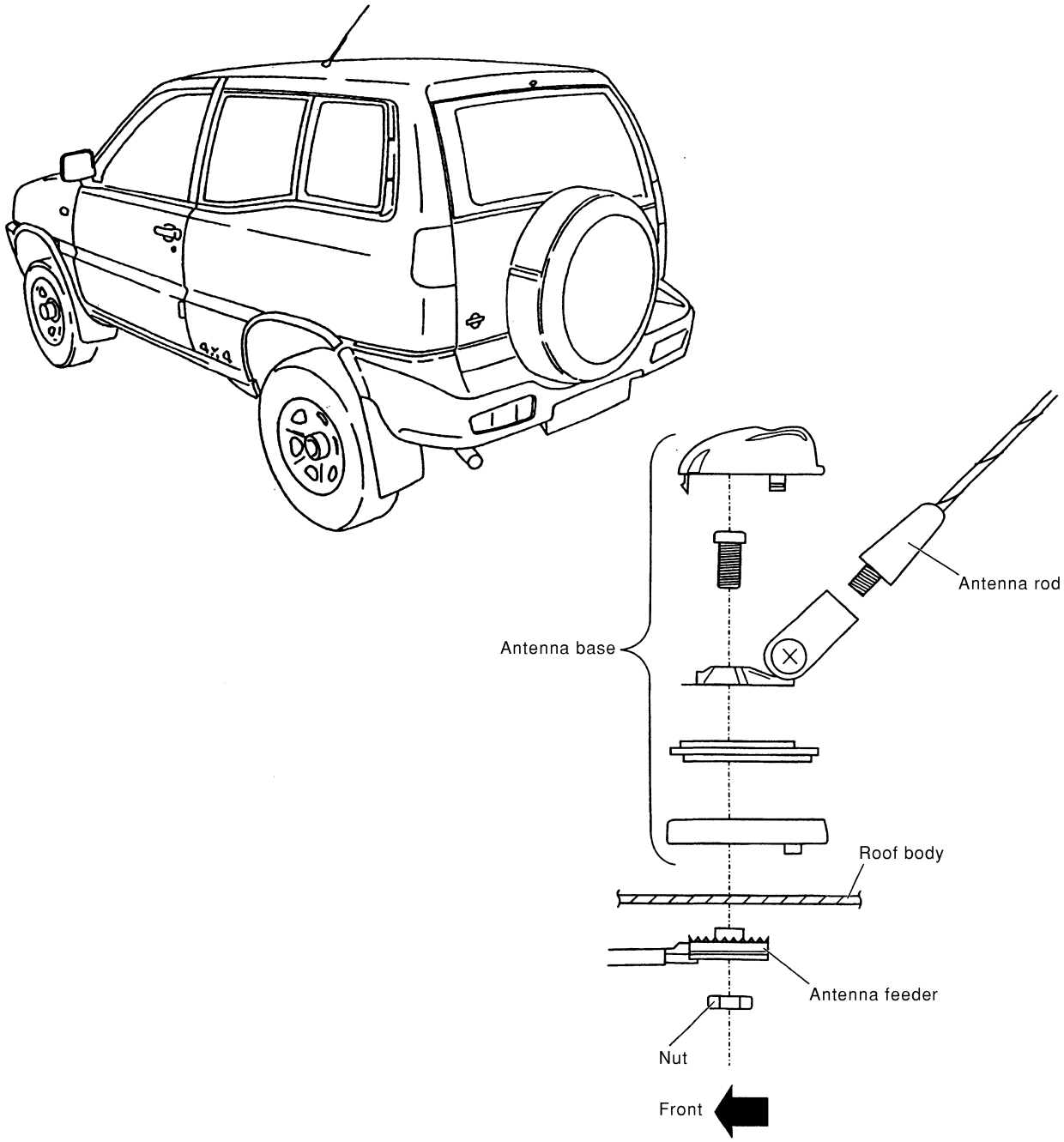
- If reception improves, check antenna ground (at body surface).
- If reception does not improve, check main feeder cable for short circuit or open circuit.

### RADIO

All voltage inspections are made with:

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

## Location of Roof Mounted Antenna

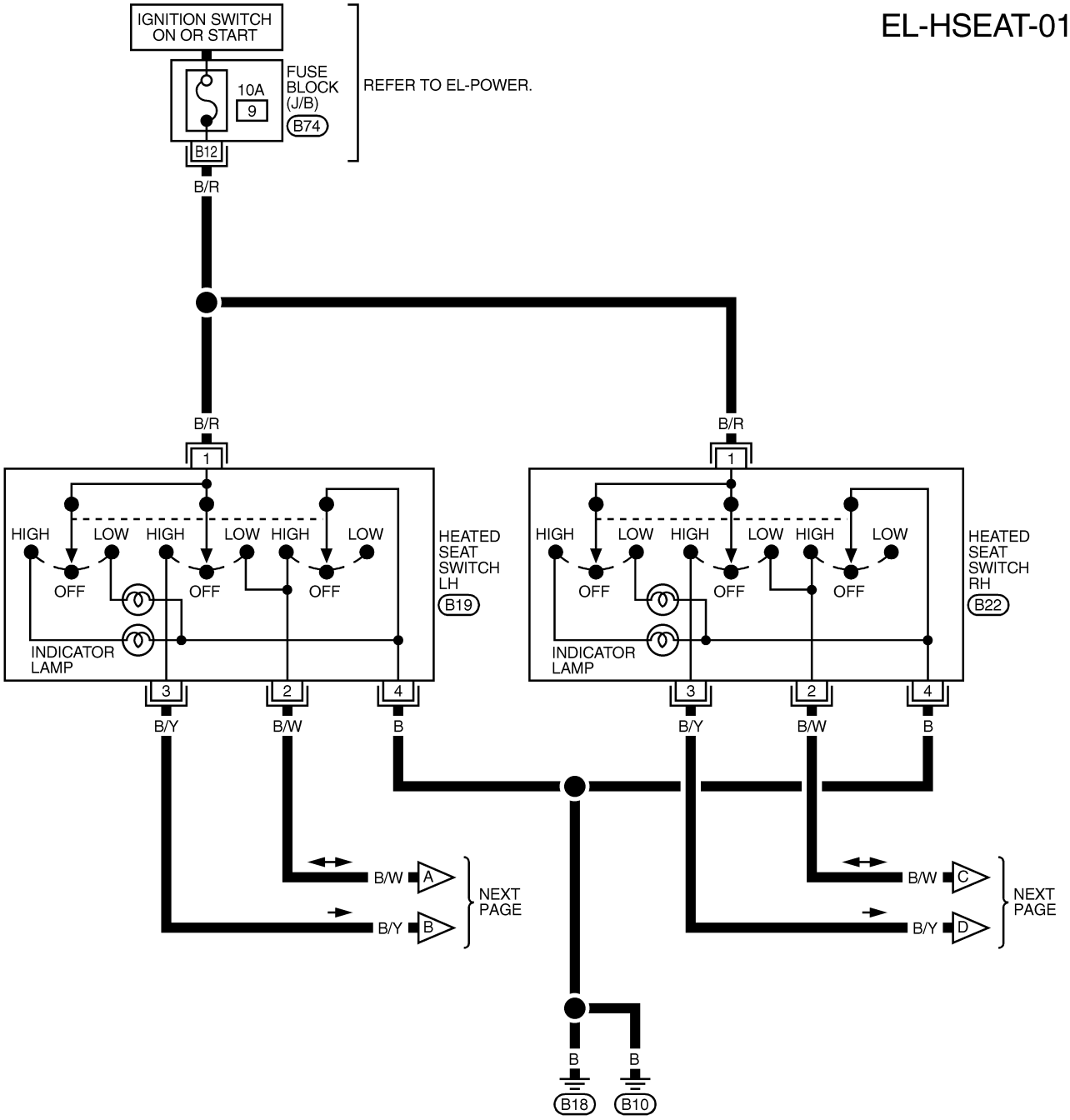



YEL602D

## Wiring Diagram — HSEAT —

### LHD MODELS WITH SEAT HEATER

EL-HSEAT-01



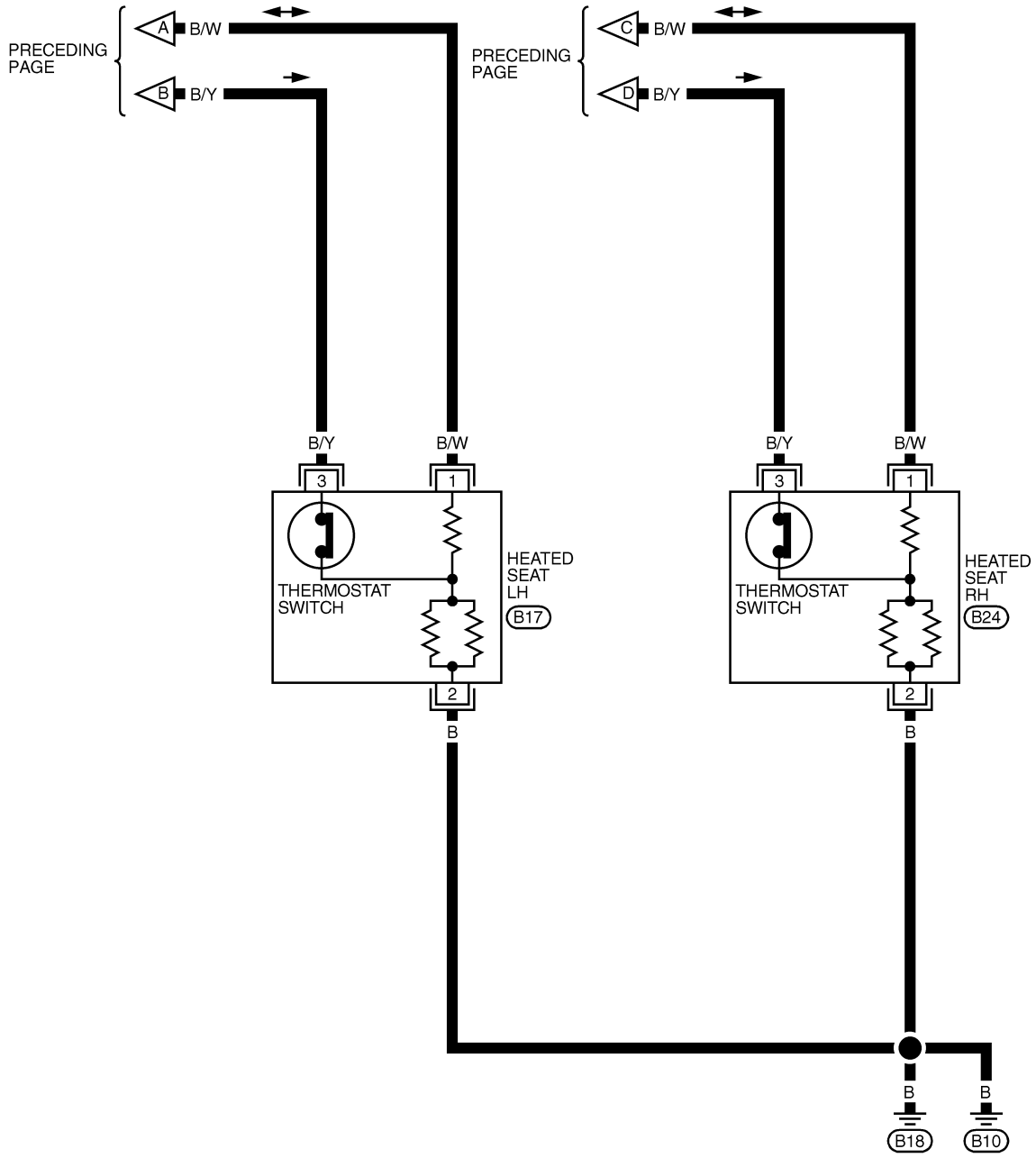

1 2 3 4 B19 L , B22 W

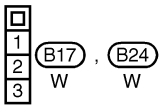
REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL133D

## Wiring Diagram — HSEAT — (Cont'd)

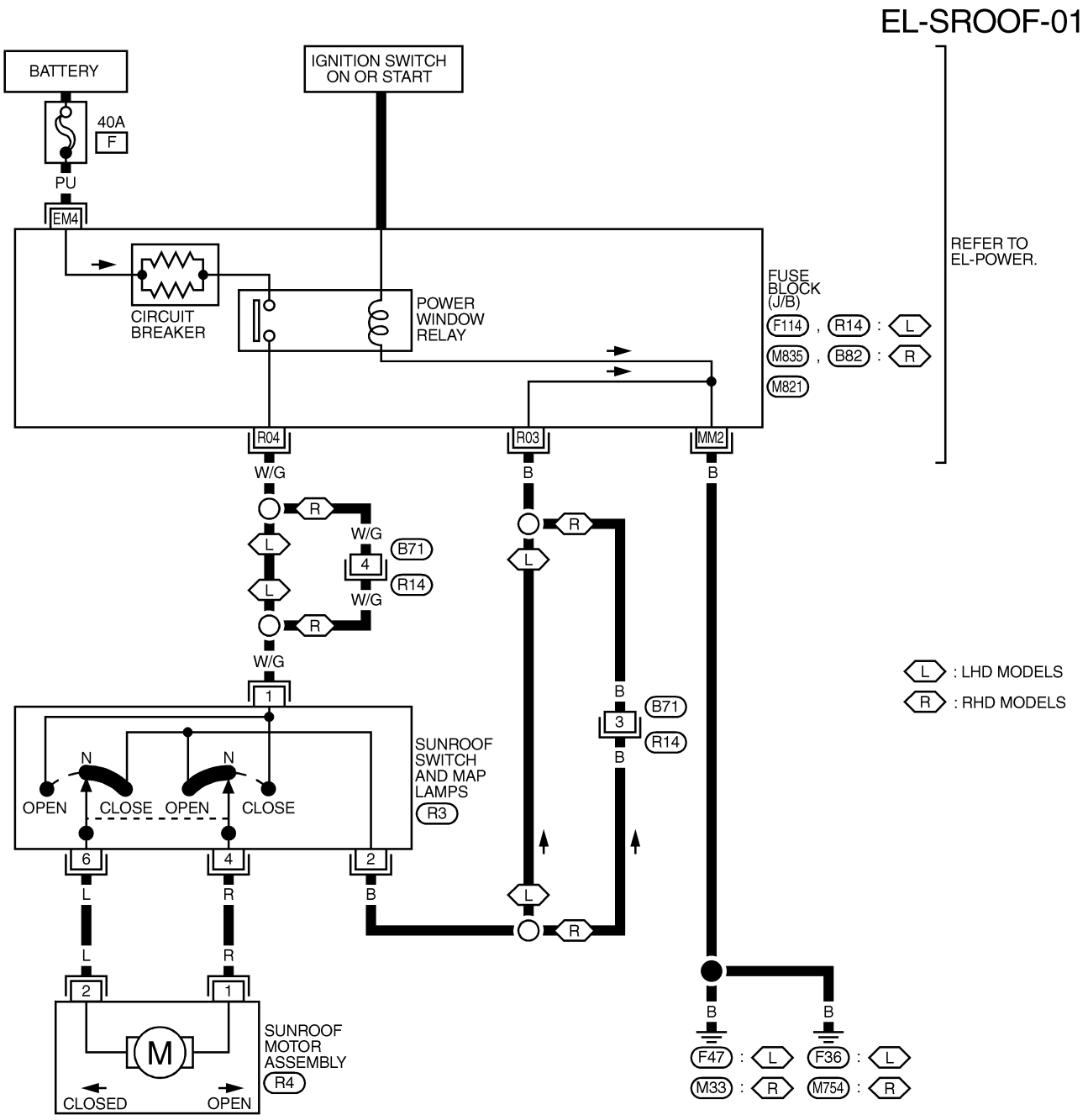
EL-HSEAT-02

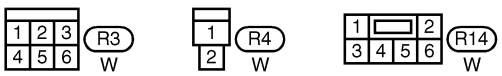



YEL134D

## Wiring Diagram — SROOF —



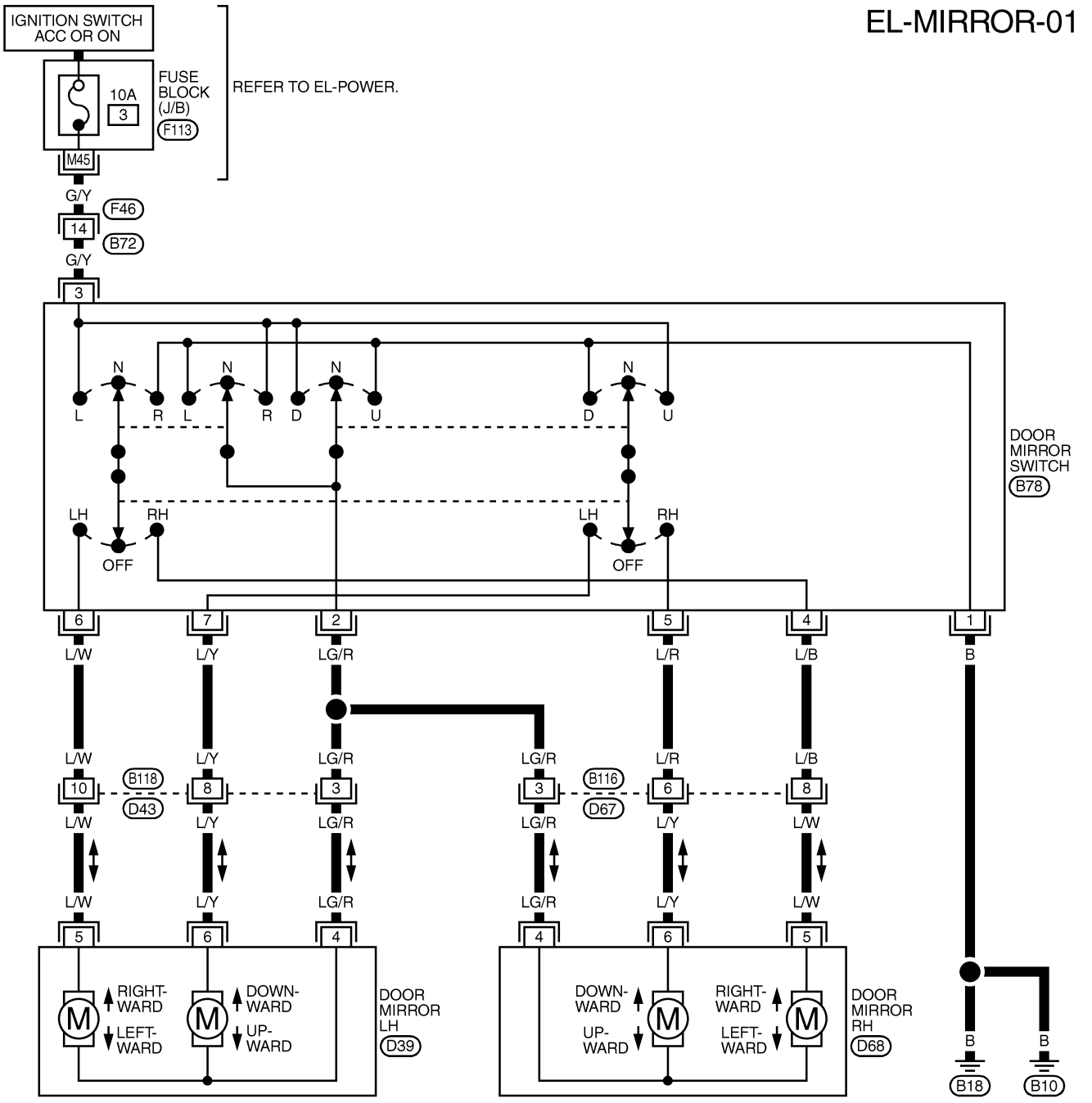

REFER TO THE FOLLOWING.
M821 , M835 , F114 , B82 , R14 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL135D

## Wiring Diagram — MIRROR —

### LHD MODELS

EL-MIRROR-01



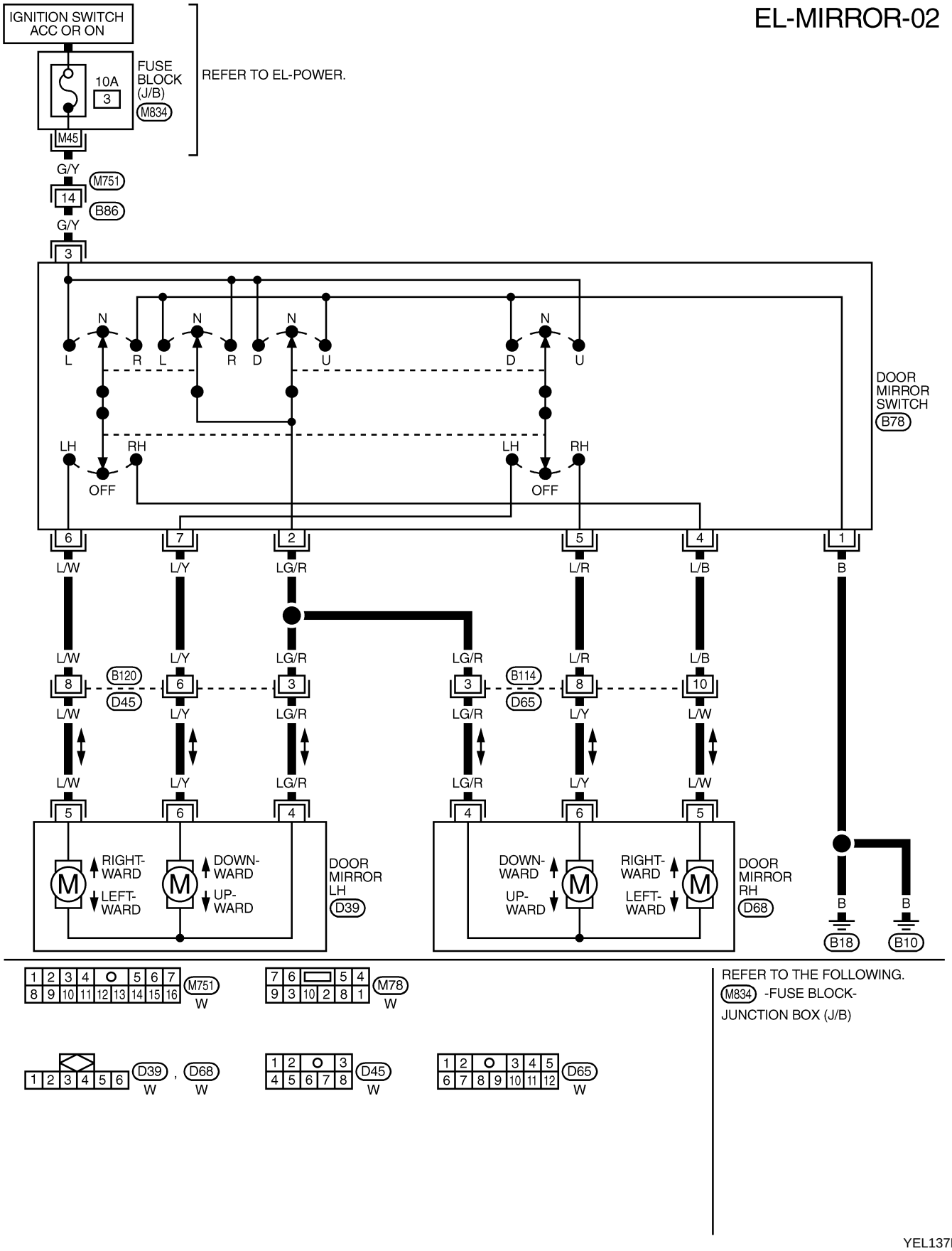

REFER TO THE FOLLOWING.
F113 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL136D

## Wiring Diagram — MIRROR — (Cont'd)

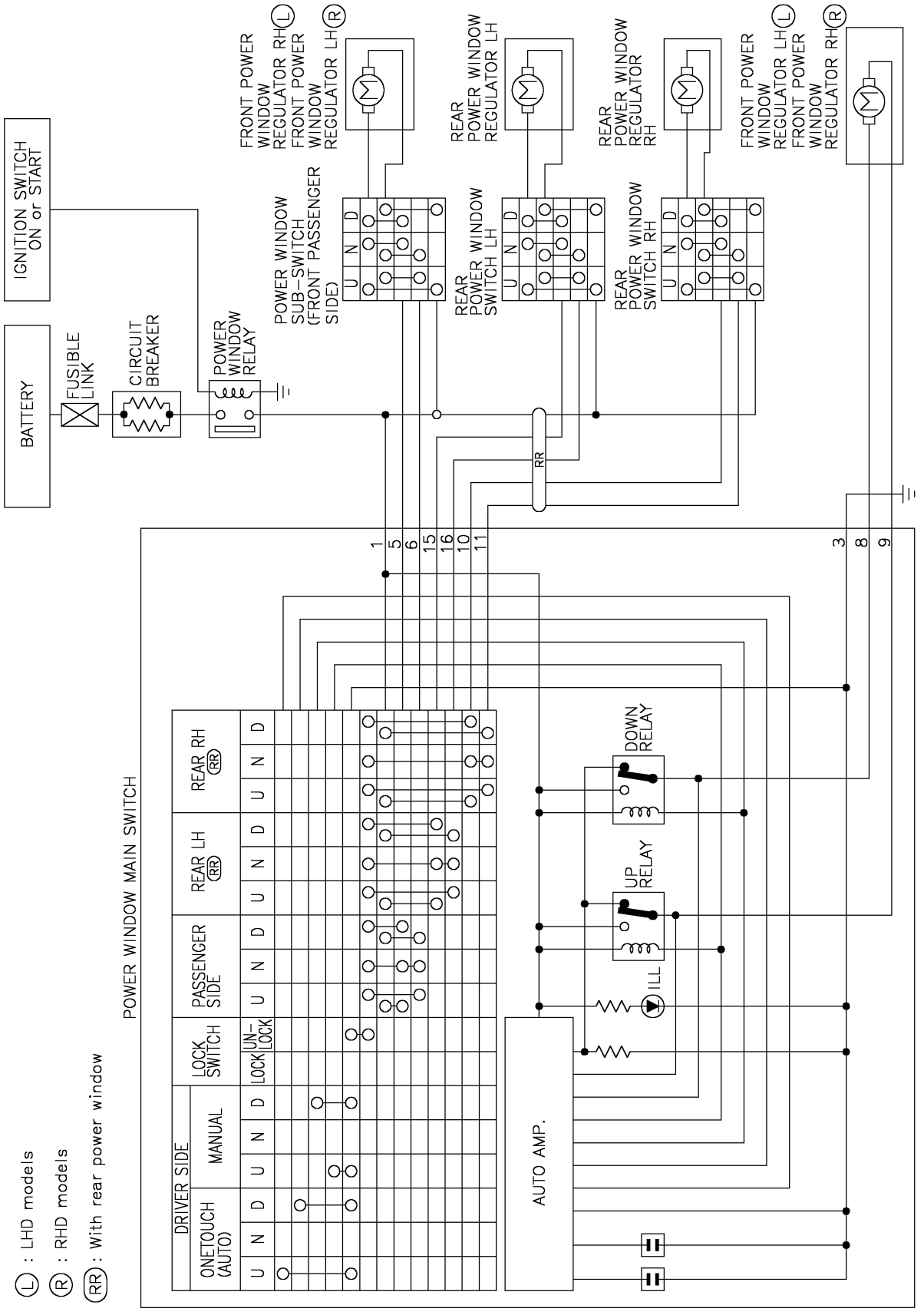
### RHD MODELS

EL-MIRROR-02



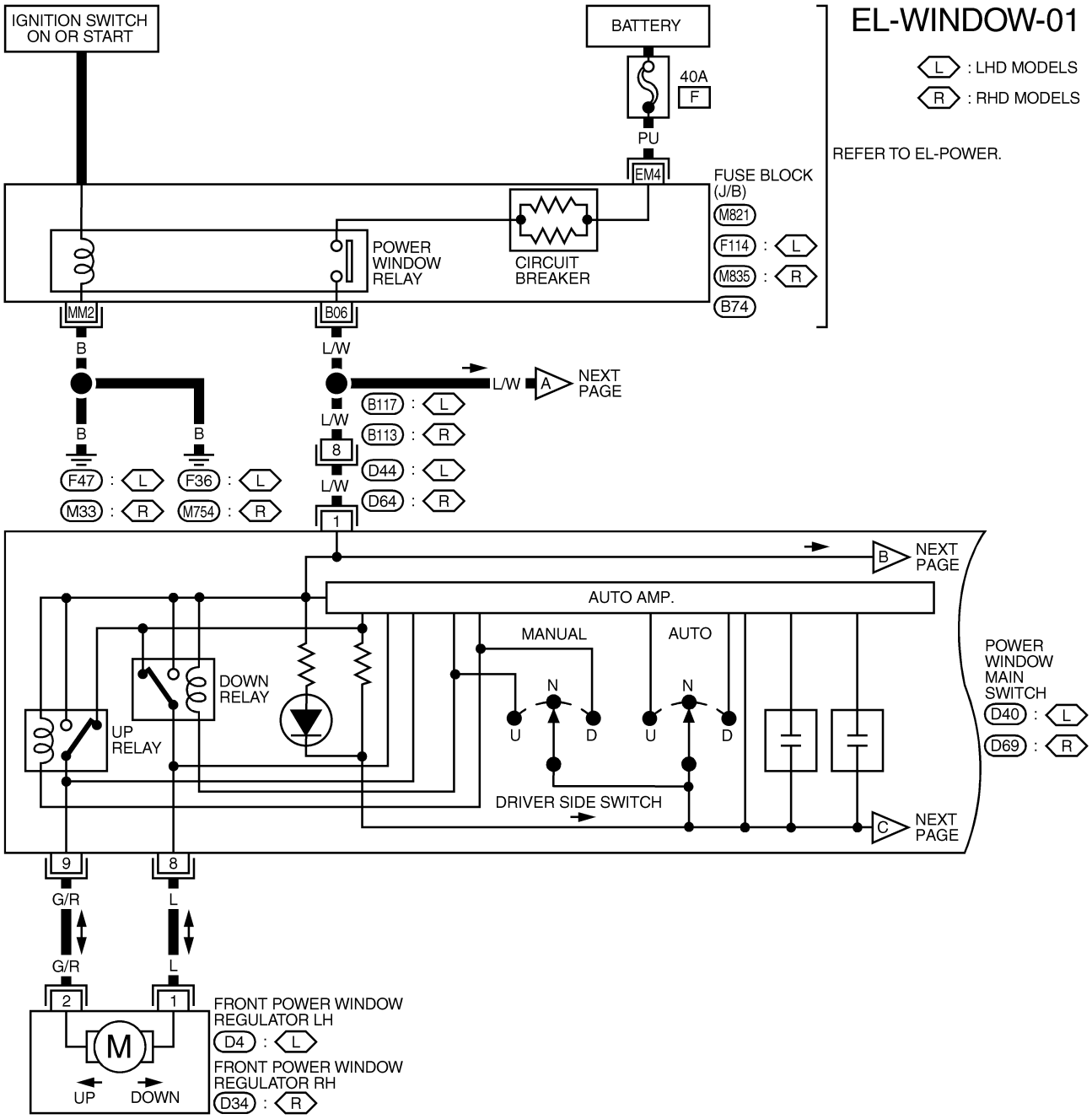

YEL137D

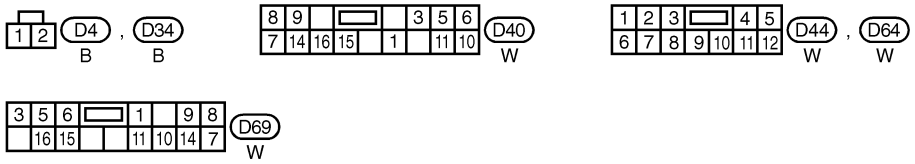
## Schematic




YEL138D

## Wiring Diagram — WINDOW —



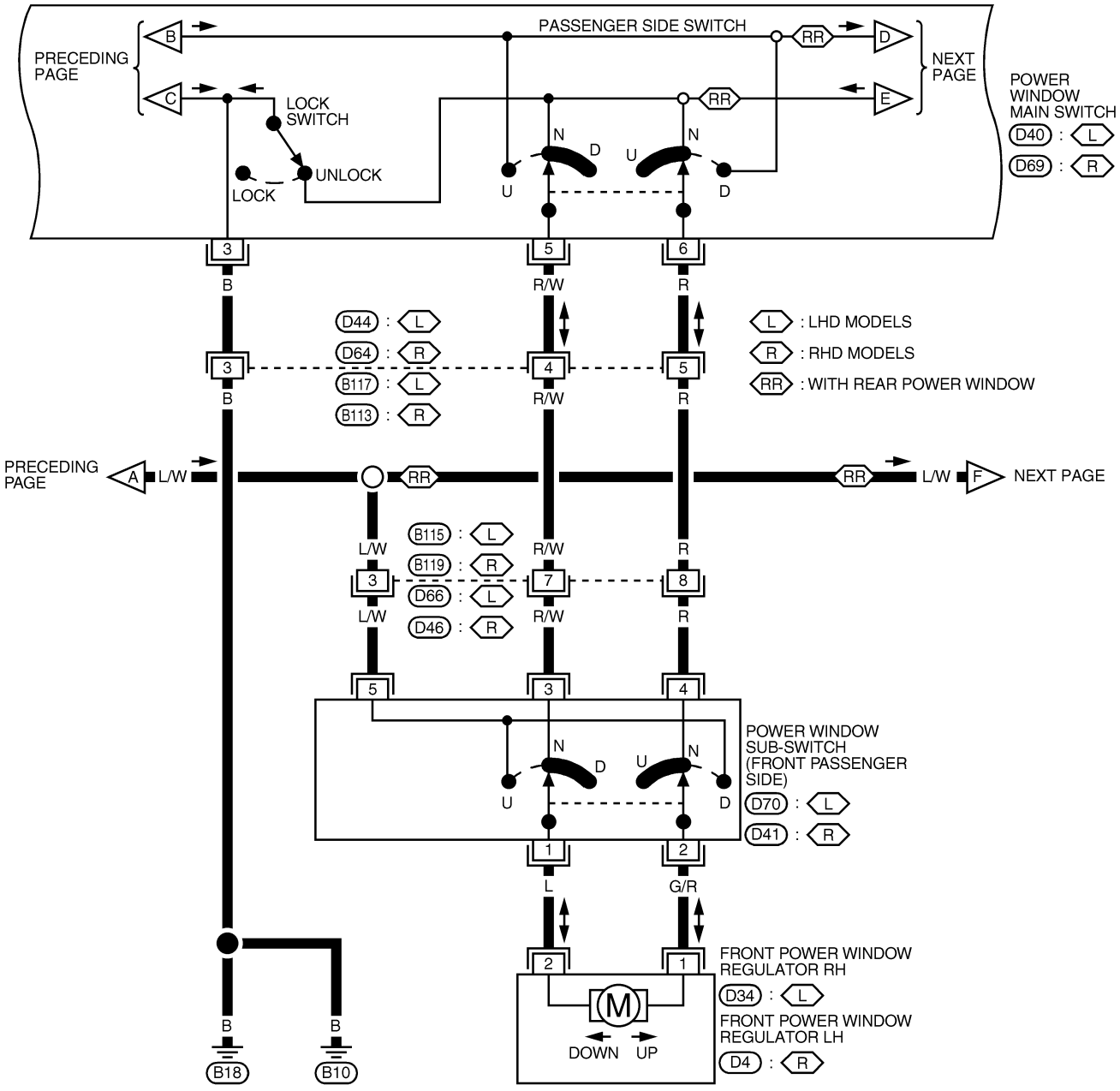



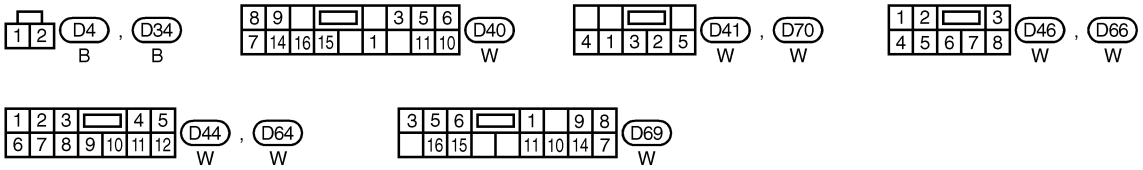

REFER TO THE FOLLOWING.
M821 , M835 , F114 , B74
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL139D

## Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-02

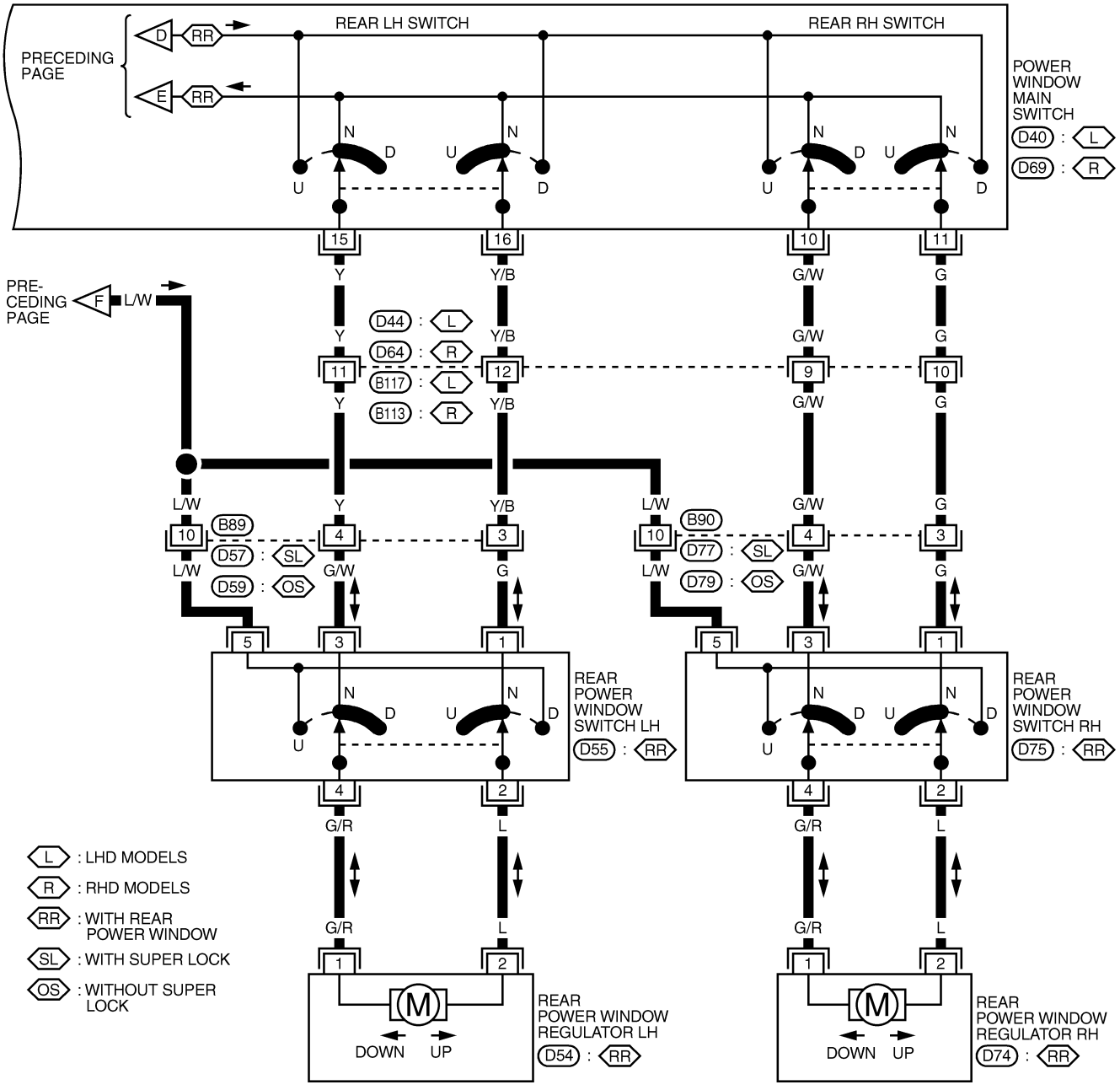


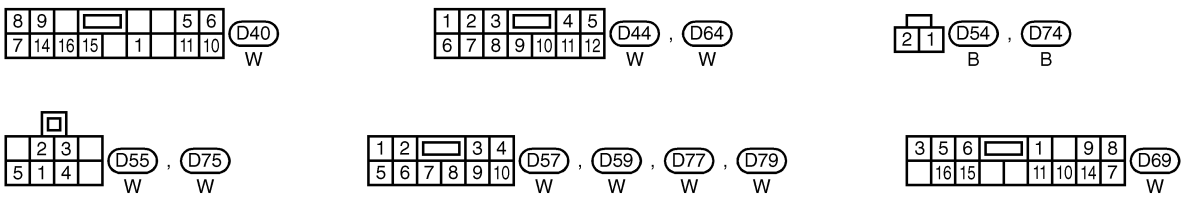




YEL140D

## Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-03



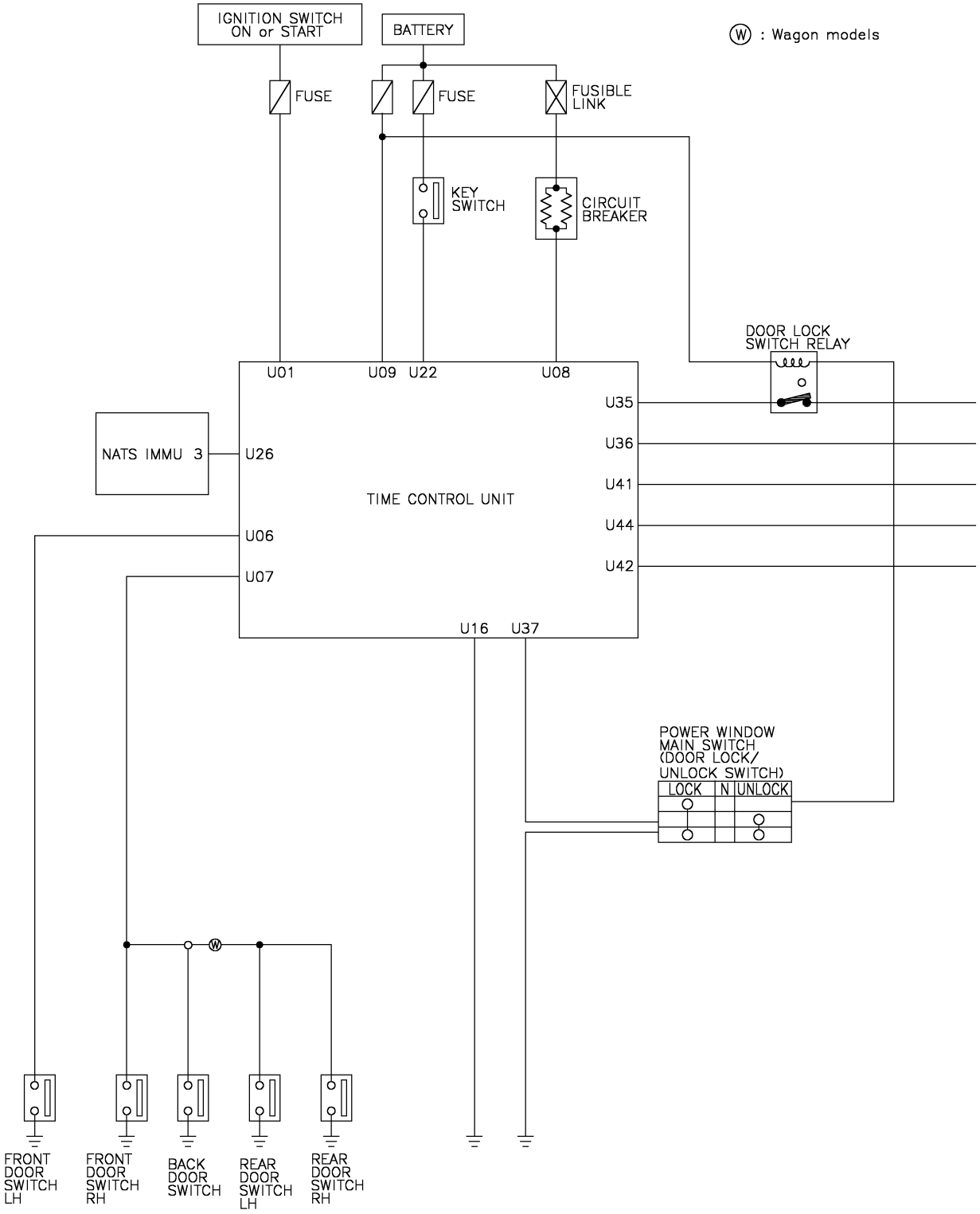

YEL141D

## Power Door Lock

- When Lock-Unlock (Unlock-Lock) is repeated more than two or three times rapidly using the door lock-&-unlock switch connected to the driver side door lock knob, the door may either be locked or unlocked by itself, or the actuator may not be activated. This depends on the Lock-Unlock operation period and other conditions. Avoid this type of operation as a system malfunction may occur.

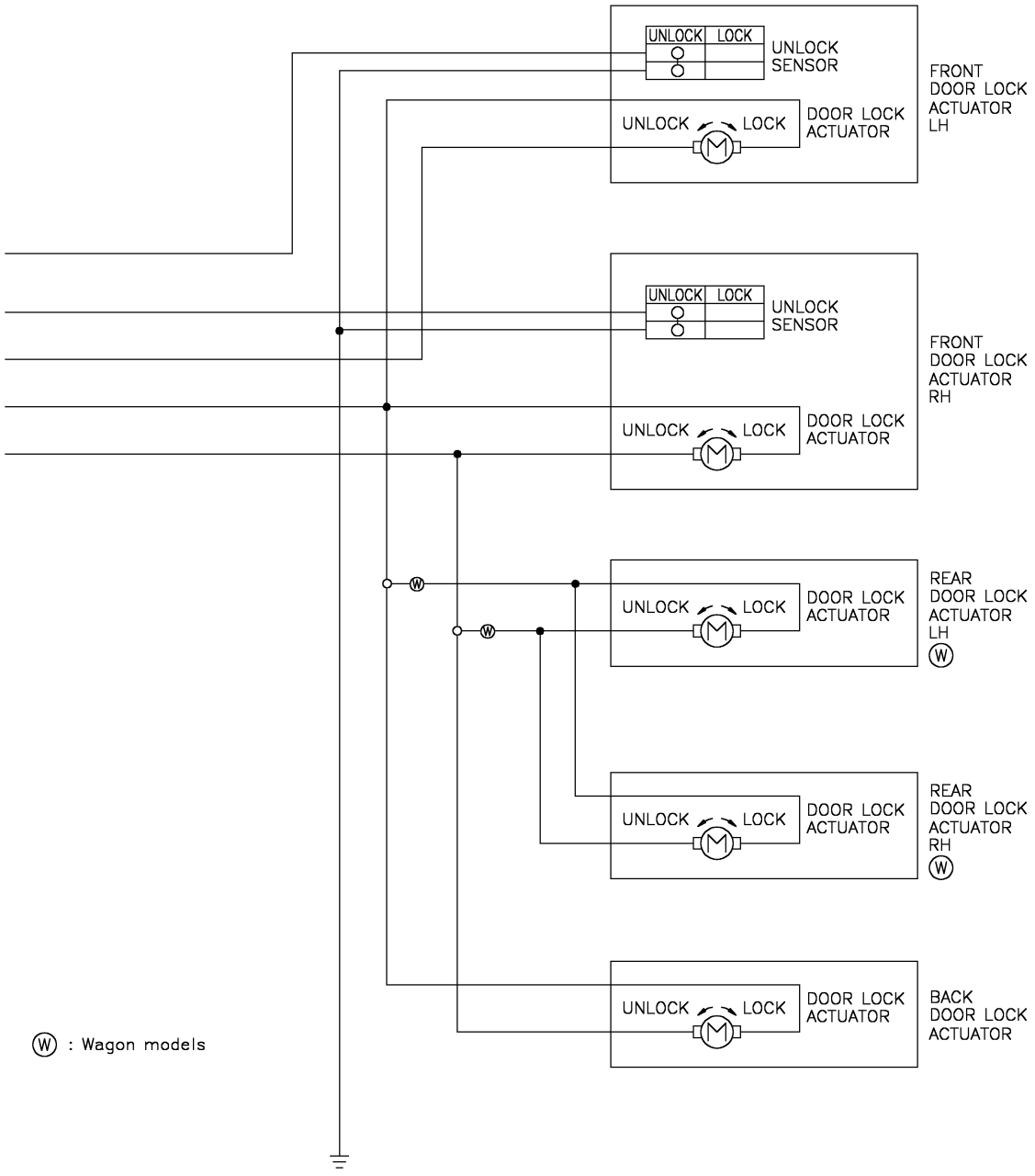
## Schematic

### LHD MODELS




YEL142D

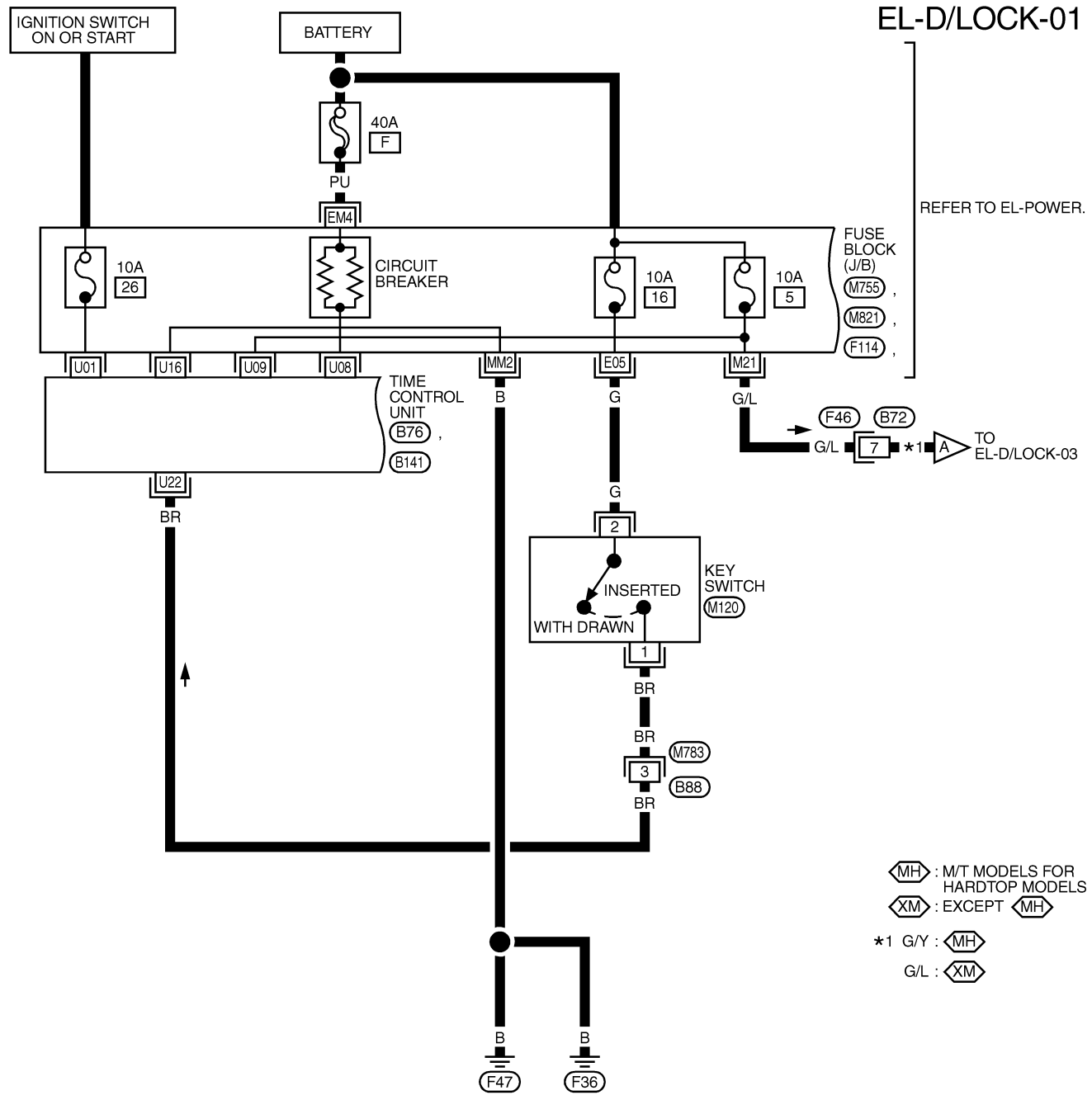
## Schematic (Cont'd)

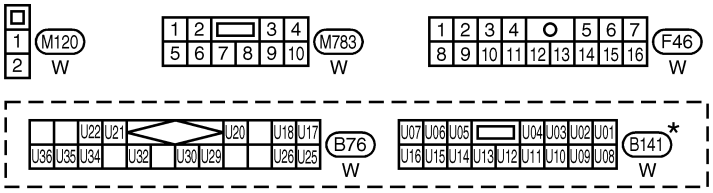



YEL143D

## Wiring Diagram — D/LOCK —

### LHD MODELS



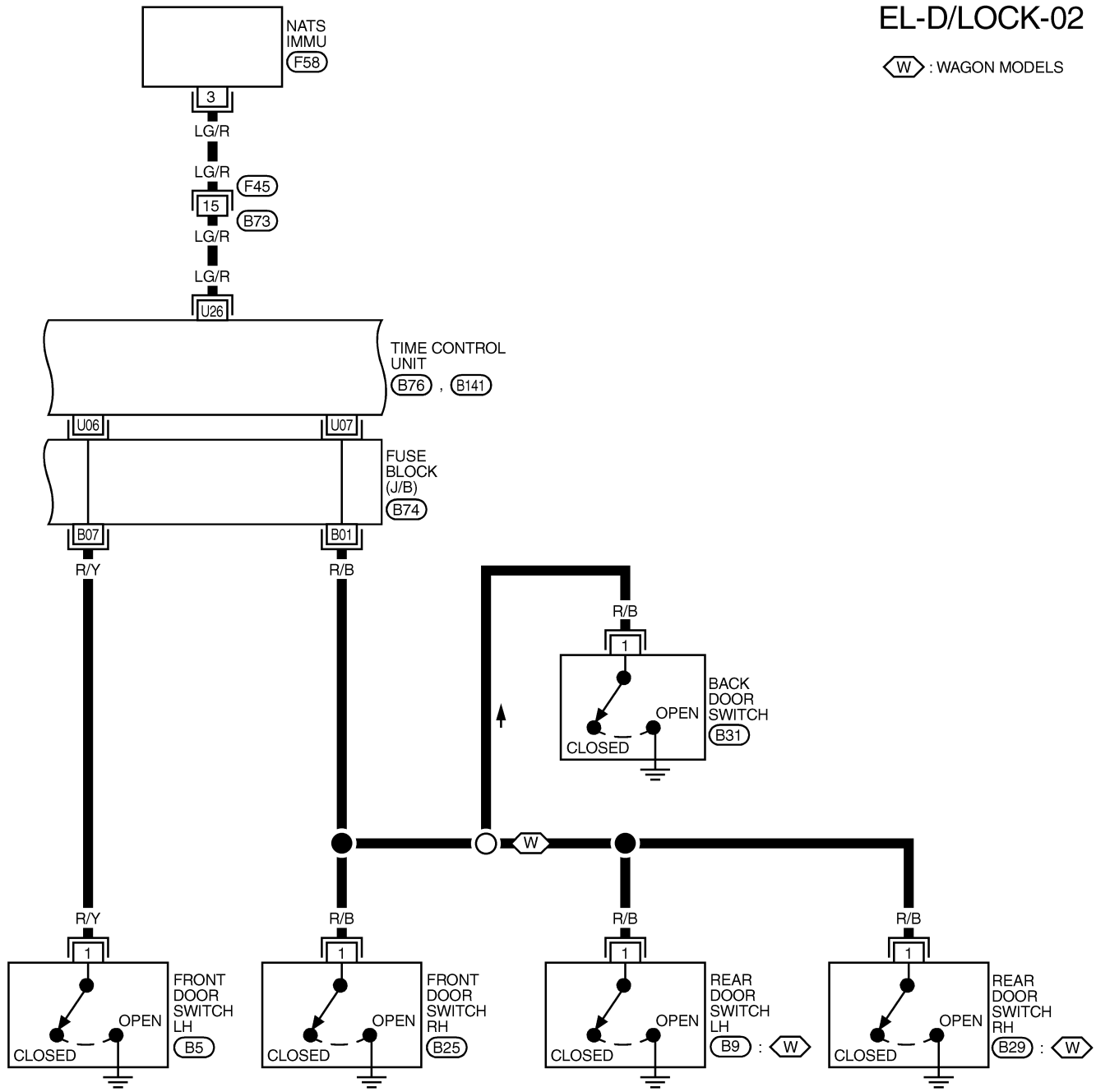

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

REFER TO THE FOLLOWING.
M755 , M821 , F114
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL144D

## Wiring Diagram — D/LOCK — (Cont'd)

### LHD MODELS

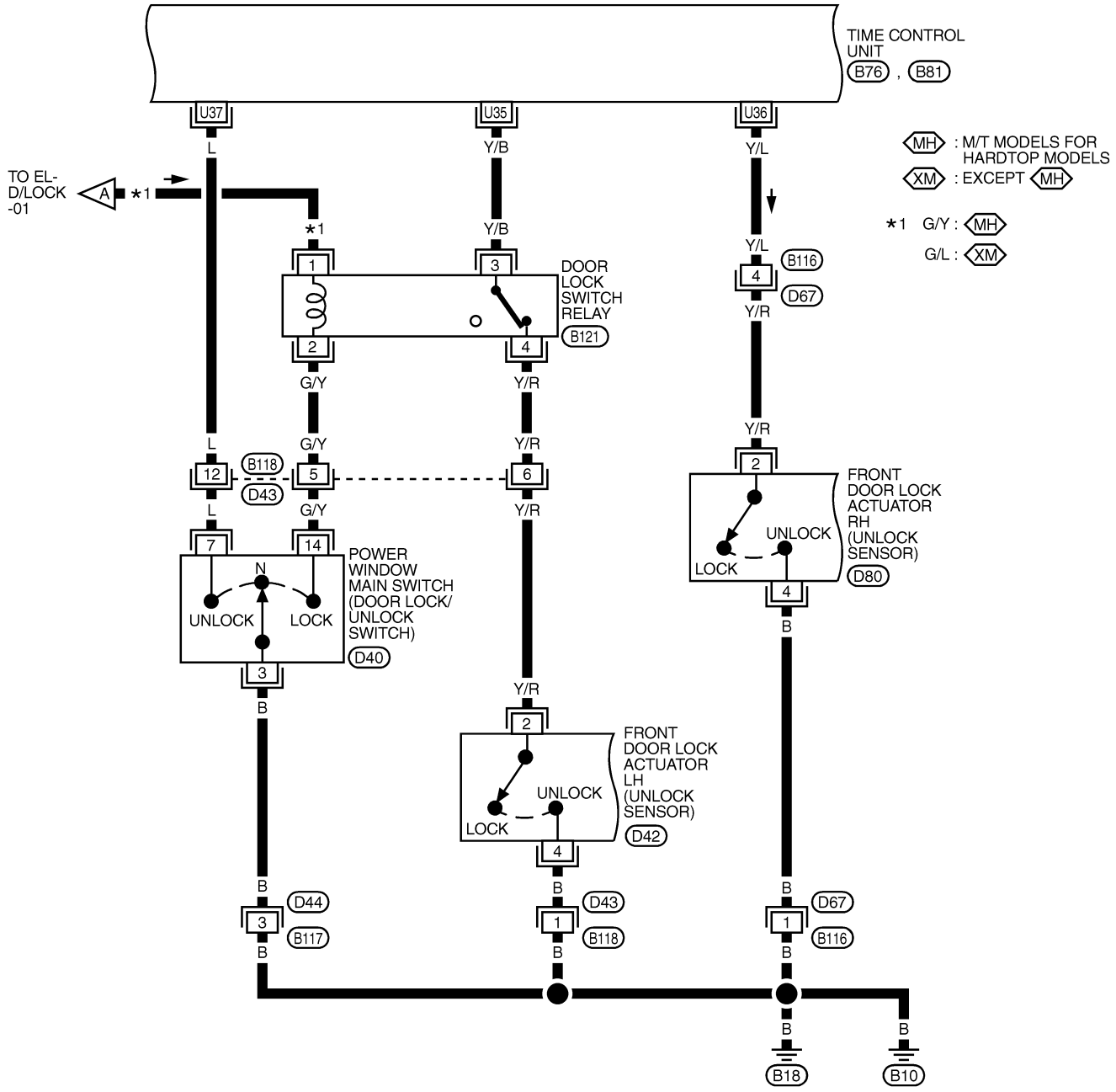


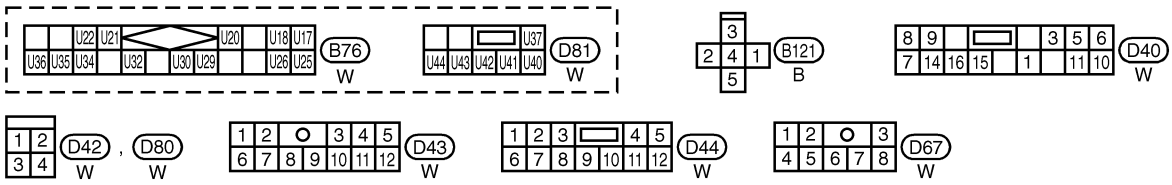

YEL145D

## Wiring Diagram — D/LOCK — (Cont'd)

### LHD MODELS

EL-D/LOCK-03

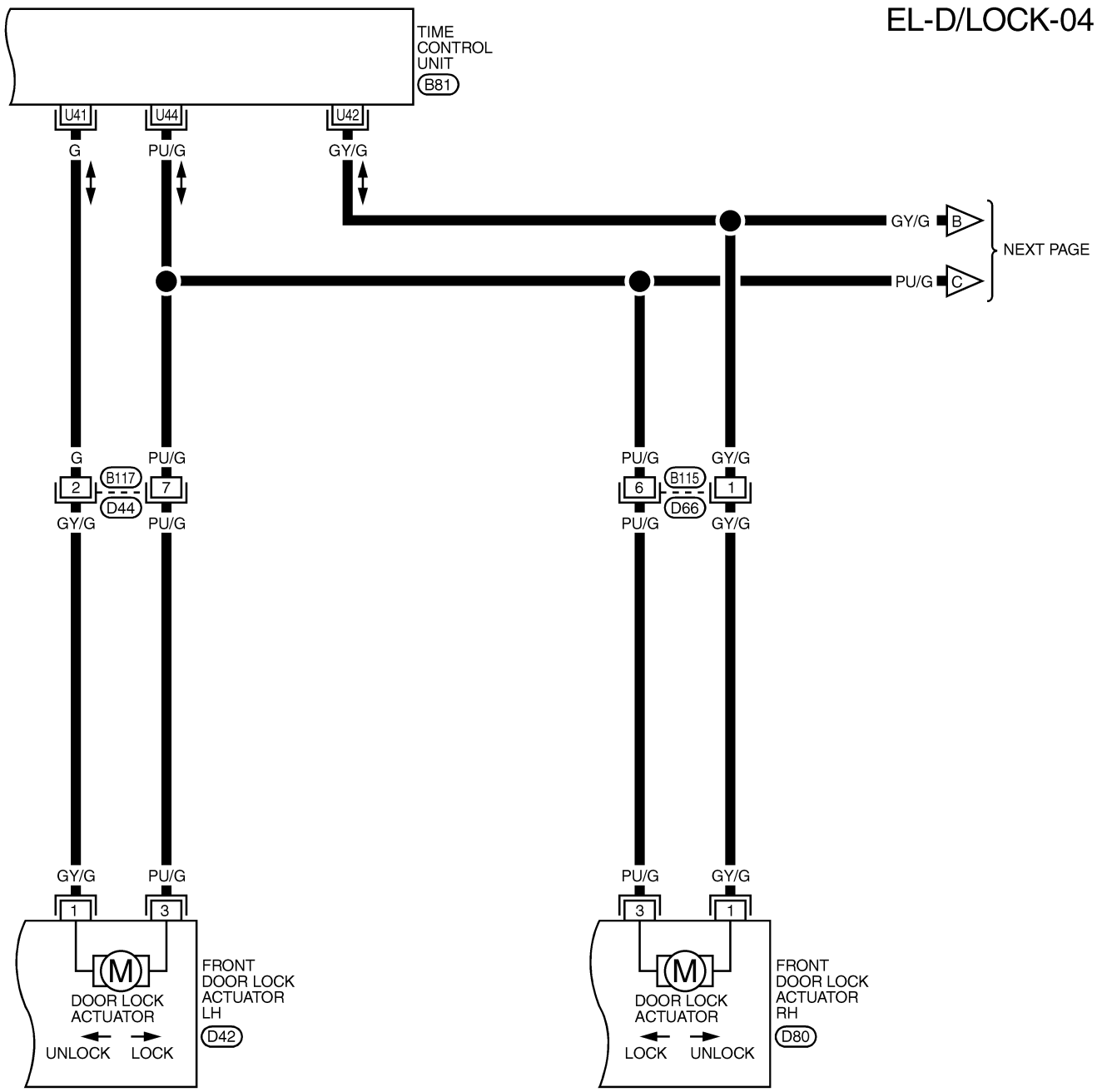


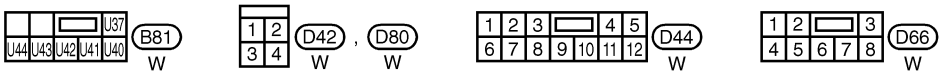




YEL146D

## Wiring Diagram — D/LOCK — (Cont'd)

### LHD MODELS



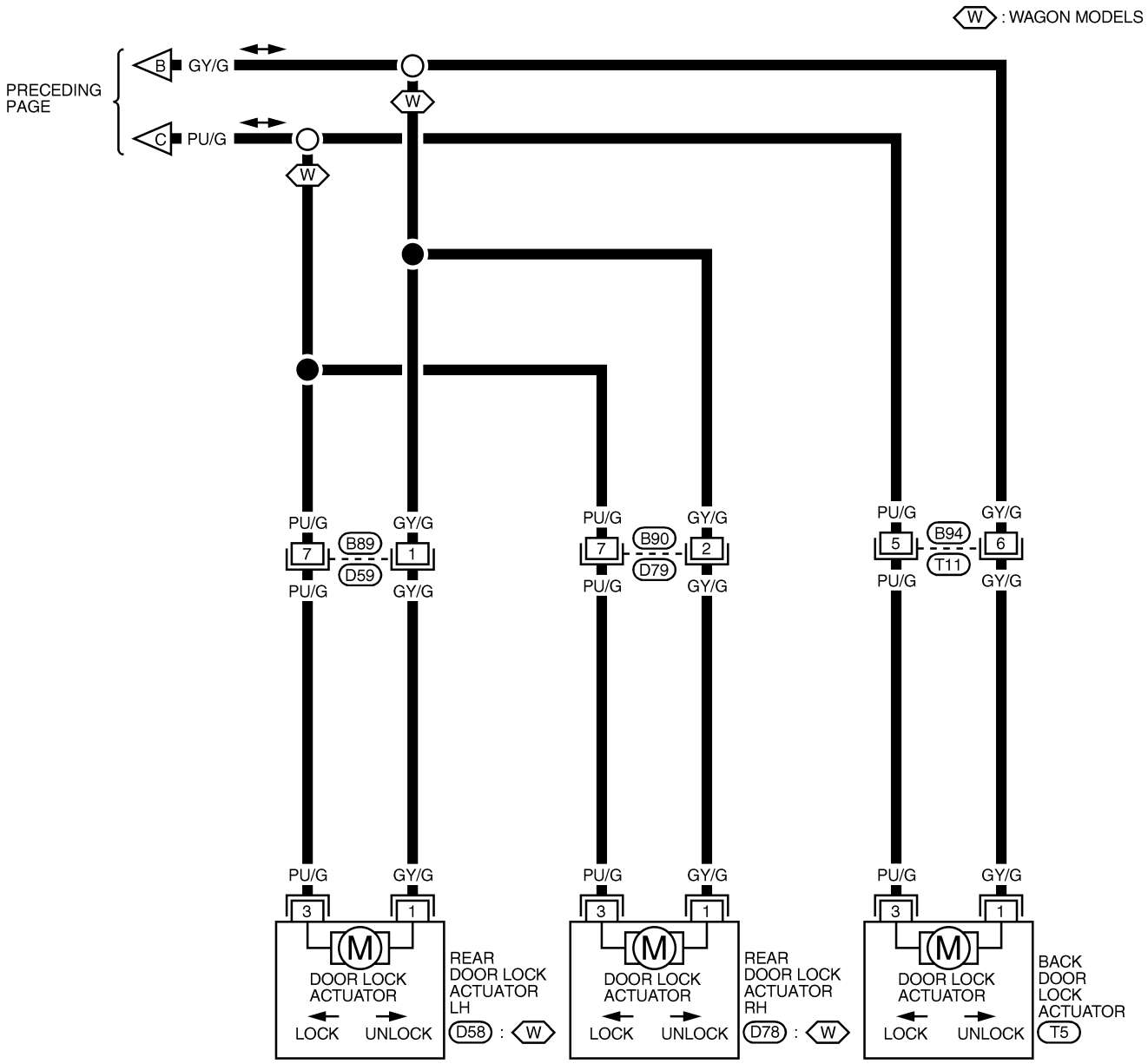



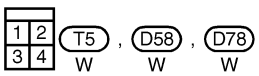

YEL147D

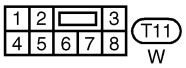
## Wiring Diagram — D/LOCK — (Cont'd)

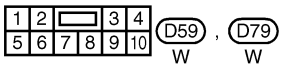
### LHD MODELS

EL-D/LOCK-05



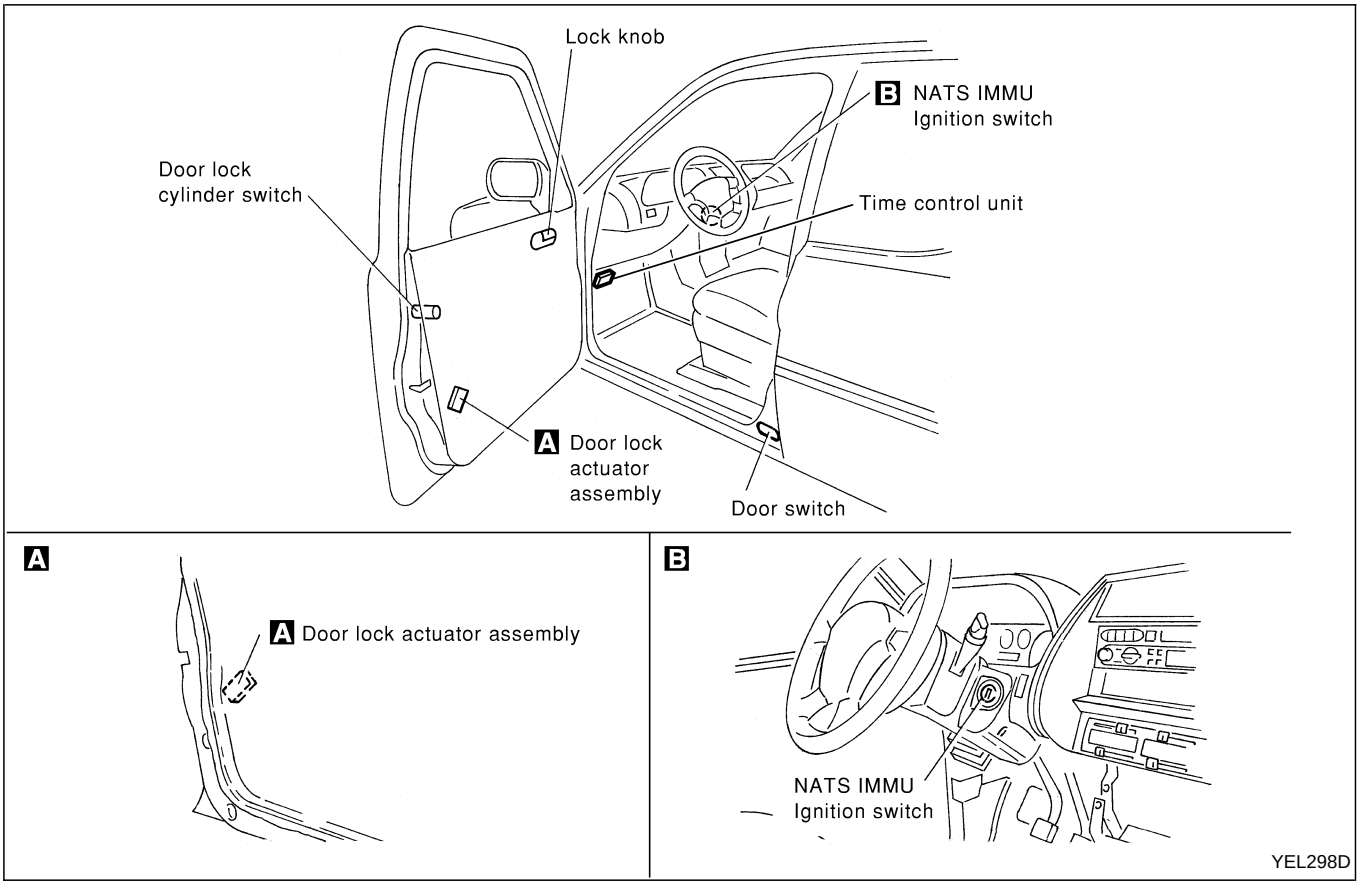




YEL148D

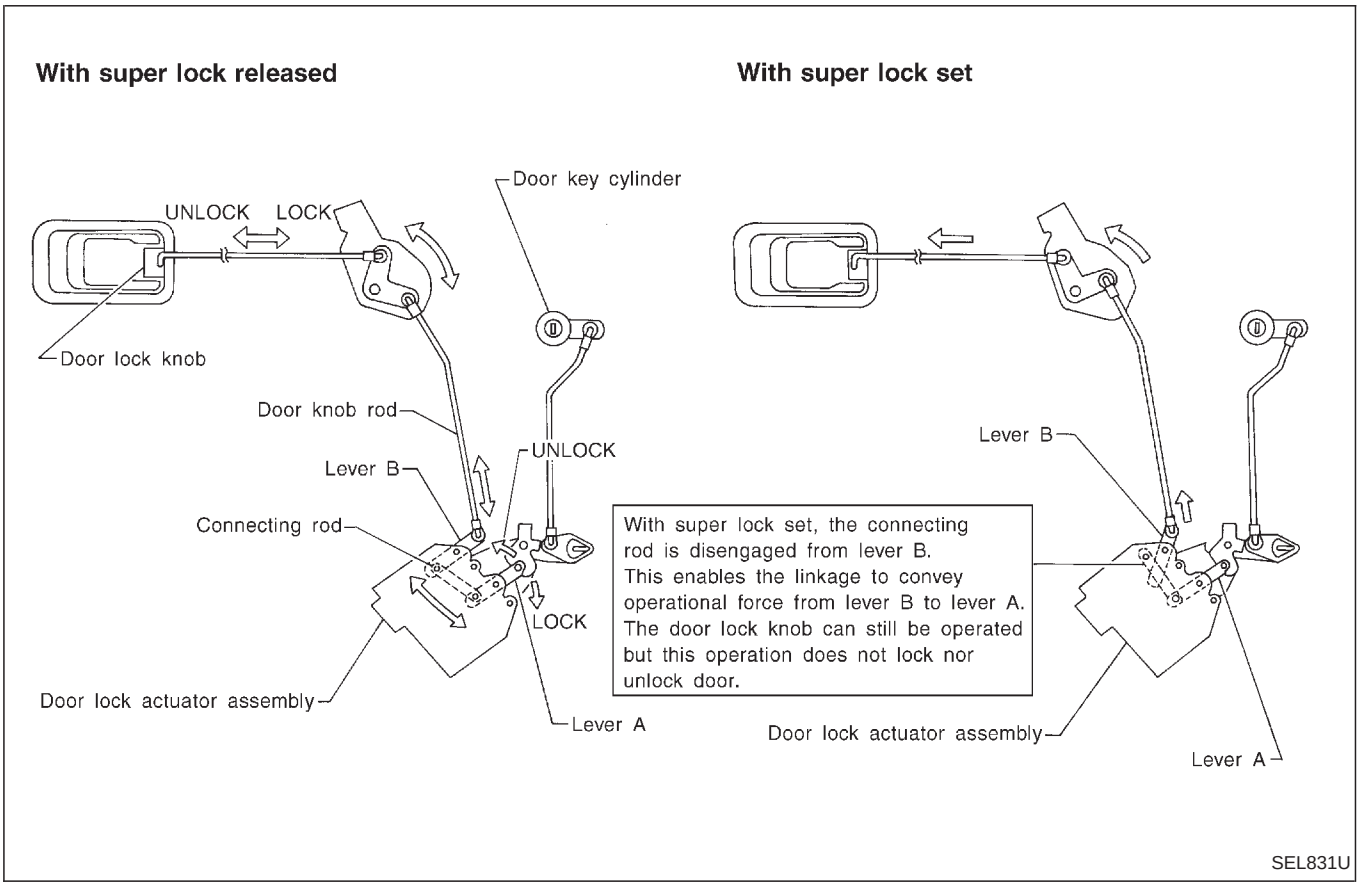
## Component Parts Location



# System Description

## OUTLINE

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




## OPERATION

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

- With the key inserted into door key cylinder on driver or passenger door, turning it to LOCK will lock all doors and set super lock while all doors are closed or one or more door is open.
- With the key inserted into door key cylinder on driver or passenger door, turning it to UNLOCK will unlock all doors and release super lock.

