



Model: Commander™ Drawworks 2000HP Single Speed - New Gen. Serial #: See S/N Affected	May 1, 2015
Product Bulletin # DW-007 <b>Alert</b>	



## DW2000 Flange Retainer

### Introduction

It has been determined that in some circumstances, the countersunk bolts can become damaged and/or shear off on the shaft retaining plates resulting in the retainer plate coming off. This failure will allow axial movement of the drum shaft. Both drum shaft assemblies: Driller's Side (AY80071 - Shaft, drum short assembly, drawworks) and Off Driller's Side (AY19535 – Shaft, drum, short, assembly) may be affected.

### Serial Numbers Affected

Cyclone Rig #38, Serial Number 80, Drawworks 2000HP New Generation Single Speed Model.





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## Recommendation

Replace existing flat head socket cap screws (6) (FS-0500NC-0100) with the Flange Retainer Safety Wire Kit (Canrig P/N: AY19080) on all affected 2000 HP Single Speed Commander™ Drawworks.

The kit includes:

- (6) ½-13 UNC hex head cap screws (HH-0500NC-0125-GR8-W)
- (6) ½" helical spring lock washers (LW-0500-HS)
- (1) 1"-8UNC hex head cap screw (HH-1000NC-0225-GR8-W)
- (1) Nord-Lock lock washer (LW-1000-NL-SP)
- (1) Redesigned flange retainer plate (DT20659 rev. B)
- (1) Bottle Red Loctite thread locker
- Safety wire and required hardware

## Actions

The Flange Retainer Safety Wire Kit (Canrig P/N: AY19080) must be installed as soon as possible. To determine if the installation requires immediate action, perform the following:

1. On the ODS encoder shaft, use a permanent marker or paint pen and scribe a line on the shaft where the shaft meets the shaft seal. (See Section A-A and Detail B in Figure 1 on page 3).
2. Referencing the dimensions supplied on Section A-A (see Figure 1 on page 3), verify if the shaft has moved.
  - if the shaft has moved axially ½", shut down the drawworks immediately and contact RigLine 24/7™ Support to schedule the repair by a Certified Canrig Technician.
  - if the shaft has not moved, contact RigLine 24/7™ Support as soon as possible. The repair is still required but does not require immediately shutting down the drawworks.

