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Tech Tip #43

TECH TIP –“Recommended practice when removing the ¼” nylon air tubing from the Torque Transfer Shaft (TTS) fitting on the Rotary Air Union (RAU)”

Customer: Aeris®

BACKGROUND:

A customer complained that he could not insert the ¼” nylon air tubing into the TTS fitting on the RAU. It was found that excessive pull force was used when removing RAU. A segment of nylon tubing, approximately 0.21” in length, was stuck in the bottom of the connector cavity of the TTS push-lock fitting, preventing installation of new tubing into the TTS.

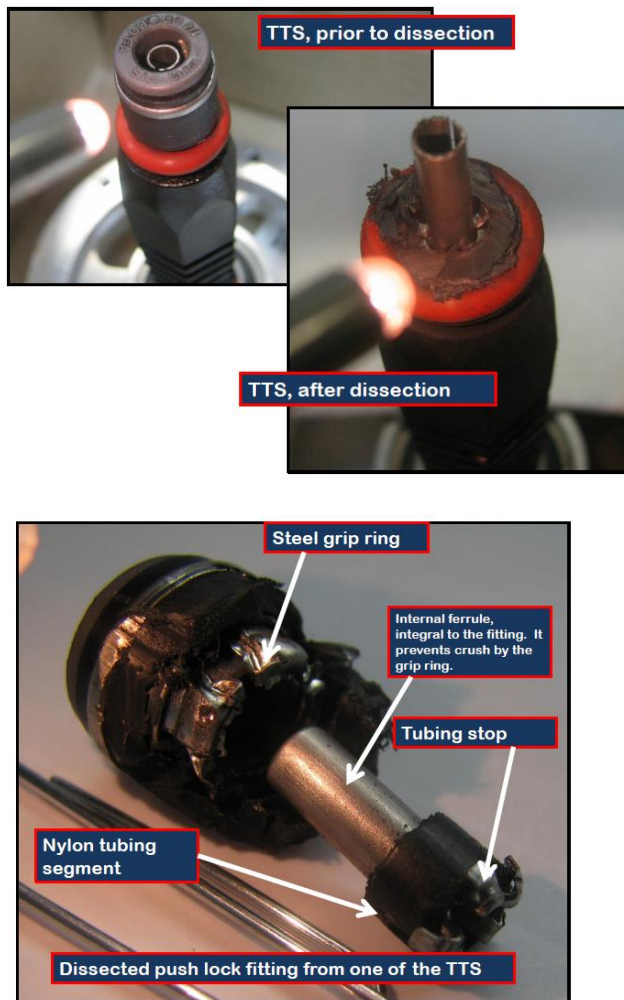


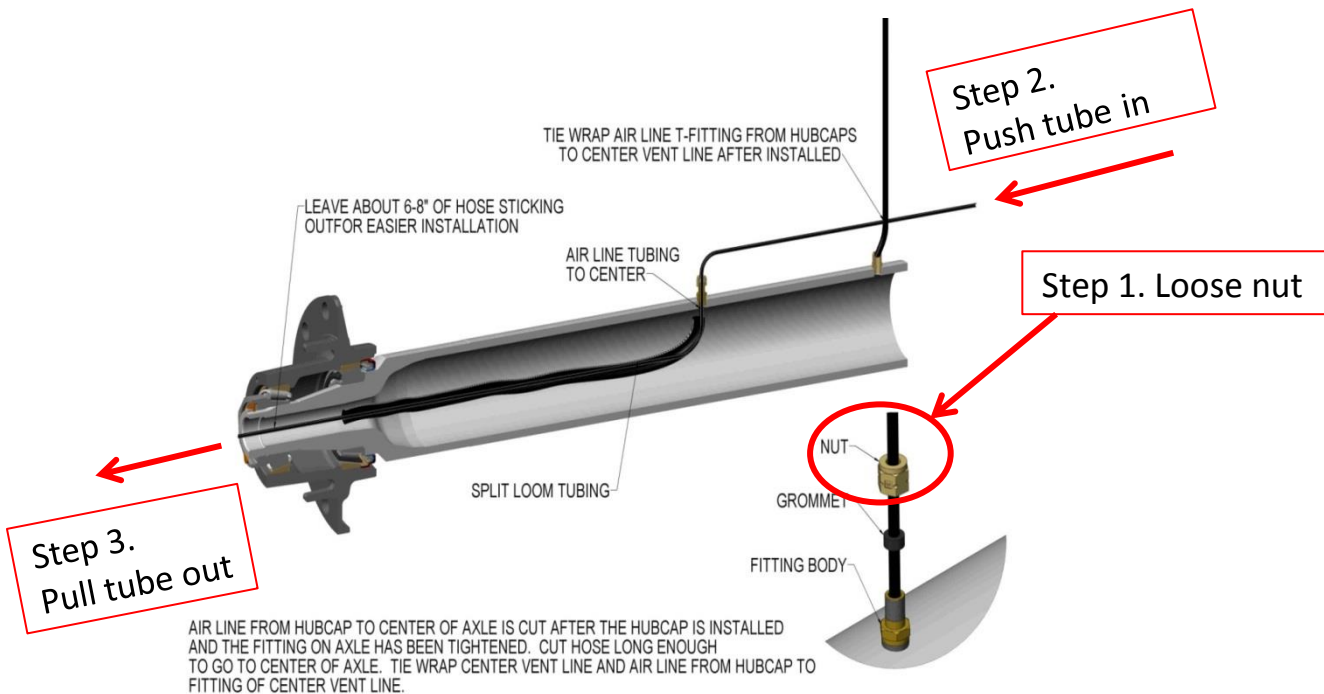
Figure 1. Torque transfer shaft dissection

The potential scenarios are described as follows:

- a) Not enough 'slack' in the tubing between the pass-thru fitting and the TTS, therefore, the mechanic could not access the release ring on the push-lock fitting, so he just pulled the RAU assembly until the tubing failed at the grip ring teeth (stress riser).
