

ELECTRICAL SYSTEM

SECTION EL

MODIFICATION NOTICE:

Wiring diagrams have been changed.

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FUSE AND FUSIBLE LINKFoldout	CONTROL UNITS/JOINT CONNECTOR (J/C)Foldout
Terminal Arrangement.....Foldout	Terminal Arrangement.....Foldout

- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- TF
- PD
- FA
- RA
- BR
- ST
- RS
- BT
- HA
- EL**
- IDX

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

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER” used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger in a frontal collision. The SRS system composition which is available to NISSAN MODEL D22 is as follows (The composition varies according to the destination and optional equipment.):

Driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), seat belt pre-tensioner, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.

Information necessary to service the system safely is included in the **RS section** of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the RS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. Spiral Cable and wiring harnesses (except “SEAT BELT PRE-TENSIONER”) covered with yellow insulation either just before the harness connectors or for the complete harness are related to the SRS.

EL-5

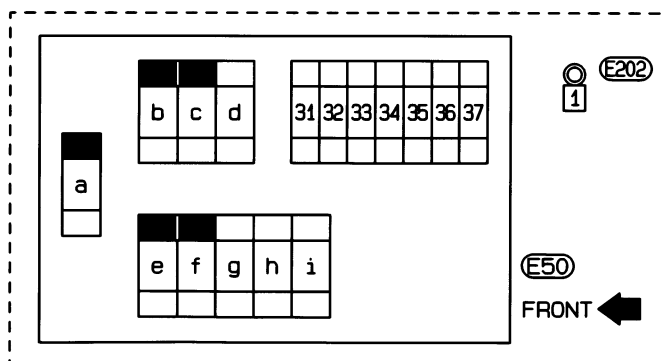
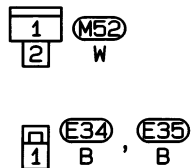
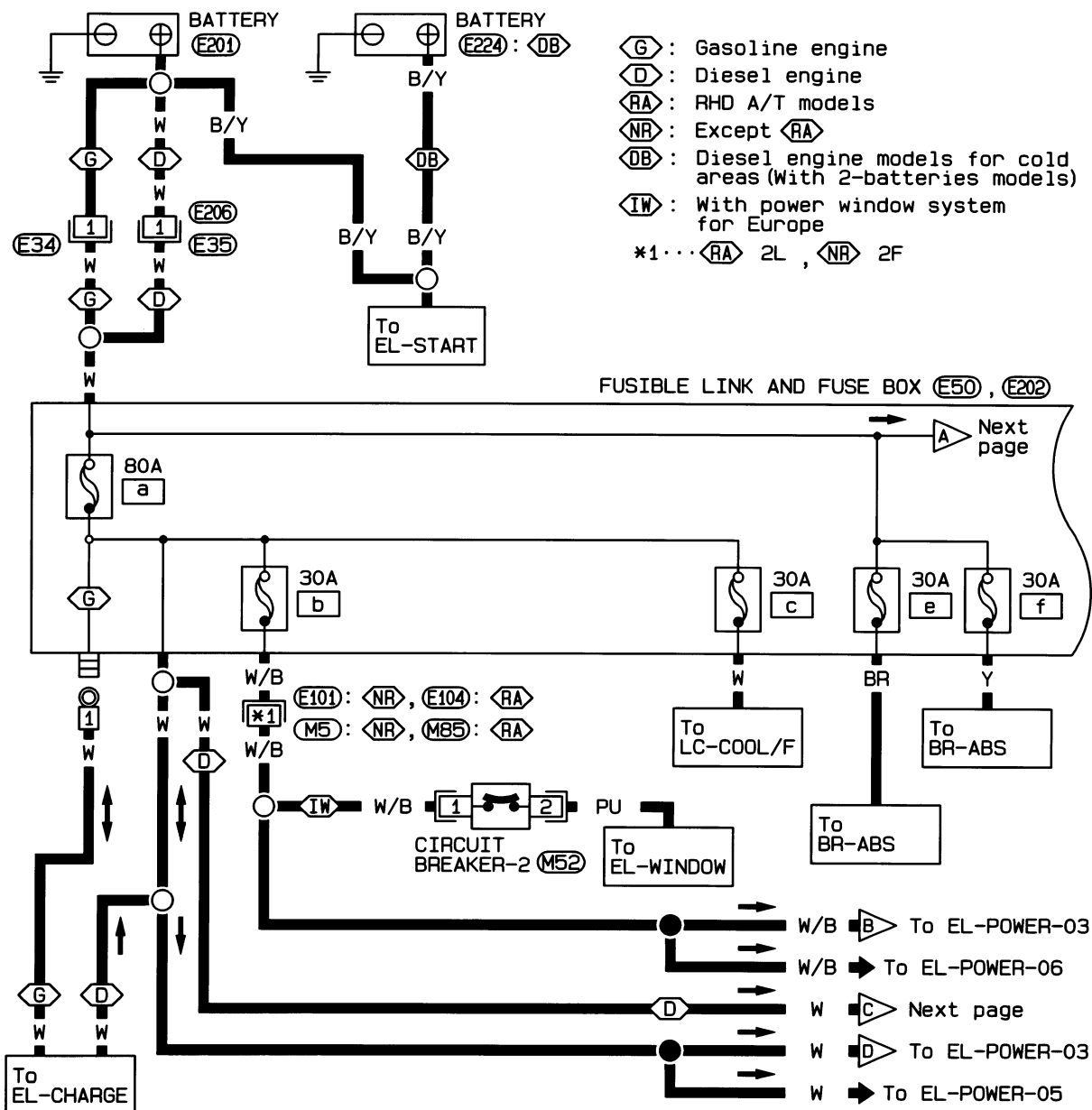


POWER SUPPLY ROUTING

Wiring Diagram — POWER —

BATTERY POWER SUPPLY — IGNITION SWITCH IN ANY POSITION

EL-POWER-01






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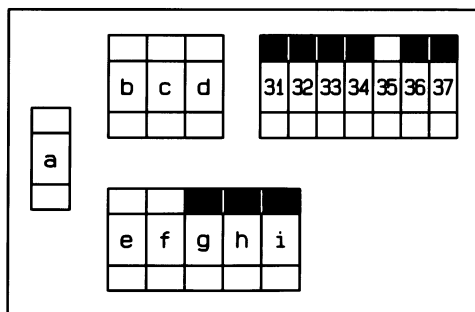
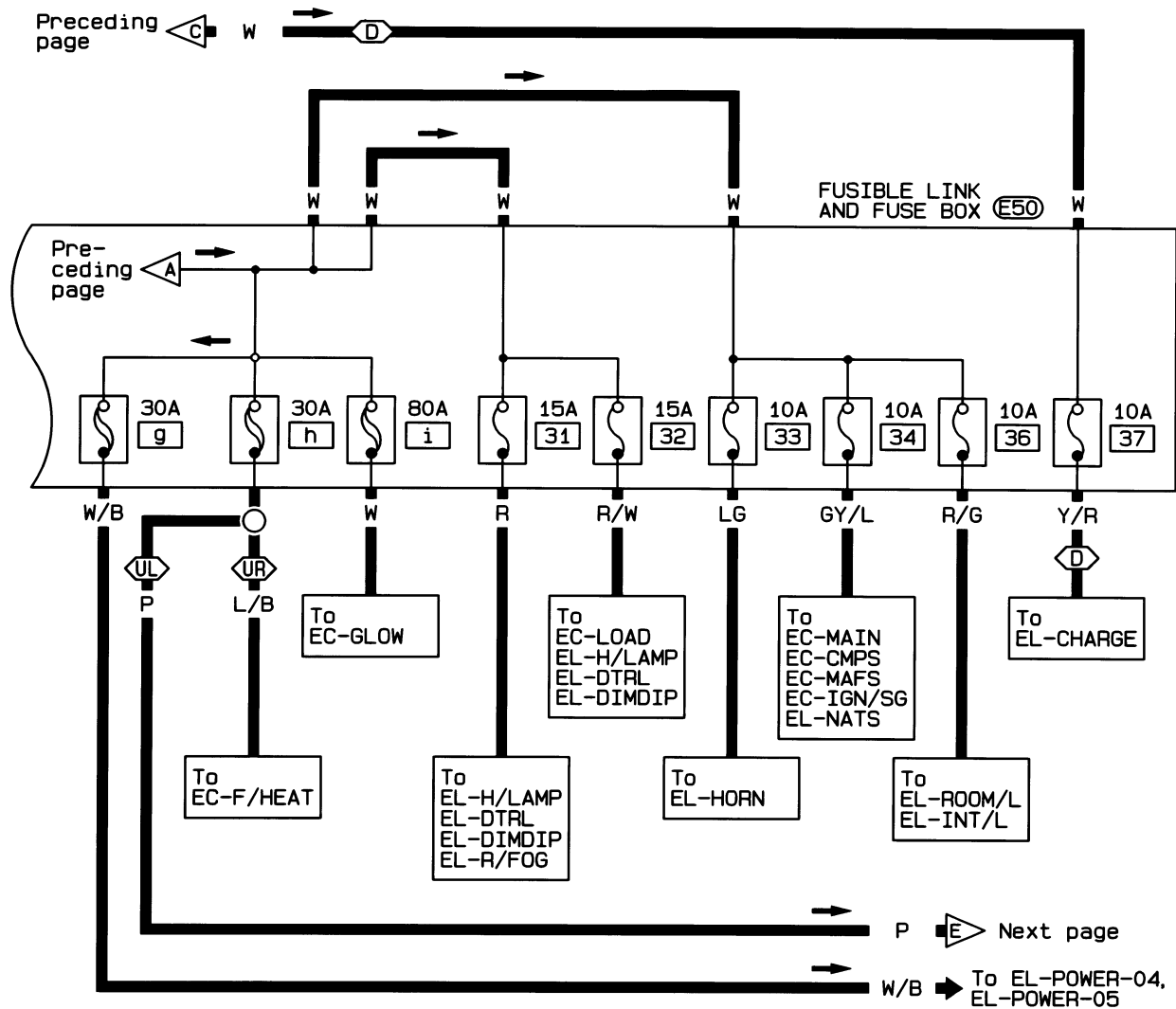
M5, E101
M85, E104

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

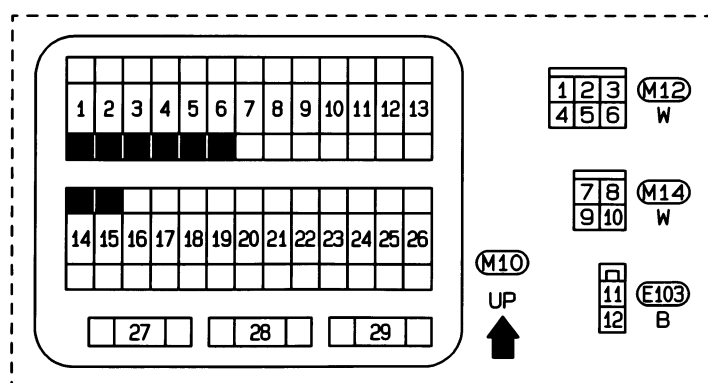
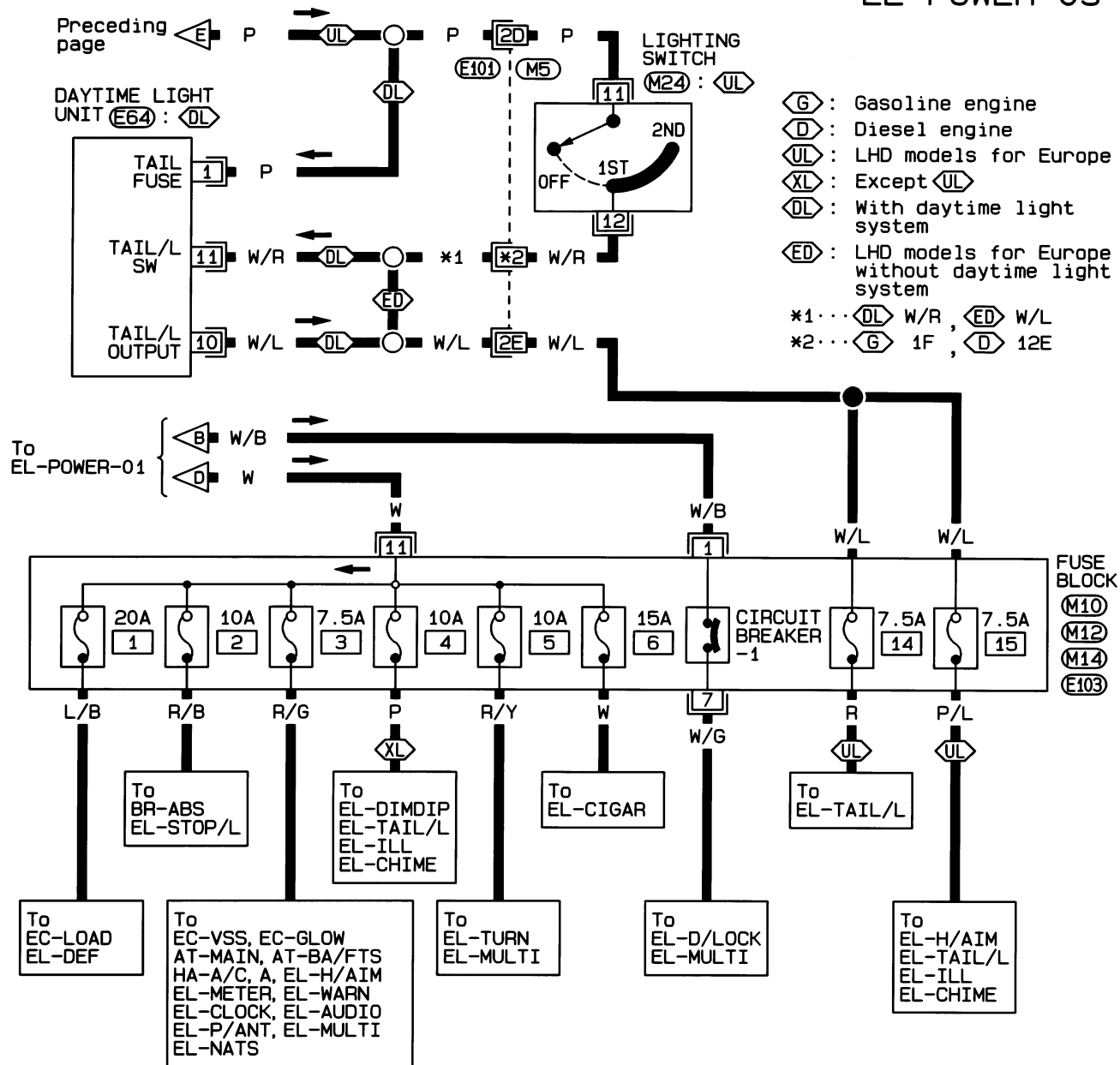
EL-POWER-02

-  : Diesel engine
-  : LHD models for Europe
-  : RHD models for Europe



Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



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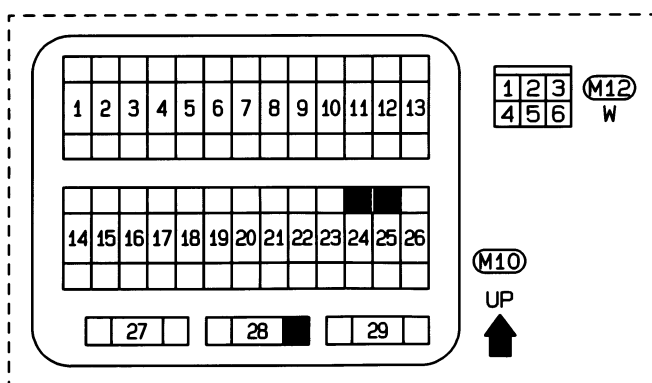
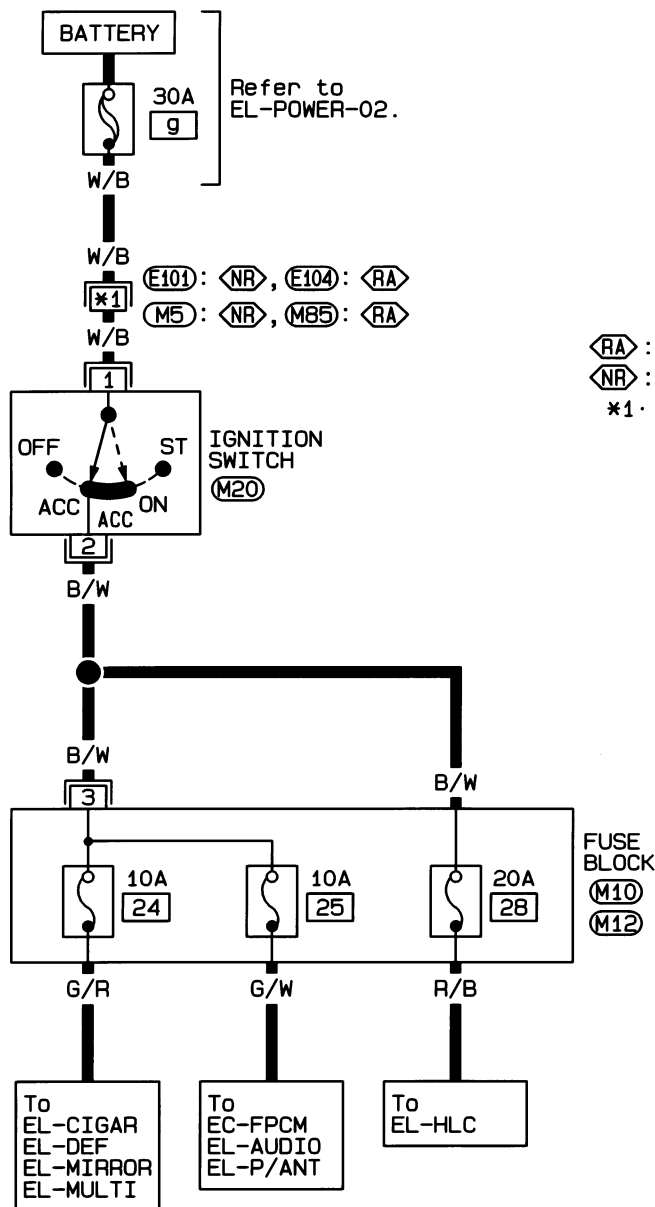
M5 E101

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

ACCESSORY POWER SUPPLY — IGNITION SW. IN “ACC” OR “ON”

EL-POWER-04



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M5, E101

(M85) (E104)

GI

MA

EM

LC

EC

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PD

FA

RA

BR

ST

RS

BT

HA

EL

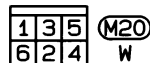
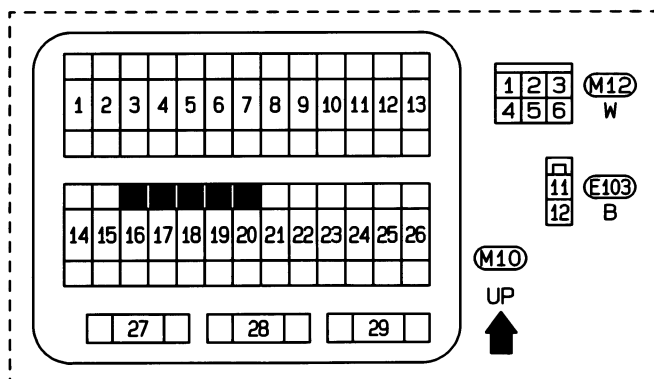
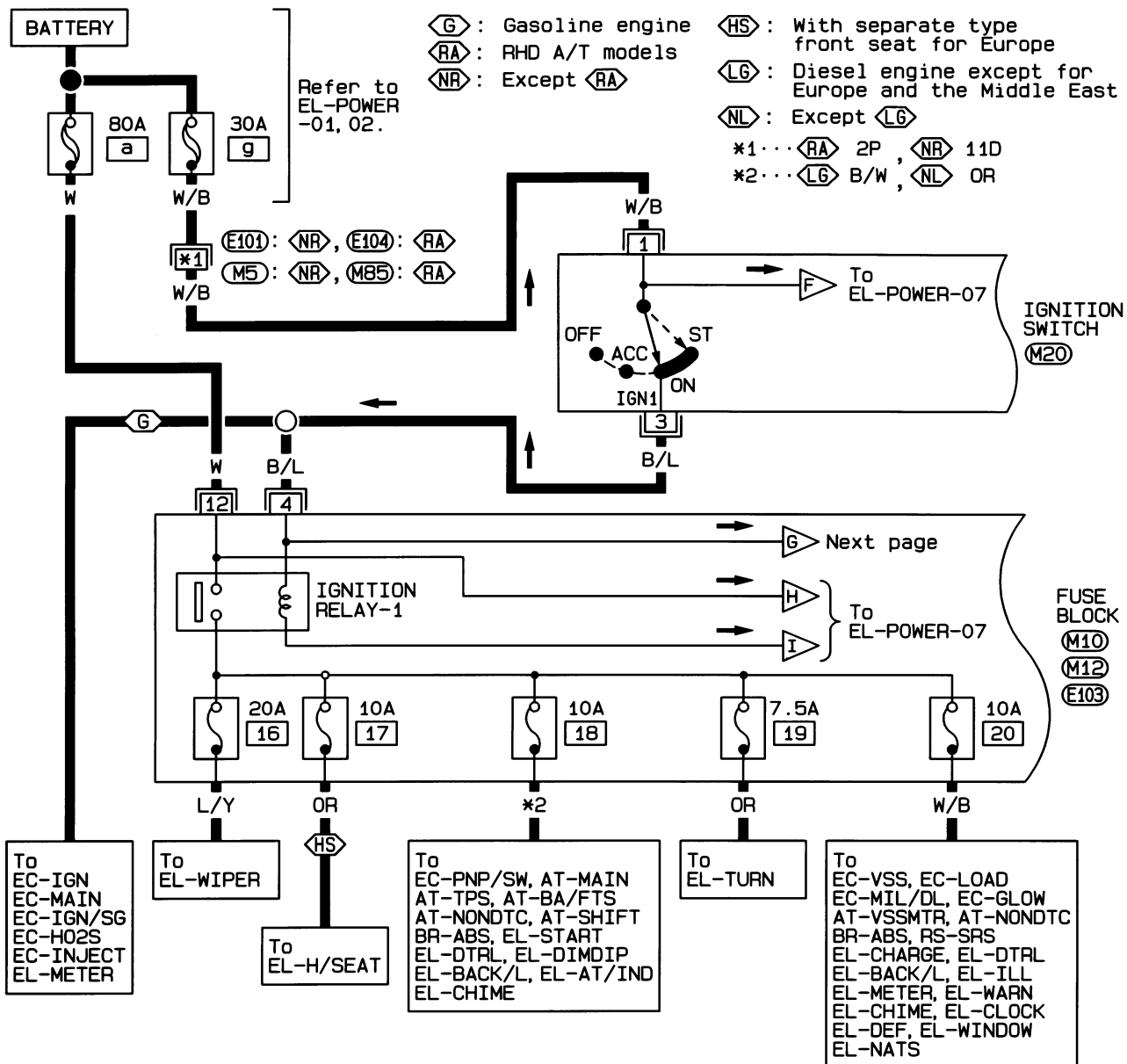
IDX

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

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

EL-POWER-05



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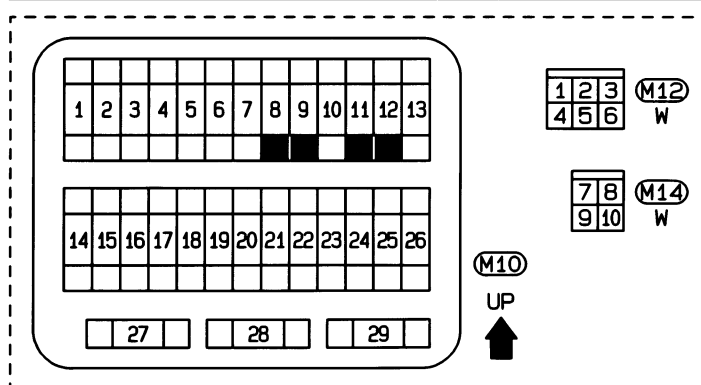
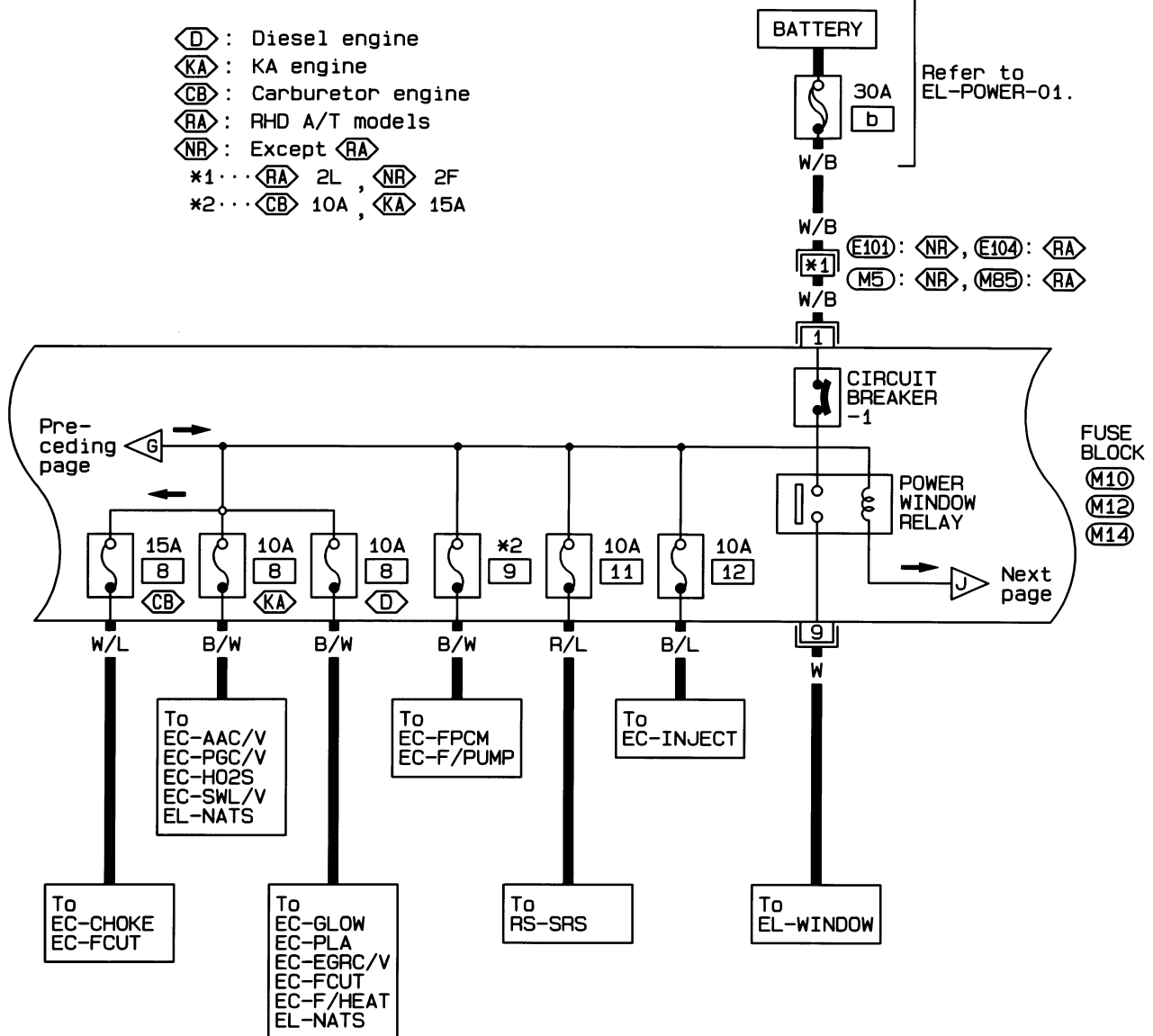
M5, E101
M85, E104

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-06

- (D) : Diesel engine
 (KA) : KA engine
 (CB) : Carburetor engine
 (RA) : RHD A/T models
 (NR) : Except (RA)
 *1... (RA) 2L, (NR) 2F
 *2... (CB) 10A, (KA) 15A



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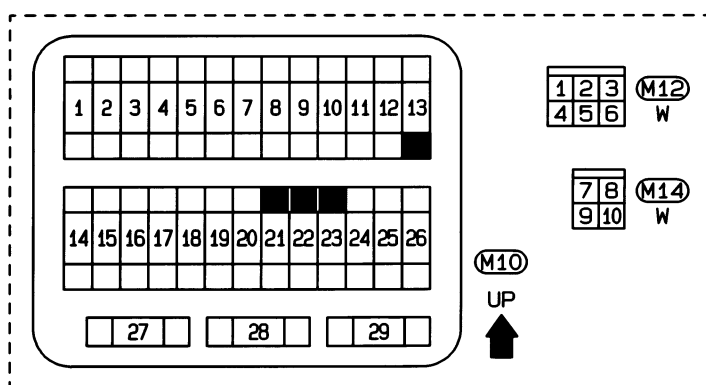
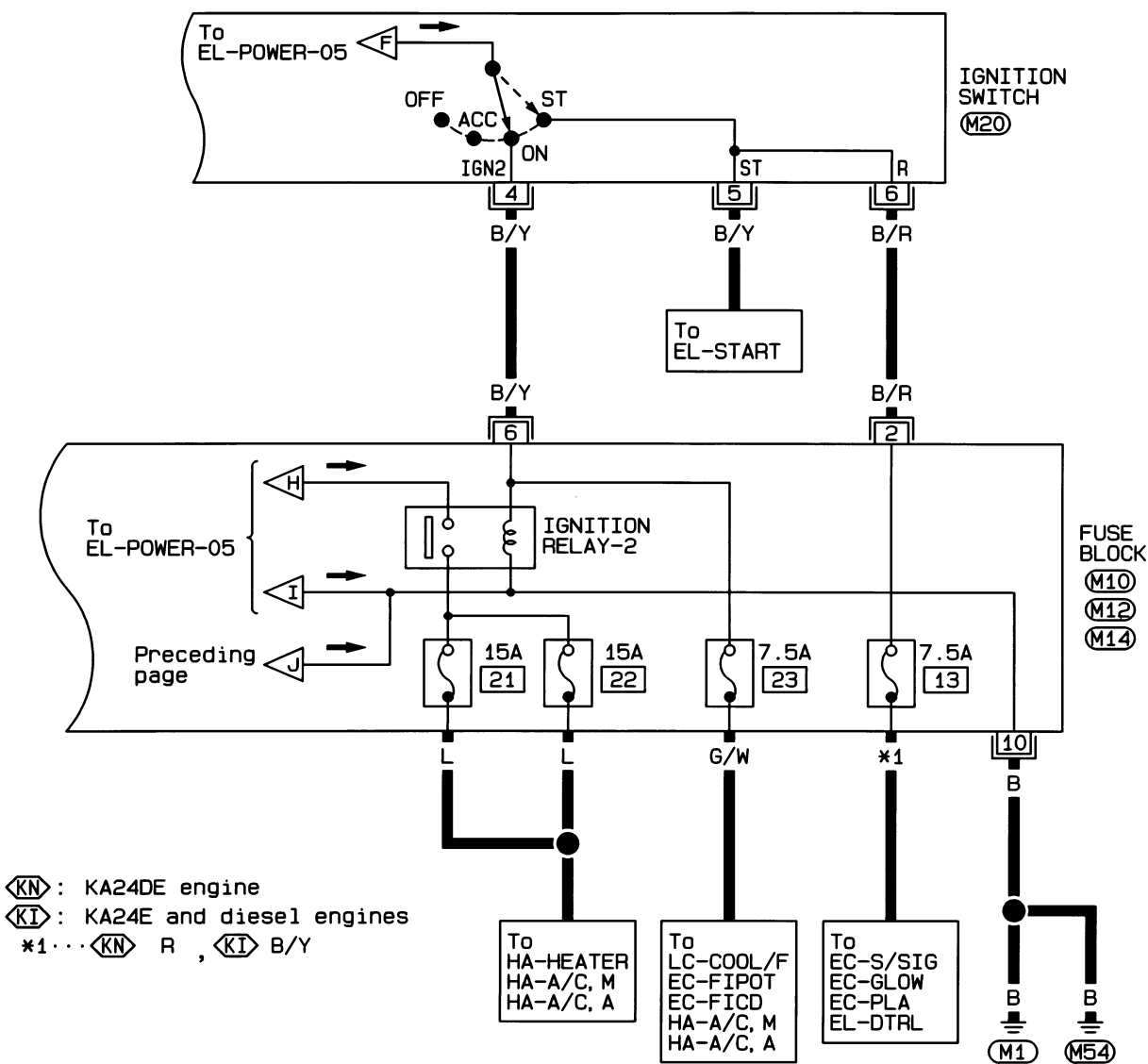
(M5), (E101)
 (M85), (E104)

EL

POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-07



Service Data and Specifications (SDS)

Applied model	Except for Europe	
	KA24DE	
	Standard	
Type	55D23R	
Capacity	V-AH	12-48

GI

MA

EM

LC

EC

FE

CL

MT

AT

TF

PD

FA

RA

BR

ST

RS

BT

HA

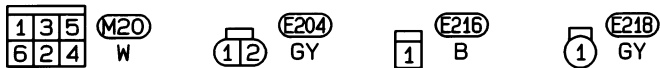
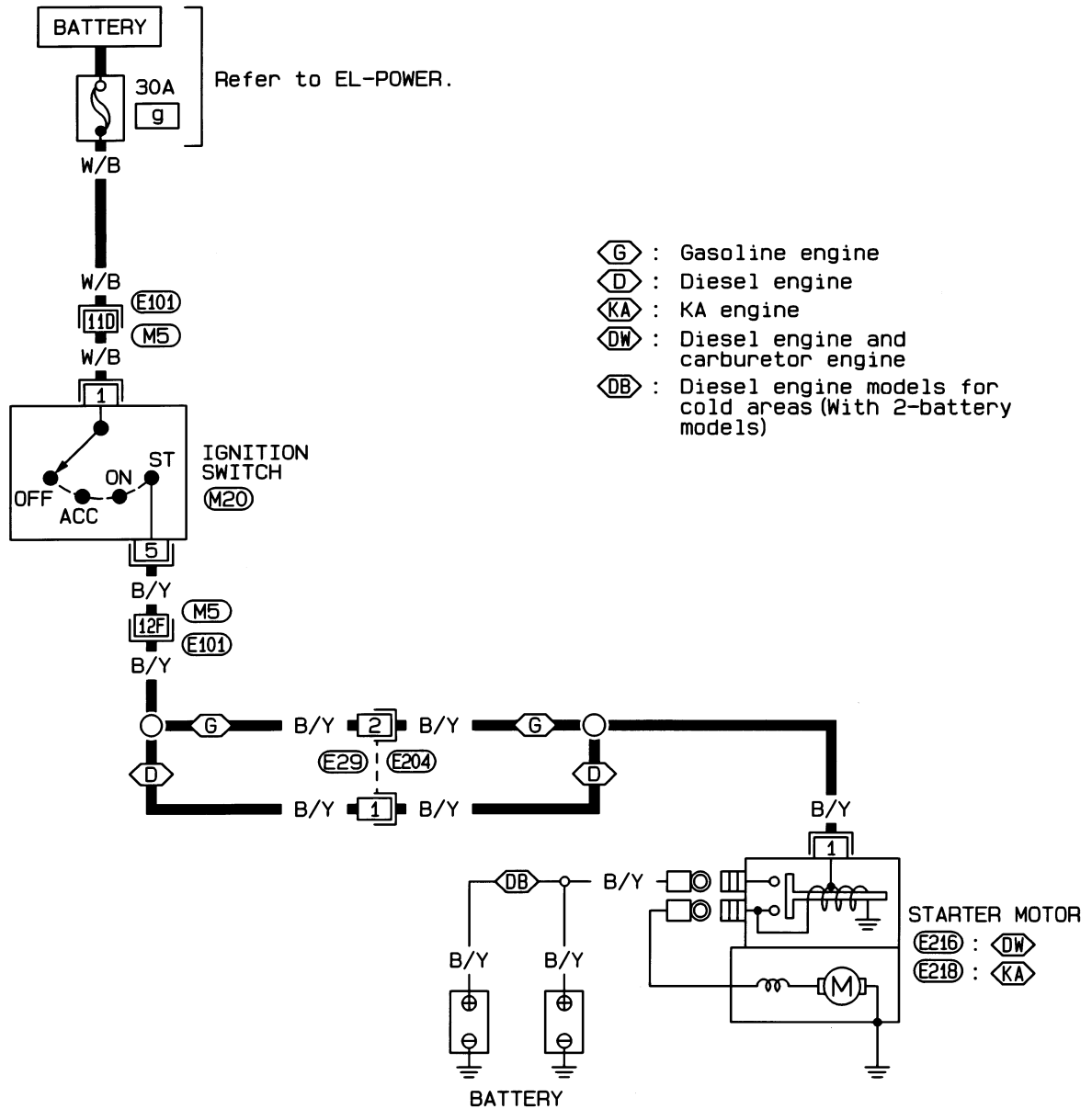
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STARTING SYSTEM

Wiring Diagram — START —/M/T Models

EL-START-01



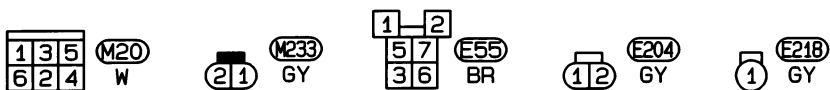
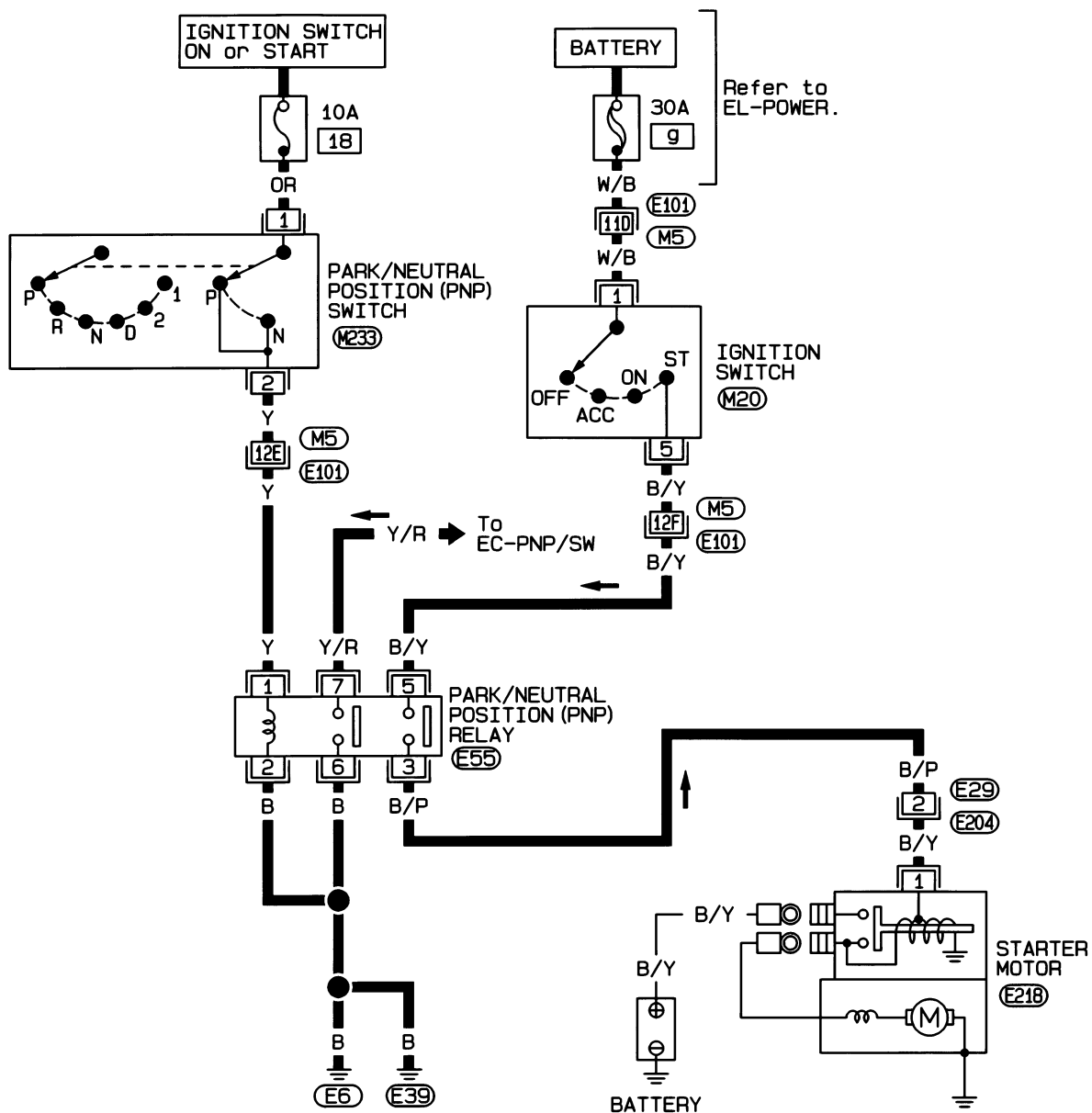
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(M5), (E101)

STARTING SYSTEM

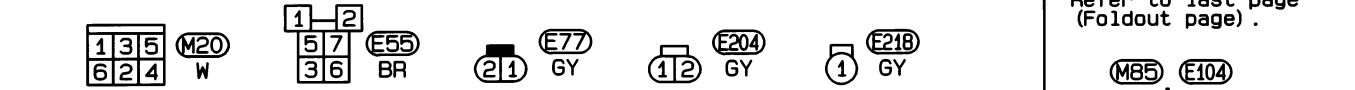
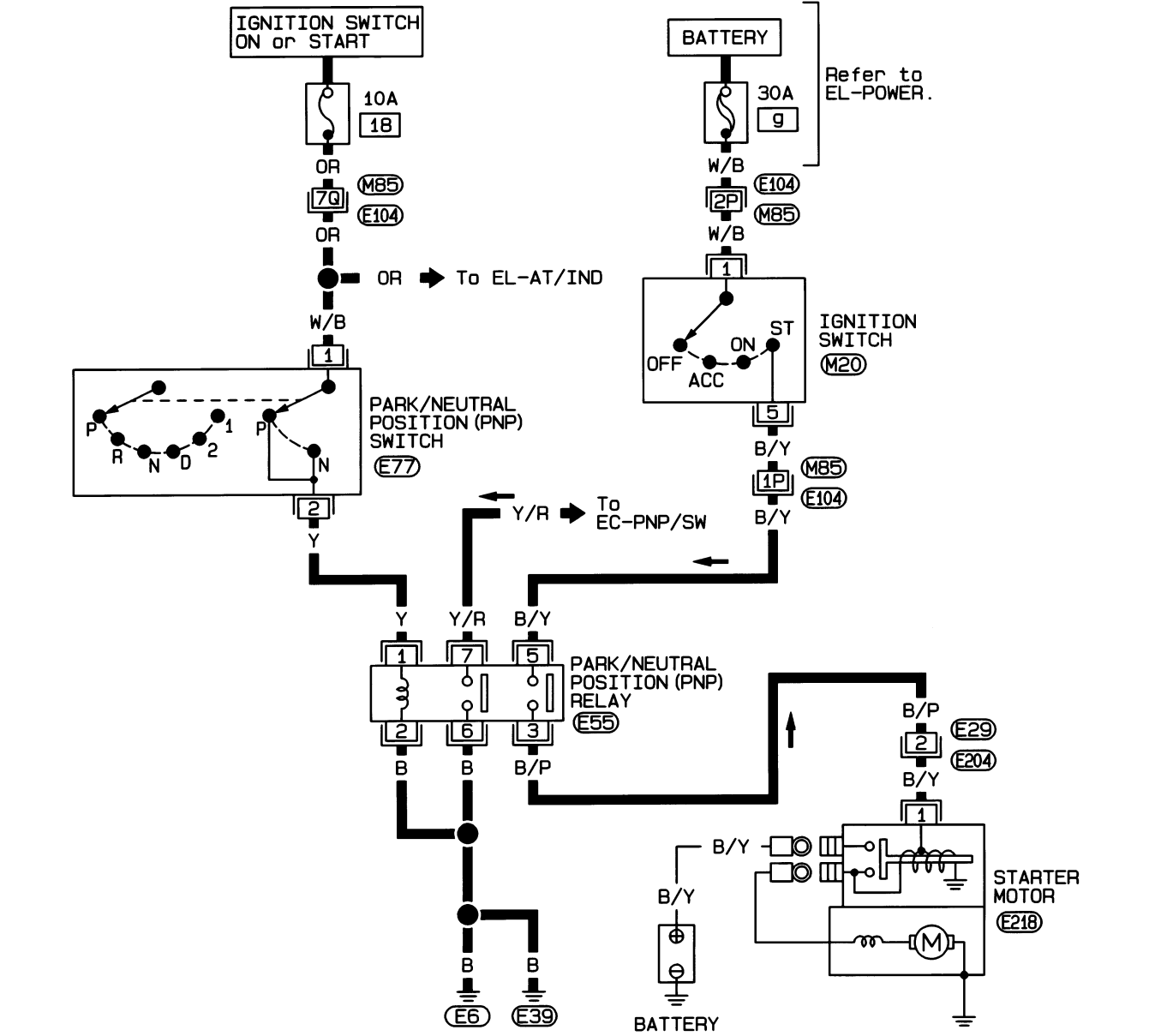
Wiring Diagram — START —/LHD A/T Models

EL-START-02



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(M5, E101)



1-2 Refer to last page (Foldout page).

624 W 36 BR (21) GY (12) GY (1) GY M85, E104

STARTING SYSTEM

Service Data and Specifications (SDS)

STARTER

Type	M0T60081A	
	MITSUBISHI	
	Reduction	
Applied model	2WD	4WD
	KA24DE	
	Standard	
System voltage	V	12
No-load		
Terminal voltage	V	11.0
Current	A	Less than 90
Revolution	rpm	More than 2,500
Minimum diameter of commutator	mm (in)	28.8 (1.134)
Minimum length of brush	mm (in)	7.0 (0.276)
Brush spring tension	N (kg, lb)	11.8 - 23.5 (1.2 - 2.4, 2.6 - 5.3)
Movement "ℓ" in height of pinion assembly	mm (in)	0.5 - 2.0 (0.020 - 0.079)

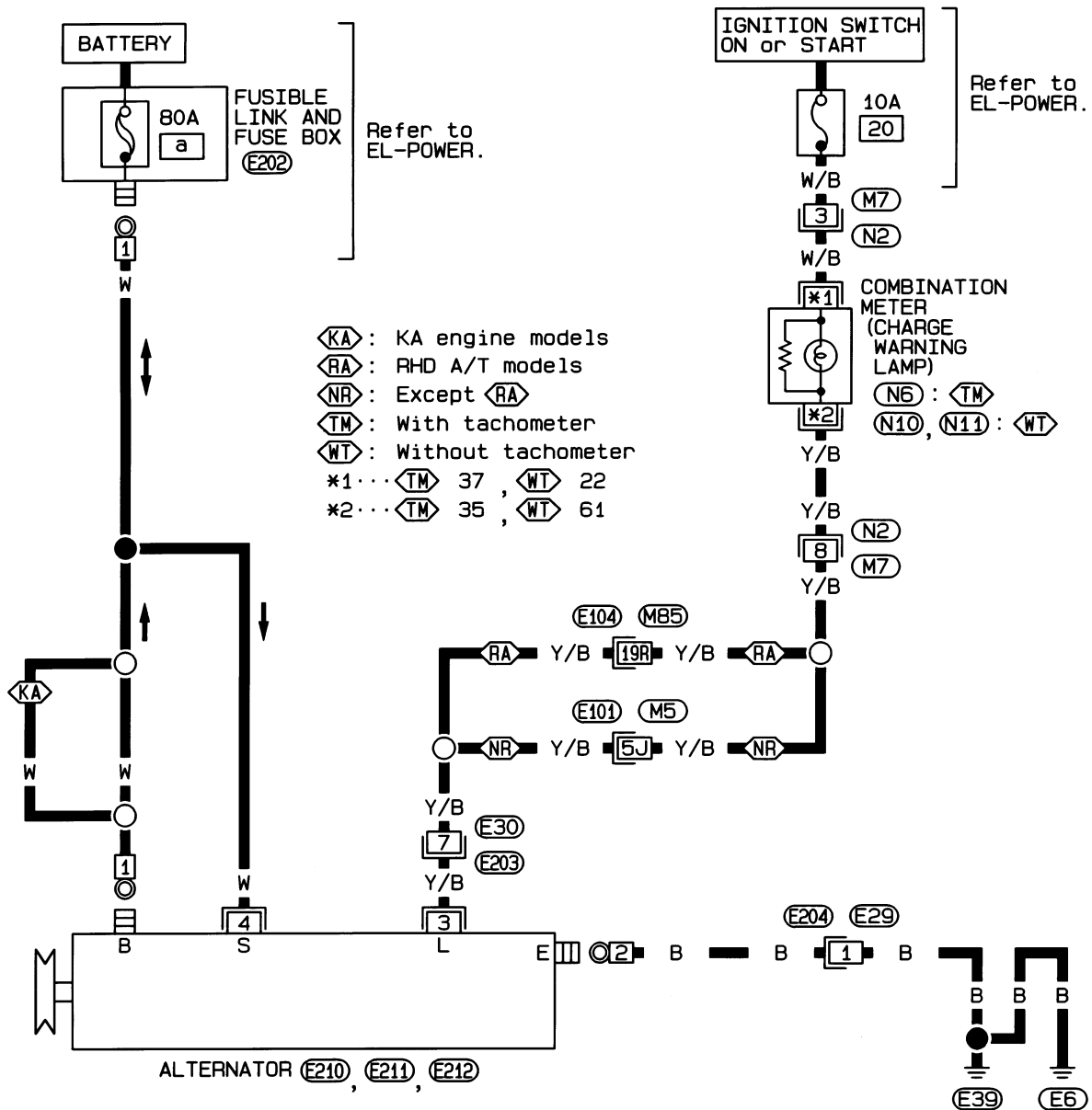
*: Not include the current of the magnet switch circuit

GI
MA
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EL
IDX

CHARGING SYSTEM

Wiring Diagram — CHARGE —/Gasoline Engine

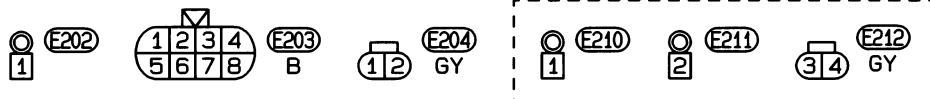
EL-CHARGE-01



1	2	3	4	5	6	7	8	9	10	11	(N2)
12	13	14	15	16	17	18	19	20	21	22	BR

36	37	38	39	40	41	42	(N6)
27	28	29	30	31	32	33	BR

21	22	23	24	25	26	27	28	29	(N10)	41	42	43	44	45	46	47	48	49	50	51	(N11)
30	31	32	33	34	35	36	37	38	BR	52	53	54	55	56	57	58	59	60	61	62	W



Refer to last page
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(M5), (E101)
(M85), (E104)

GI
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EL
IDX

EL

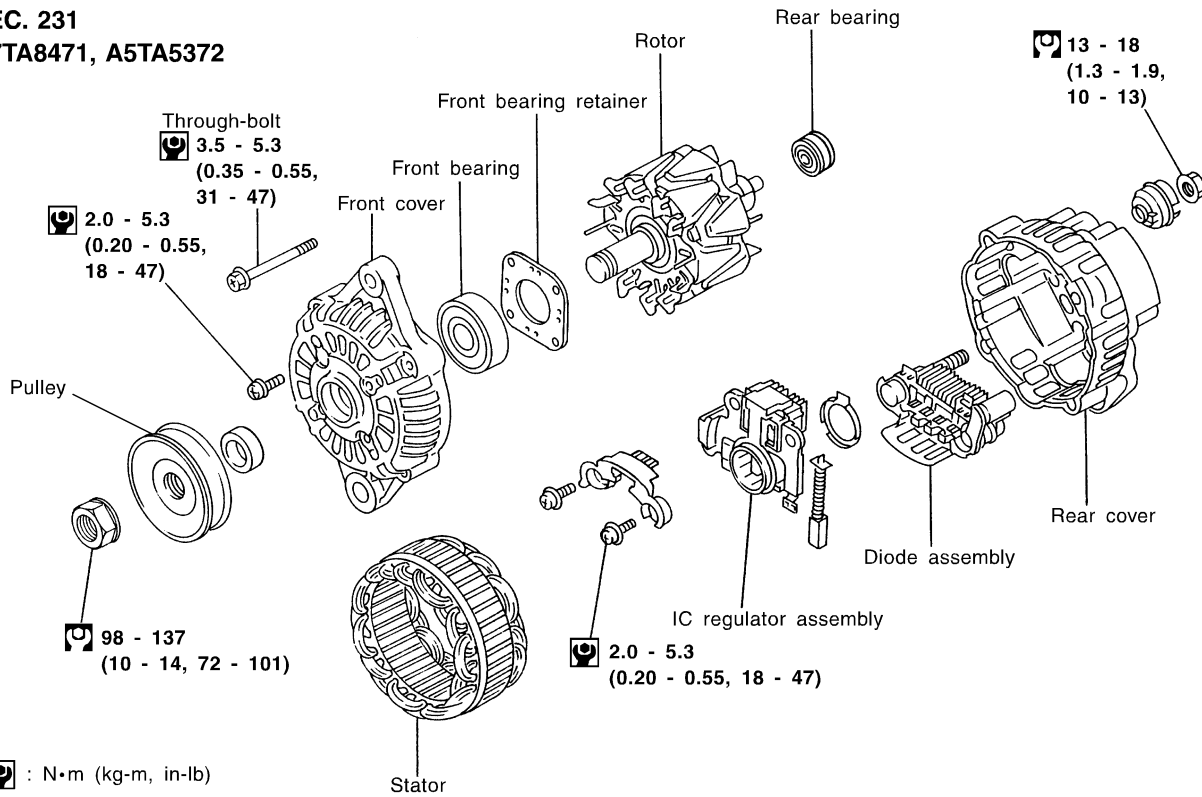
IDX

CHARGING SYSTEM

Construction

SEC. 231

A7TA8471, A5TA5372



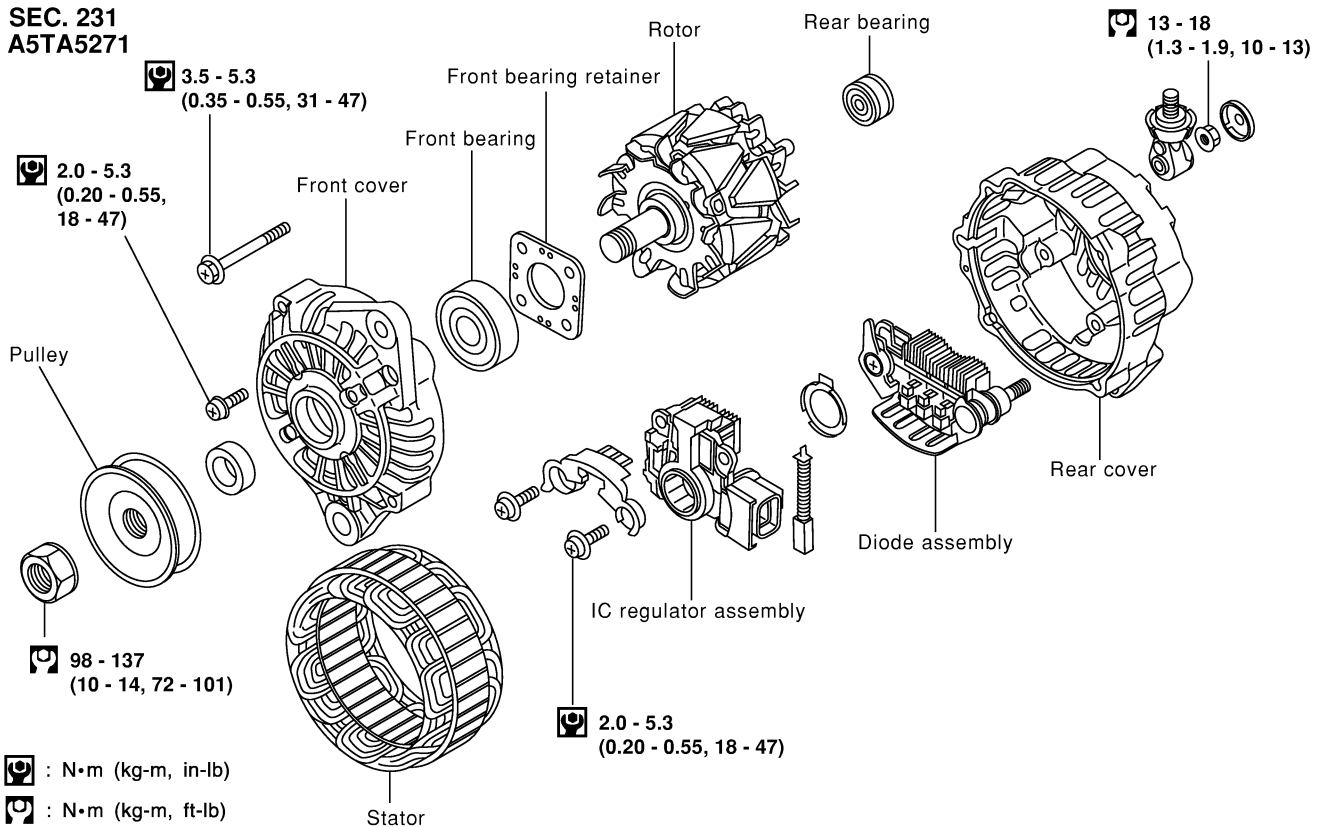
: N•m (kg-m, in-lb)

: N•m (kg-m, ft-lb)

MEL441HD

SEC. 231

A5TA5271



: N•m (kg-m, in-lb)

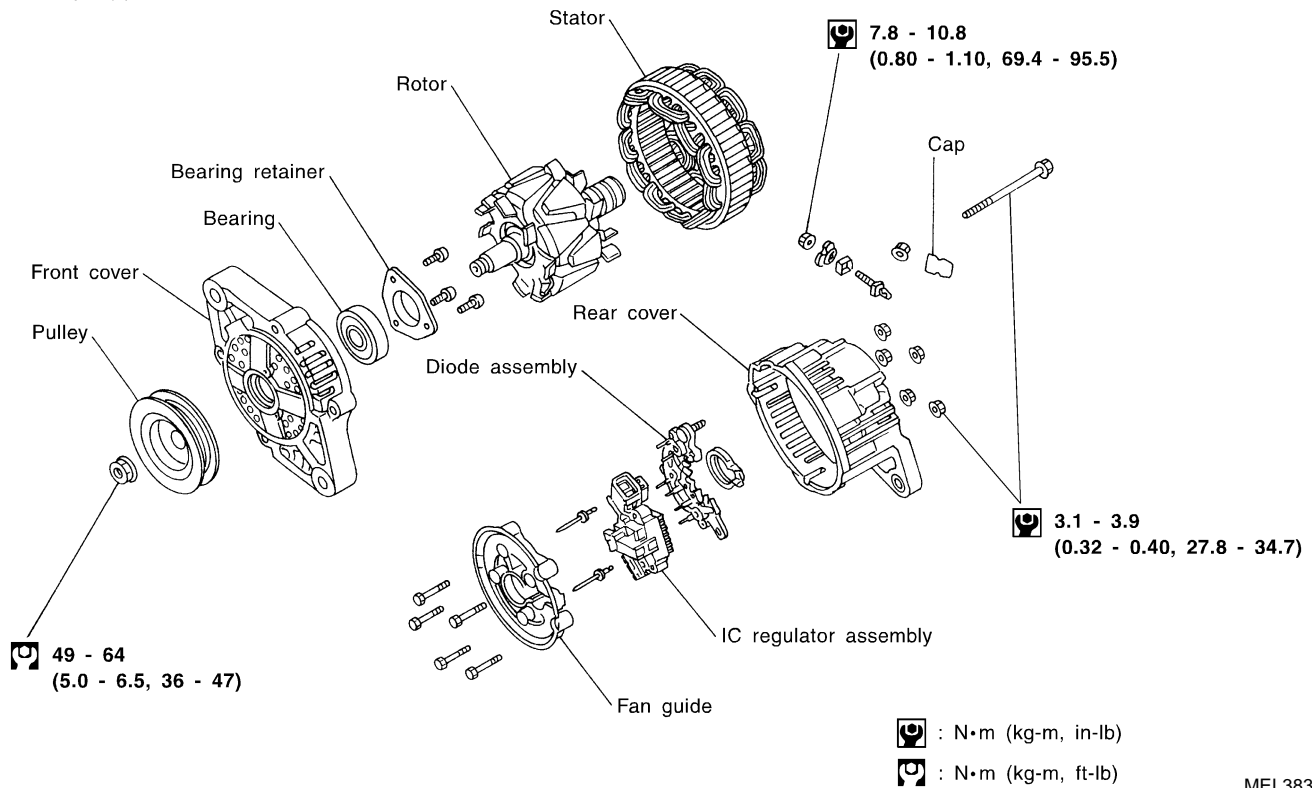
: N•m (kg-m, ft-lb)

MEL644K

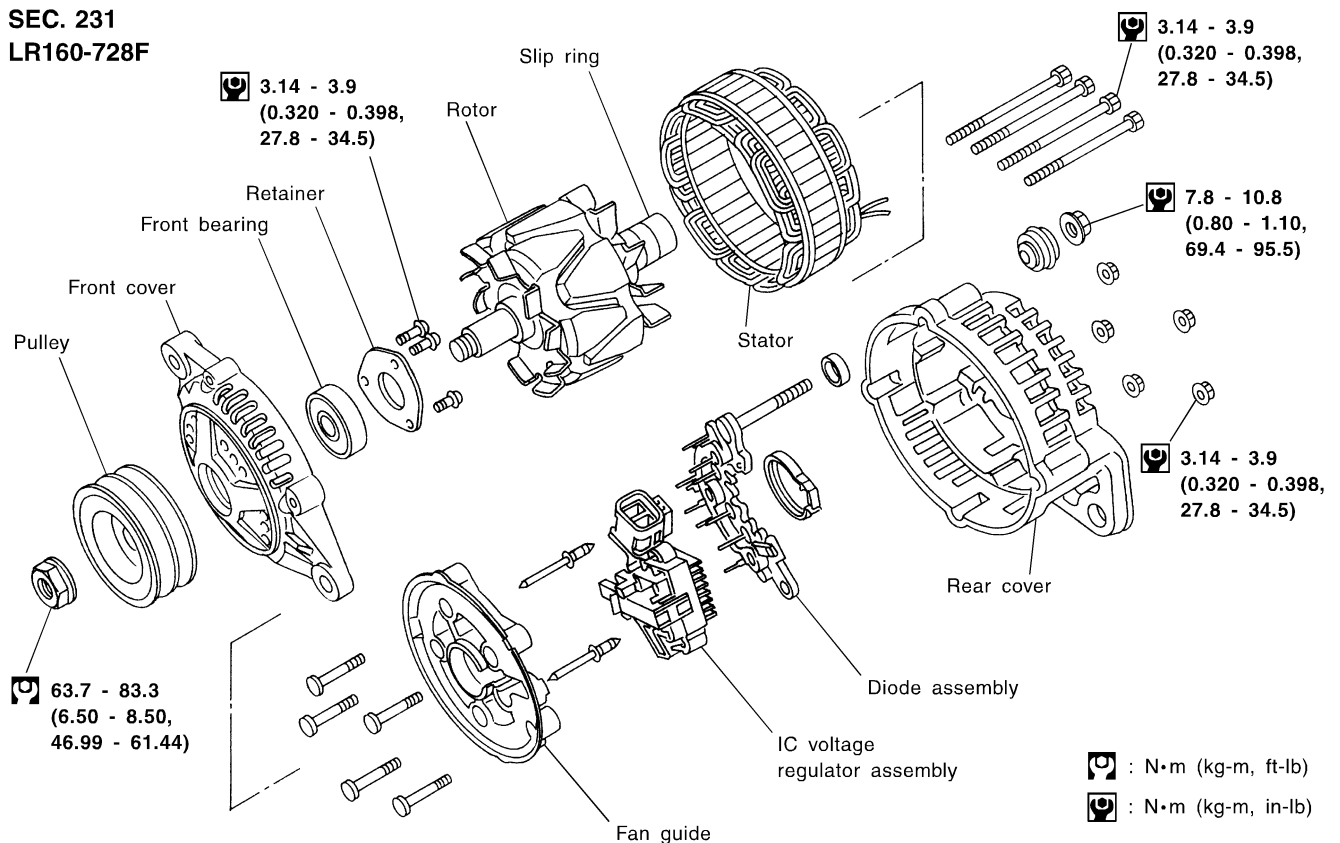
CHARGING SYSTEM

Construction (Cont'd)

SEC. 231 LR170-765



SEC. 231 LR160-728F



CHARGING SYSTEM

Service Data and Specifications (SDS)

ALTERNATOR

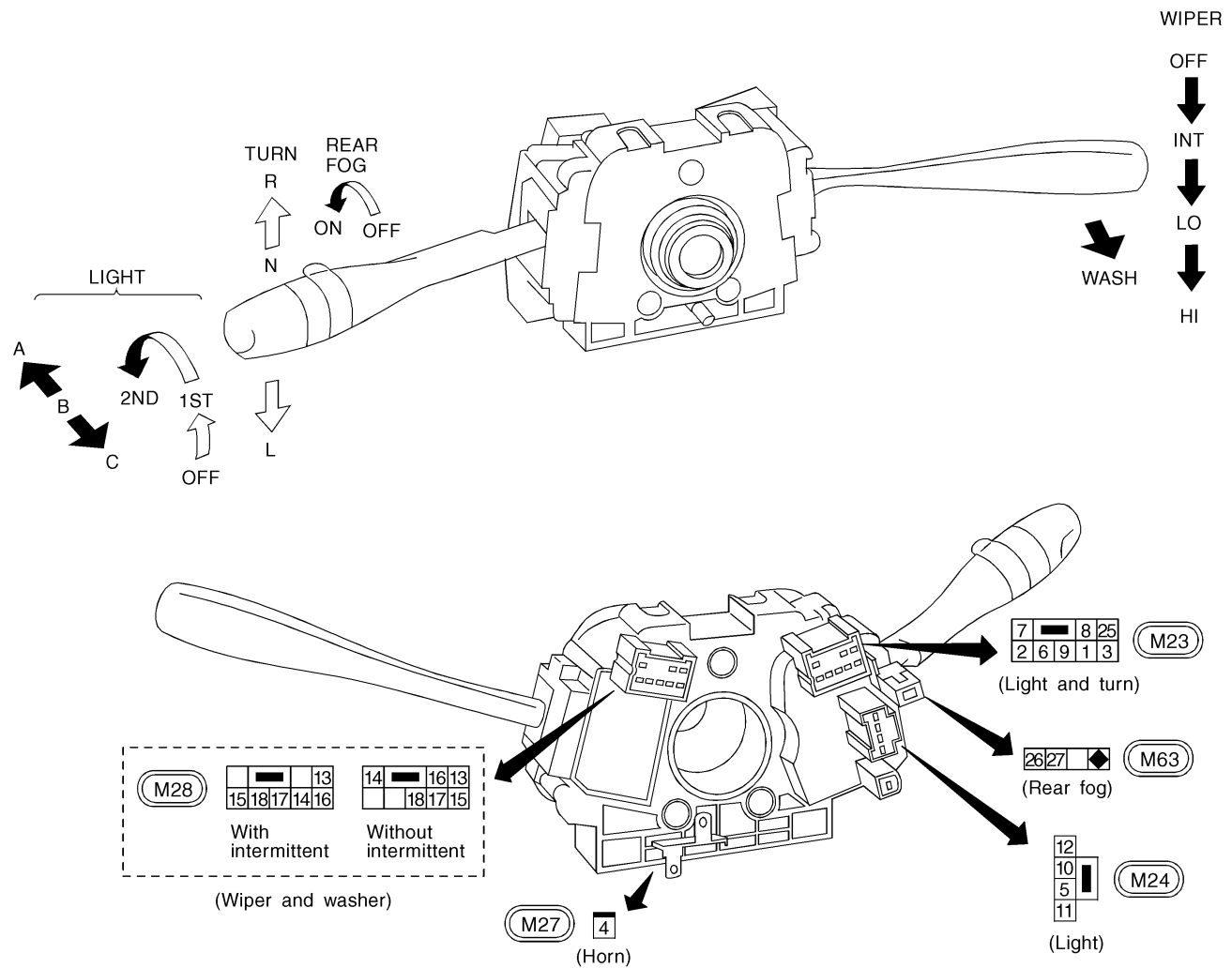
Type	A5TA5271	A7TA8471	A5TA5372	LR170-765	LR160-728F
	MITSUBISHI			HITACHI	
Applied model	KA24DE	Z24		KA24	TD25, TD27, QD32
		Standard	Option*		
Nominal rating V-A	12-70	12-35	12-70	12-70	12-60
Ground polarity	Negative				
Minimum revolution under no-load (When 13.5V is applied) rpm	Less than 1,300			Less than 1,000	
Hot output current (When 13.5V is applied) A/rpm	More than 14/1,300 More than 54/2,500	More than 27/2,500	More than 18/1,300 More than 51/2,500	More than 17/1,300 More than 54/2,500 More than 75/5,000	More than 17/1,300 More than 48/2,500 More than 57/5,000
Regulated output voltage V	14.1 - 14.7				
Minimum length of brush mm (in)	5.0 (0.20)			6.0 (0.236)	
Brush spring pressure N (g, oz)	4.80 - 5.98 (490 - 610, 17.28 - 21.51)			1.0 - 3.43 (102 - 350, 3.60 - 12.34)	
Slip ring minimum outer diameter mm (in)	22.1 (0.870)			26.0 (1.024)	
Rotor (Field coil) resistance Ω	2.5 - 2.9	2.6 - 3.1	2.5 - 2.9	2.58	

*: Models with power steering and air conditioner

COMBINATION SWITCH

Check

FOR EUROPE AND LHD MODELS



LIGHTING SWITCH

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

WIPER AND WASHER SWITCH (With intermittent)

	OFF	INT	LO	HI	WASH
13					
14					
15					
16					
17					
18					

WIPER AMPLIFIER (In combination switch)

WIPER AND WASHER SWITCH (Without intermittent)

	OFF	LO	HI	WASH
13				
14				
15				
16				
17				
18				

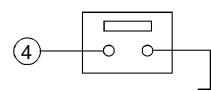
TURN SIGNAL LAMP SWITCH

	L	N	R
1			
2			
3			

REAR FOG LAMP SWITCH

	OFF	ON
26		
27		

HORN SWITCH (Without air bag)



COMBINATION SWITCH

Check (Cont'd)

RHD MODELS EXCEPT FOR EUROPE

WIPER

OFF

↓

INT

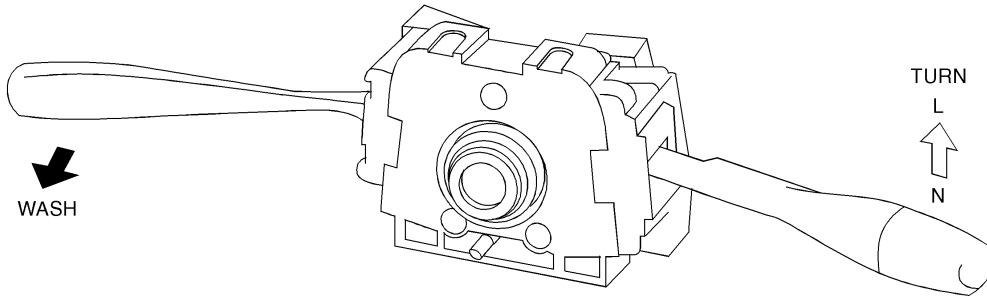
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LO

↓

HI

WASH



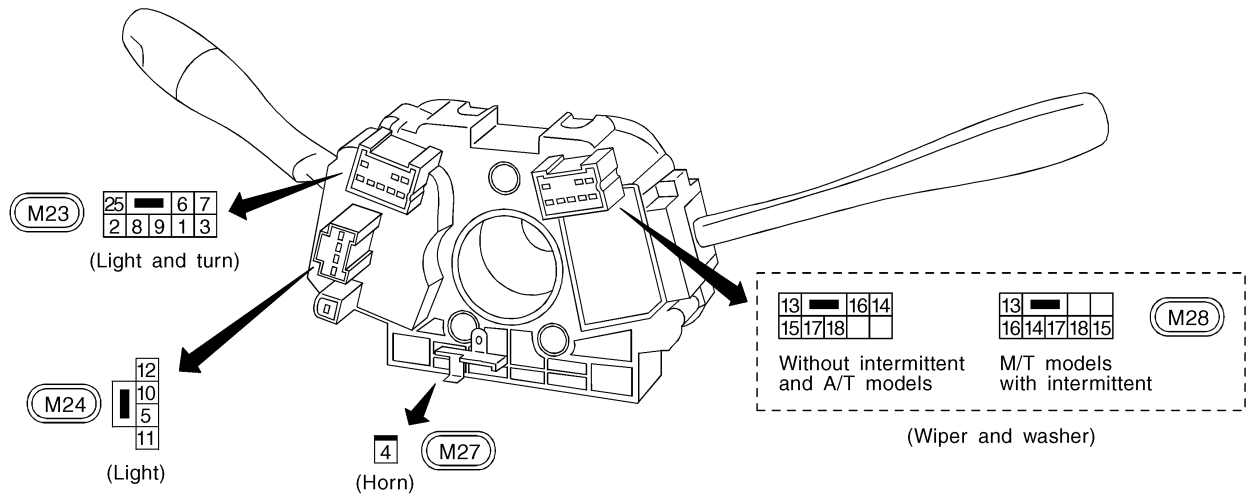
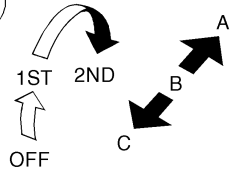
TURN

L

↑

N

LIGHT



LIGHTING SWITCH

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

WIPER AND WASHER SWITCH (A/T models with intermittent)

	OFF	INT	LO	HI	WASH
13					
14					
15					
16					
17					
18					

WIPER AND WASHER SWITCH (M/T models with intermittent)

	OFF	INT	LO	HI	WASH
13					
14					
15					
16					
17					
18					

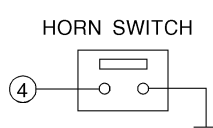
WIPER AMPLIFIER (In combination switch)

WIPER AND WASHER SWITCH (Without intermittent)

	OFF	LO	HI	WASH
13				
14				
15				
16				
17				
18				

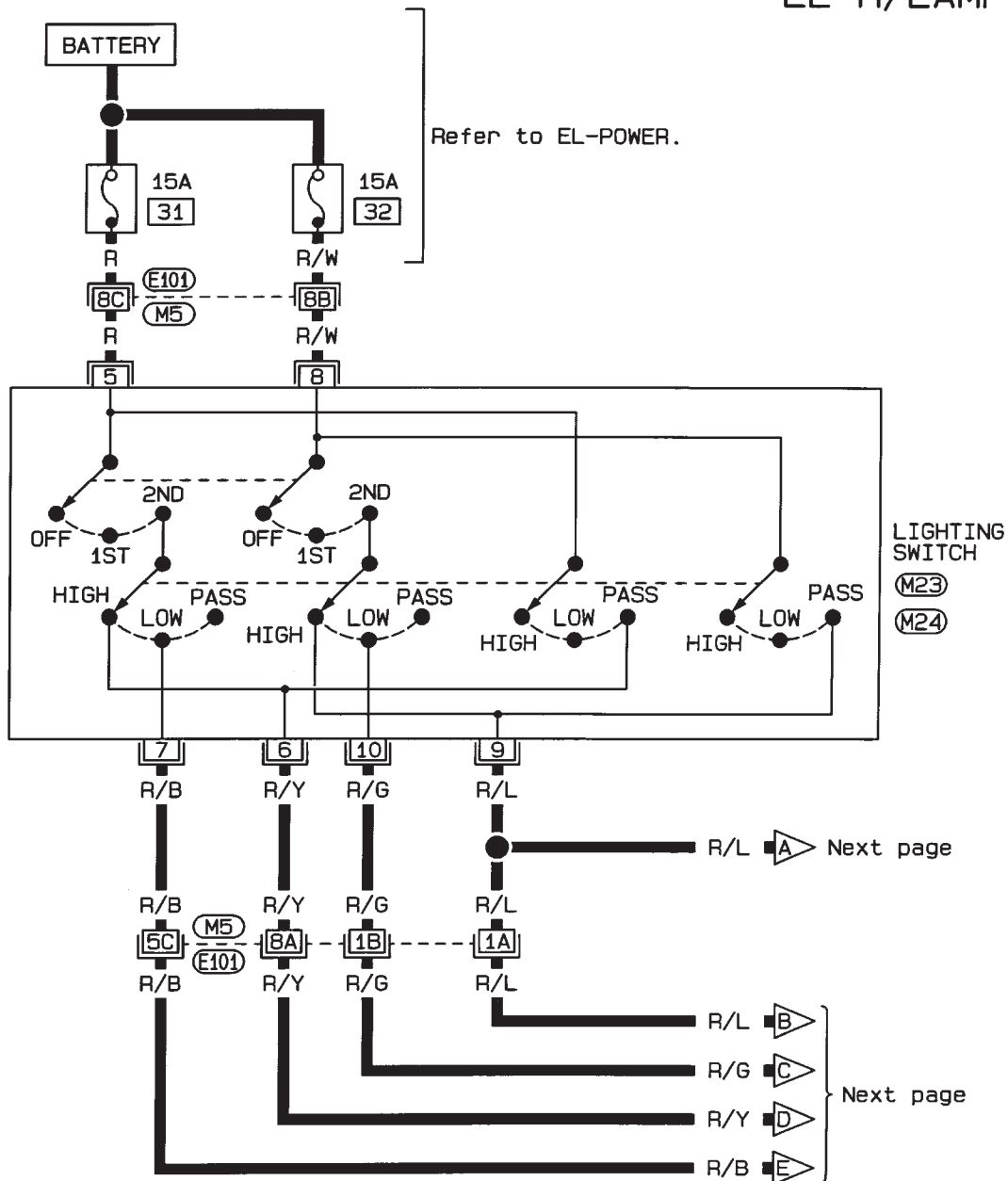
TURN SIGNAL LAMP SWITCH

	L	N	R
1			
2			
3			



Wiring Diagram — H/LAMP —/LHD Models

EL-H/LAMP-01




Refer to last page (Foldout page).

(M5), (E101)



Wiring Diagram — H/LAMP —/LHD Models (Cont'd)

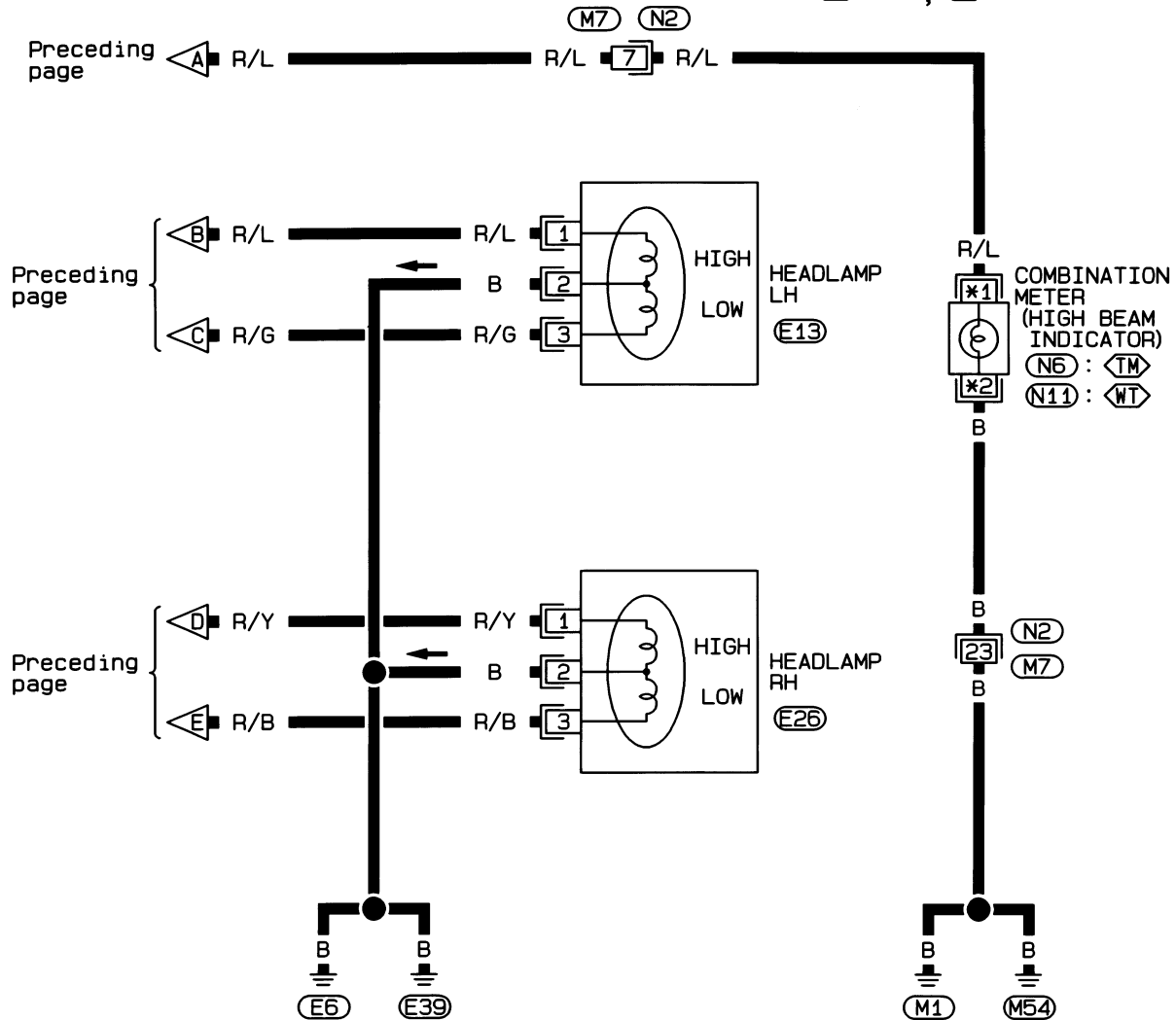
EL-H/LAMP-02

: With tachometer

: Without tachometer

*1... 29,  51

*2...  27,  50



1	2	3	4	5	6		7	8	9	10	11	N2 BR
12	13	14	15	16	17	18	19	20	21	22	23	

36	37	38	39			40	41	42	<div>N6</div> <div>BR</div>
27	28	29	30	31	32	33	34	35	

41	42	43	44	45	46		47	48	49	50	51	
52	53	54	55	56	57	58	59	60	61	62	63	64

N 11

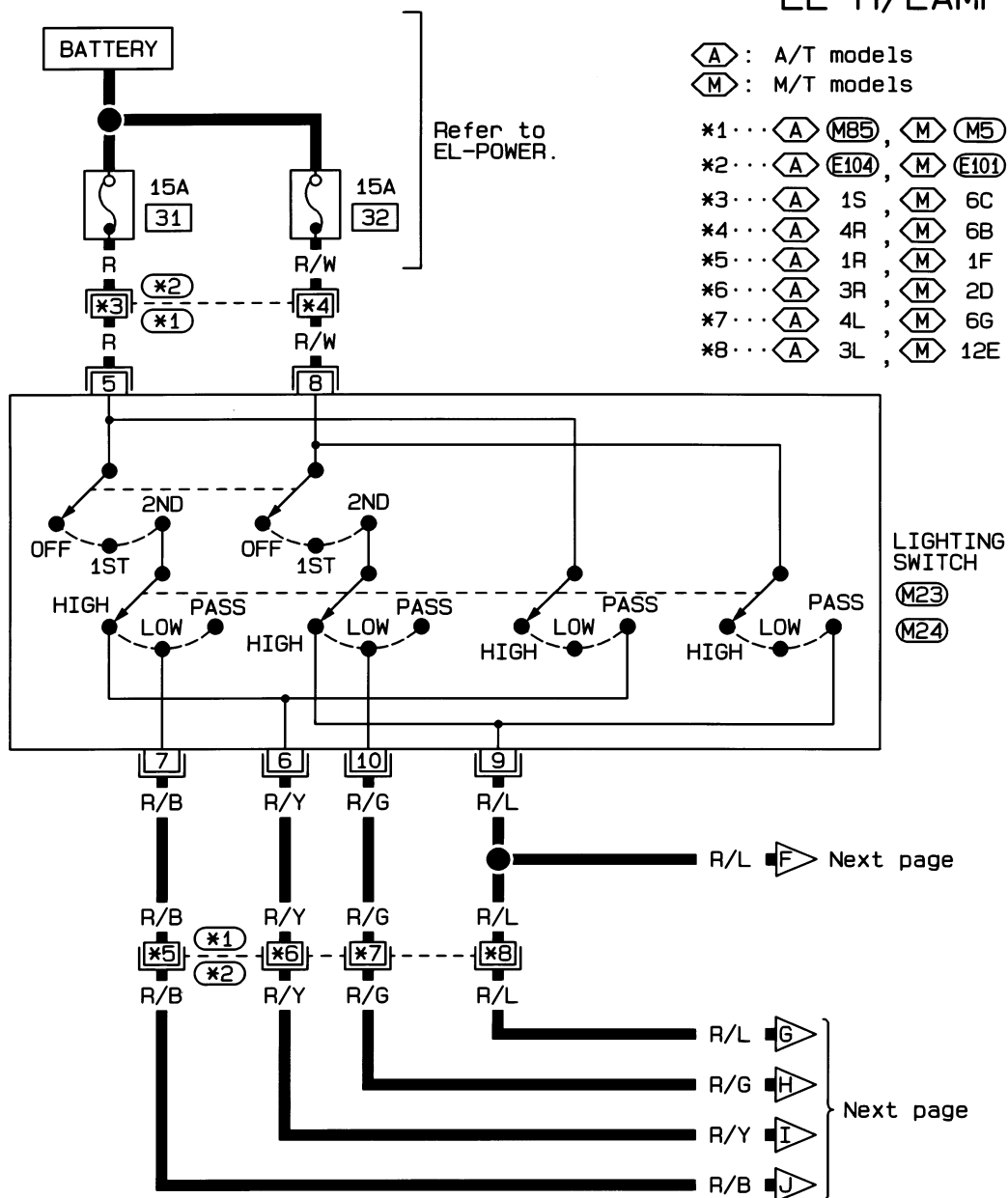
W






Wiring Diagram — H/LAMP —/RHD Models

EL-H/LAMP-03



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(Foldout page).

