

DEFOGGER - REAR WINDOW

1994 Toyota Celica

1994 ACCESSORIES & EQUIPMENT
Toyota Motor Sales, U.S.A., Inc.
Rear Window Defoggers

Celica

DESCRIPTION & OPERATION

NOTE: Some systems use an integrated or multipurpose relay as defogger relay. Some systems use a timer between switch and heating grid, and some use only a switch and heating grid.

Rear window defogger systems use a heating wire grid bonded to the inside of window. Heat is regulated by a control switch and a relay/timer. Most systems have an indicator light to show system is operating.

Power to the control switch is through a fuse in the fuse block. Timer relay will keep power to the grid for 12-18 minutes, or until the ignition is turned off.

TROUBLE SHOOTING

DEFOGGER DOES NOT WORK

Blown fuse or poor contact. Defogger switch defective. Poor connections. Broken wire. Relay defective.

INDICATOR LIGHT DOES NOT WORK

Bulb burned out. Open wire or poor connection.

TESTING

SYSTEM TESTING

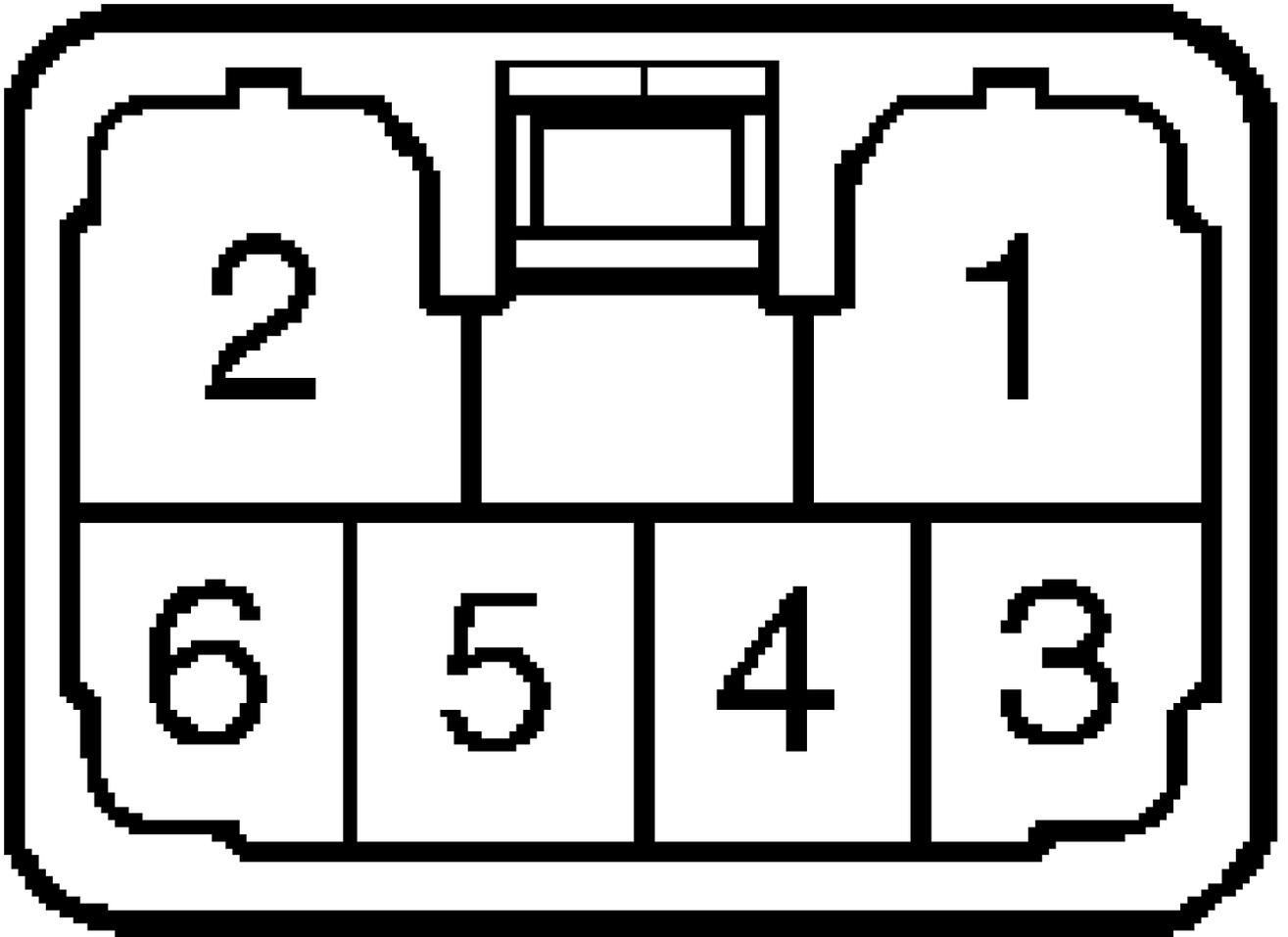
1) Ensure all in-line fuses or circuit breakers are okay. Turn ignition and control switches to ON position. Glass should feel warm after a few minutes.

