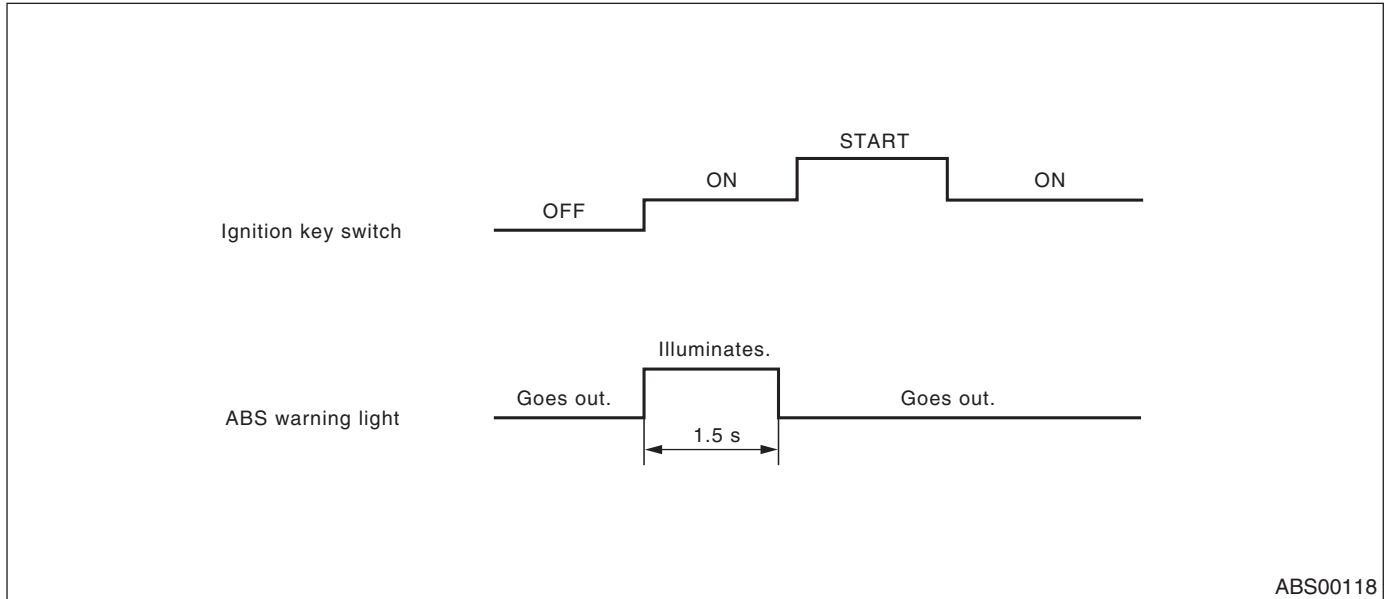


10.ABS Warning Light Illumination Pattern

A: INSPECTION



ABS00118

- 1) When the ABS warning light does not illuminate in accordance with this illumination pattern, there must be an electrical malfunction.
- 2) When the ABS warning light remains constantly OFF, repair the ABS warning light circuit or diagnosis circuit. <Ref. to ABS-24, ABS WARNING LIGHT DOES NOT COME ON., ABS Warning Light Illumination Pattern.>

NOTE:

Even though the ABS warning light does not go out 1.5 seconds after it illuminates, the ABS system operates normally when the warning light goes out while driving at approximately 12 km/h (7 MPH). However, the Anti-lock brakes do not work while the ABS warning light is illuminated.

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

B: ABS WARNING LIGHT DOES NOT COME ON.

