



Dynamic Torque Anchor

This document contains the recommended procedures to install and refurbish the Dynamic Torque Anchor.

Contents

- A.) Installation - Initial Function Test
- B.) Installation
- C.) Disengage
- D.) Service and Refurbishment
- E.) Reassembly

Refurb / Reassembly Tools

- ▶ 1/4" Allen Key
- ▶ Torque Wrench
- ▶ Solvent / Cleaning Solution
- ▶ Sand Blaster
- ▶ Heavy Duty rubber band
- ▶ Band clamp / Cinch Rope

Parts Required

QTY	Part
▶ 1	Torque Anchor Refurb. Kit for your size of anchor.

A.) Installation - Initial Function Test

- 1.) Run the Torque Anchor, box end up, into the first joint of casing (Fig. 1)
- 2.) Set the Torque Anchor with 300 ft-lb of right-hand torque (Fig. 2)
- 3.) Examine the contact points to ensure proper engagement of the anchor blocks in the ID of the casing.
- 4.) Once satisfied, relax the right-hand torque (Fig. 3) and the anchor is ready to be run to the desired depth.

B.) Installation

- 1.) Run the torque anchor to the desired depth. The anchor must be installed box end up and below the pump (Fig. 1).
- 2.) At the desired depth, apply approximately 300 ft-lb of right-hand torque (Fig. 2) on the anchor to engage the anchor blocks to the casing wall.
- 3.) The setting torque can be locked in and pump operation started.

Note: To avoid disengaging the anchor when starting or stopping the pump, pre-torque the tubing string.

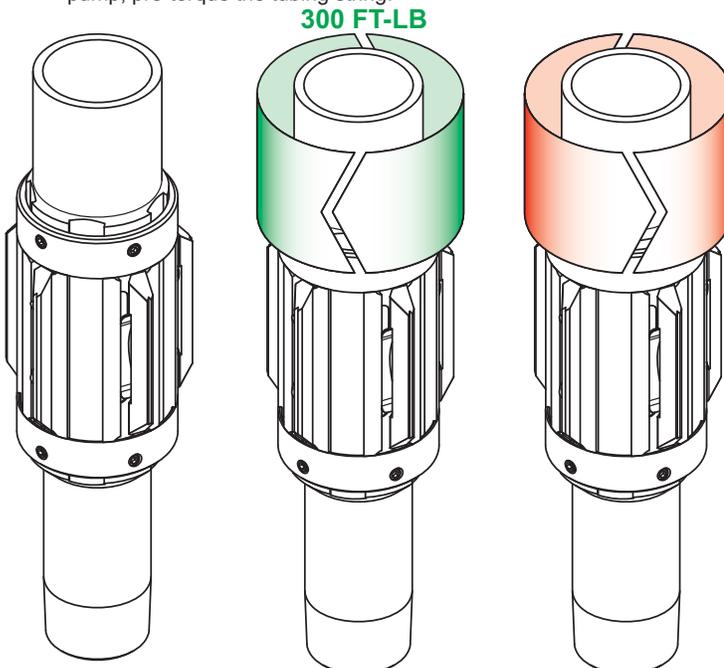


Figure 1

Figure 2

Figure 3

C.) Disengage

- 1.) Stop pump.
- 2.) Relax setting torque (Fig. 3).

D.) Service & Refurbishment

- 1.) Disassemble the torque anchor to its individual components (Fig. 4):

- ▶ Body (A)
- ▶ Anchor Blocks (B)
- ▶ Retaining Ring (C)
- ▶ Spring (D) *
- ▶ Hex Socket Screw (E) *

* Do not reuse these components.

- 2.) Clean the body, anchor blocks and retaining rings using varsol, sand blasting or other means to provide a clean part for inspection
- 3.) Inspect the parts for cracks, deformations from over-torque and corrosion. Damaged parts should not be reused. Use discretion when examining the anchor blocks. If there is any doubt with continued use, replace the anchor blocks.
- 4.) Reassemble the Torque Anchor using the Assembly Procedure.

