1. Basic Diagnostic Procedure

A: BASIC PROCEDURES

1. GENERAL DESCRIPTION

The most important purpose of diagnostics is to quickly determine which part is malfunctioning, to save time and labor.

2. IDENTIFICATION OF TROUBLE SYMPTOM

Determine what the problem is based on the symptom.

3. PROBABLE CAUSE OF TROUBLE

Look at the wiring diagram and check the system's circuit. Then check the switch, relay, fuse, ground, etc.

4. LOCATION AND REPAIR OF TROUBLE

1) Using the diagnostics, narrow down the causes.
2) If necessary, use a voltmeter, ohmmeter, etc.
3) Before replacing certain component parts (switch, relay, etc.), check the power supply, ground, for open wiring harness, poor connectors, etc. If no problem is encountered, check the component parts.

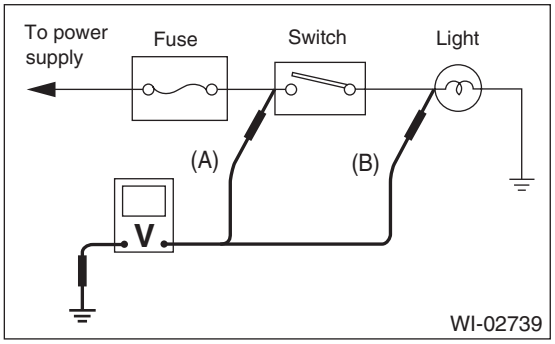
5. SYSTEM OPERATION CHECK

After repairing, ensure that the system operates properly.

B: BASIC INSPECTION

1. VOLTAGE MEASUREMENT

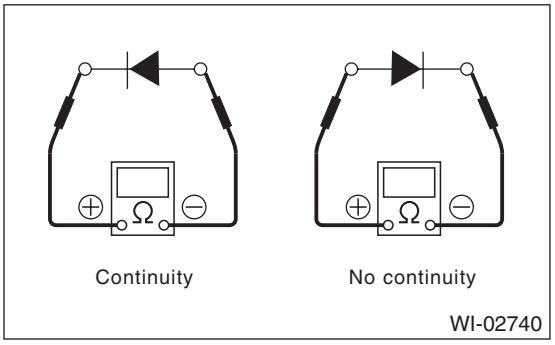
1) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal and the positive lead to the connector or component terminal.
2) Contact the positive lead of the voltmeter on connector (A). The voltmeter will indicate a voltage.
3) Touch connector (B) with the positive probe. The voltmeter will indicate no voltage.



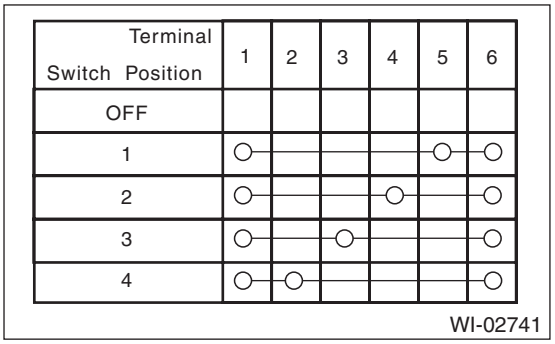
4) With the test set-up held as it is, turn the switch to ON. The voltmeter will indicate a voltage and, at the same time, the light will illuminate.
5) The circuit is in good order. If a problem such as a light failing to illuminate occurs, use the procedures outlined above to track down the malfunction.

2. CIRCUIT CONTINUITY CHECKS

1) Disconnect the battery terminal or connector so there is no voltage between the check points.
Contact the two leads of an ohmmeter to each of the check points.
If the circuit has diodes, reverse the two leads and check again.
2) Use an ohmmeter to check for diode continuity.
When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.
When contacting the two leads in reverse, there should be no continuity.

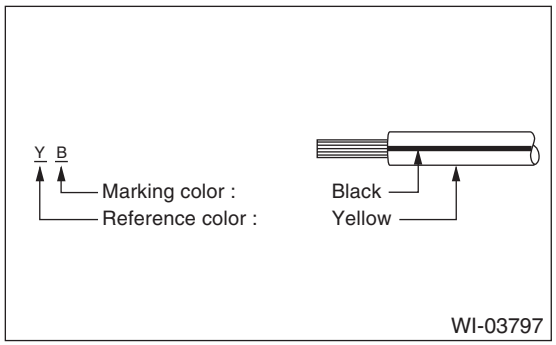


3) The symbol "❍ — ❍" indicates that continuity exists between two points or terminals. For example, when a switch position is at "3", continuity exists among terminals 1, 3 and 6, as shown in the table below.



Terminal / Switch Position	1	2	3	4	5	6
OFF						
1	○				○	○
2	○			○		○
3	○		○			○
4	○	○				○

• The wire color code, which consists of two letters (or three letters including Br or Lg), indicates the standard color (base color of the wire covering) by its first letter and the stripe marking by its second letter.



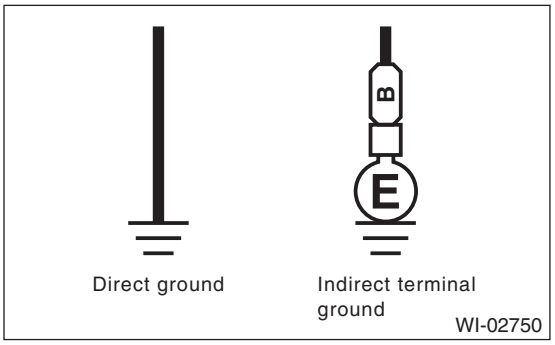
• The table lists the nominal sectional areas and allowable currents of the wires.

CAUTION:
When replacing or repairing a wire, be sure to use the same size and type of the wire which was originally used.

NOTE:
• The allowable current in the table indicates the tolerable amperage of each wire at an ambient temperature of 40°C (104°F).
• The allowable current changes with ambient temperature. Also, it changes if a bundle of more than two wires is used.

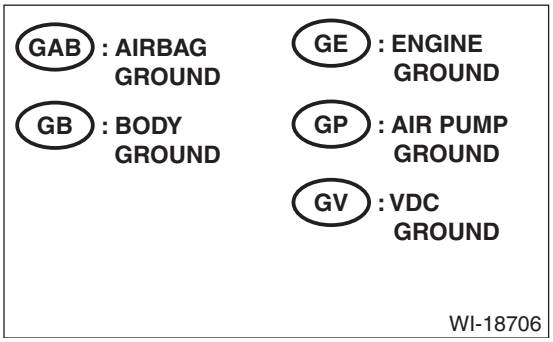
Nominal sectional area mm^2	No. of strands/ strand diameter	Outside diameter of wiring mm	Allowable current Amps/ 40°C (104°F)
0.3	7/0.26	1.8	7
0.5	7/0.32	2.2 (or 2.0)	12
0.75	30/0.18	2.6 (or 2.4)	16
0.85	11/0.32	2.4 (or 2.2)	16
1.25	16/0.32	2.7 (or 2.5)	21
2	26/0.32	3.1 (or 2.9)	28
3	41/0.32	3.8 (or 3.6)	38
5	65/0.32	4.6 (or 4.4)	51
8	50/0.45	5.5	67

• Each unit is either directly grounded to the body or indirectly grounds through a harness ground terminal. Different symbols are used in the wiring diagram to identify the two grounding systems.



