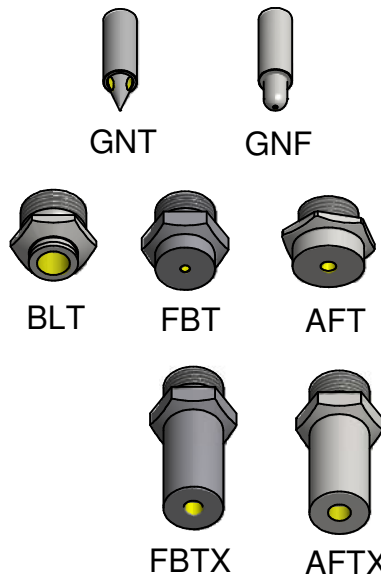
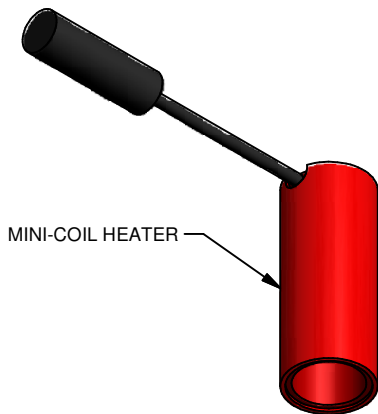
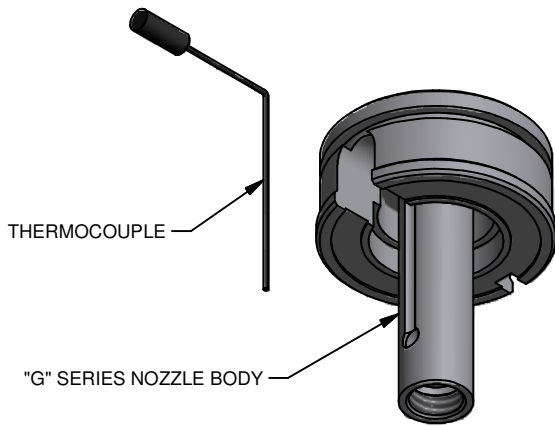
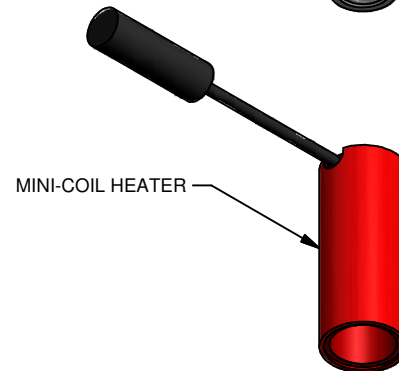
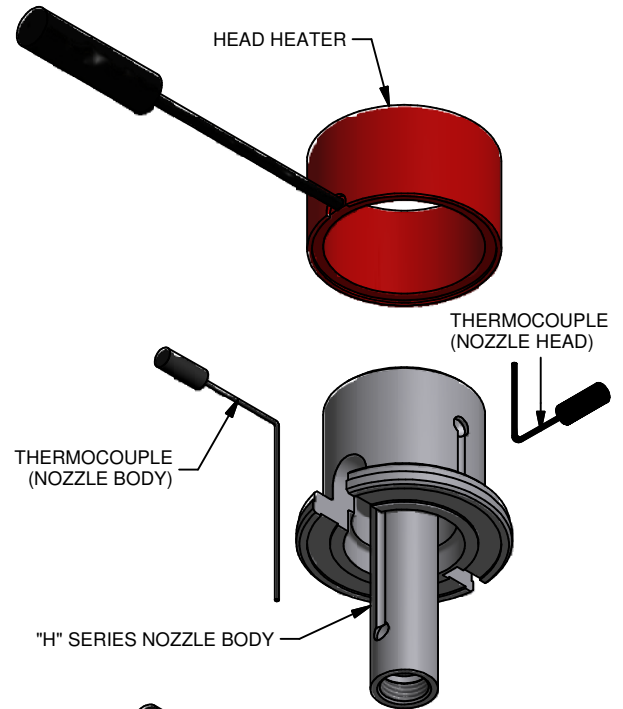


HSN - ASSEMBLY & DISASSEMBLY

"G" STYLE NOZZLE



"H" STYLE NOZZLE



"G" Style Nozzle:

1. Install thermocouple into hole and grooved slot on the shank of the nozzle.
2. Slip MC coil heater over thermocouple until secure at base of shank and tip of shank.
3. Install gate needle into body of nozzle. *(If nozzle is AFS type, skip this step.)*
4. Using anti-seize, install threaded tip into nozzle and torque to OSCO Torque Specification.

