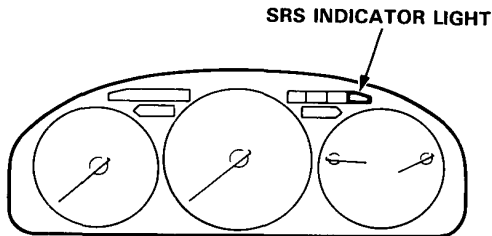


# Supplemental Restraint System (Type I)

## Troubleshooting

### Self-diagnosis Function

The SRS unit includes a self-diagnosis function. If there is a failure in the sensors, SRS unit, inflator, or their circuits, the SRS light in the instrument panel goes ON.



As a system check, the SRS light also comes on when the ignition is first turned to the II position. If the light goes off after approximately 6 seconds, the system is OK.

If the SRS light remains on (or fails to come on in the system check mode), one of the SRS components (or the wiring/connectors in-between) is faulty.

### Troubleshooting Precautions

- Always use the test harness. Do not use test probes directly on component connector terminals or wires; you may damage them or the control unit.
- When connecting any of the test harnesses to the system, push the connectors straight-in; do not bend the connector terminals.
- Before disconnecting any part of the SRS wire harness, install the short connector (RED) on the airbag.

### SRS Indicator Light Troubleshooting

#### Possible conditions:

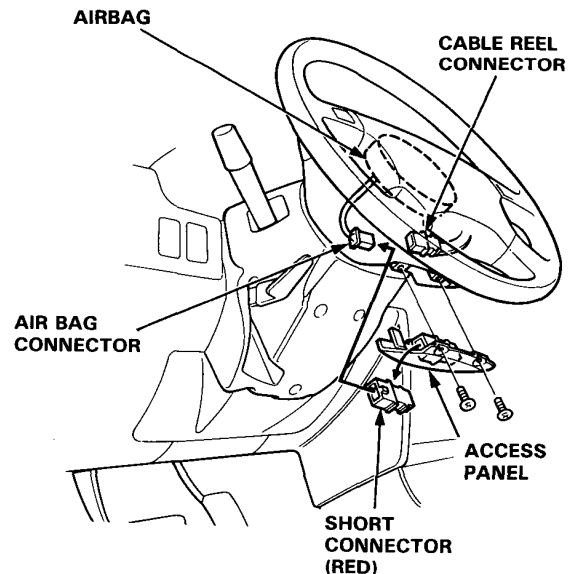
1. SRS light does not come on at all — see page 16-108.
2. SRS light stays on constantly — see page 16-112.
3. SRS light comes on in combination with a failure of another electrical system (brake system, check engine light etc.). Check for damage/corrosion at the under-dash fuse box connector.

#### NOTE:

- Before starting the applicable troubleshooting, check the condition of all SRS connectors and ground points.
- If the fault is not found after completing the applicable troubleshooting, substitute a known-good SRS unit and check whether the light indication goes away. If it does, the original SRS unit must be faulty; replace it.

### Short Connector Installation

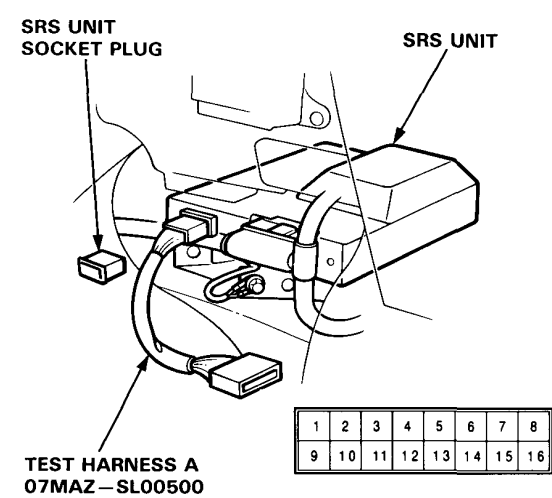
1. Disconnect the battery negative cable, then the positive cable.
2. Remove the access panel from the steering wheel, then remove the short connector (RED).



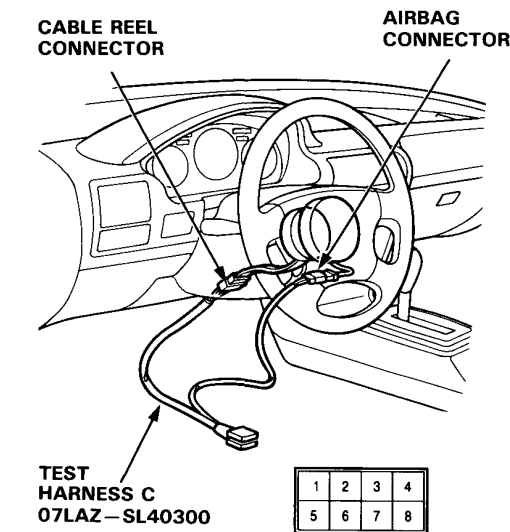
3. Disconnect the connector between the airbag and cable reel, then connect the short connector (RED) to the airbag.

