

30 CDW TYPE BRAKE VALVE

Replacement Procedure for the Brake Valve Latch Assembly

DECEMBER, 1997

This procedure is used for replacement of **30 CDW Type Brake Valve Latches (pc. no. 559888)**.

Latch Assembly Piece Numbers (REFERENCE)

Latch, Brake Valve: 559888

Key: 536397

Latch Spring: 503941

Cap Nut: 559889

NOTE: Inspection personnel may require these parts if lost during procedure. Spare part sets should be obtained in advance.

Necessary Equipment

The following represents tools necessary for removal of the latch mechanism from a 30-CDW Type Brake Valve:

One 1¹/₈" Combination Wrench

One Rawhide or equivalent mallet

One Needle Nose Pliers

One Small Brush

One Stencil with letter "R"

One Metal Hammer

One Torque Wrench

Lubricant

EP Grease Grade 0- Lithium Base with 3 percent Molybdenum Disulfide Additives, Wabtec Corporation Specification M-07672-01, such as Texaco 1920 Molytex Grease or Tribol Molube-Alloy Multi-Purpose Grease- Grade 0.

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Inspection Information

All valves, prior to inspection, need pertinent information concerning date of OEM manufacture and/or repair properly recorded. The nameplate with the OEM serial number, and the part number are located on the back end of the handle assembly (see Figure 2). **Using the attached form** or preprinted envelope, write down the serial number, piece number, COTS date and location, locomotive number, and customer name. This data may represent an OEM or a repaired valve. This form or preprinted envelope, along with the replaced components should be sent to WABCO to the attention of:

Patty Karczewski
Manager of Quality - WABCO Locomotive Products
1001 Air Brake Ave.
Wilmerding, PA. 15148

Inspection Procedure

Request appropriate railroad personnel and employ standard railroad safety operating procedures (i.e. "Blue Flag" procedures). If the valve is currently in service use on a specific locomotive, make sure the Independent Brake Valve handle of the 30 CDW Type Brake Valve is in the applied position.

Disassembly

The Brake Valve Latch assembly, (Items 1, 2, 3, & 4, Figure 1) is located at the back end and in the center of the 30 CDW Type Brake Valve (See Figure 2). This portion of the brake valve will be above the console.

With the 1¹/₈" combination wrench, unscrew the cap nut (Item 1, Figure 1) by turning the nut in a counterclockwise direction.

NOTE: It may be necessary to use the rawhide mallet or equivalent mallet to initially loosen the nut.

Remove cap nut (Item 1, Figure 1) and spring (Item 2, Figure 1) from the body of the brake valve (Item 5, Figure 1) and place in an accessible location.

With needle nose pliers, extract the Brake Valve Latch (Item 4, Figure 1) from the brake valve body (Item 5, Figure 1).

Place brake valve latch (pc. no. 559888), as is, and supporting documentation in proper packaging for return to WABCO.

NOTE: Do not remove any excess grease, etc. from the latch before sending.

Stencil Cap Nut (Item 1, Figure 1) with the letter "R" in an easily seen external position.

Re-Assembly

Reassemble latch assembly items (Items 1-4, Figure 1) in the 30 CDW Type Brake Valve using a new latch (pc. no. 559888). Verify latch mechanism has the square key securely in position. Using a small brush, lubricate the latch along the contact radius and the outside diameter of the component. (See Figure 3). Once latch (Item 4, Figure 1) is properly lubricated, place component in the bore bushing of the brake valve (Item 5, Figure 1). This is accomplished by aligning the square latch key with the square milled slot in the valve bushing. Once aligned, place into position with needle nose pliers, making sure the quadrant latch and key move freely in the body bushing. Next, place latch spring (item 2, Figure 1) in the back end of the quadrant latch. Using lubricant EP Grease Grade 0, dab the threads of the cap nut to reduce thread friction during reassembly. Using 1¹/₈" combination wrench, turn cap nut in a clockwise manner until nut is securely in place flush with mating metal surface. Torque the cap nut to 20 ft-lbs.

