INSTRUMENTATION DRIVER INFO

1. General Description

A: SPECIFICATION

Combination meter	Speedometer	Stepping motor type
	Tachometer	
	Engine coolant temperature gauge (Turbo model)	
	Fuel gauge	
	Malfunction indicator light	LED
	Oil pressure indicator light	
	ABS warning light	
	Engine coolant temperature indicator light (Non-turbo model)	
	Engine coolant temperature warning light (Non-turbo model)	
	Airbag warning light	
	Seat belt warning light	
	Door open warning light	
	Brake fluid and parking brake warning light	
	Low fuel warning light	
	Charge warning light	
	AWD warning light (AT model)	
	Hill start assist warning light (MT models with VDC)	
	Tire pressure warning light	
	Vehicle dynamics control (VDC) warning light	
	Vehicle dynamics control (VDC) indicator light	
	Turn signal indicator light	
	HI-beam indicator light	
	Security and immobilizer indicator light	
	Cruise indicator light	
	Cruise set indicator light	
	Front fog light indicator light	
	Sports indicator light (AT model)	
	AT oil temperature indicator light	
	Light illumination indicator light (Turbo model)	
	Meter illumination light	
	LCD back light	
	Odo/trip meter	LCD
	SPORT shift indicator	
	AT select lever position indicator	
Clock	Average fuel economy, Ambient air temperature, Current time, Malfunction warning display	VFD
	Passenger's airbag ON indicator	LED
	Passenger's airbag OFF indicator	
	Passenger' seat belt warning light	

B: CAUTION

- Be careful not to damage the meters and instrument panel.
- Be careful not to damage the meter glass.
- Make sure the electrical connector is connected securely.
- After installation, make sure that each meter operates normally.
- Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
- Do not apply an excessive force on the printed circuit.
- Do not drop or otherwise apply impact.
- When the combination meter of model with immobilizer has been replaced, be sure to perform the registration of immobilizer.

C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	Remarks
Circuit tester	Used for measuring resistance and voltage.

2. Combination Meter System

A: WIRING DIAGRAM

1. COMBINATION METER

<Ref. to WI-193, WIRING DIAGRAM, Combination Meter System.>

B: INSPECTION

1. SELF-DIAGNOSIS

The self-diagnosis (checking of each meter, warning light, indicator, illumination, LCD) of combination meter can be performed in the following procedure.

NOTE:
Perform the steps described in 2) through 4) within 10 seconds.
1) Within 3 seconds after turning the ignition switch to ON, set the lighting switch to tail light or headlight position.
2) Press the odo/trip meter knob three times.
3) Turn the lighting switch to OFF, and press the odo/trip meter knob three times.
4) Set the lighting switch to tail light or headlight position again, and press the odo/trip meter knob three times.

NOTE:
• If the odo/trip meter knob is pressed four times in the step, it will switch to the DTC display mode. <Ref. to IDI-9, DTC DISPLAY MODE, INSPECTION, Combination Meter System.>
• When the self-diagnosis function operates, the warning light, indicator, and LCD display checks are performed. After this, the buzzer will sound for 0.5 seconds every time the odo/trip meter knob is pressed, and operation checks are performed in the order of meter indicator needle operation, meter indicator needle indication, and LCD. Turn the ignition switch to OFF to cancel the self-diagnosis function.
• When the engine starts during diagnosis, the self-diagnosis function is not cancelled, however, once the vehicle starts driving, the self-diagnosis function is deactivated automatically for safety.
5) Move on to the “Meter Indicator Needle Operation Check”.
Check meter operation, warning light, indicator light, and LCD.

Meter indicator needle	LCD display, illumination	Warning lights, indicator lights
MIN indication ↓ MAX indication	ILL1 (lowest brightness) ↓ (Display each level for 1 second) ILL6 (highest brightness)	Light ON The engine coolant temperature warning light illuminates in red. (Non-turbo model)
MAX indication ↓ MIN indication	ILL6 (highest brightness) ↓ (Display each level for 1 second) ILL1 (lowest brightness)	

6) Press the odo/trip meter knob once.
7) Move on to the “Meter Indicator Needle Indication Check”.
Check meter operation, warning light, indicator light, and LCD.

