G2M0096

9. Select Monitor Function Mode
Applicable cartridge of select monitor: No. 498346300

A: LIST OF FUNCTION MODE

### 1. F MODE (ROM ID, ANALOG DATA ARE DISPLAYED.)

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
F00	ROM ID	ECM identification	ROM ID number of ECM is read and enabled communication state is displayed.	Possible	4-4d [T9B0]
F01	FR	FR wheel speed (mile/h)	Wheel speed detected by the FR ABS sensor is displayed in mile/h.	Possible	4-4d [T9C0]
F02	FL	FL wheel speed (mile/h)	Wheel speed detected by the FL ABS sensor is displayed in mile/h.	Possible	4-4d [T9D0]
F03	RR	RR wheel speed (mile/h)	Wheel speed detected by the RR ABS sensor is displayed in mile/h.	Possible	4-4d [T9E0]
F04	RL	RL wheel speed (mile/h)	Wheel speed detected by the RL ABS sensor is displayed in mile/h.	Possible	4-4d [T9F0]
F05	FR	FR wheel speed (km/h)	Wheel speed detected by the FR ABS sensor is displayed in km/h.	Possible	4-4d [T9C0]
F06	FL	FL wheel speed (km/h)	Wheel speed detected by the FL ABS sensor is displayed in km/h.	Possible	4-4d [T9D0]
F07	RR	RR wheel speed (km/h)	Wheel speed detected by the RR ABS sensor is displayed in km/h.	Possible	4-4d [T9E0]
F08	RL	RL wheel speed (km/h)	Wheel speed detected by the RL ABS sensor is displayed in km/h.	Possible	4-4d [T9F0]
F09	BLS	Stop light switch monitor	Stop light switch monitor voltage is displayed.	Possible	4-4d [T9G0]
F10	G-SENS	G sensor output voltage (V)	Refers to vehicle acceleration detecting by the analog G sensor. It appears on the select monitor display in volts.	Possible	4-4d [T9H0]

2. FA MODE (ON/OFF DATA ARE DISPLAYED.)

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
FA0	B1	Stop light switch	LED 1 comes on with the switch on (with the brake pedal down).	Possible	4-4d [T9I0]
	VR	Valve relay signal	LED 2 comes on with the valve relay off.		
	MR	Motor relay signal	LED 3 comes on with the motor on.		
	AT	AT ABS signal	LED 4 comes on when ABS control is on.		
	AW	ABS warning light	LED 6 comes on when the warning light is on.		
	VM	Valve relay monitor	LED 1 comes on with the valve relay off.		
	MM	Motor relay monitor	LED 8 comes on when the motor relay is on.		
	CM	CCM signal	LED 9 comes on when ABS control is on.		

3. FB MODE (TROUBLE CODES ARE DISPLAYED.)

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
FB1	D·ALL	History of trouble codes is displayed.	A maximum of 3 trouble codes are displayed in order of occurrence.	Possible	4-4d [T10B0]
	D·NEW		The most recent trouble code appears on the select monitor display.		
	D·MID		The second most recent trouble code appears on the select monitor display.		
	D·OLD		The third most recent trouble code appears on the select monitor display.		
	D·REF		A specified period of time proceeding trouble code appears on the select monitor display.		

D·＊a＊ 22?(FB1)
FR.SS SOFT

B4M0919
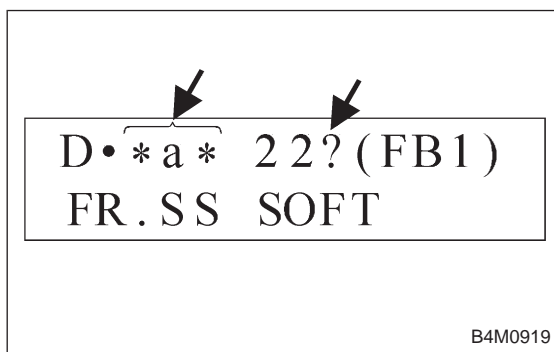
NOTE:
● If a particular trouble code is not properly stored in memory (due to a drop in ABSCM&H/U power supply, etc.) when a problem occurs, the trouble code, followed by a question mark "?", appears on the select monitor display. This shows it may be an unreliable reading.
● arefers to the troubles in order of occurrence (NEW. MID, OLD and REF).