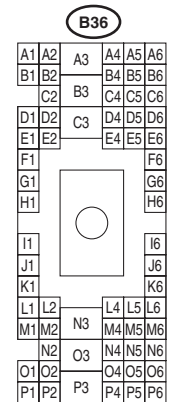
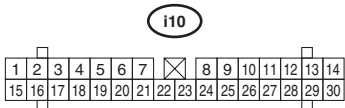
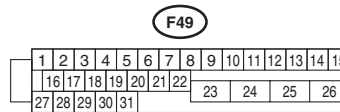
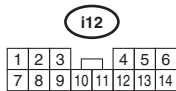
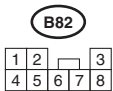
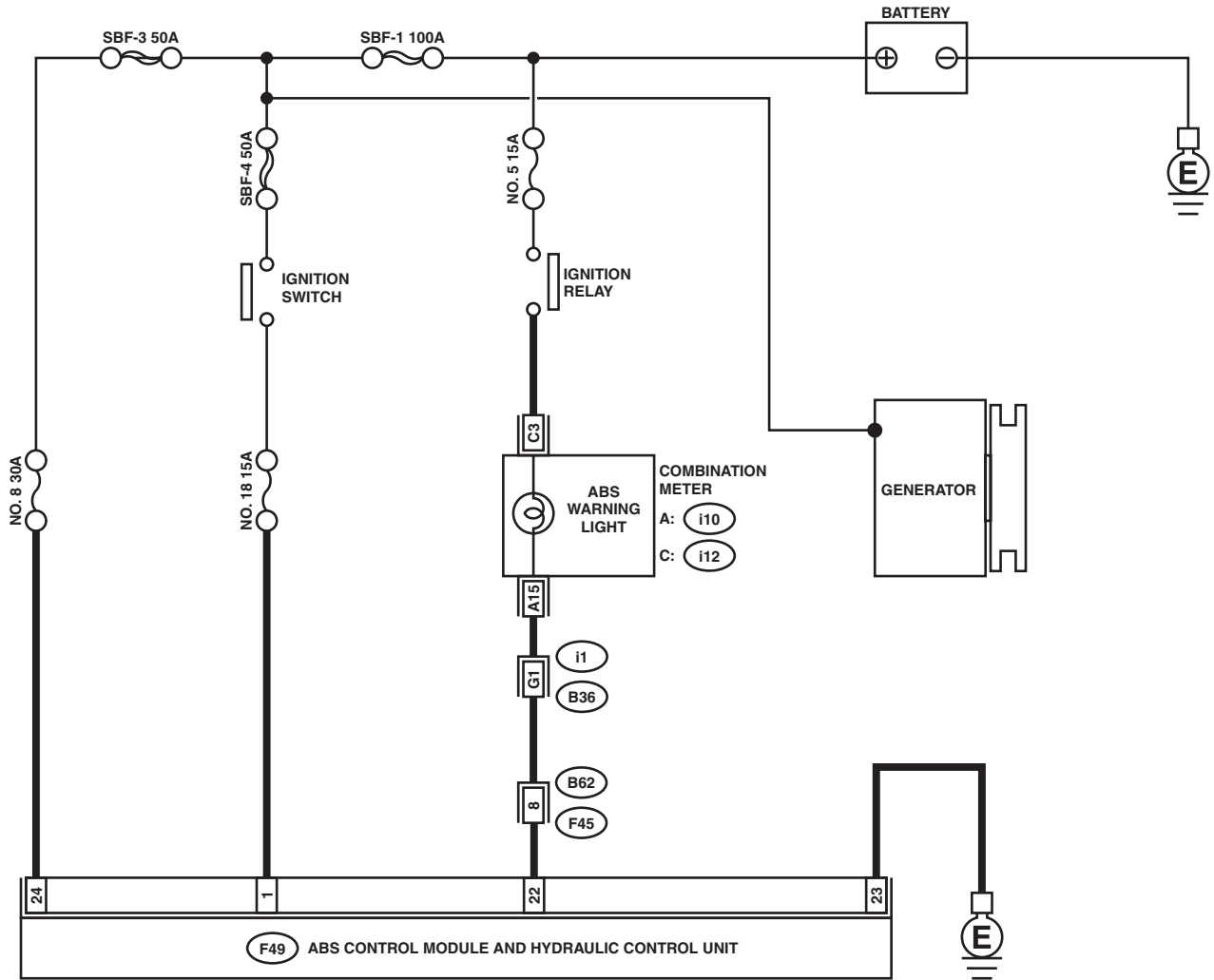
DIAGNOSIS:

- ABS warning light circuit is open or shorted.