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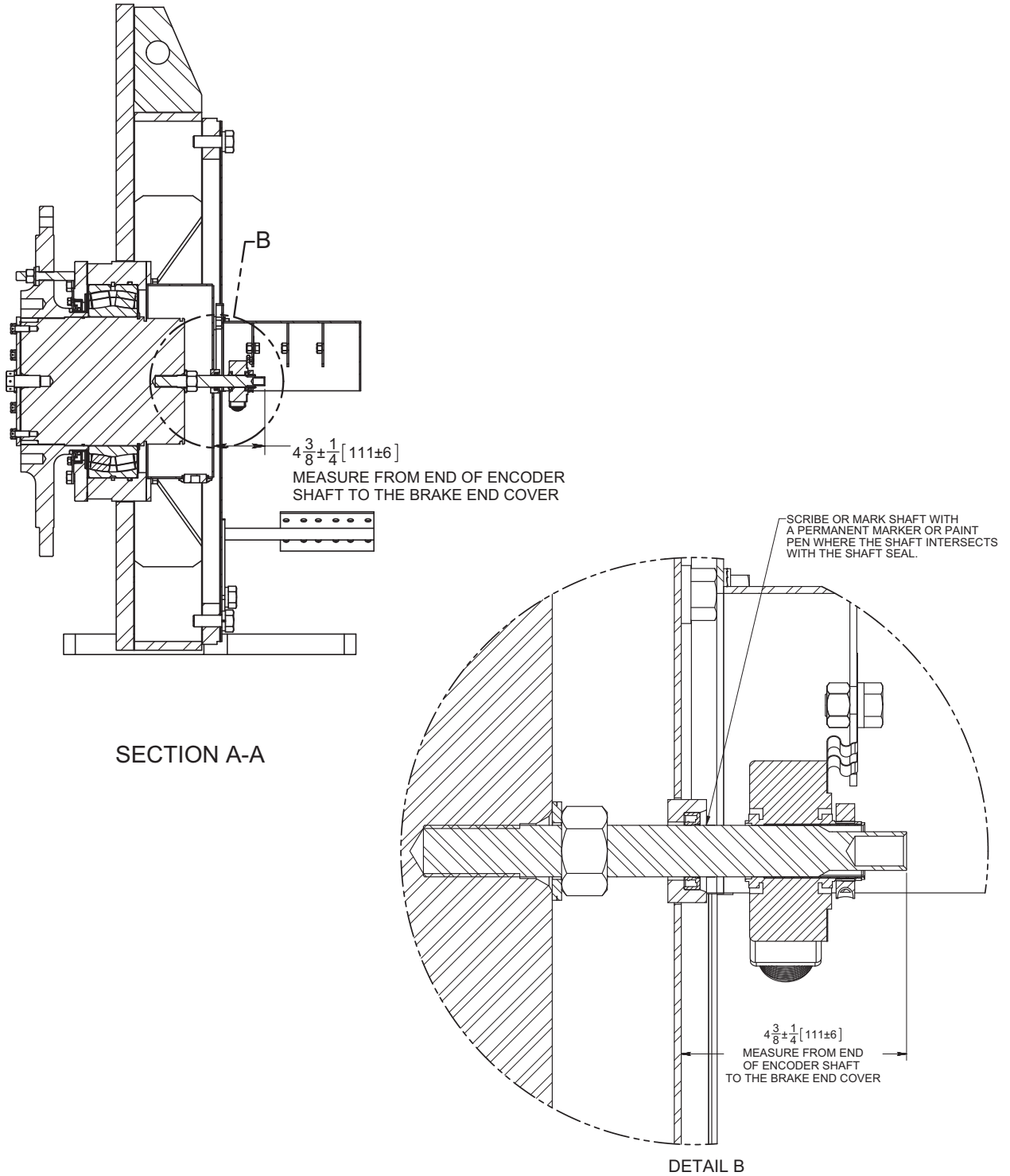


Figure 1: ODS Encoder Shaft Measurements

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## Procedure

This procedure must be performed by a Certified Canrig Technician.



**Warning!**

Follow proper lock-out/tag-out procedures before performing any work on the drawworks.

1. Perform a JSA and follow all safety procedures.
2. Lock-out/tag-out the drawworks before proceeding.



Note: For detailed assembly and disassembly instructions, refer to the drawworks build book.

3. Remove the following:
  - top and front drum guard
  - DS and ODS caliper guards
  - DS and ODS stand assemblies
  - Crown-O-Matic rail assembly
  - front and rear cross bar supports
4. Disconnect drum encoder cable.
5. Cage brake calipers (4). Remove hydraulic lines and brake calipers.
6. Remove bolts (24) securing the drum to the shaft assembly.



Warning! Ensure the drum is supported before removing the ODS pedestal unit.

7. Remove retaining bolts (8) securing the pedestal assembly to the skid and remove the pedestal unit.
8. Remove remaining bolts (24) on the drillers side of the drum and remove the drum unit assembly.
9. On the ODS planetary assembly, remove the flat head socket head bolts (6) and flange retainer plate (See Figure 2 on page 5).

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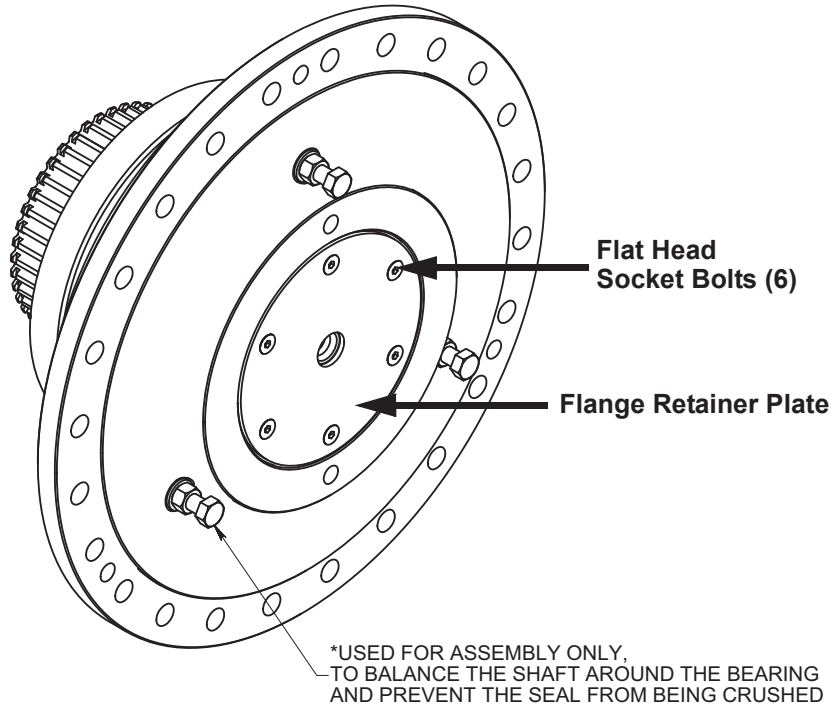


