

WASHOUT HAND HOLES AND PLATES IN LEG OF BOILER

48. (a) Where rings, plates and clamps, as per standard tracings have not been applied in leg of boiler, all 3" x 4" hand holes which are more than 1/16" larger than standard must be reduced by adding material by the electric metallic arc process after which the seat for the gasket must be ground smooth and trued to conform to the surface of the boiler plate. Half the required thickness of metal added must be placed on one side of the hole and half on the opposite side, thus preventing an excessive amount from being deposited on one side.

(b) Each hand hole plate must be ground or filed to accurately fit the contour of the boiler plate surrounding the hole to which it is to be applied. The gasket will thus be uniformly compressed and a perfect joint obtained. When hand hole joints are leaking the hand hole plate should, if necessary, be refitted to the contour of the boiler plate before a new gasket is applied.

(c) When these hand hole plates, which are accurately fitted to the contour of the boiler plate, are removed, they must not be interchanged. Each plate must be replaced in the hole to which it was fitted and care should be taken that it is not inverted. In order that hand hole plates can be identified, the upper half of plate shall be stamped on the outer surface with the locomotive number and location, "RF," "LF," "RB" or "LB," using 3/8" steel stamp.

49. Washout Hand Hole Rings, Plates and Clamps: All washout hand holes in legs of boilers of all new locomotives, new back ends and to existing boilers at class repairs, when fire-box is renewed, should have rings, plates and clamps applied and maintained as per standard tracings. When these hand hole plates and clamps are removed at any time thereafter, they can be interchanged in front or rear hand holes and require no marking on account of being interchangeable.

INJECTORS

50. Condition of Injectors: Injectors must be kept in good condition, free from scale, and must be tested before each trip. Boiler checks, delivery pipes, feed water pipes, tank hose, tank valve and screens must be kept in good condition, free from leaks and from foreign substances that would obstruct the flow of water.

STEAM LEAKS

51. Leaks Under Lagging: If a serious leak develops under the lagging, an examination must be made and the leak located. If the leak is found to be due to a crack in the shell or to any other defect which may reduce safety, the boiler must be taken out of service at once, thoroughly repaired, and reported to be in satisfactory condition before it is returned to service.

52. Leaks in Front of Enginemen: All steam valves, cocks and joints, studs, bolts and seams shall be kept in such repair that they will not emit steam in front of the engineman so as to obstruct his vision.

PADS, CLAMPS AND WEARING PLATES

53. New Locomotives and Class Repairs: All expansion pads on boilers and all clamps and wearing plates must be inspected and cleaned and if necessary oil holes and grooves in pad on boiler and side clearance between pad and clamp must be made to conform to dimensions shown on tracings entitled "Pad on Boiler." Before assembling, the rubbing surfaces of the pads, clamps

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THE PENNSYLVANIA RAILROAD

Revision of Paragraph No. 34.

LOCOMOTIVE MAINTENANCE INSTRUCTIONS NO. L-19-D.

RULES FOR INSPECTION AND CARE OF LOCOMOTIVE BOILERS AND THEIR
APPURTENANCES

Altoona, Pa.,
March 25, 1932.

The following shall be substituted for Paragraph No. 34 in the
present issue of the Circular:

34. INSPECTION OF BOLTS AND NUTS AS APPLIED: Not less frequently than once each four years, or at each alternate removal of flexible caps (to comply with Federal requirement), all locomotives shall have the steel expansion crown bolt nuts removed from all bolts and a careful inspection made of the threads on the bolts and in the nuts. The threads on bolts shall be checked for size with condemning gauge (ring type), specified for this purpose. Owing to accumulation of scale and sediment, it may be necessary to clean off crown bolt thread (roof sheet end) before gauging. When reapplying the nuts on crown bolts, both the bolt and nut shall be lubricated with Key Graphite Paste to facilitate ready removal at subsequent period without damage to threads.

F. W. HANKINS.

Chief of Motive Power.

THE PENNSYLVANIA RAILROAD

Revision of Paragraph No. 40.

LOCOMOTIVE MAINTENANCE INSTRUCTIONS No. L-19-D.

RULES FOR INSPECTION AND CARE OF LOCOMOTIVE BOILERS AND THEIR
APPURTENANCES

Altoona, Pa.
August 27, 1931.

The words "due to pitting or grooving" have been omitted from paragraph No. 40 of Circular L-19-D. The revised paragraph is given below and shall be substituted for the paragraph in the present issue of the Circular:

40. FREQUENCY: At boiler wash periods, all flues shall be thoroughly blown out with compressed air at not less than 70 pounds pressure per square inch, applied through a 1/4" or 3/8" pipe of sufficient length to extend entirely through the flue. The cleaning shall begin at the top flues and progress downward, after which a careful inspection shall be made of all flues without removing the diaphragm plates by holding a light at one end while the flues are inspected for leaks at safe-end welds or at front flue sheet where grooving takes place. All flues that indicate leakage at safe-end welds shall be renewed, and flues that show evidence of leaking at front flue sheet shall be cut out, and if pitting is found, all small flues below the superheater and up the sides to the center shall be renewed. These instructions shall also apply in connection with renewal of a flue which has burst in service.

F. W. HANKINS

Chief of Motive Power.