NOTE:
• The meter indicator needle will switch every 1.5 seconds.
• The ILL illumination level will be at the brightness it was set to when switching to the “Meter Indicator Needle Indication Check”.

Speedometer (km/h)	Tachometer (rpm)	Fuel gauge	Engine coolant temperature gauge	Low fuel warning light	Warning lights, indicator lights
0	0	Lowest position	Lowest position	Light ON	Light OFF The engine coolant temperature indicator light illuminates in blue. (Non-turbo model)
0	0	E	C	Light ON	
40	1000	1/2	1/2	Light OFF	
100	4000	F	H	Light OFF	
40	1000	1/2	1/2	Light OFF	
0	0	E	E	Light ON	

8) Press the odo/trip meter knob once.
9) Move on to the “LCD Display Check”.
Check the LCD.

NOTE:
- All warning lights and indicator lights turn off.
- The meter indicator needle maintains its position in the “Meter Indicator Needle Indication Check”.
- The ILL illumination level is lit at ILL6 (highest brightness).

Illuminating order	1	2	3	4	5	6	7	8	9	10	11	12	13	
ODO, TRIP A/B	All lights ON	All lights OFF	ODO	All lights OFF	TRIP A	All lights OFF	TRIP B	All lights OFF	All lights OFF	All lights OFF	TRIP A	All lights OFF	TRIP B	Go back to 1 and repeat
Odo/trip meter	88888.8	111111	22222.2	333333	44444.4	555555	66666.6	777777	88888.8	999999	00000.0	888888	88888.8	
AT shift indicator	All lights ON	1	2	3	4	5	6	7	P	R	N	D	E	
▲ ▼	▲ ▼	All lights OFF	▲	All lights OFF	▼	All lights OFF	▲	All lights OFF	▼	All lights OFF	▲	All lights OFF	▼	

2. SYMPTOM CHART

Symptoms	Repair order	Reference
Combination meter assembly does not operate.	1. Power supply 2. Ground circuit 3. Combination meter	<Ref. to IDI-6, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Combination Meter System.>
Speedometer does not operate.	1. ABS C/M or VDC C/M 2. Harness 3. Combination meter	<Ref. to IDI-6, CHECK ABS CONTROL MODULE OR VDC CONTROL MODULE., INSPECTION, Combination Meter System.>
Tachometer does not operate.	1. ECM 2. Harness 3. Combination meter	<Ref. to IDI-7, CHECK ENGINE CONTROL MODULE (ECM), INSPECTION, Combination Meter System.>
Fuel gauge does not operate.	1. Communication circuit 2. Fuel level sensor 3. Harness 4. Combination meter	<Ref. to IDI-7, CHECK FUEL LEVEL SENSOR., INSPECTION, Combination Meter System.>
Engine coolant temperature gauge does not operate.	1. Communication circuit 2. Engine coolant temperature sensor 3. Harness 4. Combination meter	<Ref. to IDI-8, CHECK ENGINE COOLANT TEMPERATURE SENSOR, INSPECTION, Combination Meter System.>

CAUTION:
When measuring the voltage and resistance of each control module or sensor, use a tapered pin with a diameter of less than 0.64 mm (0.025 in) in order to avoid poor contact. Do not insert the pin more than 2 mm (0.08 in).

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY FOR COMBINATION METER.** 1) Remove the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.> 2) Disconnect the combination meter harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short between the ignition switch and combination meter.
2	**CHECK POWER SUPPLY FOR COMBINATION METER.** Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short between the fuse and combination meter.
3	**CHECK GROUND CIRCUIT OF COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Measure the resistance of harness between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 21 — Chassis ground:*** ***(i10) No. 22 — Chassis ground:***	Is resistance less than 10 Ω?	Replace the meter case assembly.	Repair the wiring harness.

