

Fill / Flow Sub Running Procedures

Running Procedure:

The LRI Fill Flow sub is used to prevent debris from falling on the firing head and interfering with the operation of the firing pin. The ports in the body of the tool allow the tubing to fill with fluid as it is tripped down the well. The glass disk is broken by the drop bar on its way to the firing head.

The Fill Flow sub must be made up independently from the string and tightened only with the pipe wrenches ensuring the wrenches are placed on the knurl and the tubing upset. (Power tong should not be used)

Note:

1. Do not drift/rabbit the Fill Flow sub.
2. Do not apply torque through the Fill Flow sub when making up tubing onto the tool.

Make up the next pup joint in the assembly. Placing the back up wrench on the knurl on the Fill Flow sub, tighten the pup joint in with pipe wrenches only. (Again Power tongs should not be used)

Remove slips and continue running assembly in the hole.

Precautions:

When tripping the tubing string into the well, take care not to allow anything to drop into the tubing bore. When operations are delayed, cover the tubing bore with a cap. Falling debris may break the glass disk prematurely.

If it is suspected that a large amount of debris is resting on the glass disk, the operator should circulate well fluid through the ports for a few minutes in order to clean away as much debris as possible.

Breaking the Glass Disk:

When the guns are in position, the appropriate drop bar can be dropped through the tubing. The glass disk requires a very small amount of energy to break (about 20 ftlb) and the debris is very brittle. If the glass is broken prematurely, the glass debris will not interfere with the operation of the LRI firing head.

Redress Procedure:

1. Inspect and clean all of the components carefully. Look for damage or unacceptable surface condition (rust, rough finish etc.). Pay special attention to threads.
2. Place the Glass Disk onto its shoulder in the firing head body from the box thread side.
3. Install the Snap Ring on top (box thread side) of the Glass Disk.

