BIRRANA A7560 DIFF / PLANETARY ISOLATION SEAL TO SUIT CAT 793 TRUCK

These instructions are a recommended fitting procedure to be used in conjunction with usual sound fitting practices. Please read through these instructions before attempting installation.

Refer to the relevant section of the vehicle manufacturers' maintenance manual and obey all recommended safety instructions or warnings.

Before working on any equipment make sure that the work area is safe, the equipment is tagged and locked out in accordance with mine safety procedures and is safely supported by stands of suitable capacity.

1. Ensure that the spindle has been modified, if necessary, as per Block Installation Procedure.
2. Position the isolation seal with the breather located near top dead centre (see Figure 1). Check that the hole in the steel spacer plate fitted behind the isolation seal is aligned with the breather. Using Loctite 262 torque bolts to 47Nm (35 ft/lbs).
3. Install the wheel speed sensor using the adjustment procedure found in SENR2986 Automatic Electronic Traction Aid Service Manual. Ensure that the connector is lockwired in place after assembly.
4. Lubricate the inside of the rubber seal ring with oil or jelly (Mobil 'Waxrex 511 White' or similar).
5. Fit the wheel end as per OEM procedure.
6. Install the traction aid sensor guard with appropriate spacers.
7. Check that the AETA drive collar clamp (8W8743 / 7I5093) is fastened at 1735mm (68.3") from the end of the half shaft so it will be aligned with the sensor.
8. Remove the final drive cover.
9. Apply oil or petroleum jelly (Mobil 'Waxrex 511 White' or similar) liberally to the end of the half shaft.
10. Insert the half shaft ensuring that the drive collar clamp is aligned with a notch in the traction aid ring (8W8744). Note that when an isolation seal is fitted there are three less useable notches in the traction aid ring (see Figure 2).
11. When the half shaft reaches the seal ring, some extra force will be required to force the shaft through the seal. Once through, the shaft should slide easily until located in the differential. At this point the drive collar should also locate within the traction aid.
12. Complete reassembly of the wheelend, and fill the planetaries and differential with oil to the correct level.

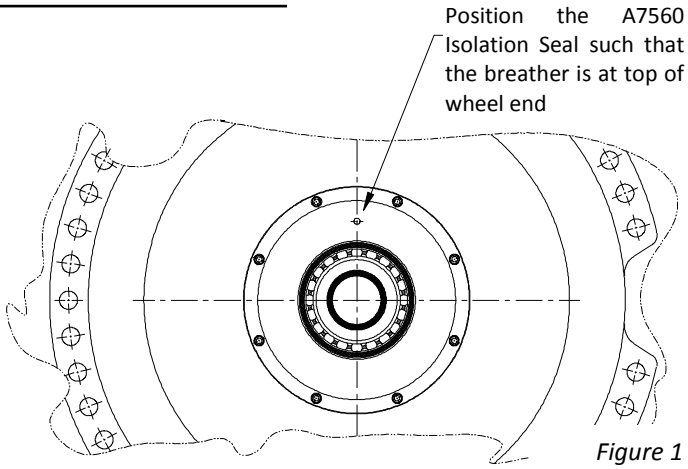


Figure 1

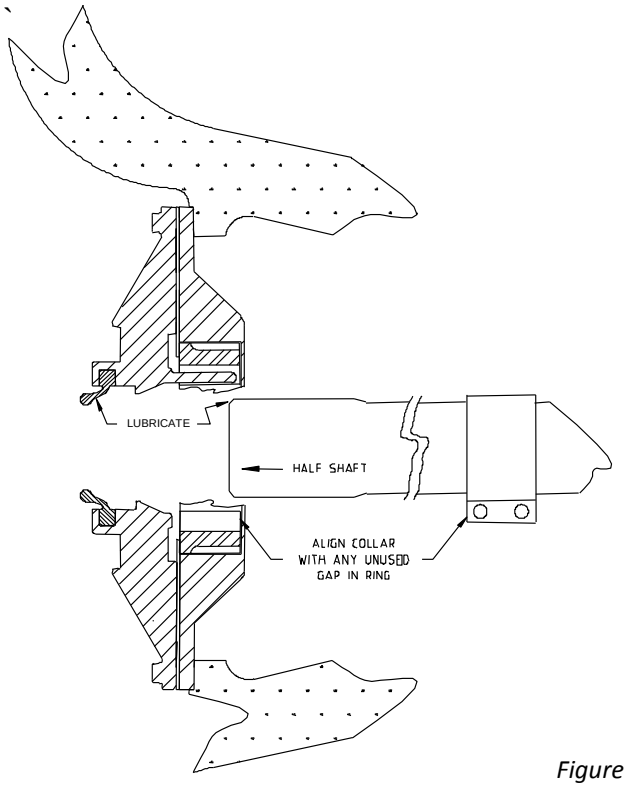


Figure 2

NOTE

The oil in the planetary and differential will have to be filled and level-checked separately after installation of the seal assembly.

