

SLIDING SLEEVE BIG BORE DUAL PORTED PBL BYPASS SYSTEM

Operating Instructions

Activation Procedure

1. **Prior to activating the tool, Record Pump Pressure _____ Pump Strokes _____.** This will be used as a reference to confirm de-activation of the tool (**figure 1**).
2. Calculate the fluid displacement **volume and time** in the drillstring to estimate when the activation dart will reach the Bypass Tool. Break drillstring at floor and drop one (1) stainless steel activation dart **Record Dart Size _____**. Ensure Dart will pass through any drill pipe restrictions above the tool.
3. It is recommended to maintain normal drilling pump rates, Displace 50% of the volume inside the drillstring, and then reduce the pump rate to 25% (Max. 200 GPM) until the dart lands on the seat. The dart will almost always seat sooner than the calculated pump strokes. **NOTE: Care should be taken when pumping the dart down.**
4. When the activation dart lands on-seat (**figure 2**), the inner mandrel will shift to its open position against the spring with pump pressure. **NOTE: IT ONLY TAKES 100-200 PSI TO FULLY ACTIVATE /OPEN THE TOOL.** Fluid will now be diverted through the side ports. As long as pumping is continuous, fluid will be diverted through the ports. If pumping is halted, the sliding sleeve will shift to the closed position. When pumping resumes, the mandrel will shift open again allowing fluid diversion through the ports of the Bypass Tool. It is recommended a constant pump rate be maintained while the tool is in the open position. It is not recommended to utilize the dart if the hole angle is greater than **55 degrees** between the surface and PBL Tool.
 - Surface indication of the tool being in the open position is a pressure drop. **Compare pump pressure/strokes to rates and pressures recorded in step one.** Once the tool is open, pump rates can be increased to the desired rate.
 - Rotating and reciprocating the drillstring is good practice while activating the PBL Sliding Sleeve Big Bore Bypass Circulating Sub.

De-Activation Procedure

1. Pick-up fishing accessories (overshot, 1 3/8" JDC Pulling Tool) and run as per wireline companies procedures and latch onto 1" fishing neck on dart and POOH. At surface break the drill string at rig floor retrieve dart with overshot. Deactivation is simply achieved by retrieving the dart with an overshot (**figure 3**).

Should there be any questions regarding the operational procedures of the PBL SSBB Tool please contact your BICO Drilling Tools Representative or visit our website at: www.bicodrilling.com