"H" Style Nozzle:

1. Bend thermocouple into hole and grooved slot on the shoulder head of the "H" Style nozzle.
2. Slip heater band over the thermocouple and tighten securely. (Tightening not required if using an MC coil heater.)
3. Install thermocouple into hole and grooved slot on the shank of the nozzle.
4. Slip MC coil heater over thermocouple until secure at base of shank and tip of shank.
5. Install gate needle into body of nozzle. *(If nozzle is AFS type, skip this step.)*
6. Using anti-seize, install threaded tip into nozzle and torque to OSCO Torque Specification.

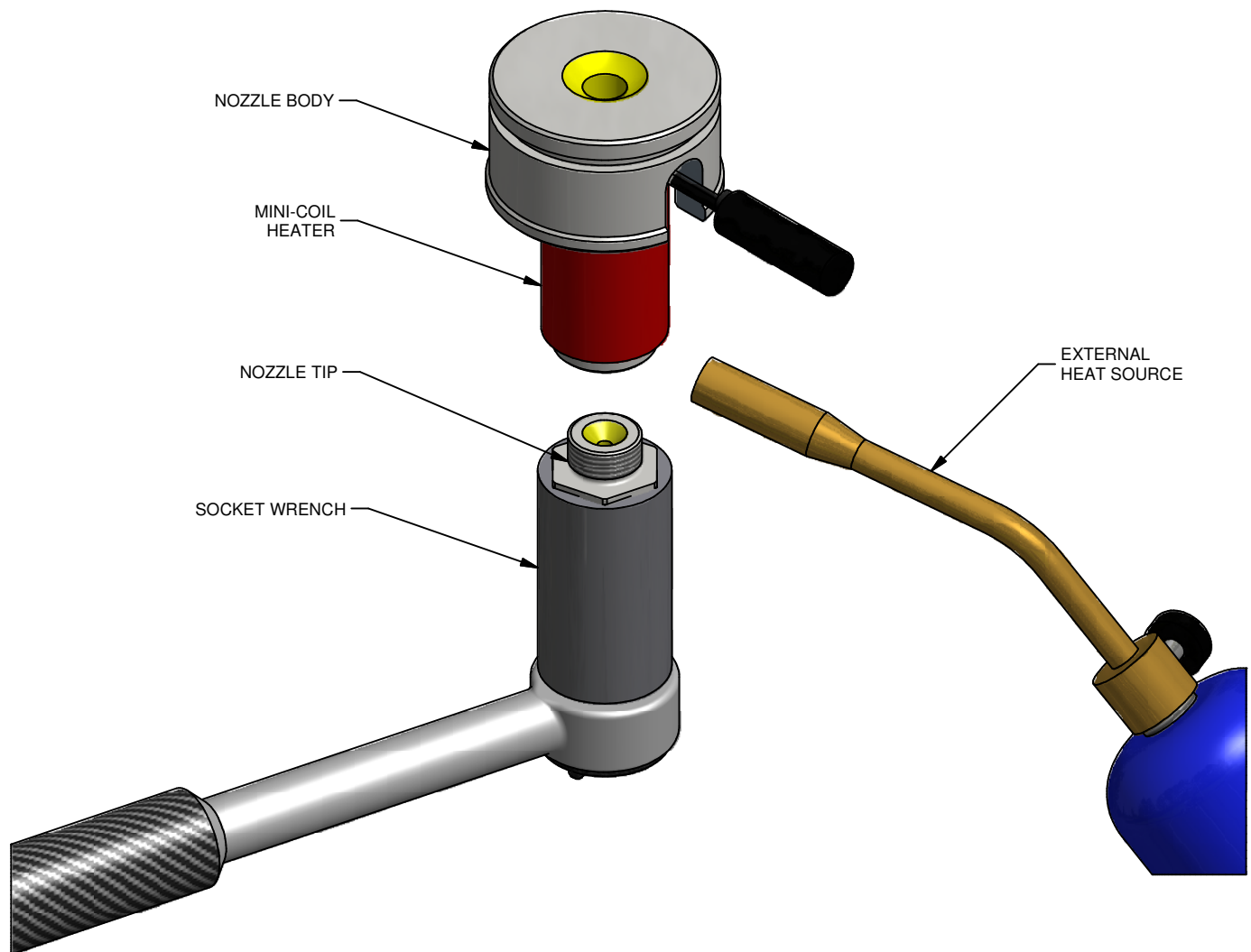
FREQUENTLY ASKED QUESTIONS

HOW DO I.....

Question: How do I remove a previously installed Nozzle Tip?

Answer: Over time, the Nozzle Tips can become seized into the Nozzle body. The best way to remove them is to use heat. Using an external heat source, gradually heat the lower part of the Nozzle body, particularly where the threads are located. Once the area is heated, use correct socket and wrench to loosen the tip.

**Note: In some applications, you will be able to remove the body heater. If you are able to slide the heater(s) over the tip, it is recommended that you do so.