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

- With the key inserted in ignition key cylinder and turning it to “ON” for about 5 - 6 sec. will unlock all doors and release super lock.

**Power door lock/unlock operation by lock knob**

- Setting lock knob on driver or passenger door to LOCK while all doors are closed, will cause all doors to lock.
  **Setting lock knob on passenger door to lock when one or more doors are open will lock passenger door only. (Power door lock system will not operate.)**
- Setting lock knob on driver or passenger door to UNLOCK while all doors are closed will unlock all doors.

**Lock knob operation cannot control super lock.**

## System Description (Cont'd)

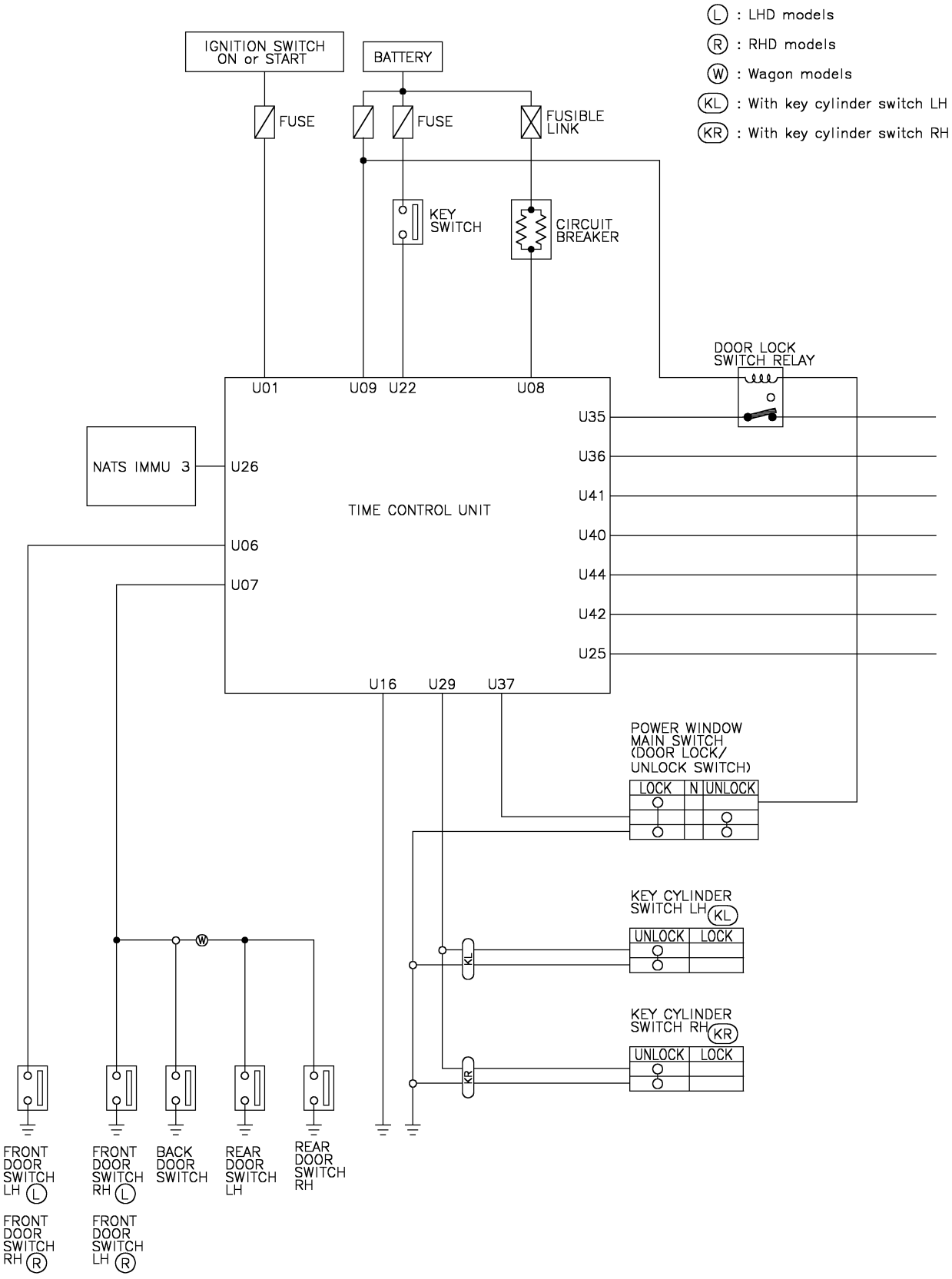
**Key reminder system**

- If the ignition key is in the ignition cylinder and any door is open, setting the lock & unlock switch and lock knob on driver door to "LOCK" locks the door once but then immediately unlocks it.

**System initialisation**

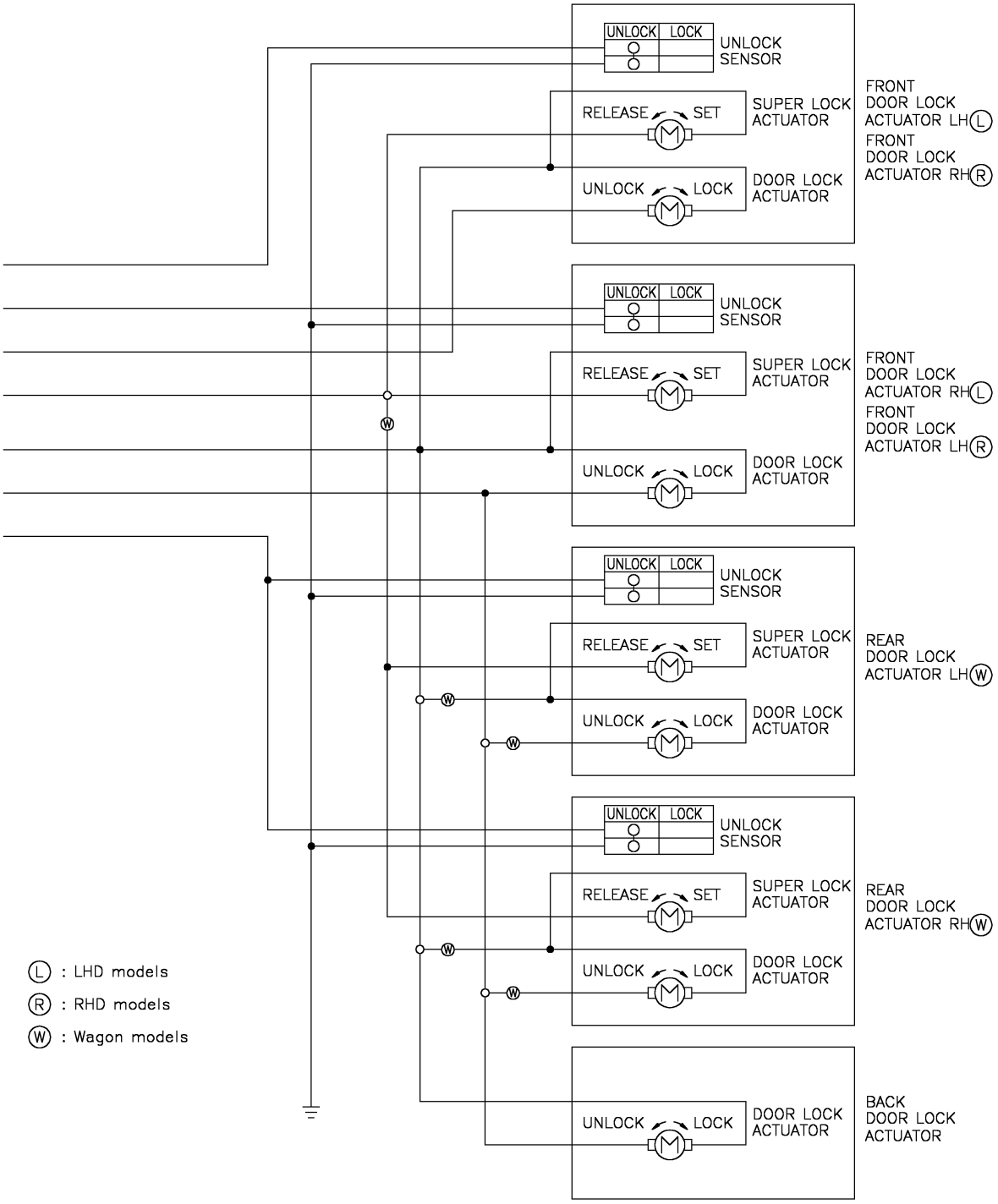
- System initialisation is required when battery cables are reconnected. Conduct one of the following:
  — insert the key into ignition key cylinder and turn it to "ON."
  — LOCK/UNLOCK operation using door key cylinder.

## Schematic



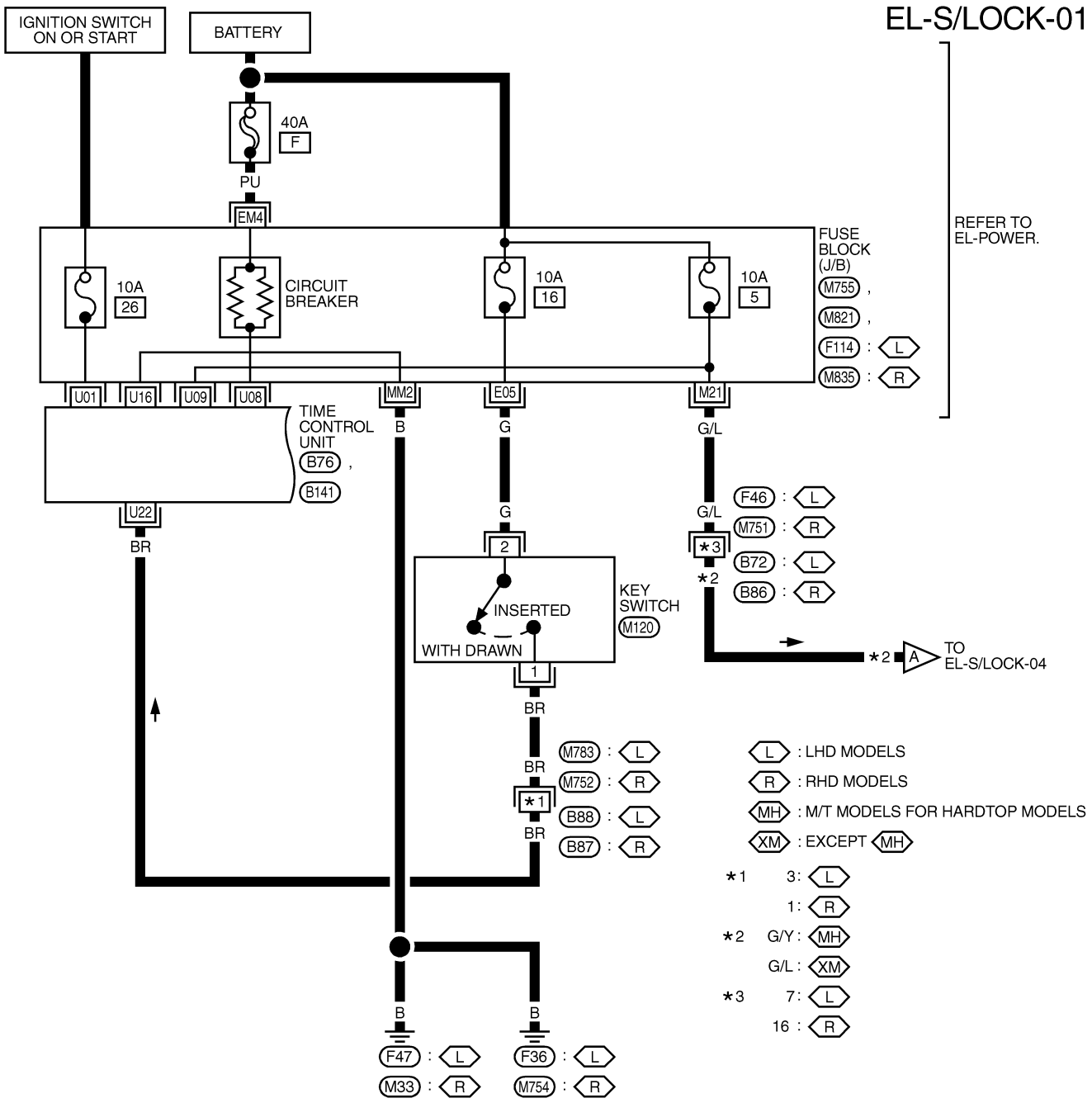

YEL149D

## Schematic (Cont'd)

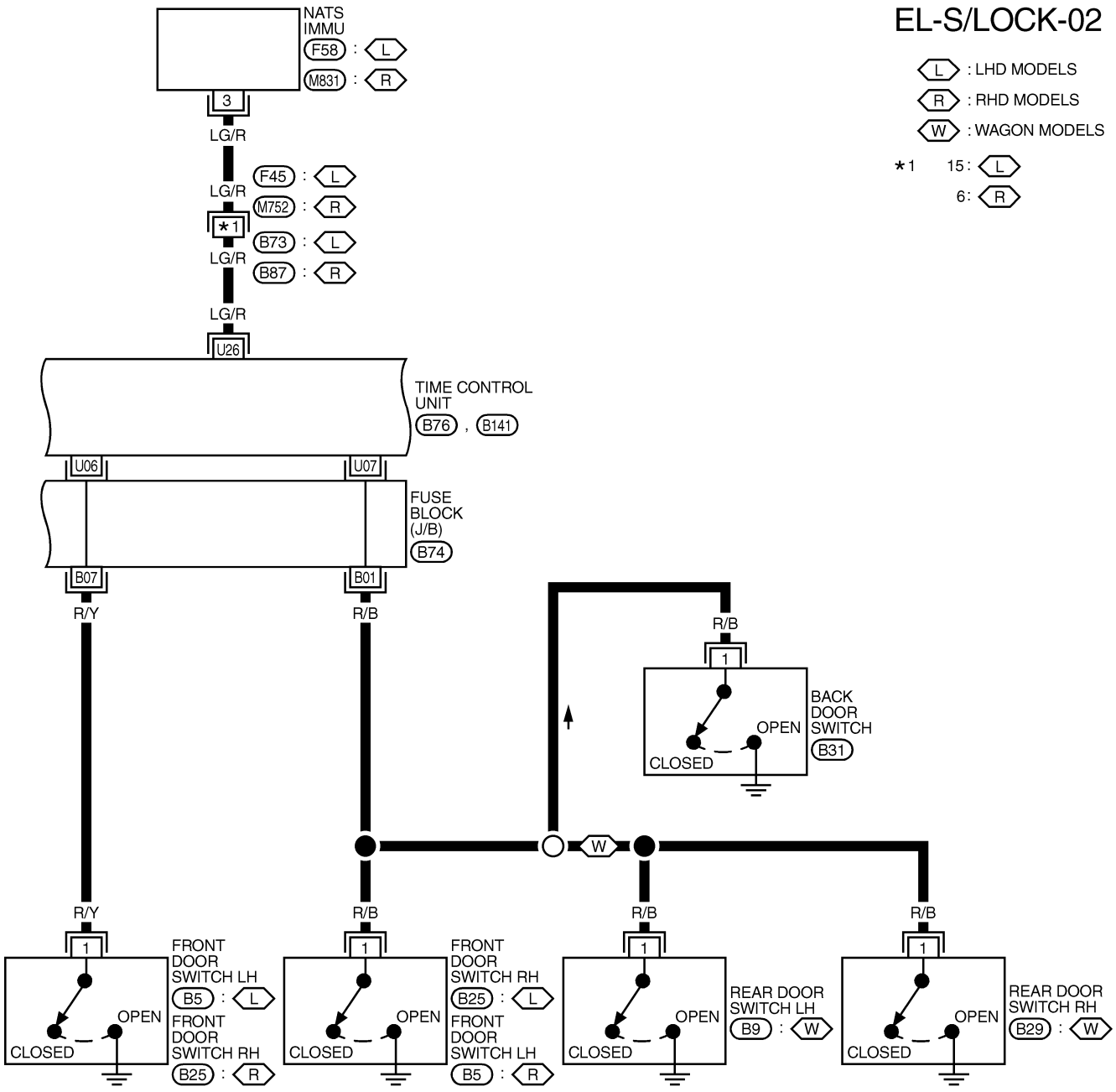



YEL150D

## Wiring Diagram — S/LOCK —



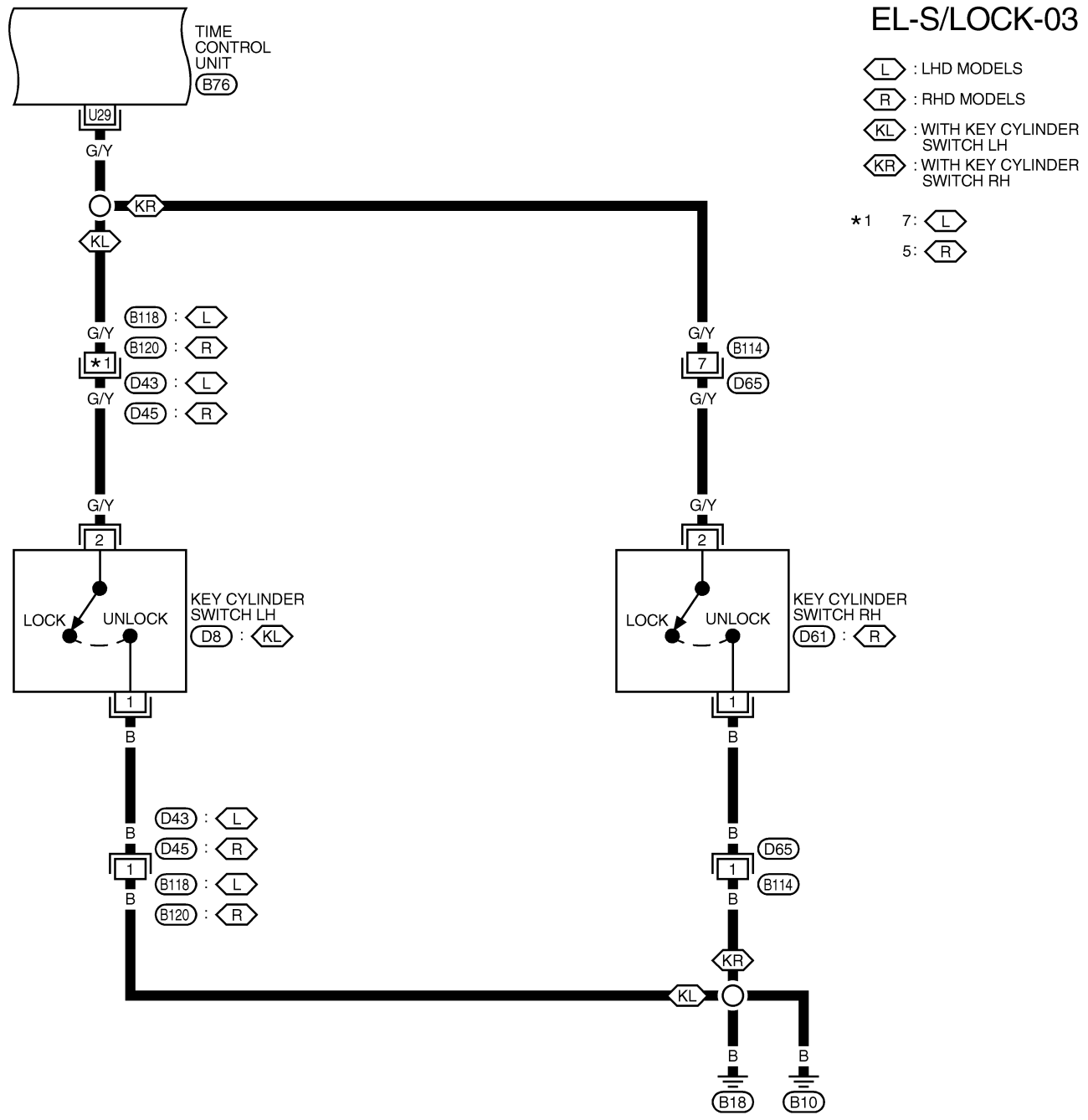
## Wiring Diagram — S/LOCK — (Cont'd)

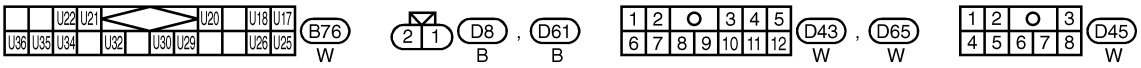



REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-JUNCTION BOX (J/B)

YEL152D

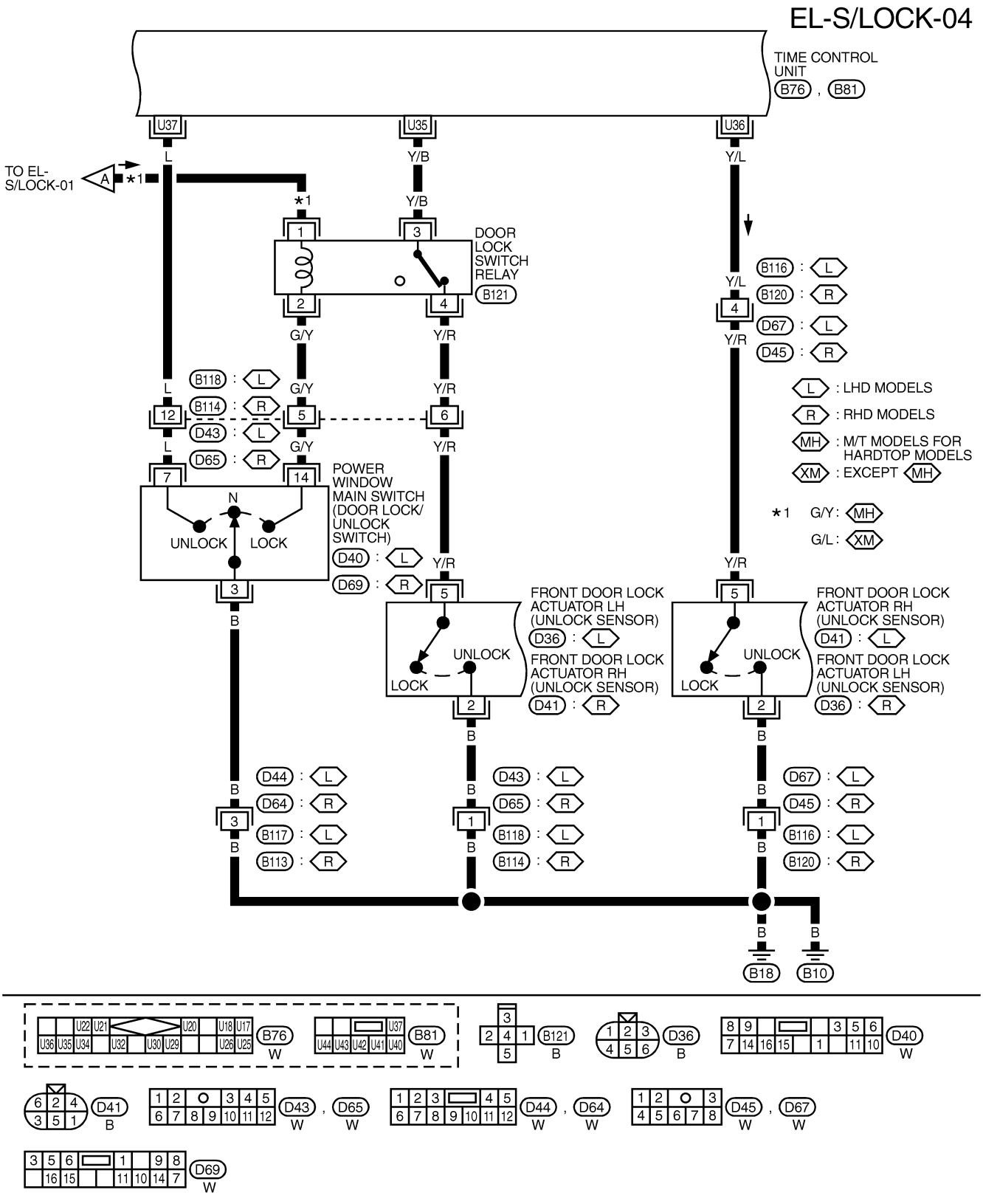
## Wiring Diagram — S/LOCK — (Cont'd)



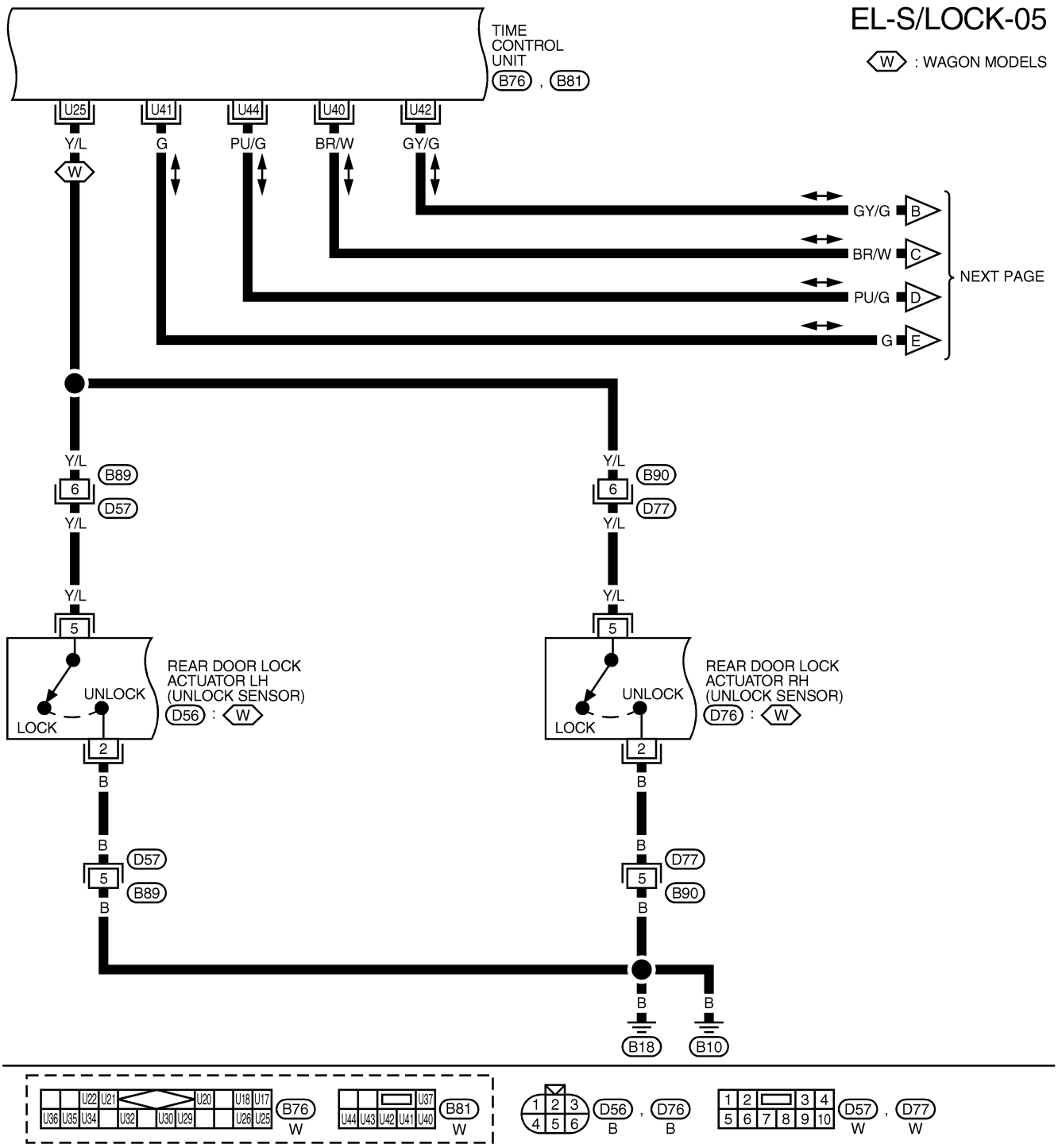

YEL153D

## Wiring Diagram — S/LOCK — (Cont'd)



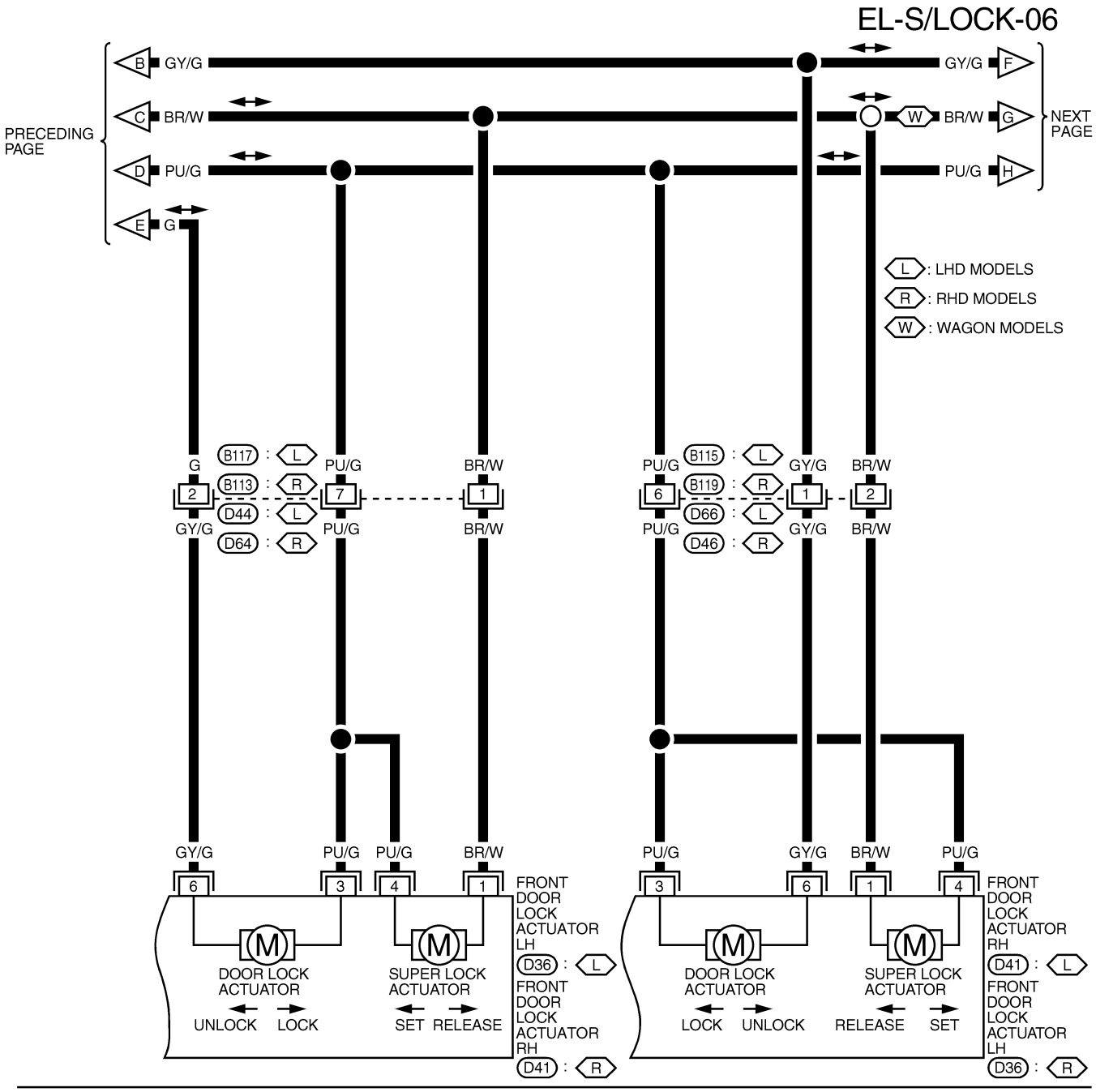

YEL154D

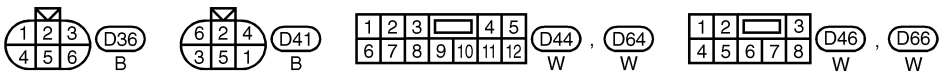
## Wiring Diagram — S/LOCK — (Cont'd)




YEL155D

## Wiring Diagram — S/LOCK — (Cont'd)

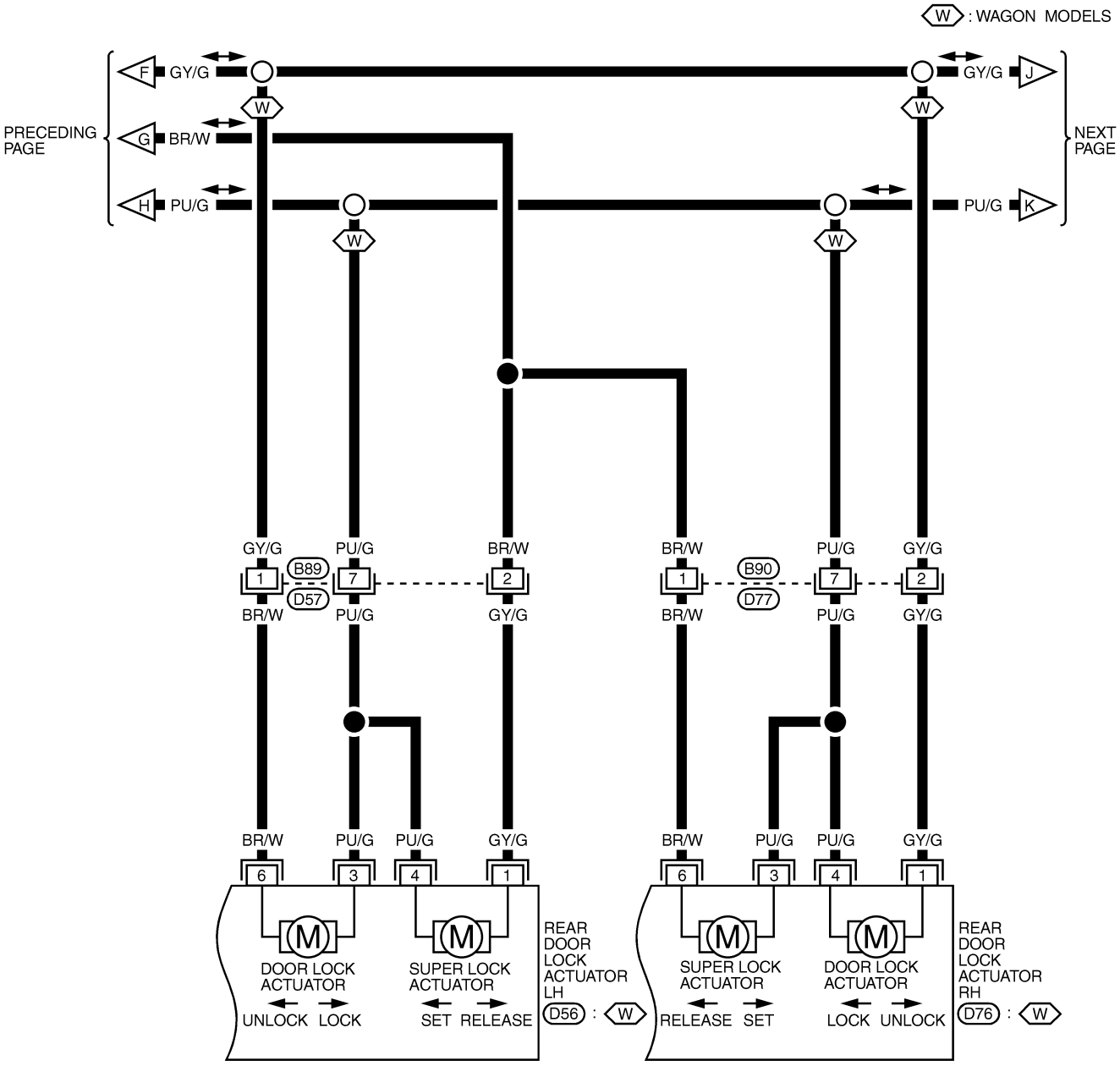


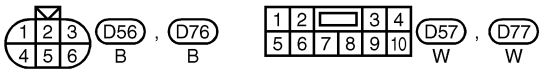




YEL156D

## Wiring Diagram — S/LOCK — (Cont'd)

EL-S/LOCK-07

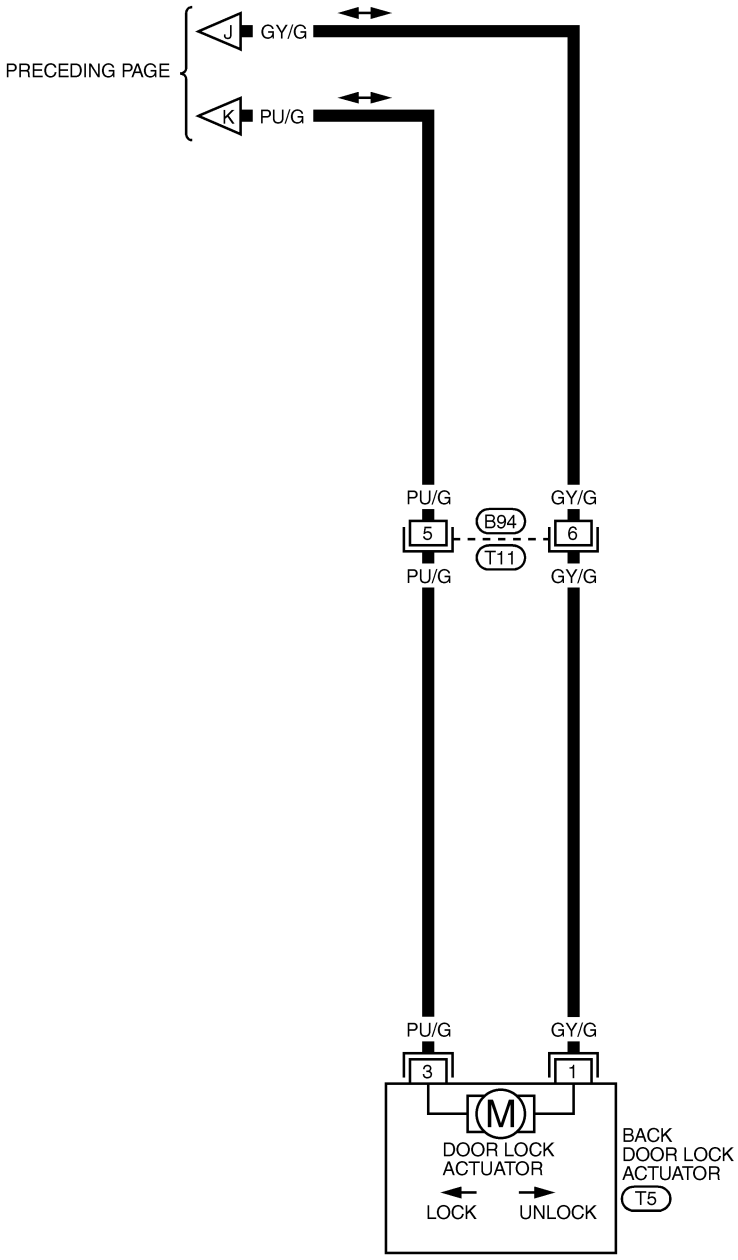


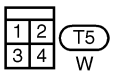



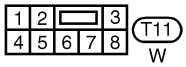

YEL157D

## Wiring Diagram — S/LOCK — (Cont'd)

EL-S/LOCK-08



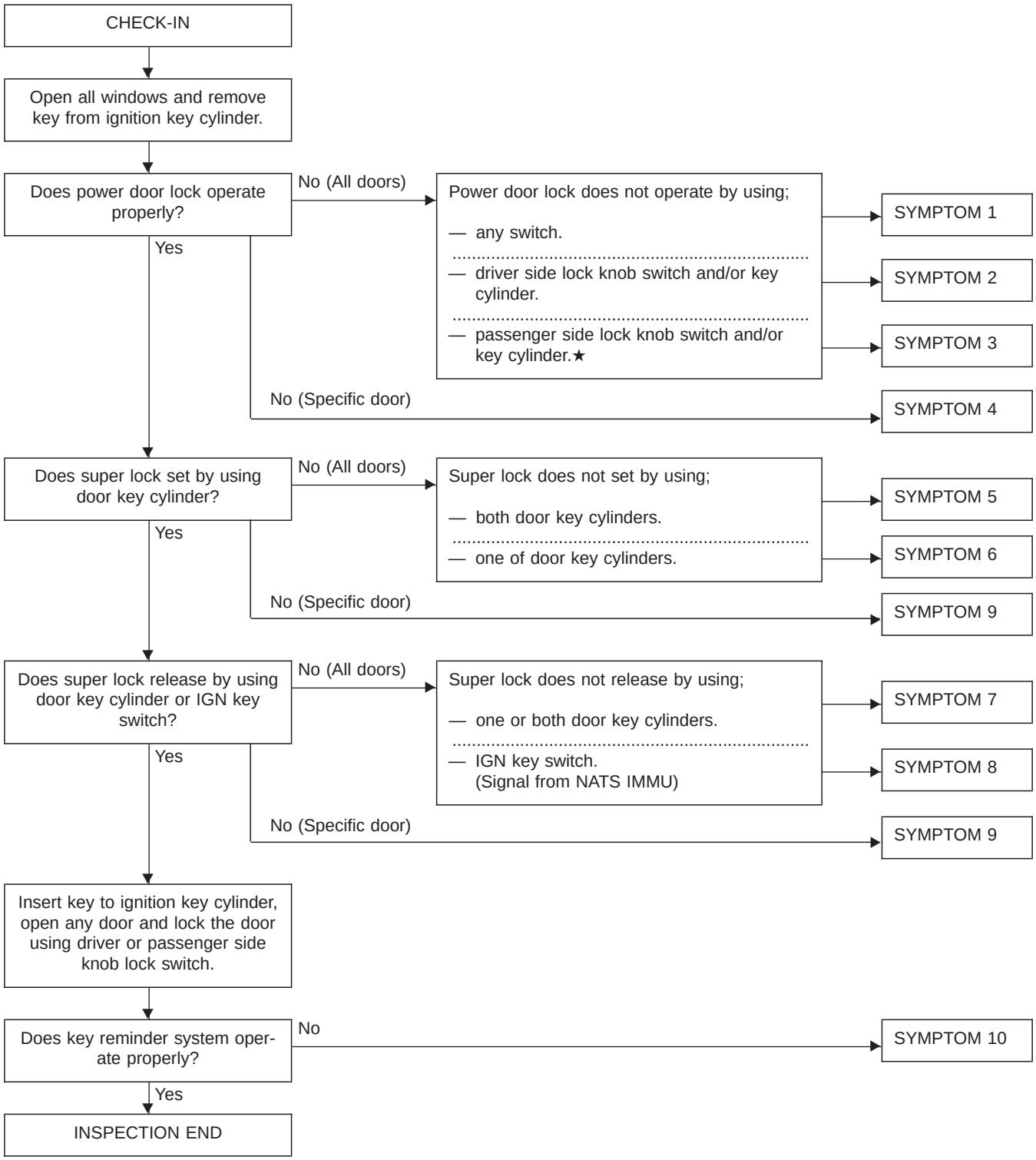




YEL158D

## Trouble Diagnoses

### PRELIMINARY CHECK




**After performing preliminary check, continue with diagnostic procedure in "SYMPTOM CHART", EL-159.**

★ When one or more doors are opened with lock knob on passenger door set to LOCK, only passenger door will lock. (Power door lock system will not operate.)

## Trouble Diagnoses (Cont'd)

**Before starting trouble diagnoses below, perform "PRELIMINARY CHECK", EL-158.**

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

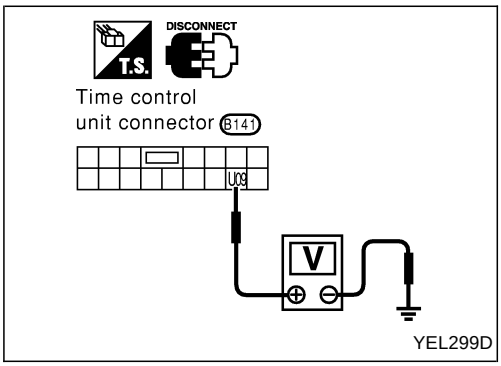
**SYMPTOM CHART**

| REFERENCE PAGE | | EL-160 | EL-161 | EL-162 | EL-163 | EL-164 | EL-165 | EL-166 | EL-167 | EL-167 |
|---|---|---|---|---|---|---|---|---|---|---|
| SYMPTOM | | Power supply and ground circuit check | Procedure 1 (Door unlock sensor check) | Procedure 2 (Door key cylinder switch check) | Procedure 3 (Door lock actuator check) | Procedure 4 (Super lock actuator check) | Procedure 5 (Door switch check) | Procedure 6 (NATS release signal check) | Procedure 7 (Ignition key switch check) | Procedure 8 (Ignition switch "ON" circuit check) |
| 1 | Power door lock does not operate using any switch. | X | X | | X | | | | | |
| 2 | Power door lock does not operate with any switch of driver side. | | X | | | | | | | |
| 3 | Power door lock does not operate with any switch of passenger side. | | X | | | | X | | | |
| 4 | Specific door lock actuator does not operate. | | | | X | | | | | |
| 5 | Super lock cannot be set by both door key cylinders. | X | | X | | X | | | X | X |
| 6 | Super lock cannot be set by one of door key cylinders. | | | X | | | | | | |
| 7 | *Super lock cannot be released by one or both door key cylinders. | | X | | | | | | | |
| 8 | *Super lock cannot be released by ignition key switch. (Signal from NATS IMMU) | | | | | | | X | | |
| 9 | Specific super lock actuator does not operate. | | | | | X | | | | |
| 10 | *Key reminder system does not operate. | | | | | | X | | X | |

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

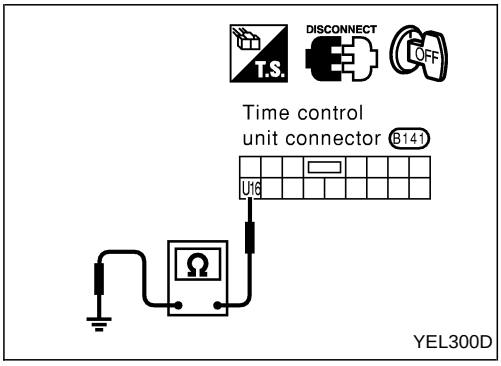
# Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK




### Main power supply circuit check

| Terminals | | Ignition switch position | | |
|---|---|---|---|---|
| ⊕ | ⊖ | LOCK | ACC | ON |
| U09 | Ground | Battery voltage | Battery voltage | Battery voltage |



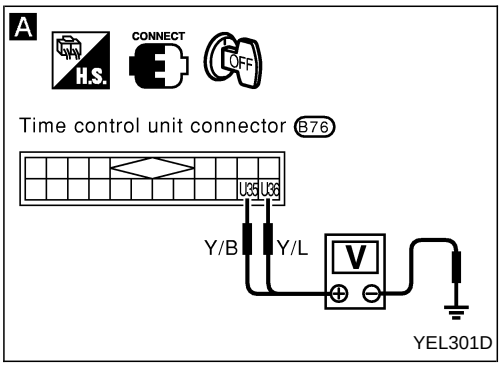

### Ground circuit check

| Terminals | Continuity |
|---|---|
| U16 - Ground | Yes |

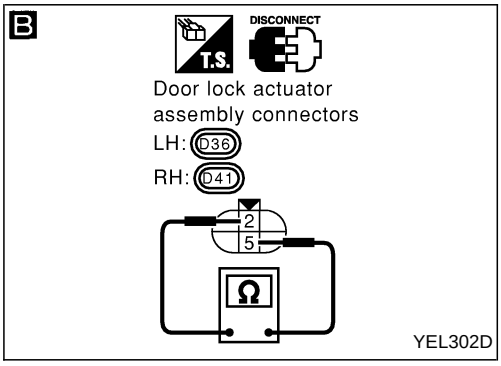
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 1
## (Door unlock sensor check)

A




B




A

CHECK DOOR UNLOCK SENSOR INPUT SIGNAL.
Check voltage between time control unit connector terminals (U35) or (U36) and ground.

| | Terminals ⊕ | Terminals ⊖ | Condition | Voltage [V] |
|---|---|---|---|---|
| Driver side | U35 | Ground | Locked | Approx. 2 (Approx. 20 sec.) |
| | | | Unlocked | 0 |
| Passenger side | U36 | Ground | Locked | Approx. 12 (Approx. 20 sec.) |
| | | | Unlocked | 0 |

OK → Door unlock sensor is OK.

NG ↓

B

CHECK DOOR UNLOCK SENSOR.
1) Disconnect door unlock sensor connector.
2) Check continuity between door unlock sensor terminals.

| Terminals | Condition | Continuity |
|---|---|---|
| ② - ⑤ | Locked | No |
| | Unlocked | Yes |

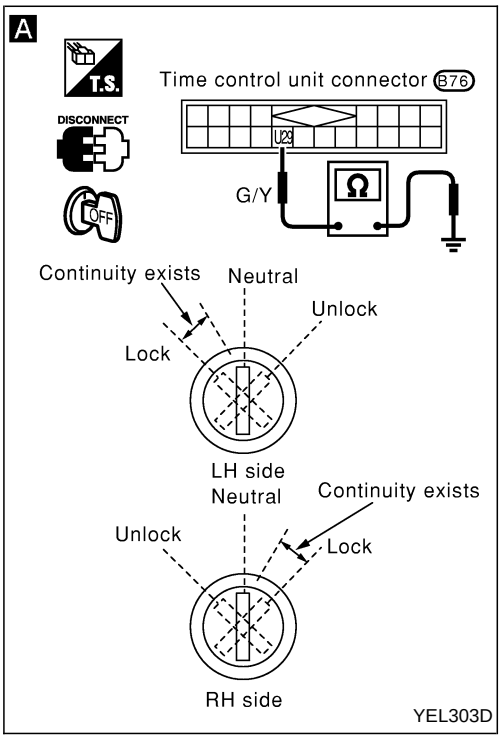
NG → Replace door lock actuator assembly.

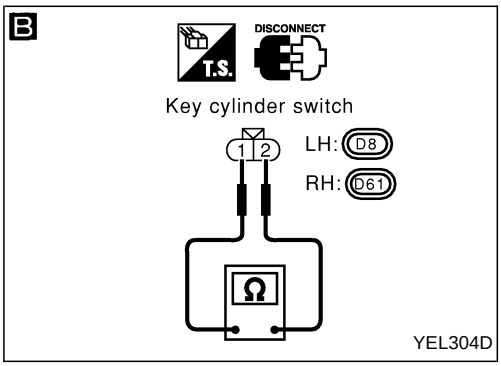
OK ↓

Check the following:
- Door unlock sensor ground circuit.
- Harness for open or short-circuit between control unit and door unlock sensor

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 2
## (Door key cylinder switch check)




**A**

CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK SIGNAL).
Check voltage between time control unit connector terminal (U29) and ground.

| Key cylinder switch operation | Voltage [V] |
|---|---|
| Between neutral and lock | 0 |
| Unlock/neutral | Approx. 5 |

OK → Door key cylinder switch is OK.

NG ↓

**B**

CHECK DOOR KEY CYLINDER SWITCH.
1) Disconnect door key cylinder switch connector.
2) Check continuity between door key cylinder switch terminals.

| Terminals | Key position | Continuity |
|---|---|---|
| ① - ② | Neutral | No |
| | Between neutral and lock | Yes |
| | Unlock/neutral | No |
| | Full stroke (Lock) | No |

NG → Replace key cylinder switch.

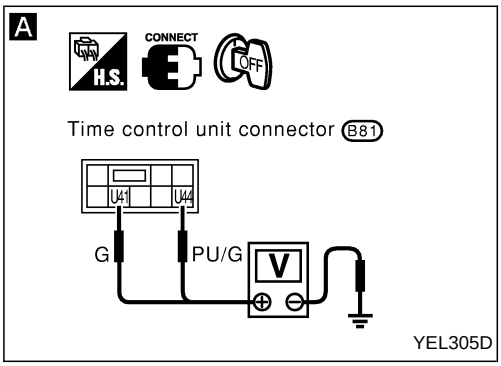
OK ↓

Check the following:
- Harness connectors
- Door key cylinder switch ground circuit
- Harness for open or short-circuit between super lock control unit and door key cylinder.

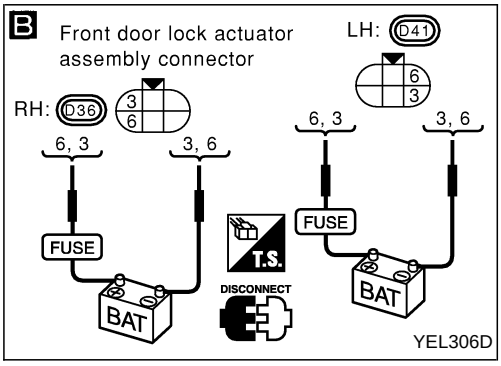
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 3 (Door lock actuator check)

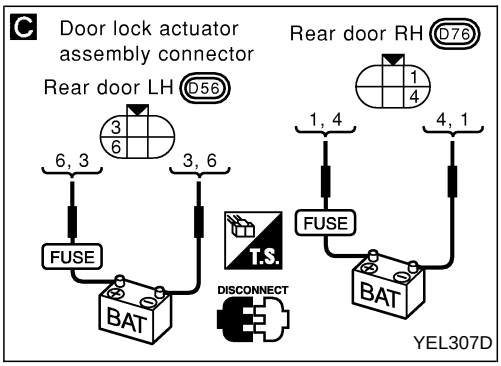
A




B




C




A

CHECK DOOR LOCK ACTUATOR CIRCUIT.
Check voltage for door lock actuator.

| Knob lock switch condition | Terminals ⊕ | Terminals ⊖ | Voltage (V) |
|---|---|---|---|
| Unlock → Lock | U41 | Ground | Approx. 12 (Approx. 5 seconds) |
| Lock → Unlock | U44 | Ground | |

**Before operating passenger side knob lock switch, close all doors.**

NG → Door lock actuator is OK.

OK ↓

B C

CHECK DOOR LOCK ACTUATOR.
1. Disconnect door lock actuator connector.
2. Apply 12V direct current to door lock actuator and check operation.

OK → Check harness between control unit and door lock actuator.

**Front door**

| Door lock actuator operation | Terminals ⊕ | Terminals ⊖ |
|---|---|---|
| Unlocked → Locked | ⑥ | ③ |
| Locked → Unlocked | ③: (LHD) ④: (RHD) | ⑥: (LHD) ①: (RHD) |

**Rear door**

| Door lock actuator operation | Terminals ⊕ | Terminals ⊖ |
|---|---|---|
| Unlocked → Locked | ⑥: (LH) ①: (RH) | ③: (LH) ④: (RH) |
| Locked → Unlocked | ③: (LH) ④: (RH) | ⑥: (LH) ①: (RH) |

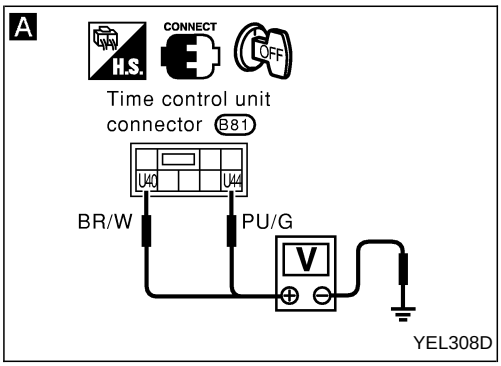
NG ↓

Replace door lock actuator assembly.

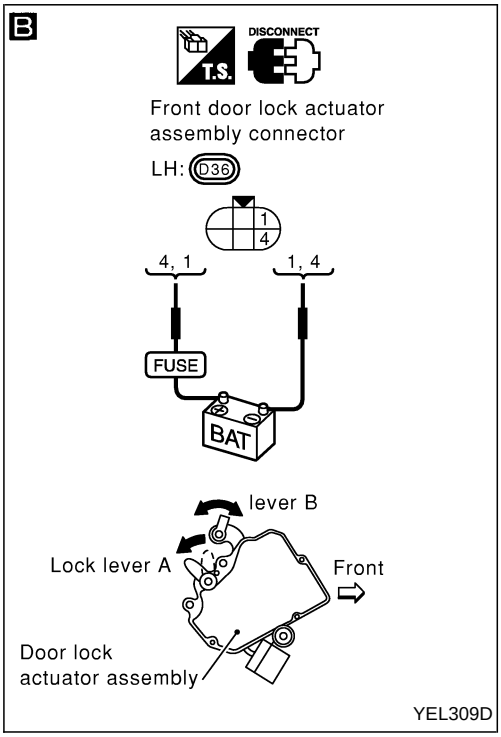
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4
## (Super lock actuator check)

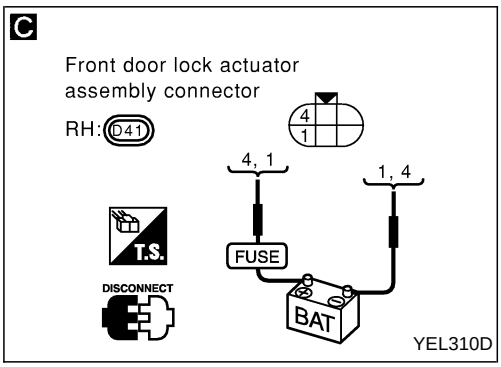
A



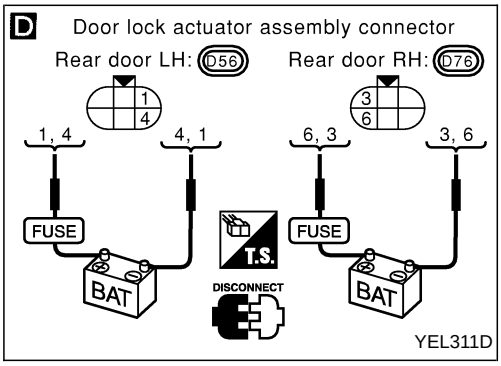

B




C




D




A

CHECK SUPER LOCK ACTUATOR CIRCUIT.
Check voltage for super lock actuator.

| Door key cylinder switch condition | Terminals ⊕ | Terminals ⊖ | Voltage (V) |
|---|---|---|---|
| Lock (Set) | U40 | Ground | Approx. 12 |
| Unlock (Released) | U44 | Ground | |

Note:
Put the system in set condition before checking release signal.

NG → Super lock actuator is OK.

OK ↓

B C D

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.

OK → Check harness between control unit and door lock actuator assembly.

