

Operation & Maintenance Instruction

26-LU-L BRACKET-CARRIAGE AND EQUIPMENT, PART NO. 654991

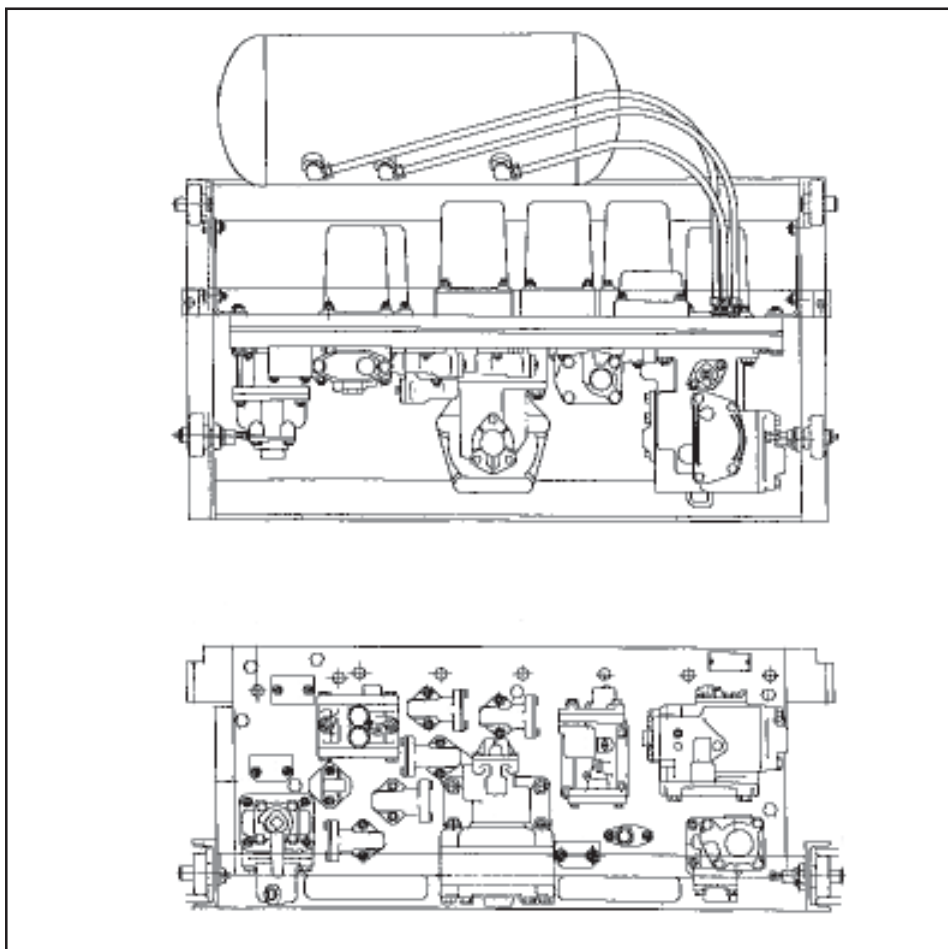
OCTOBER, 2006

NOTE: The following description and operation is based on this device and its components being new or this device and its components having been repaired, tested, installed and maintained in accordance with instructions issued by this and any other applicable Wabtec Corporation publications.

⚠ WARNING: At the time any part is replaced in this device, the operation of the complete device must pass a series of tests prescribed in the latest issue of the applicable Wabtec Test Specification. At the time this device is applied to the brake equipment arrangement, a stationary vehicle test must be made to insure that this device functions properly in the total brake equipment arrangement. (Consult your local Wabtec Corporation Representative for identity of the test specification, with latest revision date, that covers this device.)

IMPORTANT: Only Wabtec Corporation supplied parts are to be used in the repair of this device in order to obtain satisfactory operation. Commercially available non-O.E.M. parts are unacceptable.

NOTE: The part numbers and their associated descriptions are the property of Wabtec Corporation and may not be replicated in any manner or form without the prior sole written consent of an Officer of Wabtec Corporation.





Operation & Maintenance Instruction

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1.0 DESCRIPTION

The Wabtec Corporation 26-LU-L Bracket-Carriage and Equipment, Part no. 654991, is an assembly of modular valve portions and devices mounted on a common laminated carriage. Designed for use in specific locomotive equipment arrangements where the air pressure does not exceed 150 psig, this 26-LU-L Bracket-Carriage and Equipment functions to direct air flow to effect the build up and depletion of brake cylinder line pressure for automatic air brake applications, such as service, emergency, or release, in accordance with changes in brake pipe pressure and similarly for independent brake applications and releases initiated by a controlling device, such as the Wabtec Corporation 30A-CDW Brake Valve, in the locomotive equipment arrangement. A brief description of the various modular valve portions and/or devices of the 26-LU-L Bracket-Carriage and Equipment follows. A more detailed description of operation on a specific valve portion or device may be found in the Operation and Maintenance Information listed in the section describing the portion or device.

IMPORTANT: The 26-LU-L Bracket-Carriage and Equipment requires specific installation procedures and specifications. Contact your Wabtec Corporation Representative for information on specific applications.