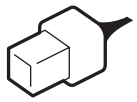
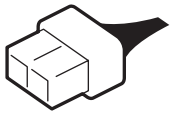
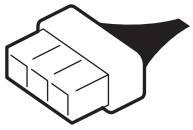
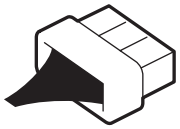
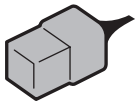
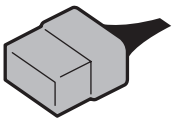
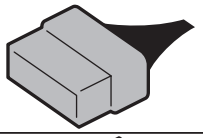
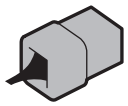
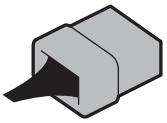
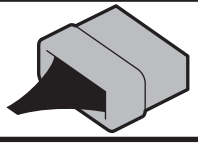
• The ground points shown in the wiring diagram refer to the following:

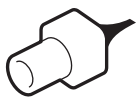
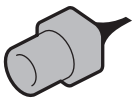
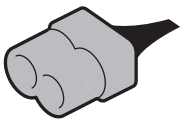
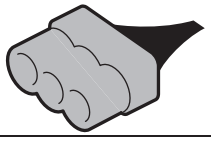
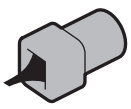
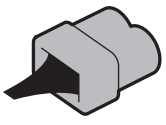
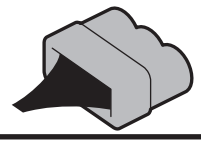
NOTE:
All wiring harnesses are provided with a ground point which must be securely connected.



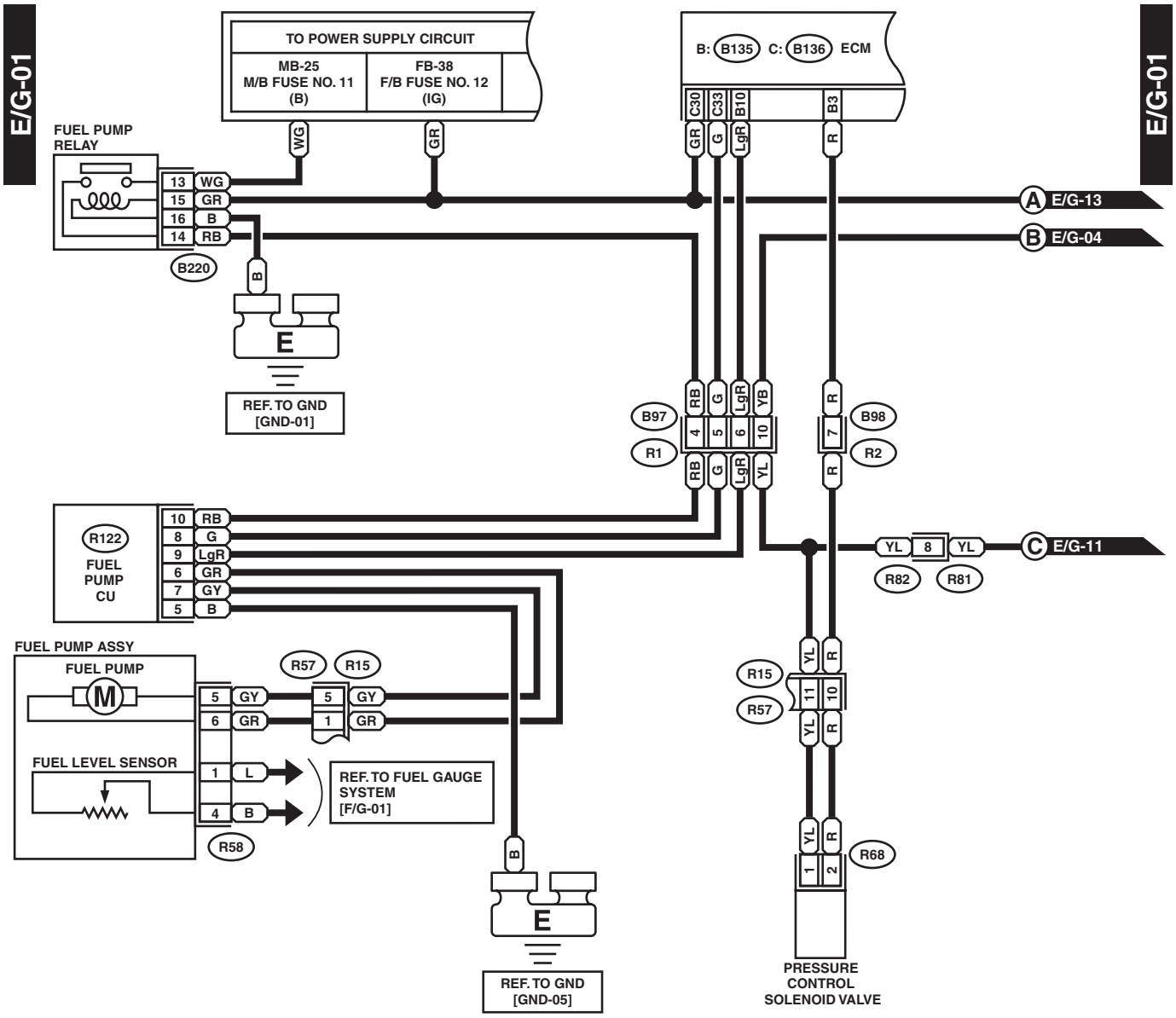
E: CONNECTOR SYMBOL IN WIRING HARNESS

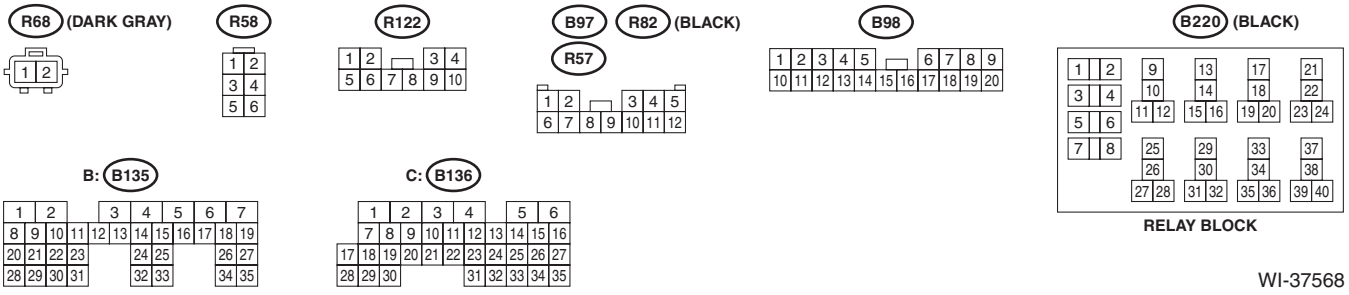
A number of connector symbols are used in each wiring diagram to easily identify the wiring harness connectors.

