COBRA® LF
Low Friction Composition Brake Shoes for Locomotives
The Direct Replacement for Cast Iron Shoes
In 1997, Railroad Friction Products Corporation introduced a new product to the railroad industry, the COBRA LF Low Friction Composition Brake Shoe. Designed for use on locomotives equipped with cast iron shoes, this innovative new product provided a cost-effective alternative to cast iron shoes, while offering the benefits of longer life, lighter weight and less maintenance. And, best of all, COBRA LF Composition Brake Shoes were designed as a direct replacement for cast iron shoes. This means there are no additional conversion costs as are normally incurred when converting from cast iron to high friction composition shoes.

The New and Improved COBRA LF Composition Brake Shoe

Now, thanks to the most advanced research and development program in the industry, RFPC has improved the COBRA LF Composition Brake Shoe with new friction material and the addition of a cast iron insert in the center of the shoe. The improved friction material is a completely new formulation using the latest mixing technology that provides significantly longer shoe life. The cast iron insert is welded to the backing plate and extends toward the face of the shoe. This insert conditions the wheel tread, thereby reducing the potential for wheel damage.

Benefits of the New & Improved COBRA LF Composition Brake Shoes

Stop Distances

As shown in the chart, the stop distance of a locomotive equipped with COBRA LF Composition Brake Shoes is comparable to that of a locomotive equipped with cast iron shoes over the entire speed range.

No Conversion Costs

Since the newly designed COBRA LF Composition Brake Shoes operate under the same brake cylinder pressure as cast iron shoes, there are absolutely no conversions to be made, no pressures to be changed, and no air brake equipment to be changed out or added on. Simply remove the old cast iron shoes and replace with the new COBRA LF Composition Shoes.

Longer Shoe Life

Extensive testing at our Dynamometer facility shows that COBRA LF Composition Brake Shoes last significantly longer than cast iron shoes and first generation low friction shoes.

Longer Wheel Life

The cast iron insert built into the shoe is more abrasive than the composition material and works continuously to remove minor tread damage and improve the condition of the tread. This leads to longer wheel life.
Lighter Weight
COBRA LF Composition Brake Shoes weigh approximately one-third as much as the cast iron shoes they replace. For example, an offset cast iron locomotive brake shoe (G-5191) weighs 23 pounds; the replacement COBRA LF (V-551) weighs 7-3/4 pounds.

Safety
Since there is no handling of the heavier cast iron shoes, there is also less chance of injury or back strain.

Additional Cost Savings
The extended life of COBRA LF Composition Brake Shoes leads directly to other cost-saving benefits, such as reduced inventory and lower labor costs due to less frequent brake shoe changeouts.

There’s No Mistaking These Shoes
In addition to the many benefits built into the new COBRA LF Composition Brake Shoe, we’ve taken numerous precautions to ensure that the low friction shoes are not mistaken for high friction shoes.

Rejection Lugs
COBRA LF Composition Brake Shoes will fit into brake heads designed to accept cast iron shoes, but the rejection lugs will not permit the shoes to be applied to brake heads designed for high friction composition brake shoes.

Color Coding
Every new COBRA LF Composition Brake Shoe is painted bright yellow for immediate identification. This will alert the installer as to the type of replacement shoe required even before the old shoes are removed.

Shipping Container
Each shipping container is given the same yellow color coding as the shoes, and carries warning labels indicating that the shoes are low friction and are to be used as a replacement for cast iron shoes only.

Installation Warnings
“COBRA SHOE LOW FRICTION” is stamped into each brake shoe backing plate. In addition, a highly visible warning sticker is applied to each shoe. It cautions against trying to install the shoe on vehicles designed for high friction composition brake shoes.

Cast iron insert removes minor wheel tread defects before they become problems.
# COBRA® LF
Low Friction Composition Brake Shoes
Shoe Identification Chart

<table>
<thead>
<tr>
<th>RFPC Part Number</th>
<th>Replaces Part Number</th>
<th>Shoe Style</th>
<th>Dimensions Length x Width</th>
<th>Average Weight</th>
<th>Pallet Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-551</td>
<td>V-501</td>
<td>Offset</td>
<td>14” x 3”</td>
<td>7-1/2 lbs.</td>
<td>176</td>
</tr>
<tr>
<td>V-552</td>
<td>V-502</td>
<td>Flanged</td>
<td>16” x 6-1/4”</td>
<td>16-1/4 lbs.</td>
<td>72</td>
</tr>
<tr>
<td>V-553</td>
<td>V-503</td>
<td>Full Width</td>
<td>14” x 3-3/8”</td>
<td>7-3/4 lbs.</td>
<td>176</td>
</tr>
<tr>
<td>V-555</td>
<td>V-505</td>
<td>Full Width</td>
<td>18” x 3-3/8”</td>
<td>9-1/2 lbs.</td>
<td>136</td>
</tr>
</tbody>
</table>

Other styles available upon request

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