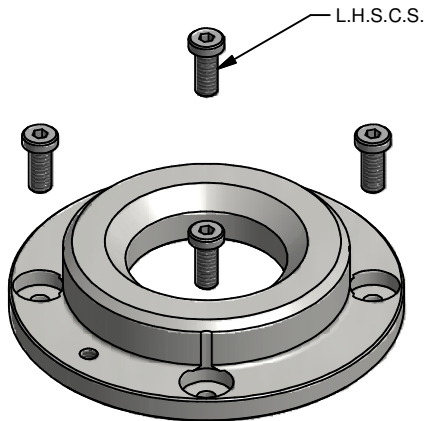
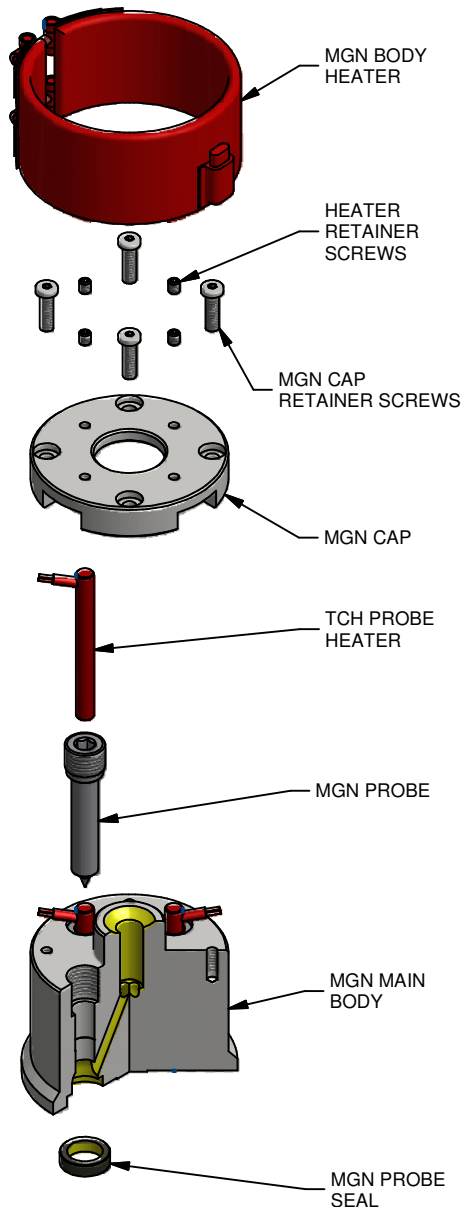


# MGN - ASSEMBLY & DISASSEMBLY



OPTIONAL MGN LOCATING RING  
(BY APPLICATION)



## Assembly & Disassembly. MGN Nozzle Components.

### Tools Needed :

9/16 - 18 Tap - for 1/2" probe seals.

11/16 - 20 Tap - for 5/8" probe seals.

Aluminum V-blocks.

Vise.

Arbor or Hydraulic Press.

1/4" Allen wrench.

Slide hammer attached to vise grips. 3/32" Allen wrench.

Surface Grinder.

### Steps :

#### 1. Remove :

- MGN Cap Retaining Screws and the MGN Cap.
- MGN Body Heater.
- Probes + TCH Probe Heaters.

It may be necessary to heat MGN to soften plastic in order to remove probes.

TIP: If the TCH Heater is difficult to remove, add a few drops of WD-40 inside probe. Let soak in for a few minutes.

- Body Thermocouple.

#### 2. Removing old MGN Probe Seal

- Choose appropriate tap, and tap into probe seal. Do not tap any deeper than thickness of probe seal.
- Attach Vise Grip / Slide Hammer to end of tap.
- Use Slide Hammer to pull out old probe seal.

#### 3. Ensure all material is cleaned from seal bore and MGN Body.

#### 4. Install new Probe Seal with a hydraulic or arbor press.

#### 5. Surface grind Probe Seal to correct height of .020" proud of main body.

#### 6. Re-install :

- Probes + TCH Probe Heaters.
- MGN Body Heater.
- Body Thermocouple.
- MGN Cap.
- Ensure Heater Retainer screws are snug to the back of the TCH probe heaters.