4. FC MODE (TROUBLE CODES ARE ERASED.)

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
FC0	D·CLR	History of trouble codes is erased.	Function of clearing trouble code.	Possible	4-4d [T9J0]

5. FD MODE (ABS SEQUENCE CONTROL MODE)

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
FD1	A·CHK	ABS sequence control	Perform ABS sequence control by operating valve and pump motor sequentially.	Impossible	4-4 [W20D2]

6. FE MODE (FREEZE FRAME DATA)

NOTE:
● Data stored at the time of trouble occurrence is shown on display.
● Each time trouble occurs, the latest information is stored in the freeze frame data in memory.

Function code		Measuring items	Contents to be monitored	Scroll	Ref. to
Code	Abbreviation				
FE1	FR	FR wheel speed (mile/h)	Wheel speed detected by the FR ABS sensor is displayed in mile/h.	Possible	4-4d [T9K0]
FE2	FL	FL wheel speed (mile/h)	Wheel speed detected by the FL ABS sensor is displayed in mile/h.	Possible	4-4d [T9L0]
FE3	RR	RR wheel speed (mile/h)	Wheel speed detected by the RR ABS sensor is displayed in mile/h.	Possible	4-4d [T9M0]
FE4	RL	RL wheel speed (mile/h)	Wheel speed detected by the RL ABS sensor is displayed in mile/h.	Possible	4-4d [T9N0]
FE5	FR	FR wheel speed (km/h)	Wheel speed detected by the FR ABS sensor is displayed in km/h.	Possible	4-4d [T9K0]
FE6	FL	FL wheel speed (km/h)	Wheel speed detected by the FL ABS sensor is displayed in km/h.	Possible	4-4d [T9L0]
FE7	RR	RR wheel speed (km/h)	Wheel speed detected by the RR ABS sensor is displayed in km/h.	Possible	4-4d [T9M0]
FE8	RL	RL wheel speed (km/h)	Wheel speed detected by the RL ABS sensor is displayed in km/h.	Possible	4-4d [T9N0]
FE13	POWER	ABSCM&H/U power supply voltage (V)	Power (in volts) supplied to ABSCM&H/U appears on the select monitor display.	Possible	4-4d [T9O0]
FE14	G-SENS	G sensor output voltage (V)	Refers to vehicle acceleration detected by the analog G sensor. It appears on the select monitor display in volts.	Possible	4-4d [T9P0]
FE15	MM	Motor relay monitor	LED 1 comes on when motor relay is on.	Possible	4-4d [T9Q0]
	B1	Stop light switch	LED 2 comes on with the stop light switch on (with the brake pedal depressed).		
	AT	AT ABS signal	LED 3 comes on when ABS control is on.		
	CM	CCM signal	LED 4 comes on when ABS control is on.		
	A0	ABS control	LED 5 comes on when ABS control is on.		
FE16	CODE	Trouble code	The most recent trouble code appears on select monitor display.	Possible	4-4d [T9R0]

1) When a trouble code is not stored in memory, activating the FE mode causes the initial value to appear on the select monitor display.
- FE1 — 4:   159 mile/h
- FE5 — 8:   255 km/h
- FE13:   18.05 V
- FE14:   5.00 V
- FE15:   The MM, B1 and A0 LEDs are on.
                   The AT and CM LEDs are out.
- FE16:   NO HISTORY OF OCCURRED
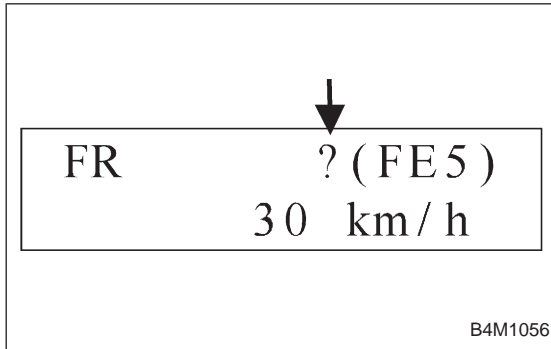
2) If freeze frame data is not properly stored in memory (due to a drop in ABSCM power supply, etc.), a trouble code, preceded by a question mark "?", appears on the select monitor display. This shows it may be an unreliable reading.