TROUBLE SYMPTOM:

- When ignition switch is turned ON (engine OFF), ABS warning light does not come on

WIRING DIAGRAM:



ABS00626

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

Step	Check	Yes	No	
1	CHECK IF OTHER WARNING LIGHTS TURN ON. Turn ignition switch to ON (engine OFF).	Do other warning lights turn on?	Go to step 2.	Repair combination meter. -<Ref. to IDI-13, Combination Meter Assembly.>
2	CHECK ABS WARNING LIGHT BULB. 1) Turn ignition switch to OFF. 2) Remove combination meter. 3) Remove ABS warning light bulb from combination meter.	Is ABS warning light bulb OK?	Go to step 3.	Replace ABS warning light bulb. <Ref. to IDI-13, Combination Meter Assembly.>
3	CHECK BATTERY SHORT OF ABS WARNING LIGHT HARNESS. 1) Disconnect connector (B62) from connector (F45). 2) Measure voltage between connector (B62) and chassis ground. <i>Connector & terminal</i> <i>(B62) No. 8 (+) — Chassis ground (-):</i>	Is the measured value less than 3 V?	Go to step 4.	Repair warning light harness.
4	CHECK BATTERY SHORT OF ABS WARNING LIGHT HARNESS. 1) Turn ignition switch to ON. 2) Measure voltage between connector (B62) and chassis ground. <i>Connector & terminal</i> <i>(B62) No. 8 (+) — Chassis ground (-):</i>	Is the measured value less than 3 V?	Go to step 5.	Repair warning light harness.
5	CHECK WIRING HARNESS. 1) Turn ignition switch to OFF. 2) Install ABS warning light bulb from combination meter. 3) Install combination meter. 4) Turn ignition switch to ON. 5) Measure voltage between connector (B62) and chassis ground. <i>Connector & terminal</i> <i>(B62) No. 8 (+) — Chassis ground (-):</i>	Is the measured value within 10 to 15 V?	Go to step 6.	Repair wiring harness.
6	CHECK BATTERY SHORT OF ABS WARNING LIGHT HARNESS. 1) Turn ignition switch to OFF. 2) Measure voltage between connector (F45) and chassis ground. <i>Connector & terminal</i> <i>(F45) No. 8 (+) — Chassis ground (-):</i>	Is the measured value less than 3 V?	Go to step 7.	Repair wiring harness.
7	CHECK BATTERY SHORT OF ABS WARNING LIGHT HARNESS. 1) Turn ignition switch to ON. 2) Measure voltage between connector (F45) and chassis ground. <i>Connector & terminal</i> <i>(F45) No. 8 (+) — Chassis ground (-):</i>	Is the measured value less than 3 V?	Go to step 8.	Repair wiring harness.
8	CHECK GROUND CIRCUIT OF ABSCM&H/U. Measure resistance between ABSCM&H/U and chassis ground. <i>Connector & terminal</i> <i>(F49) No. 23 — Chassis ground:</i>	Is the measured value less than 0.5 Ω?	Go to step 9.	Repair ABSCM&H/U ground harness.
9	CHECK WIRING HARNESS. Measure resistance between connector (F45) and chassis ground. <i>Connector & terminal</i> <i>(F45) No. 8 — Chassis ground:</i>	Is the measured value less than 0.5 Ω?	Go to step 10.	Repair harness/connector.

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK POOR CONTACT IN CONNECTORS. Turn ignition switch to OFF.	Is there poor contact in connectors between combination meter and ABSCM&H/U?	Repair connector.	Replace ABSCM only. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

MEMO:

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

C: ABS WARNING LIGHT DOES NOT GO OFF.

