



READING THE BRAKE SHOE & FRICTION MATERIAL WEAR

When performing a complete brake service on heavy-duty vehicles, do not just throw the old shoes in the core bin. The servicing technician should look at the shoes before discarding them. The lining wear should be even around the circumference of the brake assembly, and from inboard to outboard. More wear on the top, bottom or one side could indicate that peripheral brake hardware has become worn out. When that is the case, brakes cannot be properly adjusted or maintained without servicing the offending parts.

WEAR CONDITIONS

Tapered wear is a condition where the brake shoe shows more wear at the inboard or outboard side, rather than wear that is uniform. It is often caused by brake drum stretch ("bellling"). Worn anchor pins or pin holes and bushings, or outer S-cam bushings can allow applied force to push the shoes to one side, resulting in tapered wear. This condition often is accompanied by outer edge abrasion on the brake shoes. This is caused by the brake shoes tracking out of alignment due to worn parts. Reusing shoe rollers and anchor pins, therefore, is not recommended.

Do not confuse tapered lining wear with a high ridge on the inside of the drum. This is actually beneficial, as it prevents a lip from being etched into the drum. It also keeps water and contaminants out of the brake assembly.

Unequal lining wear between the leading and trailing ends of a shoe can be the result of a weak return spring, a worn out S-cam bushing or an out-of-arch brake shoe. Attempting to adjust a brake in any of these conditions will result in a dragging brake and high contact pressure at one spot of the lining. This will lead to rapid lining wear and heat damage to the drum.

If any linings are cracked, it is a good bet that they were loose on the brake shoe. This can be caused by a shoe that is out of arc, rust buildup on the shoe surface, or improper riveting. When replacing the brake shoes, make sure that the lining is tight and follows the contour of the shoe.

ALWAYS CHECK REPLACEMENT SHOES DIMENSIONS & NEVER ASSUME!

If linings are contaminated with oil or grease, correct the cause before relining. The problem is usually a leaking oil seal, too much grease on a grease-type wheel bearing or camshaft bushing, or from careless handling. Never clean a lining rather than replace it. This practice can cause imbalance in braking and loss of control. Complete hardware replacement is highly recommended at each friction reline.

The key to a good reline is to remember that brakes are a system of components working together to get the job done safely and properly. If any part of the system is not functioning properly, the system is not right.