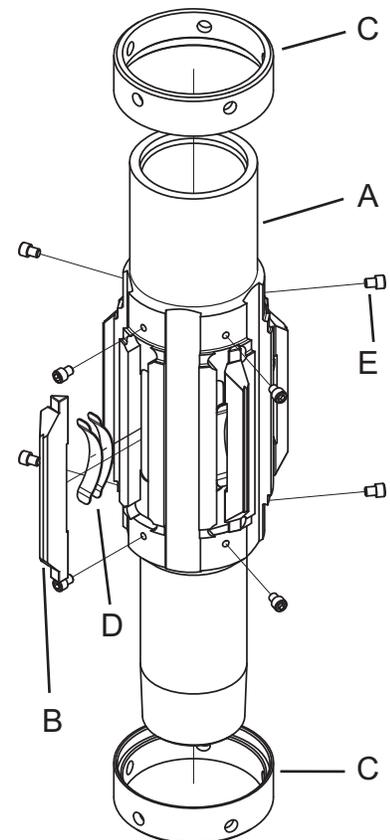


Figure 4

E.) Reassembly

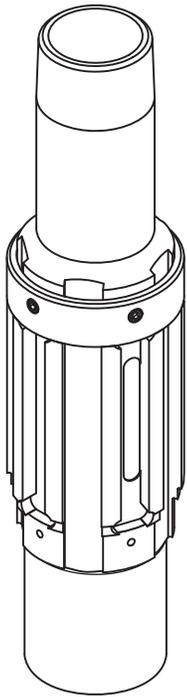


Figure 5

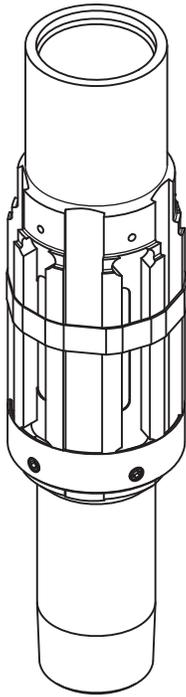


Figure 6

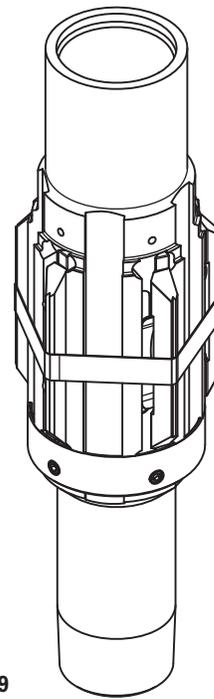


Figure 9

- 1.) Stand the anchor body upside down (pin end up) and install the retaining ring, and secure into place using the hex-socket cap screws. Torque the screws to at least 30 ft-lb (Fig. 5)

- 2.) Flip the anchor body over (box end up) and wrap a heavy-duty elastic band around the mid-section (Fig. 6).

- 4.) Use an assembly ring or cinch rope to draw in the anchor blocks close to the body. (Fig 9.)

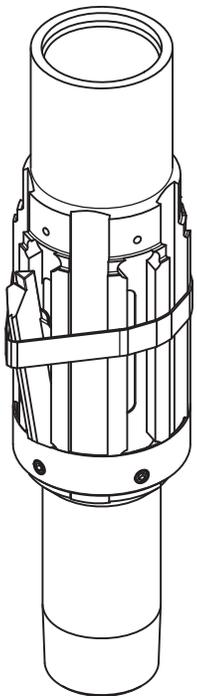


Figure 7



Figure 8a

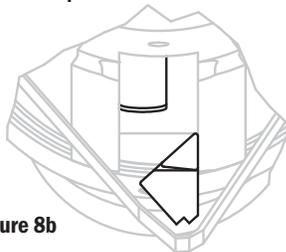


Figure 8b

- 3.) Place one anchor block into each anchor block groove (Fig. 7), taking care to note proper orientation (Figs. 8a & 8b). Anchor block grooves are identified as having circular relief "ears" at the ends of the groove. Two springs, dished-side towards the body should be placed behind the anchor block. The springs should sit in the shallow relief in the body, and on the underside of the anchor block.

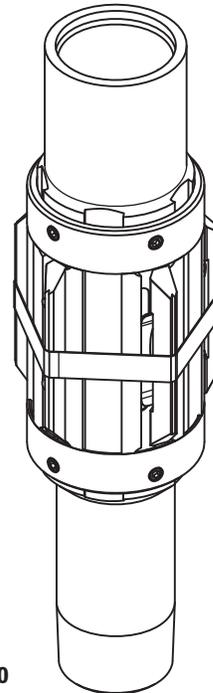


Figure 10

- 5.) Drop the second retaining ring onto the torque anchor. Ensure the retaining ring is seated fully and all anchor blocks are secured by the retaining ring. Secure the ring using the hex-socket cap screws, and torque to at least 30 ft-lb. (Fig 10.)