Figure 2: Existing ODS Flange Retainer Fasteners

10. Replace with the AY19080 Flange Retainer Safety Wire Kit. (See Figure 3 and Figure 4 on page 6).

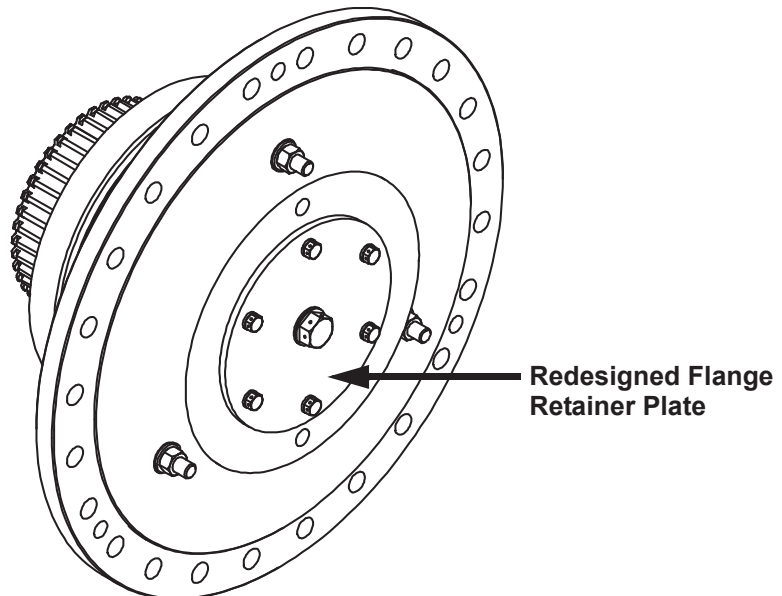


Figure 3: Flange Retainer Safety Wire Kit (Safety Wire Not Shown)

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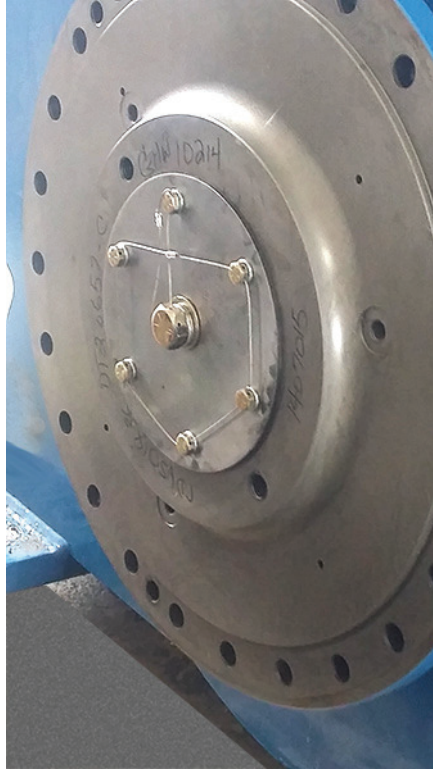


Figure 4: Flange Retainer with Safety Wire

11. On the ODS pedestal unit, remove the flat head socket head bolts (6) and flange retainer plate. (See Figure 3 on page 5).
12. Replace with the AY19080 Flange Retainer Safety Wire Kit (same as in step 10).

