

103-9111 INSTRUCTIONS

1. Remove wheels, tires, steering arm and brake components from spindle.
2. Remove nut from kingpin lock bolt and drive out lock bolt with a brass hammer or drift. Remove grease fittings.
3. Working from the bottom of spindle, use a hammer and suitable drift to drive kingpin up out of spindle/axle. Remove spindle noting the location of the thrust bearing and / or any shims (if used) to ensure proper reassembly.
4. **NOTE::** If kingpin is seized in axle and cannot be driven out, soak with penetrating oil and try again in 24 hours. If still unsuccessful, remove the axle assembly from vehicle and have kingpin pressed out. It is not recommended to use heat to free kingpin from axle boss. Excessive heat can deform or embrittle the axle boss and spindle.
5. Thoroughly clean and inspect spindle and axle for signs of damage, scoring, or cracks. The new kingpin should be a snug fit in the axle bore and not have any play. If it is tight the bore can be cleaned up lightly with a brake hone. If there is excessive play the axle will have to be removed and reamed for oversized kingpin and bushings.
6. **NOTE:** Replacement of the bushings requires specialized equipment. The bushings must be reamed to final size after installation. It is recommended that the spindles be taken to a competent machinist for this work.
7. Using a suitable arbor, remove old bushings and press new bushings into the spindle, aligning the grease hole of the bushing with the grease fitting hole in the spindle.
8. **IMPORTANT!** Incorrect installation of bushings will cause premature wear of kingpin and bushings.
9. Align hone/ream both bushings in unison for a final clearance of .001" to .0015".
10. Pack new thrust bearings with quality bearing grease. Install new grease fittings.
11. Insert old kingpin up through lower arm of spindle approximately 1". Install the thrust bearing on kingpin with metal dust shield up toward the bottom of axle boss. (Some applications may require a spacer on top of the thrust bearing). Position spindle on axle, sliding kingpin up into axle boss. Measure clearance between the top of axle boss to under side of upper arm of spindle. If gap is greater than .015" add shim(s) as necessary to obtain proper clearance (.005" - .015").
- 12) Install cup washer on kingpin with flat side against head of kingpin. Place felt washer on kingpin and slide up into open side of cup washer.
- 13) Orient notch of new kingpin toward center of axle and push kingpin down through shims and top arm of spindle, aligning the notch in the kingpin with the lock pin hole.
- 14) Install lock pin (flat of pin engaged in kingpin notch) and nut. Torque nut to 25 ft lbs.
- 15) Repeat for other side of vehicle.
- 16) Install steering arms, brake components, wheels and tires.
- 17) Grease spindle bushings and perform front end alignment.