**Front door**

| Super lock actuator operation | Terminals ⊕ | Terminals ⊖ | Connection from lever A to lever B |
|---|---|---|---|
| Released → Set | ① | ④ | Disconnect |
| Set → Released | ④ | ① | Connect |

**Rear door**

| Super lock actuator operation | Terminals ⊕ | Terminals ⊖ | Connection from lever A to lever B |
|---|---|---|---|
| Released → Set | ①: (LH) ⑥: (RH) | ④: (LH) ③: (RH) | Disconnect |
| Set → Released | ④: (LH) ③: (RH) | ①: (LH) ⑥: (RH) | Connect |

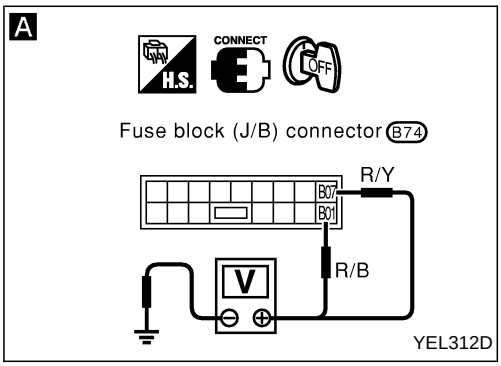
NG ↓

Replace door lock actuator assembly.

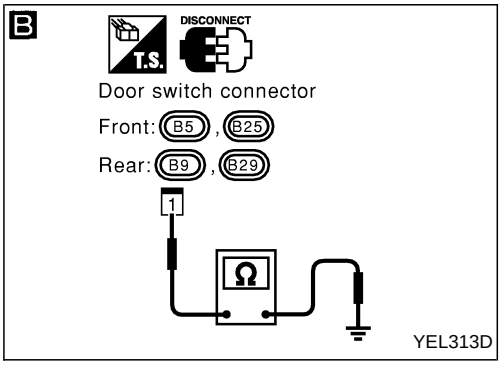
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 5
## (Door switch check)

A




B




A

CHECK DOOR SWITCH INPUT SIGNAL.
Check voltage between fuse block (J/B) and ground.

| | Terminals | Condition | Voltage [V] |
|---|---|---|---|
| Driver side door | B07 | Opened | 0 |
| | | Closed | Approx. 12 |
| Other door | B01 | Opened | 0 |
| | | Closed | Approx. 12 |

OK → Door switch is OK.

NG ↓

B

CHECK DOOR SWITCH.
1) Disconnect door switch connector.
2) Check continuity between door switch terminals.

| | Terminals | Condition | Continuity |
|---|---|---|---|
| Other door switches | ① - ground | Closed | No |
| | | Open | Yes |

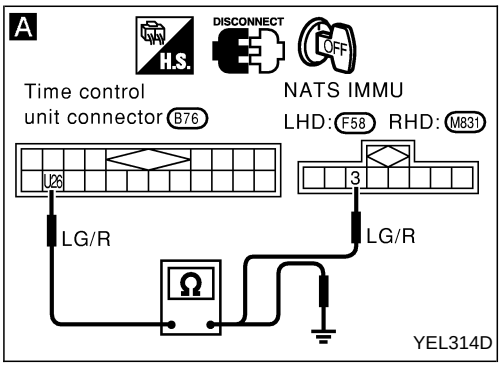
NG → Replace door switch.

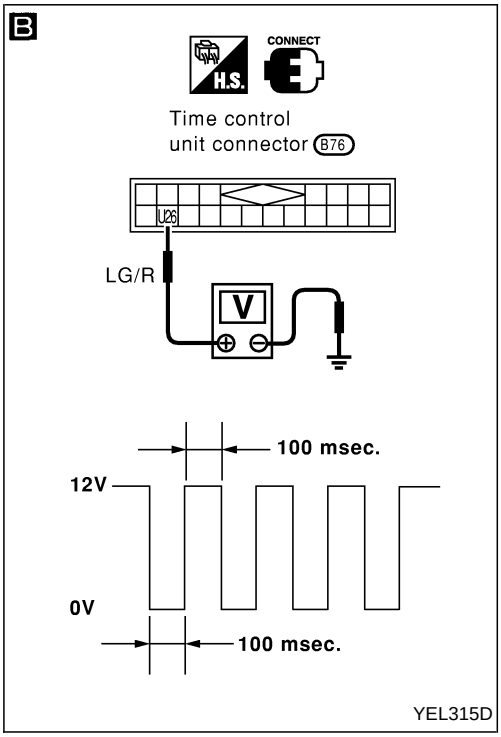
OK ↓

Check the following.
- Door switch ground condition
- Harness for open or short between control unit and door switch

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 6 (NATS release signal check)




Does engine start properly?

No → Check NATS system.

Yes ↓

**A**

CHECK NATS SIGNAL CIRCUIT.

1) Disconnect control unit connector and NATS IMMU connector.
2) Check continuity between control unit terminal (U26) and NATS IMMU terminal ③ .
   **Continuity should exist.**
3) Check continuity between control unit terminal (U26) and ground.
   **Continuity should not exist.**

NG → Repair harness.

OK ↓

**B**

CHECK NATS RELEASE SIGNAL.

1) Connect control unit connector and NATS IMMU connector.
2) Check voltage between control unit terminal (U26) and ground.

| Ignition switch condition | Voltage [V] |
|---|---|
| LOCK | 12 |
| More than 10 seconds after ignition switch turned to "ON" position | |
| For 10 seconds after ignition switch turned to "ON" position | Pulse |

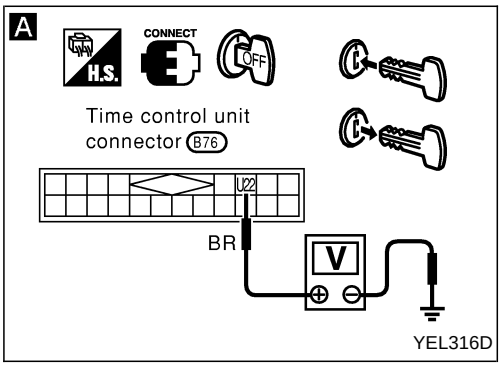
NG → Check NATS system.

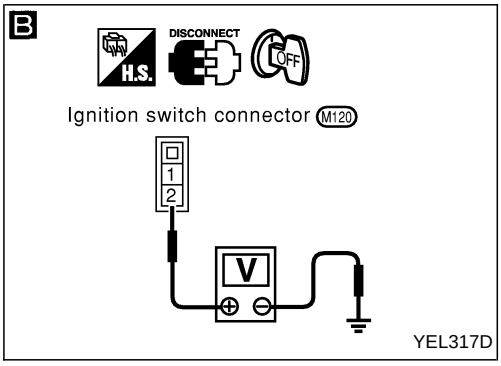
OK ↓

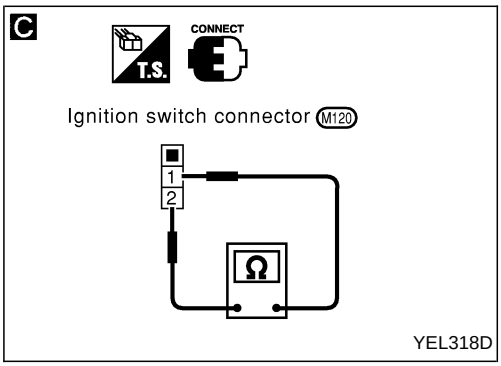
Replace super lock control unit.

## Trouble Diagnoses (Cont'd)

### DIAGNOSTIC PROCEDURE 7 (Ignition switch check)




A

CHECK IGNITION SWITCH INPUT SIGNAL.
Check voltage between control unit terminal (U22) and ground.

| Condition of key switch | Voltage [V] |
|---|---|
| Key is inserted | Approx. 12 |
| Key withdrawn | 0 |

OK → Ignition switch is OK.

NG ↓

B

CHECK IGNITION SWITCH POWER SUPPLY.
Check voltage between ignition switch harness terminal ② and ground.
**Battery voltage should exist.**

NG → Check the following.
- 10A fuse [No. 16, located in fuse block (J/B)]
- Harness for open or short between ignition switch and fuse

OK ↓

C

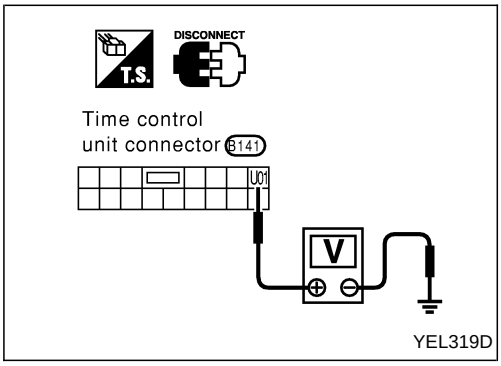
CHECK IGNITION SWITCH.
1) Disconnect ignition switch connector.
2) Check continuity between ignition switch terminals.

| Terminals | Condition | Continuity |
|---|---|---|
| ① - ② | Key is inserted. | Yes |
| | Key is withdrawn. | No |

NG → Replace ignition switch.

OK ↓

Check harness for open or short between control unit and ignition switch.

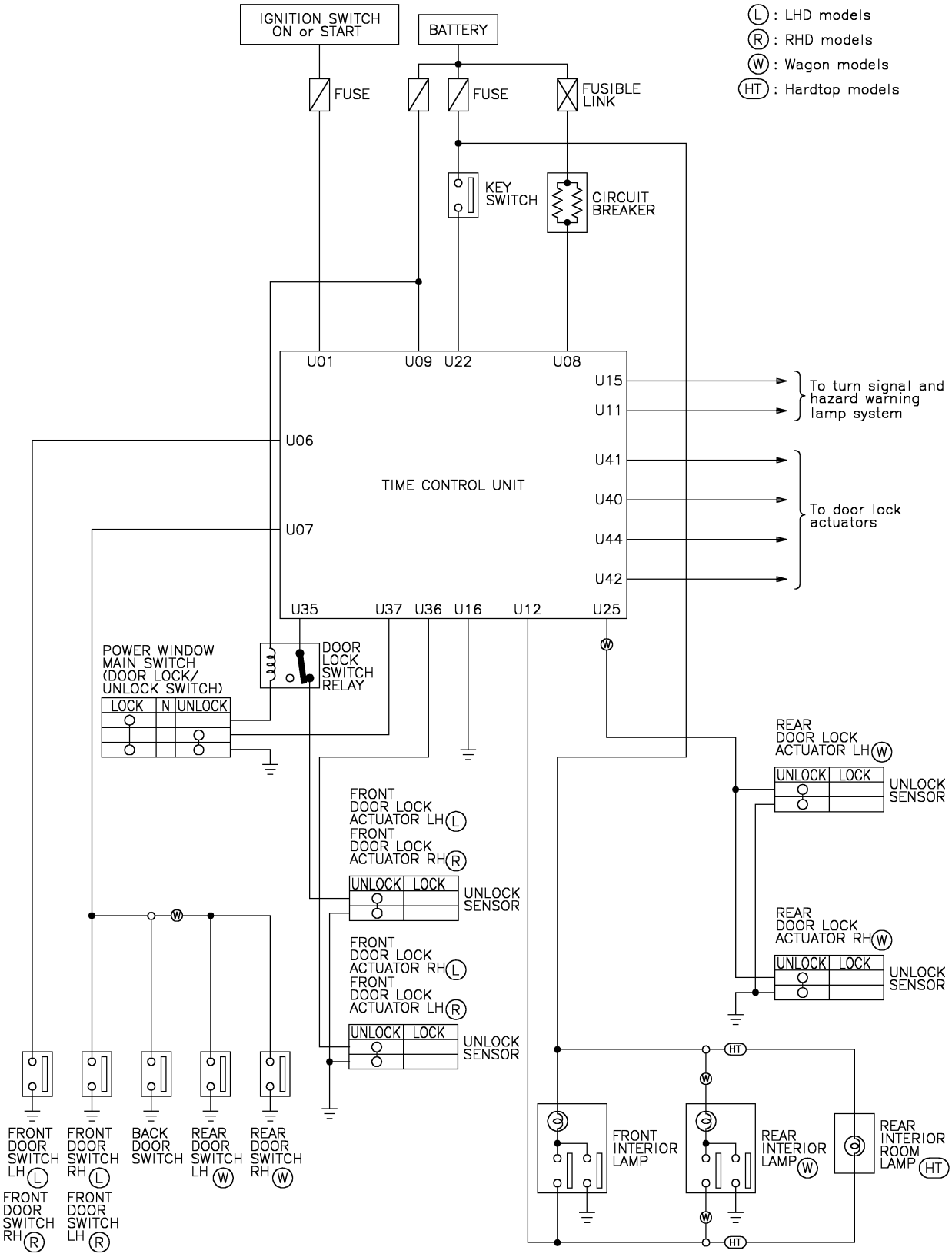



### DIAGNOSTIC PROCEDURE 8 (Ignition switch "ON" circuit check)

| Terminals | | Ignition switch position | | |
|---|---|---|---|---|
| ⊕ | ⊖ | OFF | ACC | ON |
| U01 | Ground | 0V | 0V | Battery voltage |

If NG, check the following.
- 10A fuse [No. 26, located in the fuse block (J/B)]
- Harness for open or short

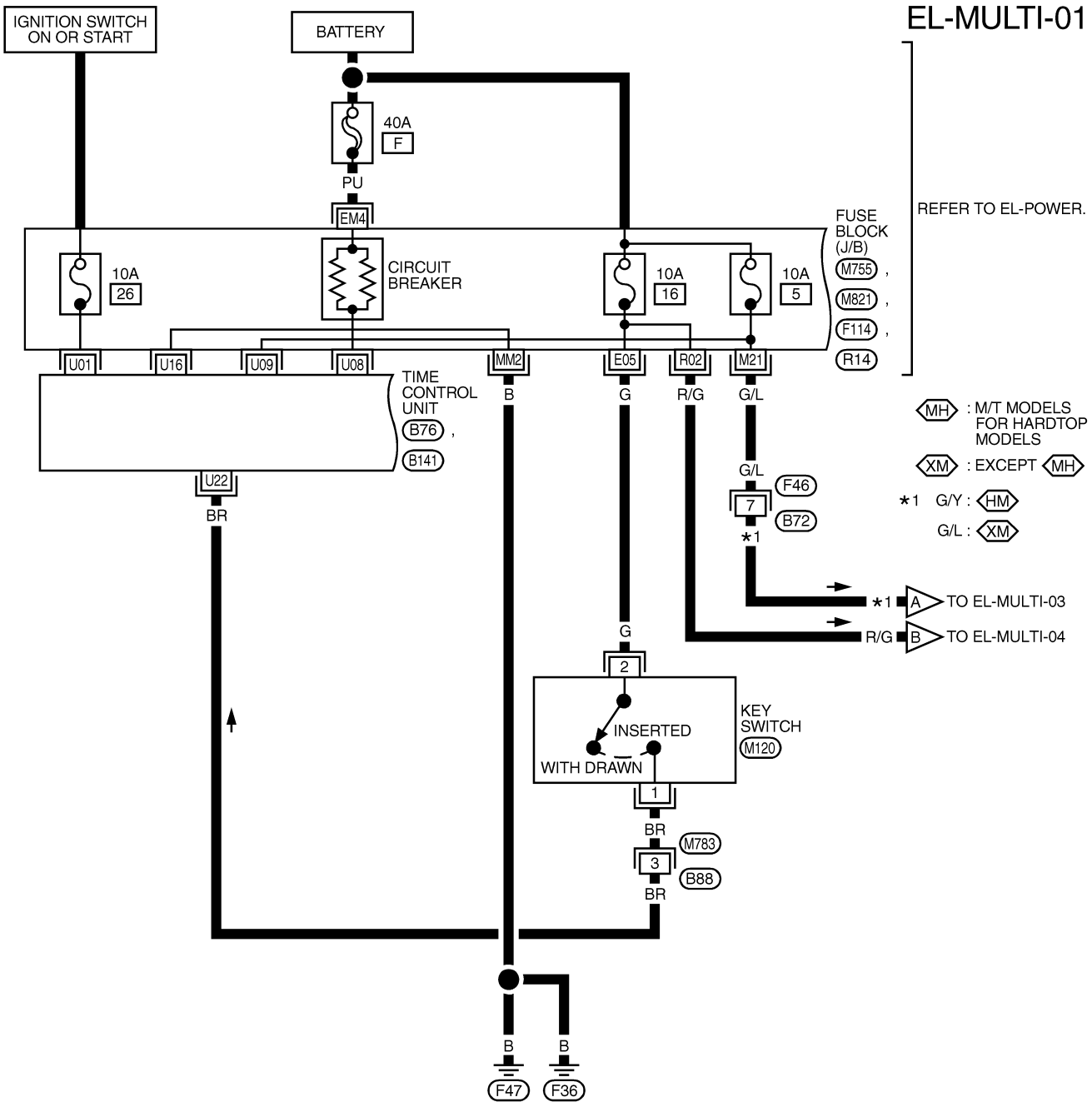
## Schematic

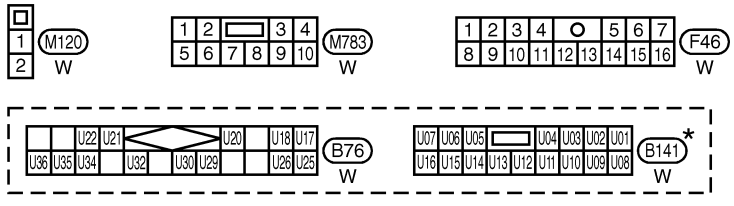



YEL159D

## Wiring Diagram — MULTI —

### LHD MODELS



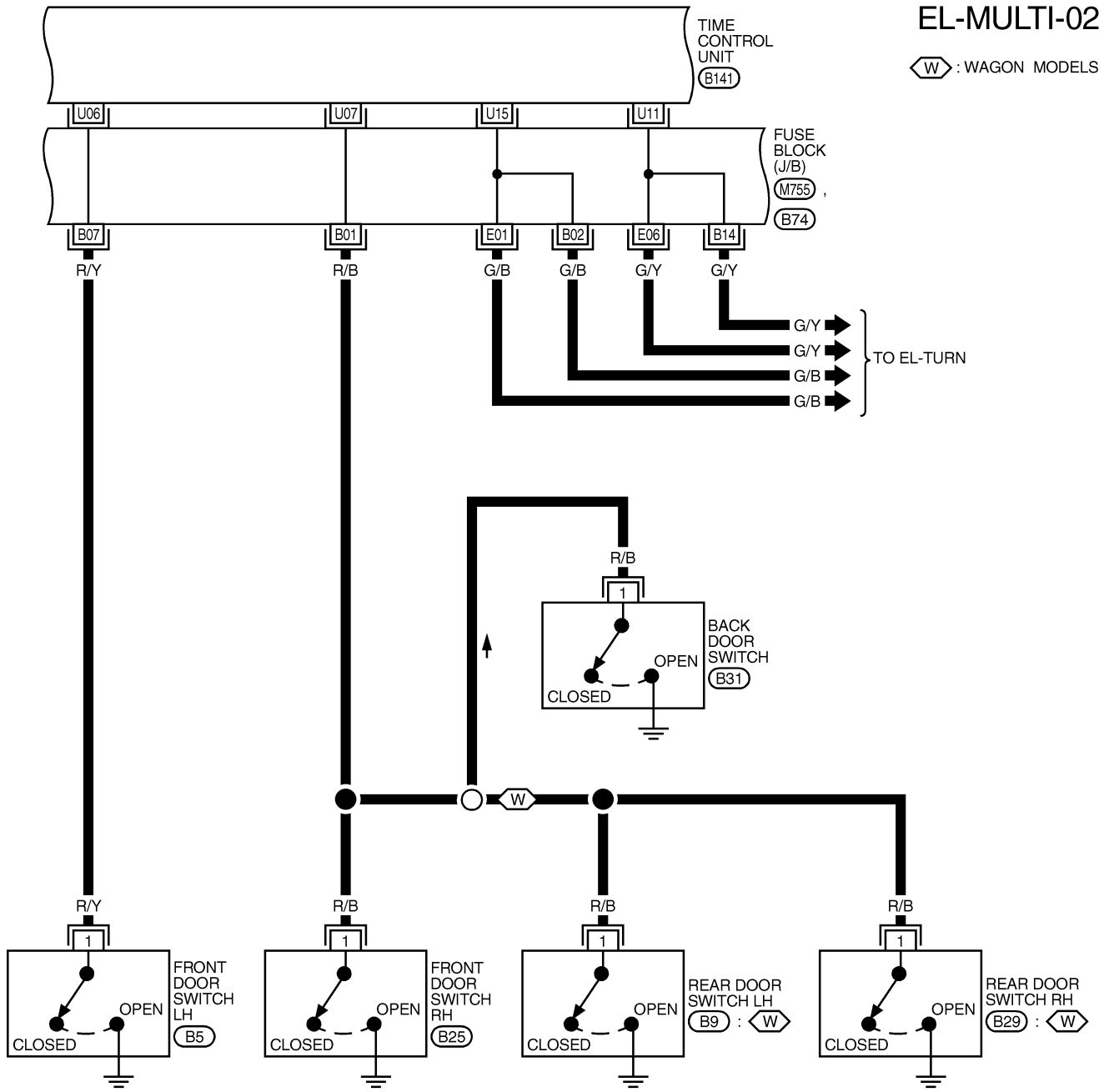

REFER TO THE FOLLOWING.
M755 , M821 , F114 , R14
-FUSE BLOCK-
JUNCTION BOX (J/B)

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

YEL160D

## Wiring Diagram — MULTI — (Cont'd)

### LHD MODELS




1 B5 BR , B9 BR , B25 BR , B29 BR , B31 BR

U07 U06 U05 U04 U03 U02 U01 / U16 U15 U14 U13 U12 U11 U10 U09 U08 B141* W

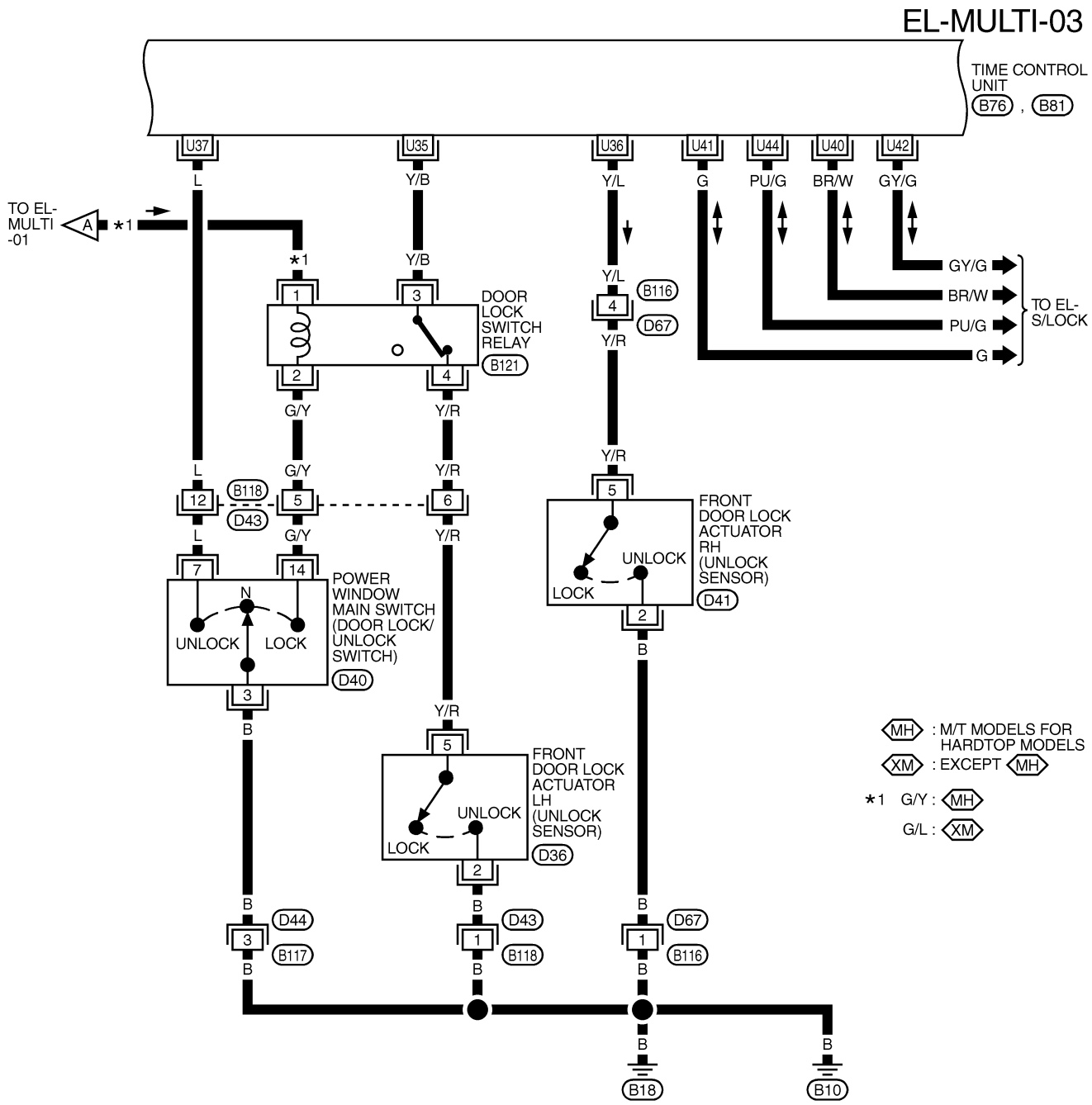
REFER TO THE FOLLOWING.
M755 , B74 -FUSE BLOCK-JUNCTION BOX (J/B)

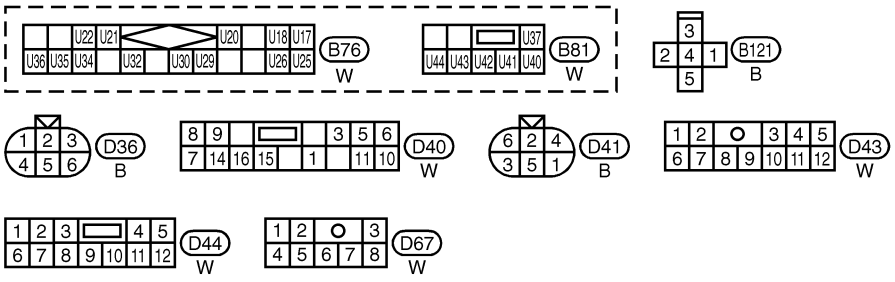
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL161D

## Wiring Diagram — MULTI — (Cont'd)

### LHD MODELS

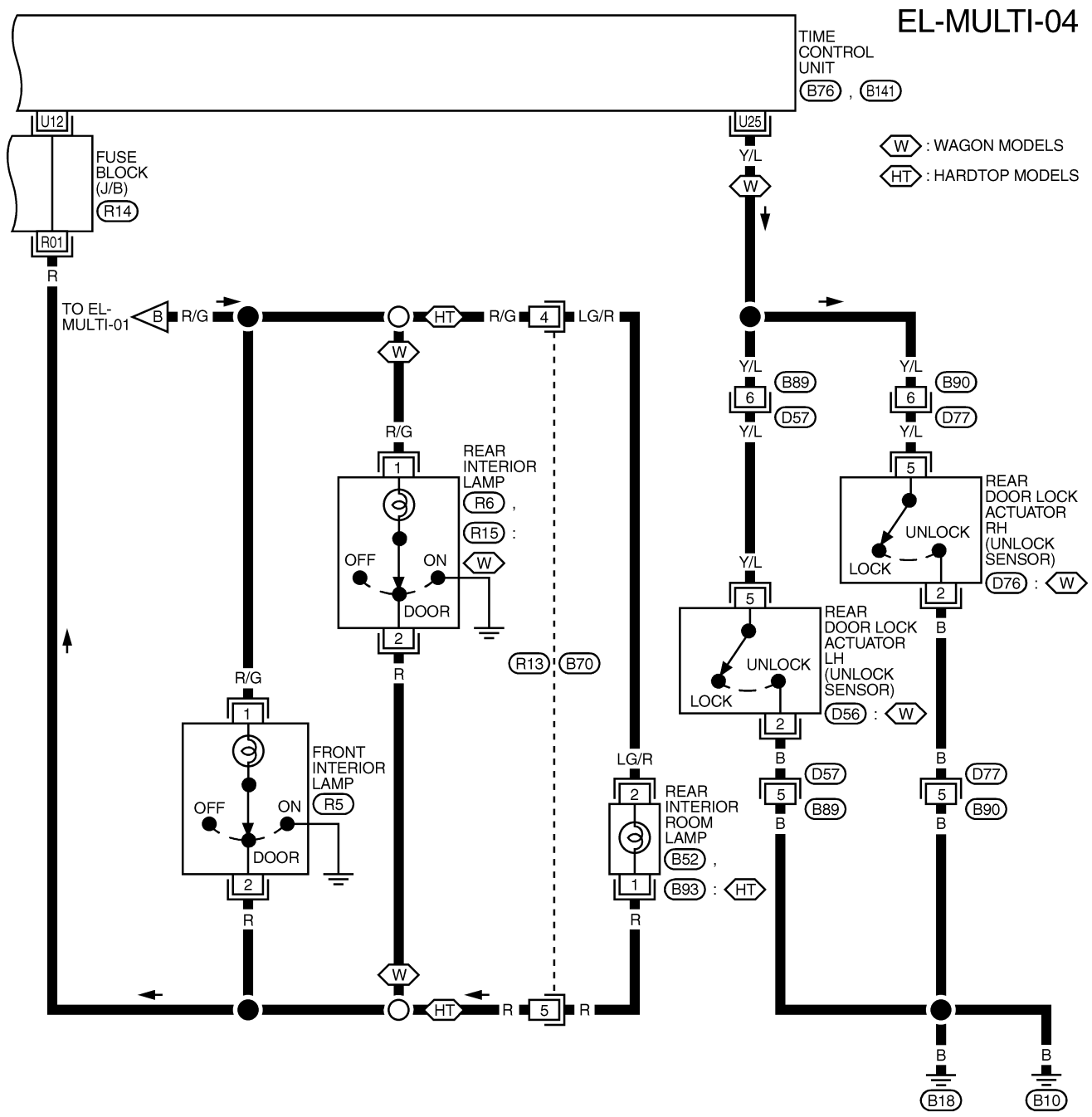


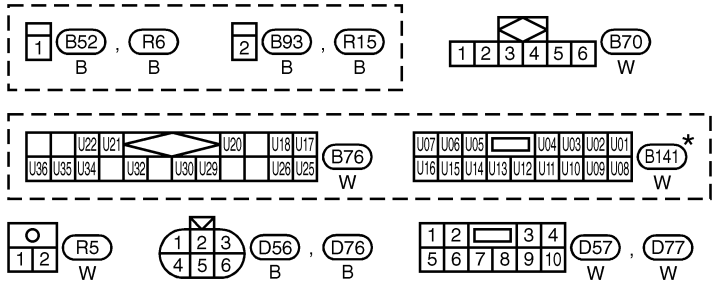




YEL162D

## Wiring Diagram — MULTI — (Cont'd)

### LHD MODELS



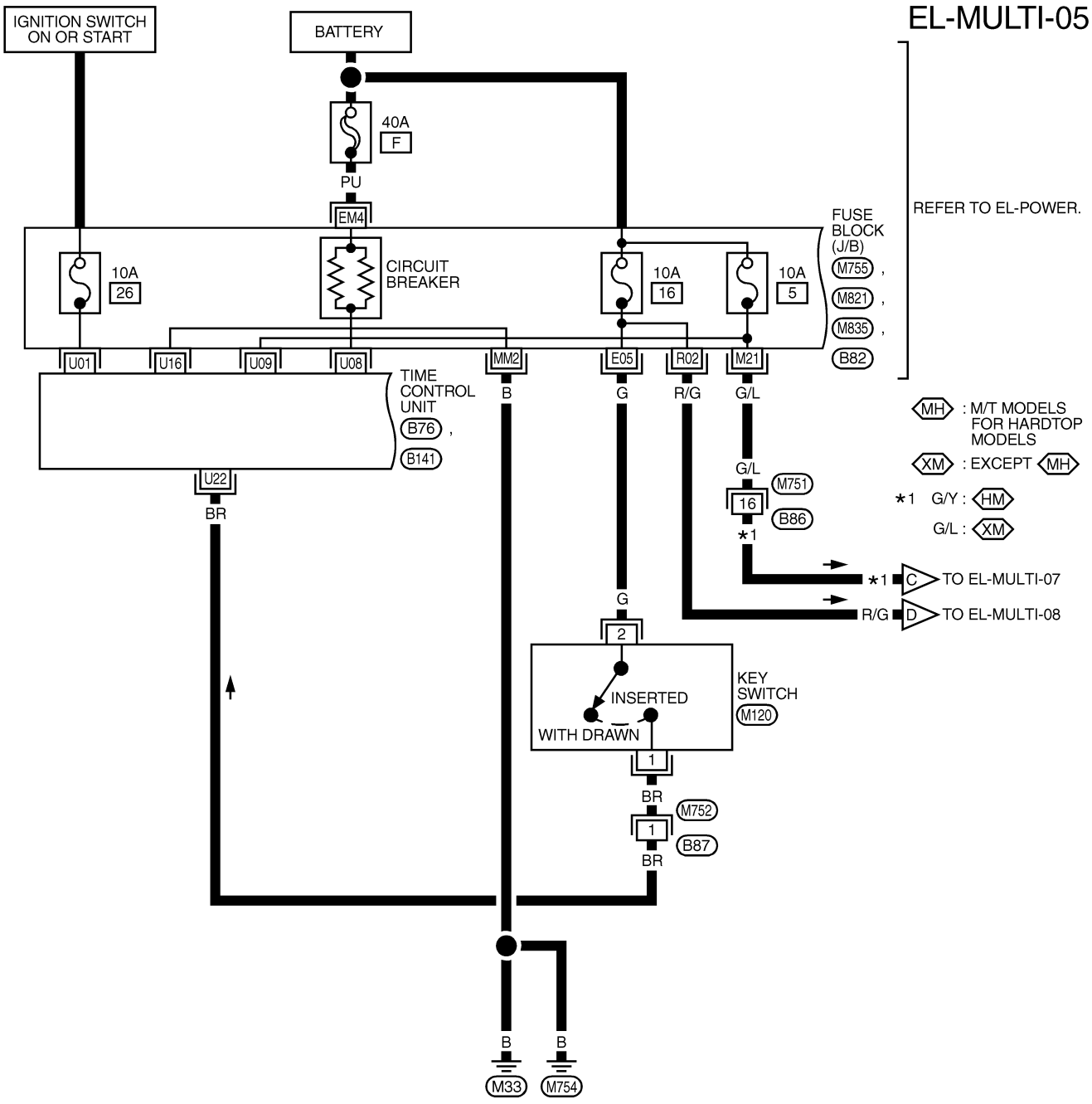

* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

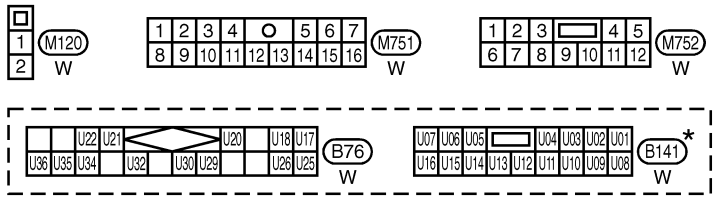
REFER TO THE FOLLOWING.
R14 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL163D

## Wiring Diagram — MULTI — (Cont'd)

### RHD MODELS



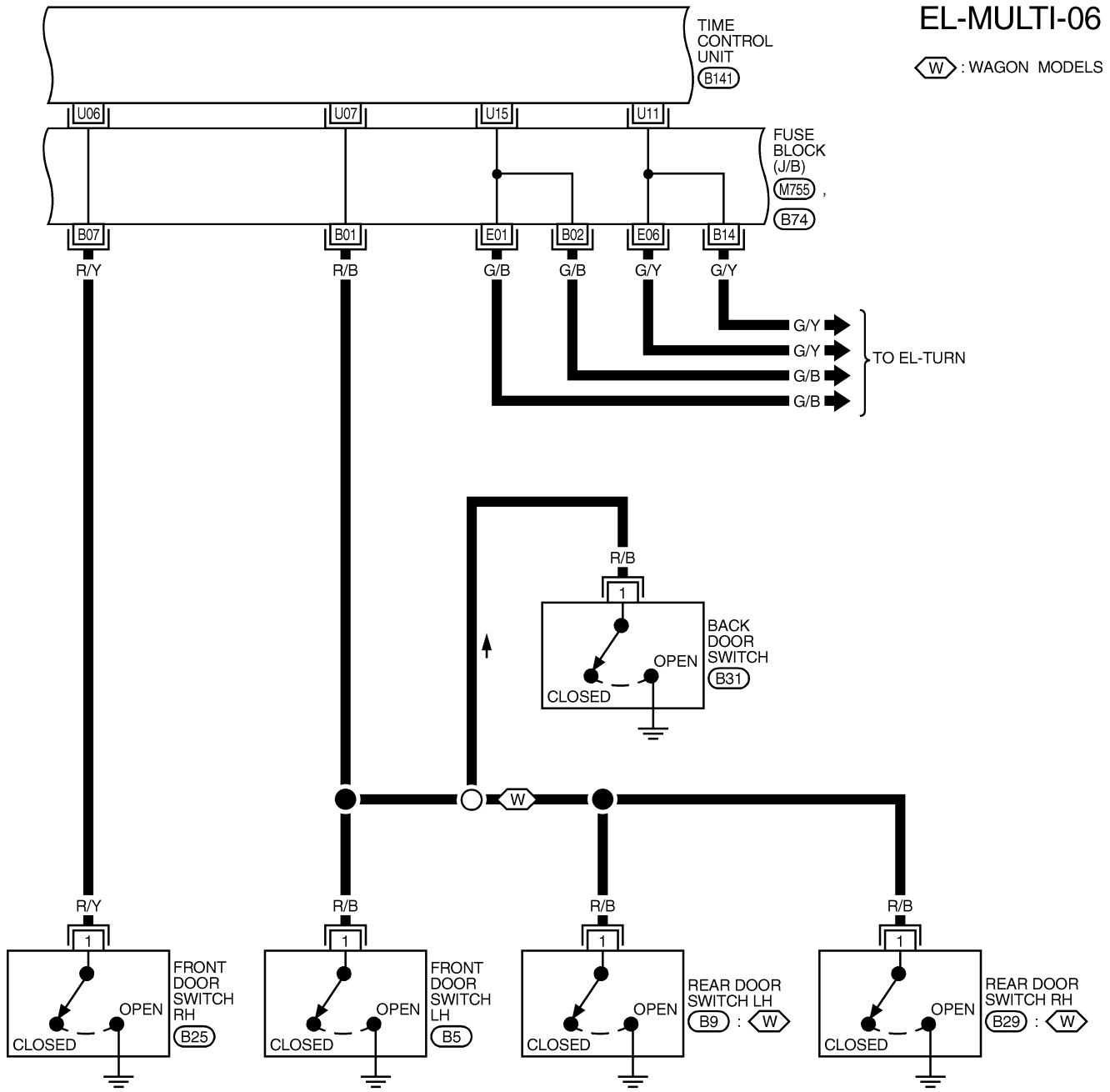

REFER TO THE FOLLOWING.
M755 , M821 , M835 , B82
-FUSE BLOCK-
JUNCTION BOX (J/B)

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

YEL164D

## Wiring Diagram — MULTI — (Cont'd)

### RHD MODELS




1 B5 BR, B9 BR, B25 BR, B29 BR, B31 BR

U07 U06 U05 U04 U03 U02 U01 / U16 U15 U14 U13 U12 U11 U10 U09 U08 B141* W

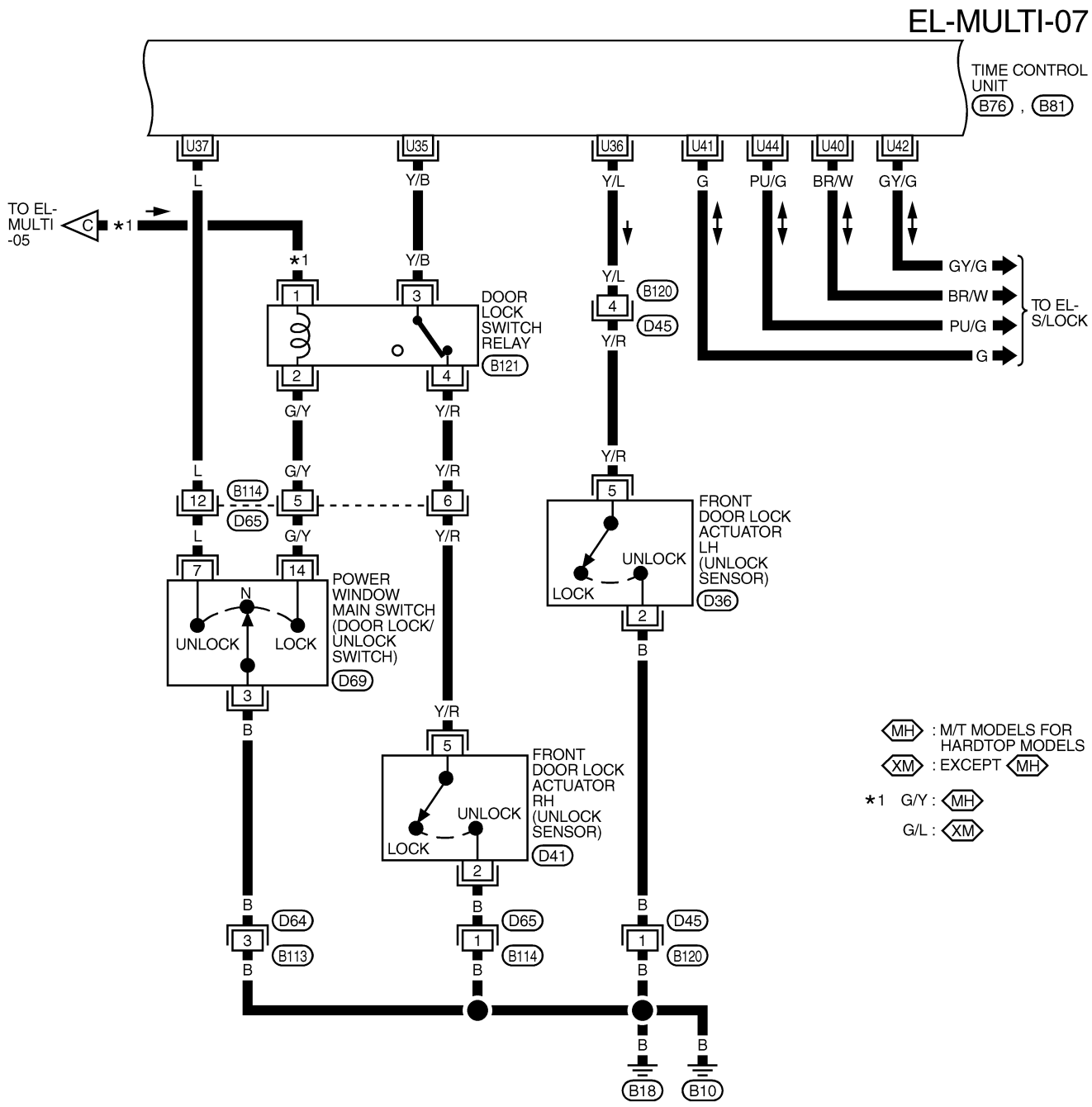
REFER TO THE FOLLOWING.
M755, B74 -FUSE BLOCK-JUNCTION BOX (J/B)

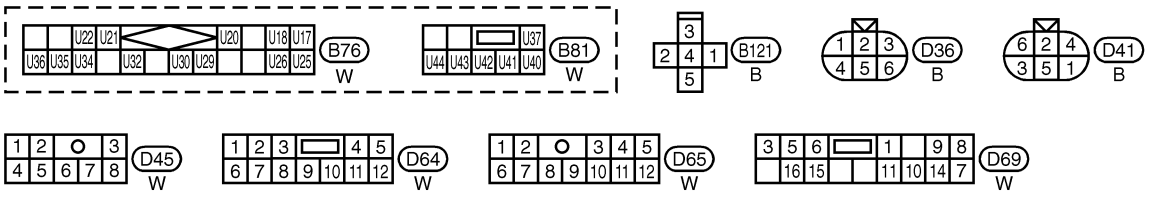
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL165D

## Wiring Diagram — MULTI — (Cont'd)

### RHD MODELS

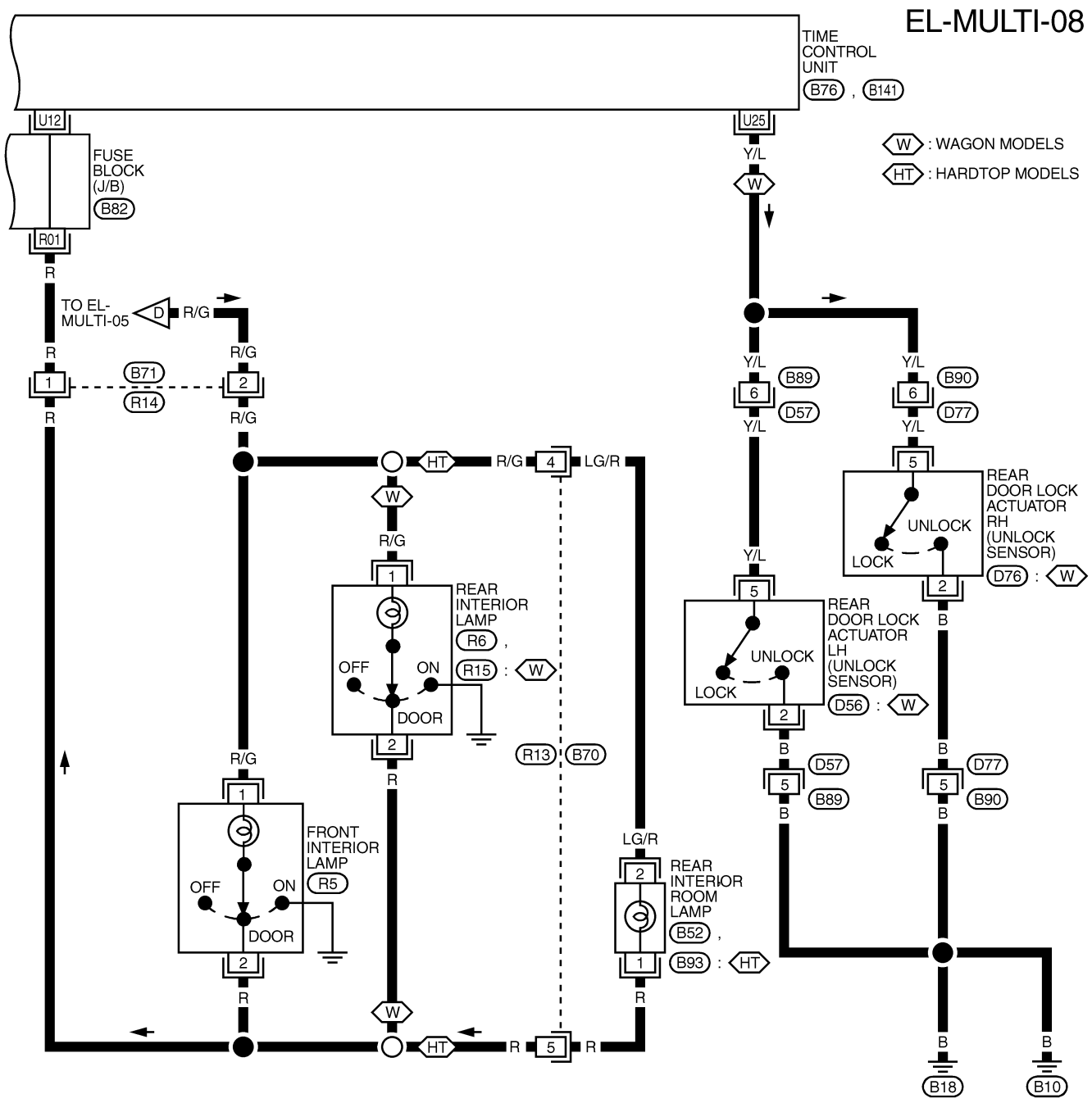


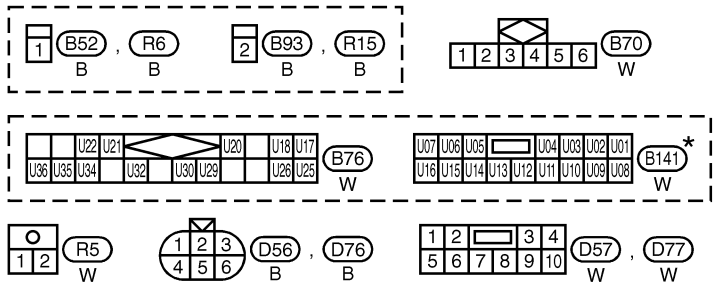




YEL166D

## Wiring Diagram — MULTI — (Cont'd)

### RHD MODELS




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

REFER TO THE FOLLOWING.
B82 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL167D

## Trouble Diagnoses

If doors can not be unlocked by remote controller operation then the following procedure is required.

A) Unlock the vehicle by a mechanical key in the drivers door key cylinder.
Note: this may cause the alarm to sound.

B) Put the key in ignition, turn to ON position for at least five seconds. Assuming the ignition key contains a valid transponder then a signal will be generated by the immobilizer which will disarm the alarm and allow key learn mode to be entered.

C) Turn ignition OFF and wait for ten seconds.

### SYMPTOM CHART

| Symptom | Possible cause | Diagnoses/service order |
|---|---|---|
| No doors can be locked or unlocked by remote control operation. | 1. Remote controller battery | 1. Check remote controller battery. Refer to EL-178. |
| | 2. Power door lock system | 2. Check that power door lock operates properly. If NG, check power door lock. |
| | 3. Key switch (insert) | 3. Check key switch (insert) signal at terminal (U22) of time control unit. |
| | 4. Door switch | 4. Check door switch signal at terminals (B01) and (B07) of time control unit (Fuse block). |
| | 5. Power supply circuit for time control unit | 5. Make sure battery voltage is present at terminal (U09) of time control unit. |
| | 6. Ground circuit for time control unit | 6. Check continuity between terminal (MM2) of time control unit (Fuse block) and ground. |
| | 7. Remote controller | 7. Replace remote controller. Refer to EL-179. |
| The new ID of remote controller cannot be entered. | 1. Remote controller battery | 1. Check remote controller battery. Refer to EL-178. |
| | 2. Key switch (insert) | 2. Check key switch (insert) signal at terminal (U22) of time control unit. |
| | 3. Door switch | 3. Check door switch signal at terminals (B01) and (B07) of time control unit (Fuse block). |
| | 4. Driver's door unlock sensor | 4. Check driver's door unlock sensor signal at terminal (U35) of time control unit. |
| | 5. Ignition ON power supply circuit for time control unit | 5. Make sure battery voltage is present at terminal (U01) of time control unit while ignition switch is in ON position. |
| | 6. Remote controller | 6. Replace remote controller. Refer to EL-179. |

Refer to "TIME CONTROL UNIT INSPECTION TABLE" on EL-178 to check the control unit signals.

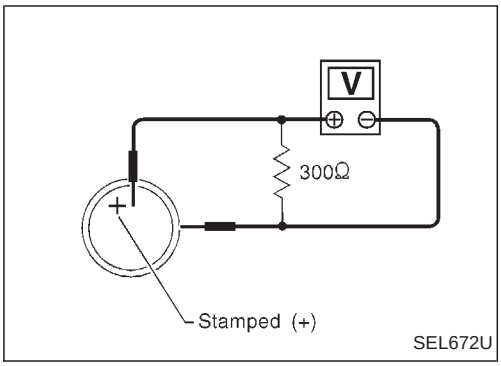
NOTE:

- The unlock operation of multi-remote control system does not activate with key inserted in the ignition key cylinder.
- The lock operation of multi-remote controller does not activate with the key inserted in the ignition key cylinder or if one of the doors is opened.

## Trouble Diagnoses (Cont'd)

### TIME CONTROL UNIT INSPECTION TABLE

| Terminal No. | Wire color | Connections | Operated condition | Voltage (V) (approximate values) |
|---|---|---|---|---|
| U01 | — | Ignition switch (via ignition relay) | Ignition key "ON" position | 12V |
| U06 (B07) | — | Driver door switch | OFF (Closed) → ON (Open) | 12V → 0V |
| U07 (B01) | — | All door switches | OFF (Closed) → ON (Open) | 12V → 0V |
| U08 | — | Power source (C/B) | — | 12V |
| U09 | — | Power source (Fuse) | — | 12V |
| U16 | — | Ground | — | 12V |
| U22 | BR | Ignition key switch (Insert) | Key inserted → key removed from ignition key cylinder | 12V → 0V |
| U25 | Y/L | Rear door unlock sensors | Rear doors: Locked → Unlocked | 0V → 12V |
| U35 | Y/B | Driver door unlock sensor | Driver door: Locked → Unlocked | 0V → 12V |
| U36 | Y/L | Passenger door unlock sensor | Passenger door: Locked → Unlocked | 0V → 12V |




### REMOTE CONTROLLER BATTERY CHECK

Remove battery and measure voltage across battery positive and negative terminals, ⊕ and ⊖.
Then, use the 300Ω resistor as shown in figure.

| Measuring terminal | | Standard value |
|---|---|---|
| ⊕ | ⊖ | |
| Battery positive terminal ⊕ | Battery negative terminal ⊖ | 2.5 - 3.0V |

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

# ID Code Entry Procedure

Enter the identity (ID) code manually when:
- remote controller or TCU is replaced.
- an additional remote controller is activated.

## Activation of the registration mode:

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

↓

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

↓

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

↓ OK

Proceed with the registration mode.

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

## Registration mode

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

↓

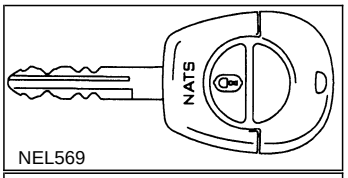
Press the "LOCK" button 3 times.

↓

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

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

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



NEL569

OK ↓

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.)

No ↓

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

Turn the ignition switch to the ON position.

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

OK ↓

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

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

↓

End

## System Description

The TCU (Time Control Unit) has the following functions.

### INTERIOR LAMP TIMER

The interior lamp timer is controlled by the TCU.
The TCU keeps the interior lamp illuminated for about 30 seconds when:

- the ignition key is turned from “ON” to “ACC” to “LOCK”
- the driver’s door is unlocked
- a door is opened and then closed while the ignition switch is in the “OFF” position. (Interior lamp switch in the “DOOR” position).

The timer is canceled when:

- driver’s door is locked, or
- ignition switch is turned “ON”.

### IGNITION KEY WARNING CHIME AND LIGHT WARNING CHIME

The ignition key and light warning chime are controlled by the TCU.
The warning chime is combined with the TCU.
The light warning chime will not sound, when ignition switch is in the “ON” or “START” position. (When power supply exists at TCU terminal (U01).)
With ignition switch in the OFF position, driver’s door open, and lighting switch in 1ST or 2ND position, warning chime will sound.
Or, with the key in the ignition switch in the “ACC” or “OFF” position, and locking the driver’s door from the inside, the warning buzzer will sound.

### REAR WINDOW DEFOGGER TIMER

The rear window defogger and door mirror defogger system are controlled by the TCU.
The rear window and door mirror defogger operate only for approximately 15 minutes.

### POWER DOOR LOCK (Super Lock)

The power door lock (super lock) is controlled by the TCU.
For further information, refer to “POWER DOOR LOCK — Super Lock” (EL-145).

### MULTI-REMOTE CONTROL SYSTEM

The multi-remote control system is controlled by the TCU.
When the following input signals are both supplied:

- Key switch OFF (when ignition key is not inserted in key cylinder);
- door switch CLOSED (when all the doors are closed);

The two above signals are already input into time control unit. At this point, time control unit receives a LOCK signal from remote controller. Time control unit locks all doors and set super lock with input of LOCK signal from remote controller.
When an UNLOCK signal is sent from remote controller once, driver’s door will be unlocked and release super lock.
Then, if an UNLOCK signal is sent from remote controller again, all other door will be unlocked.

### MULTI-REMOTE CONTROLLER ID CODE ENTRY

For detailed procedure, refer to “ID Code Entry Procedure” (EL-179).

### THEFT WARNING SYSTEM

The theft warning system is controlled by the TCU.
For further information, refer to “THEFT WARNING SYSTEM” (EL-209).

## System Description (Cont'd)

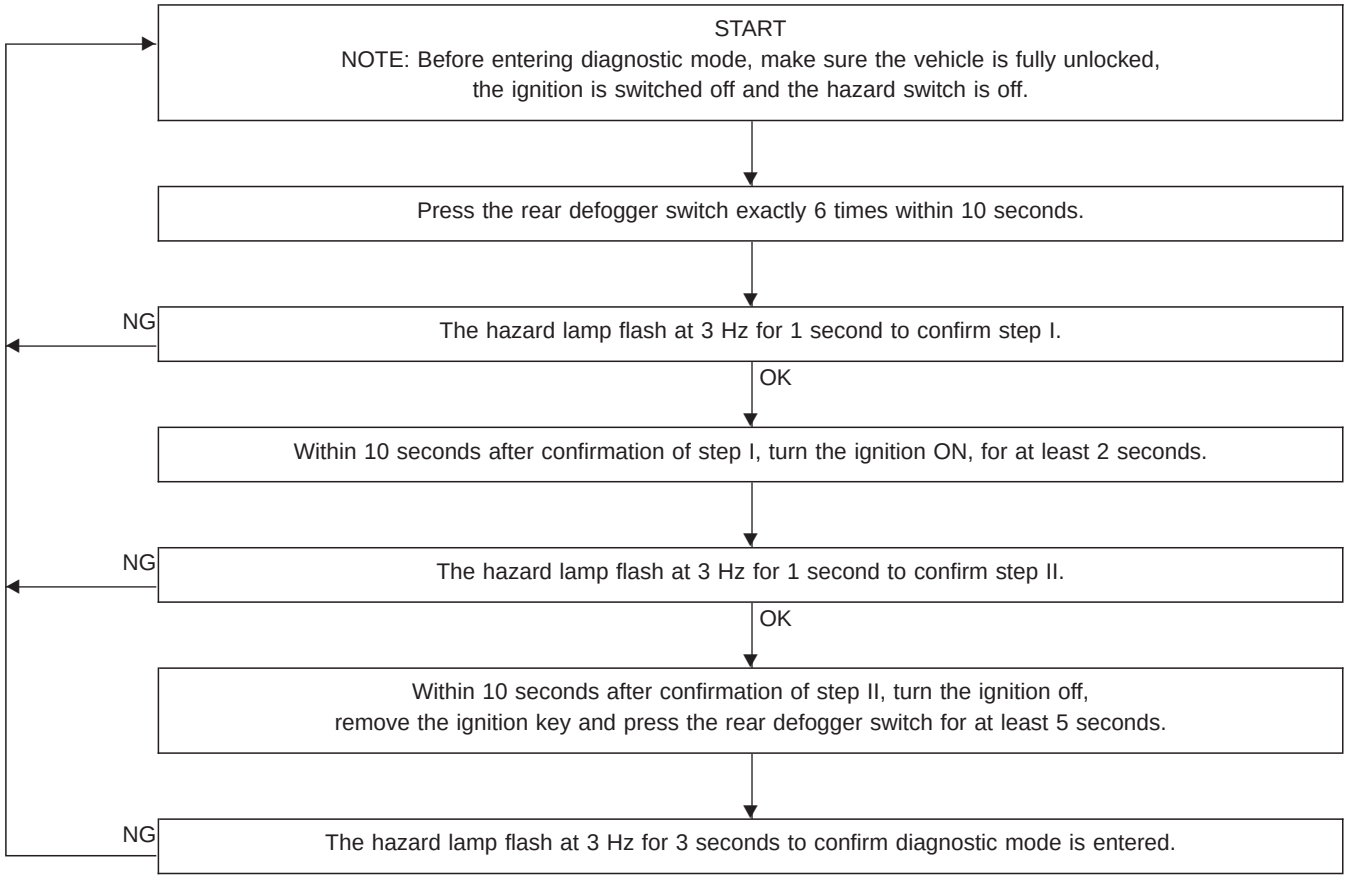
### FUNCTION

- The TCU has the following control functions.

| 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 is moved from the "unlock" position to the "lock" position. |
| 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:<br>● driver's door is unlocked,<br>● the ignition is switched off,<br>● driver's door is opened and then closed.<br>The timer is cancelled, and interior lamp turns off when:<br>● driver's door is locked, or<br>● ignition switch is turned "ON". |
| Theft warning system | Normal operation | Monitors doors, hood, boot lid, door locks, volumetric sensors (if not excluded) and ignition when armed.<br>Flashes the direction indicators and sounds the horn for 30 seconds in case one of the monitored sensors is triggered. |
| | Diagnostic mode | Indicates the last three alarm triggers by flashing the direction indicators. |
| Central door lock | | Centrally locks and unlocks the vehicle |
| Super lock | | Activates and de-activates the super lock system. |

## Trouble Diagnosis

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 and if so equipped, alarm triggers identified.
When the time control unit is in Diagnostic Mode, the control unit tests the component and indicate the result by the hazard lamp flashing.
On vehicles with a theft warning system, the TCU will first indicate the source of the last three alarm triggers by flashing the hazard lamp. (Refer to “THEFT WARNING SYSTEM”, EL-209.)



## Trouble Diagnosis (Cont'd)

### Checks

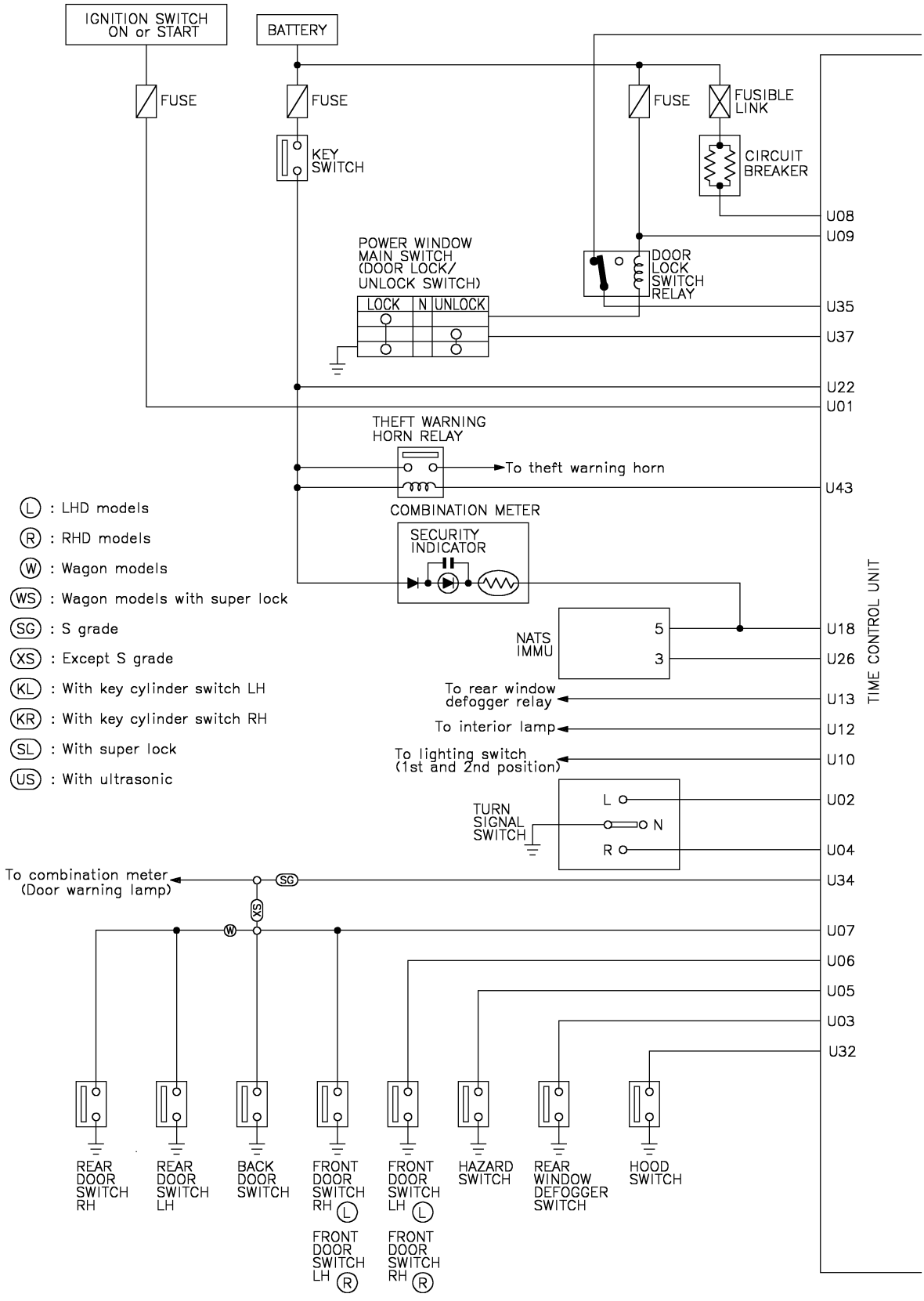
Once in Diagnostic Mode (and after identifying the last three alarm triggers in case a theft warning system is equipped on the vehicle), the following inputs can be tested.

| 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) | Hazards flash once | Door open signal for opened door |
| Driver's door locked from unlocked | Hazards flash once | Driver's door status signal |
| Passenger door locked from unlocked | Hazards flash once | Assist door status signal |
| Rear doors locked from unlocked (with ultrasonic model) | Hazards flash once | Rear doors status signal |
| Ultrasonics cancel switch is pressed (with ultrasonic model) | Hazards flash once | U/S cancel signal |
| Trunk or back door is opened from closed | Hazards flash once | Trunk open signal |
| Hood is opened from closed (with ultrasonic model) | Hazards flash once | Hood open signal |
| Hazard switch is pressed from off | Hazards flash once | Hazard switch signal |
| Turn signal switch is moved to left from off | Hazards 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 | Hazards flash once * | Key cylinder lock switch signal |
| Lighting switch turned 1st position or 2nd position from off | Hazards flash once | Tail lamp signal |
| Key put in ignition cylinder from out | Hazards flash once | Key in detect signal |
| Central unlock switch is pressed | Hazards flash once | Central unlock/Trunk release signal |

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

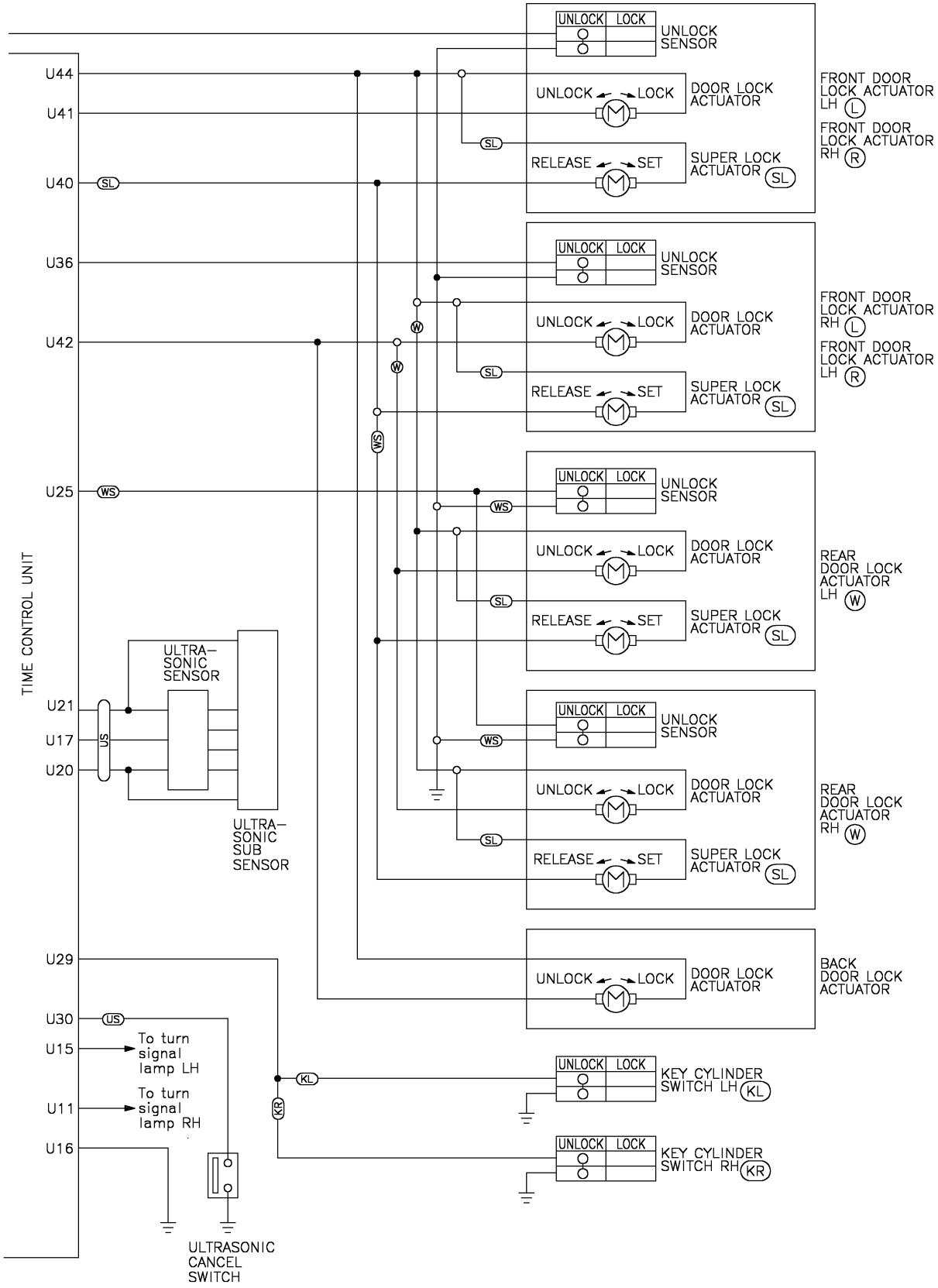
In case the system does not operate as described above, check the concerned circuit for open or short. After completion, the Diagnostic Mode can be switched off by pressing the rear defogger switch or by turning the ignition to "ON". The hazard lamp will flash at 3 Hz for 3 seconds to confirm that Diagnostic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

## Schematic




YEL168D

## Schematic (Cont'd)




YEL169D

## System Description

NATS has the following immobiliser functions:

- This version of NATS has dongle control unit to improve its anti-theft performance (RHD models). Dongle control 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 control 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.
- 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.
- 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 NATS security indicator (NATS security ind.) 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.