# Test Harnesses and Attachment Points

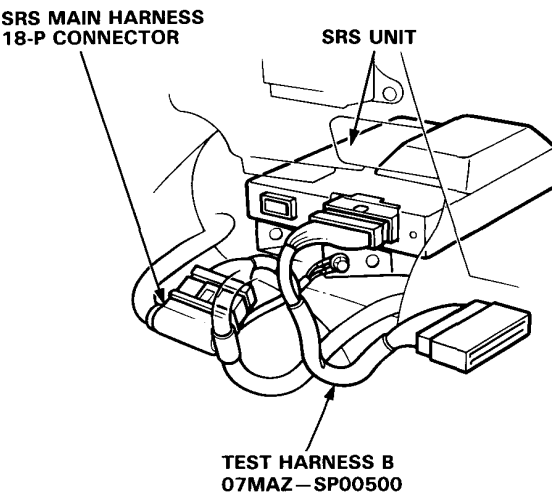
## Test Harness A



## Test Harness C



## Test Harness B

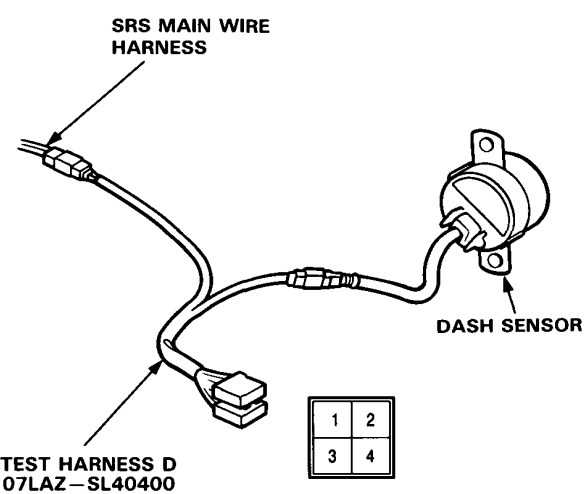


**A-SIDE (SRS UNIT SIDE)**

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

**B-SIDE (WIRE HARNESS SIDE)**

## Test Harness D

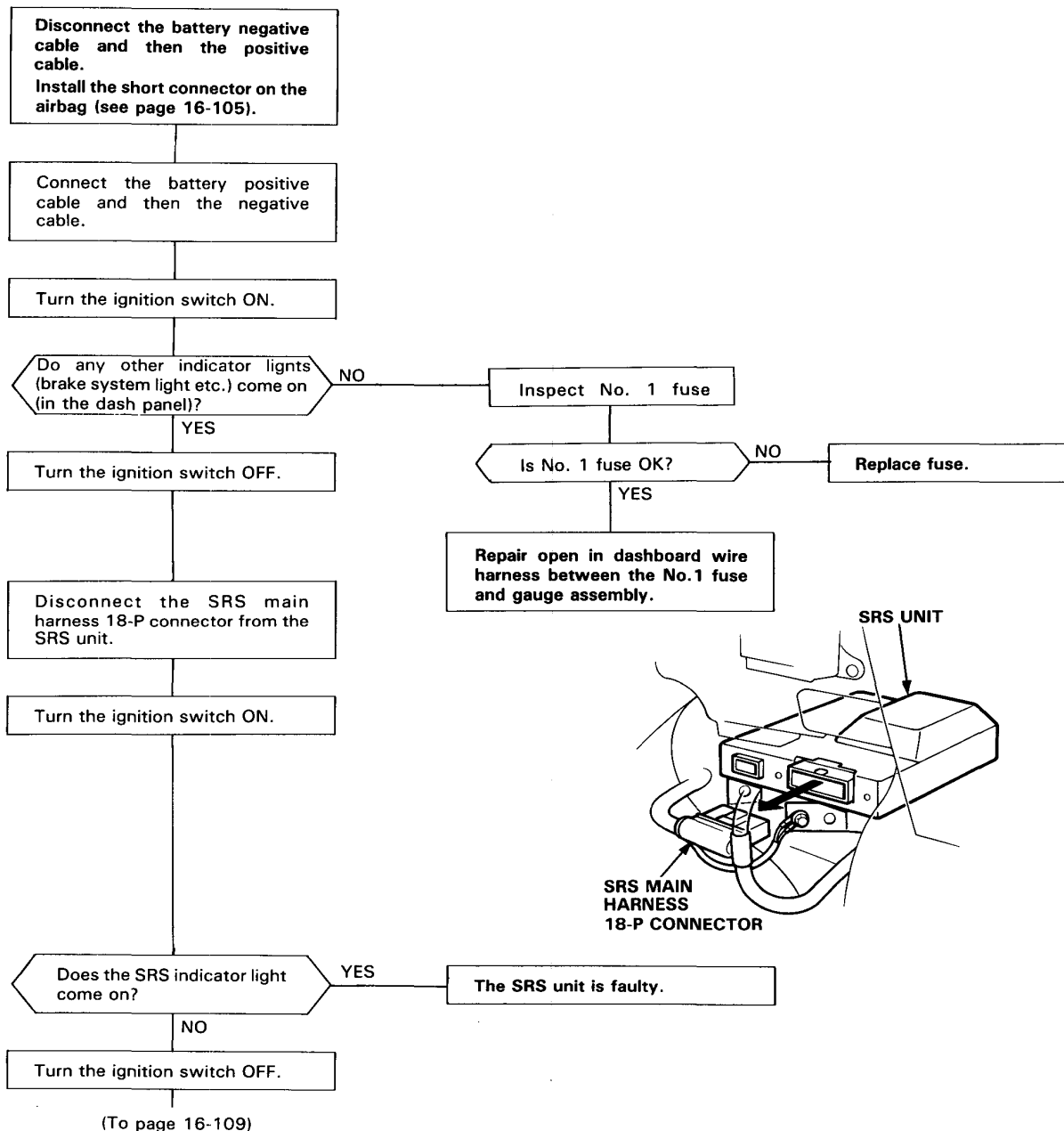


# Supplemental Restraint System (Type I)

## Troubleshooting

### The SRS Indicator Light Does Not Go On

**CAUTION:** Use only a digital circuit tester to check the system.



(From page 16-108)

Disconnect the SRS main harness 4-P connector from the main wire harness.

Turn the ignition switch ON.

UNDER-DASH FUSE BOX

MAIN WIRE HARNESS

SRS MAIN HARNESS 4-P CONNECTOR

Is SRS indicator light ON?

YES

The SRS main harness is faulty.

NO

Turn the ignition switch OFF.

Remove the gauge assembly, then inspect the SRS indicator light bulb.

Is the SRS indicator light bulb OK?

NO

Replace the indicator light bulb.

