



Model: Sigma

Serial #: N/A

Aug. 23, 2024

Product Bulletin # TDS-255 Rev 1

## Sigma Back-Up Wrench Cylinder Improvement

On a Sigma 500T top drive, the Back-up Wrench (BUW) cylinder rod unscrewed from the piston due to vibration. As a result, the BUW positioner separated from the BUW outer tube and descended 10 ft to the rig floor.

Canrig offers a new improved cylinder to avoid this from occurring.

Instructions described in product bulletin # TDS-249 "Sigma Back-Up Wrench Cylinder Rod" are not required after implementing the recommended actions in this bulletin.

Canrig recommends that the extension of the BUW positioner/gripper frame is monitored on a regular basis to ensure there is no downward drift over time.

### Affected Units

All Sigma Top Drives Back-up Wrenches utilizing double acting cylinders (Canrig part # H13248).

### Recommended Actions

Three corrective actions are available to mitigate this issue:

- Option 1: Replace cylinder P/N: H13248 (see Figure 1) with cylinder P/N: H15711 (see Figure 2 on page 2).

#### Cylinder P/N: H13248:

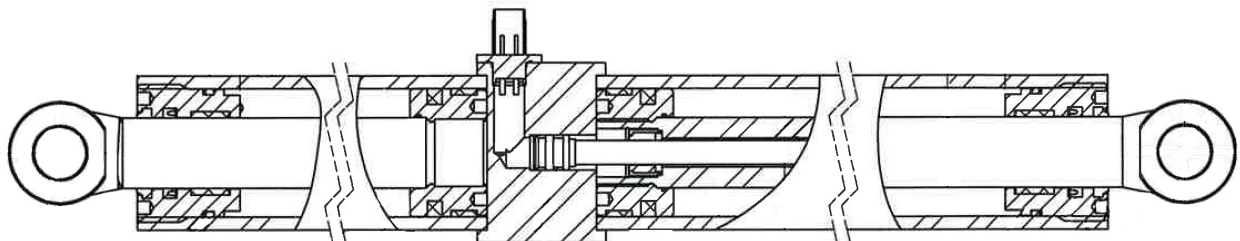


Figure 1: Cylinder P/N: H13248



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**Cylinder P/N: H15711 (New part):**

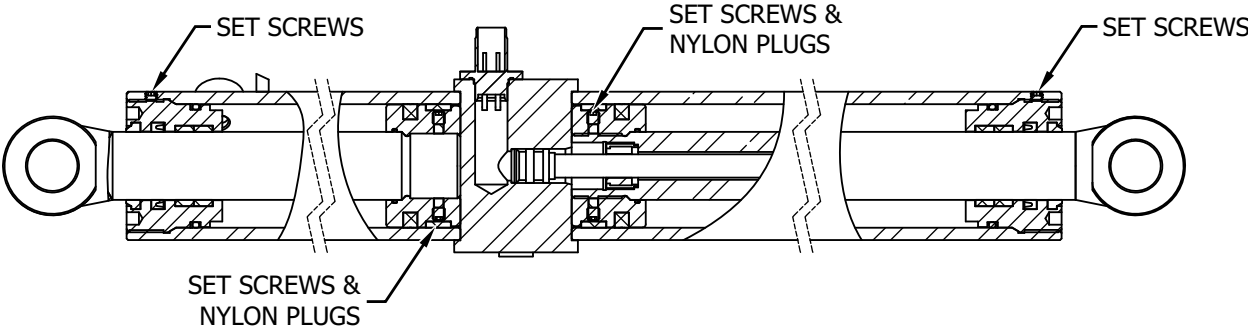


Figure 2: Cylinder P/N: H15711 (has secondary retention)

- Option 2: Return cylinder P/N: H13248 to Canrig, so the OEM can convert the cylinder to P/N: H15711.
- Option 3: In the field, modify cylinder P/N: H13248 with modification kit P/N: M17552. It is highly recommended that this modification be done in a clean facility qualified to handle hydraulic cylinder repairs, to ensure the seals and LVDT probes aren't damaged. See Figure 3 on page 3.

The modification kit includes items listed below:

**Table 1: P/N: M17552 – KIT, MOD, REPAIR, CYLINDER W/LINEAR TRANS**

Item	Qty	Description
1	1	Blue Loctite packet (242 Version)
2	1	Red Loctite packet (271 Version)
3	2	Piston
4	2	¼-20 set screw
5	4	¼-20 x .25 set screw
6	4	Nylon plug
7	1	Seal kit
8	1	Repair Instructions



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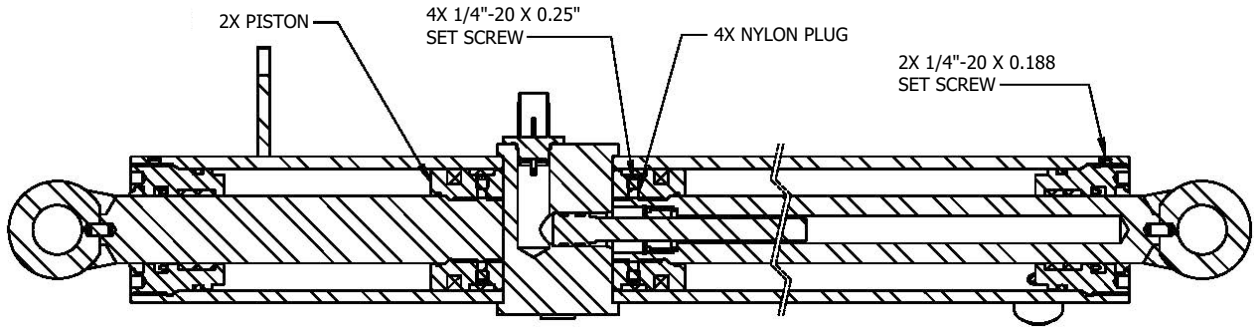


Figure 3: Cylinder view after field modification with kit M17552

Contact Canrig Part Sales ([part.sales@canrig.com](mailto:part.sales@canrig.com)) to order parts.