M5, E101
M85, E104

HEADLAMP — Conventional Type —

Wiring Diagram — H/LAMP —/RHD Models (Cont'd)

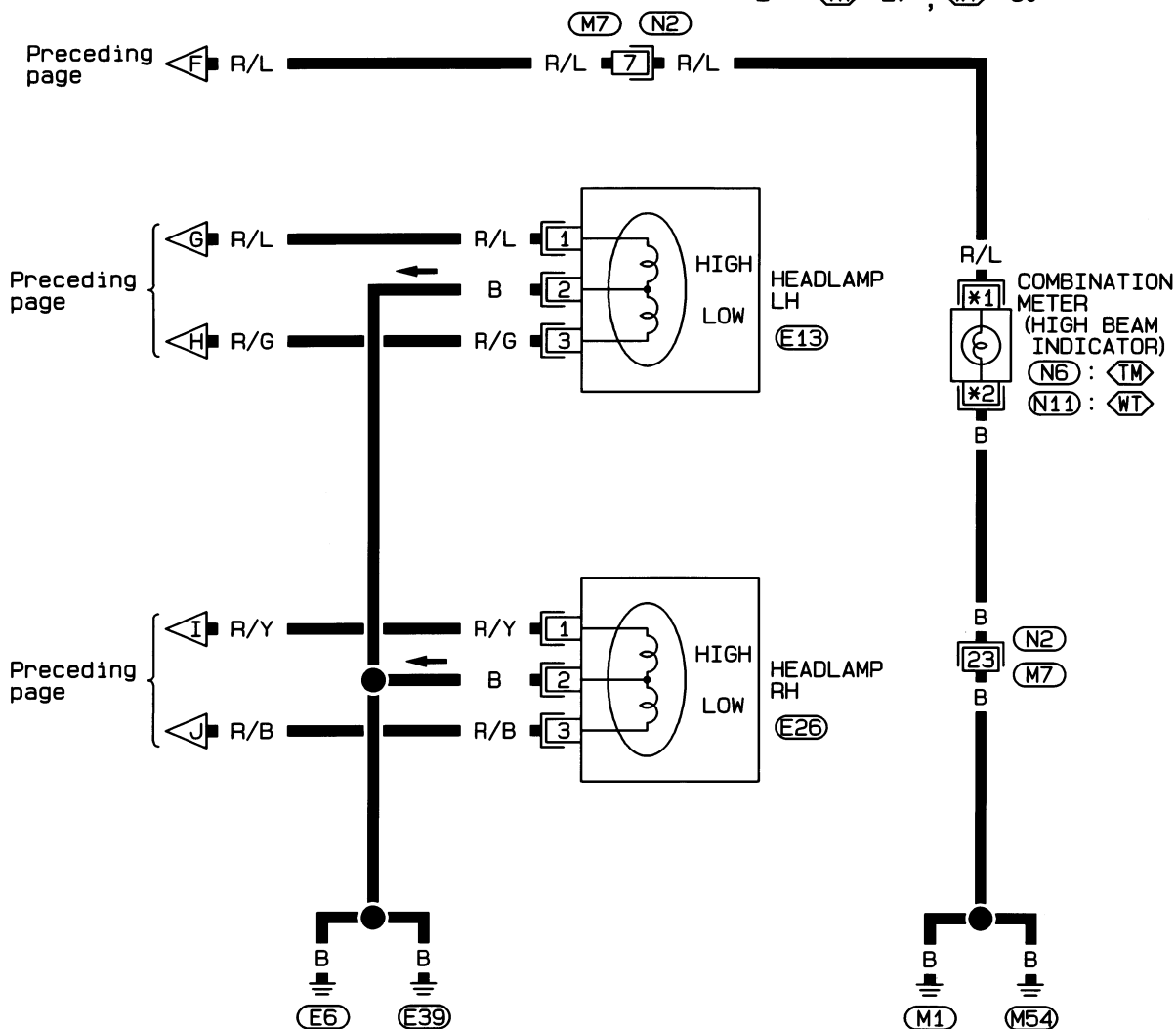
EL-H/LAMP-04

TM : With tachometer

WT : Without tachometer

*1... TM 29 , WT 51

*2... TM 27 , WT 50



1	2	3	4	5	6	7	8	9	10	11	N2
12	13	14	15	16	17	18	19	20	21	22	BR

36	37	38	39	40	41	42	N6
27	28	29	30	31	32	33	BR

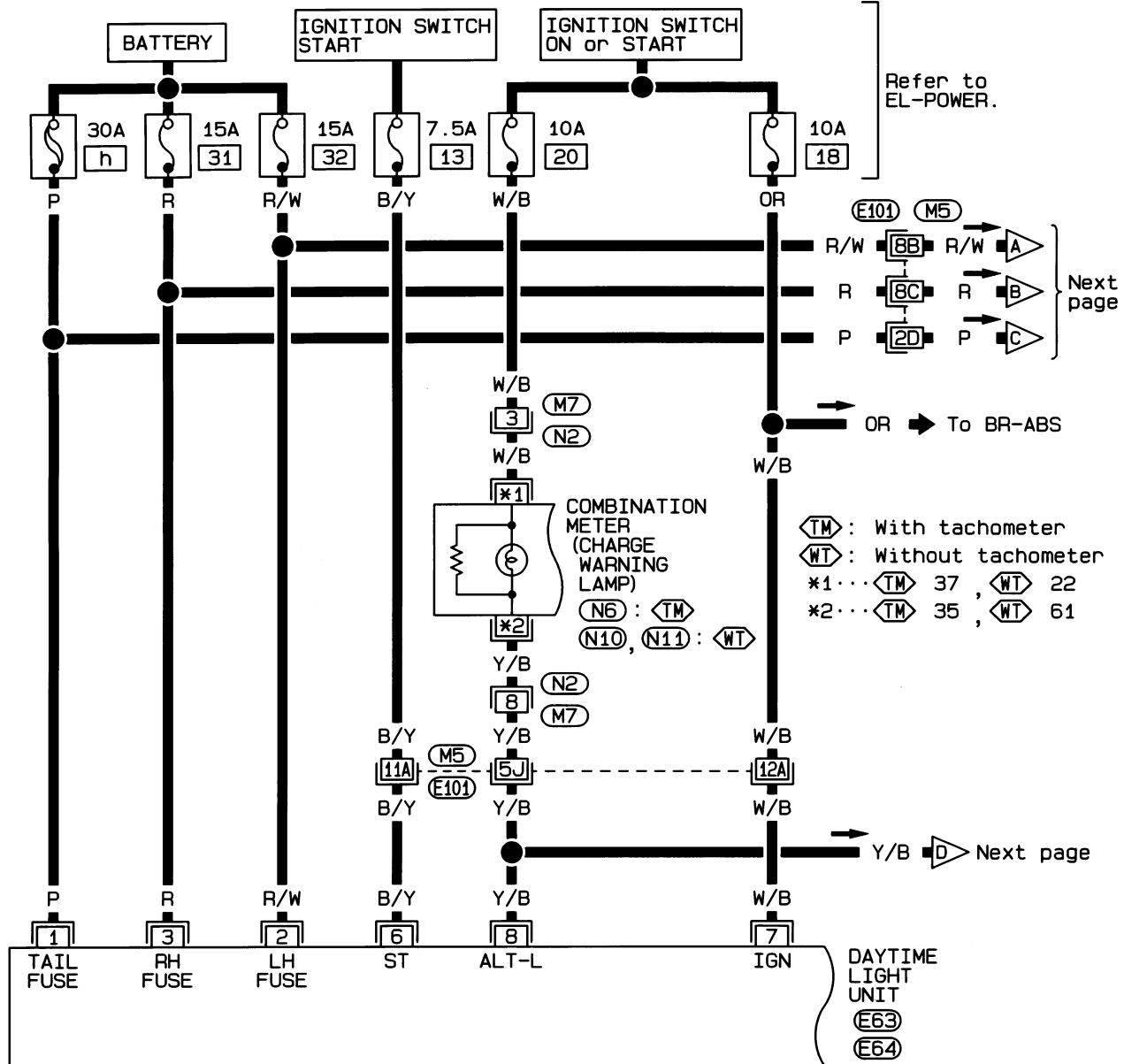
41	42	43	44	45	46	47	48	49	50	51	N11
52	53	54	55	56	57	58	59	60	61	62	W

3	E13	E26
1	B	B

HEADLAMP — Daytime Light System —

Wiring Diagram — DTRL —

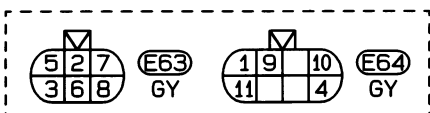
EL-DTRL-01



1	2	3	4	5	6	7	8	9	10	11	(N2)
12	13	14	15	16	17	18	19	20	21	22	BR

36	37	38	39	40	41	42	(N6)
27	28	29	30	31	32	33	BR

21	22	23	24	25	26	27	28	29	(N10)	41	42	43	44	45	46	47	48	49	50	51	(N11)
30	31	32	33	34	35	36	37	38	BR	52	53	54	55	56	57	58	59	60	61	62	W



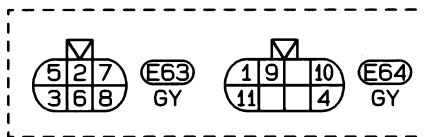
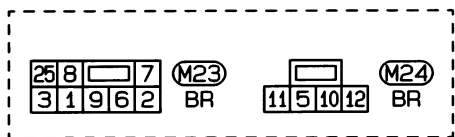
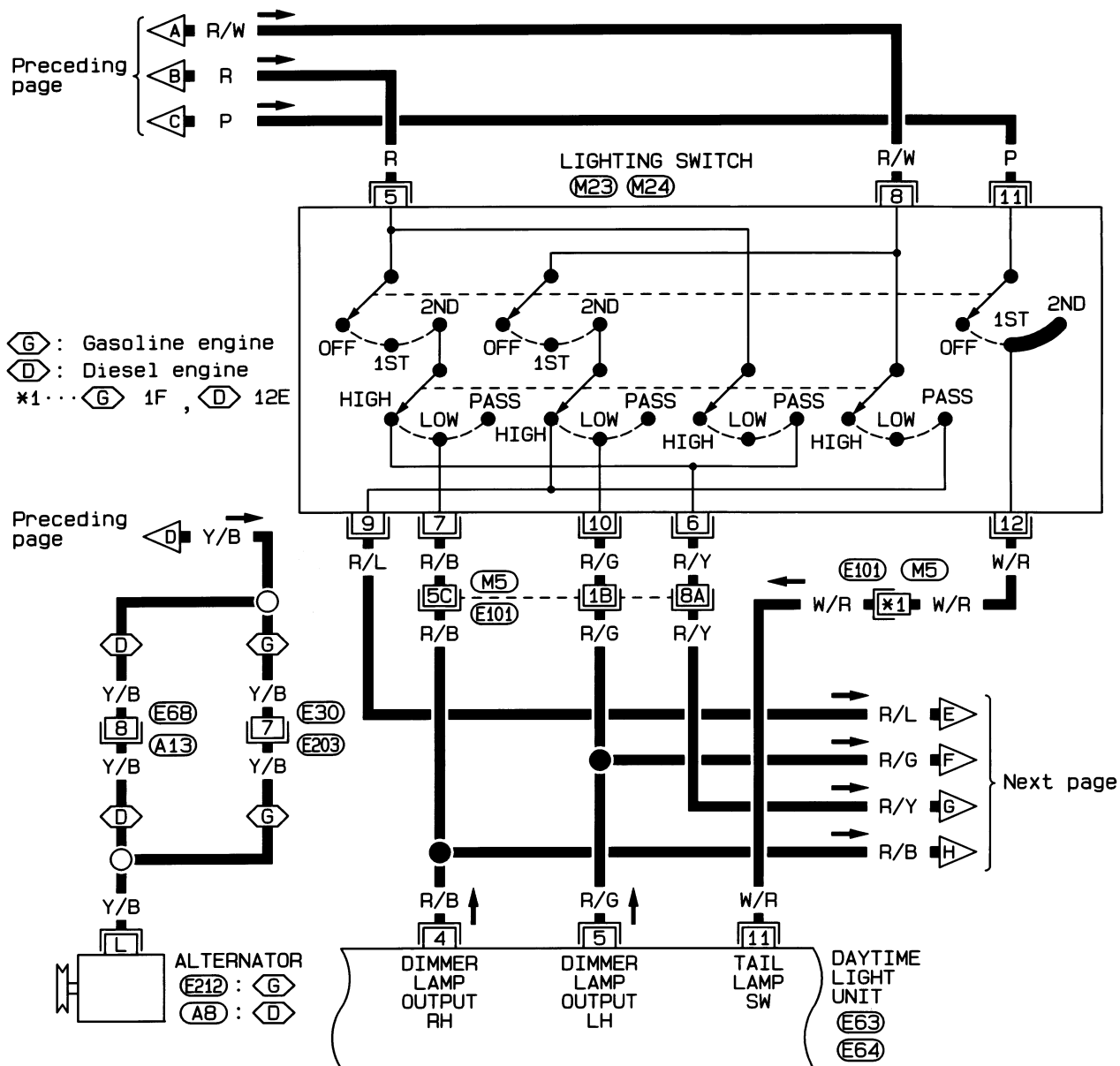
Refer to last page (Foldout page).

(M5), (E101)

HEADLAMP — Daytime Light System —

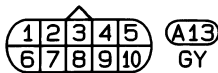
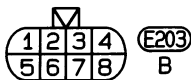
Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-02



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(Foldout page).

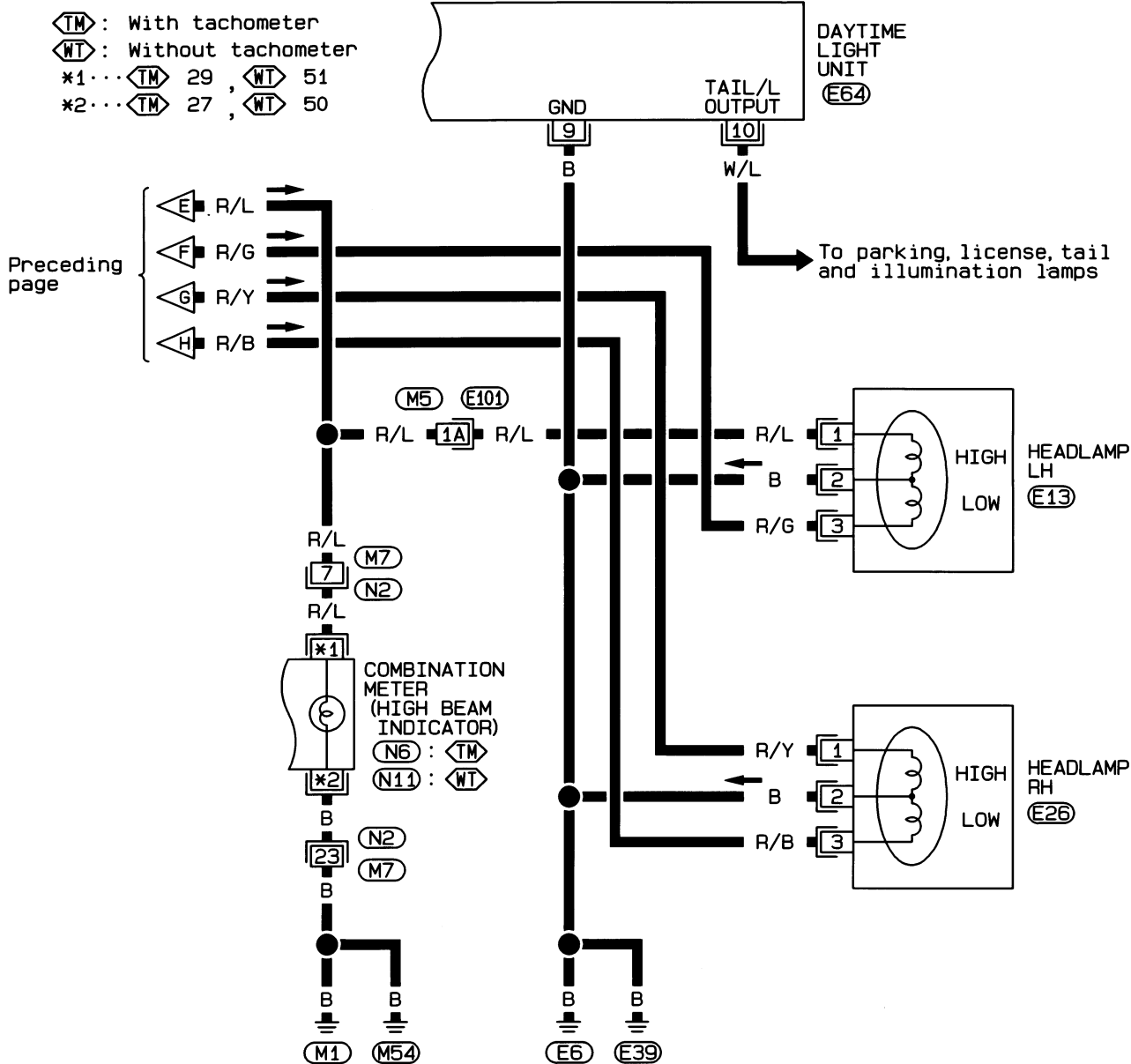
(M5), (E101)



HEADLAMP — Daytime Light System —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-03



1	2	3	4	5	6	7	8	9	10	11	N2
12	13	14	15	16	17	18	19	20	21	22	BR

36	37	38	39	40	41	42	N6
27	28	29	30	31	32	33	BR

41	42	43	44	45	46	47	48	49	50	51	N11
52	53	54	55	56	57	58	59	60	61	62	W

3	E13	E26
1 2	B	B

1	9	10	E64
11		4	GY

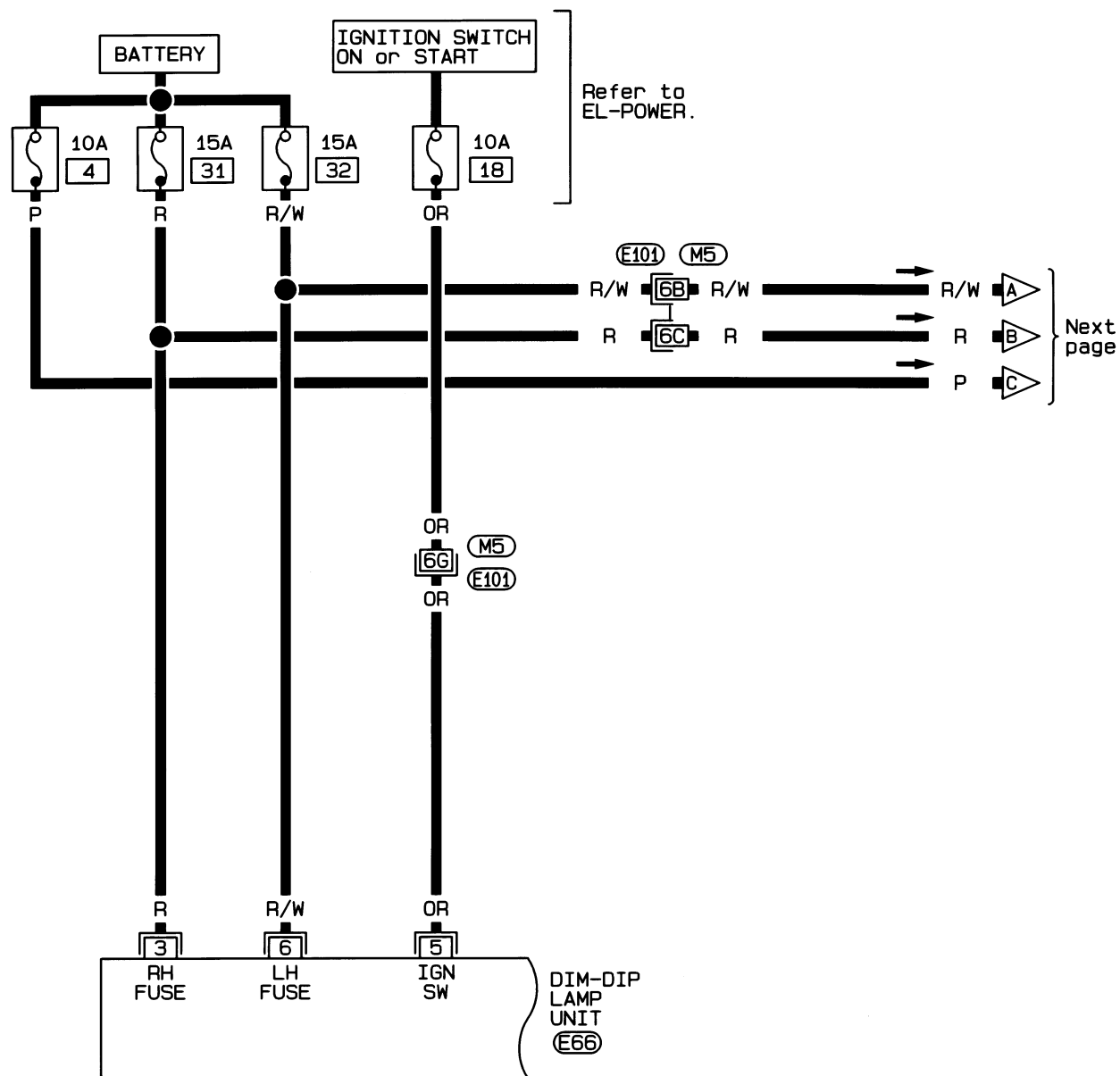
Refer to last page (Foldout page).

(M5), (E101)

EL

Wiring Diagram — DIMDIP —

EL-DIMDIP-01



876 E66
253 GY

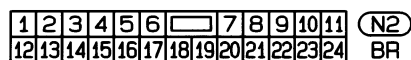
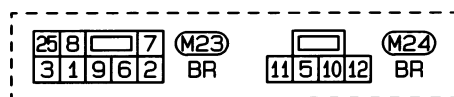
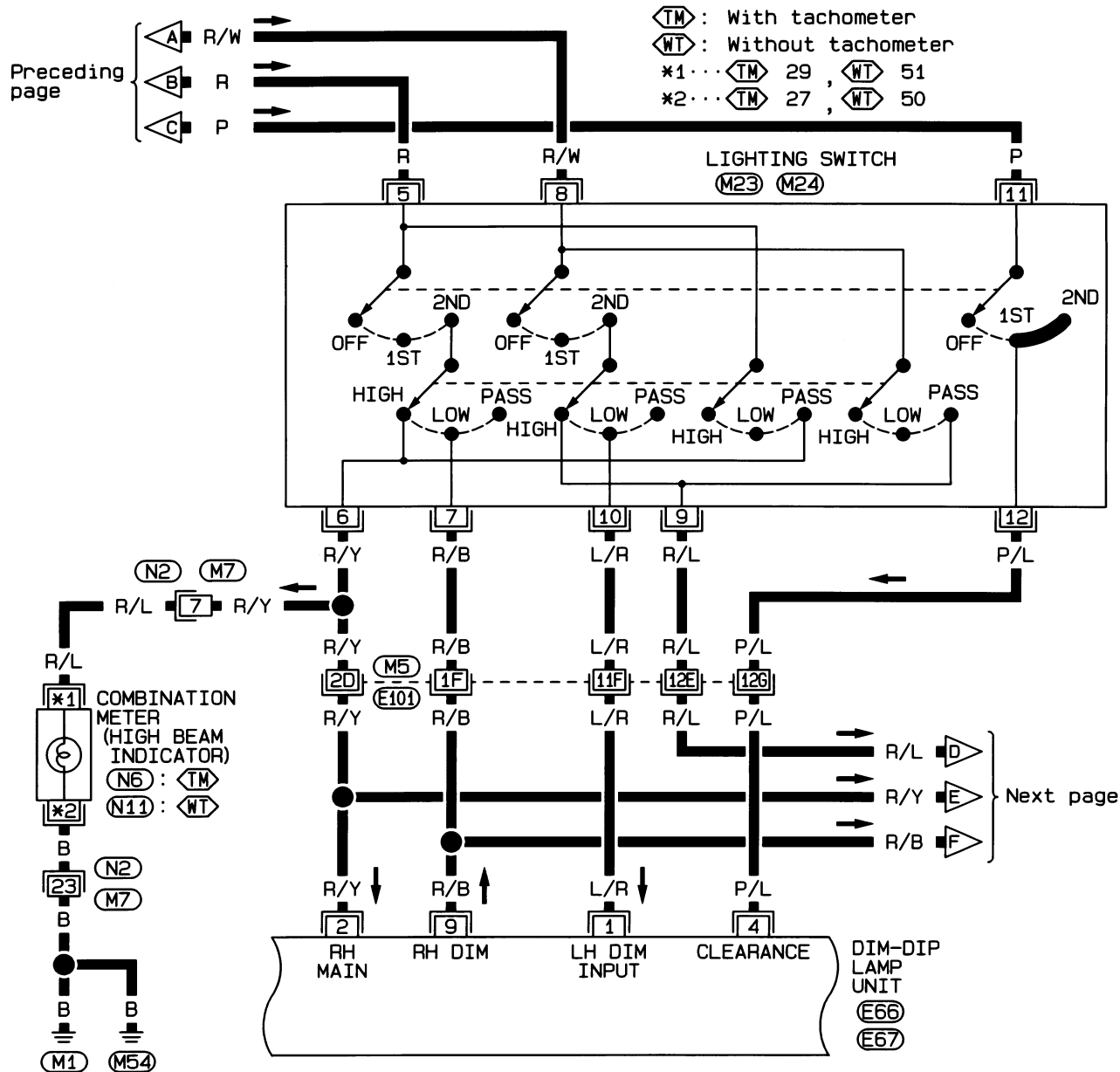
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(Foldout page).

M5, E101

HEADLAMP — Dim-dip Lamp System —

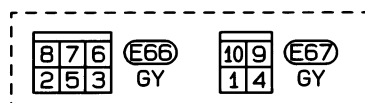
Wiring Diagram — DIMDIP — (Cont'd)

EL-DIMDIP-02



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M5, E101



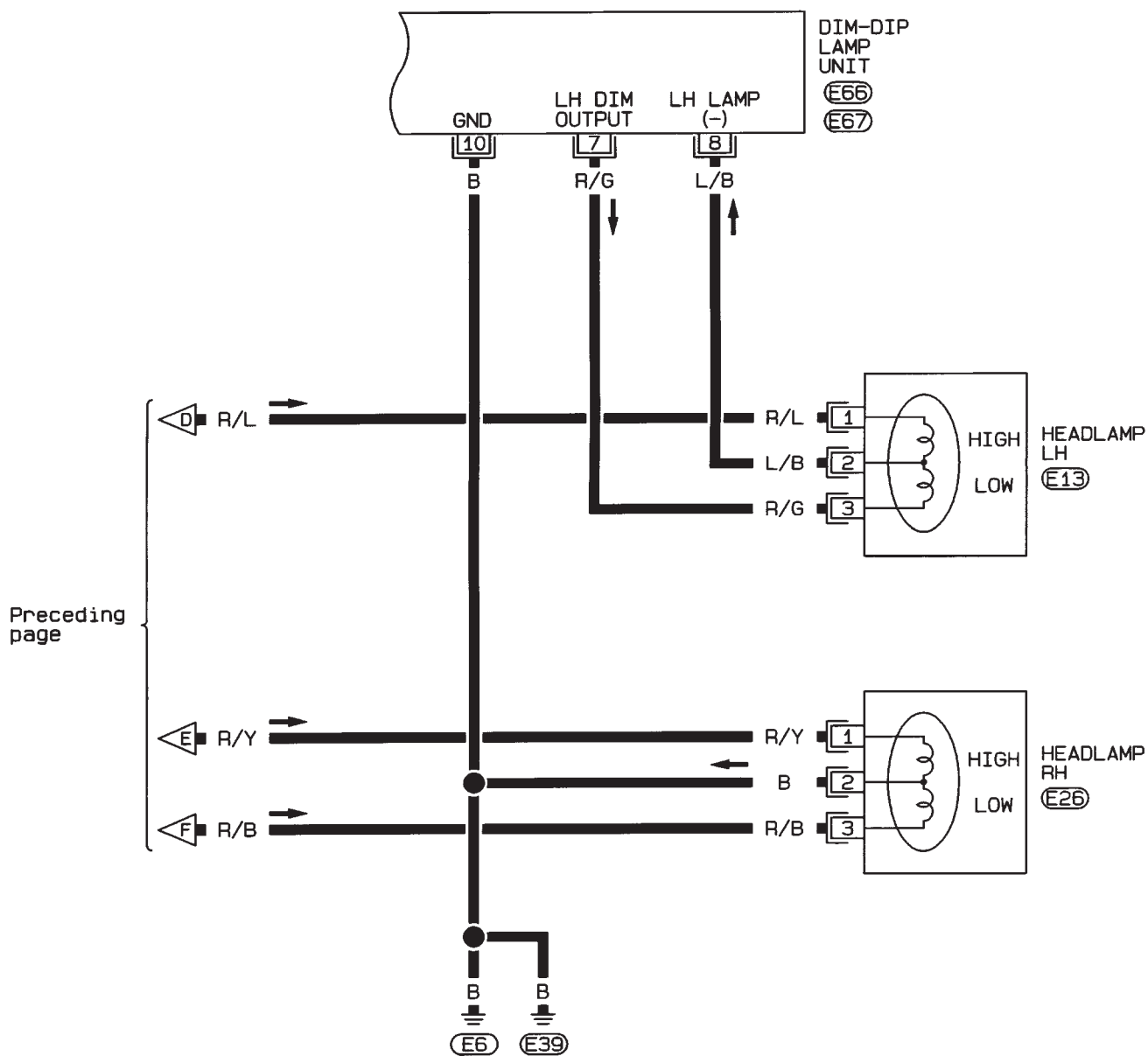
EL

IDX

HEADLAMP — Dim-dip Lamp System —

Wiring Diagram — DIMDIP — (Cont'd)

EL-DIMDIP-03



3
1 2

E13, E26
B, B

8 7 6
2 5 3

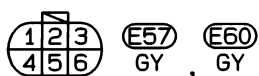
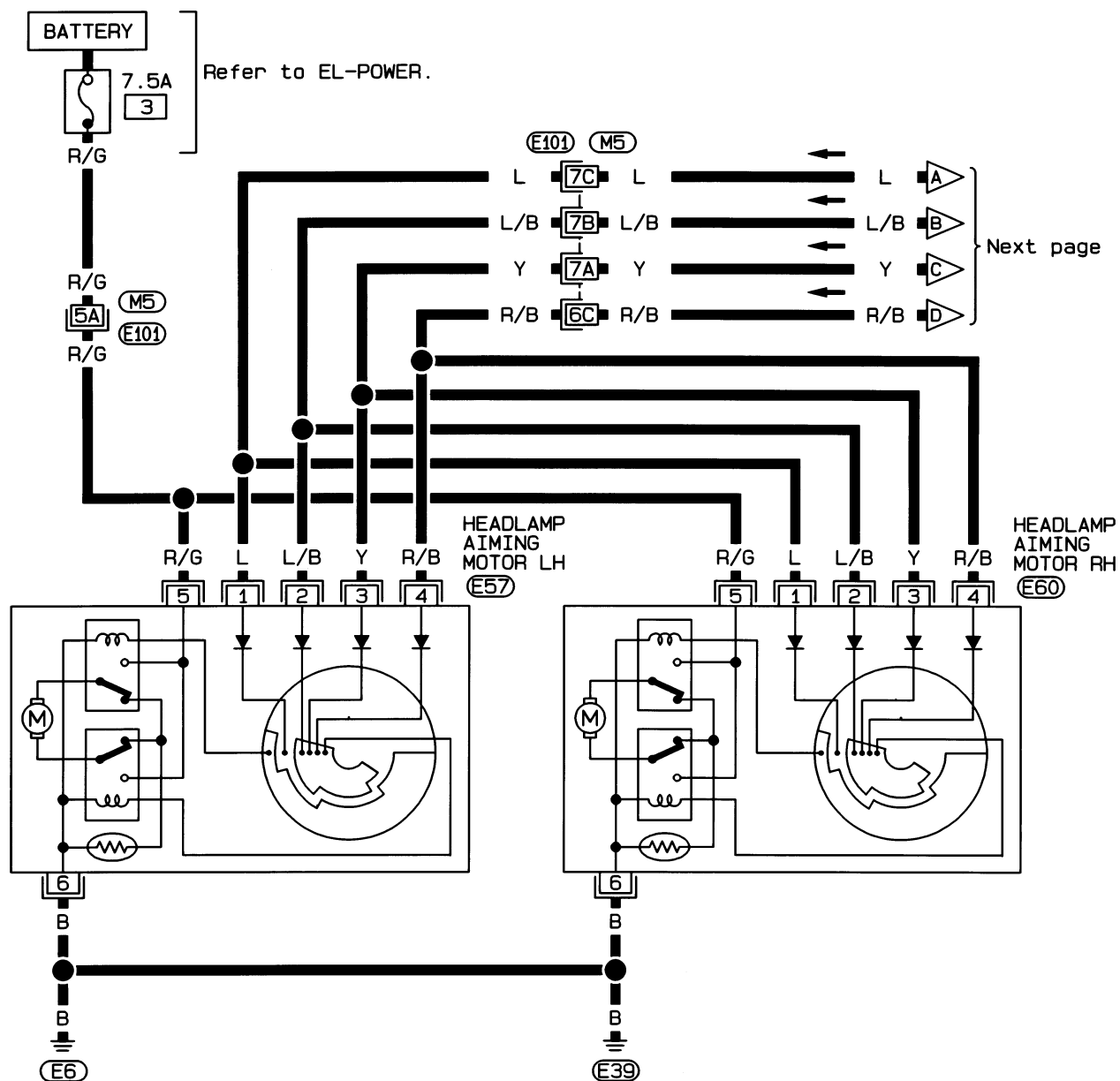
E66
GY

10 9
1 4

E67
GY

Wiring Diagram — H/AIM —

EL-H/AIM-01

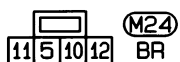
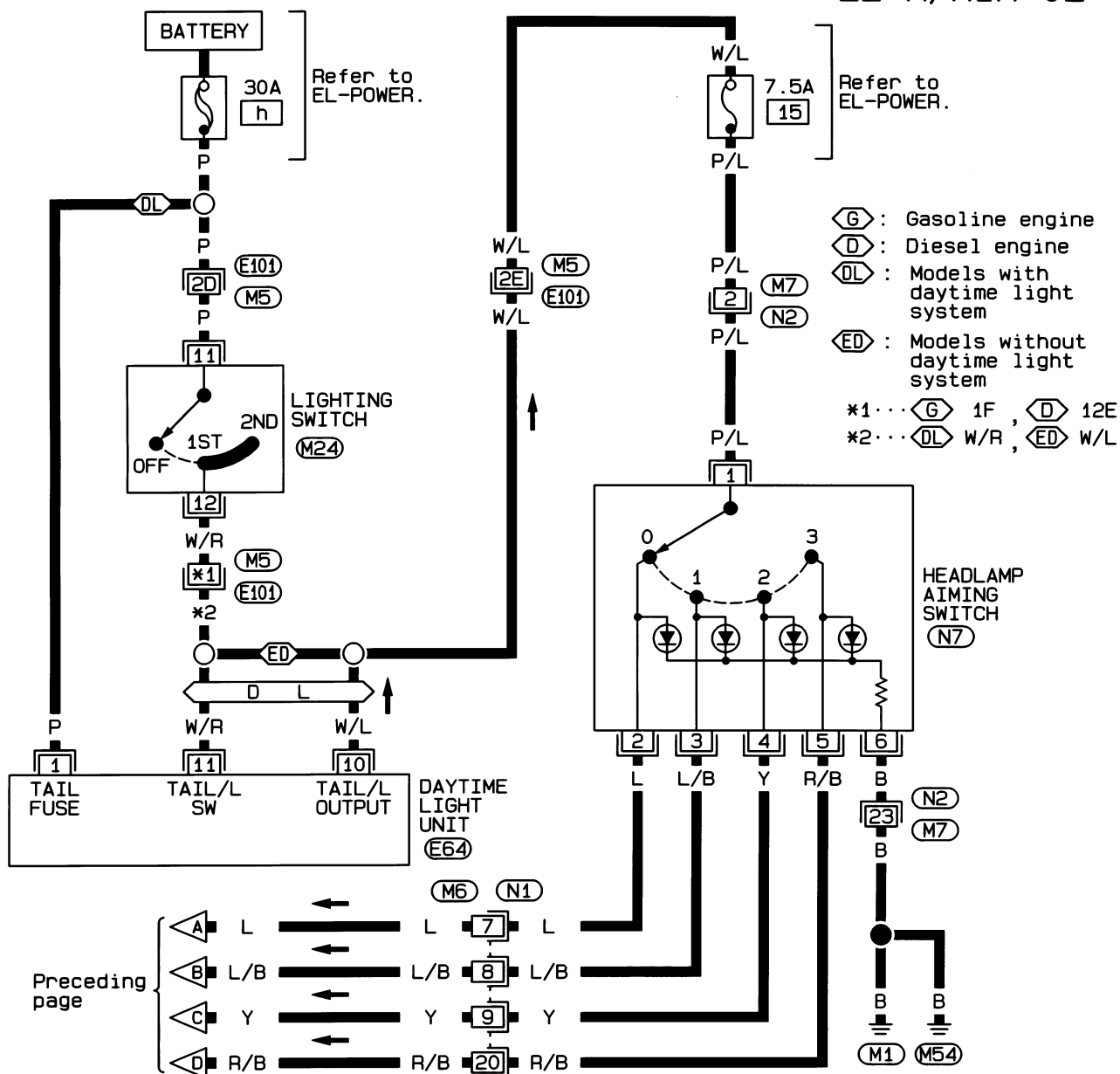


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(M5) , (E101)

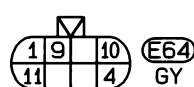
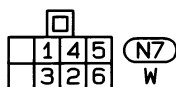
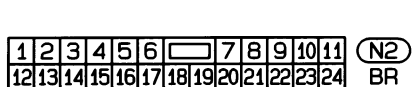
Wiring Diagram — H/AIM — (Cont'd)

EL-H/AIM-02



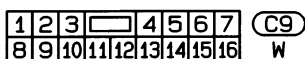
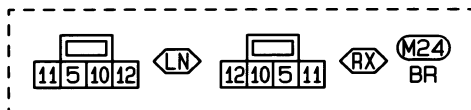
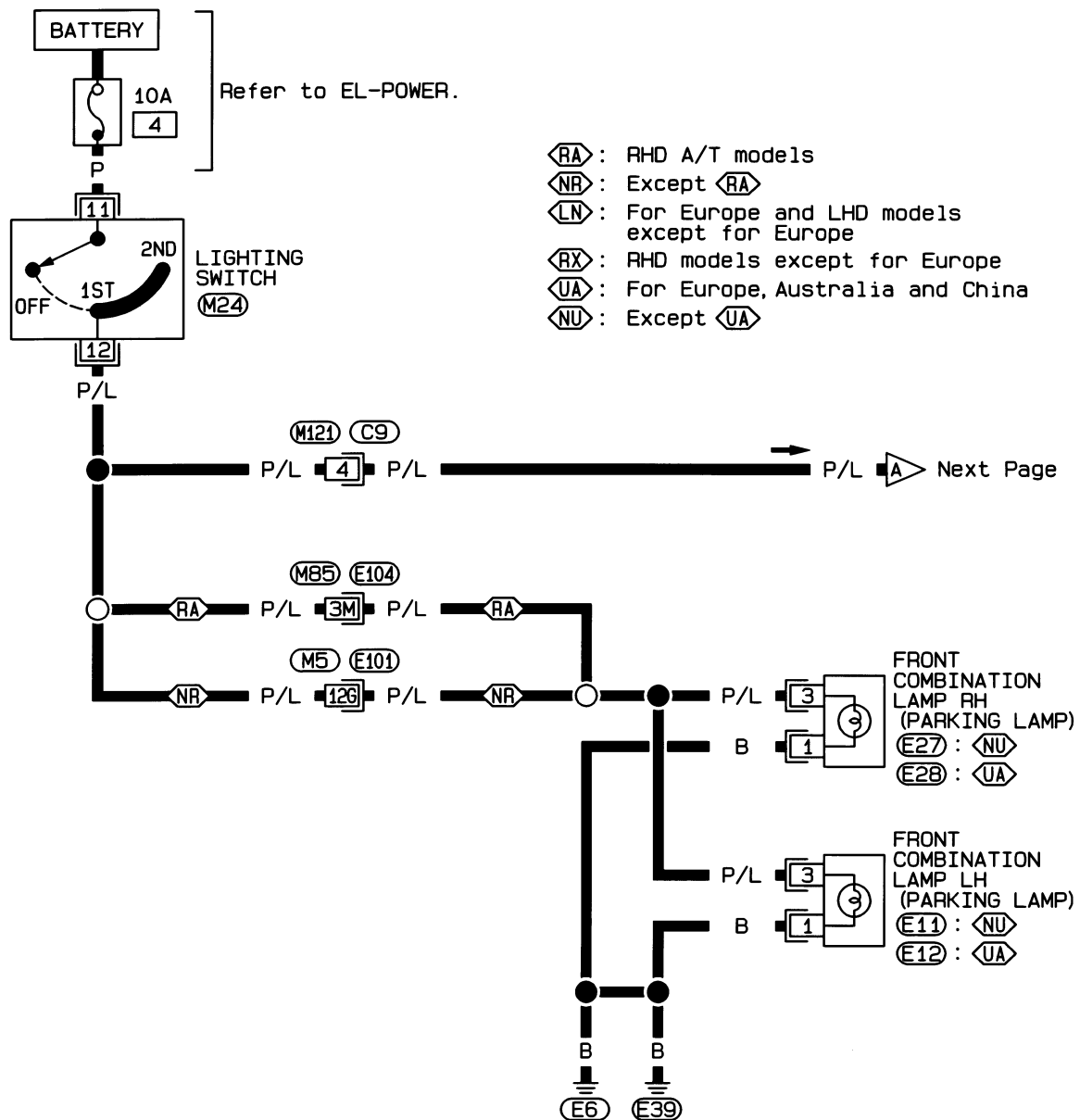
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M5 E101



Wiring Diagram — TAIL/L —/Except LHD Models for Europe

EL-TAIL/L-01



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M5, E101
M85, E104

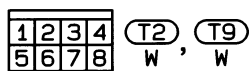
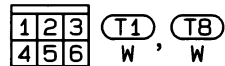
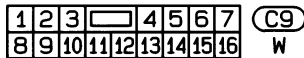
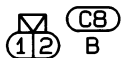
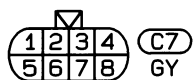
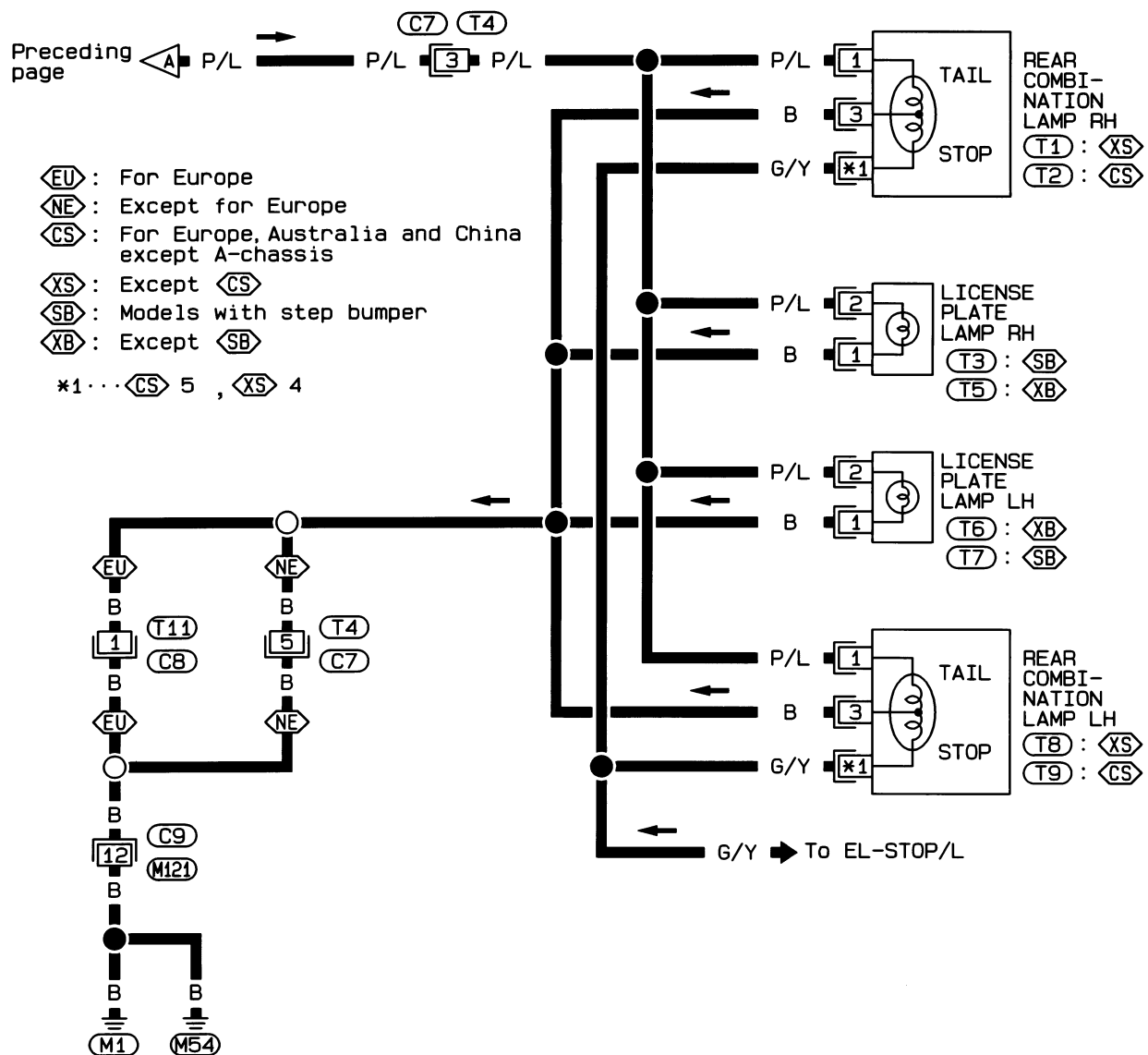
EL

IDX

PARKING, LICENSE AND TAIL LAMPS

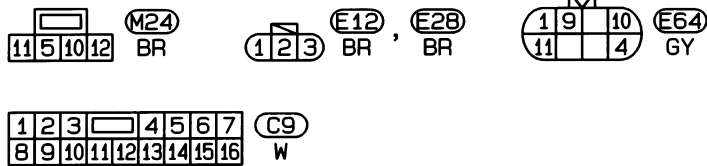
Wiring Diagram — TAIL/L —/Except LHD Models for Europe (Cont'd)

EL-TAIL/L-02



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EL-TAIL/L-03

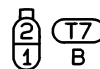
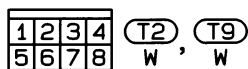
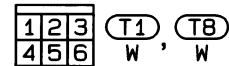
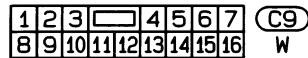
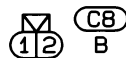
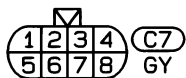
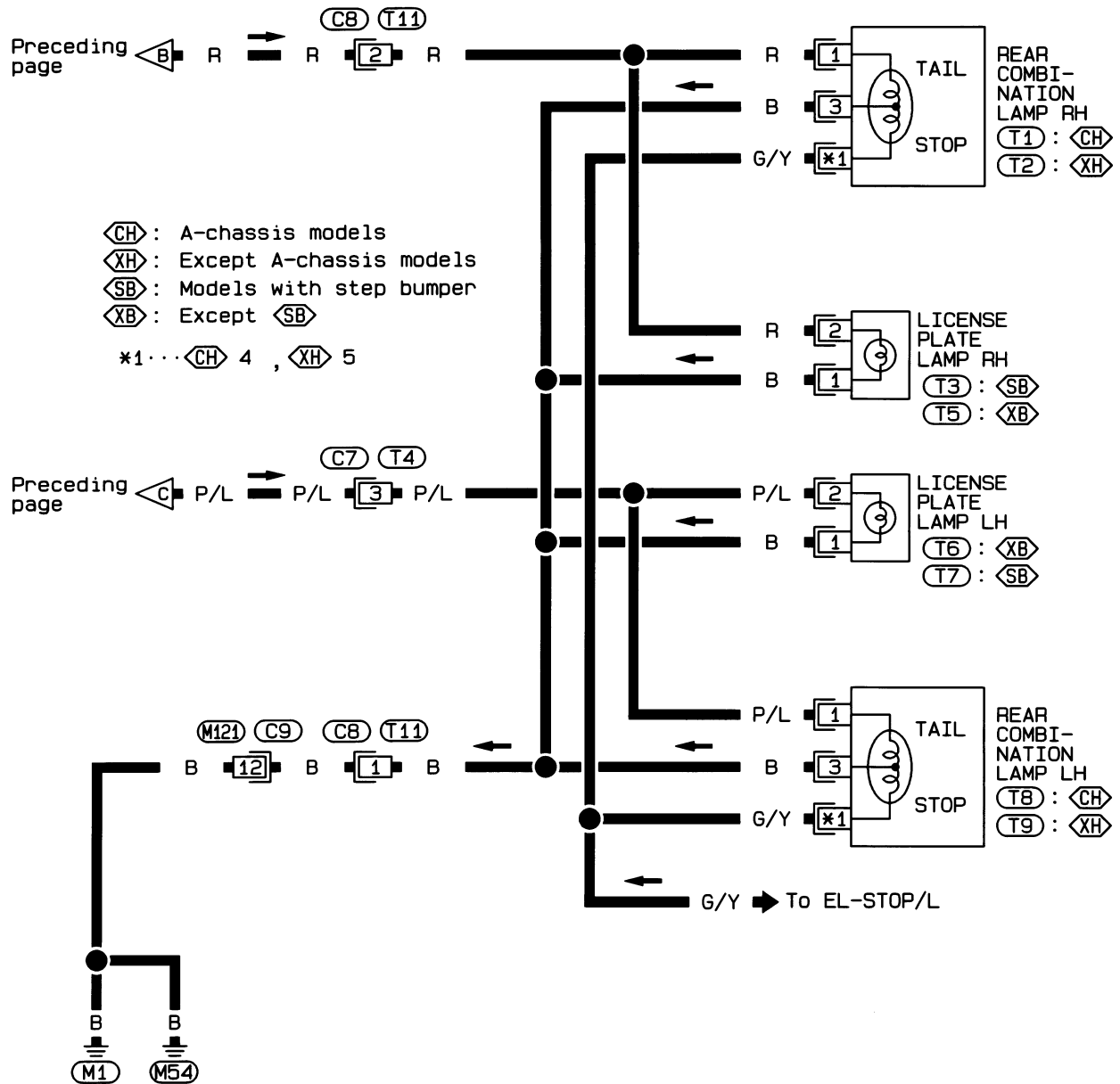


M5, E101

PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —/LHD Models for Europe (Cont'd)

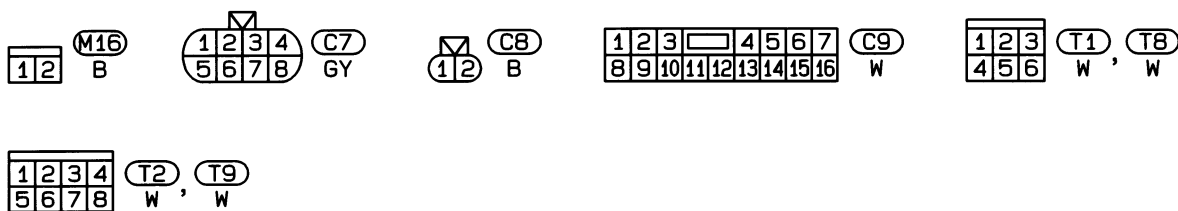
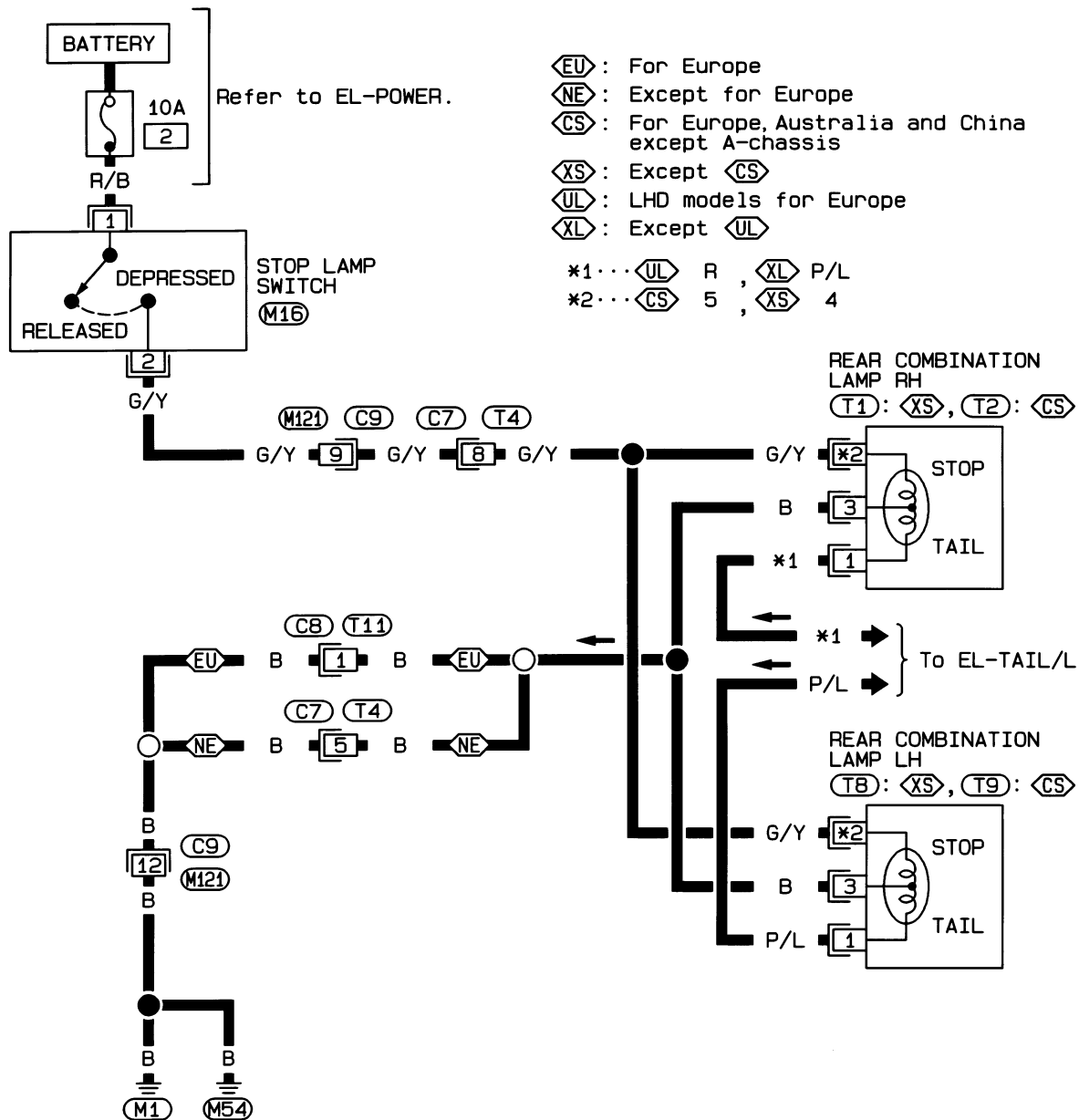
EL-TAIL/L-04



STOP LAMP

Wiring Diagram — STOP/L —

EL-STOP/L-01

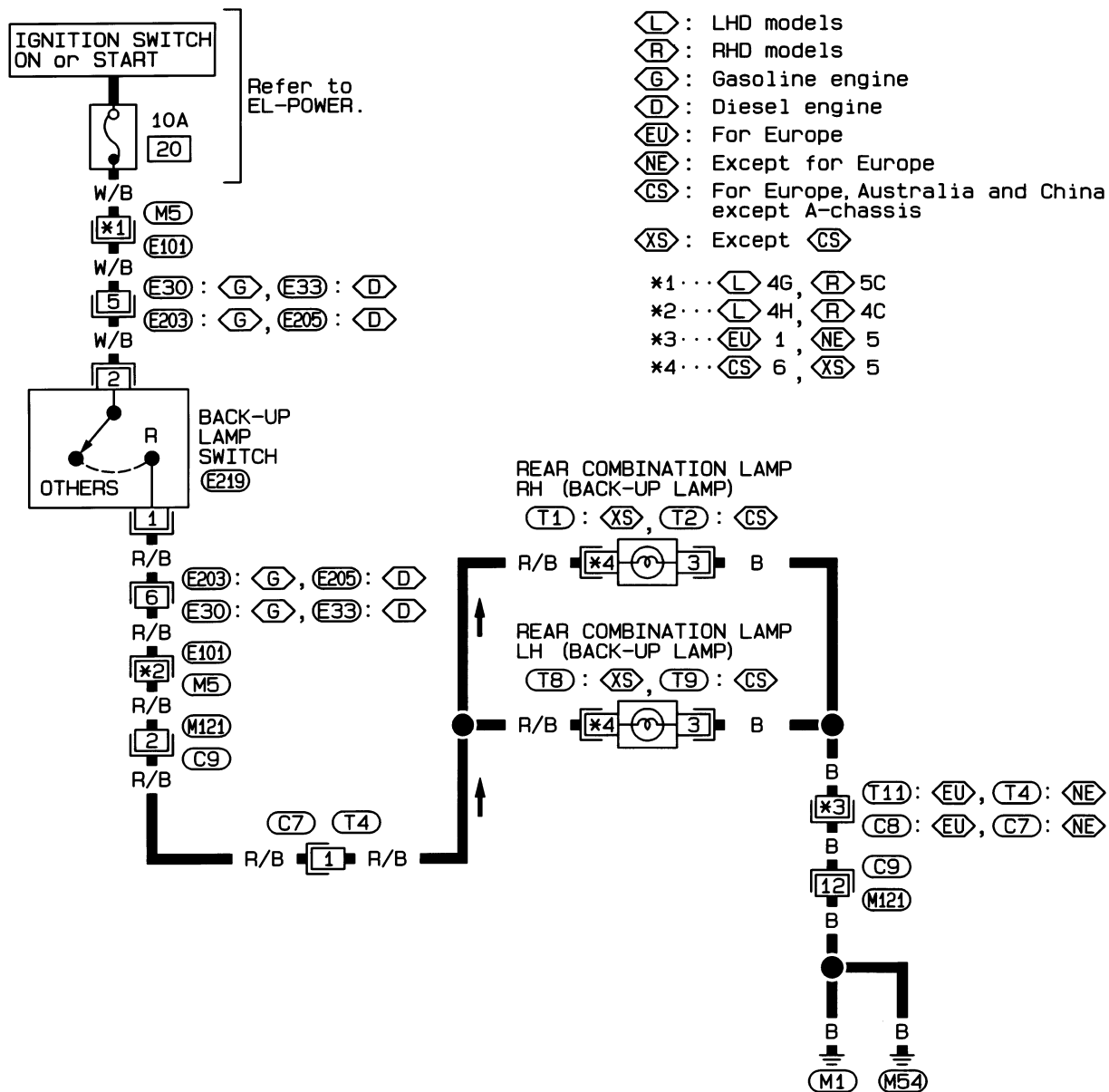


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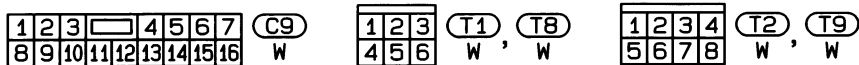
BACK-UP LAMP

Wiring Diagram — BACK/L —/M/T Models

EL-BACK/L-01



- (L) : LHD models
 (R) : RHD models
 (G) : Gasoline engine
 (D) : Diesel engine
 (EU) : For Europe
 (NE) : Except for Europe
 (CS) : For Europe, Australia and China
 except A-chassis
 (XS) : Except (CS)
- *1... (L) 4G, (R) 5C
 *2... (L) 4H, (R) 4C
 *3... (EU) 1, (NE) 5
 *4... (CS) 6, (XS) 5

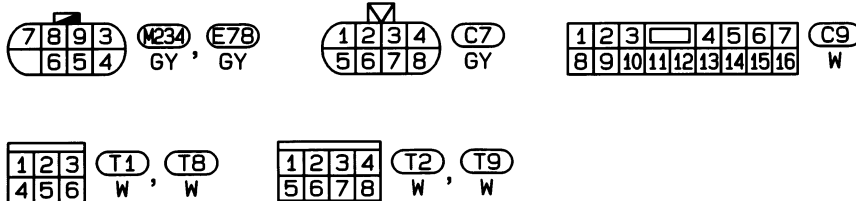
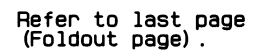


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(M5, E101)

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EL-BACK/L-02

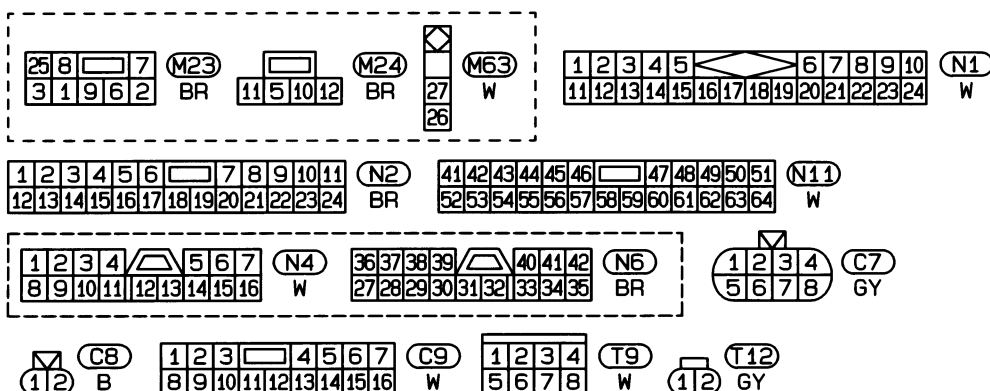
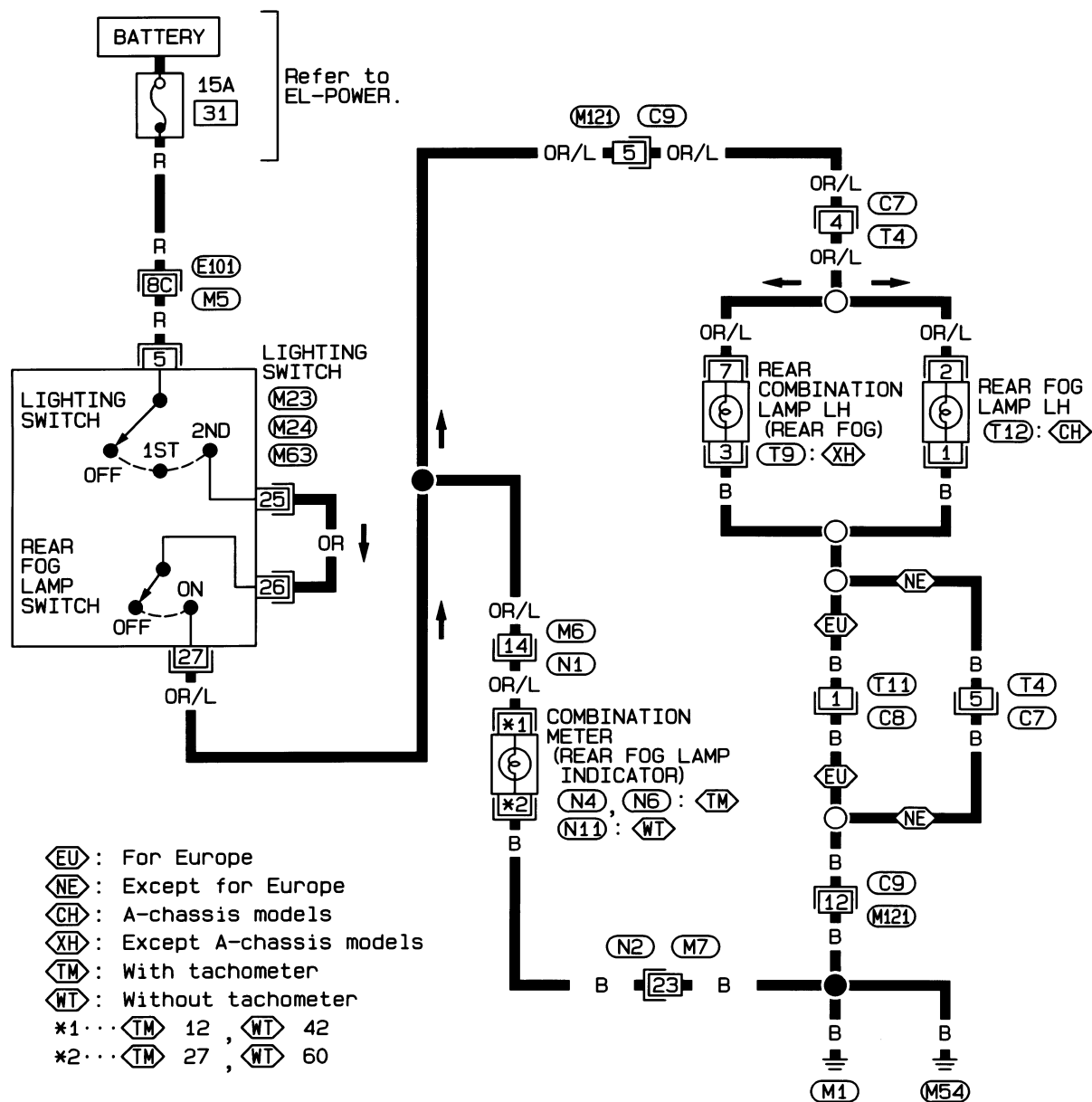


(M5) (E101)
(M85) (E104)

REAR FOG LAMP

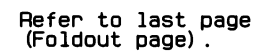
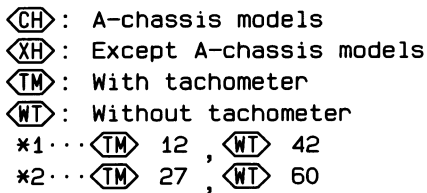
Wiring Diagram — R/FOG —/LHD Models

EL-R/FOG-01



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EL-R/FOG-02



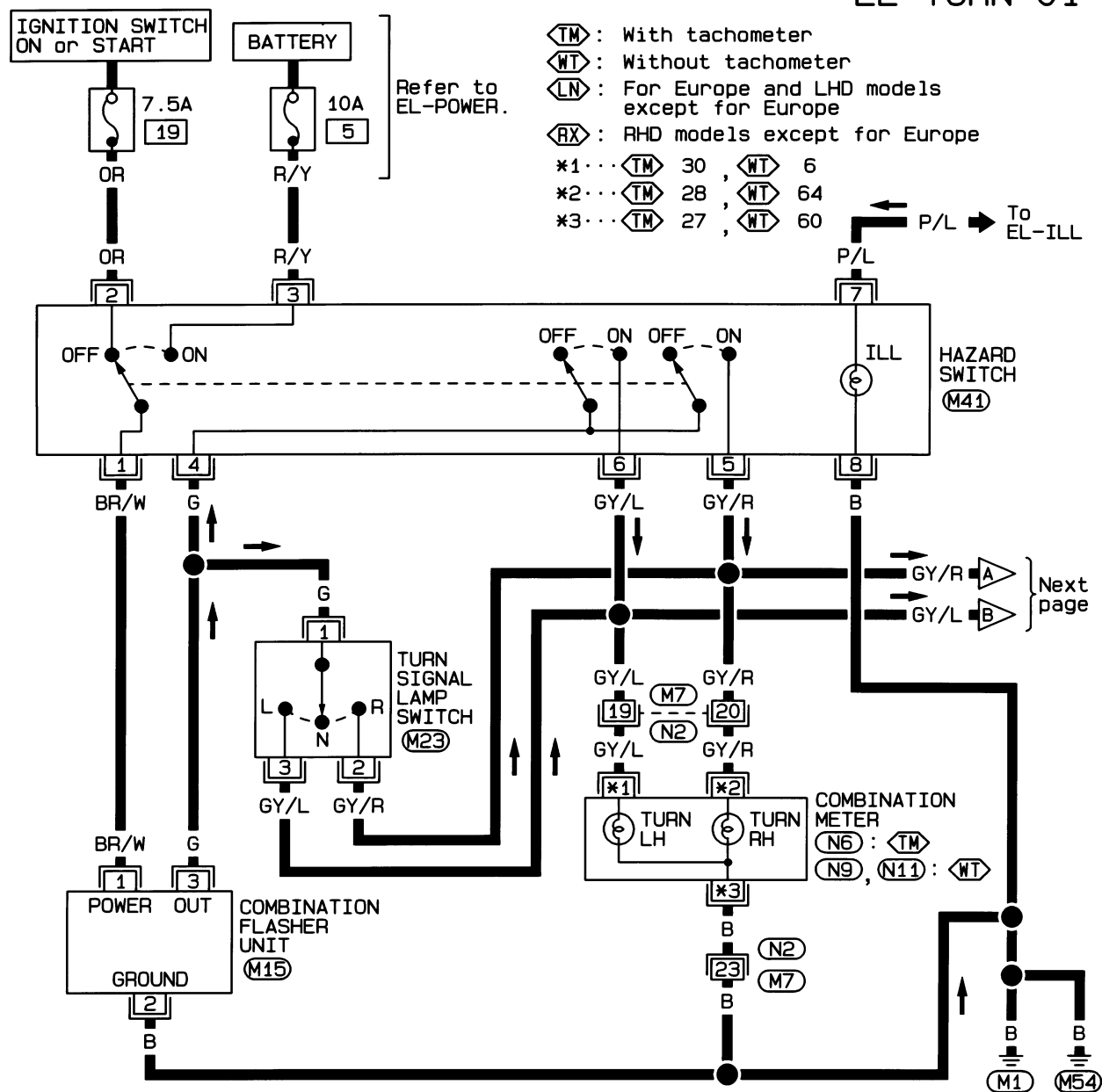
M5, E101

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —/Type-1

FOR EUROPE (Single cab) AND EXCEPT FOR EUROPE (Except LHD models with diesel engine except for the Middle East)

EL-TURN-01



1 2 3 M15
3 B

25 8 7 M23 : LN
3 1 9 6 2 BR

7 6 25 M23 : RX
3 1 9 8 2 BR

4 5 6 M41
8 7 2 1 3 W

1 2 3 4 5 6 7 8 9 10 11 N2
12 13 14 15 16 17 18 19 20 21 22 23 24 BR

36 37 38 39 40 41 42 N6
27 28 29 30 31 32 33 34 35 BR

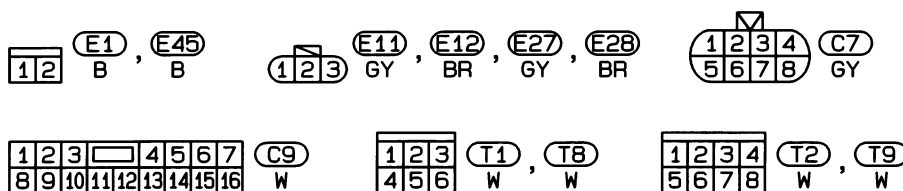
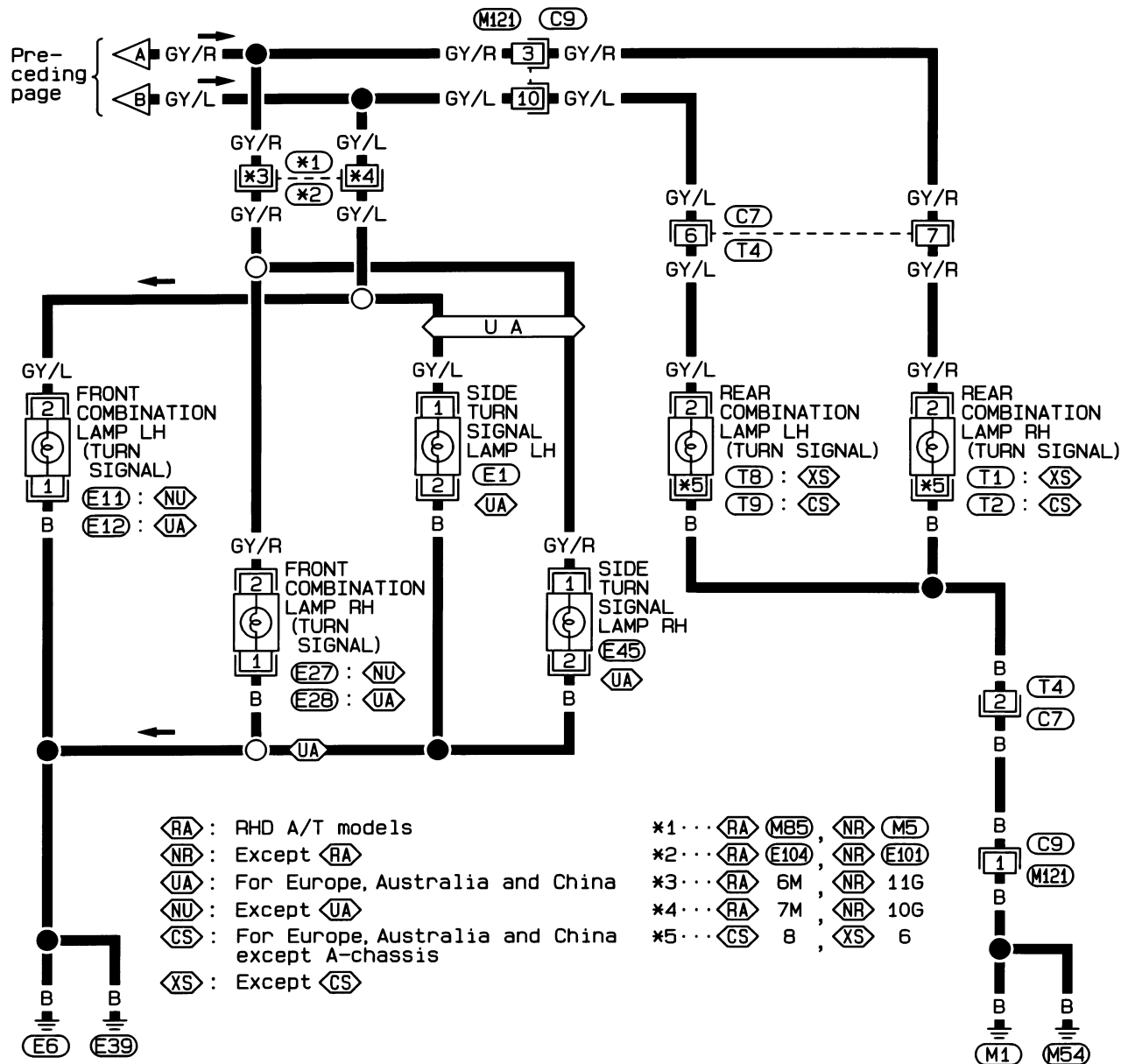
1 2 3 4 5 6 7 8 9 N9
10 11 12 13 14 15 16 17 18 19 20 W

41 42 43 44 45 46 47 48 49 50 51 N11
52 53 54 55 56 57 58 59 60 61 62 63 64 W

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —/Type-1 (Cont'd)

EL-TURN-02



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M5, E101
MB5, E104

EL

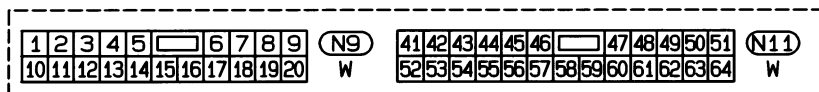
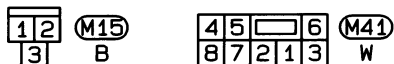
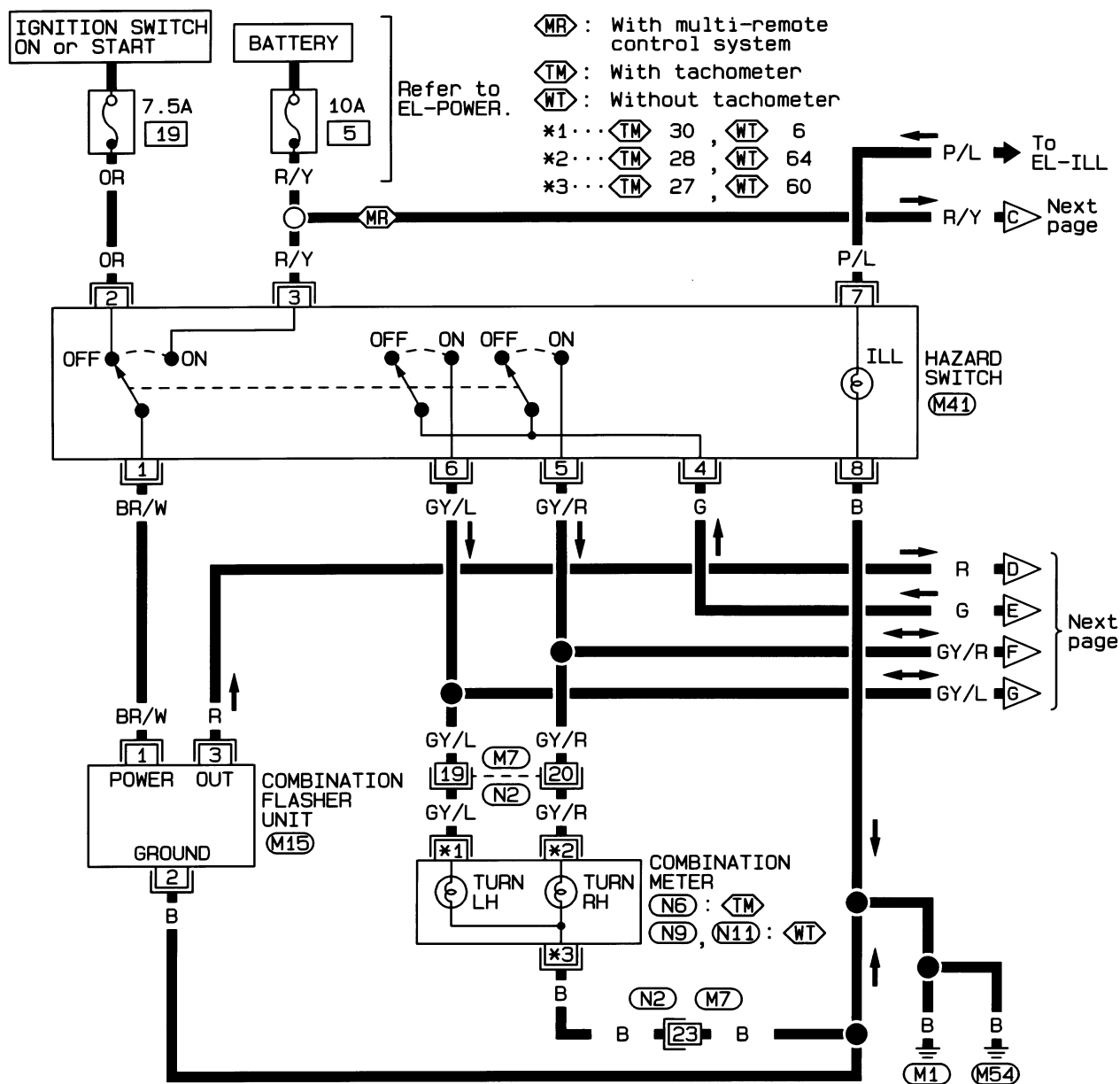
IDX

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —/Type-2

FOR EUROPE (King cab and Double cab) AND LHD MODELS WITH DIESEL ENGINE
EXCEPT FOR EUROPE AND THE MIDDLE EAST (Except STD grade with QD engine)

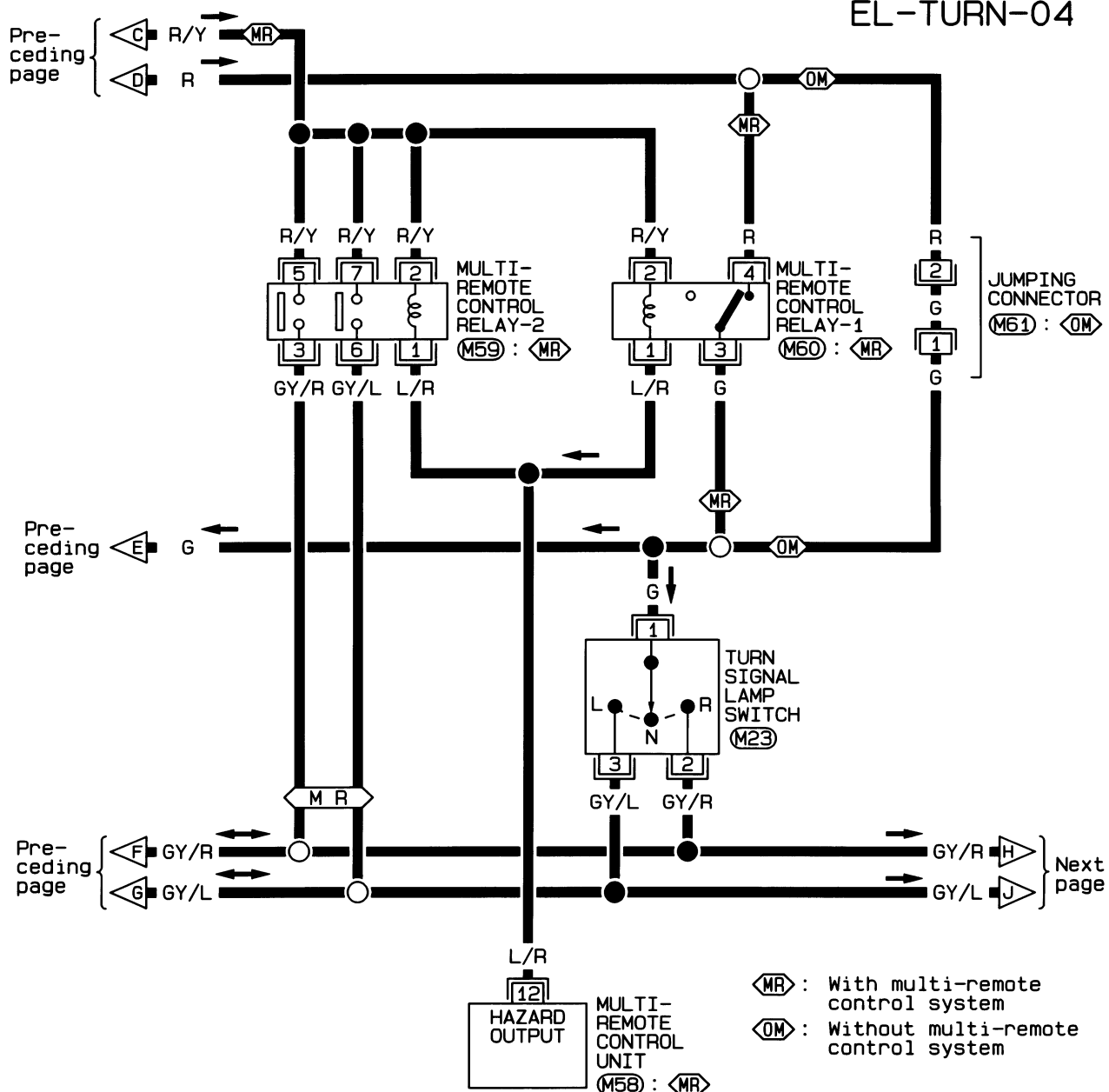
EL-TURN-03



TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —/Type-2 (Cont'd)

EL-TURN-04



25	8	7	(M23)
31	9	6	BR

5	4	3	2	1	(M58)
12	11	10	9	8	W

1	2
5	7
3	6

(M59) BR

	3	
2	4	1
	5	

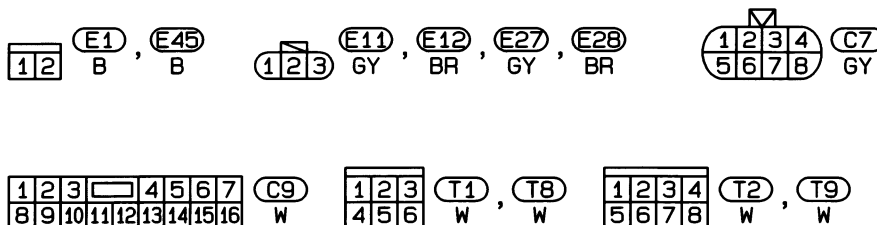
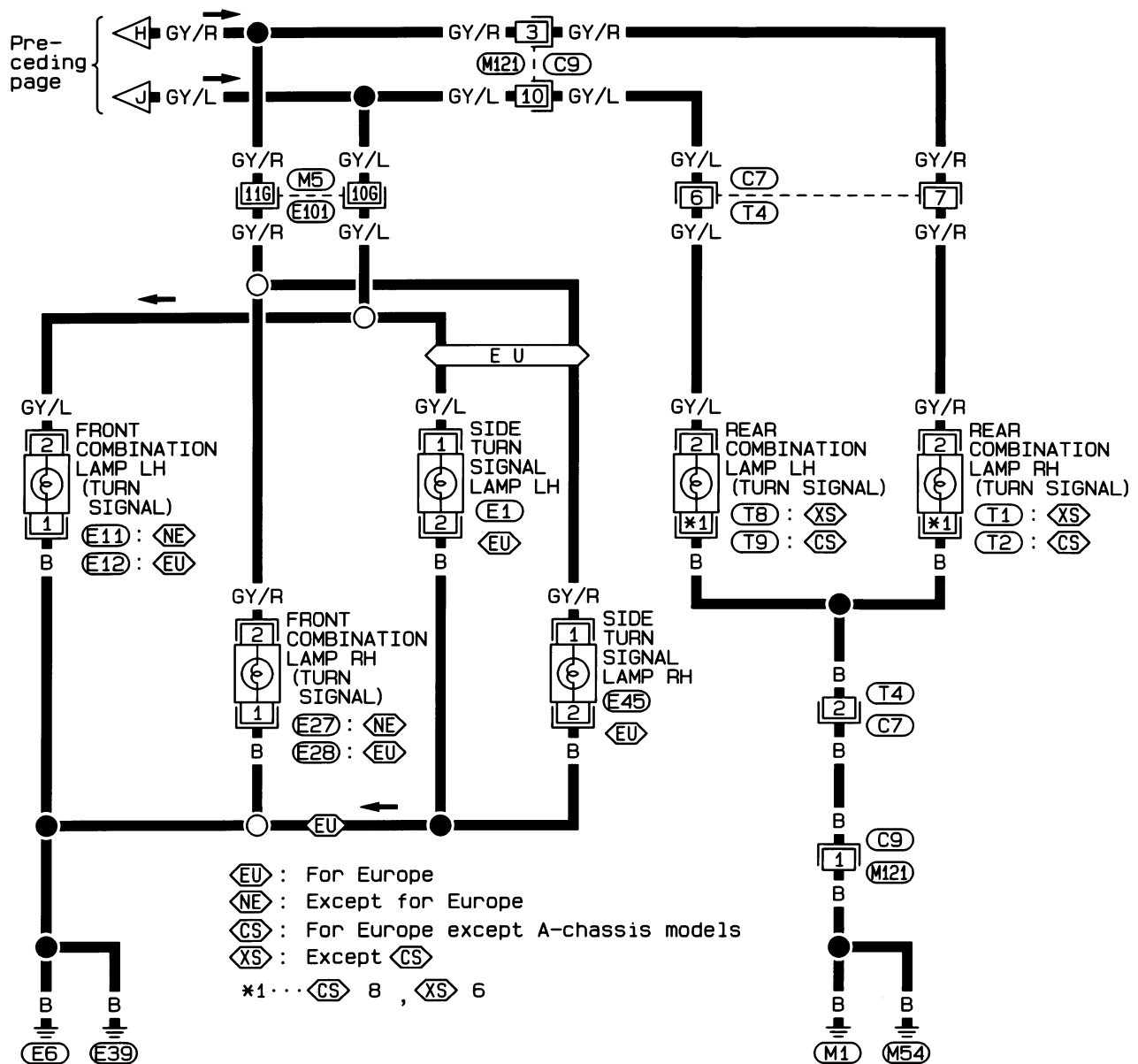
(M60)
B

1	2	(M61)
		B

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —/Type-2 (Cont'd)

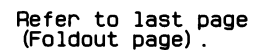
EL-TURN-05



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(Foldout page).

