



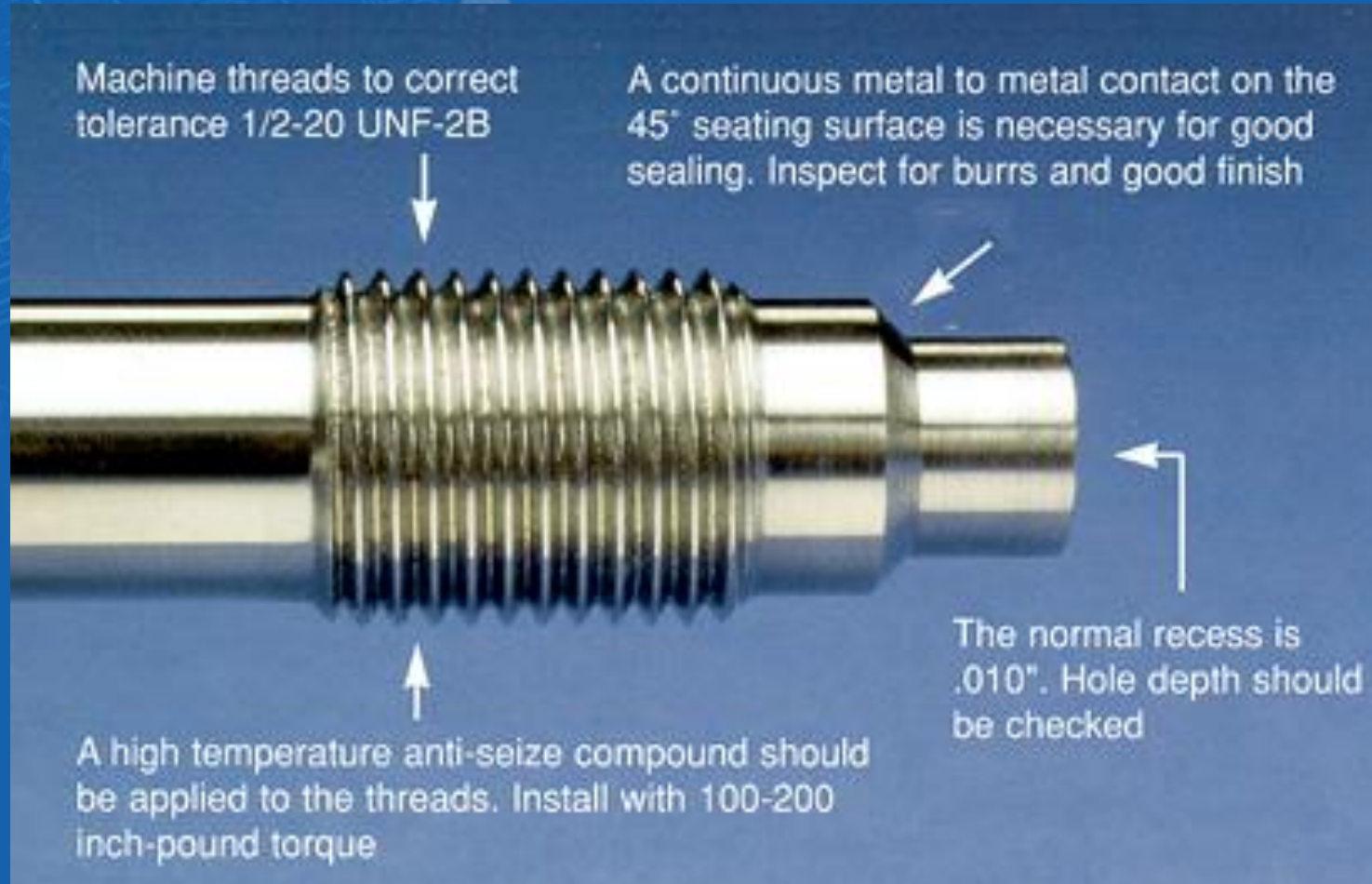
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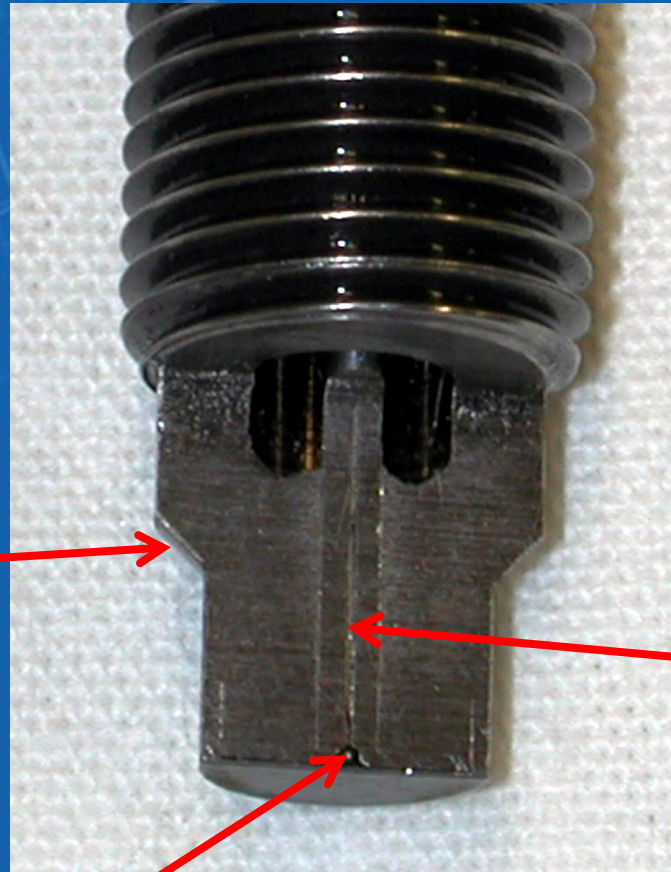
507 Kelsey St. • Delano, MN 55328
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Caring for your transducers