Move the 30 CDW Type Automatic Brake Valve Handle through the various positions starting in release, and working the handle to the handle-off position. When moving handle through the various positions, the feel is such that the various notches in the CAM can be comfortably felt by the operator. Make sure no abnormally excessive force is required to move the handle between 30 CDW Type Brake Valve positions.

IMPORTANT: After modification of the 30 CDW Type Brake Valve, a stationary vehicle air brake test **MUST BE** made to be sure that the 30 CDW Type Brake Valve functions properly in the Brake Equipment Arrangement.

With the locomotive coupled to the train consist, an air brake terminal test and running test are to be performed to ensure the air brake system functions as intended.

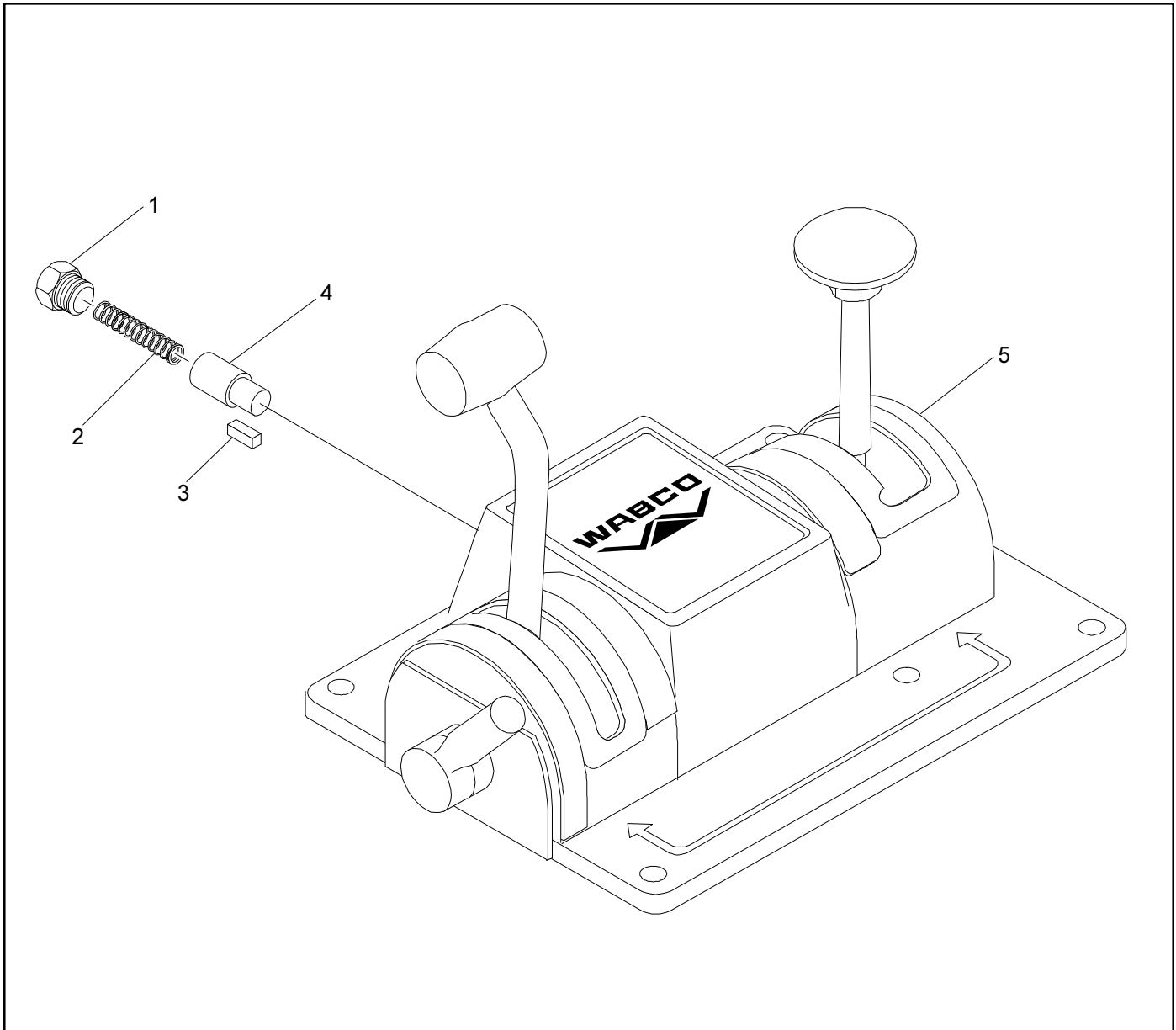
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Figure 1 - Exploded View of the 30 CDW Type Brake Valve Latch Assembly