2) If glass is not warm, use a test light or voltmeter to check for battery voltage at grid feed wire. If voltage is not correct, check wiring harness, control switch and timer/relay.

SWITCH TEST

1) To test defogger switch without timer, ensure continuity exists between terminals No. 2, No. 3, and No. 6 with switch on. See Fig. 1. With switch off, continuity should not exist between terminals No. 2, No. 3, and No. 6. Check for continuity between terminals No. 4 and No. 5 (light bulb). Continuity should exist at all times. If continuity is not as specified, replace switch.

2) To test defogger switch with timer, connect battery positive lead to terminal No. 3, and battery negative lead to terminal No. 2. See Fig. 2. Connect 3.4-watt test light between terminals No. 2 and No. 6. Push defogger switch. Ensure test light comes on for 12-18 minutes and then goes out. If switch does not operate as specified, replace switch.



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Fig. 1: Identifying Defogger Switch Terminals
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

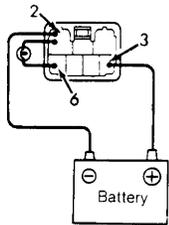
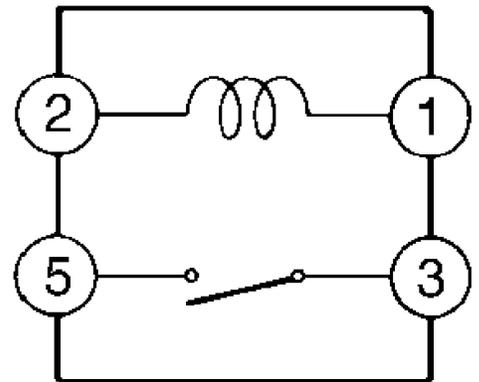
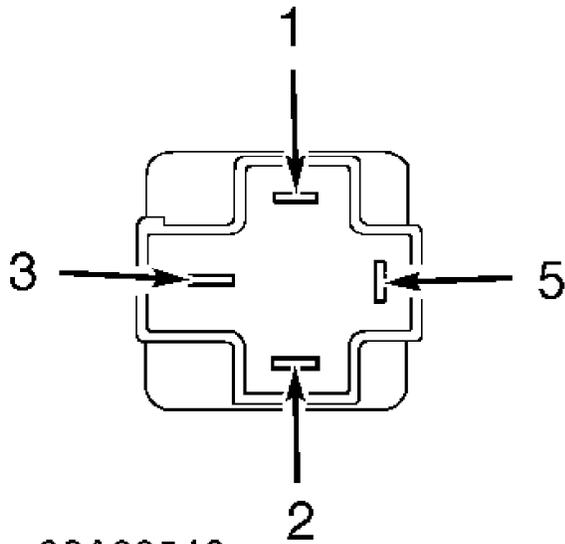


Fig. 2: Testing Defogger Switch With Timer
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

RELAY TEST

1) Using an ohmmeter, ensure continuity exists between terminals No. 1 and No. 2. See Fig. 3. Continuity should not exist between terminals No. 3 and No. 5. If continuity is not as specified, replace relay.