This is how your transducer tip should look:



Filled Transducers: Not Just a Bolt— Look Inside



45 Degree
Sealing Surface

.020" Diaphragm
Liquid Filled
Capillary

Pressure Pool
Chamber

Vertex Transducer: Not Just a Bolt— Look Inside

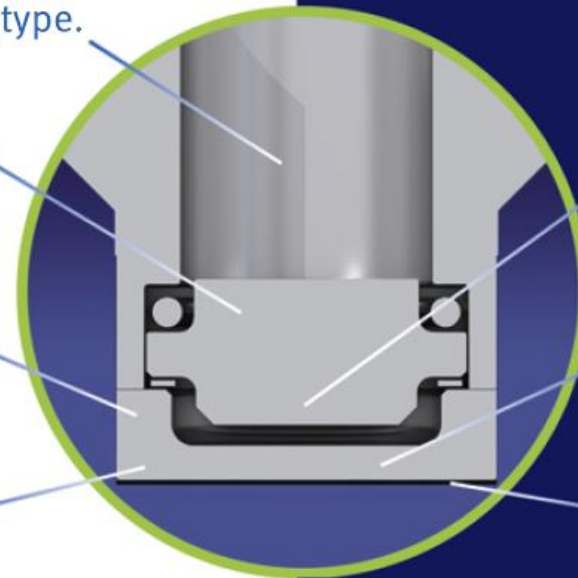
Advanced Tip Design of Dynisco Vertex™

No fill of any type.

An elegant (simple) design.
No moving internal parts that can
introduce measurement error.

Fortified sidewalls provide additional
diaphragm support from side stress.
Not found on any other sensor.

Hardened Inconel is standard.
Inconel provides lasting protection,
even in tough applications.