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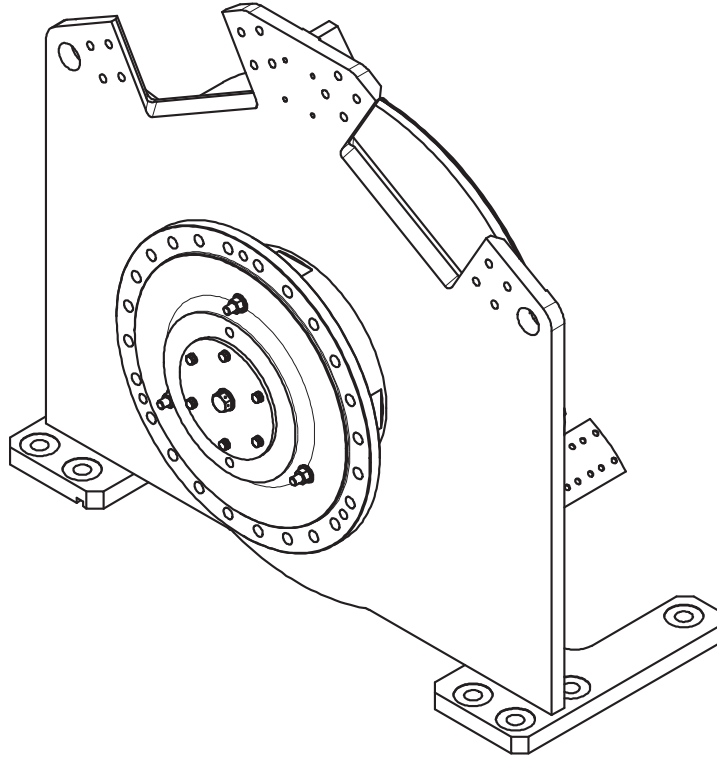


Figure 5: ODS Shaft Pedestal Assembly (with Drum Removed)

13. Re-install drum unit assembly.
14. Install and torque bolts and lock washers (24) on the DS of the drum. (See Figure 6 on page 8).
15. Install the ODS pedestal unit assembly.



Warning! Ensure the drum is supported while installing the ODS pedestal unit.

16. Install and torque bolts and lock washers (24) on the ODS of the drum. (See Figure 5).

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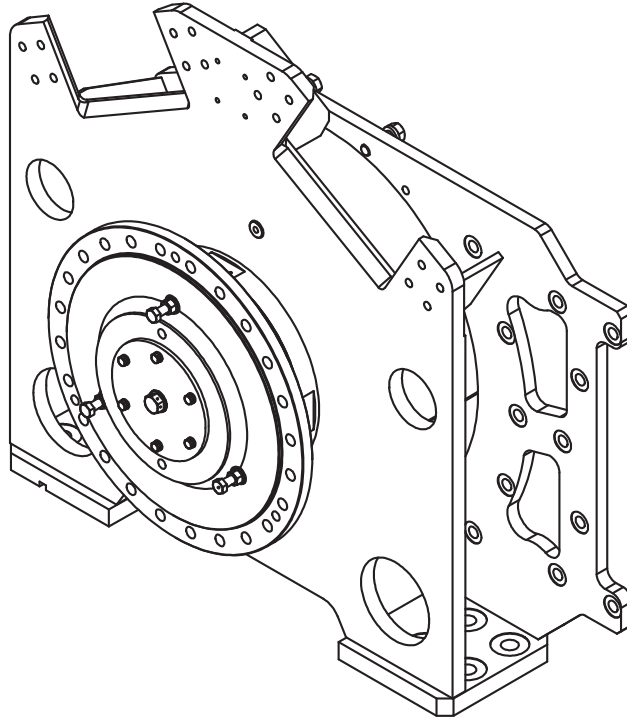


Figure 6: DS Shaft Assembly (with Drum Removed)

17. Re-install brake calipers and all brake hydraulic lines.



Note: Remember to uncage brake calipers before operating the drawworks.

18. Re-install the following:

- top and front drum guard
- DS and ODS caliper guards
- DS and ODS stand assemblies
- Crown-O-Matic rail assembly
- front and rear cross bar supports

19. Reconnect drum encoder cable.

20. Remove lock-out/tag-out.

21. Start up the drawworks, test, and check for leaks.