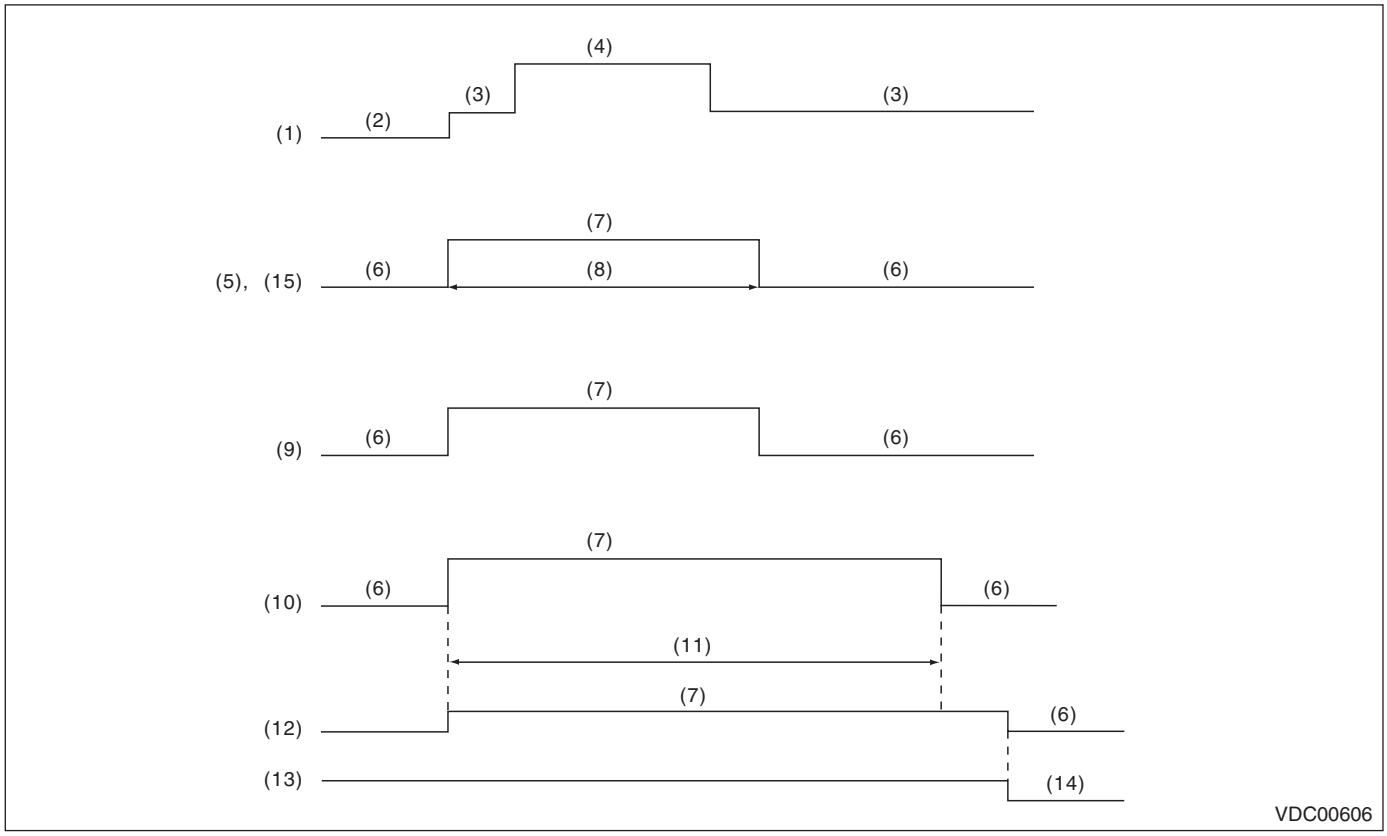
10.Warning Light Illumination Pattern

A: INSPECTION



(1)	Ignition switch	(6)	Light OFF	(11)	Several seconds (depending on engine coolant temperature)
(2)	OFF	(7)	Light ON	(12)	Brake warning light (EBD warning light)
(3)	ON	(8)	2 seconds	(13)	Parking brake
(4)	Engine start	(9)	VDC indicator light	(14)	Released
(5)	ABS warning light	(10)	VDC warning light & VDC OFF indicator light	(15)	Hill start assist warning light (MT model only)