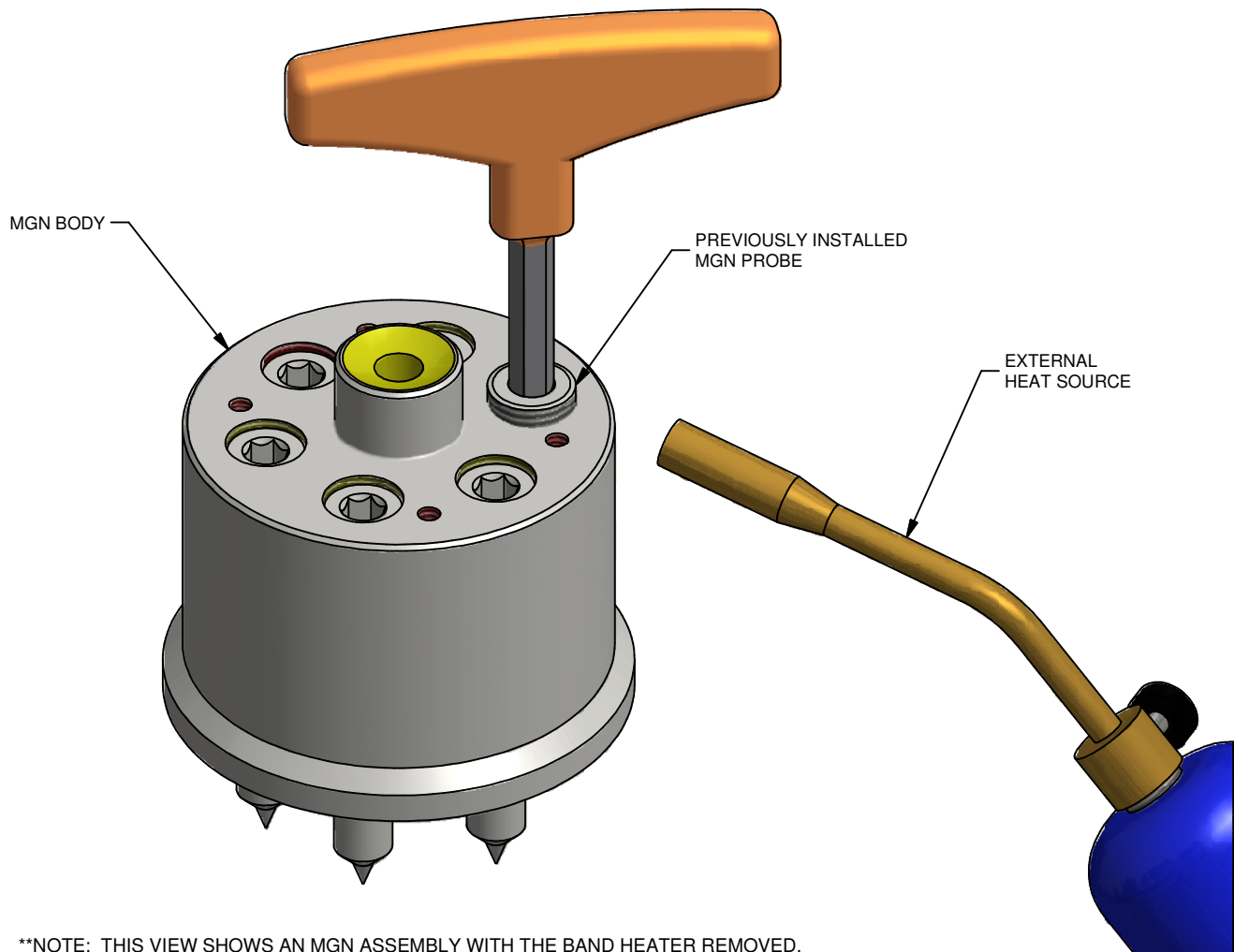
# FREQUENTLY ASKED QUESTIONS

## HOW DO I.....

Question: How do I remove a previously installed MGN probe?

Answer: Care must be taken when removing previously installed probes. Over time, the MGN probes can become seized into the MGN body. The best way to remove them is to use heat. Using an external heat source, gradually heat the upper part of the MGN body, particularly where the probe heads are located (one probe at a time). Using a "Hex-Key", periodically attempt to loosen the probe until it is free to remove.

**\*\*Note:** In extreme cases, if heat does not work and a probe becomes damaged, it may require machining to remove the damaged probe.



