

AIR BAG RESTRAINT SYSTEM

240 1990 - 1991
740 1987 - 1992
760 1987 - 1990
780 1987 - 1989
940 1992

DIAGNOSIS & TESTING

* PLEASE READ THIS FIRST *

WARNING: Failure to follow SERVICE PRECAUTIONS may result in air bag deployment and personal injury. See SERVICE PRECAUTIONS. After component replacement, ensure proper system operation. Perform SYSTEM OPERATION CHECK.

WARNING: NEVER use ohmmeter or other self-powered meter to test resistance of air bag inflator/module. Use Special Test Resistor (998-8695) in place of air bag module when testing resistance of any SRS circuit.

RETRIEVING & CLEARING FAULT CODES

NOTE: If SRS warning light does not function properly, go to SRS WARNING LIGHT PROBLEMS.

Retrieving Codes

1) Turn ignition switch to ON position. SRS warning light on instrument panel light bar will remain lit longer than 10 seconds, indicating SRS fault is present. Wait at least 20 seconds to allow SRS to complete its own system self-diagnostics. Locate proper test terminal for vehicle model series. See SRS TEST TERMINAL LOCATION table. See Figs. 10, 11, 12 and 13.

2) Using jumper wire with spade connectors at both ends, connect jumper wire to proper test terminal and touch a ground (such as cigarette lighter housing) for 2-5 seconds, and then remove wire.

3) SRS light will flash ONCE immediately upon removing wire from ground. DO NOT mistake this single flash for a code. SRS light will then begin flashing codes in crash sensor memory. Crash sensor will display all fault codes in its memory only once. See SRS FAULT CODES table. After recording codes, turn ignition off.

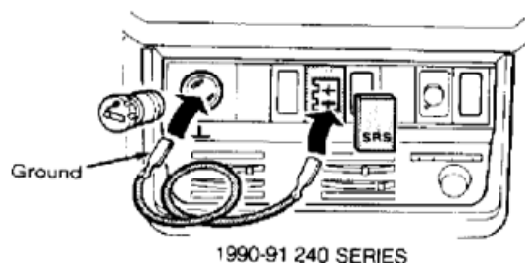
Clearing Codes

1) After all repairs have been made and SRS light has been rechecked (see SYSTEM OPERATION CHECK), turn ignition switch to ON position. Locate proper test terminal for vehicle model series. See SRS TEST TERMINAL LOCATION table. See Figs. 10, 11, 12 and 13.

2) Using jumper wire with spade connectors at both ends, connect jumper wire to proper test terminal and touch a ground (such as cigarette lighter housing) for 2-5 seconds.

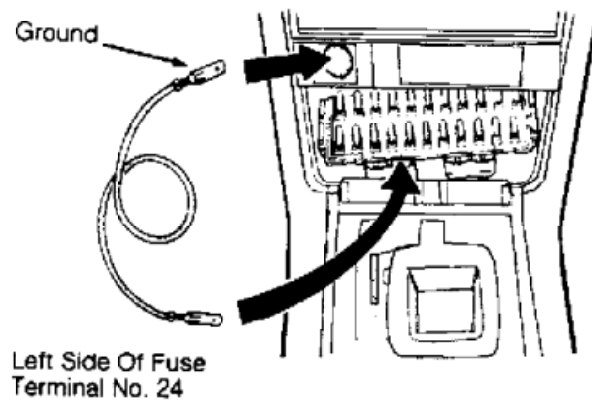
3) Momentarily remove wire from ground. SRS light will flash once. Quickly reground jumper wire 3 times within 5 seconds.

4) If codes have been properly cleared, SRS light should then go off for 4 seconds, relight for 3 seconds and then go out. SRS codes are now cleared. Perform SYSTEM OPERATION CHECK.



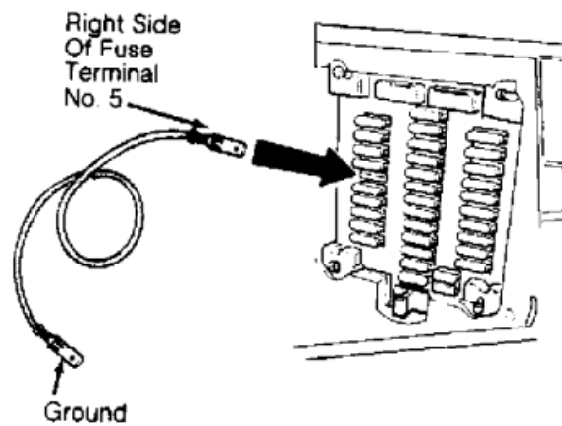
1990-91 240 SERIES

Fig. 10: Locating SRS Test Terminals (1990-91 240 Series)
Courtesy of Volvo Cars of North America



1987-91 740 SERIES & 1987 760 SERIES

Fig. 11: Locating SRS Test Terminals (740 & 1987 760 Series)
Courtesy of Volvo Cars of North America



1988-91 760 SERIES

Fig. 12: Locating SRS Test Terminals (1988-91 760 Series)
Courtesy of Volvo Cars of North America

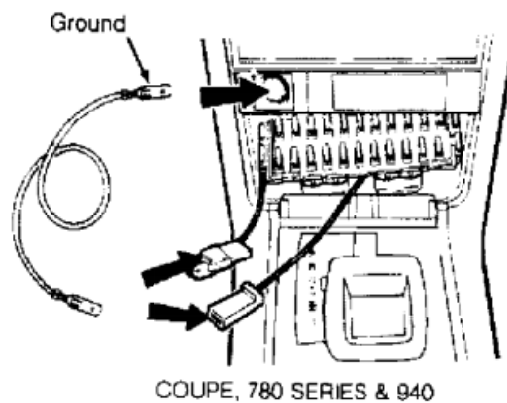


Fig. 13: Locating SRS Test Terminals (Coupe, 780 Series & 940)
Courtesy of Volvo Cars of North America