Standard type: Female		
Pole: From 1 to 8	Pole: From 9 to 20	Pole: More than 21
		
		
Standard type: Male		
		
		

Water proof type: Female		
Pole: From 1 to 8	Pole: From 9 to 20	Pole: More than 21
		
		
Water proof type: Male		
		
		

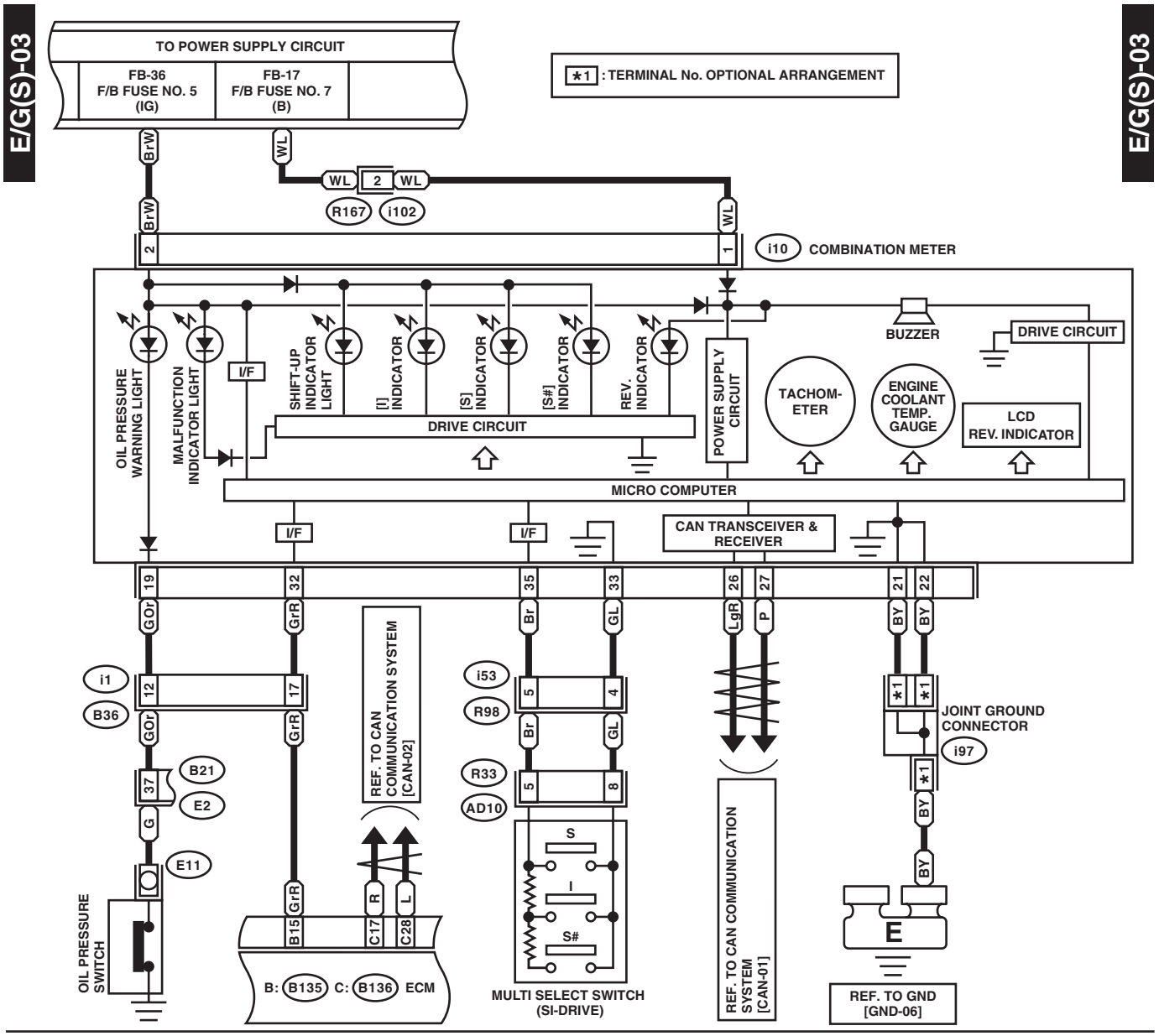
WI-02756

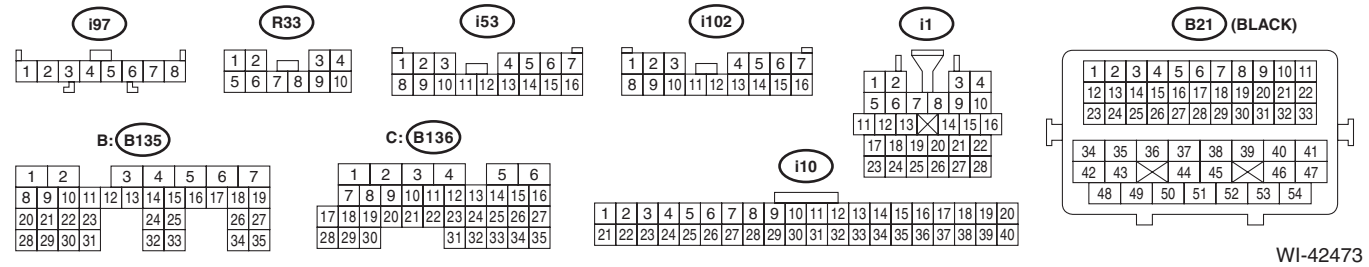

E/G-01
E/G-01
TO POWER SUPPLY CIRCUIT
MB-25
M/B FUSE NO. 11
(B)
FB-38
F/B FUSE NO. 12
(IG)
B: B135 C: B136 ECM
C30
C33
B10
B3
FUEL PUMP
RELAY
13 WG
15 GR
16 B
14 RB
B220
WG
GR
GR
G
LgR
R
A E/G-13
B E/G-04
B
E
REF. TO GND
[GND-01]
B97
R1
RB
G
LgR
YB
4
5
6
10
R
B98
R2
7
RB
G
LgR
YL
R
R122
FUEL
PUMP
CU
10 RB
8 G
9 LgR
6 GR
7 GY
5 B
YL
8
YL
C E/G-11
R82
R81
FUEL PUMP ASSY
FUEL PUMP
M
R57
R15
5 GY
6 GR
5 GY
1 GR
FUEL LEVEL SENSOR
1 L
4 B
REF. TO FUEL GAUGE
SYSTEM
[F/G-01]
R58
B
E
REF. TO GND
[GND-05]
R15
R57
YL
R
11
10
YL
R
R68
YL
R
1
2
PRESSURE
CONTROL
SOLENOID VALVE


