



TECH TIPS – BRAKES

MODULE ONE

BRAKE JOB CRITICAL-REVIEW COMPONENTS

Brake Drums

- The maximum allowable brake drum diameter is stamped or cast into the outer edge of the drum. Place a brake drum diameter gauge inside the drum. Take several measurements within 90 degrees of each other at the open and closed edges of the drum's friction surface.
 - If any of these measurements are 0.12-in, replace the brake drum.
 - If a brake drum is out-of-round, replace the drum.



Slack Adjusters

- Verify the retaining bolt or snap ring is correctly secured in the camshaft.
- Check the slack adjuster gear torque – use a lb-in torque wrench and turn, adjusting the nut counterclockwise.
 - If the torque value is less than 45 lb-in as you rotate the gear, the slack adjuster is operating correctly.
 - If the torque value exceeds 45 lb-in as you rotate the gear, replace the slack adjuster.



Shoes/Linings

- Measure the lining wear. Linings must have a greater than 0.25-in thickness at the center of the brake lining. Inspect for cracks, separation from the brake shoe table and loose rivets.
- Always use new brake shoe hardware – rollers, roller retainers and return springs.
- Inspect camshafts and camshaft bushings for wear.
- Reduced stopping distance (RSD) brake assemblies must be serviced with RSD brake shoe and lining assemblies to maintain braking capability. Use of non-RSD friction material could negatively impact the safe operation of the vehicle.
- Replace all wheel seals.



Brake Chamber

- Check the brake chamber for looseness or damage.
- Ensure retaining nuts are tightened to specification.
- Verify the push rod is exiting the chamber at a 90 degree angle and it returns completely after each brake application.
- Verify the chamber size (20, 24, 30, etc.) the chamber type – either standard or long stroke – are the same on each side of the axle.
- Inspect the chamber bracket for cracks and damage.
- Verify the caging bolt, nut and washer are installed, and the caging bolt cover is secure.

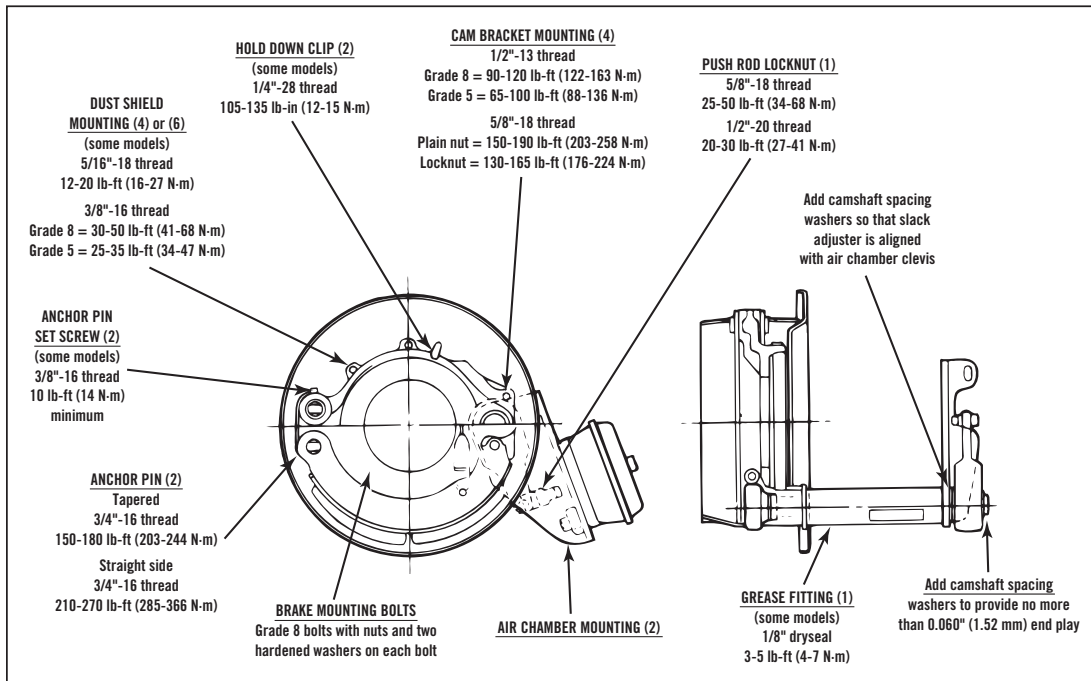


Camshafts

- Before removal of the automatic slack adjuster and camshaft, verify that cam-to-bushing radial free play is within spec.
- Check the camshaft for cracks, wear or corrosion. Check the cam head bearing journals and splines. Replace worn or damaged camshafts. Install new bushings and seals whenever you install a new camshaft.
- The bushing wears in one direction; it is important to rotate the camshaft in all directions when checking for radial free play.
 - If the radial free play is less than 0.03-in (0.76 mm) – do not replace the bushing and seals.
 - If radial free play is more than 0.03-in (0.76 mm) – replace the bushing and seals.



CAM BRAKE TORQUE SPECIFICATIONS



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