



Subject: Fan Resistor: Two-Speed Radiator Fan

Application: 1989- 9000

CATEGORY		Engine	
SECTION	2	PAGE	40
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Supersedes PSI 12/93-0415

A two-speed radiator fan was introduced on certain 1989 9000 variants. On these vehicles, if the resistor failed, the only course of action was to replace the entire fan unit. Now a separate resistor for two-speed fans is available as a spare part and is compatible on either Marelli or Bosch radiator fans. See Figure 1.

Follow the instructions below to install this resistor on whichever make fan is installed.

Cars Affected:

1989- 9000 models with 2-speed fan

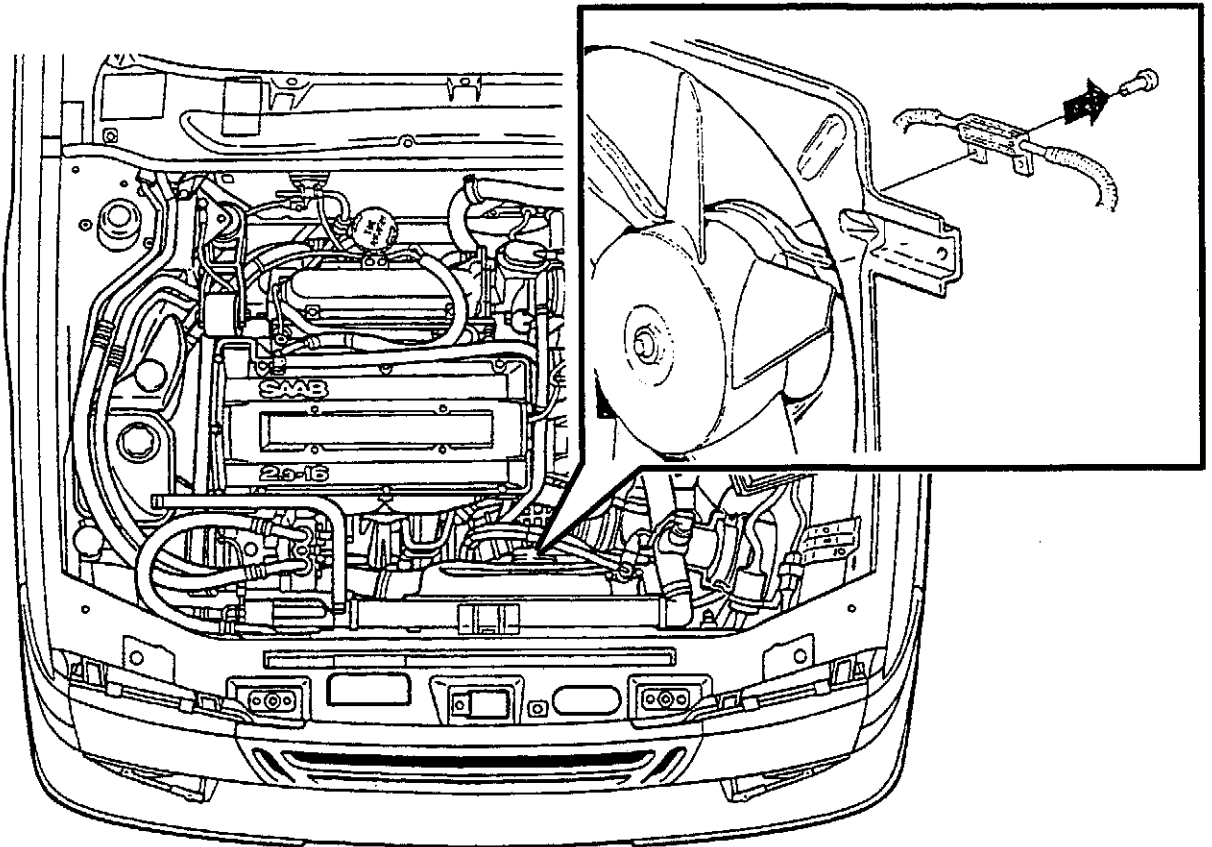


Figure 1. Resistor for two-speed radiator fan

Parts:

Complete Resistor
Pop Rivets (2)

43 95 034
98 49 514

Action:

The resistor can be checked with an ohmeter. The value of the resistor should be $0.22 \text{ ohm} \pm 5\%$.

For Marelli Fan

1. Using a strip of sheet metal to protect the fan blades and the radiator, drill out the pop rivets securing the resistor. See Figure 2.

2. Disconnect one of the fan resistor's leads from the two-pin connector and cut the other lead about 70mm from the resistor. See Figure 3. Do the same with the new complete resistor. Transfer the protective rubber sleeve from one of the splices on the new lead to the severed lead on the new fan resistor, or fit a suitable length of shrink tubing. **IMPORTANT:** Make certain green lead is connected to green lead and black lead to black lead.

3. Strip about 10mm from the insulation from both ends of the leads together. Solder the ends of the leads together. Fit the protective rubber sleeve over the soldered joint, or heat the shrink tubing. See Figure 4.

Figure 4. Fitting protective sleeve

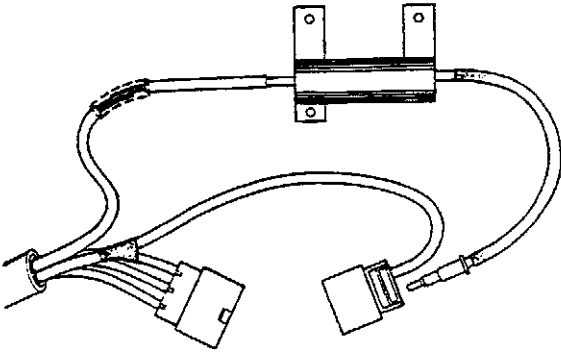


Figure 3. Cutting the lead 70mm from resistor

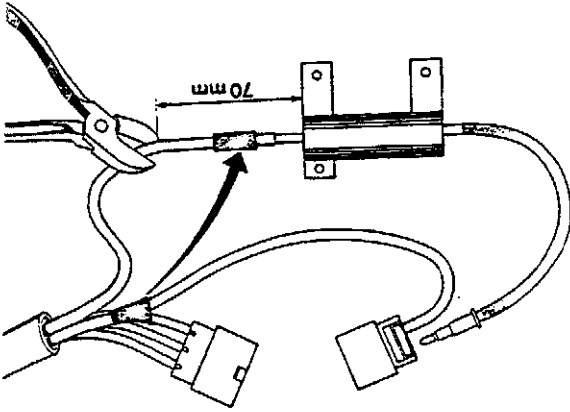
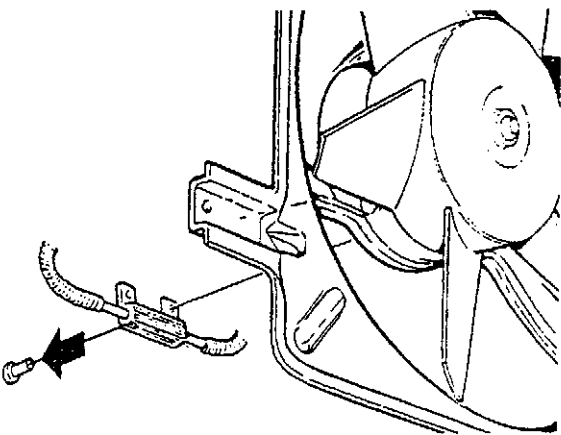


Figure 2. Drilling out pop rivet



4. Attach the fan resistor to the fan cowl by pop riveting it. See Figure 5.

Connect the lead to the 2-pin connector. Secure the leads in place by means of a cable tie.

5. Warm up the engine and make certain the fan motor operates correctly.

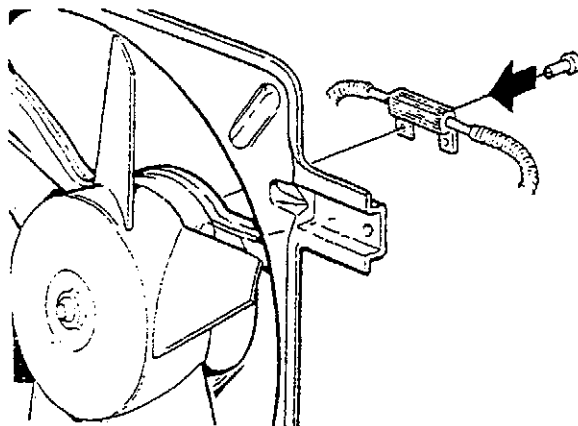


Figure 5. Pop Riveting Fan Resistor to Cowl

For Bosch Fan:

1. Using a strip of sheet metal to protect the fan blades and radiator, drill out the pop rivets securing the resistor. See Figure 6.