**NOTE: THIS VIEW SHOWS A NOZZLE ASSEMBLY WHERE THE HEATER IS UNABLE TO SLIDE OVER THE NOZZLE TIP.

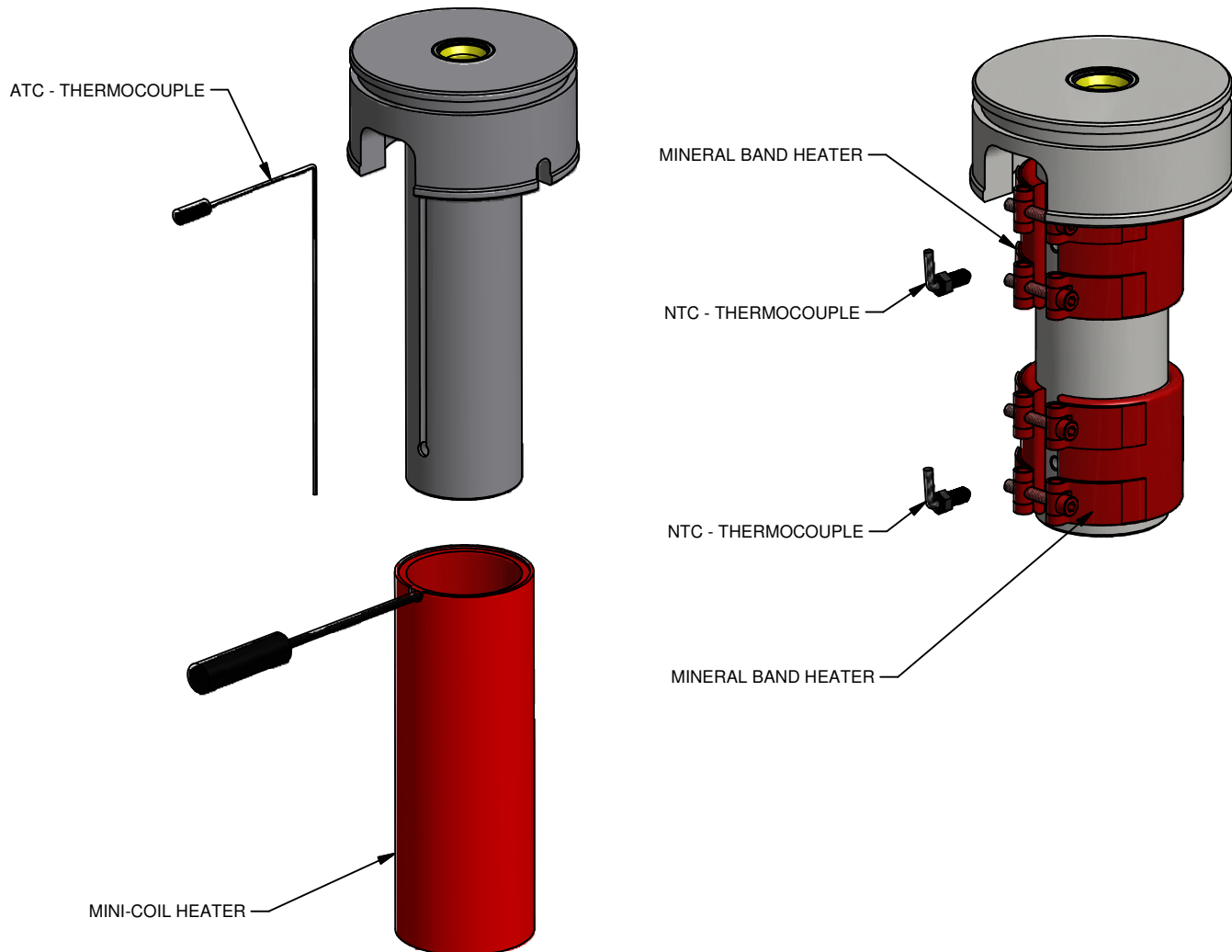
FREQUENTLY ASKED QUESTIONS

HOW DO I.....

Question: How do I replace a nozzle T/C (Thermocouple)?

Answer: There are (2) two types of thermocouples used in Osco Nozzle Assemblies. The ATC thermocouple is used with "MC" Mini-Coil Heaters and the NTC thermocouple is used with "MBH" Mineral Band Heaters. To remove an ATC thermocouple, you will need to remove the "MC" Heater entirely to be able to gain access to the contact point of the thermocouple. If your Nozzle Assembly contains an "MBH" Heater, you will need a 1/4" open-end wrench to remove the NTC thermocouple. You may access the NTC thermocouples without the need to remove the "MBH" Heaters.

**Note: This procedure may not be applicable to a 'customer-specific' nozzle assembly.



OSCO Torque Specifications

20 Series HSN/CVT		
Component	Thread Size	Suggested Torque
Tip	3/8" – 24	15 ft. lbs.
Manifold Hold Down Screws	5/16" – 18 or 3/8" – 16	32 ft. lbs.
MNS/MEN	5/8" – 18	55 ft. lbs.
Manifold Plug Retainers	5/8" – 18	55 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

50 Series HSN/CVT		
Component	Thread Size	Suggested Torque
Tip	1/2" – 24	30 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	3/4" – 16	100 ft. lbs.
Manifold Plug Retainers	3/4" – 16	100 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

100 Series HSN/CVT		
Component	Thread Size	Suggested Torque
Tip	5/8" – 24	55 – 60 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	3/4" – 16	100 ft. lbs.
