


## WORK INSTRUCTION

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DOC REF: AEU00199	<b>TITLE: FUNCTIONAL TESTING OF ANTI-GALLING COILTHREAD INSERTS</b>		

### 1 Purpose

- CoilThread inserts are manufactured from anti-galling materials to enable the use of 300 series stainless steel screws.
- This instruction defines the methods to be used to ensure functional acceptance of CoilThread inserts manufactured from anti-galling material.

### 2 Scope

- All CoilThread inserts manufactured from anti galling material.

### 3 Method (free running)

- Inserts will be installed into threaded test holes that conform to ASM33537 (Unified) or MA1567 (Metric), using standard CoilThread installation tools.
- Samples will be selected in accordance with NASM8846
- All test holes used to assess functional conformity will themselves be inspected using calibrated WTI GO/NO GO gauges. The gauge should install freely on the GO and the NO GO should not pass beyond 1½ turns.
- Acceptance of the assembled female thread is achieved using a calibrated standard thread GO / NO GO gauge
- The GO Gauge should pass freely through the insert.
- The NO GO gauge should stop within 1½ turns.

### 4 Method (Locking)

- Inserts will be installed into test holes as described in section 3.
- An A2 stainless steel test bolt is wound into the installed insert, by hand until resistance is felt from the locking flats.
- The bolt is then wound four turns through the insert using a standard calibrated torque wrench and the max torque reading recorded. (see table 1)

- The bolt is then unwound for four turns and the max removal torque recorded.
- The cycle of four turns in and out are repeated for a total of five cycles.
- Max installation and removal torque's are recorded for the first, third and fifth cycles.  
NOTE: Before the three recorded cycles are performed, the bolt must be fully removed, blown clean and cooled before being wound to the locking flats of the insert.

Table 1

TORQUE GAUGE SIZE	INSERT SIZE	
	MIN	MAX
0 - 15	M2.5	M5
0 - 15	2-56	10 - 32
0 - 150	M6	M12
0 - 150	1/4"	1/2"