FR   ?(FE5)
     30 km/h

B4M1056
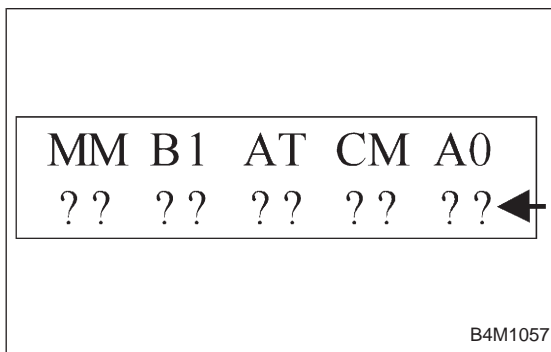
3) When a trouble code is detected in the FE mode, a question mark "?" appears continuously on the select monitor display until the freeze frame data is stored in memory.

MM B1 AT CM A0
?? ?? ?? ?? ??

B4M1057

81

```
  1997        (F00)
  ABS    4WD•AT
```

H4M1117
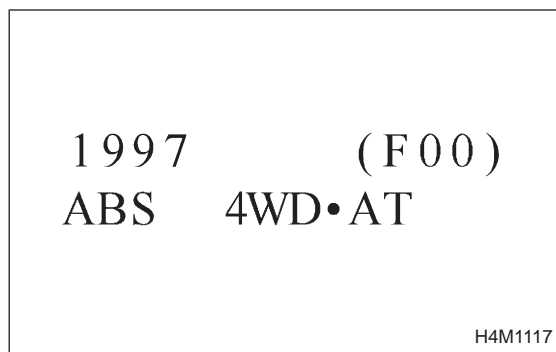
B: MODE F00
— ROM ID NUMBER (ROM) —
CONDITION:
Ignition switch ON
SPECIFIED DATA:
Presentation display

9B1	CHECK MESSAGE OF DISPLAY.

CHECK : *Does display indicate message "Error 1"?*

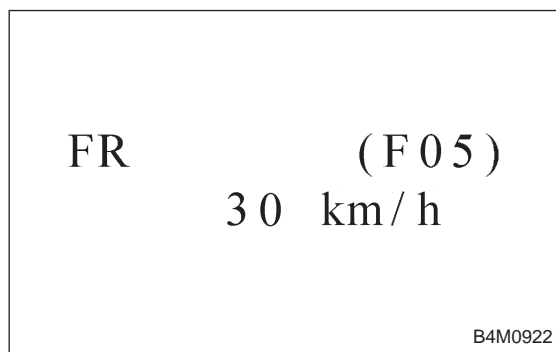YES : Repair loose or disconnect connector, or discontinued circuit in data link circuit.

NO : Go to step **9B2**.

9B2	CHECK MESSAGE OF DISPLAY.

CHECK : *Does display indicate message "Error 2"?*

YES : Repair poor contact of select monitor cartridge, or installation of different type select monitor cartridge.

NO : Data link system is normal.

```
  FR          (F05)
       30 km/h
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B4M0922

C: MODE F01 AND F05
— FRONT RIGHT WHEEL SPEED SIGNAL (FR) —
● Compare speedometer with monitor indications.
● F01: FR wheel speed is indicated in mile per hour (mile/h).
● F05: FR wheel speed is indicated in kilometer per hour (km/h).
NOTE:
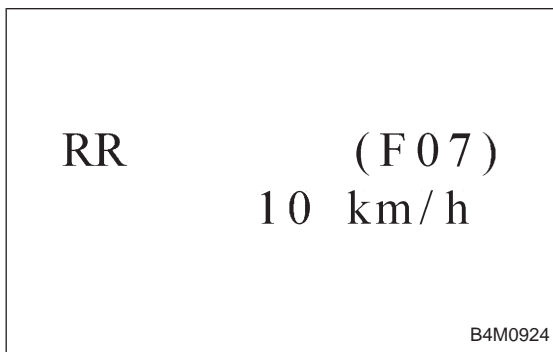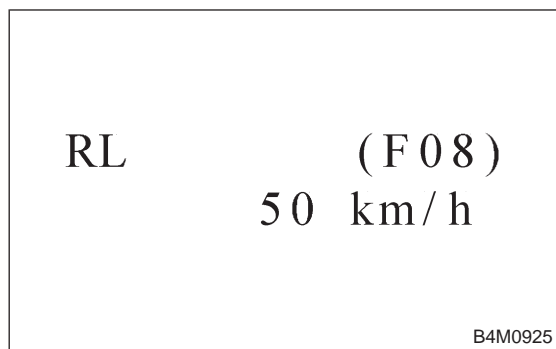The monitor as shown, indicates that FR wheel speed is 30 km/h.