- b) Failure to release system pressure before attempting to remove the tubing from the fitting. With pressure in the tubing, it is very difficult to depress the release ring to remove the tubing, so the RAU assembly was pulled until the tubing failed at the grip ring teeth.

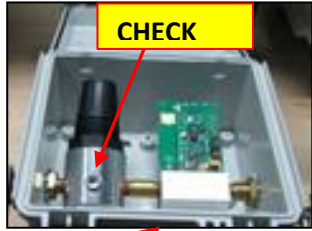
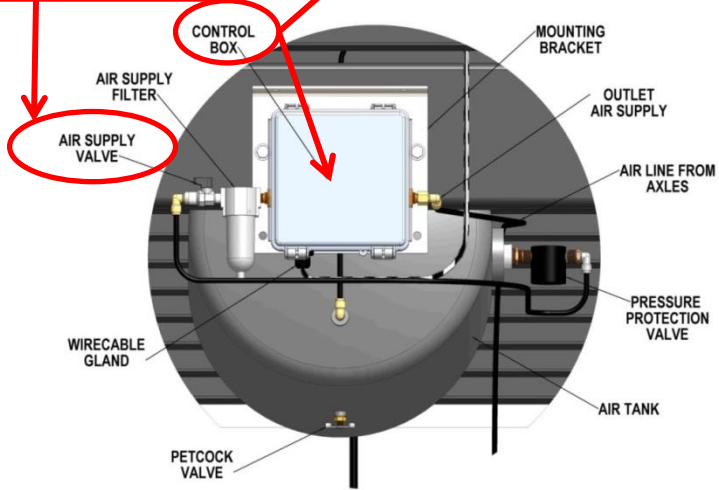
Recommended Practices before attempting to remove the tubing from the push-lock fitting:

- a) Recommended Practice: If the release ring cannot be easily accessed, loosen the compression nut on the tubing pass-thru fitting on the top of the axle and push more tubing into the axle. This will allow the RAU to move further away from the spindle and allow the release ring to be pressed for release of the tubing.



b) Release system pressure before attempting to remove the tubing from the fitting.

Step 1.
Close the air supply valve



Step 2.

- Open the Lid
- Remove cap on the check port of the regulator
- Press pin (valve core) to release pressure on airlines
- Replace cap