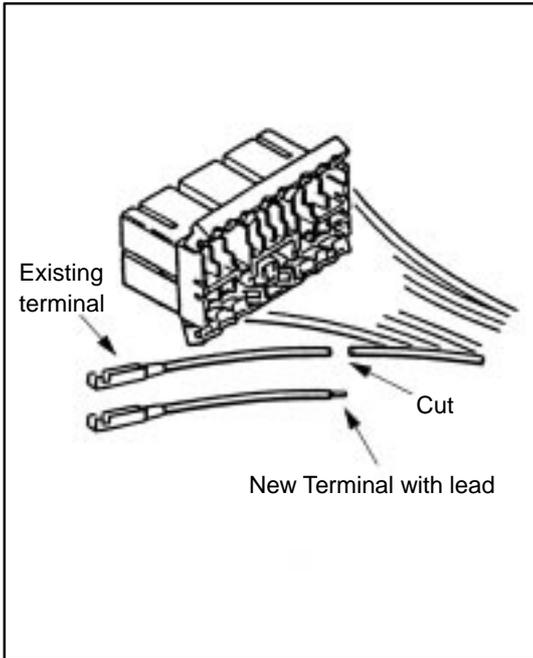


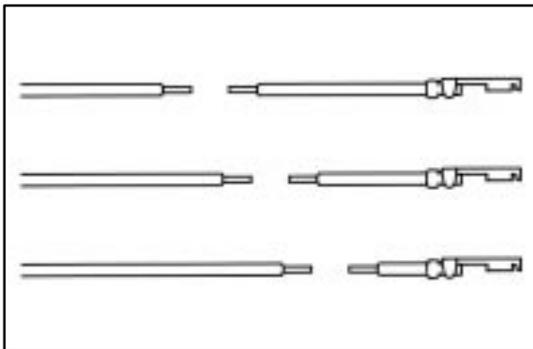
TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

Step 3. Replace the terminal.

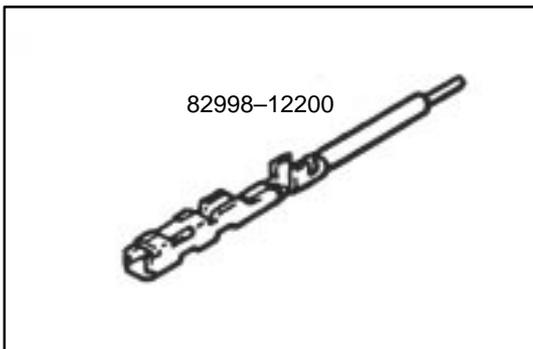


1. Cut the Old Terminal from the Harness.

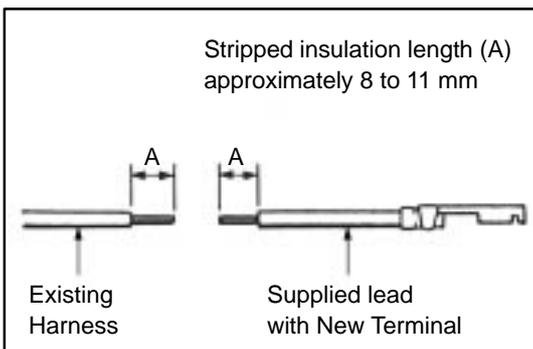
- (a) Use the new wire lead as a guide for proper length.
- NOTE: If the length of wire removed is not approximately the same length as the new piece, the following problems may develop:
- Too short — tension on the terminal, splice, or the connector, causing an open circuit.
 - Too long — excessive wire near the connector, may get pinched or abraded, causing a short circuit.



HINT: When connecting a wire harness at three or more spots to the same connector, cut the wire harness as shown on the left.



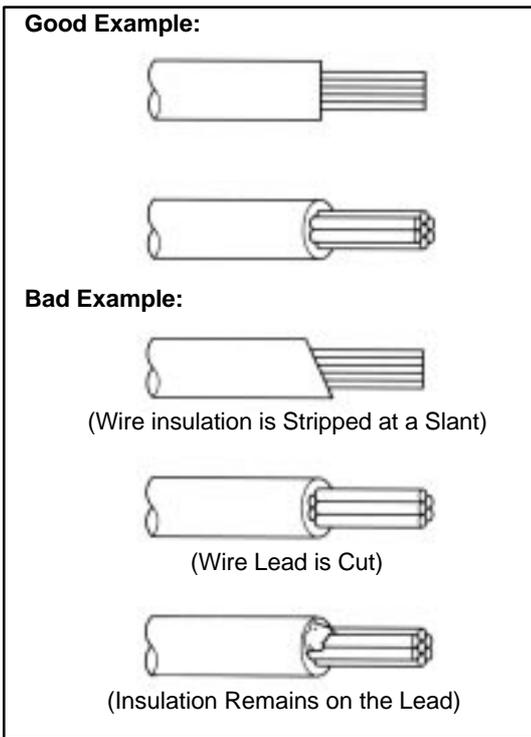
2. Select the correct replacement terminal with lead, from the supply parts.