SRS TEST TERMINAL LOCATION TABLE

SERIES	TERMINAL LOCATION	FUSE PANEL LOCATION
240 (1990-91)	Behind SRS Bezel, Above A/C-Heater Control Panel	Under Left Side Of Dash, On Driver's Kick Panel
740 (All) & 760 (1987)	Left Side Terminal Of Fuse No. 24	Center Front Console, Below Ash Tray
760 (1988-91)	Right Side Terminal Of Fuse No. 5	Behind Driver's Kick Panel
780 (All)	Fuse Holder Or Connector Near Fuse Panel	Center Front Console, Below Ash Tray

SRS FAULT CODES TABLE

CODE/FLASHES	FAULT	CORRECTIVE ACTION
1	Fault in crash sensor.	* Check all electrical connections and/or replace crash sensor.
2	Fault in standby power unit or connection	* Check all electrical connections between unit and crash sensor. * Replace standby power unit. * Replace crash sensor.
3 (1)	Test terminal or SRS warning light shorted to battery or to ground	* Check for short circuit to battery or ground at test terminal connector. * Check wiring harness and connectors.
4	Air bag assembly resistance low.	* Check wiring, contact reel and connectors for short circuits. * Measure resistance of contact reel. * Replace air bag module.
5	Air bag assembly resistance high.	* Check gas generator connector. * Check wiring and contact reel for open circuit. * Replace air bag module.
6	Not Used	* Not Used
7	Not Used	* Not Used
8	Air bag or wiring shorted to battery	* Check wiring and connectors for shorts. * Check wiring and contact reel. * Measure circuit resistance. * Replace crash sensor.
9	Air bag assembly shorted to ground.	* Check for grounded gas generator wiring. * Check wiring and contact reel. * Measure circuit resistance. * Replace air bag module.
10	Mercury switch in crash sensor shorted than one minute.	* Ensure crash sensor is correctly installed. * or closed for more * Replace crash sensor.

11 (2) ☐ BOTH seat belt				☐ * Ensure both tensioners	☐
☐ tensioners				☐ are connected.	☐
☐ disconnected (No				☐ * Check common wiring	☐
☐ code will be set if				☐ harness.	☐
☐ only one seat belt is				☐ * Replace crash sensor.	☐
☐ disconnected)				☐	☐

(1) - SRS warning light will always be on or will not activate. ☐
 (2) - 780 Series only. ☐

SRS WARNING LIGHT PROBLEMS

WARNING: NEVER use ohmmeter or other self-powered meter to test resistance of air bag inflator/module. Use Special Test Resistor (998-8695) in place of air bag module when testing resistance of any SRS circuit.

SRS Warning Light Does Not Illuminate

- 1) Remove instrument cluster to access rear of cluster, leaving harness connector installed. Check SRS light bulb by swapping with adjacent bulb socket and turning on ignition.
- 2) If SRS light bulb illuminates in different socket, bulb is good. Go to next step. If bulb does not illuminate, replace bulb and/or socket.
- 3) Using DVOM and with ignition on, measure voltage at SRS bulb socket printed circuit on rear of instrument cluster. Voltage should be about 8.5 volts for about 10 seconds.
- 4) If voltage is only 1.5 volts at bulb socket printed circuit, turn ignition off. Disconnect Yellow connector. See Fig. 1. Turn ignition on. If SRS light now illuminates, replace crash sensor.
- 5) If voltage is zero volt at bulb socket printed circuit, Brown/Light Blue wire circuit is shorted to ground. Check circuit from bulb socket to crash sensor. Repair or replace as required.
- 6) If voltage at bulb socket printed circuit reads other than 8.5, 1.5, or zero volts, check printed circuit from bulb to cluster connector for damage and/or check for bad ground to bulb socket. Repair as required or replace printed circuit board on rear of instrument cluster. After repair, check SRS warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.

SRS Warning Light Remains On

- 1) Turn ignition off. Connect DVOM to test terminal. See SRS TEST TERMINAL LOCATION table. See Figs. 10, 11, 12 and 13. Turn ignition on. Voltage should read 8.5 volts for 10 seconds. Reading should change to 1.5 volts after 10 seconds.
- 2) If voltage reading is zero volt, an open exists in Brown/Light Blue wire circuit between test terminal and Yellow connector. Trace circuit to locate open, and repair as required. After repair, check SRS warning light to ensure system is functioning properly. See SYSTEM OPERATION CHECK.

SRS Warning Light Remains On When Test Terminal Is Grounded

- 1) Ensure ignition switch is in OFF position. Connect DVOM to test terminal and to ground. See SRS TEST TERMINAL LOCATION table. See Fig. 10. Turn ignition switch to ON position. Voltage reading should be 8.5 volts for 10 seconds and then change to 1.5 volts. If voltage reading is 4.5 volts, go to next step. If voltage reading is zero volts, go to step 3).
- 2) If voltage reading is 4.5 volts for first 10 seconds and then changes to 1.5 volts, an open exists in Brown/Light Blue wire circuit between test terminal and Yellow connector. Yellow connector is located near Orange SRS connector, near center console. See Fig. 1. This wire circuit may be repaired because this wire is not in SRS Orange harness. Locate open and repair as required. When all tests and replacements are done, to ensure SRS is functioning properly, perform SYSTEM OPERATION CHECK.