YES

Connect a voltmeter between the No. 15 terminal of the 18-P connector and body ground.

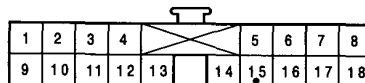
Turn the ignition switch ON.

Measure the voltage between the No. 15 terminal and body ground.

(To page 16-110)

DASHBOARD WIRE HARNESS 18-P CONNECTOR

View from terminal side



(cont'd)

# Supplemental Restraint System (Type I)

## Troubleshooting (cont'd)

(From page 16-109)

Is there less than 8.5 V with ignition switch ON?

NO

Short in the BLU wire of the dashboard wire harness. Replace the dashboard wire harness.

YES

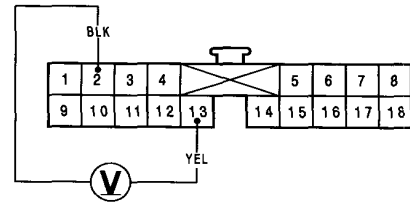
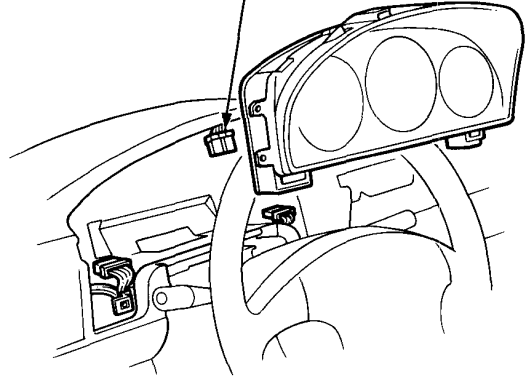
Turn the ignition switch OFF.

Connect the voltmeter between the No. 13 terminal (+) and the No. 2 terminal (-) of the dashboard wire harness 18-P connector.

Turn the ignition switch ON.

Measure the voltage between the No. 13 and No. 2 terminals.

DASHBOARD WIRE HARNESS 18-P CONNECTOR



View from terminal side

Is there battery voltage?

NO

Check for continuity between the No. 2 terminal and body ground.

YES

Turn the ignition switch OFF.

(To page 16-111)

Does continuity exist?

NO

Repair open in the BLK wire (No. 2 terminal) between the gauge assembly and body ground or look for a poor ground (G401, 402).

YES

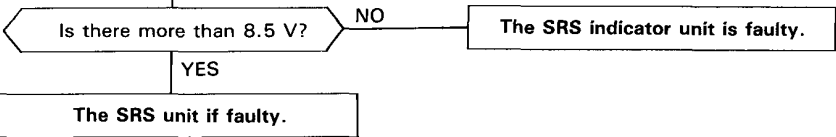
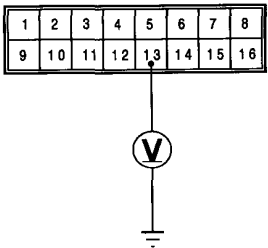
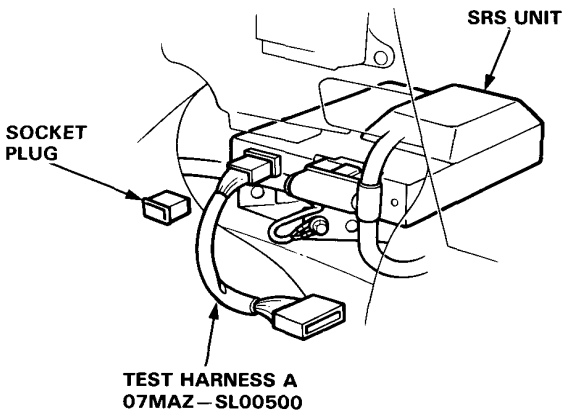
Repair open in the YEL wire (No. 13 terminal) of the dashboard wire harness between the gauge assembly and the No. 1 fuse.

(From page 16-110)

Reconnect each connector to the gauge assembly and SRS unit then connect Test Harness A to the SRS unit.

Measure the voltage between the No. 13 terminal and body ground for 6 seconds after ignition is first turned on.

**NOTE:** Make sure you reinstall the plug in the SRS unit socket after testing (DE only).



(cont'd)

# Supplemental Restraint System (Type I)

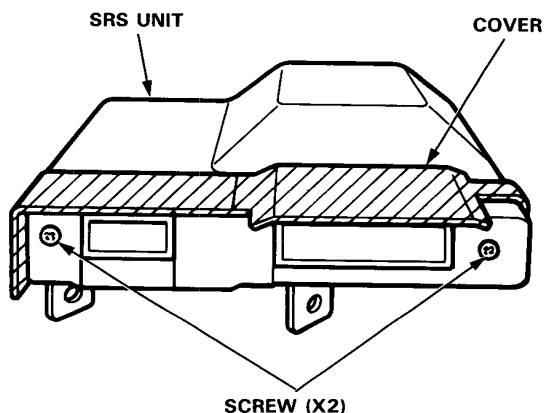
## Troubleshooting (cont'd)

### SRS Indicator Light Stays on Continuously

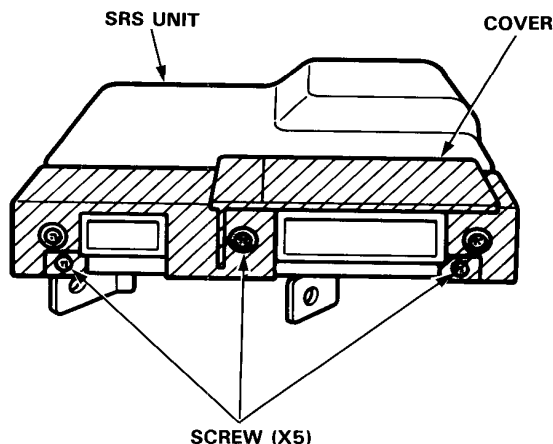
1. Make a photocopy of next page.
2. Connect test harness A to the SRS unit as shown.
3. Turn the ignition switch ON.
  - Voltages in the charts assume the car's "battery voltage" is about 12 volts. Less than 12 volts will result in different or possibly false readings.
  - Do not disconnect the airbag from the circuit when checking SRS unit voltages.