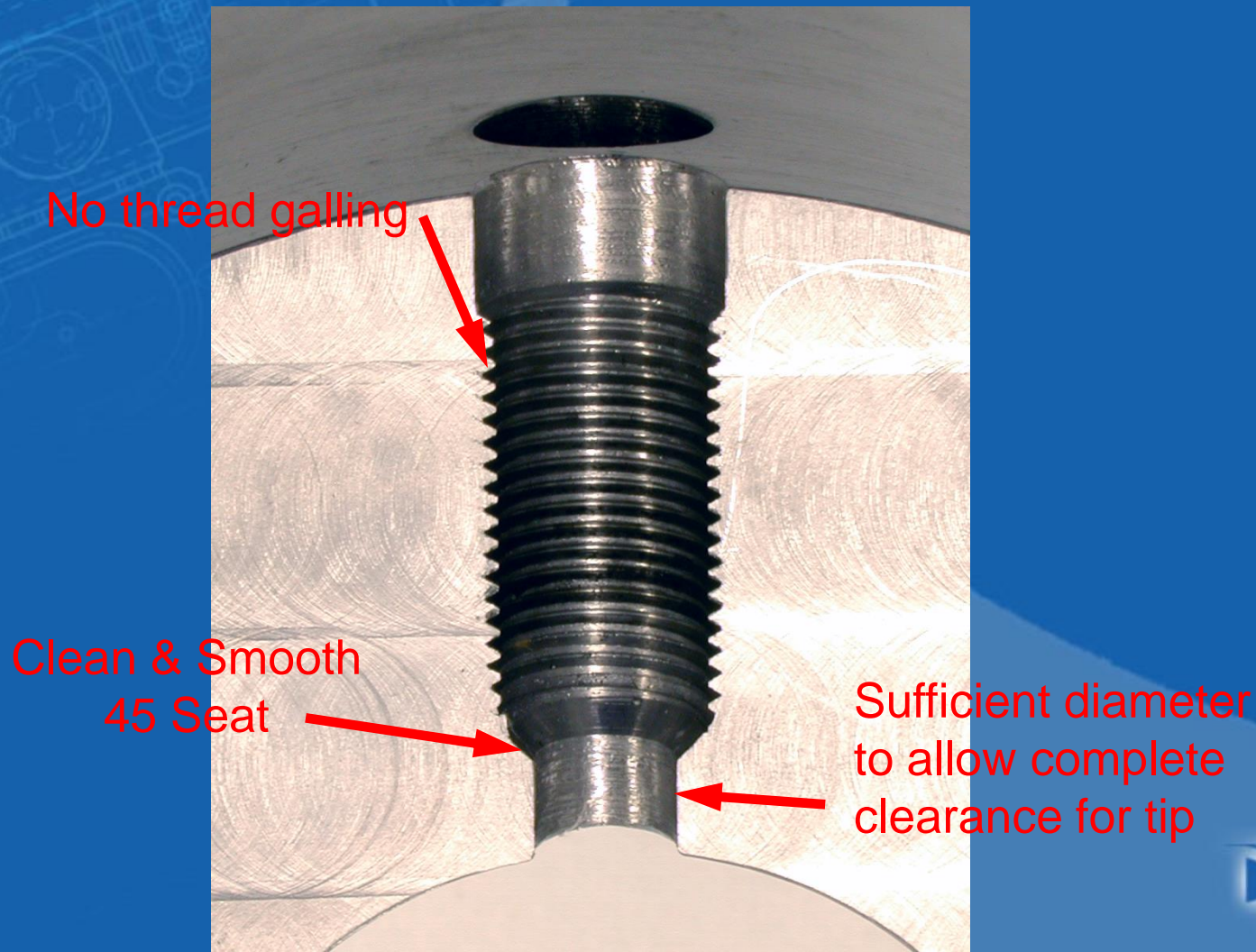


The tip-resident technology
provides a primary or direct
pressure measurement.

The diaphragm is several
times thicker than in standard
technology.

Standard DyMax® coated
Inconel provides additional
resistance to abrasion.

This is what a good hole looks like:



Transducer Mounting

How deep should transducer be?

- Typically recessed around 0.010 inch.

This depth will prevent any unnecessary diaphragm wear and help prolong the life of the pressure transducer

- **If hole is already too deep**, you can fix it by using the stackable 45 degree 0.025 inch copper spacers (PN 633511)

Transducer Mounting

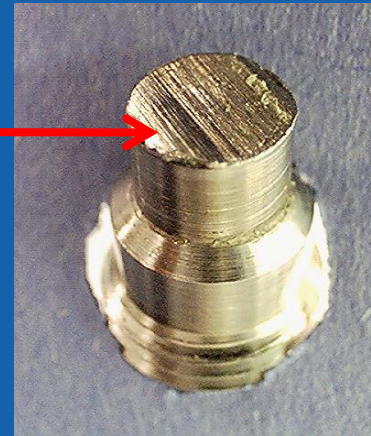
Mounting Depth

– **Too Deep**

– **Too Shallow**

- This often results in material freezing off and degrading. Sometimes the degraded polymer will actually bond the transducer to the barrel resulting in the transducer's tip being torn off during removal and or false pressure readings

