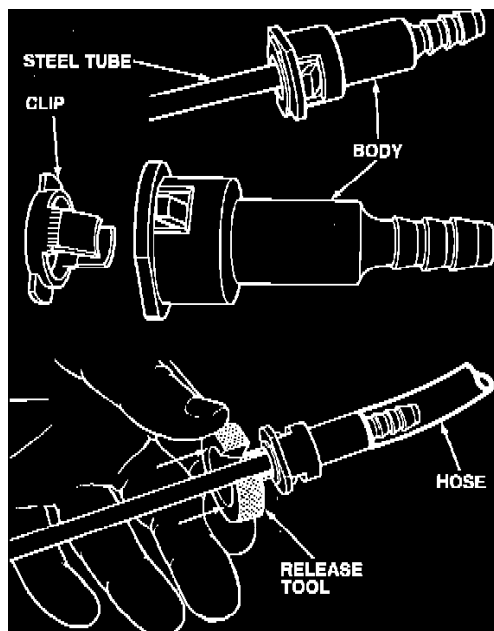


## Fuel Supply Line: Service and Repair

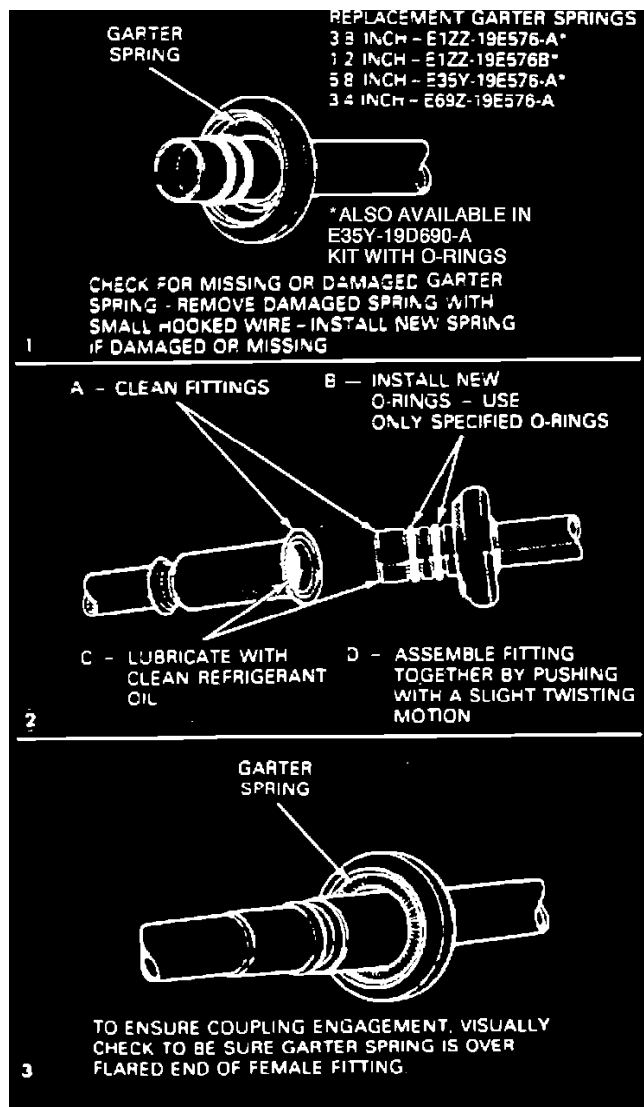


**Duckbill Clip Connector**

### **DUCKBILL CLIP CONNECTOR**

#### **REMOVAL**

To remove duckbill, use special tool shown, or pliers with thin jaws, to release the clip. Pull the connector apart gently.



### Replacement Garter Springs

## PUSH CONNECT FITTINGS

### REMOVAL

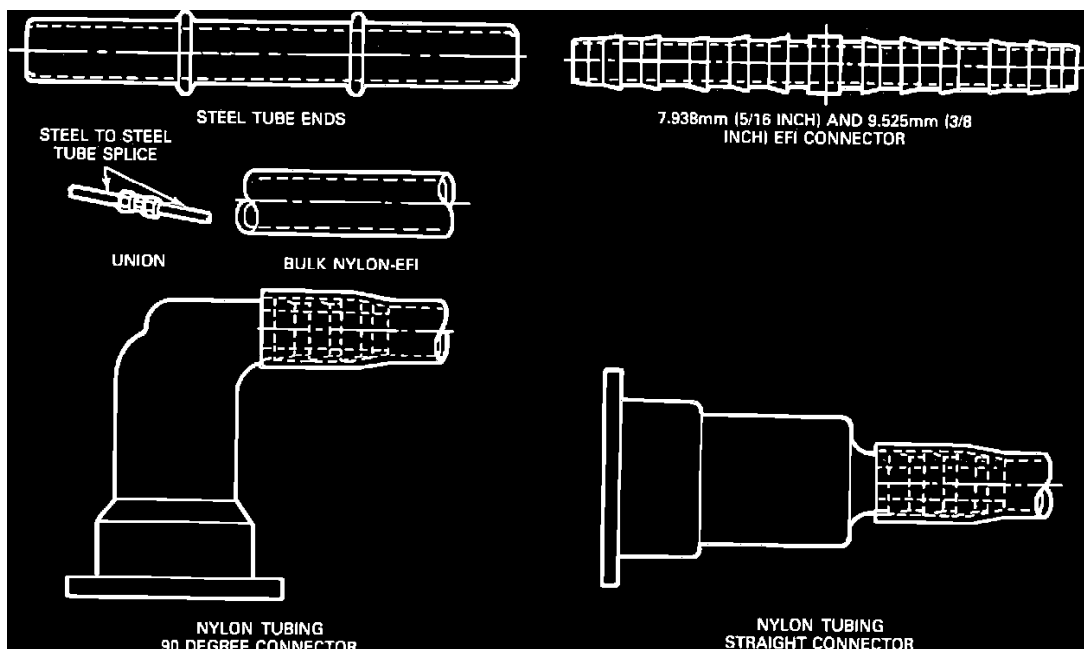
1. Inspect the push connect fittings for accumulation of dirt. If more than a light coating of dust is present, clean the fitting before disassembly.
2. Some adhesion between the seals in the fitting and the tubing will occur with time. To separate, twist the fitting on the tube, then push and pull the fitting until it moves freely on the tube.
3. Remove "hairpin" type clip from fitting by:
  - a. Bend the shipping tab downward so that it will clear the body.
  - b. Spread the two clip legs approximately 3.2 mm (1/8 inch) each to disengage the body and push the legs into the fitting.
  - c. Lightly pull from the triangular end of the clip and work it clear of the tube and fitting.

