

**§ 230.97**

**49 CFR Ch. II (10–1–01 Edition)**

(g) *Side rod bearings.* The bore of side rod bearings shall not exceed pin diameters more than  $\frac{5}{32}$  inch on main pin nor more than  $\frac{3}{16}$  inch on other pins.

**§ 230.97 Crank pins.**

(a) *General provisions.* Crank pins shall be securely applied. Securing the fit of a loose crank pin by shimming, prick punching, or welding is not permitted.

(b) *Maintenance.* Crank pin collars and collar fasteners shall be maintained 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) Cut journals that cannot be made to run cool without turning;

(3) Transverse seams in iron or steel axles;

(4) Seams in axles causing journals to run hot;

(5) Axles that are unsafe on account of usage, accident or derailment;

(6) Any axle worn  $\frac{1}{2}$  inch or more in diameter below the original/new journal diameter, except as provided in paragraph (a)(7) of this section;

(7) Any driving axles other than main driving axles with an original or new diameter greater than 6 inches that are worn  $\frac{3}{4}$  inch or more in diameter below the original/new diameter.

(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:

Axle load (in pounds)	Minimum diameter of journal (in inches)	Minimum diameter of wheel seat (in inches)	Minimum diameter of center (in inches)
50000 .....	5½	7¾	6¼
38000 .....	5	6¾	5¾
31000 .....	4½	6¼	5¼
22000 .....	3¾	5	4¾
15000 .....	3¼	4¾	3¾

**§ 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  $\frac{1}{4}$  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  $\frac{1}{8}$  of an inch in depth.

(b) *Tender truck journal condemning defects.* Tender truck journals with any of the following defects shall be re-

moved 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