Tip Scored by
extending
into melt

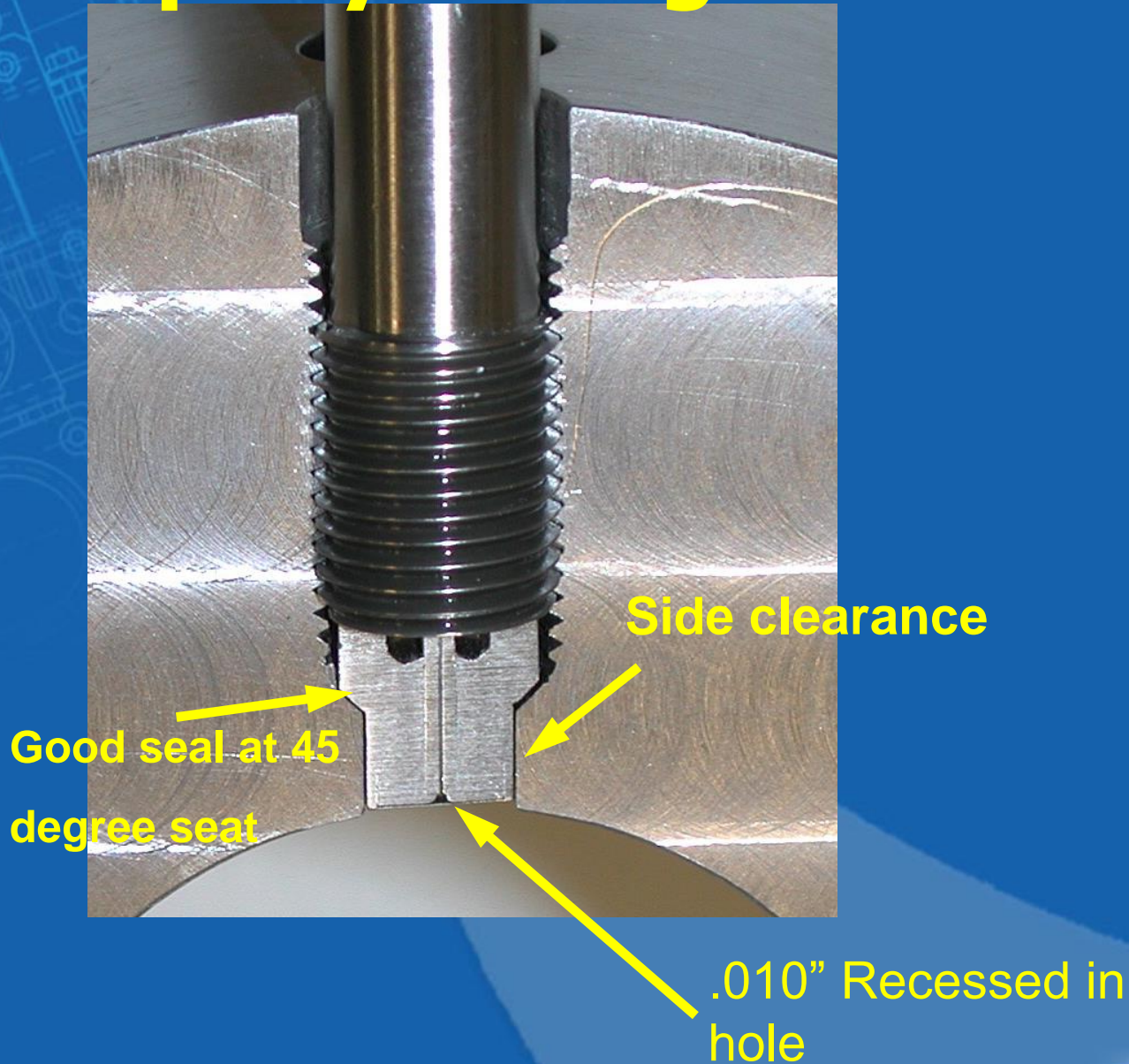


Transducer Mounting

Bad Holes Will:

- Require over-torque of the transducer to achieve a seal, causing a zero shift or damaging the transducer
- Cause side loading on the tip resulting in diaphragm damage and false readings.