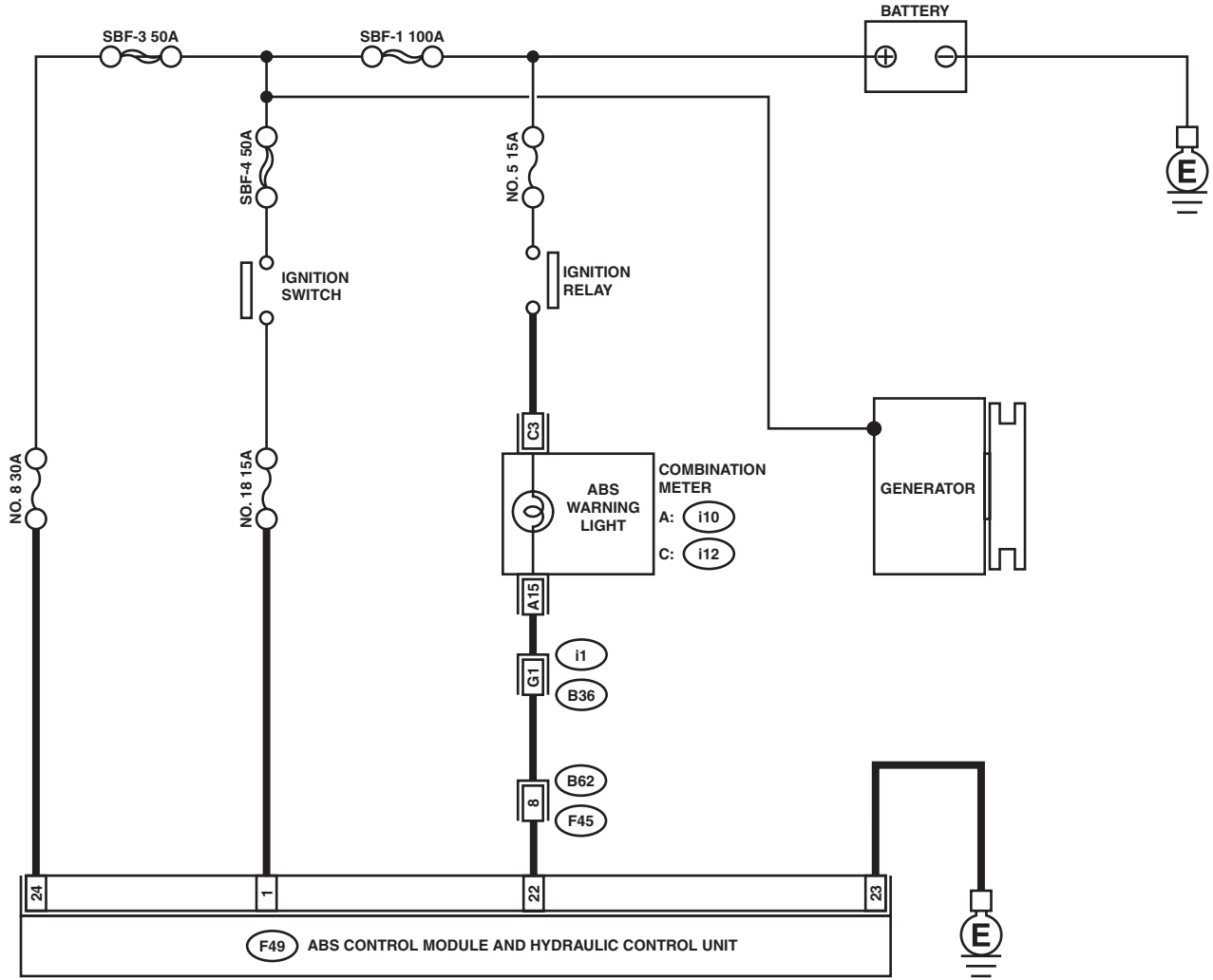
DIAGNOSIS:

- ABS warning light circuit is open or shorted.

TROUBLE SYMPTOM:

- When starting the engine and while ABS warning light is kept ON.