M5 , E101

EL-ILL-01

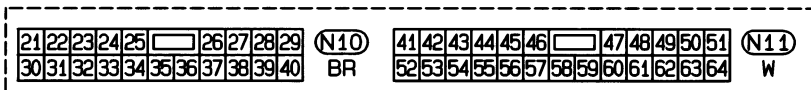
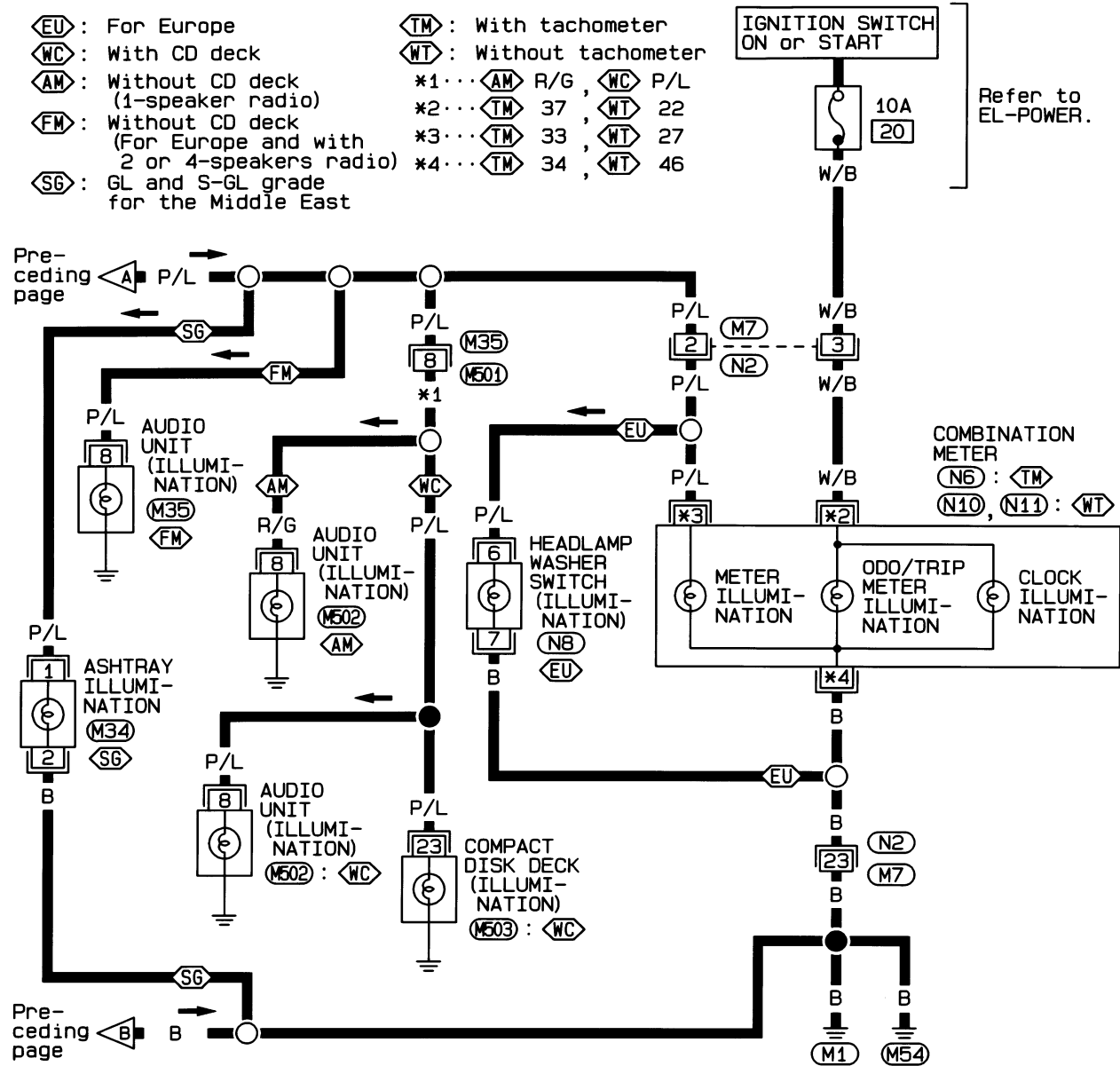


EL

ILLUMINATION

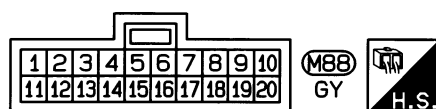
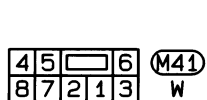
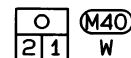
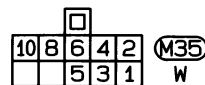
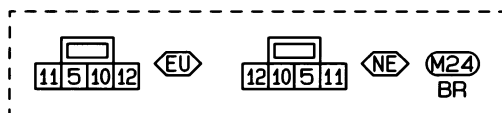
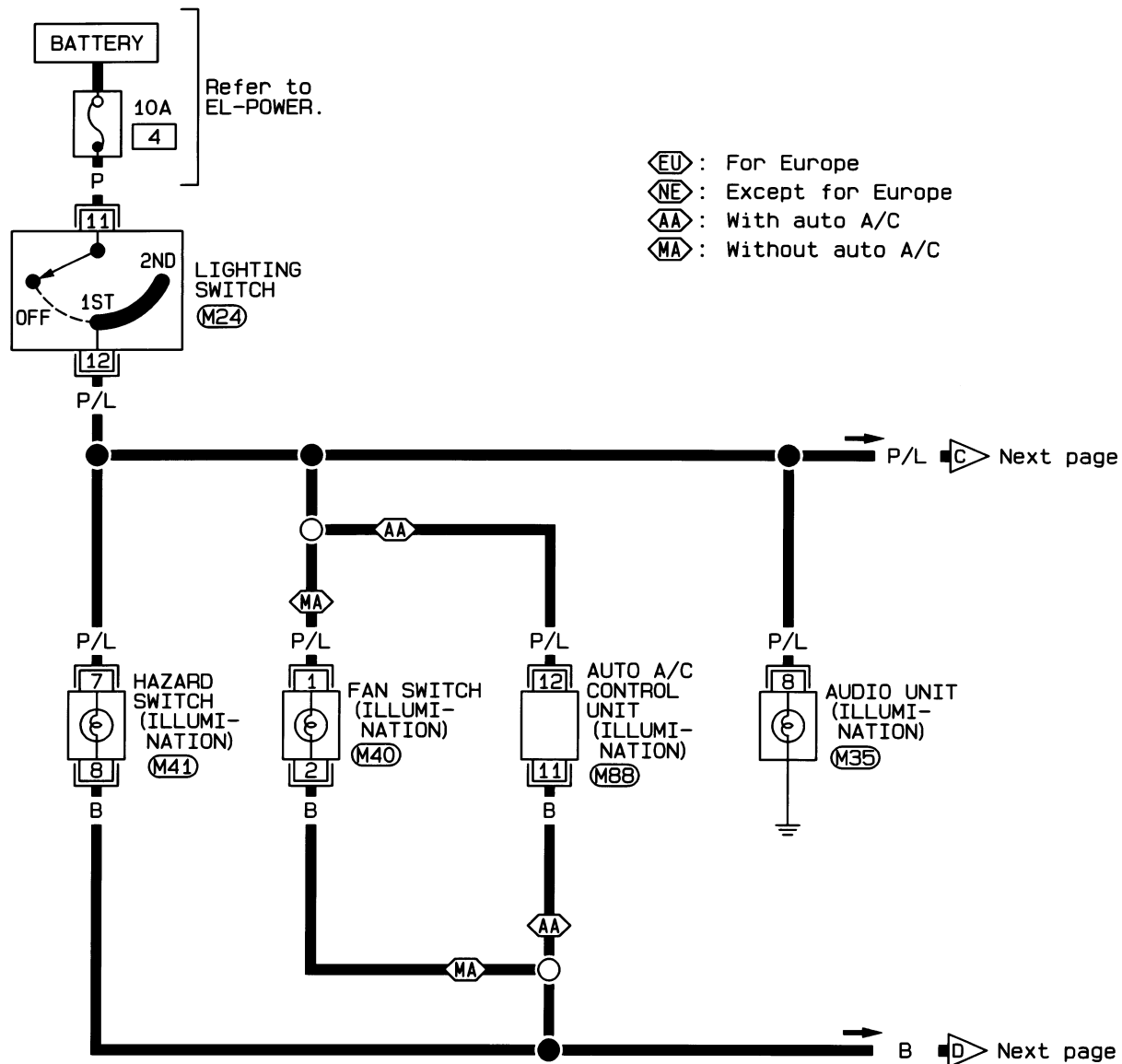
Wiring Diagram — ILL —/LHD Models (Cont'd)

EL-ILL-02



Wiring Diagram — ILL —/RHD Models

EL-ILL-03

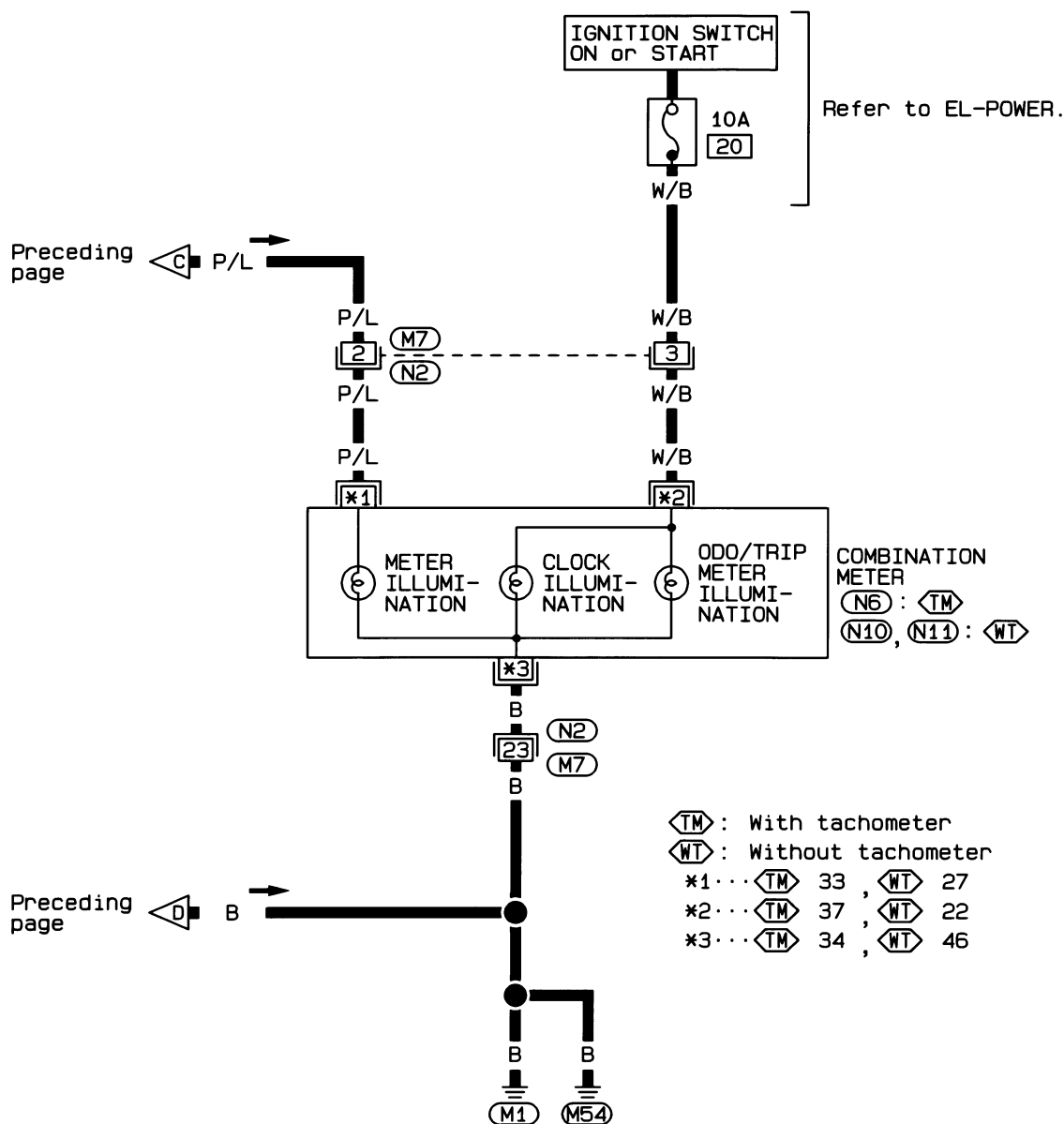


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ILLUMINATION

Wiring Diagram — ILL —/RHD Models (Cont'd)

EL-ILL-04



1	2	3	4	5	6	7	8	9	10	11	N2
12	13	14	15	16	17	18	19	20	21	22	BR

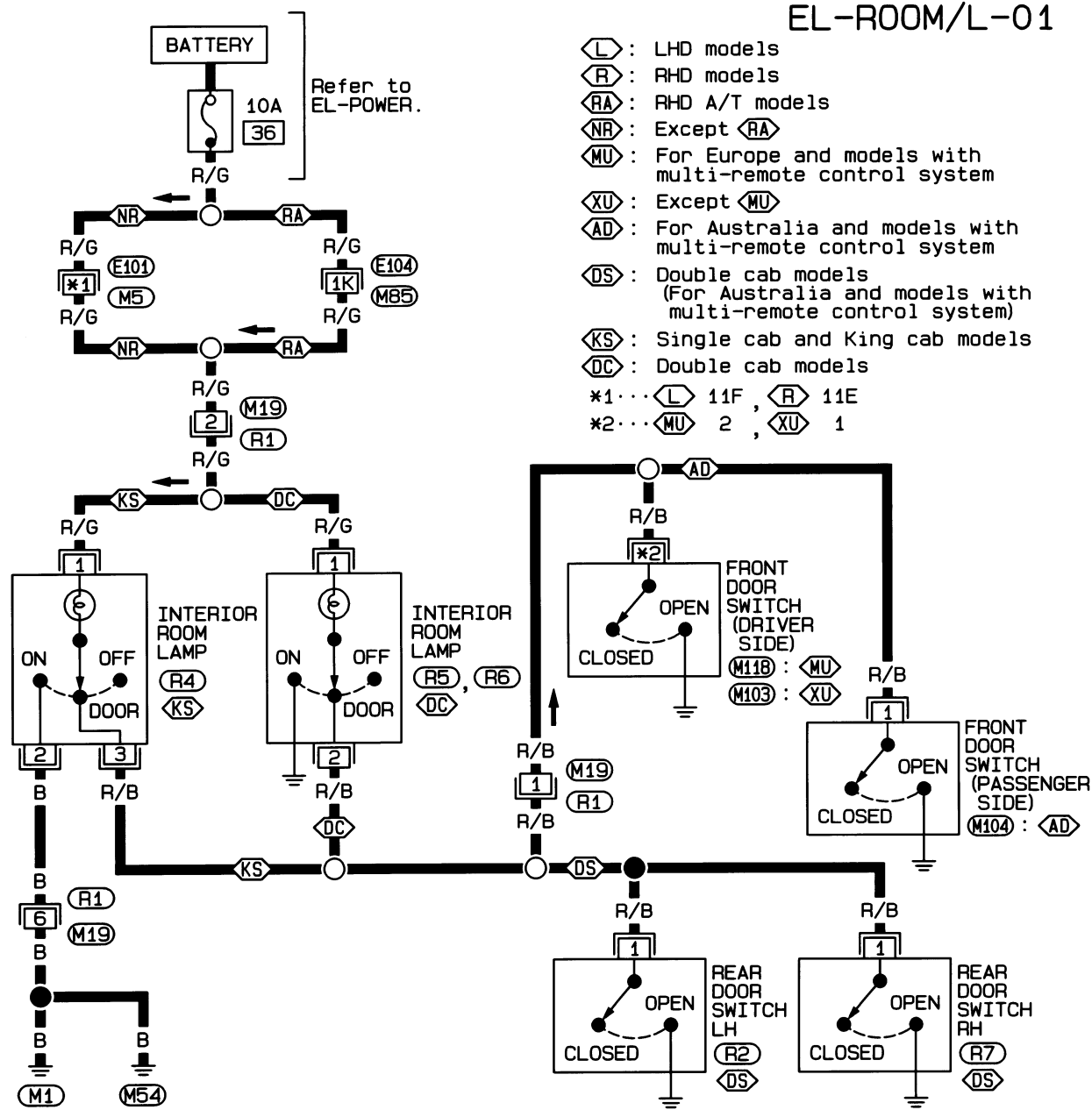
36	37	38	39	40	41	42	N6
27	28	29	30	31	32	33	BR

21	22	23	24	25	26	27	28	29	N10
30	31	32	33	34	35	36	37	38	BR
41	42	43	44	45	46	47	48	49	N11
52	53	54	55	56	57	58	59	60	W

INTERIOR ROOM LAMP

Wiring Diagram — ROOM/L —

EL-ROOM/L-01

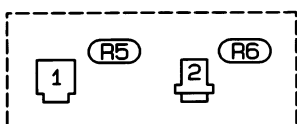


1 M103, M104, R2, R7
B, B, B, B

1 2 M118
3 B

1 2 R1
3 4 5 6 W

1 R4
2 W
3



Refer to last page
(Foldout page).

M5, E101

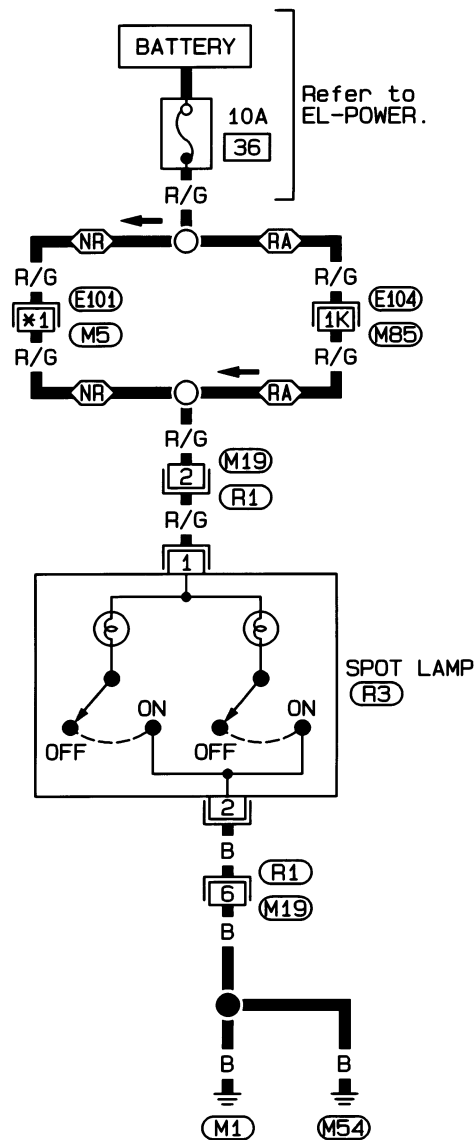
M85, E104

EL

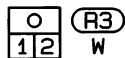
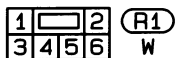
SPOT LAMP

Wiring Diagram — INT/L —

EL-INT/L-01



- ⬡ : LHD models
- ⬢ : RHD models
- ⬤ : RHD A/T models
- ⬥ : Except ⬤
- *1... ⬡ 11F, ⬢ 11E



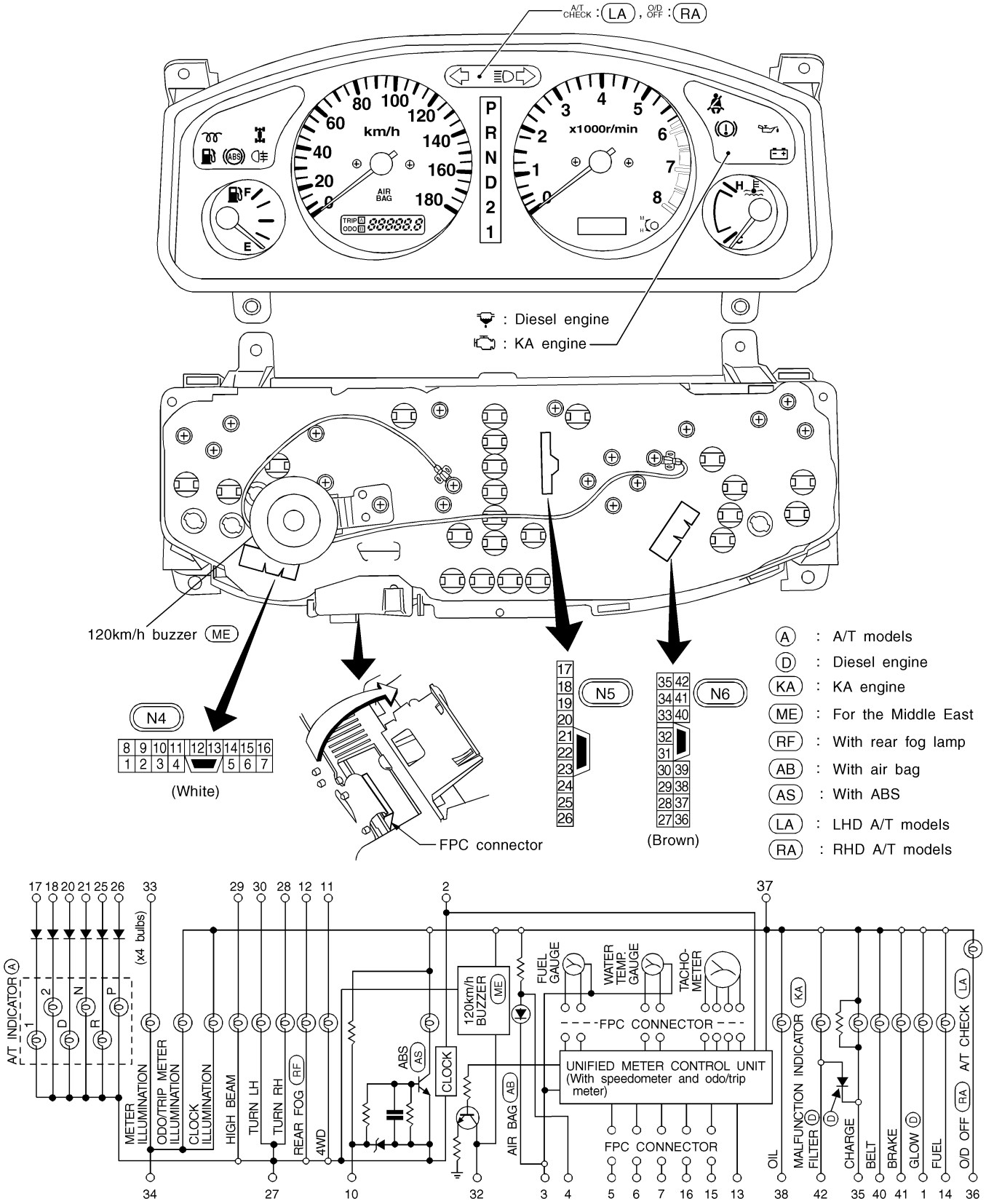
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(Foldout page).

⬢ M5, ⬢ E101

⬢ M85, ⬢ E104

Combination Meter

WITH TACHOMETER

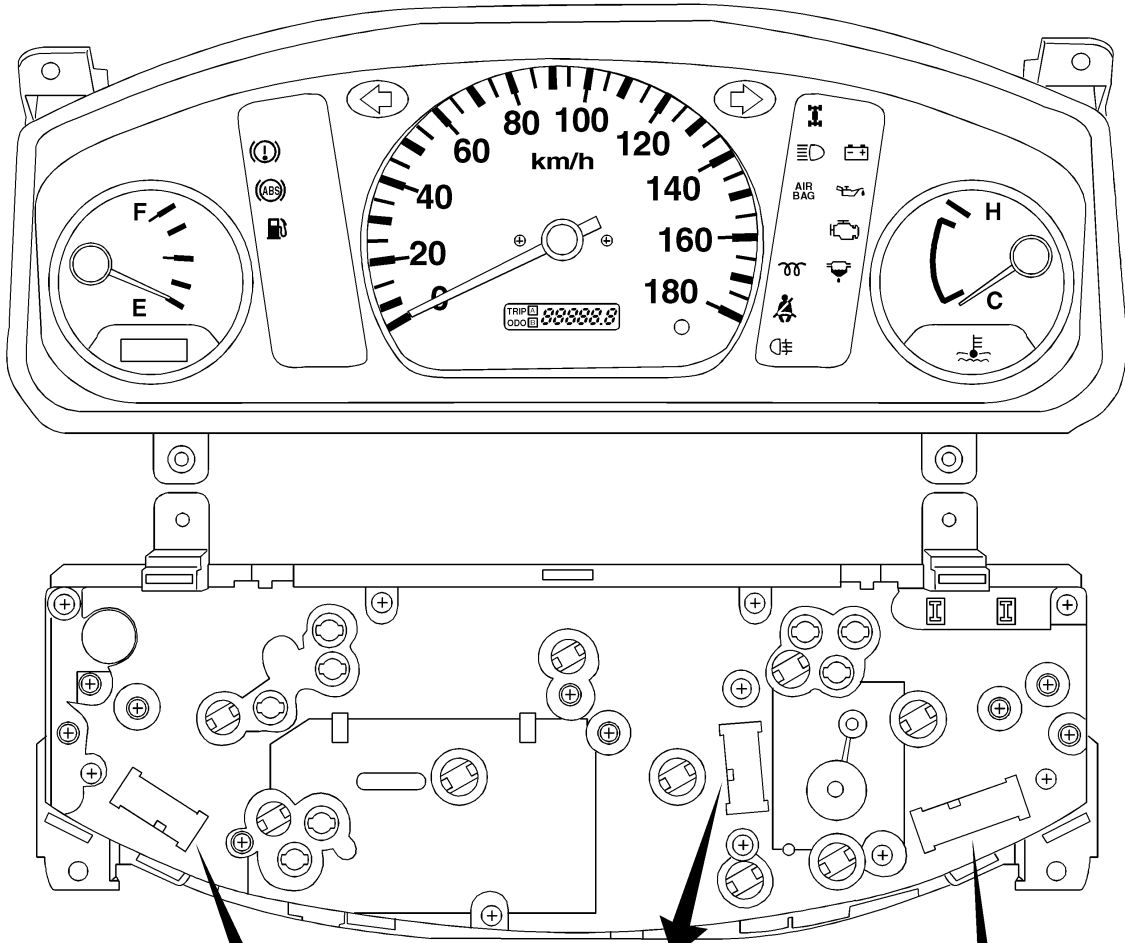


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METER AND GAUGES

Combination Meter (Cont'd)

WITHOUT TACHOMETER



- (D) : Diesel engine
- (KA) : KA engine
- (ME) : For the Middle East
- (RF) : With rear fog lamp
- (AB) : With air bag
- (AS) : With ABS

(N9)

10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9		

(White)

(N10)

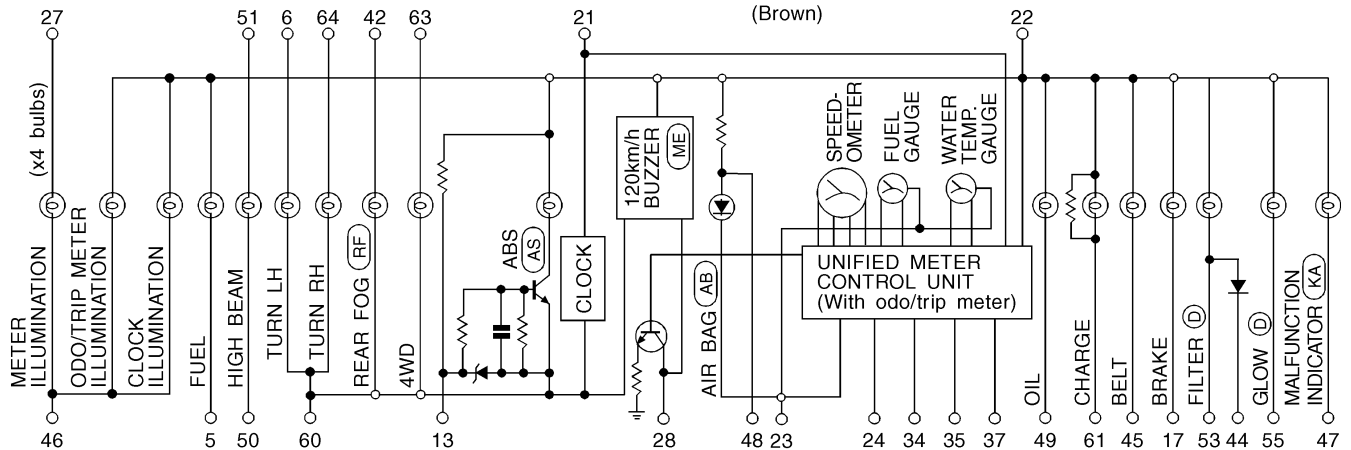
21	30
22	31
23	32
24	33
25	34
26	35
27	36
28	37
29	38
30	39
31	40

(Brown)

(N11)

51	50	49	48	47	46	45	44	43	42	41
64	63	62	61	60	59	58	57	56	55	54
53	52	51	50	49	48	47	46	45	44	43

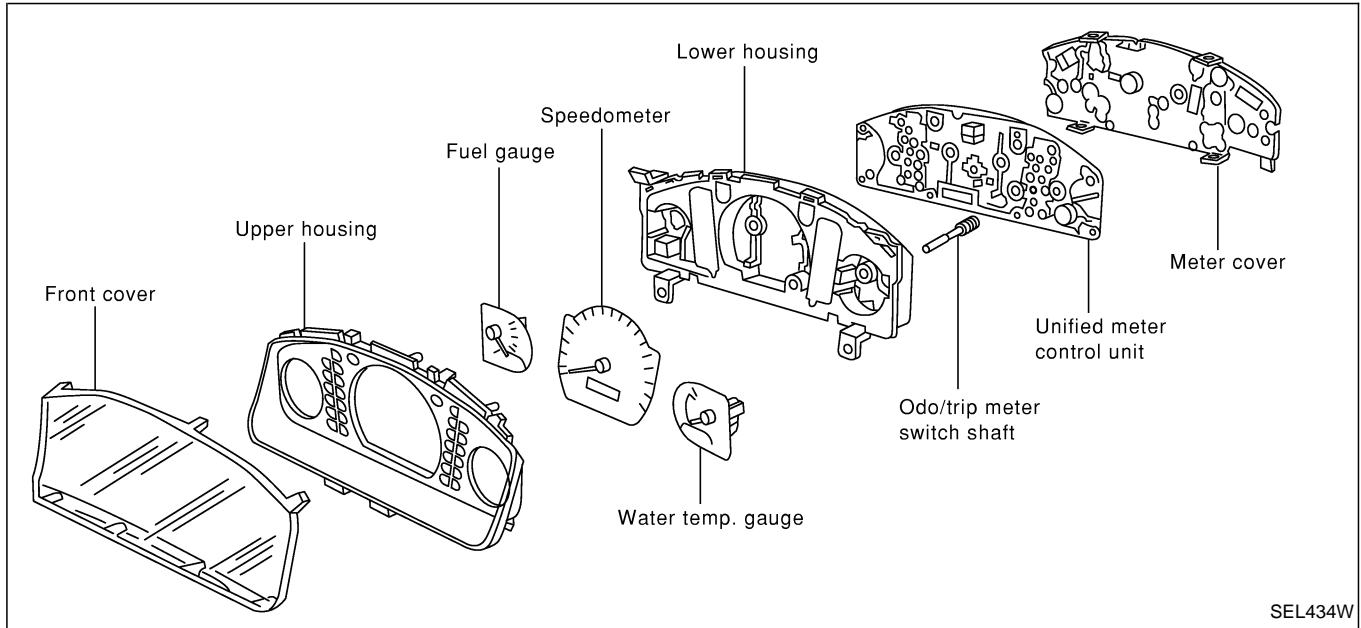
(White)



METER AND GAUGES

Combination Meter (Cont'd)

CONSTRUCTION (Without tachometer)



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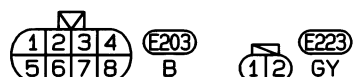
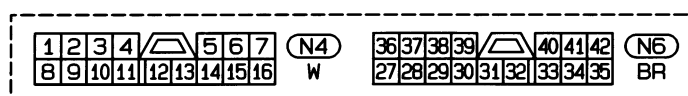
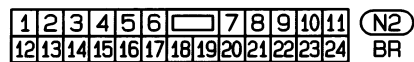
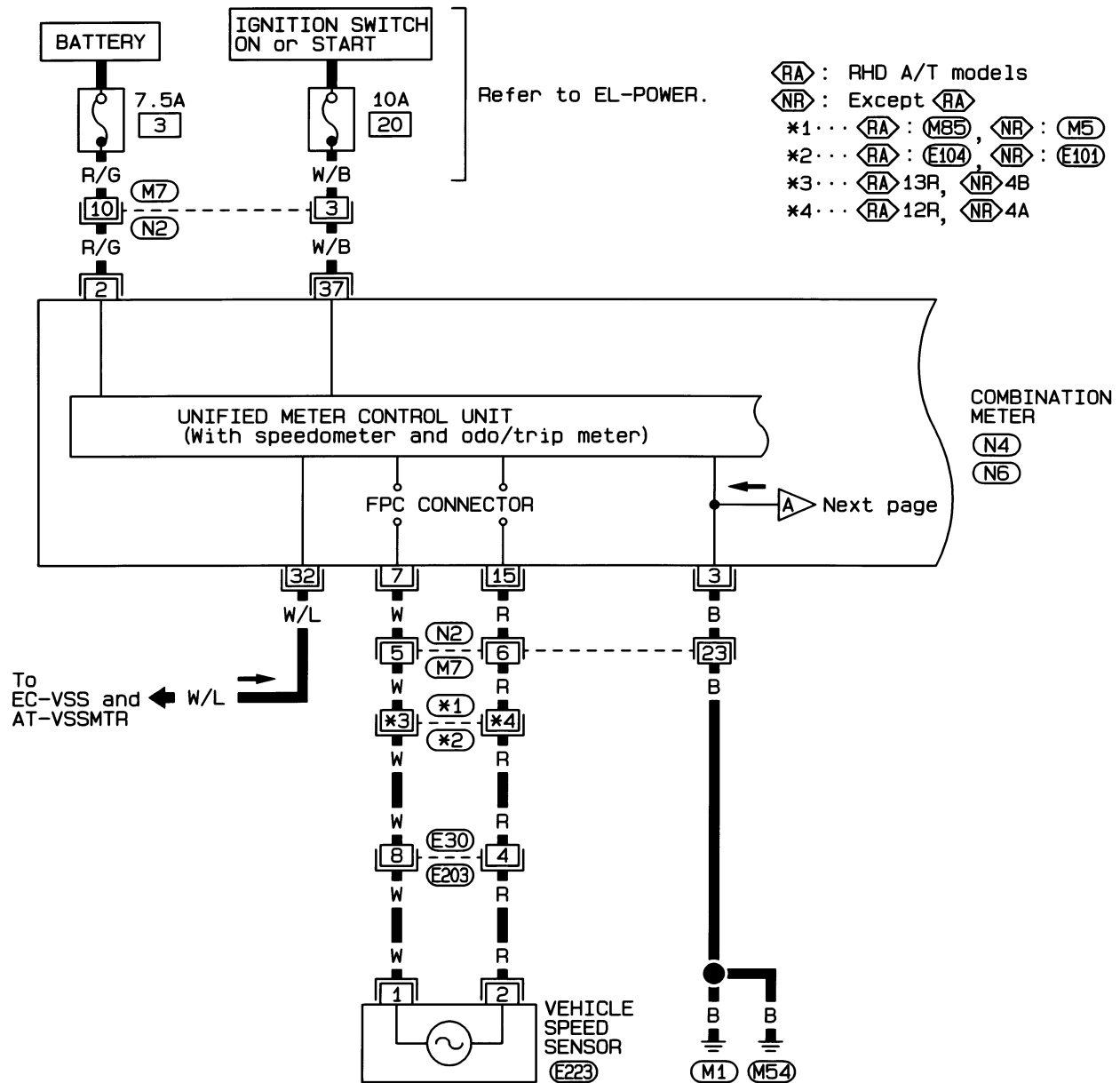
HA

EL

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Wiring Diagram — METER —/Gasoline Engine with Tachometer

EL-METER-01

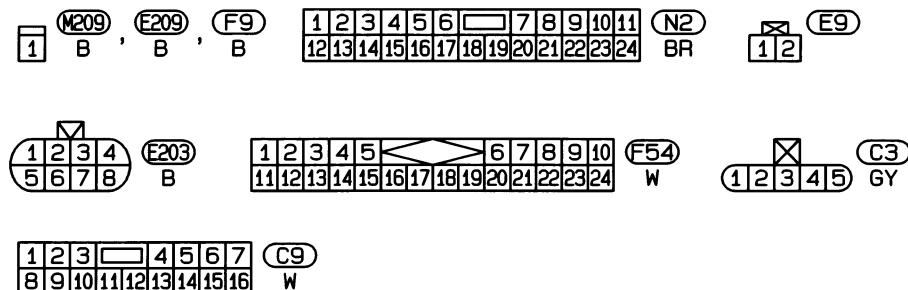
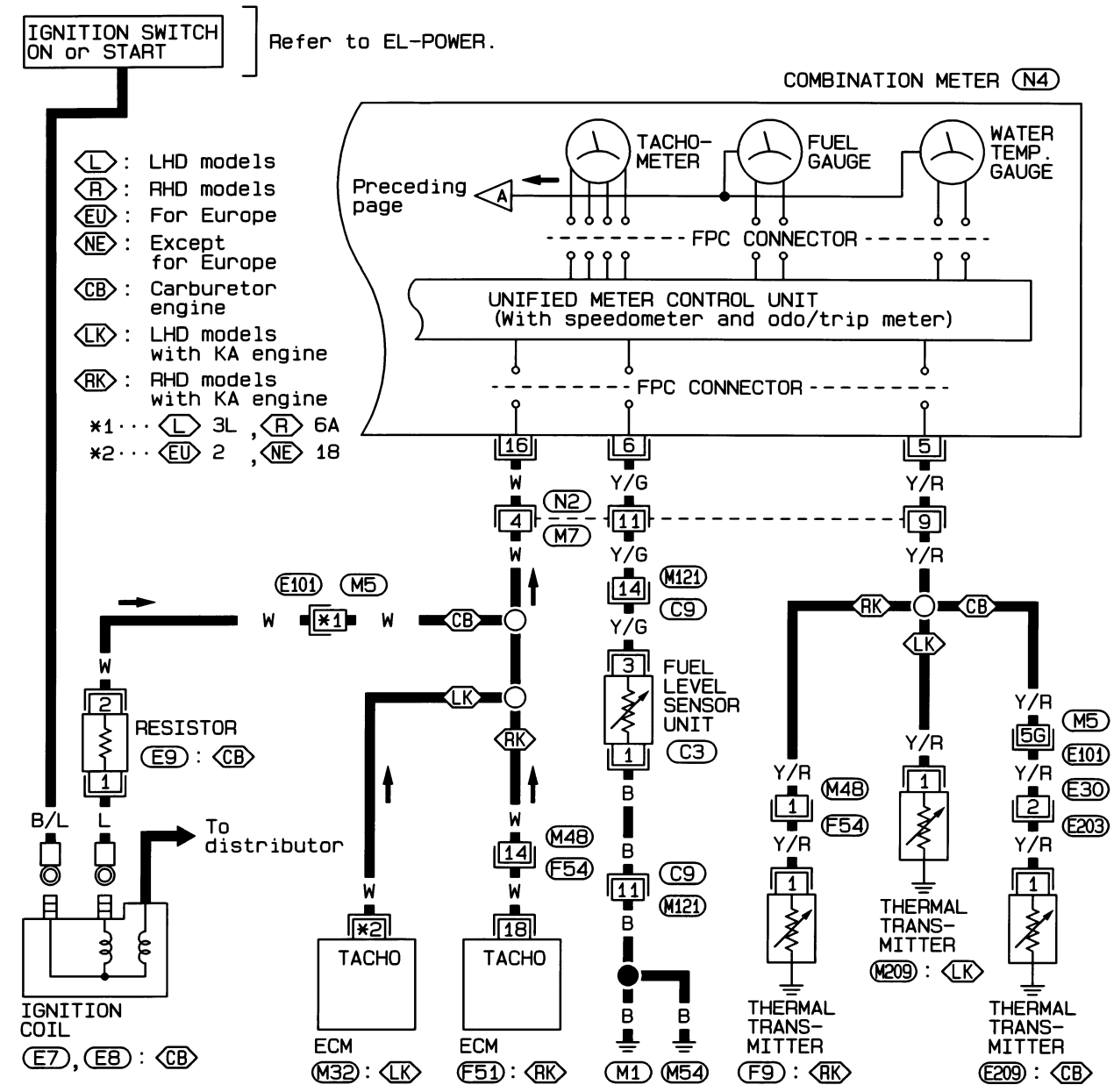


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M5 E101

(M85) (E104)

EL-METER-02



Refer to last page
(Foldout page) .

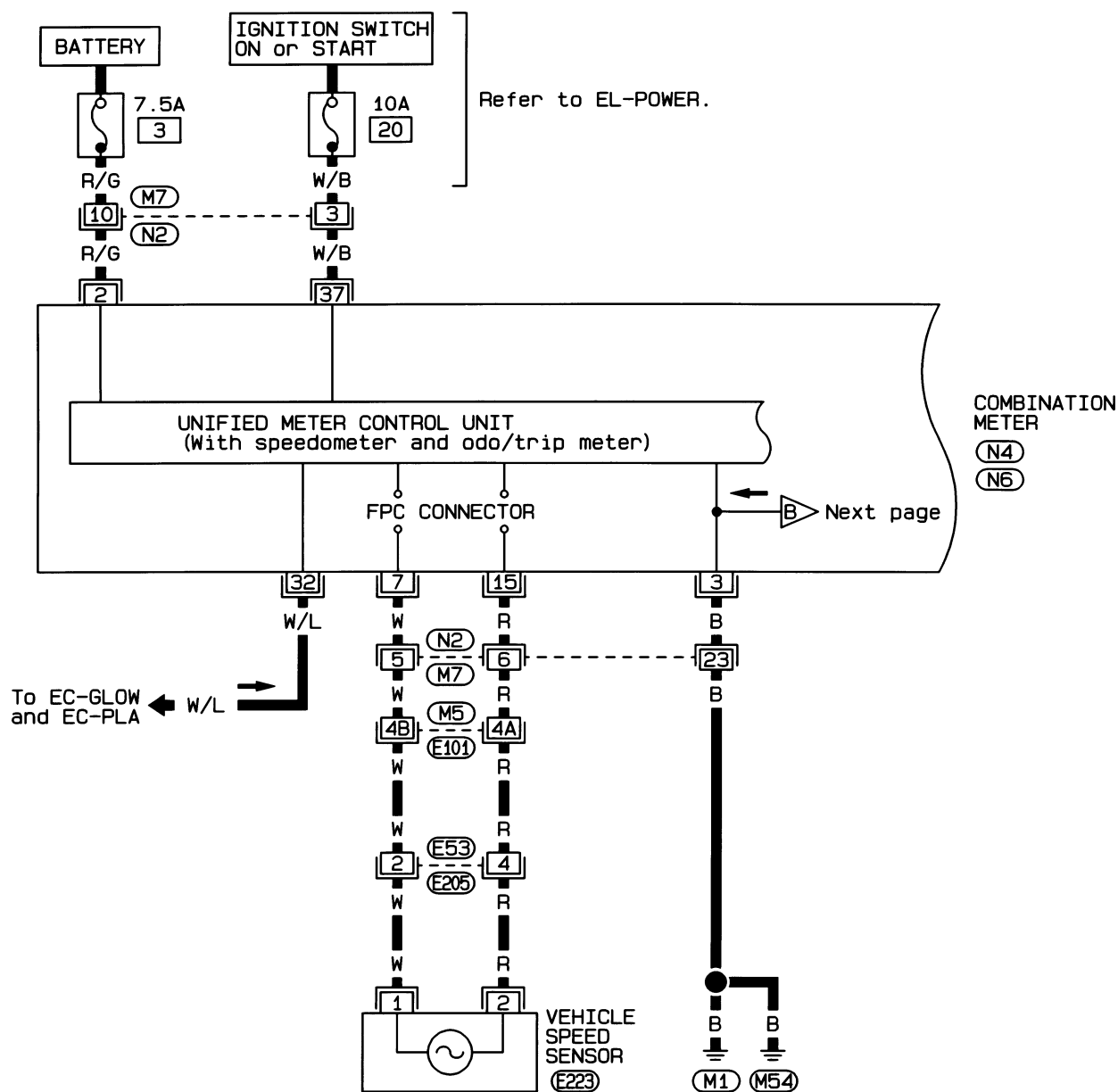
M5 E101

(M32), (F51)

METER AND GAUGES

Wiring Diagram — METER —/Diesel Engine with Tachometer

EL-METER-03



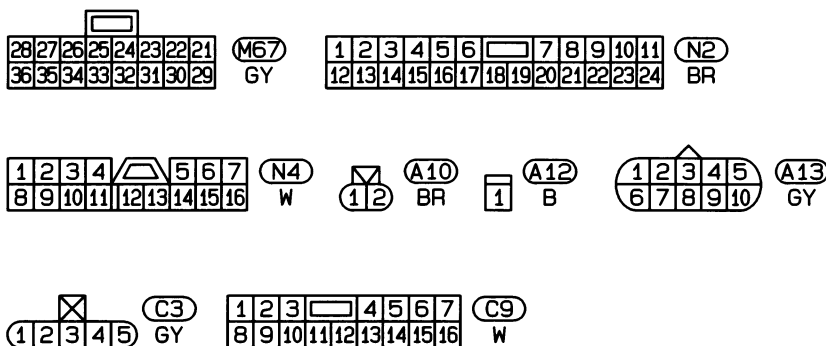
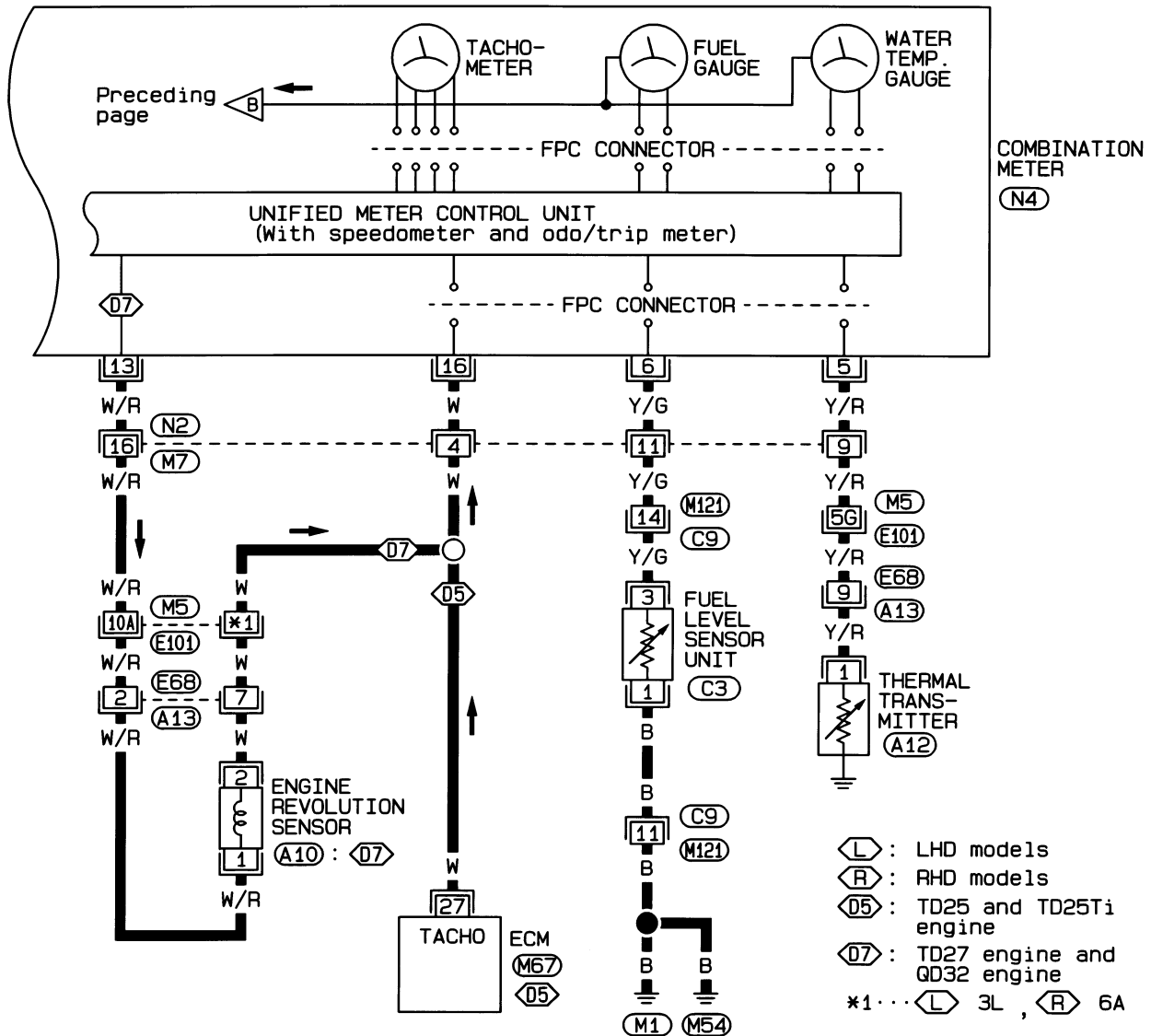
1	2	3	4	5	6	7	8	9	10	11	(N2)
12	13	14	15	16	17	18	19	20	21	22	BR

1	2	3	4	5	6	7	(N4)	36	37	38	39	40	41	42	(N6)
8	9	10	11	12	13	14	W	27	28	29	30	31	32	33	BR

1	2	3	4	(E205)	(E223)
5	6	7	8	GY	GY

Refer to last page (Foldout page).

(M5), (E101)

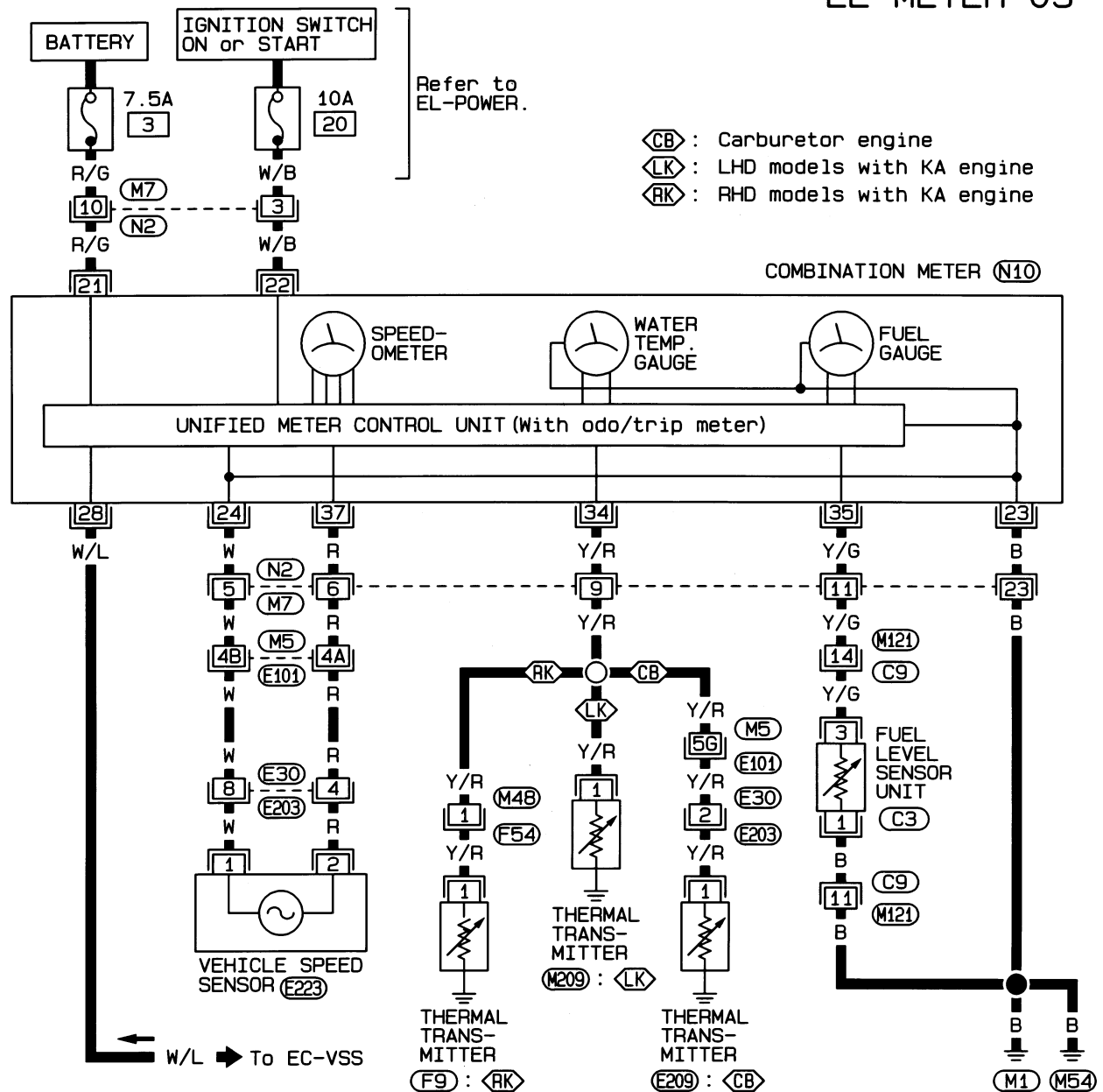


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M5 E101

Wiring Diagram — METER —/Gasoline Engine without Tachometer

EL-METER-05



1 M209, E209, F9
B, B, B

1 2 3 4 5 6 7 8 9 10 11 N2
12 13 14 15 16 17 18 19 20 21 22 23 24 BR

21 22 23 24 25 26 27 28 29 N10
30 31 32 33 34 35 36 37 38 39 40 BR

1 2 3 4 E203
5 6 7 8 B

1 2 E223
GY

1 2 3 4 5 6 7 8 9 10 F54
11 12 13 14 15 16 17 18 19 20 21 22 23 24 W

1 2 3 4 5 C3
GY

1 2 3 4 5 6 7 C9
8 9 10 11 12 13 14 15 16 W

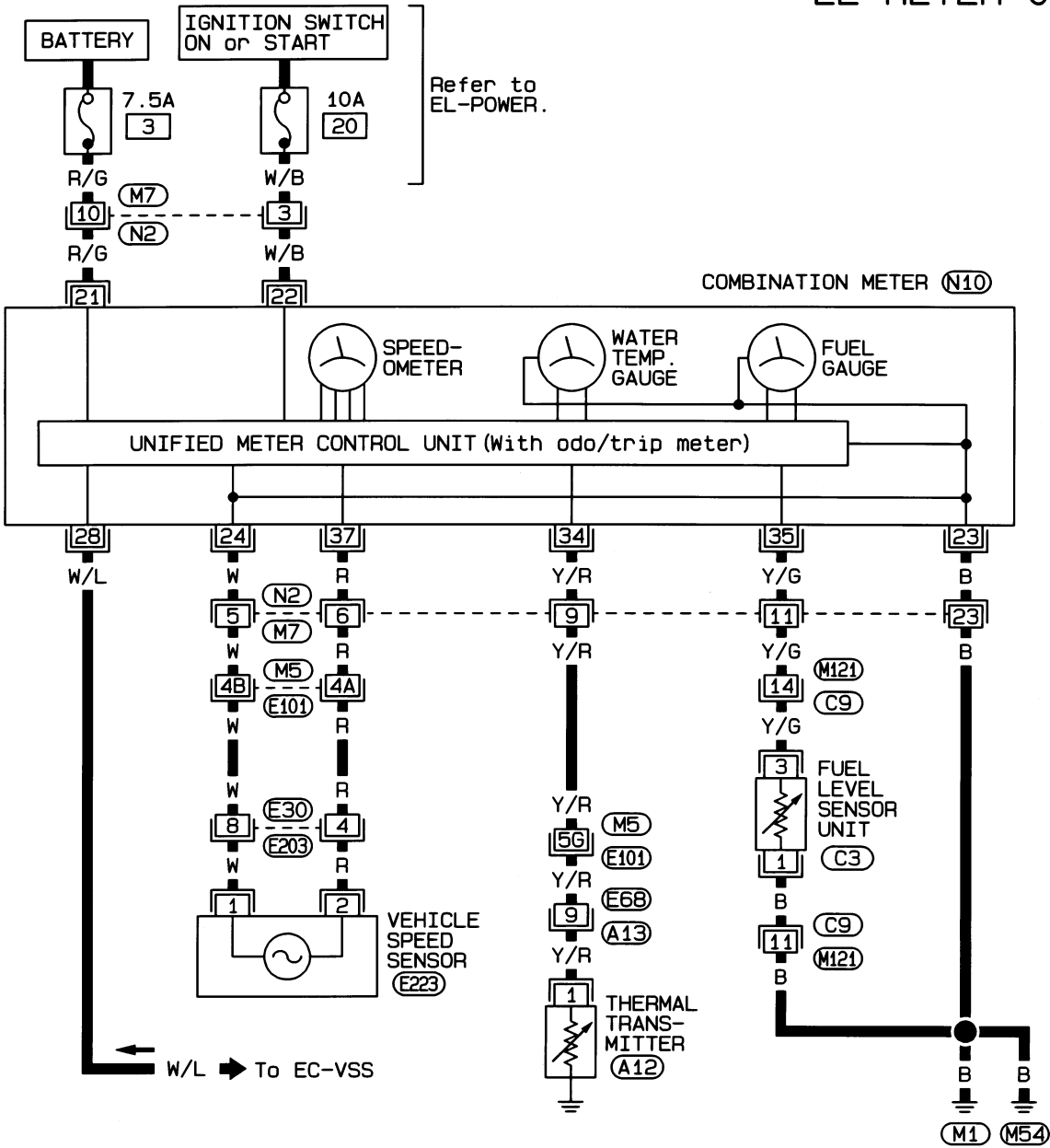
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M5, E101

METER AND GAUGES

Wiring Diagram — METER —/Diesel Engine
without Tachometer

EL-METER-06



Refer to last page
(Foldout page).

(M5), (E101)

Unified Control Meter System Description

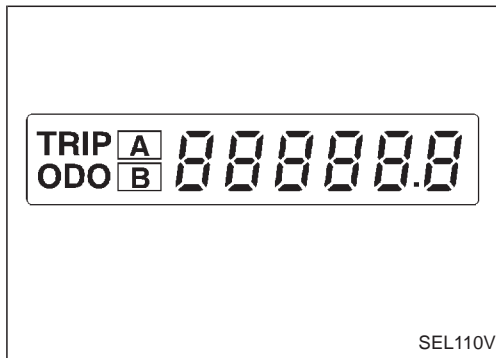
UNIFIED CONTROL METER

Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled totally by unified meter control unit.

Meter/gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode

DIAGNOSIS FUNCTION

- Odo/trip meter segment can be checked in diagnosis mode.
- Meters/gauges can be checked in diagnosis mode.

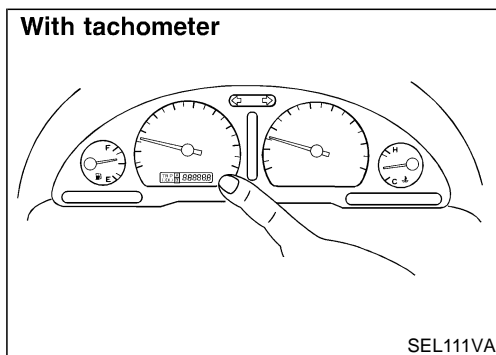


HOW TO ALTERNATE DIAGNOSIS MODE

1. Turn ignition switch to ON and change odo/trip meter to "TRIP A" or "TRIP B".
2. Turn ignition switch to OFF.
3. Turn ignition switch to ON when pushing odo/trip meter switch.
4. Confirm that trip meter indicates "000.0".
5. Push odo/trip meter switch more than three times within 5 seconds.
6. All odo/trip meter segments should be turned on.

NOTE: If some segments are not turned on, unified meter control unit should be replaced.

At this point, the unified control meter is turned to diagnosis mode.

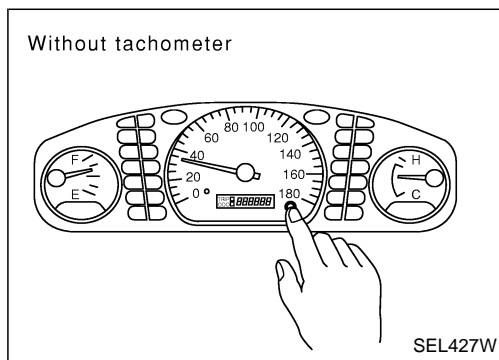


7. Push odo/trip meter switch. Indication of each meter/gauge should be as shown left during pushing odo/trip meter switch if it is no malfunctioning.

NOTE: It takes about 1 minute for indication of fuel gauge to become stable.

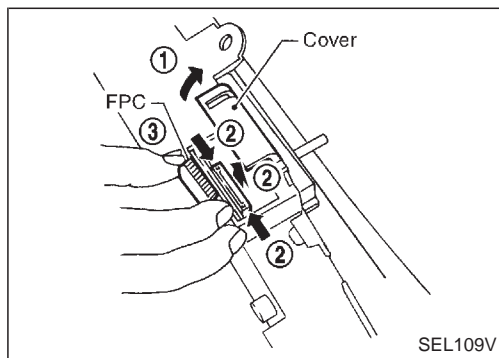
METER AND GAUGES

Meter/gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode (Cont'd)



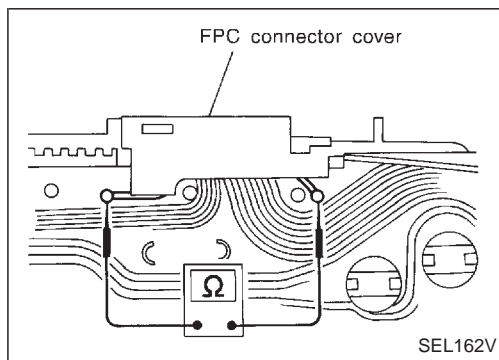
Flexible Print Circuit (FPC) (Models with Tachometer)

Tachometer, fuel gauge and water temperature gauge are connected with unified meter control unit (speedometer) by Flexible Print Circuit (FPC) connector. When replace or remove and install unified control unit (speedometer), disconnect and connect FPC connector according to the following steps.



DISCONNECT

1. Open connector cover.
2. Release connector lock by holding both ends of it and pulling it up.
3. Disconnect FPC by pulling it up.



CONNECT

1. Insert FPC into connector and lock connector pushing FPC downward.
2. Check secure connection of FPC.
3. Check continuity of check land terminals for secure connection of FPC.

Resistance: 0Ω

4. Close connector cover.

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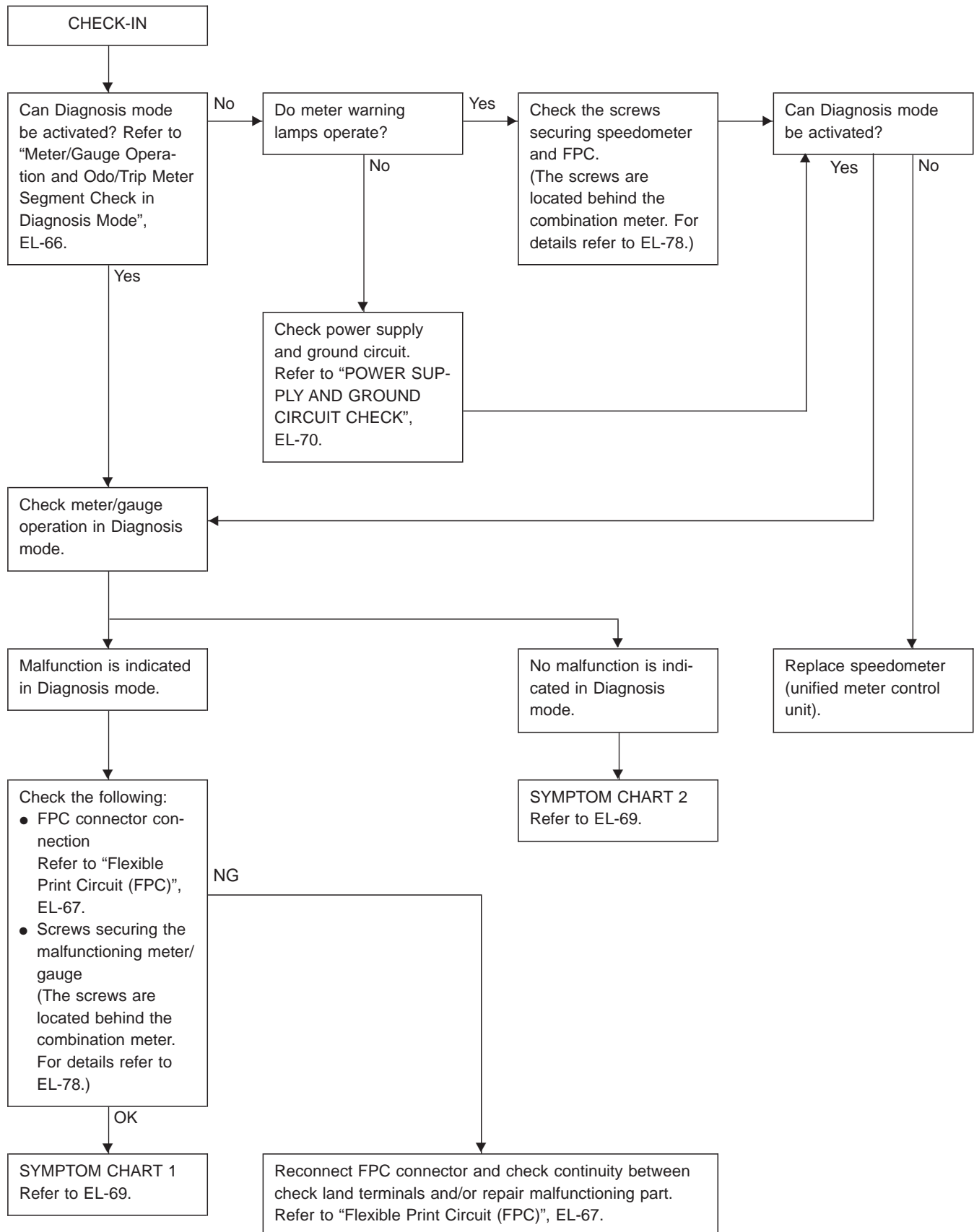
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Trouble Diagnoses/Models with Tachometer

PRELIMINARY CHECK



METER AND GAUGES

Trouble Diagnoses/Models with Tachometer (Cont'd)

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-68.

SYMPTOM CHART 1 (MALFUNCTION IS INDICATED IN DIAGNOSIS MODE)

Symptom	Possible causes	Repair order
Speedometer and/or odometer/trip meter indicate(s) malfunction in Diagnosis mode.	<ul style="list-style-type: none"> Speedometer (Unified meter control unit) 	<ul style="list-style-type: none"> Replace speedometer (unified meter control unit).
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of tachometer/fuel gauge/water temp. gauge indicates malfunction in Diagnosis mode.	<ul style="list-style-type: none"> Meter/Gauge Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-78. If the resistance is OK, replace speedometer (unified meter control unit).

SYMPTOM CHART 2 (NO MALFUNCTION IS INDICATED IN DIAGNOSIS MODE)

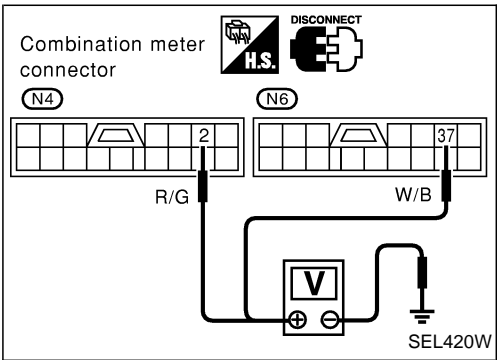
Symptom	Possible causes	Repair order
Speedometer and odometer/trip meter are malfunctioning.	<ol style="list-style-type: none"> Sensor <ul style="list-style-type: none"> Speedometer, Odo/Trip meter FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check vehicle speed sensor. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-71.) Check FPC connector. Refer to "FLEXIBLE PRINT CIRCUIT (FPC)", EL-67. Replace speedometer (unified meter control unit).
Multiple meter/gauge are malfunctioning. (except speedometer, odometer/trip meter)	<ol style="list-style-type: none"> FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check FPC connector. Refer to "FLEXIBLE PRINT CIRCUIT (FPC)", EL-67. Replace speedometer (unified meter control unit).
One of tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> Sensor/Engine revolution signal <ul style="list-style-type: none"> Tachometer Fuel gauge Water temp. gauge FPC connector Speedometer (Unified meter control unit) 	<ol style="list-style-type: none"> Check the sensor for malfunctioning meter/gauge. INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-71.) INSPECTION/FUEL TANK GAUGE (Refer to EL-72.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-72.) Check FPC connector. Refer to "Flexible Print Circuit (FPC)", EL-67. Replace speedometer (unified meter control unit).

METER AND GAUGES

Trouble Diagnoses/Models with Tachometer (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

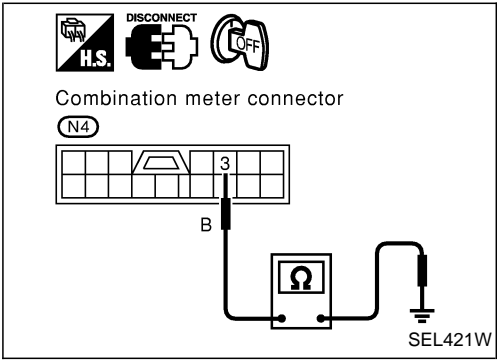
Power supply circuit check



Terminals		Ignition switch position		
⊕	⊖	OFF	ACC	ON
②	Ground	Battery voltage	Battery voltage	Battery voltage
③⑦	Ground	0V	0V	Battery voltage

If NG, check the following.

- 7.5A fuse [No. ③], located in fuse block (J/B)]
- 10A fuse [No. ②⑦], located in fuse block (J/B)]
- Harness for open or short between fuse and combination meter



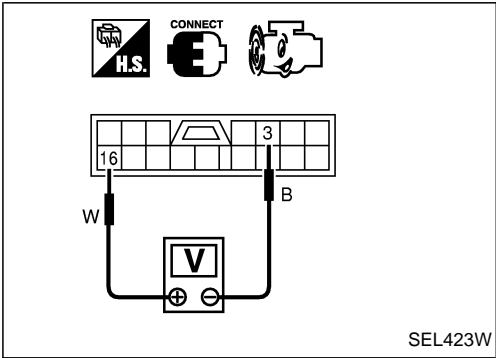
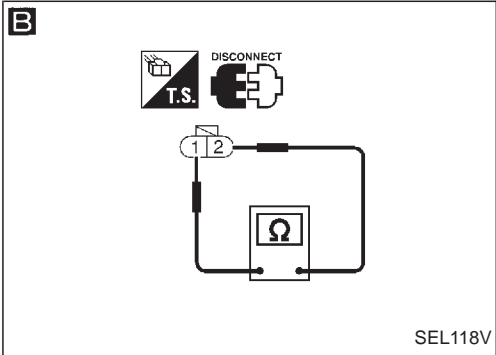
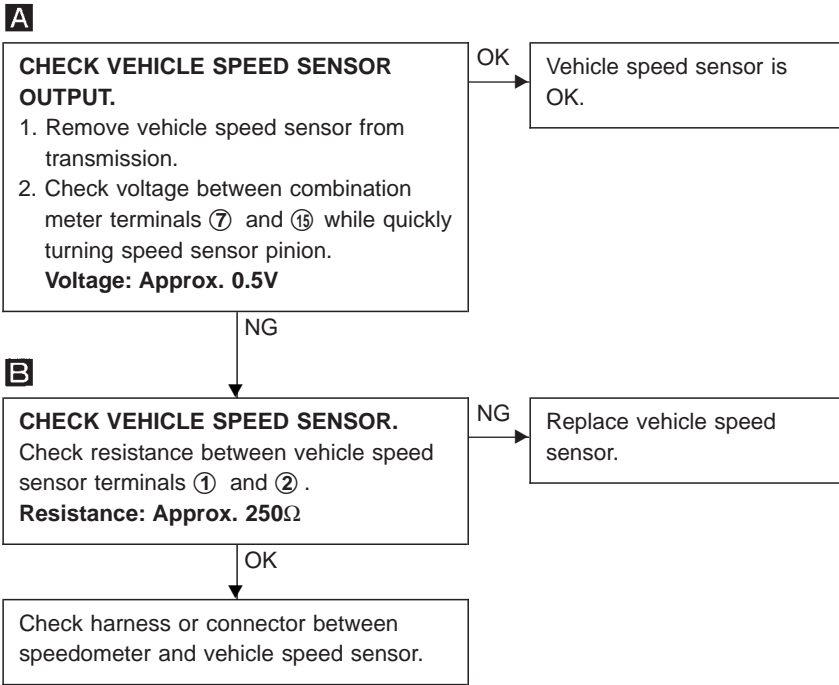
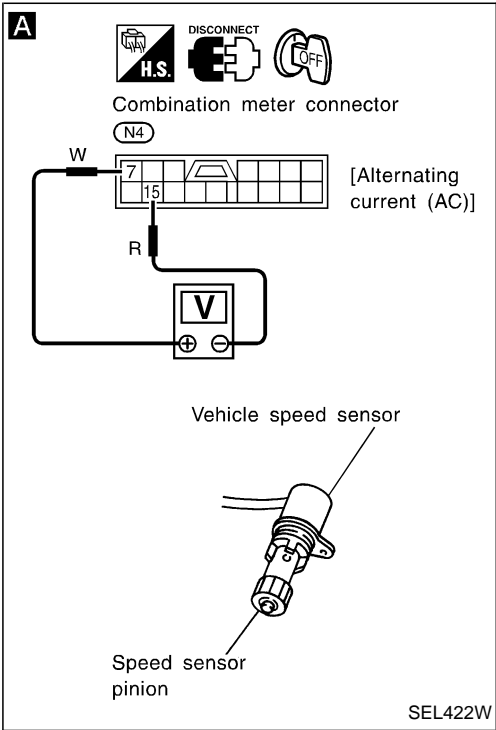
Ground circuit check

Terminals	Continuity
③ - Ground	Yes

METER AND GAUGES

Trouble Diagnoses/Models with Tachometer (Cont'd)

INSPECTION/VEHICLE SPEED SENSOR



INSPECTION/ENGINE REVOLUTION SIGNAL (Models with tachometer)

Engine	Check item	Terminals		Explanation
		⊕	⊖	
ECM controlled engine	DC voltage	⑮	③	Higher rpm = Higher voltage Lower rpm = Lower voltage Voltage should change with rpm.
Carburetor	AC voltage			
Diesel TD27 and QD32				

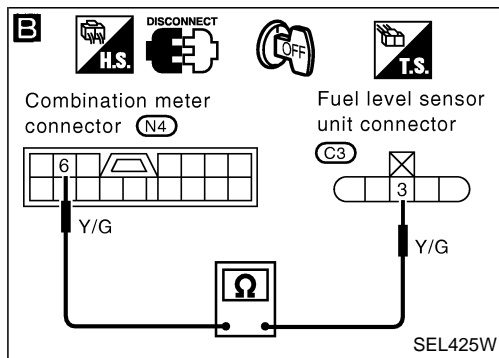
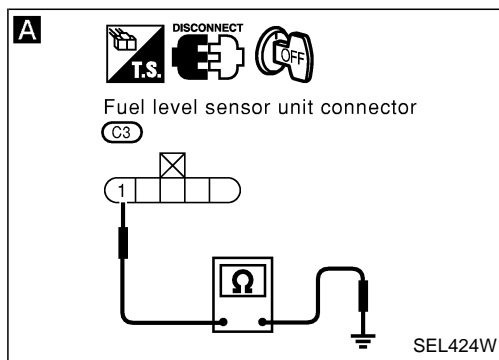
If NG, check the following.

Engine	Check item
ECM controlled engine	● Harness for open or short and connection
Carburetor	● Harness for open or short and connection ● Resistor etc.
Diesel TD27 and QD32	● Harness for open or short and connection ● Engine revolution sensor etc.

METER AND GAUGES

Trouble Diagnoses/Models with Tachometer (Cont'd)

INSPECTION/FUEL LEVEL SENSOR



CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT.
Check harness continuity between fuel level sensor unit terminal ① and ground.
Continuity should exist.

NG

Repair harness or connector.

OK

CHECK FUEL LEVEL SENSOR UNITS.
Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-78).

NG

Repair or replace.
Refer to FE section.

OK

B

CHECK HARNESS.

1. Disconnect combination meter connector (N4) and fuel level sensor unit connector.
2. Check harness continuity between combination meter terminal ⑥ and fuel level sensor unit terminal ③.

Continuity should exist.

3. Check continuity between combination meter terminal ⑥ and ground.

Continuity should not exist.

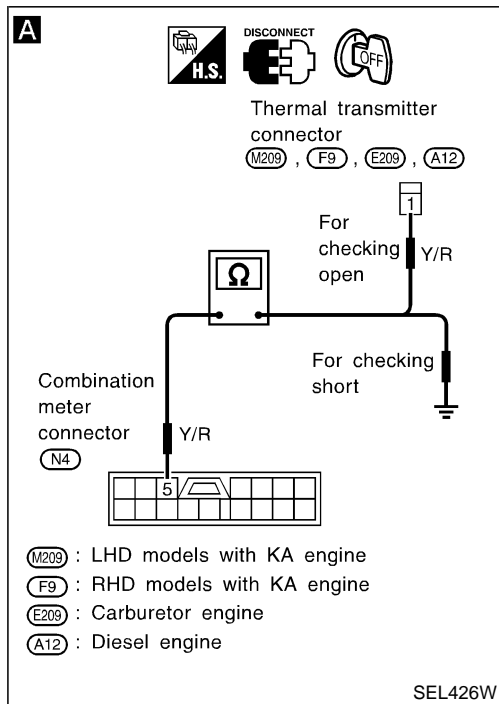
NG

Repair harness or connector.

OK

Fuel level sensor is OK.

INSPECTION/THERMAL TRANSMITTER



CHECK THERMAL TRANSMITTER.
Refer to "THERMAL TRANSMITTER CHECK" (EL-79).

NG

Repair or replace.

OK

A

CHECK HARNESS.

1. Disconnect combination meter connector (N4) and thermal transmitter connector.
2. Check harness continuity between combination meter terminal ⑤ and thermal transmitter terminal ①.

Continuity should exist.

3. Check continuity between combination meter terminal ⑤ and ground.

Continuity should not exist.

NG

Repair harness or connector.

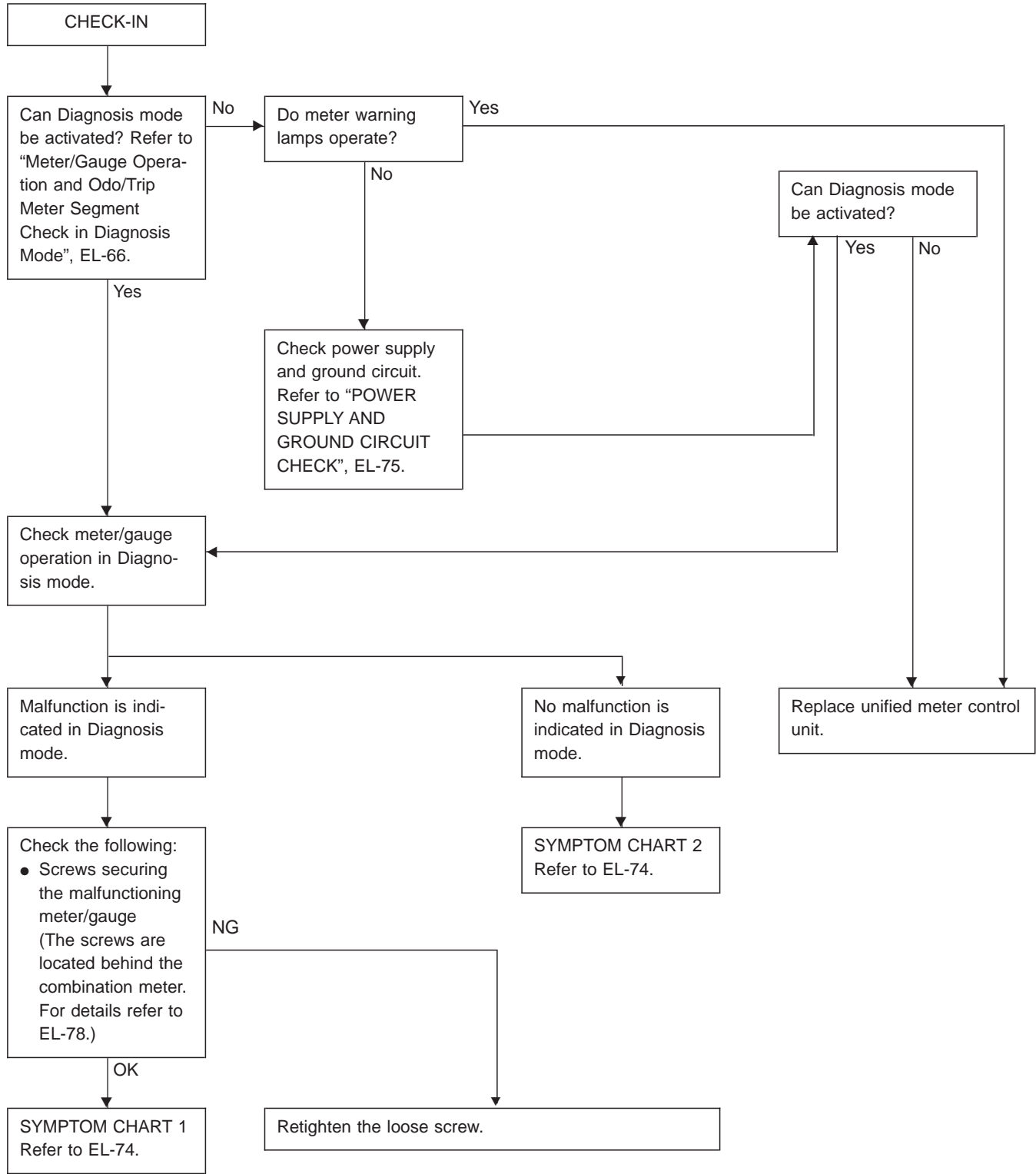
OK

Thermal transmitter is OK.

Trouble Diagnoses/Models without Tachometer

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PRELIMINARY CHECK



METER AND GAUGES

Trouble Diagnoses/Models without Tachometer (Cont'd)

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-73.

SYMPTOM CHART 1 (MALFUNCTION IS INDICATED IN DIAGNOSIS MODE)

Symptom	Possible causes	Repair order
Odo/trip meter indicate(s) malfunction in Diagnosis mode.	<ul style="list-style-type: none">Unified meter control unit	<ul style="list-style-type: none">Replace unified meter control unit.
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of speedometer/tachometer/fuel gauge/water temp. gauge indicates malfunction in Diagnosis mode.	<ul style="list-style-type: none">Meter/GaugeUnified meter control unit	<ol style="list-style-type: none">Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-78.If the resistance is OK, replace unified meter control unit.

SYMPTOM CHART 2 (NO MALFUNCTION IS INDICATED IN DIAGNOSIS MODE)

Symptom	Possible causes	Repair order
One/or more of speedometer/tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none">Sensor<ul style="list-style-type: none">Vehicle speed signalFuel gaugeWater temp. gaugeUnified meter control unit	<ol style="list-style-type: none">Check the sensor for malfunctioning meter/gauge. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-76.) INSPECTION/FUEL LEVEL SENSOR (Refer to EL-77.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-77.)Replace unified meter control unit.

METER AND GAUGES

Trouble Diagnoses/Models without Tachometer
(Cont'd)

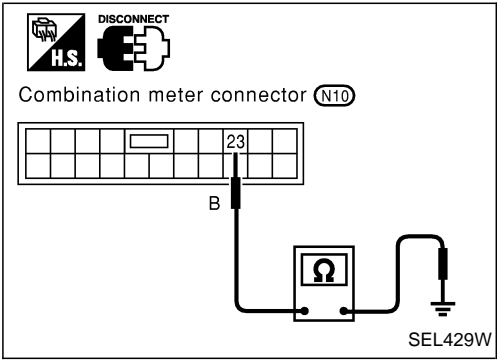
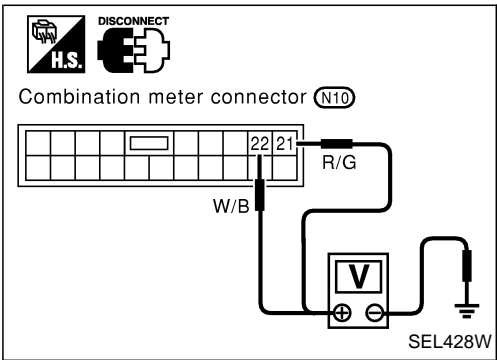
POWER SUPPLY AND GROUND CIRCUIT CHECK

Power supply circuit check

Terminals		Ignition switch position		
⊕	⊖	OFF	ACC	ON
②1	Ground	Battery voltage	Battery voltage	Battery voltage
②2	Ground	0V	0V	Battery voltage

If NG, check the following.

- 7.5A fuse [No. 3], located in fuse block (J/B)
- 10A fuse [No. 20], located in fuse block (J/B)
- Harness for open or short between fuse and combination meter



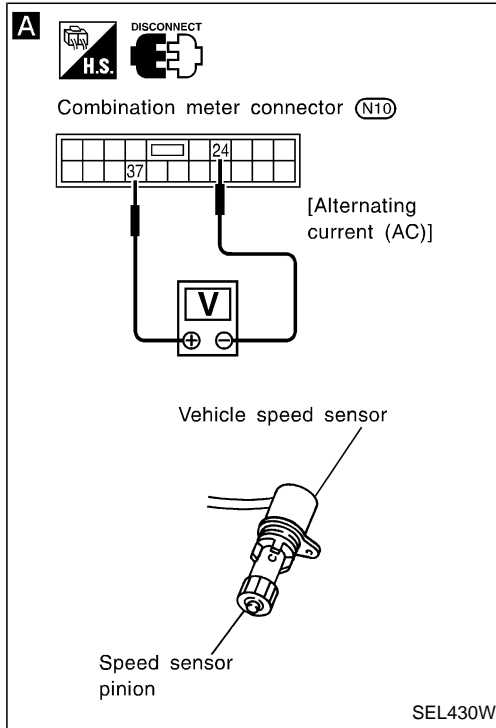
Ground circuit check

Terminals	Continuity
②3 - Ground	Yes

METER AND GAUGES

Trouble Diagnoses/Models without Tachometer (Cont'd)

INSPECTION/VEHICLE SPEED SENSOR



A

CHECK VEHICLE SPEED SENSOR OUTPUT.

1. Remove vehicle speed sensor from transmission.
2. Check voltage between combination meter terminals ②④ and ③⑦ while quickly turning speed sensor pinion.

Voltage: Approx. 0.5V

OK

Vehicle speed sensor is OK.

NG

B

CHECK VEHICLE SPEED SENSOR.

Check resistance between vehicle speed sensor terminals ① and ②.

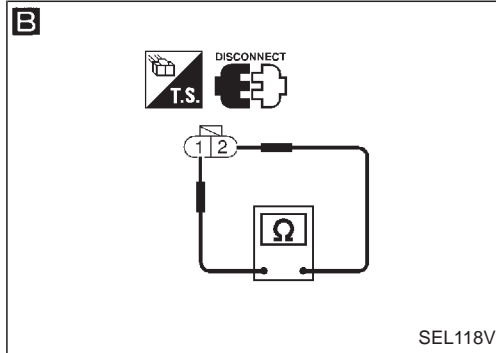
Resistance: Approx. 250Ω

NG

Replace vehicle speed sensor.

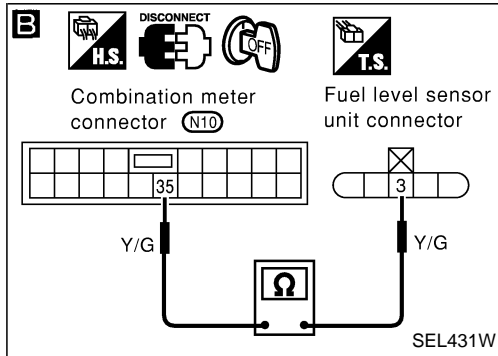
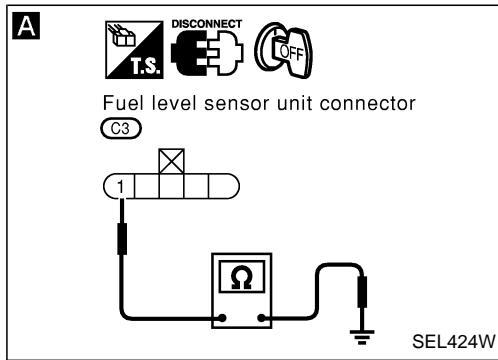
OK

Check harness or connector between speedometer and vehicle speed sensor.