A Properly Fitting Transducer



Transmitter Mounting Techniques

- To machine a new hole use Dynisco's Machining Tool Kit, part no. 200925
- Use proper mounting torque upon installation
 - Proper Torque – Rule of thumb: Finger tight + 1/4 turn
 - Less causes **leaking**
 - More causes **seizing and damage** to the transducer

Transducer Mounting

Industry Standard Hole Cleaning Kit



The Easy Way to Verify the Quality of the Mounting Hole

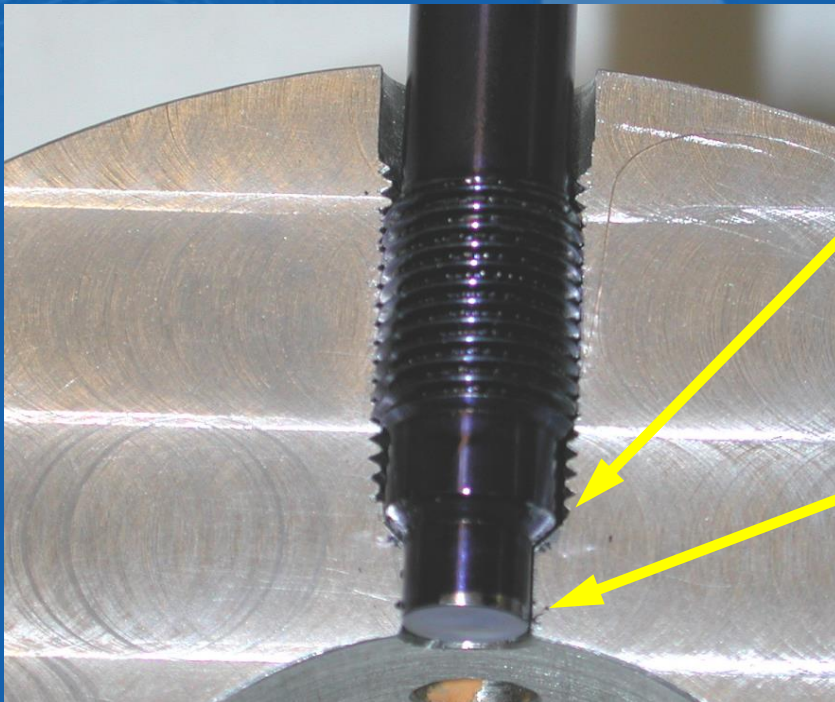


Solid Gauge Plug

**Apply Dychem Blue
onto gauge plug**



**Insert gauge plug and tighten to
proper torque**



**Scraped off Dychem
at 45 should be even
all the way around**

**Scraped off Dychem here
means inadequate
clearance**

Cleaning the Machine

ALWAYS remove the transducer before cleaning the barrel with abrasives, cleaning compounds or a wire brush

Remove the transducer with the barrel **HOT** and wipe the transducer tip clean

Remember to go back and **clean the hole with the cleaning drill/guide sleeve**

Thread Cleaning Tool for the Hole

Bottoming tap only cleans out plastic from the threads. The part is hardened so the tap doesn't cut into the threads