NOTE: There are two kinds of SRS units which do not differ in their functions and may be replaced with each other. However, as they don't have the same voltages, be sure to refer to the right chart.

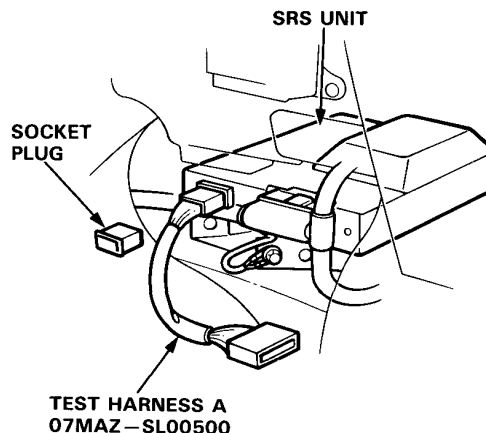
NEC: (77940-SM4-N81-M1, 77940-SM4-A81)



DE: (77940-SM5-A81)



4. First, check for voltage between Test Connector Terminal No. 12 and ground.
  - If voltage is indicated, there is a poor ground (see page 16-121).
  - Continue with checking all the other terminals if no voltage is indicated.
5. Record your voltage readings, for each terminal, in the row of blank boxes near the top of the chart.
6. Compare each reading with the voltage ranges listed in the column below it. If the reading is within a range, circle that range.
  - If you circled all the Failure Mode ranges across any row, check the car for the Probable Failure Mode listed at the end of the row. (Refer to the letter for that Mode on the following pages).
  - If you did not circle all the ranges across any row, replace the SRS unit with a known-good unit, and retest.
    - If all your voltage readings are now Normal, replace the SRS unit.
    - If your voltage readings are still not Normal but they don't fit within a complete row of Failure Mode ranges, check the condition of the terminals in each of the SRS connectors shown in the system diagram on page 16-101.



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16



**NEC: (77940-SM4-N81, 77940-SM4-A81)**

Test Con- nector Terminal	1 SADH	—	—	4 VCC	5 SV	—	—	—	—	10 BUC1	—	12 GND	13 IDC	14 M1	—	—	Probable Failure Mode
Normal Voltage	3.5 —5.2	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	8.5 —13.0	7.5 —11	—	—	
Your Volt- age Reading		—	—			—	—	—	—		—				—	—	
Failure Mode Voltage	0	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	7.5 —11	—	—	Open in cowl sen- A sor or short in dash sensor.
	7.5 —11	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	7.5 —11	—	—	Short in cowl sen- B sor or open in both dash sensors.
	5.3 —7.2	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	7.5 —11	—	—	C Open in one dash sensor.
	7.5 —11	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	7.5 —11	—	—	Open in airbag D inflator or cable reel.
	3.5 —5.2	—	—	0	0	—	—	—	—	8.5 —14.5	—	0	2.0 —8.5	6 —11	—	—	Blown SRS fuse E (No. 3) or open in the wire.
	3.5 —7.2	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	0 (8.5— 13.0)	7.5 —11	—	—	Short (or open) in F SRS indicator wire harness.

**DE: (77940-SM5-A81)**

Test Con- nector Terminal	1 SADH	—	—	4 VCC	5 SV	—	—	—	—	10 BUC1	—	12 GND	13 IDC	14 M1	—	—	Probable Failure Mode
Normal Voltage	5.1 —7.0	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	8.5 —13.0	10.5 —14.5	—	—	
Your Volt- age Reading		—	—			—	—	—	—		—				—	—	
Failure Mode Voltage	0	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	10.5 —14.5	—	—	Open in cowl sen- A sor or short in dash sensor.
	10.5 —14.5	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	10.5 —14.5	—	—	Short in cowl sen- B sor or open in both dash sensors.
	7.1 —9.5	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	10.5 —14.5	—	—	C Open in one dash sensor.
	10.5 —14.5	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	2.0 —8.5	10.5 —14.5	—	—	Open in airbag D inflator or cable reel.
	4.0 —7.0	—	—	0	0	—	—	—	—	8.5 —14.5	—	0	2.0 —8.5	8.5 —14.5	—	—	Blown SRS fuse E (No. 3) or open in the wire.
	5.1 —7.0	—	—	4.5 —5.5	12.0 —14.0	—	—	—	—	10.5 —14.5	—	0	0 (8.5— 13.0)	10.5 —14.5	—	—	Short (or open) in F SRS indicator wire harness.

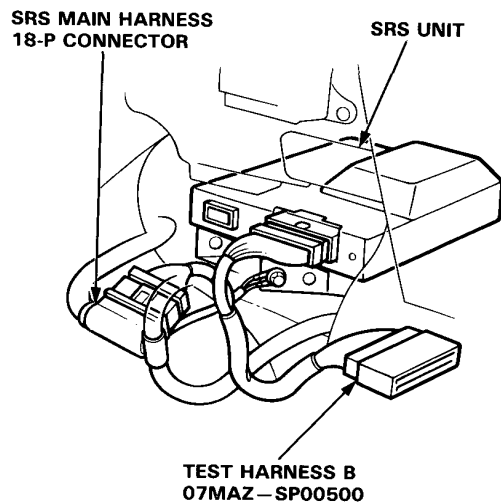
(cont'd)

# Supplemental Restraint System (Type I)

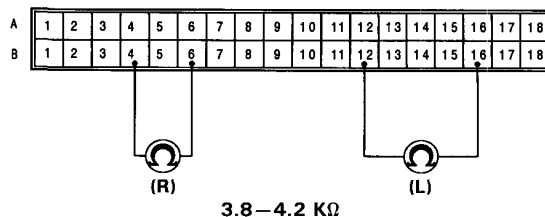
## Troubleshooting (cont'd)

**Mode A: Open in cowl sensor, or short in dash sensor.**

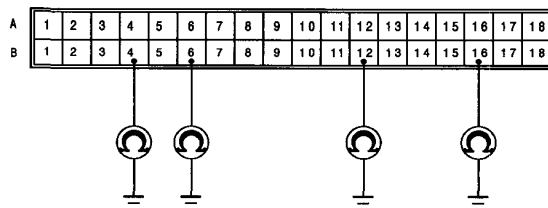
1. Disconnect the battery negative cable and then the positive cable. Install the short connector (RED) on the airbag (see page 16-105).
2. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.