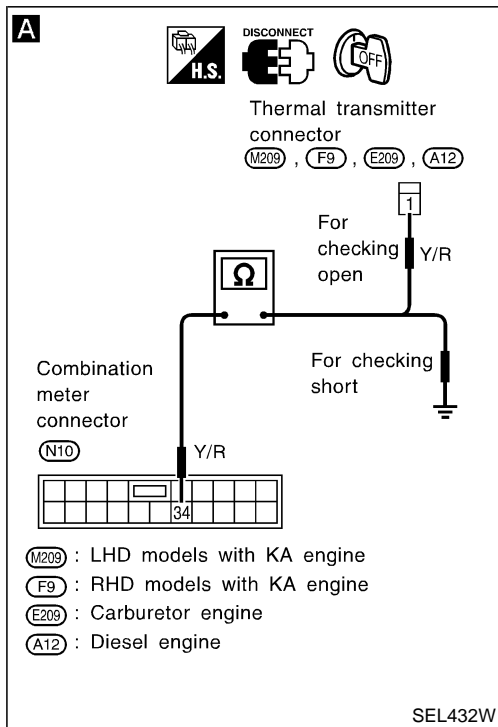
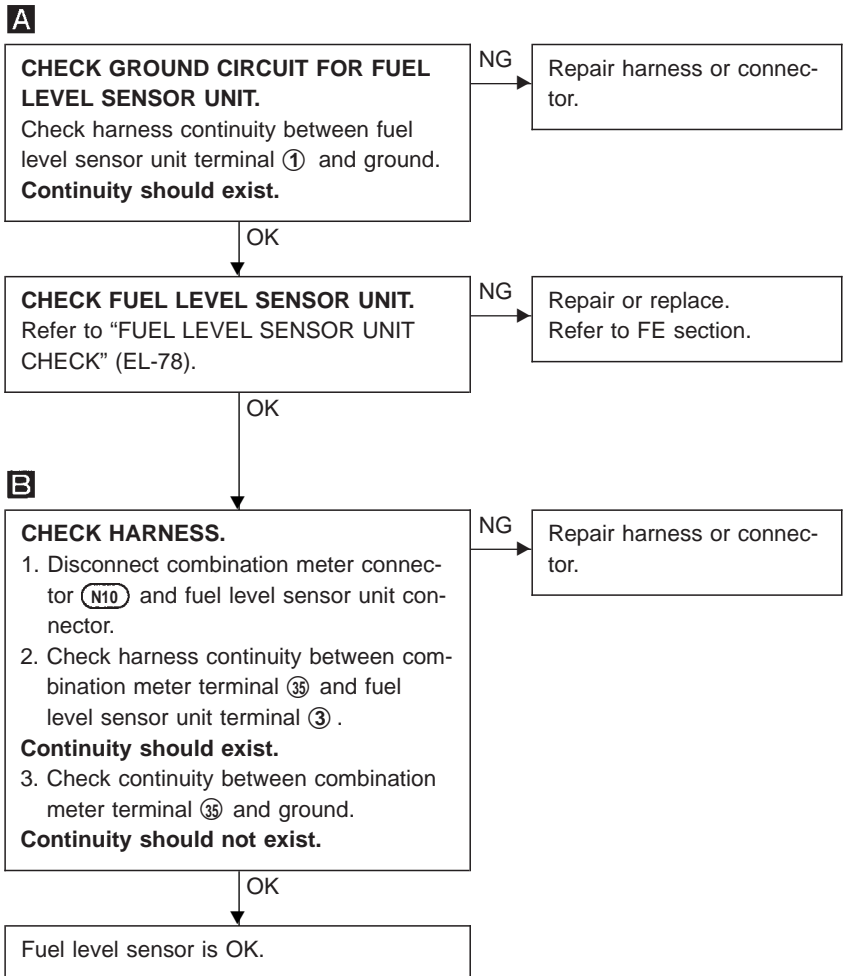


METER AND GAUGES

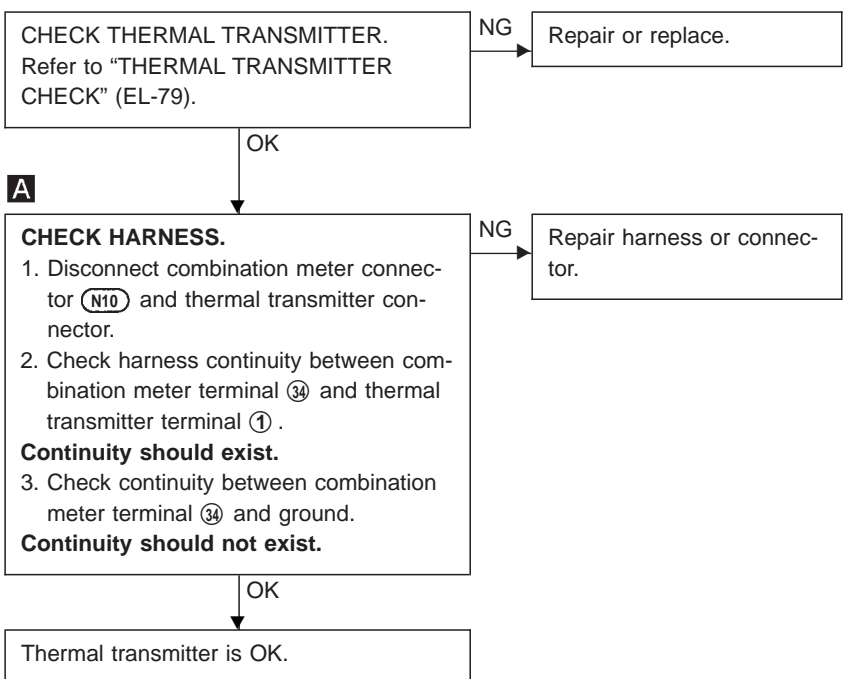
Trouble Diagnoses/Models without Tachometer (Cont'd)



INSPECTION/FUEL LEVEL SENSOR



INSPECTION/THERMAL TRANSMITTER

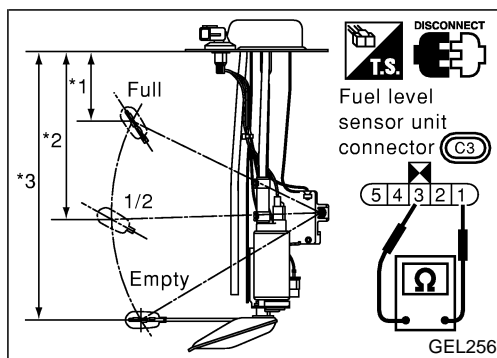
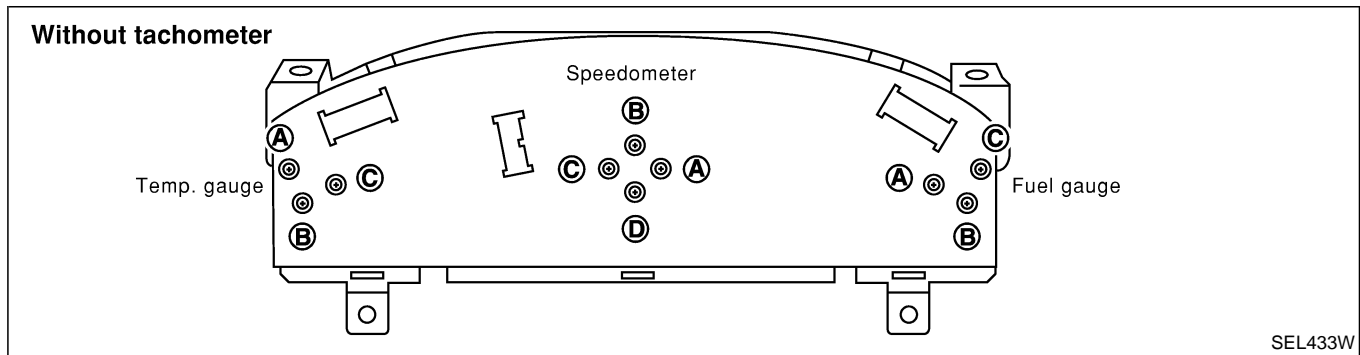
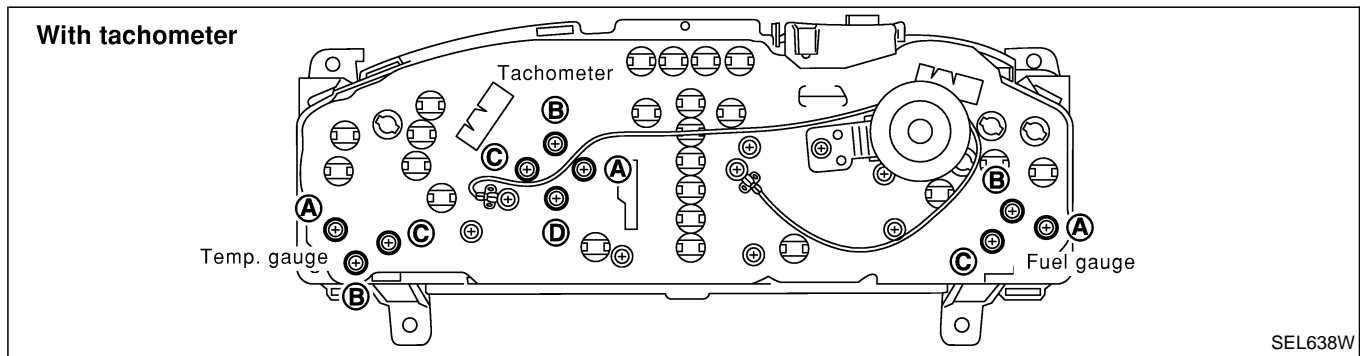


Electrical Components Inspection

METER/GAUGE RESISTANCE CHECK

1. Disconnect FPC connector (Combination meter with tachometer). Refer to EL-67.
2. Check resistance between terminals (the points of installation screws) of meter/gauge after removing meter/gauge.

Screws		Resistance Ω
Tachometer	Fuel/Temp. gauge	
A - C	A - C	Approx. 140 - Approx. 260
B - D	B - C	Approx. 230 - Approx. 310



FUEL LEVEL SENSOR UNIT CHECK

- For removal, refer to FE section.
- Check the resistance between terminals ① and ③.

Ohmmeter		Float position mm (in)				Resistance value Ω
(+)	(-)		60ℓ (13-1/4 Imp gal) tank	80ℓ (17-5/8 Imp gal) tank		
③	①	*1	Full	253 (9.96)	77 (3.03)	Approx. 4 - 6
		*2	1/2	130 (5.12)	191 (7.52)	27 - 35
		*3	Empty	27 (1.06)	299 (11.77)	78 - 85

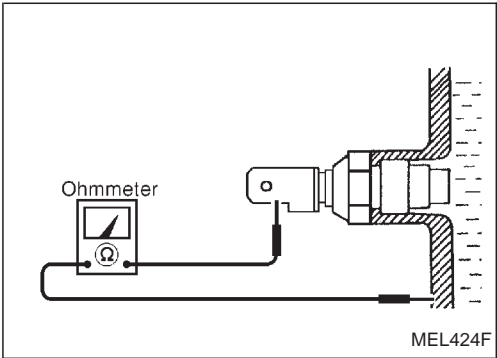
*1 and *3: When float rod is in contact with stopper.

METER AND GAUGES

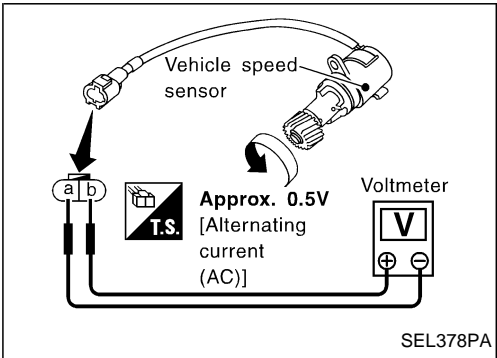
Electrical Components Inspection (Cont'd)

THERMAL TRANSMITTER CHECK

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



Water temperature	Resistance
60°C (140°F)	Approx. 167 - 211Ω
100°C (212°F)	Approx. 47 - 53Ω



VEHICLE SPEED SENSOR SIGNAL CHECK

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

GI

MA

EM

LC

EC

FE

CL

MT

AT

TF

PD

FA

RA

BR

ST

RS

BT

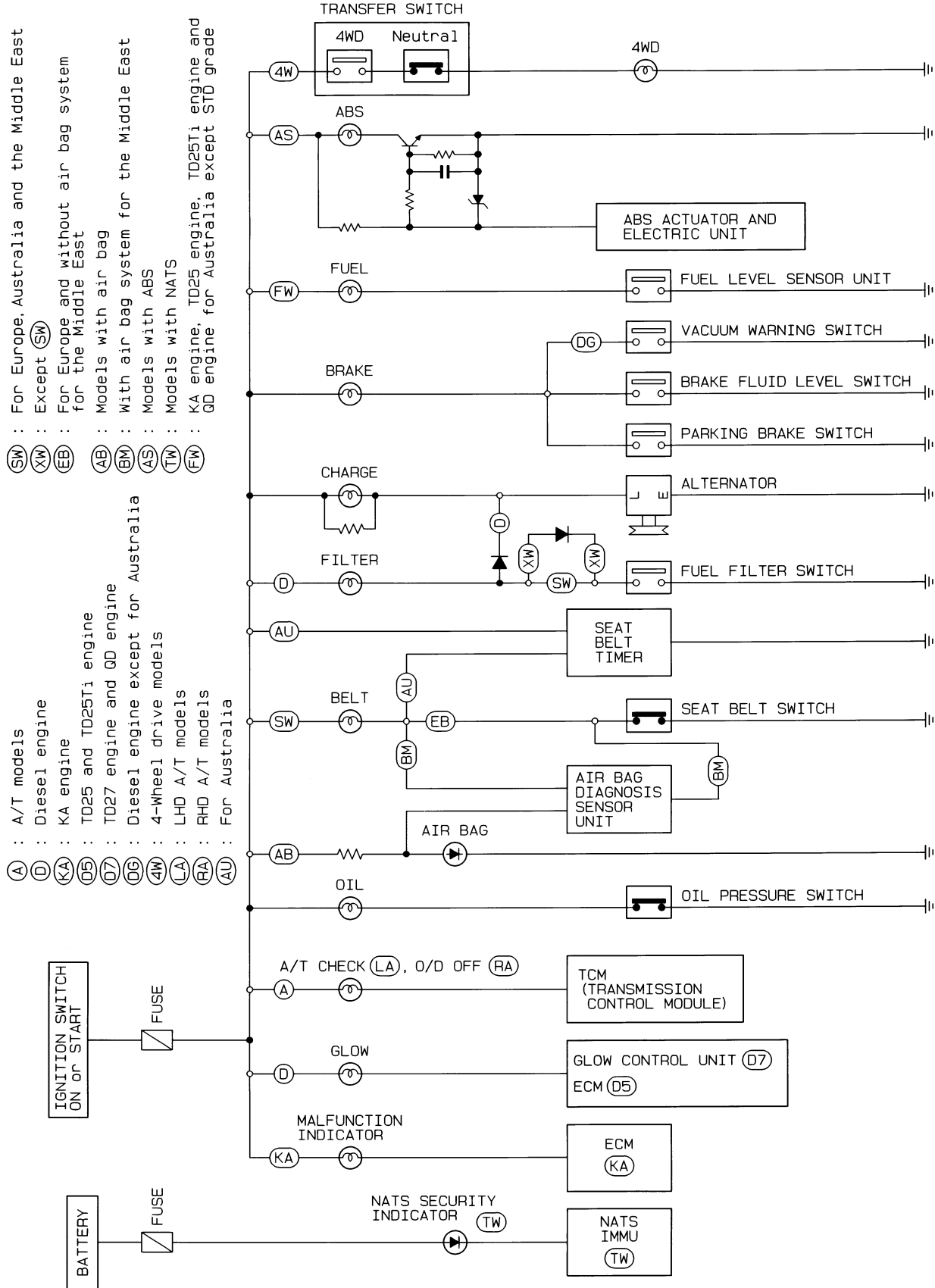
HA

EL

IDX

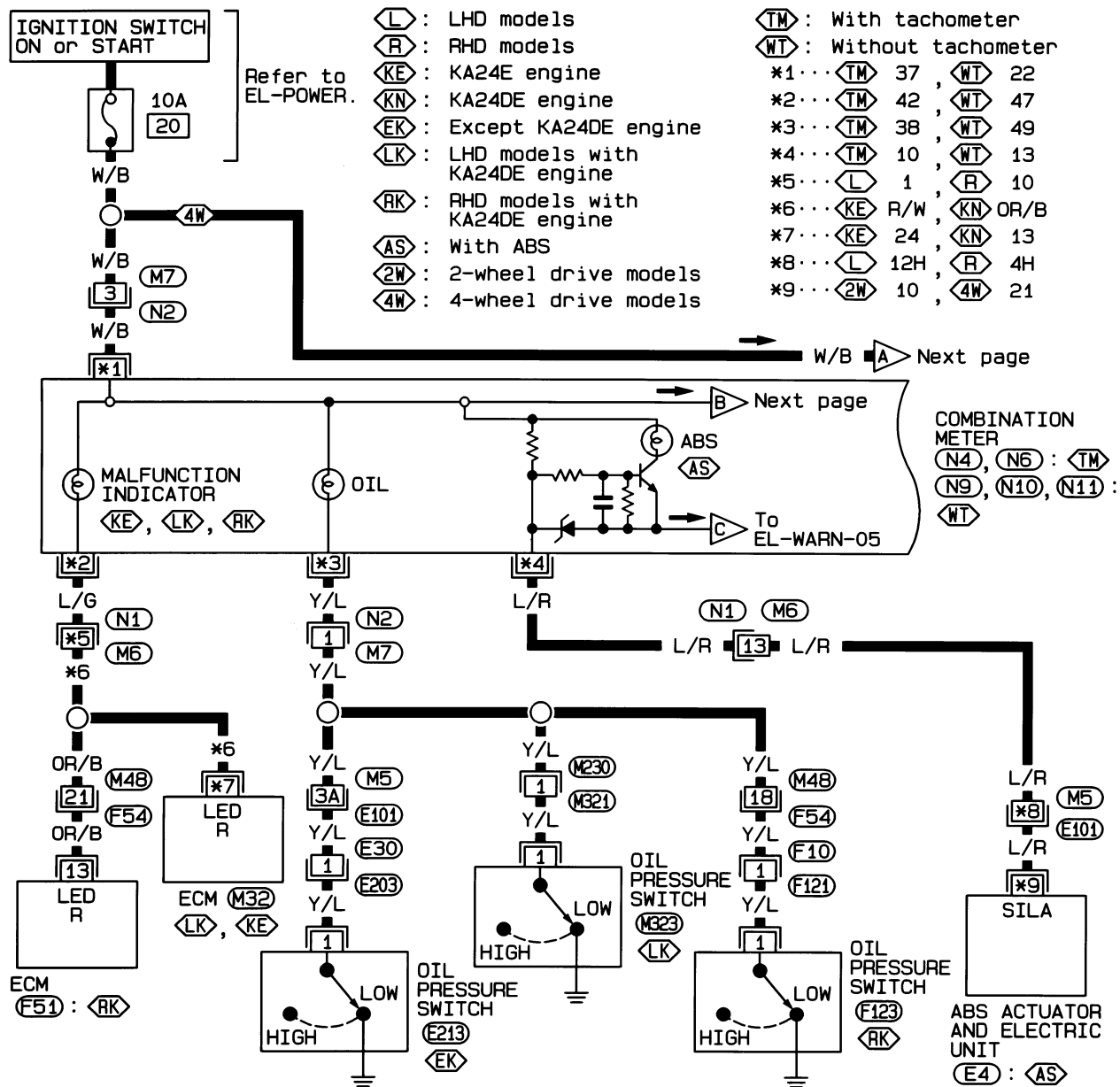
WARNING LAMPS

Schematic



Wiring Diagram — WARN —/Gasoline Engine

EL-WARN-01



1 2 3 (M230), (F10) 1 (M323), (E213), (F123) 1 2 3 4 5 6 7 8 9 10 (N1), (F54)
11 12 13 14 15 16 17 18 19 20 21 22 23 24 W W

1 2 3 4 5 6 7 8 9 10 11 (N2)
12 13 14 15 16 17 18 19 20 21 22 23 24 BR

1 2 3 4 (E203)
5 6 7 8 B

1 2 3 4 5 6 7 (N4)
8 9 10 11 12 13 14 15 16 W
36 37 38 39 40 41 42 (N6)
27 28 29 30 31 32 33 34 35 BR

1 2 3 4 5 6 7 8 9 (N9)
10 11 12 13 14 15 16 17 18 19 20 W
21 22 23 24 25 26 27 28 29 (N10)
30 31 32 33 34 35 36 37 38 39 40 BR
41 42 43 44 45 46 47 48 49 50 51 (N11)
52 53 54 55 56 57 58 59 60 61 62 63 64 W

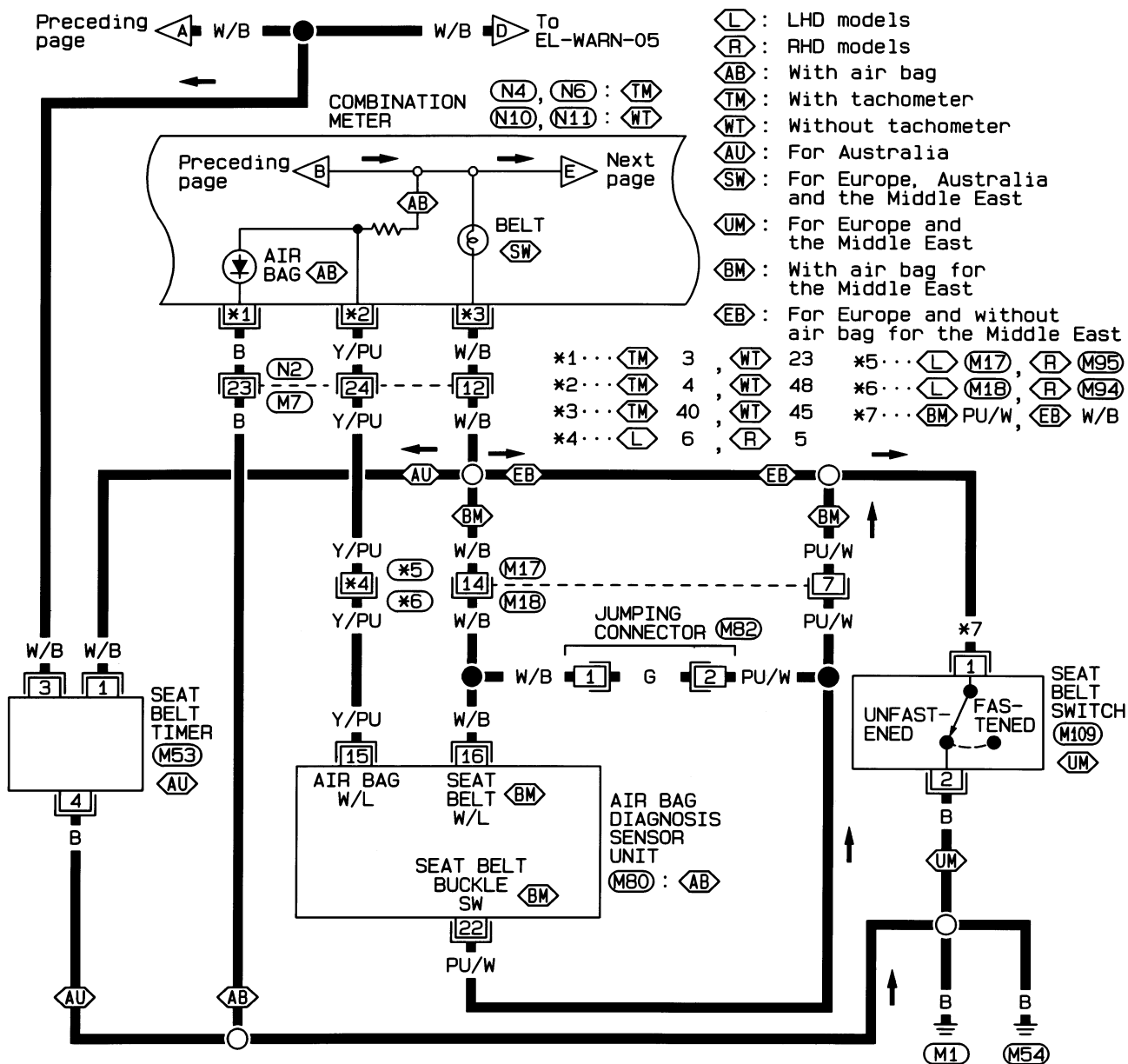
Refer to last page
(Foldout page).

(M5), (E101)
(M32)
(F51)
(E4)

WARNING LAMPS

Wiring Diagram — WARN —/Gasoline Engine (Cont'd)

EL-WARN-02

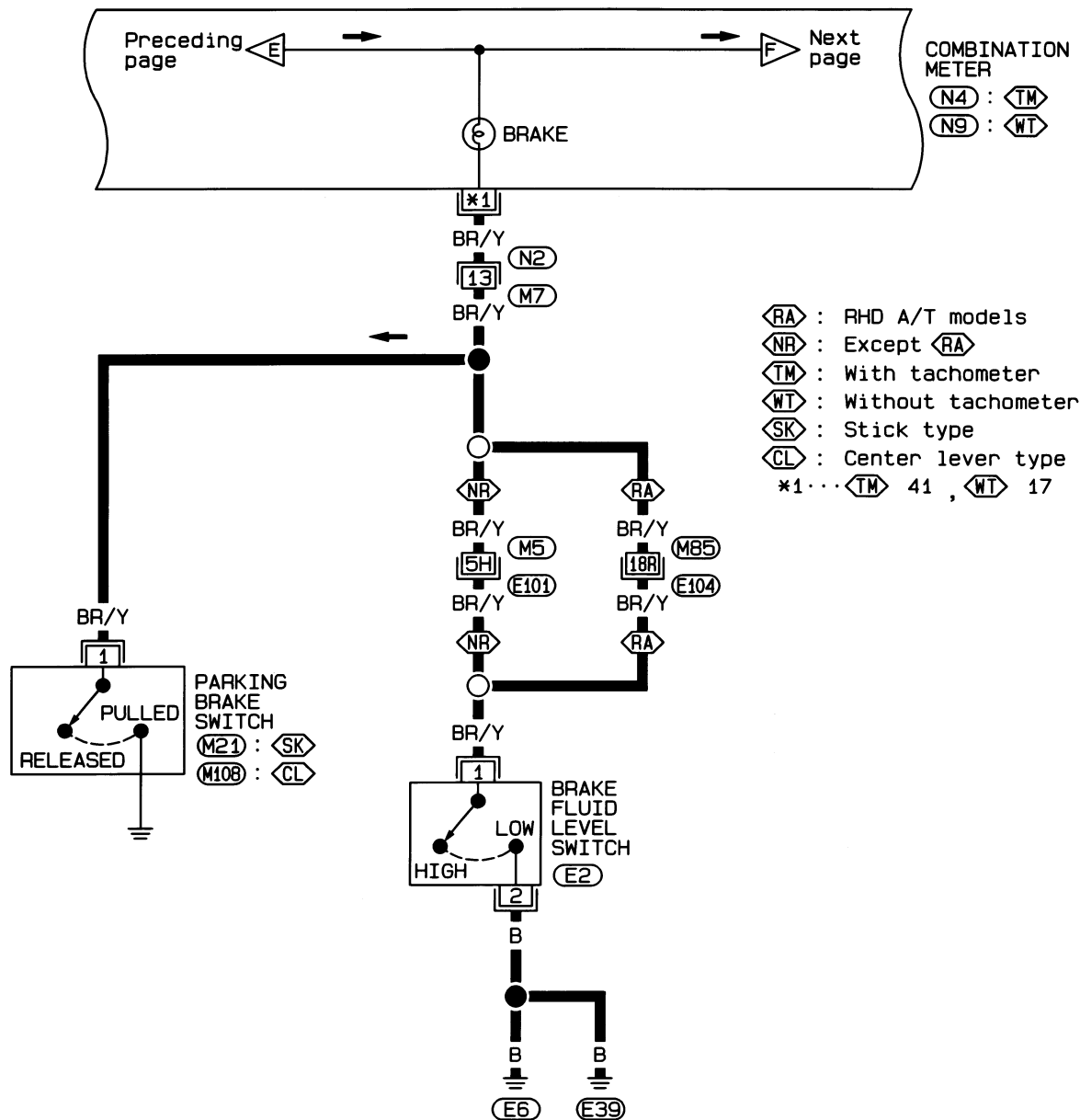


1 2 3 4 5 6 7 M18 W	1 2 3 4 5 6 7 8 M53 W	24 13 17 18 3 4 12 11 6 5 M80 Y	1 2 3 4 5 M82 W	1 2 3 4 5 M94 W
8 9 10 11 12 13 14 15 16	4 5 6 7 8	21 22 20 15 19 1 16 2	6 7 8 9 10 11 12	
1 M109 W	1 2 3 4 5 6 7 8 9 10 11 N2 BR	1 2 3 4 5 6 7 N4 W	36 37 38 39 40 41 42 N6 BR	
2 3	12 13 14 15 16 17 18 19 20 21 22 23 24	8 9 10 11 12 13 14 15 16	27 28 29 30 31 32 33 34 35	
	21 22 23 24 25 26 27 28 29 N10 BR	41 42 43 44 45 46 47 48 49 50 51 N11 W		
	30 31 32 33 34 35 36 37 38 39 40	52 53 54 55 56 57 58 59 60 61 62 63 64		

WARNING LAMPS

Wiring Diagram — WARN —/Gasoline Engine
(Cont'd)

EL-WARN-03



<div>□</div>	<div>M21</div>	<div>1</div>	<div>M108</div>	<div>1</div>	<div>1</div>	<div>2</div>	<div>3</div>	<div>4</div>	<div>5</div>	<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div>	<div>10</div>	<div>11</div>	<div>N2</div>	<div>36</div>	<div>37</div>	<div>38</div>	<div>39</div>	<div>40</div>	<div>41</div>	<div>42</div>	<div>N6</div>			
<div>1</div>	<div>W</div>	<div>1</div>	<div>B</div>	<div>1</div>	<div>12</div>	<div>13</div>	<div>14</div>	<div>15</div>	<div>16</div>	<div>17</div>	<div>18</div>	<div>19</div>	<div>20</div>	<div>21</div>	<div>22</div>	<div>23</div>	<div>24</div>	<div>27</div>	<div>28</div>	<div>29</div>	<div>30</div>	<div>31</div>	<div>32</div>	<div>33</div>	<div>34</div>	<div>35</div>	<div>BR</div>

<div>1</div>	<div>2</div>	<div>3</div>	<div>4</div>	<div>5</div>	<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div>	<div>N9</div>	<div>1</div>	<div>E2</div>	
<div>10</div>	<div>11</div>	<div>12</div>	<div>13</div>	<div>14</div>	<div>15</div>	<div>16</div>	<div>17</div>	<div>18</div>	<div>19</div>	<div>20</div>	<div>2</div>	<div>GY</div>

Refer to last page
(Foldout page).

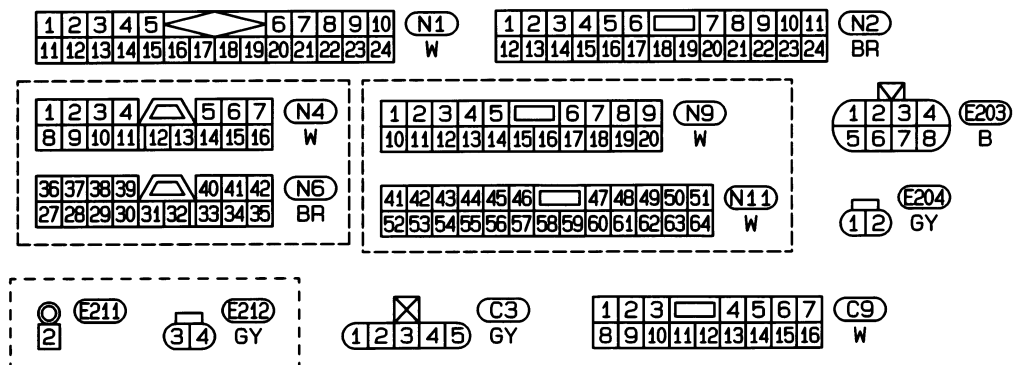
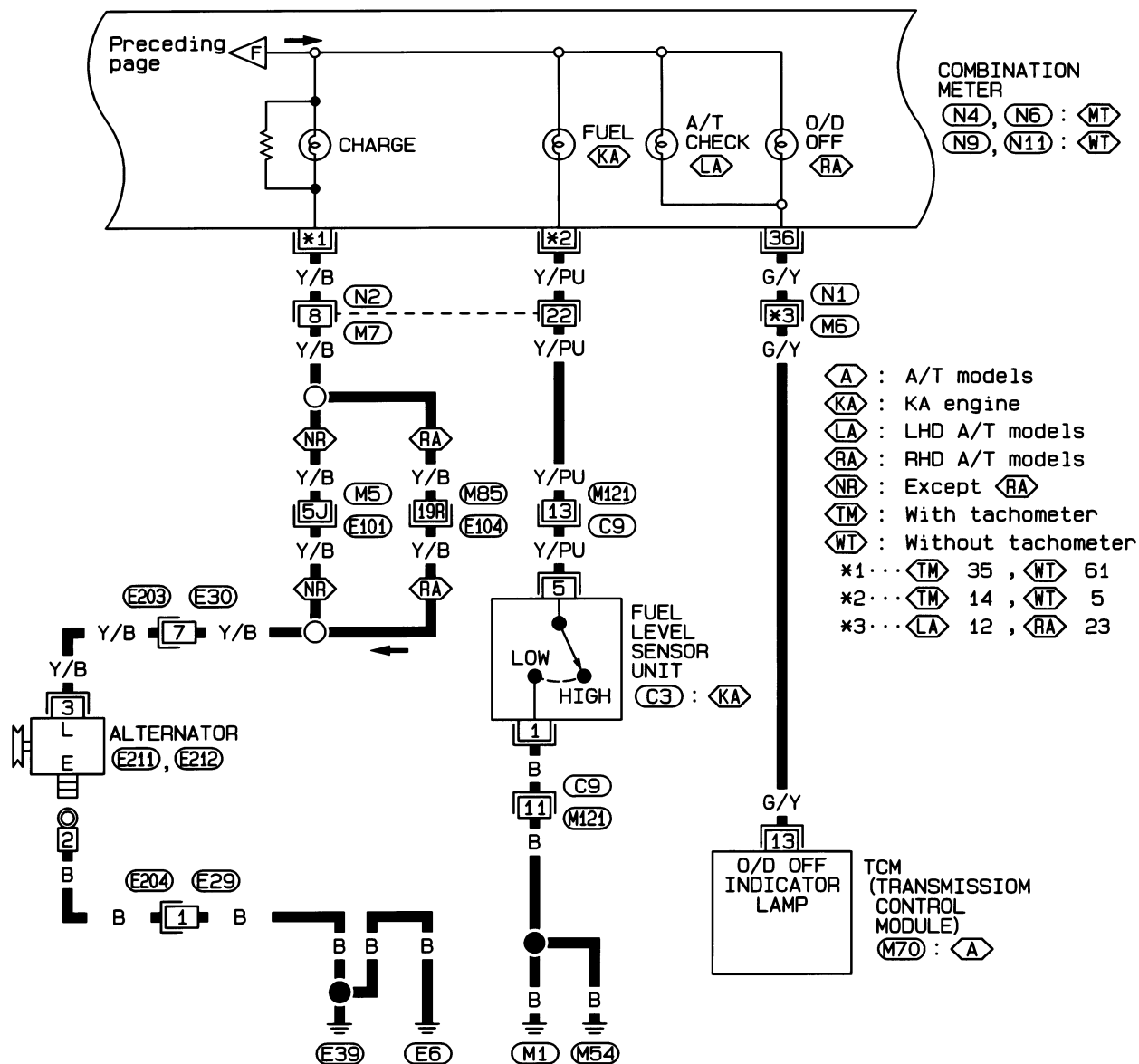
M5 , E101
M85 , E104

EL

WARNING LAMPS

Wiring Diagram — WARN —/Gasoline Engine (Cont'd)

EL-WARN-04

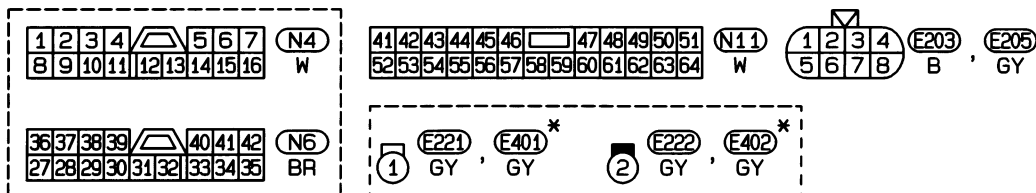
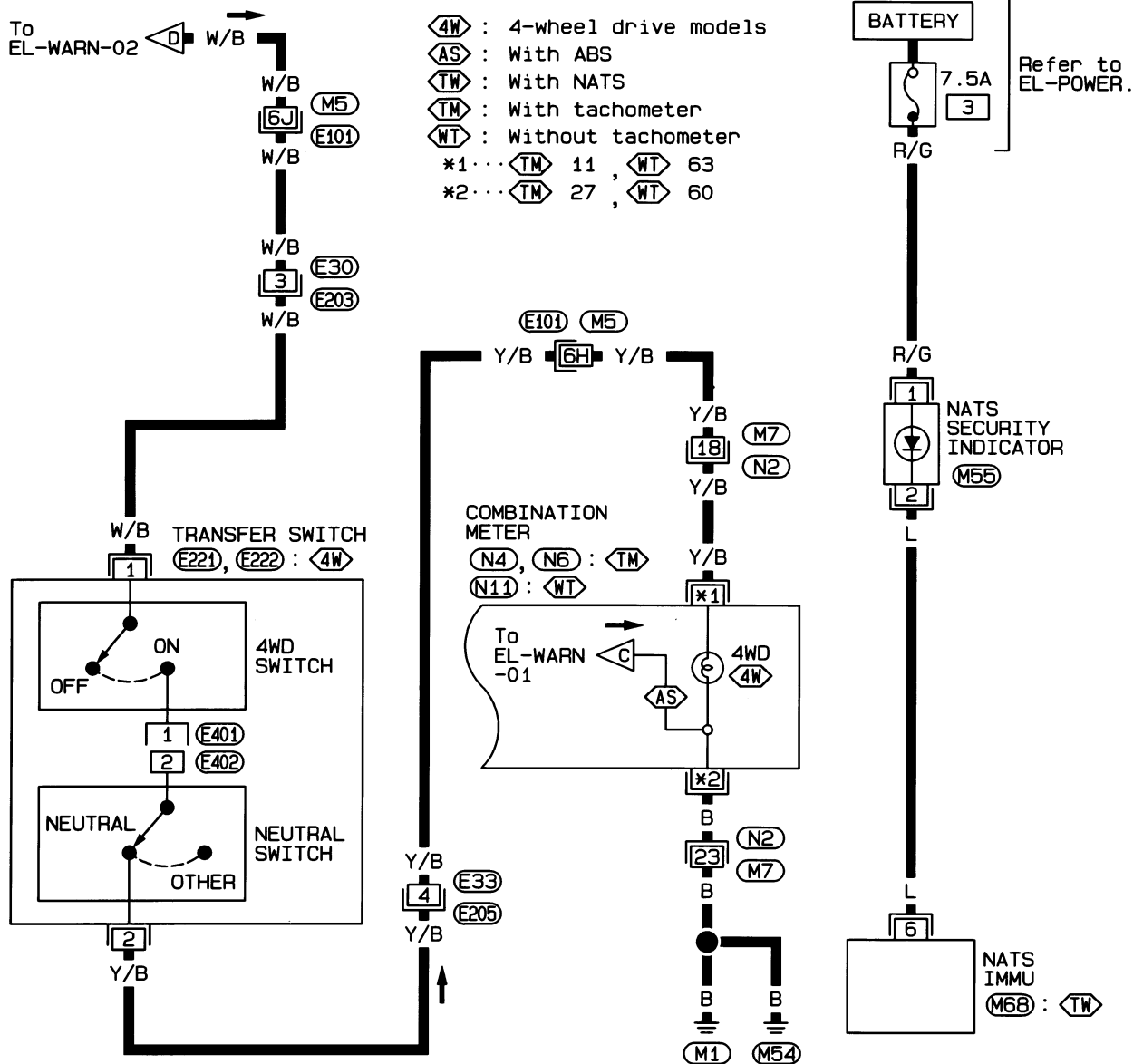


Refer to last page
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WARNING LAMPS

Wiring Diagram — WARN —/Gasoline Engine (Cont'd)

EL-WARN-05



* : This connector is not shown in "HARNESS LAYOUT".

Refer to last page
(Foldout page).

(M5), (E101)

Wiring Diagram — WARN —/Diesel Engine

IGNITION SWITCH ON or START

10A
20

W/B

4W

W/B

3 M7
N2

W/B

*1

Refer to EL-POWER.

W/B

Next page

Next page

COMBINATION METER

N4, N6 : TM
N9, N10, N11 : WT

SB

14 N2
M7

SB

8

G/LAMP

ECM M66
D5

Y/L

1

Y/L

3A M5
E101

Y/L

*5

G/L

GLOW CONTROL UNIT

M29 : WQ
M30 : CT

Y/L

1

Y/L

1

LOW

HIGH

OIL PRESSURE SWITCH E213

L/R

N1 M6

13

L/R

L/R

*6 M5
E101

L/R

*7

SILA

ABS ACTUATOR AND ELECTRIC UNIT E4 : AS

ABS AS

To EL-WARN-10

*2 SB

GLOW

*3 Y/L

OIL

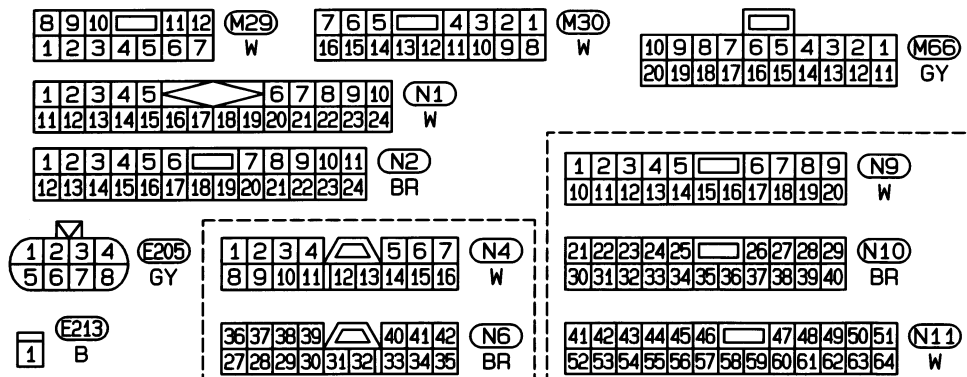
*4 L/R

W/B

Next page

*1... TM 37, WT 22
*2... TM 1, WT 55
*3... TM 38, WT 49
*4... TM 10, WT 13
*5... CT 14, WQ 3
*6... L 12H, R 4H
*7... 2W 10, 4W 21

L : LHD models
R : RHD models
D5 : TD25 and TD25Ti engine
WQ : TD27 engine except for cold areas and Australia, and QD engine
CT : TD27 engine for cold areas and Australia
AS : With ABS
2W : 2-wheel drive models
4W : 4-wheel drive models
TM : With tachometer
WT : Without tachometer



M5, E101
E4

Wiring Diagram — WARN —/Diesel Engine (Cont'd)

EL-WARN-07

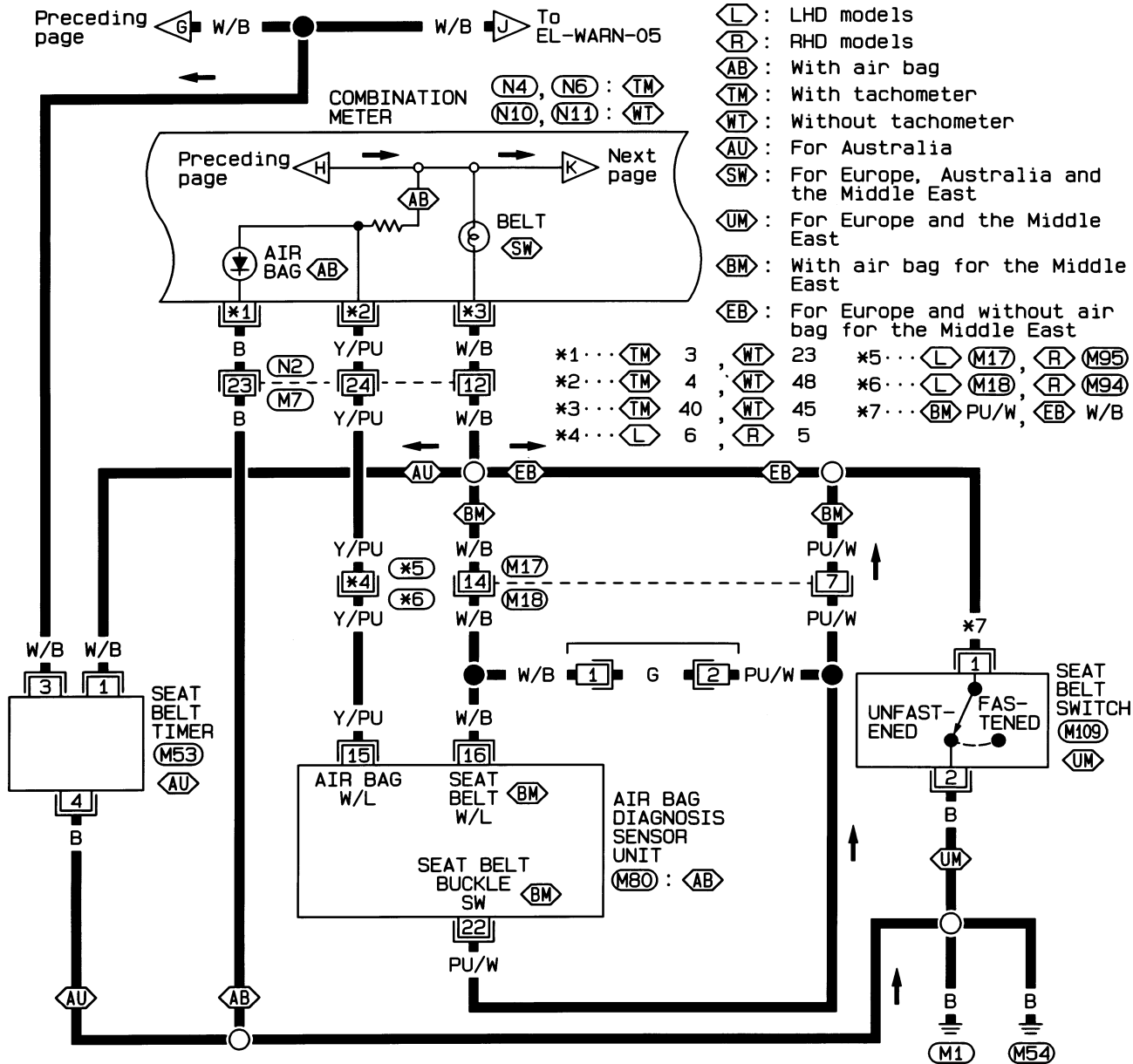
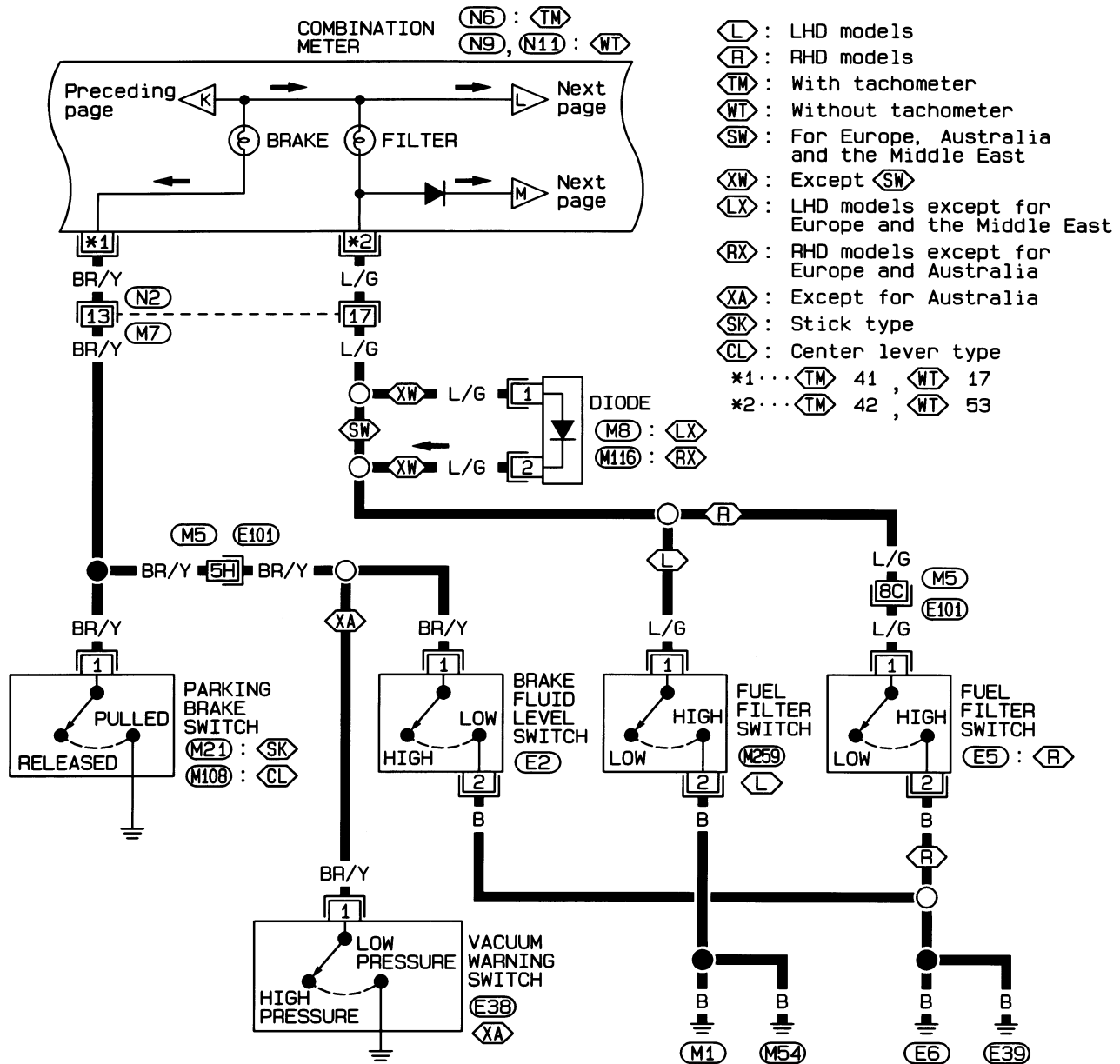


Figure 1 illustrates the 180-item test battery, organized into 18 sets of 10 items each. The items are represented by boxes containing numbers and symbols. The symbols indicate the type of test: Matrix (M), Number (N), and other symbols. The items are arranged in a grid-like pattern, with some items having a dashed border. The items are numbered 1 through 180, with some numbers missing (e.g., 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180).

EL-WARN-08



 (M8), (M116),  (M21) W,  (M108) B, (E38) GY,  (M259) BR, (E5) BR

1	2	3	4	5	6		7	8	9	10	11	(N2) BR
12	13	14	15	16	17	18	19	20	21	22	23	

36	37	38	39		40	41	42	(N6) BR
27	28	29	30	31	32	33	34	

1	2	3	4	5		6	7	8	9	(N9)	41	42	43	44	45	46		47	48	49	50	51	(N11)		
10	11	12	13	14	15	16	17	18	19	20	W	52	53	54	55	56	57	58	59	60	61	62	63	64	W

1
2

E2
GY

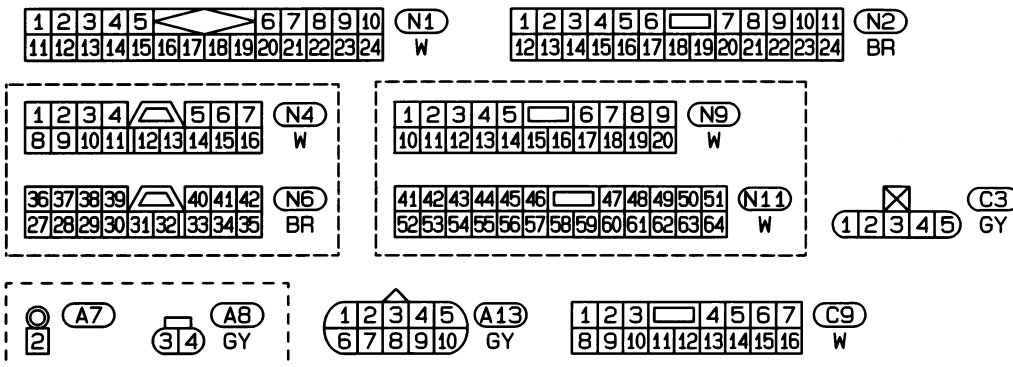
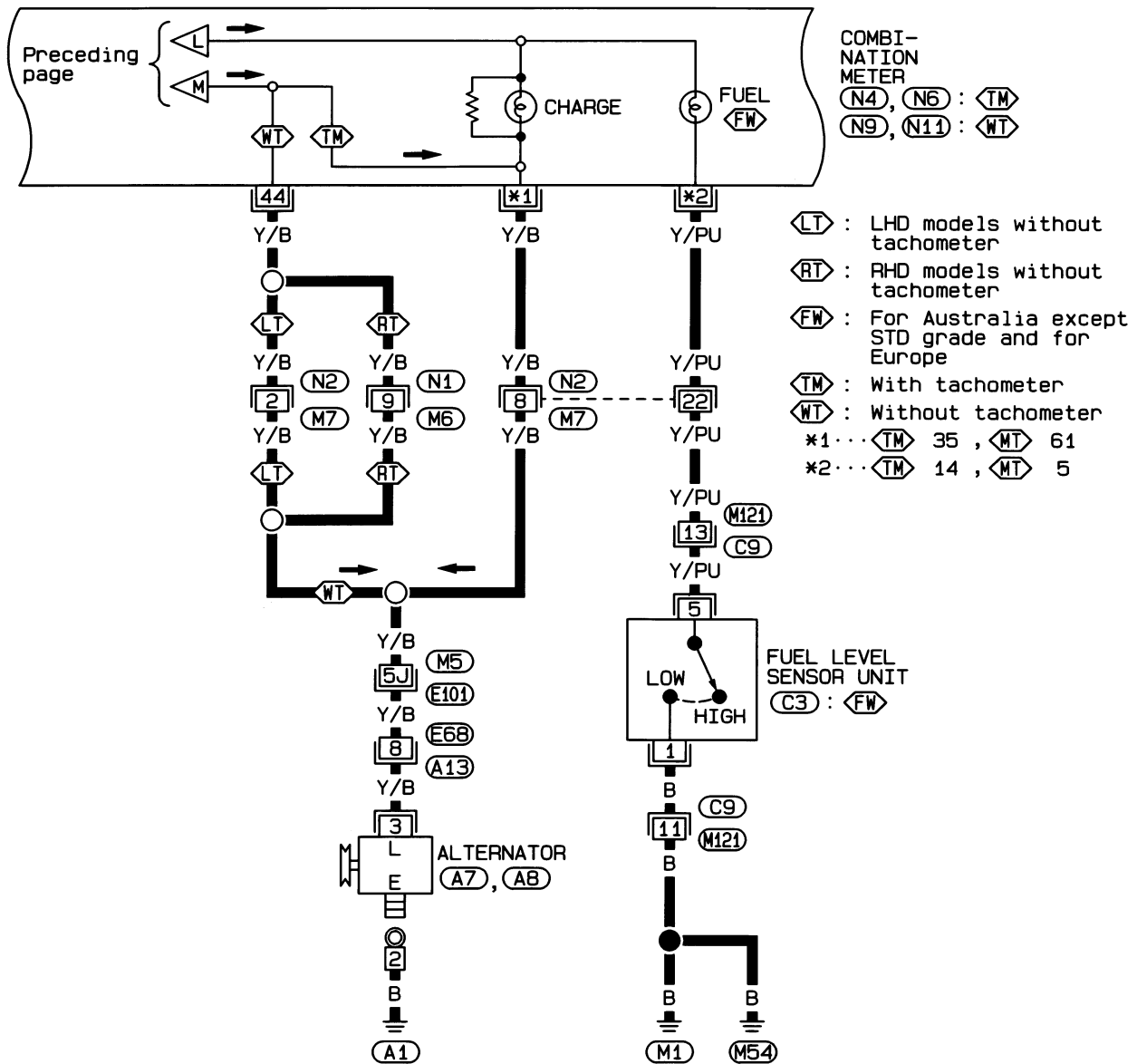
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M5 E101

WARNING LAMPS

Wiring Diagram — WARN —/Diesel Engine (Cont'd)

EL-WARN-09



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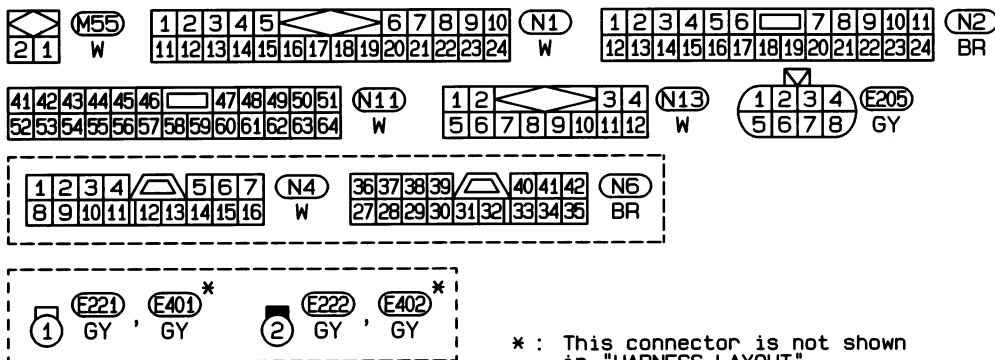
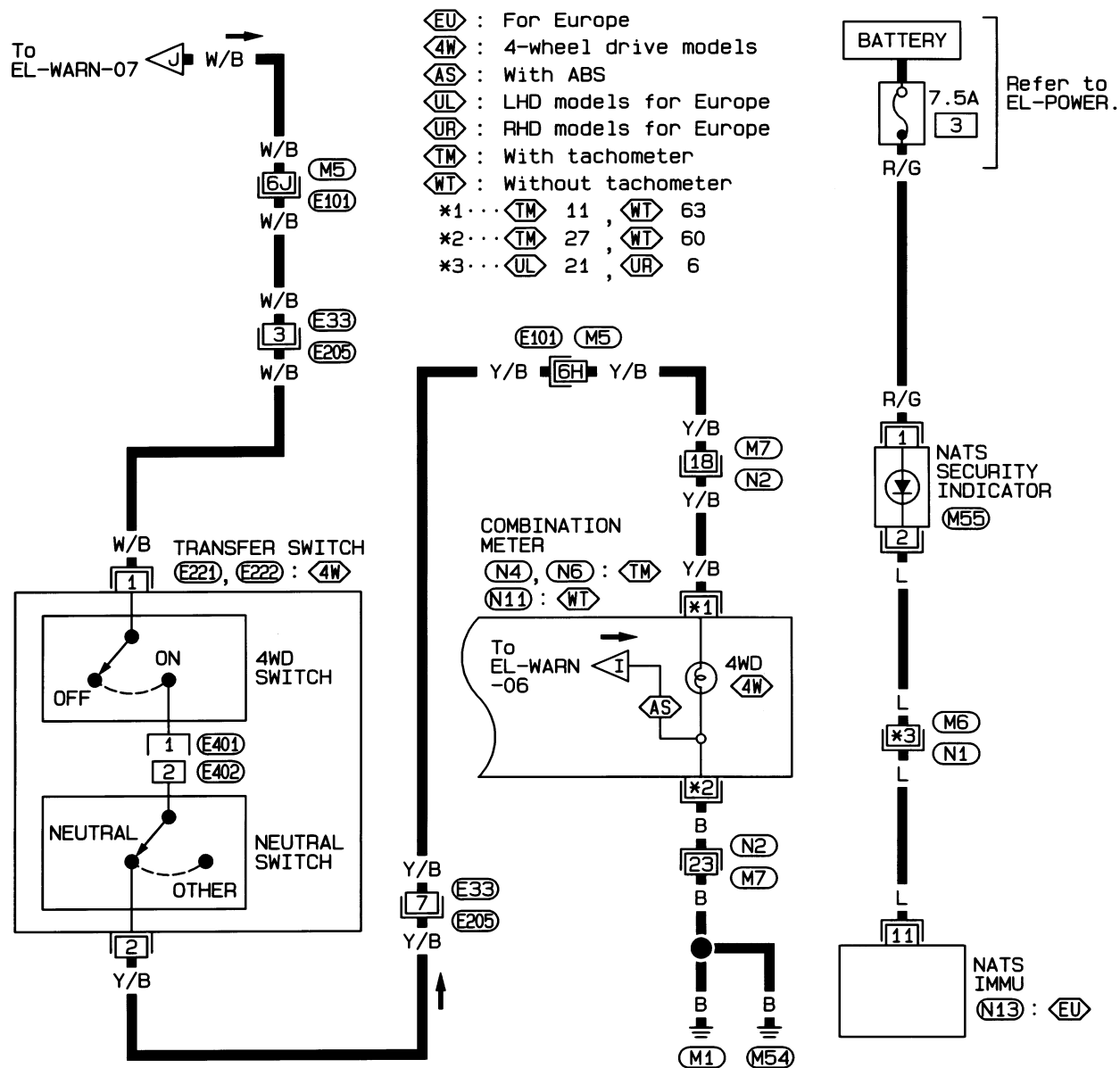
(M5), (E101)

(C3) (GY)

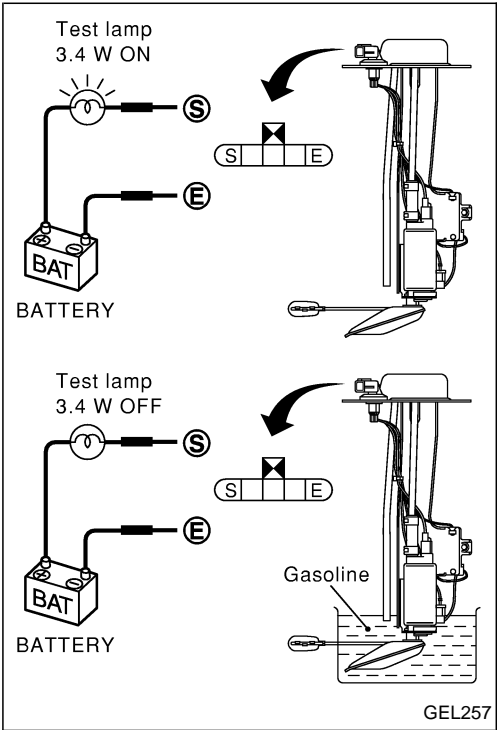
WARNING LAMPS

Wiring Diagram — WARN —/Diesel Engine (Cont'd)

EL-WARN-10



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(Foldout page).



Electrical Components Inspection

FUEL WARNING LAMP SENSOR CHECK

- It will take a short time for the bulb to light.

GI

MA

EM

LC

EC

FE

CL

MT

AT

TF

PD

FA

RA

BR

ST

RS

BT

HA

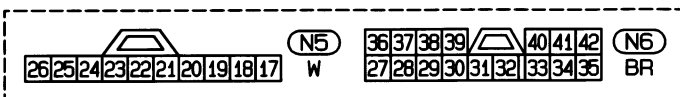
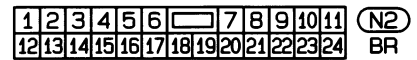
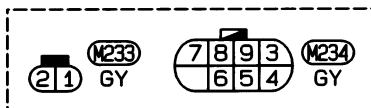
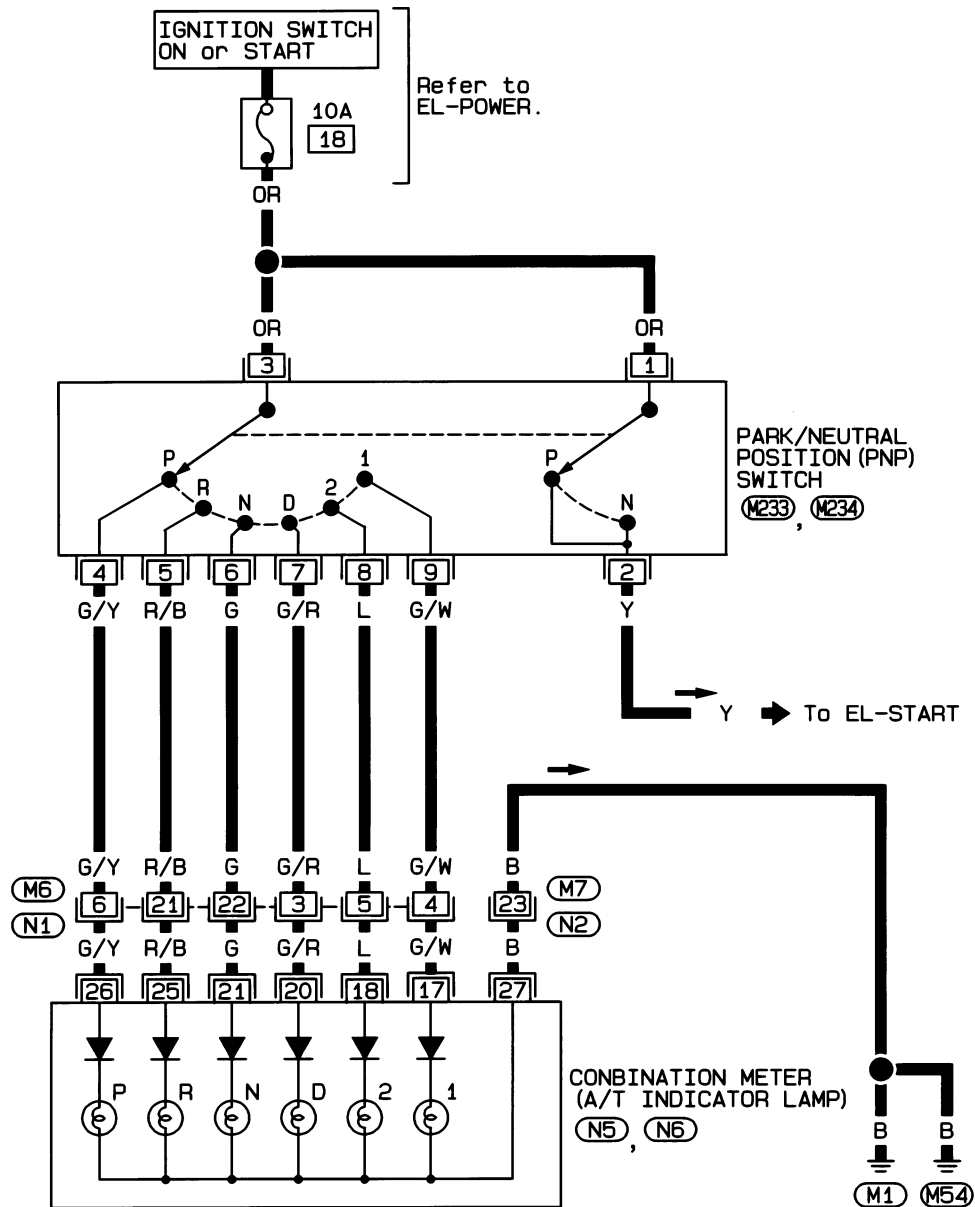
EL

IDX

A/T INDICATOR

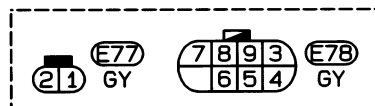
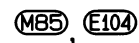
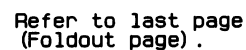
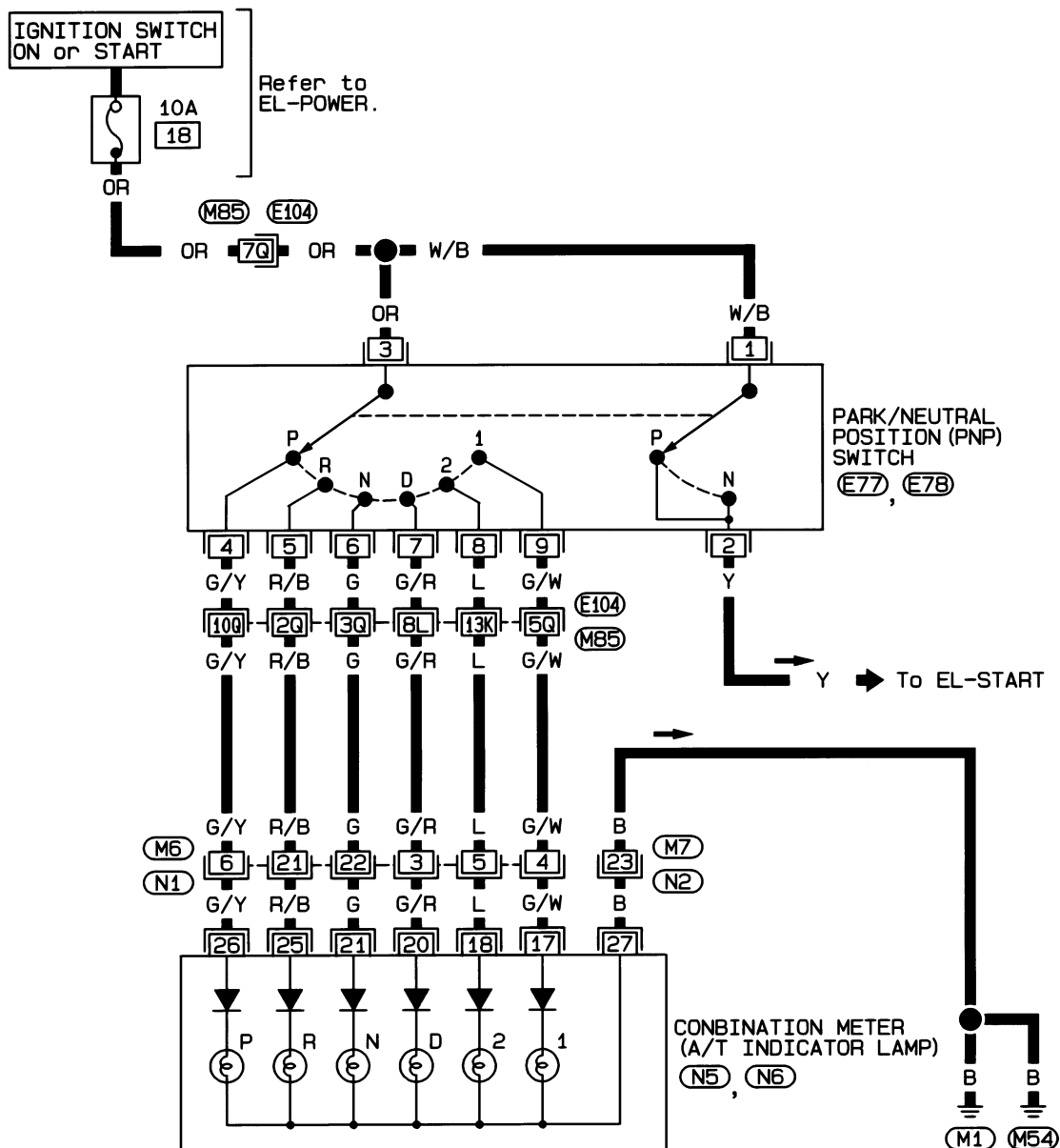
Wiring Diagram — AT/IND —/LHD Models

EL-AT/IND-01



IDX

EL-AT/IND-02

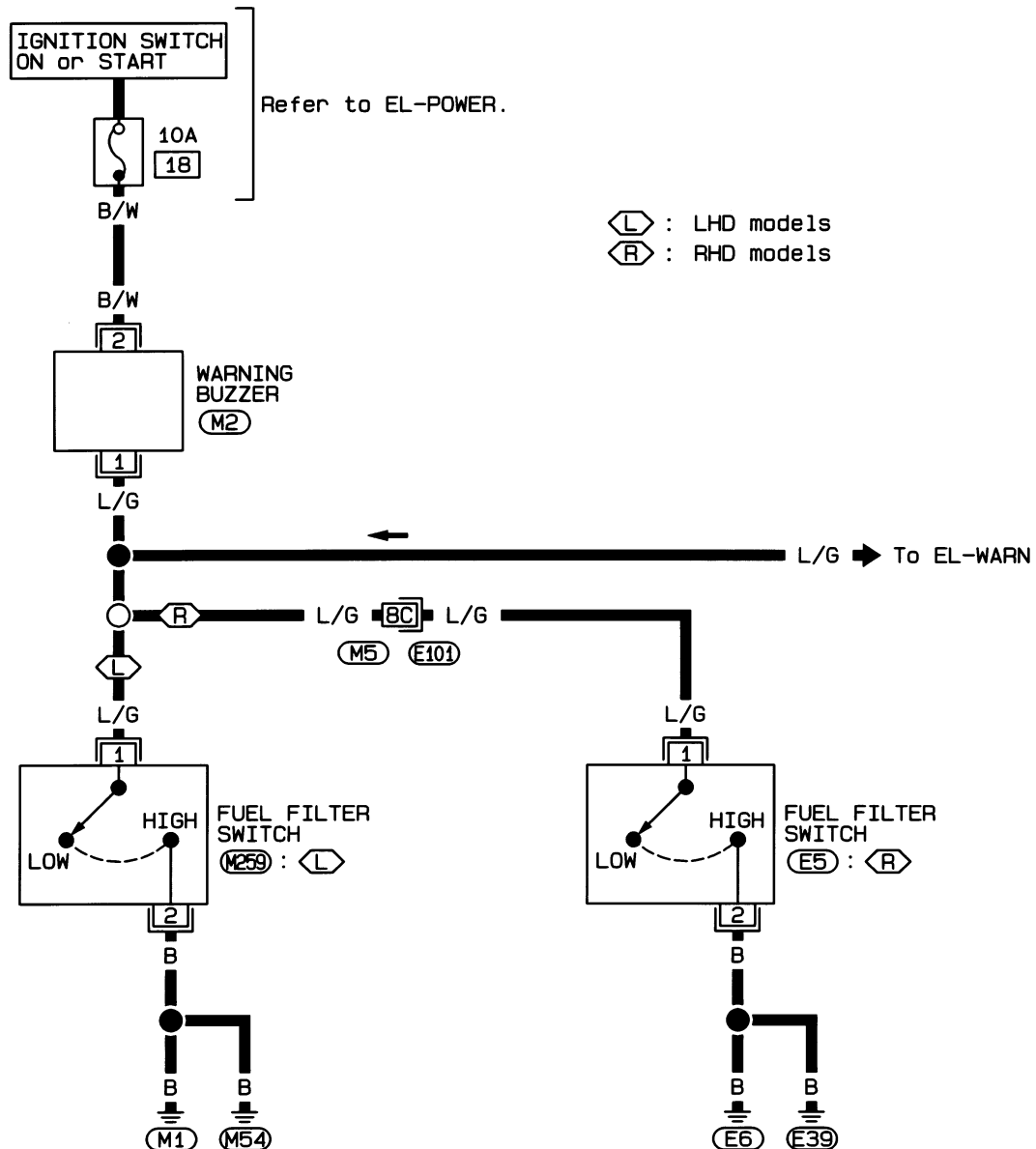


WARNING CHIME

Wiring Diagram — CHIME —/Diesel Engine Except for Europe, Australia and The Middle East

FUEL FILTER WARNING BUZZER

EL-CHIME-01



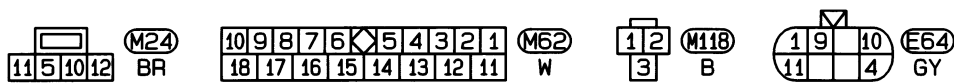
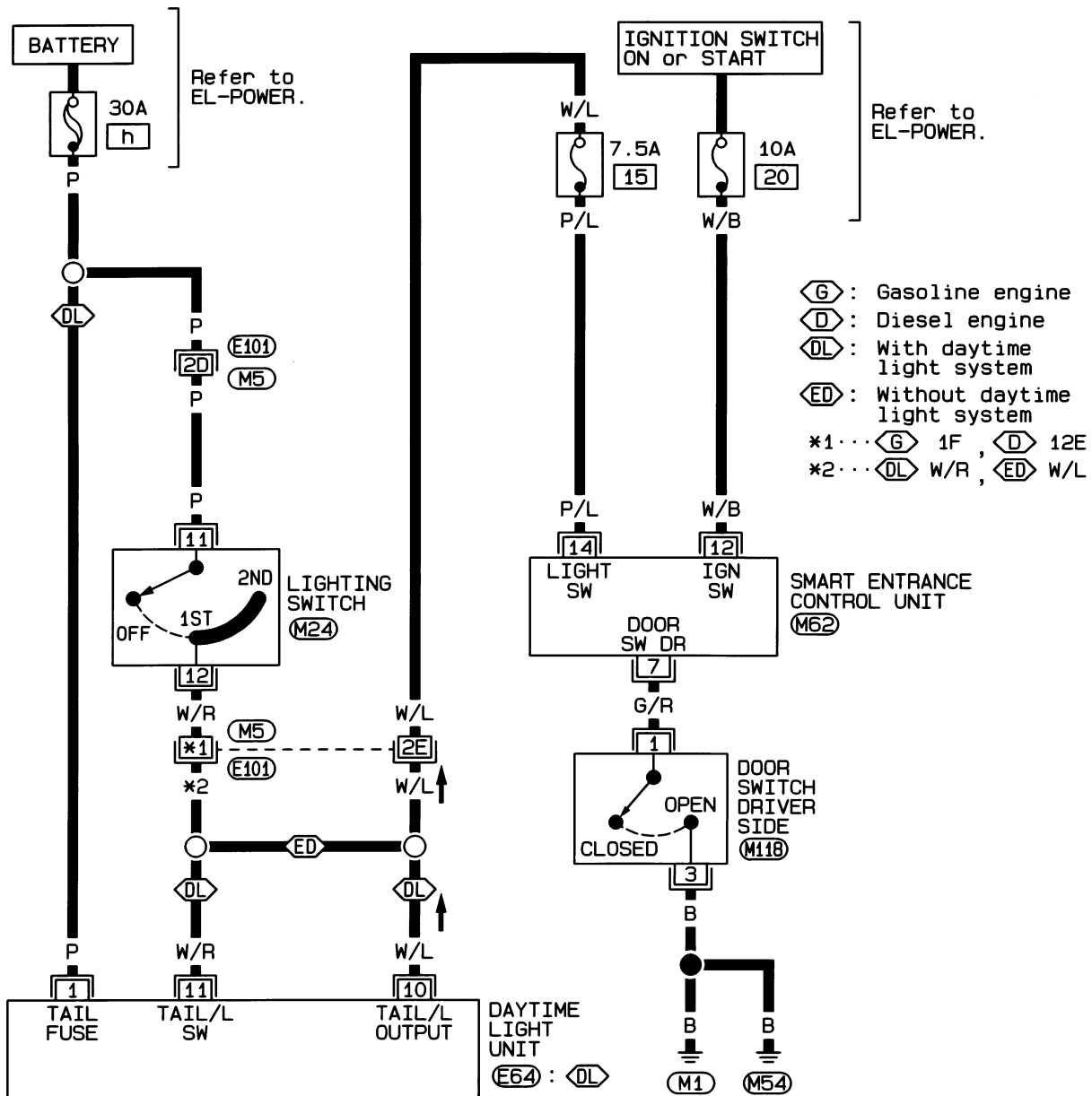
Refer to last page
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(M5) , (E101)

Wiring Diagram — CHIME —/LHD Models for Europe

LIGHT WARNING BUZZER

EL-CHIME-02



Refer to last page
(Foldout page) .

M5, E101

WARNING CHIME

LIGHT WARNING BUZZER

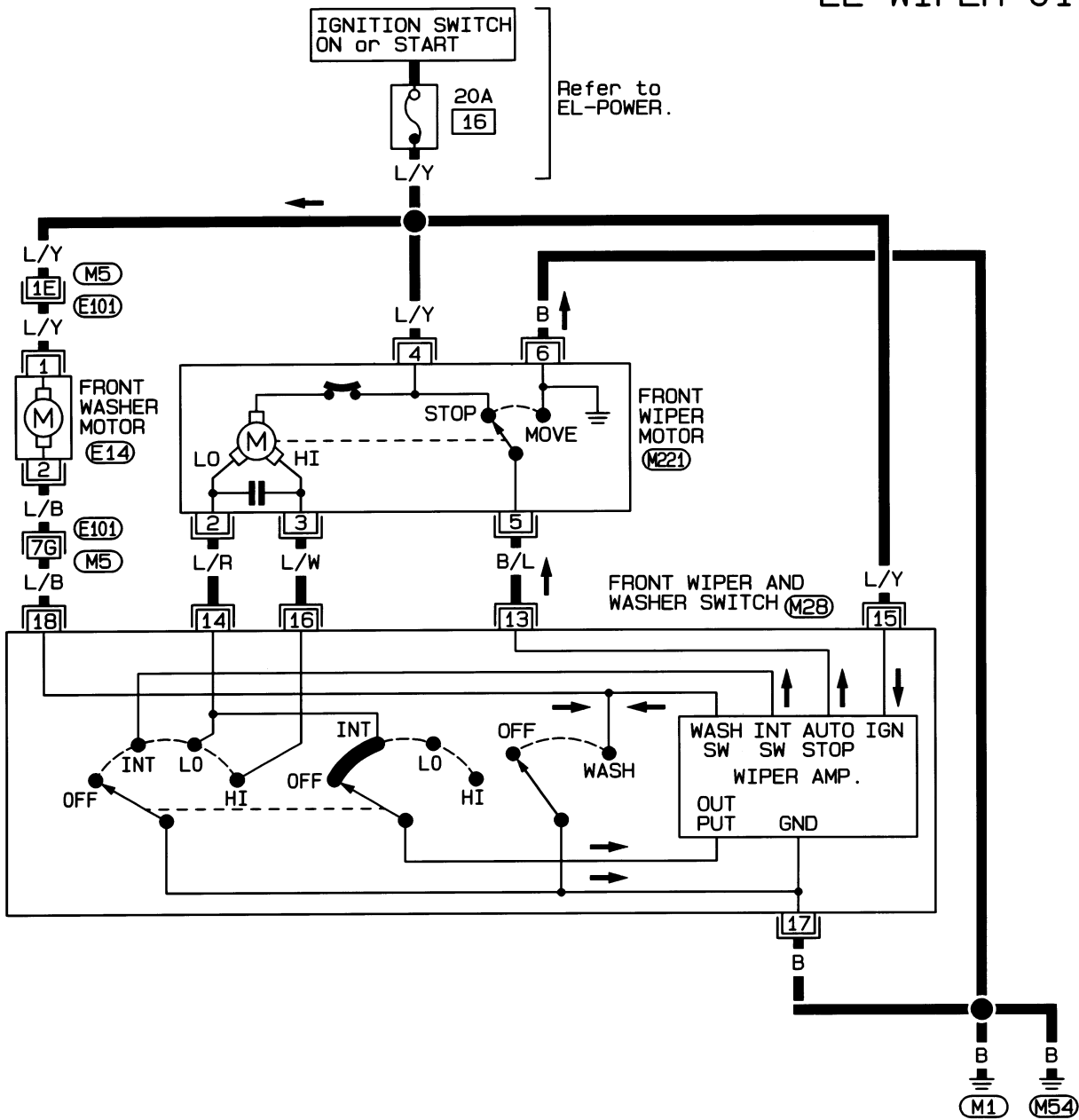
EL-CHIME-03



FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/LHD Models with Intermittent

EL-WIPER-01



13					(M28)
16	14	17	18	15	GY

	2	3	(M221)
4	5	6	W

(21)	(E14)
	GY

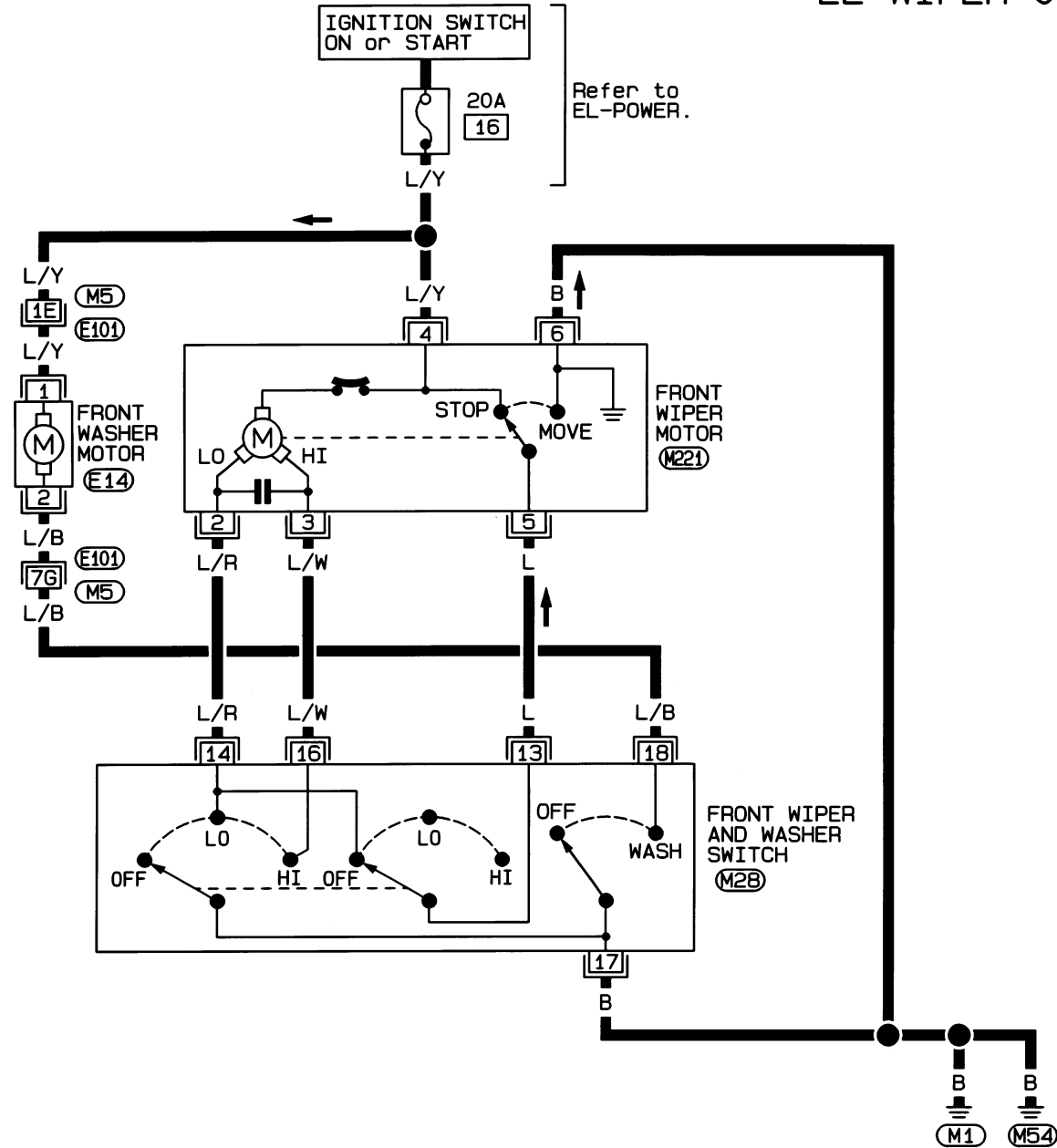
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(M5) , (E101)

FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/LHD Models
without Intermittent

EL-WIPER-02



13	16	14	M28
17	18		GY

2	3	M221
4	5	W

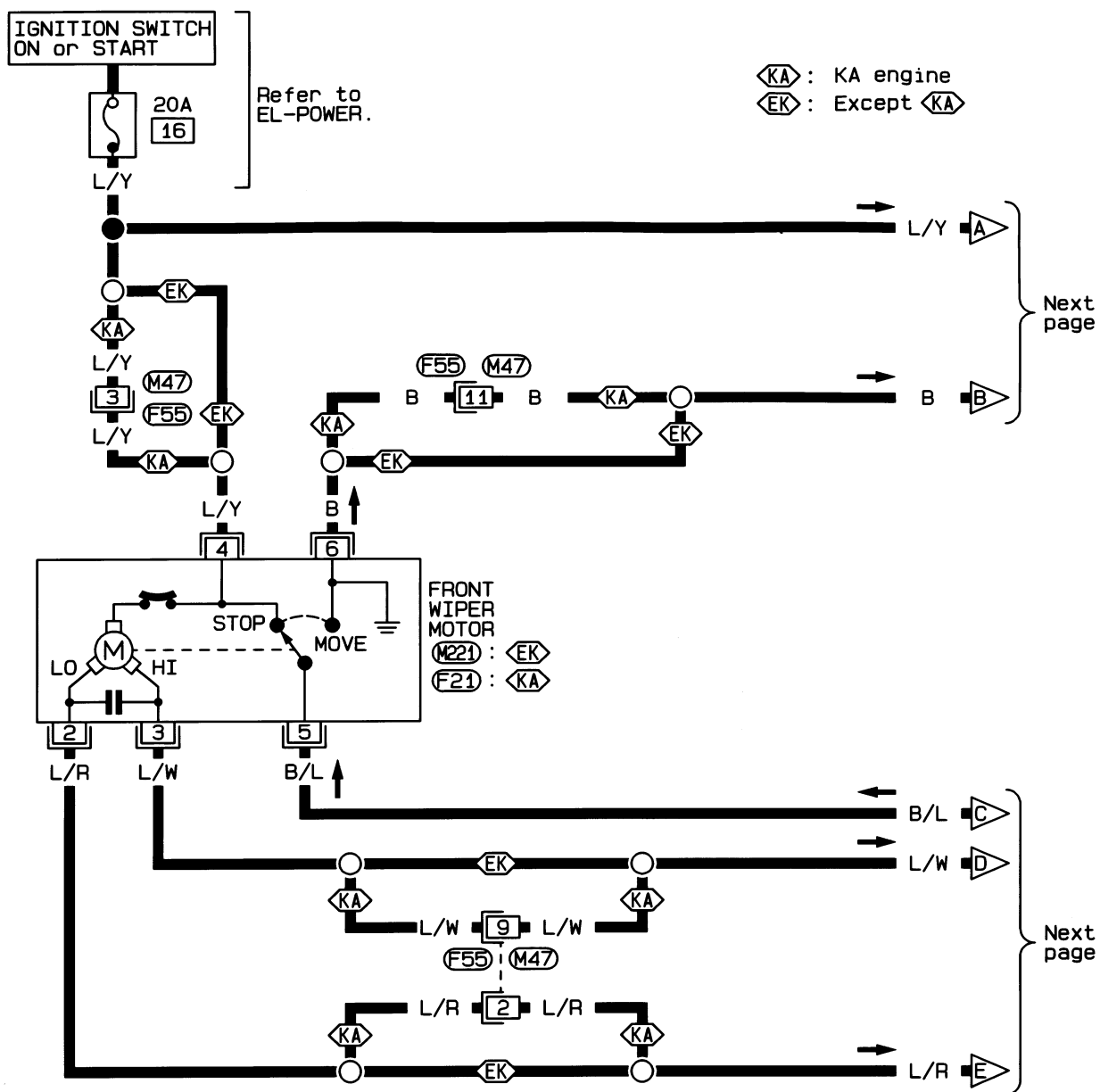
2	1	E14
		GY

Refer to last page
(Foldout page).