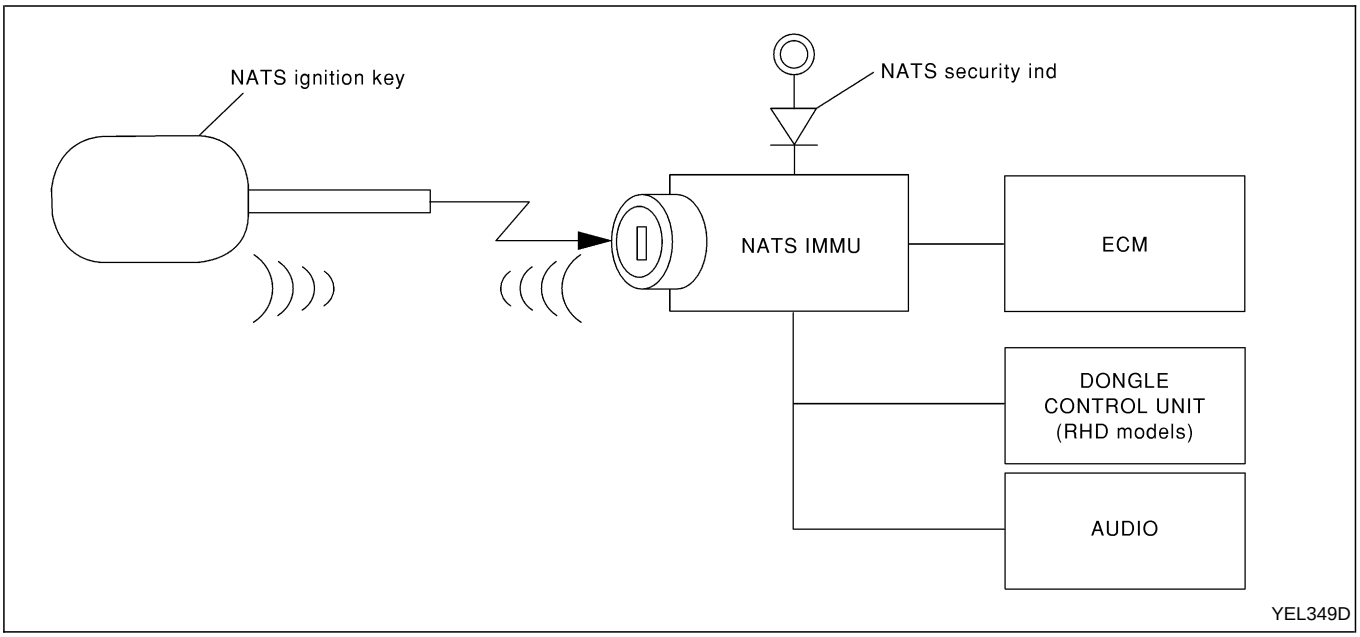
| Condition IGN ON and | With dongle | | Without dongle | |
|---|---|---|---|---|
| | MIL | Security indicator | MIL | Security indicator |
| NATS malfunction (except dongle control unit) is detected | — | 6 times blinking<br>Staying ON after ignition switch is turned ON | — | Staying ON |
| Only malfunction of dongle control 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 | 6 times blinking<br>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 initialisation 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 initialisation 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 and the PIN code from vehicle owner.**

## System Composition

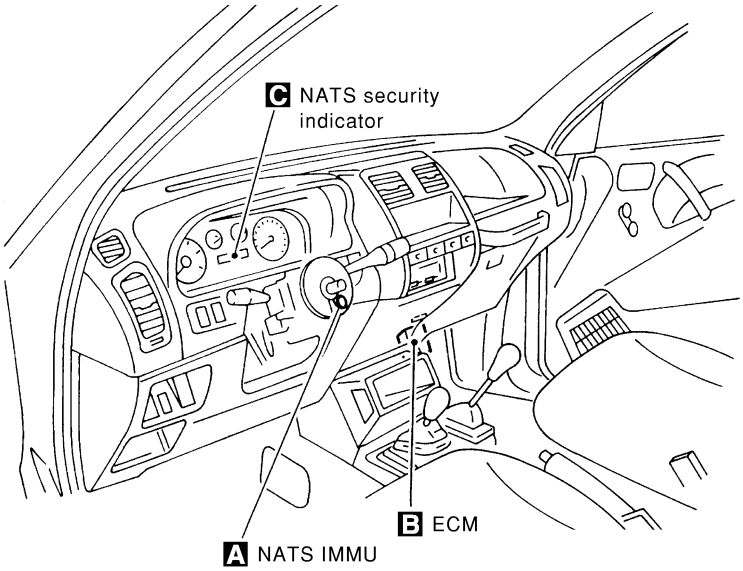
The immobiliser function of the NATS for Nissan model R20 consists of the following:

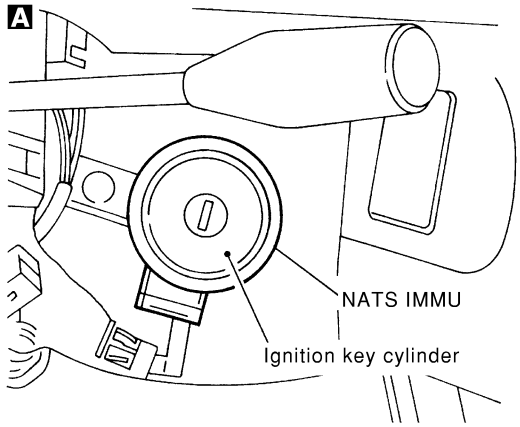
- NATS ignition key
- NATS immobiliser control unit (NATS IMMU), located in the ignition key cylinder
- Engine control module (ECM)
- Dongle control unit (RHD models)
- NATS security indicator
- NATS audio link

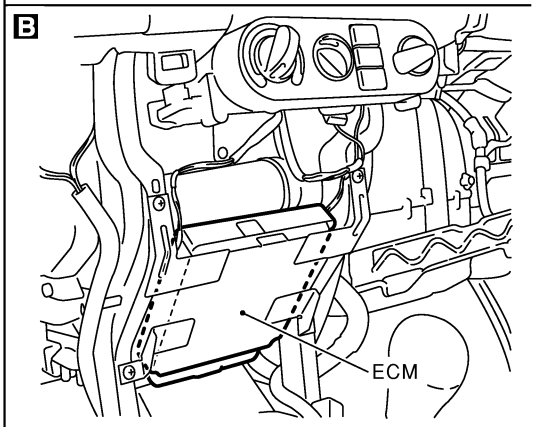


## Component Parts Location

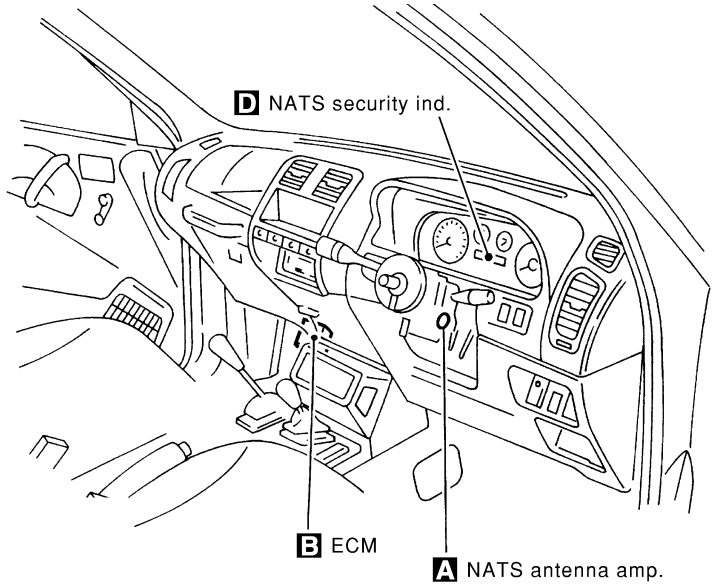
**LHD models**



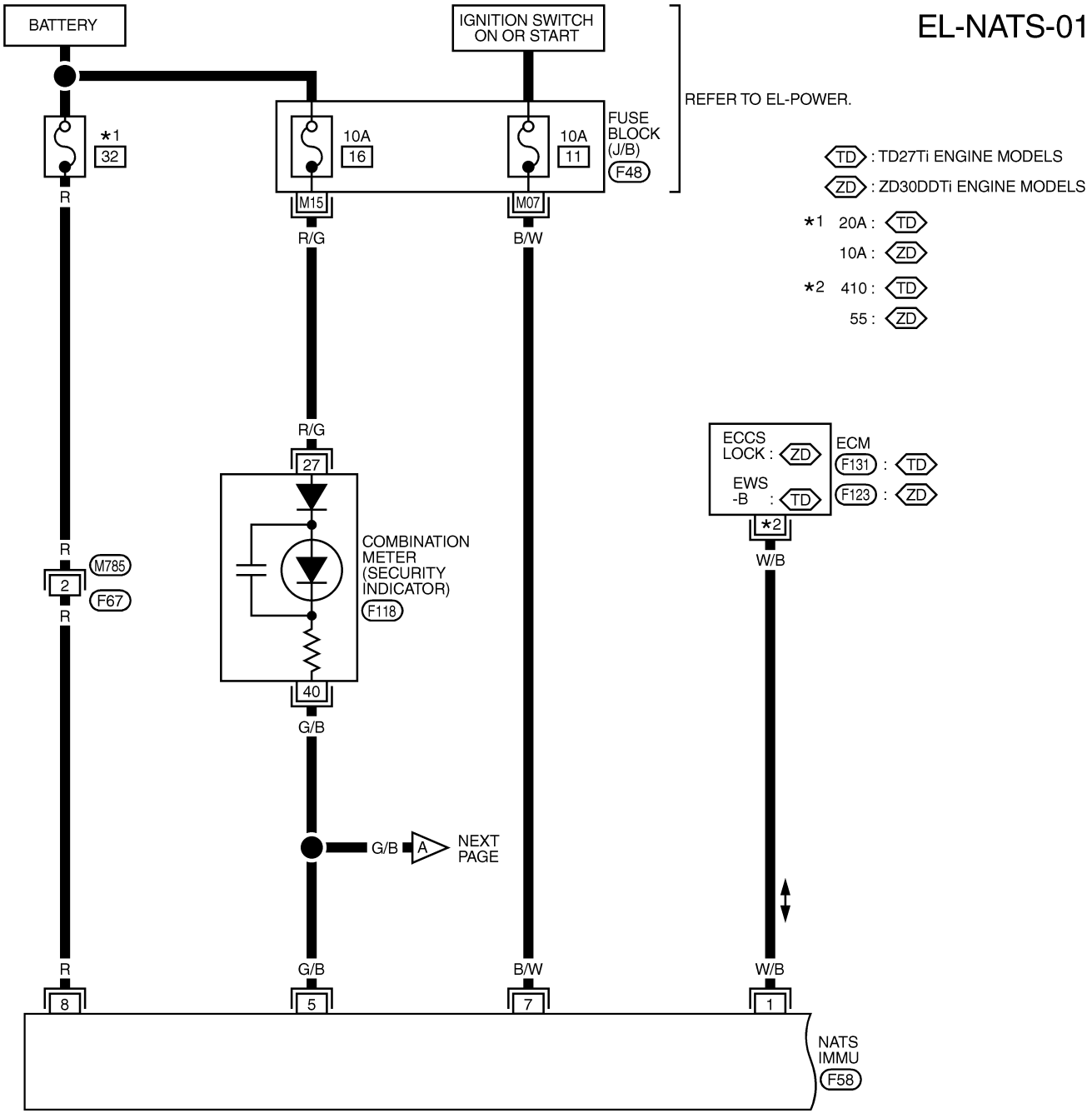

**RHD models**




YEL320D

## Wiring Diagram — NATS —

### LHD MODELS





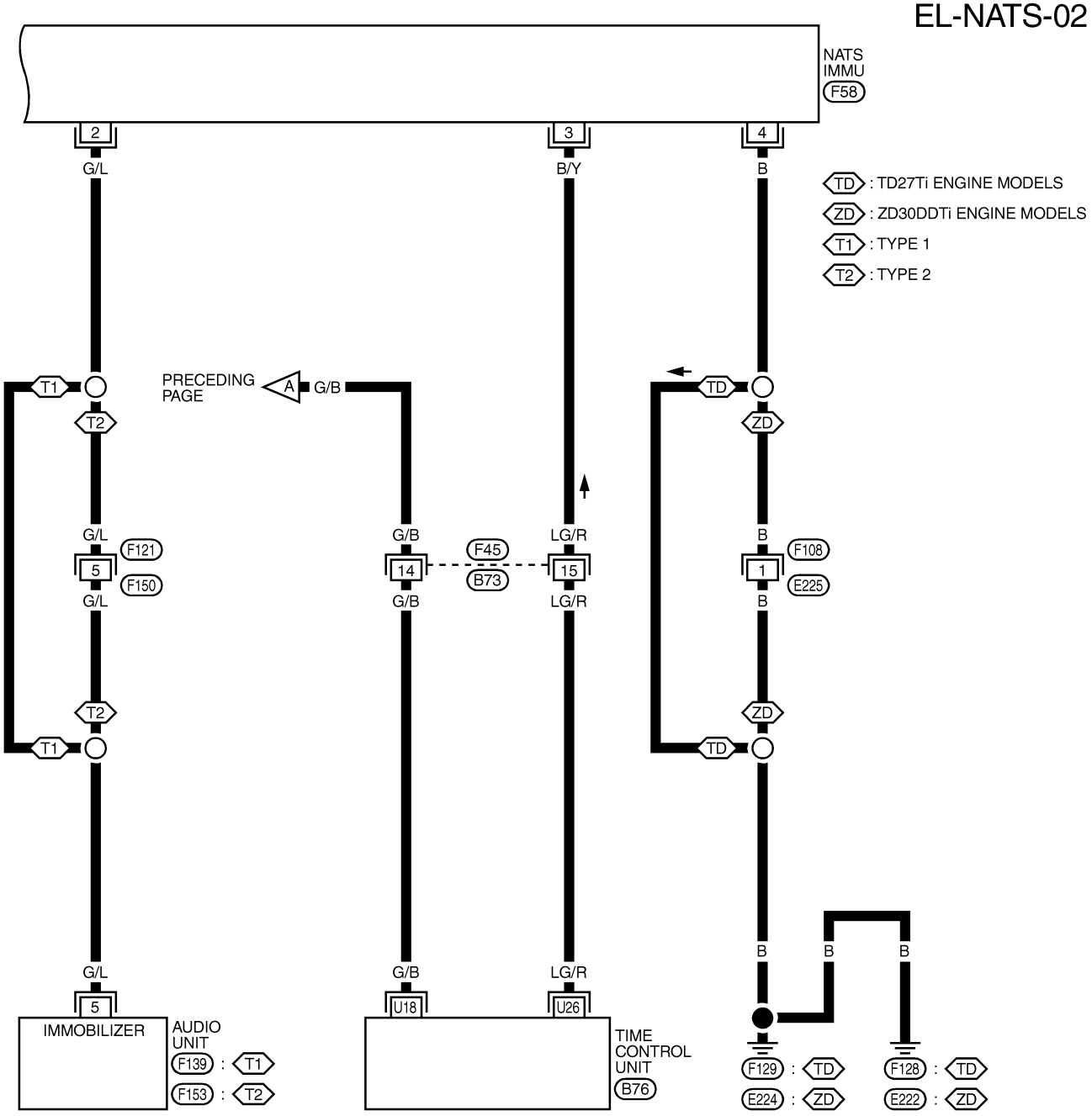
REFER TO THE FOLLOWING.
F48 -FUSE BLOCK-
JUNCTION BOX (J/B)
F123 , F131
-ELECTRICAL UNITS

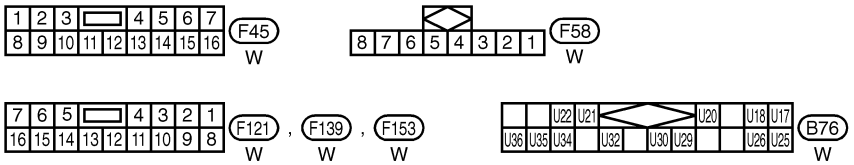
YEL187D

## Wiring Diagram — NATS — (Cont'd)

### LHD MODELS

EL-NATS-02



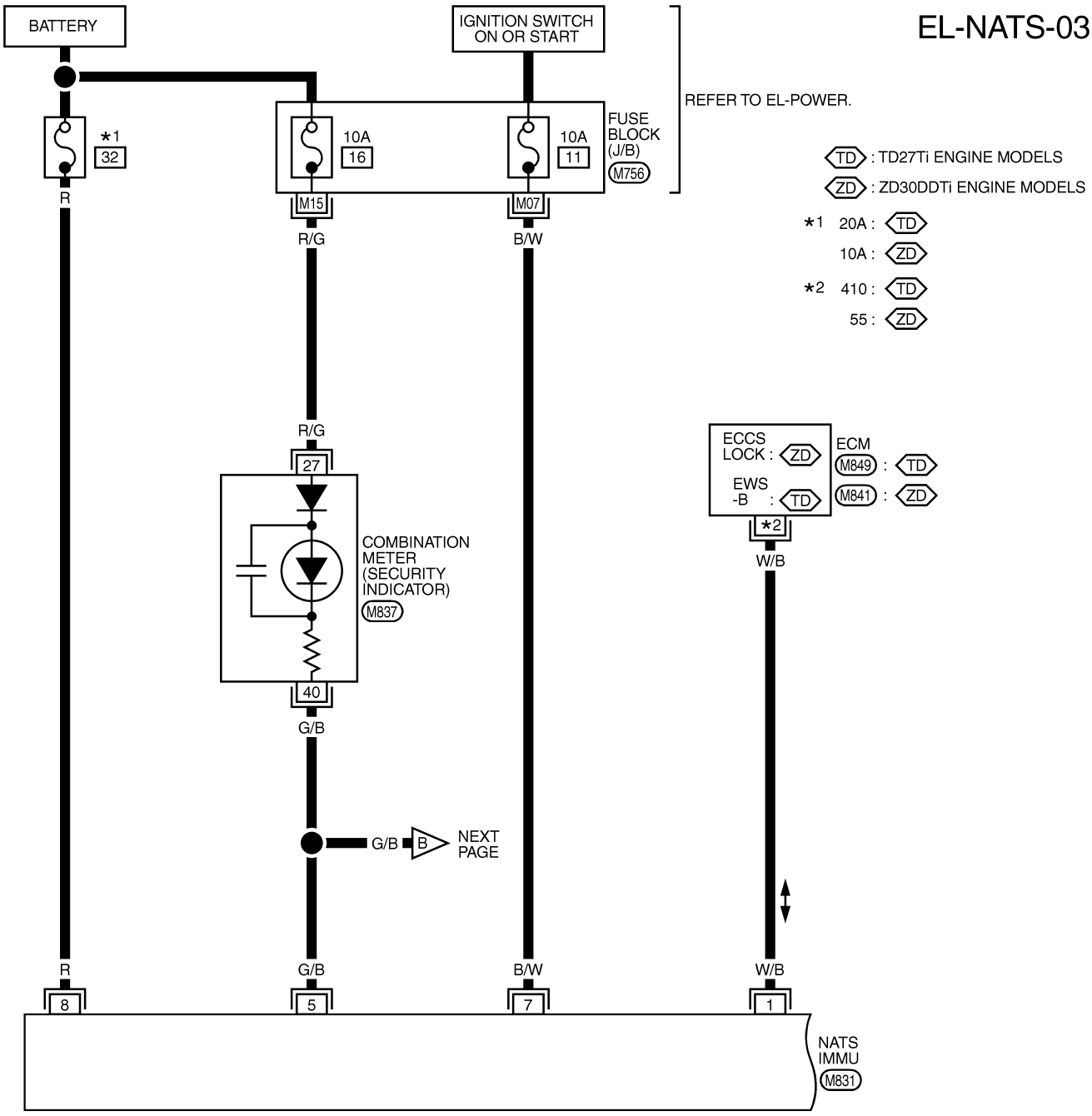



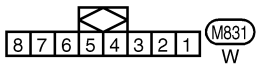

REFER TO THE FOLLOWING.
F108 -SUPER MULTIPLE JUNCTION (SMJ)

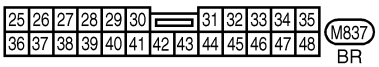
YEL188D

## Wiring Diagram — NATS — (Cont'd)

### RHD MODELS



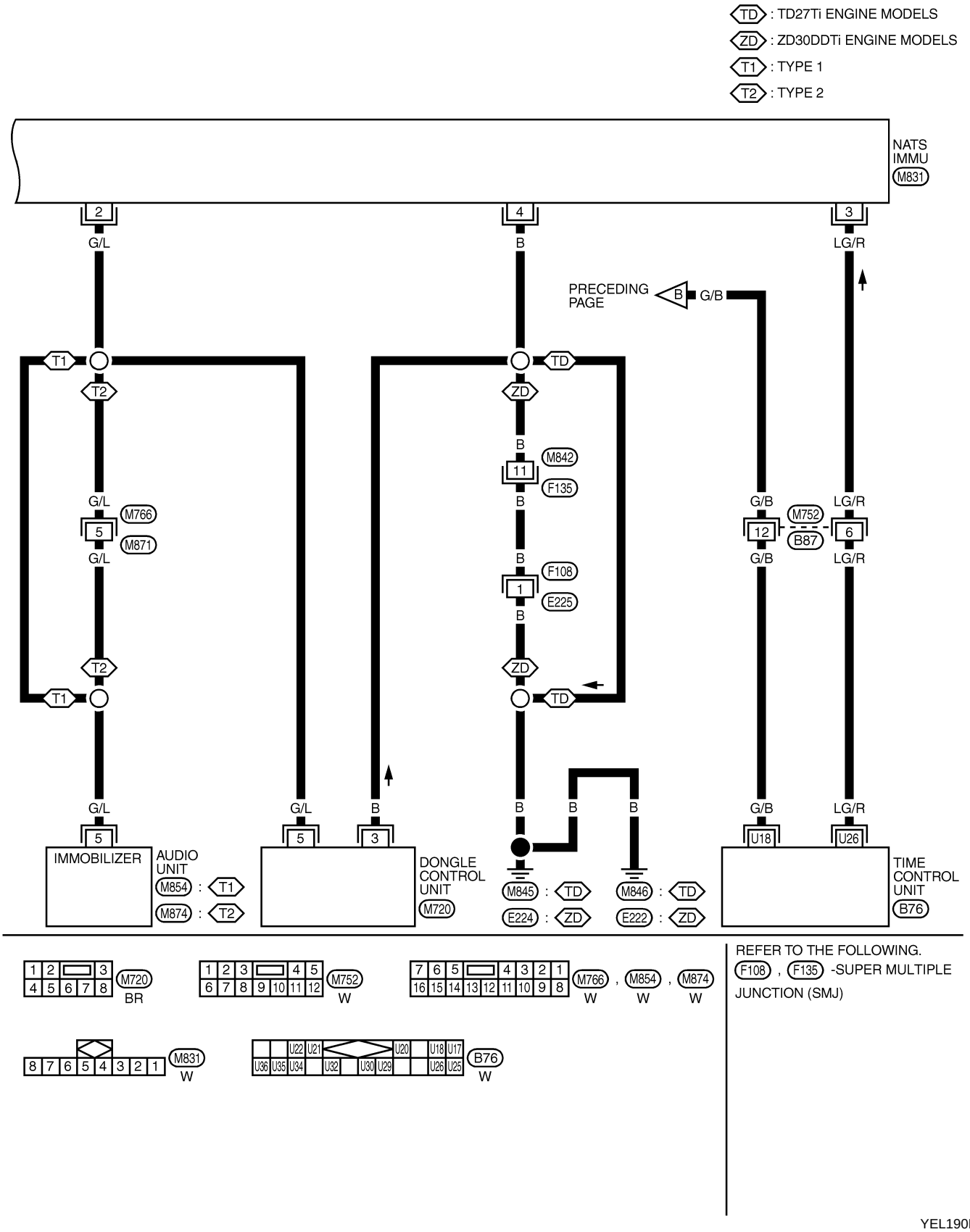

REFER TO THE FOLLOWING.
M756 -FUSE BLOCK-JUNCTION BOX (J/B)
M841 , M849 -ELECTRICAL UNITS

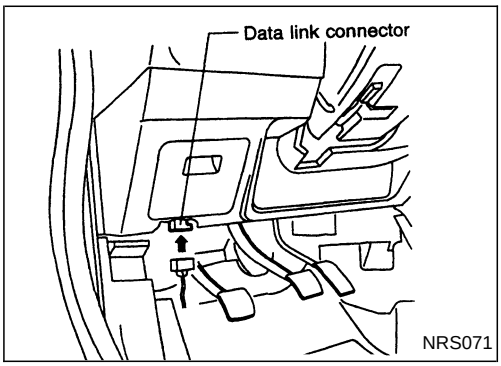
YEL189D

## Wiring Diagram — NATS — (Cont'd)

### RHD MODELS

EL-NATS-04

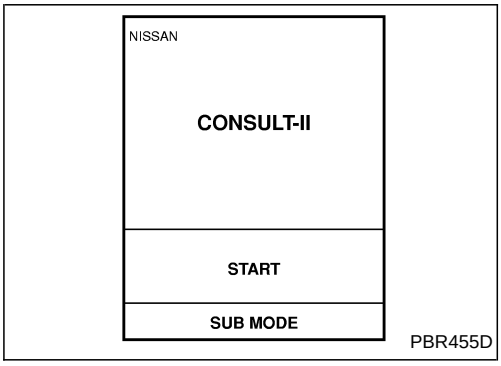




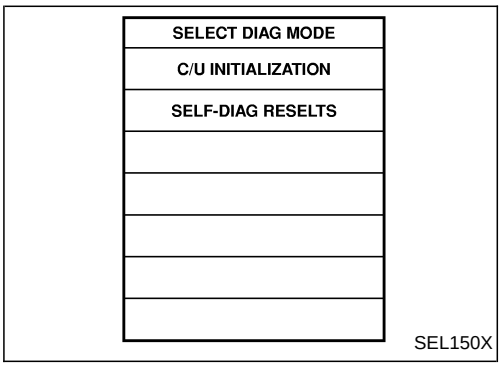

# CONSULT-II

## CONSULT-II INSPECTION PROCEDURE

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




3. Insert NATS program card into CONSULT-II.
   ⇐: **Program card**
   **NATS (AEN00A)**
4. Turn ignition switch ON.
5. Touch “START”.




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

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

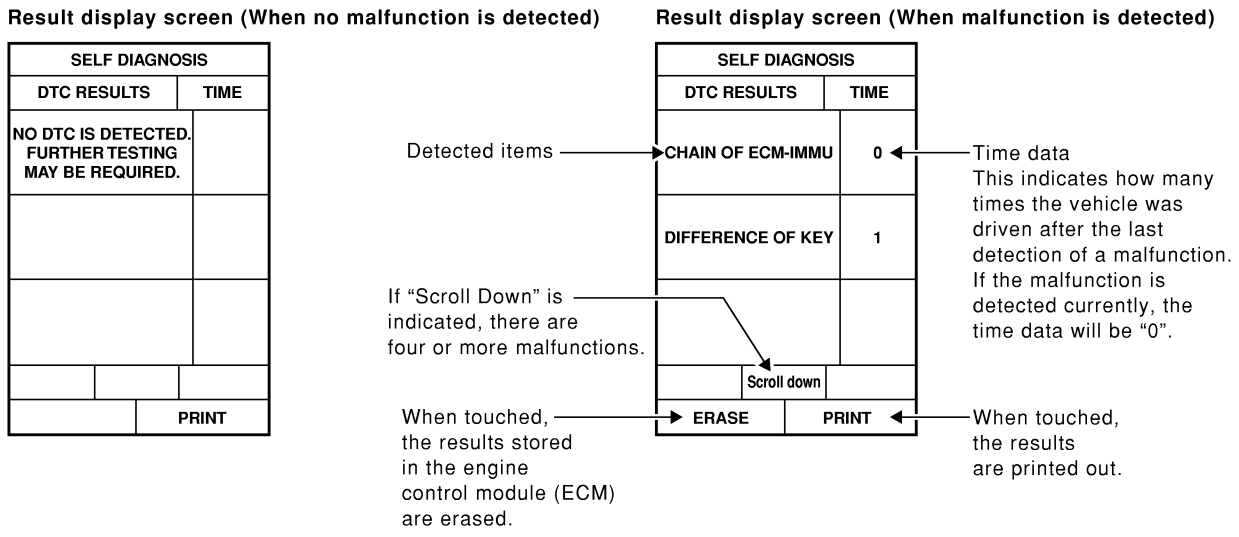
## CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

| CONSULT-II DIAGNOSTIC TEST MODE | Description |
|---|---|
| C/U INITIALIZATION | When replacing any of the following components, C/U initialization is necessary.<br>[NATS ignition key/IMMU/ECM/Dongle] |
| SELF-DIAGNOSTIC RESULTS | Detected items (screen terms) are as shown in the chart below. |

**NOTE:**
**When any initialisation 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 initialisation is performed for RHD models for Europe, security indicator will flash six times to demonstrate recognition of dongle ID.**

# CONSULT-II (Cont'd)

## HOW TO READ SELF-DIAGNOSTIC RESULTS



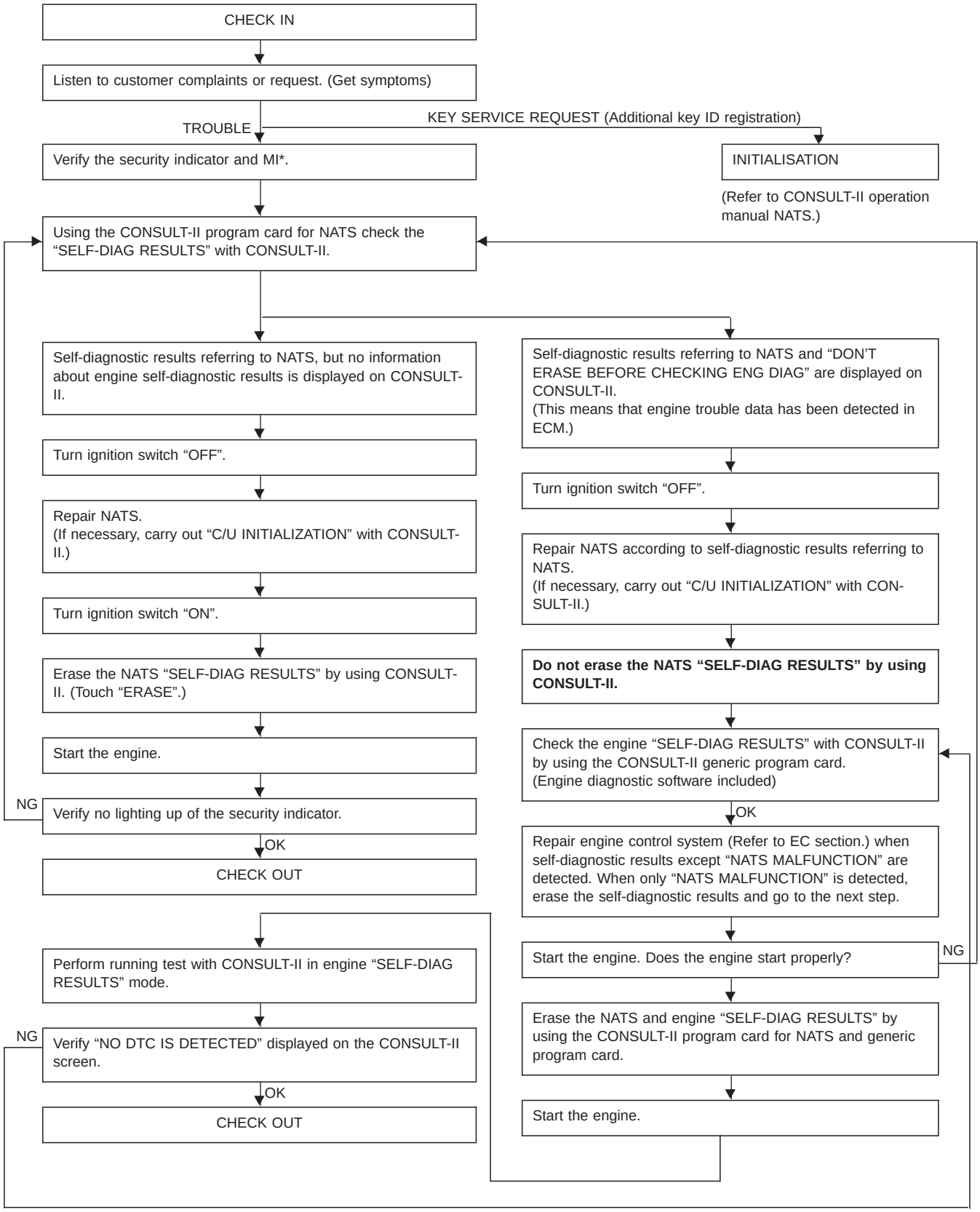

SEL308W

## NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

| Detected items (NATS program card screen terms) | P No. Code (Self-diagnostic result of "ENGINE") | Malfunction is detected when ... | Reference page |
|---|---|---|---|
| ECM INT CIRC-IMMU | NATS MALFUNCTION P1613 | The malfunction of ECM internal circuit of IMMU communication line is detected. | EL-198 |
| CHAIN OF ECM-IMMU | NATS MALFUNCTION P1612 | Communication impossible between ECM and IMMU | EL-199 |
| 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-201 |
| CHAIN OF IMMU-KEY | NATS MALFUNCTION P1614 | IMMU cannot receive the key ID signal. Or the registered ID signal from dongle unit can not be received when the IMMU request the ID. | EL-202 |
| ID DISCORD, IMM-ECM | NATS MALFUNCTION P1611 | The result of ID verification between IMMU and ECM is NG. System initialization is required. | EL-204 |
| DON'T ERASE BEFORE CHECKING ENG DIAG | — | All engine trouble codes except NATS trouble code have been detected in ECM. | EL-195 |
| 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.<br>● Unregistered ignition key is used.<br>● IMMU or ECM is malfunctioning. | EL-206 |

# Trouble Diagnoses

## WORK FLOW



# Trouble Diagnoses (Cont'd)

## SYMPTOM MATRIX CHART 1

## (Self-diagnosis related item)

| SYMPTOM | Displayed "SELF-DIAG RESULTS" on CONSULT-II screen | DIAGNOSTIC PROCEDURE (Reference page) | SYSTEM (Malfunctioning part or mode) | REFERENCE PART NO. OF ILLUSTRATION ON NEXT PAGE |
|---|---|---|---|---|
| • Security indicator lighting up*<br>• Engine does not start | ECM INT CIRC-IMMU | PROCEDURE 1 (EL-198) | ECM | B |
| • Security indicator lighting up*<br>• Engine does not start | CHAIN OF ECM-IMMU | PROCEDURE 2 (EL-199) | 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-201) | Unregistered key | D |
| | | | IMMU | A |
| | CHAIN OF IMMU-KEY | PROCEDURE 4 (EL-202) | Malfunction of key ID chip | E |
| | | | IMMU | A |
| | | | Open circuit in ground line of dongle circuit | C6 |
| | | | Open or short circuit in communication line between IMMU and dongle control unit | C5 |
| | | | Dongle control unit | G |
| | ID DISCORD, IMM-ECM | PROCEDURE 5 (EL-204) | System initialisation has not yet been completed. | F |
| | | | ECM | B |
| | LOCK MODE | PROCEDURE 7 (EL-206) | LOCK MODE | D |
| • MI staying ON<br>• Security indicator lighting up* | DON'T ERASE BEFORE CHECKING ENG DIAG | WORK FLOW (EL-195) | 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 dongle control unit (RHD models), the security indicator blinks 6 times just after ignition switch is turned to ON. Then the security indicator lights up while ignition key is in the "ON" position.

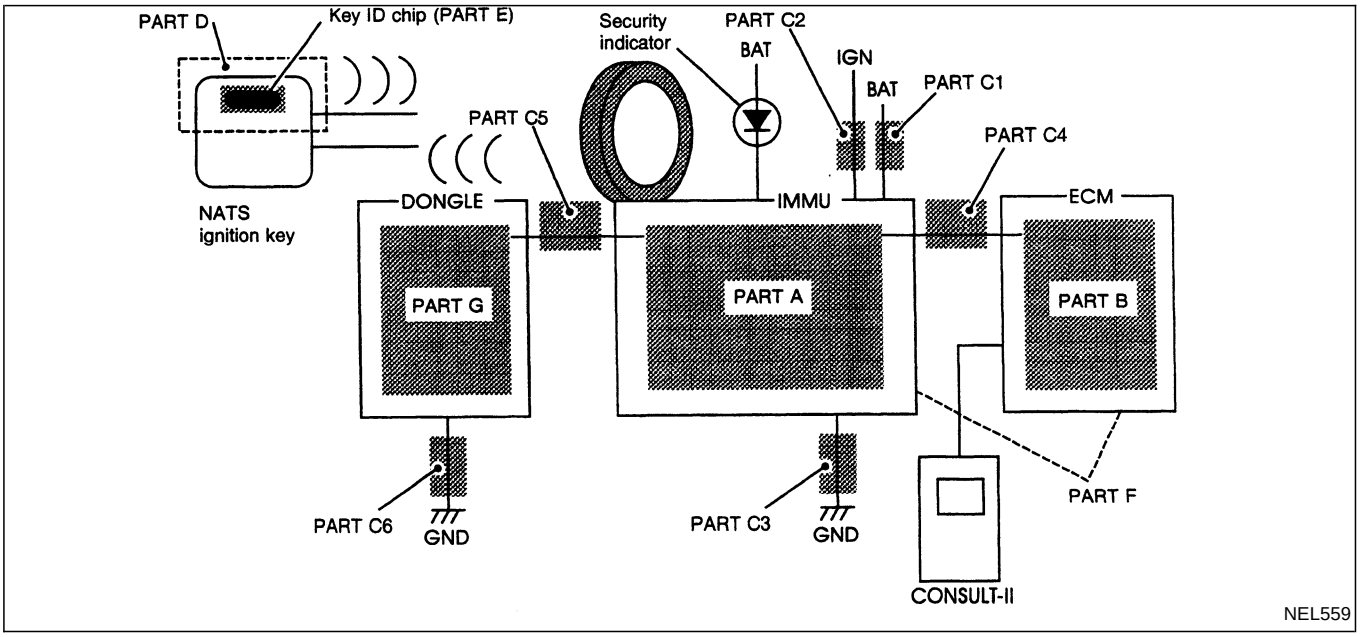
# Trouble Diagnoses (Cont'd)

## SYMPTOM MATRIX CHART 2

## (Non self-diagnosis related item)

| SYMPTOM | DIAGNOSTIC PROCEDURE (Reference page) | SYSTEM (Malfunctioning part or mode) | REFERENCE PART NO. OF ILLUSTRATION ON NEXT PAGE |
|---|---|---|---|
| • Security ind. does not light up. | PROCEDURE 6 (EL-205) | Security ind. | |
| | | Open circuit between Fuse and NATS IMMU | |
| | | Continuation of initialization mode | |
| | | NATS IMMU | |
| Security ind. does not blink just after initialization even if the vehicle is equipped with dongle unit. | PROCEDURE 8 (EL-207) | NATS might be initialized without connecting dongle unit properly. | |
| | | Open circuit in ground line of dongle control 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 control unit | C5 |
| | | Dongle control unit | G |

## DIAGNOSTIC SYSTEM DIAGRAM



# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 1

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

A

| SELF DIAGNOSIS | |
|---|---|
| DTC RESULTS | TIME |
| ECM INT CIRC-IMMU | 0 |
| | |
| | |

SEL314W

A

Confirm SELF-DIAGNOSTIC RESULTS "ECM INT CIRC-IMMU" displayed on CONSULT-II screen.
Ref. part No. B.

↓

Replace ECM.

↓

Perform initialisation with CONSULT-II.
For the operation of initialisation, refer to "CONSULT-II operation manual NATS".

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 2

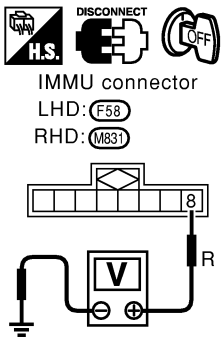
### Self-diagnostic results:
### "CHAIN OF ECM-IMMU" displayed on CONSULT-II screen

A

| SELF DIAGNOSIS | |
|---|---|
| DTC RESULTS | TIME |
| CHAIN OF ECM-IMMU | 0 |
| | |
| | |

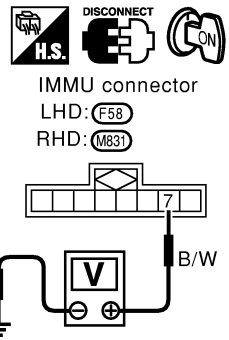
YEL471B

B



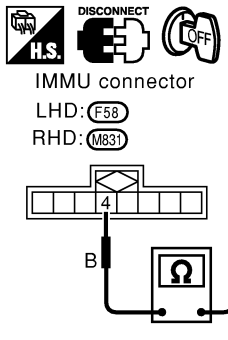

YEL322D

C



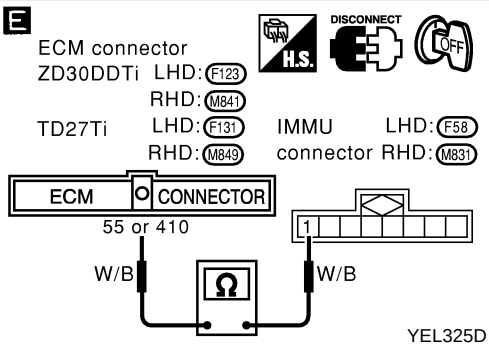

YEL323D

D




YEL324D

E




YEL325D

A

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

OK

B

**CHECK POWER SUPPLY CIRCUIT FOR IMMU.**
Check voltage between IMMU terminal ⑧ and ground.
**Battery voltage should exist.**

NG

Check the following.
- 10A fuse (ZD30DDTi models) or 20A fuse (TD27Ti models) (No. 16 )
- Harness for open or short between fuse and IMMU connector
  Ref. part No. C1

OK

C

**CHECK IGN SW. ON SIGNAL.**
Check voltage between IMMU terminal ⑦ and ground while ignition switch is "ON" position.
**Battery voltage should exist.**

NG

Check the following.
- 10A fuse (No. 11 , located in the fuse block)
- Harness for open or short between fuse and IMMU connector
  Ref. part No. C2

OK

D

**CHECK GROUND CIRCUIT FOR IMMU.**
Check continuity between IMMU terminal ④ and ground.
**Continuity should exist.**

NG

Repair harness.
Ref. part No. C3

OK

E

**CHECK COMMUNICATION OPEN CIRCUIT.**
Check continuity between IMMU terminal ① and ECM terminal 410 (TD27Ti models) or ⑤⑤ (ZD30DDTi models).
**Continuity should exist.**

NG

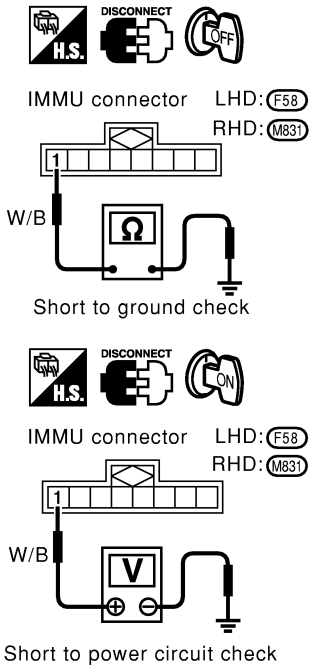
Repair harness.
Ref. part No. C4

OK

Ⓐ

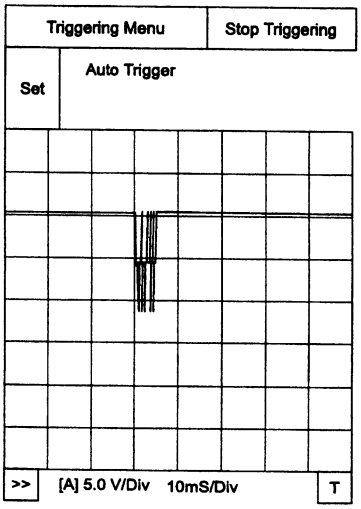
## Trouble Diagnoses (Cont'd)

F




YEL326D

G




NEL543

Ⓐ

F

**CHECK COMMUNICATION LINE SHORT CIRCUIT.**

1. Disconnect ECM connector and IMMU connector.
2. Check continuity between IMMU terminal ① and ground.
   **Continuity should not exist.**
3. Turn ignition switch to ON.
4. Check voltage between IMMU terminal ① and ground.
   **No voltage should exist.**

NG → Repair harness.
Ref. part No. C4

OK ↓

G

Check the signal from ECM to IMMU.

1. Check the signal between ECM terminal (410) (ZD30DDTi models) or (55) (TD27Ti models) and ground with CONSULT-II or oscilloscope when ignition switch is turned ON.
2. Some signals can be detected during 750 msec. just after ignition switch is turned "ON".

NG → ECM is malfunctioning.
1. Replace ECM.
   Ref part No. B
2. Perform initialization procedure, refer to "CONSULT-II operation manual NATS".

OK ↓

IMMU is malfunctioning.
1. Replace IMMU.
   Ref. part No. A
2. Perform initialization with CONSULT-II. For the initialization procedure, refer to "CONSULT-II operation manual NATS".

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 3

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

A

| SELF DIAGNOSIS | |
|---|---|
| DTC RESULTS | TIME |
| DIFFERENCE OF KEY | 0 |
| | |
| | |

YEL478B

B

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

YEL479B

A

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

OK

PERFORM INITIALISATION.
Perform initialisation with CONSULT-II.
Re-register all NATS ignition key IDs.
For the initialisation procedure, refer to "CONSULT-II operation manual NATS".
**Can the system be initialized?**
Note: If the initialisation is not completed or fails, CONSULT-II shows B message on the screen.

No →
- IMMU is malfunctioning.
1. Replace IMMU.
   Ref. part No. A
2. Perform initialisation with CONSULT-II.
   For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

Yes

Start engine.

**END**
(Ignition key ID had been unregistered.)

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4

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

A

| SELF DIAGNOSIS | |
|---|---|
| DTC RESULTS | TIME |
| CHAIN OF IMMU-KEY | 0 |
| | |
| | |

YEL480B

A

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

OK

CHECK NATS IGNITION KEY ID CHIP. Can the engine start with another registered NATS ignition key?

Yes →
- Ignition key ID chip is malfunctioning.
1. Replace the ignition key.
   Ref. part No. E
2. Perform initialisation with CONSULT-II.
   For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

No

CHECK NATS IMMU INSTALLATION. Refer to "How to Replace NATS IMMU" in EL-208.

NG → Reinstall NATS IMMU correctly.

OK

Is this vehicle equipped with dongle control unit (RHD models)?

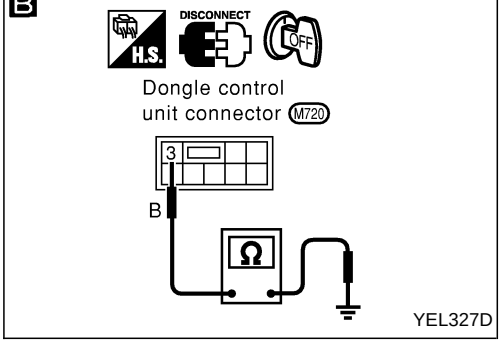
No →
IMMU is malfunctioning.
1. Replace IMMU.
   Ref part No. A
2. Perform initialisation with CONSULT-II
   For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

Yes

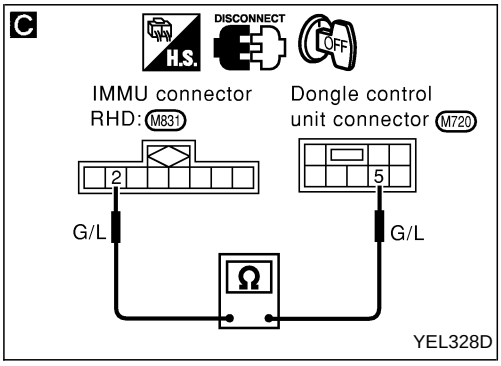
Ⓐ

## Trouble Diagnoses (Cont'd)

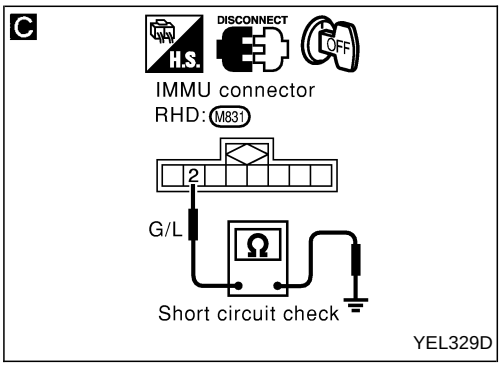
B




C




C




Ⓐ

CHECK HARNESS CONNECTOR CONNECTION.
Check the following harness connector connection.
M720
**Does the engine start?**

Yes → System is OK.
(The malfunction is caused by improper connector connection.)

No ↓

B

**CHECK GROUND CIRCUIT FOR DONGLE UNIT.**
Check continuity between dongle control unit terminal ③ and ground.
**Continuity should exist.**

No → Repair harness.

Yes ↓

C

**CHECK INTERFACE CIRCUIT.**
1. Check continuity between IMMU terminal ② and dongle control unit terminal ⑤ (Open circuit check)
   **Continuity should exist.**
2. Check continuity between IMMU terminal ② and ground. (Short circuit check)
   **Continuity should not exist.**

No → Repair harness.

Yes ↓

Dongle unit is malfunctioning.
1. Replace dongle control unit.
2. Perform initialisation with CONSULT-II. For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 5

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

A

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

C2SDD01

B

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

YEL479B

A

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

* "ID DISCORD, IMM-ECM": Registered ID of IMMU is in discord with that of ECM.

↓

PERFORM INITIALISATION.
Perform initialisation with CONSULT-II.
Re-register all NATS ignition key IDs.
For the initialisation procedure, refer to "CONSULT-II operation manual NATS".
**Can the system be initialized?**
Note: If the initialisation is not completed or fails, CONSULT-II shows B message on the screen.

No →

- ECM is malfunctioning.

1. Replace ECM.
   Ref. part No. B
2. Perform initialisation with CONSULT-II.
   For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

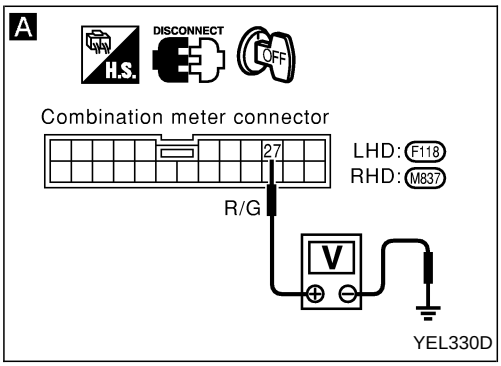
Yes ↓

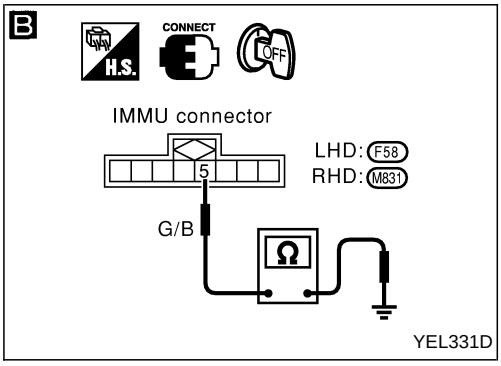
Start engine. (END)
(System initialisation was not completed.
Ref. part No. F)

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 6

### "SECURITY INDICATOR LAMP DOES NOT LIGHT UP"




Check 10A fuse (No. 16 , located in the fuse block).
NG → Replace fuse.

OK ↓

NATS INITIALISATION
1) Install the 10A fuse.
2) Perform initialisation with CONSULT-II.
For the operation of initialisation, refer to "CONSULT-II operation manual NATS".

↓

Turn ignition switch "OFF".

↓

Start engine and turn ignition switch "OFF".

↓

Check the security ind. lighting.
OK → INSPECTION END

NG ↓

A

Check voltage between combination meter connector terminal (27) and ground.
**Voltage: Battery voltage**
NG → Check harness for open or short between fuse and combination meter.

OK ↓

CHECK SECURITY INDICATOR LAMP.
NG → Repair or replace combination meter.

OK ↓

B

**CHECK NATS IMMU FUNCTION.**
1. Connect NATS IMMU connector.
2. Disconnect combination meter connector.
3. Check continuity between NATS IMMU terminal (5) and ground.
**Continuity should exist intermittently.**

NG → NATS IMMU is malfunctioning. Replace IMMU.

↓

Perform initialisation with CONSULT-II.
For the operation of initialisation, refer to "CONSULT-II operation manual NATS".

OK ↓

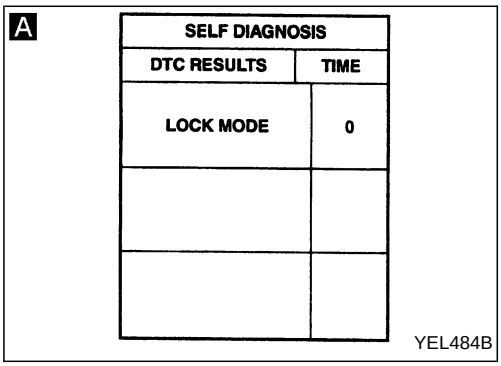
Check harness for open or short between combination meter and NATS IMMU.

# Trouble Diagnoses (Cont'd)

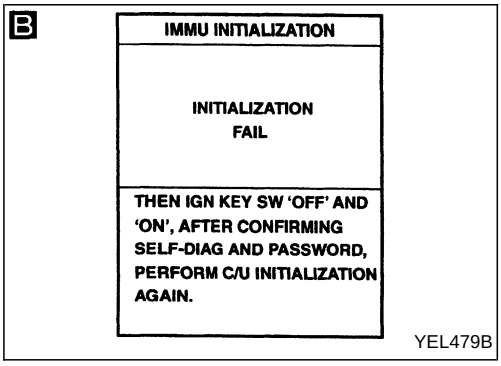
## DIAGNOSTIC PROCEDURE 7

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

A




B




A

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

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

**Can the engine start?**

Yes → System is OK. (Now the system is escaped from "LOCK MODE".)

No

CHECK NATS IMMU INSTALLATION. Refer to "How to Replace NATS IMMU" in EL-208.

NG → Reinstall NATS IMMU correctly.

OK

PERFORM INITIALISATION.
Perform initialisation with CONSULT-II.
For the initialisation procedure, refer to "CONSULT-II operation manual NATS".
**Can the system be initialized?**
Note: If the initialisation is incompleted or failed, CONSULT-II shows B message on the screen.

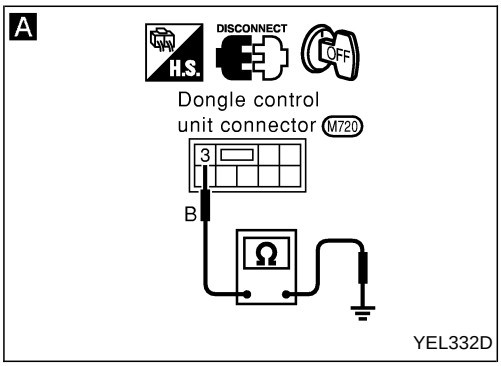
Yes → System is OK.

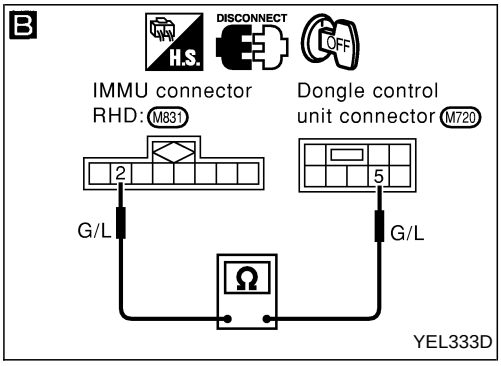
No

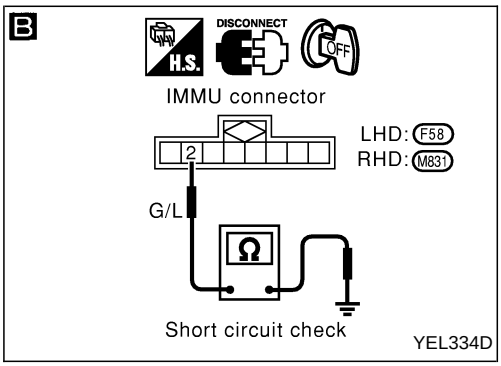
Go to DIAGNOSTIC PROCEDURE 4, EL-202 to check "CHAIN OF IMMU-KEY".

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 8




Perform initialization with CONSULT-II
Check the following harness connector connection.
M720
Then initialize NATS. For the operation of initialization, refer to "CONSULT-II operation manual NATS".
**Does the security indicator blink just after the initialization?**

Yes → System is OK.
(The malfunction is caused by improper connector connection.)

No ↓

A

**CHECK GROUND CIRCUIT FOR DONGLE UNIT.**
Check continuity between dongle control unit terminal ③ and ground.
**Continuity should exist.**

No → Repair harness.

Yes ↓

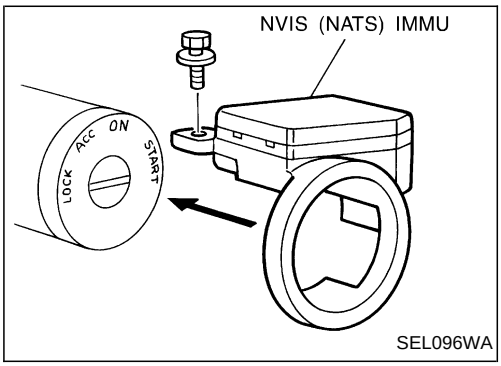
B

**CHECK INTERFACE CIRCUIT.**
1. Check continuity between IMMU terminal ② and dongle control unit terminal ⑤ (Open circuit check)
   **Continuity should exist.**
2. Check continuity between IMMU terminal ② and ground. (Short circuit check)
   **Continuity should not exist.**

No → Repair harness.

Yes ↓

Dongle unit is malfunctioning.
1. Replace dongle control unit.
2. Perform initialisation with CONSULT-II. For the initialisation procedure, refer to "CONSULT-II operation manual NATS".

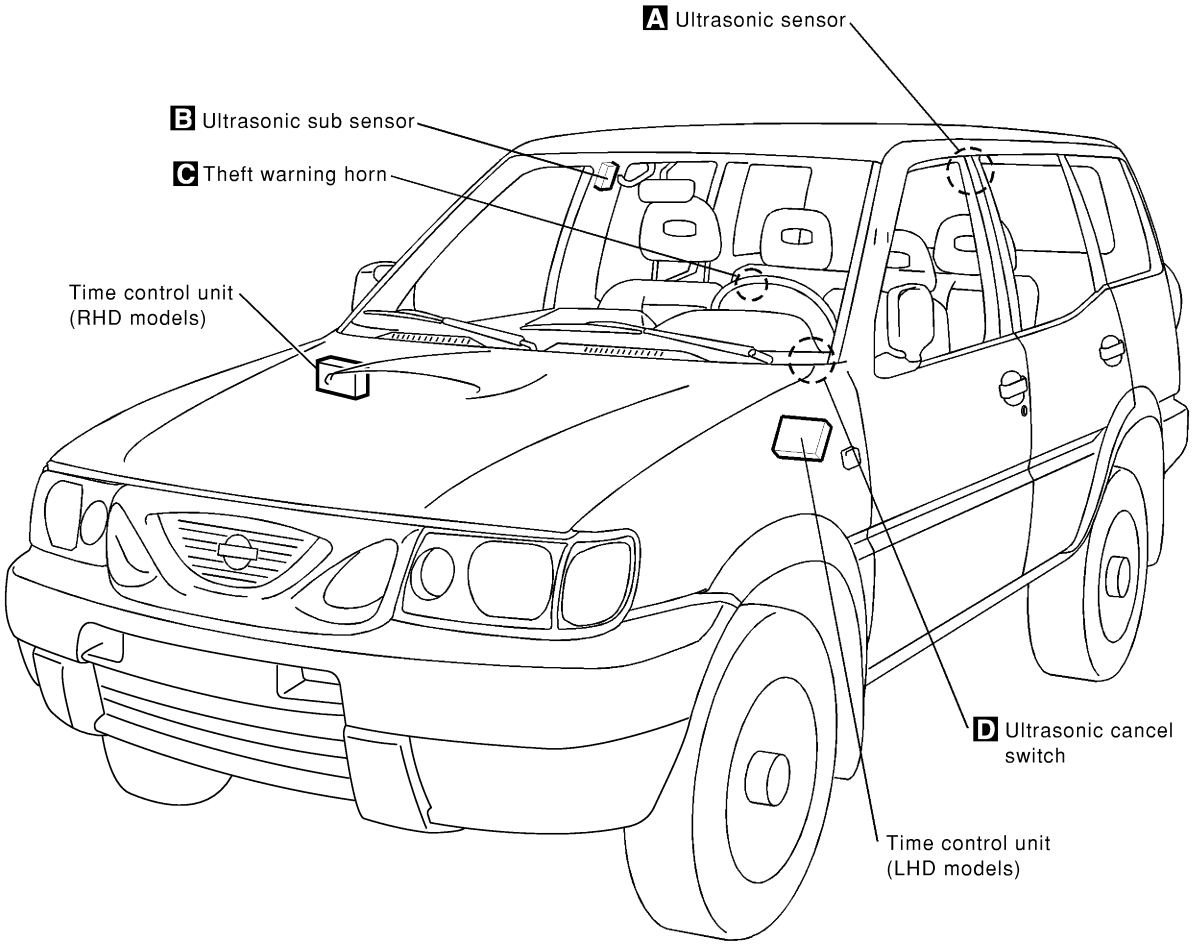


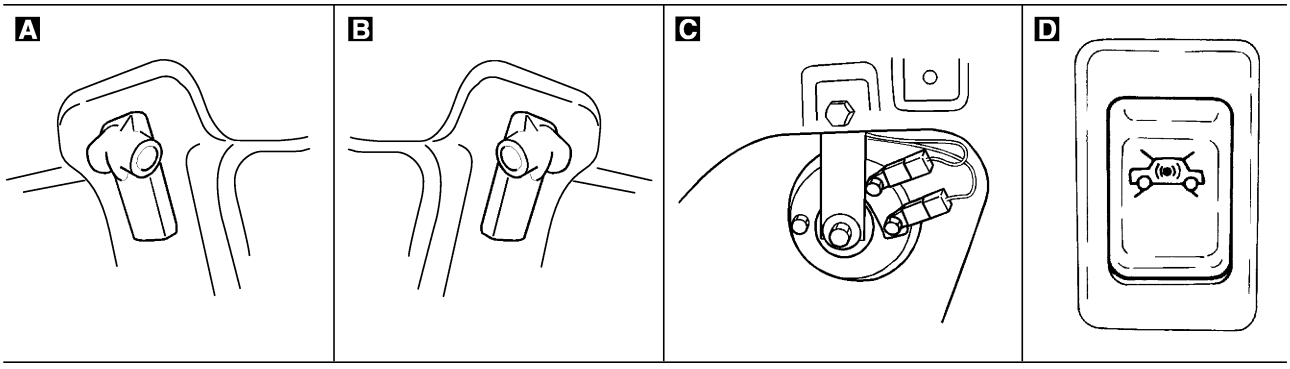

## How to Replace NATS IMMU

**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” or “CHAIN OF IMMU-KEY”.**

## Components Parts and Harness Connector Location



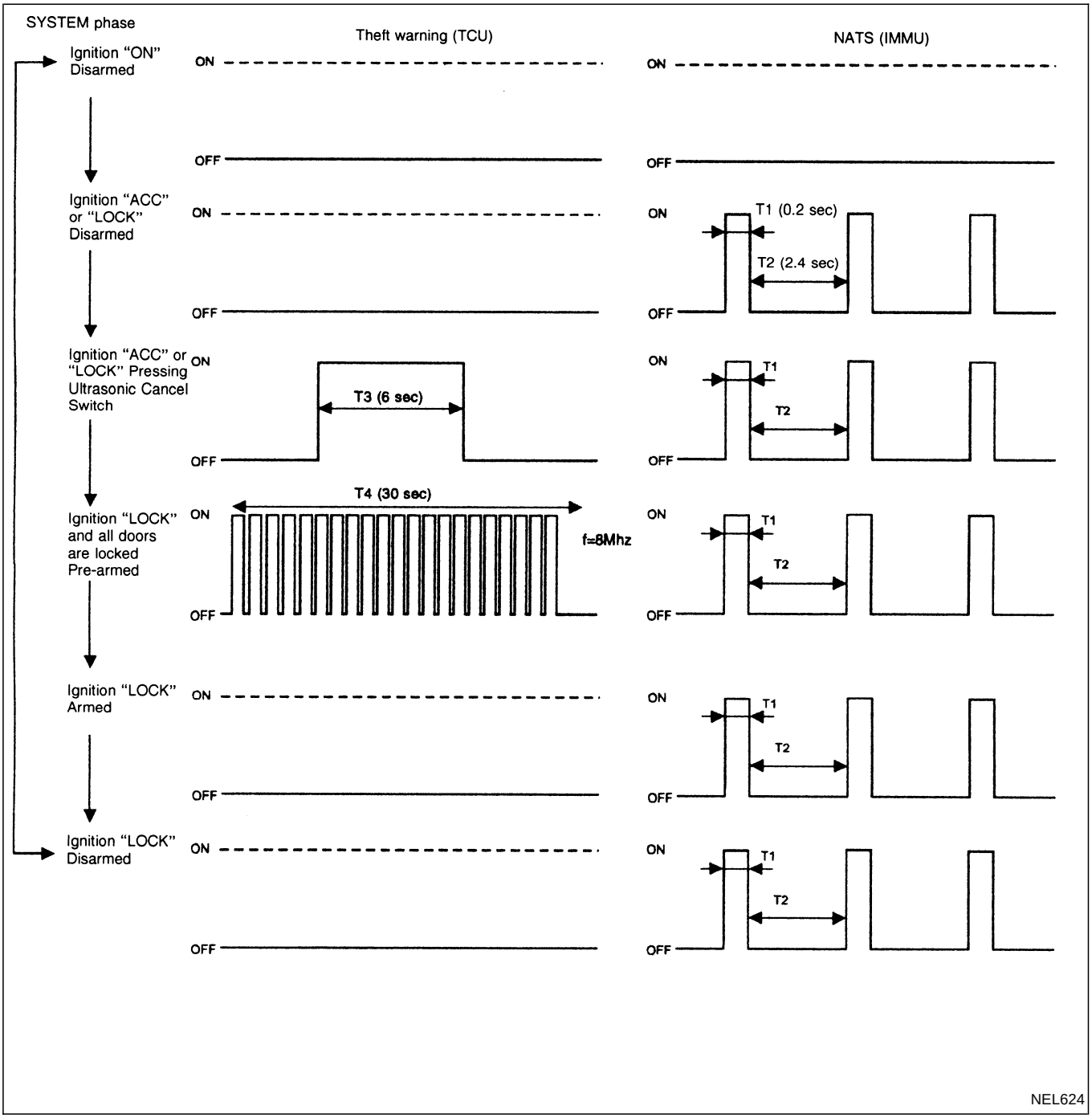




YEL335D

# System Description

## OPERATION FLOW

The SECURITY indicator can be operated by both the IMMU (for NATS) and the TCU (for Theft Warning). The flow chart shows both operations.



