



**SEAL-LOCK HT
ANCILLARY
SPECIFICATION**

SECTION	V	
Prepared	RBI	09/09/19
Engineer	SJH	10/16/19
GM QA	GJR	09/18/19
REVISION	009	10/17/19

SUBJECT: COUPLING MAKE-UP

1.0 SCOPE

1.1 This document sets forth the specification for the mill end make-up or bucking of **SEAL-LOCK HT** connectors.

2.0 DEFINITION

2.1 Make-up shall be defined as the power tight application of a coupling or box connector to a pin connector.

3.0 EQUIPMENT

3.1 The following list of equipment is required in the making-up or the bucking-on of couplings to pin connectors.

3.1.1 Appropriate size, grade, type box connector, or coupling to match the pipe and pin connector.

3.1.2 An adequate supply of thread compound.

A) Mill End: The mill end of the coupling shall be made-up using Seal Lube™ under the coupling as follows:

- Seal Lube LTF 4444 for any size larger than 3 1/2”.
- Seal Lube HTM 1001 for 3 1/2” and smaller.

B) Field End: The field end of the coupling shall be made-up using clean uncontaminated thread compound.

**NOTE: Hunting has standardized the use of SealLube™ on the mill end Coupling make-up as follows:
Seal Lube LTF 4444 for any size larger than 3 1/2”
Seal Lube HTM 1001 for 3 1/2” and smaller**

For other applications, accessories and field end, please refer to Hunting’s website to verify the current Recommended Thread Compounds approved by Hunting – Per Connection List.

To access the list, visit www.hunting-intl.com, click on “Connection Technology” and look for the link: “Recommended Thread Compounds approved by Hunting”.

NOTE: Hunting does not recommend API modified thread compound for Hunting proprietary connections. However, when an API modified thread compound is specified by the end user, Hunting has standardized on [Best-O-Life 72733] as the API modified thread lubricant used for connection qualification testing. Using another thread compound may substantially change the recommended torque listed on the sales data sheet.

3.1.3 Thread lubricant application brushes (Model 58235 moustache brush recommended.)

3.1.4 Appropriate **SEAL-LOCK HT** barrette pair for the specified size connection. Both barrette members must have the same serial number. Barrettes are not used for accessory make-up as the box ID shoulder determines the make-up position.