1.1 LAMINATE ASSEMBLY and CARRIAGE

The Laminate Assembly provides the means for mounting the various modular valve portions and devices. Air connections between the various portions and devices are made through the internal passages of the laminate. The laminate assembly is arranged so that it can be attached to four Brackets with hex head cap screws and "elastic" self-locking hex nuts. The brackets, in turn, are secured to the carriage by hex head cap screws and "elastic" self-locking hex nuts. Locomotive pipe connections are made directly to the laminate through a mating header bar located in the locomotive.

The carriage is utilized to carry the laminate and to permit the assembled unit to be readily installed on the locomotive. Four 26-L carriage rollers are attached to the carriage. The two front roller subassemblies are adjustable, permitting the bracket and carriage to be raised or lowered to mate properly with the header bar of the locomotive.

1.2 J-1.6-16 RELAY VALVE PORTION & ASSOCIATED FILLING PIECE PORTION

1.2.1 FILLING PIECE PORTION

In this equipment arrangement, the Filling Piece Portion functions as the mounting device for the J-1.6-16 Relay Valve Portion and 24-C Double Check Valve Portion. All air connections between the laminate, the J-1.6-16 Relay Valve Portion and the 24-C Double Check Valve Portion are made through the Filling Piece Portion. There are no moving parts in this Portion. Four mounting gaskets are required when installing the Filling Piece Portion, the J-1.6-16 Relay Valve Portion and the 24-C Double Check Valve Portion. Mounting gasket is to be installed between the Filling Piece Portion and the laminate. Mounting gasket is to be installed between the J-1.6-16 Relay Valve Portion and the Filling Piece Portion. One mounting gasket is used between the Filling Piece and laminate and one mounting gasket is used between the 24-C Double Check Valve Portion and the Filling Piece Portion.

NOTE: The mounting gaskets are a part of the 26-LU-L Bracket-Carriage and Equipment and are not a part of the Filling Piece Portion, 24-C Double Check Valve Portion or J-1.6-16 Relay Valve Portion. These mounting gaskets **MUST BE** ordered as individual items.

1.2.2 J-1.6-16 RELAY VALVE PORTION

This double diaphragm operated, self-lapping valve, when used in conjunction with the Filling Piece Portion is designed to function when it receives the proper signal to direct air into or exhaust air from the brake cylinder delivery pipe during the operation of the air brakes at 60% of the piloting control pressure directed into port 16 plus (in addition to) 100% of the piloting control pressure directed into port EX of this Portion.

1.3 A-1 CHARGING CUT-OFF PILOT VALVE PORTION

The A-1 Charging Cut-Off Pilot Valve Portion is a dual piston operated valve. Its function is to respond to a pressure change during a "break-in-two" to direct air under pressure to other devices in the total air brake equipment arrangement. This flow of air may result in the actuation of the valve to perform the following functions:

- (a) Automatic Sanding
- (b) Brake Pipe Charging Cut-Off
- (c) Power knockout (this equipment is NOT furnished by the Wabtec Corporation).
- (d) Dynamic Cut-Off (this equipment is NOT furnished by the Wabtec Corporation).