## System Description (Cont'd)

### SETTING THE THEFT WARNING SYSTEM

#### Initial condition

(1) Close all doors.
(2) Close hood.

#### Pre-armed phase and armed phase

The theft warning system turns into the "pre-armed" phase when hood and all doors are closed and locked by key or multi-remote controller. (The security indicator lamp blinks intermittently for 30 seconds.)
After about 30 seconds, the system automatically shifts into the "armed" phase (the system is set).

### CANCELING THE SET THEFT WARNING SYSTEM

When the following (a) or (b) operation is performed, the armed phase is canceled.
(a) Unlock the doors with the multi-remote controller.
(b) Insert key in ignition key cylinder and turn it to ON. Then NATS IMMU will send a disarm signal to the time control unit.

### ACTIVATING THE ALARM OPERATION OF THE THEFT WARNING SYSTEM

Make sure the system is in the armed phase. When the following operation (a) (b) (c) or (d) is performed, the system sounds the horns and flashes the hazard lamp for about 30 seconds.
(a) Engine hood or any door is opened before unlocking door with the multi-remote controller.
(b) A door is unlocked without using the multi-remote controller.
(c) The ignition is switched ON without using a NATS registered key.
(d) The ultrasonic sensing is triggered.

### POWER SUPPLY AND GROUND CIRCUIT

Power is supplied at all times.
- Through 10A fuse [No. 16 , located in the fuse block (J/B)]
- to combination meter (security indicator lamp) terminal 27.

Power is supplied at all times
- through 10A fuse [No. 5 , located in the fuse block (J/B)]
- to time control unit terminal U09.

With the ignition switch in the ON or START position, power is supplied
- through 10A fuse [No. 26 , located in the fuse block (J/B)]
- to time control unit terminal U01.

Ground is supplied
- to time control unit terminal U16
- through body grounds F36 and F47 (LHD models), or M33 and M754 (RHD models).

### INITIAL CONDITION TO ARM THE SYSTEM

The operation of the theft warning system is controlled by all the doors and hood.
To activate the theft warning system, the time control unit must receive signals indicating all the doors and hood are closed and the doors are locked.
When a door is open, time control unit terminal U06 or U07 receives a ground signal from each door switch.
When a door is unlocked, time control unit terminal U25, U35 or U36 receives a ground signal from each door unlock sensor.
When the hood is open, time control unit terminal U32 receives a ground signal
- from the hood switch
- through body grounds M33 and M754.

## System Description (Cont'd)

### THEFT WARNING SYSTEM ARMING (With key or remote controller used to lock doors)

If the key is used to lock doors, time control unit terminal (U29) receives a ground signal
- from terminal ② of the key cylinder switch
- through body grounds (B18) and (B10).

If this signal or lock signal from remote controller is received by the time control unit, the theft warning system will arm automatically.
When arming the theft warning system, time control unit terminal (U18) supplies ground intermittently to terminal ㊵ of the combination meter. The security lamp will blink intermittently for approximately 30 seconds (and then blink every 2.6 seconds, due to NATS).
Now the theft warning system is in armed phase.

### THEFT WARNING SYSTEM ALARM OPERATION

The theft warning system is triggered by
- opening a door
- opening back door
- opening the hood
- unlocking door without using the multi-remote controller
- switching the ignition ON without a NATS registered key
- triggering the ultrasonic sensors

Once the theft warning system is in armed phase, if the time control unit receives a signal at terminal (U25), (U35), (U36) (door unlock sensor), (U06), (U07) (door switch), (U32) (hood switch), or (U17) (ultrasonic sensor) the theft warning system will be triggered. The hazard lamps flash and the horn sounds intermittently.
Power is supplied at all times
- through 10A fuse [No. 16 , located in the fuse block (J/B)]
- to theft warning horn relay.

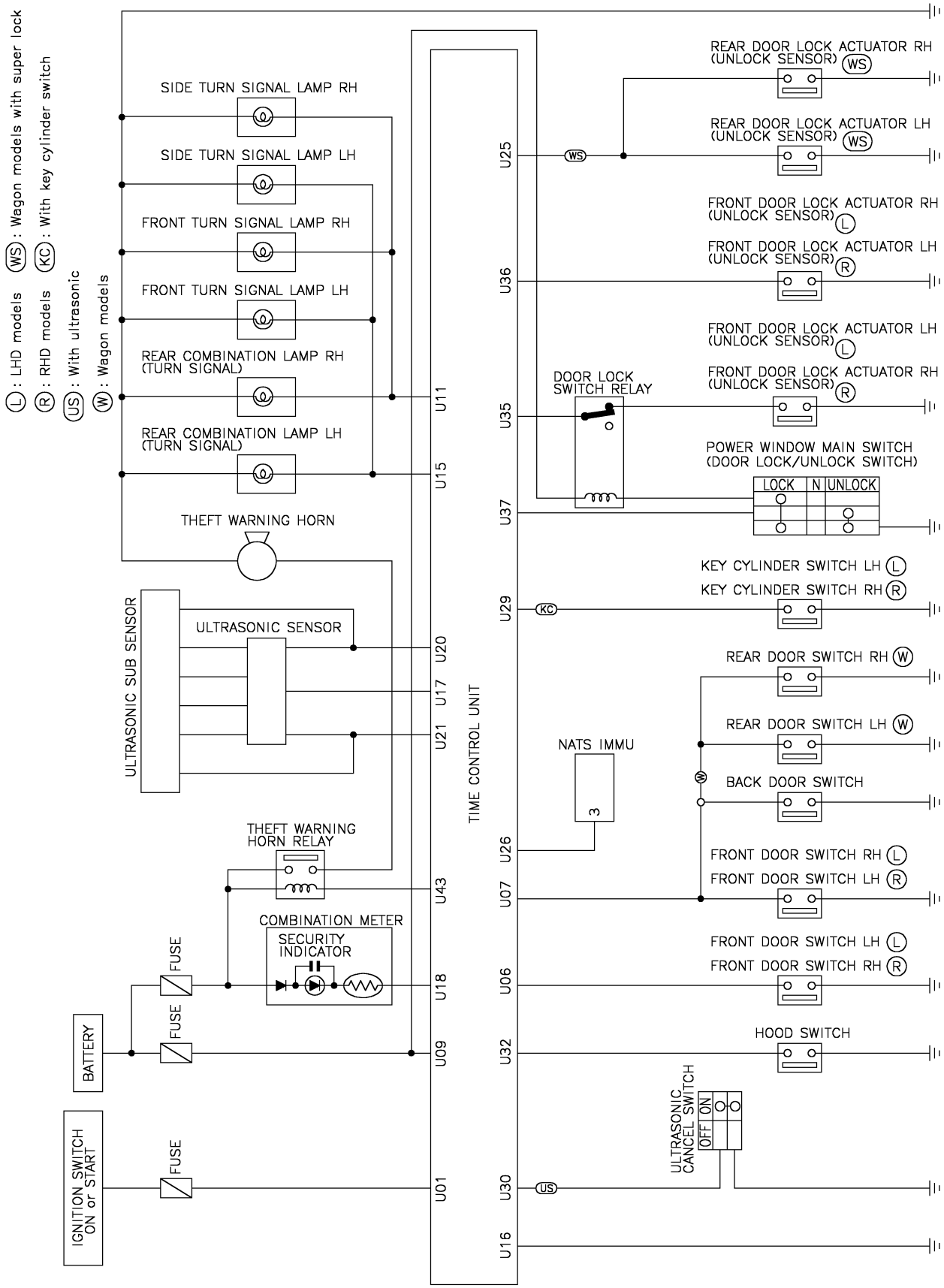
If the theft warning system is triggered, ground is supplied
- from terminal (U43) of the time control unit
- to theft warning horn relay.

The hazard lamps flash and the horn sounds intermittently.
The alarm automatically turns off after 30 seconds but will reactivate if the vehicle is tampered with again, or if the initial cause remains present.

### THEFT WARNING SYSTEM ALARM DISARMING

The theft warning system alarm operation can be deactivated by either unlocking the vehicle with the remote controller, or turning the ignition to the "ON" position with a registered NATS key.

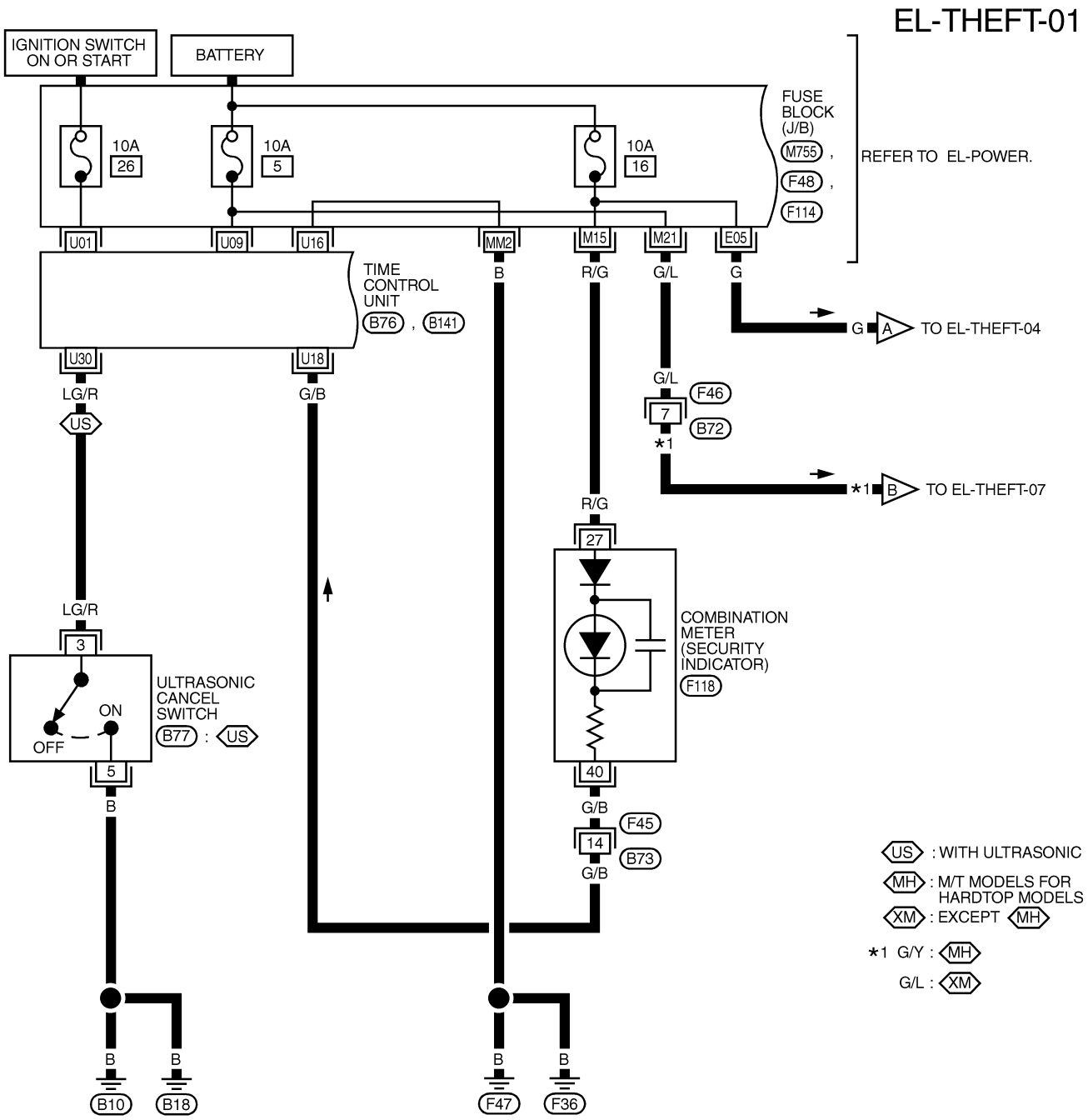
## Theft Warning System/Schematic

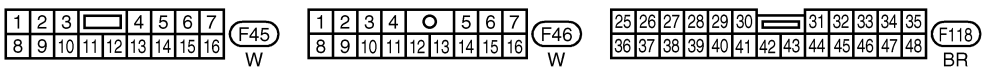



YEL170D

## Wiring Diagram — THEFT —

### LHD MODELS




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

REFER TO THE FOLLOWING.
M755 , F48 , F14
-FUSE BLOCK-
JUNCTION BOX (J/B)

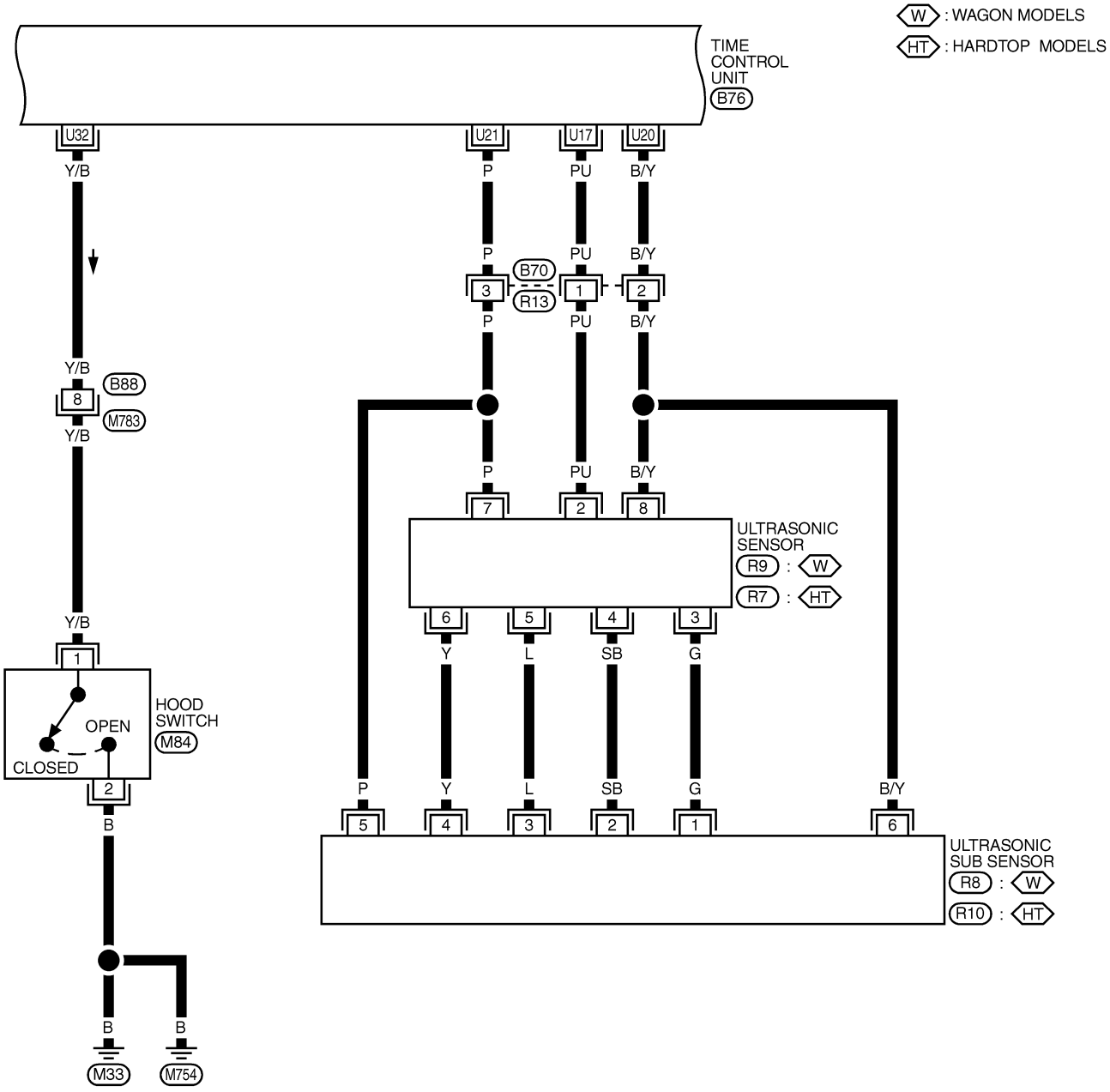
YEL171D

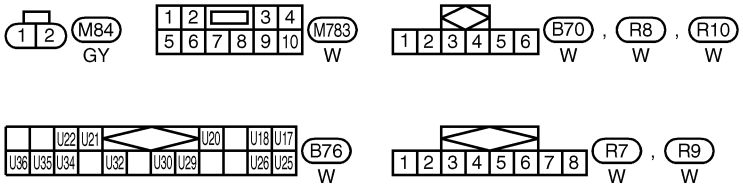
## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS

EL-THEFT-02

W : WAGON MODELS
HT : HARDTOP MODELS



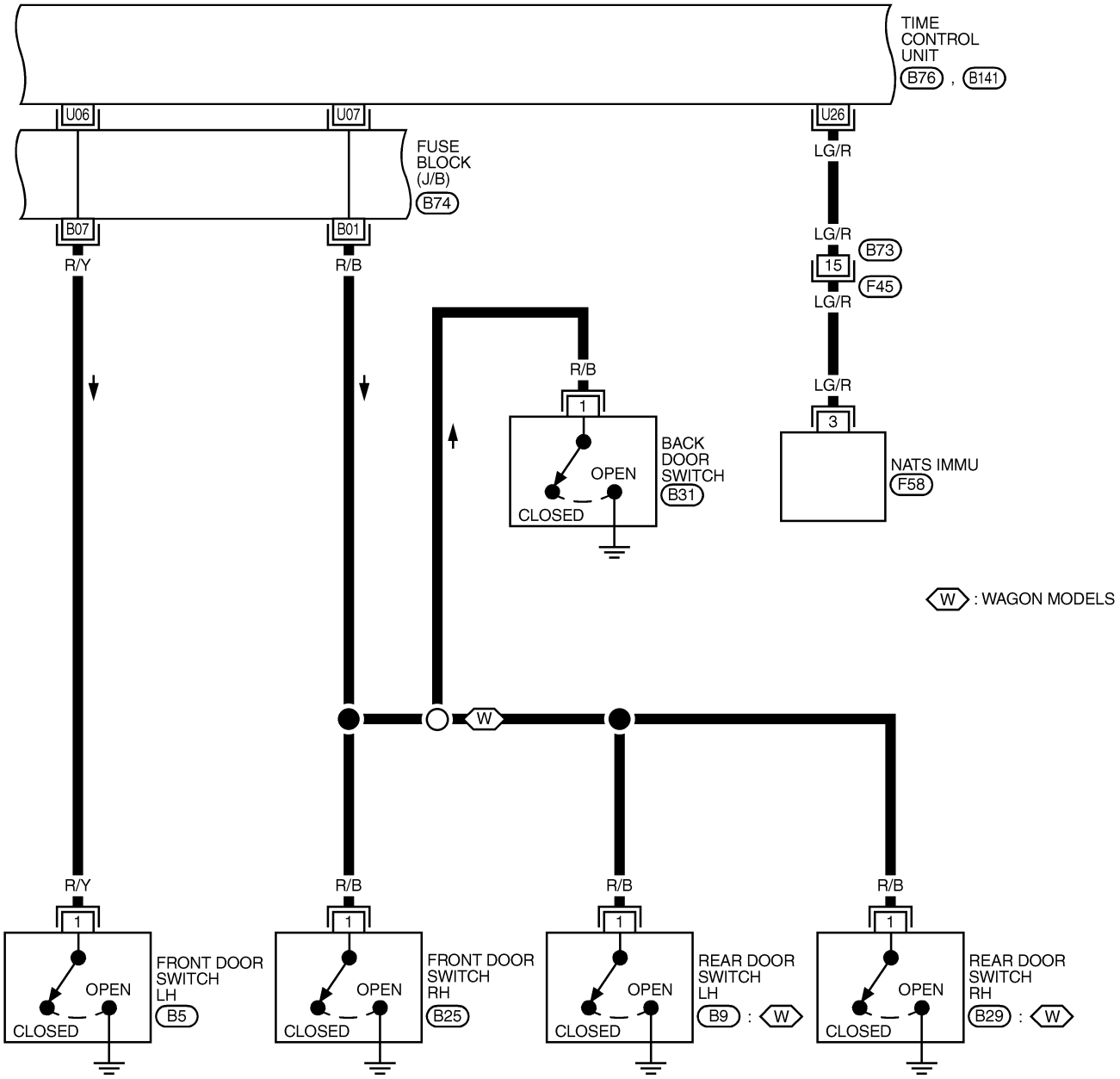



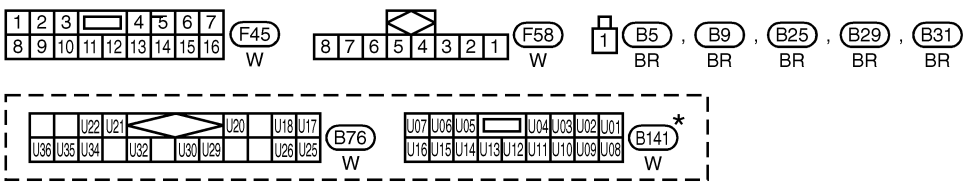

YEL172D

## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS

EL-THEFT-03



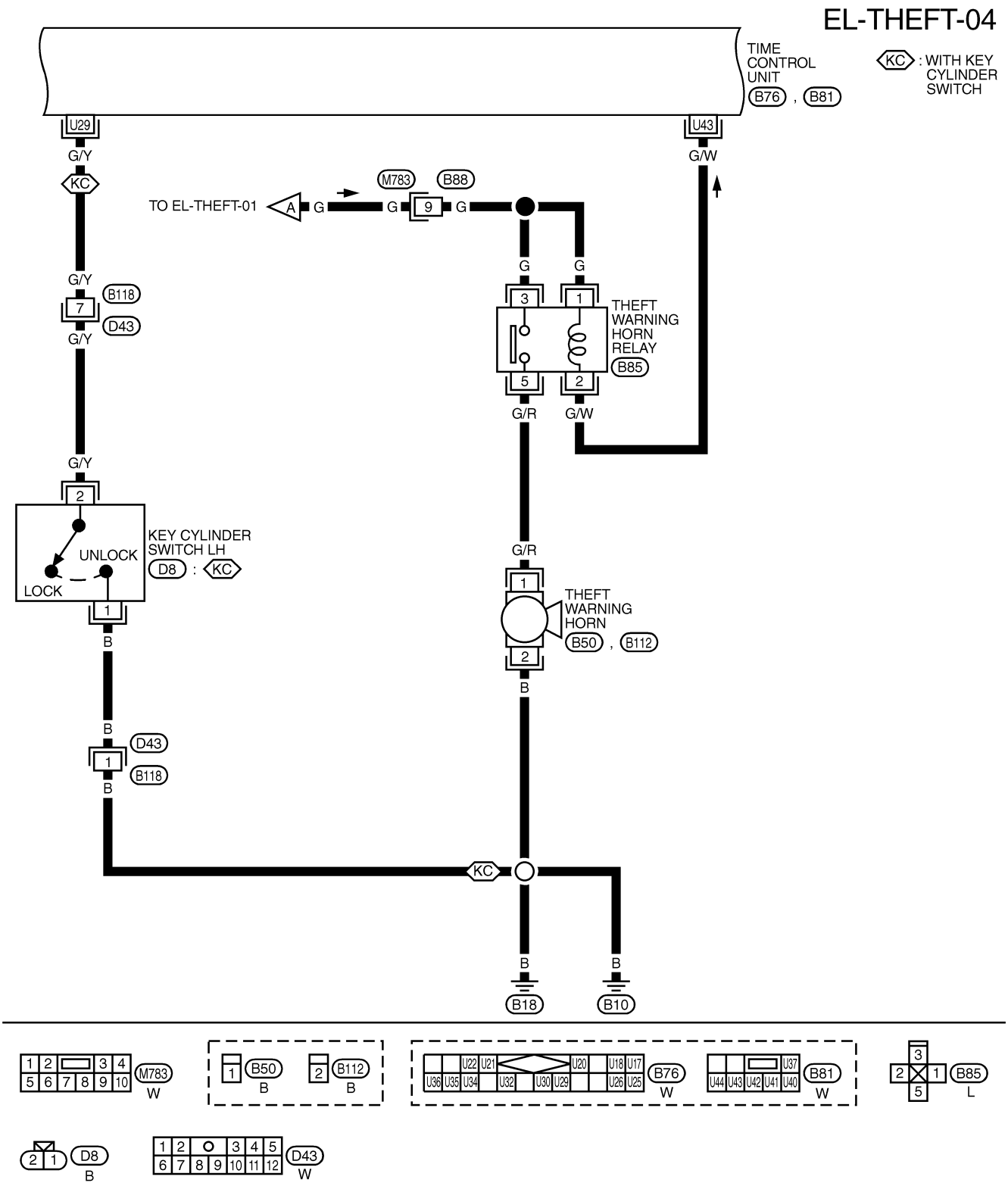




REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL173D

## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS







YEL174D

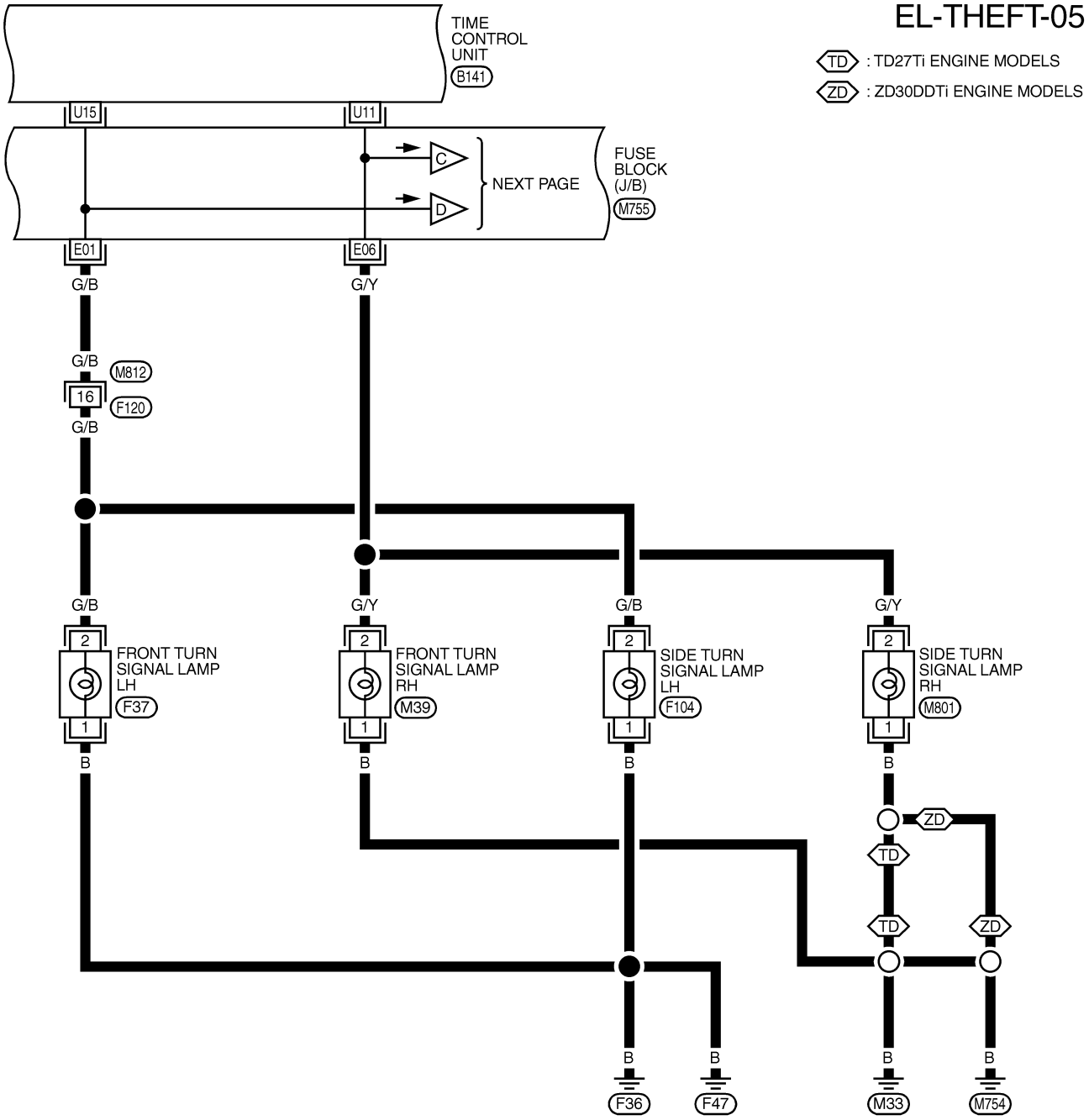
## Wiring Diagram — THEFT — (Cont'd)

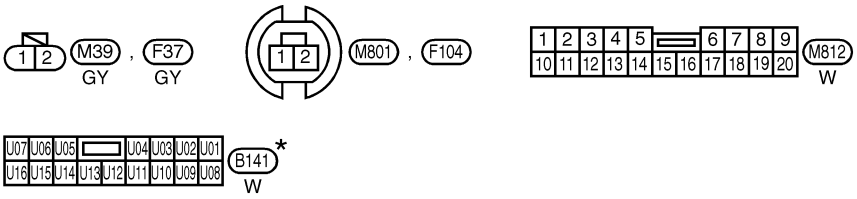
### LHD MODELS

EL-THEFT-05

TD : TD27Ti ENGINE MODELS

ZD : ZD30DDTi ENGINE MODELS




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

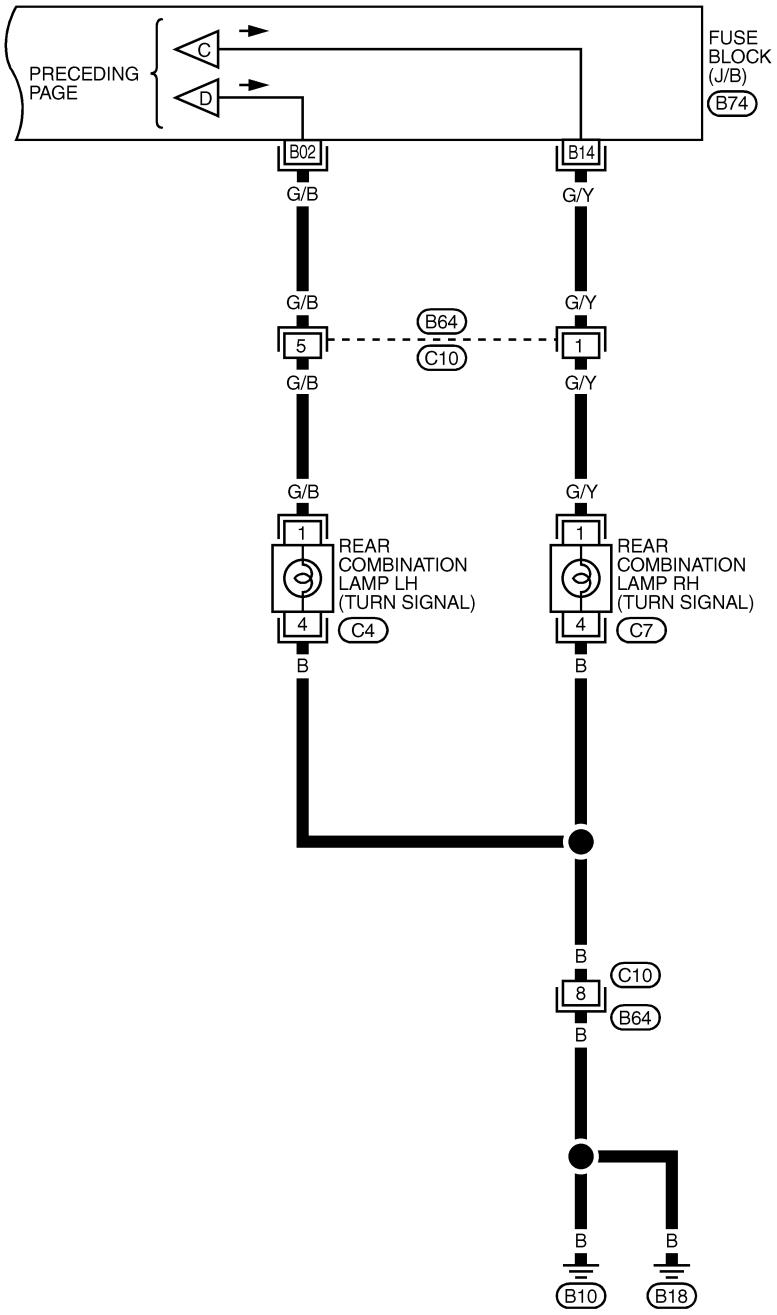
REFER TO THE FOLLOWING.
M755 -FUSE BLOCK-JUNCTION BOX (J/B)

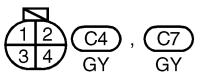
YEL175D

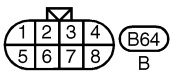
## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS

EL-THEFT-06



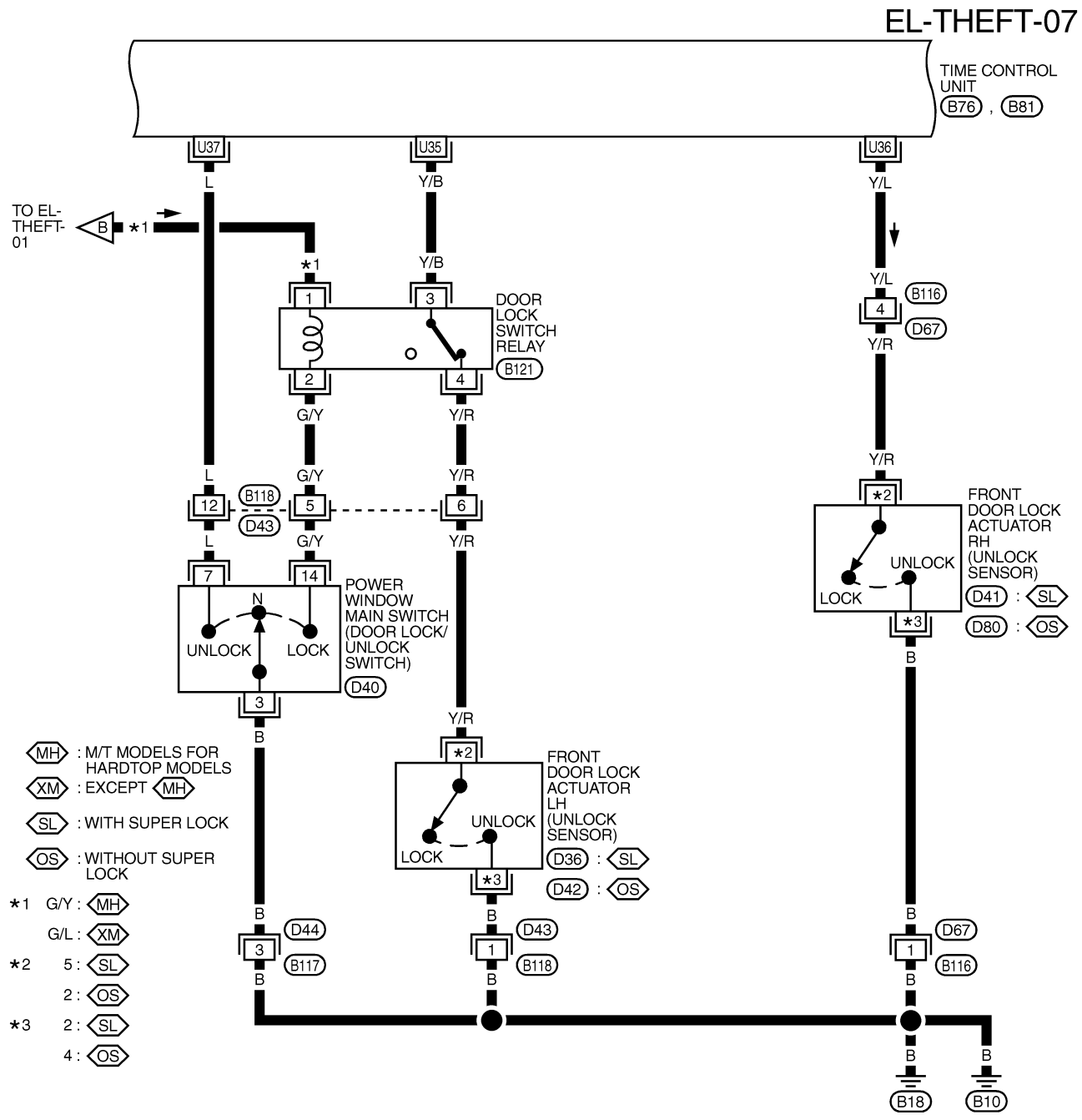



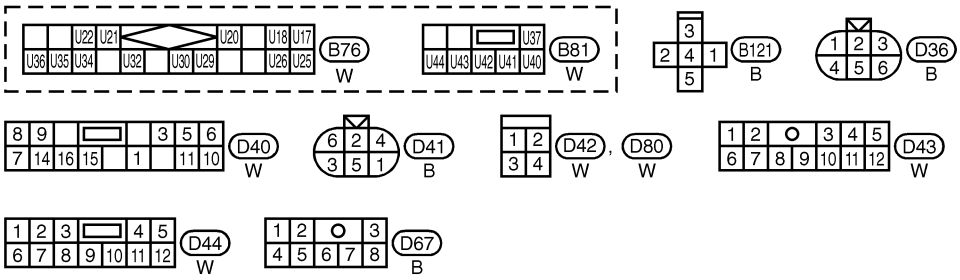

REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-
JUNCTION BOX (J/B)

YEL176D

## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS



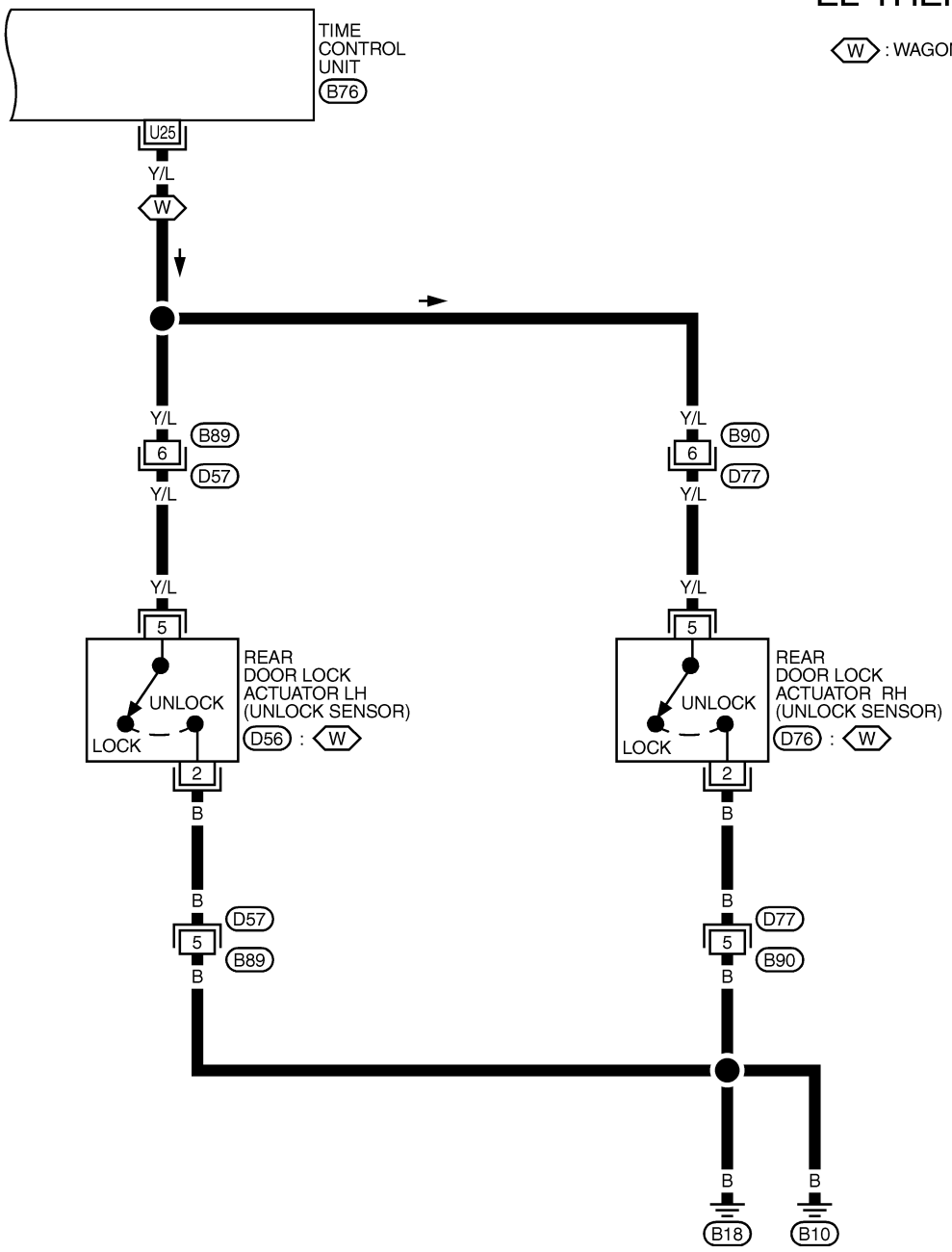



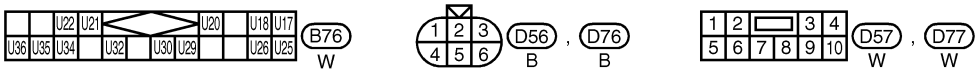

YEL177D

## Wiring Diagram — THEFT — (Cont'd)

### LHD MODELS WITH SUPER LOCK

EL-THEFT-08



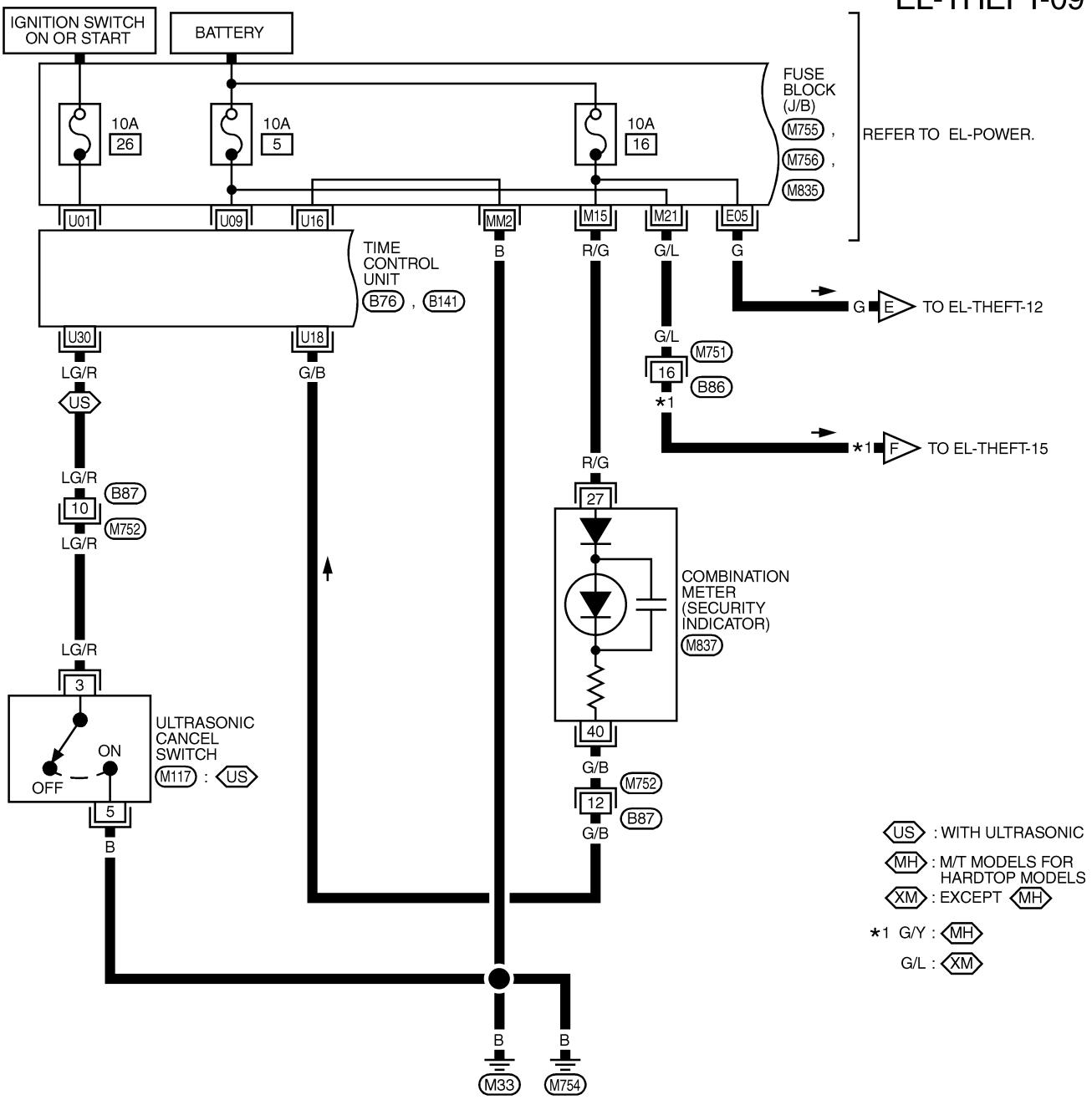



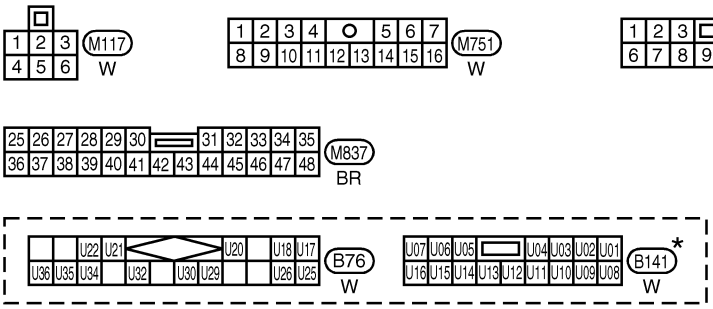

YEL178D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-09




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

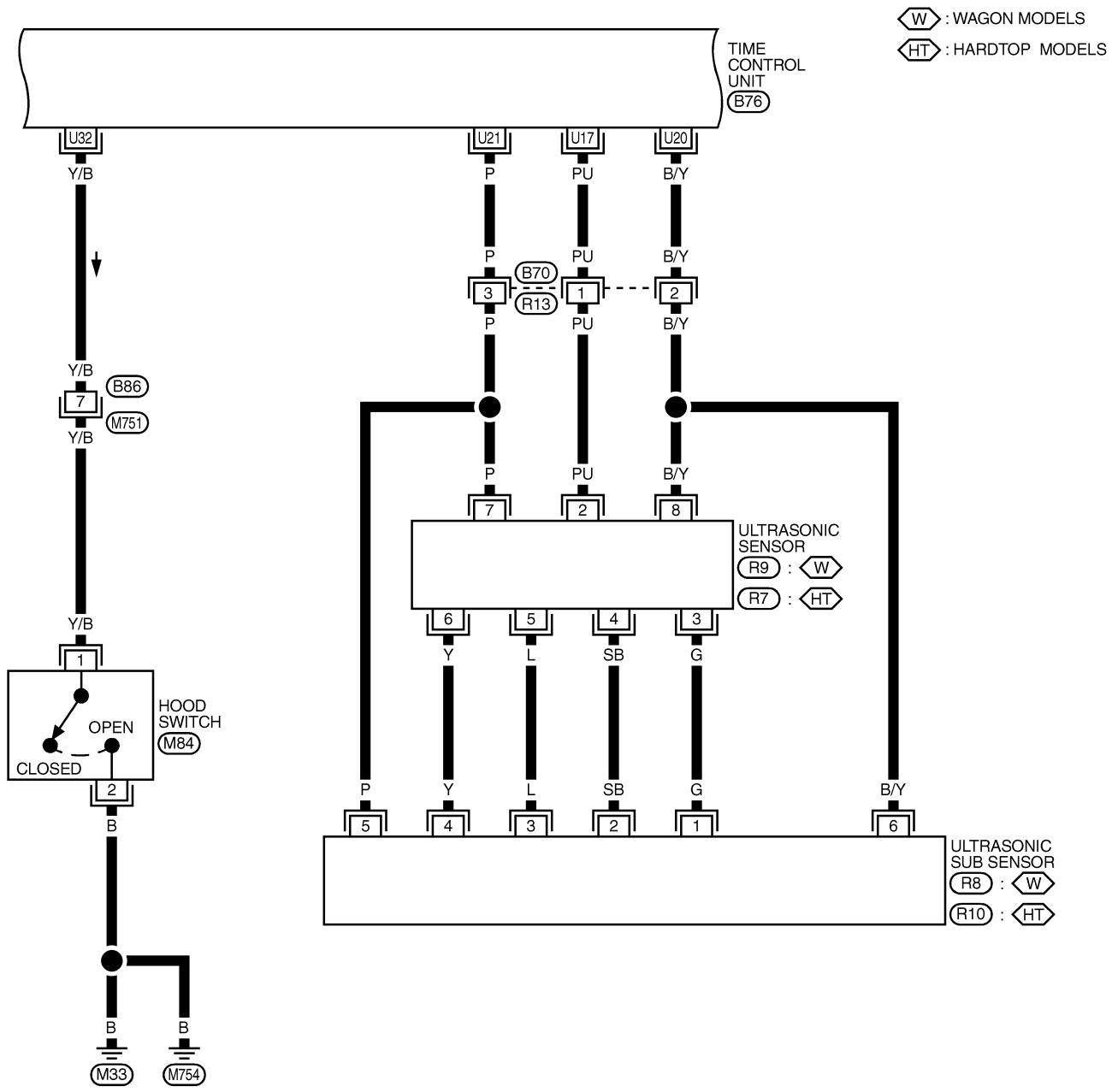
REFER TO THE FOLLOWING.
M755 , M756 , M835
-FUSE BLOCK-
JUNCTION BOX (J/B)

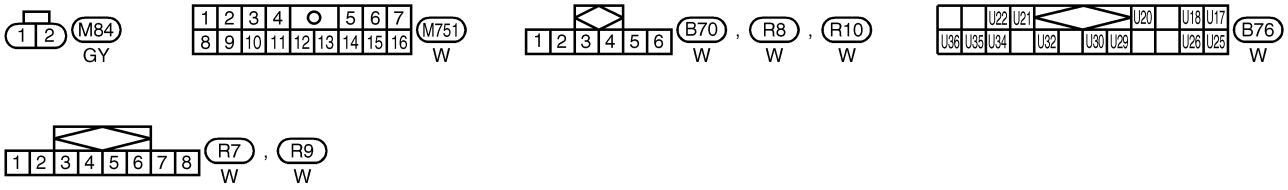
YEL179D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-10



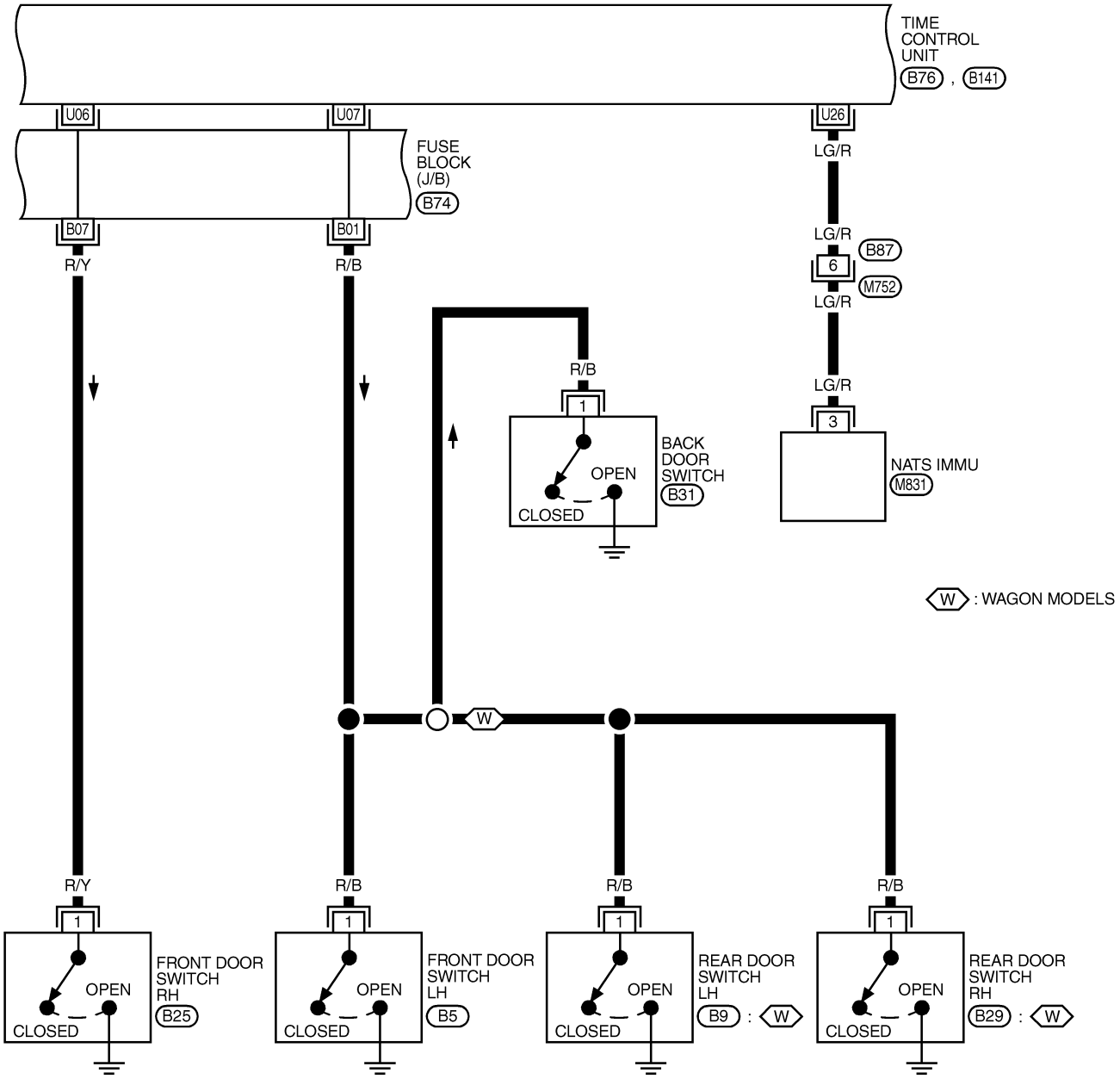



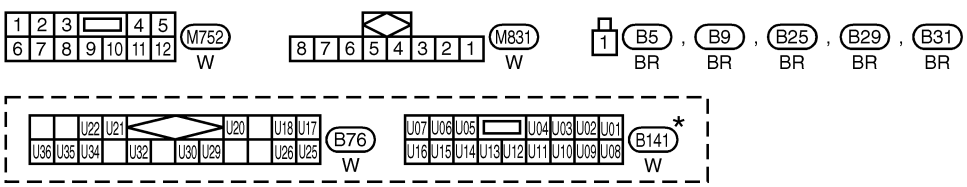

YEL180D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-11



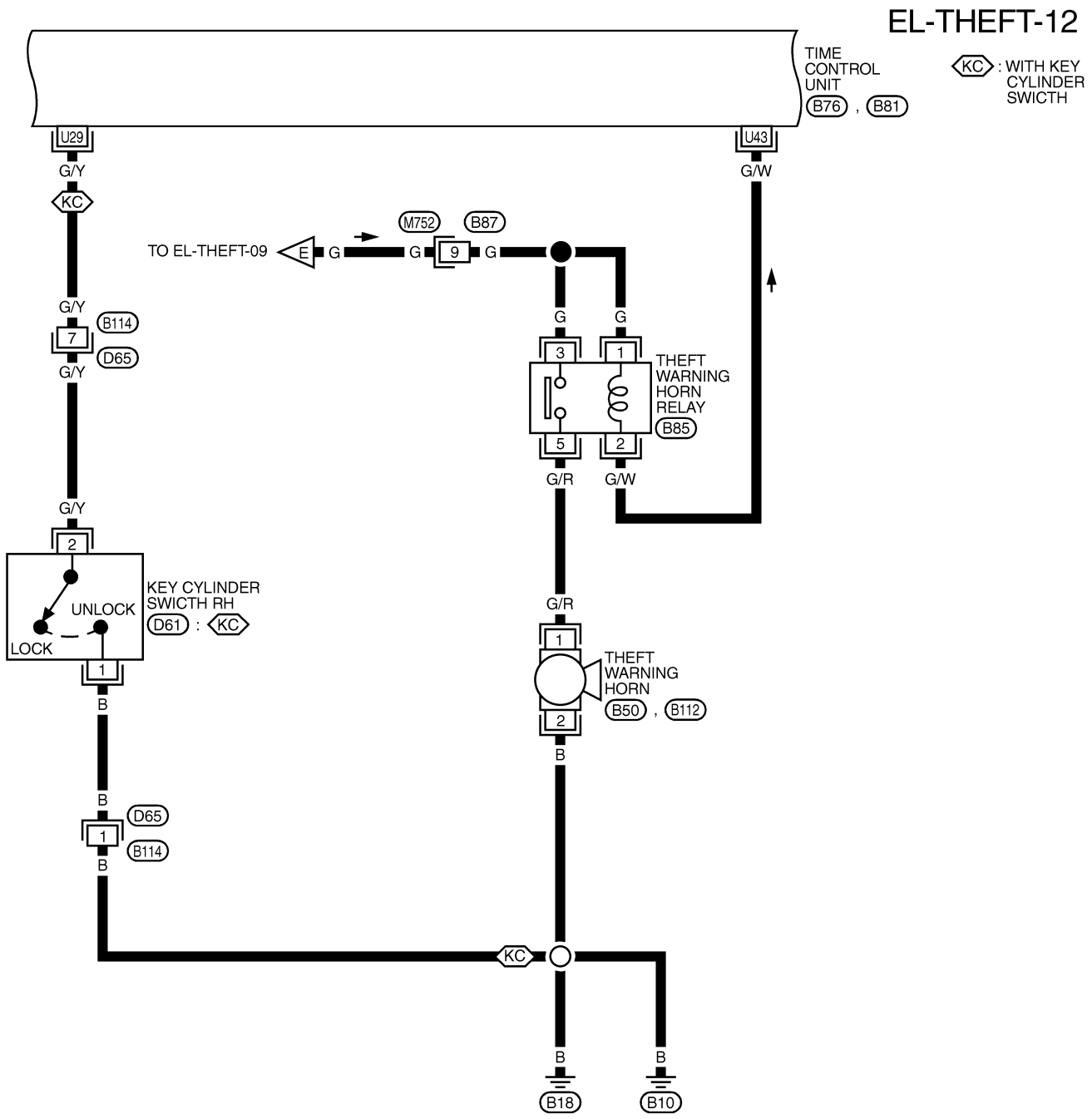

REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-JUNCTION BOX (J/B)

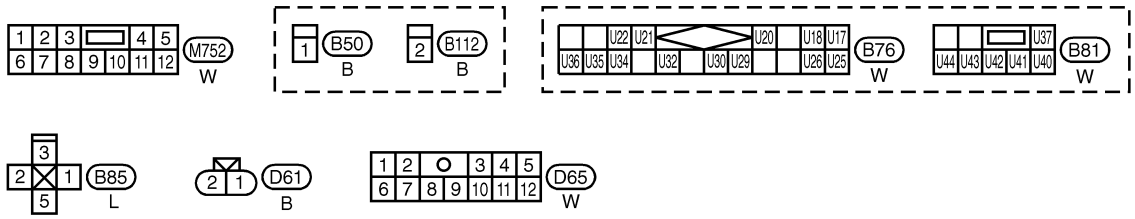
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL181D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

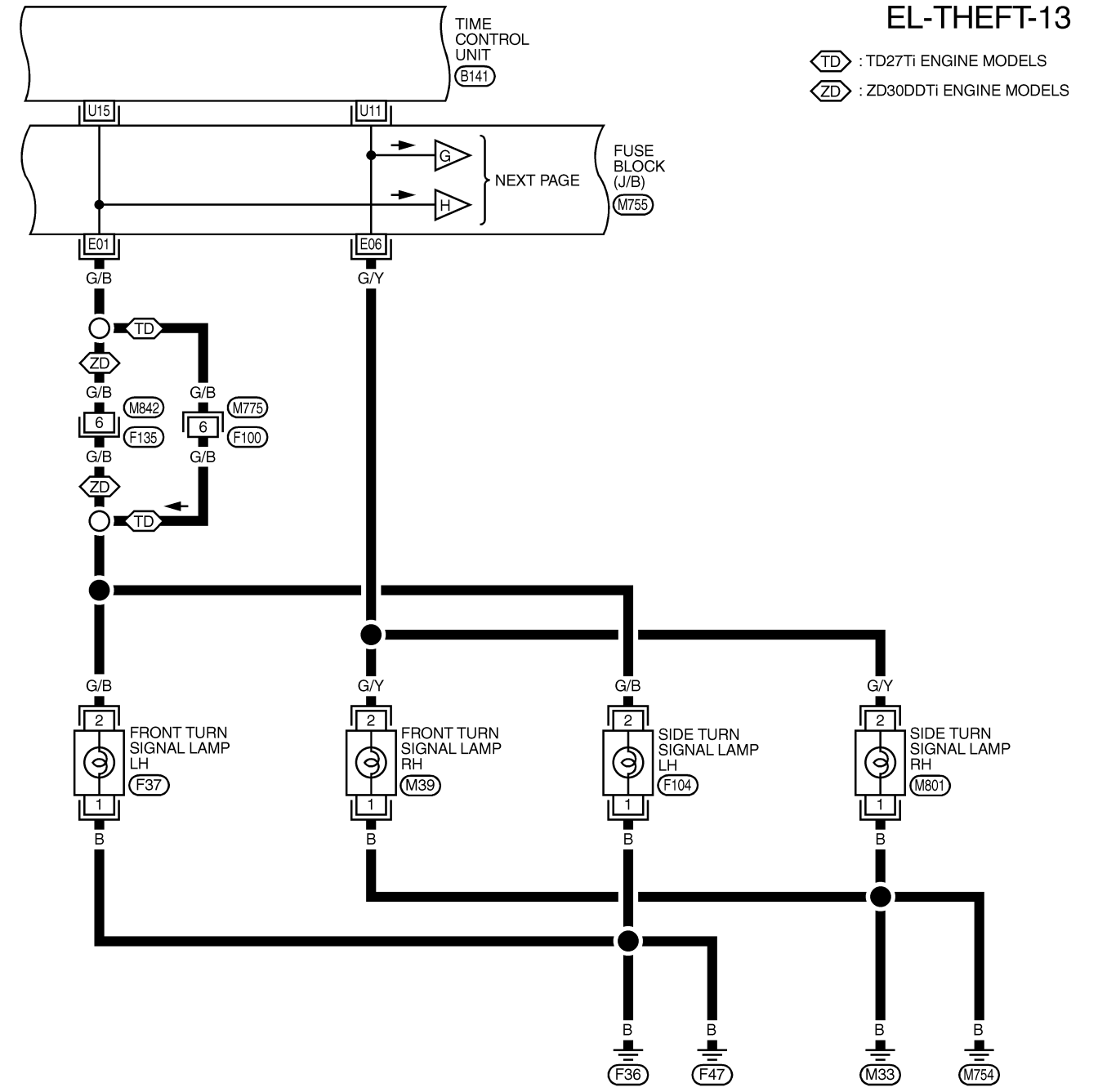


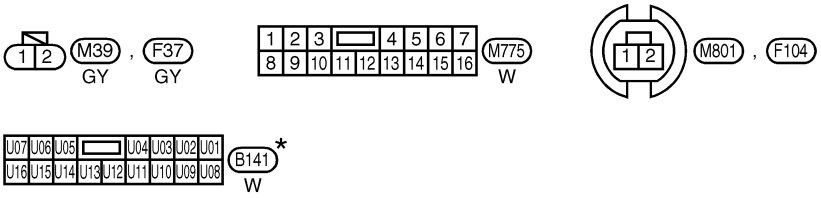




YEL182D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS




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

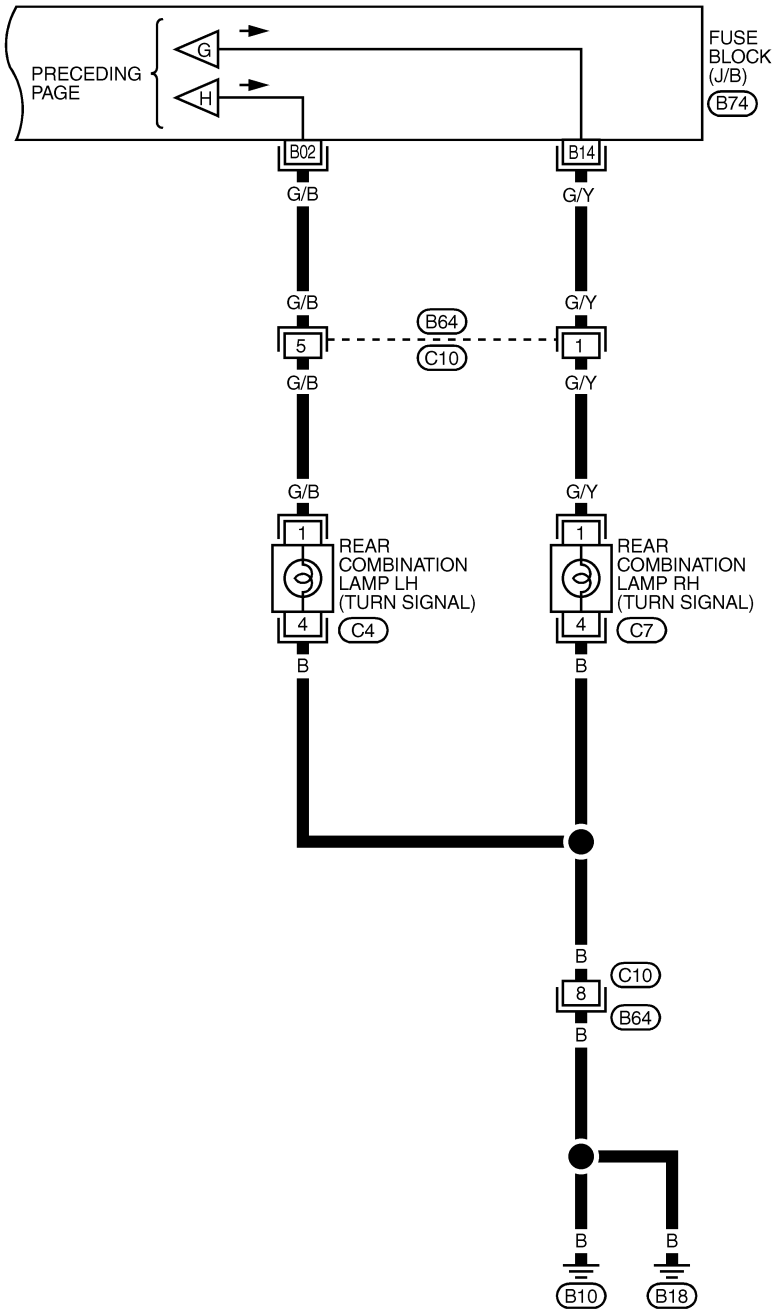
REFER TO THE FOLLOWING.
F135 -SUPER MULTIPLE JUNCTION (SMJ)
M755 -FUSE BLOCK-JUNCTION BOX (J/B)

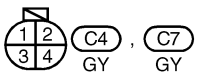
YEL183D

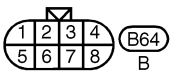
## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-14



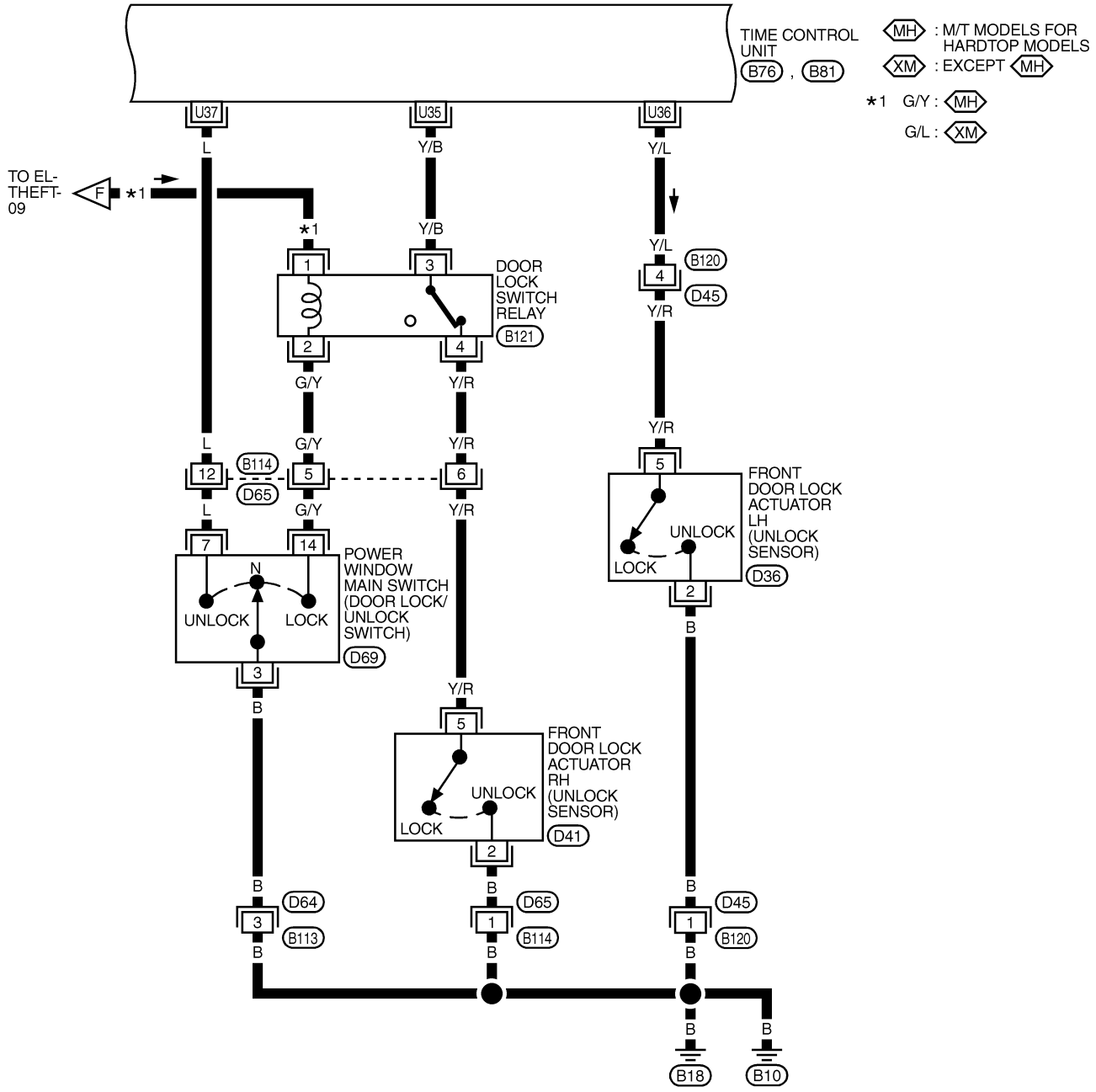

REFER TO THE FOLLOWING.
B74 -FUSE BLOCK-
JUNCTION BOX (J/B)

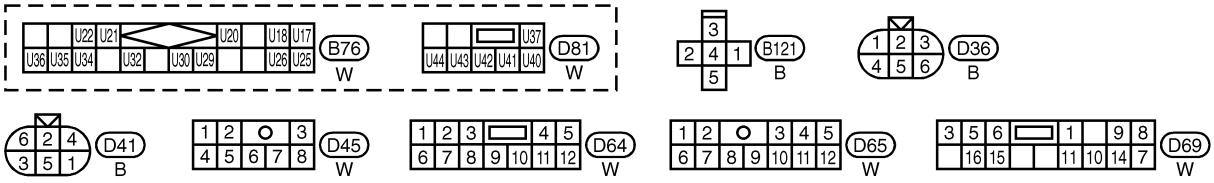
YEL184D

## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-15



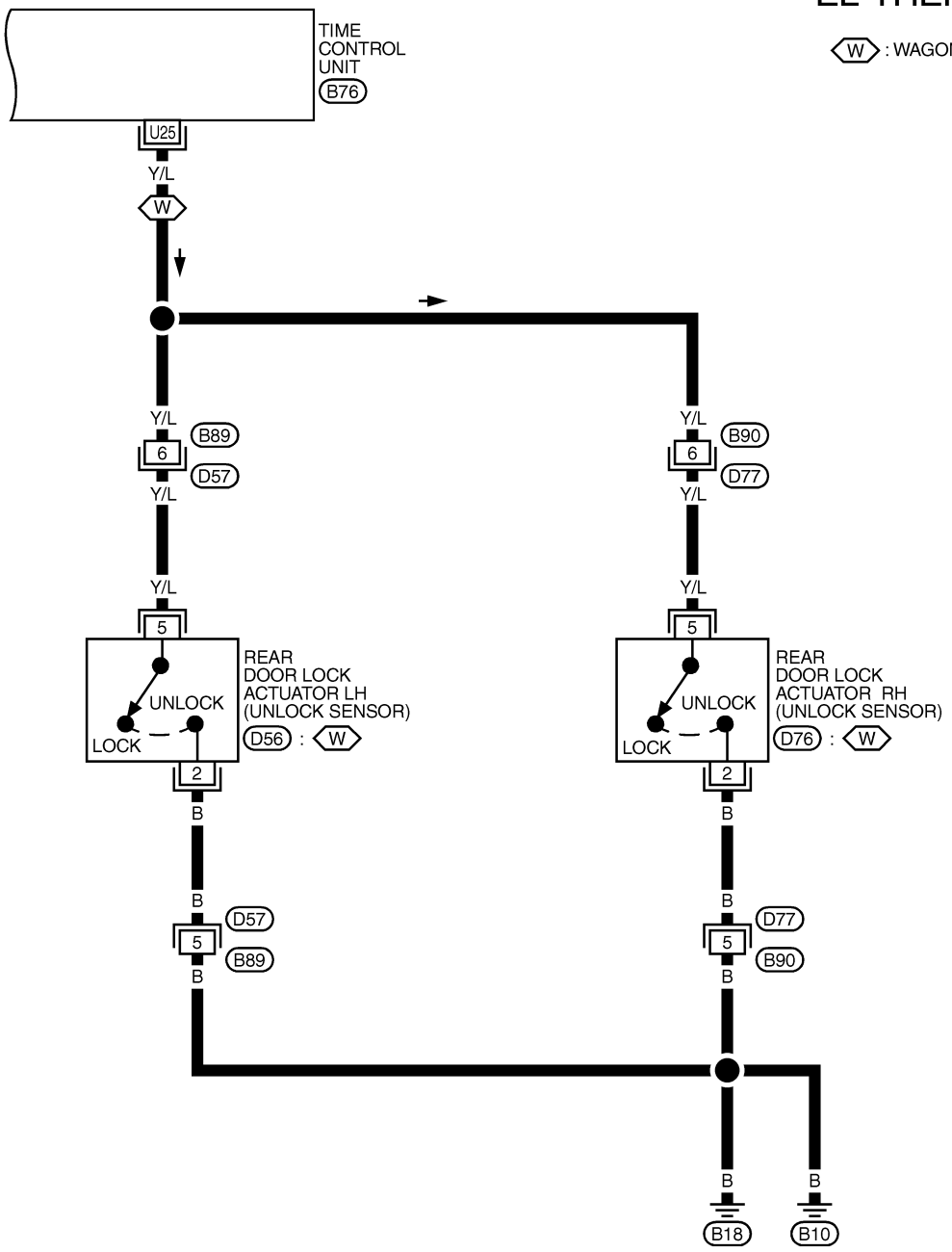

YEL185D

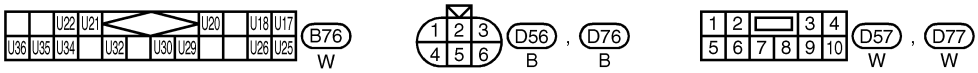
## Wiring Diagram — THEFT — (Cont'd)

### RHD MODELS

EL-THEFT-16

W : WAGON MODELS




YEL186D

## Trouble Diagnoses

### Alarm Trigger Feedback

To verify the last three triggers that activated the theft warning system, the Time Control Unit (TCU) can be switched into Diagnostic Mode (see page EL-182 how to enter Diagnostic Mode).
Approximately 2 seconds after the TCU has finished flashing the hazard lamp to confirm that the Diagnostic Mode has been successfully entered, the TCU will generate a short beep indicating the trigger that will be displayed. A single beep means the most recent trigger, three beeps means the oldest trigger. Following each beep or group of beeps, the hazard lamp will flash to indicate the alarm trigger.