4. CHECK ABS CONTROL MODULE OR VDC CONTROL MODULE

	Step	Check	Yes	No
1	**CHECK VEHICLE SPEED SIGNAL.** 1) Lift up the vehicle and support it with rigid racks. 2) Drive the vehicle faster than 10 km/h (6 MPH). **WARNING:** **Be careful not to get caught in the running wheels.** 3) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 31 (+) — Chassis ground (–):***	Is the voltage less than 1 V ←→ 5 V or more?	Replace the meter case assembly.	Go to step **2**.
2	**CHECK HARNESS BETWEEN ABS OR VDC CONTROL MODULE AND COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the ABS or VDC control module and the combination meter. 3) Measure the resistance between the ABS or VDC control module harness connectors and the combination meter harness connector. ***Connector & terminal*** ***Model without VDC*** ***(B301) No. 23 — (i10) No. 31:*** ***Model with VDC*** ***(B310) No. 33 — (i10) No. 31:***	Is resistance less than 10 Ω?	Model without VDC: Check the ABS control module. <Ref. to ABS(diag)-2, Basic Diagnostic Procedure.>Model with VDC: Check the VDC control module. <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Repair the wiring harness.

5. CHECK ENGINE CONTROL MODULE (ECM)

	Step	Check	Yes	No
1	**CHECK ECM SIGNAL.** 1) Start the engine. 2) Measure the voltage between ECM connector and chassis ground. ***Connector & terminal*** ***(B136) No. 22 (+) — Chassis ground (–):***	Is the voltage 0 ←→ 14 V or more?	Go to step **2**.	Inspect the ECM. <Ref. to EN(H4SO)(diag)-2, Basic Diagnostic Procedure.> <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.>
2	**CHECK HARNESS BETWEEN COMBINATION METER AND ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from ECM and combination meter. 3) Measure the resistance between ECM harness connector and combination meter harness connector. ***Connector & terminal*** ***(B136) No. 22 — (i10) No. 32:***	Is resistance less than 10 Ω?	Replace the meter case assembly.	Repair the wiring harness.

6. CHECK FUEL LEVEL SENSOR

	Step	Check	Yes	No
1	**CHECK THE COMMUNICATION STATUS.** 1) Connect the Subaru Select Monitor and then turn the ignition switch and Subaru Select Monitor to ON. 2) Read the DTC of the body integrated unit. <Ref. to LAN(diag)-14, OPERATION, Subaru Select Monitor.>	Is DTC being displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-33, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK COMBINATION METER.** 1) Remove the fuel sub level sensor. <Ref. to FU(H4SO)-59, REMOVAL, Fuel Sub Level Sensor.> <Ref. to FU(H4DOTC)-66, REMOVAL, Fuel Sub Level Sensor.> 2) Short the fuel sub level sensor connector terminal to the chassis ground using a suitable lead line wire with 2 — 6 Ω resistance connected between connector terminal and chassis ground. 3) Turn the ignition switch to ON. ***Terminals*** ***(R59) No. 1 — Chassis ground:***	Is the fuel gauge display in combination meter changed to FULL?	Go to step **3**.	Check harness for open or short circuits, and if normal, replace the meter case assembly.
3	**CHECK FUEL LEVEL SENSOR.** 1) Remove the fuel level sensor. <Ref. to FU(H4SO)-58, REMOVAL, Fuel Level Sensor.> <Ref. to FU(H4DOTC)-65, REMOVAL, Fuel Level Sensor.> 2) Measure the resistance between fuel level sensor terminals when the float is in FULL or EMPTY position. ***Terminals*** ***(R58) No. 1 — No. 4:***	Is the resistance 1.0 to 3.0 Ω (FULL) and 31 to 33 Ω (EMPTY)?	Go to step **4**.	Replace the fuel level sensor.