### CAUTION: Do not use any tools.

4. Grasp the fitting and hose assembly and pull in an axial direction to remove the fitting from the steel tube.
5. Once the fitting is removed from the tube end, inspect the fitting and tube for any internal parts that may have been dislodged from the fitting.

### INSTALLATION

1. It is recommended that the original clip not be reused. To install the new clip, insert clip into any two adjacent openings with the triangular portion pointing away from the fitting opening. Install clip to fully engage the body (legs of "hairpin" clip locked on outside of body).
2. Before installing fitting on the tube, wipe tube end clean with a cloth. Inspect the fitting to ensure it is free of dirt and/or obstructions.
3. To install the fitting onto the tube, align the fitting and tube axially and push the fitting onto the tube end. When the fitting is engaged, a definite click will be heard. Pull on fitting to ensure it is fully engaged.



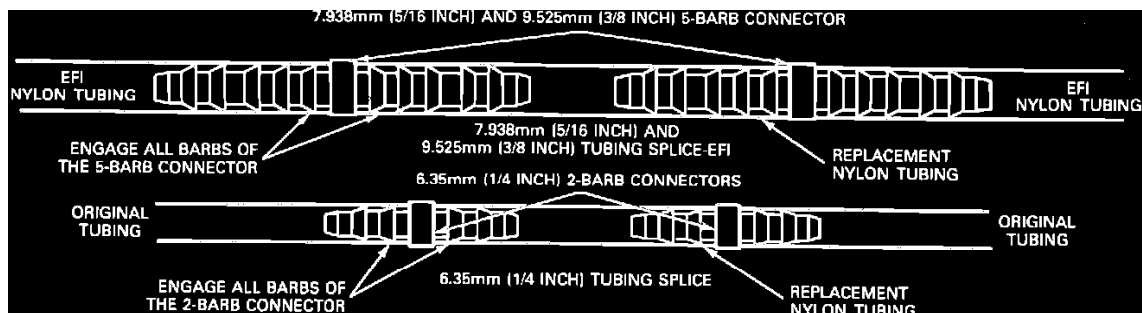
### Replacing Push Connectors

#### REPLACING DAMAGED PUSH CONNECTORS

1. Relieve fuel system pressure.

**NOTE:** Damaged push connectors must be discarded and replaced with new push connectors. If only the retaining clip is damaged, replace the clip.

2. Disconnect the damaged push connector. Be sure to bend the shipping tab to the side before removing retaining clip.
3. Select the proper size replacement push connector and nylon tube assembly.



### Replacing Push Connectors

4. Cut out a section of the original nylon tube to the same length as the nylon tube attached to the new push connector.
5. Install proper barbed connector into the replacement nylon assembly.

**NOTE:** To make hand insertion of the barbed connectors into the nylon easier, the tube end must be soaked in a cup of boiling water for one minute immediately before pushing the barbs into the nylon. The 7.938 mm (5/16 inch) barbed connector is used for splicing 9.525 mm (3/8 inch), and 7.938 mm (5/16 inch) EFI tubing.

6. Complete the splice by connecting the barbed connector to the original nylon.
7. Connect the new connector assembly to the steel tube end.
8. Check that the underbody clips are properly securing the fuel tubes.
9. Start engine and check for fuel leaks.

#### SPlicing NYLON TO NYLON

1. Relieve fuel system pressure.
2. Cut out damaged section of tubing and retain as a guide.
3. Cut a section of service tubing (type 11 or 12 nylon available in 6.35 mm (1/4 inch), 9.525 mm (3/8 inch) and 7.938 mm (5/16 inch)) to the same length as the damaged section of tubing.
4. Select the proper 6.35 mm (1/4 inch), 9.525 mm (3/8 inch), and 7.938 mm (5/16 inch) barbed connectors for completing the splice. Two connectors are required for each splice.

**NOTE:** To make hand insertion of the barbed connectors into the nylon easier, the tube end must be soaked in a cup of boiling water for one minute immediately before pushing the barbs into the nylon. The 9.525 (3/8 inch) and 7.938 mm (5/16 inch) barbed connectors are used for splicing, 9.525 mm (3/8 inch) and 7.938 mm (5/16 inch) EFI tubing.

5. Install the barbed connectors into each end of the replacement tubing using boiling water.
6. Install clips onto any tubes which might be difficult to access once the final splices are completed.
7. Complete the splice of the replacement nylon to the original nylon tubing at both ends. (Use the boiling water method mentioned to get the required number of barbs engaged.)
8. Install any remaining clips which were removed for this service and check that the tubes are secure in the original clips.
9. Start engine and check for leaks.