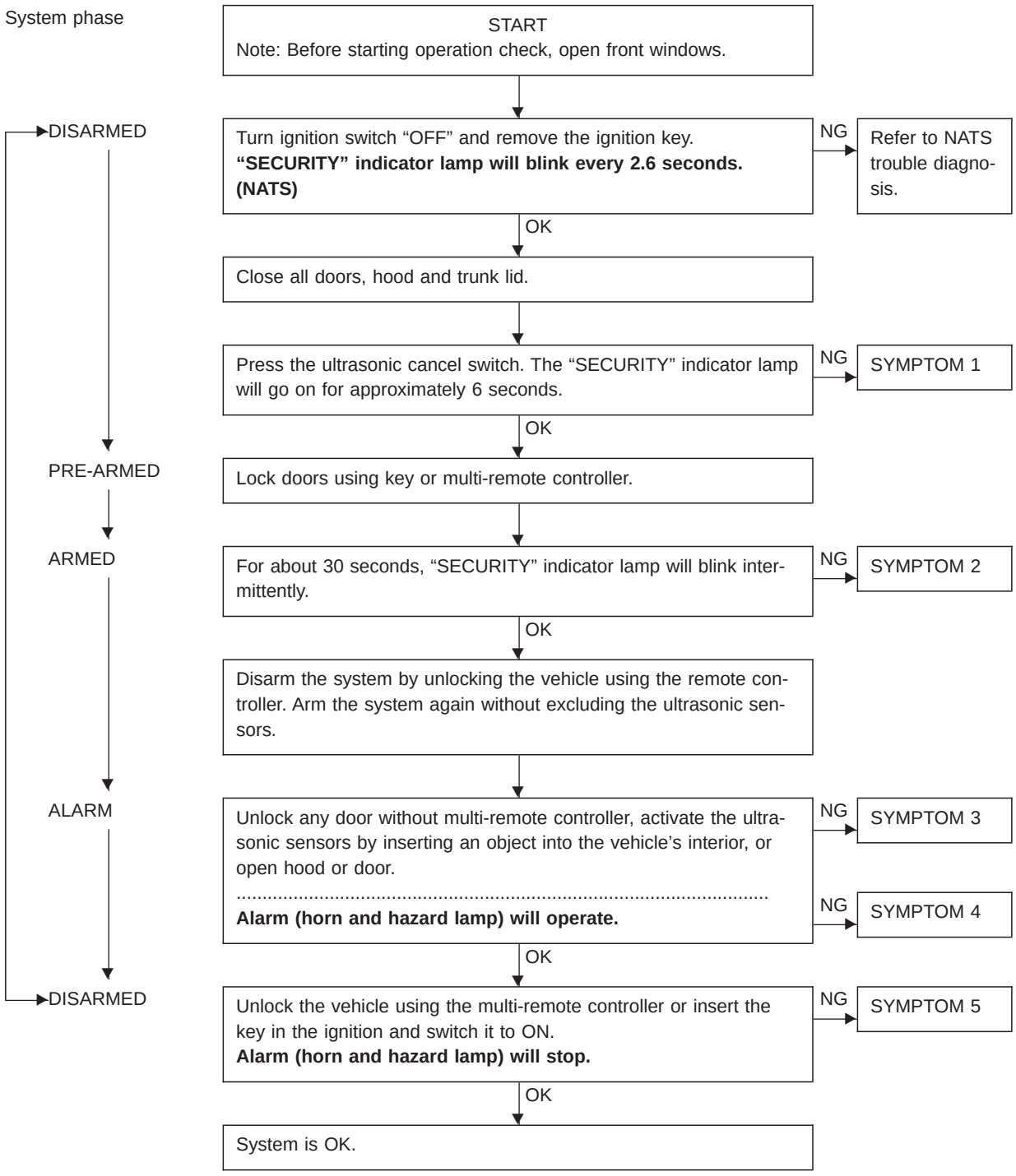
| Source of Alarm Trigger | Number (of flashes) |
|---|---|
| Driver's door lock status switch | 1 |
| Passenger door lock status switch | 2 |
| Rear door lock status switch | 3 |
| Ignition line | 4 |
| Driver's door open switch | 5 |
| Other door open switch | 6 |
| Trunk or back door open switch | 8 |
| Hood switch | 9 |
| Ultrasonic sensors | 10 |

In case there have been no alarm triggers, there will be no indicator flashes between the audible signals. After completing the alarm trigger feedback, the TCU will enter Diagnostic Mode as described on page EL-182.
Before continuing trouble diagnoses on the next page, perform the checks as mentioned in the table on page EL-183.

## Trouble Diagnoses (Cont'd)

### PRELIMINARY CHECK

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




**After performing preliminary check, go to "SYMPTOM CHART", EL-232.**

## Trouble Diagnoses (Cont'd)

**Before starting trouble diagnoses below, perform "PRELIMINARY CHECK", EL-231.**

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

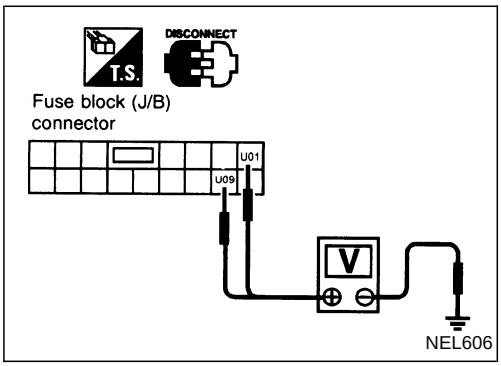
**SYMPTOM CHART**

| Procedure | | | — | Power supply and ground circuit check | | Diagnostic procedure | | | | | | — | — |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REFERENCE PAGE | | | EL-231 | EL-233 | EL-233 | EL-234 | EL-236 | EL-237 | EL-238 | EL-239 | EL-240 | EL-168 | EL-186 |
| SYMPTOM | | | Preliminary check | Power supply circuit check | Ground circuit check | Diagnostic Procedure 1 (Door, hood and back door switch check) | Diagnostic Procedure 2 (Security indicator lamp check) | Diagnostic Procedure 3 (Door unlock sensor check) | Diagnostic Procedure 4 (Door key cylinder switch check) | Diagnostic Procedure 5 (Theft warning horn alarm check) | Diagnostic procedure 6 (Hazard lamp alarm check) | Check "MULTI-REMOTE CONTROL" system. | Check "NATS (Nissan Anti-Theft system)". |
| 1 | Security indicator does not turn "ON" or blinking. | | X | X | X | | X | | | | | | |
| 2 | Theft warning system cannot be set by... | All items | X | X | X | X | | X | | | | | |
| | | Door out side key | X | X | X | | | | X | | | | |
| | | Multi-remote control | X | X | X | | | | | | | X | |
| 3 | *1 Theft warning system does not alarm when... | Any door is opened. | X | X | X | X | | | | | | | |
| | | Any door is unlocked without using key or multi-remote controller | X | X | X | | | X | | | | | |
| 4 | Theft warning alarm does not activate. | All function | X | X | X | X | | X | | | | | |
| | | Horn alarm | X | X | X | | | | | X | | | |
| | | Hazard lamp | X | X | X | | | | | | X | | |
| 5 | Theft warning system cannot be canceled by... | Turning the ignition ON *2 | X | X | X | | | | | | | | X |
| | | Multi-remote controller | X | X | X | | | | | | | X | |

X: Applicable
*1: Make sure the system is in the armed phase.
*2: Make sure the key is NATS registered.

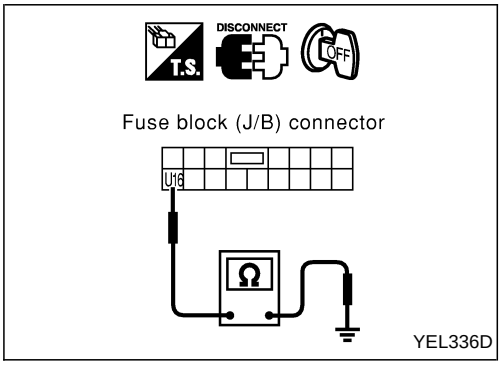
# Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK




### Main power supply circuit check

| Terminals | | Ignition switch position | | |
|---|---|---|---|---|
| ⊕ | ⊖ | OFF | ACC | ON |
| U09 | Ground | Battery voltage | Battery voltage | Battery voltage |
| U01 | Ground | 0V | 0V | Battery voltage |



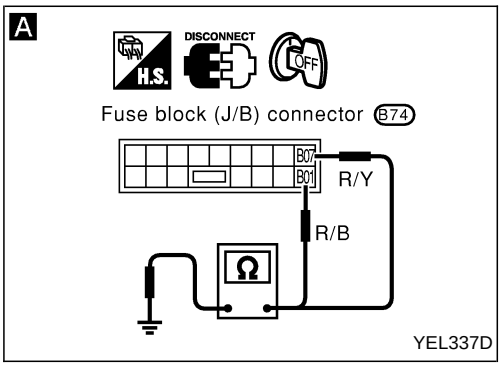

### Ground circuit check

| Terminals | Continuity |
|---|---|
| U16 - Ground | Yes |

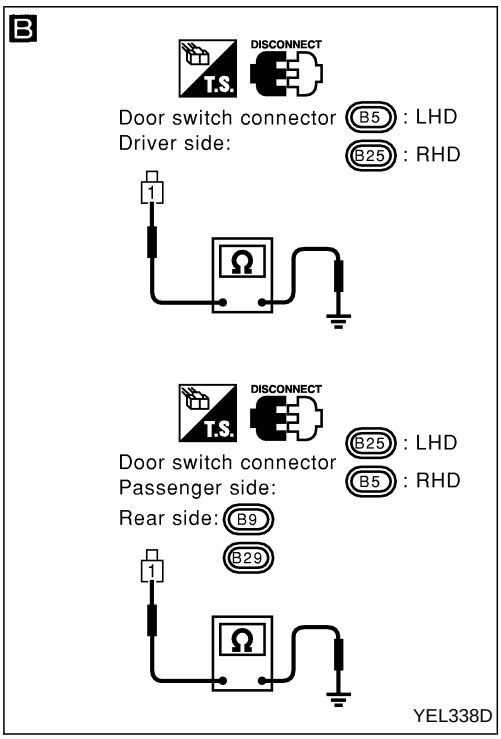
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 1-(1)
## (Door switch check)

A




B




A

CHECK DOOR SWITCH INPUT SIGNAL.
Remove time control unit from fuse block.
**Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
Check continuity between fuse block (J/B) and ground.

| | Terminals | Condition | Continuity |
|---|---|---|---|
| Driver side door | B07 | Opened | Yes |
| | | Closed | No |
| Other door | B01 | Opened | Yes |
| | | Closed | No |

OK → Door switch is OK.

NG ↓

B

CHECK DOOR SWITCH.
1) Disconnect door switch connector.
2) Check continuity between door switch terminals.

| Terminals | Condition | Continuity |
|---|---|---|
| ① - ground | Closed | No |
| | Open | Yes |

NG → Replace door switch.

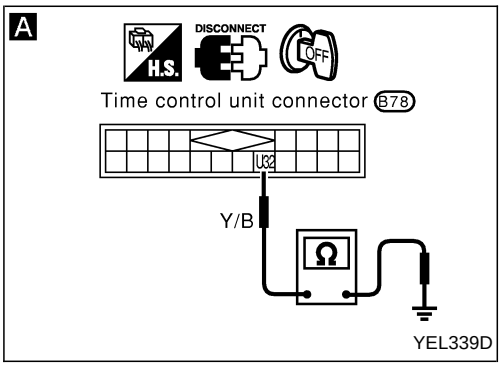
OK ↓

Check the following.
- Door switch ground condition (Except driver side)
- Harness for open or short between control unit and door switch

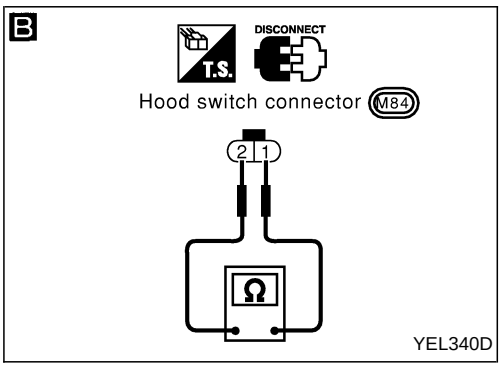
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 1-(2)
## (Hood switch check)

A




B




A

CHECK HOOD SWITCH INPUT SIGNAL.
Remove time control unit from fuse block.
**Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
Check continuity between control unit terminal U32 and ground.

| Condition | Continuity |
|---|---|
| Hood is open. | Yes |
| Hood is closed. | No |

OK → Hood switch is OK.

OK ↓

B

CHECK HOOD SWITCH.
1. Disconnect hood switch connector.
2. Check continuity between hood switch terminals.

| Terminals | Condition | Continuity |
|---|---|---|
| ①- ② | Pushed | No |
| | Released | Yes |

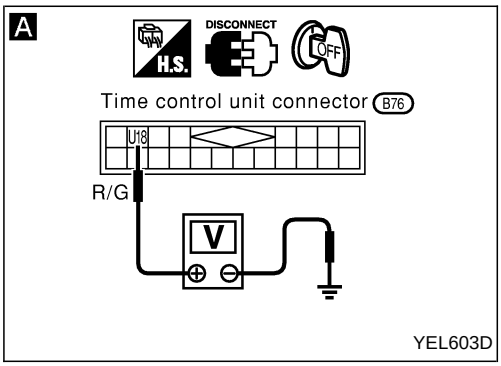
NG → Replace hood switch.

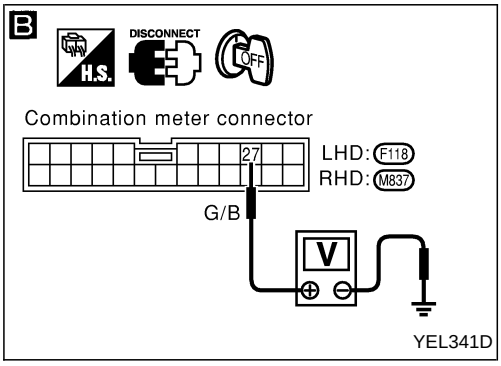
OK ↓

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

## Trouble Diagnoses (Cont'd)

### DIAGNOSTIC PROCEDURE 2
### (Security indicator check)




A

CHECK INDICATOR LAMP OUTPUT SIGNAL.
1) Remove time control unit from fuse block.
**Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
2) Check voltage between time control unit terminal (U18) and ground.
**Battery voltage should exist.**

OK → Security indicator lamp is OK.

NG ↓

CHECK INDICATOR LAMP.

NG → Replace indicator lamp.

OK ↓

B

CHECK POWER SUPPLY CIRCUIT FOR INDICATOR.
1) Disconnect security indicator connector.
2) Check voltage between indicator terminal (27) and ground.
**Battery voltage should exist.**

NG → Check the following:
- 10A fuse [No. 16 , located in the fuse block (J/B)]
- Harness for open or short between combination meter and fuse

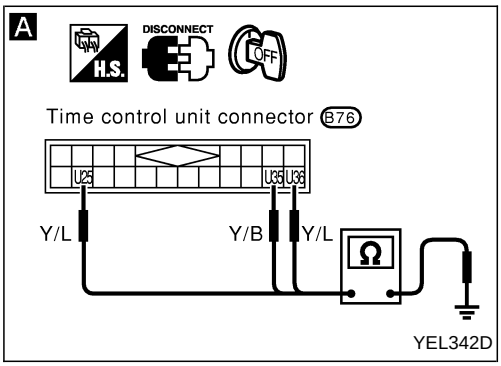
OK ↓

Check harness for open or short between security indicator and time control unit.

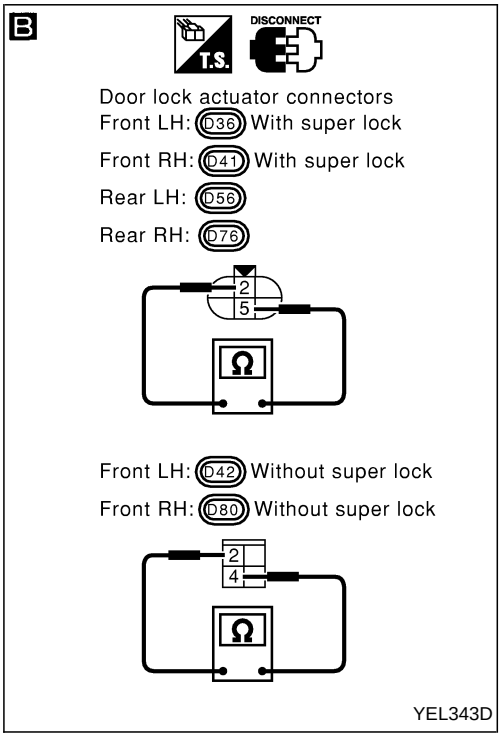
# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 3 (Door unlock sensor check)

A




B




A

CHECK DOOR UNLOCK SENSOR INPUT SIGNAL.
Remove time control unit from fuse block.
**Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
Check continuity between time control unit terminals ㉕, ㉟, ㊱ and ground.

| | Terminals ⊕ | Terminals ⊖ | Condition | Continuity |
|---|---|---|---|---|
| Driver side door | U35 | Ground | Locked | No |
| | | | Unlocked | Yes |
| Passenger side door | U36 | Ground | Locked | No |
| | | | Unlocked | Yes |
| Rear door | U25 | Ground | Locked | No |
| | | | Unlocked | Yes |

OK → Door unlock sensor is OK.

NG ↓

B

CHECK DOOR UNLOCK SENSOR.
1. Disconnect door unlock sensor connector.
2. Check continuity between door unlock sensor terminals.

| | Terminals | Condition | Continuity |
|---|---|---|---|
| Front with super lock and rear | ②-⑤ | Locked | No |
| | | Unlocked | Yes |
| Front without super lock | ②-④ | Locked | No |
| | | Unlocked | Yes |

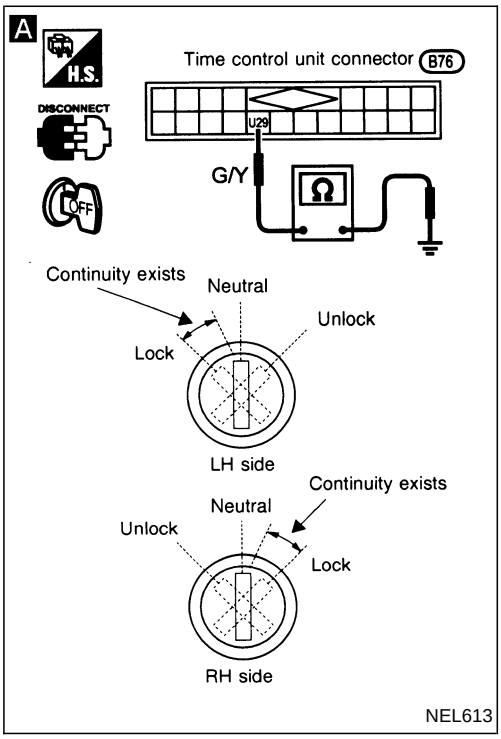
NG → Replace door unlock sensor.

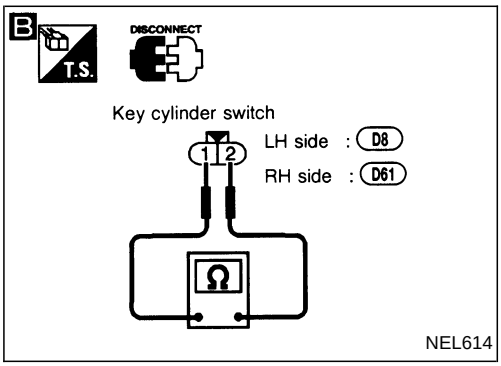
OK ↓

Check the following:
- Door unlock sensor ground circuit
- Harness for open or short between control unit and door unlock sensor

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4
## (Door key cylinder switch check)




A

CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK SIGNAL).
Remove time control unit from fuse block.
**Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
Check continuity between time control unit connector terminal (U29) and ground.

| Key cylinder switch operation | Continuity |
|---|---|
| Between neutral and lock | Yes |
| Unlock/neutral | No |

OK → Door key cylinder switch is OK.

NG ↓

B

CHECK DOOR KEY CYLINDER SWITCH.
1) Disconnect door key cylinder switch connector.
2) Check continuity between door key cylinder switch terminals.

| Terminals | Key position | Continuity |
|---|---|---|
| ①-② | Neutral | No |
| | Between neutral and lock | Yes |
| | Unlock/neutral | No |
| | Full stroke (Lock) | No |

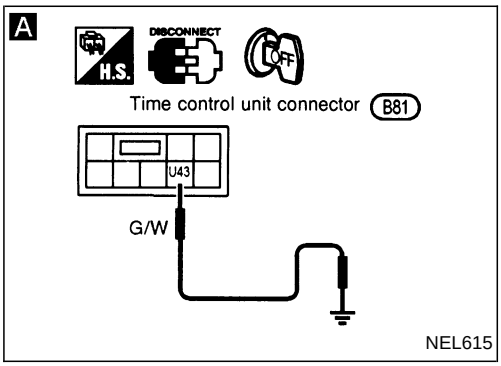
NG → Replace key cylinder switch.

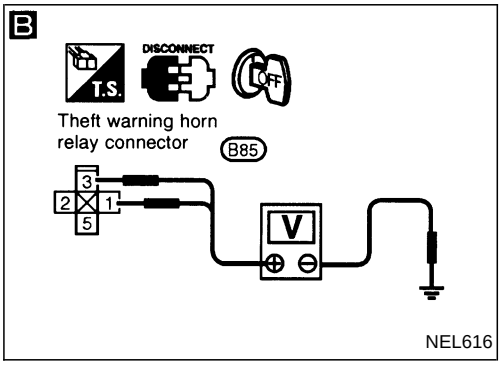
OK ↓

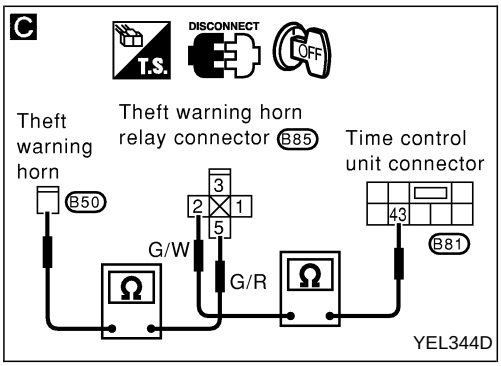
Check the following:
- Harness connectors between key cylinder switch and time control unit
- Door key cylinder switch ground circuit
- Harness for open or short-circuit between super lock control unit and door key cylinder.

# Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 5
## (Theft warning horn alarm check)




**A**

CHECK THEFT WARNING HORN ALARM OPERATION.
1. Remove time control unit from fuse block.
   **Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
2. Apply ground to time control unit connector terminal (U43) .

**Does horn alarm activate?**

Yes → Horn alarm is OK.

No ↓

Check theft warning horn relay.

NG → Replace.

OK ↓

**B**

CHECK POWER SUPPLY FOR THEFT WARNING HORN RELAY.
1) Disconnect theft warning horn relay connector.
2) Check voltage between terminal ① and ground, and ③ and ground.

**Battery voltage should exist.**

NG → Check the following:
- 10A fuse (No. 16, located in the fuse and fusible link box)
- Harness for open or short between theft warning horn relay and fuse

OK ↓

**C**

CHECK THEFT WARNING HORN RELAY CIRCUIT.
1. Disconnect theft warning horn relay connector.
2. Check continuity between theft warning horn relay ② and time control unit terminal (U43).
   **Continuity should exist.**
3. Check continuity between theft warning horn relay ⑤ and theft warning horn connector terminal.
   **Continuity should exist.**

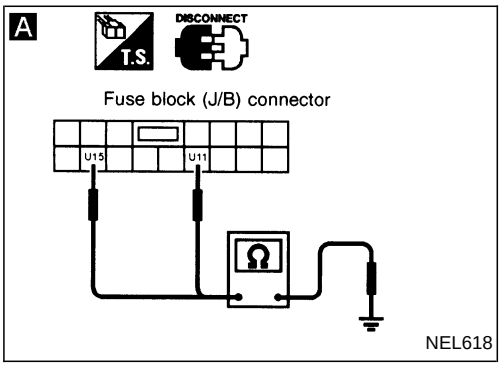
NG → Repair harness.

OK ↓

Check harness for open or short between theft warning horn relay and time control unit.

## Trouble Diagnoses (Cont'd)

### DIAGNOSTIC PROCEDURE 6 (Hazard lamp alarm check)




Push hazard switch to ON.
Check hazard lamp operation.

OK → Replace time control unit.

NG ↓

A

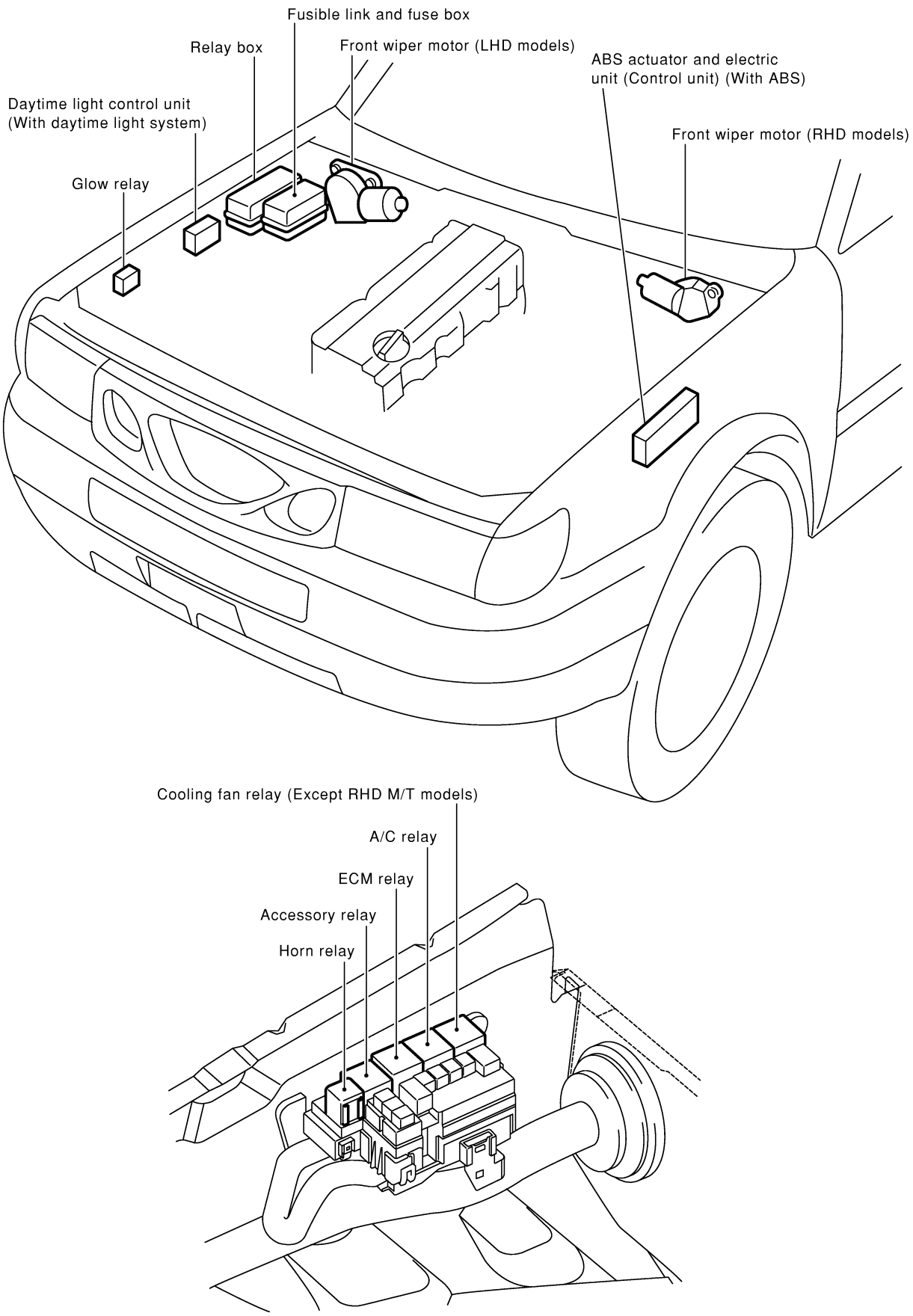
1. Remove time control unit from fuse block (J/B).
   **Note: Junction block (J/B) is very fragile. TCU should be removed carefully to avoid breaking the locking bars.**
2. Check harness continuity between fuse block (J/B) terminals (U11) and (U15) and ground.
   **Continuity should exist.**

NG → Check the following.
- Harness connectors
- Fuse block (J/B)
- Turn signal lamps
- Harness between time control unit and turn signal lamps, turn signal lamps and ground.

OK ↓

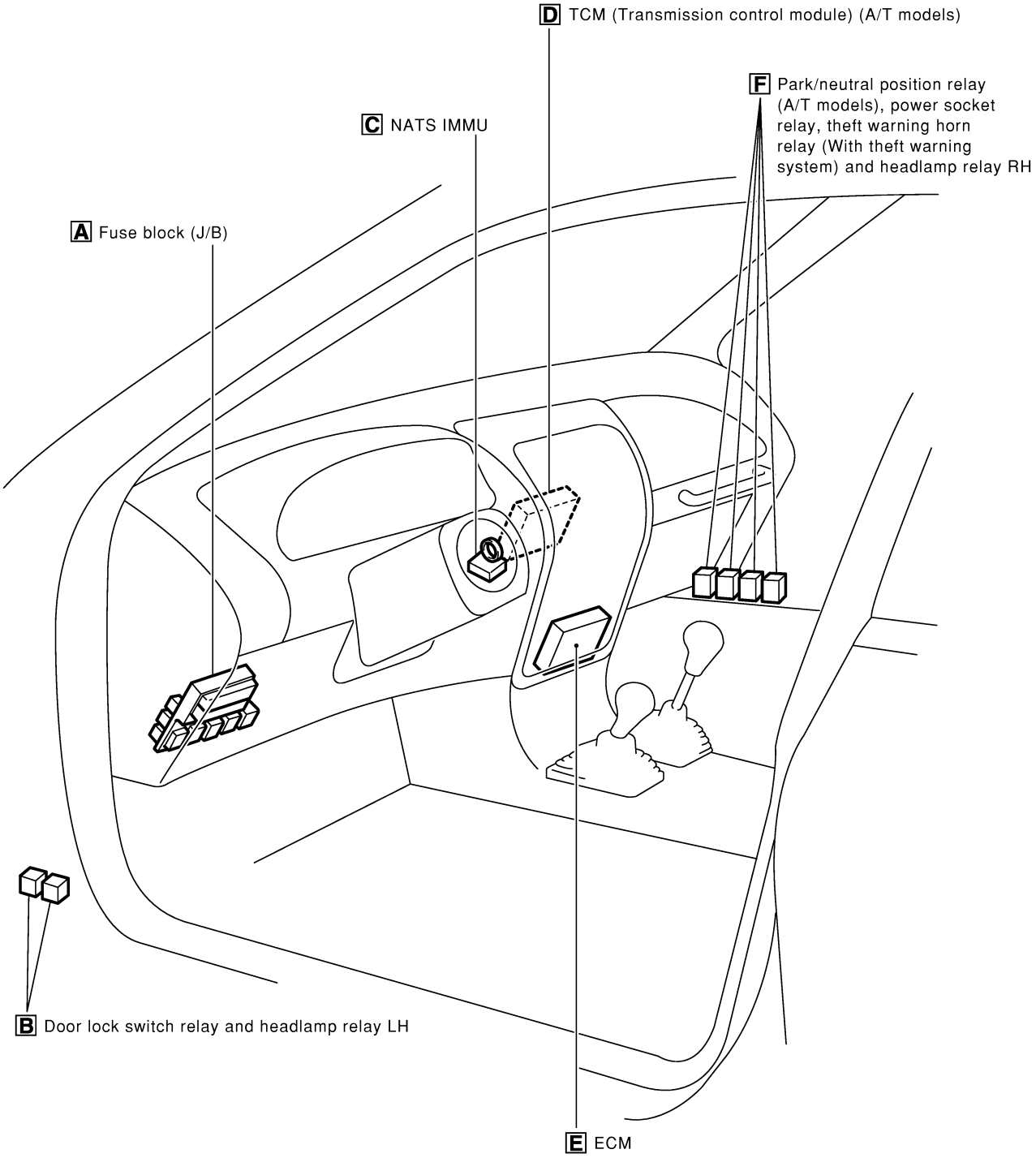
Replace time control unit.

## Engine Compartment




YEL193D

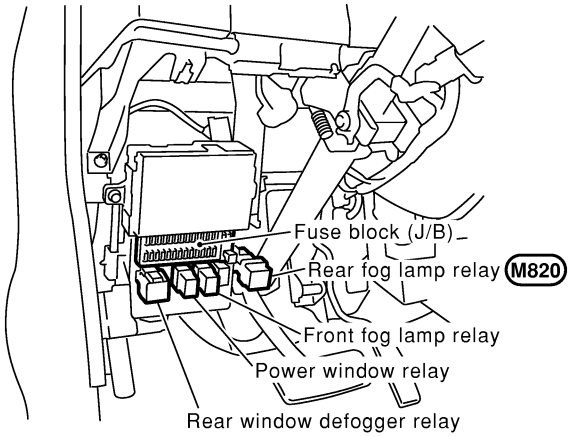
## Passenger Compartment/LHD Models



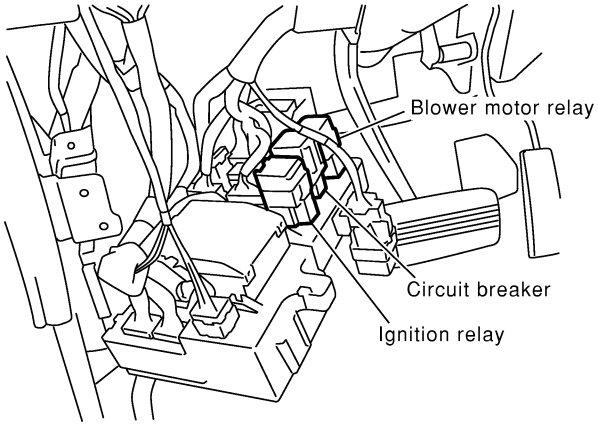

YEL194D

## Passenger Compartment/LHD Models (Cont'd)

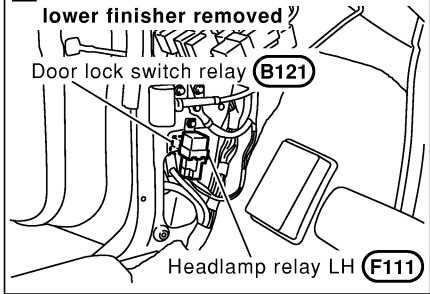
**A** Dash side LH



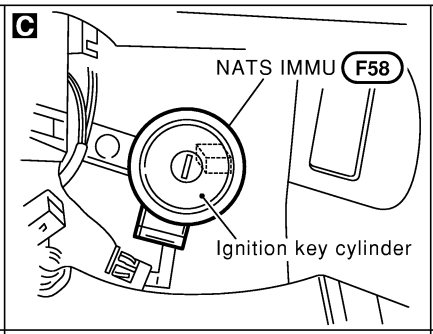

In back of the fuse block (J/B)



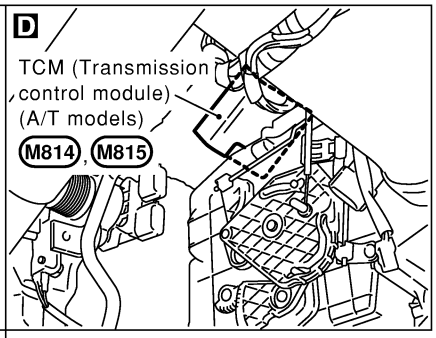

**B** Driver side view with dash side lower finisher removed



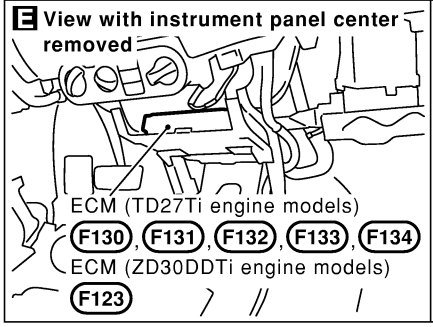

**C**



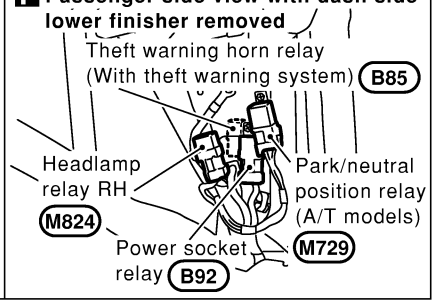

**D**




**E** View with instrument panel center removed

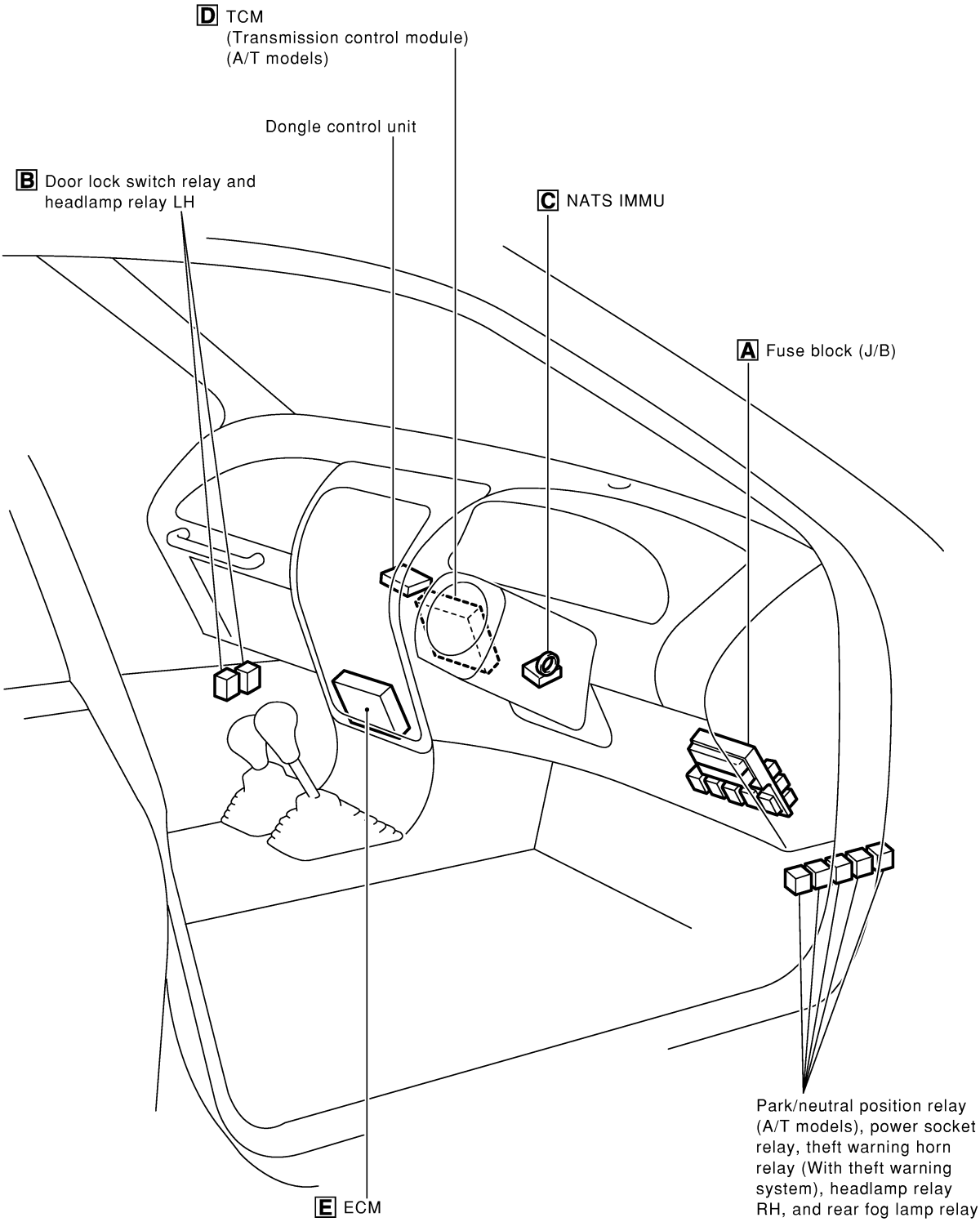



**F** Passenger side view with dash side lower finisher removed




YEL195D

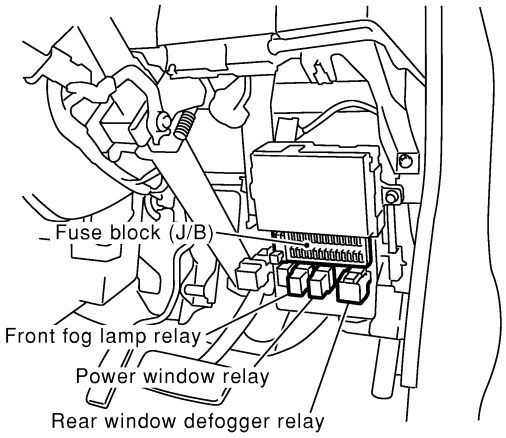
## Passenger Compartment/RHD Models



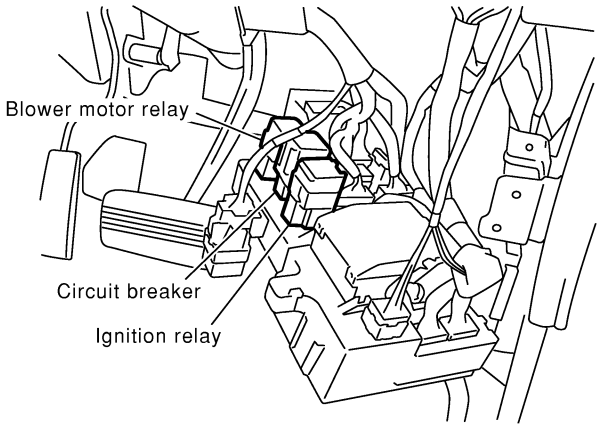

YEL196D

## Passenger Compartment/RHD Models (Cont'd)

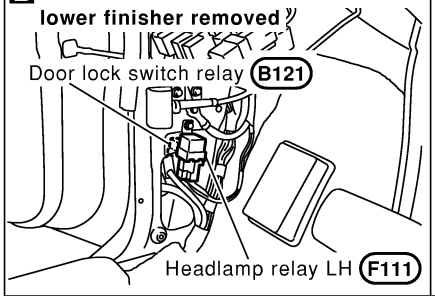
**A** Dash side RH



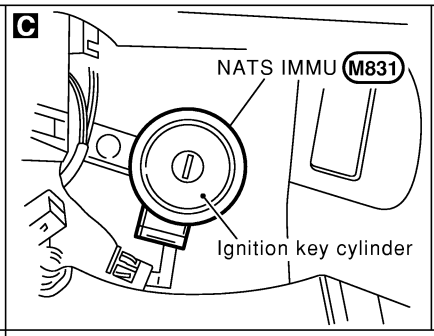

In back of the fuse block (J/B)



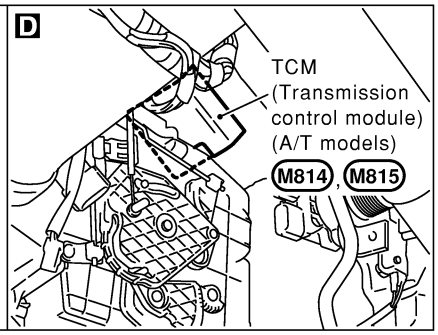

**B** Driver side view with dash side lower finisher removed



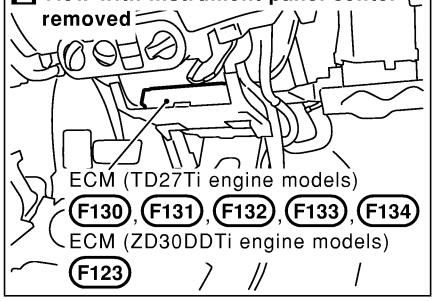

**C**




**D**




**E** View with instrument panel center removed

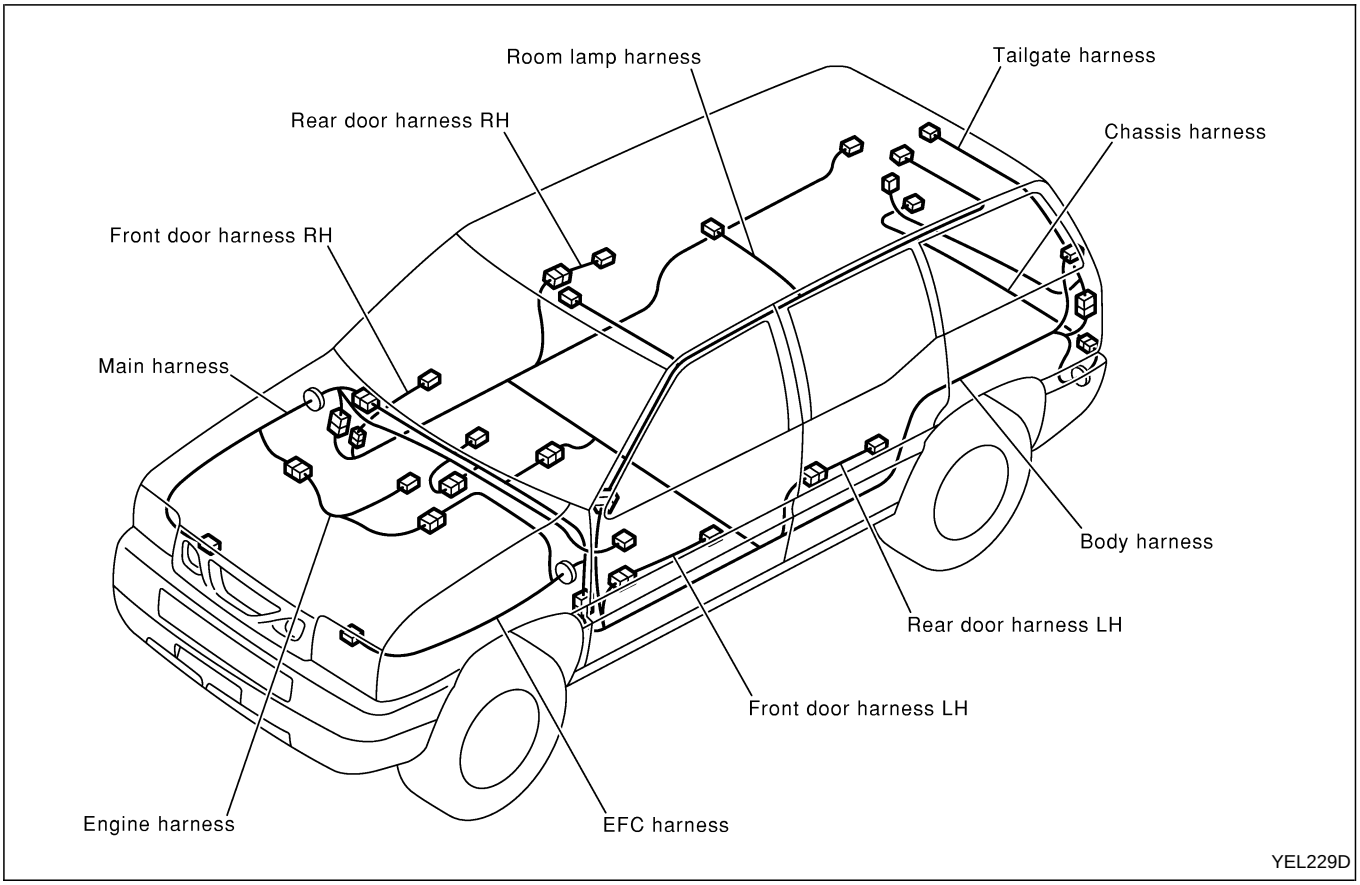



YEL197D

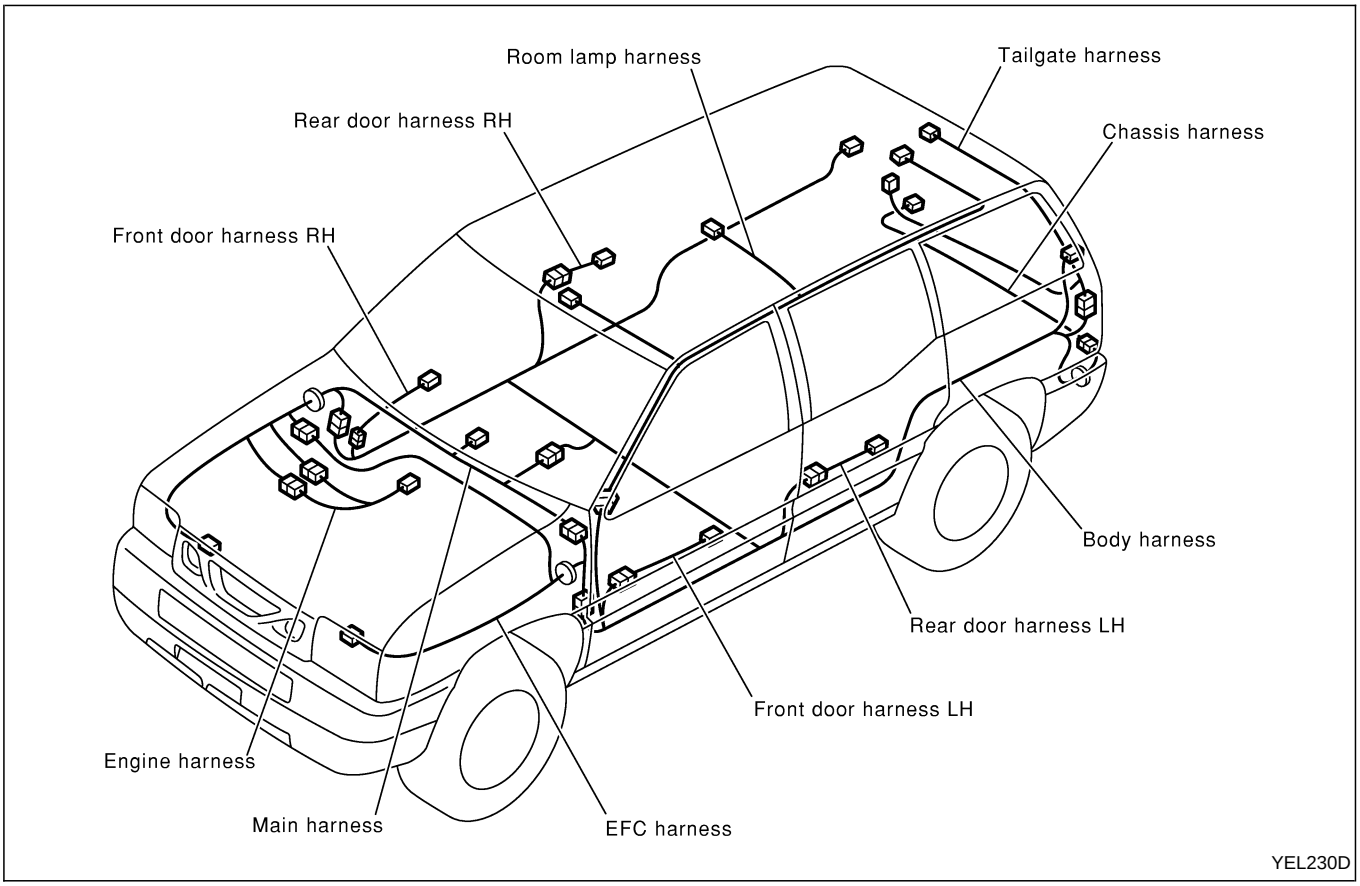
NOTE

## Outline

### LHD MODELS

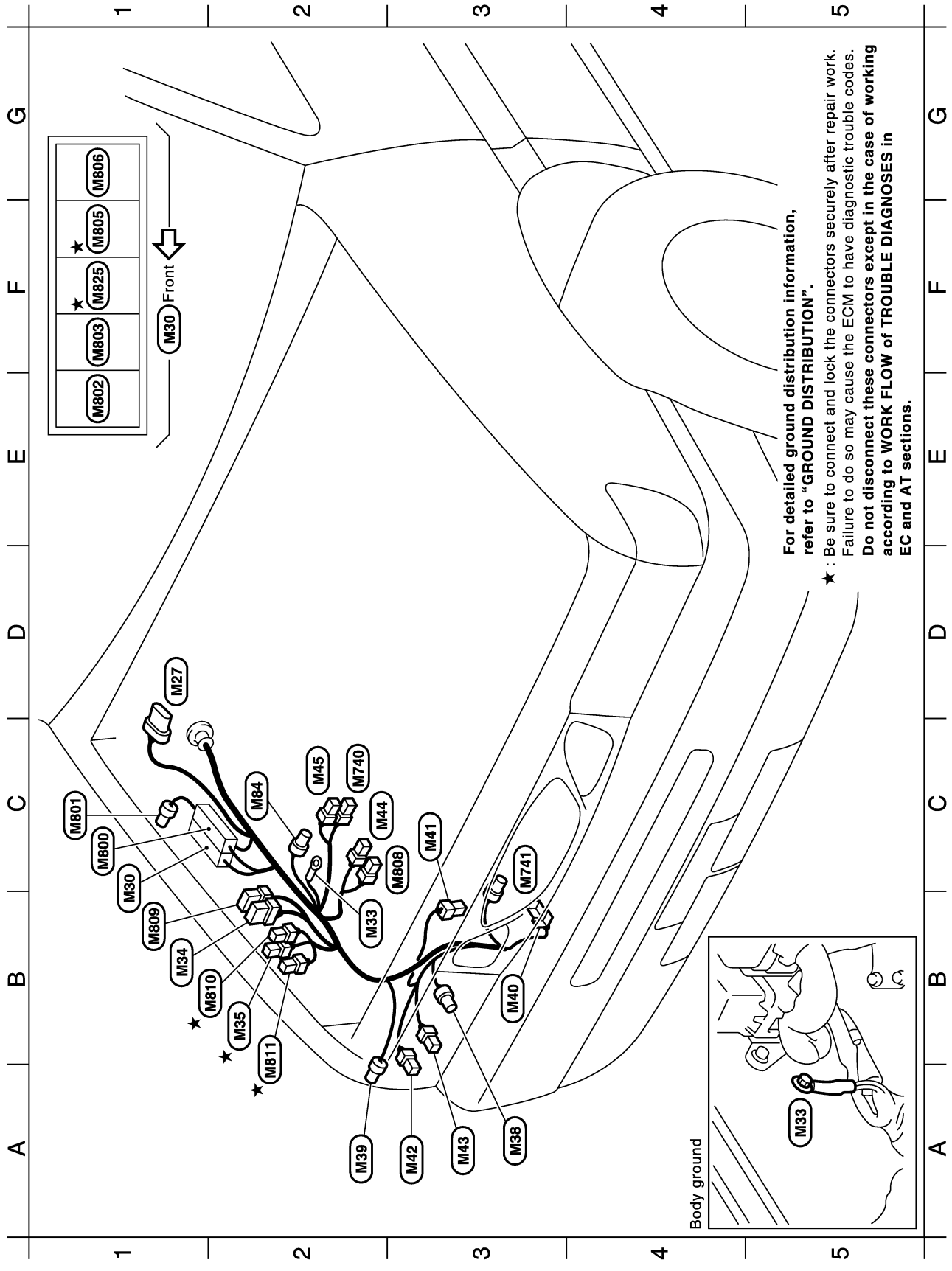



### RHD MODELS



## Main Harness

### ENGINE COMPARTMENT • LHD TD27Ti ENGINE MODELS




YEL231D

## Main Harness (Cont'd)

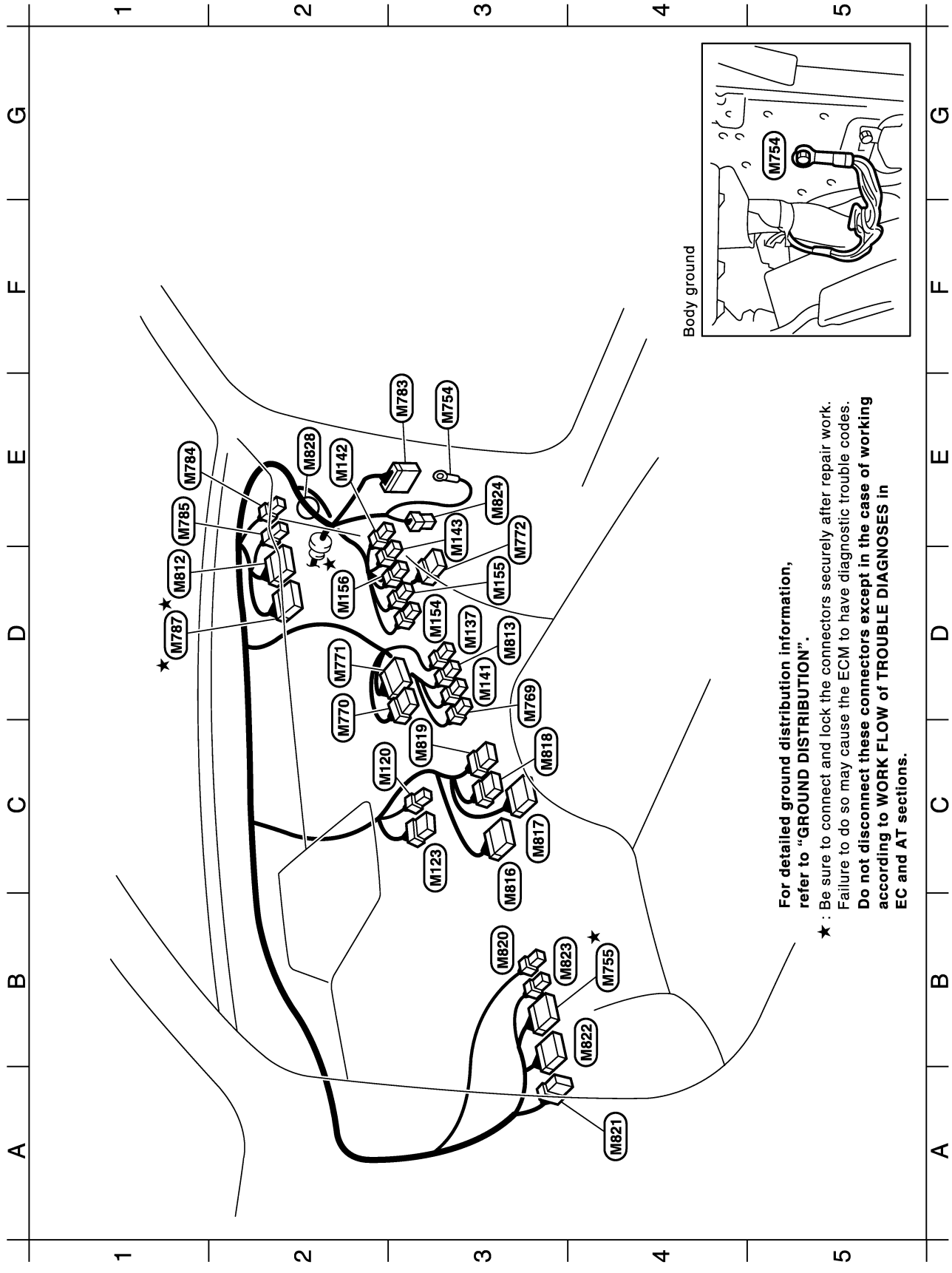
| | | | |
|---|---|---|---|
| D1 | M27 | GY/6 | : Front wiper motor |
| F1 | M30 | – | : Relay box |
| B2 | M33 | – | : Body ground |
| B1 | M34 | B/6 | : Daytime light control unit (With daytime light system) |
| B2 ★ | M35 | W/1 | : Glow relay |
| A3 | M38 | /2 | : Front fog lamp RH |
| A2 | M39 | GY/2 | : Front turn signal lamp RH |
| B3 | M40 | B/1 | : Horn (Low) |
| C3 | M41 | B/3 | : Headlamp aiming motor RH |
| A3 | M42 | B/3 | : Headlamp RH |
| A3 | M43 | B/2 | : Parking lamp RH |
| C2 | M44 | B/1 | : Battery |
| C2 | M45 | B/2 | : To E103 |
| C2 | M84 | GY/2 | : Hood switch |
| C2 | M740 | B/1 | : To E142 |
| C3 | M741 | GY/2 | : Dual-pressure switch |
| C1 | M800 | – | : Fusible link and fuse box |
| C1 | M801 | /2 | : Side turn signal lamp RH |
| E1 | M802 | GY/3 | : Horn relay |
| F1 ★ | M803 | BR/6 | : Accessory relay |
| F1 | M805 | L/4 | : A/C relay |
| G1 | M806 | L/4 | : Cooling fan relay |
| C3 | M808 | B/1 | : Battery |
| B1 ★ | M809 | W/6 | : Daytime light control unit (With daytime light system) |
| B2 ★ | M810 | W/1 | : Glow relay |
| B2 ★ | M811 | G/2 | : Glow relay |
| F1 ★ | M825 | L/4 | : ECM relay |

