


| No. Req'd. | Description. |
| ---: | :--- |
| 6 | Brake Shoe |
| 2 | $\# 5-40 \times 7 / 8$ Model Hex Bolt |
| 4 | $\# 4-40 \times 3 / 4$ Model Hex Bolt |
| 30 | $\# 2-56 \times 3 / 8$ Model Hex Bolt |
| 30 | $\# 2-56 \times$ Model Hex Bolt |
| 4 | $\# 4-40 \times 3 / 8$ Flat Hd. Screw |


| No. Req'd. | Description |
| :---: | :---: |
| 10 | $\# 5-40 \times 3 / 4$ Model Hex Bolt |
| 4 | $\# 5-40 \times 1 / 2$ Model Hex Bolt |
| 2 | $\# 5-40 \times 1$ Model Hex Bolt |
| 18 | $\# 5-40$ Model Hex Nut |
| 8 | $\# 4-40$ Model Hex Nut |
| 2 | $\# 12-24$ Hex Nut |

Right. A fireman's-side Brake Cylinder on \#169 Note the clutter of the brake linkage.

Below. Here's a similar view on \#168. The frame to boiler linkage has not been included in this series but foot notes can be made on the original frame and this linkage if there is enough call for it.


in the bearing is beyond this writer. The second hole does make a left- and righthand part but a hole in the center of a shorter part does the same thing. Oh well, we have to remember we are modeling and not doing the original design work.

## 165 REAR BRAKE HANGER

This is a three-piece fabrication and silver solder assembly. The .008 dimension ( $1 / 16$ inch on the locomotive) may be just what is left after many years of wear but it is a good point for decimal dimensioning.

## 164 REAR BRAKE EQUALIZER

The headless pin joins the Brake Shoe, 164 and 165 . Silver solder the hub and the $.125 \times .375 \mathrm{arm}$, locate and drill the .125 and .218 diameter holes, then a few strokes of the file will complete the part. For modeling purposes and convenience, you may choose to make this headless pin .187 diameter so that all Brake Shoes will be alike. Remember to make the same mistake on 165 also.

## 166, 322,323 BRAKE SHOE SHAFT

Trim the castings to length, locate and drill the ends of each casting for the steel pins. Silver solder and finish by drilling the holes. A note to remember: the optional dimensions are to space the parts for $43 / 4^{\prime \prime}$ track.

## 167 CENTER BRAKE LINK

A form-first, layout-and-drill type of part.

## 139 BRAKE ROD STRAP

A nice addition to a model to only satisfy the worm's eye viewer. This is one of the few "safety hangers" that we documented.

## 199 BRAKE LEVER

The $.125 \times .187$ round end slot allows the linear action of the Brake Cylinder Rod to swing without binding on the long radius of travel of the lever.

## BRAKE SHOE

These castings need to be contoured to match the wheel tread where they are applied. Remember that the Rear Shoes should be bored for .218 diameter pin unless you have chosen to standardize on the .187 diameter.

## 120 FILLER PLATE

Lay out the plate as shown but be sure to check how it looks when you fit parts 202 and 203 (next chapter) to the Frame. 'The right hand edge should lay parallel to the front edge of 202 and 203 Brake Cylinder Brackets when mounted to the 147 Frame. Turn the stub shaft and assemble as a left- or a right-hand assembly, then silver solder and/or rivet together.