```
FL        (F06)
     29  km/h

                            B4M0923
```
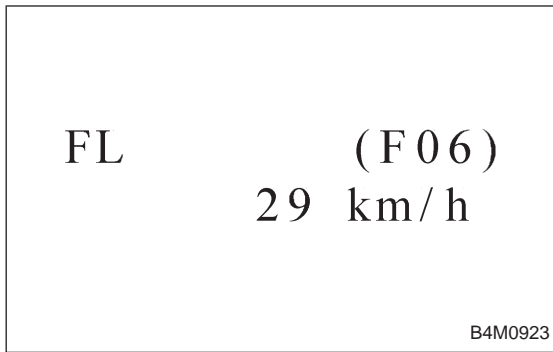
D: MODE F02 AND F06 — FRONT LEFT WHEEL SPEED SIGNAL (FL) —

● Compare speedometer with monitor indications.
● F02: FL wheel speed is indicated in mile per hour (mile/h).
● F06: FL wheel speed is indicated in kilometer per hour (km/h).

NOTE:
The monitor as shown, indicates that FL wheel speed is 29 km/h.

```
RR        (F07)
     10  km/h

                            B4M0924
```

E: MODE F03 AND F07 — REAR RIGHT WHEEL SPEED SIGNAL (RR) —

● Compare speedometer with monitor indications.
● F03: RR wheel speed is indicated in mile per hour (mile/h).
● F07: RR wheel speed is indicated in kilometer per hour (km/h).

NOTE:
The monitor as shown, indicates that RR wheel speed is 10 km/h.

```
RL          (F08)

      50  km/h



                    B4M0925
```

F: MODE F04 AND F08
## — REAR LEFT WHEEL SPEED SIGNAL (RL)
—

- Compare speedometer with monitor indications.
- F04: RL wheel speed is indicated in mile per hour (mile/h).
- F08: RL wheel speed is indicated in kilometer per hour (km/h).

NOTE:
The monitor as shown, indicates that RL wheel speed is 50 km/h.

```
BLS          (F09)

      12.00 V



                    B4M1265
```
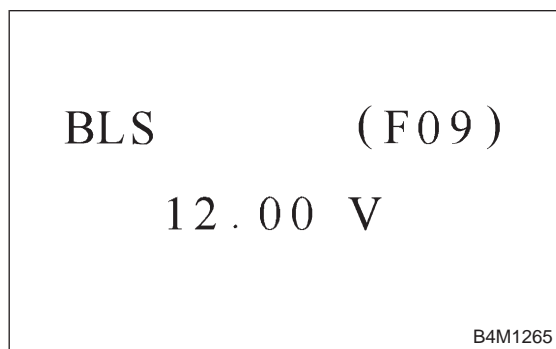
G: MODE F09
— STOP LIGHT SWITCH MONITOR (BLS) —

- Stop light switch monitor voltage is displayed.

```
G-SENS       (F10)