2) Connect battery positive lead to terminal No. 1 and battery negative lead to terminal No. 2. Continuity should exist between terminals No. 3 and No. 5. If operation is not as specified, replace relay.



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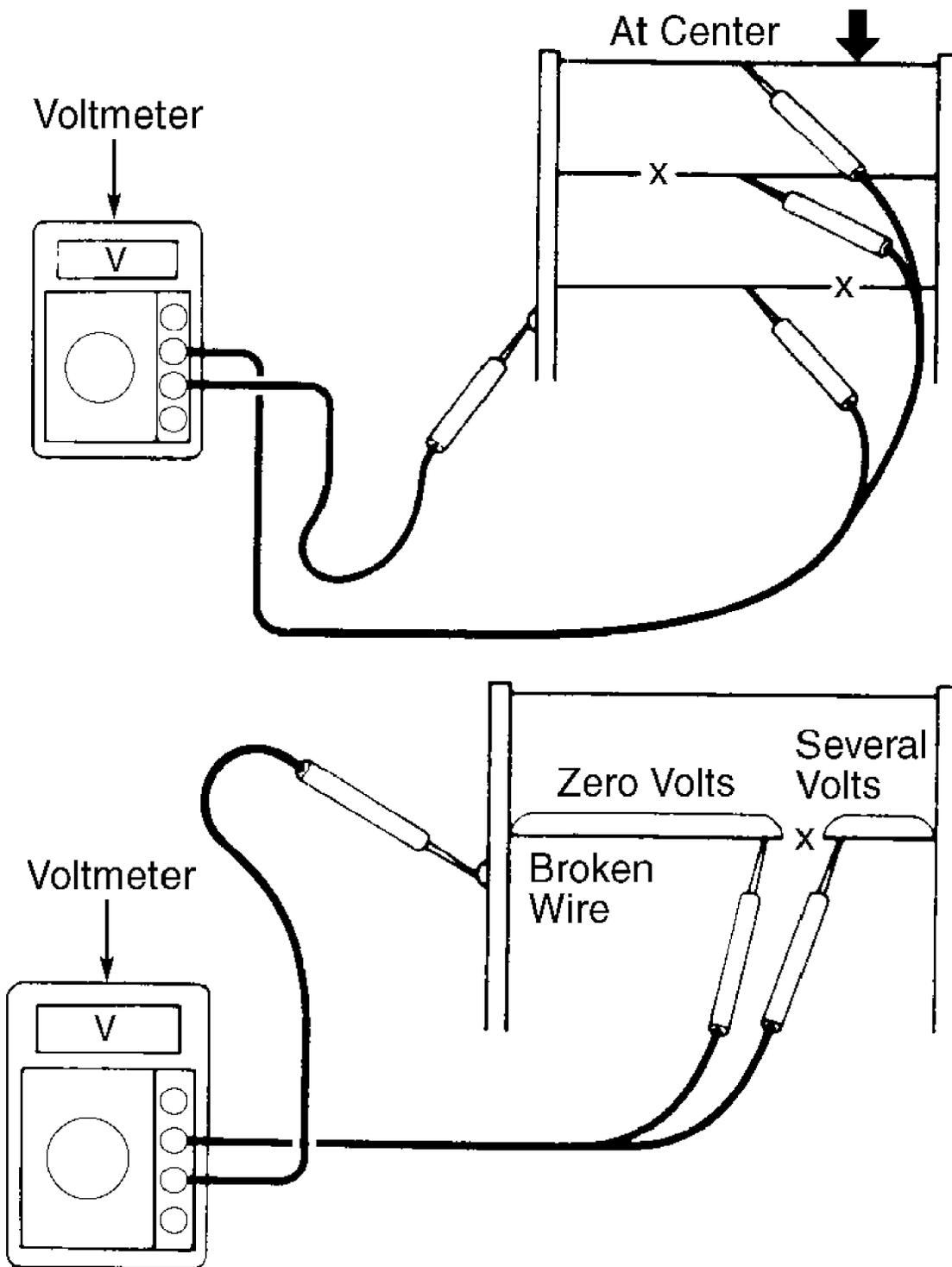
Fig. 3: Testing Defogger Relay
Courtesy of Toyota Motor Sales, U.S.A., Inc.