M5 , E101

IDX

EL-WIPER-03



3	2	
6	5	4

 $\begin{pmatrix} M221 \\ W \end{pmatrix}, \begin{pmatrix} F21 \\ W \end{pmatrix}$

1	2	3		4	5	6	7	
8	9	10	11	12	13	14	15	16

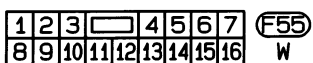
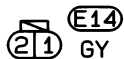
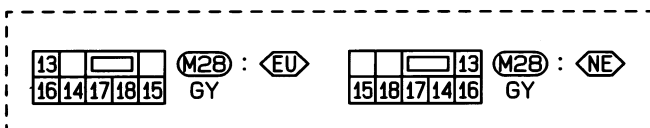
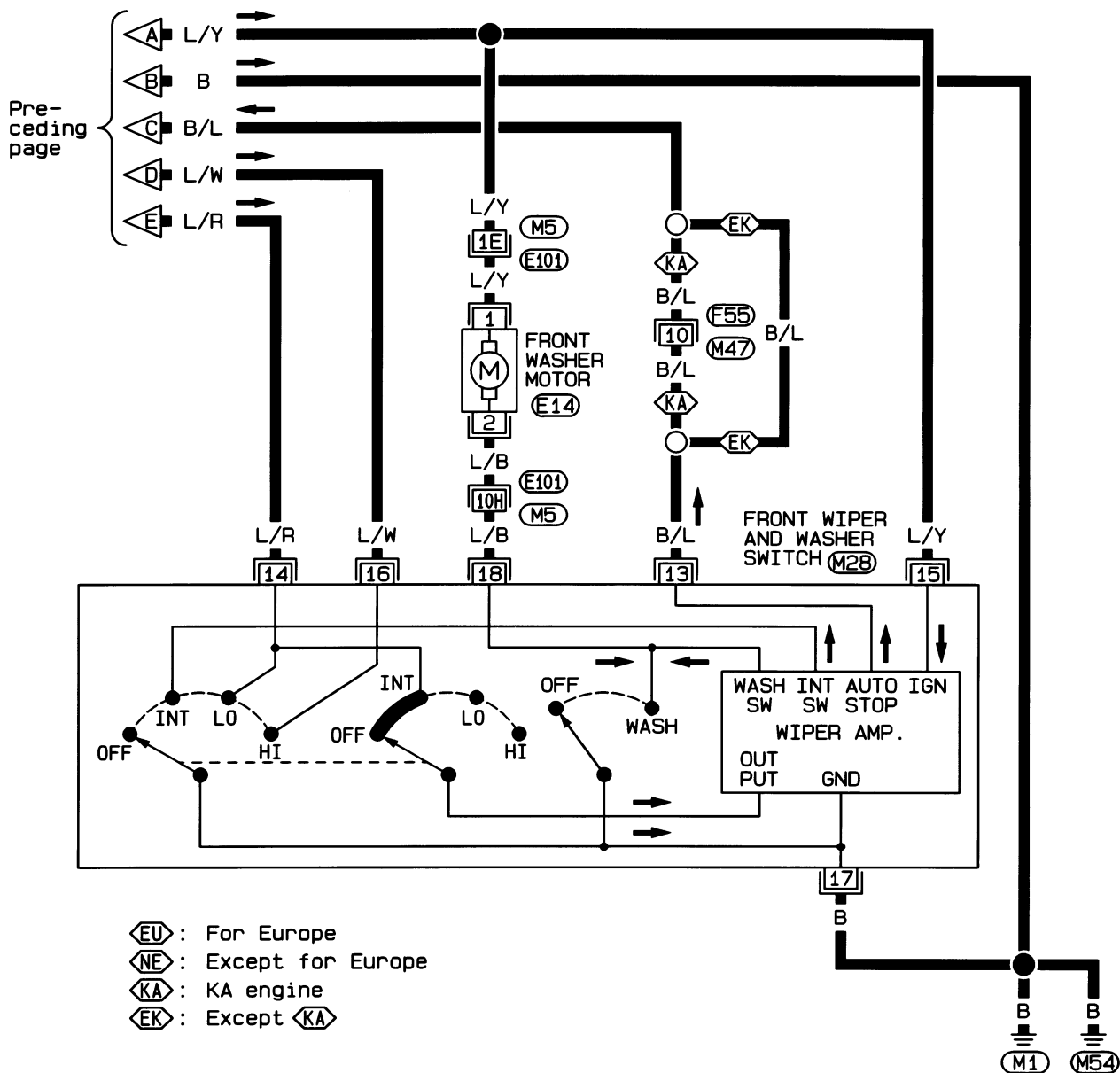
F55

W

FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/RHD M/T Models with Intermittent (Cont'd)

EL-WIPER-04



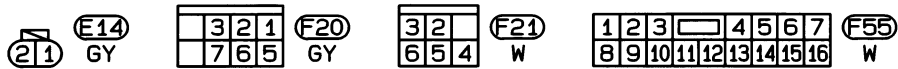
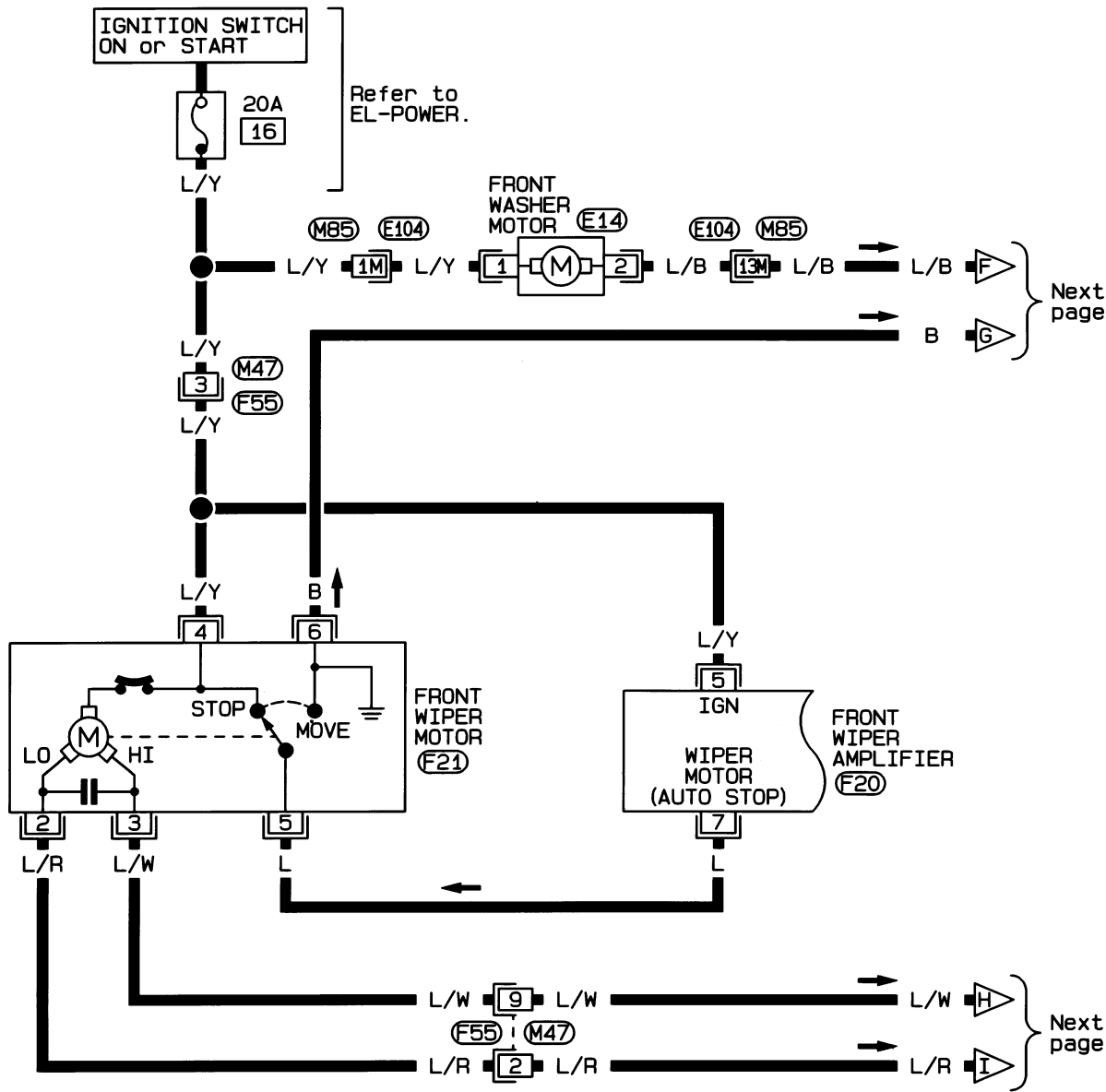
Refer to last page (Foldout page).

(M5), (E101)

FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/RHD A/T Models
with Intermittent

EL-WIPER-05



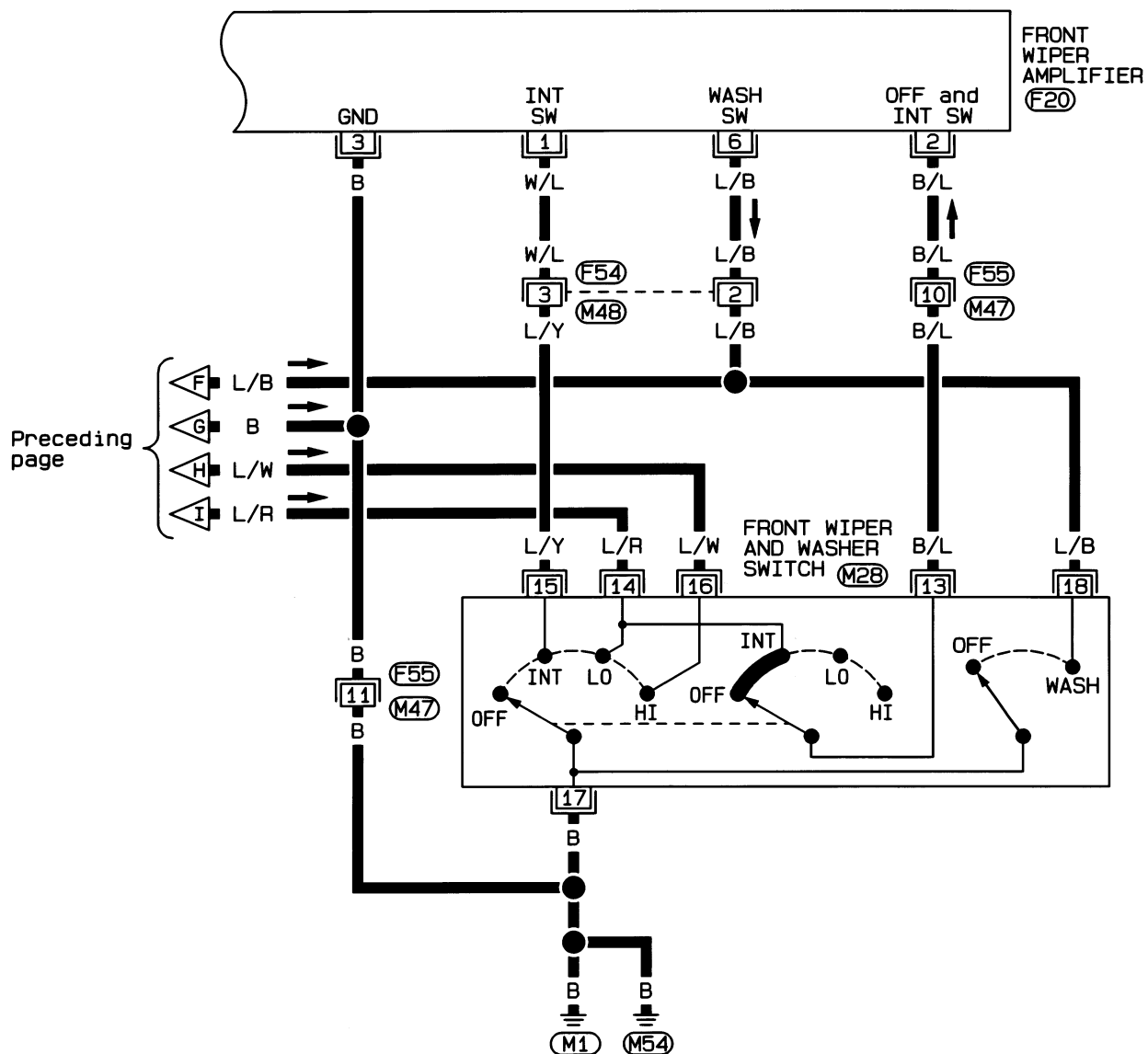
Refer to last page
(Foldout page).

M85 , E104

FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/RHD A/T Models with Intermittent (Cont'd)

EL-WIPER-06



14	16		13	(M28) GY
		18	17	

3	2	1	(F20)
7	6	5	GY

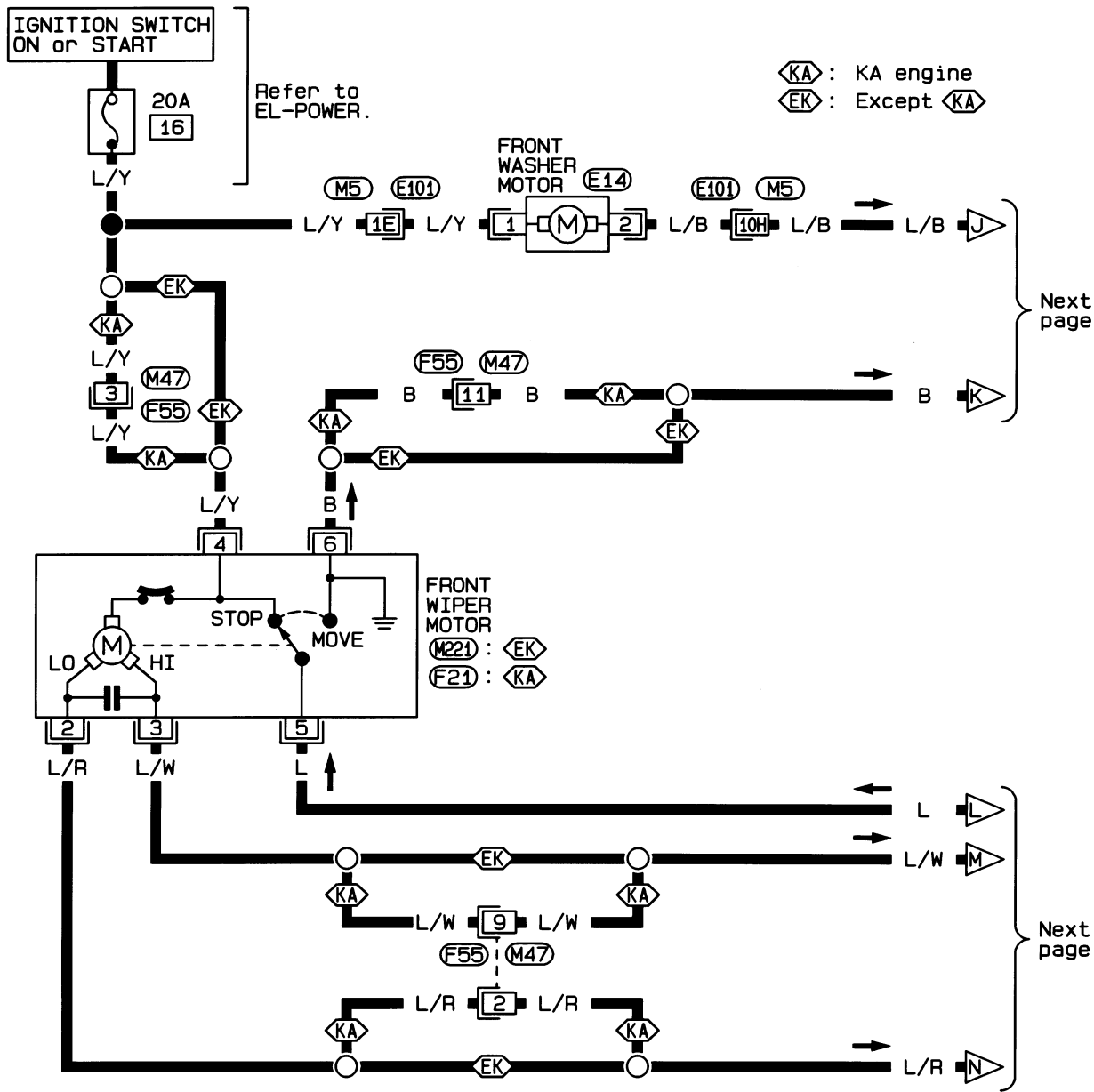
1	2	3	4	5					6	7	8	9	10	(F54)
11	12	13	14	15	16	17	18	19	20	21	22	23	24	W

1	2	3		4	5	6	7	(F55)	
8	9	10	11	12	13	14	15	16	W

FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/RHD Models
without Intermittent

EL-WIPER-07



3	2	M221	F21
6	5	W	W

2	1	E14
		GY

1	2	3		4	5	6	7	F55 W
8	9	10	11	12	13	14	15	

Refer to last page
(Foldout page).

M5 , E101

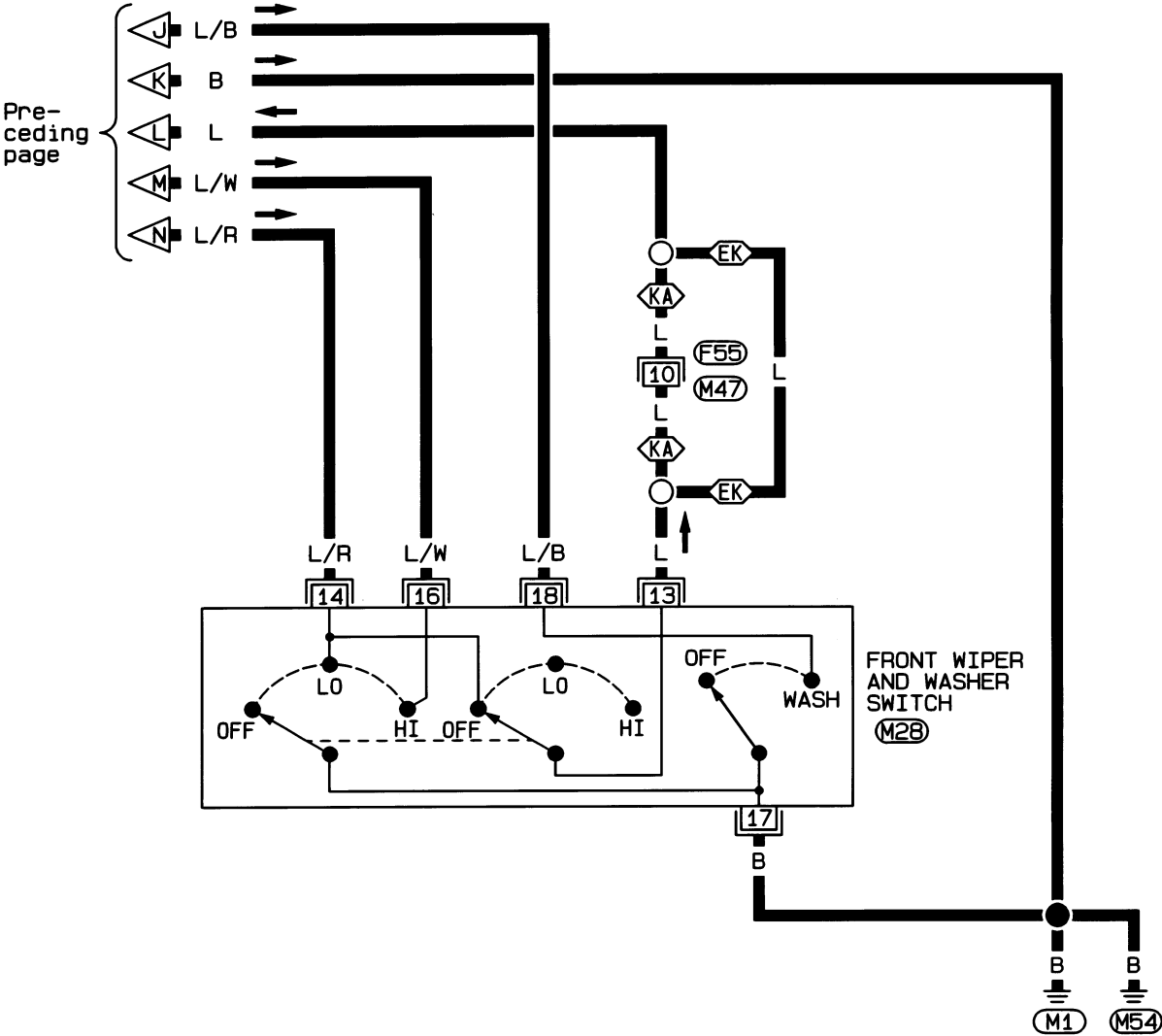
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FRONT WIPER AND WASHER

Wiring Diagram — WIPER —/RHD Models
without Intermittent (Cont'd)

EL-WIPER-08

KA : KA engine
EK : Except KA



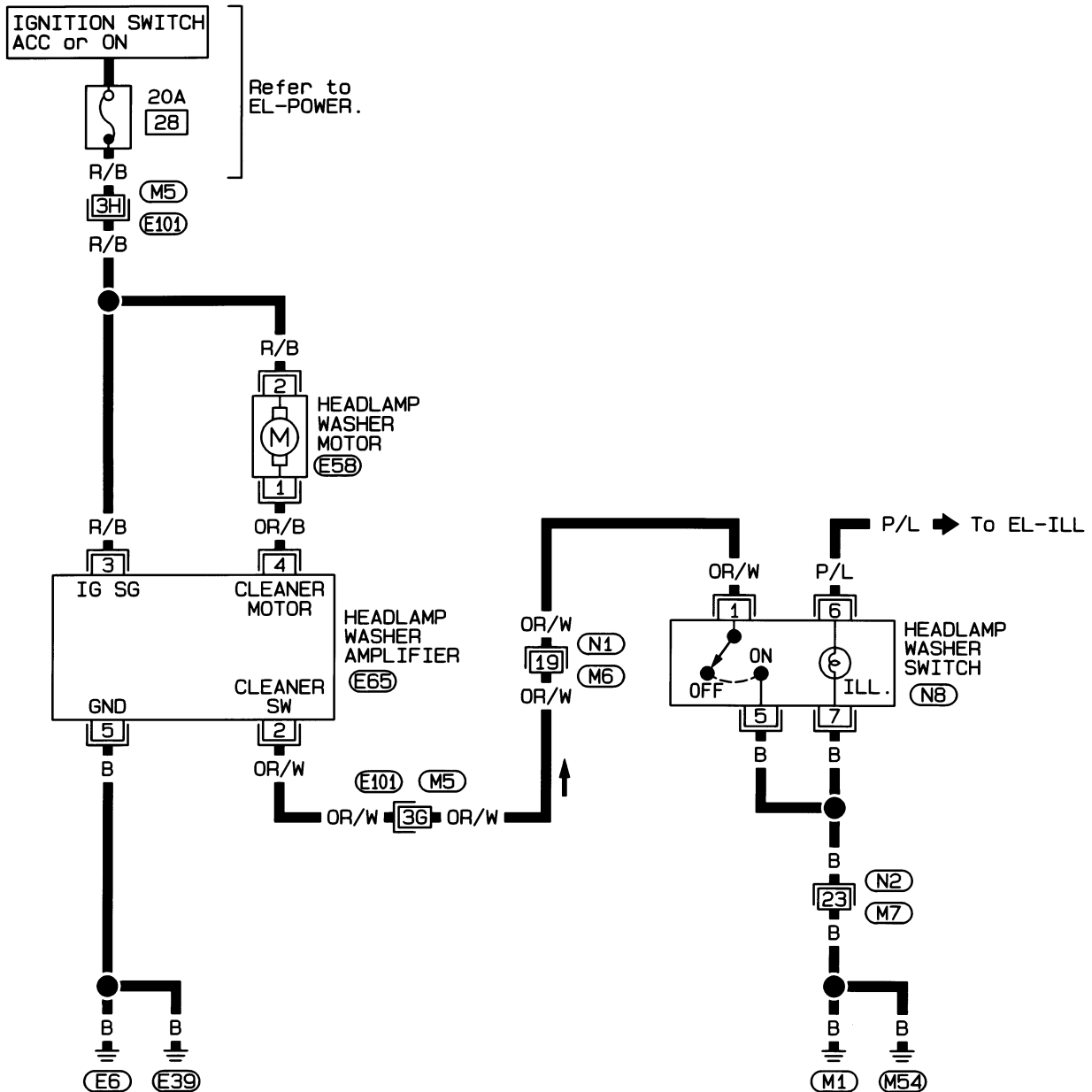
14	16		13	(M28)
		18	17	15
GY				

1	2	3		4	5	6	7	(F55)
8	9	10	11	12	13	14	15	16
W								

HEADLAMP WASHER

Wiring Diagram — HLC —

EL-HLC-01



1	2	3	4	5	6	7	8	9	10	N1
11	12	13	14	15	16	17	18	19	20	W

1	2	3	4	5	6	7	8	9	10	11	N2
12	13	14	15	16	17	18	19	20	21	22	BR

1	2	7	N8
6	4	3	BR

1	2	E58
1	2	GY

1	2	3	E65
4	5	W	

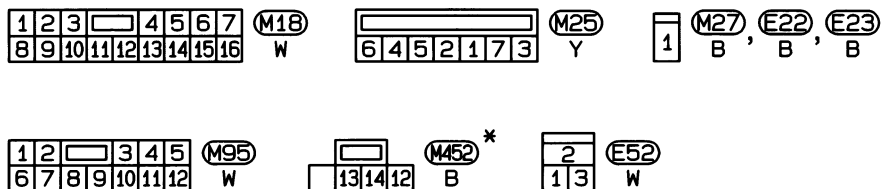
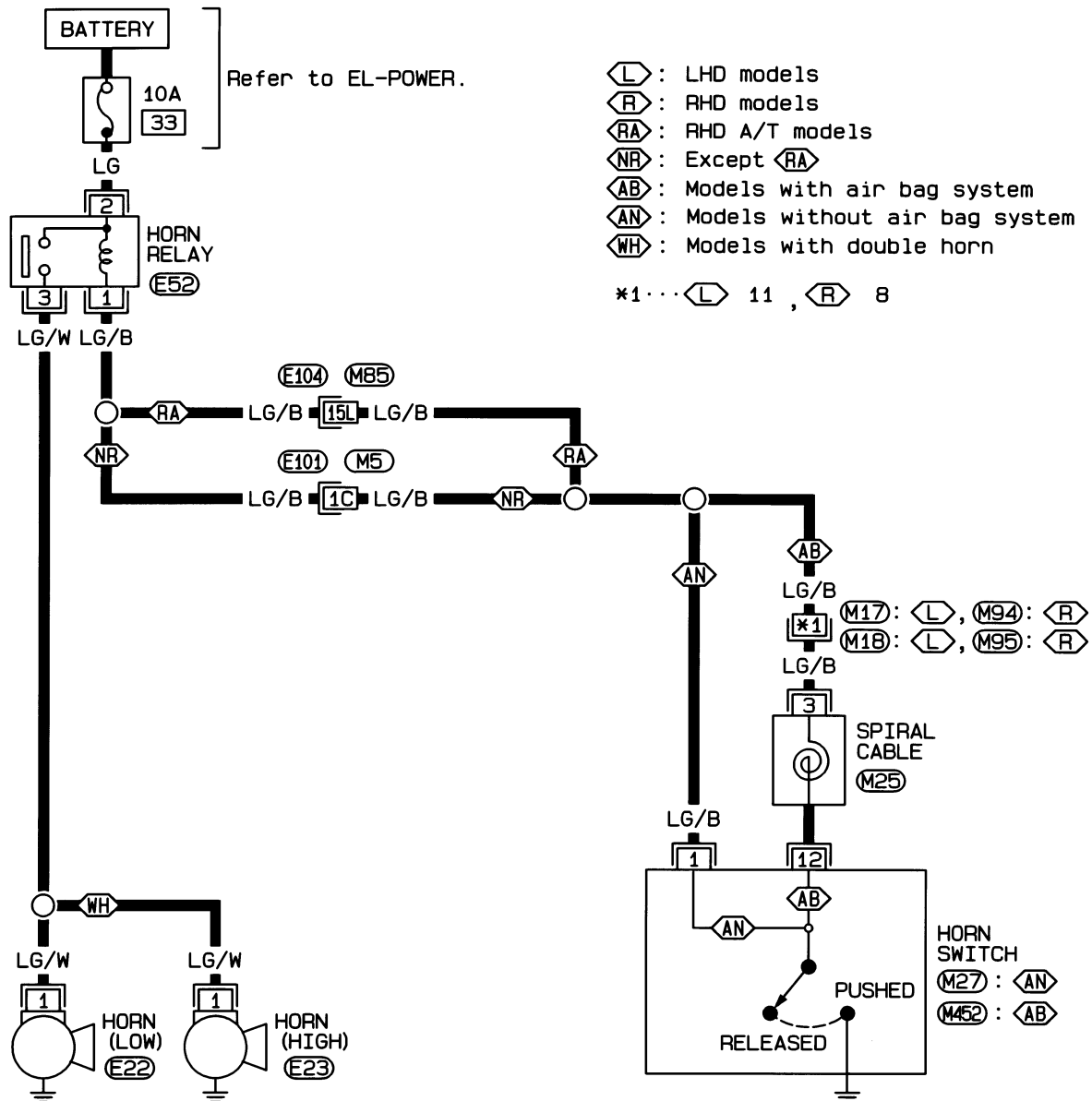
Refer to last page
(Foldout page).

M5, E101

EL

Wiring Diagram — HORN —

EL-HORN-01



* : This connector is not shown in "HARNESS LAYOUT".

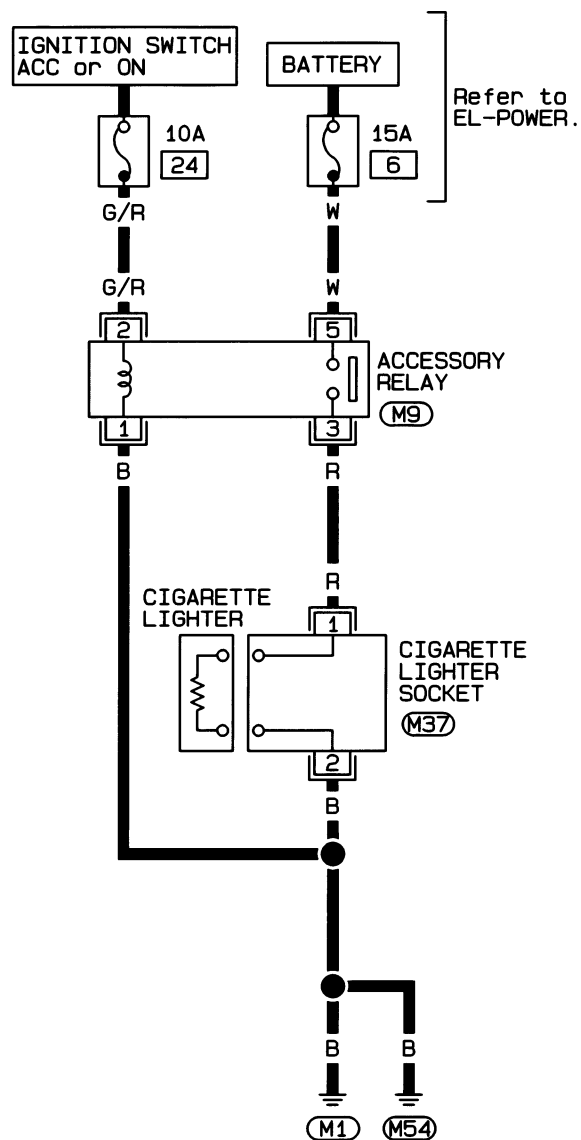
Refer to last page (Foldout page).


(M5), (E101)
(M85), (E104)

CIGARETTE LIGHTER

Wiring Diagram — CIGAR —


EL-CIGAR-01



1	2	3	4		5	6	7	
8	9	10	11	12	13	14	15	16

N4

W

36	37	38	39		40	41	42	
27	28	29	30	31	32	33	34	35

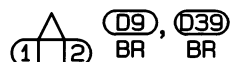
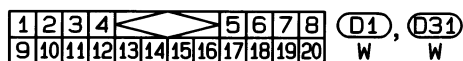
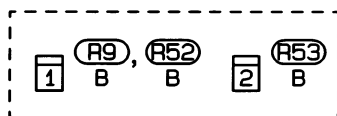
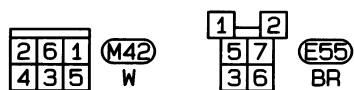
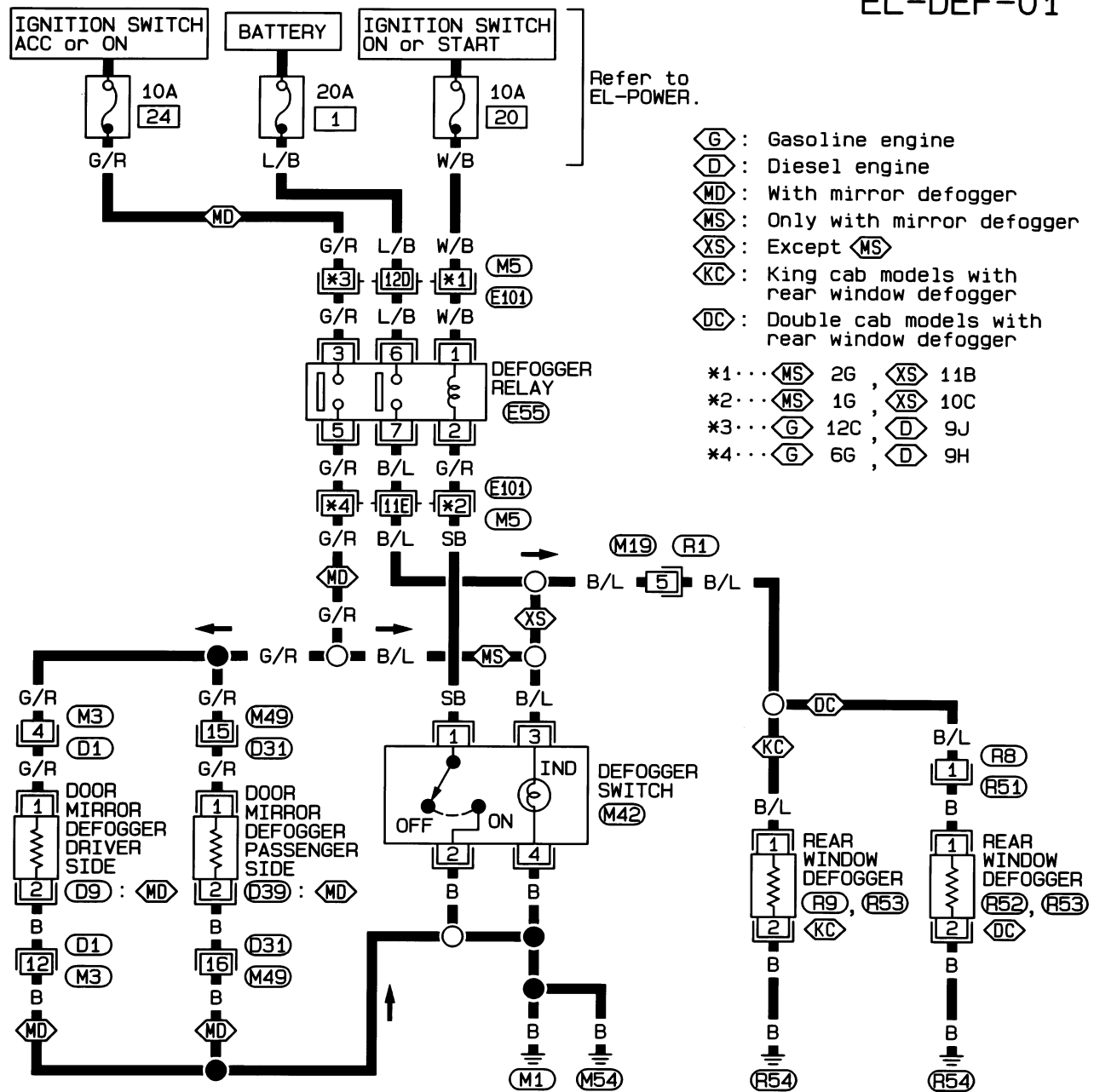
N6

BR

REAR WINDOW DEFOGGER AND MIRROR DEFOGGER

Wiring Diagram — DEF —/LHD Models

EL-DEF-01



Refer to last page
(Foldout page).

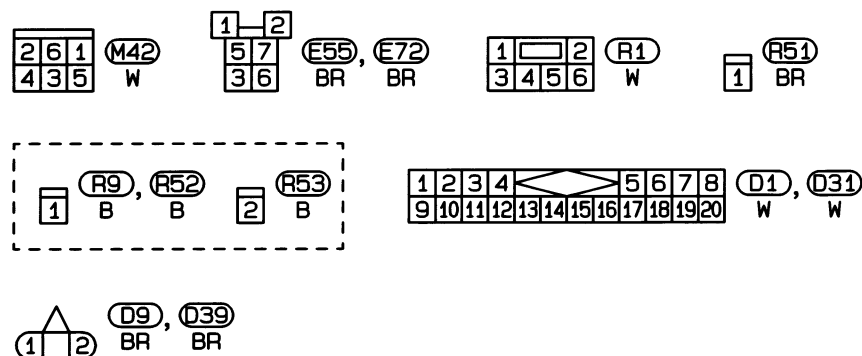
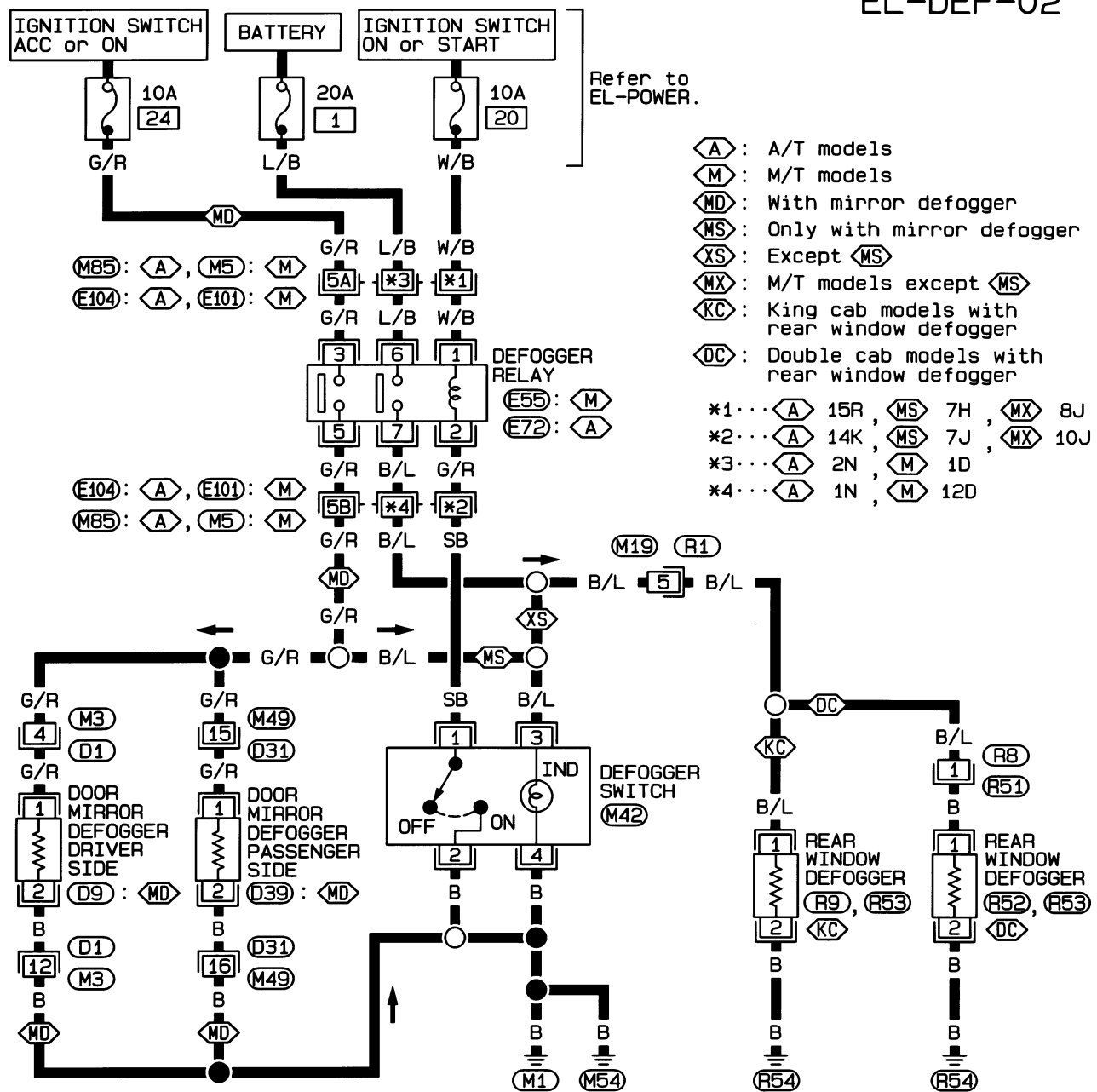
(M5), (E101)

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REAR WINDOW DEFOGGER AND MIRROR DEFOGGER

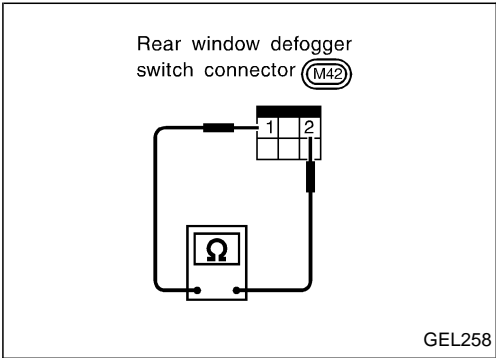
Wiring Diagram — DEF —/RHD Models

EL-DEF-02



Refer to last page (Foldout page).

(M5), (E101)
(M85), (E104)



Electrical Components Inspection

REAR WINDOW DEFOGGER SWITCH

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

Terminals	Condition	Continuity
① - ②	Rear window defogger switch is pushed	Yes
	Rear window defogger switch is released	No

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EC

FE

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FA

RA

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EL

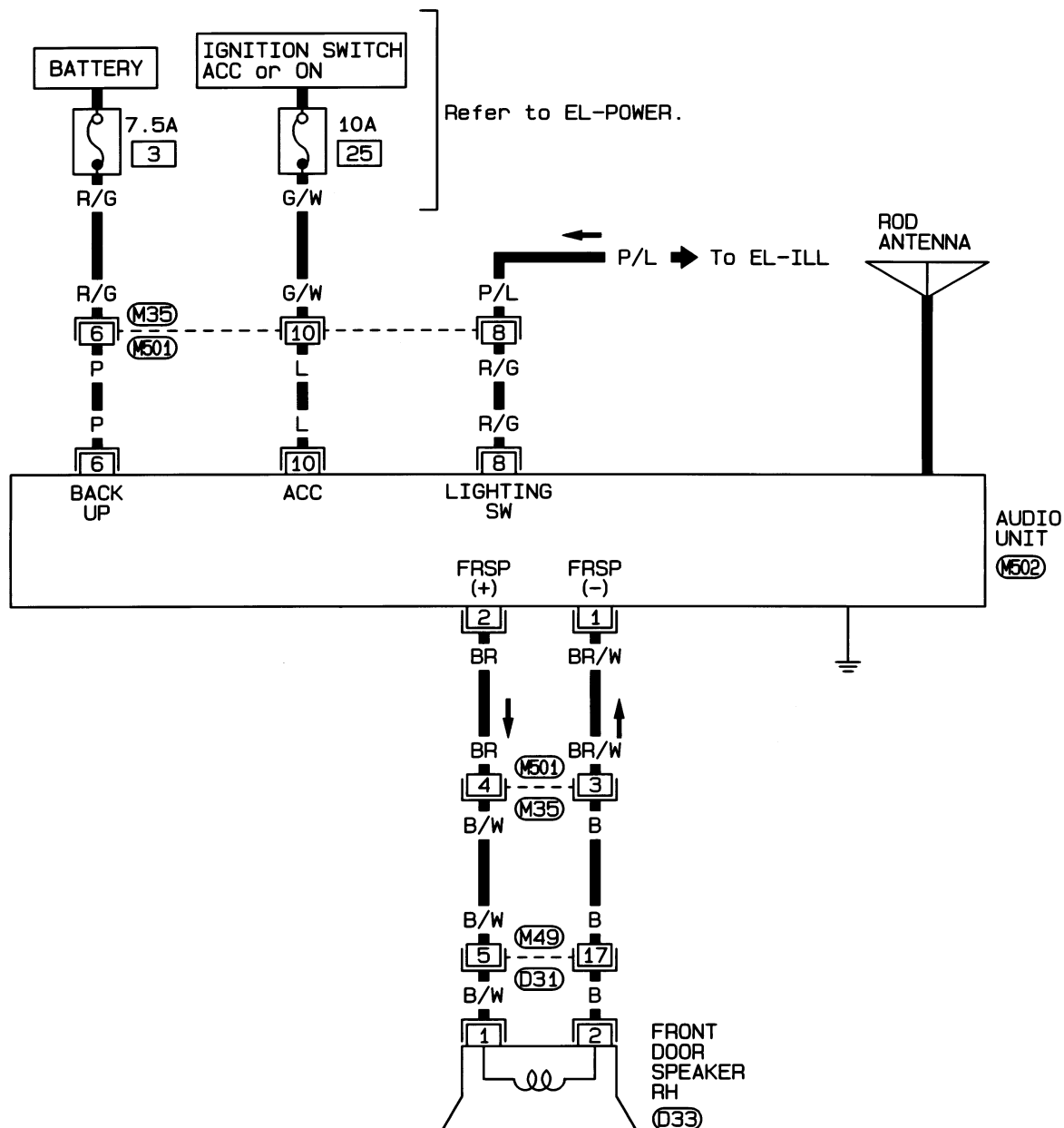
IDX

AUDIO

Wiring Diagram — AUDIO —/LHD Models Type-1

WITH 1-SPEAKER EXCEPT FOR EUROPE

EL-AUDIO-01



10	8	6	4	2	M35	M502
					W	W

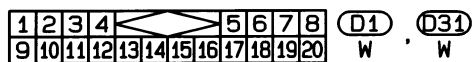
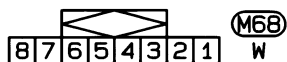
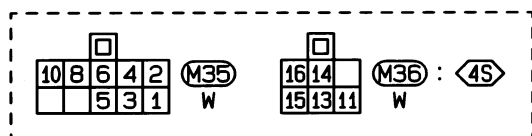
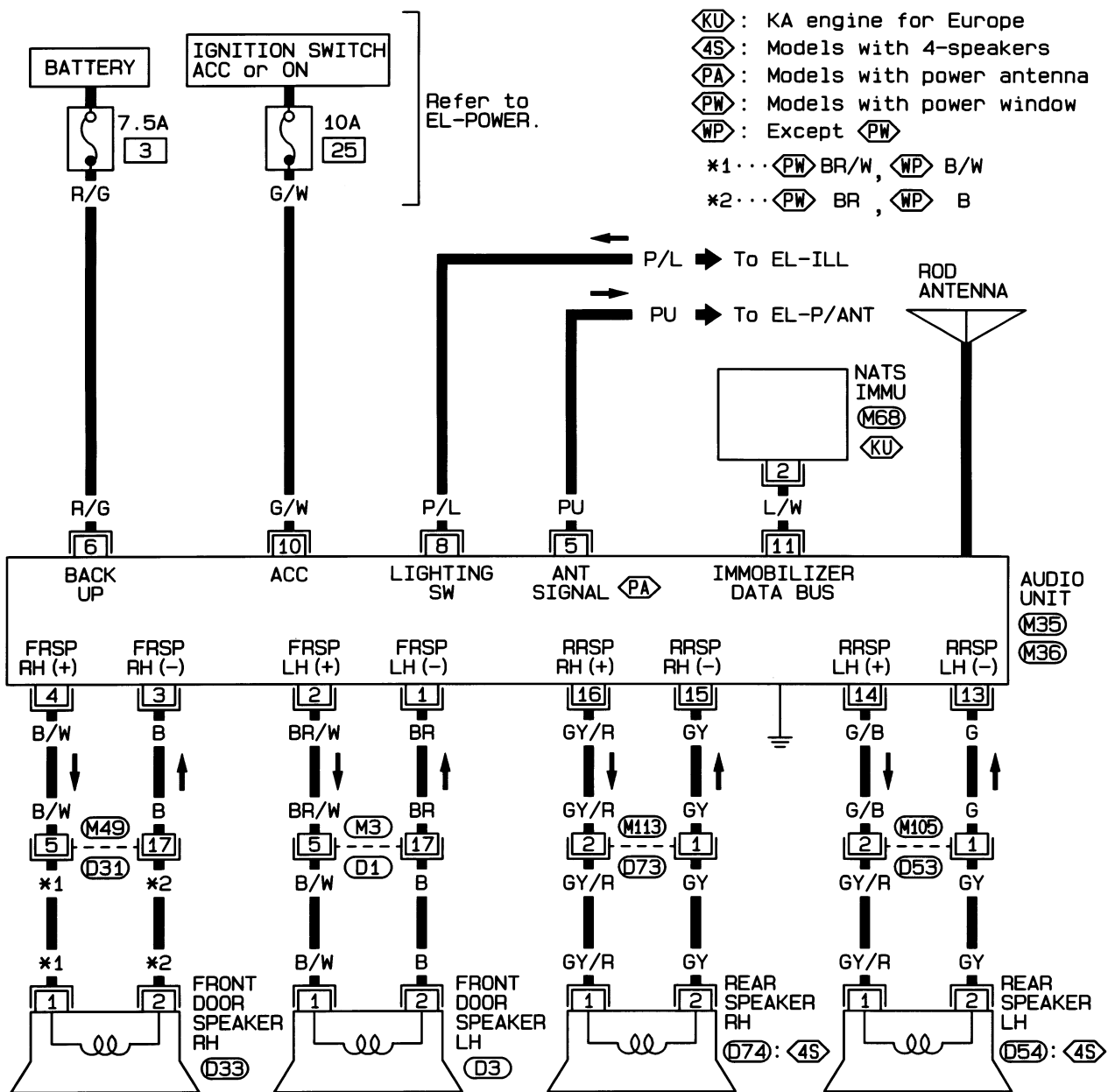
1	2	3	4	5	6	7	8	031
9	10	11	12	13	14	15	16	W

0	033
1	BR

Wiring Diagram — AUDIO —/LHD Models Type-2

WITH 2 OR 4-SPEAKERS (Without CD deck) AND WITH 1-SPEAKER (For Europe)

EL-AUDIO-02

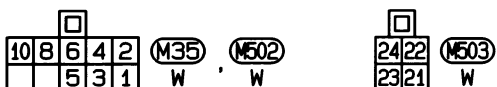
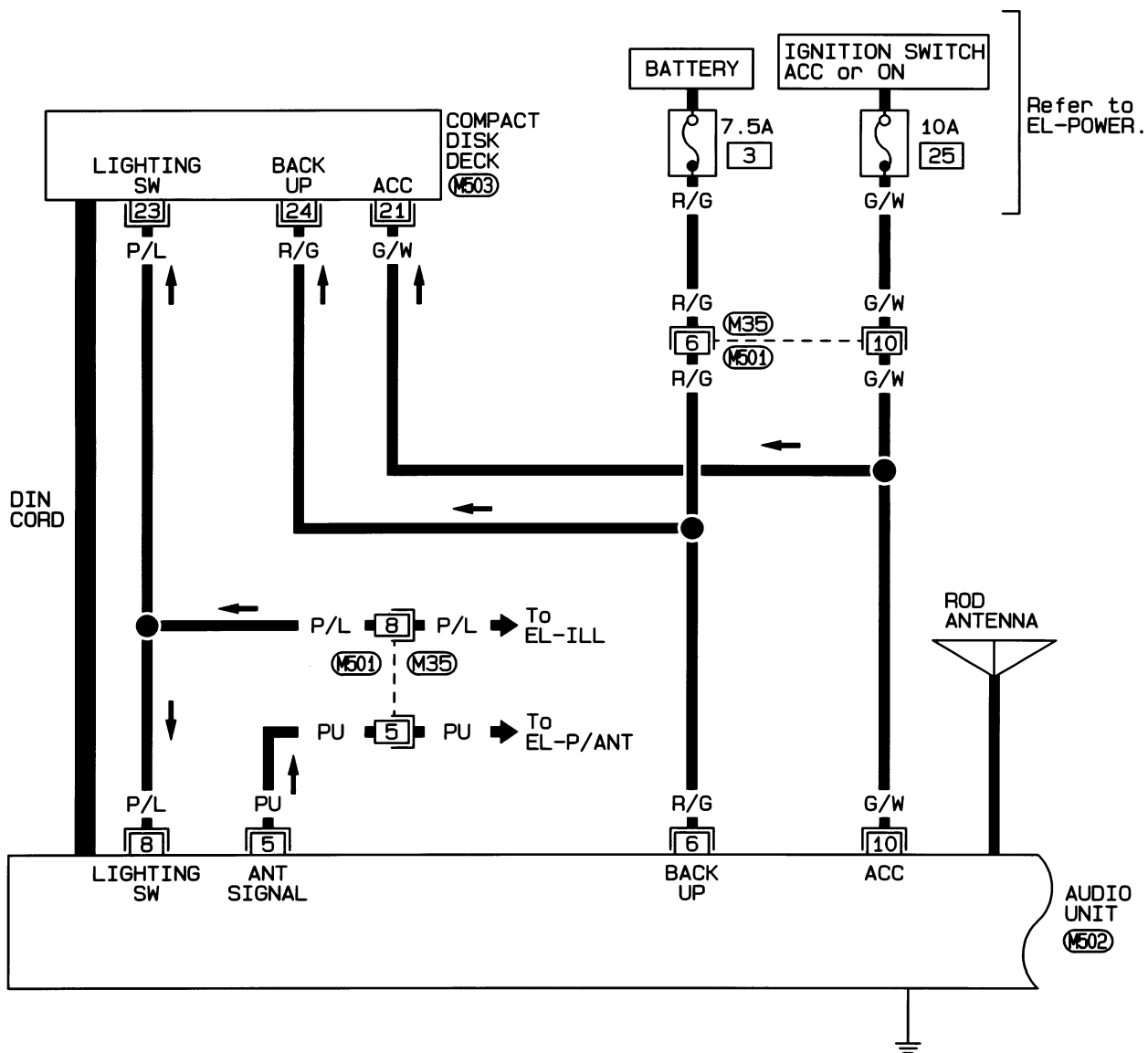


EL

IDX

WITH 4-SPEAKERS (With CD deck)

EL-AUDIO-03

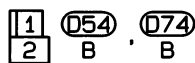
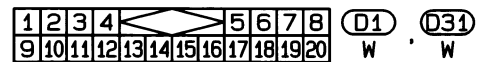
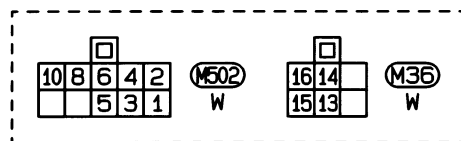
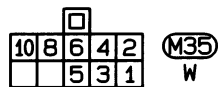
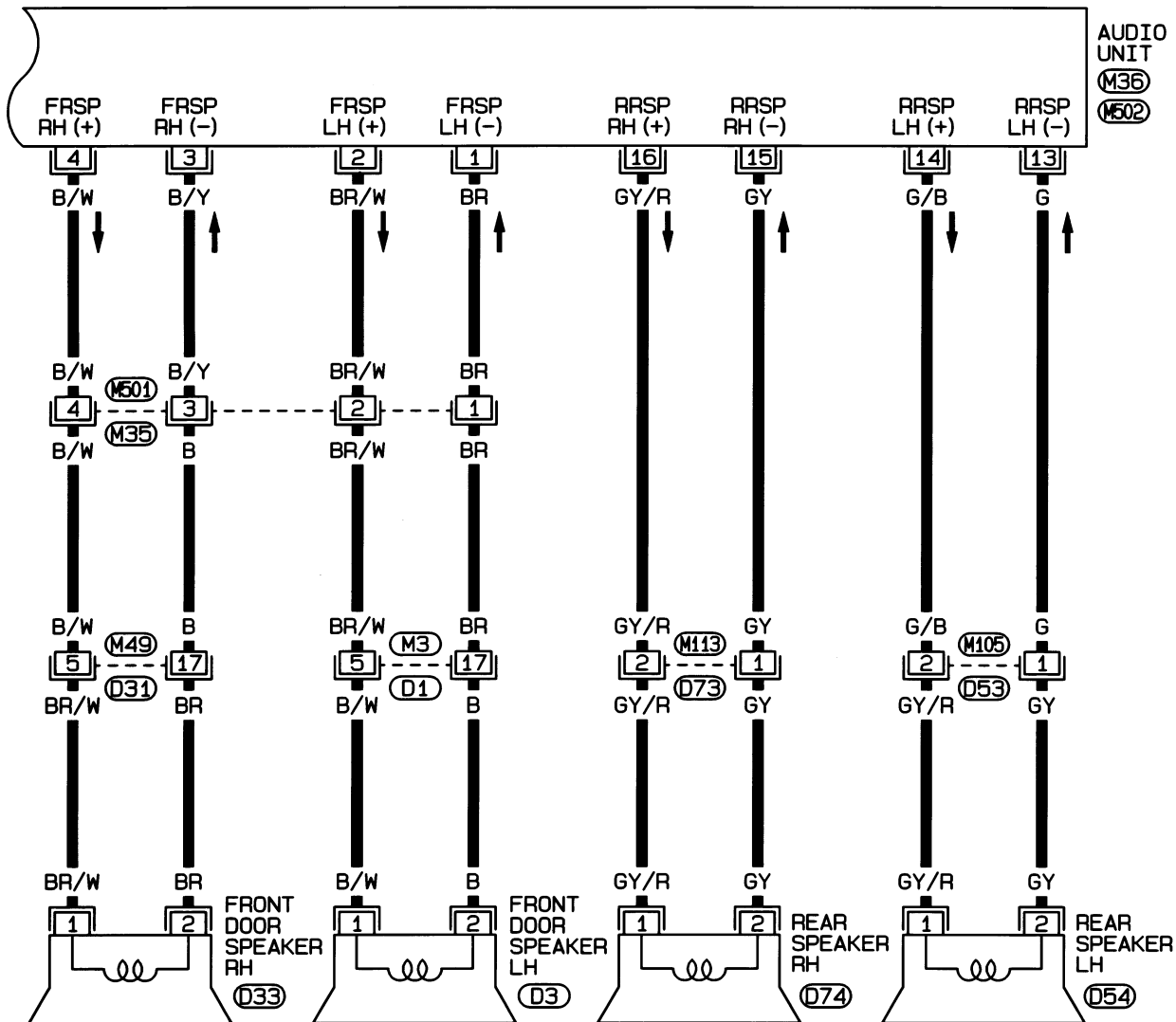


AUDIO

Wiring Diagram — AUDIO —/LHD Models

Type-3 (Cont'd)

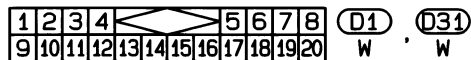
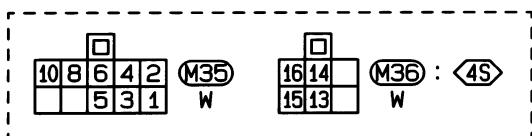
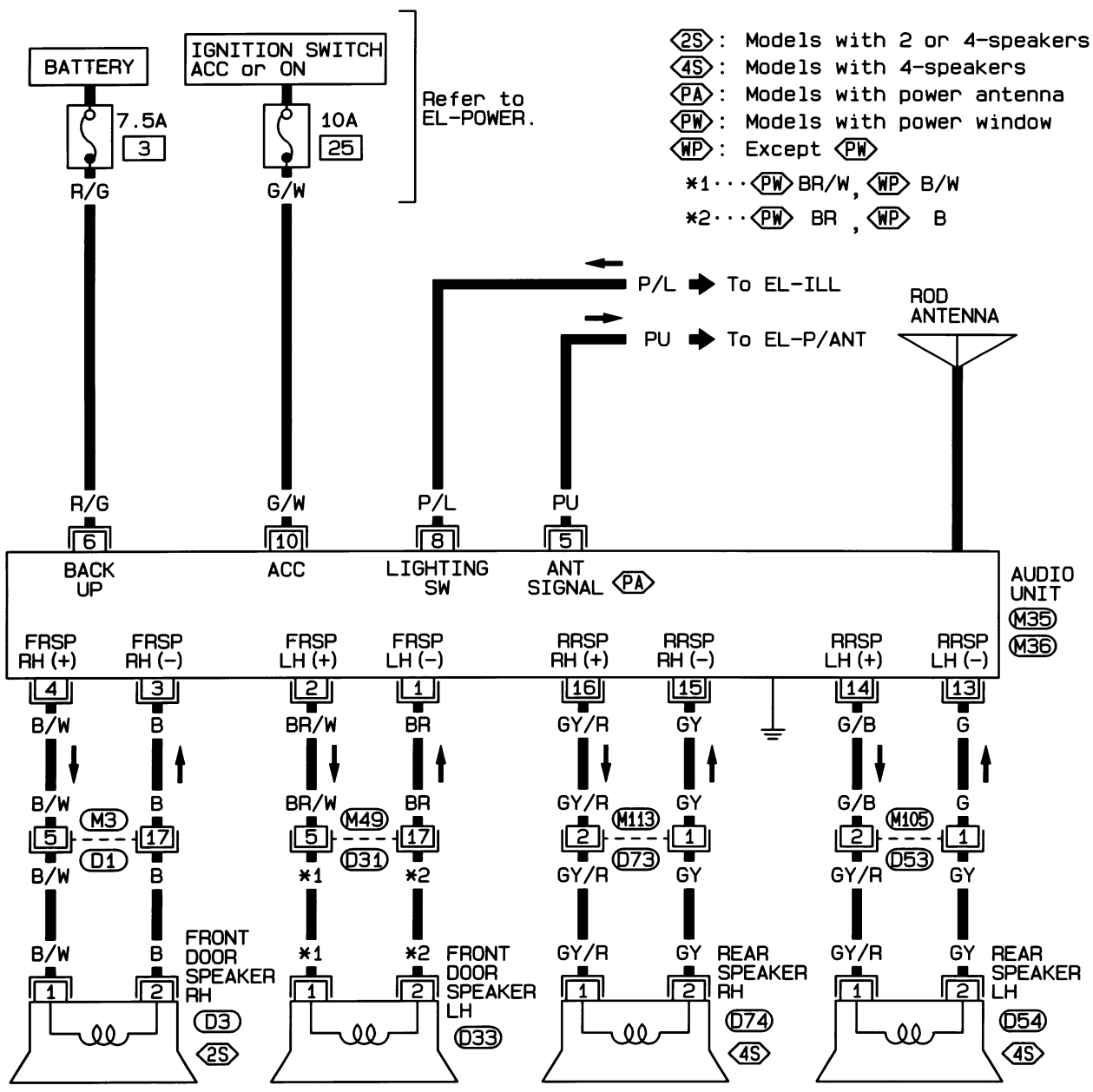
EL-AUDIO-04



EL

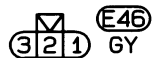
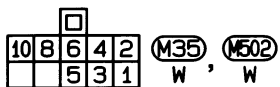
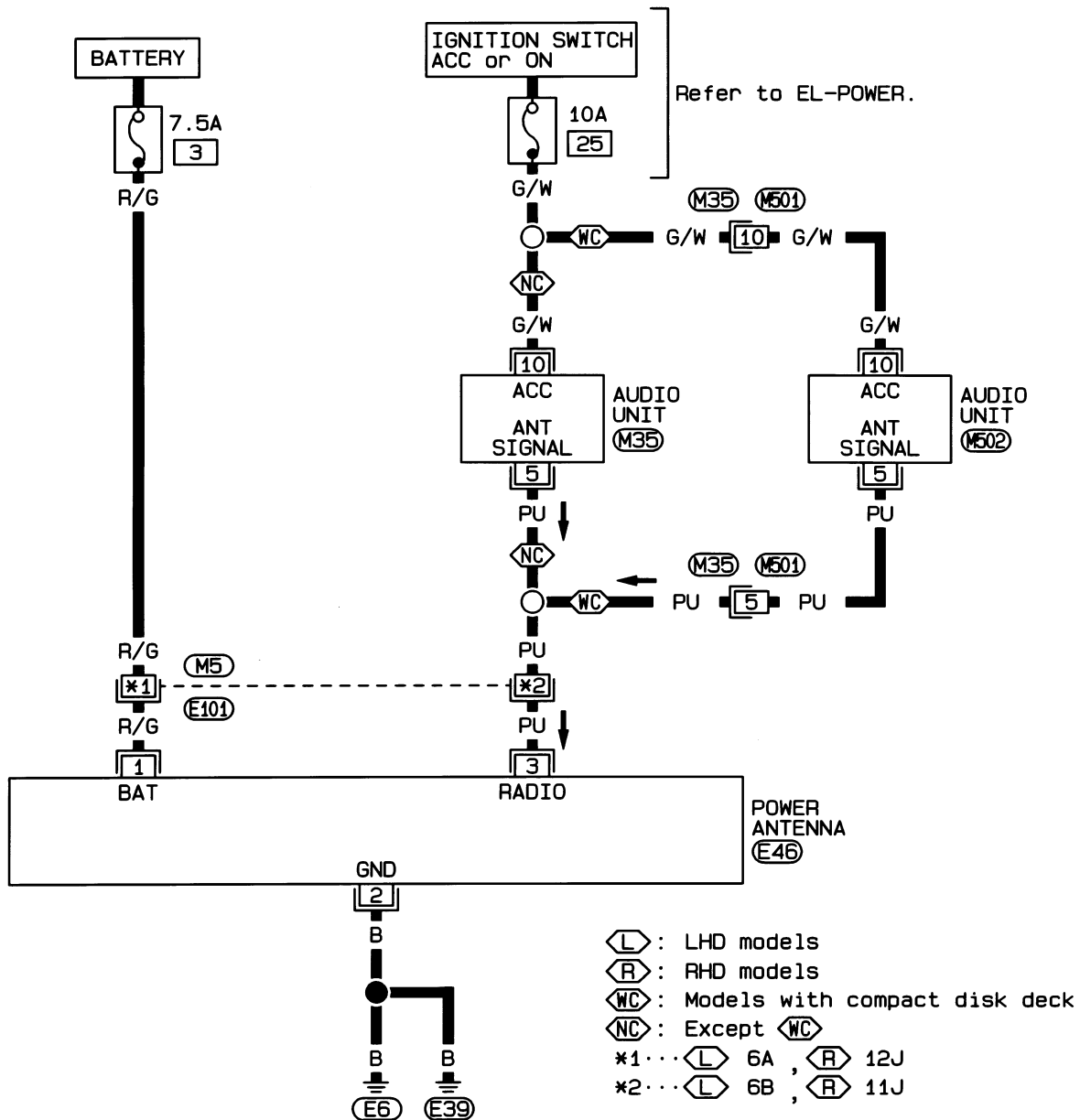
Wiring Diagram — AUDIO —/RHD Models

EL-AUDIO-05



Power Antenna/Wiring Diagram — P/ANT —

EL-P/ANT-01



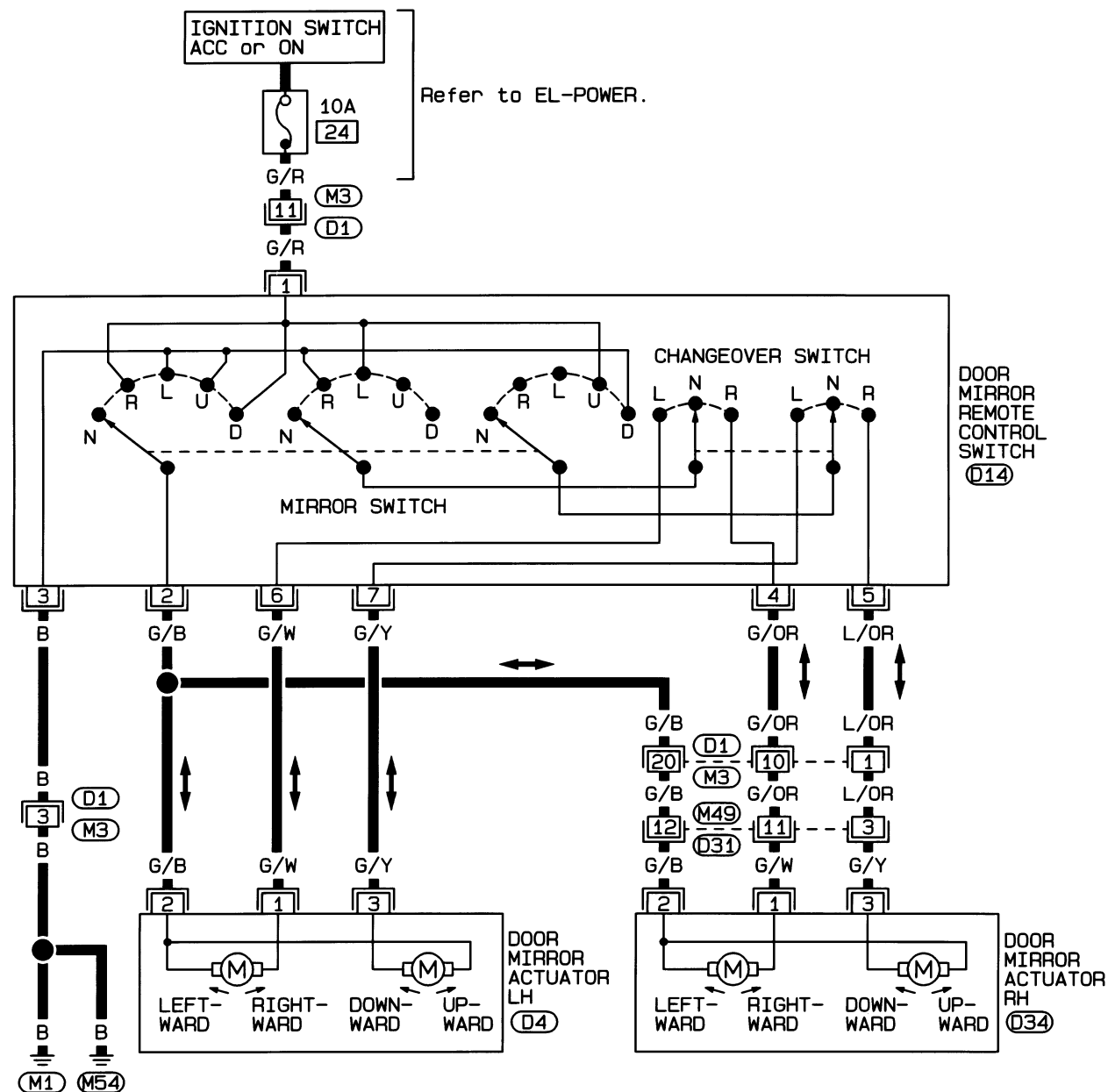
Refer to last page
(Foldout page).

(M5), (E101)

POWER DOOR MIRROR

Wiring Diagram — MIRROR —/LHD Models Except for The Middle East

EL-MIRROR-01



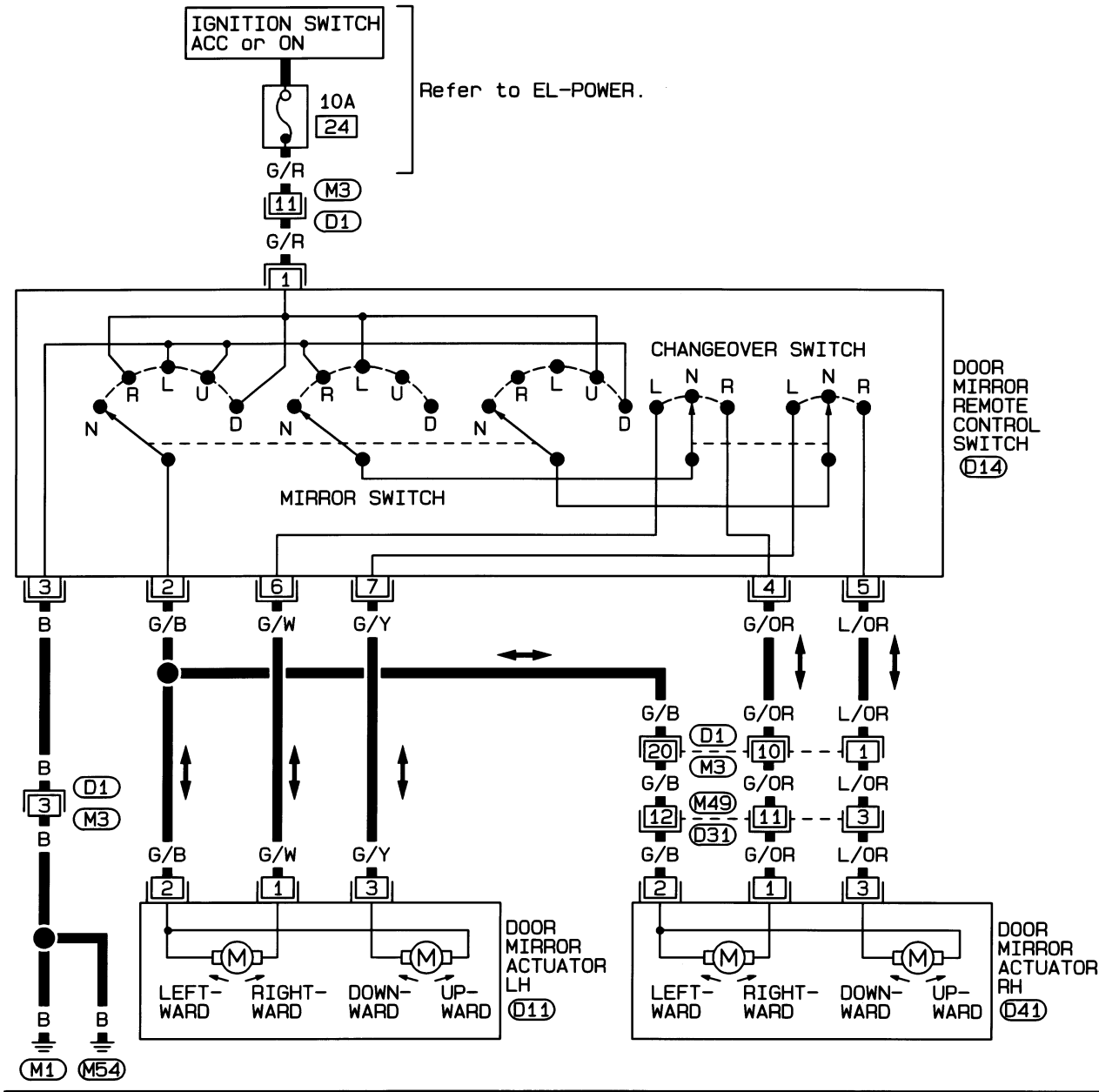
1	2	3	4	5	6	7	8	(D1), (D31)
9	10	11	12	13	14	15	16	W, W

1	2	3	(D4), (D34)
			GY, GY

2	3	4	1	9	(D14)
5	7	4	6	8	GY

Wiring Diagram — MIRROR —/LHD Models for
The Middle East

EL-MIRROR-02



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20				

D1, D31
W, W

1	2	3
---	---	---

D11, D41
BR, BR

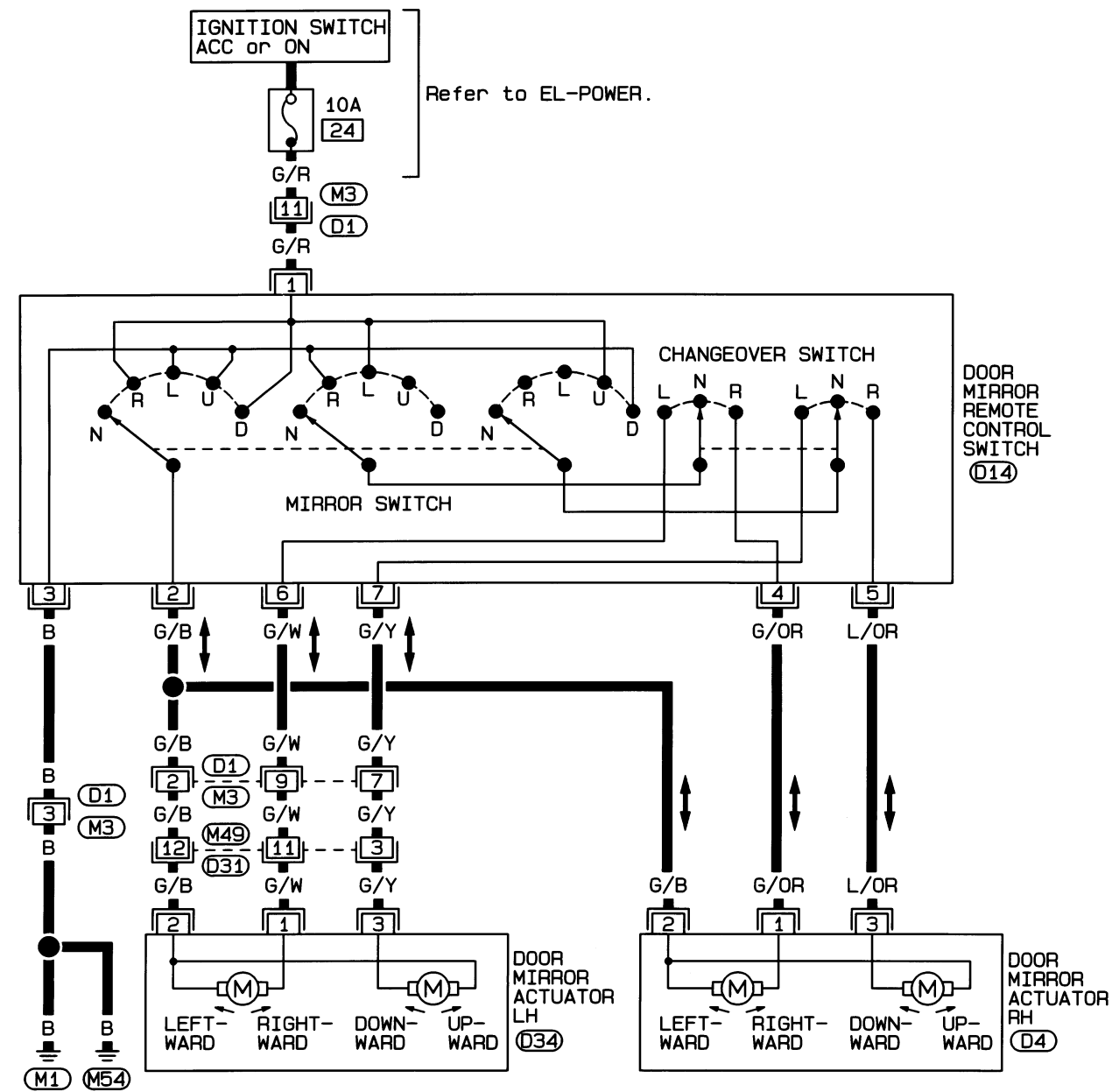
2	3			1	9
5	7	4		6	8

D14
GY

POWER DOOR MIRROR

Wiring Diagram — MIRROR —/RHD Models

EL-MIRROR-03



1	2	3	4	5	6	7	8	D1	D31
9	10	11	12	13	14	15	16	W	W

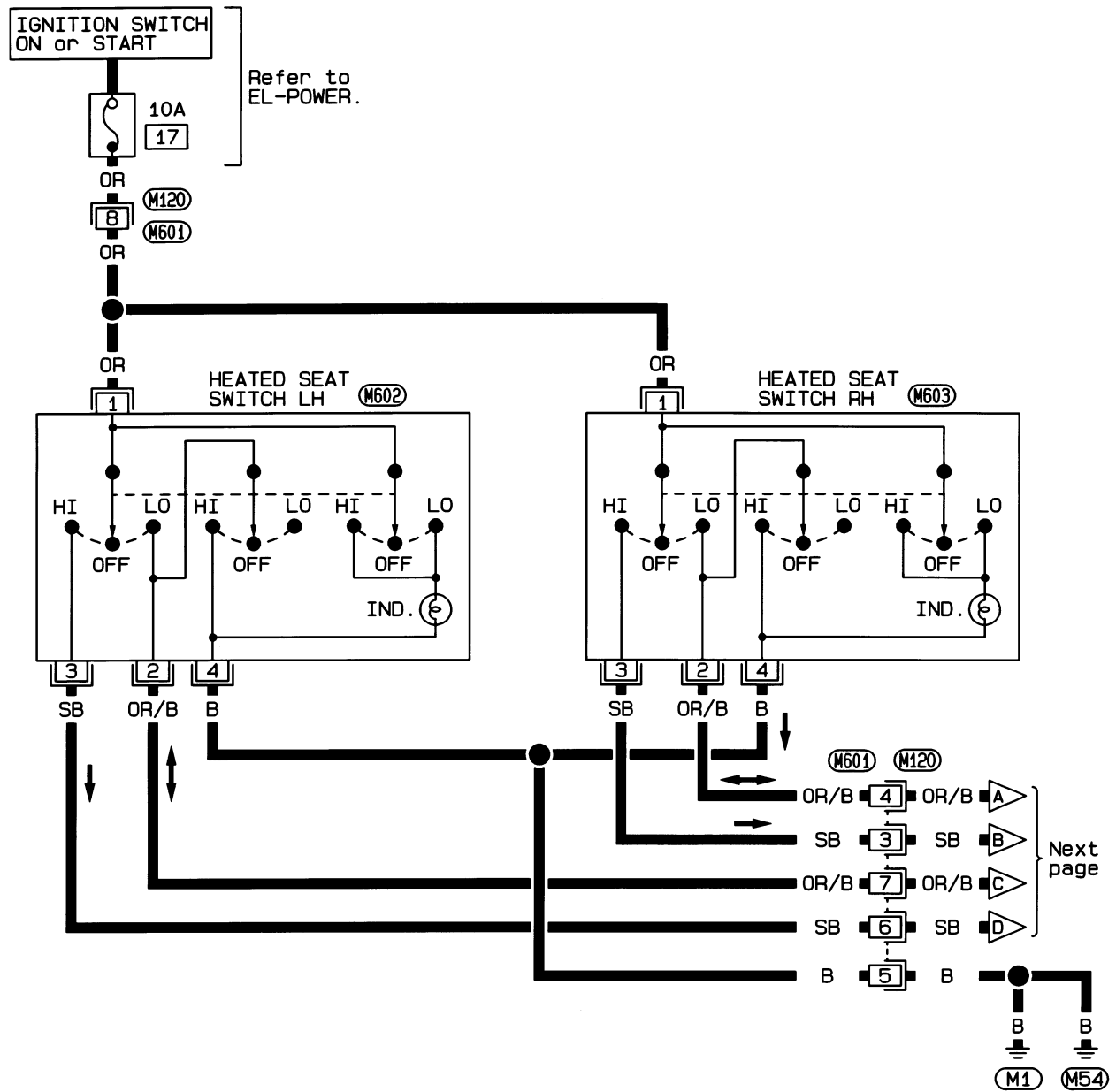
1	2	3	D4	D34
1	2	3	GY	GY

2	3	1	9	D14
5	7	4	6	8
				GY

HEATED SEAT

Wiring Diagram — H/SEAT —

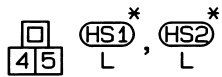
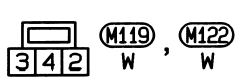
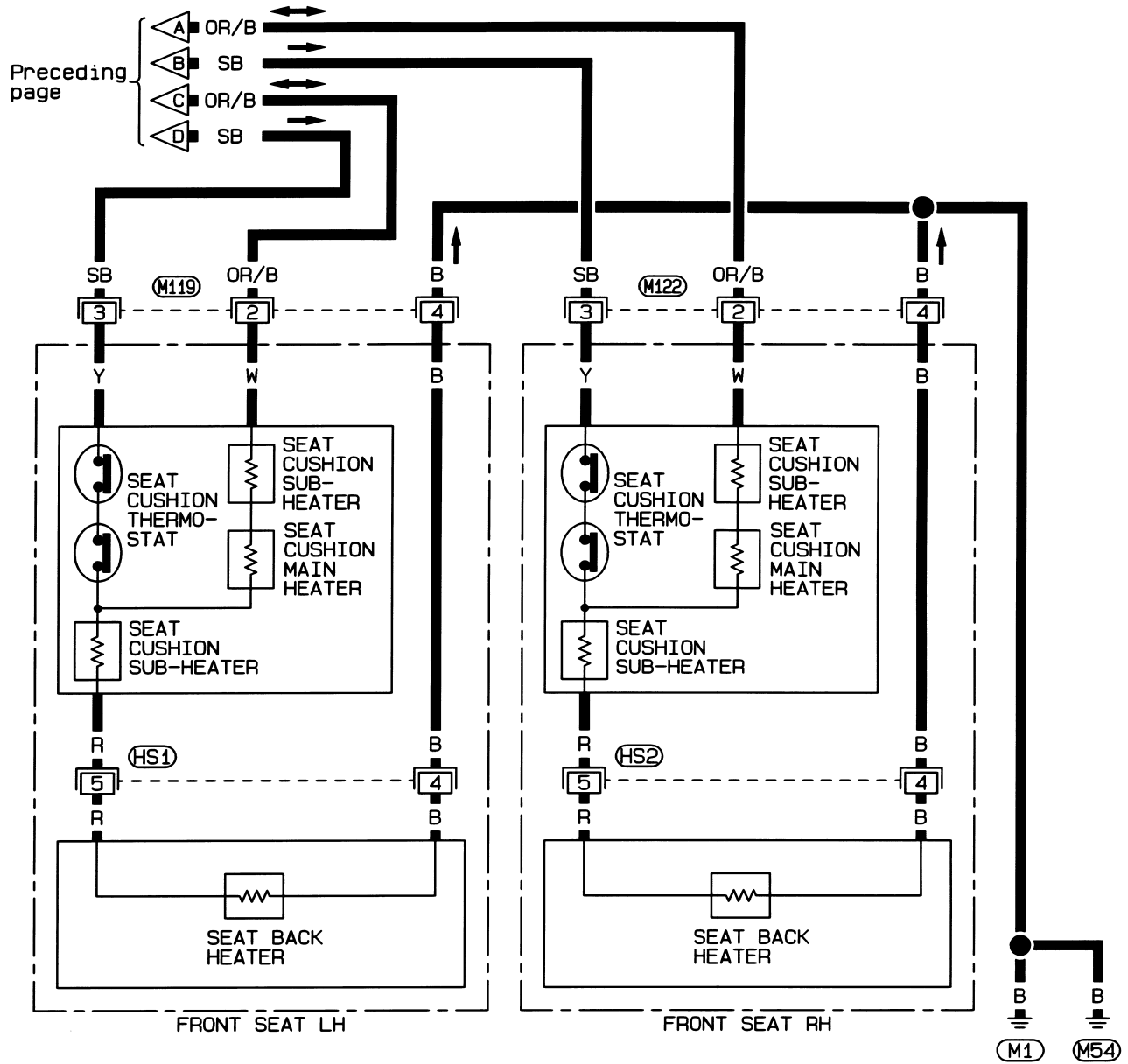
EL-H/SEAT-01



HEATED SEAT

Wiring Diagram — H/SEAT — (Cont'd)

EL-H/SEAT-02



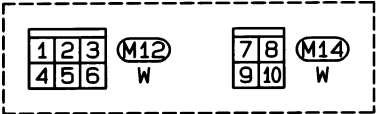
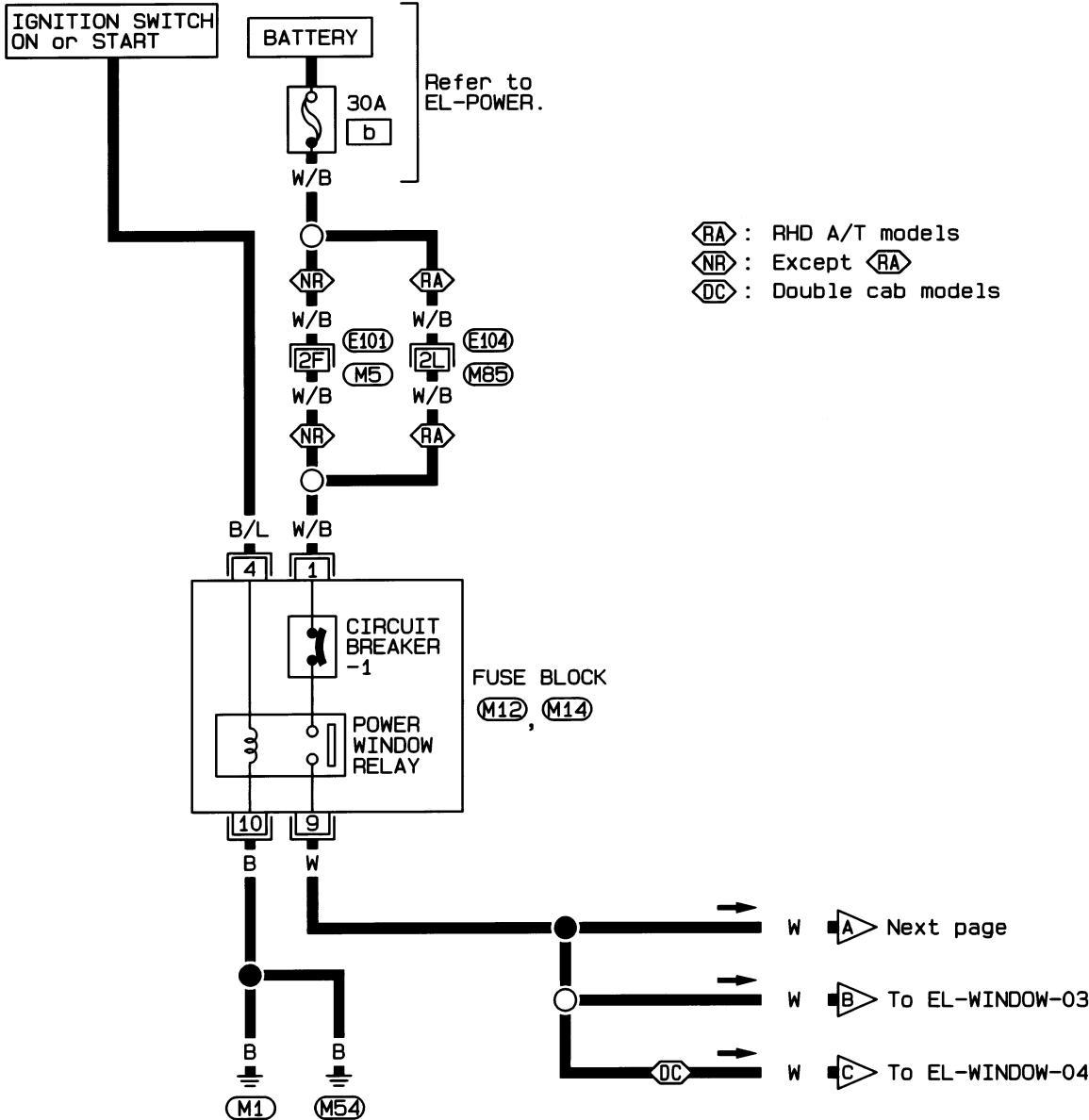
* : This connector is not shown in "HARNESS LAYOUT".

