# Running Procedure for Anaconda™ SP Connection

Procedure No: FT-RP-004

Rev: 03

## Approvals

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|---|---|---|
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## Revision Control

| Rev | Description of Changes | Date Issued |
|---|---|---|
| 00 | Issued for use | 3/1/2021 |
| 01 | Section 2.1 | 5/1/2021 |
| 02 | Section 2 and 4 | 8/18/2021 |
| 03 | Revised to reflect Constrictor thread sealant | 04/18/2023 |

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## 1. General Running Procedure

1.1 Refer to the latest revision of General Running Procedure: FT-RP-000.

## 2. Thread Compound Application

2.1 Fermata® recommends the use of Fermata® Constrictor® Advanced Thread Sealant for all sizes on the pin connection.


**Figure 1: Fermata® Constrictor™ Advanced Thread Sealant**

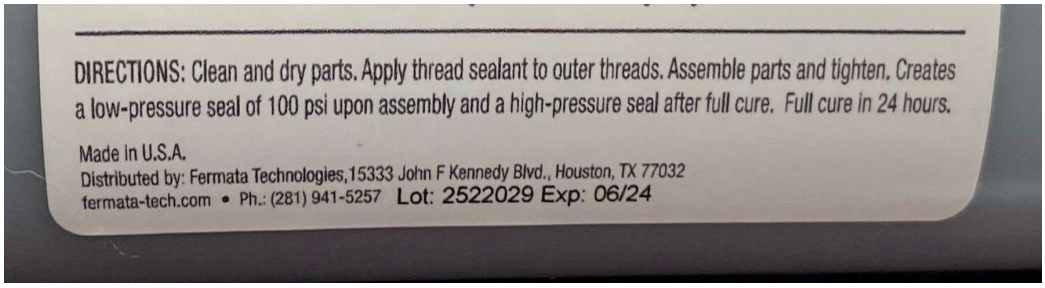



**Figure 2: Example of Fermata® Constrictor™ Advanced Thread Sealant Label Expiration Date**

2.2 The amount of applied thread compound will depend on the size and weight configuration of the connection.

2.3 The thread sealant will need to be measured to ensure the proper amount of sealant is applied to the connection, to adequately coat the root and crest of the pin connection. Refer to Table 1 for the required thread sealant mass in accordance with the size and weight configuration.

**Table 1: Constrictor™ Advanced Thread Sealant Amount**

| OD (inches) | Volume (mL) |
|---|---|
| 3-1/2” | 1.25 |
| 4-1/2” | 3 |
| 5” | 3.5 |
| 5-1/2” | 5 |
| 7 | 5 |
| 7-5/8” | 6.25 |
| 8-5/8” | 6.25 |
| 9-5/8” | 7.5 |

2.4 The use of a fine bristle mustache or 1” paint brush is recommended to best control the application of thread sealant. The brush should be clean and free of any water. Water that is on the brush or connection must be completely removed before the application of sealant.

2.5 Under certain circumstances, the thread sealant brand and application process may be altered, only if approved by Fermata® Engineering.

**Figure 3: Example of Proper & Acceptable Thread Compound Application of the Pin Connection**

## 3. Connection Compatibility

3.1 Anaconda™ SP does **NOT** have compatibility with differing weights within the same OD.

## 4. Connection Make-Up

4.1 Fermata® recommends targeting the optimum make-up torque listed on the current connection data sheet. Any make-up torque between the minimum and maximum make-up torque is acceptable, but the optimum make-up torque is ideal for most conditions and common equipment. Add 10% to all specified make-up torque values when using a thread locking compound.

4.2 Before the first connection make-up, set the dump valve to the optimum torque and test on the pipe body to ensure proper tong engagement and that the pipe integrity is not compromised.

4.3 Make-up the first connection to the optimum torque, draw a line across the pin and box, and re-apply optimum torque.

4.4 If movement past 0.5” is observed, re-apply optimum torque +20%. (This may exceed maximum make-up torque, but is acceptable, provided no yielding is observed and the tongs are not compromising the pipe body).

4.5 Repeat 4.3 to 4.4.

4.6 Movement is an indication of excess thread compound. If observed, review the amount of thread compound applied and reduce the amount.

4.7 Continue making up the string to the higher torque value, if necessary.

4.8 Spin in the connection in high gear at Revolutions Per Minute (RPM) at or below that listed in Table 2.

4.9 Move to low gear prior to the Constrictor® lock point (see Figure 4) and keep the RPM at or below that listed in Table 2.