3. Reconnect the battery cables, then check the resistance between the left dash sensor terminals B12 and B16, and between the right dash sensor terminals B4 and B6.

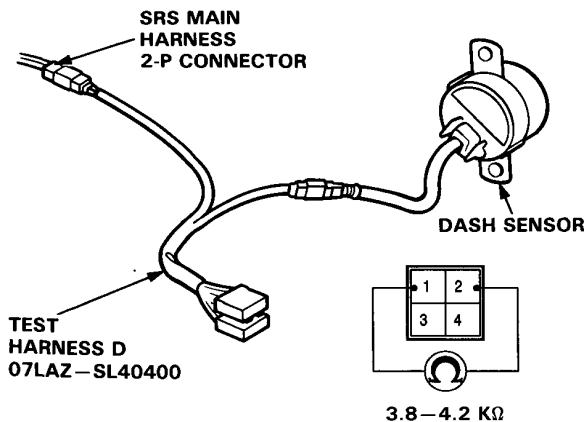


- If resistance is 3.8–4.2 KΩ for either sensor, go to step 4.
  - If resistance is less than 3.8–4.2 KΩ for either sensor, go to step 5.
4. Check continuity between body ground and each terminal of both dash sensors.



- If there is no continuity, the SRS unit is faulty. Substitute a known-good SRS unit and recheck the voltages according to the chart on page 16-113.
- If there is continuity at any of the terminals, go to step 6.

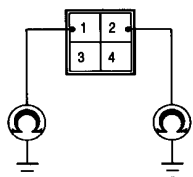
5. Connect Test Harness D between the dash sensor and the SRS main harness 2-P connector. Check the resistance between the No. 1 terminal and No. 2 terminal.



NOTE: The left and right sensors cannot be checked at the same time.

- If resistance is 3.8—4.2 KΩ, replace the SRS main harness and recheck the voltages according to the chart on page 16-113.
- If resistance is less than 3.8 — 4.2 KΩ, the respective dash sensor is faulty. Replace the dash sensor and recheck the voltages according to the chart on page 16-113.

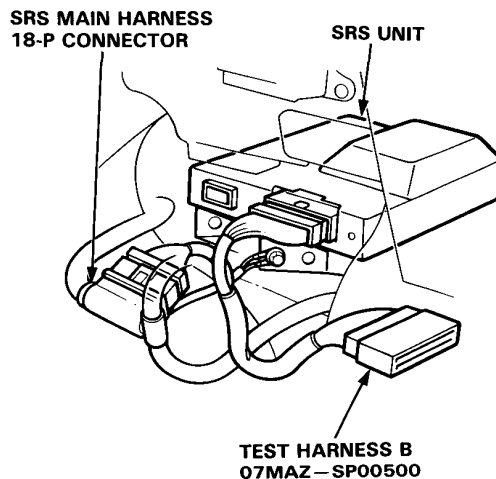
6. Connect Test Harness D between the dash sensor and SRS main harness 2-P connector. Check continuity between the No. 1 terminal and body ground, and between the No. 2 terminal and body ground.



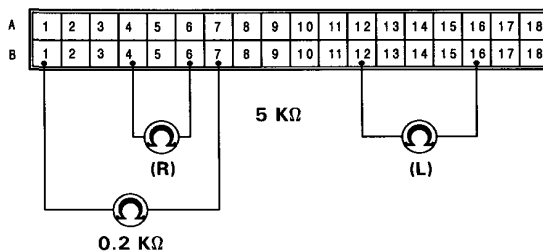
- If there is continuity, the dash sensor is faulty. Replace it and recheck the voltages according to the chart on page 16-113.
- If there is no continuity, replace the SRS main harness and recheck the voltages according to the chart on page 16-113.

**Mode B: Short cowl sensor, or open in dash sensor.**  
**Mode C: Open in one dash sensor.**

1. Disconnect the battery negative cable and then the positive cable.  
Install the short connector (RED) on the airbag (see page 16-105).
2. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.



3. Check the resistance between terminals B1 and B7.
  - If the resistance is more than 0.2 KΩ, go to mode D troubleshooting.
  - If the resistance is less than 0,2 KΩ, check the resistance between the left dash sensor terminals B12 and B16, and between the right dash sensor terminals B4 and B6.



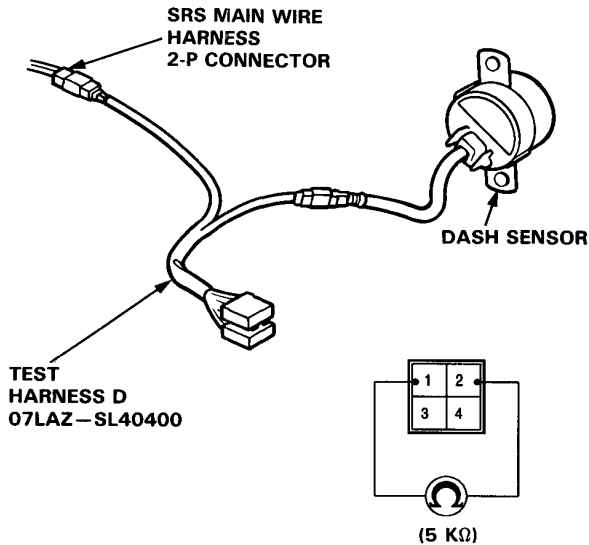
- If resistance is more than 5 KΩ, go to step 4.
- If resistance is less than 5 KΩ, the SRS unit is faulty. Substitute a known-good SRS unit and recheck the voltages according to the chart on page 16-113.