R68 (DARK GRAY)
R58
R122
B97 R82 (BLACK)
R57
B98
B220 (BLACK)
B: B135
C: B136
RELAY BLOCK

WI-37568

E/G(S)-03



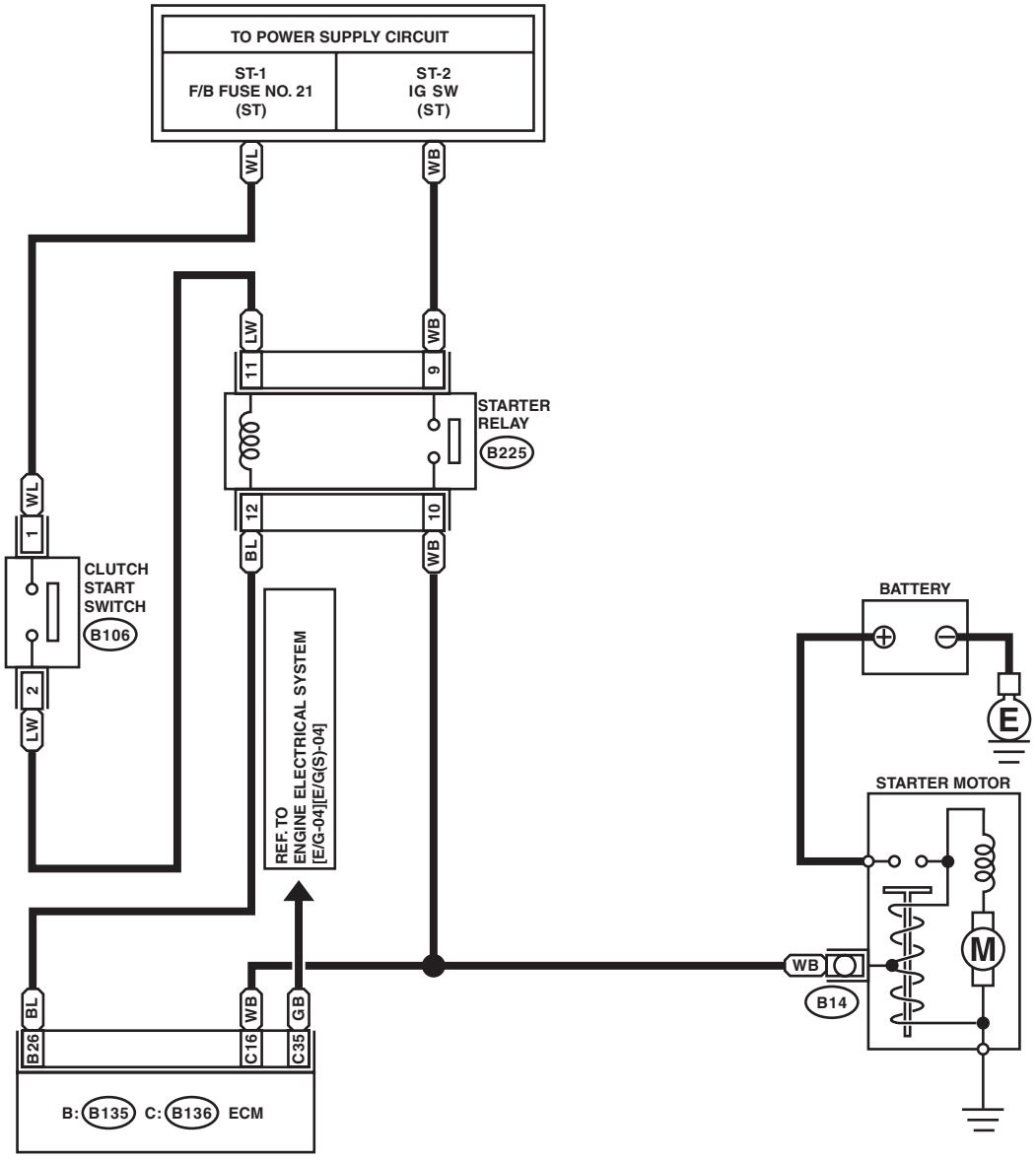


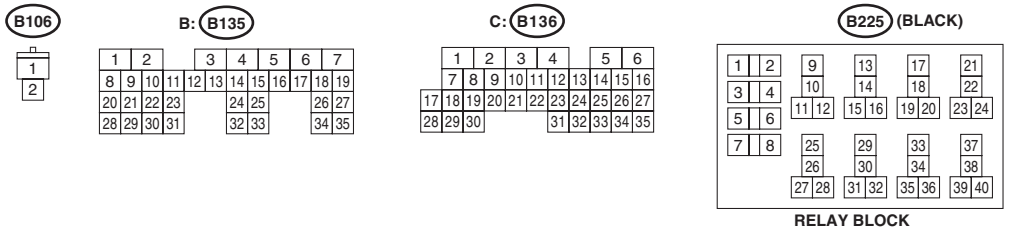
WI-42473

8. Starter System

A: WIRING DIAGRAM

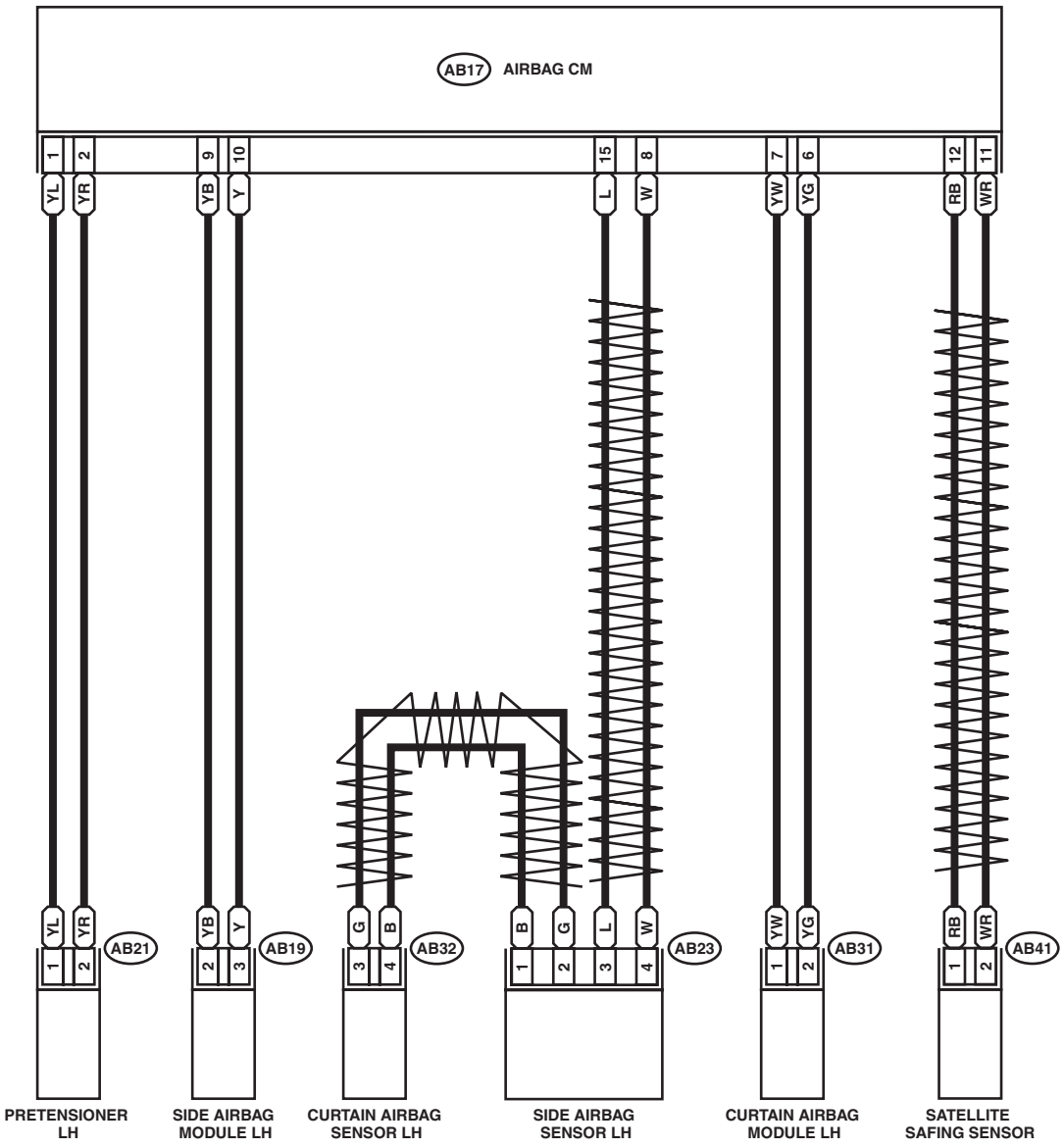
