

WHEELS—WHEEL BEARINGS

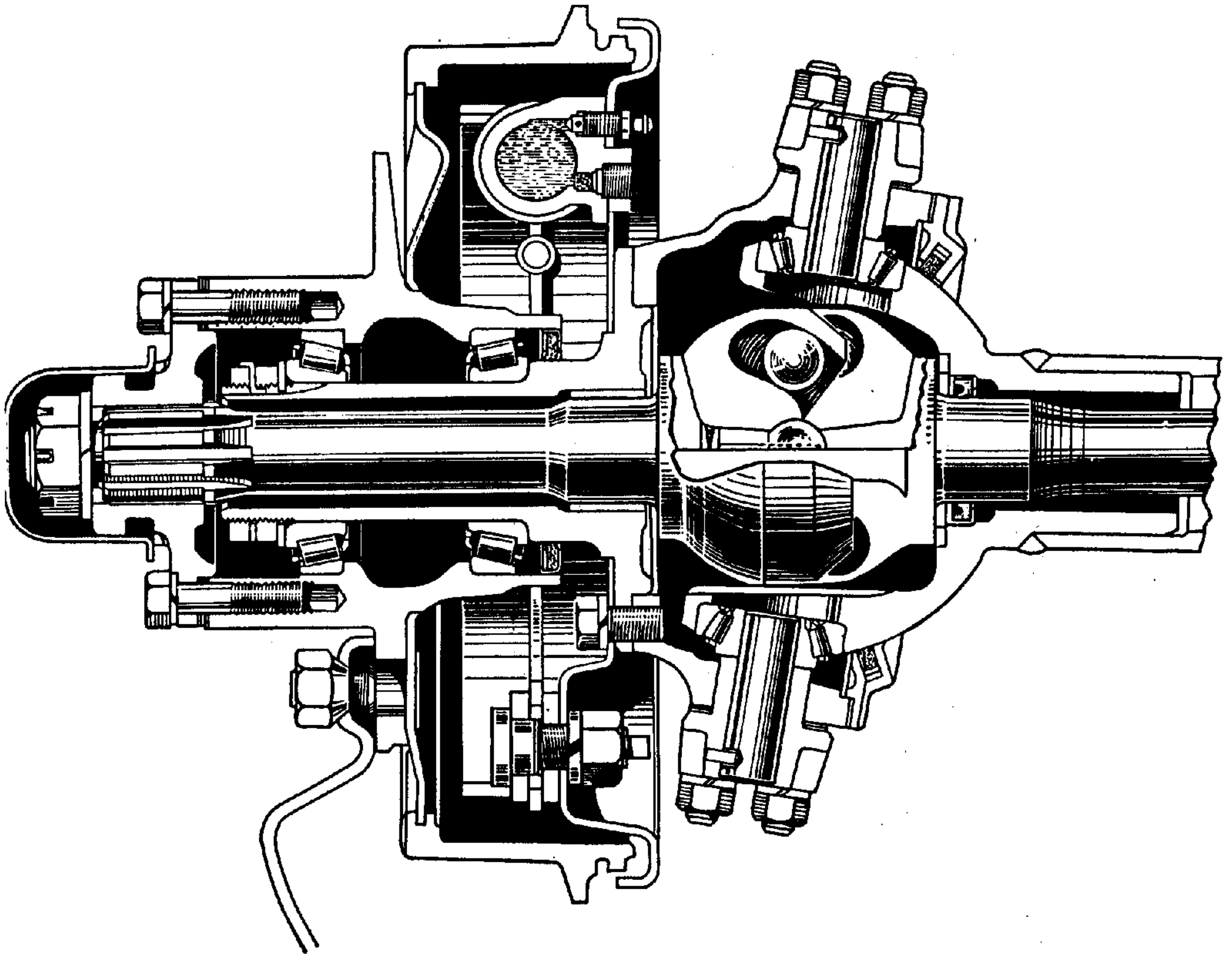


FIG. 1—FRONT WHEEL

The front and rear wheels are carried on two opposed tapered roller bearings. Bearings are adjustable for wear and their satisfactory operation and long life depends upon periodic attention and correct lubrication.

Wheel bearings cannot be checked for adjustment properly unless brakes are free from dragging on brake drums and are in fully released position.

Front Wheel Bearings

1. Raise front end of vehicle with jack so that tires clear the floor.
2. With hands test sidewise shake of the wheel. If bearings are correctly adjusted, shake of wheel will be just perceptible and wheel will turn freely with no drag. If bearing adjustment is too tight, the rollers may break or become overheated. Loose bearings may cause pounding.