EL



Wiring Diagram — WINDOW —/Without Interruption Detection Function

EL-WINDOW-01



Refer to last page
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M5, E101

(M85), (E104)

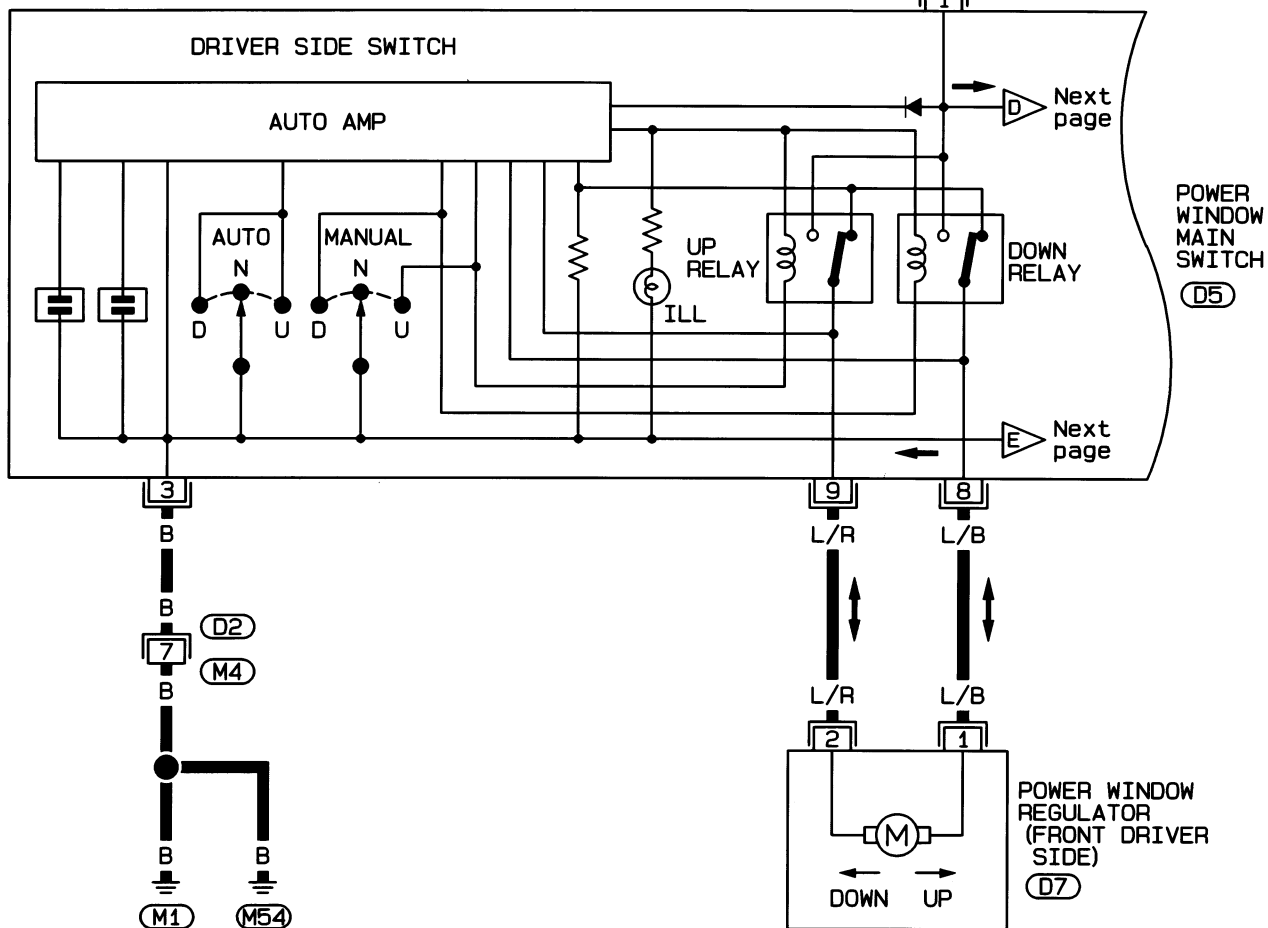
POWER WINDOW

Wiring Diagram — WINDOW —/Without Interruption Detection Function (Cont'd)

EL-WINDOW-02

Preceding page

(L) : LHD models
(R) : RHD models



1	2	3		4	5	
6	7	8	9	10	11	12

D2

W

1	2	(D7)
		B

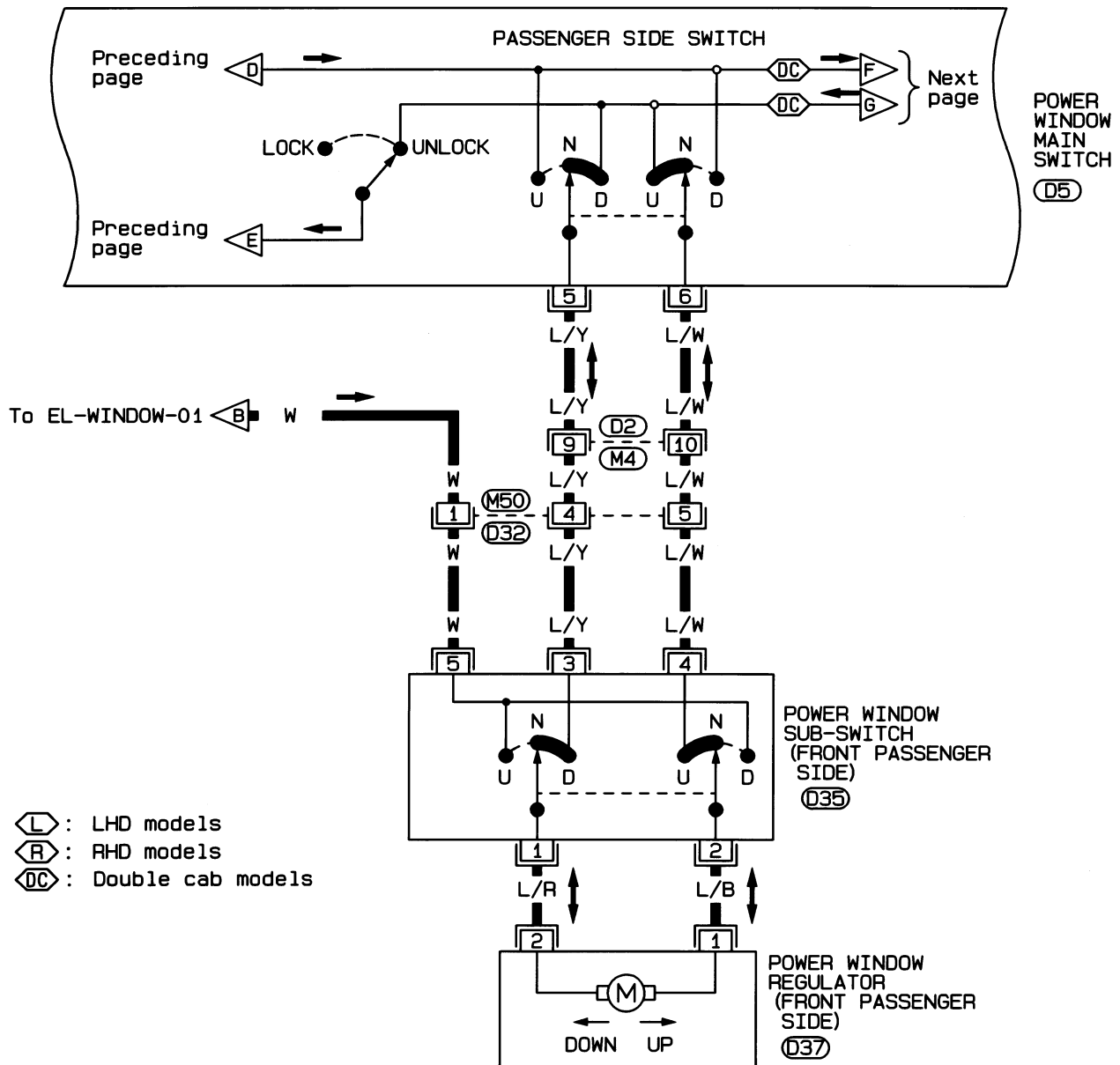
8	9			3	5	6	(D5)	:	(L)	3	5			1	9	8	(D5)	:	(R)
7	14	16	15		1	12	11	10	W		16	15			11	10	14	7	W

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POWER WINDOW

Wiring Diagram — WINDOW —/Without Interruption Detection Function (Cont'd)

EL-WINDOW-03



1	2	3	4	5
6	7	8	9	10

(D2)
W

8	9	3	5	6
7	14	16	15	1

(D5) : (L)
W

3	5	1	9	8
16	15	11	10	14

(D5) : (R)
W

1	2
3	4

(D32)
W

4	1	3	2	5	6
---	---	---	---	---	---

(D35)
W

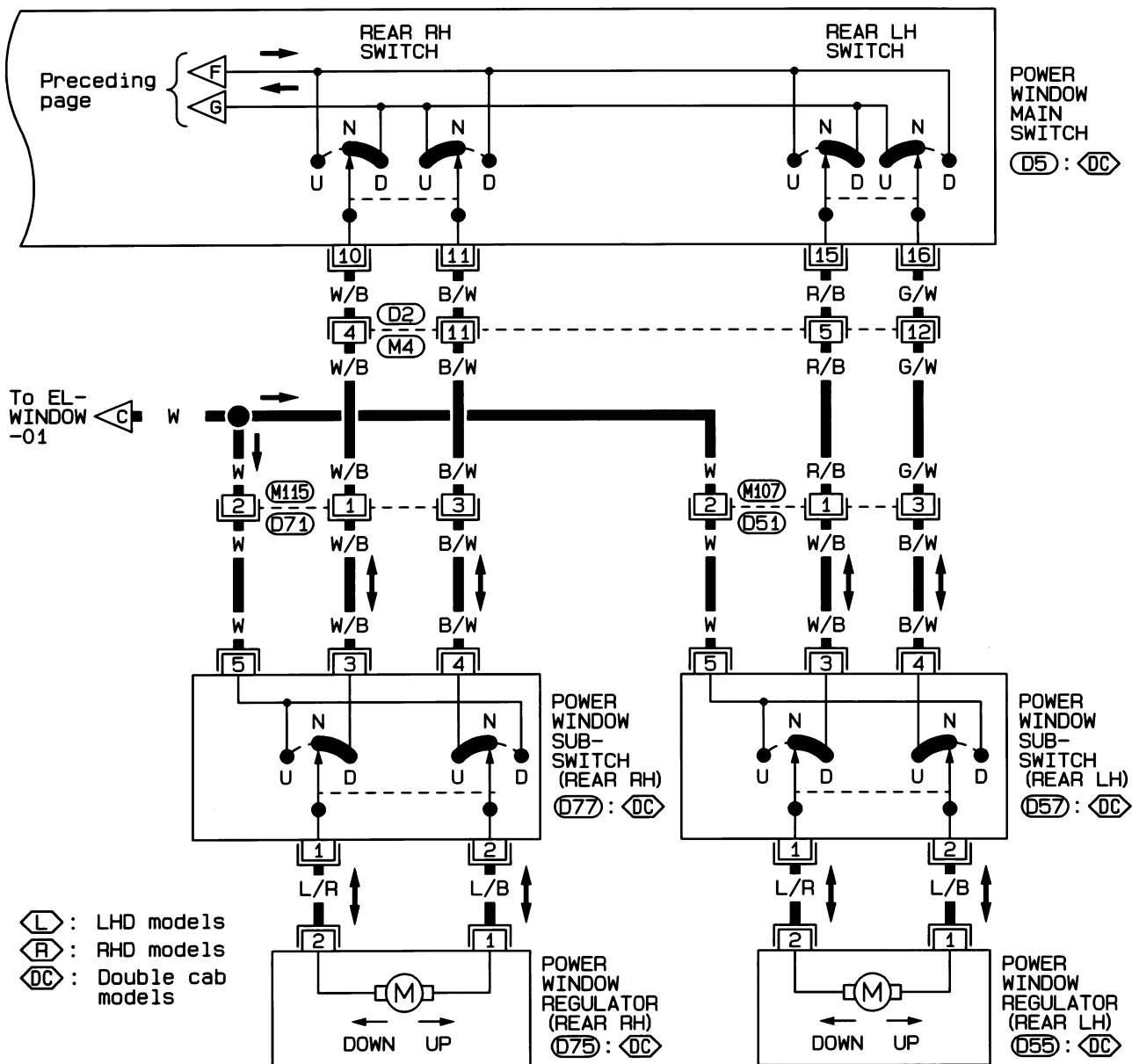
1	2
---	---

(D37)
B

POWER WINDOW

Wiring Diagram — WINDOW —/Without Interruption Detection Function (Cont'd)

EL-WINDOW-04



1	2	3		4	5	
6	7	8	9	10	11	12

D2

W

8	9			3	5	6	(D5) : (L)	3	5		1	9	8	(D5) : (R)				
7	14	16	15		1	12	11	10	W		16	15		11	10	14	7	W

1	2	3	(D51)	(D74)
1	2	3	W	W

1	2	(D55)	(D75)
1	2	B	B

4	1	3	2	5	(D57)	(D77)
4	1	3	2	5	W	W

EL

IDX

Trouble Diagnoses/Without Interruption Detection Function

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> 30A fusible link and circuit breaker-1 Grounds (M1) and (M54) Power window relay Open/short in power window main switch circuit 	<ol style="list-style-type: none"> Check 30A fusible link (letter [b], located in fusible link and fuse box) and circuit breaker-1, located in fuse block. Turn ignition switch "ON" and verify battery positive voltage is present at terminal ① of power window main switch and terminal ⑤ of sub-switch. Check grounds (M1) and (M54). Check power window relay. Check harness between power window relay and power window main switch for open/short circuit.
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> Driver side power window regulator circuit Driver side power window regulator 	<ol style="list-style-type: none"> Check harness between power window main switch and power window regulator for open or short circuit. Check driver side power window regulator.
One or some of power window except driver side power window cannot be operated.	<ol style="list-style-type: none"> Power window sub-switch Passenger side power window regulator Power window main switch Power window circuit 	<ol style="list-style-type: none"> Check power window sub-switch. Check power window regulator of malfunctioning power window. Check power window main switch. 4-1. Check harnesses between power window main switch and power window sub-switch for open/short circuit. 4-2. Check harnesses between power window sub-switch and power window regulator for open/short circuit.
Passenger power window cannot be operated using power window main switch but can be operated by power window sub-switch.	<ol style="list-style-type: none"> Power window main switch 	<ol style="list-style-type: none"> Check power window main switch.
Driver side power window auto function cannot be operated using power window main switch.	<ol style="list-style-type: none"> Power window main switch 	<ol style="list-style-type: none"> Check power window main switch.

System Description/With Interruption Detection Function

GI

OUTLINE

MA

Power window system consists of

- CPU (combined with power window main switch)
- four power window regulators

EM

When ignition switch is in the “ON” position, power window can be operated depending on power window sub/main switch condition.

LC

OPERATIVE CONDITION

- Power windows can be raised or lowered with each sub-switch or the power window main switch located on the driver’s door trim when ignition switch is in the “ON” position and power window lock switch on the driver’s door trim is unlocked.
- When power window lock switch is locked, no windows can be raised or lowered except for driver’s side window.
- When ignition switch is in the “ON” position, to fully open/close the driver’s side window, press down/pull up completely on the automatic switch (main switch) and release it; it needs not be held. The window will automatically open/close all the way. To stop the window, pull up/press down then release the switch.
- After turning ignition switch to OFF, the driver’s side window can be raised or lowered for 15 minutes. The timer control for supplying power after turning ignition switch to “OFF” will be canceled when the driver’s side door is closed. (Except models for Europe)

EC

FE

CL

MT

INTERRUPTION DETECTION FUNCTION

AT

CPU (combined with power window main switch) monitors the power window regulator motor operation and the power window position (full closed or other) for driver’s power window by the signals from encoder and limit switch in front power window regulator (driver’s side).

TF

When CPU (combined with power window main switch) detects interruption during the following close operation in the driver’s side door,

PD

- automatic close operation when ignition switch is in the “ON” position
- automatic close operation during power window timer operation
- manual close operation during power window timer operation

FA

CPU (combined with power window main switch) controls driver’s power window regulator motor for open and the power window will be lowered about 150 mm (5.91 in).

RA

BR

ST

RS

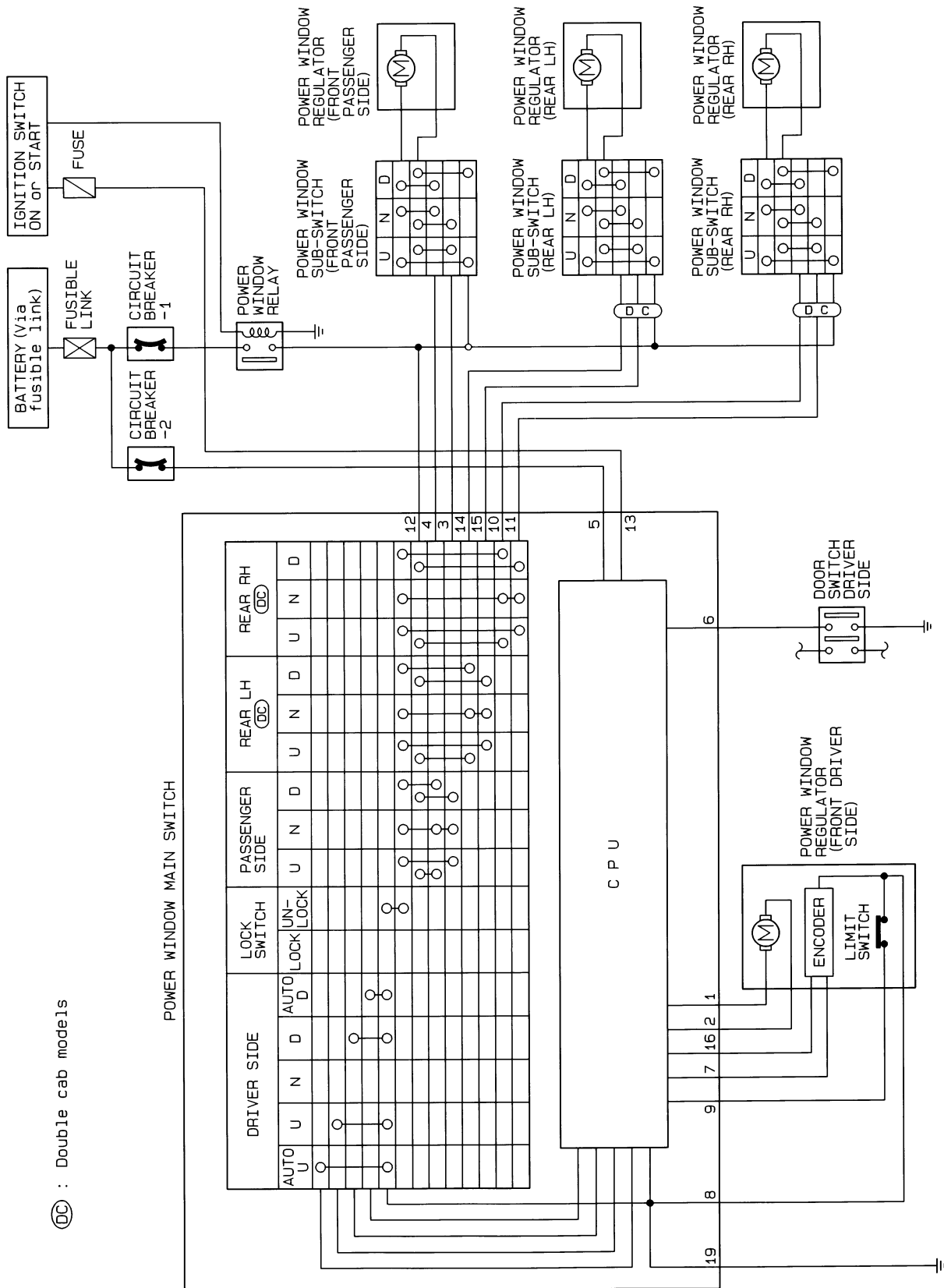
BT

HA

EL

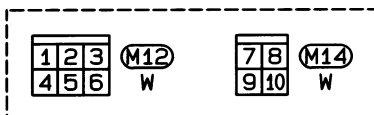
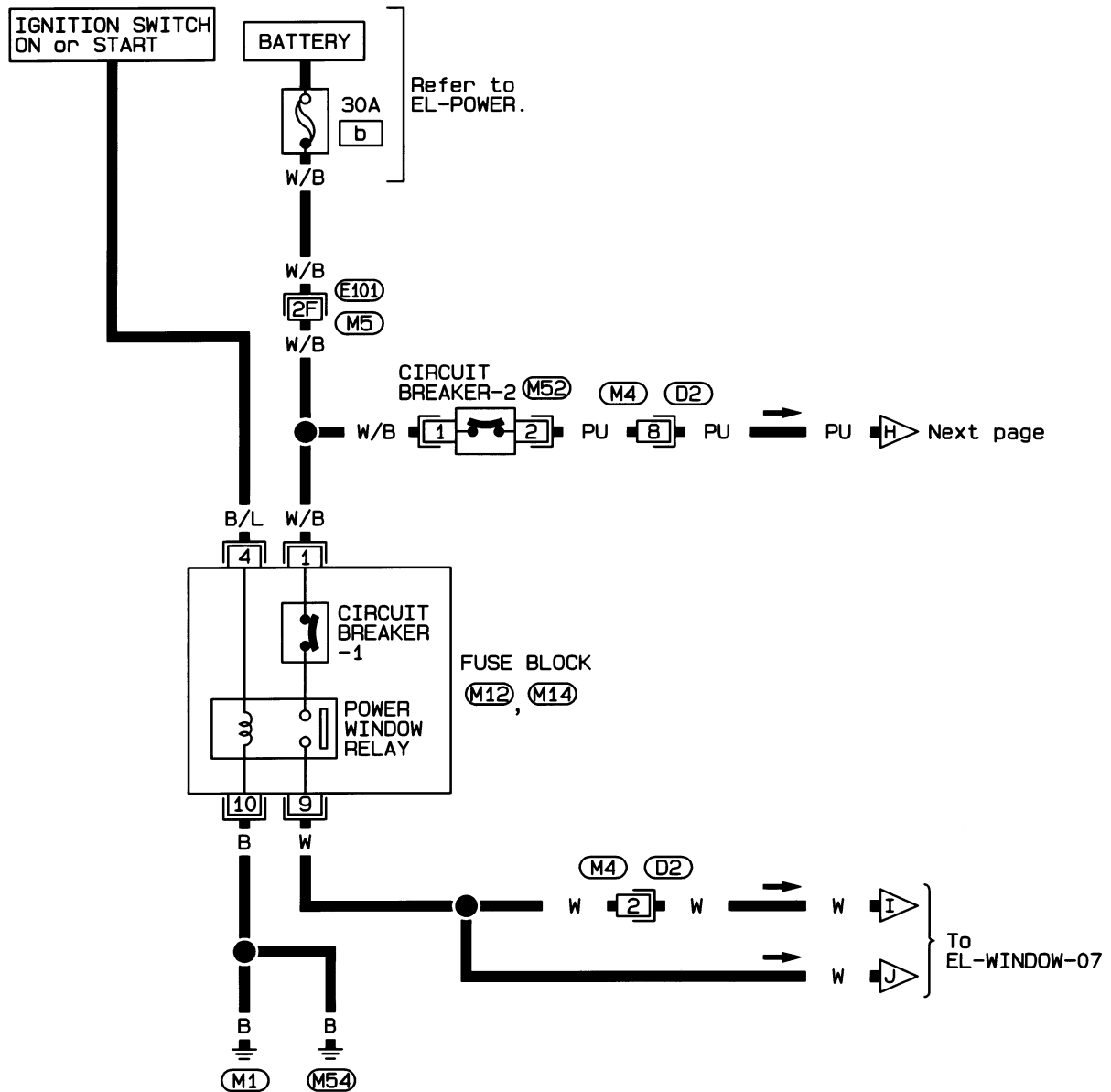
IDX

EL-130



Wiring Diagram — WINDOW —/With Interruption Detection Function

EL-WINDOW-05



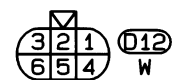
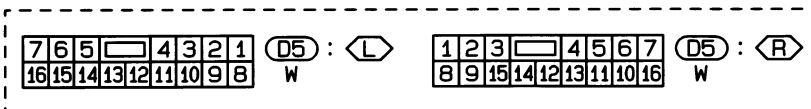
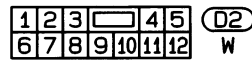
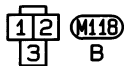
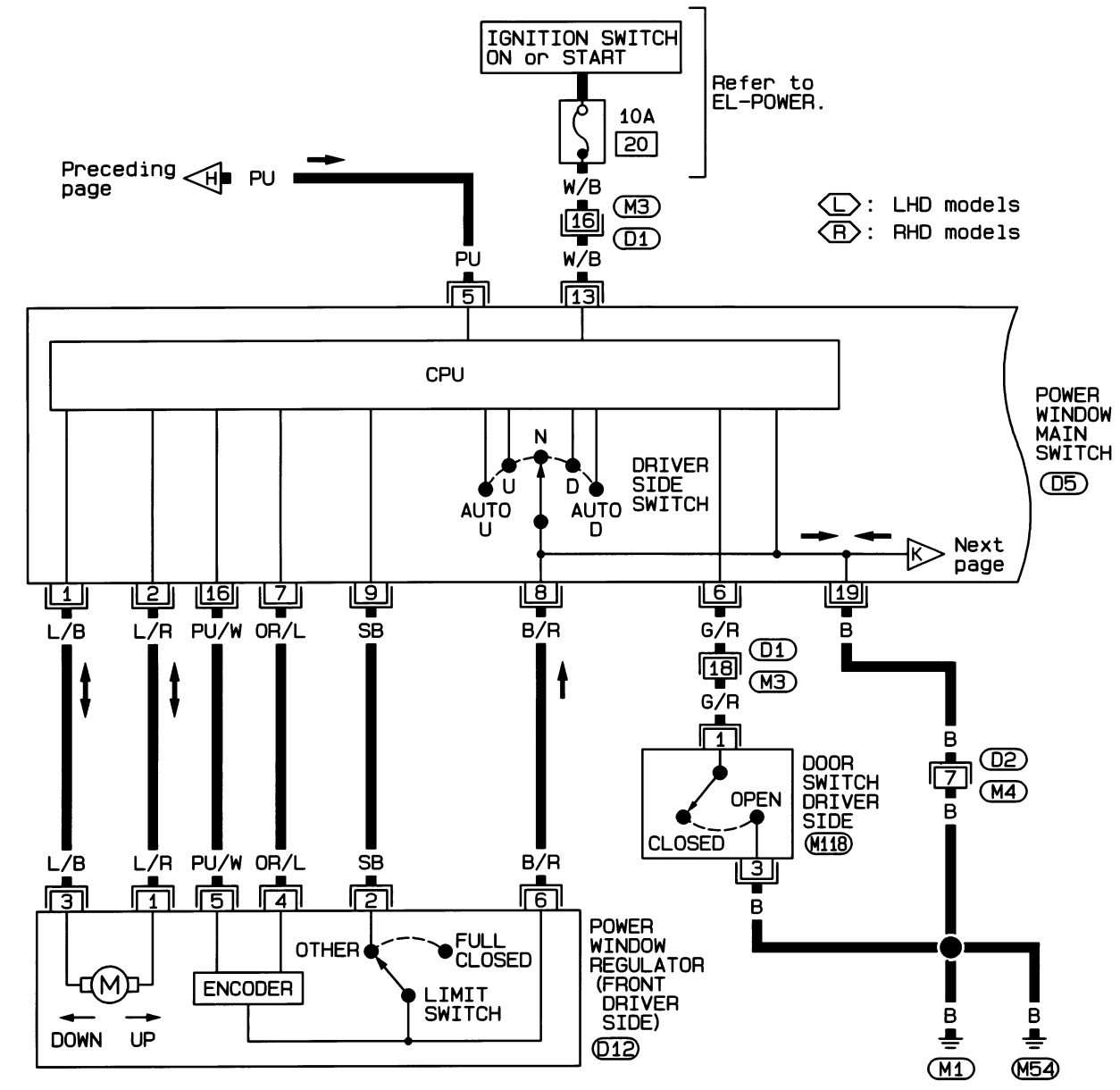
Refer to last page (Foldout page).

M5, **E101**

POWER WINDOW

Wiring Diagram — WINDOW —/With Interruption Detection Function (Cont'd)

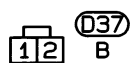
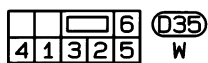
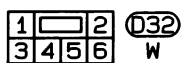
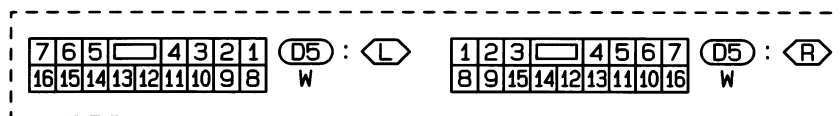
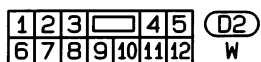
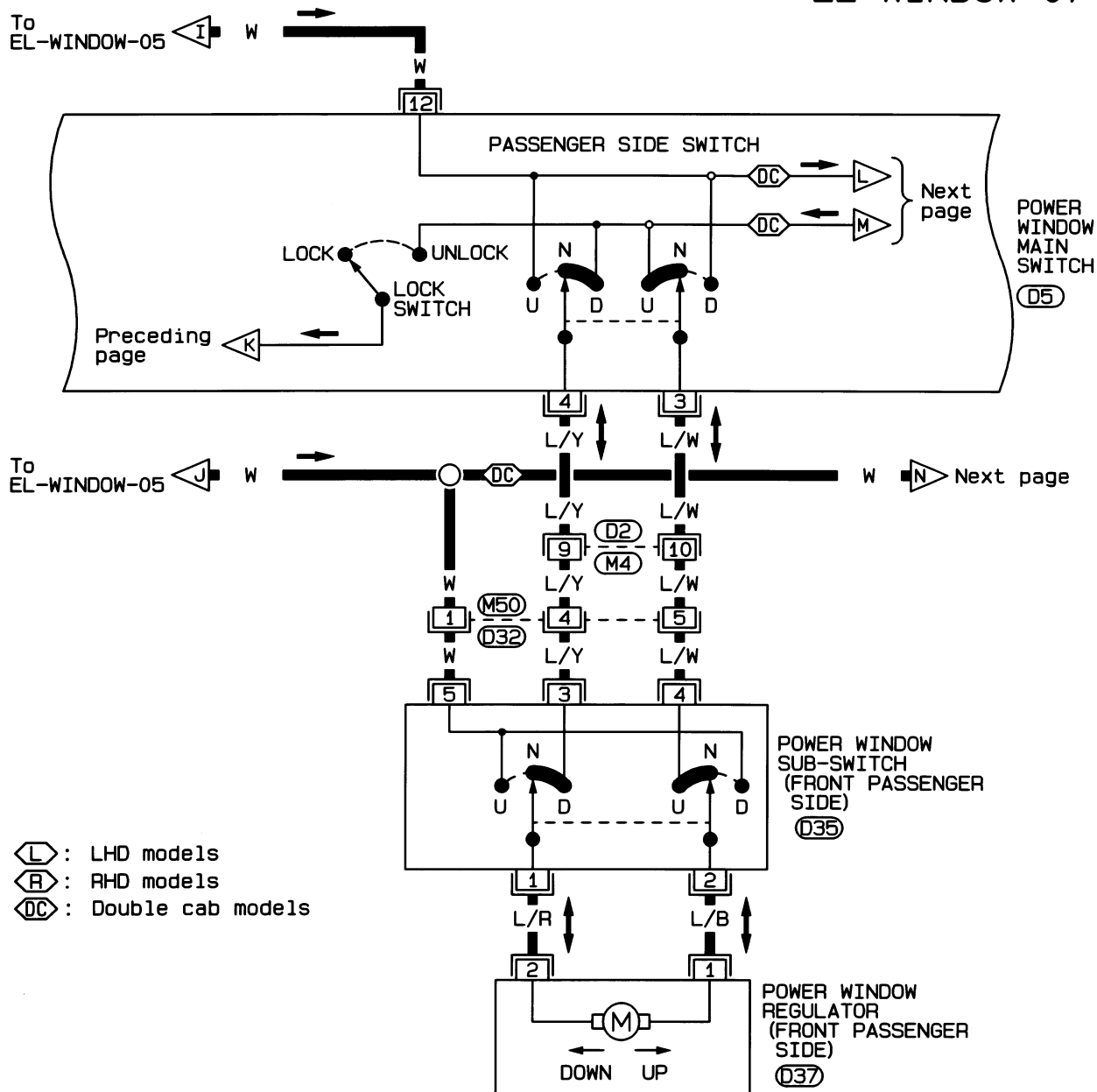
EL-WINDOW-06



POWER WINDOW

Wiring Diagram — WINDOW —/With Interruption Detection Function (Cont'd)

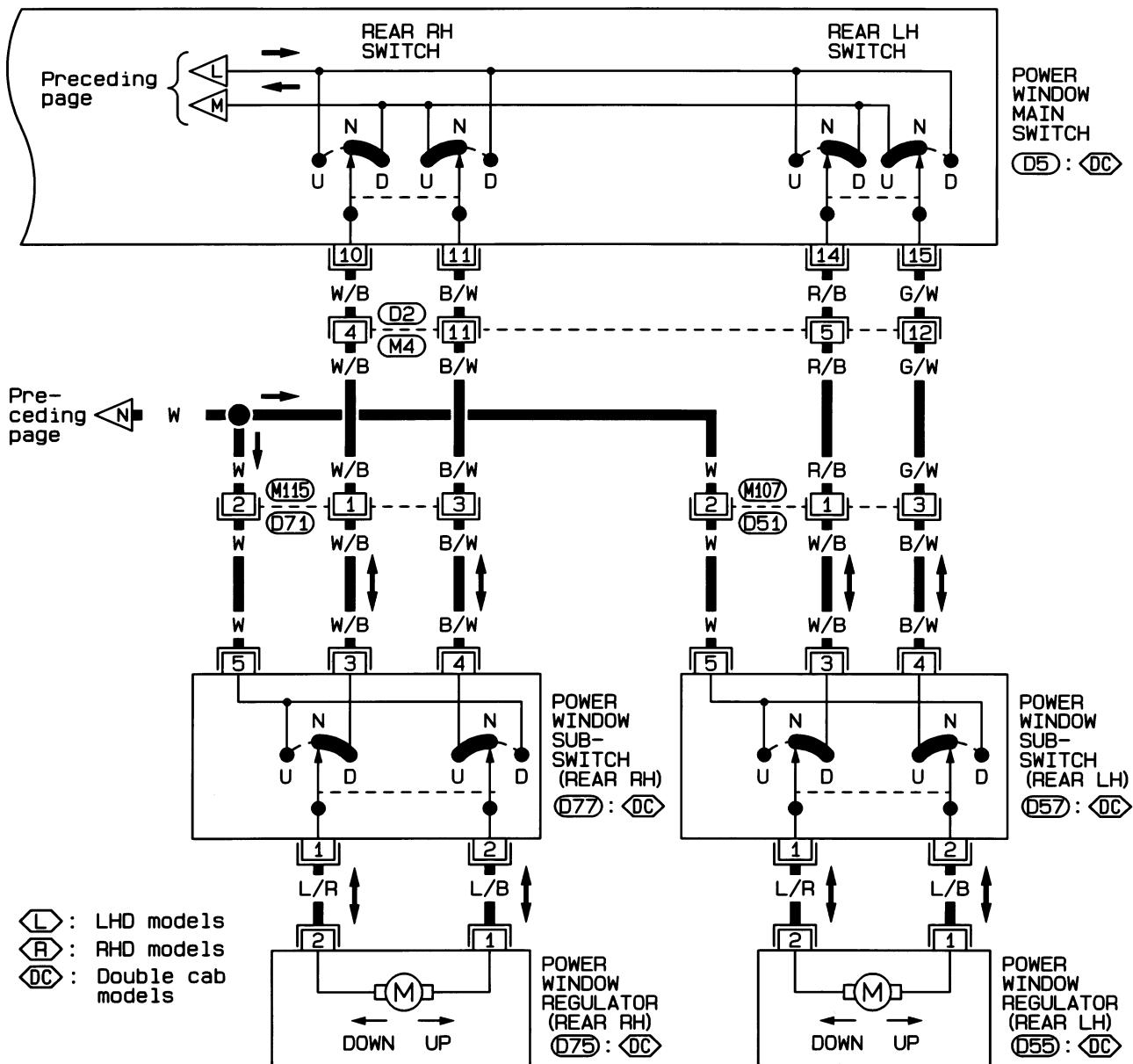
EL-WINDOW-07



POWER WINDOW

Wiring Diagram — WINDOW —/With Interruption Detection Function (Cont'd)

EL-WINDOW-08



1	2	3		4	5	
6	7	8	9	10	11	12

D2

W

7	6	5		4	3	2	1	(D5) :	L	1	2	3		4	5	6	7	(D5) :	R
16	15	14	13	12	11	10	9	8	W	8	9	15	14	12	13	11	10	16	W

1	2	3	(D51)	(D71)
1	2	3	W	W

1	2	(D55)	(D75)
1	2	B	B

4	1	3	2	5	(D57)	(D77)
4	1	3	2	5	W	W

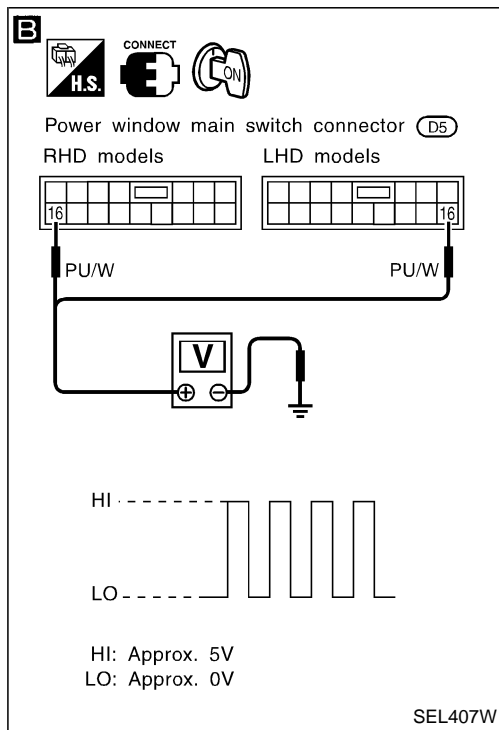
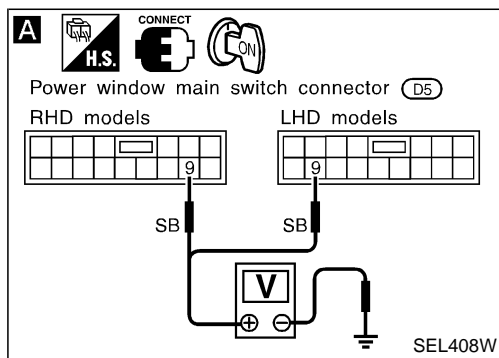
Trouble Diagnoses/With Interruption Detection Function

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> 10A fuse, 30A fusible link Ground circuit Power window main switch 	<ol style="list-style-type: none"> Check 10A fuse [No. 20], located in fuse block (J/B)], 30A fusible link (letter b, located in fuse and fusible link box). Check ground circuit of power window main switch terminal 19. Check power window main switch.
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> Driver side power window regulator circuit Driver side power window regulator M52 circuit breaker-2 M52 circuit breaker-2 circuit Power window main switch circuit 	<ol style="list-style-type: none"> Check harness between power window main switch and driver side power window regulator for open or short circuit. Check driver side power window regulator. Check M52 circuit breaker-2. Check harness between M52 circuit breaker-2 and 30A fusible link (letter b, located in fuse and fusible link box). 5-1. Check harness between power window main switch terminal 13 and 10A fuse [No. 20], located in fuse block (J/B)]. 5-2. Check harness between power window main switch terminal 5 and M52 circuit breaker.
One or more power windows except driver's side window cannot be operated.	<ol style="list-style-type: none"> Power window sub-switches Power window regulators Power window main switch Power window circuit 	<ol style="list-style-type: none"> Check power window sub-switch. Check power window regulator. Check power window main switch. 4-1. Check harnesses between power window main switch and power window sub-switch for open/short circuit. 4-2. Check harnesses between power window sub-switch and power window regulator for open/short circuit.
Power windows except driver's side window cannot be operated using power window main switch but can be operated by power window sub-switch.	<ol style="list-style-type: none"> Power window main switch 	<ol style="list-style-type: none"> Check power window main switch.
Driver side power window automatic operation does not function properly.	<ol style="list-style-type: none"> Power window main switch Encoder and limit switch 	<ol style="list-style-type: none"> Check power window main switch. Check encoder and limit switch. (EL-136)
Timer control for supplying power after turning ignition switch to "OFF" does not operate properly. (Except models for Europe)	<ol style="list-style-type: none"> Driver side door switch circuit Driver side door switch Ignition switch ON signal circuit Power window main switch 	<ol style="list-style-type: none"> Check harness between driver side door switch and power window main switch. Check driver side door switch. Check ignition switch ON signal circuit to power window main switch. Check power window main switch.

POWER WINDOW

Trouble Diagnoses/With Interruption Detection Function (Cont'd)

ENCODER AND LIMIT SWITCH CHECK



CHECK DOOR WINDOW SLIDE MECHANISM

Check the following.

- Obstacles in window, glass molding, etc.
- Worn or deformed glass molding
- Door sash tilted too far inward or outward
- Door window regulator

NG

Remove obstacles or repair door window slide mechanism.

OK

A

CHECK POWER SUPPLY TO LIMIT SWITCH

1. Disconnect driver side power window regulator connector.
2. Turn ignition switch ON.
3. Check voltage between power window main switch terminal ⑨ and ground. Approx. 5V should exist.

NG

Replace power window main switch.

OK

CHECK LIMIT SWITCH OPERATION

1. Turn ignition switch OFF.
2. Connect driver side power window regulator connector.
3. Turn ignition switch ON.
4. Check voltage between power window main switch terminal ⑨ and ground during power window closing operation.

OK

B

CHECK ENCODER

Measure voltage between power window main switch terminal ⑩ and ground with oscilloscope when power window is in automatic closing operation. If check result is NG, replace power window regulator motor (front driver side). If check result is OK, replace power window main switch.

Terminal No.	Condition	Voltage (DCV)
⑨	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5
	Other positions	Approx. 0

NG

RESET LIMIT SWITCH

Reset limit switch. Refer to BT section. Then check voltage between power window main switch terminal ⑨ and ground during power window closing operation at least ten times.

NG

Replace power window regulator motor (front driver side).

Terminal No.	Condition	Voltage (DCV)
⑨	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5
	Other positions	Approx. 0

OK

B

CHECK ENCODER

Measure voltage between power window main switch terminal ⑩ and ground with oscilloscope when power window is in automatic closing operation.

NG

Replace power window regulator motor (front driver side).

OK

Replace power window main switch.

System Description

Power is supplied at all times

- through 30A fusible link (Letter **B**, located in the fusible link and fuse box)
- to circuit breaker-1 (terminal **①** of fuse block)
- through circuit breaker-1 (terminal **⑦** of fuse block)
- to door lock timer terminal **③**.

Ground is supplied to door lock timer terminal **①** through body grounds **(M1)** and **(M54)**.

INPUT

When the door lock & unlock switch (power window main switch) is in LOCKED position, ground signal is supplied

- to door lock timer terminal **⑤**
- through door lock & unlock switch terminal **⑭**
- to door lock & unlock switch terminal **③**
- through body grounds **(M1)** and **(M54)**.

When the door lock & unlock switch (power window main switch) is in UNLOCKED position, ground signal is supplied

- to door lock timer terminal **⑧**
- through door lock & unlock switch terminal **⑦**
- to door lock & unlock switch terminal **③**
- through body grounds **(M1)** and **(M54)**.

Driver side door key cylinder and driver side lock knob are connected to lock knob switch with a rod. When lock knob switch is in UNLOCKED position, ground signal is supplied

- to door lock timer terminal **⑥**
- through lock knob switch terminal **②**
- to driver side lock knob switch terminal **①**
- through body grounds **(M1)** and **(M54)**.

When lock knob switch is in LOCKED position, ground signal is interrupted.

Door lock operates according to the conditions of the door lock & unlock switch (power window main switch) and lock knob switch.

OUTPUT

Unlock

Ground is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **①** (double cab models)
- through door lock timer terminal **②**.

Power is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **②** (double cab models)
- through door lock timer terminal **④**.

Then, the doors are unlocked.

Lock

Ground is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **②**
- through door lock timer terminal **④**.

Power is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **①**
- through door lock timer terminal **②**.

Then, the doors are locked.

GI

MA

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BT

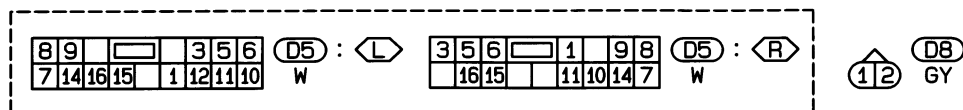
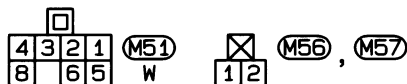
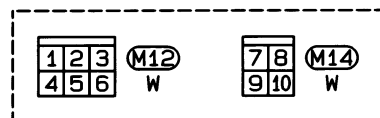
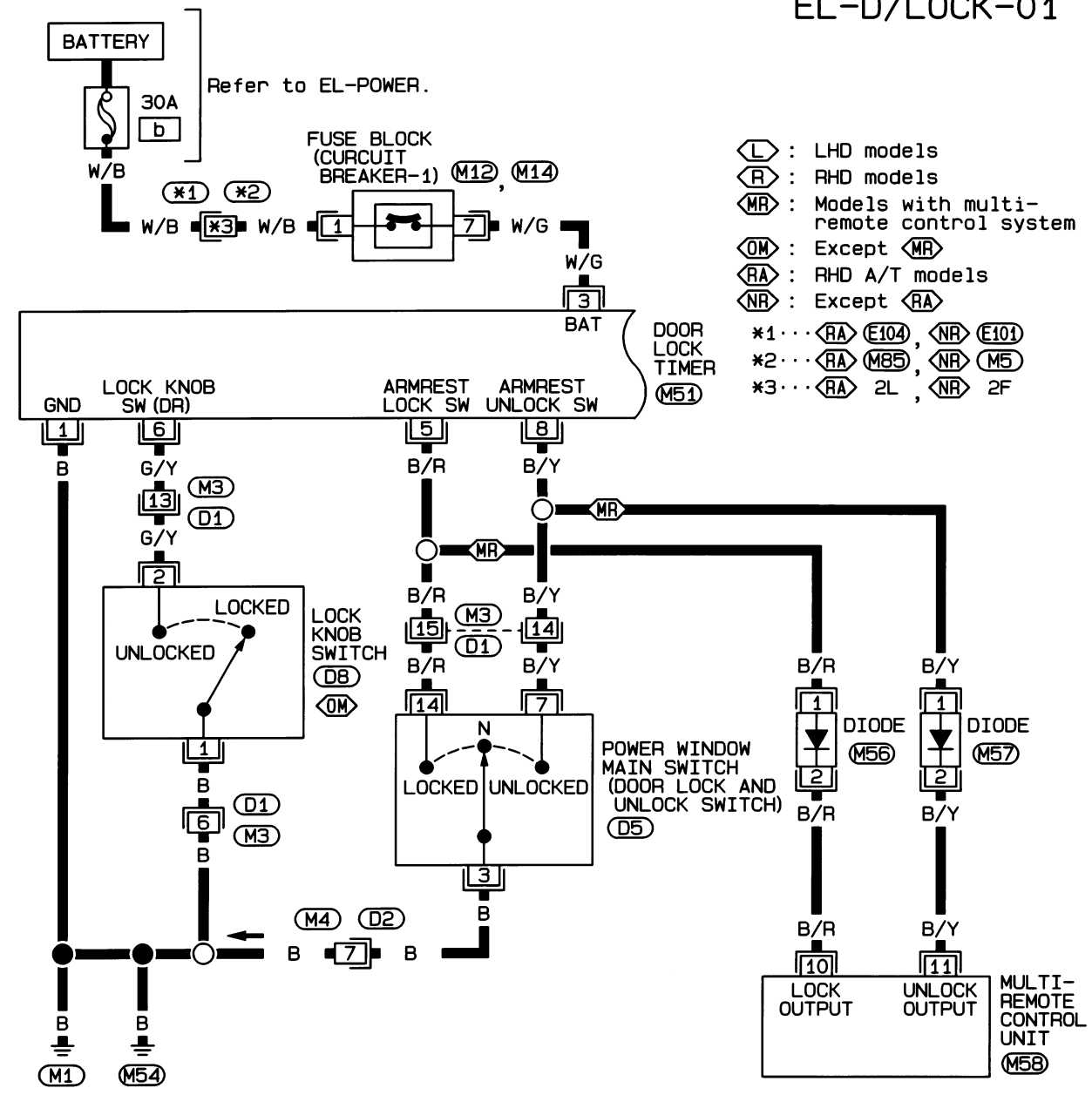
HA

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Wiring Diagram — D/LOCK —

EL-D/LOCK-01



Refer to last page (Foldout page).

(M5), (E101)

(M85), (E104)

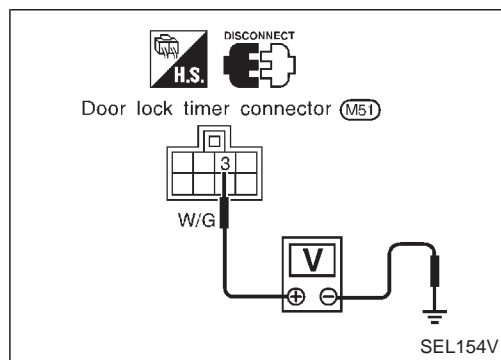
EL-D/LOCK-02



Trouble Diagnosis

SYMPTOM CHART

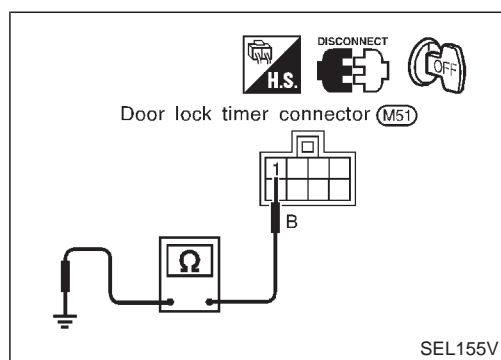
REFERENCE PAGE	EL-140	EL-141	EL-142	EL-143
	Main power supply and ground circuit check	Diagnostic procedure 1 (Door lock and unlock switch check)	Diagnostic procedure 2 (Door lock actuator check)	Diagnostic procedure 3 (Driver side lock knob switch check)
SYMPTOM				
None of the doors lock/unlock when operating any switch.	X		X	
One or more doors are not locked and/or unlocked.			X	
Door lock and unlock switch does not operate.		X		
Lock knob switch on driver's door does not operate.				X



MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

Main power supply for door lock timer

Terminal		Ignition switch		
⊕	⊖	OFF	ACC	ON
③	Ground	Battery voltage	Battery voltage	Battery voltage



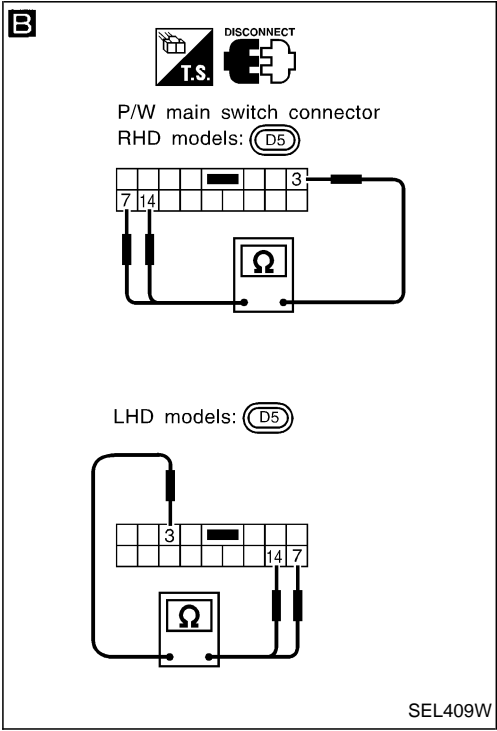
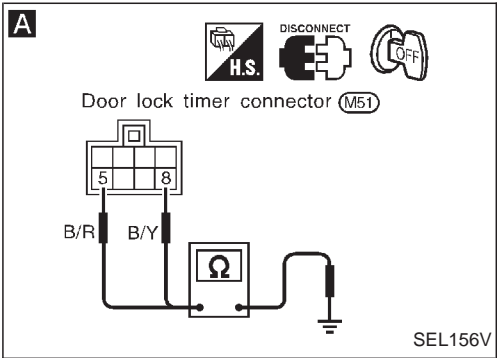
Ground circuit for door lock timer

Terminals	Continuity
① - Ground	Yes

Trouble Diagnosis (Cont'd)

DIAGNOSTIC PROCEDURE 1

(Door lock and unlock switch check)



A

CHECK DOOR LOCK AND UNLOCK SWITCH INPUT SIGNAL.

1. Disconnect door lock timer connector.

2. Check continuity between control unit terminal ⑤ or ⑧ and ground.

OK → Door lock and unlock switch is OK.

Terminals	Door lock and unlock switch condition	Continuity
⑤ - Ground	Lock	Yes
	N and Unlock	No
⑧ - Ground	Unlock	Yes
	N and Lock	No

NG

B

CHECK DOOR LOCK AND UNLOCK SWITCH.

1. Disconnect door lock and unlock switch connector.

2. Check continuity between power window main switch (Door lock and unlock switch) terminals.

NG → Replace door lock and unlock switch.

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

OK

Check the following.

- Ground circuit for door lock and unlock switch
- Harness for open or short between door lock and unlock switch and door lock timer connector

GI

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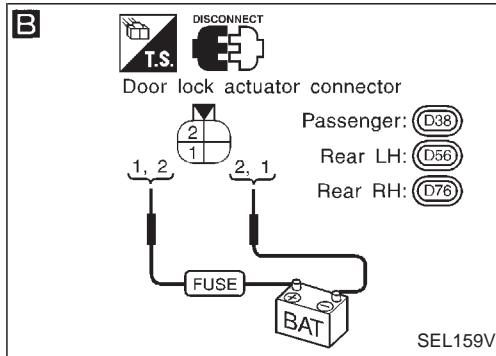
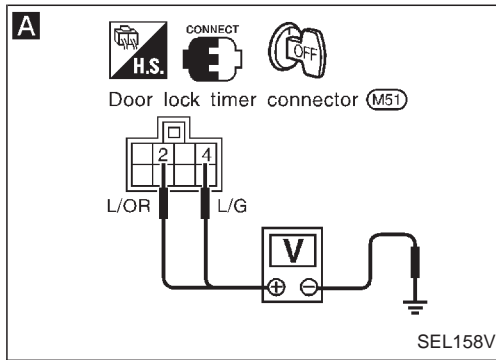
EL

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Trouble Diagnosis (Cont'd)

DIAGNOSTIC PROCEDURE 2

(Door lock actuator check)



A

CHECK DOOR LOCK ACTUATOR CIRCUIT.

Check voltage for door lock actuator.

Lock knob switch condition	Terminals		Voltage V
	+	-	
Lock	②	ground	Battery voltage
Unlock	④	ground	

NG

Replace door lock timer.
(Before replacing control unit, perform DIAGNOSTIC PROCEDURE 1.)

OK

B

CHECK DOOR LOCK ACTUATOR.

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

NG

Replace door lock actuator.

Door lock actuator operation	Terminals	
	+	-
Unlocked → Locked	①	②
Locked → Unlocked	②	①

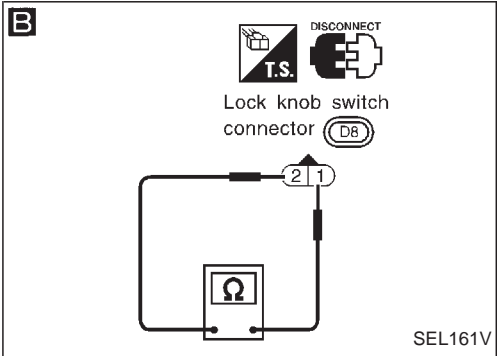
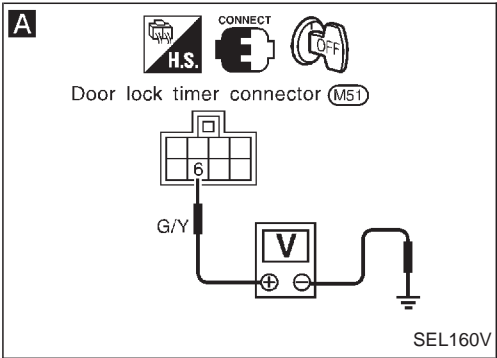
OK

Repair harness between door lock timer connector and door lock actuator.

Trouble Diagnosis (Cont'd)

DIAGNOSTIC PROCEDURE 3

(Driver side lock knob switch check)



A

CHECK LOCK KNOB SWITCH INPUT SIGNAL.

Check voltage between door lock timer terminal ⑥ and ground.

OK

Driver side lock knob switch is OK.

Lock knob switch condition	Voltage V
Lock	Approx. 12
Unlock	0

NG

B

CHECK LOCK KNOB SWITCH.

1. Disconnect driver side lock knob switch connector.
2. Check continuity between lock knob switch terminals.

NG

Replace lock knob switch.

Terminals	Condition	Continuity
① - ②	Locked	No
	Unlocked	Yes

OK

Check the following.

- Ground circuit for lock knob switch
- Harness for open or short between lock knob switch and door lock timer

GI

MA

EM

LC

EC

FE

CL

MT

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TF

PD

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IDX

System Description

Power is supplied at all times

- through 30A fusible link (Letter **B**, located in the fusible link and fuse box)
- to circuit breaker-1 (terminal **①** of fuse block)
- through circuit breaker-1 (terminal **⑦** of fuse block)
- to smart entrance control unit terminal **⑪**.

Ground is supplied to smart entrance control unit terminal **⑱** through body grounds **(M1)** and **(M54)**.

INPUT

When the door lock & unlock switch (power window main switch) is in LOCKED position, ground signal is supplied

- to smart entrance control unit terminal **④**
- through door lock & unlock switch terminal **⑭**
- to door lock & unlock switch terminal **③**
- through body grounds **(M1)** and **(M54)**.

When the door lock & unlock switch (power window main switch) is in UNLOCKED position, ground signal is supplied

- to smart entrance control unit terminal **⑤**
- through door lock & unlock switch terminal **⑦**
- to door lock & unlock switch terminal **③**
- through body grounds **(M1)** and **(M54)**.

Driver side door key cylinder and driver side lock knob are connected to lock knob switch with a rod. When lock knob switch is in UNLOCKED position, ground signal is supplied

- to smart entrance control unit terminal **②**
- through lock knob switch terminal **②**
- to driver side lock knob switch terminal **①**
- through body grounds **(M1)** and **(M54)**.

When lock knob switch is in LOCKED position, ground signal is interrupted.

Door lock operates according to the conditions of the door lock & unlock switch (power window main switch) and lock knob switch.

OUTPUT

Unlock

Ground is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **①** (double cab models)
- through smart entrance control unit terminal **⑮**

Power is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **②** (double cab models)
- through smart entrance control unit terminal **⑯**

Then, the doors are unlocked.

Lock

Ground is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **②**
- through smart entrance control unit terminal **⑯**

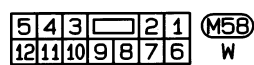
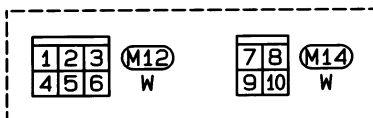
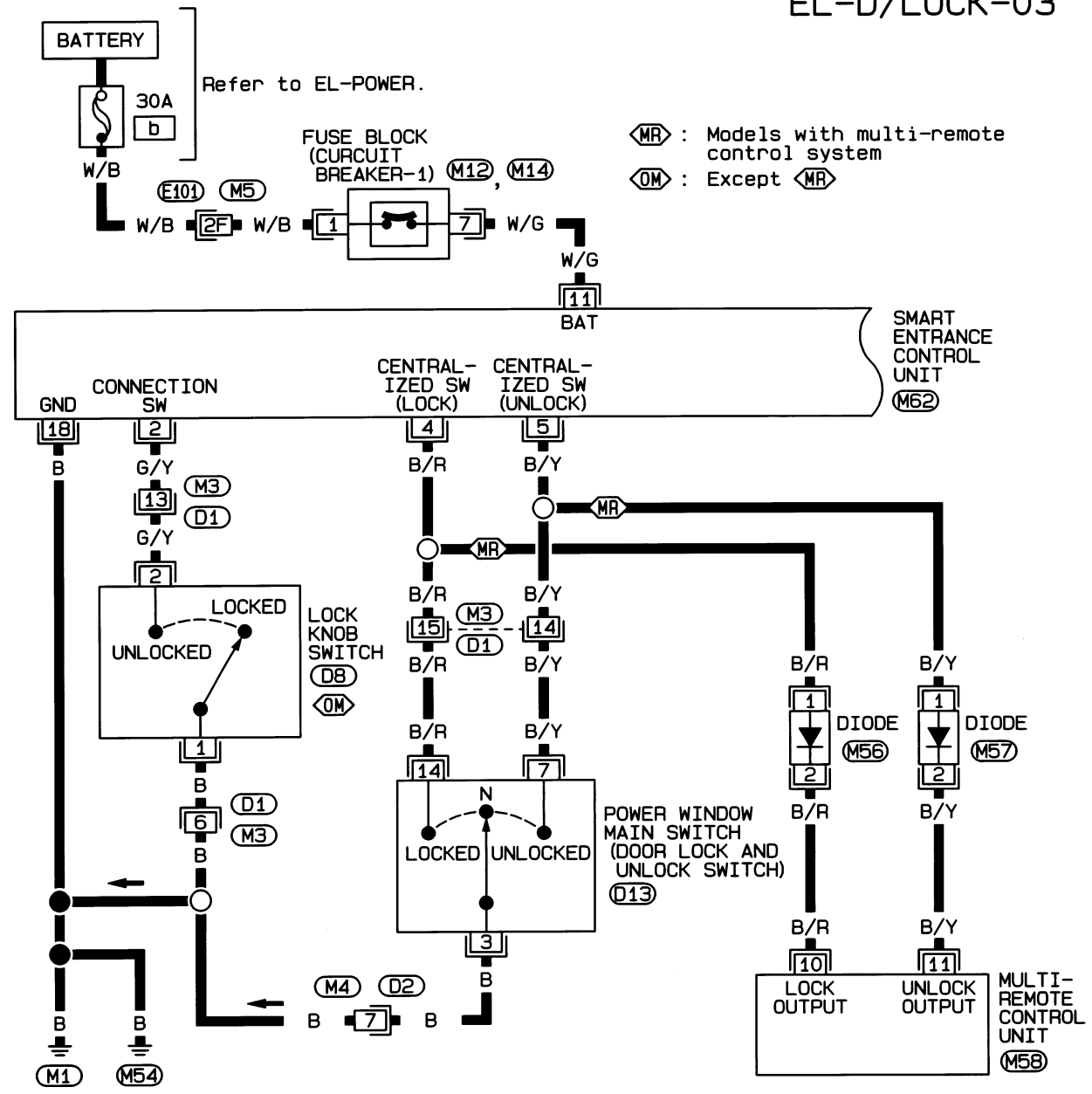
Power is supplied

- to passenger side door lock actuator, rear door lock actuator LH and RH terminal **①**
- through smart entrance control unit terminal **⑮**

Then, the doors are locked.

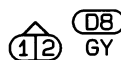
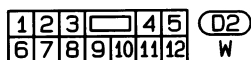
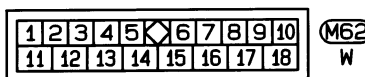
Wiring Diagram — D/LOCK —

EL-D/LOCK-03



Refer to last page (Foldout page).

M5, E101



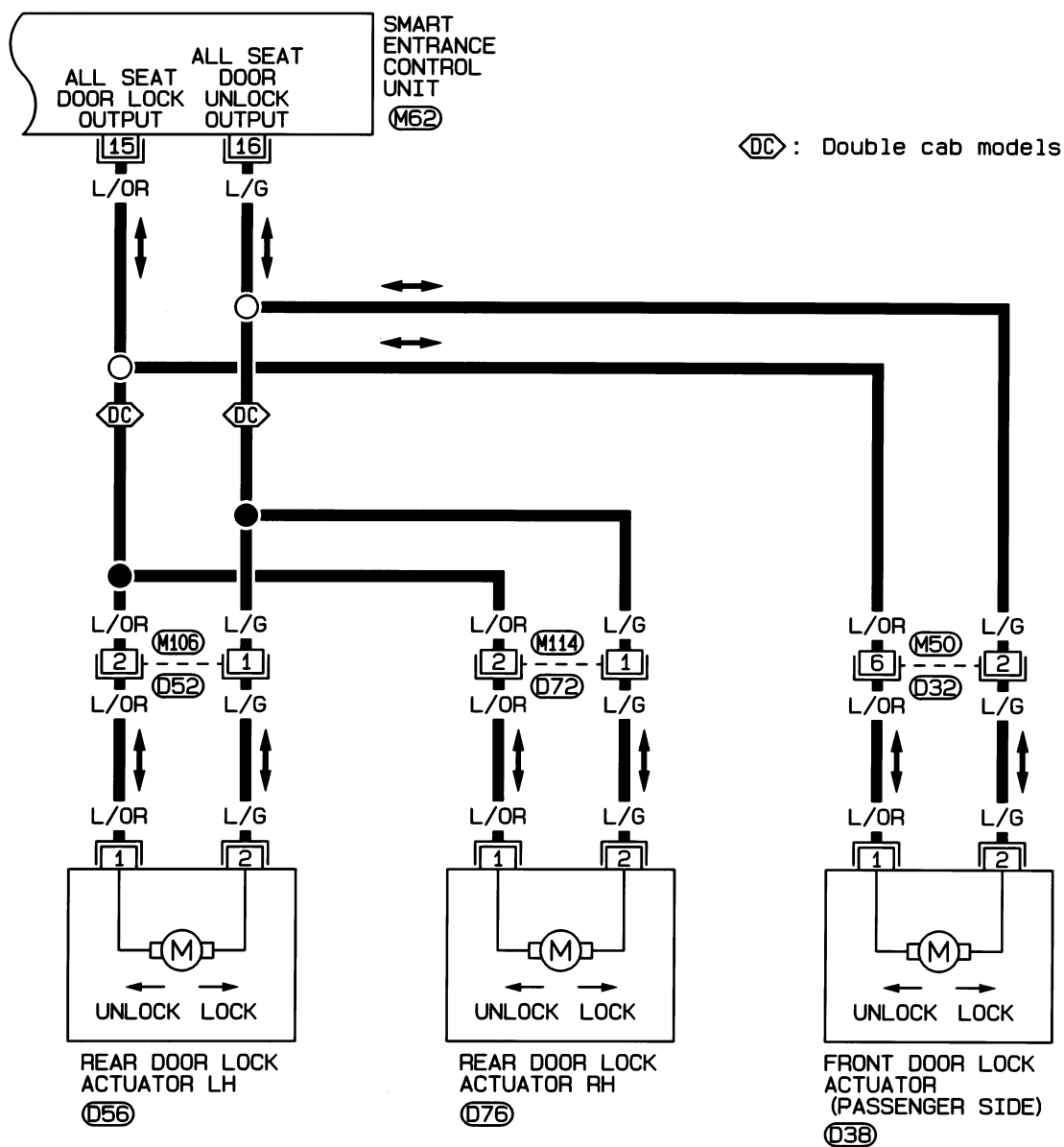
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POWER DOOR LOCK/FOR EUROPE

Wiring Diagram — D/LOCK — (Cont'd)

EL-D/LOCK-04



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

M62
W



1 2 3 4 5 6
3 4 5 6
032
W



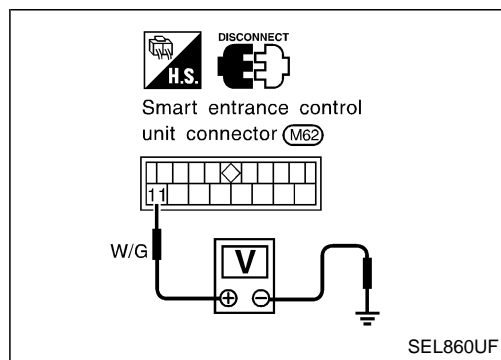
038 056 076
GY, GY, GY

1 2 052 072
1 2
W, W

Trouble Diagnosis

SYMPTOM CHART

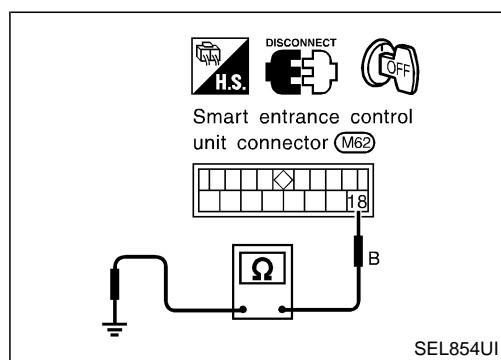
REFERENCE PAGE	EL-147	EL-148	EL-149	EL-150
SYMPTOM	Main power supply and ground circuit check	Diagnostic procedure 1 (Door lock and unlock switch check)	Diagnostic procedure 2 (Door lock actuator check)	Diagnostic procedure 3 (Driver side lock knob switch check)
None of the doors lock/unlock when operating any switch.	X		X	
One or more doors are not locked and/or unlocked.			X	
Door lock and unlock switch does not operate.		X		
Lock knob switch on driver's door does not operate.				X



MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

Main power supply for door lock timer

Terminal		Ignition switch		
⊕	⊖	OFF	ACC	ON
⑪	Ground	Battery voltage	Battery voltage	Battery voltage



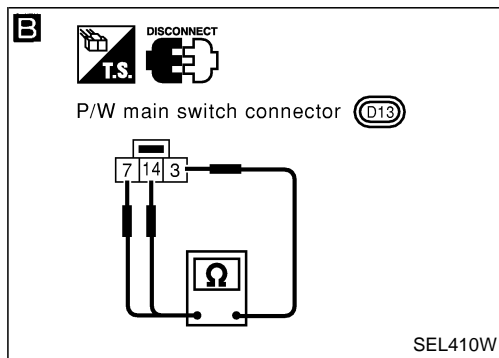
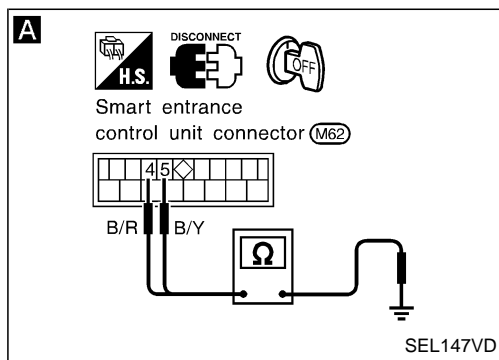
Ground circuit for door lock timer

Terminals	Continuity
⑱ - Ground	Yes

Trouble Diagnosis (Cont'd)

DIAGNOSTIC PROCEDURE 1

(Door lock and unlock switch check)



A

CHECK DOOR LOCK AND UNLOCK SWITCH INPUT SIGNAL.

1. Disconnect smart entrance control unit connector.
2. Check continuity between control unit terminal ④ or ⑤ and ground.

Terminals	Door lock and unlock switch condition	Continuity
④ - Ground	Lock	Yes
	N and Unlock	No
⑤ - Ground	Unlock	Yes
	N and Lock	No

OK

Door lock and unlock switch is OK.

NG

B

CHECK DOOR LOCK AND UNLOCK SWITCH.

1. Disconnect door lock and unlock switch connector.
2. Check continuity between power window main switch (Door lock and unlock switch) terminals.

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

NG

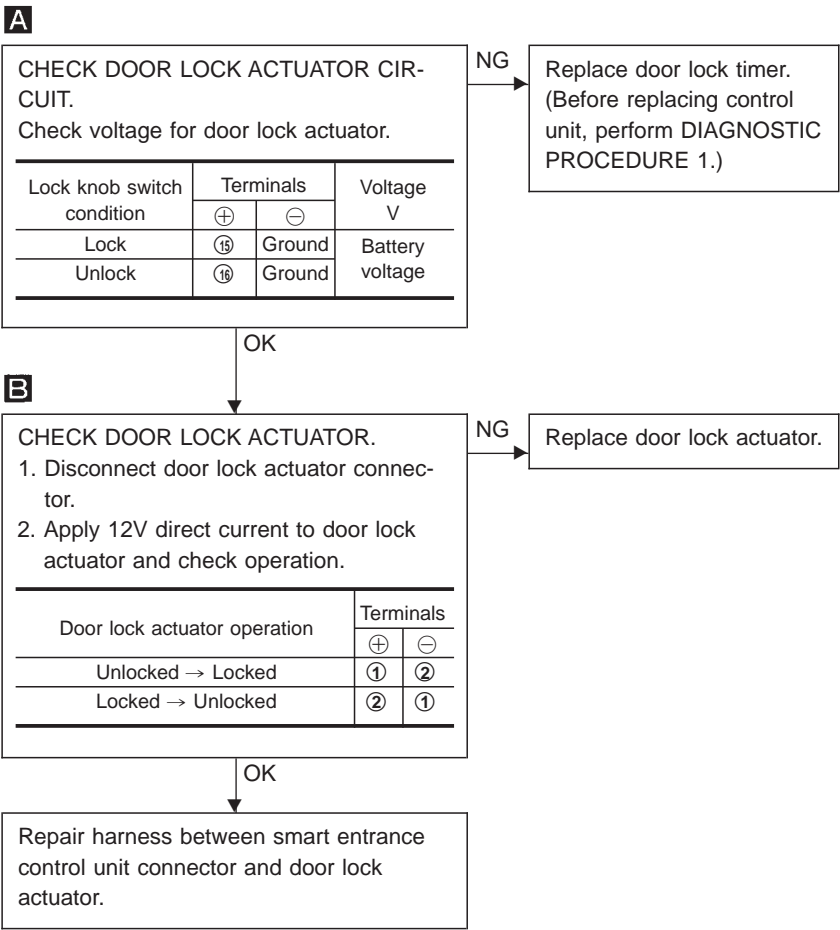
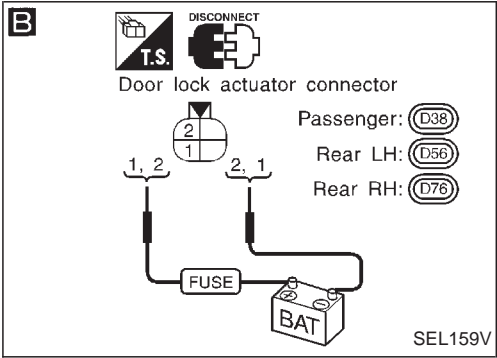
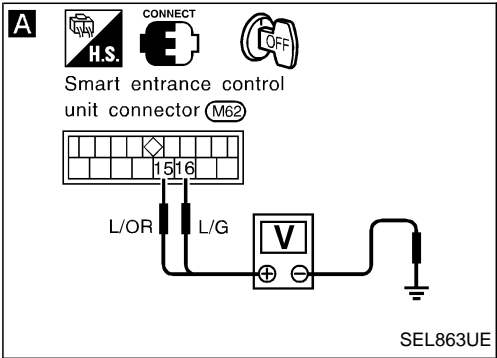
Replace door lock and unlock switch.

OK

Check the following.

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

Trouble Diagnosis (Cont'd)
DIAGNOSTIC PROCEDURE 2
(Door lock actuator check)



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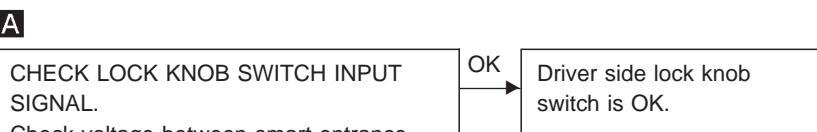
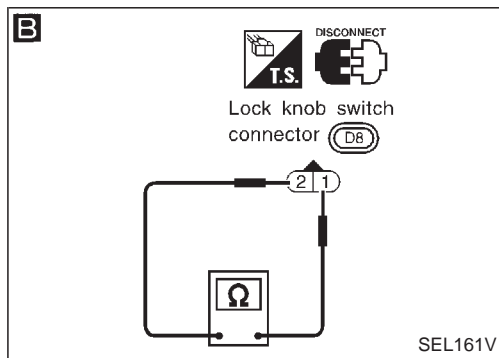
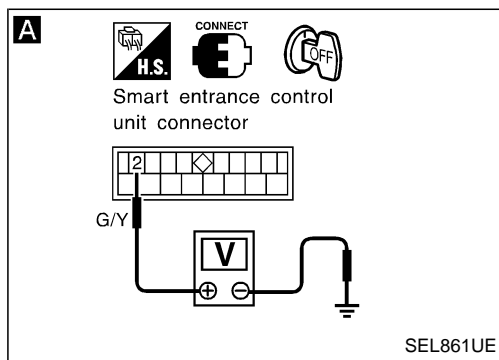
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Trouble Diagnosis (Cont'd)

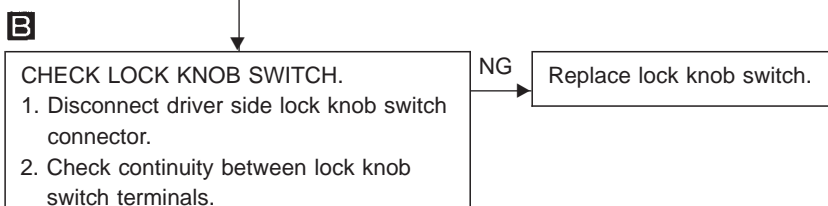
DIAGNOSTIC PROCEDURE 3

(Driver side lock knob switch check)



Lock knob switch condition	Voltage V
Lock	Approx. 12
Unlock	0

NG



Terminals	Condition	Continuity
① - ②	Locked	No
	Unlocked	Yes

OK

Check the following.

- Ground circuit for lock knob switch
- Harness for open or short between lock knob switch and smart entrance control unit

System Description

FUNCTION

Multi-remote control system has the following function.

- Door lock
- Door unlock
- Hazard reminder

LOCK OPERATION

To lock door by multi-remote controller, the following two signals must be received.

- Key switch OFF (when ignition key is not in ignition key cylinder.)
- All door switches CLOSED

When the LOCK signal is input to multi-remote control unit (the antenna of the system is combined with multi-remote control unit), ground is supplied

- through multi-remote control unit terminal ⑩
- to door lock timer terminal ⑤ (models except for Europe)/smart entrance control unit terminal ④ (models for Europe) and
- to door lock relay terminal ⑥ .

Then door lock timer (models except for Europe)/smart entrance control unit (models for Europe) operates to lock doors (except for driver's door) and door lock relay energized to lock driver's door.

UNLOCK OPERATION

To unlock door by multi-remote controller, the following signal must be received.

- Key switch OFF (when ignition key is not in ignition key cylinder)

When the UNLOCK signal is input to multi-remote control unit (the antenna of the system is combined with multi-remote control unit), ground is supplied

- through multi-remote control unit terminal ⑪
- to door lock timer terminal ⑧ (models except for Europe)/smart entrance control unit terminal ⑤ (models for Europe) and
- to door lock relay terminal ⑤ .

Then door lock timer (models except for Europe)/smart entrance control unit (models for Europe) operates to unlock doors (except for driver's door) and door lock relay is energized to unlock driver's door.

HAZARD REMINDER

When the doors are locked or unlocked by multi-remote controller, ground is supplied

- to terminal ① of multi-remote control relay-1 and 2
- through multi-remote control unit terminal ⑫ .

Then the relays are energized and hazard warning lamp flashes as follows

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

MULTI-REMOTE CONTROLLER ID CODE ENTRY

A maximum of four remote controllers can be entered. Any attempt to enter a remote controller will erase all ID codes previously entered. Therefore, be sure to receive all remote controllers from the vehicle owner when any ID code entry is performed.

To enter ID code entry, the following signals must be input to the multi-remote control unit.

- Driver side LOCKED signal (from driver side door unlock sensor)
- Door switch CLOSED signal
- Key switch signal (INSERTED/WITHDRAWN)
- Accessory power supply
- Signal from remote controller

For detailed procedure, refer to "ID Code Entry Procedure" in EL-161.