      2.30 V



                    B4M0927
```
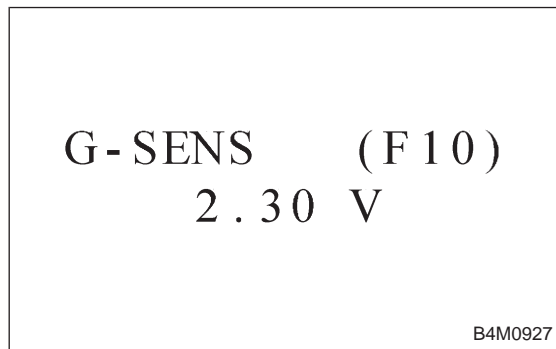
H: MODE F10
— G SENSOR OUTPUT VOLTAGE (G-SENS)
—

- Refers to vehicle acceleration detecting by the analog G sensor. It appears on the select monitor display in volts.

NOTE:
Only AWD model

LED No.	Signal name	Display
1	Stop light switch	B1
2	Valve relay signal	VR
3	Motor relay signal	MR
4	AT ABS signal	AT
5	—	—
6	ABS warning light	AW
7	Valve relay monitor	VM
8	Motor relay monitor	MM
9	CCM signal	CM
10	—	—

B1	VR	MR	AT	—
AW	VM	MM	CM	—

1	2	3	4	5
6	7	8	9	10

I: MODE FA0
— ON ↔ OFF SIGNAL —

Requirement for LED "ON"

LED No. 1   Stop light switch is turned ON. (With brake pedal depressed.)
LED No. 2   Valve relay is turned OFF.
LED No. 3   Motor relay is turned ON.
LED No. 4   ABS control operates.
LED No. 6   ABS warning light is ON.
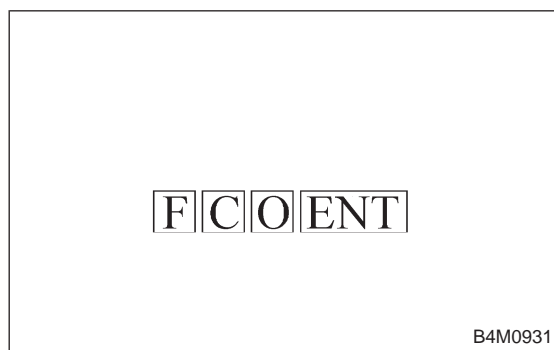LED No. 7   Valve relay is turned OFF.
LED No. 8   Motor relay is turned ON.
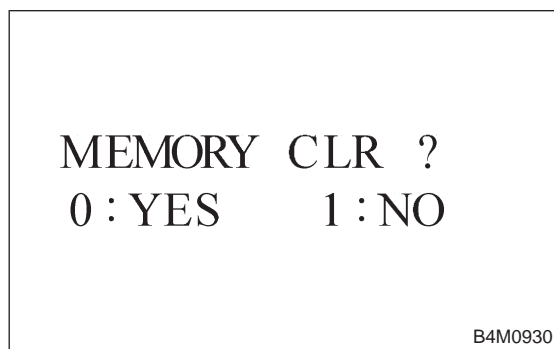LED No. 9   ABS control operates.

MEMORY CLR ?
0 : YES   1 : NO

B4M0930
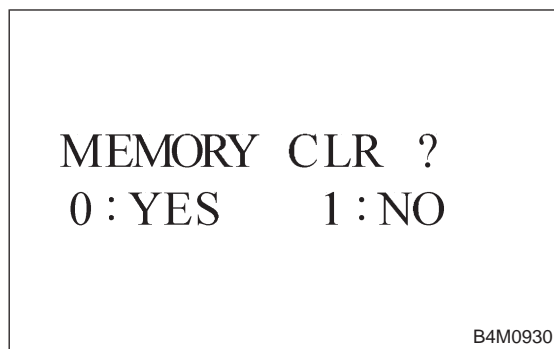
J: MODE FC0
— HISTORY OF TROUBLE CODES IS ERASED (D·CLR) —

● Deletes the recorded trouble codes in ABS control module.

F C O ENT

B4M0931

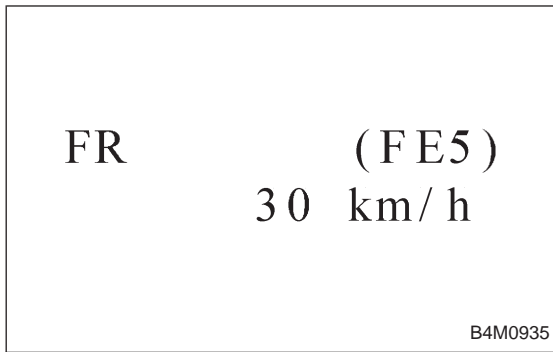1) Press the function key [F] [C] [O] [ENT] in that order.

MEMORY CLR ?
0 : YES   1 : NO

B4M0930

2) System indicates as shown.

MEMORY CLR ?
∗ 0 : YES   1 : NO

B4M0933
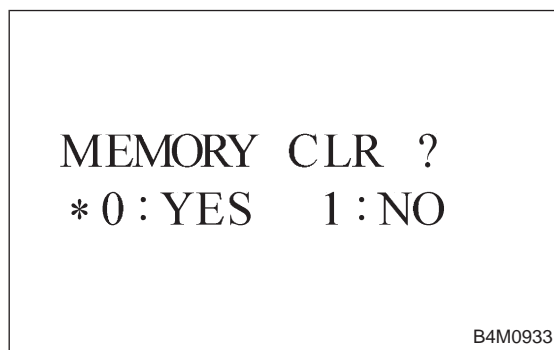
3) Press the function key [0], to clear memories. The indication of ∗ is added to screen.

PLEASE
KEY OFF

B4M0934

4) Press the function key [ENT]. System indicates as shown.
5) Turn ignition switch to OFF.

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FR          (FE5)
      30  km/h

                    B4M0935
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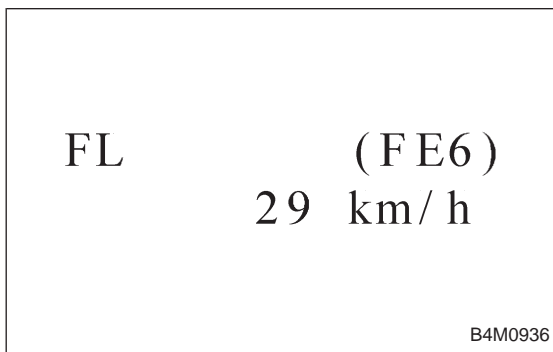
K: MODE FE1 AND FE5 — FRONT RIGHT WHEEL SPEED SIGNAL (FR) —

● The wheel speed is indicated at the time of malfunction.
● FE1: FR wheel speed is indicated in mile per hour (mile/h).
● FE5: FR wheel speed is indicated in kilometer per hour (km/h).

NOTE:
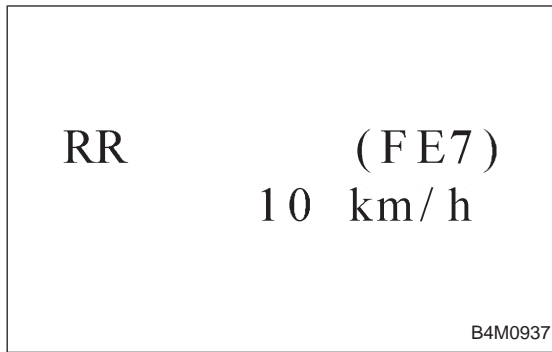The monitor as shown, indicates that FR wheel speed is 30 km/h.

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FL          (FE6)
      29  km/h

                    B4M0936
```

