16. Rear Window Defogger System

A: WIRING DIAGRAM

Refer to “Rear Defogger System” in WI section. <Ref. to WI-145, WIRING DIAGRAM, Rear Defogger System.>

B: INSPECTION

1. SYSTEM INSPECTION

Symptoms	Repair order
Rear window defogger does not operate.	1. Fuse (M/B No. 10) 2. Rear defogger relay 3. Defogger switch 4. Heat wire 5. Wiring harness 6. Body integrated unit

NOTE:
Rear window defogger system can be customized on the Subaru Select Monitor.

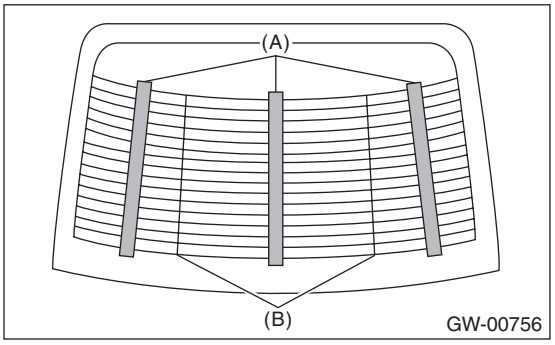
System name	Initial setting	Customize setting
Rear window defogger timer	OFF after 15 min.	Repeat 15 min. operation and 2 min. stop.

2. CHECK WITH SUBARU SELECT MONITOR

CAUTION:
Check that the rear window defogger timer 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-6, 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 {Current Data Display & Save}.
(5) Display the data of rear window defogger switch.
2) After rear window defogger switch is set to ON, check whether it turns to OFF in 15 minutes or repeats 15 minutes operation and 2 minutes stop?
3) When it becomes OFF on above 2), it is normal. When it repeats 15 minutes operation and 2 minutes stop, replace body integrated unit.
6) Wrap a piece of aluminum foil around the tip of tester probe and press it against the heat wire with your finger.

3. HEAT WIRE INSPECTION

CAUTION:
When wiping off the stain on glass with cloth, use a dry and soft cloth and move it in the direction of the heat wire extension to avoid damage to the heat wire.
1) Prepare the following checking items.
• Liquid crystal thermograph sheet (Approximate Size: 300 × 300 mm (11.8 × 11.8 in) and thermal temperature: 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 from the outside of the rear glass.

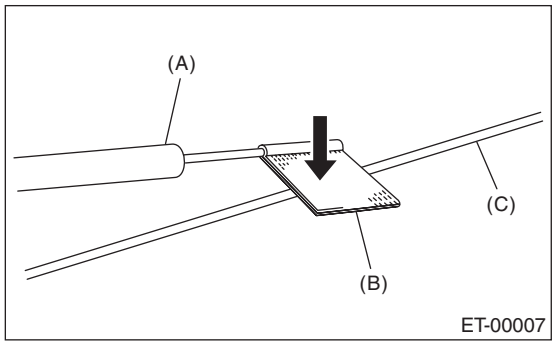


(A) Liquid crystal thermograph sheet
(B) Separate line

NOTE:
Use the liquid crystal thermograph sheet every range it is separated with the separate line.
5) Determine the faulty heat wire by checking the color of the liquid crystal thermograph sheet.

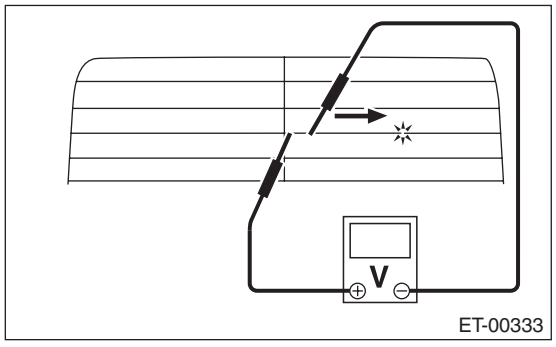
Liquid crystal thermograph sheet	Criteria
Change occurred (red → blue)	Normal
No change (black)	Open

NOTE:
• Check from the inside of the glass if the liquid crystal thermograph sheet does not change.
• The time for the color change may differ depends on the surface temperature of the glass.



(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) Move the tester probe on the negative (–) side slowly along the heat wire. If voltage changes from zero while moving the tester probe, heat wire is open at the voltage change point.

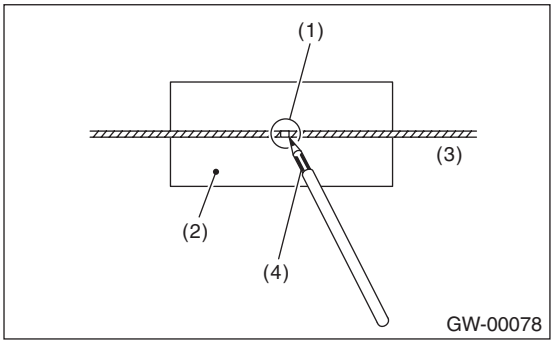


9) Repair the heat wire that determines the place of the open circuit. <Ref. to GW-28, REPAIR, Rear Window Defogger System.>

C: REPAIR

1) Clean the broken portion with alcohol or appropriate cleaning solvent.
2) Mask both side of wire with masking tape.
3) Apply the conductive silver composition to the broken portion.

Conductive silver composition:
by Permatex
QUICK GRID



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

4) Dry using a dryer after applying the composition.
5) After repair, check the wire.