★: 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.**

YEL232D

## Main Harness (Cont'd)

### PASSENGER COMPARTMENT • LHD TD27Ti ENGINE MODELS




YEL233D

## Main Harness (Cont'd)

| | | | |
|---|---|---|---|
| C2 | M120 | W/2 | : Key switch |
| C3 | M123 | B/5 | : Ignition switch |
| D3 | M137 | W/2 | : Ashtray illumination |
| D3 | M141 | B/2 | : Cigarette lighter socket |
| E2 | M142 | /2 | : Glove box lamp |
| E3 | M143 | BR/2 | : Glove box lamp switch |
| D3 | M154 | W/2 | : Blower motor |
| D3 | M155 | BR/4 | : Fan resistor |
| D2 | ★ M156 | W/4 | : Thermo control amplifier |
| E3 | M754 | – | : Body ground |
| B4 | ★ M755 | W/16 | : Fuse block (J/B) |
| D3 | M769 | W/2 | : Ambient light console |
| C2 | M770 | W/6 | : A/C control panel (Fan switch) |
| D2 | M771 | W/12 | : A/C control panel |
| D3 | M772 | B/6 | : Intake door motor |
| E3 | M783 | W/10 | : To B88 |
| E1 | M784 | B/2 | : To F68 |
| E1 | M785 | W/3 | : To F67 |
| D1 | ★ M787 | W/12 | : To F66 |
| D1 | ★ M812 | W/20 | : To F120 |
| D3 | M813 | B/1 | : Cigarette lighter socket |
| C3 | M816 | GY/12 | : Combination switch (Wiper and washer switch) |
| C3 | M817 | BR/12 | : Combination switch (Lighting switch) |
| C3 | M818 | W/8 | : Combination switch (Fog lamp switch) |
| C3 | M819 | GY/8 | : Combination switch (Spiral cable) |
| B3 | M820 | L/4 | : Rear fog lamp relay |
| A4 | M821 | W/6 | : Fuse block (J/B) |
| B4 | M822 | W/12 | : Fuse block (J/B) |
| B3 | M823 | B/2 | : Fuse block (J/B) |
| E3 | M824 | B/5 | : Headlamp relay RH |
| E2 | M828 | – | : Diode-3 |

★ : 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.**

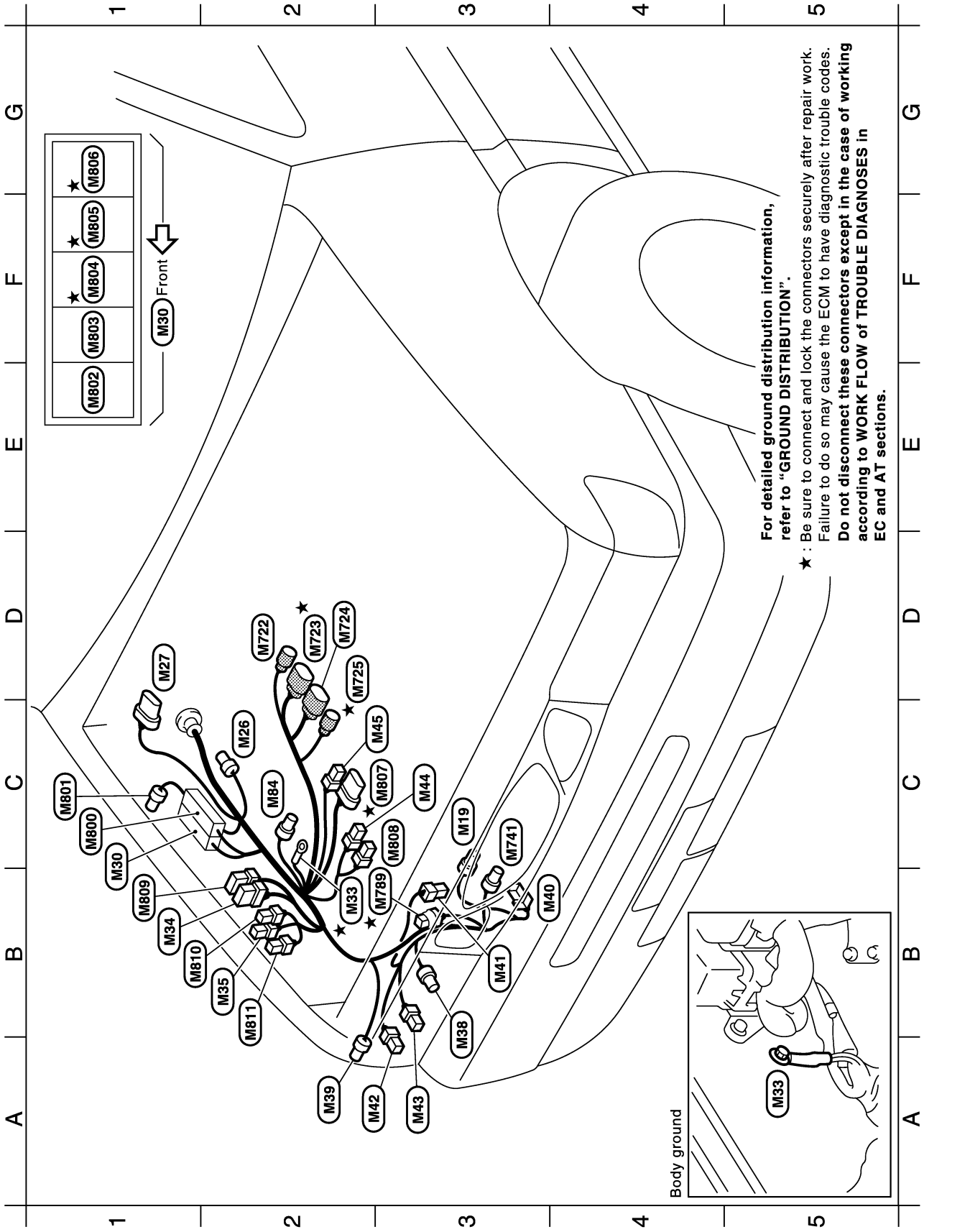
Diode-3 M828

A/C control panel — Compressor

YEL234D

## Main Harness (Cont'd)

### ENGINE COMPARTMENT • LHD ZD30DDTi ENGINE MODELS




YEL235D

## Main Harness (Cont'd)

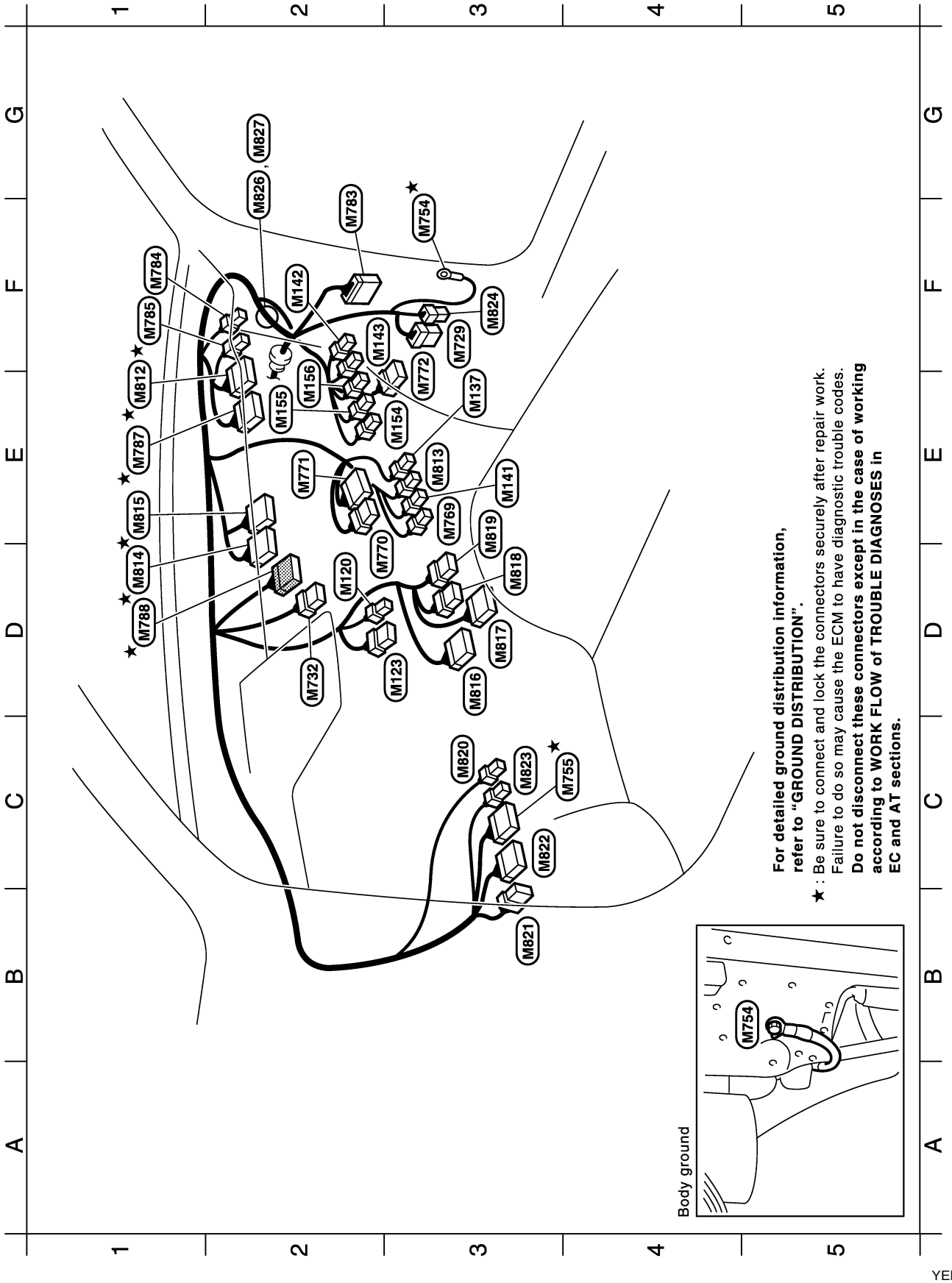
| | | | |
|---|---|---|---|
| C3 | M19 | B/2 | : Cooling fan motor (A/T models) |
| C2 | M26 | GY/2 | : Fuel filter switch (Except for North Europe) |
| D1 | M27 | GY/6 | : Front wiper motor |
| F1 | M30 | – | : Relay box |
| B2 ★ | M33 | – | : Body ground |
| B1 | M34 | B/6 | : Daytime light control unit (With daytime light system) |
| B2 | M35 | W/1 | : Glow relay |
| A3 | M38 | /2 | : Front fog lamp RH |
| A2 | M39 | GY/2 | : Front turn signal lamp RH |
| B3 | M40 | B/1 | : Horn (Low) |
| B3 | M41 | B/3 | : Headlamp aiming motor RH |
| A2 | M42 | B/3 | : Headlamp RH |
| A3 | M43 | B/2 | : Parking lamp RH |
| C3 | M44 | B/1 | : Battery |
| C3 | M45 | B/2 | : To E202 |
| C2 | M84 | GY/2 | : Hood switch |
| D2 | M722 | GY/2 | : Park/neutral position switch (A/T models) |
| D2 ★ | M723 | BR/8 | : Terminal cord assembly (A/T models) |
| D2 | M724 | GY/8 | : Park/neutral position switch (A/T models) |
| D2 ★ | M725 | GY/3 | : Revolution sensor (A/T models) |
| C3 | M741 | GY/2 | : Dual-pressure switch |
| B3 ★ | M789 | W/2 | : Condenser (A/T models) |
| C1 | M800 | – | : Fusible link and fuse box |
| C1 | M801 | /2 | : Side turn signal lamp RH |
| E1 | M802 | GY/3 | : Horn relay |
| F1 | M803 | BR/6 | : Accessory relay |
| F1 ★ | M804 | BR/6 | : ECM relay |
| F1 ★ | M805 | L/4 | : A/C relay |
| G1 ★ | M806 | L/4 | : Cooling fan relay |
| C3 ★ | M807 | GY/9 | : To E201 |
| C3 | M808 | B/1 | : Battery |
| B1 | M809 | W/6 | : Daytime light control unit (With daytime light system) |
| B1 | M810 | W/1 | : Glow relay |
| B2 | M811 | G/2 | : Glow relay |

★ : 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.**

YEL236D

## Main Harness (Cont'd)

### PASSENGER COMPARTMENT • LHD ZD30DDTi ENGINE MODELS




YEL237D

## Main Harness (Cont'd)

| | | | |
|---|---|---|---|
| D2 | M120 | W/2 | : Key switch |
| D3 | M123 | B/5 | : Ignition switch |
| E3 | M137 | W/2 | : Ashtray illumination |
| E3 | M141 | B/2 | : Cigarette lighter socket |
| F2 | M142 | /2 | : Glove box lamp |
| F2 | M143 | BR/2 | : Glove box lamp switch |
| E3 | M154 | W/2 | : Blower motor |
| E2 | M155 | BR/4 | : Fan resistor |
| E2 | M156 | W/4 | : Thermo control amplifier |
| F3 | M729 | BR/6 | : Park/neutral position relay (A/T models) |
| D2 | M732 | W/8 | : A/T mode switch (A/T models) |
| F3 ★ | M754 | – | : Body ground |
| C3 ★ | M755 | W/16 | : Fuse block (J/B) |
| E3 | M769 | W/2 | : Ambient light console |
| D2 | M770 | W/6 | : A/C control panel (Fan switch) |
| E2 | M771 | W/12 | : A/C control panel |
| E3 | M772 | B/6 | : Intake door motor |
| F2 | M783 | W/10 | : To B88 |
| F1 | M784 | B/2 | : To F68 |
| F1 ★ | M785 | W/3 | : To F67 |
| E1 ★ | M787 | W/12 | : To F66 |
| D1 ★ | M788 | W/20 | : To F93 |
| E1 ★ | M812 | W/20 | : To F120 |
| E3 | M813 | B/1 | : Cigarette lighter socket |
| D1 ★ | M814 | GY/24 | : TCM (Transmission control module) (A/T models) |
| E1 ★ | M815 | W/24 | : TCM (Transmission control module) (A/T models) |
| D3 | M816 | GY/12 | : Combination switch (Wiper and washer switch) |
| D3 | M817 | BR/12 | : Combination switch (Lighting switch) |
| D3 | M818 | W/8 | : Combination switch (Fog lamp switch) |
| E3 | M819 | GY/8 | : Combination switch (Spiral cable) |
| C3 | M820 | L/4 | : Rear fog lamp relay |
| B3 | M821 | W/6 | : Fuse block (J/B) |
| C3 | M822 | W/12 | : Fuse block (J/B) |
| C3 | M823 | B/2 | : Fuse block (J/B) |
| F3 | M824 | B/5 | : Headlamp relay RH |
| G2 | M826 | – | : Diode-1 (A/T models) |
| G2 | M827 | – | : Diode-2 (A/T models) |

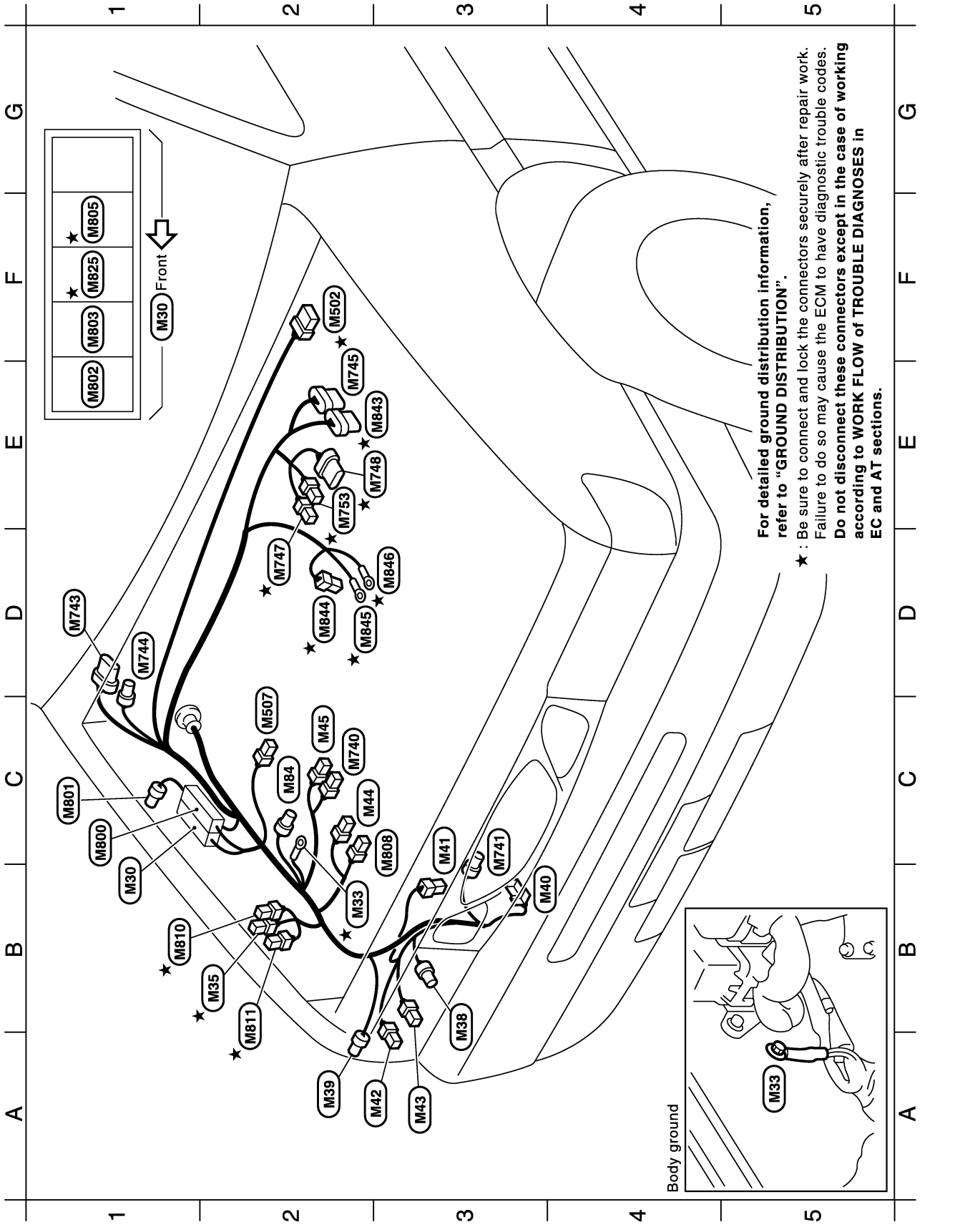
★: Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**




YEL238D

## Main Harness (Cont'd)

### MAIN HARNESS ENGINE COMPARTMENT • RHD TD27Ti ENGINE MODELS




YEL239D

## Main Harness (Cont'd)

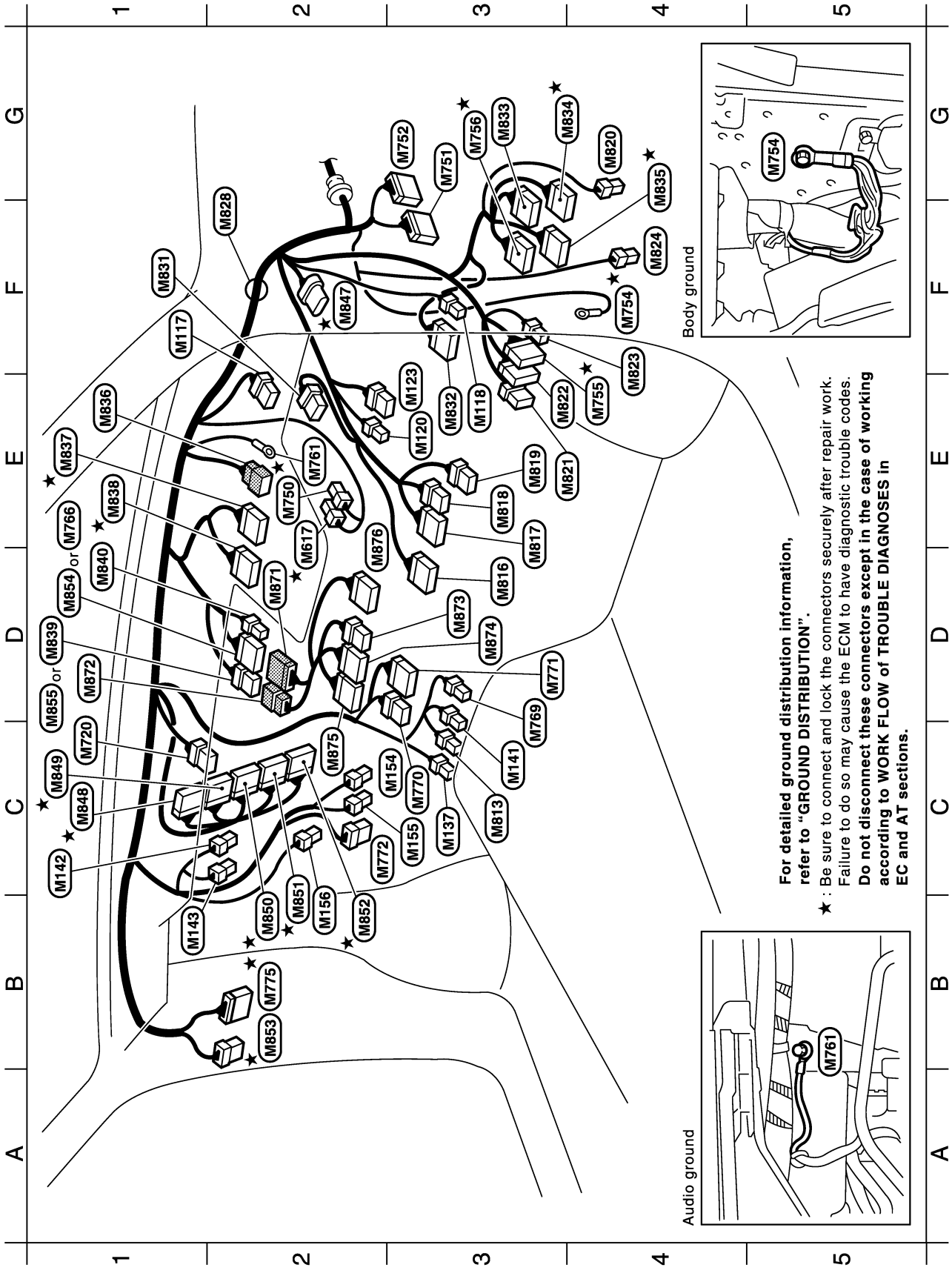
| | | | |
|---|---|---|---|
| F1 | M30 | – | : Relax box |
| B2 | ★ M33 | – | : Body ground |
| B2 | ★ M35 | W/1 | : Glow relay |
| B3 | M38 | /2 | : Front fog lamp RH |
| A2 | M39 | GY/2 | : Front turn signal lamp RH |
| B3 | M40 | B/1 | : Horn (Low) |
| C3 | M41 | B/3 | : Headlamp aiming motor RH |
| A3 | M42 | B/3 | : Headlamp RH |
| A3 | M43 | B/2 | : Parking lamp RH |
| C2 | M44 | B/1 | : Battery |
| C2 | M45 | B/2 | : To E103 |
| C2 | M84 | GY/2 | : Hood switch |
| F2 | M502 | W/6 | : Front wiper motor |
| C2 | M507 | GY/2 | : Brake fluid level switch |
| C2 | M740 | B/1 | : To E142 |
| C3 | M741 | GY/2 | : Dual-pressure switch |
| D1 | M743 | GY/10 | : To F76 (With ABS) |
| D1 | M744 | GY/2 | : To F79 (With ABS) |
| E2 | ★ M745 | B/8 | : To E147 |
| D2 | ★ M747 | /3 | : TVC and SHUT off |
| E2 | ★ M748 | /7 | : Electronic control fuel injection pump |
| E2 | ★ M753 | W/2 | : Needle lift sensor |
| C1 | M800 | – | : Fusible link and fuse box |
| C1 | M801 | /2 | : Side turn signal lamp RH |
| E1 | M802 | GY/3 | : Horn relay |
| F1 | M803 | BR/6 | : Accessory relay |
| F1 | ★ M805 | L/4 | : A/C relay |
| C3 | M808 | B/1 | : Battery |
| B1 | ★ M810 | W/1 | : Glow relay |
| B2 | ★ M811 | G/2 | : Glow relay |
| F1 | ★ M825 | L/4 | : ECM relay |
| E3 | ★ M843 | GY/8 | : To E151 |
| D2 | ★ M844 | /3 | : Crankshaft position sensor (TDC) |
| D2 | ★ M845 | – | : Engine ground |
| D3 | ★ M846 | – | : Engine 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 DIAGNOSES in EC and AT sections.**

YEL240D

## Main Harness (Cont'd)

### PASSENGER COMPARTMENT • RHD TD27Ti ENGINE MODELS




YEL241D

## Main Harness (Cont'd)

F1 M117 W/6 : Ultrasonic cancel switch
E3 M118 W/4 : Headlamp aiming switch
E3 M120 W/2 : Key switch
E3 M123 B/5 : Ignition switch
C3 M137 W/2 : Ashtray illumination
C3 M141 B/2 : Cigarette lighter socket
C1 M142 /2 : Glove box lamp
B1 M143 BR/2 : Glove box lamp switch
C3 M154 W/2 : Blower motor
C3 M155 BR/4 : Fan resistor
B2 ★ M156 W/4 : Thermo control amplifier
D2 ★ M617 B/2 : Stop lamp switch
C1 M720 BR/8 : Dongle control unit
E2 ★ M750 L/2 : Brake switch
G3 M751 W/16 : To B86
G3 M752 W/12 : To B87
F4 ★ M754 – : Body ground
E4 ★★ M755 W/16 : Fuse block (J/B)
G3 ★ M756 W/20 : Fuse block (J/B)
E2 M761 – : Audio ground
E1 M766 W/16 : To M871 (Type 2)
C3 M769 W/2 : Ambient light console
C3 M770 W/6 : A/C control panel (Fan switch)
D3 M771 W/12 : A/C control panel
C2 M772 B/6 : Intake door motor
B2 ★ M775 W/16 : To F100
C3 M813 B/1 : Cigarette lighter socket
D3 M816 GY/12 : Combination switch (Wiper and washer switch)
D3 M817 BR/12 : Combination switch (Lighting switch)
E3 M818 W/8 : Combination switch (Fog lamp switch)
E3 M819 GY/8 : Combination switch (Spiral cable)
G4 M820 L/4 : Rear fog lamp relay
E4 M821 W/6 : Fuse block (J/B)
E3 M822 W/12 : Fuse block (J/B)
F4 M823 B/2 : Fuse block (J/B)
F4 M824 B/5 : Headlamp relay RH
F2 M828 – : Diode-3
F1 M831 W/8 : NATS IMMU
E3 M832 W/16 : Data link connector
G3 M833 W/10 : Fuse block (J/B)
G4 ★ M834 GY/20 : Fuse block (J/B)
G4 ★ M835 GY/10 : Fuse block (J/B)
E1 M836 Y/6 : To B103
E1 ★ M837 BR/24 : Combination meter
E1 ★ M838 W/24 : Combination meter
D1 M839 BR/8 : To M872 (Type 2)
D1 M840 W/1 : Navigation
F2 ★ M847 /5 : Accelerator work unit
C1 ★ M848 –/9 : ECM
C1 ★ M849 –/40 : ECM
B2 ★ M850 –/52 : ECM
B2 ★ M851 –/24 : ECM
B2 ★ M852 –/9 : ECM
B2 ★ M853 W/6 : To F137
D1 M854 W/16 : Audio unit (Type 1)
D1 M855 BR/8 : Audio unit (Type 1)

### Audio sub-harness (Type 2)

D2 M871 W/16 : To M766
D1 M872 BR/8 : To M839
D3 M873 BR/8 : Audio unit
D3 M874 W/16 : Audio unit
C2 M875 W/12 : Audio unit
D2 M876 W/16 : CD auto-changer (With CD auto-changer)

★: 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.**

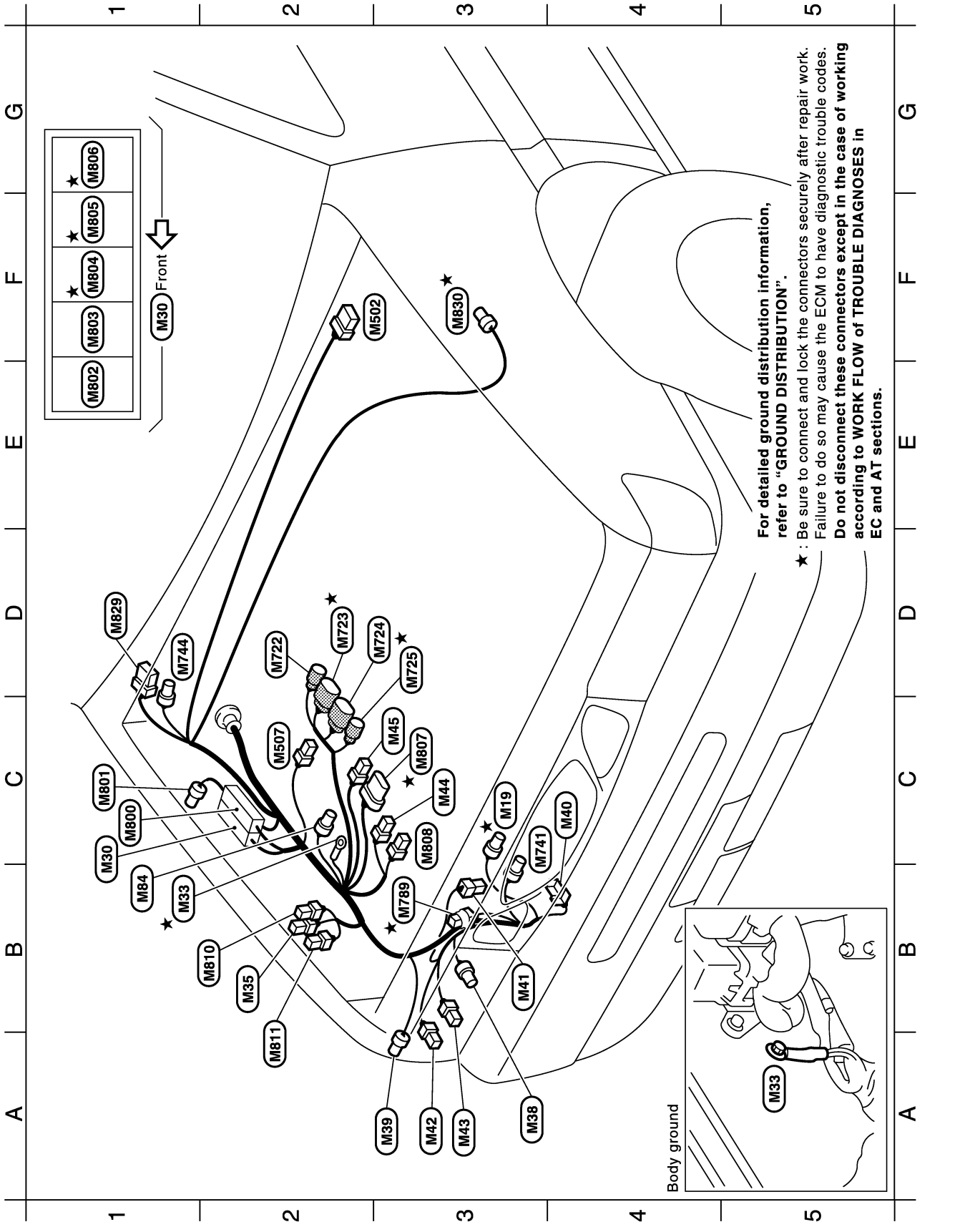
Diode-3 M828




YEL242D

## Main Harness (Cont'd)

### MAIN HARNESS ENGINE COMPARTMENT • RHD ZD30DDTi ENGINE MODELS




YEL243D

## Main Harness (Cont'd)

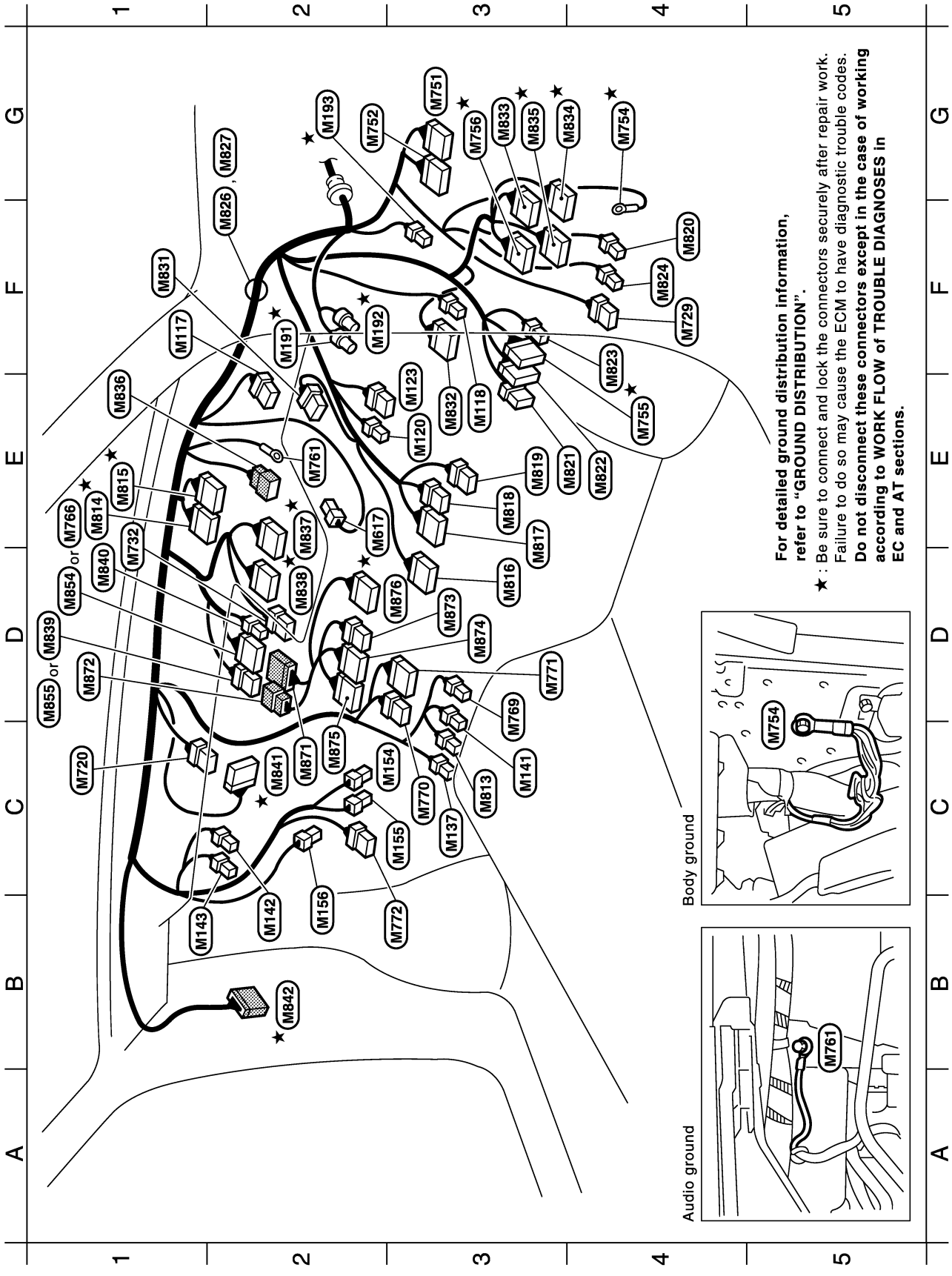
| | | | |
|---|---|---|---|
| C3 | M19 | B/2 | : Cooling fan motor (A/T models) |
| C1 | M30 | – | : Relay box |
| B1 | M33 | – | : Body ground |
| B2 | M35 | W/1 | : Glow relay |
| A3 | M38 | /2 | : Front fog lamp RH |
| A3 | M39 | GY/2 | : Front turn signal lamp RH |
| C4 | M40 | B/1 | : Horn (Low) |
| B3 | M41 | B/3 | : Headlamp aiming motor RH |
| A3 | M42 | B/3 | : Headlamp RH |
| A3 | M43 | B/2 | : Parking lamp RH |
| C3 | M44 | B/1 | : Battery |
| C3 | M45 | B/2 | : To E202 |
| B1 | M84 | GY/2 | : Hood switch |
| F2 | M502 | W/6 | : Front wiper motor |
| C2 | M507 | GY/2 | : Brake fluid level switch |
| D2 | M722 | GY/2 | : Park/neutral position switch (A/T models) |
| D2 | M723 | BR/8 | : Terminal cord assembly (A/T models) |
| D3 | M724 | GY/8 | : Park/neutral position switch (A/T models) |
| D3 | M725 | GY/3 | : Revolution sensor (A/T models) |
| C3 | M741 | GY/2 | : Dual-pressure switch |
| D1 | M744 | GY/2 | : F79 |
| B3 | M789 | W/2 | : Condenser (A/T models) |
| C1 | M800 | – | : Fusible link and fuse box |
| C1 | M801 | /2 | : Side turn signal lamp RH |
| E1 | M802 | GY/3 | : Horn relay |
| F1 | M803 | BR/6 | : Accessory relay |
| F1 | M804 | BR/6 | : ECM relay |
| F1 | M805 | L/4 | : A/C relay |
| G1 | M806 | L/4 | : Cooling fan relay (A/T models) |
| C3 | M807 | GY/9 | : To E201 |
| C3 | M808 | B/1 | : Battery |
| B2 | M810 | W/1 | : Glow relay |
| A2 | M811 | G/2 | : Glow relay |
| D1 | M829 | GY/8 | : To F136 |
| F3 | M830 | GY/2 | : Dropping resistor (A/T models) |

★: 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.**

YEL244D

## Main Harness (Cont'd)

### PASSENGER COMPARTMENT • RHD ZD30DDTi ENGINE MODELS




YEL245D

## Main Harness (Cont'd)

F1 (M117) W/6 : Ultrasonic cancel switch
E3 (M118) W/4 : Headlamp aiming switch
E3 (M120) W/2 : Key switch
E3 (M123) B/5 : Ignition switch
C3 (M137) W/2 : Ashtray illumination
C3 (M141) B/2 : Cigarette lighter socket
B2 (M142) /2 : Glove box lamp
B1 (M143) BR/2 : Glove box lamp switch
C2 (M154) W/2 : Blower motor
C3 (M155) BR/4 : Fan resistor
B2 (M156) W/4 : Thermo control amplifier
★ F2 (M191) BR/3 : Accelerator position sensor
★ F2 (M192) GY/3 : Accelerator position switch
★ G2 (M193) W/3 : Accelerator switch (F/C)
★ E2 (M617) B/2 : Stop lamp switch
C1 (M720) BR/8 : Dongle control unit
F4 (M729) BR/6 : Park/neutral position relay (A/T models)
D1 (M732) W/8 : A/T mode switch (A/T models)
G3 (M751) W/16 : To (B86)
G2 (M752) W/12 : To (B87)
★ G4 (M754) – : Body ground
★ E4 (M755) W/16 : Fuse block (J/B)
★ G3 (M756) W/20 : Fuse block (J/B)
E2 (M761) – : Audio ground
E1 (M766) W/16 : To (M871) (Type 2)
D3 (M769) W/2 : Ambient light console
C3 (M770) W/6 : A/C control panel (Fan switch)
D3 (M771) W/12 : A/C control panel
B3 (M772) B/6 : Intake door motor
C3 (M813) B/1 : Cigarette lighter socket
★ E1 (M814) GY/24 : TCM (Transmission control module) (A/T models)
★ E1 (M815) W/24 : TCM (Transmission control module) (A/T models)
D3 (M816) GY/12 : Combination switch (Wiper and washer switch)
E3 (M817) BR/12 : Combination switch (Lighting switch)
E3 (M818) W/8 : Combination switch (Fog lamp switch)
E3 (M819) GY/8 : Combination switch (Spiral cable)
F4 (M820) L/4 : Rear fog lamp relay
E3 (M821) W/6 : Fuse block (J/B)
E4 (M822) W/12 : Fuse block (J/B)
F4 (M823) B/2 : Fuse block (J/B)
F4 (M824) B/5 : Headlamp relay RH

F2 (M826) – : Diode-1 (A/T models)
G2 (M827) – : Diode-2 (A/T models)
F1 (M831) W/8 : NATS IMMU
E3 (M832) W/16 : Data link connector
G3 (M833) W/10 : Fuse block (J/B)
★ G3 (M834) GY/20 : Fuse block (J/B)
★ G3 (M835) GY/10 : Fuse block (J/B)
E1 (M836) Y/6 : To (B103)
★ E2 (M837) BR/24 : Combination meter
★ D2 (M838) W/24 : Combination meter
D1 (M839) BR/8 : To (M872) (Type 2)
D1 ★ (M840) W/1 : Navigation
C2 ★ (M841) W/88 : ECM
B2 ★ (M842) SMJ : To (F135)
D1 (M854) W/16 : Audio unit (Type 1)
D1 (M855) BR/8 : Audio unit (Type 1)

### Audio sub-harness (Type 2)

C2 (M871) W/16 : To (M766)
D1 (M872) BR/8 : To (M839)
D3 (M873) BR/8 : Audio unit
D3 (M874) W/16 : Audio unit
C2 (M875) W/12 : Audio unit
D3 (M876) W/16 : CD auto-changer (With CD auto-changer)

★ : 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.**

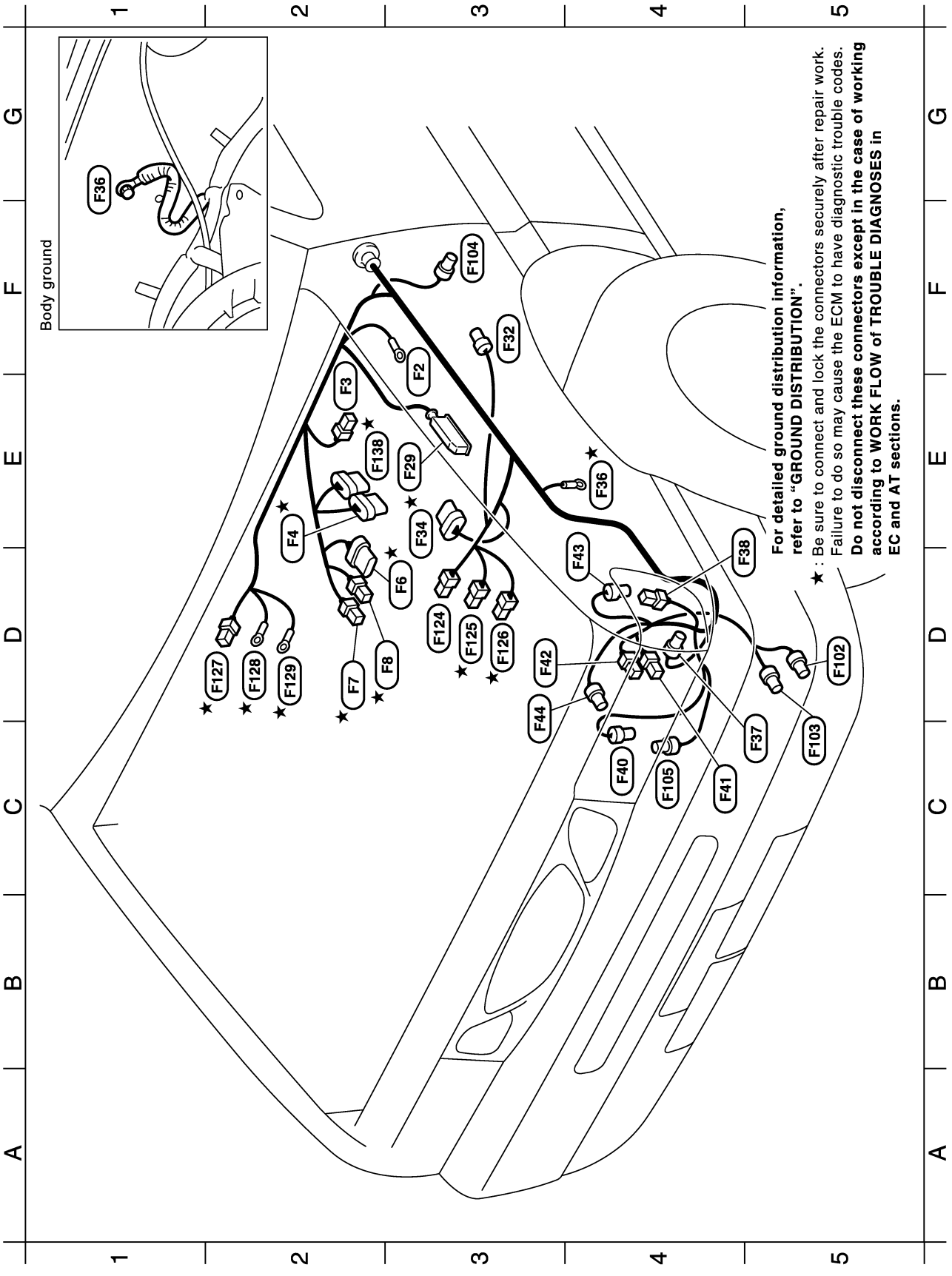
Diode-1 (M826), Diode-2 (M827)




YEL246D

## EFC Harness

### ENGINE COMPARTMENT • LHD TD27Ti ENGINE MODELS




YEL247D

## EFC Harness (Cont'd)

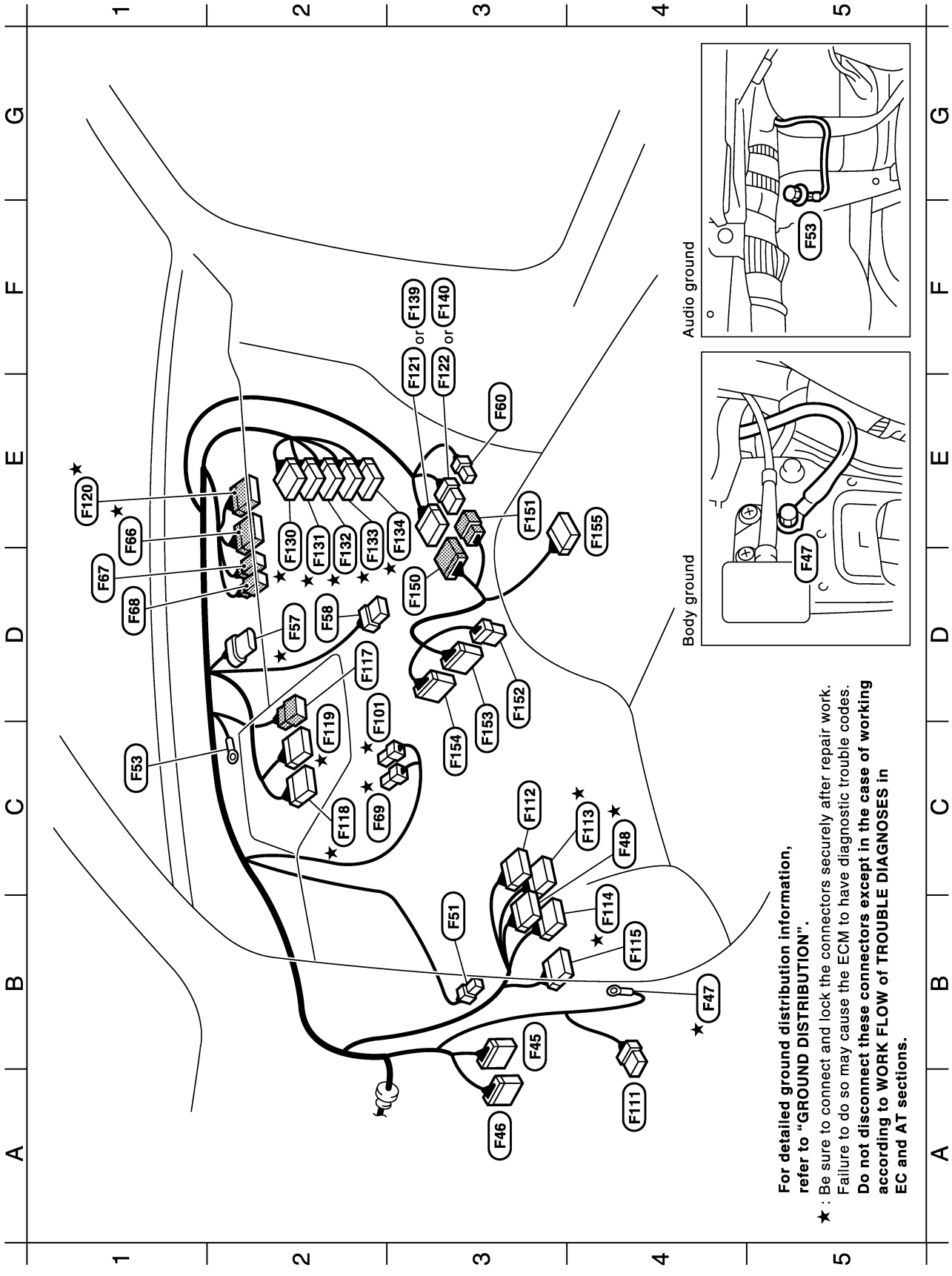
| | | | |
|---|---|---|---|
| F3 | F2 | – | : ABS ground (With ABS) |
| E2 | F3 | G/2 | : Brake fluid level switch |
| E2 ★ | F4 | B/8 | : To E147 |
| D3 ★ | F6 | /7 | : Electronic control fuel injection pump |
| D2 ★ | F7 | /3 | : TVC and SHUT off |
| D2 ★ | F8 | W/2 | : Needle lift sensor |
| E3 | F29 | B/31 | : ABS actuator and electric unit (Control unit) (With ABS) |
| F3 | F32 | BR/2 | : Front wheel sensor LH (With ABS) |
| E3 ★ | F34 | /5 | : Mass air flow sensor |
| E4 ★ | F36 | – | : Body ground |
| C5 | F37 | GY/2 | : Front turn signal lamp LH |
| D4 | F38 | W/2 | : Condenser |
| C4 | F40 | B/2 | : Cooling fan motor |
| C4 | F41 | B/2 | : Parking lamp LH |
| D3 | F42 | B/3 | : Headlamp LH |
| D4 | F43 | B/3 | : Headlamp aiming motor LH |
| D3 | F44 | L/4 | : Front fog lamp LH |
| D5 | F102 | B/2 | : Washer motor |
| C5 | F103 | B/4 | : Headlamp cleaner motor |
| F3 | F104 | /2 | : Side turn signal lamp LH |
| C4 | F105 | /2 | : Ambient temperature sensor |
| D3 | F124 | B/2 | : Throttle control solenoid valve |
| D3 ★ | F125 | B/2 | : EGR control solenoid valve A |
| D3 ★ | F126 | B/2 | : EGR control solenoid valve B |
| D2 ★ | F127 | /3 | : Crankshaft position sensor (TDC) |
| D2 ★ | F128 | – | : Engine ground |
| D2 ★ | F129 | – | : Engine ground |
| E2 ★ | F138 | GY/8 | : To E151 |

★: 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.**

YEL248D

## EFC Harness (Cont'd)

### PASSENGER COMPARTMENT • LHD TD27Ti ENGINE MODELS




**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.**

YEL249D

| | | | | |
|---|---|---|---|---|
| B3 | | F45 | W/16 | : To B73 |
| A3 | | F46 | W/16 | : To B72 |
| B4 | ★ | F47 | – | : Body ground |
| C4 | ★ | F48 | W/20 | : Fuse block (J/B) |
| B3 | | F51 | W/4 | : Headlamp aiming switch |
| C1 | | F53 | – | : Audio ground |
| D2 | ★ | F57 | /5 | : Accelerator work unit |
| D2 | | F58 | W/8 | : NATS IMMU |
| E3 | | F60 | W/1 | : Navigation |
| E1 | ★ | F66 | W/12 | : To M787 |
| D1 | | F67 | W/3 | : To M785 |
| D1 | | F68 | B/2 | : To M784 |
| C2 | ★ | F69 | B/2 | : Stop lamp switch |
| C2 | ★ | F101 | L/2 | : Brake switch |
| A4 | | F111 | B/5 | : Headlamp relay LH |
| C3 | | F112 | W/10 | : Fuse block (J/B) |
| C4 | ★ | F113 | GY/20 | : Fuse block (J/B) |
| B4 | ★ | F114 | GY/10 | : Fuse block (J/B) |
| B4 | | F115 | W/16 | : Data link connector |
| D2 | | F117 | Y/6 | : To B104 |
| C2 | ★ | F118 | BR/24 | : Combination meter |
| C2 | ★ | F119 | W/24 | : Combination meter |
| E1 | ★ | F120 | W/20 | : To M812 |
| F3 | | F121 | W/16 | : To F150 (Type 2) |
| F3 | | F122 | BR/8 | : To F151 (Type 2) |
| D2 | ★ | F130 | –/9 | : ECM |
| D2 | ★ | F131 | –/40 | : ECM |
| D2 | ★ | F132 | –/52 | : ECM |
| D2 | ★ | F133 | –/24 | : ECM |
| E3 | ★ | F134 | –/9 | : ECM |
| F3 | | F139 | W/16 | : Audio unit (Type 1) |
| F3 | | F140 | BR/8 | : Audio unit (Type 1) |

### Audio sub-harness (Type 2)

| | | | |
|---|---|---|---|
| D3 | F150 | W/16 | : To F121 |
| E3 | F151 | BR/8 | : To F122 |
| D3 | F152 | BR/8 | : Audio unit |
| C3 | F153 | W/16 | : Audio unit |
| C3 | F154 | W/12 | : Audio unit |
| E4 | F155 | W/16 | : CD auto-changer (With CD auto-changer) |

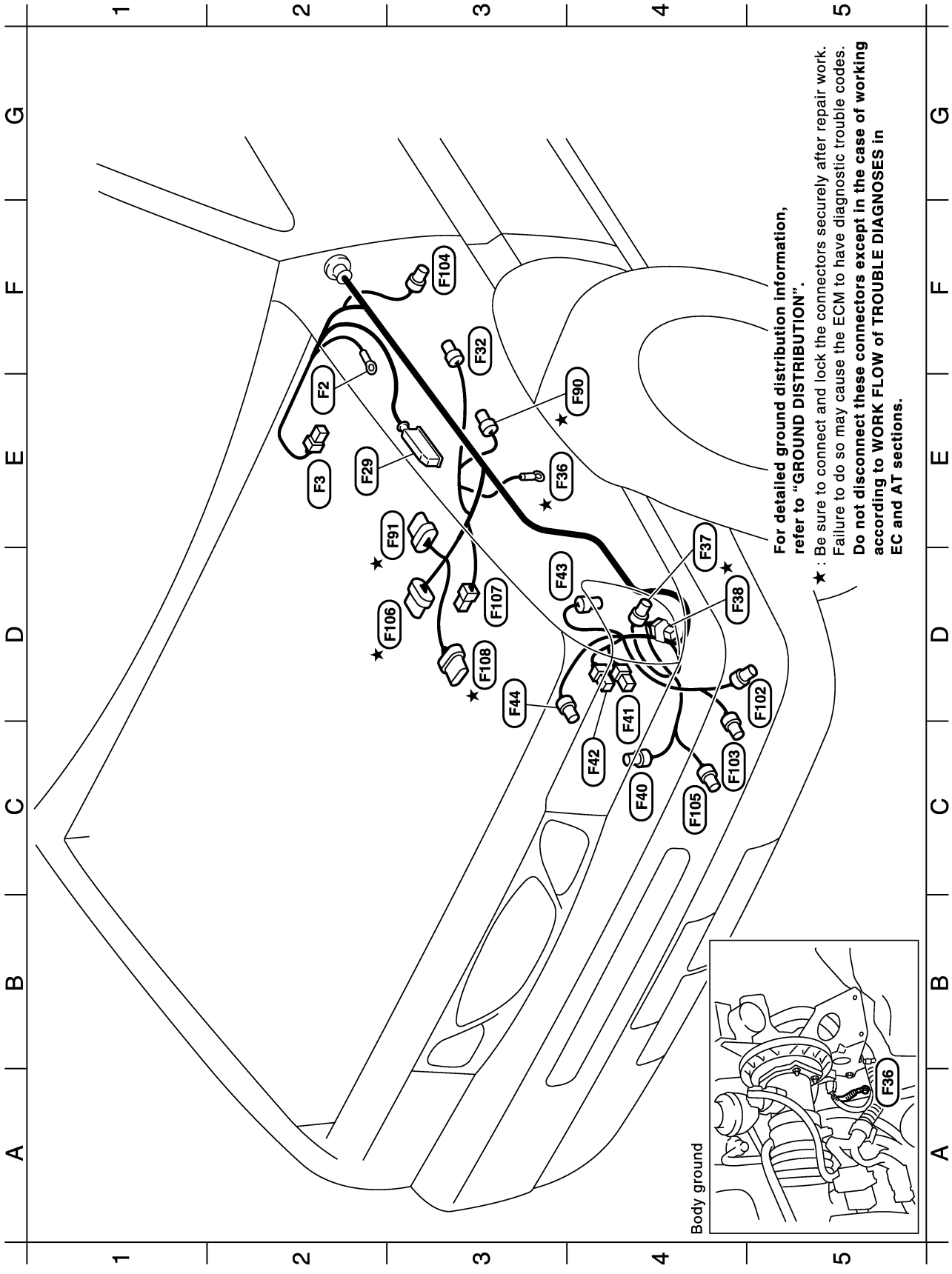
★ : Be sure to connect and lock the connectors securely after repair work.
Failure to do so may cause the ECM to have diagnostic trouble codes.
**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**



YEL250D

## EFC Harness (Cont'd)

### ENGINE COMPARTMENT • LHD ZD30DDTi ENGINE MODELS




YEL251D

## EFC Harness (Cont'd)

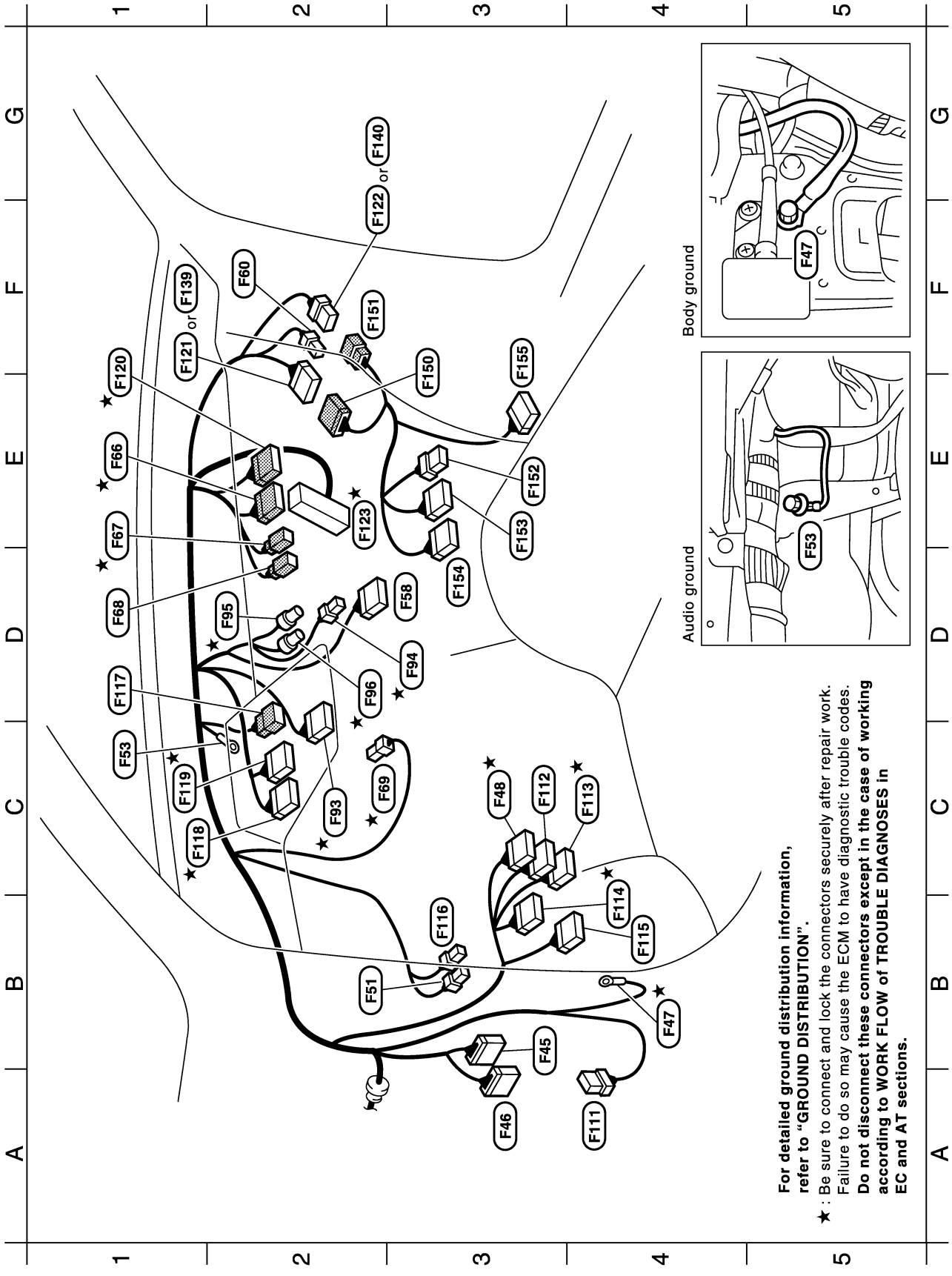
| | | | |
|---|---|---|---|
| E2 | F2 | – | : ABS ground |
| E2 | F3 | G/2 | : Brake fluid level switch |
| E2 | F29 | B/31 | : ABS actuator and electric unit (Control unit) |
| F3 | F32 | BR/2 | : Front wheel sensor LH |
| E3 ★ | F36 | – | : Body ground |
| D4 | F37 | GY/2 | : Front turn signal lamp LH |
| D4 ★ | F38 | W/2 | : Condenser (M/T models) |
| C4 | F40 | B/2 | : Cooling fan motor (M/T models) |
| C4 | F41 | B/2 | : Parking lamp LH |
| C4 | F42 | B/3 | : Headlamp LH |
| D3 | F43 | B/3 | : Headlamp aiming motor LH |
| D3 | F44 | L/4 | : Front fog lamp LH |
| E4 ★ | F90 | GY/2 | : Dropping resistor |
| E3 ★ | F91 | /5 | : Mass air flow sensor |
| D5 | F102 | B/2 | : Washer motor |
| C4 | F103 | B/4 | : Headlamp cleaner motor |
| F3 | F104 | /2 | : Side turn signal lamp LH |
| C4 | F105 | /2 | : Ambient temperature sensor |
| D3 ★ | F106 | GY/10 | : To E227 |
| D3 | F107 | /2 | : Variable nozzle turbocharger control solenoid valve |
| D3 ★ | F108 | SMJ | : To E225 |

★: 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.**

YEL252D

## EFC Harness (Cont'd)

### PASSENGER COMPARTMENT • LHD ZD30DDTi ENGINE MODELS




YEL253D

## EFC Harness (Cont'd)

B3 F45 W/16 : To B73
A3 F46 W/16 : To B72
B4 ★ F47 – : Body ground
C3 ★ F48 W/20 : Fuse block (J/B)
B2 F51 W/4 : Headlamp aiming switch
C1 F53 – : Audio ground
D3 F58 W/8 : NATS IMMU
F2 F60 W/1 : Navigation
E1 ★ F66 W/12 : To M787
E1 ★ F67 W/3 : To M785
D1 F68 B/2 : To M784
C2 ★ F69 B/2 : Stop lamp switch
C2 ★ F93 W/20 : To M788
D3 ★ F94 W/3 : Accelerator switch (F/C)
D2 ★ F95 GY/3 : Accelerator position switch
D2 ★ F96 BR/3 : Accelerator position sensor
A4 F111 B/5 : Headlamp relay LH
C3 F112 W/10 : Fuse block (J/B)
C4 ★ F113 GY/20 : Fuse block (J/B)
B4 ★ F114 GY/10 : Fuse block (J/B)
B4 F115 W/16 : Data link connector
B3 F116 W/4 : Heat up switch
D1 F117 Y/6 : To B104
C1 ★ F118 BR/24 : Combination meter
C1 ★ F119 W/24 : Combination meter
E1 ★ F120 W/20 : To M812
F1 F121 W/16 : To F150 (Type 2)
F2 BR/8 : To F151 (Type 2)
E2 ★ F123 W/88 : ECM
F1 F139 W/16 : Audio unit (Type 1)
G2 F140 BR/8 : Audio unit (Type 1)