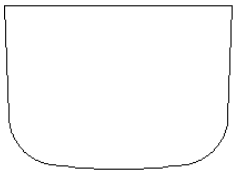
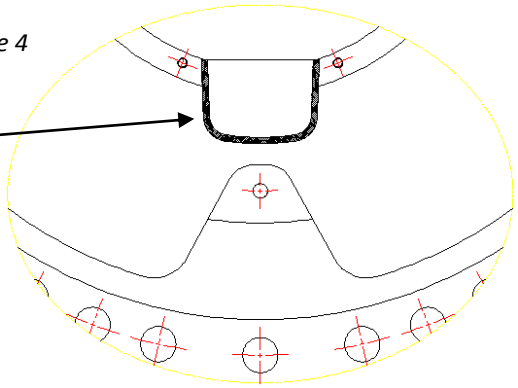


Figure 3

Cut block from 16mm thick mild steel plate. Shape to suit the cooling pipe cut-out in the back of the spindle.

Figure 4

Weld block into spindle, as detailed below.



WARNING

- Follow consumable manufacturer's recommendations & specifications at all times.
- Ensure that correct Personal Protective Equipment is worn.
- Ensure all mine site safety & work procedures are followed.

WELDER QUALIFICATION

All welders must be qualified for fillet & butt welding as per the current AWS D1.1 or AS 2980. The welding operator must have used the process in the last 6 months, or be re-certified for this process before welding.

ELECTRODE

Use either an AWS E7018 electrode or AWS E71T-1 FCAW wire. It is preferred that low hydrogen electrodes or wire be used.

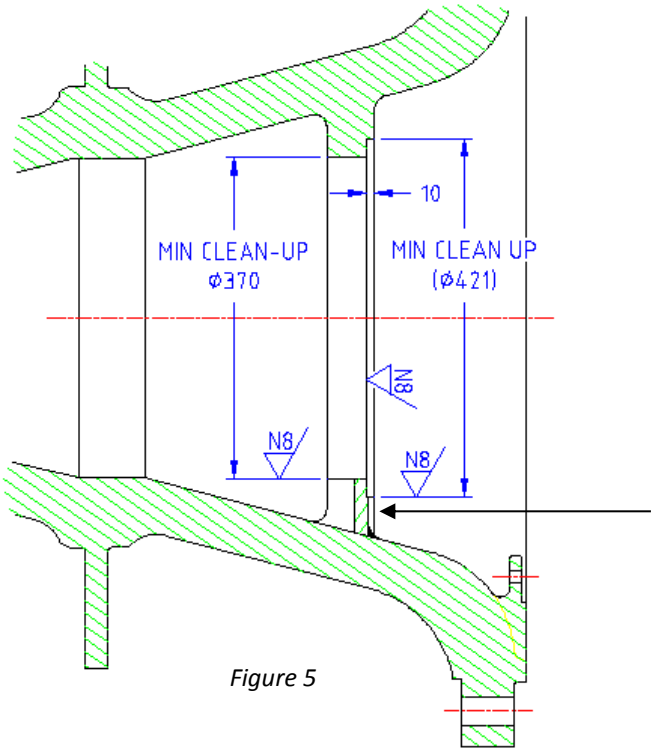


Figure 5

BLOCK INSTALLATION PROCEDURE

(Only required for spindles with cut-out in casting for oil recirculation piping – see Figure 4)

1. Remove all paint and scale from the spindle housing, in the area to be welded.
2. Cut block (see Figure 3), to suit cut-out in back of spindle.
3. Grind 6mm bevel on outside edge of plate.
4. Position block, so it sits slightly raised from the *machined* face (see Figure 5).
5. Preheat spindle evenly to 200 – 250°C & maintain within 100mm of the weld.
6. Weld around the block, ensuring that enough weld is deposited to enable cleanup of the spindle face, ready to mount the isolation seal.
7. Do not exceed weld deposits of 8mm fillet weld volume.
8. Deposit weld metal in accordance with manufacturer's specifications.
9. Needle peen after each pass.
10. Maximum inter-pass temperature is 350°C.
11. All weld shall be free of defects, undercut, incomplete fusion & porosity.
12. Slow cool using a heat blanket.
13. Re-machine spindle to the dimensions shown in Figure 5.