4.10 RPM may occasionally be adjusted based on make-up profile, if approved by Fermata® Field Service Management or Engineering.

4.11 The following (Table 2) is the recommended maximum make-up RPM.

**Table 2**

| Pipe Diameter | High Gear not to exceed | Low Gear not to exceed |
|---|---|---|
| 4-1/2” to 5-1/2” | 20 RPMs | 5 RPMs |
| 7” to 7-5/8” | 15 RMPs | 5 RPMs |
| 9-5/8” and greater | 10 RPMs | 3 RPMs |

4.12 Verify the make-up result against the torque-turn graph to ensure that there were no abnormal make-up scenarios that could affect the make-up and performance of the connection.

4.13 The Constrictor® Lock Point is the point on the graph where the torque-turn slope begins to change

from curved to linear. It is required to be between 5% and 80% of makeup torque as shown in Figure 4.

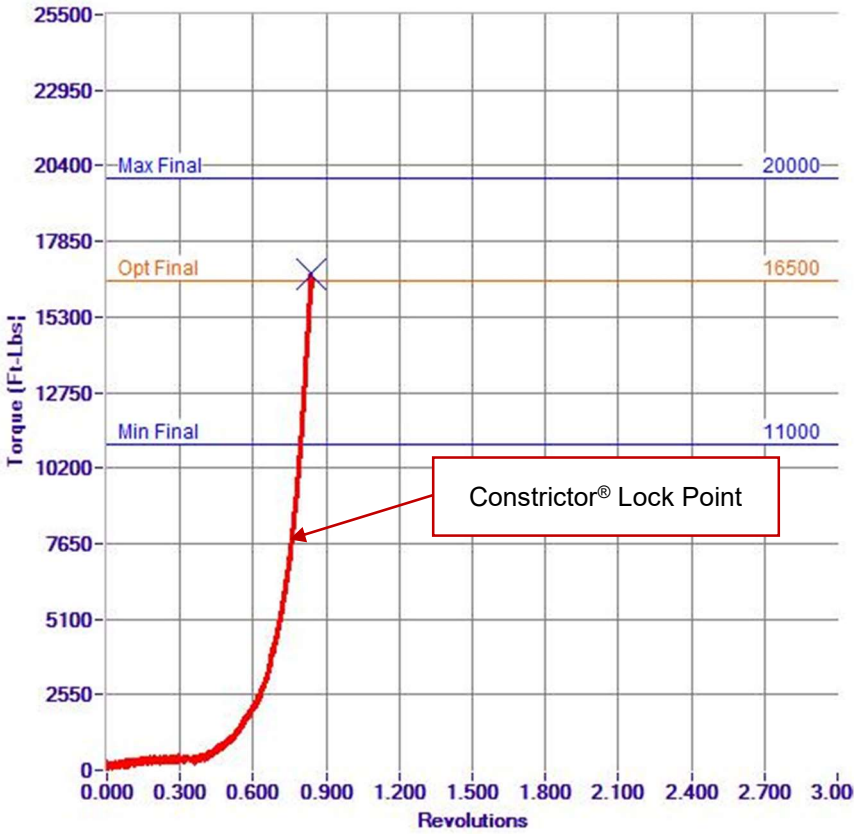



**Figure 4: Example of a Proper Make-up Graph**

4.14 Figures 5 & 6 are examples of unacceptable make-up graphs where too much thread compound was applied.

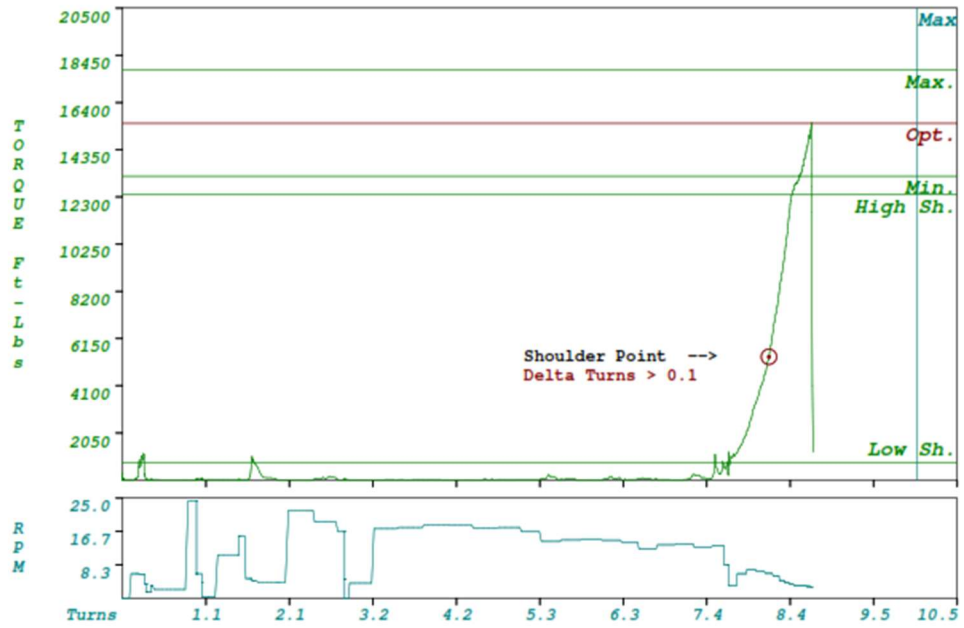



