

17. Rear Window Defogger System

A: WIRING DIAGRAM

Refer to “Rear Defogger System” in the wiring diagram. <Ref. to WI-192, WIRING DIAGRAM, Rear Defogger System.>

B: INSPECTION

1. CHECK SYSTEM

Symptoms	Inspection order
Rear window defogger does not operate.	<ol style="list-style-type: none"> 1. Check the fuse. 2. Check the rear defogger relay. 3. Check the defogger switch. 4. Check the heat wire. 5. Check the wiring harness. 6. Check body integrated unit.

NOTE:

Rear window defogger system can be customized on the Subaru Select Monitor, when the body integrated unit customize setting {A/C ECM setting} is “support”.

System name	Initial setting	Customize setting
Rr defogger op. mode	OFF after 15 min.	Repeat 15 min. operation and 2 min. stop.

2. CHECK WITH SUBARU SELECT MONITOR

CAUTION:

Check whether the “Rr defogger op. mode” setting is in initial setting or customize setting before performing inspection.

1) Check the input signal when the rear window defogger switch is operated using Subaru Select Monitor.

(1) Prepare the Subaru Select Monitor. <Ref. to GW-7, PREPARATION TOOL, General Description.>

(2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.

(3) On «System Selection Menu» display, select {Integ. unit mode}.

(4) Select the {R defogger output} on {Current Data Display & Save}.

(5) Check the displayed data (ON/OFF) by operating the rear window defogger switch.

2) Check the operation with rear window defogger switch ON.

- When customize setting is set as «Continuous», it is normal if the 15-minute operation and 2-minute stop repeats.

- When customize setting is «Normal», it is normal if the operation lasts for 15 minutes and then turns OFF.

3) When the operation in 2) above fails, replace the body integrated unit.

3. HEAT WIRE INSPECTION

CAUTION:

Use a dry soft cloth to wipe off dirt on the glass along the heat wires with care not to damage the heat wires.

1) Inspect the following inspection tools.

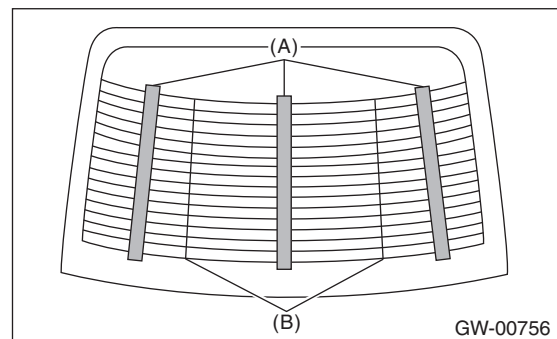
- Liquid crystal thermograph sheet (size: approx. 300 × 300 mm (11.8 × 11.8 in), heat sensing temperature: approx. 35 — 40°C (95 — 104°F))

- Aluminum foil

2) Turn the ignition switch to ON.

3) Turn the defogger switch to ON.

4) Push the liquid crystal thermograph sheet on to the outer surface of the rear glass.



(A) Liquid crystal thermograph sheet

(B) Parting line

NOTE:

Use the liquid crystal thermograph sheet to each section divided by parting lines.

5) Check the color of the liquid crystal thermograph sheet to identify the faulty heat wire.

Liquid crystal thermograph sheet	Criteria
Changed (red → blue)	Normal operation
No change (black)	Open

NOTE:

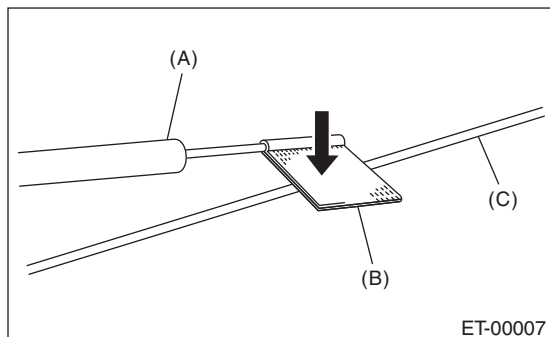
- If the response of the liquid crystal thermograph sheet is not sufficient, try the inspection on the inner surface of the glass.

- The time until color change depends on the glass surface temperature.

Rear Window Defogger System

GLASS/WINDOWS/MIRRORS

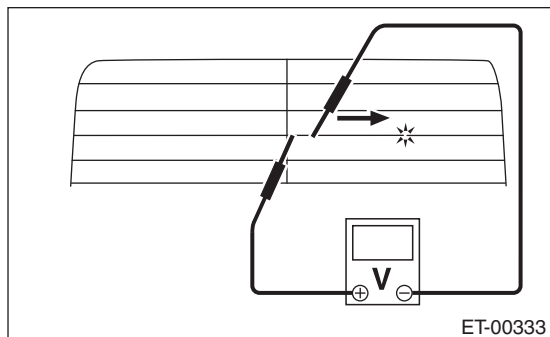
6) Wrap the aluminum foil around the tip of each tester probe and push them on to the faulty heat wire.



- (A) Tester probe
- (B) Aluminum foil
- (C) Heat wire

7) To both ends of the section that has been found to include an open in the step 5), apply the tester positive (+) probe and the negative (-) probe.

8) Slowly move the negative (-) tester probe along the heat wire. While moving the tester probe, find an open point where the voltage reading changes from 0.



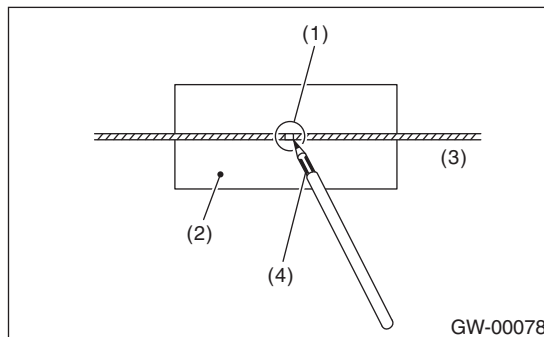
9) Repair the heat wire that determines the place of the open circuit. <Ref. to GW-52, REPAIR, Rear Window Defogger System.>

C: REPAIR

- 1) Clean the broken portion with alcohol or white gasoline.
- 2) Mask both side of wire with masking tape.
- 3) Apply conductive silver composition to the damaged point.

Conductive silver composition:

**Permatex
QUICK GRID**



- (1) Broken portion
- (2) Masking tape
- (3) Broken wire
- (4) Conductive silver composition

- 4) After applying conductive silver composition, dry it using a drier.
- 5) After repair, check the wire.