Operation & Maintenance Instruction

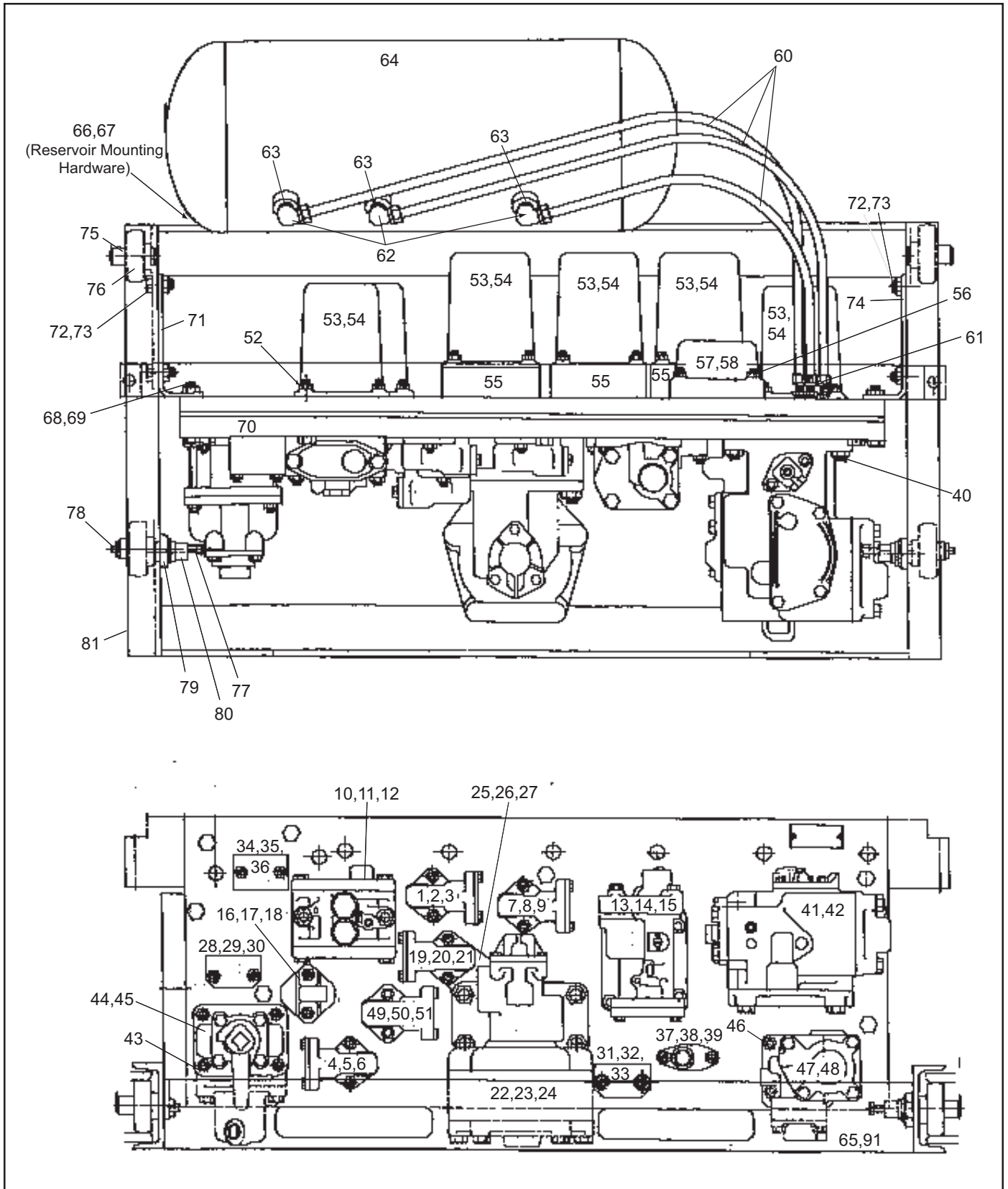


Figure 1 - Part No. 654991



1.4 26-F CONTROL VALVE SERVICE

This diaphragm operated spool type valve is designed to respond to a service or emergency change of brake pipe pressure to develop a brake cylinder line pressure from reductions in brake pipe pressure with reference to a control reservoir pressure.

1.5 CHECK VALVE PORTION

The Check Valve Portion is a spring loaded type check valve used to prevent a back flow of air from one line into another. In this equipment arrangement, this Check Valve Portion is designated as the "Number 8 Check Valve".

1.6 24-C DOUBLE CHECK VALVE PORTION

The 24-C Double Check Valve Portion functions to permit the flow of air pressure to a device or passage to be controlled by either of two other devices by selecting the higher value inlet pressure. The higher value inlet pressure is directed to the outlet port of the check valve portion while the lower inlet pressure port is blocked by the "seated" internal check valve.

There are five 24-C Double Check Valve Portions used in this equipment arrangement.

1.7 P-2-A BRAKE APPLICATION VALVE PORTION

The P-2-A Brake Application Valve Portion is a diaphragm operated multi- spool valve type device which functions to initiate a penalty "automatic" brake application when actuated by another (external) control device. The external control may relate to a single equipment network such as safety control, overspeed control, or train control/stop etc., or to an combination of these equipment networks.

1.8 26-F CONTROL VALVE QUICK RELEASE VALVE PORTION

The 26-F Control Valve Quick Release Valve Portion is a pneumatically controlled, diaphragm operated, piston type valve. It is designed to function to permit a release of an automatic air brake application when the handle of the Independent Brake Valve at the controlling cab station is manually depressed.

1.9 1" COMBINED CUT-OUT COCK & STRAINER

The 1" Combined Cut-Out Cock and Strainer is a panel mounted device designed to open or close pneumatic communication between devices and to assist in removing airborne dirt and/or moisture from the air flowing through it.

The dirt chamber of this device can be removed from the strainer body for cleaning. Provision is made in the dirt chamber for the addition of a drain cock, if so desired. This drain cock is not a part of the 1" Combined Cut-Out Cock and Strainer.

The 1" Cut-Out Cock and Strainer is used in this equipment arrangement to permit or cut-off the flow of brake pipe air to the laminate and other devices of this equipment arrangement. The two positions of this device are designated "IN" and "OUT":

1.10 PANEL MOUNTED 45 CUBIC INCH VOLUME

The Panel Mounted 45 Cubic Inch Volume contains no moving parts. It is incorporated into the design of the 26-LU-L Bracket-Carriage and Equipment to eliminate the need for a separately mounted small volume reservoir, and additional piping and fittings in the equipment arrangement. This 45 Cubic Inch Volume has been designated as the Quick Service Reservoir.

1.11 PANEL MOUNTED 90 CUBIC INCH DISPLACEMENT VOLUME and SPACER

The 90 Cubic Inch Displacement Volume and the Spacer, 20 Cubic Inch Displacement Volume are used together in this equipment arrangement to provide a 110 Cubic Inch displacement volume. An o-ring is used between the housing and spacer and the spacer and laminate to provide air seals. These devices are incorporated into the design of the 26-LU-L Bracket-Carriage and Equipment to eliminate the need for a separately mounted small volume reservoir and additional piping and fittings in the equipment arrangement. In this equipment arrangement, there are three combinations of 90 Cubic Inch Housing and 20 Cubic Inch Spacers to make three 110 Cubic Inch Volumes; these are designated as the Equalizing Reservoirs (2) and the Timing Reservoir.

There are three 90 Cubic Inch Housing used alone and these are designated as the Sanding Reservoir, and two Volume Reservoirs. There are no moving parts in the 90 Cubic Inch Housing or the 20 Cubic Inch Spacers.

