

Date: May 02, 2023

Applicability: PowerDrive Orbit

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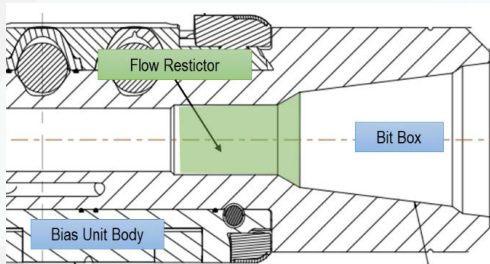
Approved By: David Smith, Operations Manager

BACKGROUND INFORMATION

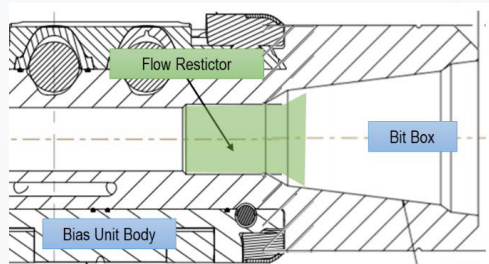
Flow restrictors are assembled to the bias unit at the rigsite to create additional pad force for a given flow rate through the assembly. Recuts of the bias unit box may cause variation in the way these restrictors seat when assembled into the bias unit body.

FLOW RESTRICTOR INSIDE BU

In operation, the flow restrictor loads against the pin of bit with axial force caused by flow. But in the installation process, it usually is observed to shoulder on the bevel in the bit box. In some cases, with a bit box that has been recut near the maximum specified limit, the restrictor body may shoulder on an internal diameter change in bias unit body. This creates the appearance that it is not 'fully seated'.



Flow restrictor seated in an unrecut bias unit



Flow restrictor seated in a recut bias unit

FIELD ACTION

Bias units with a restrictor that shoulders internally may be run without issue. There is still enough clearance to accommodate the bit pin. In operation, the restrictor will shoulder against the bit pin properly.



Flow restrictor seated in an unrecut bias unit



Flow restrictor seated in a recut bias unit