ST-01



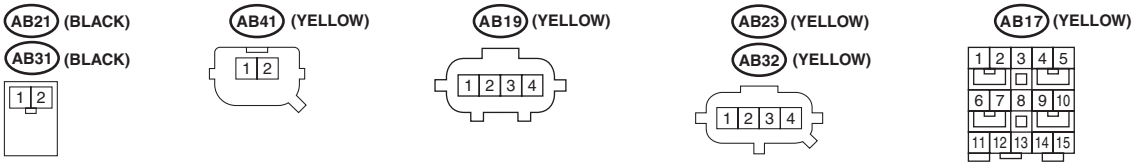


WI-33815

A/B-03



A/B-03

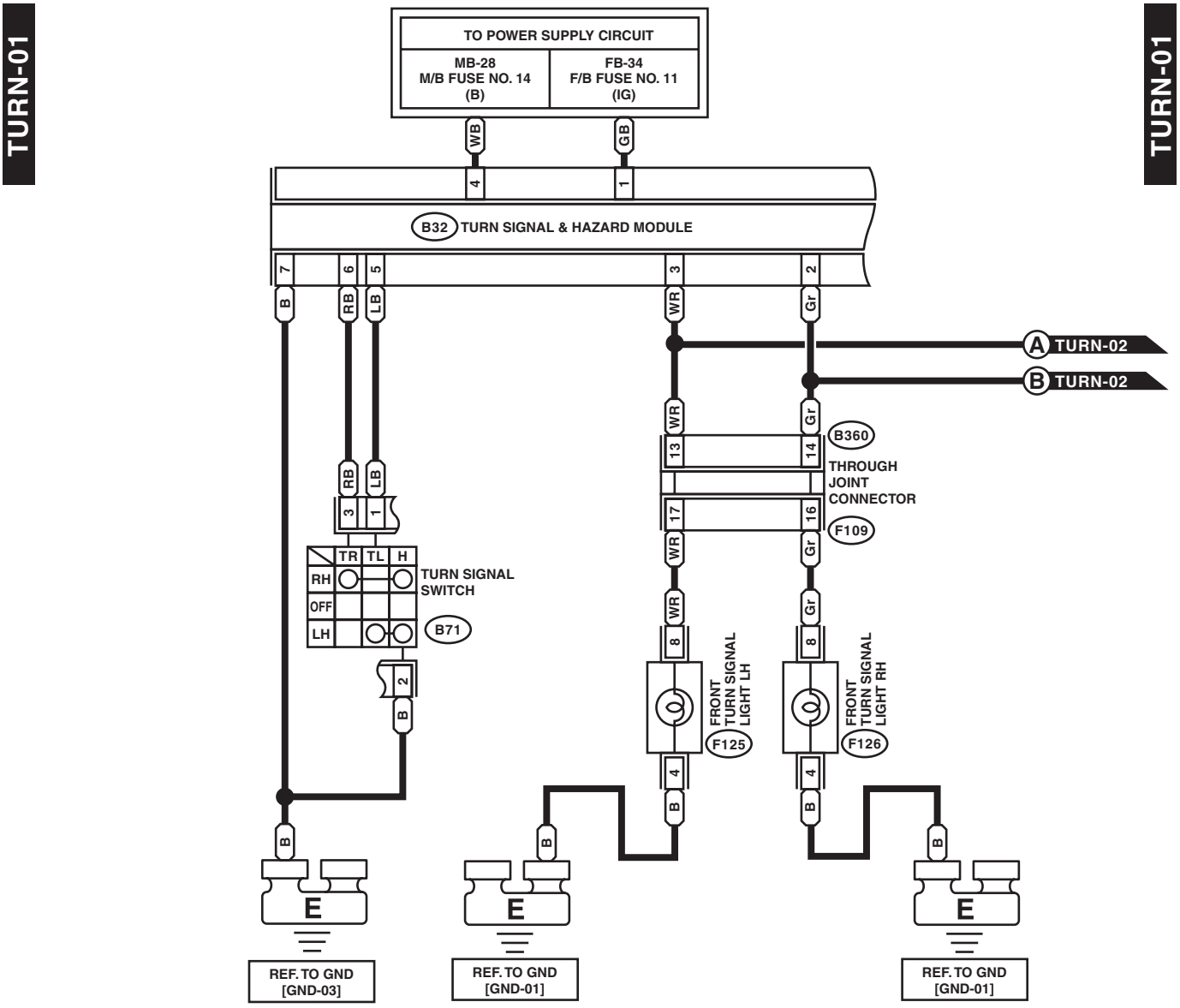


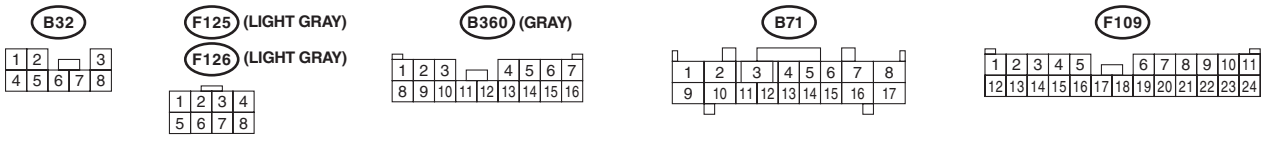
WI-29892

23.Turn Signal Light and Hazard Light System

A: WIRING DIAGRAM

TURN-01



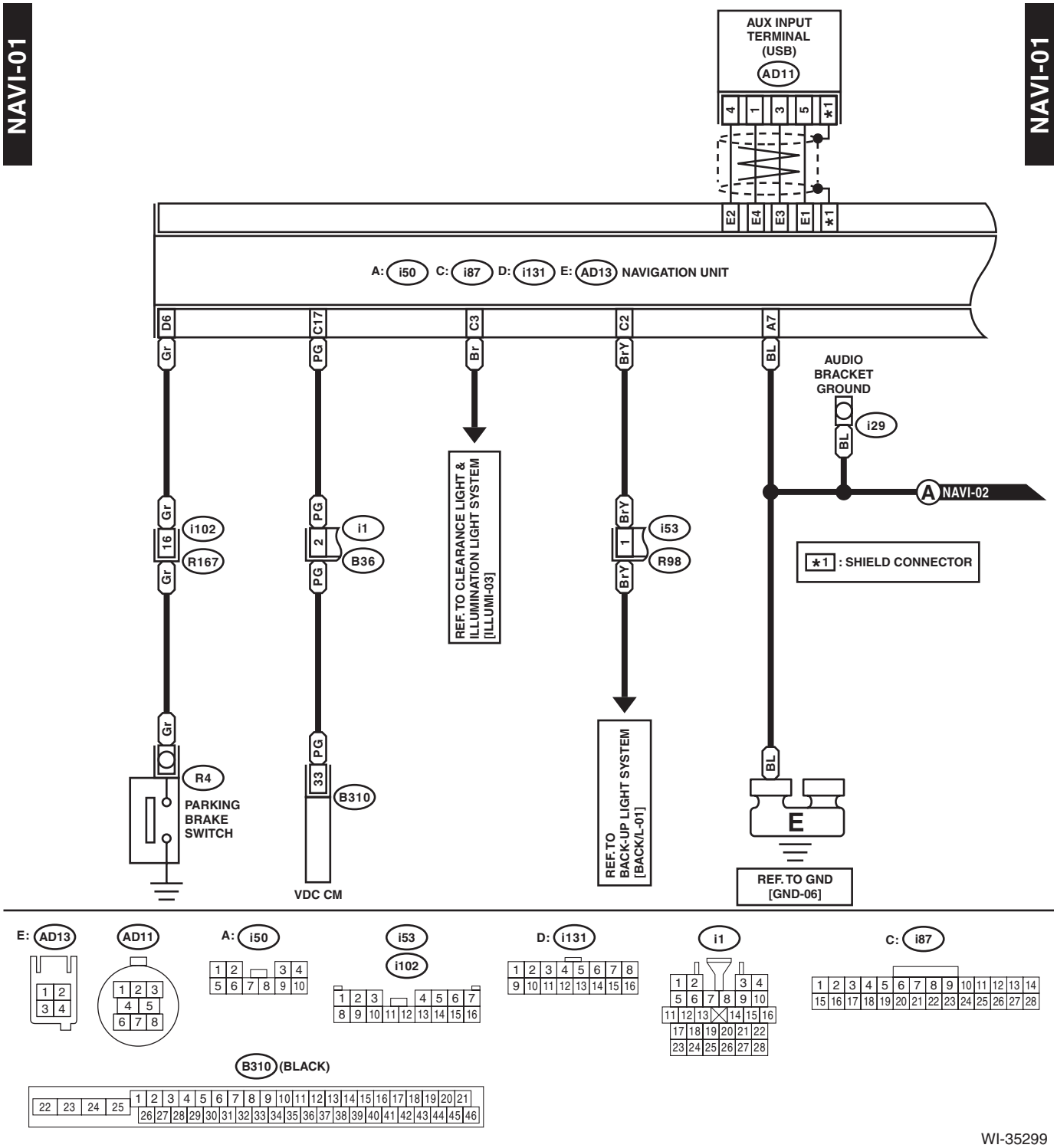