**Figure 5: Unacceptable Make-Up Graph Example 1**

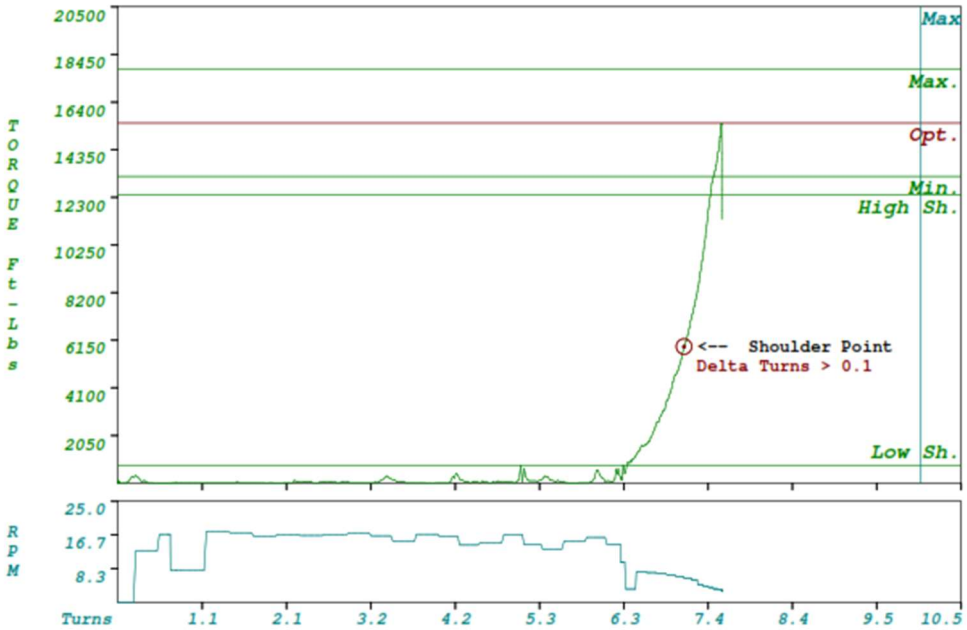



**Figure 6: Unacceptable Make-Up Graph Example 2**

4.15 Verification of proper Anaconda™ SP connection make-up can be made by checking that the base of the triangle is aligned within +/-.100” of the box face as shown in Figure 7.

4.16 The Constrictor® lock point must be visible to ensure proper make-up as shown in Figure 7.

4.17 A 1” wide x 24” long white paint stripe is applied to the field (Pin) end to aid in locating the triangle stamp location.

**Figure 7: Example of Proper Triangle Stamp Position After Make-Up**

## 5. Downhole Rotation of Connection

5.1 The maximum operating torque listed on the latest revision of the connection data sheet is the maximum torque allowed for downhole rotation, unless reviewed and approved by Fermata® Engineering. The speed should not exceed 40 RPM.

5.2 RPM's and operating torque may be evaluated and adjusted on a case-by-case basis, if approved by Fermata® Engineering.

5.3 Take care to gradually increase or decrease rotation speed and torque to prevent potential dynamic loading scenarios.