If this test indicates adjustment is necessary, proceed as follows:

Adjustment

1. With wheels still on jack remove hub cap, axle shaft nut, washer and driving flange. Wheel bearing adjustment will then be accessible.
2. Bend lip of nut lock so that adjustment locknut and lock can be removed.
3. Tighten adjusting nut until wheel binds, at the same time rotating wheel to make sure all surfaces are in proper contact.
4. Then back off nut about $\frac{1}{8}$ turn or more if necessary making sure wheel rotates freely.
5. Replace lock and do not fail to bend over locknut.
6. Check adjustment and reassemble driving flange. When front hub is completely assembled, test wheel shake before removing jack.

Rear Wheel Bearings

Raise wheel on which adjustment is to be made by placing jack under axle housing. Test wheel for loose bearing. If adjustment is necessary proceed as follows:

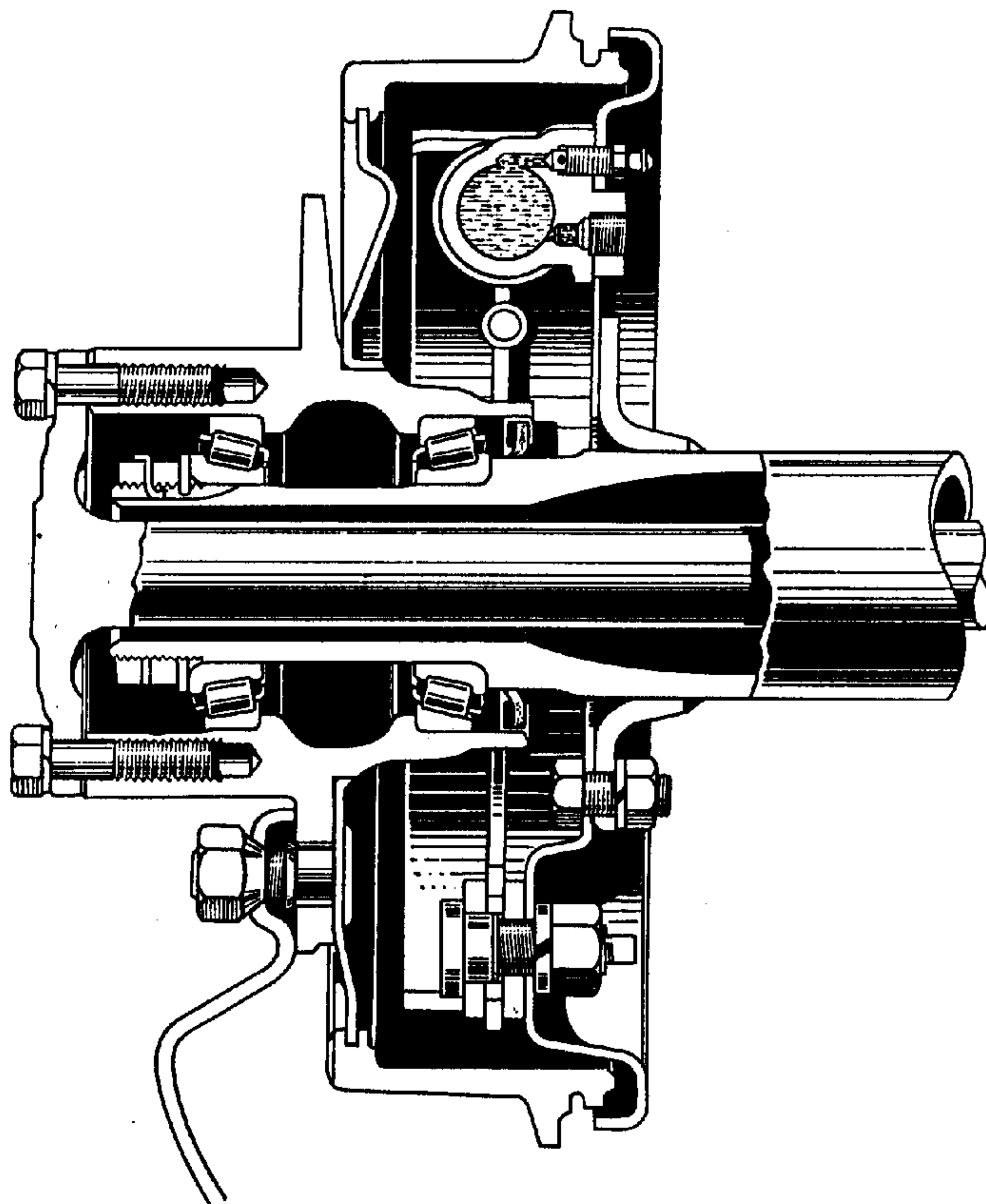


FIG. 1—REAR WHEEL

Adjustment

1. Remove axle shaft flange cap screws and axle shaft.
2. Bend lip of nut lock so that locknut can be removed.
3. Tighten inner adjusting nut until wheel binds, at the same time rotate wheel to make sure all surfaces are seating properly.
4. Back off nut $\frac{1}{8}$ turn or more if necessary until wheel turns freely.
5. Replace nut lock and locknut and be sure to bend over lock.
6. Replace axle shaft with gasket and install cap screws.

Lubrication Wheel Hub Bearings

Under normal operating conditions the hub bearings require lubrication only every 6,000 miles when hubs and bearings should be removed and thoroughly washed in suitable cleaning fluid.

Bearings should be given more than a casual cleaning. Use a clean stiff brush and remove all particles of old lubricant from bearings and hubs.

After bearings are thoroughly cleaned inspect for pitted races and rollers, also check the hub oil seal.

Repack bearing cones and rollers with grease and reassemble hub in reverse order as that of dismantling, testing bearing adjustment as covered under "Adjustment"

When reinstalling hubs and drums the hubs with the right hand threaded studs are placed on the right hand side of vehicle. The left hand threaded studs are on the left hand side, viewing vehicle from the rear.

Brake Drum

The brake drums are attached to the wheel hubs by five serrated bolts. These bolts are also used for mounting the wheels to the hubs.

To remove a brake drum, drive out the serrated bolts and remove the drum from hub.

When placing drum on hub, make sure that the contacting surfaces are clean and flat. Line up holes in drum with those in hub and force drum over shoulder on hub. Insert five new serrated bolts through drum and hub and drive the bolts into place solidly. Place a round piece of stock in vise

