

### Nozzles:

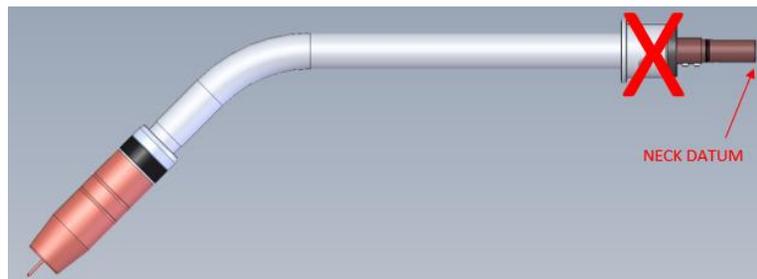
1. If anti-spatter is used, do not use excessive spray times as this will saturate the nozzle insulator and will degrade insulating material.
2. Nozzle should be cleaned as often as possible. Spatter buildup can often lead to poor gas shielding or short-circuiting between the contact tip and the nozzle.
3. Spatter should be removed with the proper tools designed for spatter removal.
4. In high temperature welding applications, heavy duty consumables are recommended.

### Contact Tips, Retaining Heads, Gas Diffusers and Liners:

1. TOUGH LOCK™ Contact Tips may be removed and rotated 180° in retaining head / gas diffuser, providing an additional wear surface and extending the service life of the product.
2. Inspect retaining head for spatter adhesion, blocked gas ports and carburized contact surfaces. Clean as often as possible.
3. Ensure all consumables are tightly fastened and sized properly for your application.
4. Do not immerse liner into solvents for cleaning. The liner may be periodically blown out with compressed air.

### Necks:

1. Use of a checking fixture is recommended to ensure a repeatable TCP.
2. Ensure neck connections are properly torqued. **Loose Connections = Resistance, and Resistance = Excessive Heat.**
3. As shown below, the neck datum is the back of the copper – not the torch body.



### Gun Cables:

1. Periodically check neck, cable, and power pin connections. Loose connections can cause overheating and premature failure.
2. Sharp bends and loops in the cable should be avoided. You can suspend the wire feeder from a boom or trolley in semi-auto applications or use counterbalances in automation applications. This will help eliminate excessive bends and keep the cable clear of hot weldments.
3. Avoid rough surfaces and sharp edges that can cause tears and nicks in cable jacket which can cause premature failure.
4. Periodically check all ground cables and connections.
5. Use anti-seize on all threaded connections.
6. Ensure your cable is properly sized for the application, especially in automation. Excessive slack (more than ~3") or overly-taught cables will lead to premature failure.

**Reamers:**

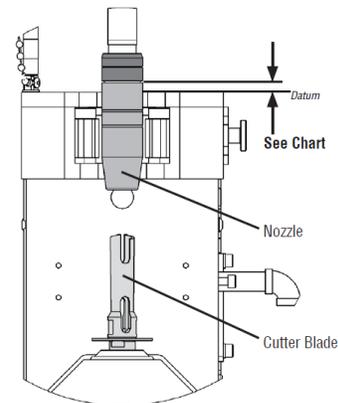
1. Use the reamer to remove accumulated spatter as needed. TOUGH GARD Anti-Spatter Liquid can be applied / sprayed at the same frequency as reamer cycles, or it can be applied independently between ream cycles.
2. Reamer cycles can be "hidden" in table indexes or part loading to minimize downtime.
3. Ensure the unit is supplied with 80-100 psi while under load to ensure optimal results.
4. Ensure the torch is programmed to the proper position. Access the TOUGH GUN Reamer Cutter Blade and V-Block Chart at [www.Tregaskiss.com/datasheet](http://www.Tregaskiss.com/datasheet), and see the **Setting Nozzle Heights** chart below:

**Setting Nozzle Heights**

See the chart below in order to find the correct height to set your nozzle for proper cutter blade insertion:

Cutter Blade	Nozzle	Retaining Head					
		404-3		404-20 / 404-26 / 404-30 / 404-32		454-1	
RC-12	3/4" (19.05 mm)	0.110" Below	2.79 mm Below	0.375"	9.53 mm	0.466"	11.84 mm
RCT-01	5/8" (15.88 mm)	0.030"	0.762 mm	0.225"	5.72 mm	0.716"	18.19 mm
RCT-04	1/2" (12.7 mm)	0.219" Below	5.56 mm Below	0.125"	3.18 mm	0.065"	1.65 mm

**Note:** Using the top of the reamer as the datum, the base of the nozzle will either be above or below this datum depending on the nozzle configuration.



**TOUGH GUN TT3E Reamer**

**Have a Question?**

Please contact our Technical Services department by email at [techsupport@tregaskiss.com](mailto:techsupport@tregaskiss.com). Our Technical Services department can also be reached by phone at 1-855-MIGWELD (644-9353). Assistance is available Monday through Friday from 8:00 a.m. to 5:00 p.m. EST.

*All questions are answered to the best of our ability with the information provided to us. Other factors not disclosed in electronic inquiries we receive may alter the best welding advice and procedures we recommend. We will respond to your inquiry as soon as possible. Depending on the complexity of your question, it could take up to 1-2 business days to respond if you contact us electronically.*