

Clock System

INSTRUMENTATION/DRIVER INFO

3. Clock System

A: WIRING DIAGRAM

1. CLOCK

<Ref. to WI-143, 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-12, 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-13, 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-13, 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-14, 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-15, 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 the resistance less than 10 Ω?	Replace the clock body.	Repair the wiring harness.

3. CHECK ILLUMINATION CIRCUIT

Step	Check	Yes	No
1 CHECK BODY INTEGRATED UNIT 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. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>
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.	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 the resistance less than 10 Ω ?	Replace the clock body.	Repair the wiring harness.

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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 displayed fuel economy correct?	Replace the clock body.	Replace the meter case assembly.