	Step	Check	Yes	No
4	**CHECK FUEL SUB LEVEL SENSOR.** 1) Remove the fuel sub level sensor. <Ref. to FU(H4SO)-59, REMOVAL, Fuel Sub Level Sensor.> <Ref. to FU(H4DOTC)-66, REMOVAL, Fuel Sub Level Sensor.> 2) Measure the resistance between fuel sub level sensor terminals when the float is in FULL or EMPTY position. ***Terminals*** ***(R59) No. 1 — No. 2:***	Is the resistance 1.0 to 3.0 Ω (FULL) and 61 to 63 Ω (EMPTY)?	Go to step **5**.	Replace the fuel sub level sensor.
5	**CHECK HARNESS BETWEEN FUEL SUB-LEVEL SENSOR AND BODY INTEGRATED UNIT.** 1) Disconnect the connector from body integrated unit. 2) Measure the resistance between the fuel sub level sensor harness connector terminal and body integrated unit harness connector terminal. ***Connector & terminal*** ***(R59) No. 1 — (B281) No. 7:***	Is resistance less than 10 Ω?	Go to step **6**.	Repair the wiring harness.
6	**CHECK HARNESS BETWEEN FUEL LEVEL SENSOR AND FUEL SUB LEVEL SENSOR.** Measure the resistance between fuel level sensor harness connector terminal and fuel sub level sensor harness connector terminal. ***Connector & terminal*** ***(R58) No. 1 — (R59) No. 2:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair the wiring harness.
7	**CHECK FUEL LEVEL SENSOR GROUND CIRCUIT.** Measure the resistance between fuel level sensor harness connector terminal and chassis ground. ***Connector & terminal*** ***(R58) No. 4 — Chassis ground:***	Is resistance less than 10 Ω?	Replace the meter case assembly.	Repair the wiring harness.

7. CHECK ENGINE COOLANT TEMPERATURE SENSOR

	Step	Check	Yes	No
1	**CHECK THE COMMUNICATION STATUS.** 1) Connect the Subaru Select Monitor and then turn the ignition switch and Subaru Select Monitor to ON. 2) Read the DTC of the body integrated unit. <Ref. to LAN(diag)-14, OPERATION, Subaru Select Monitor.>	Is DTC being displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-33, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK ENGINE COOLANT TEMPERATURE SENSOR.** Check the engine coolant temperature sensor. <Ref. to EN(H4SO)(diag)-2, Basic Diagnostic Procedure.> <Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.>	Is the engine coolant temperature sensor OK?	Replace the meter case assembly.	Replace the engine coolant temperature sensor.

8. DTC DISPLAY MODE

It is possible to display the DTC of the combination meter through the following procedures.
1) Within 3 seconds after turning the ignition switch to ON, set the lighting switch to tail light or headlight position.
2) Press the odo/trip meter knob four times.
3) Turn the lighting switch to OFF, and press the odo/trip meter knob four times.
4) Set the lighting switch to tail light or headlight position again, and press the odo/trip meter knob four times.

NOTE:
- Perform the steps described in 2) and 4) within 10 seconds.
- When the engine starts during diagnosis, the self-diagnosis function is not cancelled, however, once turning the ignition switch to OFF or the vehicle starts driving, DTC display mode is cancelled automatically for safety.
- When the DTC display mode operates, {ECM}, {TCM}, {ABS/VDC} is displayed cyclically in this order for every three seconds or every press of the trip knob. DTC is displayed in the following table according to type of control module, receiving DTC, DTC detected, No DTC.
- When the DTCs of individual control modules change from current malfunctions to past malfunctions, and the trouble is cleared, when the engine is started three or more times, the DTC will no longer be displayed in the combination meter. In this case, read the DTC using Subaru Select Monitor.

Control module	Condition	Display
ECM	Receiving DTC	Trip “A” + “P (Blink)”
	DTC detected	Trip “A” + “P xxxx”
	No DTC	Trip “A” + “P ----”
TCM	Receiving DTC	Trip “B” + “P (Blink)”
	DTC detected	Trip “B” + “P xxxx”
	No DTC	Trip “B” + “P ----”
ABS/VDCCM	Receiving DTC	Trip “A” + “C (Blink)”
	DTC detected	Trip “A” + “C xxxx”
	No DTC	Trip “A” + “C ----”
When CAN communication error is occurred	—	“-----”

NOTE:
As MT model is not equipped with TCM, only “Receiving DTC” is displayed.

3. Clock System

A: WIRING DIAGRAM

1. CLOCK

<Ref. to WI-204, WIRING DIAGRAM, Clock System.>

B: INSPECTION

1. SYMPTOM CHART

Symptom	Repair order	Reference
No display is shown.	1. Power supply 2. Clock body	<Ref. to IDI-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Clock System.>
The brightness does not change even when the night illumination control switch is operated.	1. CHECK COMBINATION METER DTC. 2. Check clock illumination circuit. 3. Check communication circuit between combination meter and clock.	<Ref. to IDI-11, CHECK ILLUMINATION CIRCUIT, INSPECTION, Clock System.>
Ambient air temperature/fuel economy displays do not appear.	1. Communication circuit between combination meter and clock 2. Clock body	<Ref. to IDI-11, CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Clock System.>
“Err” is displayed at the ambient air temperature display.	1. Check communication circuit between combination meter and ambient air temperature sensor. 2. CHECK COMBINATION METER DTC. 3. Check communication circuit between combination meter and clock.	<Ref. to IDI-12, CHECK AMBIENT TEMPERATURE METER SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Clock System.>
“Err” is displayed at the average fuel economy display.	1. Check communication circuit between combination meter and each module. 2. Check communication circuit between combination meter and clock.	<Ref. to IDI-13, CHECK AVERAGE FUEL ECONOMY SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Clock System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

	Step	Check	Yes	No
1	**CHECK CLOCK POWER SUPPLY.** 1) Disconnect the clock harness connector. 2) Measure the voltage between the clock harness connector and chassis ground. ***Connector & terminal*** ***(i59) No. 10 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for a open or short between the fuse and clock.
2	**CHECK CLOCK GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between the clock harness connector and chassis ground. ***Connector & terminal*** ***(i59) No. 6 — Chassis ground:***	Is resistance less than 10 Ω?	Replace the clock body.	Repair the wiring harness.

3. CHECK ILLUMINATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK AMBIENT AIR TEMPERATURE OUTPUT DATA.** Connect the Subaru Select Monitor, and check the illumination ON/OFF data at the data monitor of the integrated unit.	Is it operating properly?	Go to step **2**.	Follow the diagnosis for the integrated unit.
2	**CHECK COMBINATION METER BRIGHTNESS CHANGE.** 1) Turn the ignition switch to ON. 2) Turn the lighting switch to ON, and check for whether the combination meter brightness changes or not. • Lit only at night time (Non-turbo model) • One level brightness drop (Turbo model)	Does the brightness of the combination meter change?	Go to step **3**.	Replace the meter case assembly.
3	**CHECK CLOCK ILLUMINATION POWER SUPPLY.** 1) Turn the ignition switch to OFF. 2) Disconnect the clock harness connector. 3) Turn the ignition switch and lighting switch to ON. 4) Measure the voltage between the clock harness connector and chassis ground. ***Connector & terminal*** ***(i59) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check the harness for an open circuit between the fuse and clock.
4	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the clock, and install a properly operating clock.	Does the brightness change?	Replace the clock body.	Replace the meter case assembly.

4. CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK THE HARNESS BETWEEN CLOCK AND COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of the clock and the combination meter. 3) Measure the resistance between the harness connector of the clock and the combination meter. ***Connector & terminal*** ***(i59) No. 5 — (i10) No. 29:***	Is resistance less than 10 Ω?	Replace the clock body.	Repair the wiring harness.

5. CHECK AMBIENT TEMPERATURE METER SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY FOR AMBIENT SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the ambient temperature sensor harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the ambient temperature sensor harness connector terminal and chassis ground. ***Connector & terminal*** ***(F78) No. 1 (+) — Chassis ground (–):***	Is the voltage 4 V or more?	Go to step **2**.	Check the harness for a open or short between the fuse and clock.
2	**CHECK HARNESS BETWEEN AMBIENT TEMPERATURE SENSOR AND COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the combination meter. 3) Measure the resistance between the ambient temperature sensor harness connector terminal and combination meter harness connector terminal. ***Connector & terminal*** ***(F78) No. 1(+) — (i10) No. 24:*** ***(F78) No. 2(+) — (i10) No. 23:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair the wiring harness.
3	**CHECK AMBIENT SENSOR.** 1) Remove the ambient temperature sensor. 2) Check the ambient temperature sensor. <Ref. to AC(diag)-29, AMBIENT SENSOR, Diagnostic Procedure for Sensors.>	Is the ambient temperature sensor operating properly?	Go to step **4**.	Replace the ambient sensor.
4	**CHECK AMBIENT TEMPERATURE DISPLAY.** 1) Connect the harness connector of the combination meter. 2) Connect a resistance of 3 Ω between the harness connector terminals of the ambient temperature sensor. 3) Turn the ignition switch to ON, and check the ambient air temperature display.	Is the ambient air temperature indicator showing 25°C (77°F)?	Repair the poor contact between the ambient air temperature sensor and harness connector.	Go to step **5**.
5	**CHECK AMBIENT AIR TEMPERATURE OUTPUT DATA.** Connect the Subaru Select Monitor, and check the ambient temperature data in the data monitor of the integrated unit.	Is the ambient air temperature indicator showing 25°C (77°F)?	Go to step **6**.	Replace the meter case assembly.
6	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the clock, and install a properly operating clock.	Is the ambient air temperature indicator showing 25°C (77°F)?	Replace the clock.	Replace the meter case assembly.

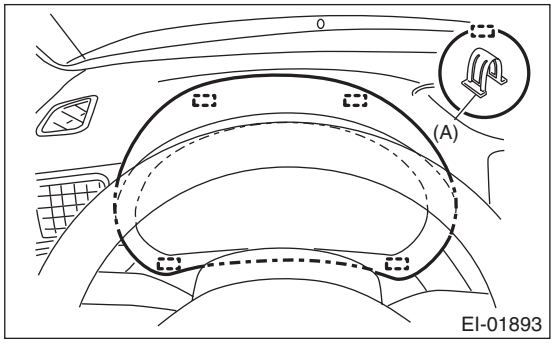
6. CHECK AVERAGE FUEL ECONOMY SYSTEM COMMUNICATION CIRCUIT

Step		Check	Yes	No
1	**CHECK OUTPUT DATA OF INTEGRATED UNIT.** Read the DTC of integrated unit using Subaru Select Monitor. <Ref. to LAN(diag)-14, OPERATION, Subaru Select Monitor.>	Is DTC displayed?	Go to step **2**.	Replace the meter case assembly.
2	**CHECK THE COMMUNICATION STATUS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the clock, and install a properly operating clock.	Is the fuel economy display correct?	Replace the clock body.	Replace the meter case assembly.

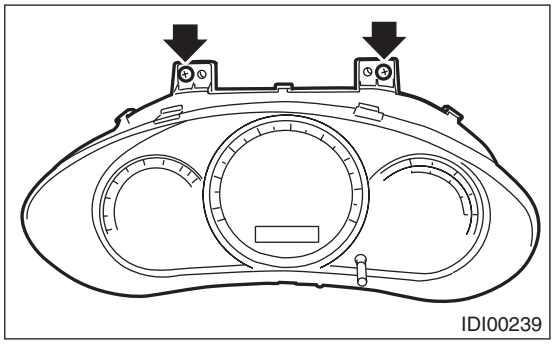
4. Combination Meter

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Set the tilt steering at the lowest position. Pull out steering wheels with telescopic functions all the way.
3) Remove the plastic hook (A), and detach the meter visor.



4) Remove the screws of the combination meter, and pull on the meter while tipping it towards yourself.



5) Disconnect the connector in the rear side of combination meter to remove meter.

CAUTION:
• Be careful not to damage the meter or instrument panel.
• Pay particular attention to avoid damaging the meter glass.

B: INSTALLATION

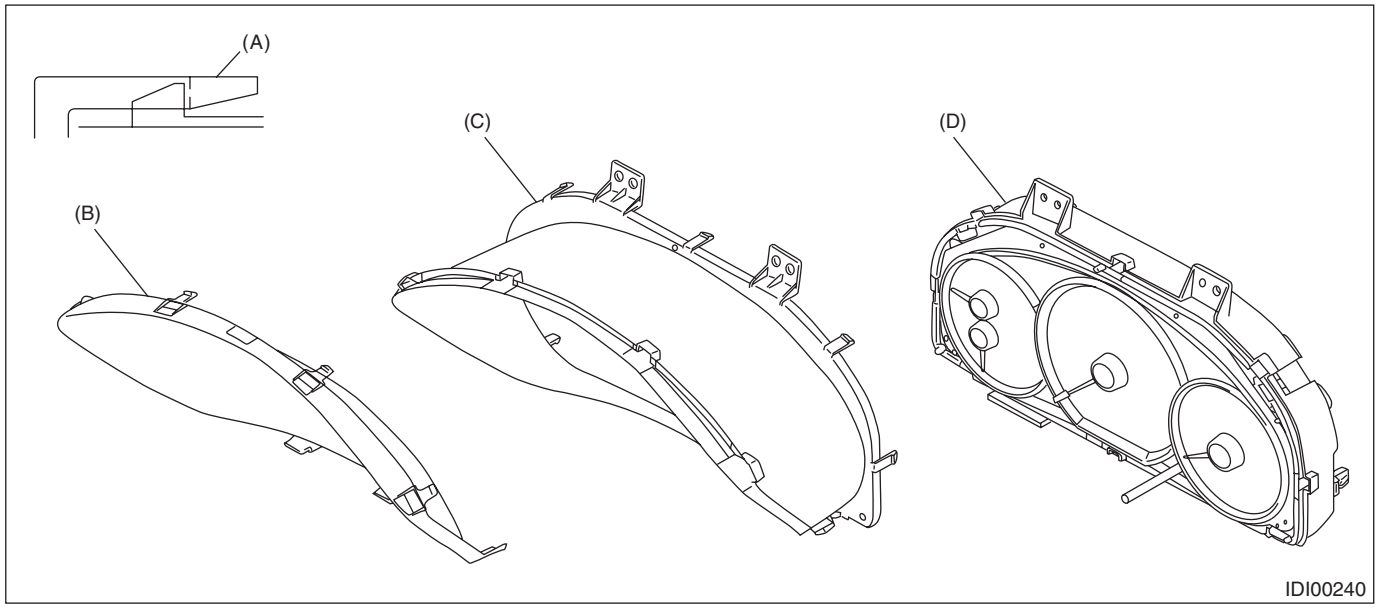
Install in the reverse order of removal.

CAUTION:
• Make sure the electrical connector is connected securely.
• Make sure that each meter operates normally.
• When the combination meter of model with immobilizer has been replaced, be sure to perform the registration of immobilizer.

C: DISASSEMBLY

CAUTION:
- **Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.**
- **Be careful not to apply excessive force to the trip knob.**
- **Be sure not to touch the meter indicator needle.**

Disengage claw (A), and remove the meter glass assembly (B) and meter visor (C) from meter case assembly (D).



1. BULB REPLACEMENT

LEDs are used for all of warning lights and indicator lights of combination meters, replace the meter case assembly if faulty.

D: ASSEMBLY

Assemble in the reverse order of disassembly.

5. Speedometer

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the speedometer alone. (Do not remove the cover on the back surface.)

6. Tachometer

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the tachometer alone. (Do not remove the cover on the back surface.)

7. Fuel Gauge

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the fuel gauge alone. (Do not remove the cover on the back surface.)

8. Engine Coolant Temperature Gauge

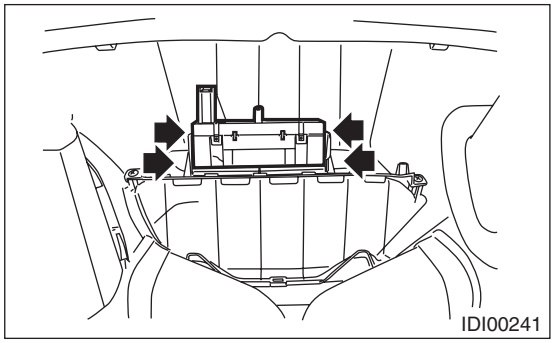
A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the engine coolant temperature gauge alone. (Do not remove the cover on the back surface.)

9. Clock

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the audio. <Ref. to ET-6, REMOVAL, Audio.>
3) Insert your hands from the audio space, and disengage the four claws of the bracket at the back side of the instrument panel.



4) Disconnect the harness connector and remove the clock.

B: INSTALLATION

Install in the reverse order of removal.