3. Strip insulation from wire on the harness and replacement terminal lead.

Start stripping at least 8 mm (0.31 in.) to 11 mm (0.43 in.) away from the end of the existing harness at vehicle side and also from the end of the repair wire.

TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT

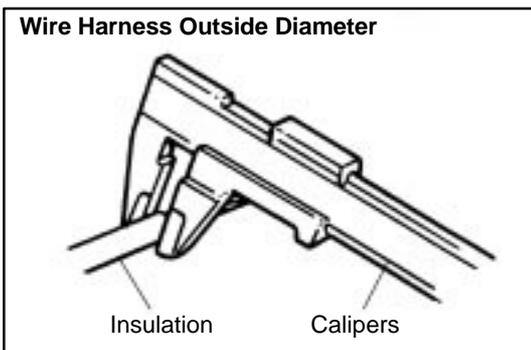


NOTICE:

Take care not to damage the wire when stripping the wire harness lead. After finishing the operation, visually inspect the wire. If there is any damage, perform the operation again.

HINT:

If the wire size is not known, start with largest stripper hole and work down until a clean strip of the insulation is removed without nicking or cutting the wire lead.



4. Select Correct Size of Sleeve from the Supply Parts.

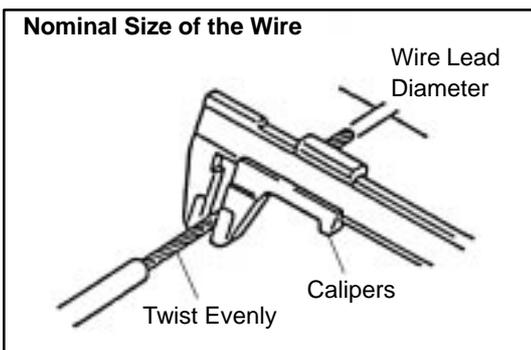
(a) Measure the diameter of wire by using the measuring device as following:

- When size is based on the outside diameter of the wire harness

Measure the outside diameter of the wire harness by placing a measuring device, such as a micrometer or Vernier Caliper, across the diameter of the insulation on the lead and taking a reading.

- When size is based on the nominal size of the wire lead.

Measure the diameter of the wire lead by placing a measuring device, such as a micrometer or Vernier Caliper, across the diameter of the wire lead and taking a reading.

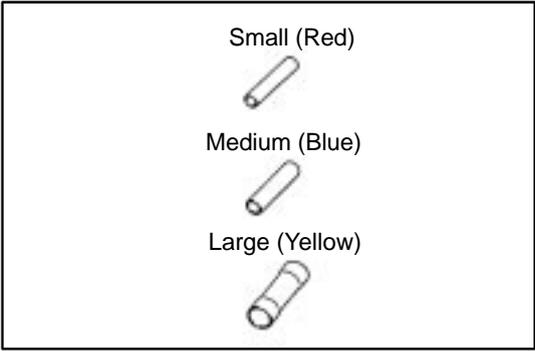


HINT:

To calculate the "nominal size" of wire

$$\text{Nominal size} = \frac{3.14 \times (\text{Diameter of wire lead})^2}{4}$$

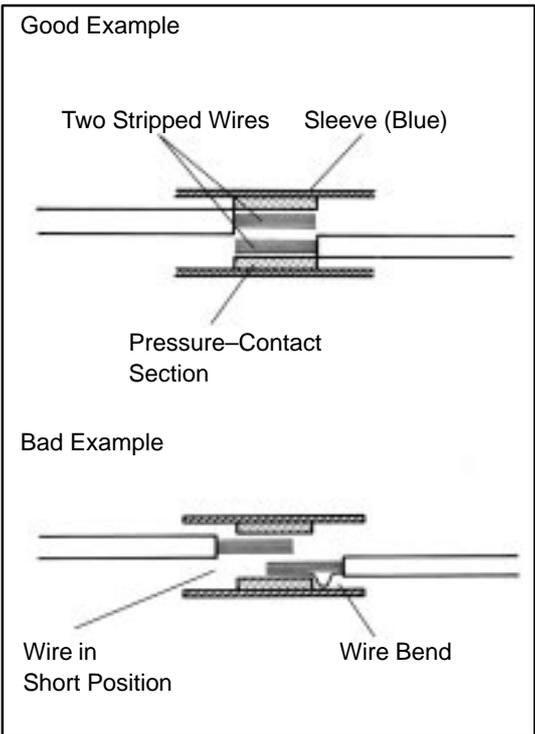
TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT



(b) Use the table to determine proper sleeve size

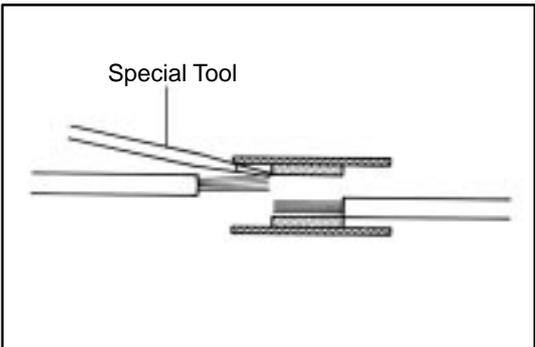
	Part Number	Nominal size of wire (Outside Diameter of wire)
Small	82999-12010	0.3 or less (1.0 – 0.2 mm)
Medium	82999-12020	0.5 – 1.25 (2.0 – 1.0 mm)
Large	82999-12030	2 or more (5.0 – 3.0 mm)

NOTE: For details, refer to sleeve size table on item 4 of STEP 1



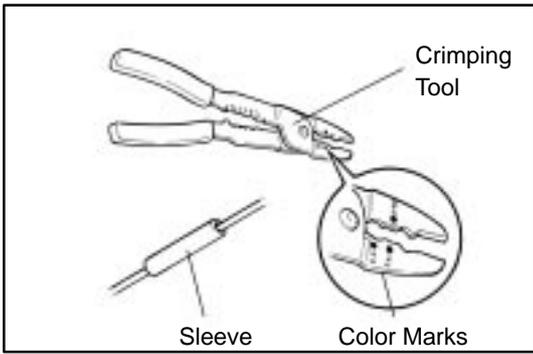
5. Crimp the Replacement Terminal Lead to the Harness Lead.

(a) Overlap the two stripped wire ends inside the sleeve as illustrated on the left.



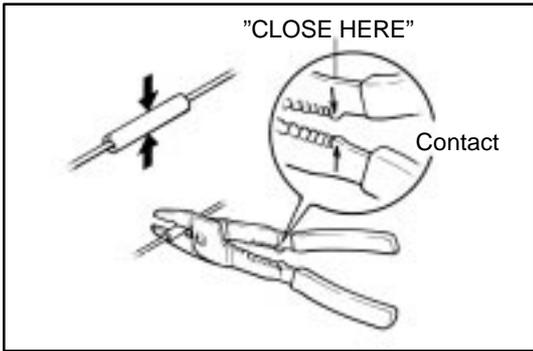
HINT: You might find it easier if you use a miniature special tool as a guide as you insert wires into the sleeve.

TERMINAL AND CONNECTOR REPAIR-TERMINAL REPLACEMENT



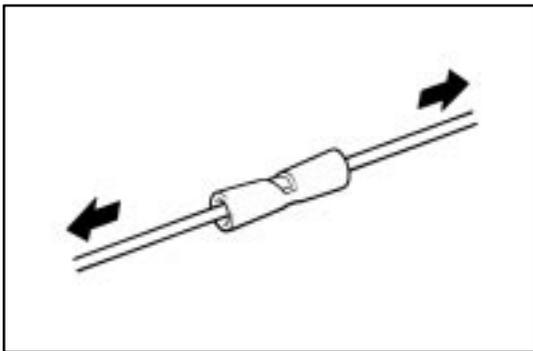
- (b) The crimping tool (AMP Part No. 169060) has color marks on it. Place the sleeve in the correct section of the tool according to the color of the sleeve itself.

HINT: For the crimping tool, AMP "Part No. 169060" is convenient to use.