WIRING DIAGRAM:



B82

1	2	3
4	5	6
7	8	

i12

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

F45

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

F49

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

B36

A1	A2	A3	A4	A5	A6
B1	B2	B3	B4	B5	B6
C2	C3	C4	C5	C6	
D1	D2	D3	D4	D5	D6
E1	E2	E3	E4	E5	E6
F1					F6
G1					G6
H1					H6
I1					I6
J1					J6
K1					K6
L1	L2		L4	L5	L6
M1	M2	N3	M4	M5	M6
N2	O3	N4	N5	N6	
O1	O2	O4	O5	O6	
P1	P2	P3	P4	P5	P6

i10

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

ABS00626

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK INSTALLATION OF ABSCM&H/U CONNECTOR. Turn ignition switch to OFF.	Is ABSCM&H/U connector inserted into ABSCM until the clamp locks onto it?	Go to step 2.	Insert ABSCM&H/U connector into ABSCM&H/U until the clamp locks onto it.
2 CHECK DIAGNOSIS TERMINAL. Measure resistance between diagnosis terminals (B81) and chassis ground. <i>Terminals</i> <i>Diagnosis terminal (A) — Chassis ground:</i> <i>Diagnosis terminal (B) — Chassis ground:</i>	Is the measured value less than 0.5 Ω?	Go to step 3.	Repair diagnosis terminal harness.
3 CHECK DIAGNOSIS LINE. 1) Turn ignition switch to OFF. 2) Connect diagnosis terminal (B81) to diagnosis connector (B82) No. 8. 3) Disconnect connector from ABSCM&H/U. 4) Measure resistance between ABSCM&H/U connector and chassis ground. <i>Connector & terminal (F49) No. 4 — Chassis ground:</i>	Is the measured value less than 0.5 Ω?	Go to step 4.	Repair harness connector between ABSCM&H/U and diagnosis connector.
4 CHECK GENERATOR. 1) Start the engine. 2) Idle the engine. 3) Measure voltage between generator and chassis ground. <i>Terminal</i> <i>Generator B terminal (+) — Chassis ground (-):</i>	Is the measured value within 10 to 15 V?	Go to step 5.	Repair generator. <Ref. to SC(H4SO)-15, Generator.>
5 CHECK BATTERY TERMINAL. Turn ignition switch to OFF.	Is there poor contact at battery terminal?	Repair battery terminal.	Go to step 6.
6 CHECK POWER SUPPLY OF ABSCM. 1) Disconnect connector from ABSCM&H/U. 2) Start engine. 3) Idle the engine. 4) Measure voltage between ABSCM&H/U connector and chassis ground. <i>Connector & terminal (F49) No. 1 (+) — Chassis ground (-):</i>	Is the measured value within 10 to 15 V?	Go to step 7.	Repair ABSCM&H/U power supply circuit.
7 CHECK WIRING HARNESS. 1) Disconnect connector (F45) from connector (B62). 2) Turn ignition switch to ON.	Does the ABS warning light turn on?	Repair front wiring harness.	Go to step 8.
8 CHECK ABSCM&H/U TERMINAL. 1) Turn ignition switch to OFF. 2) Check for damage at the ABSCM&H/U terminal.	Is there any damage on terminal?	Replace ABSCM only. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>	Go to step 9.
9 CHECK ABSCM&H/U. Measure resistance between ABSCM&H/U terminals. <i>Terminal</i> <i>No. 22 — No. 23:</i>	Is the measured value more than 1 MΩ?	Go to step 10.	Replace ABSCM only. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK WIRING HARNESS. Measure resistance between connector (F45) and chassis ground. <i>Connector & terminal</i> <i>(F45) No. 8 — Chassis ground:</i>	Is the measured value less than 0.5 Ω ?	Go to step 11.	Repair harness.
11 CHECK WIRING HARNESS. 1) Connect connector to ABSCM&H/U. 2) Measure resistance between connector (F45) and chassis ground. <i>Connector & terminal</i> <i>(F45) No. 8 — Chassis ground:</i>	Is the measured value more than 1 M Ω ?	Go to step 12.	Repair harness.
12 CHECK POOR CONTACT IN ABSCM&H/U CONNECTOR.	Is there poor contact in ABSCM&H/U connector?	Repair connector.	Replace ABSCM only. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).>

ABS WARNING LIGHT ILLUMINATION PATTERN

ABS (DIAGNOSTICS)

MEMO: