

## Subject: ABS Electronic Control Module

Application: 1991 9000

CATEGORY	
<b>Brakes</b>	
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ISSUE <b>11/93-0408</b>	CODE <b>590</b>

Certain 1991 9000 models may experience water seeping into the wiring for the ABS electronic control module (ECM). The water can run along the wiring and collect in the ECM connector where it can cause corrosion of the connecting pins. Should this happen, the ANTI LOCK warning lamp may illuminate and different diagnostic trouble codes may be stored in the ECM.

If a customer should complain of the ANTI LOCK warning lamp lighting, verify whether or not corrosion is present in the ECM connector.

### Cars Affected:

1991 9000

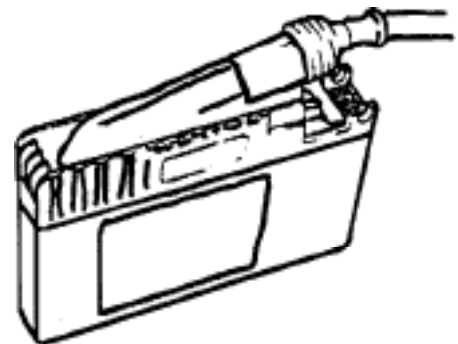
### Parts:

Contact 61 Corrosion-Dissolving Spray	30 04 520
Connector Pin	91 20 957
Insulating Tape	
Dismantling Tool Kit	65 60 110

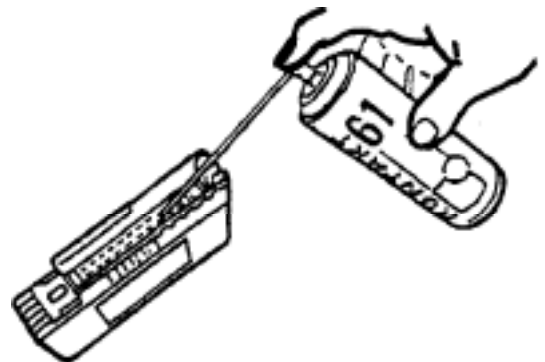
### Action:

1. Remove the ABS ECM and its connector. See Figure 1. Inspect the pins on the ECM for signs of corrosion.

If corrosion is evident, spray the pins with Contact 61 and allow time for it to work. Then clean the pins thoroughly to remove all corrosion. See Figure 2.



**Figure 1.** ABS Electronic Control Module (ECM)

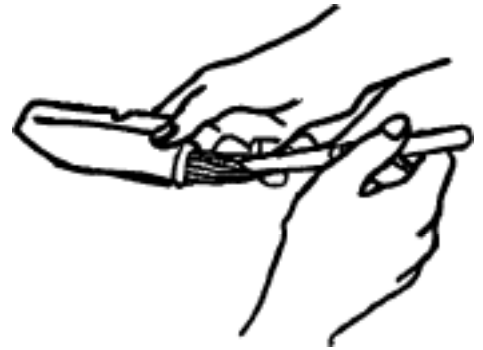


**Figure 2.** Spraying Pins with Contact 61

2. In order to allow water to drain from the ECM, it will be necessary to drill a drainage hole in the connector housing.

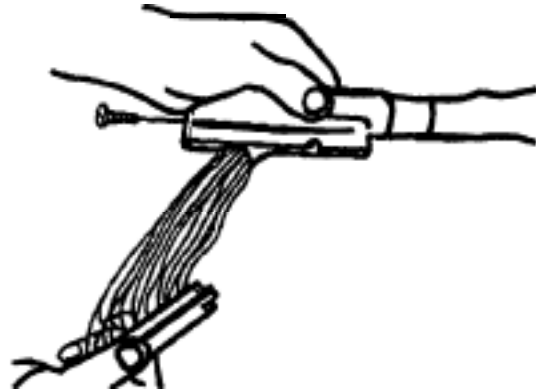
Open the connector so that the leads are not damaged when the drainage hole is drilled. Remove the rubber seal on the connector.

Using a knife, cut the adhesive to separate the cable leads where they enter the connector. Use extreme care to avoid damaging the insulation. See Figure 3.



**Figure 3.** Separating cable leads

3. Undo the screw securing the connector housing. Pull the wiring, complete with pin holder, out of the connector. See Figure 4.



**Figure 4.** Pulling Wire from Connector

4. Drill a 7mm drainage hole in the front part of the connector housing. Bend the leads out of the way to avoid damaging them when drilling. See Figure 5.

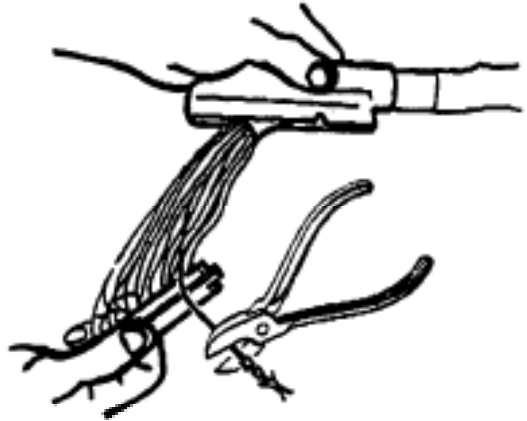
Deburr the hole on the inside.



**Figure 5.** Drilling 7mm drainage hole

5. Inspect the connector pins. If severe corrosion is evident, the pins must be replaced.

Use a terminal repair tool (from Kit P/N 85 80 110) and remove the corroded connecting pins and cut them off from their leads. Make sure that these leads are not also corroded. If they are, cut them shorter until no corrosion is evident. See Figure 8.



**Figure 6.** Removing corroded connecting pins

6. Reassemble the connector in reverse order. Wrap insulating tape around the unprotected leads and then refit the rubber seal. See Figure 7.
7. Spray the **ECM's** and connector pins with Contact 61 and refit the ECM.

Clear any diagnostic trouble code (s). Test drive the car to verify that no fresh trouble codes are generated (i.e. the ANTI LOCK warning lamp does not light up).



**Figure 7.** Wrapping Insulating Tape on leads

### **Warranty Information:**

For warranty repairs, please use Failure Coding 37120-66-0-01-05. Time allowance is 0.4 hour which should be entered as straight time.