1.12 THREE COMPARTMENT RESERVOIR,

The Three Compartment Reservoir is provided in this equipment arrangement to eliminate the need for separately mounted reservoirs in the total equipment arrangement. Three lengths of SAE-J-844 - Type 3-B Hose are used to connect the three compartments of the reservoir to the laminate. The compartments of the reservoir are designated as follows: Auxiliary Reservoir - 1000 Cubic Inches; Selector Volume Reservoir - 500 Cubic Inches; and the Control Reservoir - 900 Cubic Inches. There are no moving parts within the Three Compartment Reservoir.



Operation & Maintenance Instruction

2.0 MAINTENANCE SCHEDULE

IMPORTANT: The indicated procedures listed in this Section are to be performed at least ONCE during the time period specified, or more frequently if service conditions so indicate.

2.1 TWELVE MONTHS

2.1.1 J-1.6-16 RELAY VALVE PORTION & FILLING PIECE

IMPORTANT: At least ONCE every 12 months, or more frequently if service conditions so indicate, the "J-1.6-16" Relay Valve Portion is to be removed from the equipment arrangement and taken to the "shop area" for service and maintenance.

2.1.1.1 The J-1.6-16 Relay Valve Portion is to be completely disassembled, the parts cleaned, inspected, lubricated, and then reassembled using NEW rubber parts and/or other specified NEW parts. The assembled Portion is then to be tested for correct operation.

2.2 TWENTY FOUR MONTHS

2.2.1 IMPORTANT: ALL Component Portions and/or Devices of the 26-LU-L Bracket-Carriage and Equipment with the exception of the J-1.6-16 Relay Valve Portion are to be removed from the equipment arrangement at least ONCE every 24 months, taken to the shop, be completely disassembled, the parts cleaned, inspected, lubricated, and then reassembled using NEW rubber part and/or other specified NEW parts. The assembled Portion or Device is then to be tested for correct operation.

3.0 PARTS CATALOG & REPLACEMENT PARTS INFORMATION

3.1 PARTS CATALOG

3.1.1 **IMPORTANT:** When ordering replacement parts for the Wabtec 26-LU-L Bracket-Carriage and Equipment refer to the current issue of the Wabtec Corporation Parts Catalog 3201-15.

NOTE: The reference numbers used in this publication and those used in the Parts Catalog may differ. Check the descriptive part name and part number to be sure that the desired part is ordered.

3.2 REPLACEMENT PARTS

3.2.1 **IMPORTANT:** To obtain satisfactory operation of the Wabtec Corporation 26-LU-L Bracket- Carriage and Equipment and its Component Portions and Devices, Wabtec Corporation replacement parts are to be used in the maintenance of the 26-LU-L Bracket-Carriage and Equipment and its Component Portions or Devices.

4.0 SAFETY PROCEDURES & WARNINGS

Regular owner-operating property and shop safety procedures are to be followed.

The work area is to be clean.

IMPORTANT: An adequate support or lifting device MUST BE available to support the Device and/or Valve Portion(s) during removal, installation and maintenance procedures. The weight of the 26-LU-L Bracket-Carriage and Equipment is approximately 610 pounds.

⚠ WARNING: Extreme care must be taken when handling this device and its components and while performing the many tasks associated with its repair. It is of utmost importance that the workman read, understand and comply with the appropriate warnings listed below during maintenance procedure.

The use of an air jet, which must be less than 30 psig, to blow parts clean or to blow them dry after being cleaned with a solvent will cause particles of dirt and/or droplets of the cleaning solvent to be airborne. These conditions may cause skin and/or eye irritation.

When using an air jet do not direct it toward another person. Improper use of air jet could result in bodily injury.

Personal eye protection must be worn when performing any work on this device or its component parts to avoid any possible injury to the eyes.

The use of solvents as cleaning agents and the use of lubricants can involve health and/or safety hazards. The manufacturers of the solvents and lubricants should be contacted for safety data (such as OSHA Form OSHA 20 or its equivalent). The recommended precautions and procedures of the manufacturers should be followed.



Operation & Maintenance Instruction

When performing any test or work on devices or equipment while they are on the vehicle, special precautions must be taken to insure that vehicle movement will not occur which could result in injury to personnel and/or damage to equipment.

Assembly may be under a spring load, Exercise caution during disassembly so that no parts "Fly Out" and cause bodily injury.

All air supply and/or electric current to this device and/or to any components part must be cut-off before this device and/or any component part is removed from the equipment arrangement.

"Bottled" up air under pressure (even though air supply is cut-off) may cause gaskets and/or particles of dirt to become airborne and an increase in sound level when this device and/or any component part are removed from the equipment arrangement.

Personal eye and ear protection must be worn and care taken to avoid possible injury when performing any work on this device and/or component part.

When performing work where high temperature is involved, use insulated gloves.

To prevent receiving electrical shock when performing electrical test, hands must be clear of electrical components, contacts and housing and required "in-lab" grounding procedures must be strictly adhered to. A wooden workbench should be used. Failure to heed this WARNING could result in severe injury or death.

An adequate support or lifting device must be available to support the complete unit or its major components during removal, installation and maintenance procedures. Observe weight information stated throughout this repair procedure.

5.0 CLEANING SOLVENT, LUBRICANT & SEALANT

5.1 The solvent used to clean specified parts and to clean the choke plugs in the repair shop MUST BE an aliphatic organic solution such as mineral spirits or naphtha that will dissolve oil or grease and that will permit the cleaning to be done without abrasion to surfaces or parts.