L: MODE FE2 AND FE6 — FRONT LEFT WHEEL SPEED SIGNAL (FL) —

● The wheel speed is indicated at the time of malfunction.
● FE2: FL wheel speed is indicated in mile per hour (mile/h).
● FE6: FL wheel speed is indicated in kilometer per hour (km/h).

NOTE:
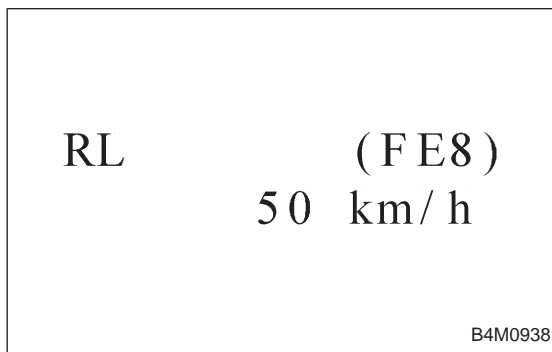The monitor as shown, indicates that FL wheel speed is 29 km/h.

RR   (FE7)
   10 km/h

B4M0937

M: MODE FE3 AND FE7
— REAR RIGHT WHEEL SPEED SIGNAL (RR) —

● The wheel speed is indicated at the time of malfunction.
● FE3: RR wheel speed is indicated in mile per hour (mile/h).
● FE7: RR wheel speed is indicated in kilometer per hour (km/h).