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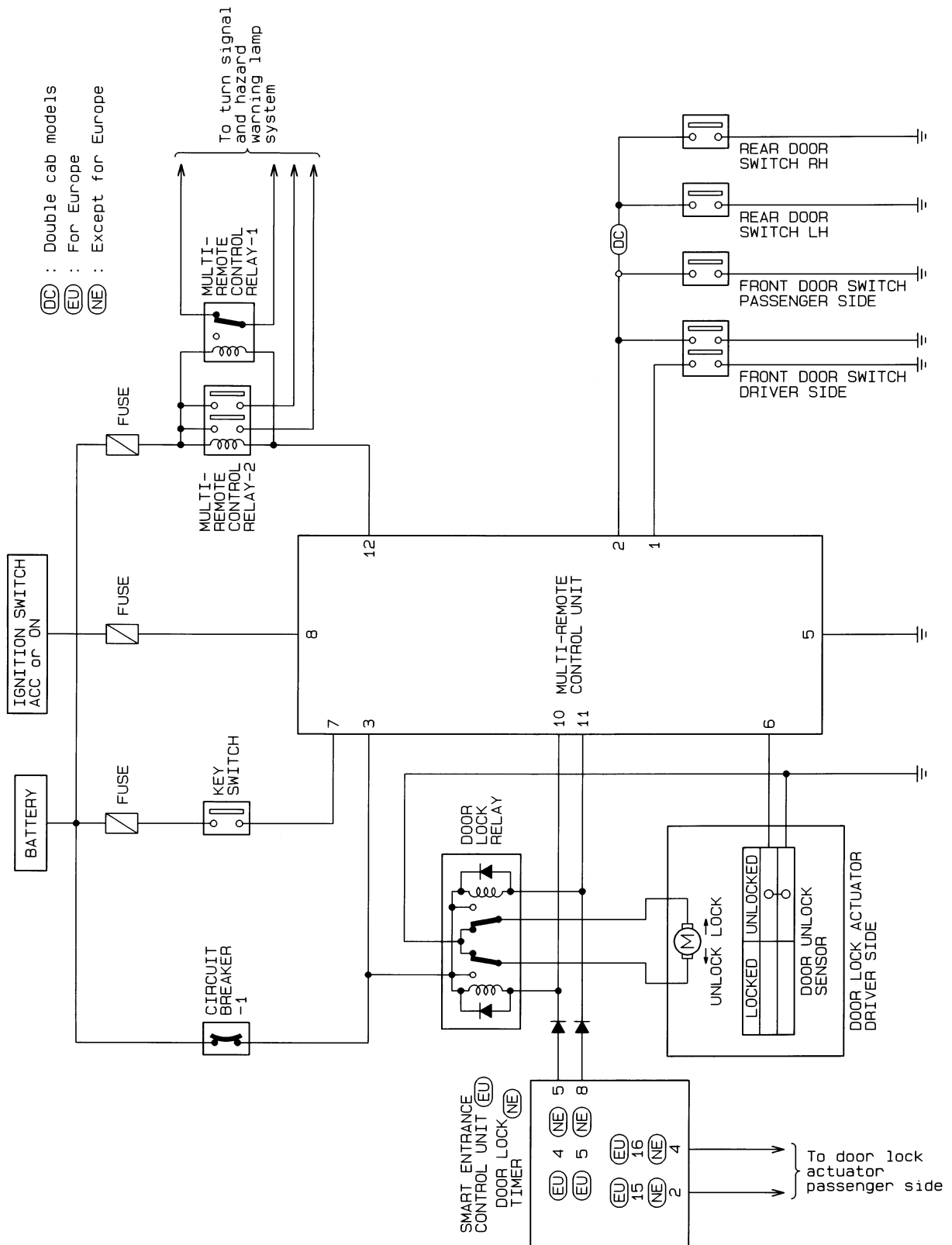
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MULTI-REMOTE CONTROL SYSTEM

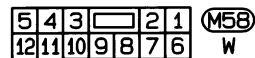
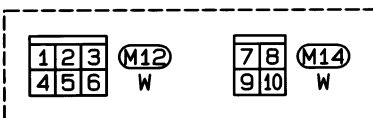
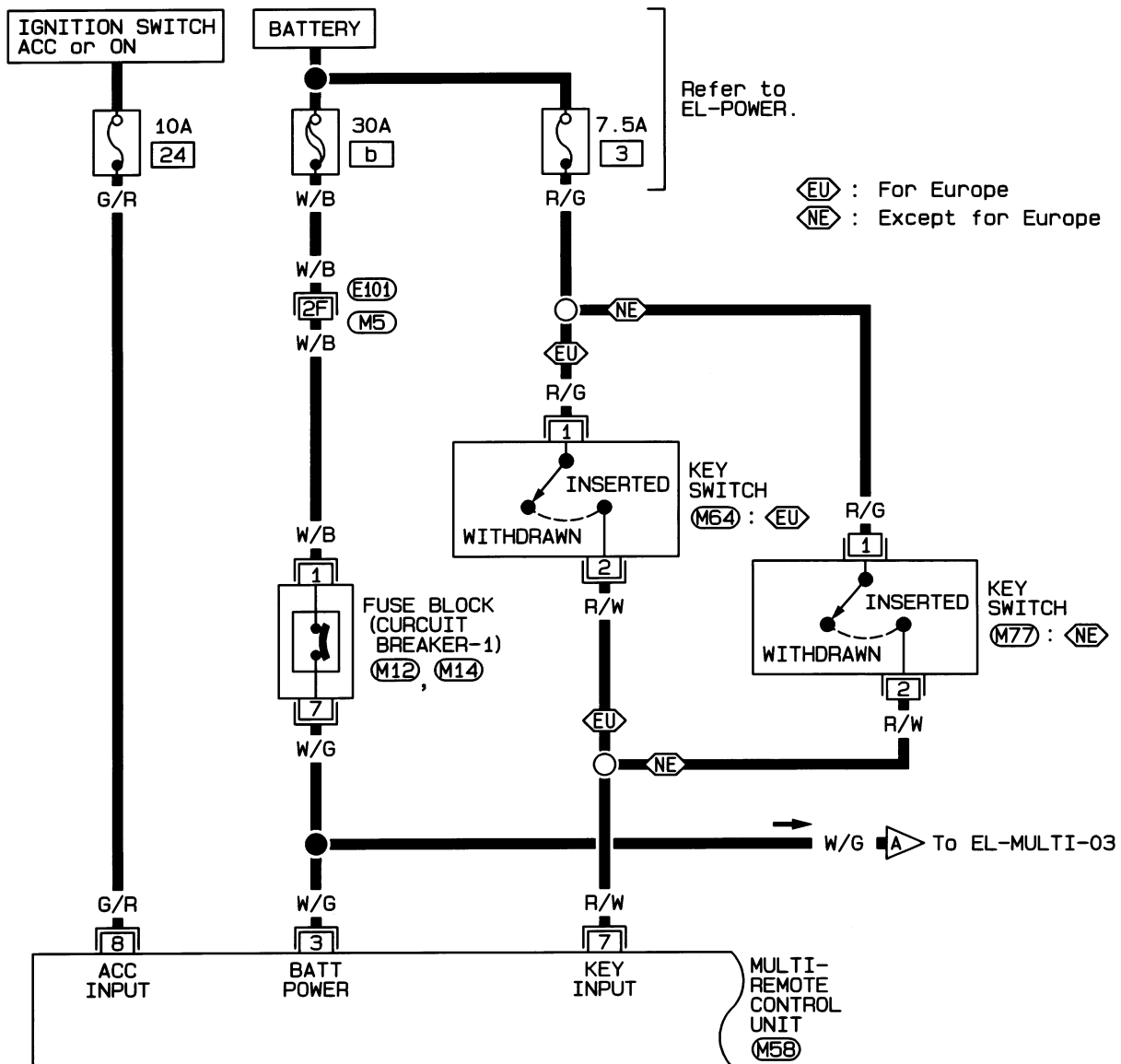
Schematic



MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI —

EL-MULTI-01



Refer to last page (Foldout page).

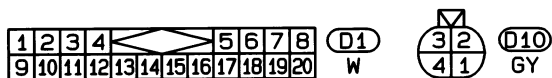
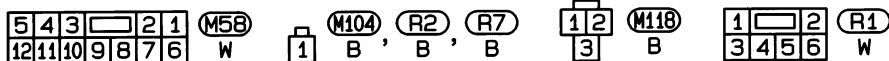
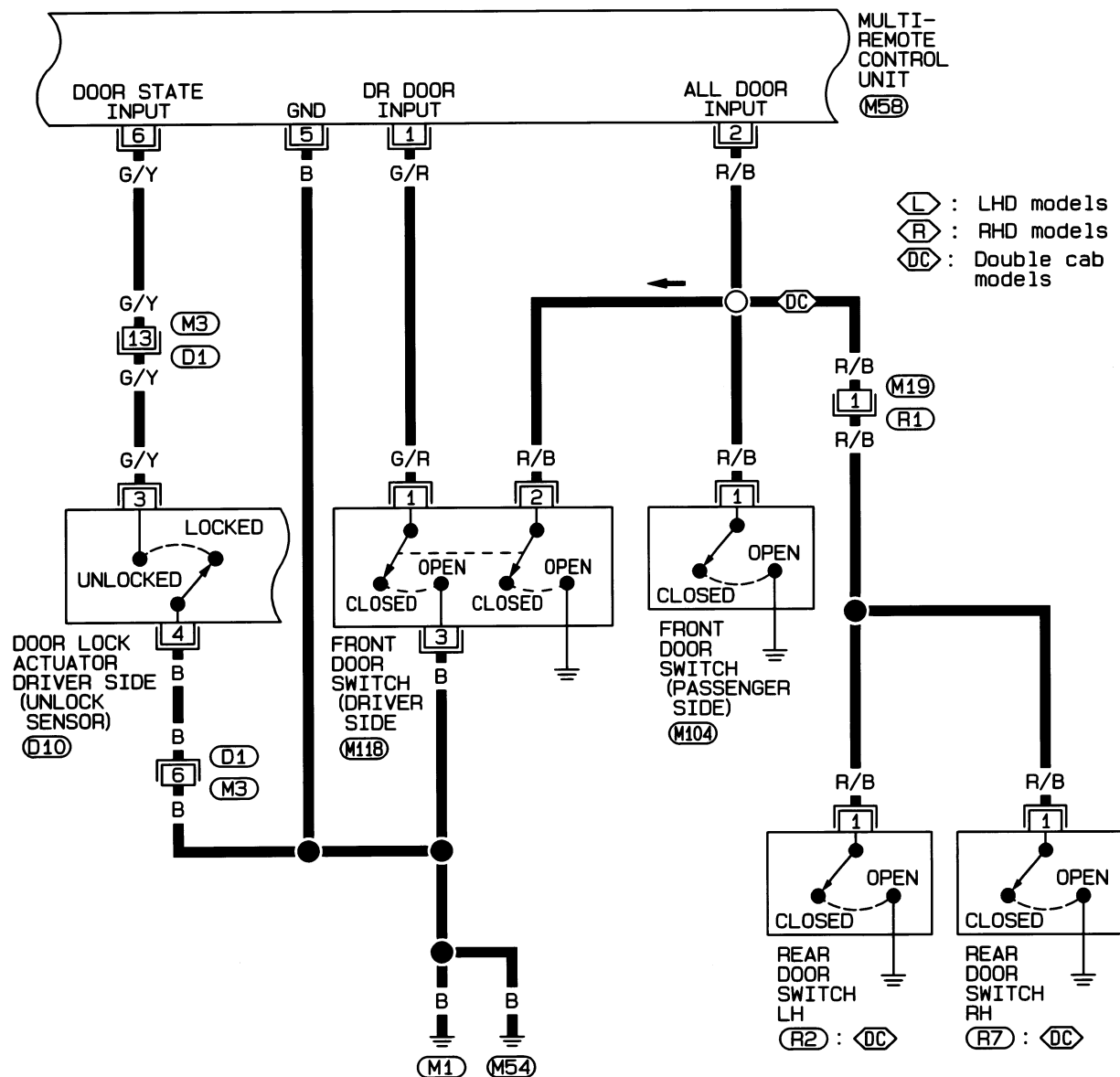
(M5), (E101)

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MULTI-REMOTE CONTROL SYSTEM

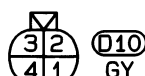
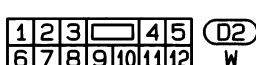
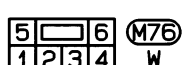
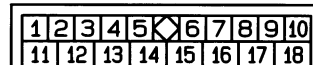
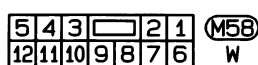
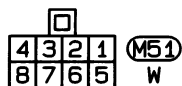
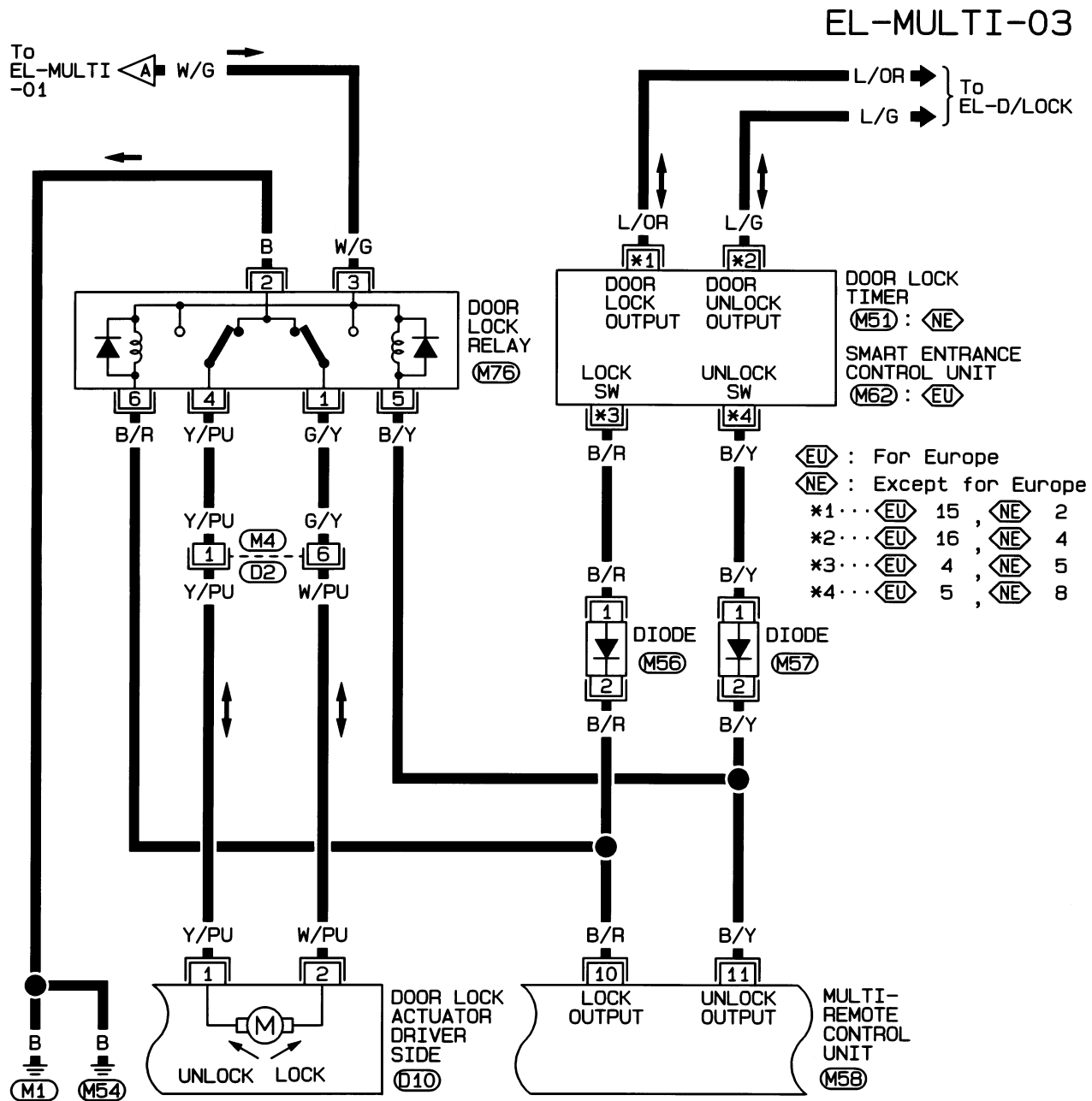
Wiring Diagram — MULTI — (Cont'd)

EL-MULTI-02



MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)



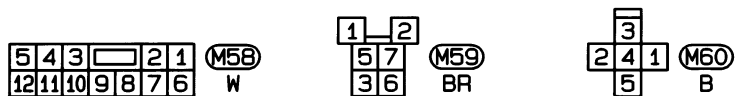
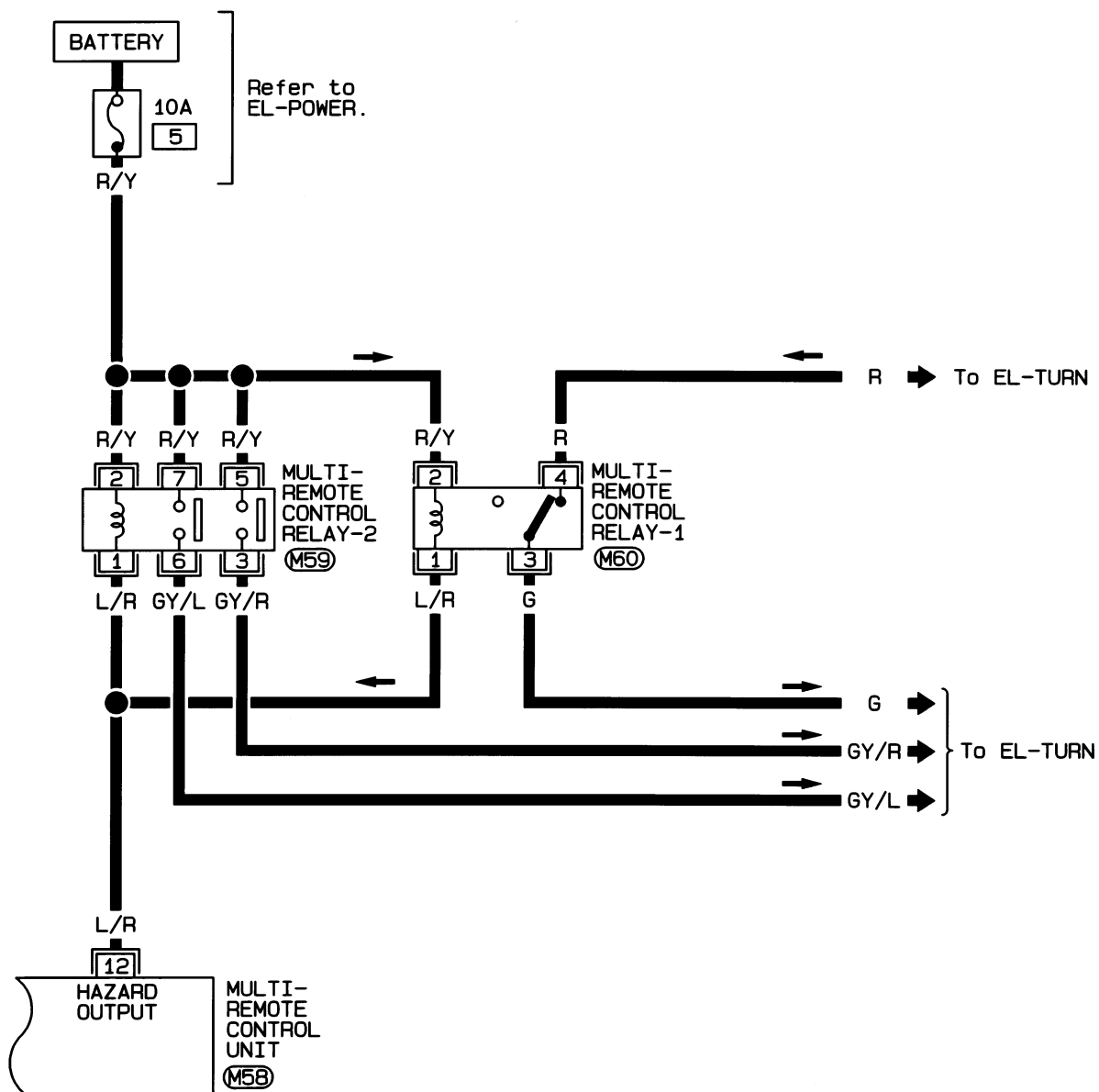
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MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

EL-MULTI-04



Trouble Diagnoses

SYMPTOM CHART

Symptom	Possible cause	Diagnoses/service order
No doors can be locked or unlocked by remote control operation. (See NOTE.)	<ol style="list-style-type: none"> 1. Remote controller battery 2. Key switch (insert) 3. Door switch 4. Power supply circuit for multi-remote control unit 5. Ground circuit for multi-remote control unit 6. Remote controller 	<ol style="list-style-type: none"> 1. Check remote controller battery. Refer to EL-158. 2. Check key switch (insert) signal at terminal ⑦ of multi-remote control unit. 3. Check door switch signal at terminals ① and ② of multi-remote control unit. 4. Make sure battery voltage is present at terminal ③ of multi-remote control unit. 5. Check continuity between terminal ⑤ of multi-remote control unit and ground. 6. Replace remote controller. Refer to EL-161.
Driver's door cannot be locked or unlocked by remote controller operation.	Driver side door lock actuator circuit	Check driver side door lock actuator circuit. Refer to EL-159.
Doors other than driver side cannot be locked or unlocked by remote control operation. (If the power door lock system does not operate correctly, check power door lock system. Refer to EL-140.)	Lock/unlock signal to door lock timer (models except for Europe)/smart entrance control unit (models for Europe)	<ul style="list-style-type: none"> • When locking is not possible: Check continuity between terminal ⑩ of multi-remote control unit and terminal ⑤ of door lock timer (models except for Europe)/terminal ④ of smart entrance control unit (models for Europe). • When unlocking is not possible: Check continuity between terminal ⑩ of multi-remote control unit and terminal ⑧ of door lock timer (models except for Europe)/terminal ⑤ of smart entrance control unit (models for Europe).
Hazard reminder does not operate properly.	<ol style="list-style-type: none"> 1. 10A fuse 2. Multi-remote control relay-1 and 2 3. Hazard reminder circuit 	<ol style="list-style-type: none"> 1. Check 10A fuse (No. ⑤, located in the fuse block). 2. Check multi-remote control relay-1 and 2. 3. Check harness for open or short between relays and multi-remote control unit terminal ⑫.
The new ID of remote controller cannot be entered.	<ol style="list-style-type: none"> 1. Remote controller battery 2. Key switch (insert) 3. Door switch 4. Driver's door unlock sensor 5. Accessory power supply circuit for multi-remote control unit 6. Remote controller 	<ol style="list-style-type: none"> 1. Check remote controller battery. Refer to EL-158. 2. Check key switch (insert) signal at terminal ⑦ of multi-remote control unit. 3. Check door switch signal at terminals ① and ② of multi-remote control unit. 4. Check driver's door unlock sensor signal at terminal ⑥ of multi-remote control unit. 5. Make sure battery voltage is present at terminal ⑧ of multi-remote control unit while ignition switch is in ACC position. 6. Replace remote controller. Refer to EL-161.

Refer to "MULTI-REMOTE CONTROL UNIT INSPECTION TABLE" on next page to check the control unit signals.

NOTE:

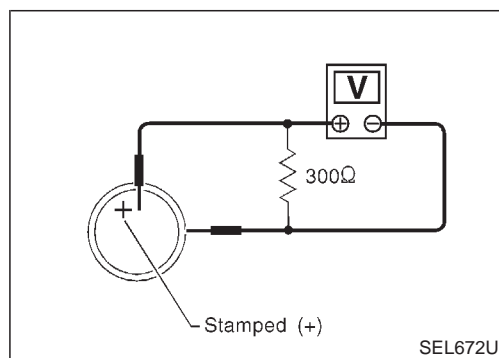
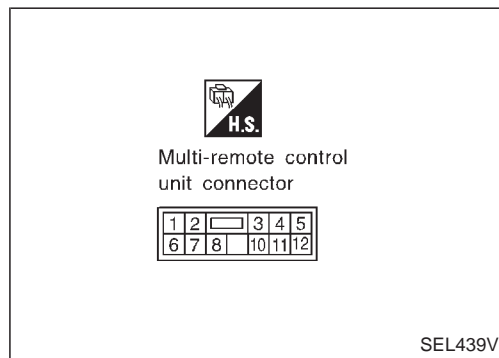
- Always check remote controller battery before replacing remote controller.
- The unlock operation of multi-remote control system does not activate with key inserted in the ignition key cylinder.
- The lock operation of multi-remote controller does not activate with the key inserted ignition key cylinder or if one of the door is opened.

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

MULTI-REMOTE CONTROL UNIT INSPECTION TABLE

Terminal No.	Connections	Condition		Voltage V (approximate values)
1	Driver side door switch	Driver side door	Opened	0
			Closed	12
2	Door switch (all doors)	One of doors is opened		0
		All doors are closed		12
3	Power source (BAT)	—		12
5	Ground	—		—
6	Driver side door unlock sensor	Driver side door	Locked	5
			Unlocked	0
7	Key switch (insert)	Key is in ignition key cylinder		12
		Key is not in ignition key cylinder		0
8	Accessory power supply	Ignition switch	OFF	0
			ACC or ON	12
10	Lock signal	Remote controller LOCK button is pushed (All doors are closed and key is not in ignition key cylinder.)		0
		Other than above condition		12
11	Unlock signal	Remote controller UNLOCK button is pushed (Key is not in ignition key cylinder.)		0
		Other than above condition		12
12	Multi-remote control relay-1, 2	Remote controller LOCK/UNLOCK button is pushed (All doors are closed and key is not in ignition key cylinder.)		0
		Other than above condition		12



REMOTE CONTROLLER BATTERY CHECK

Remove battery and measure voltage across battery positive and negative terminals, ⊕ and ⊖.

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

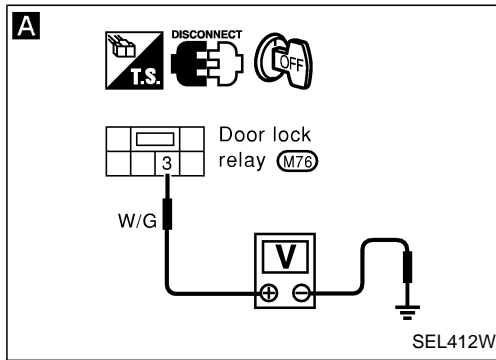
Note:

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

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

DRIVER SIDE DOOR LOCK ACTUATOR CHECK



CHECK DOOR LOCK RELAY.
Refer to EL-160.

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Replace the relay.

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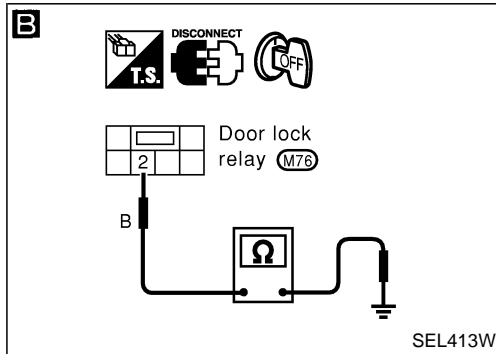
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CHECK POWER SUPPLY FOR DOOR LOCK RELAY.
Check voltage between door lock relay terminal ③ and ground.
Battery voltage should exist.

NG

Check the following.

- 30A fusible link (letter **b**, located in fusible link and fuse box) (No. **3**, located in the fusible link and fusible link box).
- Check harness for open or short between fusible link and relay.

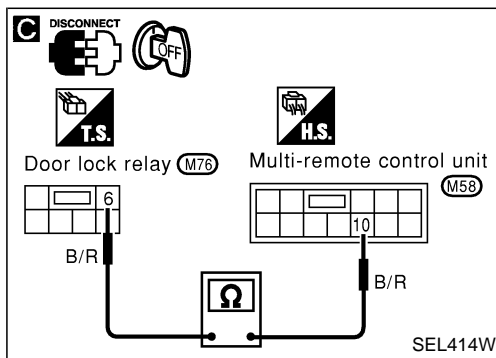
OK

CHECK GROUND CIRCUIT FOR DOOR LOCK RELAY.
Check continuity between door lock relay terminal ② and ground.
Continuity should exist.

NG

Repair harness.

OK



CHECK LOCK SIGNAL FOR DOOR LOCK RELAY.
Check continuity between door lock relay terminal ⑥ and multi-remote control unit terminal ⑩.
Continuity should exist.

NG

Check harness for open or short between door lock relay and multi-remote control unit.

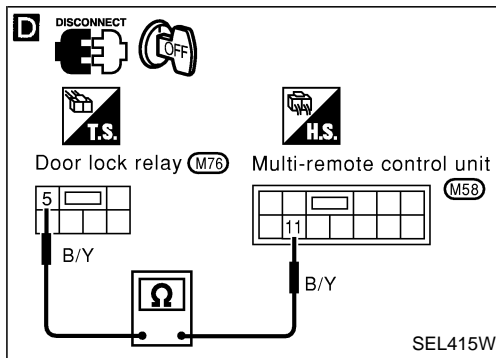
OK

CHECK UNLOCK SIGNAL FOR DOOR LOCK RELAY.
Check continuity between door lock relay terminal ⑤ and multi-remote control unit terminal ⑪.
Continuity should exist.

NG

Check harness for open or short between door lock relay and multi-remote control unit.

OK



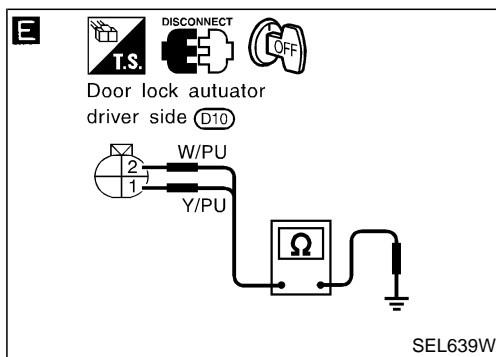
CHECK DOOR LOCK ACTUATOR CIRCUIT.
1. Connect the relays.
2. Disconnect driver side door lock actuator.
3. Check continuity between driver side door lock actuator and door lock relay.
Continuity should exist.

NG

Check harness for open or short between door lock relay and door lock actuator.

OK

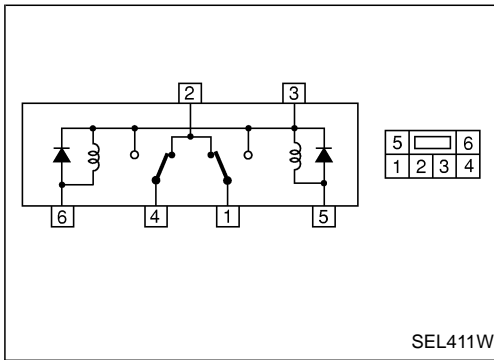
Replace door lock actuator.



MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

DOOR LOCK RELAY CHECK



Condition		Continuity between terminals					
		1	2	3	4	5	6
Battery voltage not applied between each terminal	③ and ⑤	○	○				
	③ and ⑥		○	○	○		
Battery voltage applied between each terminal	③ and ⑤	○	○	○			
	③ and ⑥			○	○		
Always				○	○	○	○

CAUTION:

While applying battery voltage to relay terminals, insert fuse into the circuit.

ID Code Entry Procedure

Note:

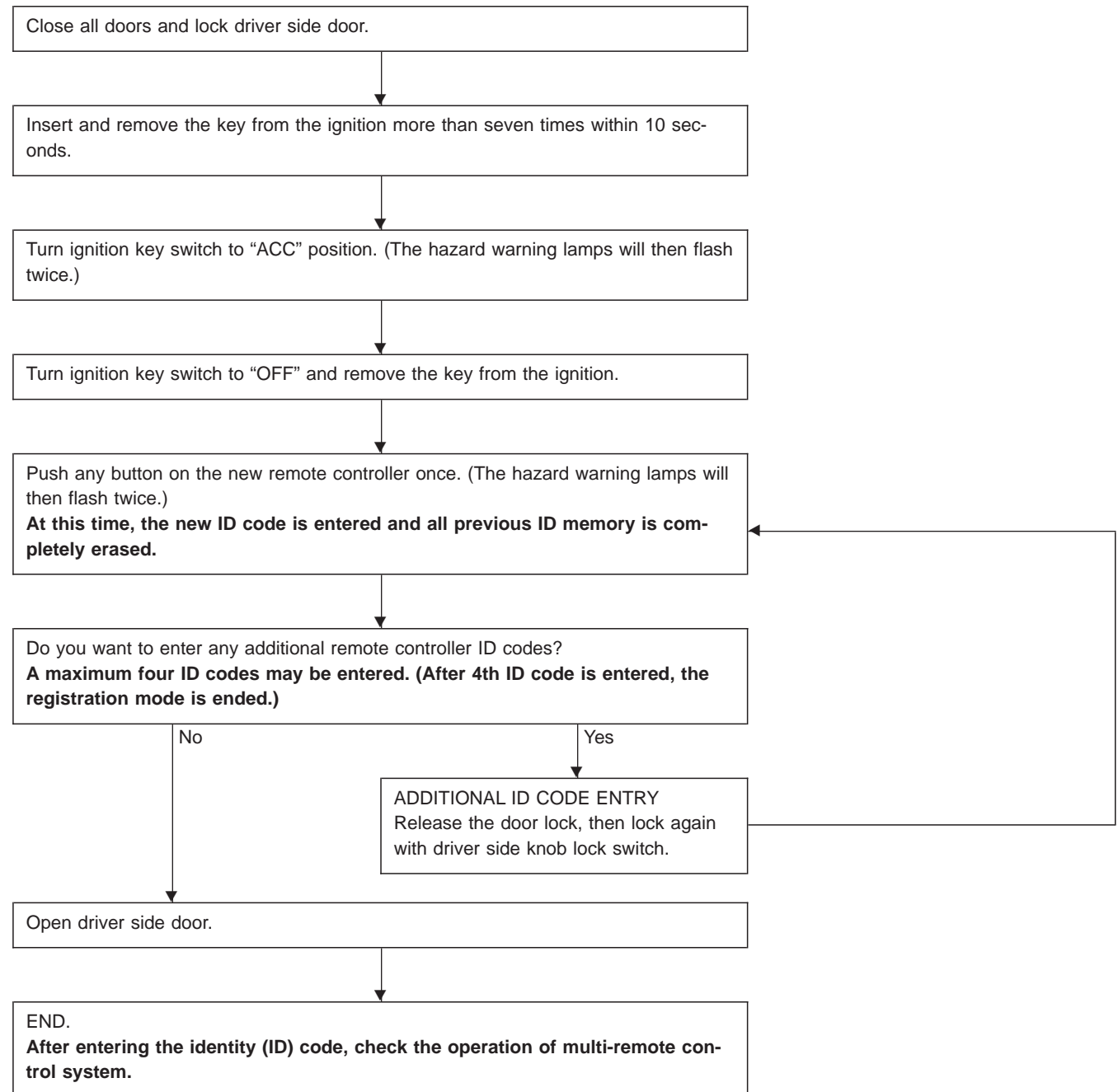
A maximum of four remote controllers can be entered. Any attempt to enter a remote controller will erase all ID codes previously entered. Therefore, be sure to receive all remote controllers from the vehicle owner when any ID code entry is performed.

Enter the identity (ID) code manually when:

- remote controller or control unit is replaced.
- an additional remote controller is activated.

To enter the ID code, follow the procedures below.

PROCEDURE

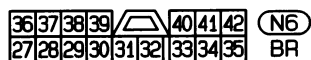
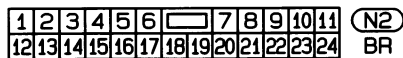
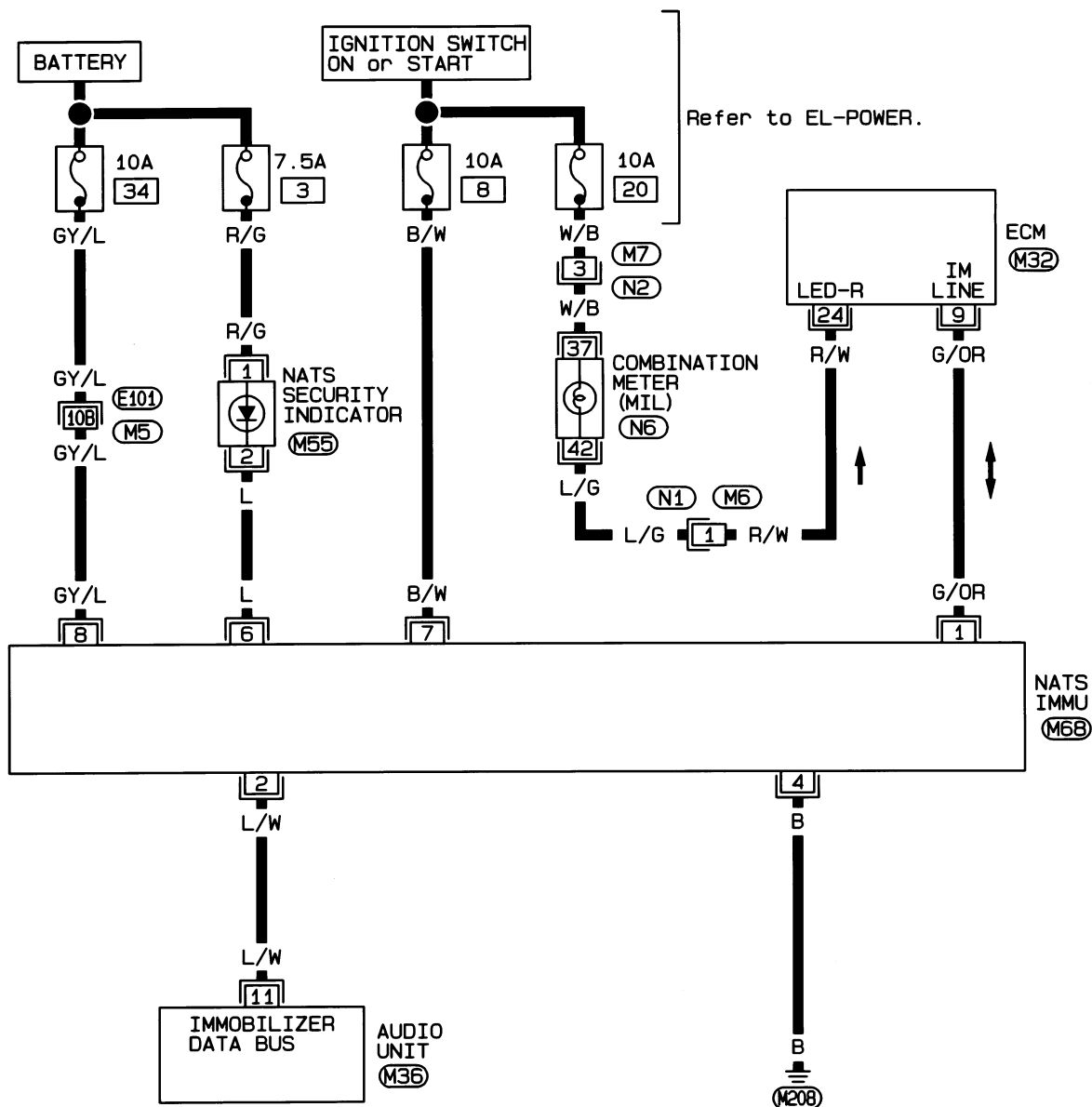


NOTE:

- If you need to activate more than two additional new remote controllers, repeat the procedure “Additional ID code entry” for each new remote controller.
- Any ID codes cannot be entered after termination of the “setting mode”.

Wiring Diagram — NATS —

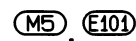
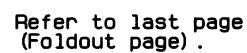
EL-NATS-01



Refer to last page (Foldout page).

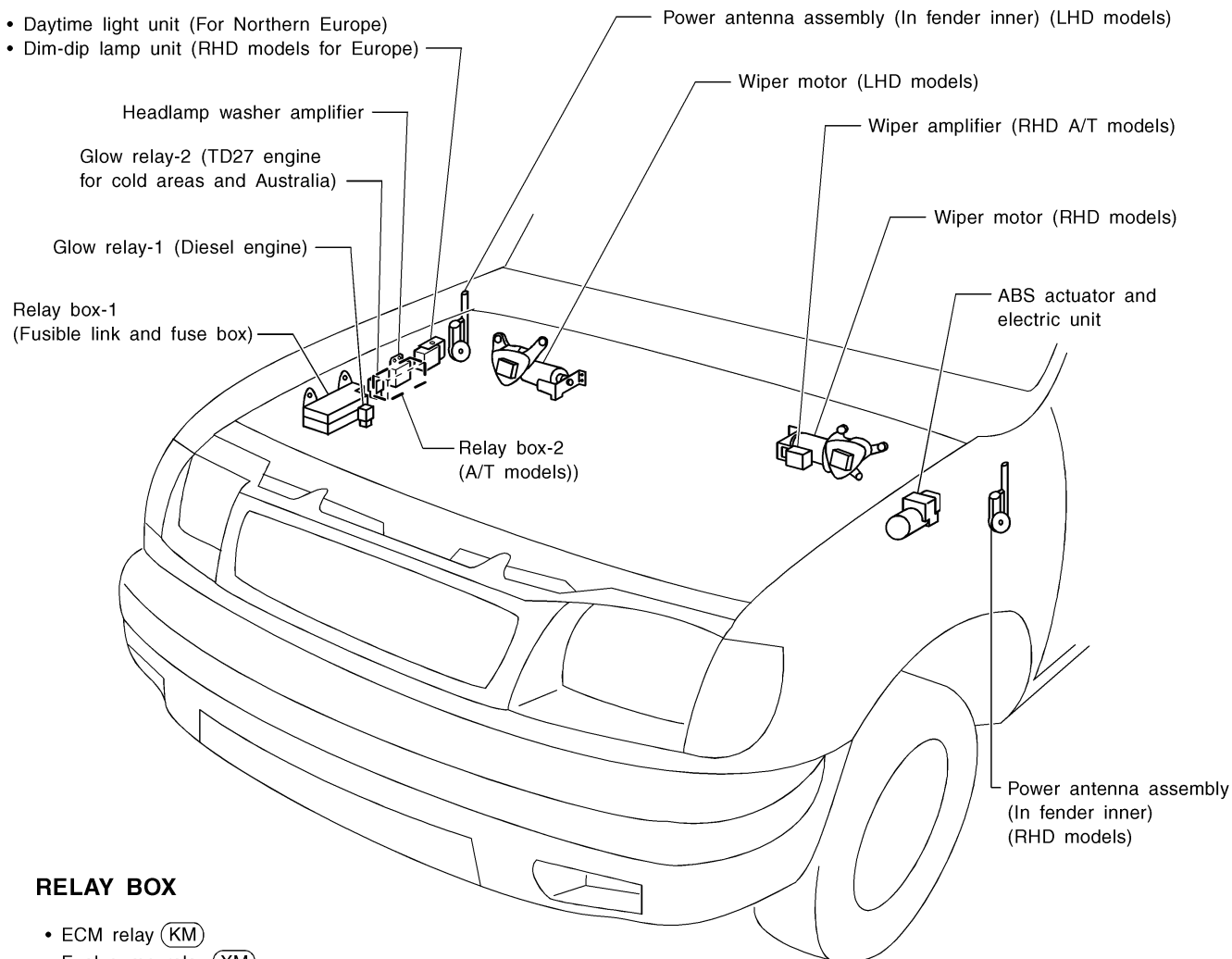
(M5), (E101)
(M32)

EL-NATS-02



Engine Compartment

- Daytime light unit (For Northern Europe)
- Dim-dip lamp unit (RHD models for Europe)



RELAY BOX

- ECM relay (KM)
- Fuel pump relay (XM)
- Automatic choke relay (Z engine)
- Fuel heater relay (RHD models for Europe)
- ECM relay (XM)
- Fuel pump relay (KM)
- Cooling fan relay (TD27 and QD32 engines with air conditioner)

Horn relay

Air conditioner relay

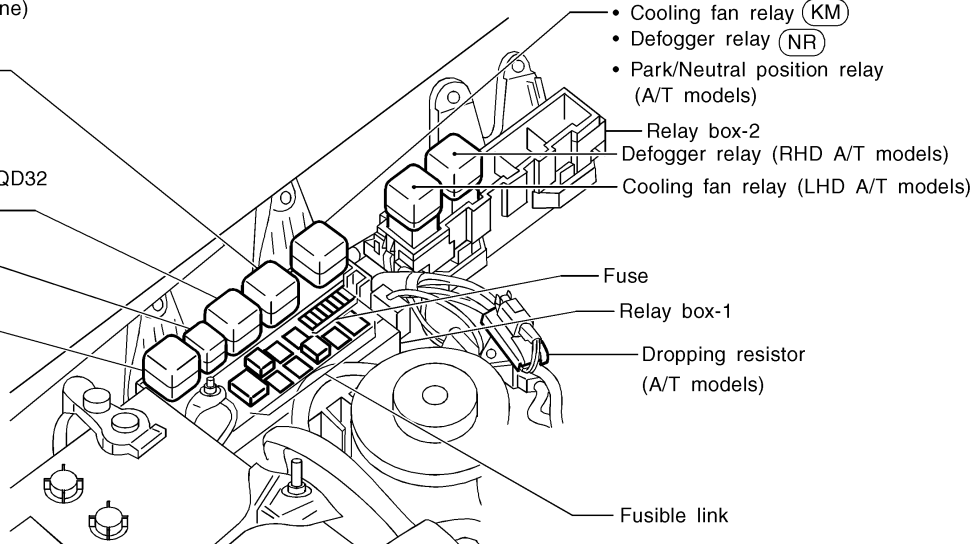
- Cooling fan relay (KM)
- Defogger relay (NR)
- Park/Neutral position relay (A/T models)
- Relay box-2
- Defogger relay (RHD A/T models)
- Cooling fan relay (LHD A/T models)

Fuse

Relay box-1

Dropping resistor (A/T models)

- (KM) : KA engine M/T models for the Middle East
- (XM) : KA engine except (KM)
- (NR) : Except RHD A/T models



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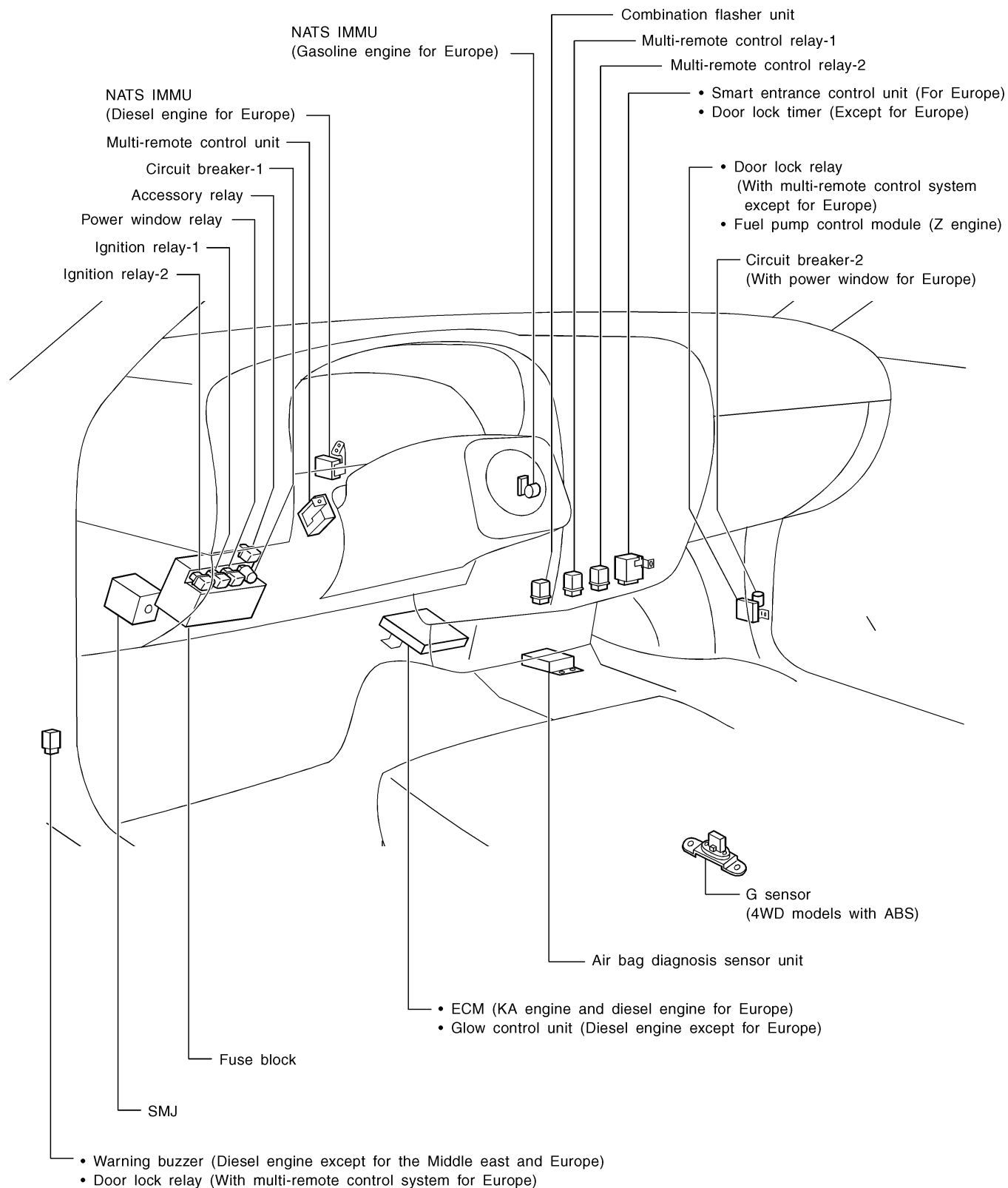
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LOCATION OF ELECTRICAL UNITS

Passenger Compartment

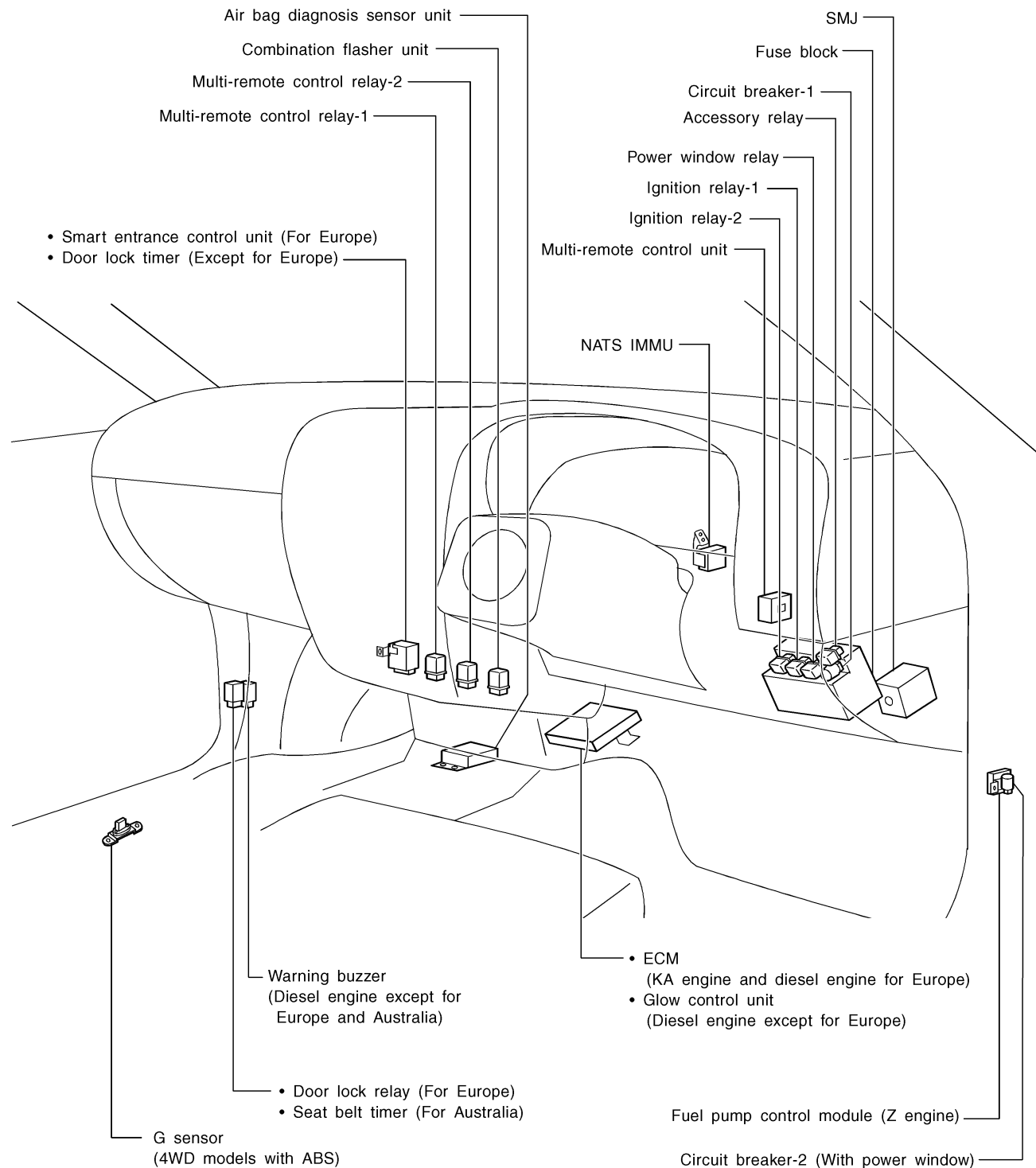
LHD MODELS



LOCATION OF ELECTRICAL UNITS

Passenger Compartment (Cont'd)

RHD MODELS



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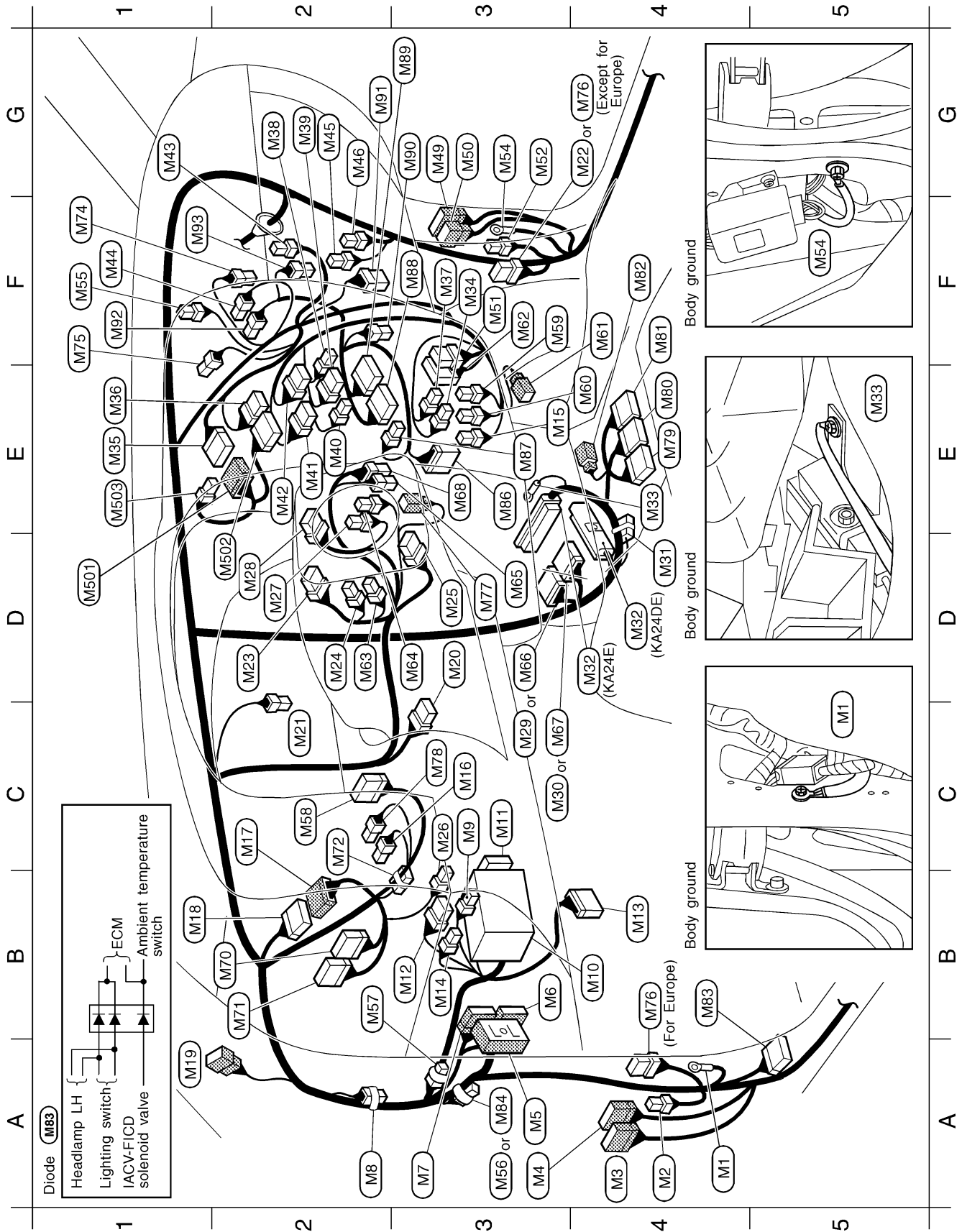
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HARNESS LAYOUT

Main Harness

INSTRUMENT PANEL — LHD MODELS



HARNESS LAYOUT

Main Harness (Cont'd)

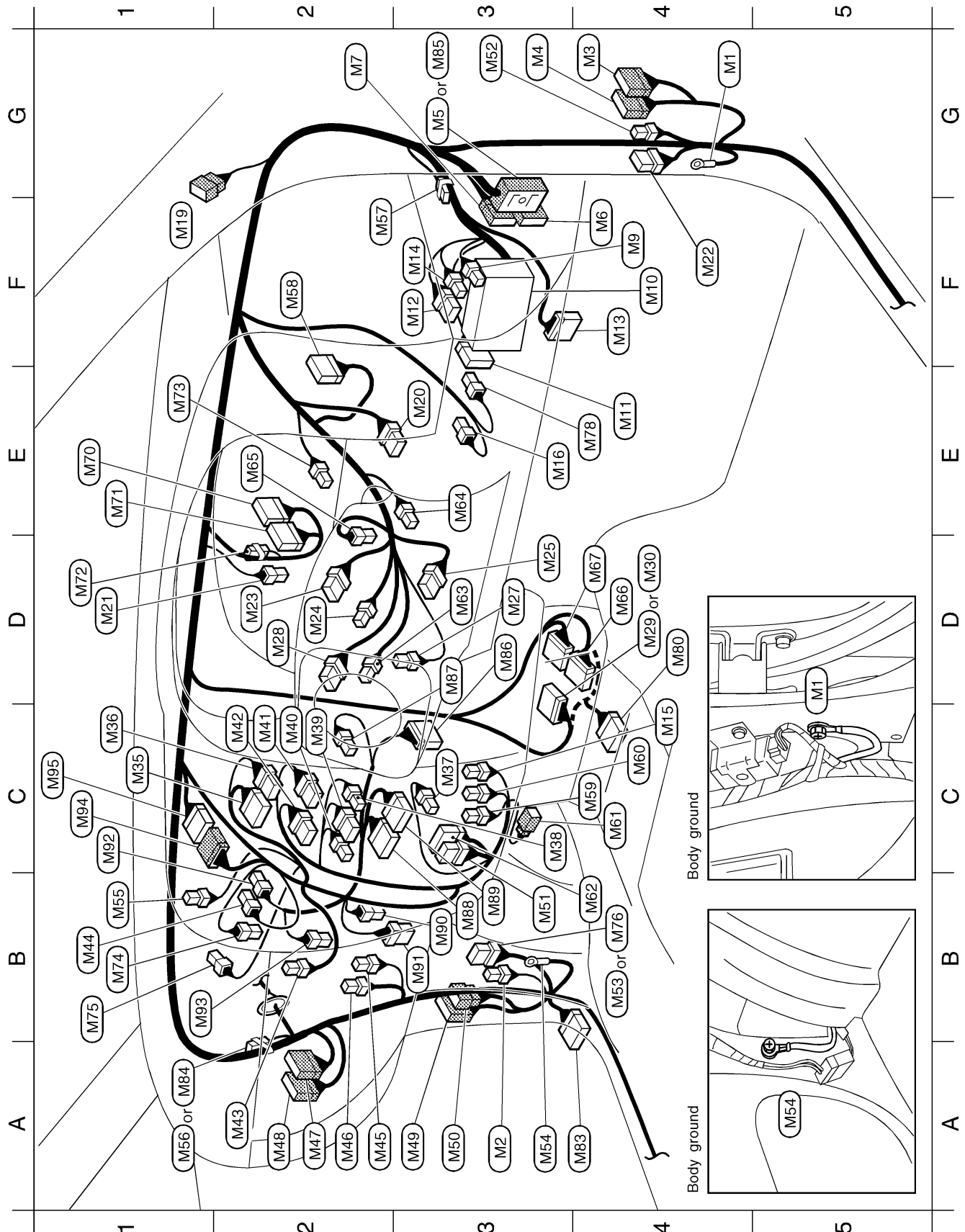
A4 (M1)	—	: Body ground	E1 (M35)	W/10	: Audio unit	F1 (M74)	W/2	: Intake air temperature sensor (With auto A/C)
A4 (M2)	W/2	: Warning buzzer (Diesel engine except for Europe and the Middle East)	E1 (M36)	W/6	: Audio unit (KA24E and with 4-speakers radio)	F1 (M75)	B/2	: Sunload sensor (With auto A/C)
A4 (M3)	W/20	: To (D1)	F3 (M37)	B/2	: Cigarette lighter	B4+G4 (M76)	W/6	: Door lock relay (★1)
A3 (M4)	W/12	: To (D2) (With power window)	G2 (M38)	W/3	: A/C switch (Without auto A/C)	D3 (M77)	BR/2	: Key switch (For Turkey)
A3 (M5)	SMJ	: To (E101)	G2 (M39)	W/6	: Fan switch (Without auto A/C)	C3 (M78)	L/2	: Shift lock brake switch (A/T models)
B3 (M6)	W/24	: To (N1)	E2 (M40)	W/2	: Fan switch illumination (Without auto A/C)	E4 (M79)	Y/12	: Air bag diagnosis sensor unit (With pre-tensioner seat belt)
A3 (M7)	BR/24	: To (N2)	E2 (M41)	W/8	: Hazard switch	E4 (M80)	Y/20	: Air bag diagnosis sensor unit
A2 (M8)	—/2	: Diode (Diesel engine except for Europe and the Middle East)	E2 (M42)	W/6	: Defogger switch (For Europe and SE grade with diesel engine)	F4 (M81)	Y/12	: Air bag diagnosis sensor unit (With pre-tensioner seat belt)
C3 (M9)	L/4	: Accessory relay	G1 (M43)	Y/2	: Air bag module passenger side	F4 (M82)	W/2	: Jumping connector (With pre-tensioner seat belt)
B4 (M10)	—	: Fuse block	F1 (M44)	BR/4	: Thermo control amplifier	B4 (M83)	L/10	: Diode (KA24DE)
C3 (M11)	GY/14	: Data link connector for CONSULT (With air bag, ABS or ECM)	G2 (M45)	BR/4	: Fan resistor (Without auto A/C)	A3 (M84)	BR/2	: Resistor (A/T models)
B3 (M12)	W/6	: Fuse block	G2 (M46)	W/2	: Blower motor	E3 (M86)	BR/10	: Mode door motor (With auto A/C)
B4 (M13)	B/10	: Check connector (Z24S)	G3 (M49)	W/20	: To (D31)	E3 (M87)	W/2	: In-vehicle sensor (With auto A/C)
B3 (M14)	W/4	: Fuse block	G3 (M50)	W/6	: To (D32) (With power window)	F3 (M88)	GY/20	: A/C auto amp. (With auto A/C)
E3 (M15)	B/3	: Combination flasher unit	F3 (M51)	W/8	: Door lock timer (With power window except for Europe)	G3 (M89)	GY/4	: A/C auto amp. (With auto A/C)
C3 (M16)	B/2	: Stop lamp switch	G3 (M52)	W/2	: Circuit breaker-2 (For Europe)	G3 (M90)	L/2	: Aspirator motor (With auto A/C)
C2 (M17)	W/16	: To (M18) (With air bag)	G3 (M54)	—	: Body ground	G2 (M91)	B/6	: Air mix door motor (With auto A/C)
B1 (M18)	W/16	: To (M17) (With air bag)	F1 (M55)	W/2	: NATS security indicator (For Europe)	F1 (M92)	W/4	: Fan control amp. (With auto A/C)
A1 (M19)	W/6	: To (R1)	A3 (M56)	—/2	: Diode (★1)	F1 (M93)	W/4	: Intake door motor (With auto A/C)
D3 (M20)	W/6	: Ignition switch	B2 (M57)	—/2	: Diode (★1)	Sub-harness D1 (M501) W/10 : To (M35) D2 (M502) W/10 : Audio unit E1 (M503) W/4 : Compact disk deck Diode (M8)		
C2 (M21)	W/1	: Parking brake switch (Stick type)	C2 (M58)	W/12	: Multi-remote control unit (★1)			
G4 (M22)	W/6	: Fuel pump control module (Z24S)	F3 (M59)	BR/6	: Multi-remote control relay-2 (★1)			
D2 (M23)	BR/8	: Lighting switch	F4 (M60)	B/5	: Multi-remote control relay-1 (★1)			
D2 (M24)	BR/4	: Turn signal lamp switch	F4 (M61)	B/2	: Jumping connector (★1)			
D3 (M25)	Y/7	: Lighting switch	F3 (M62)	W/18	: Smart entrance control unit (For Europe)			
C3 (M26)	L/2	: Spiral cable (With air bag)	D2 (M63)	W/3	: Rear fog lamp switch (For Europe and China)			
D2 (M27)	B/1	: Horn switch (Without air bag)	D3 (M64)	W/2	: Key switch (For Europe except Single cab)			
D2 (M28)	GY/8	: Wiper and washer switch	D3 (M65)	W/4	: NATS antenna amp. (Diesel engine for Europe)			
C3 (M29)	W/12	: Glow control unit (TD27 engine except for cold areas and QD engine)	D3 (M66)	GY/20	: ECM (Diesel engine for Europe)			
C3 (M30)	W/16	: Glow control unit (TD27 engine for cold areas)	C3 (M67)	GY/16	: ECM (Diesel engine for Europe)			
D4 (M31)	GY/6	: Joint connector-1 (KA engine)	E3 (M68)	W/8	: NATS IMMU (KA24E)			
D4 (M32)	W/64	: ECM (KA24E)	B2 (M70)	W/24	: TCM (Transmission control module) (A/T models)			
E4 (M33)	—	: Body ground (KA24E)	B2 (M71)	GY/24	: TCM (Transmission control module) (A/T models)			
F3 (M34)	W/2	: Ashtray illumination (GL and S-GL grade for the Middle East)	C2 (M72)	—/6	: Joint connector-2 (A/T models)	★1 : With multi-remote control system ★2 : For Europe...Smart entrance control unit Except for Europe...Door lock timer		

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HARNESS LAYOUT

Main Harness (Cont'd)

INSTRUMENT PANEL — RHD MODELS



HARNESS LAYOUT

Main Harness (Cont'd)

G4 (M1)	—	: Body ground	B1 (M44)	BR/4	: Thermo control amplifier	D4 (M80)	Y/20	: Air bag diagnosis sensor unit
A3 (M2)	W/2	: Warning buzzer (Diesel engine except for Europe and Australia)	A2 (M45)	BR/4	: Fan resistor (Without auto A/C)	A4 (M83)	L/10	: Diode (KA engine)
G4 (M3)	W/20	: To (D1)	A2 (M46)	W/2	: Blower motor	A1 (M84)	BR/2	: Resistor (A/T models)
G3 (M4)	W/12	: To (D2) (With power window)	A2 (M47)	W/16	: To (F55) (KA engine)	G3 (M85)	SMJ	: To (E104) (A/T models)
G3 (M5)	SMJ	: To (E101) (M/T models)	A2 (M48)	W/24	: To (F54) (KA engine)	D3 (M86)	BR/10	: Mode door motor (With auto A/C)
F4 (M6)	W/24	: To (N1)	A3 (M49)	W/20	: To (D31)	D3 (M87)	W/2	: In-vehicle sensor (With auto A/C)
G2 (M7)	BR/24	: To (N2)	A3 (M50)	W/6	: To (D32) (With power window)	B3 (M88)	GY/20	: A/C auto amp. (With auto A/C)
F4 (M9)	L/4	: Accessory relay	B3 (M51)	W/8	: Door lock timer (With power window except for Europe)	B3 (M89)	GY/4	: A/C auto amp. (With auto A/C)
F4 (M10)	—	: Fuse block	G3 (M52)	W/2	: Circuit breaker-2 (For Europe)	B3 (M90)	L/2	: Aspirator motor (With auto A/C)
E4 (M11)	GY/14	: Data link connector for CONSULT (With air bag, ABS or ECM)	B4 (M53)	W/8	: Seat belt timer (For Australia)	B3 (M91)	B/6	: Air mix door motor (With auto A/C)
F3 (M12)	W/6	: Fuse block	A3 (M54)	—	: Body ground	C1 (M92)	W/4	: Fan control amp. (With auto A/C)
F4 (M13)	B/10	: Check connector (Z engine)	B1 (M55)	W/2	: NATS security indicator (For Europe)	B1 (M93)	W/4	: Intake door motor (With auto A/C)
F3 (M14)	W/4	: Fuse block	A1 (M56)	—/2	: Diode	C1 (M94)	W/12	: To (M95) (With air bag)
C4 (M15)	B/3	: Combination flasher unit	F2 (M57)	—/2	: Diode	C1 (M95)	W/12	: To (M94) (With air bag)
E3 (M16)	B/2	: Stop lamp switch	F2 (M58)	W/12	: Multi-remote control system (For multi-remote control system)	 (M221) W/6 : Wiper motor (Except KA engine)		
F1 (M19)	W/6	: To (R1)	C4 (M59)	BR/6	: Multi-remote control unit (For Europe except Single cab)			
E3 (M20)	W/6	: Ignition switch	C4 (M60)	B/5	: Multi-remote control relay-2			
D1 (M21)	W/1	: Parking brake switch (Stick type)	C4 (M61)	B/2	: Multi-remote control relay-1			
F4 (M22)	W/6	: Fuel pump control module (Z engine)	C4 (M61)	B/2	: Jumping connector	 Diode (M56) , (M57) Smart entrance control unit Lock and unlock switch Smart entrance control unit Door lock relay Multi-remote control unit Door lock relay		
D2 (M23)	BR/8	: Lighting switch	B4 (M62)	W/18	: Smart entrance control unit (For Europe except Single cab)			
D2 (M24)	BR/4	: • Turn signal lamp switch	D3 (M63)	W/3	: Rear fog lamp switch (For Europe)			
D3 (M25)	Y/7	: Lighting switch	E3 (M64)	W/2	: Key switch (For Europe)			
D3 (M27)	B/1	: Spiral cable (With air bag)	E2 (M65)	W/4	: NATS antenna amp. (For Europe)	 Diode (M83) Headlamp LH Lighting switch Defogger relay (For Australia)		
D2 (M28)	GY/8	: Horn switch (Without air bag)	D4 (M66)	GY/20	: ECM (Diesel engine for Europe)			
D4 (M29)	W/12	: Wiper and washer switch	D4 (M67)	GY/16	: ECM (Diesel engine for Europe)			
D4 (M29)	W/12	: Glow control unit	E1 (M70)	W/24	: TCM (Transmission control module) (A/T models)			
D4 (M30)	W/16	: Glow control unit (TD27 engine for Australia)	E1 (M71)	GY/24	: TCM (Transmission control module) (A/T models)	 Diode (M83) Headlamp LH Lighting switch Defogger relay (For Australia)		
C1 (M35)	W/10	: Audio unit	D1 (M72)	—/6	: Joint connector-2 (A/T models)			
C1 (M36)	W/6	: Audio unit (Double cab models)	E1 (M73)	W/4	: A/T device (A/T models)			
C3 (M37)	B/2	: Cigarette lighter	B1 (M74)	W/2	: Intake air temperature sensor (With auto A/C)			
C3 (M38)	W/3	: A/C switch (Without auto A/C)	B1 (M75)	B/2	: Sunload sensor (With auto A/C)	 Diode (M83) Headlamp LH Lighting switch Defogger relay (For Australia)		
C2 (M39)	W/6	: Fan switch (Without auto A/C)	B4 (M76)	W/6	: Door lock relay (For Europe except Single cab)			
C2 (M40)	W/2	: Fan switch illumination (Without auto A/C)	E4 (M78)	L/2	: Shift lock brake switch (A/T models)			
C2 (M41)	W/8	: Hazard switch						
C2 (M42)	W/6	: Defogger switch (For Europe and with power window)						
A2 (M43)	Y/2	: Air bag module passenger side						

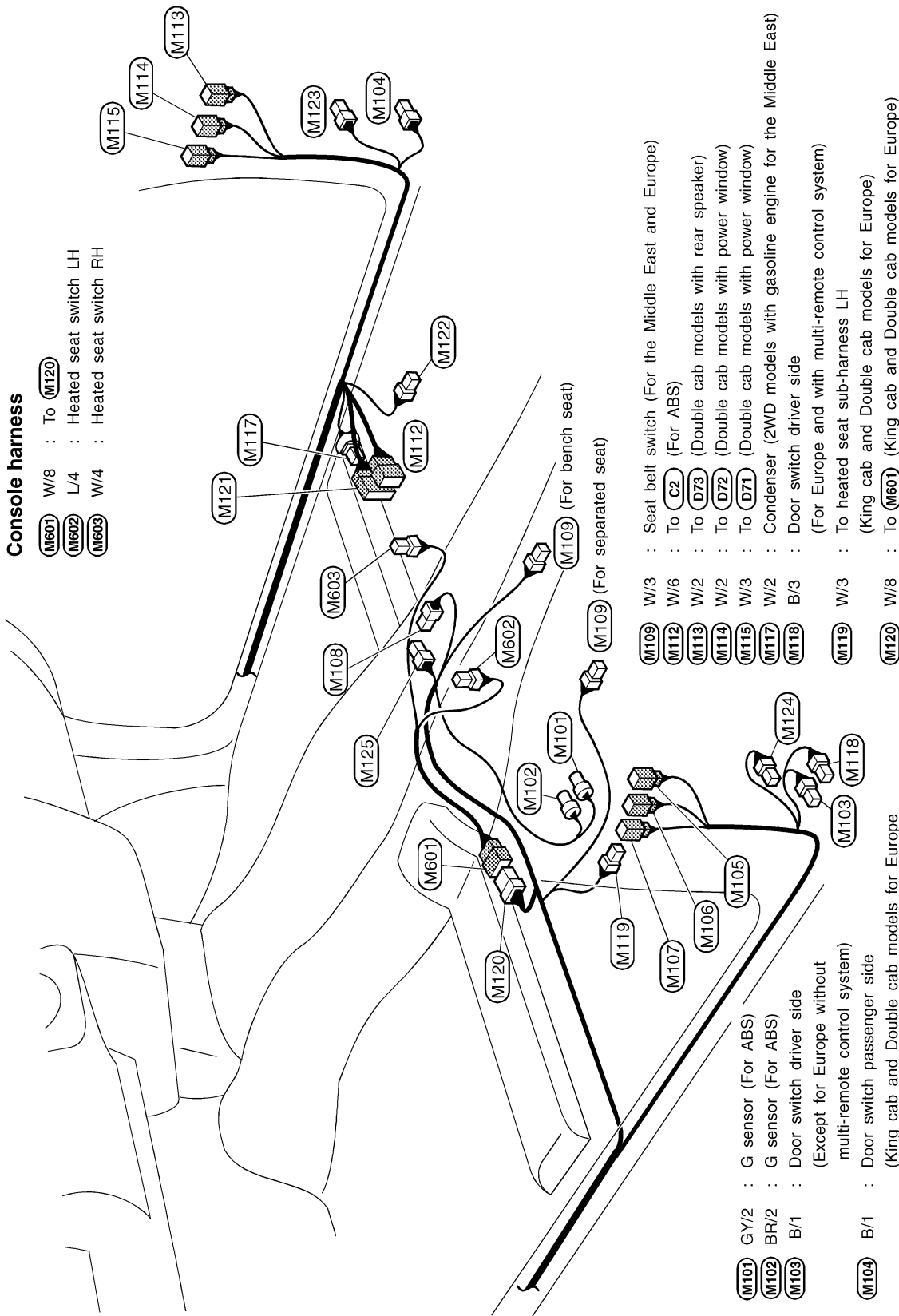
HARNESS LAYOUT

Main Harness (Cont'd)

BODY SIDE — LHD MODELS

Console harness

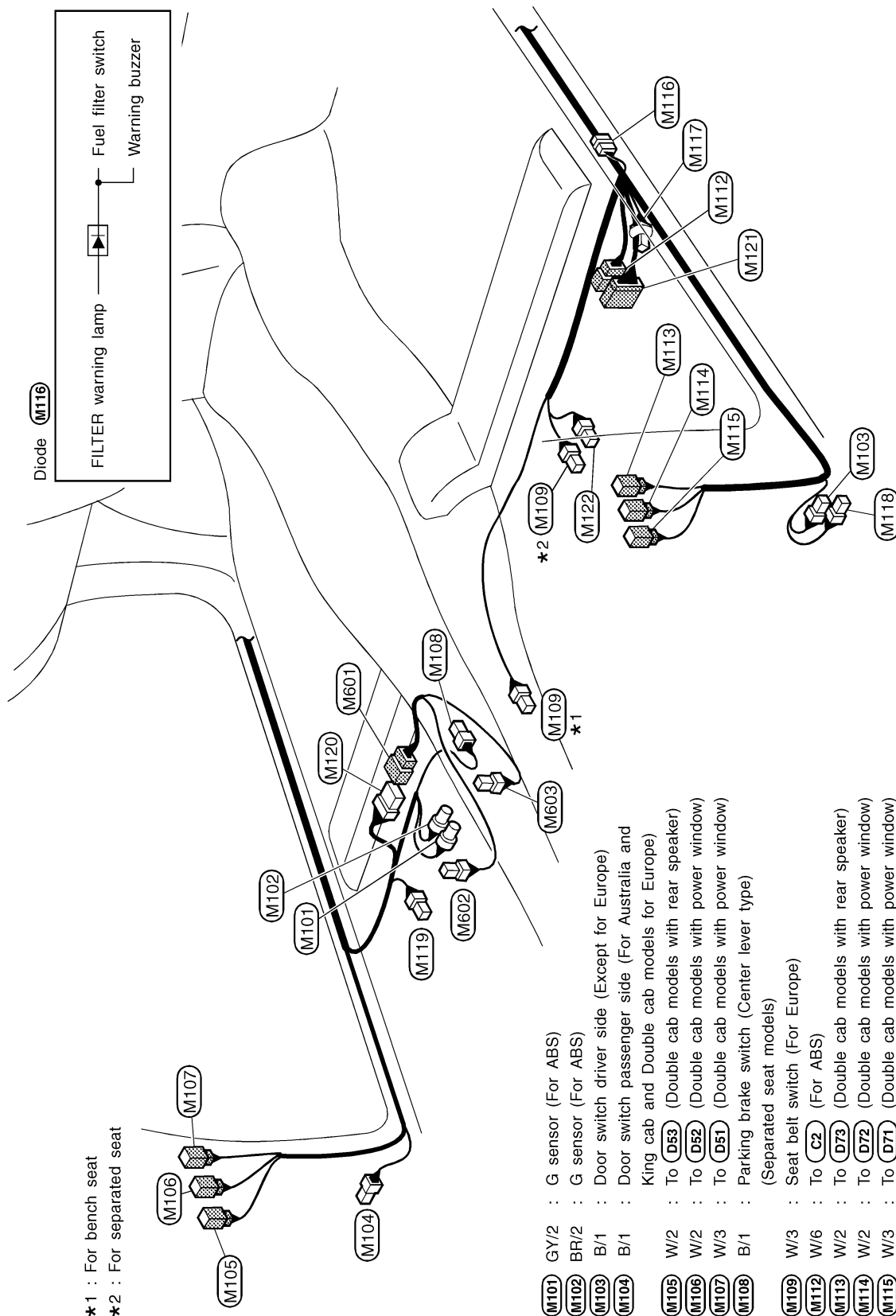
- (M601)** W/8 : To **(M120)**
(M602) L/4 : Heated seat switch LH
(M603) W/4 : Heated seat switch RH



HARNESS LAYOUT

Main Harness (Cont'd)

BODY SIDE — RHD MODELS



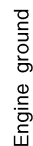
Console harness

M121	W/16	: To C9
M122	W/3	: To heated seat sub-harness RH (King cab and Double cab models for Europe)
M601	W/8	: To M120
M602	L/4	: Heated seat switch LH
M603	W/4	: Heated seat switch RH

M101	GY/2	: G sensor (For ABS)
M102	BR/2	: G sensor (For ABS)
M103	B/1	: Door switch driver side (Except for Europe)
M104	B/1	: Door switch passenger side (For Australia and King cab and Double cab models for Europe)
M105	W/2	: To D53 (Double cab models with rear speaker)
M106	W/2	: To D52 (Double cab models with power window)
M107	W/3	: To D51 (Double cab models with power window)
M108	B/1	: Parking brake switch (Center lever type) (Separated seat models)
M109	W/3	: Seat belt switch (For Europe)
M112	W/6	: To C2 (For ABS)
M113	W/2	: To D73 (Double cab models with rear speaker)
M114	W/2	: To D72 (Double cab models with power window)
M115	W/3	: To D71 (Double cab models with power window)
M116	-/2	: Diode (Diesel engine except for Europe and Australia)
M117	W/2	: Condenser (Gasoline engine)
M118	B/3	: Door switch driver side (For Europe)
M119	W/3	: To heated seat sub-harness LH (King cab and Double cab models for Europe)
M120	W/8	: To M601 (King cab and Double cab models for Europe)

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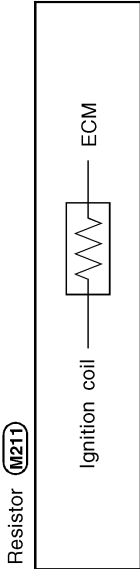
ENGINE COMPARTMENT — KA24DE ENGINE (LHD models)



HARNESS LAYOUT
Main Harness (Cont'd)

Sub-harness

- B2 M302 BR/3 : Throttle position sensor
- B2 M303 GY/3 : Throttle position switch (A/T models)
- C2 M304 B/6 : To M225
- E2 M321 B/3 : To M230
- D3 M322 -/2 : Knock sensor
- D3 M323 B/1 : Oil pressure switch



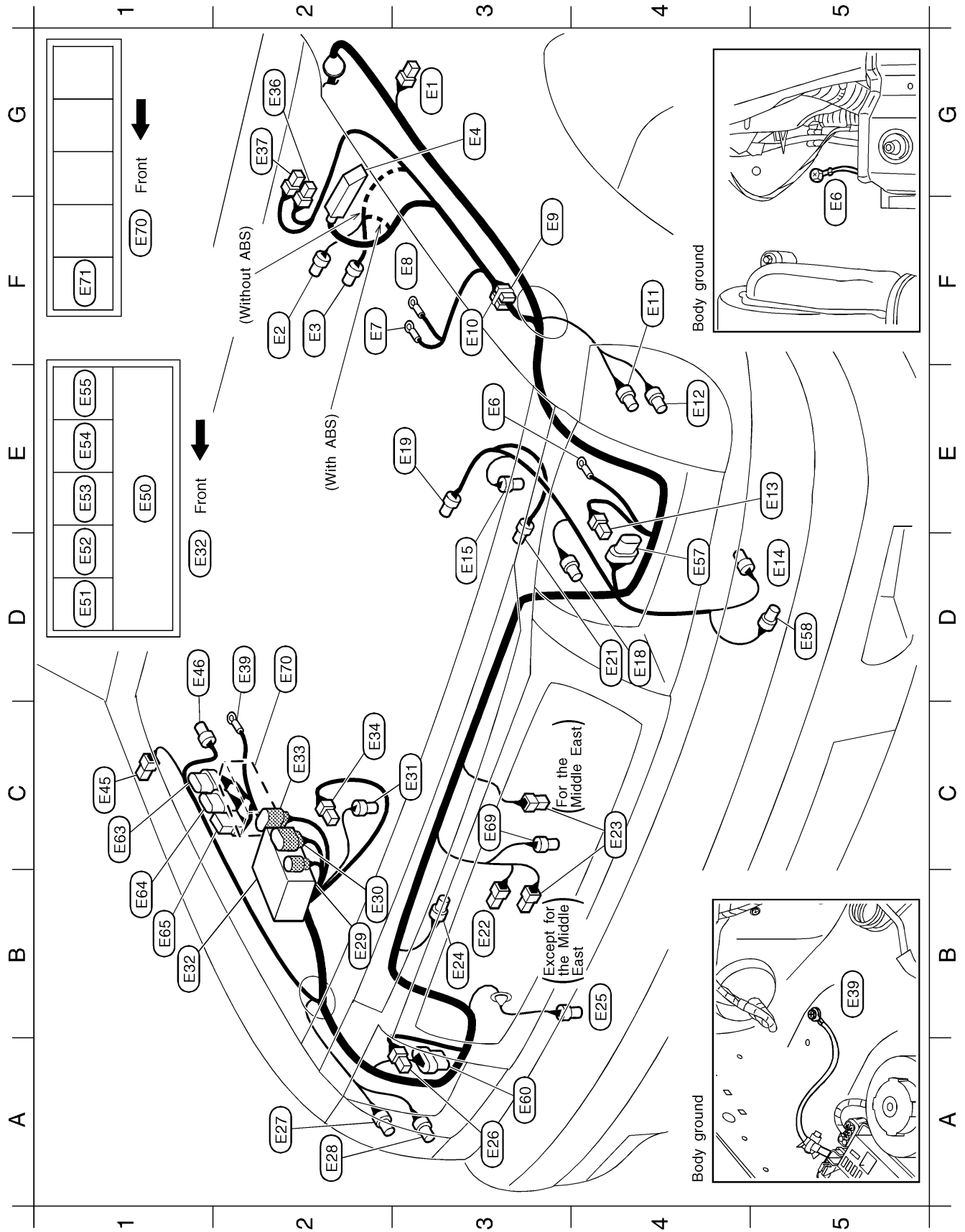
- D1 M204 GY/3 : Mass air flow sensor (With three way catalyst)
- C2 M207 - : Engine ground
- C2 M208 - : Engine ground
- C3 M209 B/1 : Thermal transmitter
- E1 M211 -/2 : Resistor
- D3 M212 B/1 : Compressor
- E3 M213 GY/2 : Distributor
- E3 M214 GY/6 : Distributor
- C3 M215 GY/2 : Engine coolant temperature sensor
- C1 M221 W/6 : Wiper motor
- C2 M222 B/2 : IACV-FICD solenoid valve
- C2 M223 BR/2 : IACV-AAC valve
- D1 M225 B/6 : To M304
- C3 M226 GY/2 : Injector No.1
- D2 M227 GY/2 : Injector No.2
- E2 M228 GY/2 : Injector No.3
- E2 M229 GY/2 : Injector No.4
- D1 M230 B/3 : To M321
- E3 M231 B/3 : Heated oxygen sensor (With three way catalyst)
- B1 M232 GY/2 : Dropping resistor (A/T models)
- B1 M233 GY/2 : Park/Neutral position (PNP) switch (A/T models)
- C1 M234 GY/8 : Park/Neutral position (PNP) switch (A/T models)
- C1 M235 BR/8 : To terminal cord assembly (A/T models)
- B1 M236 GY/3 : Revolution sensor (A/T models)
- D1 M237 BR/4 : Mass air flow sensor (Without three way catalyst)

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HARNESS LAYOUT

Engine Room Harness

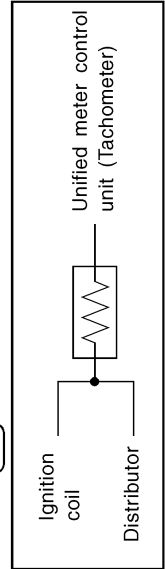
LHD MODELS — GASOLINE ENGINE



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G3	E1	B/2	: Side turn signal lamp LH (For Europe and China)
F2	E2	GY/2	: Brake fluid level switch
F2	E3	GY/3	: Heated oxygen sensor (KA24E engine)
G3	E4	B/31	: ABS actuator and electric unit (For ABS)
E3	E6	—	: Body ground
F2	E7	—	: Ignition coil (Z engine)
F3	E8	—	: Ignition coil (Z engine)
F3	E9	-/2	: Resistor (Z engine)
F3	E10	W/2	: Condenser (Z engine)
F4	E11	GY/3	: Front combination lamp LH (Except for Europe and China)
E4	E12	BR/3	: Front combination lamp LH (For Europe and China)
E5	E13	B/3	: Headlamp LH
D5	E14	GY/2	: Washer motor
D3	E15	BR/2	: Front wheel sensor LH (For ABS)
D4	E18	GY/2	: Not used (KA engine for the Middle East)
E3	E19	GY/3	: Distributor (Z engine)
D4	E21	B/1	: Compressor (Z engine)
B3	E22	B/1	: Horn low
C4	E23	B/1	: Horn high
B3	E24	GY/2	: Cooling fan motor (KA engine for the Middle East)
B4	E25	B/4	: Triple-pressure switch
A3	E26	B/3	: Headlamp RH
A2	E27	GY/3	: Front combination lamp RH (Except for Europe and China)
A2	E28	BR/3	: Front combination lamp RH (For Europe and China)
B2	E29	GY/2	: To E204
B2	E30	B/8	: To E203
C3	E31	GY/2	: Front wheel sensor RH (For ABS)
B1	E32	—	: Relay box-1 (Fusible link and fuse box)
C2	E33	GY/8	: To E205 (KA engine)
C2	E34	B/1	: Battery
G2	E36	B/1	: ISC-FI pot control solenoid valve (Z engine)
G2	E37	B/1	: ISC-FI pot control solenoid valve (Z engine)
D2	E39	—	: Body ground
C1	E45	B/2	: Side turn signal lamp RH (For Europe and China)
D1	E46	GY/3	: Power antenna
			(For the Middle East except 4WD models with ABS)
E1	E50	—	: Fusible link and fuse box
D1	E51	L/4	: Air conditioner relay
D1	E52	W/3	: Horn relay
E1	E53	L/4	: ECM relay (KA engine for Europe)
		BR/6	: ECM relay (KA engine M/T models except for Europe and the Middle East, and A/T models)
		L/4	: Fuel pump relay (KA engine M/T models for the Middle East)