5.2 A compound consisting of one part graphite, Wabtec Corporation Specification M-7695-2, such as Superior Flake Graphite Co. Superflake Number 597, Joseph Dixon Crucible Co. Microfyne Graphite, or National Carbon Co. Number 38 or 39 Graphite, and two parts of SAE-20 oil by weight is

required for the coating of choke plug threads after the choke plug has been cleaned and just prior to choke plug installation.

5.3 Pipe Sealant with Teflon, Wabtec Corporation Specification M-7499-15, such as Loctite Corporation Pipe Sealant with Teflon is to be used on the threads of fittings and bushing when they are installed.

5.4 EPO Grease - Lithium Base with 3% Molybdenum Disulfide, Wabtec Corporation Specification M-7672-1, such as Texaco Inc. 1929 Molytex Grease, or Imperial Metallic Lubricants Co. Molube - Alloy Multi-purpose Grease Grade 0, is required for the lubrication of the 26-L Roller Shafts prior to installing the Rollers.

5.5 Locking Sealant, Retaining Compound, Wabtec Corporation Specification M-7499-6, such as Loctite Corp. Retaining Compound Number 35, is required should it be necessary to replace any stud of the laminate.

6.0 MAINTENANCE PROCEDURES - ON LOCOMOTIVE

IMPORTANT: "On-Locomotive" maintenance procedures on the Wabtec 26-LU-L Bracket- Carriage and Equipment are limited to the removal and replacement of Component Portions, Devices and Mounting Gaskets.

NO "ON-LOCOMOTIVE" repair of the Component Portions, Devices, or laminate are to be attempted. Portions and Devices are to be taken to the repair shop. If the laminate is found to be damaged or leaking, the Complete 26-LU-L Bracket-Carriage and Equipment should be replaced. Follow locomotive builder owner-operating property instructions. NO repairs should be attempted to the laminate. Contact your Wabtec Corporation Representative for the proper procedures if repairs to the laminate are required.

WARNING: The 26-LU-L Bracket-Carriage and Equipment weighs approximately 610 pounds. To prevent possible bodily injury and/or damage to equipment, a proper support and/or lifting device capable of supporting 1000 pounds MUST BE used when working on or moving the Panel.

6.1 REQUIRED PARTS

The repair person will require the following:

6.1.1 A NEW or repaired and tested Component Portion and/or Device for each Component Portion or Device removed from the laminate.



Operation & Maintenance Instruction

6.1.2 NEW mounting gaskets for ALL Portions and/or Devices.

6.1.3 The following NEW or serviced and inspected choke plugs for use in the various ports of the laminate as follows:

6.1.3.1 "P-2-A" Brake Application Valve Portion laminate ports.

(a) 1/4" Choke Plug with a 0.0465" drill for Port 10A.

(b) 1/4" Choke Plug, with a 0.0550" drill Port 24A.

6.1.3.2 26-F Control Valve Service Portion Laminate Ports:

(a) 1/4" Choke Plug with Strainer, No. 71 drill for Port 6.

(b) 1/4" Choke Plug, with a 0.0890" drill for Port 5A.

(c) 1/4" Choke Plug, with a 0.0465" drill for Port 1A.

(d) 1/4" Choke Plug, 0.1094" drill for Pipe Bracket Panel Port 10.

6.2 COMPONENT PORTION OR DEVICE REMOVAL & REPLACEMENT

6.2.1 IMPORTANT: ALL locomotive builder, owner-operating property safety procedures and the warnings and safety procedures listed in Section 4.0 of this publication MUST BE adhered to.

6.2.2 Be sure that ALL air flow and ALL electrical current to the 26-LU-L Bracket- Carriage and Equipment is cut-off.

6.2.3 Chock the wheels of the locomotive to prevent any vehicle movement.

6.2.4 Suitable warning placards indicating that work is being performed are to be placed on and about the locomotive.

6.2.5 **IMPORTANT:** Before removing any portion or device from the laminate, remove ALL free dirt from the exterior surfaces of the portion or device.

The exterior surfaces of the portions or devices may be cleaned by wiping with a clean, dry lint- free cloth or by blowing the surfaces clean with a low pressure jet of clean, dry air.

6.2.6 **IMPORTANT:** Refer to Figure 1 and to the current issue of The Wabtec Corporation Parts Catalog 3201-15 for the location of the Components or the 26-LU-L Bracket- Carriage and Equipment.

6.2.7 WARNING: To avoid possible bodily injuries when handling or moving any Component Portion or Device of the 26-LU-L Bracket- Carriage and Equipment, an adequate support and/or transporting device MUST BE available.

6.2.8 **IMPORTANT:** Component Portions and/or Devices are to be removed and replaced ONE AT A TIME.

6.2.8.1 When a portion or device is removed from the laminate or a filling piece, the mounting surface of the laminate and/or filling piece is to be checked to be sure that it is free of defects. The air passages of the laminate and/or filling piece are to be inspected to be sure that they are clear and unrestricted. If necessary, these air passages may be blown out with a low pressure jet of clean, dry air. Exercise care when blowing out passages so that no dirt is blown into the ports or passages.

