



Guidelines for Monitoring Insert Bowl Wear

Inspect Slip Insert Bowls Regularly for Wear



Have a Dedicated Insert Bowl for Running Casing and Liners



(Insert Bowl Wear Grooves – See Page 2)

Why is this Critical?

- Increased rotating hours
- Heavier drilling hook loads (exceeding 500,000 lbs. below 20,000')
- Dynamic loads caused by pipe movement and rig heave are transferred to the slips.
- Damage is associated with worn insert bowls due to the lack of support at the base of the bowl. This causes the slips to break at the toe.
- Worn bowls damage the slips and the pipe.
- Some slip designs can lose entire column of inserts and risk dropping the string downhole.

It is important to make sure the pipe is stopped when setting the slips – especially below 20,000'!

Workstrings recommends inspecting the bowl for wear at the following intervals:

- Beginning of a well
- After each casing point
- After each bit trip below 20,000'
- Anytime there is significant rotating hours between bit trips

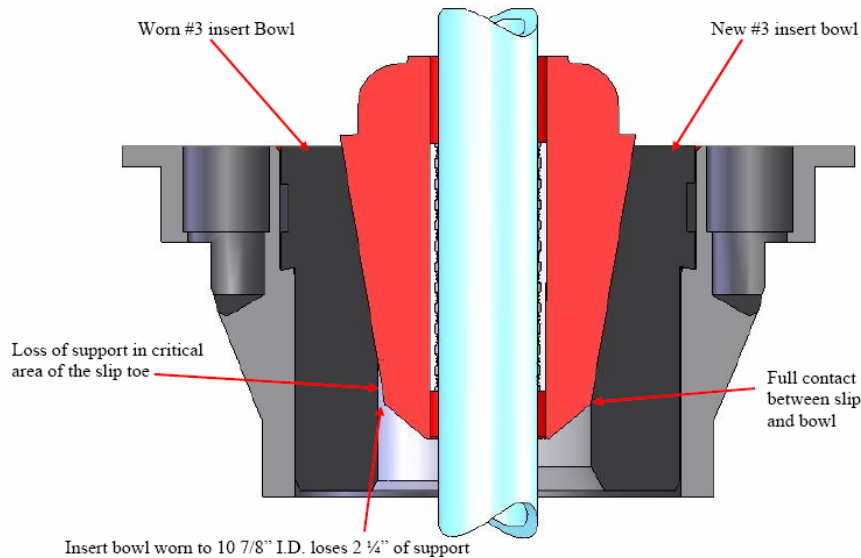


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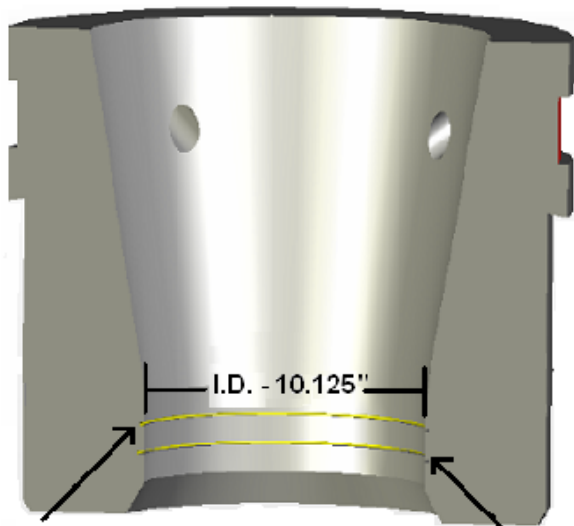
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The AOT insert bowls have wear grooves that provide a positive indicator of bowl wear

The use of Access Oil Tools proprietary wear indicator bowls (patent pending) allows the drill crew to monitor the amount of wear on the inside dimension of the drilling bowl by a simple visual inspection.

API #3 Insert Bowl



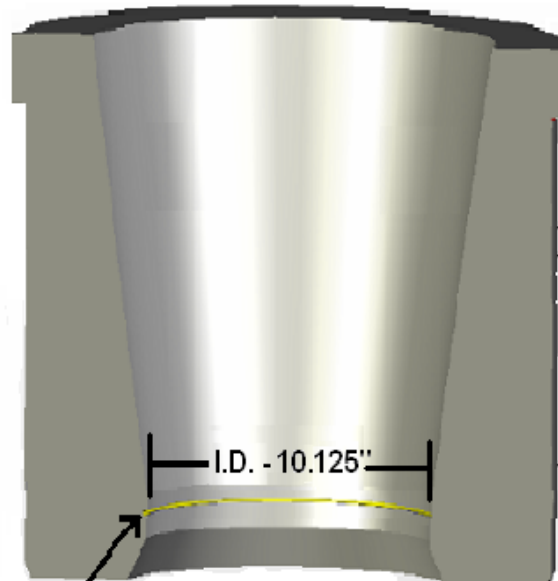
When the I.D. is worn to 10.375", the upper wear groove is no longer visible.

Subsequent loads should be limited to 350 tons.

When the I.D. is worn to 10.624", the lower wear groove is no longer visible.

At this point the inner bowls should be discarded and replaced with new bowls.

12 degree Insert Bushing for LDXL/XP Master Bushing



When the I.D. is worn to 10.525", the wear groove is no longer visible.

At this point the inner bowls should be discarded and replaced with new bowls.