3.1.5 Power tongs capable of producing the required torque at 5 - 14 RPM.

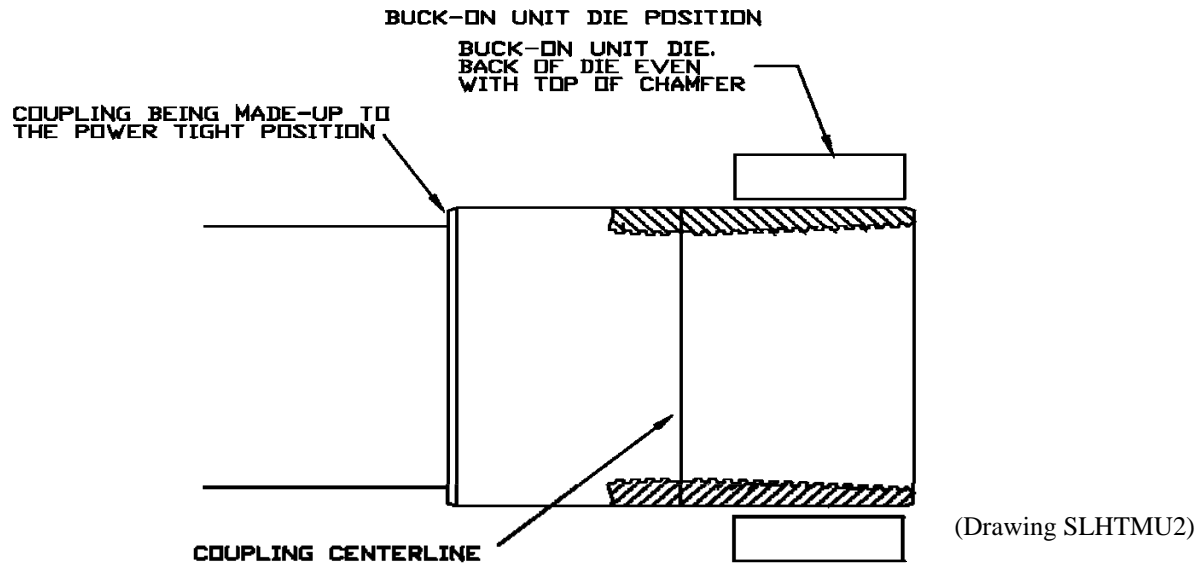
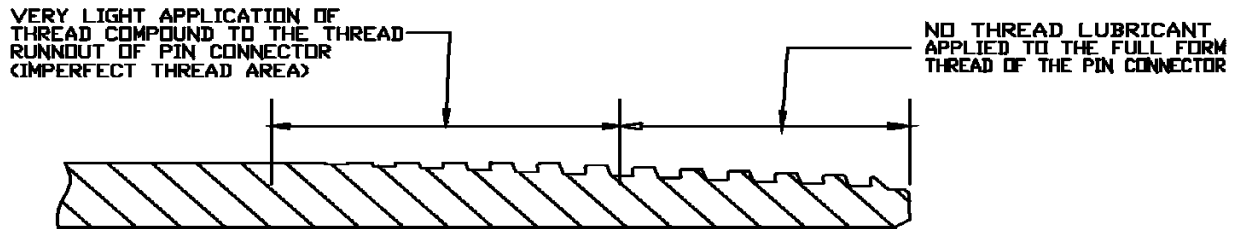
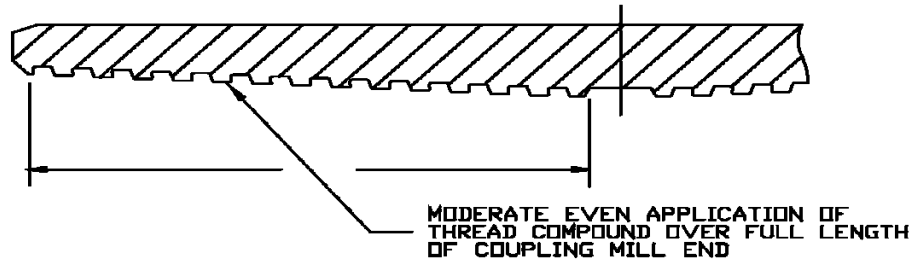
3.1.6 Molybdenum disulfide spray or equivalent (Molykote).

NOTE: The power and back-up tongs shall have sufficient dies, evenly spaced around the coupling and pipe circumferences, so that an even gripping pressure is applied, both axially and circumferentially, to prevent distortion to the connection.

3.1.7 Latest Hunting sales drawing with specified torque values for the appropriate size, weight

MILL END ASSEMBLY PROCEDURES - SLHT CASING

THREAD LUBRICANT APPLICATION - SLHT MILL END CONNECTIONS





**SEAL-LOCK HT
ANCILLARY
SPECIFICATION**

SECTION	V	
Prepared	RBI	09/09/19
Engineer	SJH	10/16/19
GM QA	GJR	09/18/19
REVISION	009	10/17/19

SUBJECT: COUPLING MAKE-UP

and grade product of **SEAL-LOCK HT**.
3.1.8 **OPTIONAL** - Torque turn monitoring system.