1) When warning lights or indicator lights do not illuminate in accordance with this illumination pattern, there must be an electrical malfunction.
2) When warning lights or indicator lights remain constantly OFF, check the combination meter circuit or CAN communication circuit. <Ref. to VDC(diag)-28, VDC WARNING LIGHT, VDC OFF INDICATOR LIGHT AND VDC INDICATOR LIGHT DO NOT COME ON, Warning Light Illumination Pattern.> <Ref. to VDC(diag)-29, ABS WARNING LIGHT DOES NOT COME ON, Warning Light Illumination Pattern.> <Ref. to VDC(diag)-29, HILL START ASSIST WARNING LIGHT DOES NOT COME ON, Warning Light Illumination Pattern.>
3) When ABS warning light and hill start assist warning light do not go off, check the combination meter circuit. <Ref. to VDC(diag)-30, ABS WARNING LIGHT DOES NOT GO OFF, Warning Light Illumination Pattern.> <Ref. to VDC(diag)-30, HILL START ASSIST WARNING LIGHT DOES NOT GO OFF, Warning Light Illumination Pattern.>
4) When the VDC indicator light, VDC warning light & VDC OFF indicator light do not go off, check the combination meter circuit or CAN communication circuit. <Ref. to VDC(diag)-30, VDC INDICATOR LIGHT DOES NOT GO OFF, Warning Light Illumination Pattern.> <Ref. to VDC(diag)-31, VDC WARNING LIGHT AND VDC OFF INDICATOR LIGHT DO NOT GO OFF, Warning Light Illumination Pattern.>

NOTE:
• Even though the ABS warning light does not go off after 2 seconds from ABS warning light illumination, the ABS system operates normally when the warning light goes off while driving at approximately 12 km/h (7 MPH). However, the ABS system does not work while the ABS warning light is illuminated.
• It may take several minutes before VDC warning light & VDC OFF indicator light goes off if the vehicle is parked under low temperature for a specified time. This is not defective because it is resulted from low engine coolant temperature.
• With the vehicle jack-up/lift-up or set on free rollers, when the wheels lock or spin after starting the engine, ABS warning light, VDC warning light & VDC OFF indicator light may illuminate because VDCCM&H/U detects the abnormal conditions from ABS wheel speed sensors. In this case, this is not a malfunction. Perform the Clear Memory Mode. <Ref. to VDC(diag)-25, Clear Memory Mode.>

B: VDC WARNING LIGHT, VDC OFF INDICATOR LIGHT AND VDC INDICATOR LIGHT DO NOT COME ON

DETECTING CONDITION:

- Defective combination meter
- Defective CAN communication

TROUBLE SYMPTOM:

When the ignition switch is turned to ON (engine OFF), VDC indicator light, VDC warning light & VDC OFF indicator light do not illuminate.

NOTE:

When pressing the VDC OFF switch for 10 seconds or more, the VDC OFF indicator light goes off and cannot operate any more. When turning the ignition switch from OFF to ON, the OFF operation enabled status is restored.

	Step	Check	Yes	No
1	**CHECK OTHER INDICATOR LIGHT.** Turn the ignition switch to ON.	Does other indicator light illuminate soon after "ON"?	Go to step **2**.	Perform the self-diagnosis of combination meter.
2	**CHECK VDCCM.** When the engine does not start, display the current data of VDCCM using Subaru Select Monitor.	Is "VDC Warning Light" output set to ON?	Go to step **3**.	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
3	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **4**.
4	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

C: ABS WARNING LIGHT DOES NOT COME ON

DETECTING CONDITION:

- Defective combination meter
- Defective CAN communication

TROUBLE SYMPTOM:

When the ignition switch is turned to ON (engine OFF), ABS warning light and hill start assist warning light do not come on.

	Step	Check	Yes	No
1	**CHECK OTHER LIGHTS TURN ON.** Turn the ignition switch to ON. (engine OFF)	Do other warning lights illuminate?	Go to step **2**.	Check the combination meter.
2	**READ DTC.** Read the DTC. <Ref. to VDC(diag)-23, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-34, List of Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **4**.
4	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

D: HILL START ASSIST WARNING LIGHT DOES NOT COME ON

For the diagnostic procedures, refer to “ABS WARNING LIGHT DOES NOT COME ON”. <Ref. to VDC(diag)-29, ABS WARNING LIGHT DOES NOT COME ON, Warning Light Illumination Pattern.>

E: ABS WARNING LIGHT DOES NOT GO OFF

DETECTING CONDITION:
- Defective combination meter
- Defective CAN communication

TROUBLE SYMPTOM:
When starting the engine, the ABS warning light and hill start assist warning light are kept ON.

