Federal Railroad Administration, DOT

(b) Maintenance. Crank pin collars and collar fasteners shall be maintain- ed in a safe and suitable condition for service.

RUNNING GEAR

§ 230.98 Driving, trailing, and engine truck axles.

(a) Condemning defects. Driving, trailing, and engine truck axles with any of the following defects shall be removed from service immediately and repaired (see appendix A of this part for inspection requirements):
(1) Bent axle;
(2) Collars that are broken, cracked, or worn to 1⁄4 inch or less in thickness;
(3) Truck axles that are unsafe on account of usage, accident, or derailment;
(4) A fillet in the back shoulder that is worn out; or
(5) A gouge between the wheel seats that is more than 1⁄8 of an inch in depth.

(b) Journal diameter stamped. For steam locomotives with plain bearings, the original/new journal diameter shall be stamped on one end of the axle no later than January 18, 2005.

§ 230.99 Tender truck axles.

The minimum diameters of axles for various axle loads shall be as follows:

<table>
<thead>
<tr>
<th>Axle load (in pounds)</th>
<th>Minimum diameter of journal (in inches)</th>
<th>Minimum diameter of wheel seat (in inches)</th>
<th>Minimum diameter of center (in inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50000</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>38000</td>
<td>5</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>31000</td>
<td>4%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>22000</td>
<td>3%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>15000</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

§ 230.100 Defects in tender truck axles and journals.

(a) Tender truck axle condemning defects. Tender truck axles with any of the following defects shall be removed from service immediately and repaired:
(1) Axles that are bent;
(2) Collars that are broken, cracked, or worn to ½ inch or less in thickness;
(3) Truck axles that are unsafe on account of usage, accident, or derailment;
(4) A fillet in the back shoulder that is worn out; or
(5) A gouge between the wheel seats that is more than ½ of an inch in depth.

(b) Tender truck journal condemning defects. Tender truck journals with any of the following defects shall be removed from service immediately and repaired:
(1) Cut journals that cannot be made to run cool without turning;
(2) Seams in axles causing journals to run hot;
(3) Overheating, as evidenced by pronounced blue black discoloration;
(4) Transverse seams in journals of iron or steel axles; or
(5) Journal surfaces having any of the following:
   (i) A circumferential score;
   (ii) Corrugation;
   (iii) Pitting;
   (iv) Rust;
   (v) Etching.

§ 230.101 Steam locomotive driving journal boxes.

(a) Driving journal boxes. Driving journal boxes shall be maintained in a safe and suitable condition for service. Not more than one shim may be used between the box and bearing.

(b) Broken bearings. Broken bearings shall be renewed.