

MANUAL ADJUST CONVENTIONAL HUB

Wheel Bearing Adjustment Procedures

Reference TMC RP618

NOTE: Always follow your company's safety procedures.

1. Lubricate the bearings with clean lubricant of the same type used in the axle sump or hub assembly.
2. Install the wheel hub and bearings onto spindle and torque the inner adjusting nut to 200 ft-lbs while rotating the hub assembly.
3. Back off the inner adjusting nut one full turn. Rotate the hub.
4. Re-torque the inner adjusting nut to 50 ft-lbs while rotating the wheel hub assembly.
5. Back off the inner adjustment nuts as per chart below.
6. Install the cotter pin or locking washer.
7. Install and torque the outer jam nut as per chart below.
8. Use a dial indicator to verify acceptable end play of .001" - .005"
(NOTE: If end play is not within specification, readjustment is required.)
9. Be sure to install or activate the locking device.

| Axle Type | Axle Spindle Threads Per Inch | Spindle Nut Type | Final Spindle Nut Backoff | Jam Nut Torque (ft-lbs) |
|--------------------------|-------------------------------|---|---------------------------|--|
| Steer (Front non-driven) | 12 | Single Nut with Cotter Pin | 1/6 Turn | Install Cotter Pin to Lock Spindle Nut Into Position (From Step 6) |
| | 18 | | 1/4 Turn | |
| | 12 | Double Nut System With Bendable Tang Washer or Dowel Pin and Washer | 1/3 Turn | 200 - 300 |
| | 14 | | 1/2 Turn | |
| | 18 | | | |
| Drive | 12 | Double Nut System Dowel Pin and Washer | 1/4 Turn | 300 - 400 |
| | 16 | | | |
| | 12 | Double Nut System With Bendable Tang Washer | 1/4 Turn | 200 - 275 |
| | 16 | | | |
| Trailer | 12 | Double Nut System With Bendable Tang Washer or Dowel Pin and Washer | 1/4 Turn | 200 - 300 |
| | 16 | | | |

NOTICE: Use the proper hubcap for the type of lubricant used.



CAUTION: Failure to fill the hub with the correct amount of lubricant can cause premature failure of the hub assembly.

MANUAL ADJUST CONVENTIONAL HUB

Torque Specifications

| Item | Measurement | Torque (ft-lbs) | Notes |
|---------------------------------------|---|--|--|
| Ball Seat Wheel Nut | 3/4 - 16 1 1/8 - 16 | 450 - 500 450 - 500 | Always tighten the top nut first or pilot damage may result. Do not lubricate the faces of the hub, drum, wheel, or on the ball seats of the wheel nuts. The last nut rotation should be with a calibrated torque device. |
| Hub Pilot Wheel Nut | M22 x 1.5 | 450 - 500 | Always tighten the top nut first or pilot damage may result. Apply two drops of oil between the nut and nut flange, and two or three drops to the outermost second or third thread of the wheel studs. Lightly lubricate the wheel pilots on the hub. The last nut rotation should be with a calibrated torque device. |
| Drive Studs, Installation Torque | 3/4 - 16 5/8 - 18* 9/16 - 18 1/2 - 20 | 55 - 75 55 - 75 40 - 60 40 - 60 | Torque value is for drive axle stud installation only. For drive axle flange nuts, see axle manufacturer's recommendations for proper torque. <i>*For Aluminum hubs, target 50 ft-lb</i> |
| Hub Cap | 5/16 - 18 | 12 - 18 | Minimum SAE Grade 5 fasteners, flat washers only. |
| Oil Fill Plug | 1/4 NPT 3/8 NPT 9/16 - 18 | 20 - 25 20 - 25 20 - 25 | - - O-Ring Style |
| Bolt-On ABS Ring Screw | 8 - 32 1/4 - 20 | 18 - 22 in-lbs 125 - 135 in-lbs | |
| Disc Brake Rotor Screw | M8 x 1.25 M16 x 1.5 1/2 - 20 9/16 - 12 5/8 - 11 5/8 - 18 | 18 - 22 190 - 210 100 - 120 130 - 150 190 - 210 210 - 230 | |
| Disc Brake Rotor Nut (Stud in Hub) | 5/8 - 18 | 190 - 210 | |
| Drive Axle Flange Nuts | | | See axle manufacturer's recommendations for proper drive axle nut torque. |

INSTRUCTION NOTE: Always tighten the top nut first to fully seat the brake drum on the drum pilot and against the hub face. See the adjacent diagram for bolt tightening sequence, and tighten in order from 1 through 8 or 10, depending on the bolt pattern.

For updated and complete instructions refer to TMC RP618.