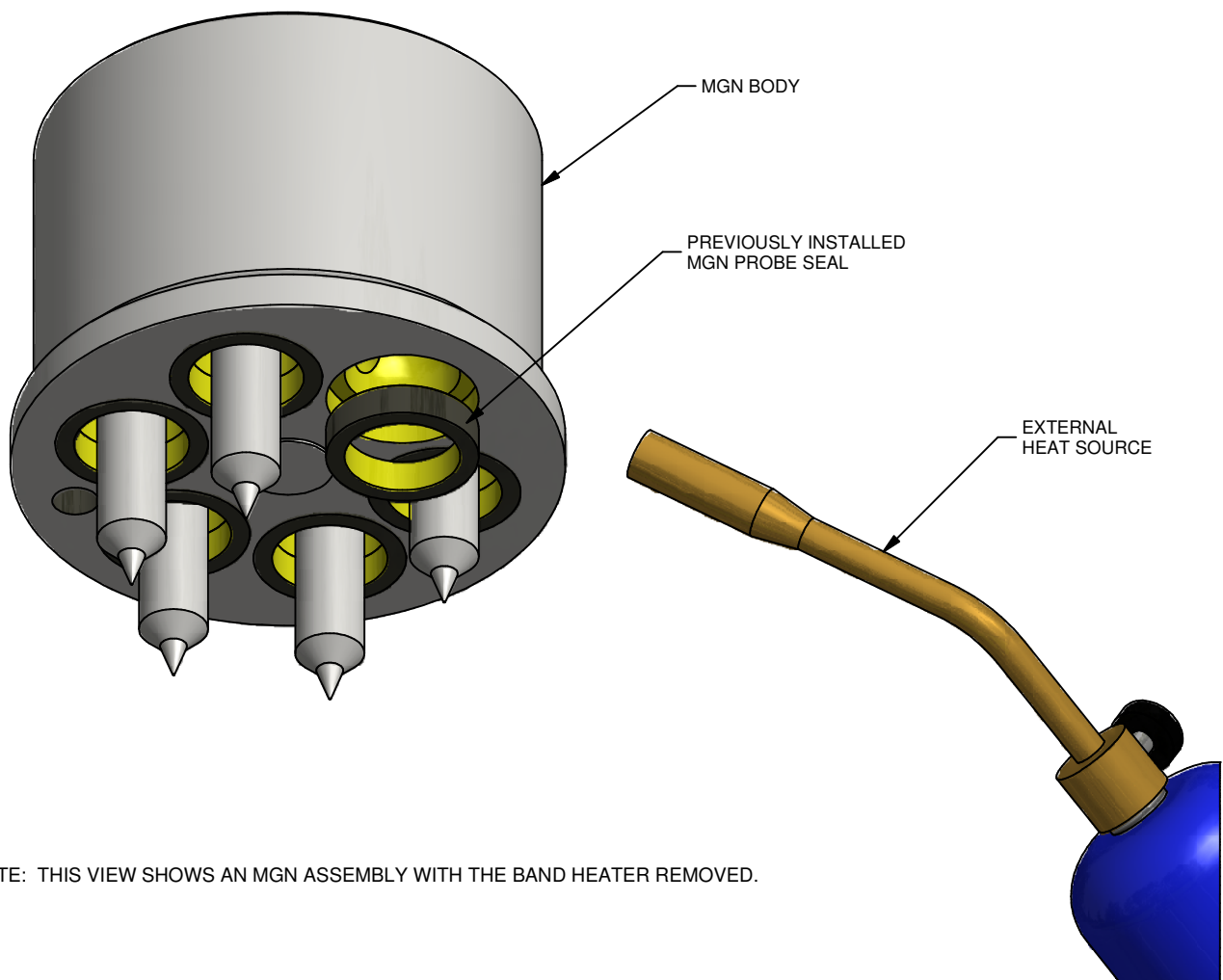
# FREQUENTLY ASKED QUESTIONS

## HOW DO I.....

Question: How do I remove a previously installed MGN probe seal?

Answer: Over time, the MGN probe seals can become seized into the MGN body. The best way to remove them is to use heat. Using an external heat source, gradually heat the lower part of the MGN body, particularly where the probe seals are located (one probe at a time). Once the area is heated, use a pair of pliers or a tool that will allow you to pull on the seal.

\*\*Note: Once a probe seal is removed, it can no longer be re-used. New probe seal(s) will be needed when re-assembling the MGN assembly. After installing the new probe seal(s), machining will be required for accurate fit.



\*\*NOTE: THIS VIEW SHOWS AN MGN ASSEMBLY WITH THE BAND HEATER REMOVED.

# 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.