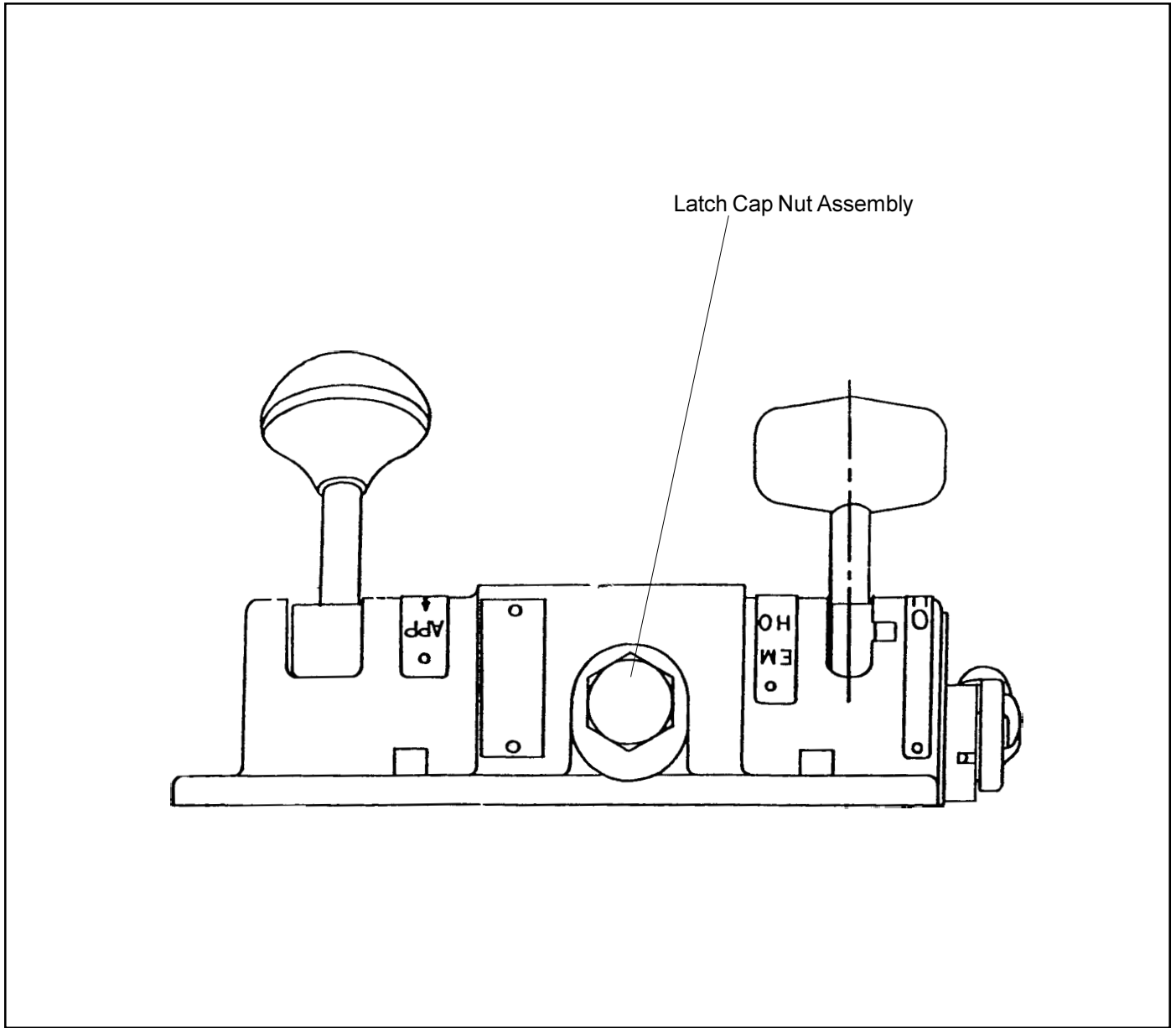


Figure 2 - Back View of the 30 CDW Type Brake Valve