(cont'd)

# Supplemental Restraint System (Type I)

## Troubleshooting (cont'd)

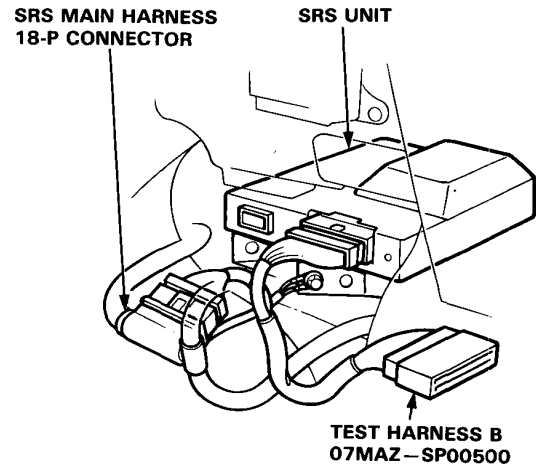
4. Connect Test Harness D between the dash sensor and the SRS main harness 2-P connector. Check the resistance between the No. 1 terminal and No. 2 terminal.



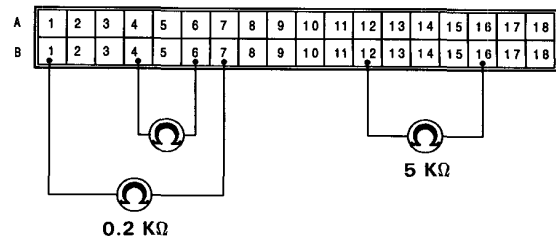
- If resistance is more than 5 KΩ, the dash sensor is faulty. Replace it and recheck the voltages according to the chart on page 16-113.
- If resistance is less than 5 KΩ, the SRS main harness is faulty. Replace the SRS main harness and recheck the voltages according to the chart on page 16-113.

### Mode D: Open in airbag inflator or cable reel.

1. Disconnect the battery negative cable and then the positive cable.
2. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.

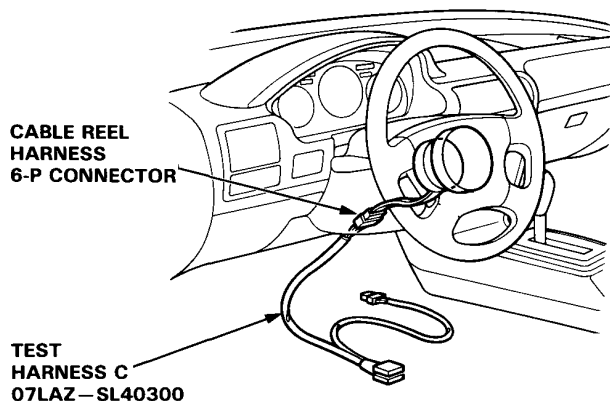


3. Check the resistance between terminals B4 and B6, and between terminals B12 and B16.
  - If the resistance is more than 5 KΩ, go to mode B troubleshooting.
  - If the resistance is less than 5 KΩ, measure the resistance between the B1 and the B7 terminals.

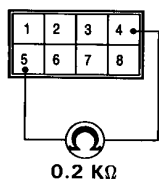


- If resistance is more than 0.2 KΩ, go to step 4.
- If resistance is less than 0.2 KΩ, the SRS unit is faulty. Substitute a known-good SRS unit and recheck the voltages according to the chart on page 16-113.

4. Disconnect the cable reel harness 6-P connector from the SRS main harness, then connect Test Harness C only to the cable reel harness side of the 6-P connector.

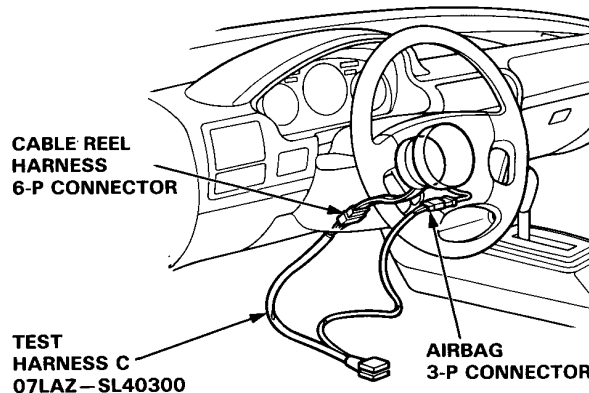


5. Measure the resistance between the No. 4 terminal and the No. 5 terminal.

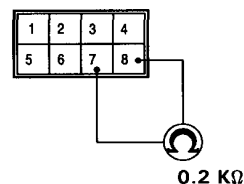


- If resistance is more than 0.2 KΩ, go to step 5.
- If resistance is less than 0.2 KΩ, the SRS main harness is faulty. Replace the SRS main harness and recheck the voltages according to the chart on page 23-305.

6. Disconnect the airbag 3-P connector from the cable reel harness, then connect Test Harness C to the airbag 3-P connector.



7. Measure the resistance between the No. 7 terminal and the No. 8 terminal.



- If resistance is more than 0.2 KΩ, the inflator is faulty. Replace the airbag assembly and recheck the voltages according to the chart on page 16-113.
- If resistance is less than 0.2 KΩ, the cable reel is faulty. Replace the cable reel and recheck the voltages according to the chart on page 16-113.