6.2.8.2 ALL choke plugs located in any portion or device mounting surface of the laminate are to be removed and replaced with a NEW or serviced and inspected choke plug of the same part number. As a choke plug is removed from the laminate, it is to be tagged and/or placed in a plastic bag with a tag showing its piece number. A NEW or serviced and inspected choke plug of the same piece number is to be installed. Just prior to installation, the threads of the choke plug are to be lightly coated with the graphite and oil compound as specified in Section 5.2. Choke plugs are to be installed so that they are flush with, or just below the mounting surface, of the laminate. Removed choke plugs are to be transported to the shop and cleaned and inspected following the procedures of Section 7.0.

6.2.9 J-1.6-16 RELAY VALVE PORTION

(NOTE: See Section 6.2.13 for information on the associated "24-C" Double Check Valve Portion; and Section 7.3 for information on the associated Filling Piece.)

6.2.9.1 Remove the four 5/8" hex nuts (22) which secure the "J-1.6-16" Relay Valve Portion (23) and the mounting gasket (24) in place on the Filling Piece (25).

SCRAP the mounting gasket (24).

6.2.9.3 Inspect the exposed mounting face of the Filling Piece (25) following the procedure of Section 6.2.8.1.

6.2.9.4 Remove ALL protective materials from a NEW or repaired and tested "J-1.6-16" Relay Valve Portion (23). Be sure that all tape is removed from ports.



Operation & Maintenance Instruction

6.2.9.5 Install a NEW mounting gasket (24) and the NEW or repaired and tested "J-1.6-16" Relay Valve Portion (23) on the studs of the laminate (70) extending through the Filling Piece (25) so that the mounting gasket (24) fits between the Filling Piece Portion (25) and the Relay Valve Portion (23).

Secure the parts in position by installing the four 5/8" hex nuts (22). Equally tighten the nuts.

6.2.9.6 Provide adequate protection to prevent dirt and/or moisture from entering the removed "J-1.6-16" Relay Valve Portion and transport it to the shop for maintenance.

6.2.10 A-1 CHARGING CUT-OFF PILOT VALVE PORTION

6.2.10.1 Remove the two 1/2" hex nuts (10) which secure the A-1 Charging Cut-Off Pilot Valve Portion (11) and mounting gasket (12) on the laminate (70).

6.2.10.2 Remove the A-1 Charging Cut-Off Pilot Valve Portion (11) and mounting gasket (12) from the laminate (70). SCRAP the mounting gasket (12).

6.2.10.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.10.4 Remove ALL protective materials from a NEW or repaired and tested "A-1" Charging Cut-Off Pilot Valve Portion. Be sure that all tape is removed from all ports.

6.2.10.5 Install a NEW mounting gasket (12) and the NEW or repaired and tested A-1 Charging Cut-Off Pilot Valve Portion (11) on the laminate (70).

Secure the parts in position by installing the two 1/2" hex nuts (10).

6.2.10.6 Provide adequate protection to prevent dirt and/or moisture from entering the ports of the removed A-1 Charging Cut-Off Pilot Valve Portion and transport it to the shop for maintenance.

6.2.11 26-F CONTROL VALVE SERVICE PORTION

6.2.11.1 Remove the four 1/2" hex nuts (40) which secure the 26-F Control Valve Service Portion (41) and mounting gasket (42) to the laminate (70).

6.2.11.2 Remove the 26-F Control Valve Service Portion (41) and mounting gasket (42) from the laminate (70). SCRAP the mounting gasket (42).

6.2.11.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.11.4 The choke plugs, located in the laminate's Service Portion Mounting Face, MUST BE removed and replaced with NEW or serviced and inspected choke plugs of the same part number.

IMPORTANT: REMOVE AND REPLACE ONLY ONE CHOKE PLUG AT A TIME:

6.2.11.4.1 Remove the 1/4" Choke Plug with Number 71 drill from port 6.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.11.4.1.1 Apply a light coating of the oil and graphite compound as specified in Section 5.2 to the threads of a NEW or serviced and inspected 1/4" Choke Plug with Strainer.

Install this Choke Plug into Port 6 of the laminate (70). Be sure that the Choke Plug is installed so that it is flush with or just below the surface of the laminate.

6.2.11.4.1.2 Place the removed choke plug assembly in a plastic bag tagged or marked to indicate size or part number.

6.2.11.4.2 Remove the 1/4" Choke Plug with 0.0465" drill from port 5A.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.11.4.2.1 Apply a light coating of the oil and graphite compound as specified in Section 5.2 to the threads of a NEW or serviced and inspected 1/4" Choke Plug.

Install this Choke Plug into port 5A of the laminate (70). Be sure that the choke plug is installed so that it is flush with or just below the surface of the laminate (70).

6.2.11.4.2.2 Place the removed choke plug in a plastic bag tagged or marked to indicate size or part number.

6.2.11.4.3 Remove the 1/4" Choke Plug, 0.1094" drill from port 10.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.11.4.3.1 Apply a light coating of the oil and graphite compound, as specified in Section 5.2, to the threads of a NEW or serviced and inspected 1/4" Choke Plug.

Install this Choke Plug into port 10 of the laminate (70). Be sure that the Choke Plug is installed so that it is flush with or just below the surface of the Panel.



