



RESTORING S-CAM BRAKE PERFORMANCE

Brake service is more than just replacing the friction material and adjusting it to the proper clearance. Restoring the brake system to its original condition will give you safer stops and longer intervals between relines. Cost per mile of any heavy-duty vehicle is the bottom line.

When replacing the friction material on a reline, it cannot be the only thing that you look at in doing the job. Why? Because the friction material is one component in a **system** that needs to function with the other components. Observing the condition of all brake components when performing the brake reline will explain premature lining wear or brake performance problems and head off future troubles.

Things To Examine For Performance

Lining Thickness Most experts will agree that the minimum acceptable lining thickness is $\frac{1}{4}$ " which is slightly above the rivet heads. When the lining is less than $\frac{1}{4}$ " there is a possibility of drum scoring and camshaft turnover. That is why it is extremely important to make reline time an opportunity to restore the total air brake system to optimum performance.

Slack Adjusters Follow the manufacturer's recommendations for adjusting. It may be necessary to remove the self-adjusting pawl before the slack can be manually adjusted. Inspect the cam splines for wear. Replace any camshaft that shows a combined clearance of .020" free movement between slack and camshaft. Also check the clevis for the same wear clearance. It is a good idea as well to determine if the chamber pushrod is to size.

Interpret Shoe Wear Don't just throw the old shoes away in the core bin. Look at them. Lining wear should be even around the circumference of the brake assembly, and from the inboard to the outboard. More wear on the bottom; top, or one side could indicate that brake hardware is worn. Tapered worn linings, unevenly worn linings, and linings that are severely cracked tell you something else is not right in the system. When that is the case, brakes can't be adjusted properly. Worn brake shoes tell the story of the entire system's operating health.

Brake Drums and Hardware Brake drums that are oversized require attention to the amount of oversize. If the drums are re-used and are .060" oversized, standard lining will not give you the performance and stopping ability of a new drum. Less lining-to-drum contact causes excessive heat and thus shortens lining life. Brake hardware is the other thing that reduces lining life if it is not replaced at each reline. Dragging brake shoes and improperly positioned brake shoes will not adjust properly and cause many problems over the life of the new brake shoes and friction.

The key to a good reline is to remember that brakes are a system of components working together to get the job done. If part of the system isn't right, the system isn't right. A reline covering all the points discussed does cost more up front, but it will pay for itself in long life and trouble free operation.