(cont'd)

# Supplemental Restraint System (Type I)

## Troubleshooting (cont'd)

### Mode E: Blown SRS No. 3 fuse, or open in the wire.

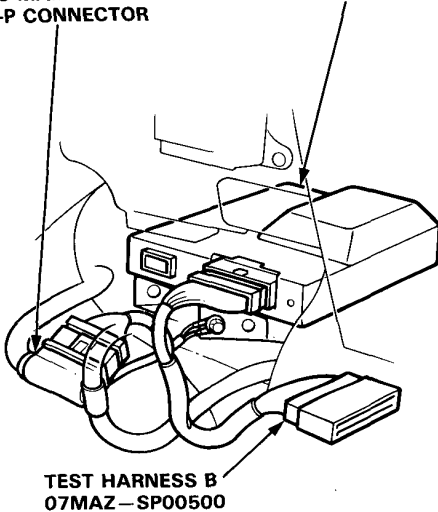
1. Check the SRS No.3 (10 A) fuse in the under-dash fuse box. If it's OK, go on to step 2.  
If it's blown, replace it with a new 10 A fuse, then turn the ignition switch ON:

- If fuse doesn't blow, go on to step 2.
- If the fuse blows, troubleshoot as necessary to find the short.

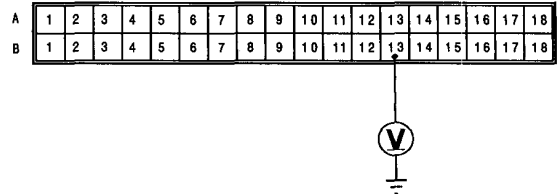
2. Disconnect battery negative cable, then the positive cable. Install the short connector (RED) on the airbag (see page 16-105).
3. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.

SRS MAIN HARNESS  
18-P CONNECTOR

SRS UNIT



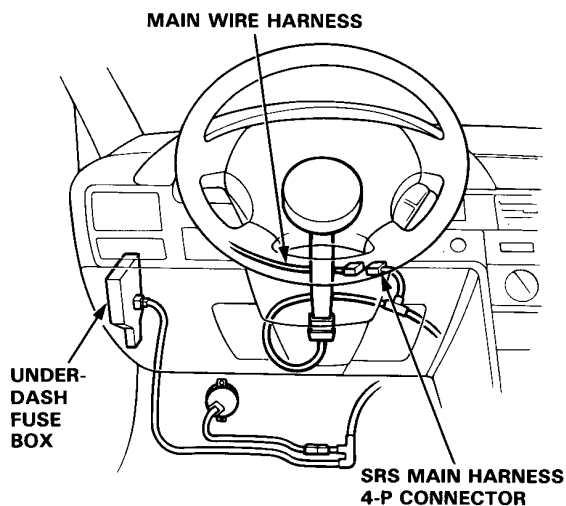
4. Reconnect the positive and negative cables to the battery.
5. Measure the voltage between the B13 terminal and body ground with the ignition switch ON.



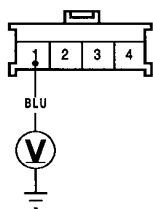
- If there is battery voltage, the SRS unit is faulty. Replace it and recheck the voltages according to the chart on page 16-113.
- If less than battery voltage, the SRS main harness is faulty. Replace it and recheck the voltages according to the chart on page 16-113.

**Mode F: Short or open in SRS indicator wire harness.**

1. Disconnect the SRS main harness 4-P connector from the main wire harness.



2. Measure the voltage between the No. 1 terminal and body ground on the SRS main harness 4-P connector side, with the ignition switch ON.

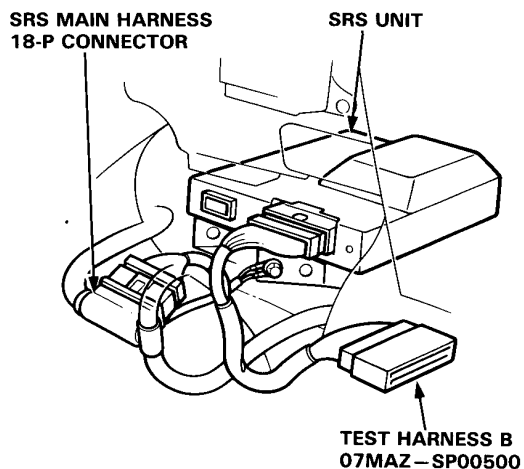


View from terminal side

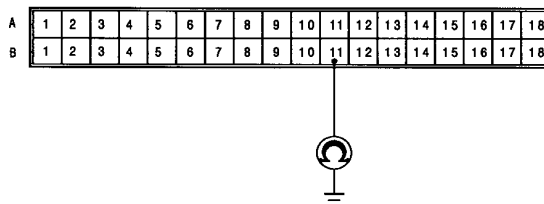
- If voltage is more than 8.5 V, go to step 8.
- If voltage is less than 8.5 V, go to step 3.

3. Disconnect the battery negative cable, then the positive cable. Install the short connector (RED) on the airbag (see page 16-105).
4. Reconnect the battery positive cable and negative cable.

5. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.



6. Check for continuity between the B11 terminal and body ground.



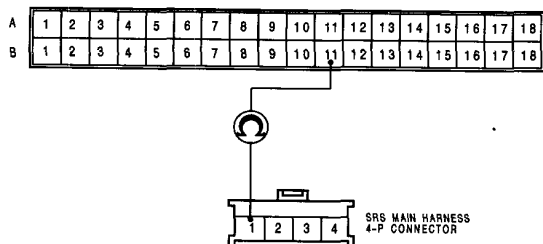
- If there is continuity, the SRS main harness is shorted. Replace the SRS main wire harness and recheck the voltages according to the chart on page 16-113.
- If there is no continuity, go to step 7.