## 6. Break out & Inspection of Connection

6.1 Verify the back-up tongs are equipped with the appropriately sized dies prior to break-out of the connection.

6.2 Place the back-up tongs on the pipe body below the swaged area of the box.

6.3 Break-out the connection in low gear to ensure adequate torque capability.

6.4 Keep the break-out speed low to prevent galling (preferably 5 RPM or less).

6.5 Break-out the connection slowly until the pin "jumps", indicating disengagement.

6.6 Use a stabbing guide prior to disengagement to prevent damage to the connection.

6.7 Alignment is equally important during the connection break-out as during make-up. Verify proper alignment prior to break-out of the connection.

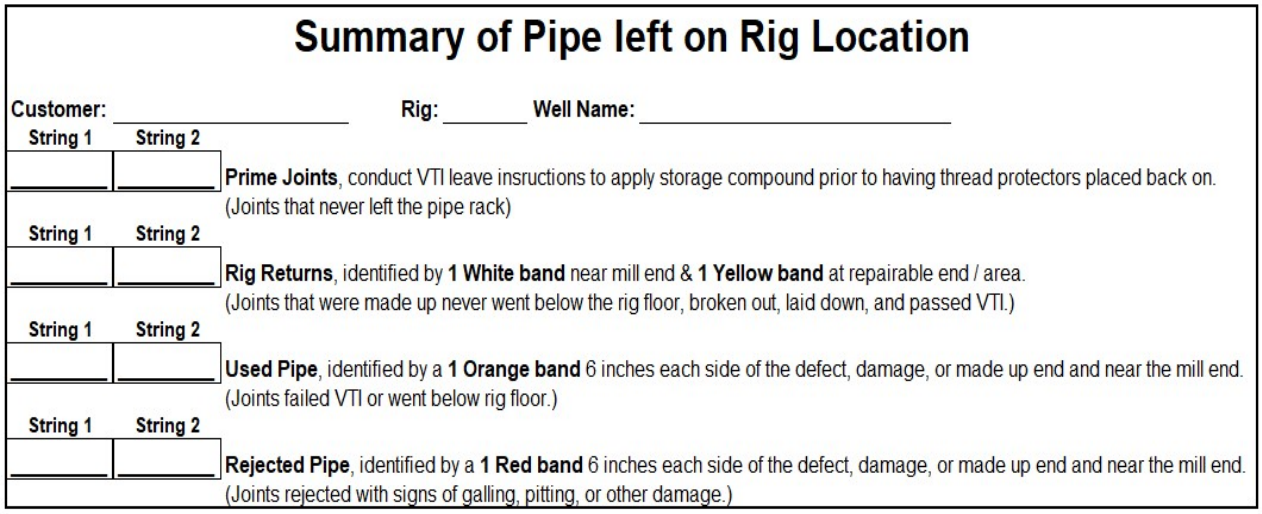
6.8 If it is necessary to re-run the connection, make sure to fully break-out the connection, remove all thread compound and debris, inspect the connection for damage (galling/gouging), and follow the make-up procedure outlined in Section 4.

6.9 When necessary to lay down the string, the connection must be stored and covered with an approved storage compound and covered with the proper sized thread protectors. Ensure that the thread protectors are clean and free of grime, debris and foreign contaminants.

6.10 Properly mark the joints in accordance with the rig repair / rejection report (Figure 8) and notify your immediate supervisor if joints were laid down.

## 7. Marking Instructions

7.1 All used, rejected, repairable, and/or prime pipe left at rig locations will be identified, tagged and categorized based on the chart shown in Figure 8, and must be submitted to Field Service Management as soon as possible via email.



**Summary of Pipe left on Rig Location**

**Customer:** _____ **Rig:** _____ **Well Name:** _____

| String 1 | String 2 | |
|---|---|---|
| | | **Prime Joints**, conduct VTI leave insructions to apply storage compound prior to having thread protectors placed back on. (Joints that never left the pipe rack) |
| | | **Rig Returns**, identified by **1 White band** near mill end & **1 Yellow band** at repairable end / area. (Joints that were made up never went below the rig floor, broken out, laid down, and passed VTI.) |
| | | **Used Pipe**, identified by a **1 Orange band** 6 inches each side of the defect, damage, or made up end and near the mill end. (Joints failed VTI or went below rig floor.) |
| | | **Rejected Pipe**, identified by a **1 Red band** 6 inches each side of the defect, damage, or made up end and near the mill end. (Joints rejected with signs of galling, pitting, or other damage.) |

**Figure 8: Pipe Classification Summary Example**