Instruction Sheet for Flexiride® Half Axles

⚠ CAUTION ⚠

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You must follow the maintenance procedures to prevent damage to important structural components. Damage to certain structural components such as wheel bearings can cause the wheel end to seize and overheat or come off of the axle. Loss of a wheel end while the trailer is moving can cause you to lose control and lead to an accident, which can result in serious injury or death.

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Flexiride® Half Axles must be ***bolted (using all bolt holes)*** to a base plate which fully supports the Flexiride® Half Axle. The optional base plates supplied for Flexiride® Half Axle mounting must also be fully supported for the entire length of the plate. ***Any welding to the Flexiride® Half Axle will critically alter the rubber and bonding adhesive properties and void the warranty.***

Hub Removal - Standard Bearings

Whenever the hub equipment on your axle must be removed for inspection or maintenance follow this procedure:

1. Elevate and support the trailer unit per manufacturers' instructions.
2. Remove the wheel.
3. Remove the grease cap by carefully prying progressively around the flange of the cap. If the hub is an oil lube type, then the cap can be removed by unscrewing it counterclockwise while holding the hub stationary.
4. Remove the cotter pin from the spindle nut or, in the case of lubricated spindles versions, bend the locking tang to the free position.
5. Unscrew the spindle nut (counterclockwise) and remove the spindle washer.
6. Remove the hub from the spindle, being careful not to allow the outer bearing cone to fall out. The inner bearing cone will be retained by the seal.
7. For 5,200 lb. and 7,000 lb. half axles, a hub puller should be used to assist in drum removal.

Bearing Lubrication - Grease

Along with bearing adjustment, proper lubrication is essential to the proper function and reliability of your trailer axle. Bearings should be lubricated every 12 months or 12,000 miles. The method to repack bearing cones is as follows:

1. Place a quantity of grease into the palm of your hand.
2. Press a section of the widest end of the bearing into the outer edge of the grease pile closest to the thumb forcing grease into the interior of the bearing.
3. Repeat this while rotating the bearing from roller to roller.
4. Continue this process until you have the entire bearing completely filled with grease.
5. Before reinstalling, apply a light coat of grease on the bearing cup.

Recommended Wheel Bearing Lubrication Specifications

Grease:

Thickener Type	Lithium Complex
Dropping Point	215° C (419° F) Minimum
Consistency	NLGI No. 2
Additives	EP, Corrosion & Oxidation Inhibitors
Viscosity Index	80 Minimum

Approved Sources:

Mobil Oil	Mobilgrease HP, Mobilith AW2
Exxon/Standard	Ronex MP
Kendall Refining Co.	Kendall L-427
Ashland Oil Co.	Valvoline Multipurpose GM
76 Lubricants	76 Multiplex EP
Citgo Petroleum	Lithoplex MP#2
Mystik	Mystik JT-6 Hi Temp Grease
Pennzoil ProdUct Co.	Premium Wheel Bearing Grease 707L

Note: *DO NOT mix different types of grease thickeners. The grease that The Universal Group Llc.recommends has a Lithium Complex thickener. Mixing this grease with a Barium, Calcium, Clay, or Polyurea soap based thickener agent will cause adverse effects. This may include causing the two greases to harden,separate, become acidic, or pose other hazards and damage to the bearings.*

Bearing Adjustment and Hub Replacement

If the hub has been removed or bearing adjustment is required, the following adjustment procedure must be followed:

1. While *turning the hub*, tighten the spindle nut with a 12 inch wrench, (approximately 50 ft-lbs.), until a definite drag is felt in turning the hub.
2. Without disturbing the hub and bearings, (*do not turn the hub*), back off the spindle nut to remove all torque.
3. Adjust spindle nut *"Finger Tight"* to nearest snug alignment of slots and cotter pin hole.
4. Install the cotter pin, (for regular spindles) or tang washer (for lubricated spindles), in order to lock the bearing adjustment and prevent the spindle nut from backing off.
5. Check the Bearing Adjustment:
   a.) Check that the hub rotates freely.
   b.) Check the hub for excessive end play. Grasp the hub and push and pull it, in and out, along the spindle axis to detect "End Play". A slight movement, up to .012", is acceptable, but pronounced looseness is not.
   c.) If the hub does not rotate freely, or has excessive end play, the bearing adjustment is re-done.
6. Install dust cap with installation tool or rubber mallet to avoid damage or marring of the dust cap.

Lubricated Spindles

The procedure is as follows:

1. Remove the rubber plug from the end of the grease cap.
2. Place a standard grease gun onto the grease fitting located in the end of the spindle. Make sure the grease gun nozzle is fully engaged on the fitting.
3. Pump grease into the fitting. The old displaced grease will begin to flow back out the cap around the gun nozzle.
4. When the new clean grease is observed, remove the grease gun, wipe off any excess, and replace the rubber plug in the cap.
5. Rotate hub or drum while adding grease.

Important note: *Most mounted tires will deflect fairly easily when enough hand pressure is applied while shaking the tire. Excessive pressure may result in the perception that the bearings' tilt is greater than it actually is.*

Attaching Fasteners

Grade 5 automotive fine thread bolts with lock washers must be used to attach Flexiride® Half Axles to the base plates or frame surface.

Torque bolts as follows:

Nom. Size & T.P.I.	Torque Range
5/16 - 24	18 – 20 ft lbs
3/8 - 24	30 – 25 ft lbs
1/2 - 20	75 – 85 ft lbs

Maintenance

Do not expose Flexiride® Half Axle to grease,oil or fuel. If exposed, it will damage the rubber. Remove any grease, etc. with detergent and water only.

All trailer axles should be inspected once a year. Boat trailer axles should be checked twice a year. If you need complete instructions, contact your local trailer or marine dealer.

Every time the vehicle is used:

1. Check tire pressures
2. Check wheel bolt torque to 90 ft lb
3. Do not exceed rated load
4. 60% of trailer load should be in front of the trailer axle .