Operation & Maintenance Instruction

6.2.11.4.3.2 Place the removed choke plug in a plastic bag tagged or marked to indicate size or part number.

6.2.11.4.4 Remove the 1/4" Choke Plug with 0.0465" drill from port 1A.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.11.4.4.1 Apply a light coating of the oil and graphite compound as specified in Section 5.2 to the threads of a NEW or serviced and inspected 1/4" Choke Plug.

Install this Choke Plug into port 1A of the laminate (70). Be sure that the choke plug is installed so that it flush with or just below the surface of the laminate (70).

6.2.11.4.4.2 Place the removed choke plug in a plastic bag tagged or marked to indicate size or part number.

6.2.11.5 Remove **ALL** protective material from a NEW or repaired and tested 26-F Control Valve Service Portion. Be sure that all tape is removed from all ports.

6.2.11.6 Install a NEW mounting gasket (42) and the NEW or repaired and tested 26-F Control Valve Service Portion (41) on the laminate (70).

Secure the parts in position by installing the four 1/2" hex nuts (40).

6.2.11.7 Provide adequate protection to prevent dirt and/or moisture from entering the ports of the removed 26-F Control Valve Service Portion and transport it and the removed choke plugs to the shop.

6.2.12 BLANKING PLATE, U-1-40-8 DEAD ENGINE

6.2.12.1 Remove the two 3/8" hex nuts (34) which secure the blanking plate (35) and the two mounting 15/16" O.D. ring gaskets (36) in place on the laminate (70).

6.2.12.2 Remove the blanking plate (35) with mounting gaskets (36) from the laminate (70).

6.2.12.3 Remove and SCRAP the two 15/16" O.D. mounting ring gaskets (36).

6.2.12.4 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.12.5 Install a NEW 15/16" O.D. ring gasket (36) into each of the ring grooves on the mounting face of the Blanking Plate (35).

6.2.12.6 Install the blanking plate (35) with mounting gaskets (36) on the laminate (70) and secure the parts in place by installing two 3/8" hex nuts (34). Equally tighten the nuts.

6.2.13 24-C DOUBLE CHECK VALVE PORTIONS

NOTE: There are five 24-C Double Check Valve Portions and one check valve Bypass Plate used in this equipment arrangement, each of these Check Valve Portions (2, 5, 8, 20 and 50) and Bypass Plate (17) are to be removed and replaced in the same manner. The 24-C Double Check Valve Portion (20) is mounted on the Filling Piece (25) rather than on the laminate (70).

6.2.13.1 Remove the 3/8" hex nuts (1, 4, 7, 16, 19, and 49) which secure the 24-C Double Check Valve Portions (2, 5, 8, 20 and 50) or Bypass Plate (17) and the Mounting Gasket (3, 6, 9, 18, 21, and 51) in place.

6.2.13.2 Remove the 24-C Double Check Valve Portions (2, 5, 8, 20 and 50) or Bypass Plate (17) and Mounting Gasket (3, 6, 9, 18, 21 and 51). SCRAP the Mounting Gasket (3, 6, 9, 18, 21 and 51).

6.2.13.3 Inspect the exposed mounting face of the Filling Piece (25) or laminate (70) following the procedures of Section 6.2.8.1.

6.2.13.4 Remove ALL protective materials from a NEW or repaired and tested 24-C Double Check Valve Portion (2, 5, 8, 20 and 50). Be sure that all tape is removed from all ports.

6.2.13.5 Install a NEW Mounting Gasket (3, 6, 9, 18, 21 and 51) the 24-C Double Check Valve Portions (2, 5, 8, 20 and 50) or Bypass Plate (17) on the laminate (70) or Filling Piece (25) and secure the parts in place by installing two 3/8" hex nuts (1, 4, 7, 16, 19 and 49). Equally tighten the nuts.

6.2.13.6 Provide adequate protection to prevent dirt and/or moisture from entering the ports of the removed Portion and transport it to the shop area.

6.2.14 P-2-A BRAKE APPLICATION VALVE PORTION

6.2.14.1 Remove the four 1/2" hex nuts (13) which secure the P-2-A Brake Application Valve Portion (14) and the Mounting Gasket (15) to the laminate (70).

6.2.14.2 Remove the P-2-A Brake Application Valve Portion (14) and Mounting Gasket (15) from the laminate (70). SCRAP the Mounting Gasket (15).



Operation & Maintenance Instruction

6.2.14.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.14.4 The choke plugs located in the laminate, P-2-A Brake Application Valve Portion mounting face **MUST BE** removed and replaced with **NEW** or serviced and inspected choke plugs of the same part number.

IMPORTANT: REMOVE AND REPLACE ONLY ONE CHOKE PLUG AT A TIME.

6.2.14.4.1 Remove the 1/4" Choke Plug, with 0.0465 drill from port 10A.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.14.4.1.1 Apply a light coating of the oil and graphite compound, as specified in Section 5.2, to the threads of a **NEW** or serviced and inspected 1/4" Choke Plug.

Install this Choke Plug into port 10A of the laminate (70). Be sure that the Choke Plug is installed so that it is flush with, or just below, the surface of the laminate (70).

6.2.14.4.1.2 Place the removed Choke Plug in a plastic bag, tagged or marked with size or part number.

6.2.14.4.2 Remove the 1/4" Choke Plug with 0.0550 drill from port 24A.

Inspect the port following the procedures of Section 6.2.8.1.