NOTE:
The monitor as shown, indicates that RR wheel speed is 10 km/h.
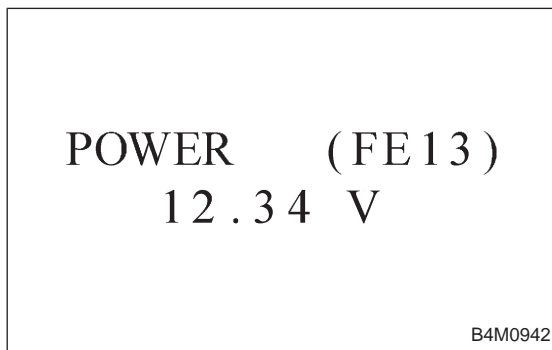
RL   (FE8)
   50 km/h

B4M0938

N: MODE FE4 AND FE8
— REAR LEFT WHEEL SPEED SIGNAL (RL) —

● The wheel speed is indicated at the time of malfunction.
● FE4: RL wheel speed is indicated in mile per hour (mile/h).
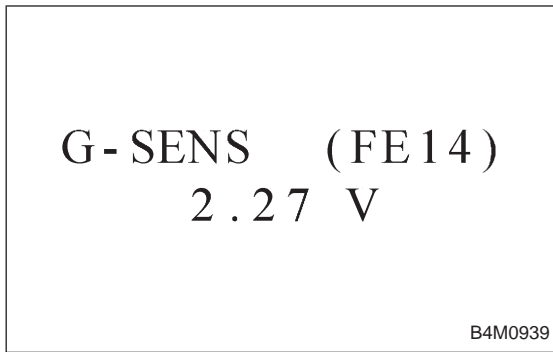● FE8: RL wheel speed is indicated in kilometer per hour (km/h).

NOTE:
The monitor as shown, indicates that RL wheel speed is 50 km/h.

POWER   (FE13)
   12.34 V

B4M0942

O: MODE FE13
— ABSCM&H/U POWER SUPPLY VOLTAGE (POWER) —

● ABSCM&H/U power supply voltage is indicated at the time of malfunction.

G-SENS   (FE14)
2.27 V

B4M0939

LED No.	Signal name	Display
1	Motor relay monitor	MM
2	Stop light switch	B1
3	AT ABS signal	AT
4	CCM signal	CM
5	ABS signal	AO
6	—	—
7	—	—
8	—	—
9	—	—
10	—	—

MM	B1	AT	CM	AO
—	—	—	—	—

1	2	3	4	5
6	7	8	9	10

CODE   21   (FE16)

FR.SS   HARD

H4M1151

P: MODE FE14
— G SENSOR OUTPUT VOLTAGE (G-SENS) —

● Refers to vehicle acceleration detected by the analog G sensor at the time of malfunction. It appears on the select monitor display in volts.
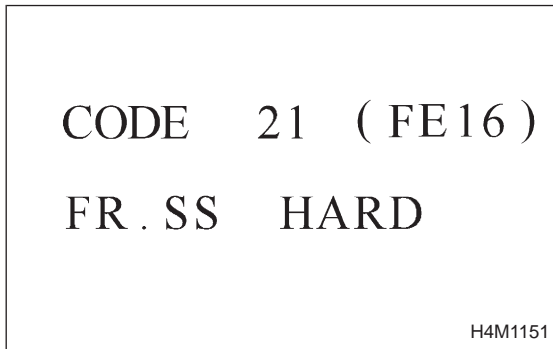
NOTE:
Only AWD model

Q: MODE FE15
— ON ↔ OFF SIGNAL —

● ON or OFF is indicated at the time of malfunction.
● Requirement for LED "ON"
LED No. 1   Motor relay is turned ON.
LED No. 2   Stop light switch is turned ON. (With brake pedal depressed.)
LED No. 3   ABS control operates.
LED No. 4   ABS control operates.
LED No. 5   ABS control operates.

R: MODE FE16
— TROUBLE CODE (CODE) —

● When freeze frame data is stored in memory, trouble code appears on monitor.

NOTE:
The monitor as shown, indicates trouble code 21.