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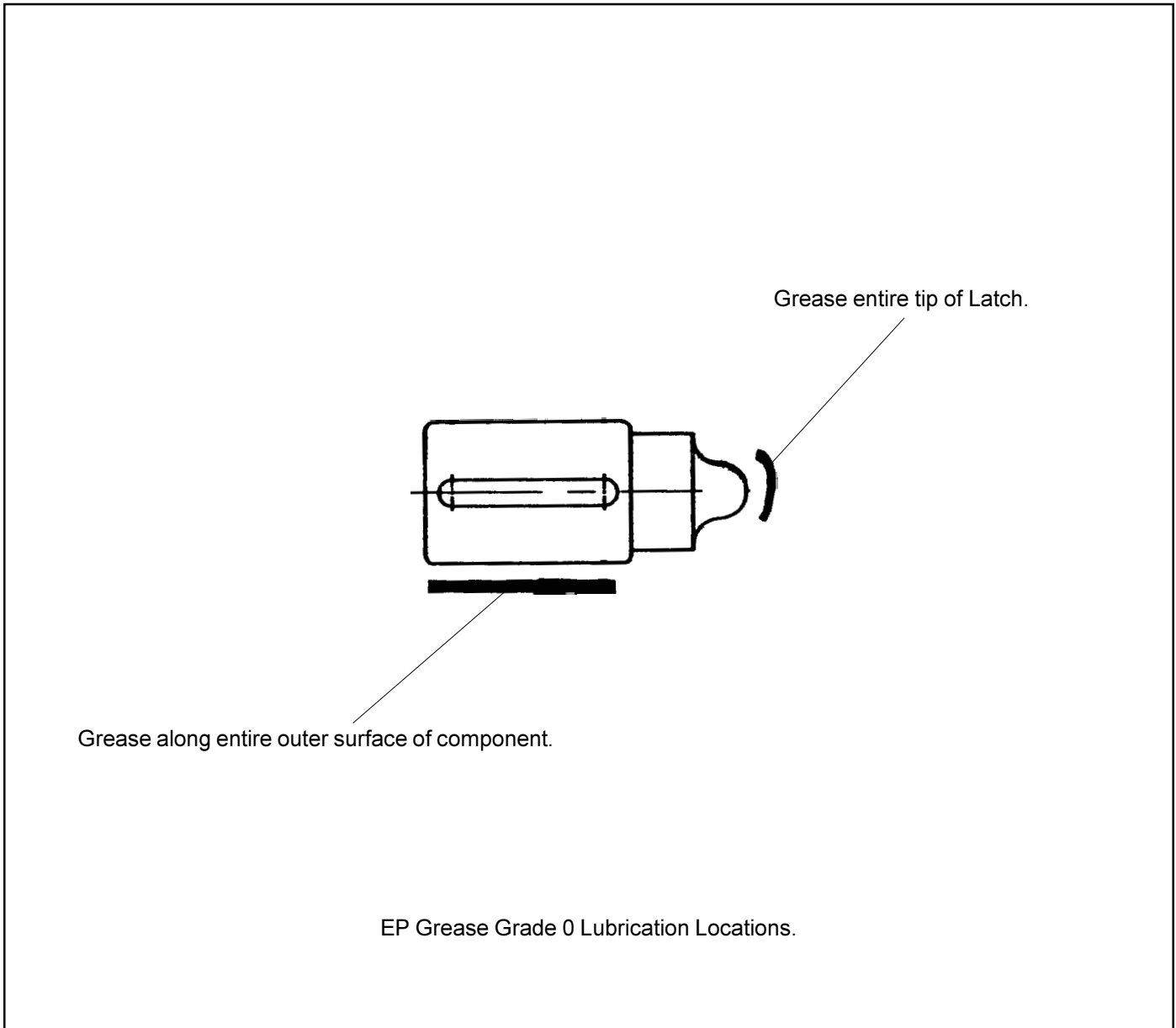


Figure 3 - 30 CDW Type Brake Valve Latch