

REAR HUBS, DRUMS AND BEARINGS (AEROBUS)

Disassembly and Inspection

Axle assembly uses flanged axle shafts for mounting wheels and brake drums. Axle shaft bearings are of single row, tapered roller type with total endplay of the axle shafts adjustable by a threaded sleeve in the right side bearing cup retainer only.

If axle shaft bearing troubles are suspected or if there are indications that the oil seals are leaking, it will be necessary to remove the axle shaft for further inspection.

1. Remove the wheel and tire assembly and brake drum. At this point be sure that any apparent signs of oil seal leakage are not actually brake cylinder leakage. If need for further disassembly is indicated then:
2. Insert the proper size socket wrench through hole in the axle flange and remove nuts from the four bolts hold-

ing bearing and seal retainer in position. It is not necessary to loosen the bearing adjusting sleeve on the right side assembly at this time.

3. The fit of the bearing cup in the axle is not tight and the axle shaft and bearing assembly can be easily removed and placed securely in a vise.
4. Remove the inner oil seal from axle housing with a suitable puller and replace it with a new seal. Be sure to install the new seal with the rubbing lip toward the differential and be careful not to bend or distort the new seal while seating it in the housing.
5. With the axle shaft securely in a vise, strike several sharp blows to the locking collar with a sharp chisel until it fractures and can be slipped off the axle shaft. Be careful with the oil seal seat on the axle shaft during this removal operation. If possible cover the seal seat with a piece of copper tubing or a similar material to prevent damage.

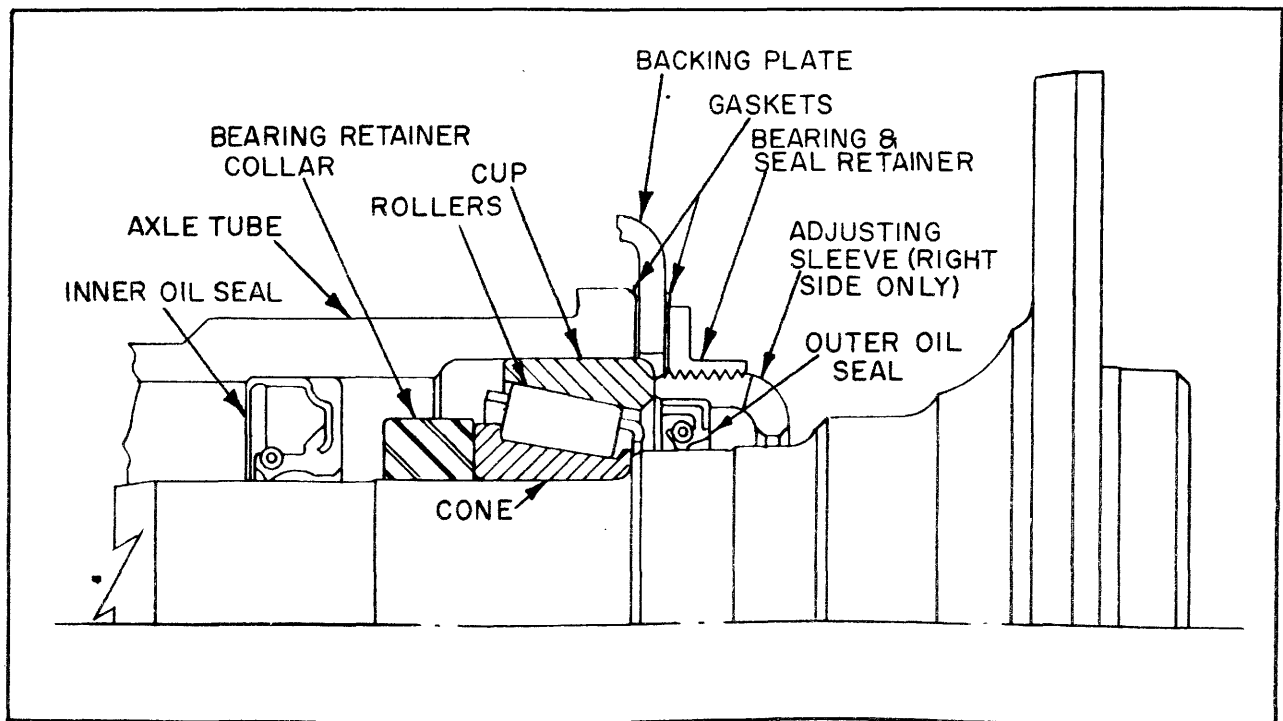


Fig. 1-Aerobus Rear Axle and Bearing Assembly

6. Remove the roller cage that protrudes beyond the outer cup by severing the bridges in the retainer with a chisel.
7. With the protective sleeve in place over the oil seal seat, grind off a section of the inner bearing race flange so that the rollers can be removed with needle nosed pliers.
8. After all rollers have been removed, pull roller cage out as far as possible and cut through with a pair of side cutters and remove.
9. The outer bearing race can now be removed. Attach a puller or use a press to remove the inner cone race.
5. Press bearing retaining collar onto shaft against bearing cone. (Load to press retainer onto shaft must be 6000 lbs minimum).
6. Install new gaskets on both sides of brake anchor plate.
7. Slide the axle shaft assembly into position being careful not to damage the new inner seal.
8. When installing the right side axle shaft assembly, back the threaded bearing adjuster out until it is at least flush with the inside face of the retainer.
9. Position the retainer against the face of the axle housing, be sure the axle shaft is in its proper position, and tighten the retainer bolts to 50-60 foot pounds torque.

Reassembly

1. Clean axle shaft in solvent and inspect for fatigue signs, worn or scored oil seal seats, wear or accumulated metal deposits on thrust block ends of axle shaft or excessively worn splines. Machine surfaces can usually be satisfactorily cleaned. If abnormal conditions are noted, the shaft should be replaced.
2. Install new outer oil seal in seal retainer (always replace outer oil seal regardless of condition.)
3. Coat lip of seal with lubricant and slide onto axle shaft with open end of seal retainer and seal lip toward spline end of axle shaft.
4. Lubricate new bearing assembly and press onto axle shaft using proper tool. Be certain that inner cone seats firmly against shoulder on axle shaft. (Load to press bearing onto shaft must be 1600 lbs. minimum).
10. With a dial indicator mounted on the brake backing plate, tighten the threaded bearing adjuster until there is "O" end play in the shaft. Loosen the nut approximately three notches to obtain .005-.010 end play. Secure locking tabs.
11. If the left axle shaft bearing or seal has been replaced, then it will be necessary to remove the right wheel and brake drums and rotate the threaded adjuster at least one full revolution counterclockwise to loosen the bearing adjustment so that false readings are not obtained when the nuts are tightened on the retainer plates. After the axle shaft is assembled, proceed with step 10.

NOTE: At this point the axle and bearing are loose.