WI-30443

31.Navigation System

A: WIRING DIAGRAM

1. WITHOUT SI-DRIVE

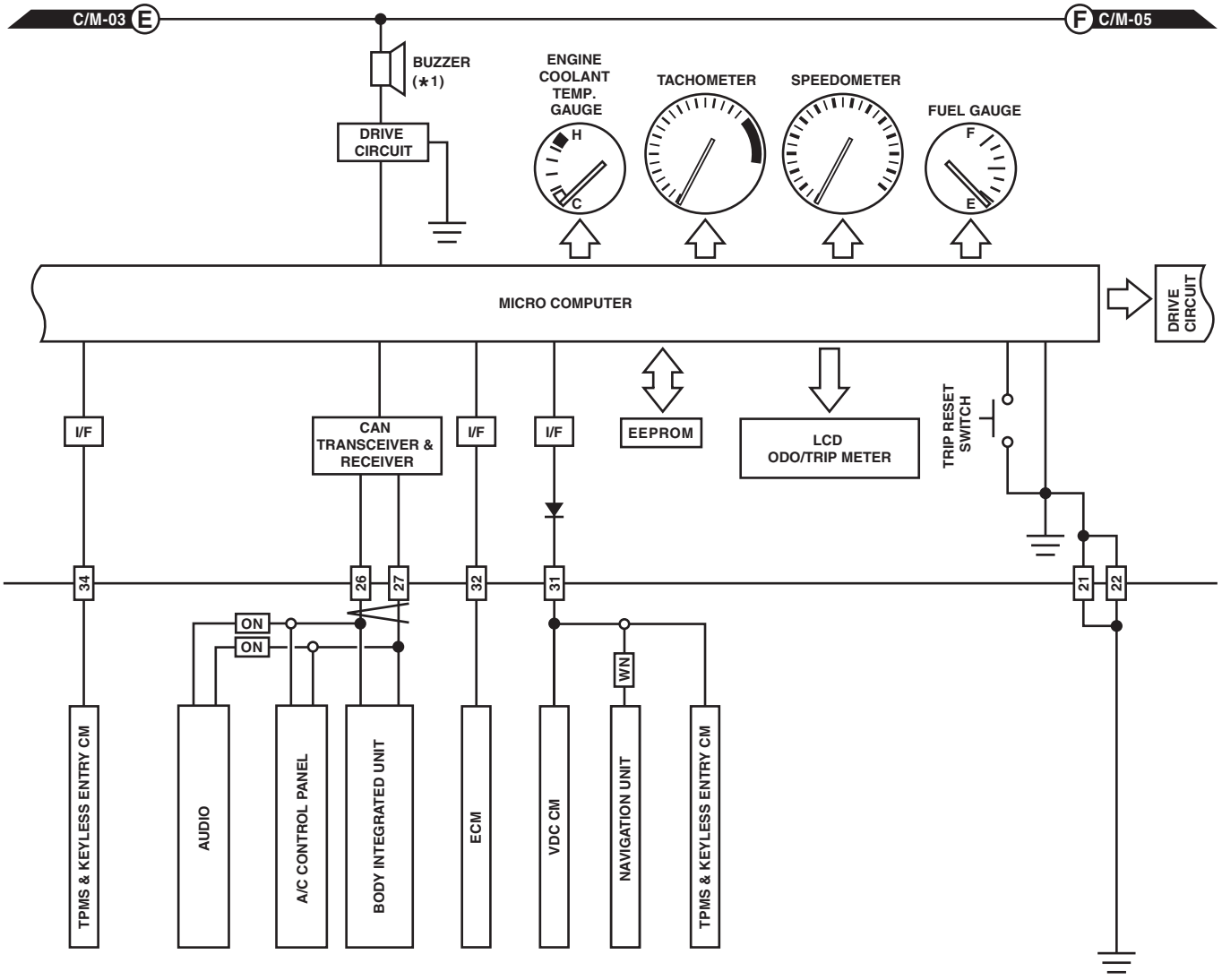


WI-35299

C/M-04

C/M-04

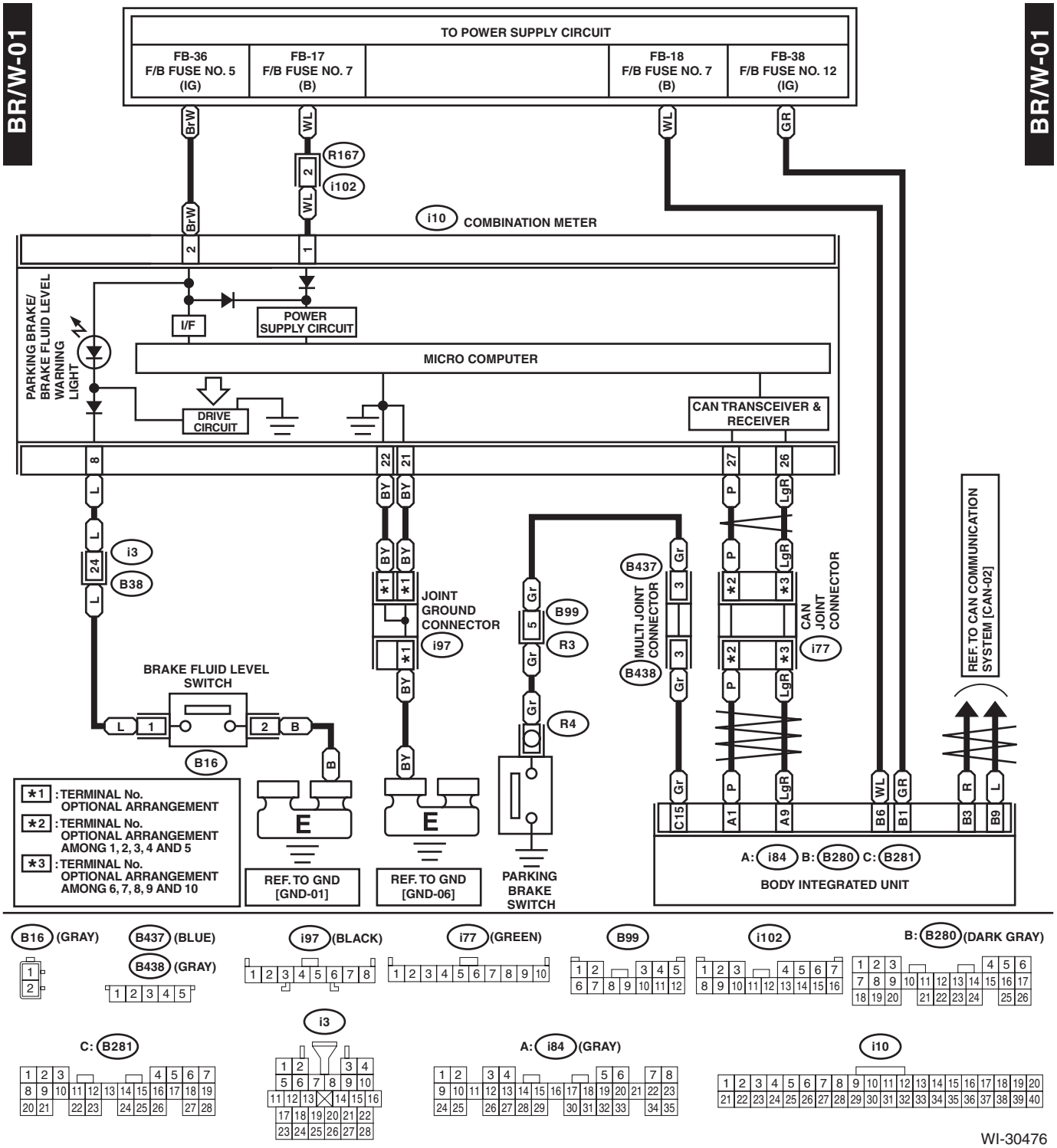
ON : WITHOUT NAVIGATION
WN : WITH NAVIGATION
*1 : SEAT BELT
KEY WARNING
HEADLIGHT ON WARNING
CUSTOMIZED