### Audio sub-harness (Type 2)

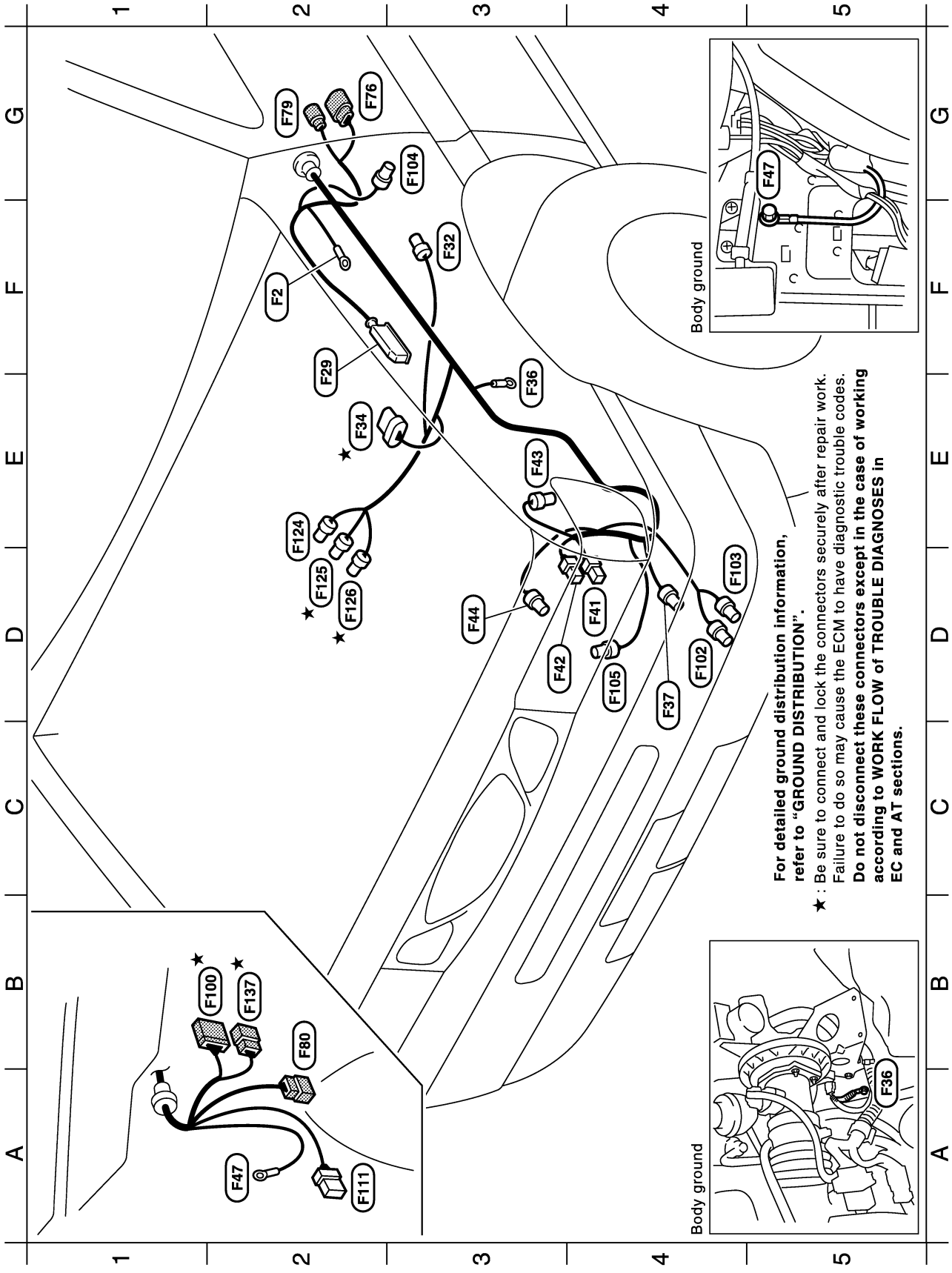
F3 F150 W/16 : To F121
F2 F151 BR/8 : To F122
E3 F152 BR/8 : Audio unit
E3 F153 W/16 : Audio unit
D3 F154 W/12 : Audio unit
F3 F155 W/16 : CD auto-changer (With CD auto-changer)

★: 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.**

YEL254D

## EFC Harness (Cont'd)

### EFC HARNESS ENGINE COMPARTMENT • RHD TD27Ti ENGINE MODELS




YEL255D

## EFC Harness (Cont'd)

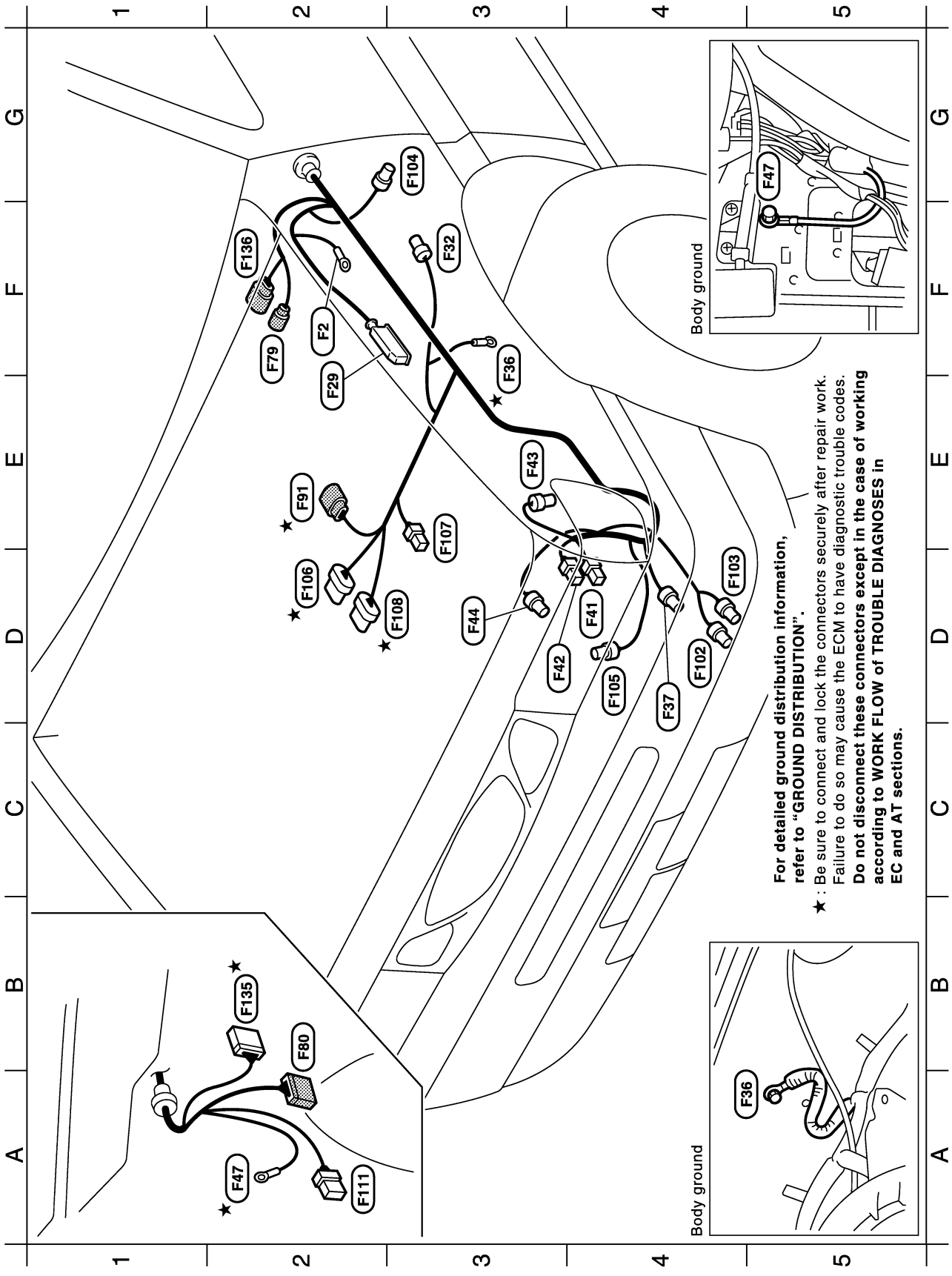
| | | | |
|---|---|---|---|
| F2 | F2 | – | : ABS ground (With ABS) |
| F2 | F29 | B/31 | : ABS actuator and electric unit (Control unit) (With ABS) |
| F3 | F32 | BR/2 | : Front wheel sensor LH |
| E2 ★ | F34 | /5 | : Mass air flow sensor |
| E3 | F36 | – | : Body ground |
| D4 | F37 | GY/2 | : Front turn signal lamp LH |
| D4 | F41 | B/2 | : Parking lamp LH |
| D3 | F42 | B/3 | : Headlamp LH |
| E3 | F43 | B/3 | : Headlamp aiming motor LH |
| D3 | F44 | /2 | : Front fog lamp LH |
| A2 | F47 | – | : Body ground |
| G2 | F76 | GY/10 | : To M743 (With ABS) |
| G2 | F79 | GY/2 | : To M744 (With ABS) |
| B2 | F80 | W/10 | : To B67 (With ABS) |
| B2 ★ | F100 | W/16 | : To M775 |
| D4 | F102 | B/2 | : Washer motor |
| D4 | F103 | B/4 | : Headlamp cleaner motor |
| G3 | F104 | /2 | : Side turn signal lamp LH |
| D4 | F105 | /2 | : Ambient temperature sensor |
| A2 | F111 | B/5 | : Headlamp relay LH |
| E2 | F124 | B/2 | : Throttle control solenoid valve |
| D2 ★ | F125 | B/2 | : EGR control solenoid valve A |
| D2 ★ | F126 | B/2 | : EGR control solenoid valve B |
| B2 ★ | F137 | W/6 | : To M853 |

★ : 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.**

YEL256D

## EFC Harness (Cont'd)

### EFC HARNESS ENGINE COMPARTMENT • RHD ZD30DDTi ENGINE MODELS




YEL257D

## EFC Harness (Cont'd)

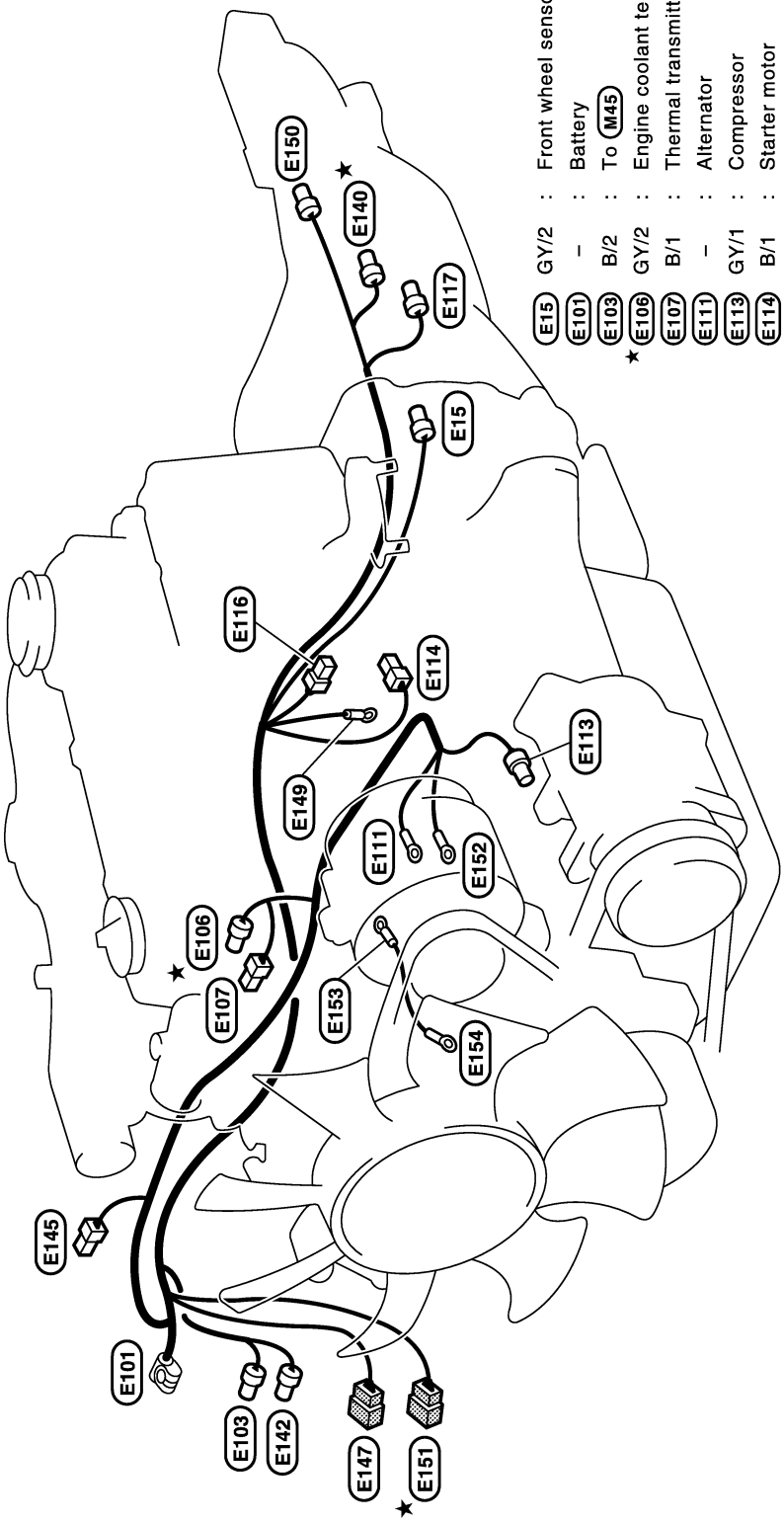
| | | | |
|---|---|---|---|
| F2 | F2 | – | : ABS ground |
| E2 | F29 | /31 | : ABS actuator and electric unit (Control unit) |
| F3 | F32 | BR/2 | : Front wheel sensor LH |
| F3 | F36 | – | : Body ground |
| D4 | F37 | GY/2 | : Front turn signal lamp LH |
| D4 | F41 | B/2 | : Parking lamp LH |
| D3 | F42 | B/3 | : Headlamp LH |
| E3 | F43 | B/3 | : Headlamp aiming motor LH |
| D3 | F44 | /2 | : Front fog lamp LH |
| A2 | F47 | – | : Body ground |
| F2 | F79 | GY/2 | : To M744 |
| B2 | F80 | W/10 | : To B67 |
| E2 | F91 | /5 | : Mass air flow sensor |
| D4 | F102 | B/2 | : Washer motor |
| D4 | F103 | B/4 | : Headlamp cleaner motor |
| G3 | F104 | /2 | : Side turn signal lamp LH |
| D4 | F105 | /2 | : Ambient temperature sensor |
| D2 | F106 | GY/10 | : To E227 |
| E3 | F107 | /2 | : Variable nozzle turbocharger control solenoid valve |
| D3 | F108 | SMJ | : To E225 |
| A2 | F111 | B/5 | : Headlamp relay LH |
| B2 | F135 | SMJ | : To M842 |
| F2 | F136 | GY/8 | : M829 |

★: 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.**

YEL258D

## Engine Harness

### TD27Ti ENGINE MODELS




E15 GY/2 : Front wheel sensor RH
E101 – : Battery
E103 B/2 : To M45
★ E106 GY/2 : Engine coolant temperature sensor
E107 B/1 : Thermal transmitter
E111 – : Alternator
E113 GY/1 : Compressor
E114 B/1 : Starter motor
E116 B/1 : Oil pressure switch
E117 GY/2 : Back-up lamp switch
★ E140 BR/3 : Vehicle speed sensor
E142 B/1 : To M740
E145 L/2 : Glow plug
E147 B/8 : To M745 (RHD models)
To F4 (LHD models)
E149 – : Starter motor
E150 GY/2 : 4WD switch
★ E151 GY/8 : To M843 (RHD models)
To F138 (LHD models)
E152 – : Alternator
E153 – : Alternator
E154 – : Body ground

**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.**

YEL259D

## Engine Harness (Cont'd)

### ZD30DDTi ENGINE MODELS

**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.**







| | | | |
|---|---|---|---|
| ★ E201 | GY/9 | : To M807 | |
| E202 | B/2 | : To M45 | |
| E203 | – | : Body ground | |
| E204 | B/2 | : Intake air control valve control solenoid valve | |
| E205 | BR/2 | : Swirl control valve control solenoid valve | |
| E206 | – | : Battery (+) | |
| E207 | B/1 | : Starter motor | |
| E208 | – | : Starter motor | |
| ★ E209 | BR/3 | : Vehicle speed sensor | |
| E210 | GY/2 | : Back-up lamp switch (M/T models) | |
| E211 | GY/2 | : Front wheel sensor RH | |
| E212 | GY/2 | : 4WD switch | |
| E213 | B/2 | : Park/neutral position switch (M/T models) Transfer neutral position switch (A/Tmodels) | |
| E214 | – | : Alternator | |
| E215 | – | : Alternator | |
| E216 | GY/2 | : Alternator | |
| E217 | B/1 | : Oil pressure switch | |
| ★ E218 | GY/6 | : EGR volume control valve | |
| ★ E219 | GY/2 | : Engine coolant temperature sensor | |
| ★ E220 | GY/6 | : To E231 | |
| E221 | – | : Engine ground | |
| ★ E222 | – | : Engine ground | |
| ★ E223 | GY/3 | : Charge air pressure sensor | |
| ★ E224 | – | : Engine ground | |
| ★ E225 | SMJ | : To F108 | |
| E226 | B/1 | : Compressor | |
| ★ E227 | GY/10 | : To F106 | |
| E228 | B/1 | : Thermal transmitter | |
| ★ E229 | B/3 | : Crankshaft position sensor (TDC) | |
| E230 | B/1 | : To E241 | |

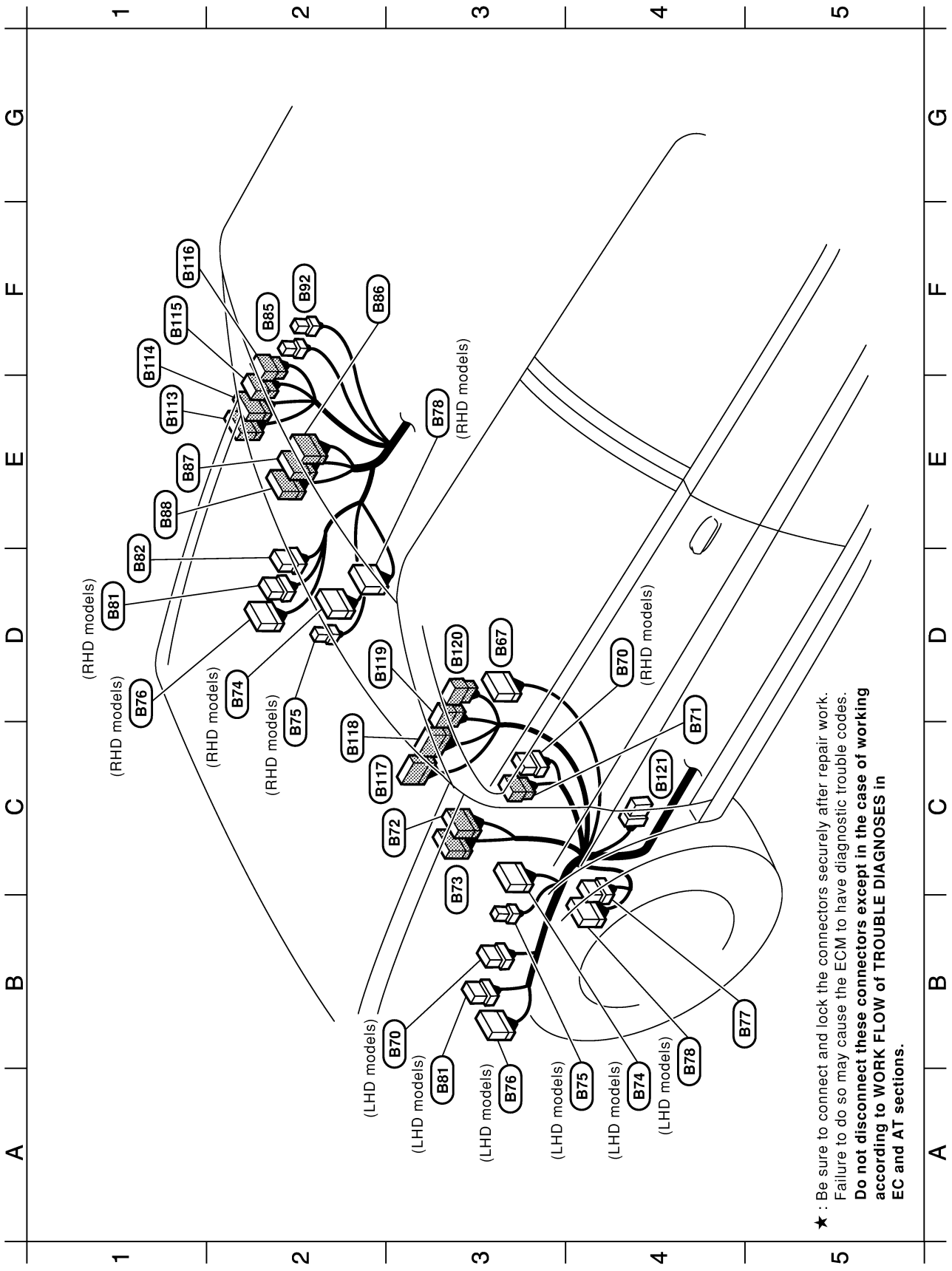
**Glow sub-harness**

| | | |
|---|---|---|
| E241 | B/1 | : To E230 |
| E242 | – | : Glow plug |
| ★ E231 | GY/6 | : To E220 |
| ★ E232 | /9 | : Electronic control fuel injection pump |

YEL260D

## Body Harness

### HARDTOP MODELS (Front side)




YEL261D

## Body Harness (Cont'd)

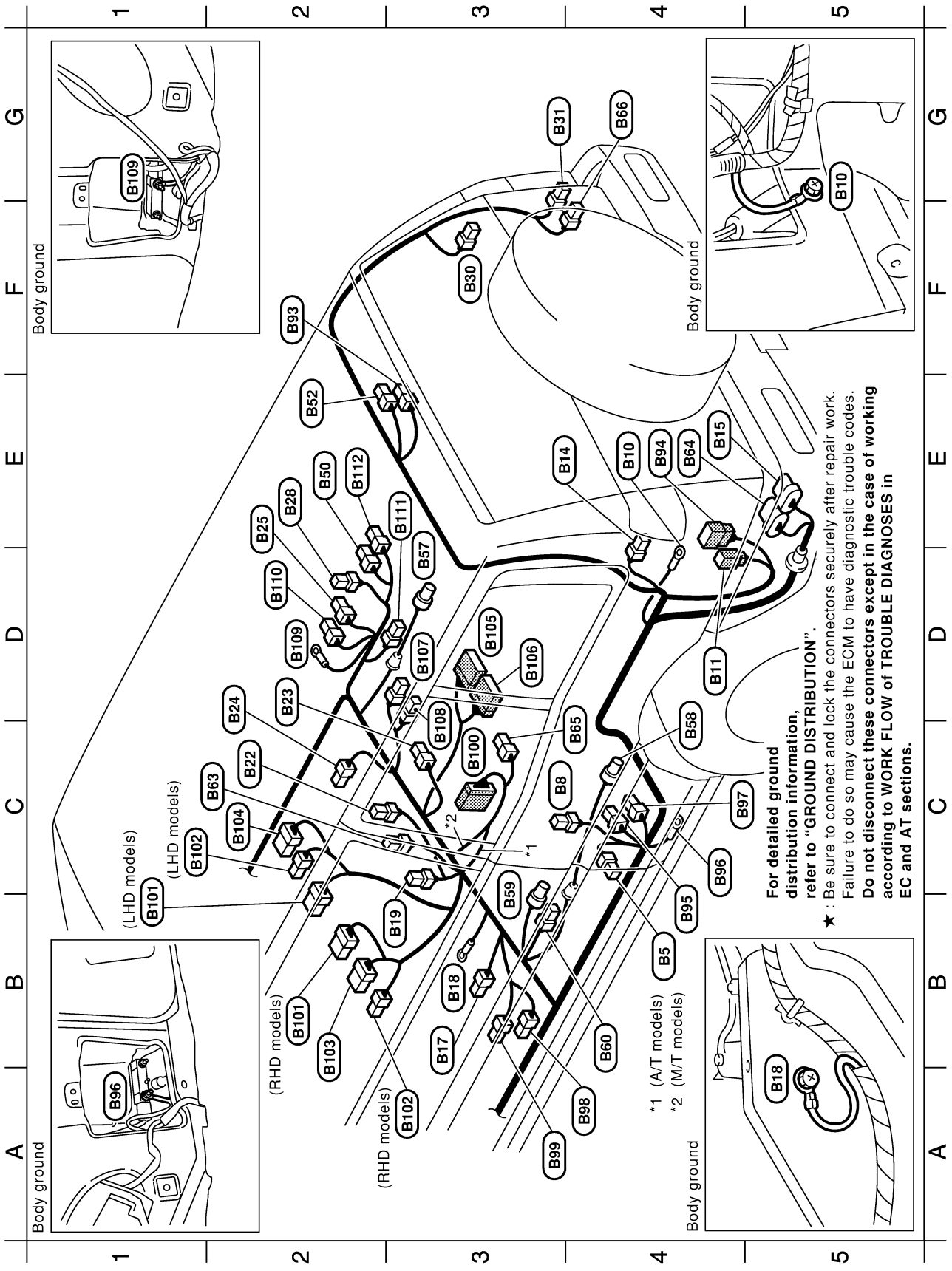
| | | | | |
|---|---|---|---|---|
| D3 | B67 | W/10 | : To F80 | (RHD models) |
| D4, B3 | B70 | W/6 | : To R13 | |
| C4 | B71 | W/6 | : To R14 | (RHD models) |
| C3 | B72 | W/16 | : To F46 | (LHD models) |
| C3 | B73 | W/16 | : To F45 | (LHD models) |
| D2, A4 | B74 | BR/16 | : Fuse block (J/B) | |
| C2, A4 | B75 | B/2 | : Fuse block (J/B) | |
| D1, A3 | B76 | W/20 | : Time control unit | |
| B4 | B77 | W/6 | : Ultrasonic cancel switch (With ultrasonic for LHD models) | |
| E3, A4 | B78 | W/10 | : Door mirror switch (With mirror control system) | |
| D1, A3 | B81 | W/8 | : Time control unit | |
| D1 | B82 | W/6 | : Fuse block (J/B) (RHD models) | |
| F2 | B85 | L/4 | : Theft warning horn relay (With theft warning system) | |
| F2 | B86 | W/16 | : To M751 (RHD models) | |
| E1 | B87 | W/12 | : To M752 (RHD models) | |
| E1 | B88 | W/10 | : To M783 (LHD models) | |
| F2 | B92 | L/4 | : Power socket relay | |
| E1 | B113 | W/12 | : To D64 (RHD models) | |
| F1 | B114 | W/12 | : To D65 (RHD models) | |
| F1 | B115 | W/8 | : To D66 (LHD models) | |
| F1 | B116 | W/8 | : To D67 (LHD models) | |
| C2 | B117 | W/12 | : To D44 (LHD models) | |
| C2 | B118 | W/12 | : To D43 (LHD models) | |
| D2 | B119 | W/8 | : To D46 (RHD models) | |
| D3 | B120 | W/8 | : To D45 (RHD models) | |
| C4 | B121 | B/5 | : Door lock switch relay | |

★ : 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.**

YEL263D

## Body Harness (Cont'd)

### HARDTOP MODELS (Rear side)




YEL262D

## Body Harness (Cont'd)

B4 (B5) BR/1 : Front door switch LH
C3 (B8) B/2 : Rear speaker LH
E4 (B10) – : Body ground
D4 (B11) W/2 : To (T1)
E3 (B14) W/2 : Stop lamp LH
E4 (B15) B/6 : To (C2)
B3 (B17) W/3 : Heated seat LH (With seat heater)
B3 (B18) – : Body ground
B3 (B19) L/4 : Heated seat switch LH (With seat heater)
C2 (B22) W/4 : Heated seat switch RH (With seat heater)
D2 (B23) B/1 : Parking brake switch
D2 (B24) W/3 : Heated seat RH (With seat heater)
E2 (B25) BR/1 : Front door switch RH
E2 (B28) B/2 : Rear speaker RH
F3 (B30) W/2 : Stop lamp RH
G3 (B31) BR/1 : Back door switch
E2 (B50) B/1 : Theft warning horn (With theft warning system)
E2 (B52) B/1 : Rear interior room lamp
D3 (B57) BR/2 : Rear wheel sensor RH (With ABS)
C4 (B58) BR/2 : Rear wheel sensor LH (With ABS)
B3 (B59) BR/2 : G sensor (With ABS)
B4 (B60) GY/2 : G sensor (With ABS)
C2 (B63) B/4 : A/T control device (Overdrive control switch) (A/T models)
E4 (B64) B/8 : To (C10)
C4 (B65) B/2 : Front power socket
G4 (B66) B/2 : Rear power socket
F2 (B93) B/1 : Rear interior room lamp
E4 (B94) W/8 : To (T11)
B4 (B95) Y/2 : Front LH seat belt pre-tensioner
C4 (B96) – : Body ground (With side air bag)
C4 (B97) Y/2 : Satellite sensor LH (With side air bag)
A4 (B98) –/2 : Front side air bag module LH (With side air bag)
A3 (B99) –/1 : Front side air bag module LH (With side air bag)
C3 (B100) Y/12 : Air bag diagnosis sensor unit
B2 (B101) Y/6 : Combination switch (Spiral cable)
C1, A3 (B102) Y/2 : Front passenger air bag module
B2 (B103) Y/6 : To (M836) (RHD models)
C2 (B104) Y/6 : To (F117) (LHD models)
D3 (B105) Y/12 : Air bag diagnosis sensor unit
D3 (B106) Y/20 : Air bag diagnosis sensor unit
D3 (B107) –/1 : Front side air bag module RH (With side air bag)

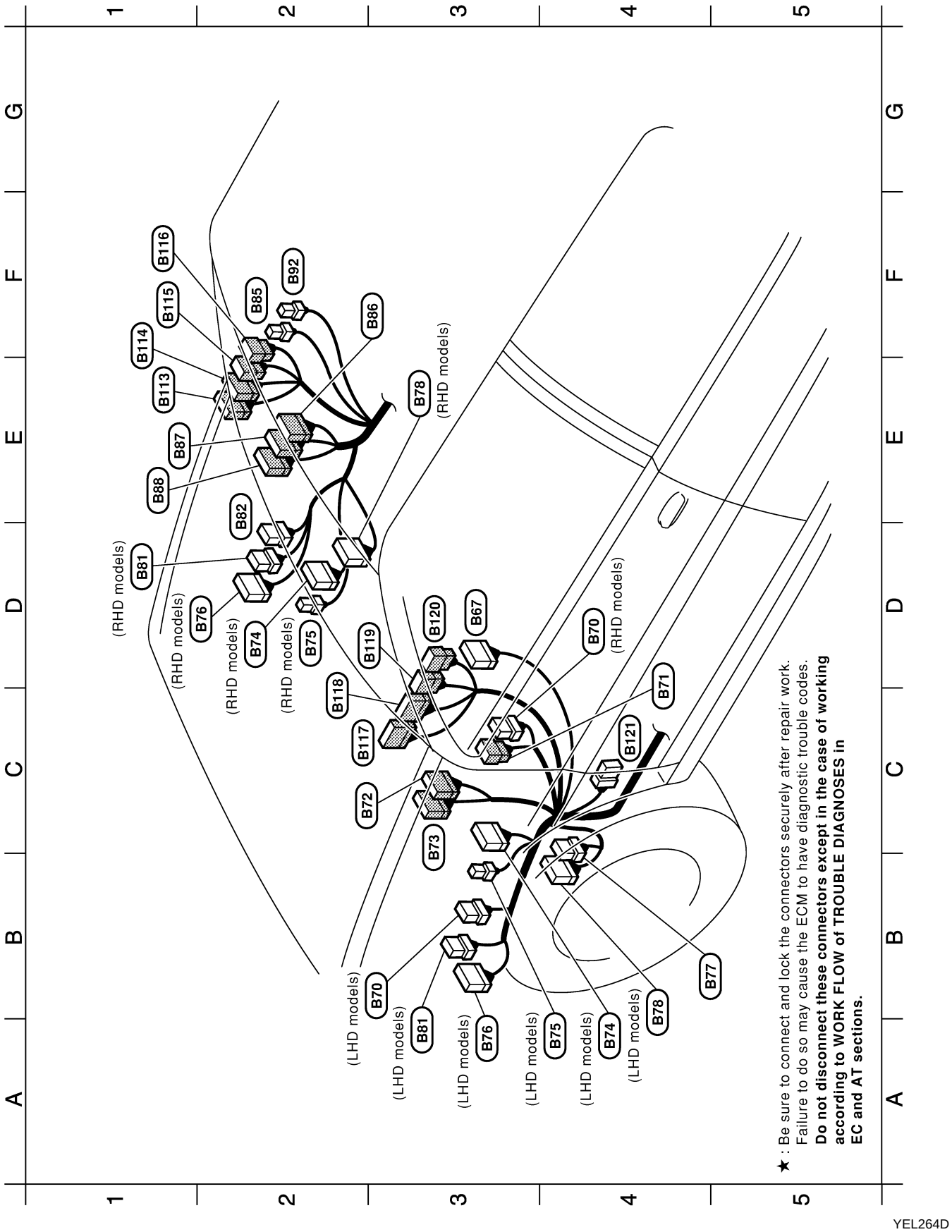
C3 (B108) –/2 : Front side air bag module RH (With side air bag)
D2 (B109) – : Body ground (With side air bag)
D2 (B110) Y/2 : Satellite sensor RH (With side air bag)
E3 (B111) Y/2 : Front RH seat belt pre-tensioner
E2 (B112) B/1 : Theft warning horn (With theft warning system)

★ : 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.**

YEL282D

## Body Harness (Cont'd)

### WAGON MODELS (Front side)




YEL264D

## Body Harness (Cont'd)

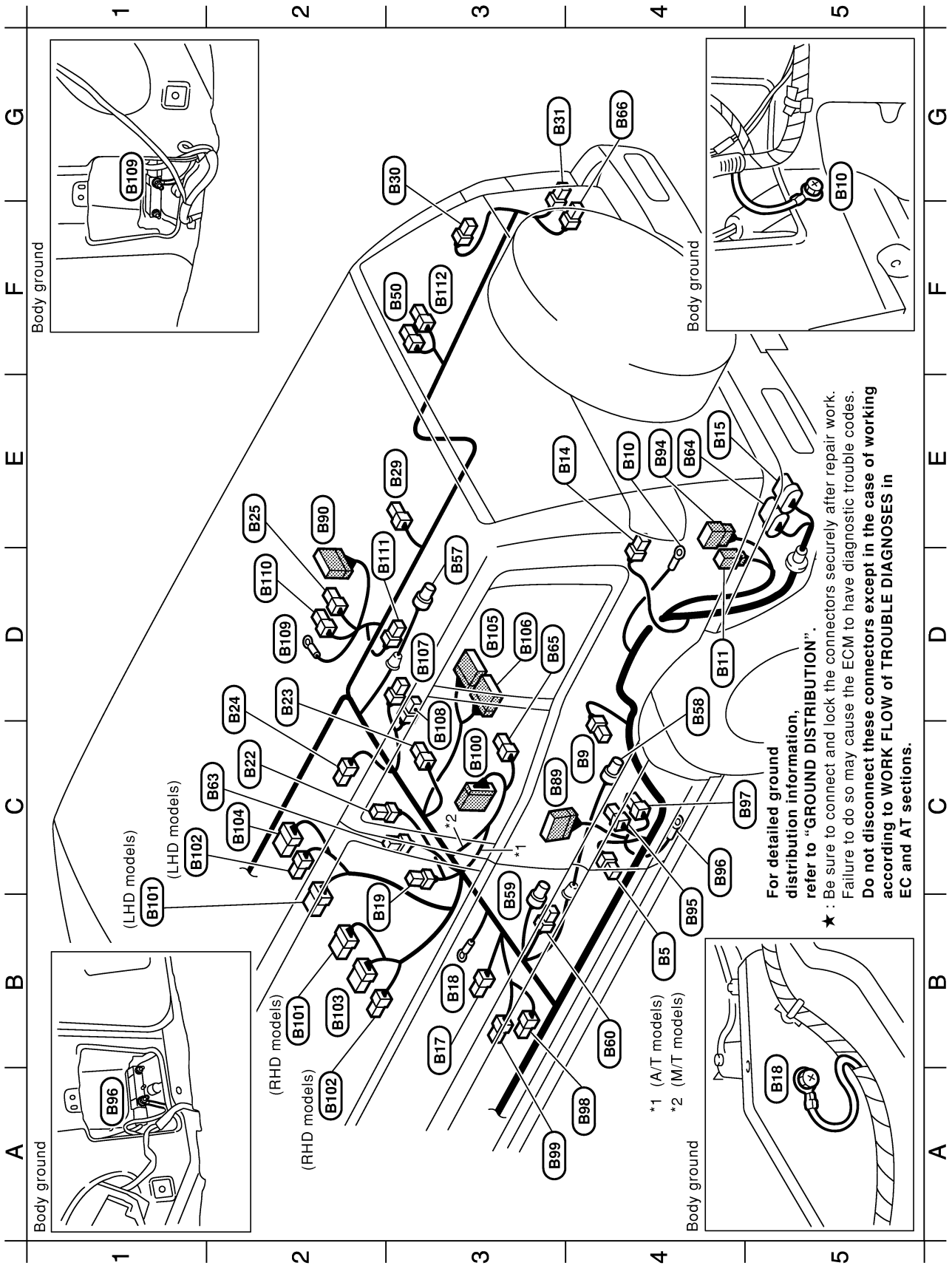
| | | | | |
|---|---|---|---|---|
| D3 | B67 | W/10 | : To F80 | (RHD models) |
| D4, B3 | B70 | W/6 | : To R13 | |
| D4 | B71 | W/6 | : To R14 | (RHD models) |
| C2 | B72 | W/16 | : To F46 | (LHD models) |
| C3 | B73 | W/16 | : To F45 | (LHD models) |
| D2, A4 | B74 | BR/16 | : Fuse block (J/B) | |
| D2, A4 | B75 | B/2 | : Fuse block (J/B) | |
| D2, A3 | B76 | W/20 | : Time control unit | |
| B4 | B77 | W/6 | : Ultrasonic cancel switch (With ultrasonic for LHD models) | |
| E3, B4 | B78 | W/10 | : Door mirror switch (With mirror control system) | |
| D1, A3 | B81 | W/8 | : Time control unit | |
| E2 | B82 | W/6 | : Fuse block (J/B) (RHD models) | |
| F2 | B85 | L/4 | : Theft warning horn relay (With theft warning system) | |
| F3 | B86 | W/16 | : To M751 | (RHD models) |
| E1 | B87 | W/12 | : To M752 | (RHD models) |
| E1 | B88 | W/10 | : To M783 | (LHD models) |
| F2 | B92 | L/4 | : Power socket relay | |
| E1 | B113 | W/12 | : To D64 | (RHD models) |
| F1 | B114 | W/12 | : To D65 | (RHD models) |
| F1 | B115 | W/8 | : To D66 | (LHD models) |
| F1 | B116 | W/8 | : To D67 | (LHD models) |
| C2 | B117 | W/12 | : To D44 | (LHD models) |
| C2 | B118 | W/12 | : To D43 | (LHD models) |
| D2 | B119 | W/8 | : To D46 | (RHD models) |
| D3 | B120 | W/8 | : To D45 | (RHD models) |
| C4 | B121 | B/5 | : Door lock switch relay | |

★: 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.**

YEL266D

## Body Harness (Cont'd)

### WAGON MODELS (Rear side)




YEL265D

## Body Harness (Cont'd)

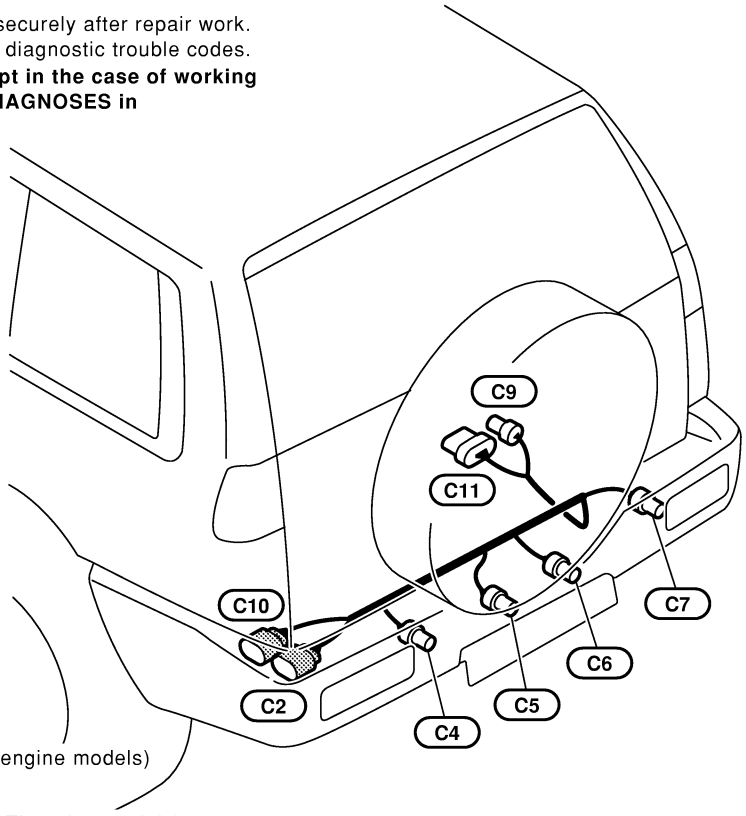
| | | | |
|---|---|---|---|
| B4 | B5 | BR/1 | : Front door switch LH |
| C4 | B9 | BR/1 | : Rear door switch LH |
| E4 | B10 | – | : Body ground |
| D4 | B11 | W/2 | : To T1 |
| E3 | B14 | W/2 | : Stop lamp LH |
| E4 | B15 | B/6 | : To C2 |
| B3 | B17 | W/3 | : Heated seat LH (With seat heater) |
| B3 | B18 | – | : Body ground |
| B3 | B19 | L/4 | : Heated seat switch LH (With seat heater) |
| C2 | B22 | W/4 | : Heated seat switch RH (With seat heater) |
| D2 | B23 | B/1 | : Parking brake switch |
| D2 | B24 | W/3 | : Heated seat RH (With seat heater) |
| E2 | B25 | BR/1 | : Front door switch RH |
| E3 | B29 | BR/1 | : Rear door switch RH |
| G3 | B30 | W/2 | : Stop lamp RH |
| G3 | B31 | BR/1 | : Back door switch |
| F3 | B50 | B/1 | : Theft warning horn (With theft warning system) |
| D3 | B57 | BR/2 | : Rear wheel sensor RH (With ABS) |
| D4 | B58 | BR/2 | : Rear wheel sensor LH (With ABS) |
| B3 | B59 | BR/2 | : G sensor (With ABS) |
| B4 | B60 | GY/2 | : G sensor (With ABS) |
| C2 | B63 | B/4 | : A/T control device (Overdrive control switch) (A/T models) |
| E4 | B64 | B/8 | : To C10 |
| D65 | B65 | B/2 | : Front power socket |
| G4 | B66 | B/2 | : Rear power socket |
| C3 | B89 | W/10 | : To D57 (With super lock) |
| | | W/10 | : To D59 (Without super lock) |
| E2 | B90 | W/10 | : To D77 (With super lock) |
| | | W/10 | : To D79 (Without super lock) |
| E4 | B94 | W/8 | : To T11 |
| B4 | B95 | Y/2 | : Front LH seat belt pre-tensioner |
| C4 | B96 | – | : Body ground (With side air bag) |
| C4 | B97 | Y/2 | : Satellite sensor LH (With side air bag) |
| A4 | B98 | –/2 | : Front side air bag module LH (With side air bag) |
| A3 | B99 | –/1 | : Front side air bag module LH (With side air bag) |
| C3 | B100 | Y/12 | : Air bag diagnosis sensor unit |
| B1, B2 | B101 | Y/6 | : Combination switch (Spiral cable) |
| C1, A2 | B102 | Y/2 | : Front passenger air bag module |
| B2 | B103 | Y/6 | : To M836 (RHD models) |
| C2 | B104 | Y/6 | : To F117 (LHD models) |
| D3 | B105 | Y/12 | : Air bag diagnosis sensor unit |
| D3 | B106 | Y/20 | : Air bag diagnosis sensor unit |
| D3 | B107 | –/1 | : Front side air bag module RH (With side air bag) |
| C3 | B108 | –/2 | : Front side air bag module RH (With side air bag) |
| D2 | B109 | – | : Body ground (With side air bag) |
| D2 | B110 | Y/2 | : Satellite sensor RH (With side air bag) |
| D2 | B111 | Y/2 | : Front RH seat belt pre-tensioner |
| F3 | B112 | B/1 | : Theft warning horn (With theft warning system) |

★: 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.**

YEL283D

## Chassis Harness

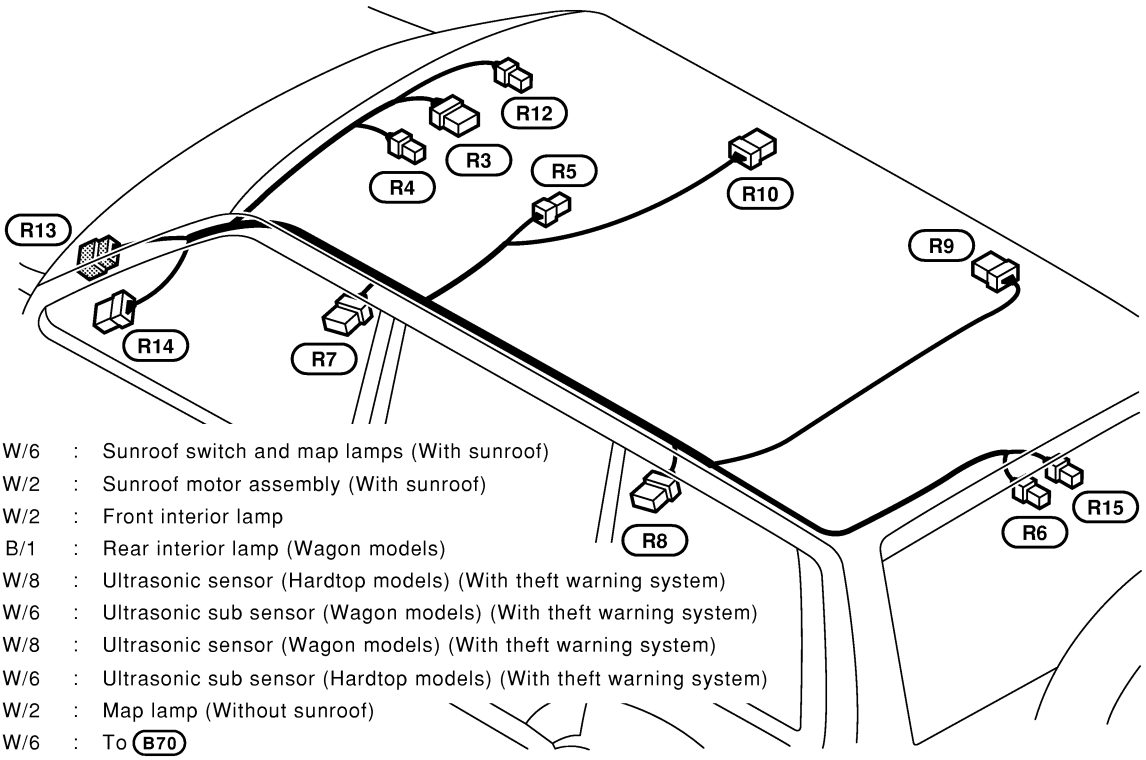
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.
**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**




| | | | |
|---|---|---|---|
| C2 | B/6 | : | To B15 |
| C4 | GY/4 | : | Rear combination lamp LH |
| C5 | GY/2 | : | License plate lamp LH |
| C6 | GY/2 | : | License plate lamp RH |
| C7 | GY/4 | : | Rear combination lamp RH |
| C9 | GY/3 | : | Fuel level sensor unit (TD27Ti engine models) |
| C10 | B/8 | : | To B64 |
| C11 | GY/5 | : | Fuel level sensor unit (ZD30DDTi engine models) |

YEL267D

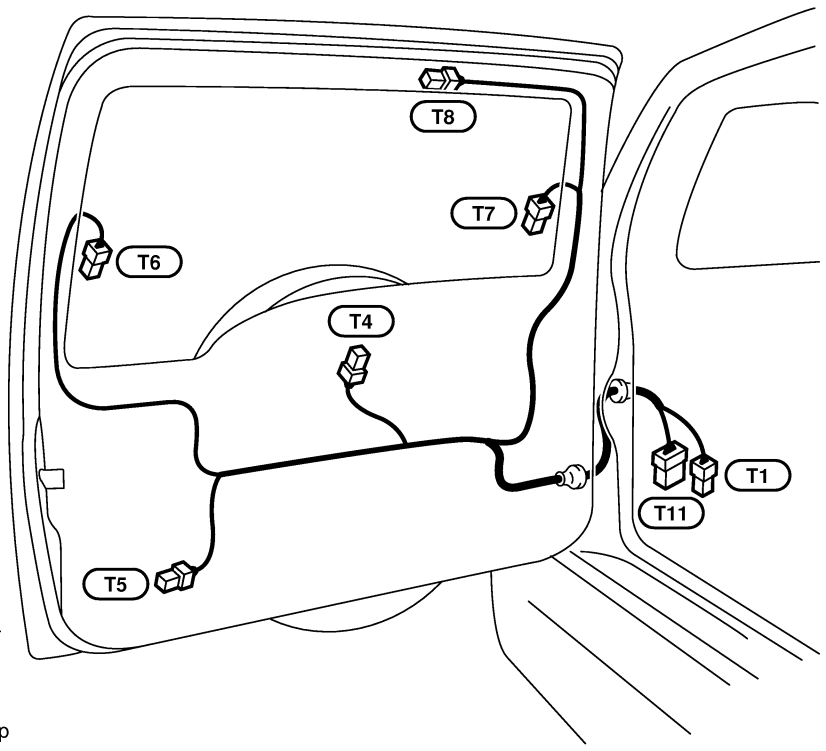
## Room Lamp Harness




| | | | |
|---|---|---|---|
| R3 | W/6 | : | Sunroof switch and map lamps (With sunroof) |
| R4 | W/2 | : | Sunroof motor assembly (With sunroof) |
| R5 | W/2 | : | Front interior lamp |
| R6 | B/1 | : | Rear interior lamp (Wagon models) |
| R7 | W/8 | : | Ultrasonic sensor (Hardtop models) (With theft warning system) |
| R8 | W/6 | : | Ultrasonic sub sensor (Wagon models) (With theft warning system) |
| R9 | W/8 | : | Ultrasonic sensor (Wagon models) (With theft warning system) |
| R10 | W/6 | : | Ultrasonic sub sensor (Hardtop models) (With theft warning system) |
| R12 | W/2 | : | Map lamp (Without sunroof) |
| R13 | W/6 | : | To B70 |
| R14 | W/6 | : | Fuse block (J/B) (LHD models)<br>To B71 (RHD models) |
| R15 | B/1 | : | Rear interior lamp (Wagon models) |

YEL268D

## Tailgate Harness



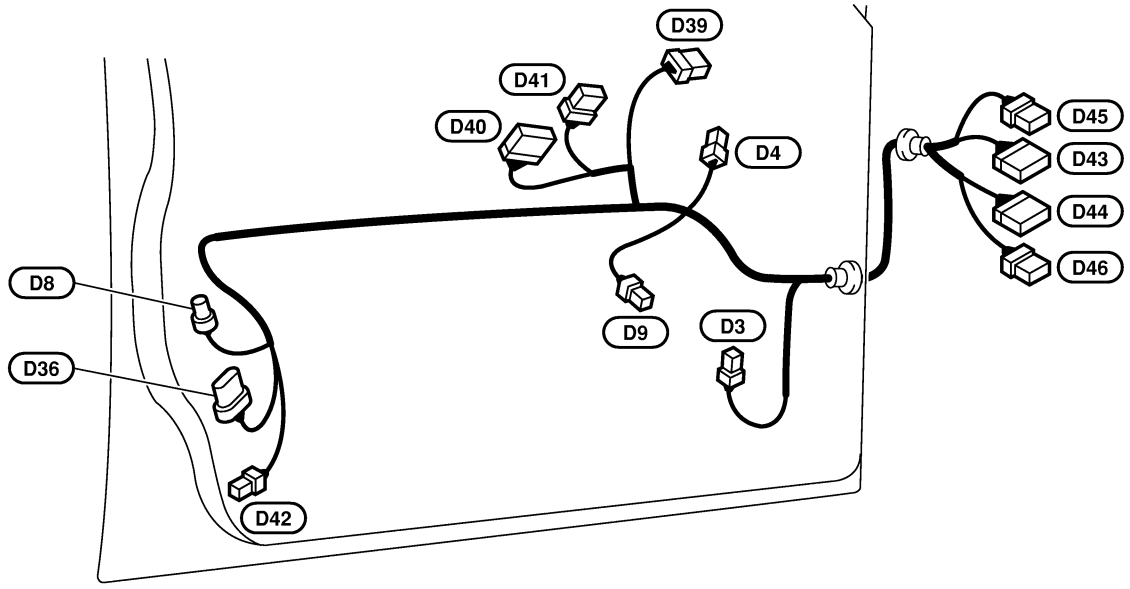

| | | | |
|---|---|---|---|
| T1 | W/2 | : | To B11 |
| T4 | W4 | : | Rear wiper motor |
| T5 | W/4 | : | Back door lock actuator |
| T6 | B/1 | : | Rear window defogger |
| T7 | B/1 | : | Rear window defogger |
| T8 | W/2 | : | High-mounted stop lamp |
| T11 | W/8 | : | To B94 |

YEL269D

## Door Harness (LH side)

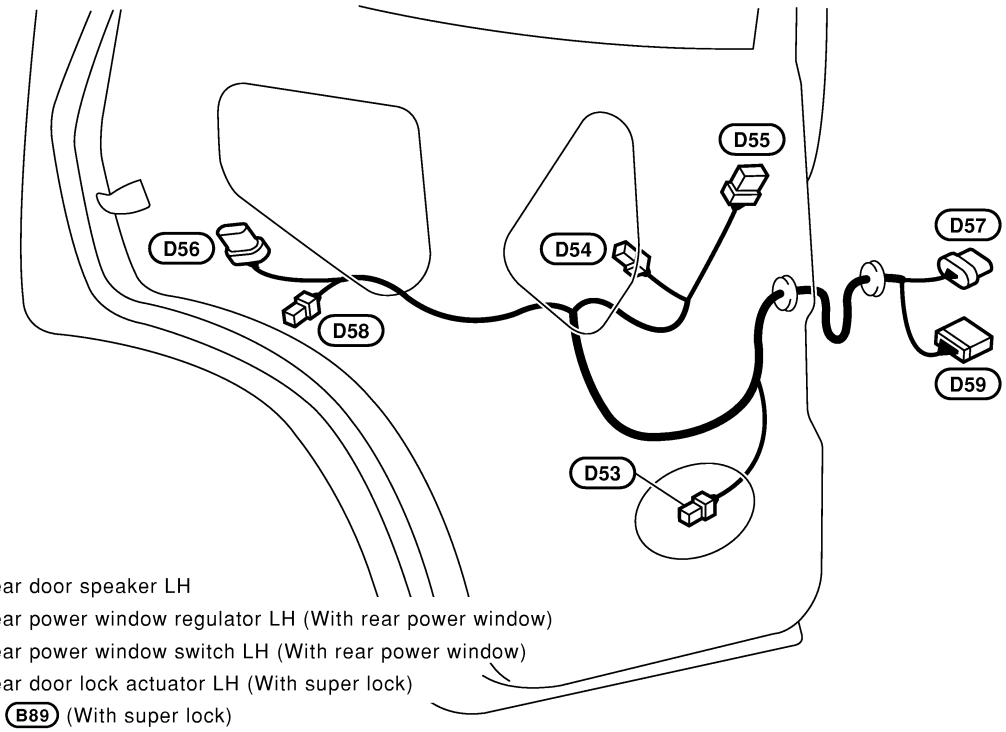
### FRONT

- D3 B/2 : Front door speaker LH
- D4 /2 : Front power window regulator LH
- D8 B/2 : Key cylinder switch LH (With key cylinder switch)
- D9 B/2 : Tweeter LH (With tweeter)
- D36 B/6 : Front door lock actuator LH (With super lock)
- D39 W/6 : Door mirror LH (With mirror control system)
- D40 W/16 : Power window main switch (LHD models)
- D41 W/8 : Power window sub-switch (Front passenger side) (RHD models)
- D42 W/4 : Front door lock actuator LH (Without super lock)
- D43 W/12 : To B118 (LHD models)
- D44 W/12 : To B117 (LHD models)
- D45 W/8 : To B120 (RHD models)
- D46 W/8 : To B119 (RHD models)




YEL270D

### REAR

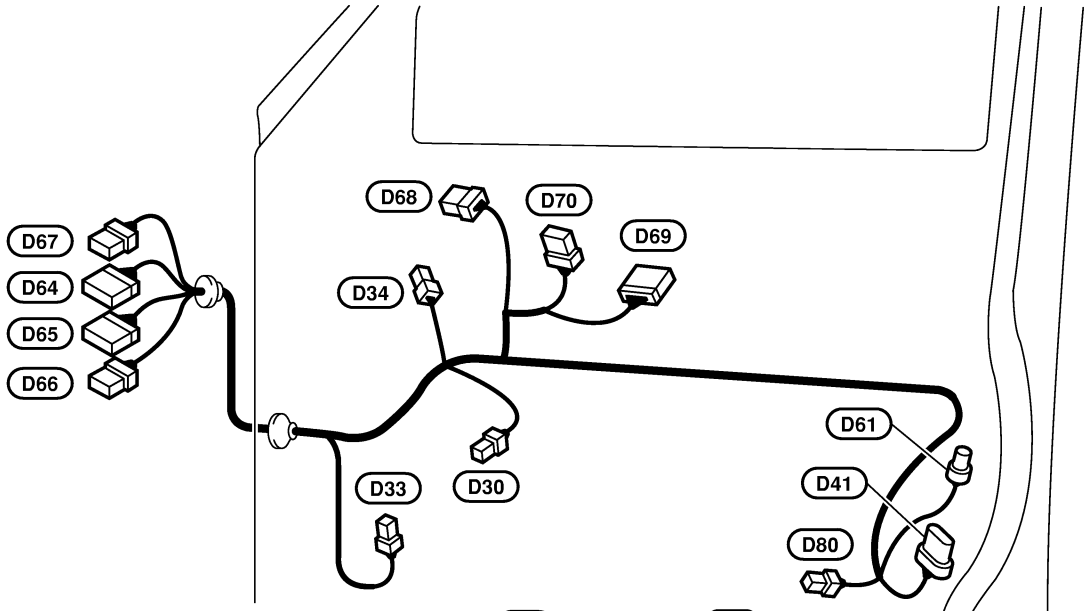



- D53 B/2 : Rear door speaker LH
- D54 B/2 : Rear power window regulator LH (With rear power window)
- D55 W/8 : Rear power window switch LH (With rear power window)
- D56 B/6 : Rear door lock actuator LH (With super lock)
- D57 W/10 : To B89 (With super lock)
- D58 W/4 : Rear door lock actuator LH (Without super lock)
- D59 W/10 : To B89 (Without super lock)

YEL272D

## Door Harness (RH side)

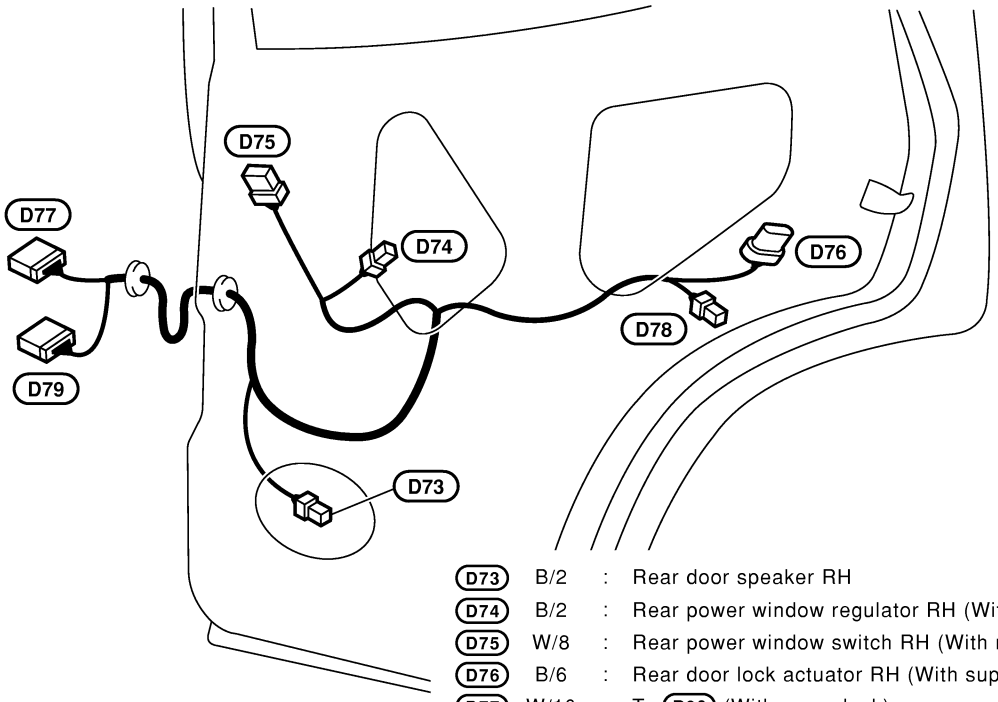
FRONT




| | | | |
|---|---|---|---|
| D30 | B/2 | : | Tweeter RH (With tweeter) |
| D33 | B/2 | : | Front door speaker RH |
| D34 | /2 | : | Front power window regulator RH |
| D41 | B/6 | : | Front door lock actuator RH (With super lock) |
| D61 | B/2 | : | Key cylinder switch RH (With key cylinder switch) |
| D64 | W/12 | : | To B113 (RHD models) |
| D65 | W/12 | : | To B114 (RHD models) |
| D66 | W/8 | : | To B115 (LHD models) |
| D67 | W/8 | : | To B116 (LHD models) |
| D68 | W/6 | : | Door mirror RH (With mirror control system) |
| D69 | W/16 | : | Power window main switch (RHD models) |
| D70 | W/8 | : | Power window sub-switch (Front passenger side) (LHD models) |
| D80 | W/4 | : | Front door lock actuator RH (Without super lock) |

YEL271D

REAR




| | | | |
|---|---|---|---|
| D73 | B/2 | : | Rear door speaker RH |
| D74 | B/2 | : | Rear power window regulator RH (With rear power window) |
| D75 | W/8 | : | Rear power window switch RH (With rear power window) |
| D76 | B/6 | : | Rear door lock actuator RH (With super lock) |
| D77 | W/10 | : | To B90 (With super lock) |
| D78 | W/4 | : | Rear door lock actuator RH (Without super lock) |
| D79 | W/10 | : | To B90 (Without super lock) |

YEL273D

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 |
|---|---|---|
| 1STSIG | AT | A/T 1ST. SIGNAL |
| 2NDSIG | AT | A/T 2ND. SIGNAL |
| 3RDSIG | AT | A/T 3RD. SIGNAL |
| 4THSIG | AT | A/T 4TH. SIGNAL |
| A/C, M | HA | MANUAL AIR CONDITIONER |
| A/CCUT | EC | AIR CONDITIONER CUT CONTROL |
| ABS | BR | ANTI-LOCK BRAKE SYSTEM |
| ACC/SW | EC | ACCELERATOR SWITCH (FC) |
| ACL/SW | EC | ACCELERATOR POSITION SWITCH |
| APS | AT, EC | ACCELERATOR POSITION SENSOR |
| AT/C | EC | A/T CONTROL |
| AUDIO | EL | AUDIO |
| BA/FTS | AT | A/T FLUID TEMPERATURE SENSOR AND TCM POWER SUPPLY |
| BACK/L | EL | BACK-UP LAMP |
| BOOST | EC | TURBOCHARGER BOOST SENSOR |
| BRK/SW | EC | BRAKE SWITCH |
| CHARGE | SC | CHARGING SYSTEM |
| CHIME | EL | WARNING CHIME |
| CIGAR | EL | CIGARETTE LIGHTER |
| CKPS | EC | CRANK SHAFT POSITION SENSOR (OBD) |
| CLOCK | EL | CLOCK |
| COOL/F | EC | COOLING FAN CONTROL |
| D/LOCK | EL | POWER DOOR LOCK |
| DEF | EL | REAR WINDOW DEFOGGER |
| DTRL | EL | HEADLAMP — WITH DAYTIME LIGHT SYSTEM |
| ECMRLY | EC | ECM RELAY |
| ECTS | EC | ENGINE COOLANT TEMPERATURE SENSOR |
| EGRC/V | EC | EGR VALVE AND EVAP CANISTER PURGE CONTROL SOLENOID VALVE |
| EGVC/V | EC | EGR VOLUME CONTROL VALVE |
| ENGSS | AT | ENGINE SPEED SIGNAL |
| F/FOG | EL | FRONT FOG LAMP |
| FTS | AT | A/T FLUID TEMPERATURE SENSOR |
| GLOW | EC | QUICK GLOW SYSTEM |
| H/AIM | EL | HEADLAMP AIMING CONTROL SYSTEM |
| H/LAMP | EL | HEADLAMP |
| HEATER | HA | HEATER SYSTEM |
| HEATUP | EC | HEAT UP SWITCH |
| HLC | EL | HEADLAMP CLEANER |
| HORN | EL | HORN |
| HSEAT | EL | HEATED SEAT |
| ILL | EL | ILLUMINATION |
| INJPMP | EC | ELECTRONIC CONTROL FUEL INJECTION PUMP |
| INT/L | EL | INTERIOR AND MAP LAMPS |
| INT/V | EC | INTAKE AIR CONTROL VALVE CONTROL SOLENOID VALVE |
| LPSV | AT | LINE PRESSURE SOLENOID VALVE |
| MAFS | EC | MASS AIR FLOW SENSOR |
| MAIN | AT | MAIN POWER SUPPLY AND GROUND CIRCUIT |
| MAIN | EC | MAIN POWER SUPPLY AND GROUND CIRCUIT |
| METER | EL | SPEEDOMETER, TACHOMETER, TEMP. AND FUEL GAUGES |
| MIL/DL | EC | MIL AND DATA LINK CONNECTORS |
| MIRROR | EL | DOOR MIRROR |
| MULTI | EL | REMOTE KEYLESS ENTRY SYSTEM |
| NATS | EL | NISSAN ANTI-THEFT SYSTEM |
| NLS | EC | NEEDLE LIFT SENSOR |
| NONDTC | AT | NON-DETECTABLE ITEMS |
| OILPSW | EC | OIL PRESSURE SWITCH |
| OVRCSV | AT | OVER RUN CLUTCH SOLENOID VALVE |
| PNP/SW | AT | PARK/NEUTRAL POSITION SWITCH |
| PNP/SW | EC | NEUTRAL POSITION SWITCH |
| R/FOG | EL | REAR FOG LAMP |
| REMOTE | EL | AUDIO (REMOTE CONTROL SWITCH) |
| S/LOCK | EL | POWER DOOR LOCK-SUPER LOCK |
| S/SIG | EC | START SIGNAL |

| Code | Section | Wiring Diagram Name |
|---|---|---|
| SROOF | EL | SUNROOF |
| SRS | RS | SUPPLEMENTAL RESTRAINT SYSTEM |
| SSV/A | AT | SHIFT SOLENOID VALVE A |
| SSV/B | AT | SHIFT SOLENOID VALVE B |
| START | SC | STARTING SYSTEM |
| STOP/L | EL | STOP LAMP |
| SWL/V | EC | SWIRL CONTROL VALVE CONTROL SOLENOID VALVE |
| TAIL/L | EL | PARKING, LICENSE, TAIL AND STOP LAMPS |
| TCV | AT | TORQUE CONVERTER CLUTCH SOLENOID VALVE |
| THEFT | EL | VEHICLE SECURITY (THEFT WARNING) SYSTEM |
| THLCNT | EC | THROTTLE CONTROL SOLENOID VALVE |
| TURN | EL | TURN SIGNAL AND HAZARD WARNING LAMP |
| TVC&SO | EC | TVC AND SHUT OFF |
| VNT | EC | VARIABLE NOZZLE TURBOCHARGER CONTROL SOLENOID VALVE |
| VSS | EC | VEHICLE SPEED SENSOR |
| VSSA/T | AT | VEHICLE SPEED SENSOR A/T (REVOLUTION SENSOR) |
| VSSMTR | AT | VEHICLE SPEED SENSOR MTR |
| WARN | EL | WARNING LAMPS |
| WINDOW | EL | POWER WINDOW |
| WIP/R | EL | REAR WIPER AND WASHER |
| WIPER | EL | FRONT WIPER AND WASHER |