4.0 CERTIFICATION

4.1 The torque unit shall be calibrated for accuracy every six (6) months.

5.0 MAKE-UP PROCEDURE

- 5.1 Thoroughly clean and visually inspect both sides of the connection to be made-up.
 - 5.1.1 Ensure that the pin thread start and full form threads are free from tears and burrs.
 - 5.1.2 Ensure that the coupling or box connector is free from burrs or tears on the starting threads and throughout the full form thread length.
 - 5.1.3 Both connectors shall be free of any debris such as chips, shavings, dirt or other foreign particles that could create galling or damage to the connection during make-up.
 - 5.1.4 Make-up lines properly applied to both pin and box connectors in accordance with ancillary Specification **“Make-up Position Using Barrettes, SEAL-LOCK HT”**.

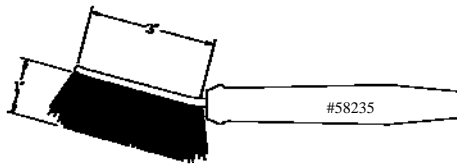
5.2 Apply a light to moderate, even coating of thread lubricant, per Section 3.1.2 **NOTES** of this procedure, to cover the full box/coupling threaded surface.

NOTE: See Section 3.1.2 for recommended thread compounds.

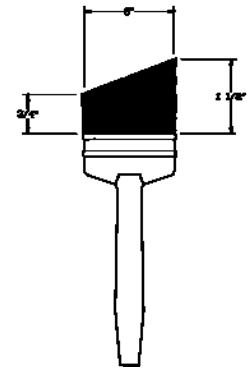
5.3 Apply a very light coat of the recommended thread lubricant to the imperfect thread area only on the pin connector. The imperfect thread area is defined as those threads whose crests have not been machined.



Do Not Use
Bottle Brush



Preferred Moustache Brush #58235



Alternate Acceptable
Modified Paint Brush

NOTE: A light to moderate, even coating of thread compound is defined as all thread surfaces, root and crest, and pin face/torque shoulder covered with an even coating of thread compound. However, the thread form should remain clearly visible.

NOTE: Adjust the amount of lubricant applied to the pin and coupling connectors to cause a gradual increase in torque throughout the make-up. An indicator of connection overlube is during the last one-half of a turn to final make-up position there is no gradual increase of torque even though the pin is continuing to advance into the coupling.

5.4 Apply the box or coupling to the pin end by hand to the hand-tight position.

THIS PAGE IS INTENTIONALLY BLANK



**SEAL-LOCK HT
ANCILLARY
SPECIFICATION**

SECTION	V	
Prepared	RBI	09/09/19
Engineer	SJH	10/16/19
GM QA	GJR	09/18/19
REVISION	009	10/17/19

SUBJECT: COUPLING MAKE-UP

- 5.5 Position the connection in the power tongs.
- 5.6 Apply the specified torque to the connection at 5-14 RPM. Make-up speed should not exceed 14 rpm. Make-up speed should not vary excessively during make-up and should be continuous with no gear changing.

TARGET MAKE-UP RPM

<u>8 PITCH</u>	<u>5 PITCH</u>
2 3/8" - 14 RPM	5" - 10 RPM
2 7/8" - 12 RPM	5 1/2" - 9 RPM
3 1/2" - 10 RPM	7" - 7 RPM
4" - 8 RPM	
4 1/2" - 8 RPM	

- 5.7 **OPTIONAL** Make-up Torque/Turn Monitoring
 - 5.7.1 Optional Torque-Turn Equipment - A torque-turn /time or torque/turn monitoring system may be utilized. Monitoring equipment should be capable of resolving torque to 1/100th of a turn increments as a minimum but equipment capable of resolving torque to 1/1000th of a turn should be utilized when available. An enhanced computer display should be part of the torque-turn monitoring equipment and should be utilized to monitor make-up. The monitoring equipment should be capable of dumping during the make-up by either the computer technician or when maximum parameters are reached. As the torque enters the acceptable window, the technician should be able to depress a function key to manually terminate the make-up. The system should be capable of automatic dumping as input parameters are met. The load cells used with the torque monitoring equipment should be calibrated every six (6) months, traceable to the appropriate national standard.
 - 5.7.2 If the optional torque/turn monitoring equipment is used, a make-up torque/turn graph should be generated for every connection.