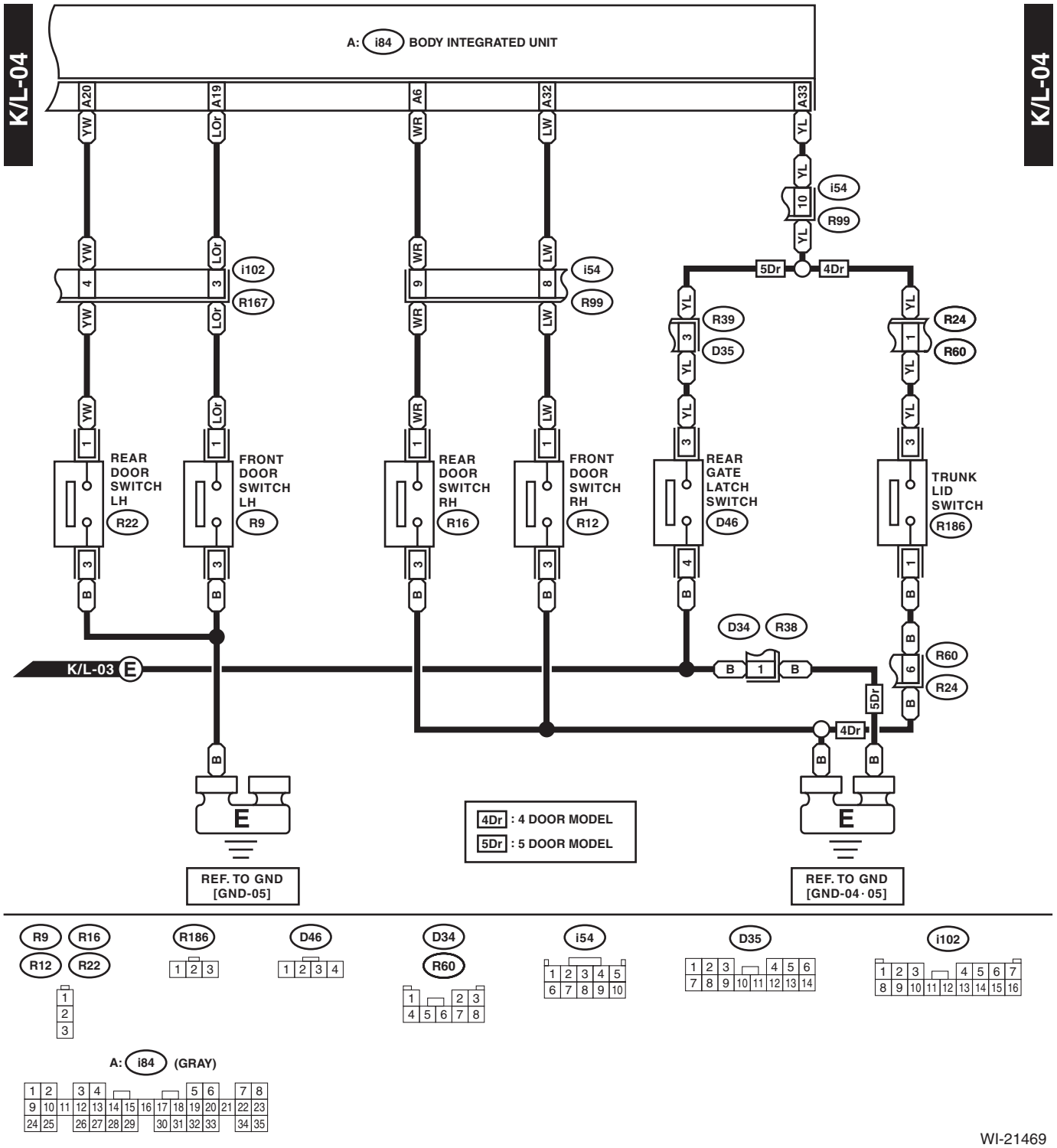
WI-33820

42.Parking Brake / Brake Fluid Level Warning Light System

A: WIRING DIAGRAM



WI-30476


K/L-04
K/L-04
A: i84 BODY INTEGRATED UNIT
A20
A19
A6
A32
A33
YW
LOr
WR
LW
YL
i54
10
R99
5Dr
4Dr
i102
4
3
R167
9
8
R39
D35
R24
R60
REAR DOOR SWITCH LH
R22
FRONT DOOR SWITCH LH
R9
REAR DOOR SWITCH RH
R16
FRONT DOOR SWITCH RH
R12
REAR GATE LATCH SWITCH
D46
TRUNK LID SWITCH
R186
D34
R38
K/L-03 E
6
5Dr
4Dr
E
REF. TO GND [GND-05]
REF. TO GND [GND-04 · 05]
4Dr : 4 DOOR MODEL
5Dr : 5 DOOR MODEL

R9
R16
R12
R22
R186
D46
D34
R60
i54
D35
i102
A: i84 (GRAY)

WI-21469

52.Front Wiring Harness

A: LOCATION

Connector				Connecting to	
No.	Pole	Color	Area	No.	Description
F5	1	Black	C-2		Horn
F6	2	Brown	C-1		Front fog light RH
F9	16	★	B-5		Secondary air relay holder
F11	2	★	C-3		Secondary air pump
F16	2	Gray	C-1		Sub fan motor
F17	2	Gray	C-2		Main fan motor
F21	2	Brown	D-3		Front fog light LH
F24	1	★	C-2		Magnet clutch
F25	1	★	C-2		Generator terminal B
F26	3	★	C-2		Generator
F27	22	Black	B-4		Relay holder
F35	12	Blue	B-4		Main fuse box (M/B)
F36	7	★	B-4		
F37	20	★	C-4		
F47	1	Black	C-2		Horn
F58	3	Light gray	C-3		Headlight beam leveler LH
F59	3	Light gray	C-1		Headlight beam leveler RH
F70	2	★	B-4		Main fuse box (M/B)
F78	2	Black	C-2		Ambient sensor
F103	2	Light gray	B-1		Daytime running light resistor
F108	18	Gray	B-4	B361	Through joint connector
F109	24	★	B-3	B360	
F125	8	Light gray	C-3		Front combination light LH
F126	8	Light gray	C-1		Front combination light RH
★: White or natural color					

