

PBL Surface Test Instructions

Make Up and Testing the PBL Tool at Surface

1. Pick up the PBL Tool. Remove thread protectors and tape over ports and make up the lower pin of PBL Tool to BHA. Make-up torque is the same as the drill collar thread connection. See Tech Sheets for torque verification. (Do not Over Torque)
2. Make-up drill pipe to top of the tool. Torque connection
3. Pick up BHA out of the slips and lower into the hole ensuring that the opening ports are below the rotary table within drilling fluid
4. Break out drill string and drop one (1) vinyl activation ball to activate the tool. Reinstall drill string. It is recommended to fill up the drill string with fluid prior to dropping the activation ball
5. Engage the pump very slowly and watch for the sleeve opening and the fluid diverting through the ports. It will not take a lot of pressure to overcome the spring tension when opening the sleeve (50 - 200 psi)
6. When fully satisfied that the tool is functioning properly, stop pumping, and pick up string and place in the slips. The PBL Sub piston will close when the pumping is stopped
7. Break the drill string and drop 2 x steel de-activation balls into the drill string
8. Reinstall the drill string and pick up out of the slips and lower the string so that the opening port is below the rotary table & within drilling fluids
9. Engage the pump and record the pressure at which the vinyl ball shears through the ball seat. **BUILD PRESSURE RAPIDLY.** This should be plus or minus 10% of the recorded pressure that was sent with the tool. (NB: De-activation Pressures are 'tool specific' and can vary from 1600 to 4500 psi). If the de-activation pressure observed is significantly different from what was recorded and sent with the tool, **DO NOT** run this tool and contact the supplier for further clarification
10. With opening ball sheared and the port closed, keep pumping and lift the tool above the table to visually check the ports are closed
11. Stop the pumps, pick up string and place in the slips, and break the tool between the circulating sub and the ball catcher sub. Break out the PBL Main Body from Bottom Sub and retrieve the balls from the ball catcher. **Do not under any circumstances re-use the vinyl opening balls once they have been used in the tool**
12. Reinsert cage into Bottom Sub with beveled end up (NO-Go towards bottom). Reassemble PBL Main Body onto Bottom Sub and torque to required value
- 13 PBL Tool is ready for operation

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