approximately the diameter of the head of the bolt and place hub and drum assembly over it so that it rests against head of the bolt then swedge bolt into countersunk section of hub with punch.

The runout of the face of the drum should be within .003". If runout is found to be greater than .003" it will be necessary to reset bolts to correct the condition.

Left hand hub bolts are identified with an "L" stamped on threaded end of bolt.

The left hand threaded nuts can be identified by a groove around the hexagon faces.

Hubs containing the left hand threaded hub bolts are installed on the left hand side of vehicle.

Tires

The most important factor of safe vehicle operation is systematic and correct tire maintenance. Tires must sustain the weight of a loaded vehicle, withstand more than ordinary rough service, provide maximum safety over all types of territory, and furnish the medium on which the vehicle can be maneuvered with ease.

Although there are other elements of tire service, inflation maintenance is the most important and in many instances the most neglected. Tire pressures should be consistently maintained for safe operation.

An under inflated tire is dangerous and too much flexing causes breakage of the fabric resulting in a

failure. Over-inflation in time may cause a blow-out.

To remove the tire from a drop center rim, first deflate completely and then force the tire away from the rim throughout its entire circumference until the bead falls into the center of the wheel rim, then with a heavy screw driver or tire removing tool, placed across the wheel from the valve, remove one side of the tire at a time and remove inner tube. (See "Combat Wheels").

Installation of tire is made in the same manner by first dropping one side of the tire into the center of the rim and with tire tool spring bead over the wheel rim using care not to damage the inner tube.

When tightening the wheel stud nuts, alternately tighten opposite nuts to prevent wheel runout. After nuts have been tightened with the wheel jacked up, lower jack so wheel rests on the floor and retighten the nuts.

Combat Wheels

Combat wheels are identified by eight bolts holding together the two halves of the tire rim. When removing a tire, first remove the wheel and be sure to deflate the tire before removing the rim nuts. After removing the rim nuts, remove the outer rim then remove the tire after which remove the bead locking ring and tube from the tire. Mounting the tire is the reverse procedure. Do not put too much air in the tube when mounting. Combat wheel rim bolt and hub bolt torque reading 60-70 ft. lbs.

WHEEL SPECIFICATIONS

Wheels:

Make Kelsey-Hayes
 Rim 16x4.00 Drop Center-16x4.50 Combat Wheels
 Tires 16 x 8.00
 Type Mud and Snow non-directional Tread
 Tire Pressure 30 lbs.

Bearings—F and R

	Inner	Outer
Make	Timken	Timken
Cone and roller	18590	18590
Cup	18520	18520