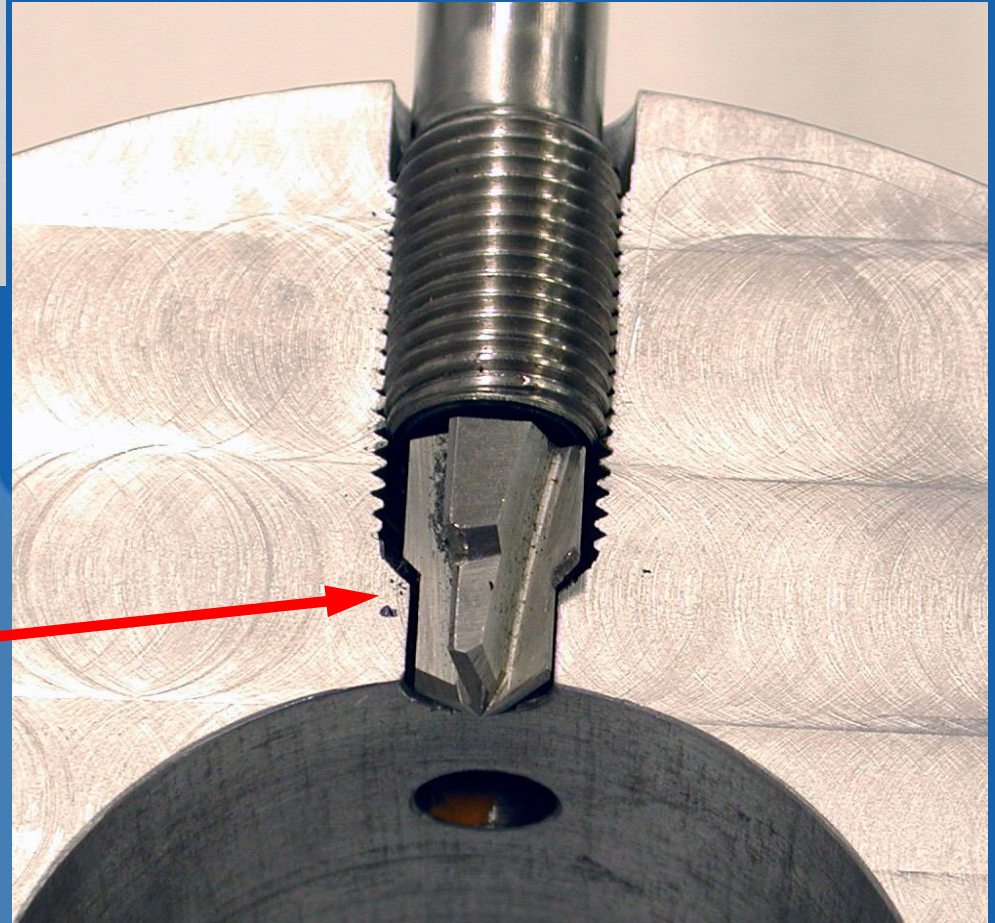
Bottoming Tap



Seat cleaning tool for the hole



4 Fluted cleaning tool cleans out plastic from the seat and tip area. The part is hardened so the tool doesn't wear down the seat area.



Mounting Hole Problems

- Problem

- Damaged tip
- No response
- Galled threads

- Reason

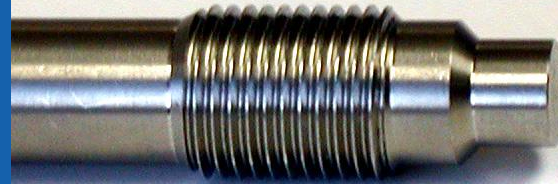
- Improper hole
- Over-pressured
- No anti-seize used

Problems

Threads Galled



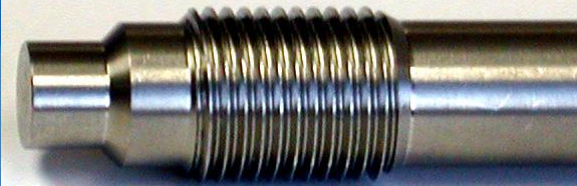
New Transducer



Tip Compression from Bad or Unclean Hole

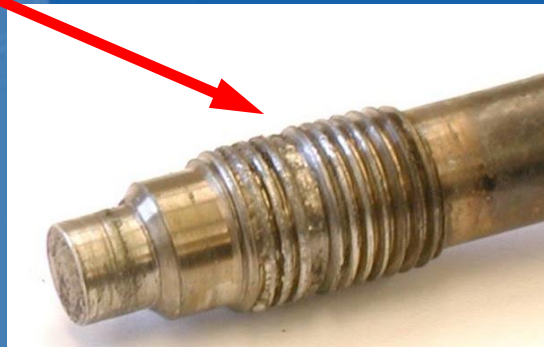


New Transducer



Problems:

Threads Galled



New Transducer



Rounded tip from too small or dirty hole



Transducer Mounting

Always use a high temperature anti-seize compound when mounting transducers

Always use proper mounting torque

- 100-200 inch-pounds recommended (8-16 ft lbs)
 - 500 inch-pounds MAXIMUM (45 ft lbs)
- RULE OF THUMB...finger tight plus 1/4 turn

Supporting Products

Repair Program

Send your damaged transducer to Sensors Inc. If it is repairable, it will be repaired for approximately half the price of a new one

If it is unrepairable, receive a 10% discount toward replacement

Send in competitor's transducer in with order and receive 25% off



Supporting Products



UPR900

Pressure and Temperature Indicator with 2 alarms, retransmit, software configuration

Automatically sets the span based on the R-Cal from the pressure transmitter



ATC990

PID Pressure Control with dual inputs, Auto Tuning

Supporting Products



BP420 Rupture Disks

Available in lengths from 1.5 to 12 inches

Available with NPT fitting to guide released material away from operator



GRMT Graduated Retractable Melt-bolt Thermocouple

Allows element to be placed into polymer stream for more accurate temperature measurement

The End of : Caring for your transducers

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