	Step	Check	Yes	No
1	**READ DTC.** Read the DTC. <Ref. to VDC(diag)-23, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-34, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **3**.
3	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

F: HILL START ASSIST WARNING LIGHT DOES NOT GO OFF

For the diagnostic procedures, refer to “ABS WARNING LIGHT DOES NOT GO OFF”. <Ref. to VDC(diag)-30, ABS WARNING LIGHT DOES NOT GO OFF, Warning Light Illumination Pattern.>

G: VDC INDICATOR LIGHT DOES NOT GO OFF

DETECTING CONDITION:
- Defective combination meter
- Defective CAN communication

TROUBLE SYMPTOM:
When starting the engine, VDC indicator light is kept ON.

	Step	Check	Yes	No
1	**READ DTC.** Read the DTC. <Ref. to VDC(diag)-23, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-34, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **3**.
3	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

H: VDC WARNING LIGHT AND VDC OFF INDICATOR LIGHT DO NOT GO OFF

DETECTING CONDITION:

- Defective combination meter
- Defective CAN communication
- Defective engine
- VDC OFF switch is shorted.

TROUBLE SYMPTOM:

When starting the engine, VDC OFF indicator light is kept ON.

NOTE:
When pressing the VDC OFF switch for 10 seconds or more, the VDC OFF indicator light goes off and cannot operate any more. When turning the ignition switch from OFF to ON, the OFF operation enabled status is restored.

	Step	Check	Yes	No
1	**READ DTC.** Read the DTC. <Ref. to VDC(diag)-23, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-34, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK ENGINE.**	Does the malfunction indicator light illuminate?	Repair the engine.	Go to step **3**.
3	**CHECK ENGINE COOLANT TEMPERATURE.** Warm up the engine and check if VDC warning light & VDC OFF indicator light illumination condition changes.	When the engine coolant temperature is too low, VDC warning light & VDC OFF indicator light illuminate. Do the lights go off when the engine is warmed up?	Normal	Go to step **4**.
4	**CHECK VDC OFF SWITCH.** Remove and check VDC OFF switch. <Ref. to VDC-28, VDC OFF Switch.>	Is the VDC OFF switch normal?	Go to step **5**.	Replace the VDC OFF switch. <Ref. to VDC-28, VDC OFF Switch.>
5	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **6**.
6	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