(cont'd)

# Supplemental Restraint System (Type I)

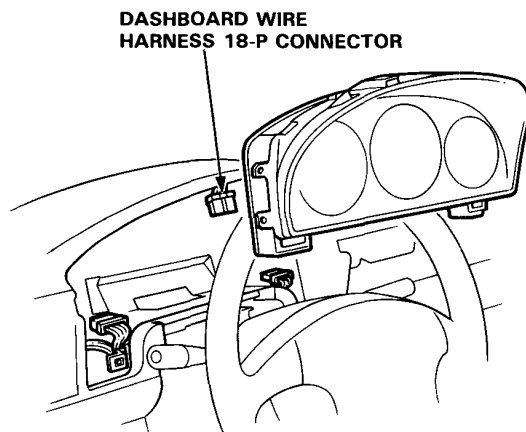
## Troubleshooting (cont'd)

7. Check for continuity between the B11 terminal of Test Harness B and the No. 1 terminal of the SRS main harness 4-P connector.

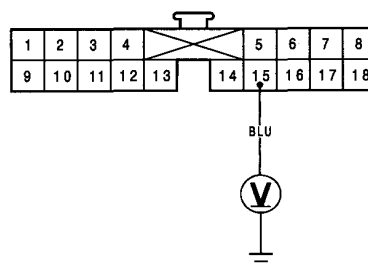


- If there is continuity, the SRS unit is faulty; Replace it and recheck the voltages according to the chart on page 16-113.
- If there is no continuity, there is an open in the SRS main harness. Replace the SRS main wire harness and recheck the voltages according to the chart on page 16-113.

8. Connect the SRS main harness 4-P connector to the main wire harness. Disconnect the dashboard wire harness 18-P connector from the gauge assembly.



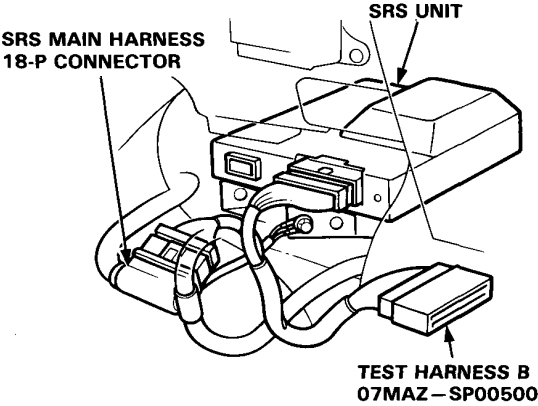
9. Measure the voltage between the No. 15 terminal and body ground with the ignition switch ON.



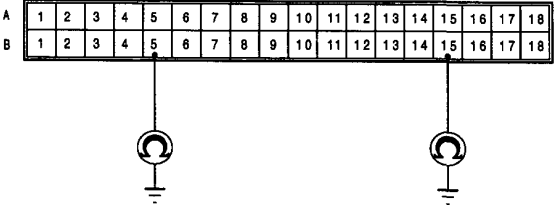
- If voltage is more than 8.5 V, the SRS indicator circuit is faulty (in the gauge assembly.) Replace the gauge assembly and recheck the voltages according to the chart on page 16-113.
- If voltage is less than 8.5 V, the dashboard wire harness (or the main wire harness) is faulty. Replace it and recheck the voltages according to the chart on page 16-113.

**Poor ground at SRS unit or unit mounting bolts.**

1. Disconnect the battery negative cable and then the positive cable. Install the short connector (RED) on the airbag. (see page 16-105).
2. Connect Test Harness B between the SRS unit and SRS main harness 18-P connector.



3. Check for continuity between the B5, B15 terminals and body ground.



- If there is continuity, the SRS unit is faulty. Replace it and recheck the voltages according to the chart on page 16-113.
- If there is no continuity, there is an open in the SRS unit ground, the SRS unit component grounds, or the SRS main harness is faulty. Check the grounds (check the SRS unit ground wire and mounting bolts) and, if necessary, replace the SRS main harness. Recheck the voltages according to the chart on page 16-113.

# Supplemental Restraint System (Type I)

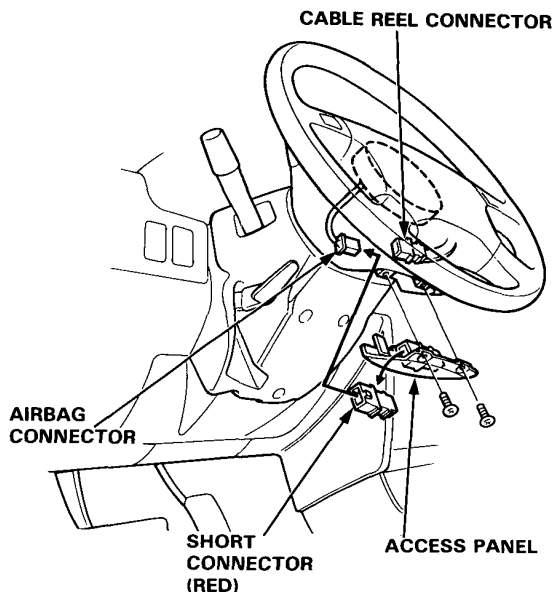
## Airbag Assembly Removal

**⚠ WARNING** Store a removed airbag assembly with the pad surface up, if the airbag is improperly stored face down, accidental deployment could propel the unit with enough force to cause serious injury.

### CAUTION:

- Do not install used SRS parts from another car. When repairing an SRS, use only new parts.
- Carefully inspect the airbag assembly before installing it. Do not install an airbag assembly that shows signs of being dropped or improperly handled, such as dents, cracks or deformation.
- Always keep the short connector on the airbag connector when the harness is disconnected.
- Do not disassemble or tamper with the airbag assembly.

1. Disconnect the battery negative cable, and then the positive cable.
2. Remove the access panel from the steering wheel, then remove the short connector from the panel.



3. Disconnect the connector between the airbag and cable reel.
4. Install the short connector (RED) on the airbag.

5. Remove the 2 TORX® bolts using a TORX® T30 bit, then remove the airbag assembly.