55.Engine Wiring Harness and Transmission Cord

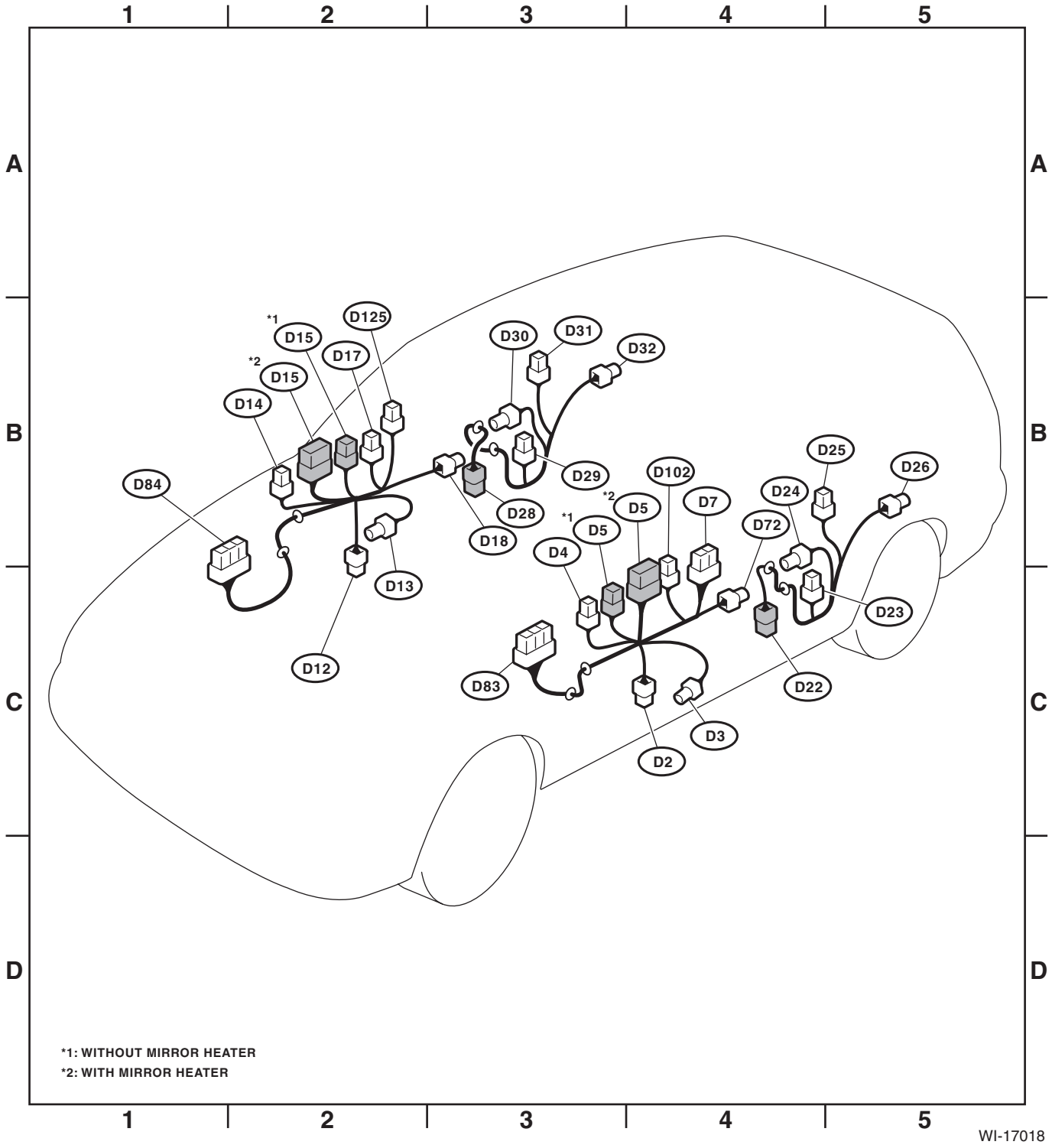
A: LOCATION

1. WITHOUT SI-DRIVE

Connector				Connecting to	
No.	Pole	Color	Area	No.	Description
E2	54	Black	A-2	B21	Bulkhead wiring harness
E4	2	Black	B-3		Purge control solenoid valve 1
E5	2	Dark gray	B-2		Fuel injector No. 1
E6	2	Dark gray	A-2		Fuel injector No. 3
E8	2	Black	B-2		Engine coolant temperature sensor
E10	2	Light gray	B-2		Crankshaft position sensor
E11	1	—	B-2		Oil pressure switch
E14	2	Light gray	B-3		Knock sensor
E16	2	Dark gray	B-3		Fuel injector No. 2
E17	2	Dark gray	B-4		Fuel injector No. 4
E19	1	★	B-2		Power steering oil pressure switch
E21	3	Black	B-2		Manifold absolute pressure sensor
E22	4	Dark gray	B-1		Front oxygen (A/F) sensor
E31	3	Gray	B-1		Ignition coil No. 1
E32	3	Gray	C-4		Ignition coil No. 2
E33	3	Gray	B-2		Ignition coil No. 3
E34	3	Gray	C-4		Ignition coil No. 4
E35	3	Light gray	B-4		Camshaft position sensor LH
E36	3	Light gray	A-2		Camshaft position sensor RH
E37	2	Blue	B-4		Oil flow control solenoid valve LH
E38	2	Blue	B-2		Oil flow control solenoid valve RH
E40	2	Black	B-4		Secondary air combination valve LH
E41	6	Black	A-3		Secondary air combination valve RH
E51	5	Light gray	B-4		Tumble generator valve assembly LH
E52	2	Black	B-2		Purge control solenoid valve 2
E55	5	Light gray	B-1		Tumble generator valve assembly RH
E57	6	Black	B-3		Electronic throttle control
E64	2	Blue	B-2		Wastegate control solenoid valve
E80	2	Dark gray	B-3		Leak diagnosis connector 1
E87	2	Dark gray	A-2		Leak diagnosis connector 2
E88	2	Dark gray	B-5		Leak diagnosis connector 3
★: White or natural color					

Connector				Connecting to	
No.	Pole	Color	Area	No.	Description
T1	2	Gray	D-3	T13	Transmission cord
T2	2	Brown	D-3	T12	
T5	4	Dark gray	C-2	B19	Bulkhead wiring harness
T6	4	Dark gray	D-3		Rear oxygen sensor
T9	4	Gray	D-3	B128	Bulkhead wiring harness
T12	2	Brown	D-3	T2	Neutral position switch
T13	2	Gray	D-3	T1	Back-up light switch

Door Cord


1
2
3
4
5
A
B
C
D
*1
D15
D125
*2
D15
D17
D14
D84
D13
D12
D18
D28
D29
D30
D31
D32
*1
D5
*2
D5
D4
D102
D7
D72
D24
D25
D26
D23
D22
D83
D3
D2
*1: WITHOUT MIRROR HEATER
*2: WITH MIRROR HEATER
WI-17018