I: BRAKE WARNING LIGHT DOES NOT GO OFF

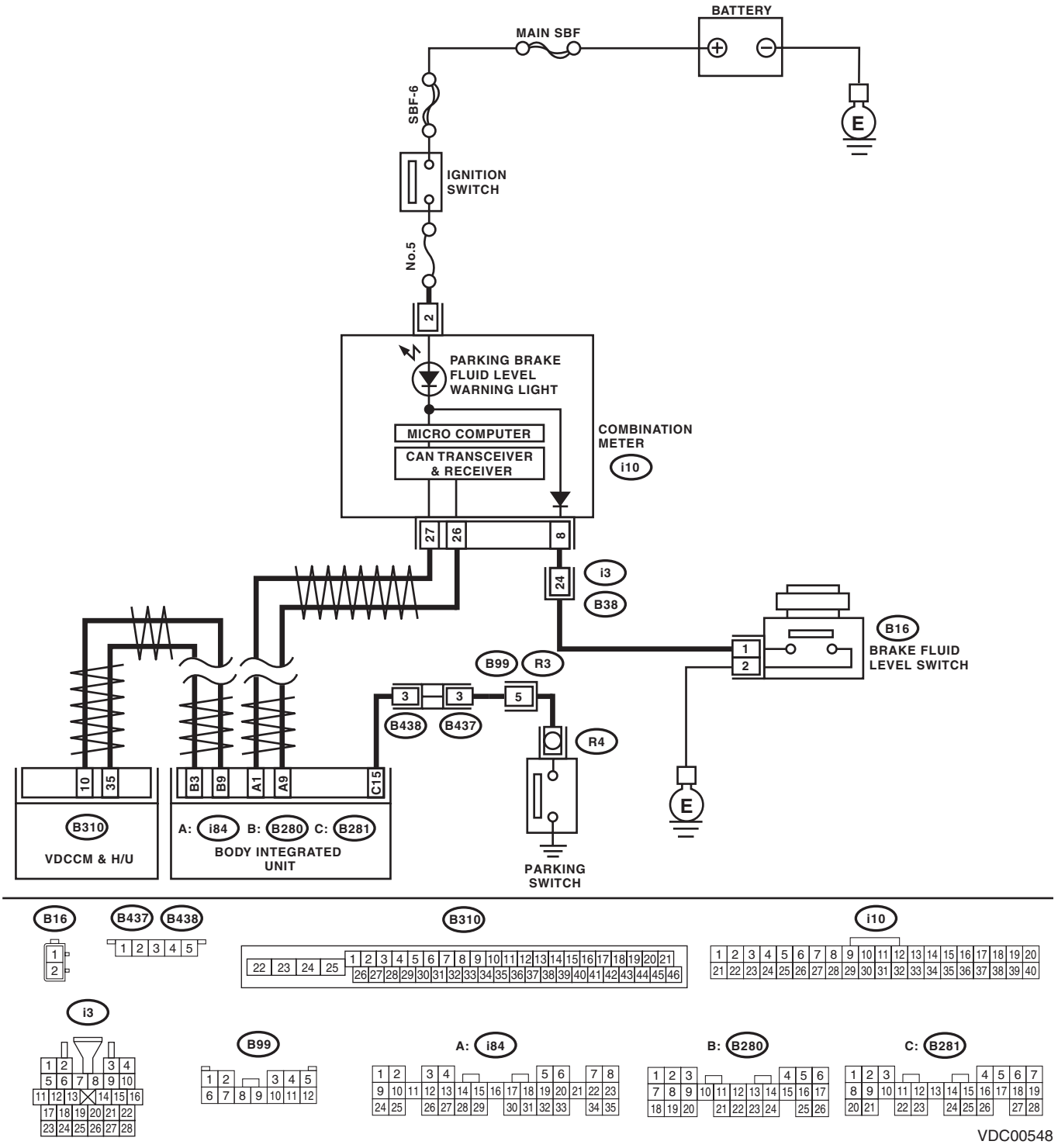
DETECTING CONDITION:

- Brake warning light circuit is shorted.
- Defective sensor/connector
- Defective CAN communication

TROUBLE SYMPTOM:

After starting the engine, the brake warning light remains lit though the parking lever is released.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK INSTALLATION OF VDCCM&H/U CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Check that the VDCCM&H/U connector is inserted until it is locked by clamp.	Is the connector firmly inserted?	Go to step **2**.	Insert the VDCCM&H/U connector until it is locked by clamp.
2	**READ DTC.** Read the DTC. <Ref. to VDC(diag)-23, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-34, List of Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK BRAKE FLUID AMOUNT.** Check the amount of brake fluid in the reservoir tank of master cylinder.	Is the amount of brake fluid between the lines of “MAX” and “MIN”?	Go to step **4**.	Replenish brake fluid to the specified value.
4	**CHECK BRAKE FLUID LEVEL SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the level switch connector (B16) from master cylinder. 3) Measure the resistance of master cylinder terminals. ***Terminals*** ***No. 1 — No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the master cylinder.
5	**CHECK GROUND SHORT OF HARNESS.** 1) Disconnect the connector (i10) from combination meter. 2) Measure the resistance between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 8 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Repair the harness between combination meter and brake fluid level switch.
6	**CHECK PARKING BRAKE SWITCH.** 1) Disconnect the connector (R4) from parking brake switch. 2) Release the parking brake. 3) Measure the resistance between parking brake switch terminal and chassis ground.	Is the resistance 1 MΩ or more?	Go to step **7**.	Replace the parking brake switch.
7	**CHECK GROUND SHORT OF HARNESS.** 1) Disconnect the connector (B281) from body integrated unit. 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B281) No. 15 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **8**.	Repair the harness between body integrated unit and parking brake switch.
8	**CHECK POOR CONTACT OF CONNECTOR.** Check for poor contact of all connectors.	Is there poor contact?	Repair the connector.	Go to step **9**.
9	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-30, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is there any fault in LAN system?	Perform the diagnosis according to DTC for LAN system.	Go to step **10**.
10	**CHECK COMBINATION METER.** Check the combination meter. <Ref. to IDI-4, INSPECTION, Combination Meter System.>	Is combination meter OK?	Replace the VDCCM only. <Ref. to VDC-11, REPLACEMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>