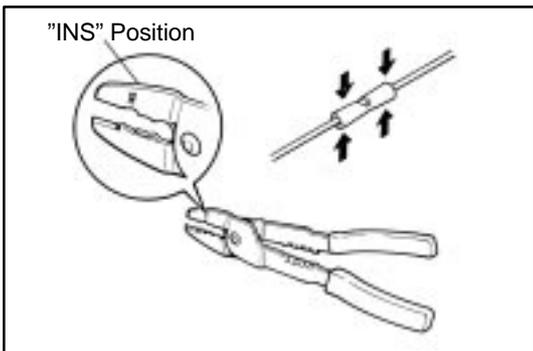
- (c) With the center of the sleeve correctly placed between the crimping jaws, squeeze the crimping tool until either end comes into contact at the section marked by "CLOSE HERE".

HINT: Check to see that the sleeve and wires are still in the correct position before closing the crimping tool ends with steady pressure.



- (d) Pull the joined wires to either end. Make sure that they are joined firmly by the sleeve.

NOTICE:
If the joined wires come loose the splice is defective, so replace the sleeve and repeat the procedure.

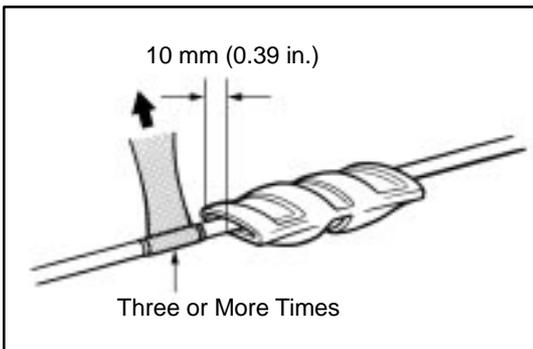


- (e) Crimp both ends of the sleeve with the crimping tool at the "INS" position.

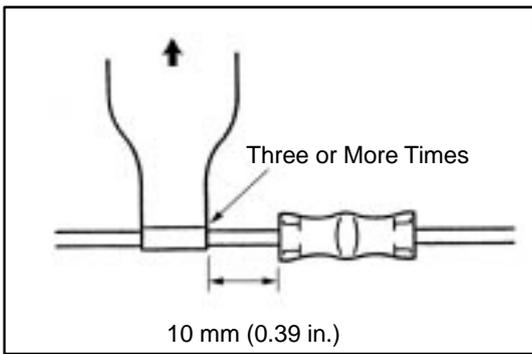
6. Protect Joined Section

Wrap silicon tape around the joins to protect them from moisture.

NOTE: This job is required in repairs of the engine compartment, under the floor and other moisture entry positions.

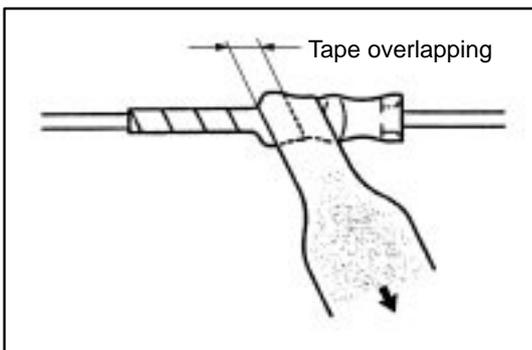


TERMINAL AND CONNECTOR REPAIR—TERMINAL REPLACEMENT

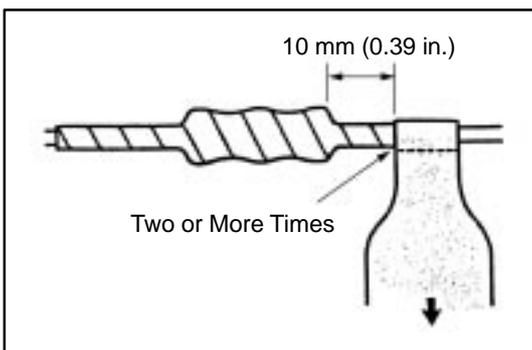


HINT:

- Before starting the operation, thoroughly wipe dirt and grease off the sections to be joined.
 - If the adhesive surfaces of two tapes come in contact they will stick together and will not come apart, so do not remove the backing film except when using the tape.
 - Do not let oil and dust, etc. get on the tape surface.
- (a) Ready about 100 mm (3.94 in.) of silicon tape (Part No. 08231-00045) and peel off the film.
 - (b) Stretch the silicon tape until its width is reduced by half.
 - (c) About 10 mm (0.39 in.) from the end of the sleeve, wrap the silicon tape around the sleeve three or more times while stretching the tape.



- (d) Wrap the remaining part of the sleeve with half of the tape overlapping at each turn.



- (e) Firmly wrap the tape two times or more about 10 mm (0.39 in.) from the other end of the sleeve, then wrap the tape back towards the start again and firmly finish winding the tape around the center of the sleeve.