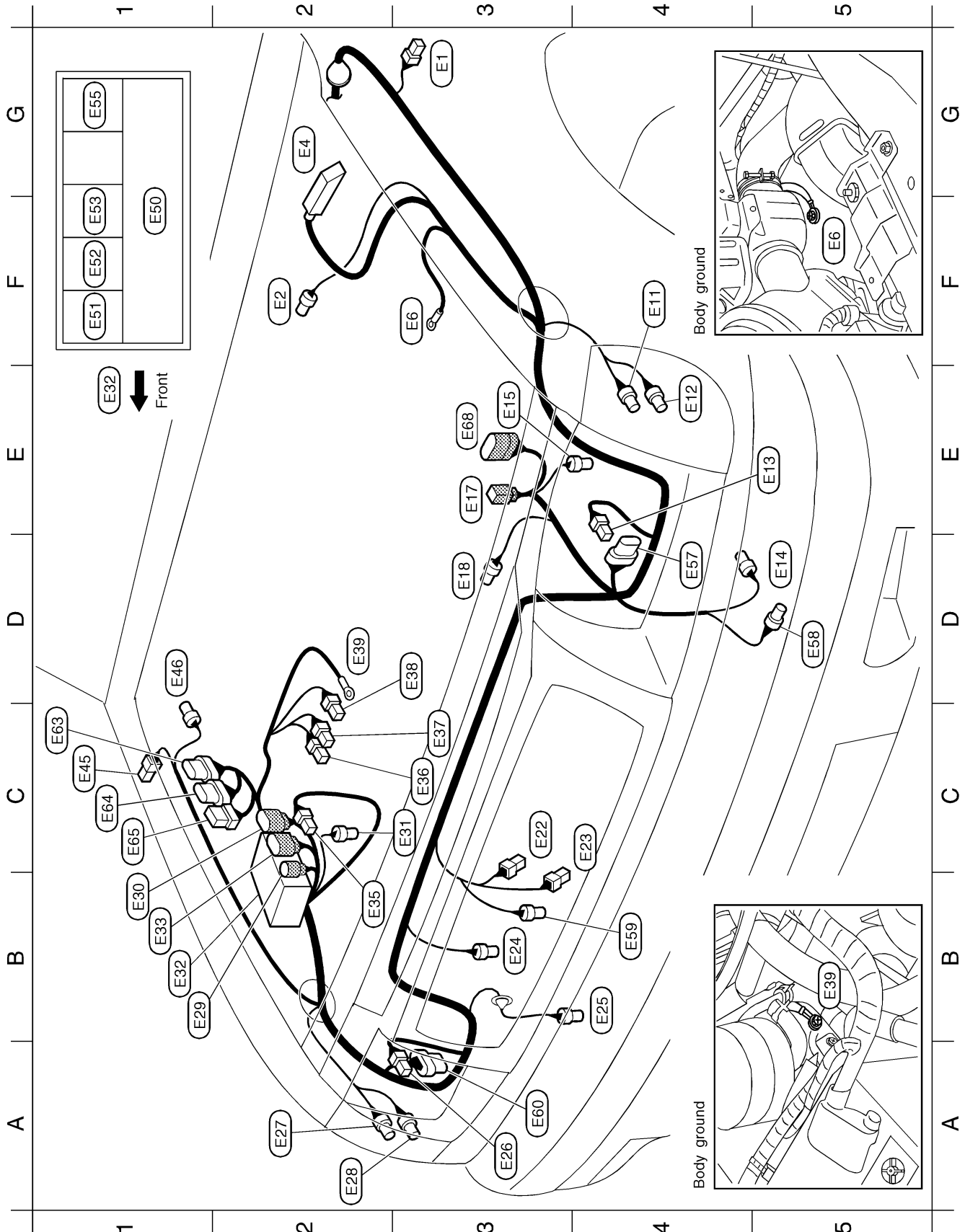
Resistor (E9)



HARNESS LAYOUT

Engine Room Harness (Cont'd)

LHD MODELS — DIESEL ENGINE

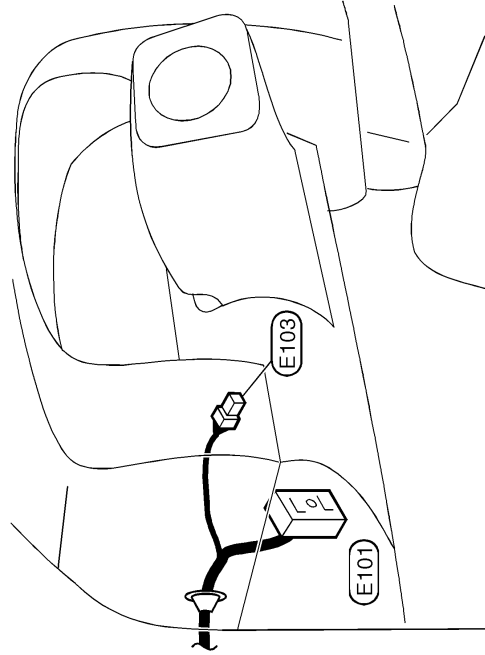


HARNESS LAYOUT

Engine Room Harness (Cont'd)

D4 (E57) GY/6 : Headlamp aiming motor LH (For Europe)
D5 (E58) GY/2 : Headlamp washer motor (For Europe)
B4 (E59) B/2 : Ambient sensor (For auto A/C)
(For Europe except 2WD models with ABS)
A3 (E60) GY/6 : Headlamp aiming motor RH (For Europe)
C1 (E63) GY/6 : Daytime light unit (With daytime light system)
C1 (E64) GY/8 : Daytime light unit (With daytime light system)
C1 (E65) W/6 : Headlamp washer amplifier (For Europe)
E3 (E68) GY/10 : To (A13)

PASSENGER COMPARTMENT



(E101) SMJ : To (M5)
(E103) B/2 : Fuse block

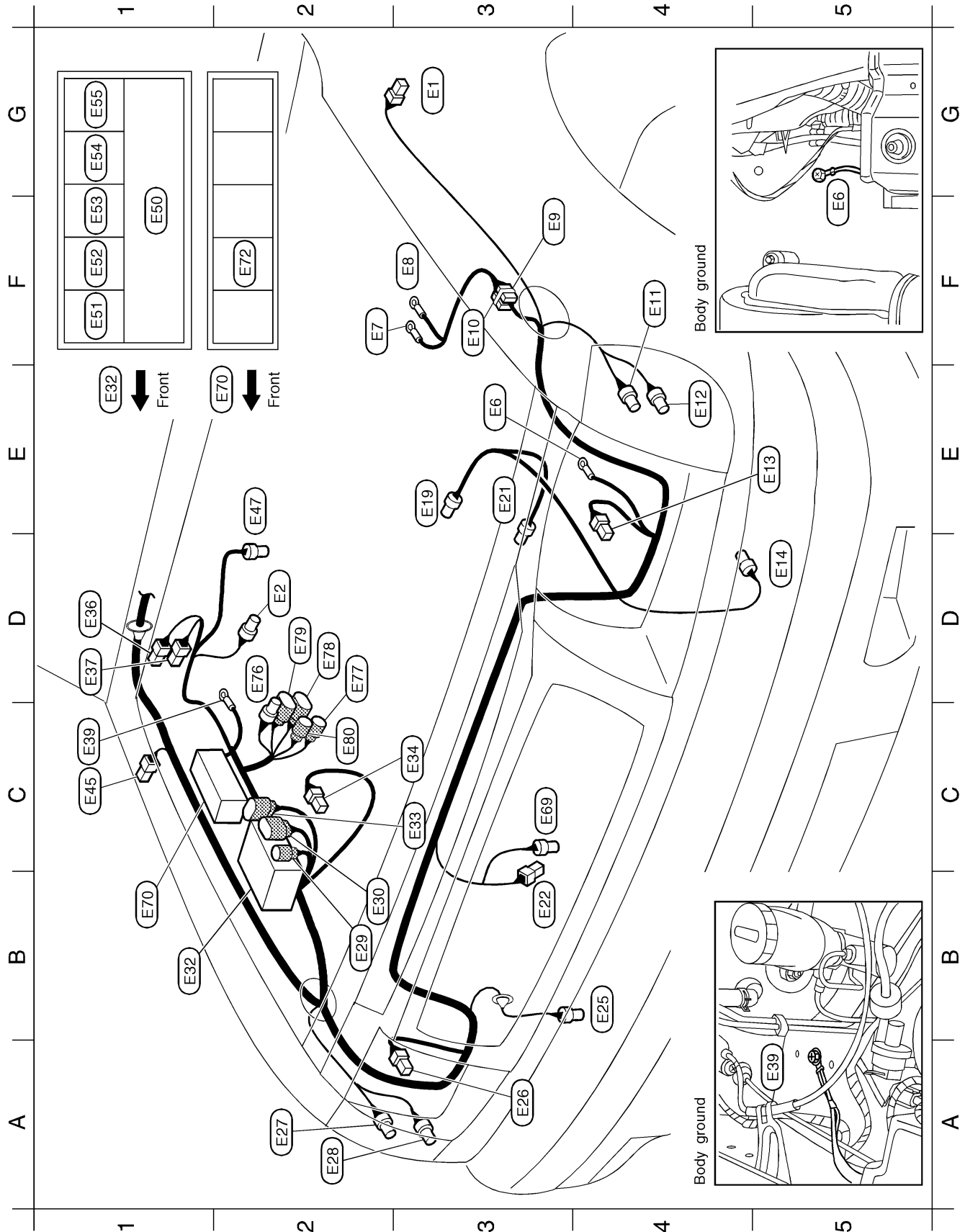
G3 (E1) B/2 : Side turn signal lamp LH (For Europe)
F2 (E2) GY/2 : Brake fluid level switch
G2 (E4) B/31 : ABS actuator and electric unit (For ABS)
F3 (E6) — : Body ground
F4 (E11) GY/3 : Front combination lamp LH (Except for Europe)
E4 (E12) BR/3 : Front combination lamp LH (For Europe)
E5 (E13) B/3 : Headlamp LH
D5 (E14) GY/2 : Washer motor
E3 (E15) BR/2 : Front wheel sensor LH (For ABS)
E3 (E17) B/2 : To (A2)
D3 (E18) GY/2 : Thermoswitch (Except TD27 engine except for the Middle East and TD engine 2WD models with ABS for Europe)
C3 (E22) B/1 : Horn low
C4 (E23) B/1 : Horn high
B3 (E24) GY/2 : Cooling fan motor (Except TD27 engine except for the Middle East and TD engine 2WD models with ABS for Europe)
B4 (E25) B/4 : Triple-pressure switch
A3 (E26) B/3 : Headlamp RH
A2 (E27) GY/3 : Front combination lamp RH (Except for Europe)
A2 (E28) BR/3 : Front combination lamp RH (For Europe)
B2 (E29) GY/2 : To (E204)
B1 (E30) B/8 : To (E203) (For Europe)
C3 (E31) GY/2 : Front wheel sensor RH (For ABS)
B1 (E32) — : Relay box (Fusible link and fuse box)
B1 (E33) GY/8 : To (E205)
B2 (E35) B/1 : To (E206)
C3 (E36) B/1 : IACV-FICD solenoid valve
C3 (E37) B/1 : IACV-FICD solenoid valve
D3 (E38) GY/1 : Vacuum warning switch
D2 (E39) — : Body ground
C1 (E45) B/2 : Side turn signal lamp RH (For Europe)
D1 (E46) GY/3 : Power antenna (For Europe except 2WD models with ABS)
F1 (E50) — : Fusible link and fuse box
F1 (E51) L/4 : Air conditioner relay
F1 (E52) W/3 : Horn relay
F1 (E53) L/4 : Cooling fan relay (Except TD27 engine except for the Middle East and TD engine 2WD models with ABS for Europe)
G1 (E55) L/4 : Defogger relay (Except for the Middle East)

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HARNESS LAYOUT

Engine Room Harness (Cont'd)

RHD MODELS — GASOLINE ENGINE



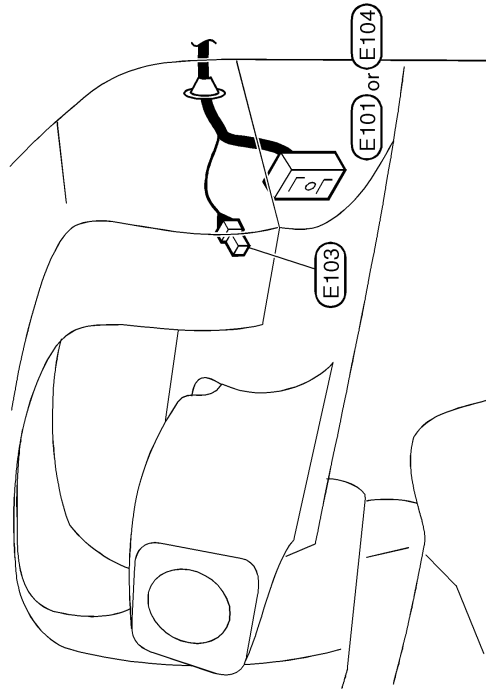
HARNESS LAYOUT

Engine Room Harness (Cont'd)

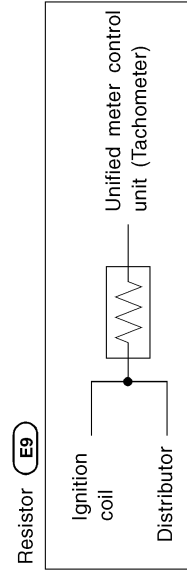
G3	E1	B/2	: Side turn signal lamp LH (For Australia)
D2	E2	GY/2	: Brake fluid level switch
E3	E6	—	: Body ground
F2	E7	—	: Ignition coil (Z engine)
F3	E8	—	: Ignition coil (Z engine)
F3	E9	-/2	: Resistor (Z engine)
F3	E10	W/2	: Condenser (Z engine)
F4	E11	GY/3	: Front combination lamp LH (Except for Australia)
E4	E12	BR/3	: Front combination lamp LH (For Australia)
E5	E13	B/3	: Headlamp LH
D5	E14	GY/2	: Washer motor
E3	E19	GY/3	: Distributor (Z engine)
E3	E21	B/1	: Compressor (Z engine)
B3	E22	B/1	: Horn low
B4	E25	B/4	: Triple-pressure switch
A3	E26	B/3	: Headlamp RH
A2	E27	GY/3	: Front combination lamp RH (Except for Australia)
A2	E28	BR/3	: Front combination lamp RH (For Australia)
B2	E29	GY/2	: To E204
B2	E30	B/8	: To E203
B1	E32	—	: Relay box-1 (Fusible link and fuse box)
C3	E33	GY/8	: To E205 (KA engine)
C3	E34	B/1	: Battery
D1	E36	B/1	: ISC-FI pot control solenoid valve (Z engine)
D1	E37	B/1	: ISC-FI pot control solenoid valve (Z engine)
C1	E39	—	: Body ground
C1	E45	B/2	: Side turn signal lamp RH (For Australia)
E2	E47	GY/3	: Carburetor (Z engine)
F1	E50	—	: Fusible link and fuse box
F1	E51	L/4	: Air conditioner relay
F1	E52	W/3	: Horn relay
F1	E53	BR/6	: ECM relay (KA engine)
G1	E54	B/5	: Automatic choke relay (Z engine)
		L/4	: Fuel pump relay (KA engine)
G1	E55	BR/6	: Defogger relay (M/T models for AAustralia)
		BR/6	: Park/Neutral position (PNP) relay (A/T models)
C3	E69	BR/2	: Ambient temperature switch (KA engine)
B1	E70	—	: Relay box-2 (A/T models)
F2	E72	BR/6	: Defogger relay (A/T models)
D2	E76	GY/2	: Dropping resistor (A/T models)

D2 (E77) GY/2 : Park/Neutral position (PNP) switch (A/T models)
D2 (E78) GY/8 : Park/Neutral position (PNP) switch (A/T models)
D2 (E79) BR/8 : To terminal cord assembly (A/T models)
C2 (E80) GY/3 : Revolution sensor (A/T models)

PASSENGER COMPARTMENT



(E101) SMJ : To (M5) (M/T models)
(E103) B/2 : Fuse block
(E104) SMJ : To (M85) (A/T models)

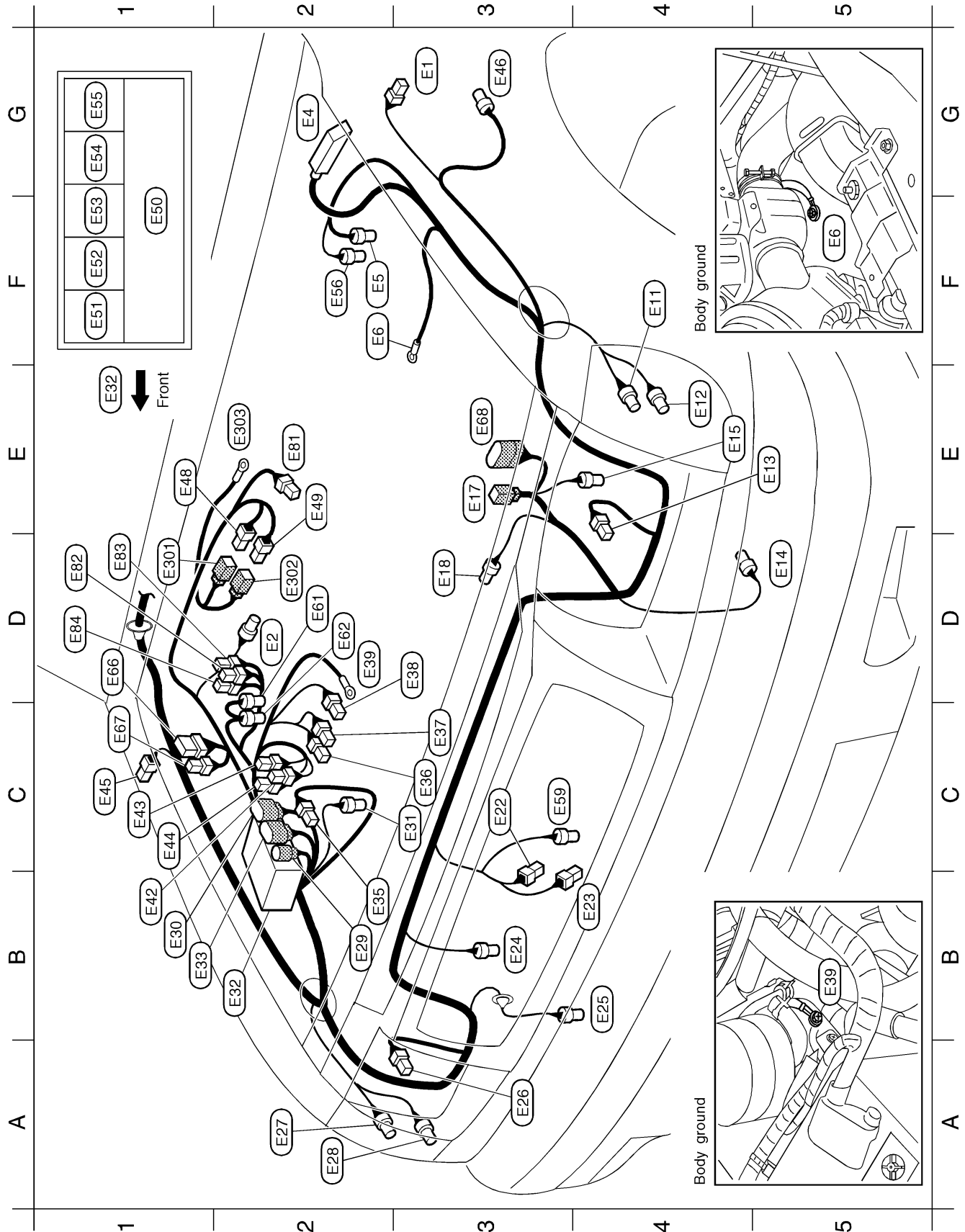


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HARNESS LAYOUT

Engine Room Harness (Cont'd)

RHD MODELS — DIESEL ENGINE

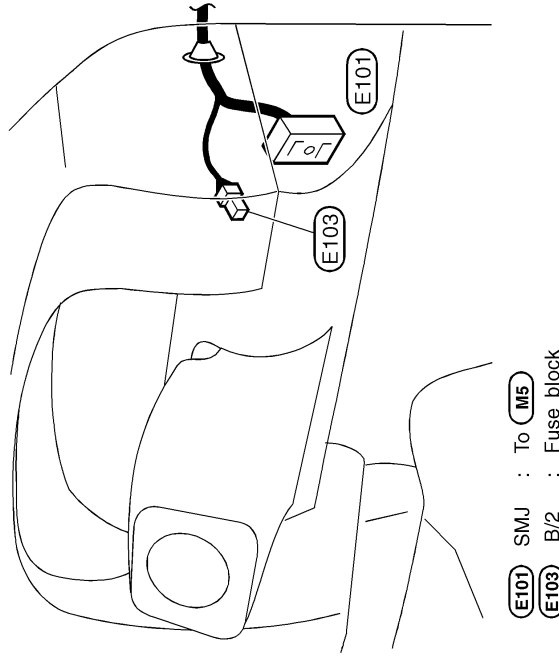


HARNESS LAYOUT

Engine Room Harness (Cont'd)

G1	E54	L/4	: Fuel heater relay (For Europe)
G1	E55	BR/6	: Defogger relay (TD27 engine for Australia and TD25, 25Ti and QD engine)
F2	E56	GY/4	: Fuel filter (For fuel heater)(For Europe)
C3	E59	B/2	: Ambient sensor (For auto A/C)
D2	E61	B/2	: EGRC-solenoid valve (Throttle chamber)(For Europe)
D2	E62	BR/2	: EGRC-solenoid valve (EGR valve)(For Europe)
D1	E66	GY/6	: Dim-dip lamp unit (For Europe)
C1	E67	GY/4	: Dim-dip lamp unit (For Europe)
E3	E68	GY/10	: To A13
E2	E81	B/2	: Dropping resistor (TD engine for Australia)
D1	E82	W/1	: Glow relay-2 (TD engine for Australia)
D1	E83	W/1	: Glow relay-2 (TD engine for Australia)
D1	E84	G/2	: Glow relay-2 (TD engine for Australia)

PASSENGER COMPARTMENT



Sub-harness

D1	E301	B/1	: To E48 (QD engine)
D2	E302	L/2	: To E49 (TD engine)
E2	E303	—	: Glow plug

G3	E1	B/2	: Side turn signal lamp LH (For Europe and Australia)
D2	E2	GY/2	: Brake fluid level switch
G2	E4	B/31	: ABS actuator and electric unit (For ABS)
F2	E5	BR/2	: Fuel filter switch
F2	E6	—	: Body ground
F4	E11	GY/3	: Front combination lamp LH (Except for Europe and Australia)
E4	E12	BR/3	: Front combination lamp LH (For Europe and Australia)
E5	E13	B/3	: Headlamp LH
D5	E14	GY/2	: Washer motor
E4	E15	BR/2	: Front wheel sensor LH (For ABS)
E3	E17	B/2	: To A2
D3	E18	GY/2	: Thermoswitch
C3	E22	B/1	: Horn low
B4	E23	B/1	: Horn high (For Europe and QD engine except for Australia)
B3	E24	GY/2	: Cooling fan motor
B4	E25	B/4	: Triple-pressure switch
A3	E26	B/3	: Headlamp RH
A2	E27	GY/3	: Front combination lamp RH (Except for Europe and Australia)
A2	E28	BR/3	: Front combination lamp RH (For Europe and Australia)
B2	E29	GY/2	: To E204
B1	E30	B/8	: To E203 (For Europe)
C3	E31	GY/2	: Front wheel sensor RH (For ABS)
B2	E32	—	: Relay box-1 (Fusible link and fuse box)
B1	E33	GY/8	: To E205
B2	E35	B/1	: To E206
C3	E36	B/1	: IACV-FICD solenoid valve
C3	E37	B/1	: IACV-FICD solenoid valve
D3	E38	GY/1	: Vacuum warning switch (Except for Australia)
D2	E39	—	: Body ground
B1	E42	W/1	: Glow relay-1
C1	E43	W/1	: Glow relay-1
C1	E44	G/2	: Glow relay-1
C1	E45	B/2	: Side turn signal lamp RH (For Europe and Australia)
G3	E46	GY/3	: Power antenna (For Europe except 2WD model with ABS)
E1	E48	B/1	: To E301 (QD engine)
E2	E49	L/2	: To E302 (TD engine)
F1	E50	—	: Fusible link and fuse box
F1	E51	L/4	: Air conditioner relay
F1	E52	W/3	: Horn relay
F1	E53	L/4	: Cooling fan relay (For Europe except 2WD models with ABS and QD engine)

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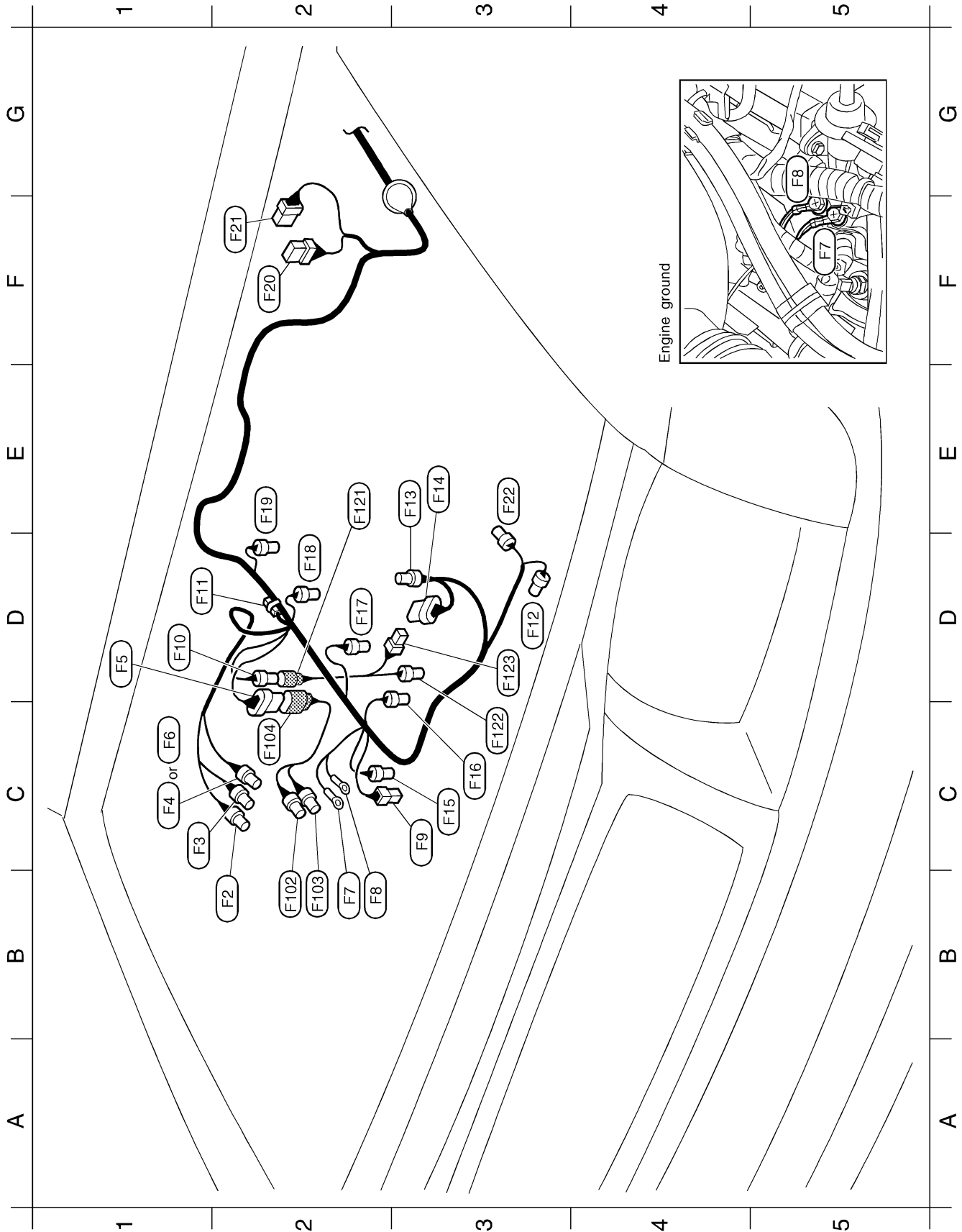
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HARNESS LAYOUT

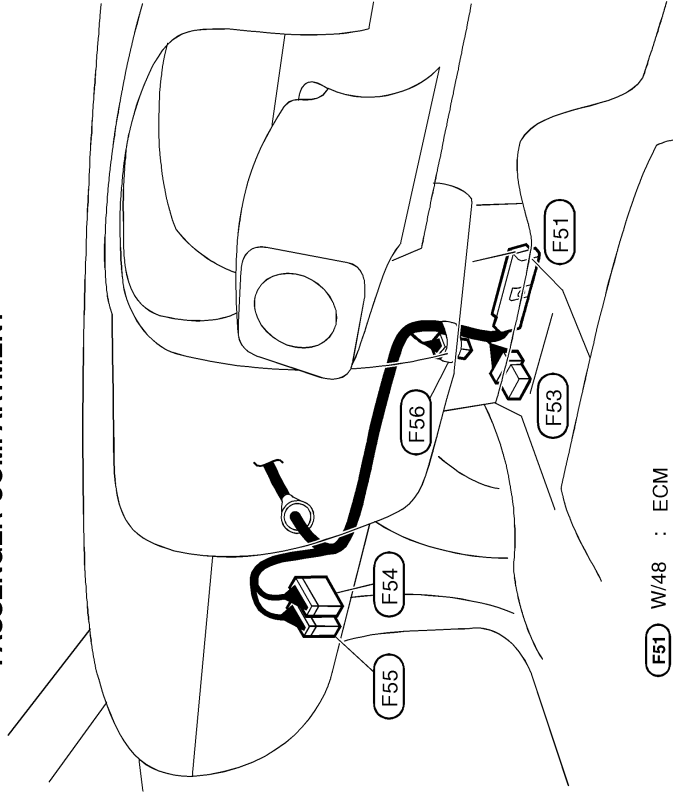
Engine Control Harness



HARNESS LAYOUT

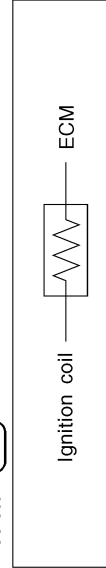
Engine Control Harness (Cont'd)

PASSENGER COMPARTMENT

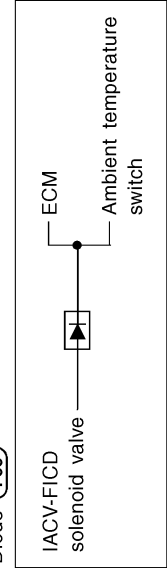


- (F51) W/48 : ECM
- (F53) GY/6 : Joint connector
- (F54) W/24 : To (M48)
- (F55) W/16 : To (M47)
- (F56) -/2 : Diode

Resistor (F11)



Diode (F56)



- B2 (F2) B/2 : IACV-FICD solenoid valve
- C1 (F3) BR/2 : IACV-AAC valve
- C1 (F4) GY/3 : Mass air flow sensor (With three way catalyst)
- D1 (F5) B/6 : To (F104)
- C1 (F6) BR/4 : Mass air flow sensor (Without three way catalyst)
- B2 (F7) — : Engine ground
- B2 (F8) — : Engine ground
- C3 (F9) B/1 : Thermal transmitter
- D1 (F10) B/3 : To (F121)
- D1 (F11) -/2 : Resistor
- D3 (F12) B/1 : Compressor
- E3 (F13) GY/2 : Distributor
- E3 (F14) GY/6 : Distributor
- C3 (F15) GY/2 : Engine coolant temperature sensor
- C3 (F16) GY/2 : Injector No.1
- D2 (F17) GY/2 : Injector No.2
- D2 (F18) GY/2 : Injector No.3
- E2 (F19) GY/2 : Injector No.4
- F2 (F20) GY/8 : Wiper amplifier (A/T models)
- F2 (F21) W/6 : Wiper motor
- E2 (F22) B/3 : Heated oxygen sensor (With three way catalyst)

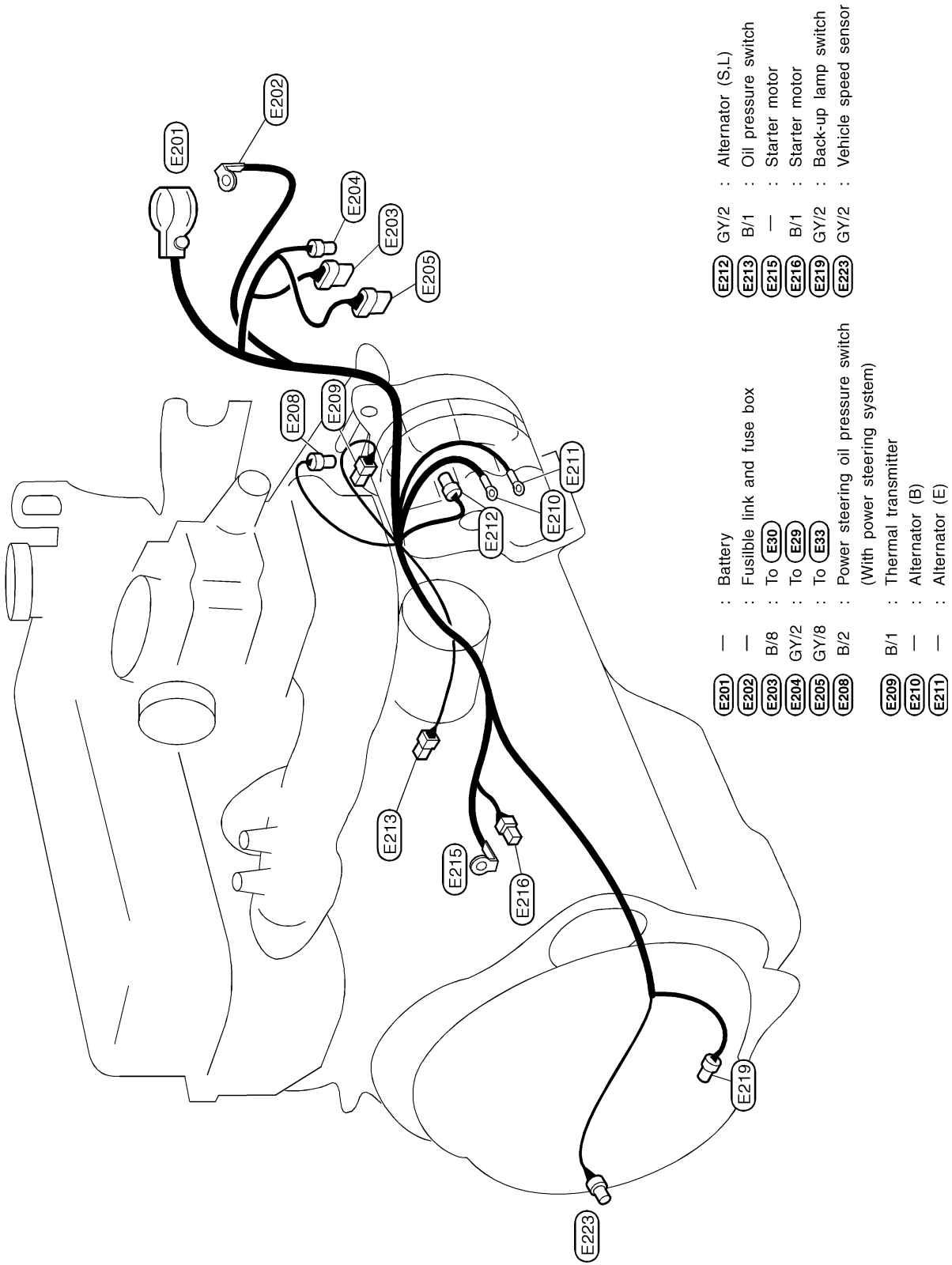
Sub-harness

- B2 (F102) BR/3 : Throttle position sensor
- B2 (F103) GY/3 : Throttle position switch (A/T models)
- C2 (F104) B/6 : To (F5)
- E2 (F121) B/3 : To (F10)
- C3 (F122) -/2 : Knock sensor
- D3 (F123) B/1 : Oil pressure switch

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Engine Harness

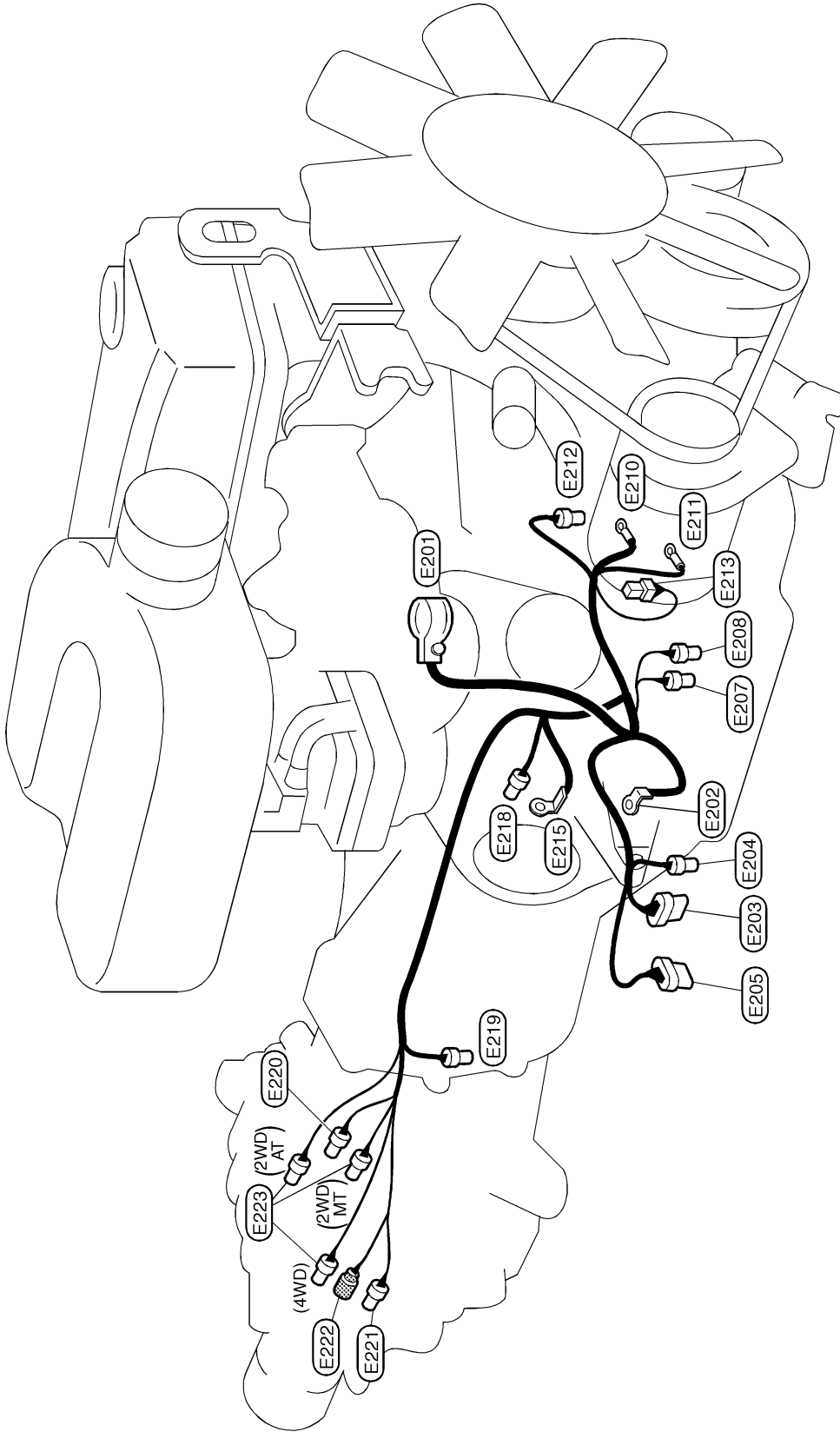
Z ENGINE



HARNESS LAYOUT

Engine Harness (Cont'd)

KA ENGINE



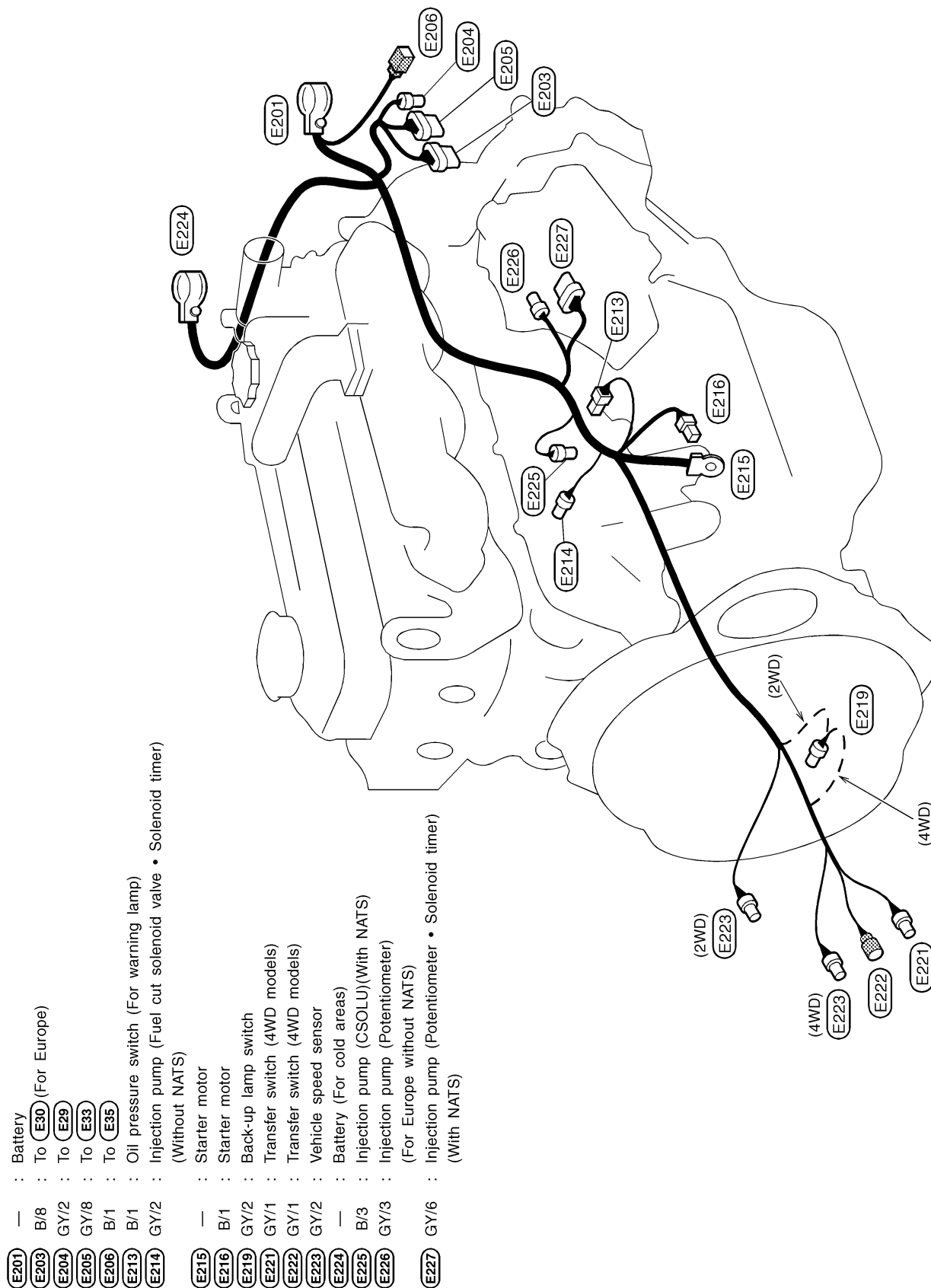
E201	—	: Battery	E213	B/1	: Oil pressure switch (KA24E)
E202	—	: Fusible link and fuse box	E215	—	: Starter motor
E203	B/8	: To E30	E218	GY/1	: Starter motor
E204	GY/2	: To E29	E219	GY/2	: Back-up lamp switch (M/T models)
E205	GY/8	: To E33	E220	B/2	: Park/Neutral position (PNP) switch (M/T models)
E207	GY/2	: Power steering oil pressure switch (RHD 4WD models)	E221	GY/1	: Transfer switch (4WD models)
E208	B/2	: Power steering oil pressure switch (Except RHD 4WD models)	E222	GY/1	: Transfer switch (4WD models)
E210	—	: Alternator (B)	E223	GY/2	: Vehicle speed sensor
E211	—	: Alternator (E)			
E212	GY/2	: Alternator (S,L)			

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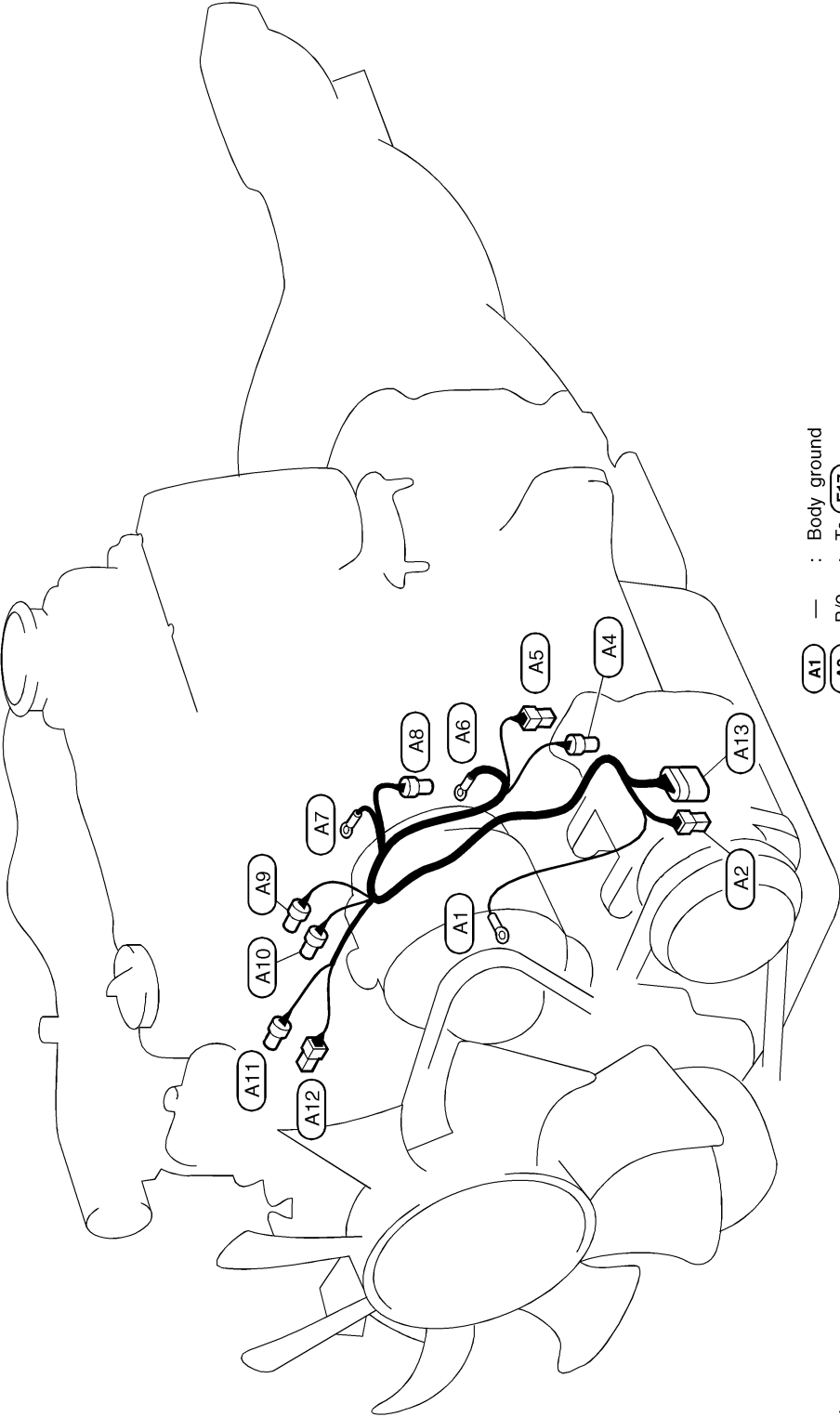
HARNESS LAYOUT

Engine Harness (Cont'd)

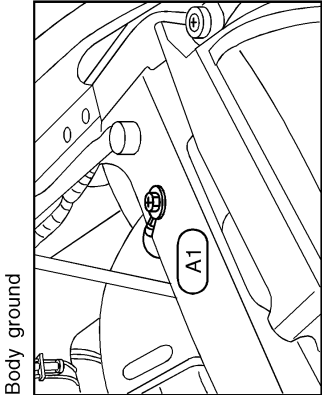
DIESEL ENGINE



Alternator Harness



A1	—	: Body ground
A2	B/2	: To (E17)
A3	B/1	: Compressor
A4	B/1	: Oil pressure switch (For fuel heater)
A5	B/1	: (Except QD engine for Australia)
A6	—	: Alternator (B)
A7	—	: Alternator (E)
A8	GY/2	: Alternator (S.L)
A9	GY/2	: Thermoswitch (Turbocharger models and except for Europe)
A10	BR/2	: Revolution sensor
A11	GY/2	: Engine coolant temperature sensor
A12	B/1	: Thermal transmitter
A13	GY/10	: To (E68)

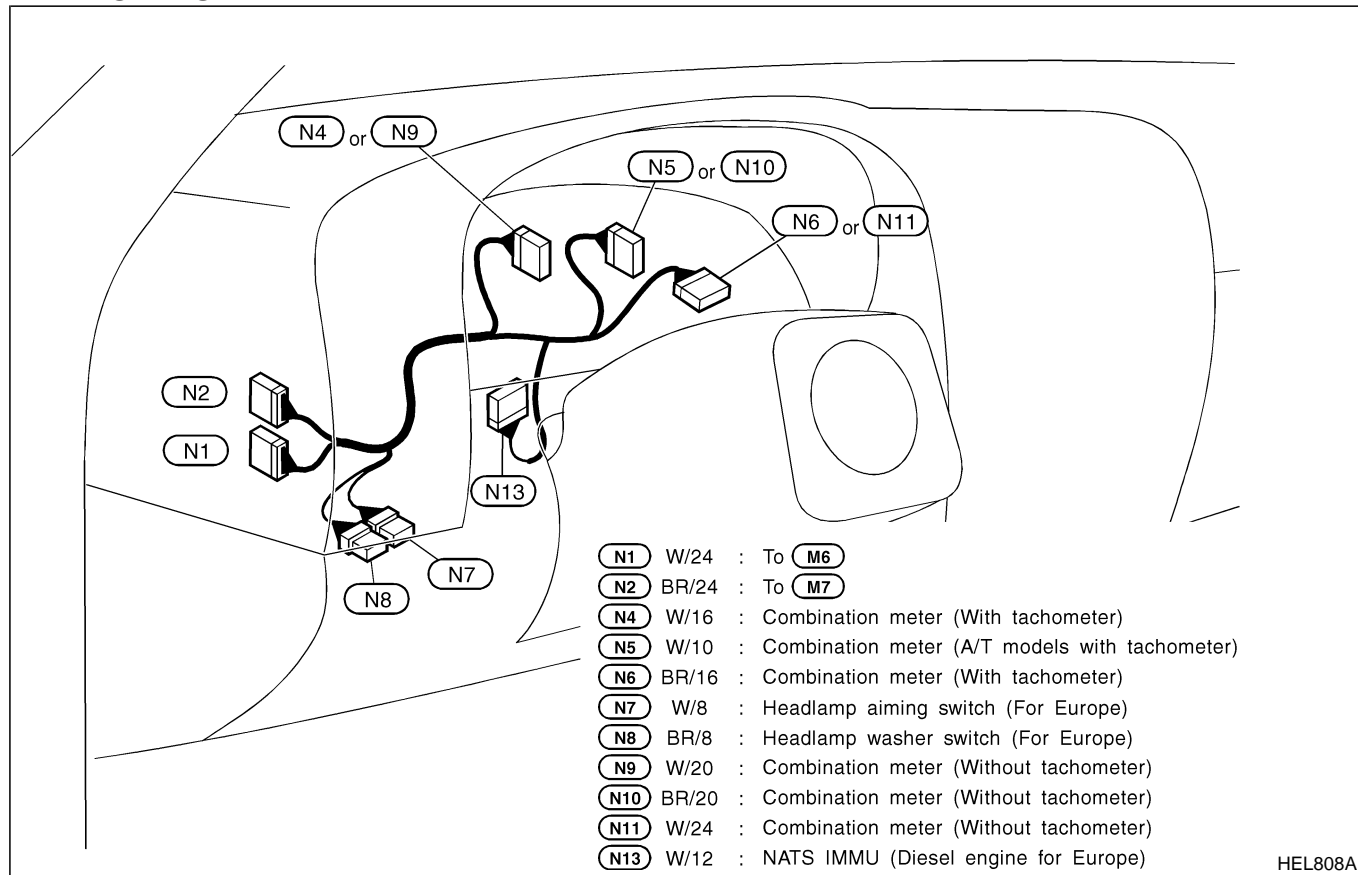


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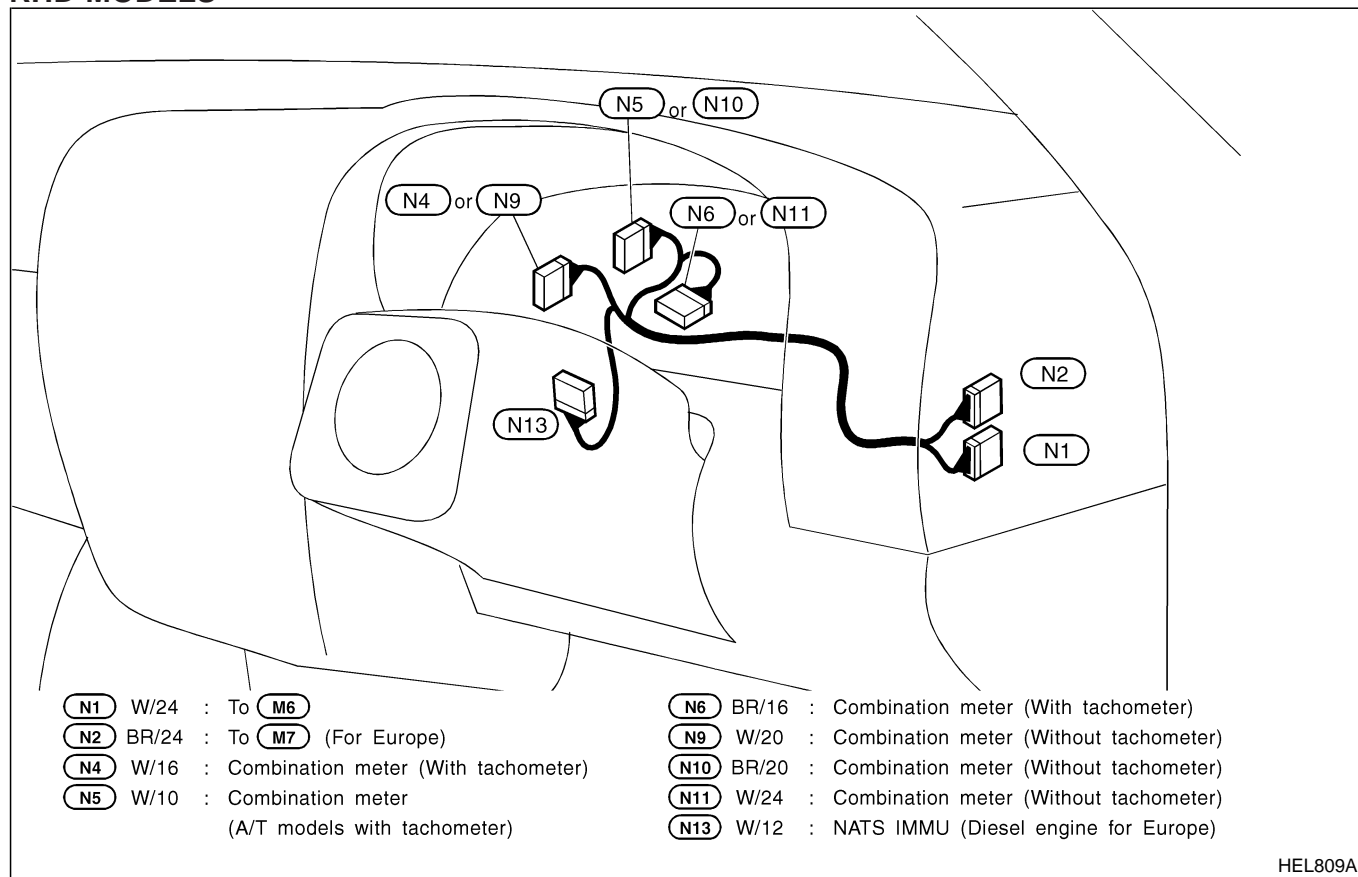
HARNESS LAYOUT

Instrument Harness

LHD MODELS



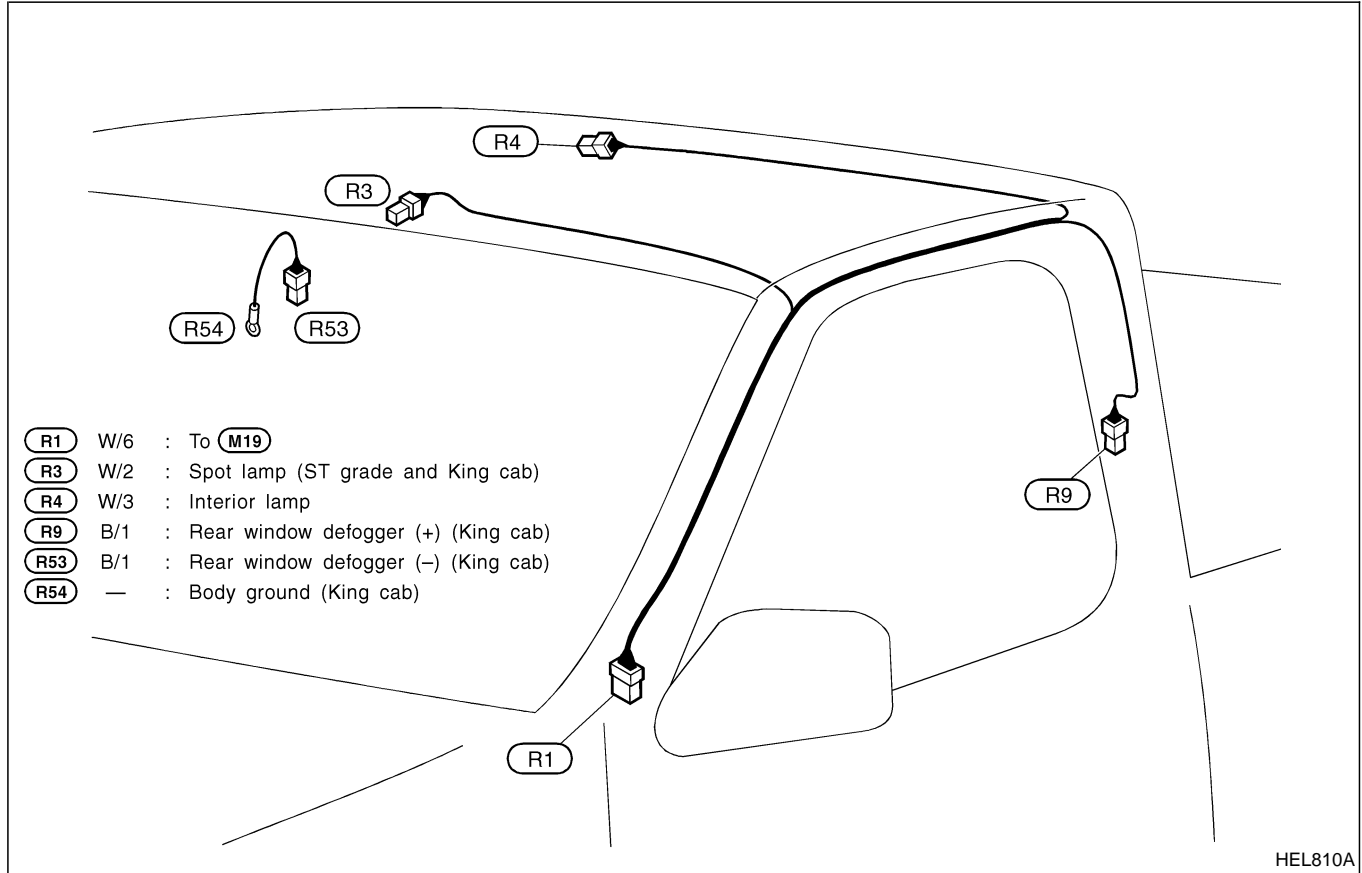
RHD MODELS



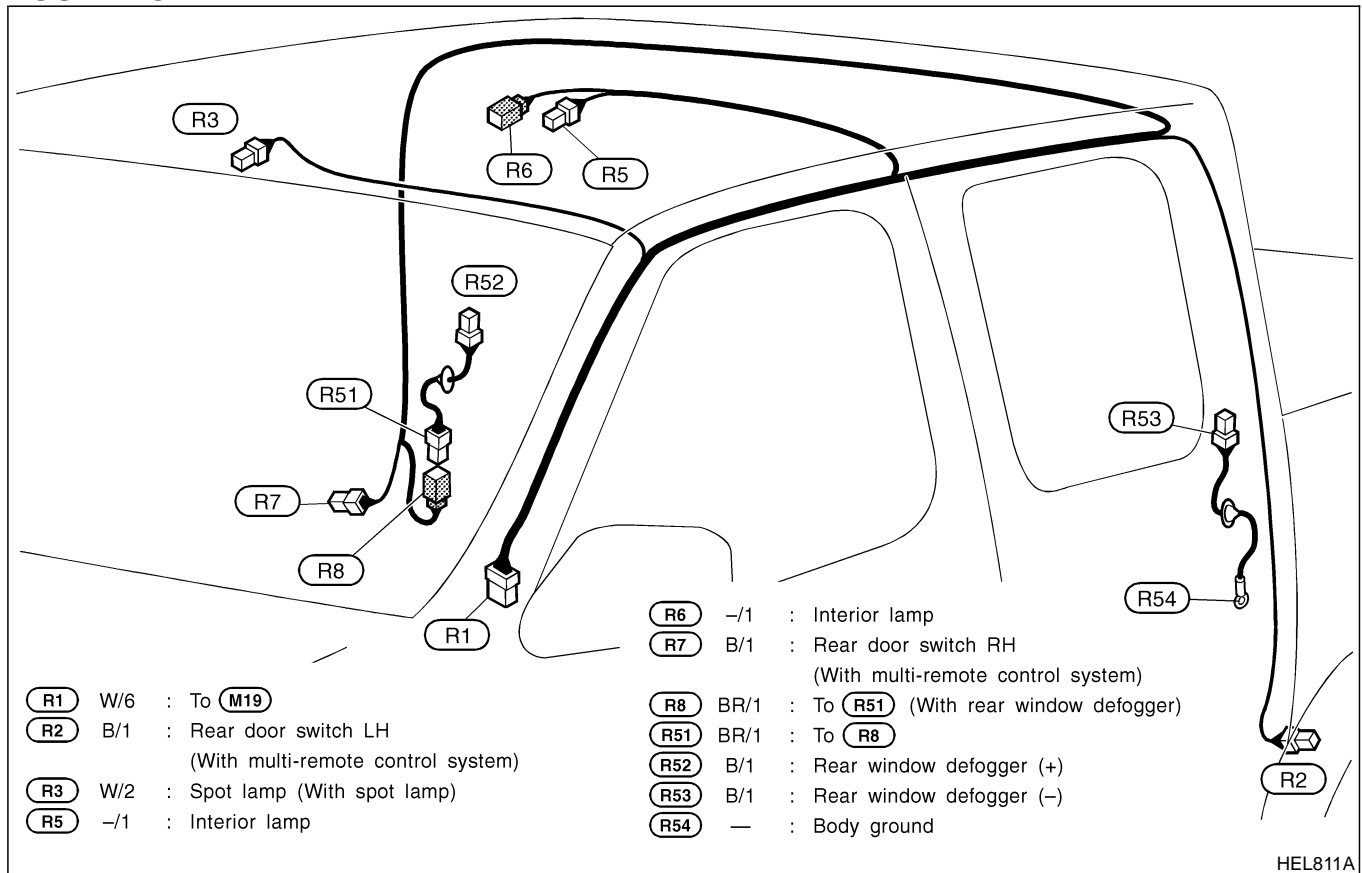
HARNESS LAYOUT

Room Lamp Harness/LHD Models

SINGLE AND KING CAB



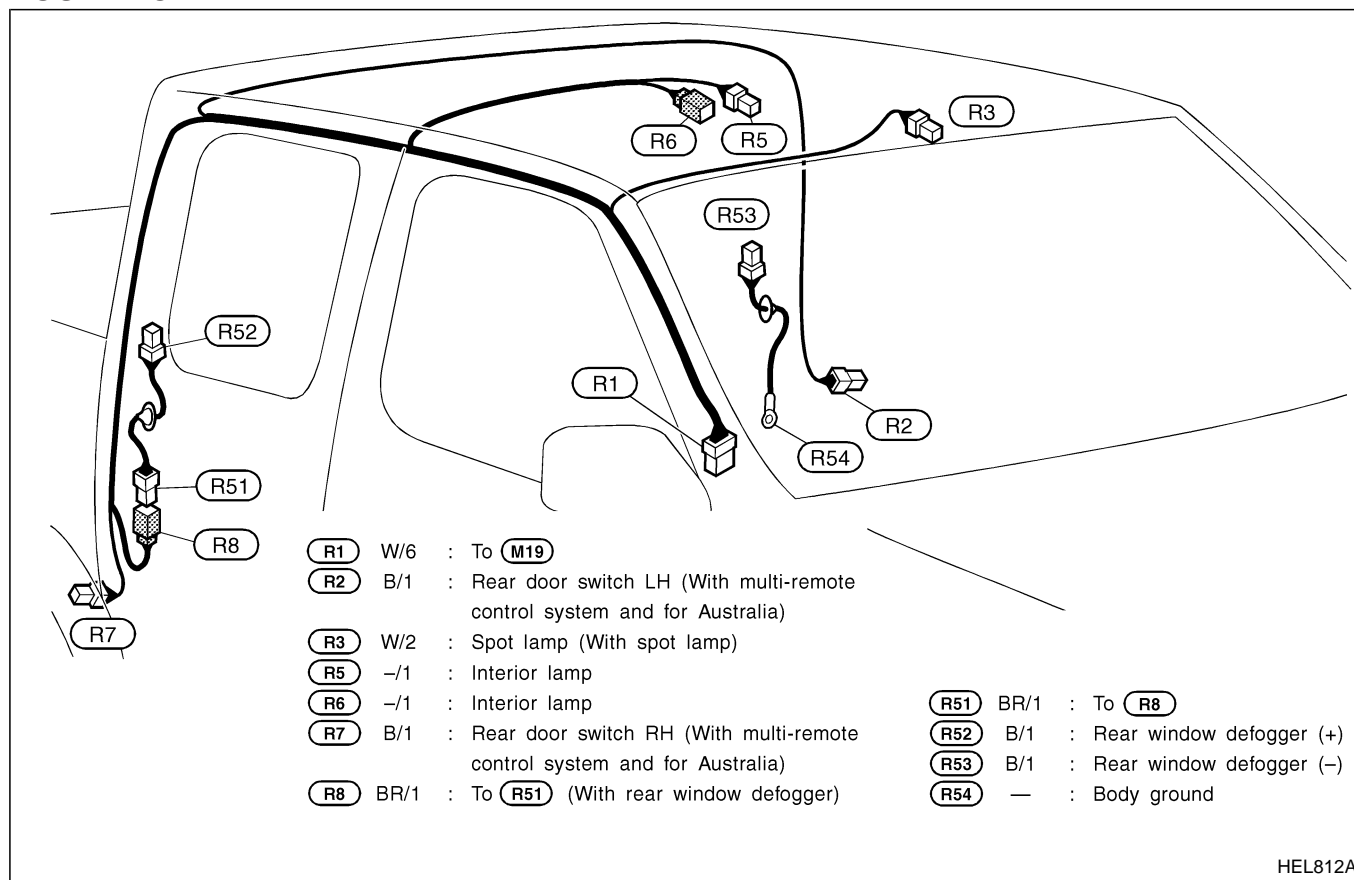
DOUBLE CAB



HARNESS LAYOUT

Room Lamp Harness/RHD Models

DOUBLE CAB



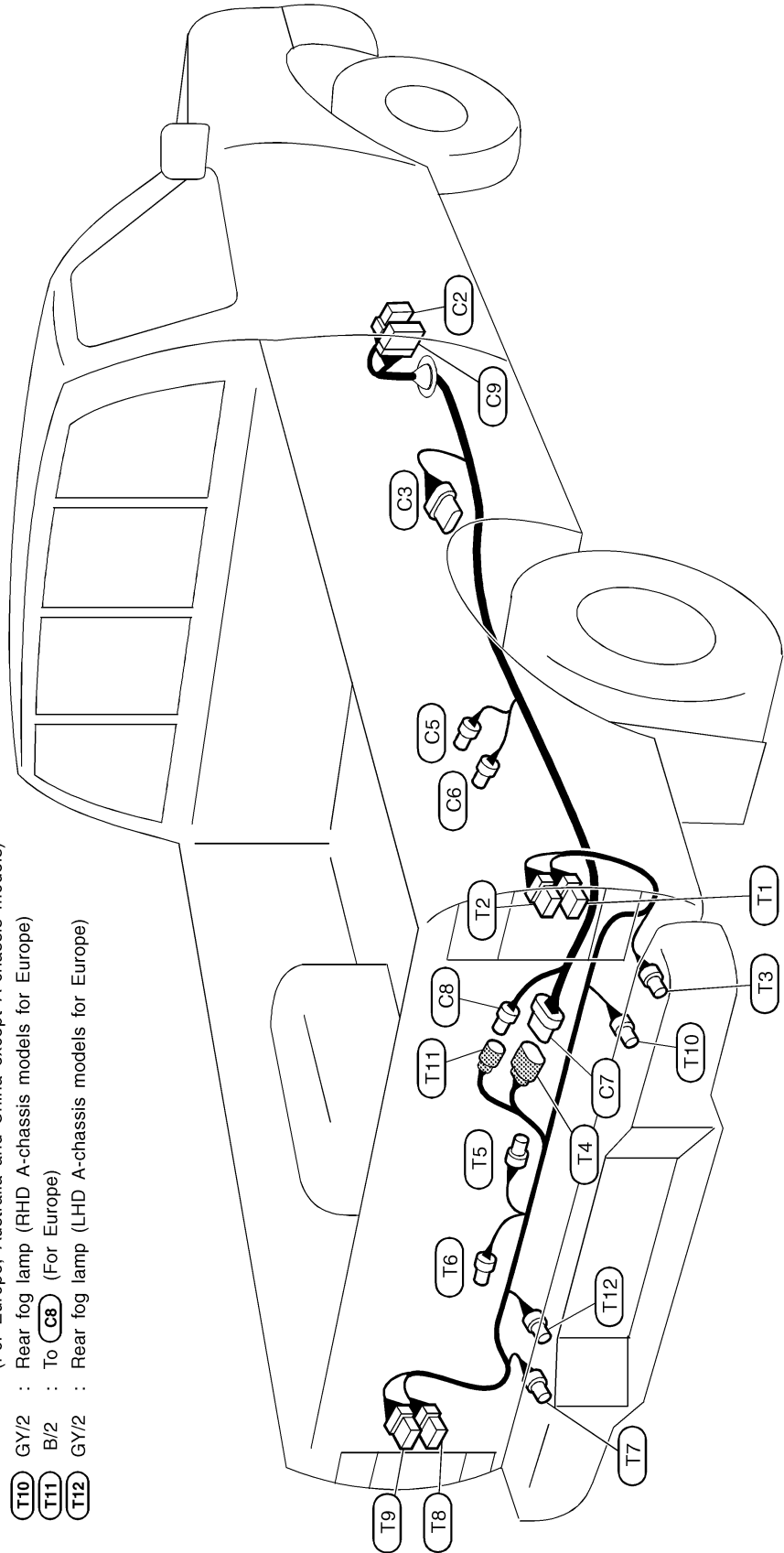
Chassis Harness and Tail Harness

Tail harness

- T1** : W/6 : Rear combination lamp RH
(A-chassis models and except for Europe, Australia and China)
- T2** : W/8 : Rear combination lamp RH
(For Europe, Australia and China except A-chassis models)
- T3** : GY/2 : License plate lamp RH (With step bumper)
- T4** : GY/8 : To **C7**
- T5** : GY/2 : License plate lamp RH (Without step bumper)
- T6** : GY/2 : License plate lamp LH (Without step bumper)
- T7** : B/2 : License plate lamp LH (With step bumper)
- T8** : W/6 : Rear combination lamp LH
(A-chassis models and except for Europe, Australia and China)
- T9** : W/8 : Rear combination lamp LH
(For Europe, Australia and China except A-chassis models)
- T10** : GY/2 : Rear fog lamp (RHD A-chassis models)
- T11** : B/2 : To **C8** (For Europe)
- T12** : GY/2 : Rear fog lamp (LHD A-chassis models for Europe)

Chassis harness

- C2** : W/6 : To **M112** (With ABS)
- C3** : GY/6 : Fuel level sensor unit and fuel pump
- C5** : GY/4 : To rear wheel sensor sub-harness (For ABS)(4WD models)
- C6** : GY/2 : Rear wheel sensor (For ABS)(2WD models)
- C7** : GY/8 : To **T4**
- C8** : B/2 : To **T11** (For Europe)
- C9** : W/16 : To **M121**

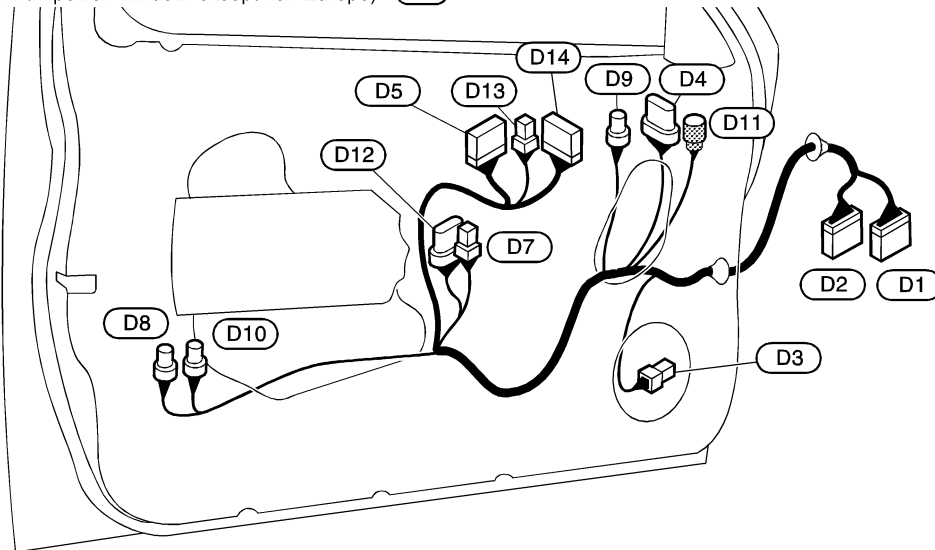


HARNESS LAYOUT

Front Door Harness (LH side)

LHD MODELS

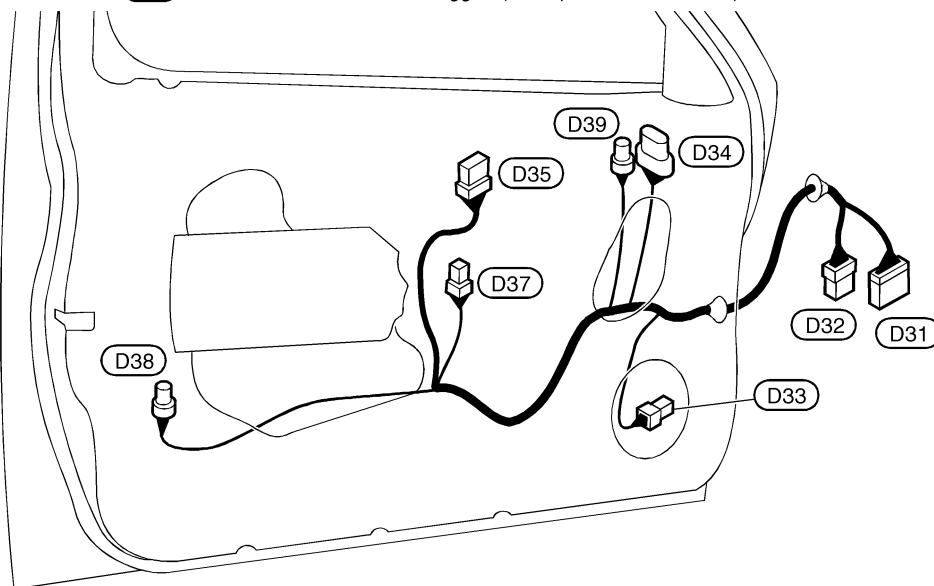
- | | |
|--|---|
| (D1) W/20 : To (M3) | (D8) GY/2 : Lock knob switch (With power door lock without multi-remote control system) |
| (D2) W/12 : To (M4) (With power window) | (D9) BR/3 : Door mirror defogger (With power window for Europe) |
| (D3) BR/2 : Front speaker | (D10) GY/4 : Door lock actuator (With multi-remote control system) |
| (D4) GY/5 : Door mirror actuator (With power door mirror except for the Middle East) | (D11) GY/3 : Door mirror actuator (With power door mirror for the Middle East) |
| (D5) W/16 : Power window main switch | (D12) GY/6 : Power window regulator (With power window for Europe) |
| (D7) B/2 : Power window regulator (With power window except for Europe) | (D13) W/3 : Power window main switch (With power window for Europe) |
| | (D14) GY/12 : Door mirror remote control switch |



HEL814A

RHD MODELS

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|--|
| (D31) W/20 : To (M49) |
| (D32) W/6 : To (M50) (With power window) |
| (D33) BR/2 : Front speaker |
| (D34) GY/5 : Door mirror actuator (With power door mirror) |
| (D35) W/8 : Power window sub-switch (With power window) |
| (D37) B/2 : Power window regulator (With power window) |
| (D38) GY/4 : Door lock actuator (With power door lock) |
| (D39) BR/3 : Door mirror defogger (With power door mirror) |

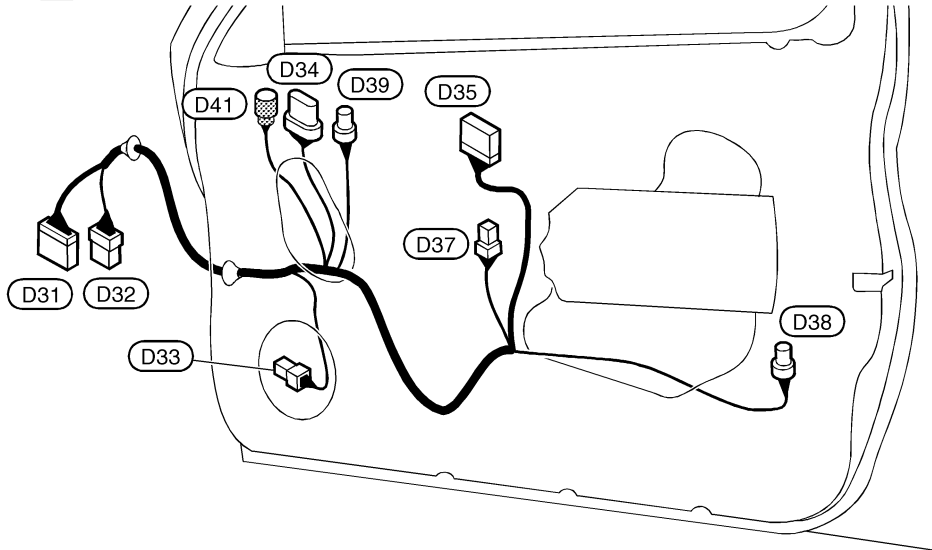


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Front Door Harness (RH side)

LHD MODELS

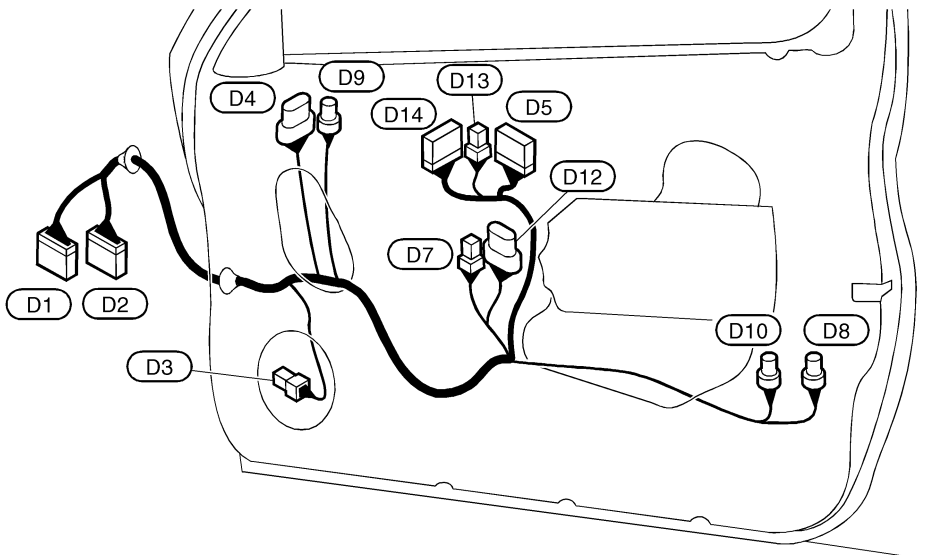
- (D31) W/20 : To (M49)
- (D32) W/6 : To (M50) (With power window)
- (D33) BR/2 : Front speaker
- (D34) GY/5 : Door mirror actuator (With power door mirror except for the Middle East)
- (D35) W/8 : Power window sub-switch (With power window)
- (D37) B/2 : Power window regulator (With power window)
- (D38) GY/4 : Door lock actuator (With power door lock)
- (D39) BR/3 : Door mirror defogger (With power window for Europe)
- (D41) BR/3 : Door mirror actuator (With power door mirror for the Middle East)



HEL816A

RHD MODELS

- (D1) W/20 : To (M3)
- (D2) W/12 : To (M4) (With power window)
- (D3) BR/2 : Front speaker
- (D4) GY/5 : Door mirror actuator (With power window)
- (D5) W/16 : Power window main switch
- (D7) B/2 : Power window regulator (With power window except for Europe)
- (D8) GY/2 : Lock knob switch (With power door lock without multi-remote control system)
- (D9) BR/3 : Door mirror defogger (With power window)
- (D10) GY/4 : Door lock actuator (With multi-remote control system)
- (D12) GY/6 : Power window regulator (With power window for Europe)
- (D13) W/3 : Power window main switch (With power window for Europe)
- (D14) GY/12 : Door mirror remote control switch (With power window)



HEL817A

WIRING DIAGRAM CODES (CELL CODES)

Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
AAC/V	EC	IACV-AAC Valve
ABS	BR	Anti-lock Brake System
A/C, M	HA	Manual Air Conditioner
A/C, A	HA	Auto Air Conditioner
AT/IND	EL	A/T Indicator
AUDIO	EL	Audio
BACK/L	EL	Back-up Lamp
BA/FTS	AT	BATT/A/T Fluid Temperature Sensor and TCM Power Supply
CHARGE	EL	Charging System
CHIME	EL	Warning Chime
CHOKE	EC	Automatic Choke
CIGAR	EL	Cigarette Lighter
CLOCK	EL	Clock
CMPS	EC	Camshaft Position Sensor
COOL/F	LC	Cooling Fan Control
DEF	EL	Rear Window Defogger and Mirror Defogger
DIMDIP	EL	Headlamp — With Dim-dip Lamp System
D/LOCK	EL	Power Door Lock
DTRL	EL	Headlamp — With Daytime Light System
ECTS	EC	Engine Coolant Temperature Sensor
EGRC/V	EC	EGRC — Solenoid Valve
ENGSS	AT	Engine Speed Signal
FCUT	EC	Fuel Cut Solenoid Valve
F/HEAT	EC	Fuel Heater System
FICD	EC	IACV-FICD Solenoid Valve
FIPTOT	EC	ISC-FI Pot
FPCM	EC	Fuel Pump Control Module
F/PUMP	EC	Fuel Pump
GLOW	EC	Quick-glow System
H/AIM	EL	Headlamp Aiming Control
HEATER	HA	Heater
H/LAMP	EL	Headlamp
HLC	EL	Headlamp Washer
HO2S	EC	Heated Oxygen Sensor
HORN	EL	Horn
H/SEAT	EL	Heated Seat

Code	Section	Wiring Diagram Name
IGN	EC	Ignition System
IGN/SG	EC	Ignition Signal
ILL	EL	Illumination
INJECT	EC	Injector
INT/L	EL	Spot Lamp
KS	EC	Knock Sensor
LOAD	EC	Electric Load Signal
LPSV	AT	Line Pressure Solenoid Valve
MAFS	EC	Mass Air Flow Sensor
MAIN	EC, AT	Main Power Supply and Ground Circuit
METER	EL	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	MIL and Data Link Connector For CONSULT
MIRROR	EL	Power Door Mirror
MULTI	EL	Multi-remote Control System
NATS	EL	Nissan Anti-theft System
NONDTC	AT	Non-detectable Items
OVRCSV	AT	Overrun Clutch Solenoid Valve
P/ANT	EL	Power Antenna
PGC/V	EC	EVAP Canister Purge Control Solenoid Valve
PLA	EC	Partial Load Advance Control
PNP/SW	EC	Park/Neutral Position Switch
POWER	EL	Power Supply Routing
PST/SW	EC	Power Steering Oil Pressure Switch
R/FOG	EL	Rear Fog Lamp
ROOM/L	EL	Interior Room Lamp
SHIFT	AT	Shift Lock System
SSV/A	AT	Shift Solenoid Valve A
SSV/B	AT	Shift Solenoid Valve B
SRS	RS	Supplemental Restraint System
S/SIG	EC	Start Signal
START	EL	Starting System
STOP/L	EL	Stop Lamp
SWL/V	EC	Swirl Control Valve Control Solenoid Valve
TAIL/L	EL	Parking, License and Tail Lamps
TCV	AT	Torque Converter Clutch Solenoid Valve

WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name
TPS	EC, AT	Throttle Position Sensor
TURN	EL	Turn Signal and Hazard Warning Lamps
VSS	EC	Vehicle Speed Sensor
VSSAT	AT	Vehicle Speed Sensor A/T (Revolution Sensor)

Code	Section	Wiring Diagram Name
VSSMTR	AT	Vehicle Speed Sensor Meter
WARN	EL	Warning Lamps
WINDOW	EL	Power Window
WIPER	EL	Front Wiper and Washer

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