GRID FILAMENT TESTING

NOTE: When testing grid wires with voltmeter, wrap aluminum foil around end of test probe, then press foil to grid wire. This will prevent probe from damaging grid wire.

1) To locate breaks in grid wire filaments, attach a voltmeter to middle portion of each filament. Attach other meter probe to vertical section of window grid. See Fig. 4.

2) If a grid is broken, meter will register zero volts or about 10 volts, depending on if grid is broken between or outside test leads. If wire is unbroken, meter will register about 5 volts. To locate break, move probe along wire until voltage changes abruptly.

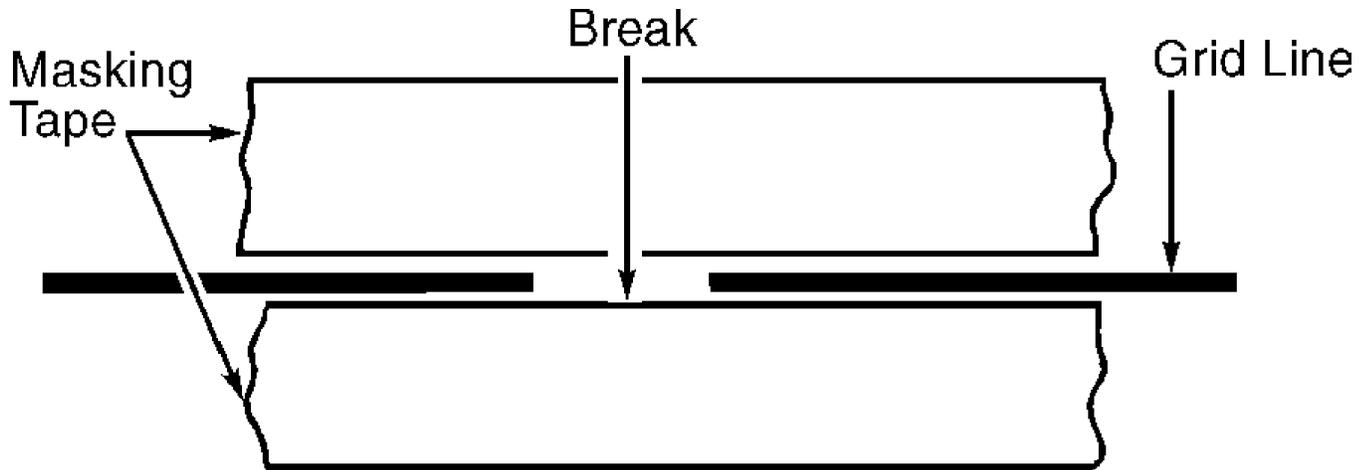


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Fig. 4: Testing Grid Filament
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

GRID FILAMENT REPAIR

Clean broken wire tips thoroughly. Place masking tape along both sides of broken wire. See Fig. 5. Apply Repair Paste (DuPont 4817) to broken section of grid. Remove masking tape after paste has dried. Wait 24 hours before using defogger.



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Fig. 5: Repairing Rear Defogger Grid Filament
Courtesy of Toyota Motor Sales, U.S.A., Inc.

