Vision Oil Tools, LLC
Shop/Warehouse
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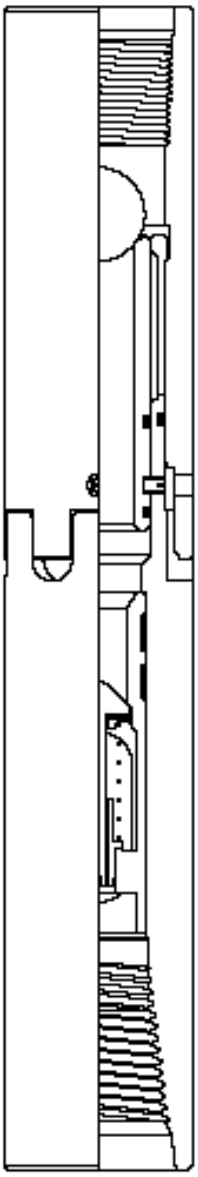
Hydraulic Bit Release Sub

DESCRIPTION

The Hydraulic Bit Release Sub is a disconnect device used to remove the Drill Bit or Mill after drilling operations



FEATURES

- Eliminates tubing trip after drill out
- High strength
- High torque
- Hydraulic release
- Full open after release
- Field adjustable shear pressure
- Wire line re-entry guide after release
- All parts contained in the bottom sub after shear out
- Uses standard float valves

Size	O.D.	I.D,	Fishing Neck OD	Torque Max	Tensile Max
2-3/8 EUE x 2-3/8 Reg	3-1/4”	1-1/4”	3-1/16”	9,000 FT./LB.	86,000 LB.
2-3/8 EUE x 2-7/8 Reg	3-3/4”	1-1/4”	3-1/16”	9,000 FT./LB.	86,000 LB.
2-7/8 EUE x 2-7/8 Reg	3-3/4”	1-1/4”	N/A	18,000 FT./LB.	100,000 LB.
3-1/2 EUE x 3-1/2 Reg	4-1/4”	1-5/8”	N/A	23,000 FT./LB.	145,000 LB.

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RECOMMENDED RUNING PROCEDURES

Prior to running, determine the desired shear value and verify that the correct number of shear screws is installed using a thread lock compound. The Hydraulic Bit Release Sub is shipped with the maximum number of brass shear screws installed using a thread lock compound. The Hydraulic Bit Release Sub is shipped with the maximum number of brass shear screws installed.

OPERATION

Install the Hydraulic Bit Release Sub in the drill string and hold a back-up on the top sub while tightening the drill string to the recommended torque. Hold a back-up on the bottom sub while the drill bit or mill is installed.

Run the drill string in well to a depth above desired drilling depth. Verify correct operation of the drilling equipment (power swivel, etc.) and establish circulation prior to beginning the drill-out. Use the recommended RPM, pump rates and drilling weights for specific bit or mill being used.

After the drill-out is complete, raise the drill string off bottom and drop the release ball. The release ball will fall to the seat or can be pumped down if desired. If the ball is pumped down, slow pump rate as the ball nears the seat. After the release ball lands on the seat, continue to increase the pressure. When the predetermined release pressure is reached the Hydraulic Bit Release Sub will separate and the drill bit, bottom sub, piston and float vale will drop to the bottom of the well. The top sub stays on the drill string and can now be used as a wireline re-entry guide.

Pump off Subs Pressures and field experience

The Original Pump-Off Subs were designed with calculated Shear Pressures to be approximately 435-PSI per Brass Screw. (1740-PSI Differential)

A change in the brass Shear-Screw Material was made to accommodate a more consistent shear value.

We have Field-tested and Bench-tested the most recent Batches of Pump-Off Subs. The Results with the Present Shear Screws have determined that the standardized Shear Stock is approximately 550-PSI per Brass Shear Screw. These Pressures can vary due to the Shear Screws, as the industry standard for brass screws is plus or minus 20%

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The Pump off subs were all pumped off with 4 Shear Screws in a range of 1760-PSI to 2640-PSI. These were tested from 6 different Batches.

If you desire a lower Pump Off Differential we recommend taking out 1 Shear-Screw. (1210-2090 Range)

We would **NOT** recommend that you ever run just 1 shear screw. We would recommend running the maximum number of shear screws unless pressure capabilities are limited by equipment or application requirements.

Problems with pumping off the pump-off subs have been found with well-associated problems.

- High Jarring impacts on the string that could exceed tensile strength or exceed brass shear pins
- Trash in the pump-off sub
  - One case the tubing had to be chemical cut because trash is pump off sub
- Sand or fill around the pump off sub when Shearing off Pump-Off Sub
  - One case took 5000 PSI before Shearing but found the hole filling up with sand.
  - One case the tubing had to be chemical cut because of sand fill