

Assembly instructions for mounting corrugated tubes on fir-trees



Fig. 1: Corrugated tube on a coil



Fig. 2: Corrugated tube with plain segments



Fig. 3: Quick connect system 241



Fig. 4: Quick connect system 246

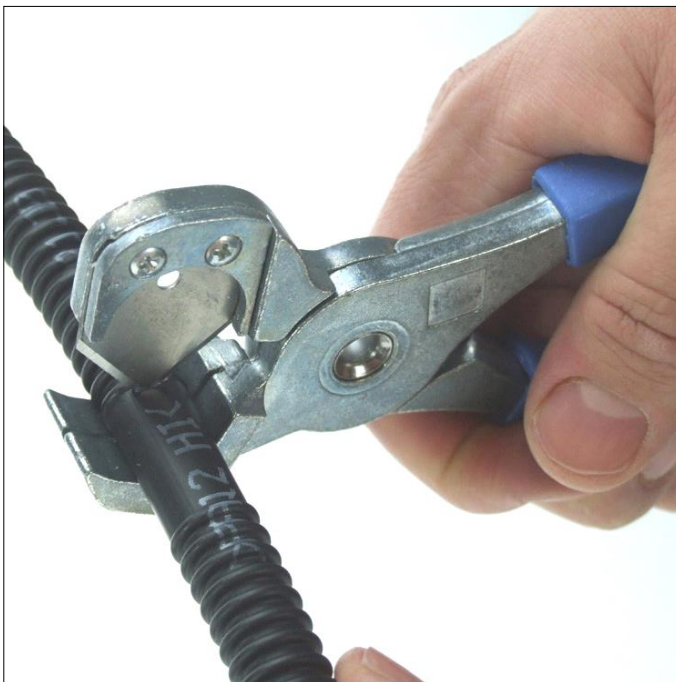


Fig. 5: Cutting the corrugated tube at one end of the plain segment with the VOSS cutting pliers

These assembly instructions are intended for qualified fitters in automotive engineering.

1. Corrugated tubes

The corrugated tube must have plain segments of 25-2 mm length in periodic intervals (figs 1, 2, 6).

2. Quick connectors

- Couplings of VOSS quick connect system 241 (fig. 3)
- Nylon plugs of VOSS quick connect system 246 (fig 4)

3. Assembly instructions

Before the assembly, check that tubes and connectors are clean and free of grease, and do not show any signs of damage.

3.1. Cutting the corrugated tube

The corrugated tube must be cut off at one end of a plain segment (fig. 5). The plain segment must at least remain as long as the fir-tree profile (length L) of the connector (fig. 6).

The tube must be cut off square. We recommend the use of the VOSS cutting pliers (fig. 7), which ensures that the tube is cut squarely and cleanly. A subsequent treatment of the cut surface is not necessary.

A saw or similar tools must not be used for this purpose as the formation of burrs would be unavoidable and jeopardize the sealing capability of the connection.



Fig. 6: Minimal length of the plain segment = length of the fir-tree



Fig. 7: VOSS cutting pliers

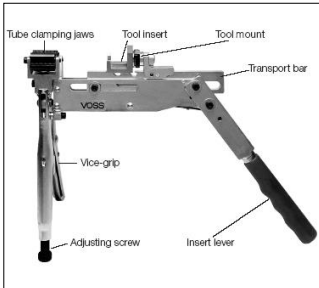


Fig. 8: VOSS manual assembly tool



Fig. 9: Special clamp jaws for corrugated tubes



Fig. 10: Different tool inserts for different systems, forms and sizes



Fig. 11: Placing the tube in the jaws and the plug in the insert

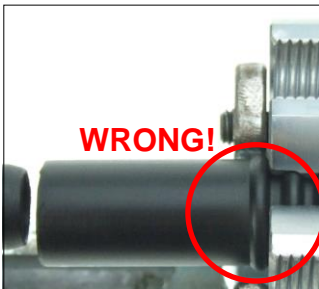


Fig. 12: WRONG! The corrugated tube protrudes

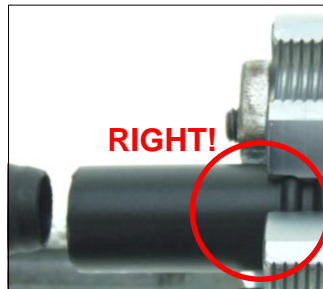


Abb. 13: RIGHT! The corrugated tube does not protrude

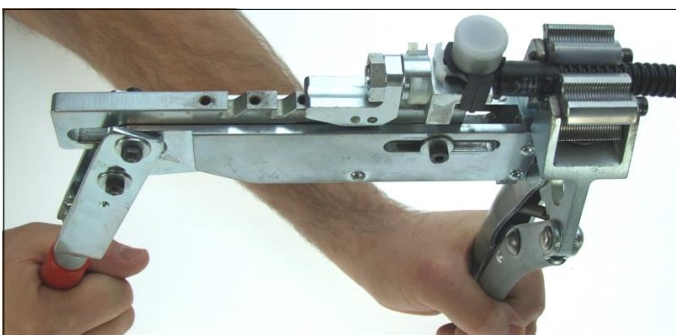


Fig. 14: Mounting the corrugated tube on the fir-tree

3.2. Mounting the corrugated tube on the fir-tree

The procedure must be carried out at room temperature. The tube must not be heated. The fir-tree must be undamaged, clean and free of grease.

Place the quick connector in the tool insert and press the transport bar manually towards the tube until the fir-tree is aligned with the inside diameter of the tubing.

For mounting the corrugated tube on the fir-tree we recommend the VOSS manual assembly tool (fig. 8).

The corrugated tube can then be pressed onto the connector as far as the end of the fir-tree by using the insert lever (figs. 8 and 14).

The tube clamping jaws must be turned until they match to the corrugated tube (fig. 9). Different types of jaws are available.

The vice-grip may now be released and the corrugated tube with mounted connector be removed.

A tool insert corresponding to the quick connector has to be placed in the tool mount. For different quick connect systems, forms and sizes different tool inserts are available (fig. 10).

Place the corrugated tube into the jaws (fig. 11). The plain segment of the tube has to protrude completely; the corrugated segment does not protrude (figs. 12-13). Secure the tube firmly by tightening the vice-grip. The clamping force may be varied by means of the adjusting screw (fig. 8).