WIRING DIAGRAMS

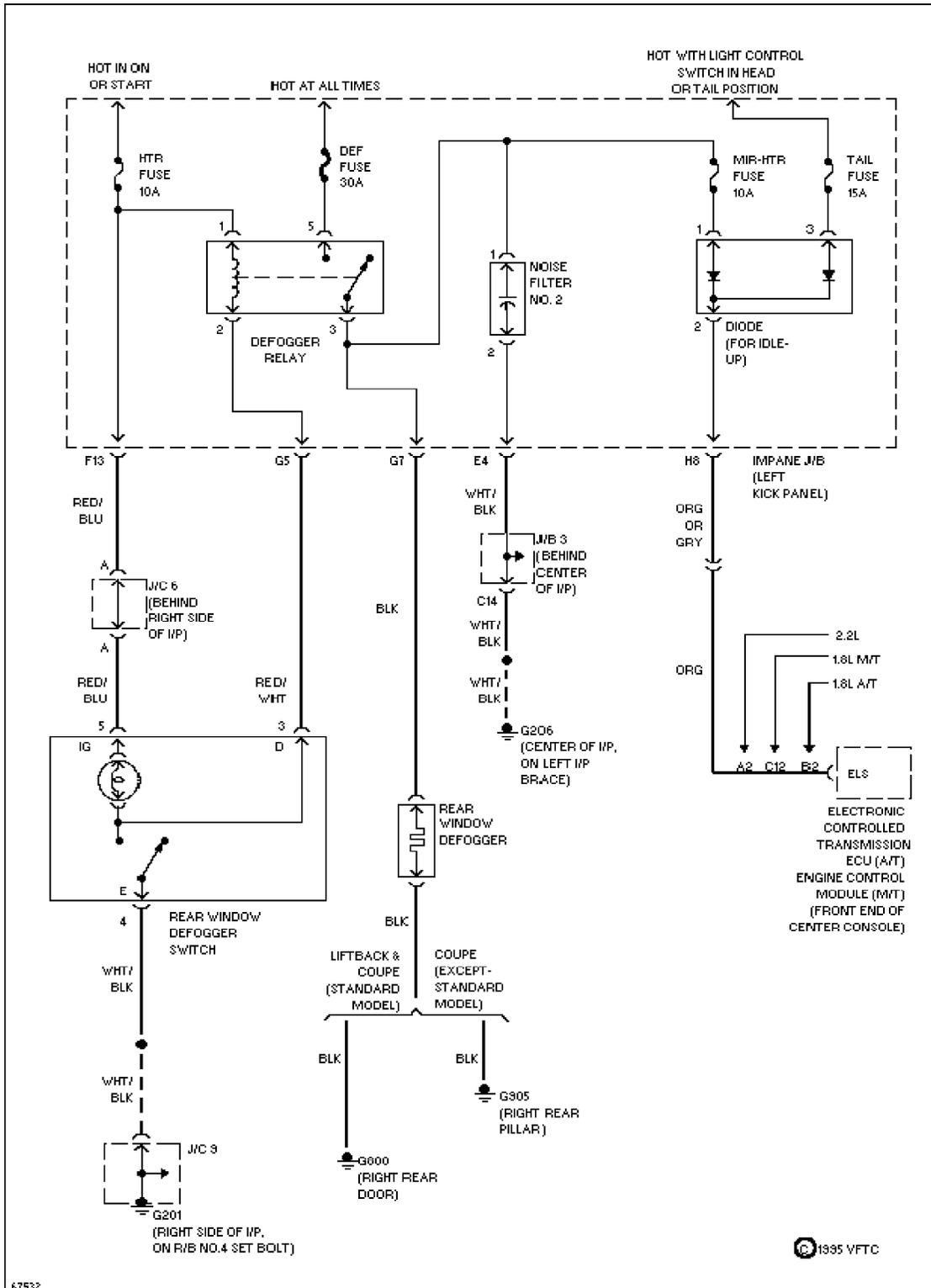


Fig. 6: Rear Window Defogger Wiring Diagram