



Sedan Range

DATE 10/95

14-04

**SERVICE**

## **TECHNICAL BULLETIN**

### Cooling System – Fan Fuse Failure

MODEL 1995 MY  
Sedan (4.0L) Range  
VIN  
720001 - ON

#### **ISSUE:**

The cooling fan circuit protection fuses F11 (30 Amp) and F17 (30 Amp) located in the LH Engine Bay Fuse Box may fail intermittently on 1995 MY XJ6 and XJR vehicles. The problem may be caused by a defective single pressure switch which controls slow fan speed operation.

During normal operation, the single pressure switch closes after refrigerant pressure rises to 12 bar. The fans are switched in series, which results in slow speed operation. If refrigerant pressure rises to 22 bar, the triple pressure switch closes. The fans are then switched in parallel, which results in high speed operation.

If the single pressure switch is defective, and refrigerant pressure rises enough to close the triple pressure switch, the fans will switch directly to high speed mode from off. This results in a higher current draw than the normal sequence of switching from low to high speed. The higher current draw may blow either or both fuses F11 and F17.

The fuses supply power as follows:

- |     |        |                                                                                         |
|-----|--------|-----------------------------------------------------------------------------------------|
| F11 | 30 Amp | Both cooling fans in series operation;<br>right side cooling fan in parallel operation. |
| F17 | 30 Amp | Left side cooling fan in parallel operation.                                            |

#### **ACTION:**

If the cooling fan circuit fuse(s) fail, check the cooling fan operation as follows:

1. If the engine is hot, disconnect the radiator thermostatic switch.
2. Replace fuses F11 and F17 as needed.

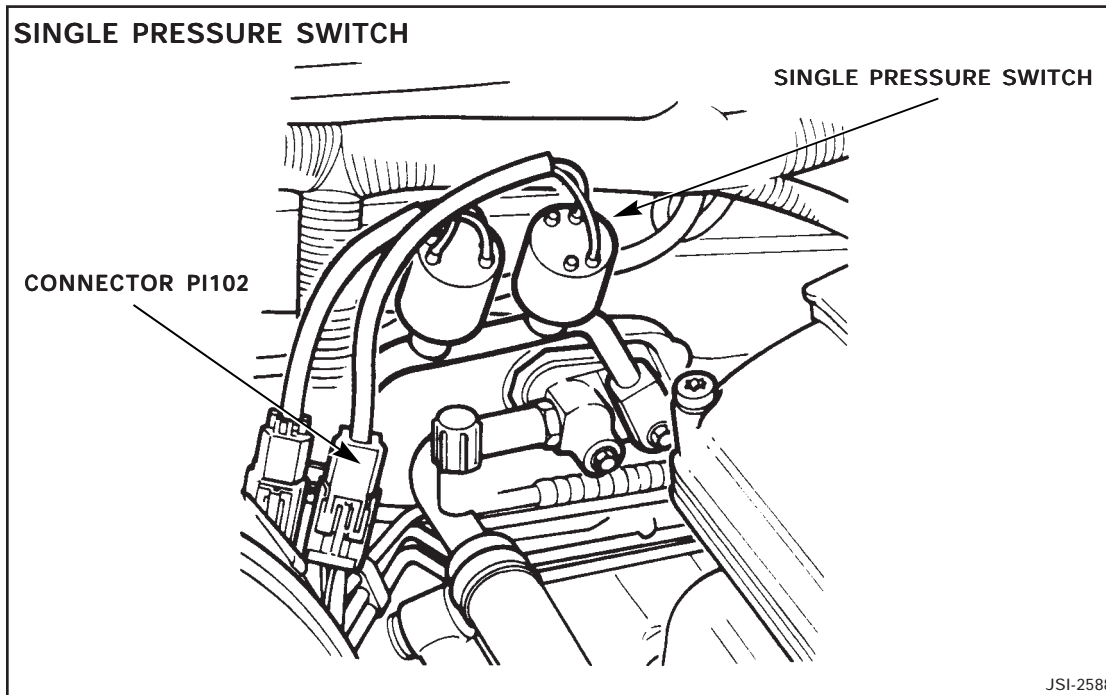


ILLUSTRATION 1

3. Disconnect the wiring harness of the single pressure switch at the white 2-way connector (PI102), Illustration 1.
4. Jump the terminals on the harness side of the connector. Switch the ignition ON and check if the cooling fans run at slow speed.
  - If the cooling fans operate at slow speed, the single pressure switch is suspect; continue with step 6.
  - If the cooling fans do not operate, the switch is probably OK. Perform normal electrical fault tracing on the fan circuit.
5. Switch the ignition OFF and remove the jumper from the harness side of the connector. Leave the connector disconnected.
6. Connect a volt-ohmmeter across the terminals of the single pressure switch connector. Set the meter to as high a range as possible (greater than 100,000 Ohms).
  - If the resistance is 1 Ohm or less, no fault is currently present at the switch. Reconnect the connector, run the engine with the climate control system set to the maximum cooling setting. Check that the cooling fans run at slow speed (series operation) within a few seconds.
  - If the resistance is greater than 1 Ohm, but less than 100,000 Ohms, the switch has high resistance and must be replaced.
  - If the resistance exceeds 100,000 Ohms, proceed to step 7.

7. Leave the volt-ohmmeter connected to the single pressure switch and run the engine with the climate control system set to maximum cooling. (If necessary, increase engine speed for a short time.) Check that the compressor clutch is engaged.
  - If the resistance suddenly drops to 1 Ohm or less, reconnect the connector. Check that the cooling fans run at slow speed (series operation) after a few seconds. If the switch resistance drops below 100,000 Ohms, but is greater than 1 Ohm, replace the single pressure switch.
  - If the cooling fans switch from OFF directly into high speed (parallel) operation, the single pressure switch is permanently open. Replace the single pressure switch.

Refer to the Sedan Range 1995 Electrical Guide, Fig. 07.1, for additional information.

### PARTS INFORMATION:

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
Single pressure switch	LNA 7655BA	1

### WARRANTY INFORMATION:

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME ALLOWANCE</u>
JZ DD **	82-10-36	Replace single pressure switch	0.45 hrs.

- \*\* GN Switch intermittent output - when switch is replaced for high resistance.  
 LF Switch permanently open circuit.