NOTE: If an appreciable amount of thread lubricant is being pushed to the tube ID and/or the tube OD during make-up, too much thread lubricant is being applied to the connection.

NOTE: If torques are high or low, adjust the thread compound application to give good make up torque curves. For high torque, apply more compound. For very high torque, apply Molybdenum disulfide to both pin and box connectors prior to the application of the thread compound.

NOTE: The SEAL-LOCK HT connection is a position make-up connection. The make-up indicator lines must be properly aligned for the connection to work as designed. The internal torque shoulders on box accessories determines the correct make-up position on accessory connections.

6.0 MAKE-UP ACCEPTANCE AND REJECTION

- 6.1 For an acceptable make-up both position and torque requirements must be met.
 - 6.1.1 The criteria for proper make-up shall be as described in Section 5.0 of Ancillary Specification "Make-up Position Using Barrettes, **SEAL-LOCK HT**."
 - 6.1.2 The torque applied to the connection must meet the minimum published torque when the position requirements are met.

THIS PAGE IS INTENTIONALLY BLANK



**SEAL-LOCK HT
ANCILLARY
SPECIFICATION**

SECTION	V	
Prepared	RBI	09/09/19
Engineer	SJH	10/16/19
GM QA	GJR	09/18/19
REVISION	009	10/17/19

SUBJECT: COUPLING MAKE-UP

- 6.1.3 Accessory connections must exhibit a positive shoulder; pin face to box shoulder engagement. The delta torque of the shouldered connection shall be a minimum of 10% of the actual shoulder torque. The maximum published torque may be exceeded on thick wall accessories but shall not exceed 80% of the published minimum yield torque.
 - 6.2 Connections which do not meet the criteria of Paragraph 6.1 should be set aside and a Hunting representative contacted as soon as possible.
 - 6.3 Following buck-up, the ovality or out-of-roundness shall be within the specified manufacturing tolerances for the product when measured on the open end of the coupling and documented on Bucking Report.
 - 6.4 End drift the made-up connection in accordance with the Hunting "**Full Length Drift/End Drift Inspection Procedure**" (**Generic**).
- 7.0 REWORK**
- 7.1 If the connection does not shoulder or make-up to the proper position, remove the coupling, clean and visually examine both pin and box for damage. If no damage is found remake up as directed in Section 5.0 and inspect as directed in Section 6.0 of this document. The amount of the thread lubricant may be altered and a higher make-up torque (up to maximum recommended torque) may be used.
 - 7.2 Connections which will not meet the criteria of Section 6.0 should be set aside and a Hunting representative contacted.
- 8.0 RUNNING PROCEDURE FOR ACCESSORIES MADE UP USING THREAD LOCKING COMPOUND / LUBRICANT**
- 8.1 Using steam, soap and hot water, or safety solvent, remove all thread storage or running compound from both pin and box connectors.
 - 8.2 Ensure that the thread and sealing surfaces are clean, dry, and free of oil, grease, or residues.
 - 8.3 On thread sealing connections, apply the Hunting recommended thread compound on the first three (3) thread of the pin and last three (3) threads of the box (area of the perfect threads engagement).
 - 8.4 Just prior to make up, the thread locking lubricant shall only be applied on the pin threads (not on the box), on the area that has not been covered by the approved thread compound.
 - 8.5 When making up accessories like float equipment, hangers, thick wall accessories, and others, shoulder torques might be higher than normal due to relationship of the friction factors of the thread locking lubricant in comparison with the API Modified thread compounds and the wall thickness.
 - 8.6 The make up torque of the accessories should be aimed to the maximum recommended torque. Therefore, if necessary, the published torque may be exceeded but in any case shall not exceed 80% of the published minimum yield torque.