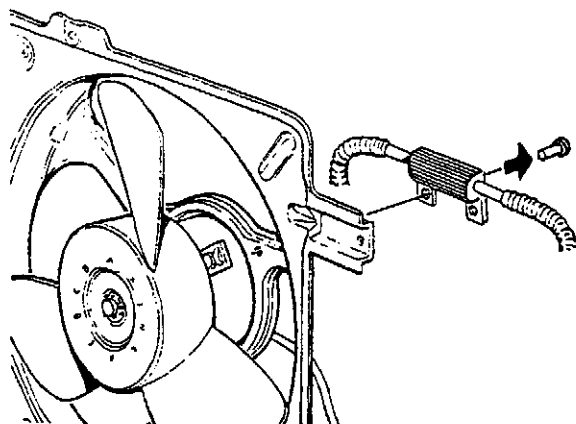


Figure 6. Drilling out pop rivets

2. Carefully bend aside the two hooks holding the protective cover over the cable connections and remove the cover. See Figure 7.

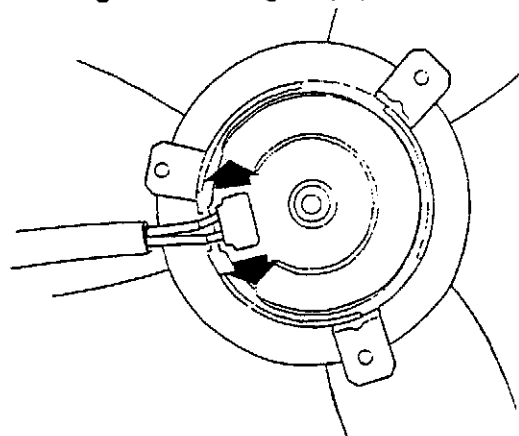


Figure 7. Bending hooks aside

3. Use a soldering iron to heat the electric leads. Separate the connectors and remove the cable. See Figure 8. Be sure to note the proper orientation of the cables.

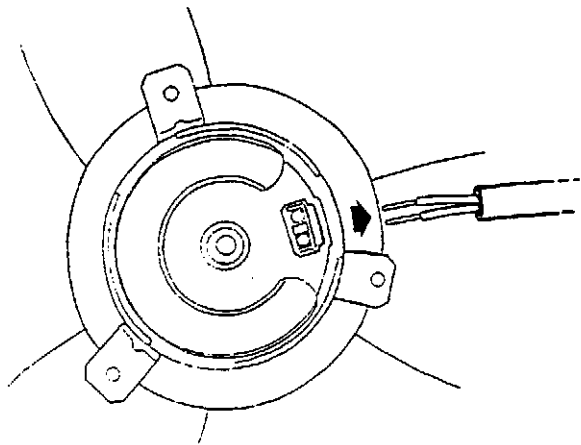


Figure 8. Separating connectors & removing cable

4. Solder the new cable to the fan motor. See Figure 9.

IMPORTANT: It is extremely important to be sure that the leads are connected to the correct pins as the fan will rotate in the wrong direction if they are not.
Press the protective cover back in place.

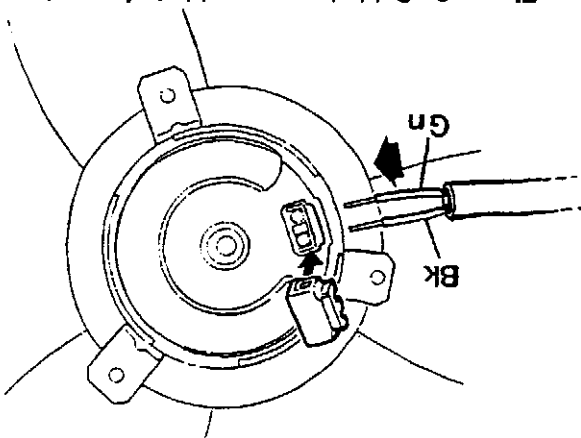


Figure 9. Soldering new cable to fan motor

5. Attach the fan resistor to the fan cowl by means of pop rivets. Plug in the connectors and secure the leads in place by means of a cable tie. See Figure 10.
6. Warm up the engine and make certain the fan motor operates correctly.

Warranty Information:

Both fans: for warranty repairs, please use Failure Coding 36596-62-0-01-01. Time allowance is straight time Labor Operation No. 36599 for 0.4 hour.

Figure 10. Pop riveting new fan resistor to cowl

