

Setting and Releasing the Quarter-Turn Tension Anchor

Preparation

- It is recommended that the casing be prepared and cleaned prior to running in with a quarter-turn tension anchor (e.g., bit and scraper, string mill, etc.) to ensure the tool will actuate properly.
- Do not use the drag springs as carrying handles for this tool. The springs could be permanently distorted, which can result in serious difficulty running the tool.
- The box-end sub is the top of the tension anchor (TA); the pin is bottom.
- **The top sub of the TA is reverse threaded and tightens to the TA mandrel with a left-hand turn.**
- Do not tighten through the TA when attaching it to the tubing string. When attaching tubing to the TA, put a backup on the anchor subs. Doing so will help prevent over tightening and possible galling of the 10 round inner threads on the TA, as well as prevent the top sub from backing off.
- **To avoid accidentally setting the anchor while running in/out, ensure the rig backups function properly and are utilized.**
- Always confirm the TA placement in relation to the pump and/or any other downhole assembly.

NOTE: The quarter-turn tension anchor is NOT a catcher. The TA will hold the well tubing in tension, but it will not stop a parted pipe from falling down the well.

Setting the Tension Anchor

- Run the quarter-turn tension anchor downhole to setting depth with last movement of tubing being down.
- Hold right-hand torque on the tubing.
- Rotate the TA one-quarter turn at the tool

and pick up on the tubing. This action will set the anchor in tension.

- When picking up the tubing, do not exceed one half of the set shear value.

NOTE: Tubing tension should always be applied in inches of stretch rather than pounds of pull to ensure accurate tension is applied, as not all weight indicators are accurate.

Releasing the Tension Anchor

- Hold left-hand torque on the tubing and lower the tubing 3 ft. at the tool. This action will release the tool.
- If the tool will not release in the above manner, an up strain greater than the set shear value plus string weight will shear the tool, causing it to release.

Stretch Formula

Length = pull force in thousands of lbs. x length of feet in thousands x stretch constant in inches of stretch per thousand pounds of pull per thousand feet of length.

(Example) 20,000 lbs. of pull on 8,000 ft. of 2.375" OD, 4.7#, 1.995" ID tubing

$20 \times 8 \times 0.30675$ (stretch constant for 4.7# 2.375 tubing) = 49.08 inches of stretch

*Stretch constant for 6.5# 2.875" tubing is .22075

