Setting and Releasing the Slimline® Full Bore Tubing Anchor Catcher

Preparation

- It is recommended that the casing be prepared and cleaned prior to running in with a TAC (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 TAC; the pin is bottom.
- Do not tighten through the TAC when attaching it to the tubing string. When attaching tubing to the TAC, put a backup on the TAC subs. Doing so will help prevent over tightening and possible galling of the 10 round inner threads on the TAC.
- **To avoid accidentally setting the anchor while running in/out, ensure the rig back-ups function properly and are utilized.**
- Always confirm the TAC placement in relation to the pump and/or any other downhole assembly. The Slimline Full Bore TAC features a slim OD and full bore ID (2.4" on the 5.5" model), allowing it to be set above the seat nipple in 2-7/8" tubing with a large pump running through it.

Running-In

NOTE: Unless requested otherwise, all TACs will be LEFT-HAND SET.

- **To prevent the TAC from setting while running in, it is recommended to occasionally (every 5-10 stands) use a pipe wrench to put a right-hand turn in the tubing** (if running a right-hand set TAC, put a left-hand turn in the tubing).
- SLOW DOWN, especially when going through a tight spot or when hitting fluid.

Setting the TAC

- Once the desired setting depth in reached, rotate the tubing to the left (to the RIGHT if the TAC is right-hand set) until the slips contact the casing (**approximately 3-5 turns at the tool**).
- **Whenever possible, set the TAC using pipe wrenches.** However, if power tongs are needed, make sure the torque on the tongs is several hundred pounds less than what the tubing string was initially tightened with. This approach will help prevent the tubing from backing off.
- The tubing will torque up when the slips have set. To ensure all tubing torque works its way down to the tool, maintain left-hand torque and alternate several times between setting down and pulling up.
- During this slip-setting operation, the strain pulled should be at least equal to the final strain that will be applied when the tubing is landed and full set-down weight should be applied.
- Set back to neutral, torque again and then the tubing is ready to be landed. As an added measure to help prevent the TAC from backing off during pump operation, hold tension for at least 2 minutes to ensure slips permanently bite the casing. Finally, put an additional 1/2–3/4 turn immediately before landing the tubing.

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.

Source: Much of the content in this document has been sourced from *"Baker Hughes Technical Unit Service Tools / Remedial Systems - General Service Equipment and Accessories - Unit No. TU 4160 Feb. 10, 2011."*

Normal Releasing Procedure

- To ensure the lower cone will be completely retracted when the slips lose their grip on the casing, the anchor catcher should be released with the tubing in slight compression as the upper cone contacts slips. This feature prevents dulling of the slips during retrieving due to incomplete retraction of the lower cone.
- If this is not possible, however, the tool can be released without compression or even with the tubing string in tension.
- Rotate the tubing to the right (to the LEFT if the TAC is right-hand set) **3–5 turns at the tool** to retract the cones from the slips and allow the slips to move back into the housing.
- To ensure the slips are all the way backed off while the tubing anchor is coming out, occasionally (every 5–10 stands) use a pipe wrench to turn the tubing to the right (to the LEFT if the TAC is right-hand set).

Emergency Release

If the tubing anchor catcher does not release in the normal manner, an up-strain greater than the total shear strength of the shear pins plus the weight of the tubing will shear the pins and release the TAC.

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 x 8 x 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*

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