Manifold Plug Retainers	7/8" – 14	100 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

200 Series HSN/CVT		
Component	Thread Size	Suggested Torque
Tip	1" – 16	90 – 100 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	1" – 12	120 ft. lbs.
Manifold Plug Retainers	1" – 14	120 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

50 Series VGN		
Component	Thread Size	Suggested Torque
Tip	1/2" – 24	30 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	3/4" – 16	100 ft. lbs.
Manifold Plug Retainers	3/4" – 16	100 ft. lbs.
Pin Bushing Retainer	5/8" – 11	55 – 60 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

100 Series VGN		
Component	Thread Size	Suggested Torque
Tip	11/16" – 20	55 – 60 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	3/4" – 16	100 ft. lbs.
Manifold Plug Retainers	7/8" – 14	100 ft. lbs.
Pin Bushing Retainer	3/4" – 16	100 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

200 Series VGN		
Component	Thread Size	Suggested Torque
Tip	1" – 16	90 – 100 ft. lbs.
Manifold Hold Down Screws	3/8" – 16	32 ft. lbs.
MNS/MEN	1" – 12	120 ft. lbs.
Manifold Plug Retainers	1" – 14	120 ft. lbs.
Pin Bushing Retainer	1" – 14	120 ft. lbs.
Thermocouple	#8 – 32	20 inch lbs.
Thermocouple	1/4" – 28	60 inch lbs.

Miscellaneous		
Component	Thread Size	Suggested Torque
300 Series Tips	1-3/16" – 18	90 – 100 ft. lbs.
MGN Probes	9/16" – 18	40 ft. lbs.
SCV-200 Tips	1" – 16	90 – 100 ft. lbs.
SCV-400 Tips	1-1/4" – 16	100 – 110 ft. lbs.
DSV-500 Tips	1-3/8" – 18	120 – 130 ft. lbs.