6.2.14.4.2.1 Apply a light coating of the oil and graphite compound, as specified in Section 5.2, to the threads of a **NEW** or serviced and inspected 1/4" Choke Plug.

Install this Choke Plug into port 24A of the laminate. Be sure that the Choke Plug is installed so that it is flush with, or just below, the surface of the laminate (70).

6.2.14.4.2.2 Place the removed Choke Plug in a plastic bag tagged or marked with size or part number.

6.2.14.5 Remove **ALL** protective materials from a **NEW** or repaired and tested P-2-A Brake Application Valve Portion (14). Be sure that all tape is removed from all ports.

6.2.14.6 Install a **NEW** Mounting Gasket (15) and the P-2-A Brake Application Valve Portion (15), on the laminate (70). Secure the parts in place by installing four 1/2" hex nuts (13). Equally tighten the nuts.

6.2.14.7 Provide adequate protection to prevent dirt and/ or moisture from entering the ports of the removed Portion and transport it and the removed Choke Plugs to the shop.

6.2.15 BLANKING PLATE LB-8 MAGNET VALVE

6.2.15.1 Remove the two 3/8" hex nuts (31) that secure the blanking plate (29, 32) and the mounting gasket (33) to the laminate (70).

6.2.15.2 Remove the blanking plate (29, 32) and the mounting gasket (33) from the laminate (70). **SCRAP** the mounting gasket (33).

6.2.15.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.15.4 Install a **NEW** mounting gasket (33) and the **NEW** or repaired and tested blanking plate (32) on the laminate (70). Secure the parts in place by installing two 3/8" hex nuts (31). Equally tighten the nuts.

6.2.17 26-F CONTROL VALVE QUICK RELEASE PORTION

6.2.17.1 Remove the four 3/8" hex nuts (46) that secure the 26-F Control Valve Quick Release Portion (47) and Mounting Gasket (48) to the laminate (70).

6.2.17.2 Remove the 26-F Control Valve Quick Release Portion (47) and the Mounting Gasket (48) from the laminate (70). **SCRAP** the Mounting Gasket (48).

6.2.17.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.17.4 Remove **ALL** protective materials from a **NEW** or repaired and tested 26-F Control Valve Portion (47). Be sure that **ALL** tape is removed from all ports.

6.2.17.5 Install a **NEW** Mounting Gasket (48) and the 26-F Control Valve Quick Release Portion (47) on the laminate (70). Using four 3/8" hex nuts (46) secure the parts in place. Equally tighten the nuts.

6.2.17.6 Provide adequate protection to prevent dirt and/ or moisture from entering the removed 26-F Control Valve Quick Release Portion and transport it to the shop.

6.2.18 1" COMBINED CUT-OUT COCK AND STRAINER

6.2.18.1 Remove the four 3/8" hex nuts (43) which secure the 1" Combined Cut-Out Cock and Strainer (44) and the Mounting Gasket (45) to the laminate (70).



Operation & Maintenance Instruction

6.2.18.2 Remove the 1" Combined Cut-Out Cock and Strainer (44) and the Mounting gasket (45) from the laminate (70). SCRAP the Mounting Gasket (45).

6.2.18.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.18.4 Remove ALL protective materials from a NEW or repaired and tested 1" Combined Cut-Out Cock and Strainer (44). Be sure that ALL tape is removed from all ports.

6.2.18.5 Install a NEW Mounting Gasket (45) and the 1" Combined Cut-Out Cock and Strainer (44) on the laminate (70). Secure the parts in place by installing four 3/8" hex nuts. Equally tighten the nuts.

6.2.18.6 Provide adequate protection to prevent dirt and/or moisture from entering the removed 1" Combined Cut-Out Cock and Strainer and transport it to the shop.

6.2.19 CHECK VALVE PORTION, Lock-Over

6.2.19.1 Remove the two 5/16" hex nuts (37) which secure the Check Valve Portion (38) and the two 15/16" O.D. mounting ring gaskets (39) to the laminate (70).

6.2.19.2 Remove the Check Valve Portion (38), and the two 15/16" O.D. ring mounting gaskets (39) from the laminate (70). SCRAP the two mounting gaskets (39).

6.2.19.3 Inspect the exposed mounting face of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.19.4 Remove ALL protective materials from a NEW or repaired and tested Check Valve Portion (38). Be sure that ALL tape is removed from all ports.

6.2.19.5 Install two NEW 15/16" O.D. mounting ring gaskets (39), in their grooves on the mounting face of the Check Valve Portion (38), then install the Portion on the laminate (70). Secure the parts in place by installing two 5/16" hex nuts (37). Equally tighten the nuts.

6.2.19.6 Provide adequate protection to prevent dirt and/or moisture from entering the removed Check Valve Portion and transport it to the shop.

6.2.20 PANEL MOUNTED 45 CUBIC INCH VOLUME

6.2.20.1 Remove the four 3/8" hex nuts (56) which secure the Panel Mounted 45 Cubic Inch Volume (57) and the 4-3/4" I.D. o-ring (58) to the laminate (70).

6.2.20.2 Remove the 45 Cubic Inch Volume (57) with 4-3/4" I.D. o-ring (58) from the laminate (70).

6.2.20.3 Remove the 4-3/4" I.D. o-ring (58) from its groove in the mounting face of the 45 Cubic Inch Volume (57). SCRAP the o-ring (58).

6.2.20.4 Inspect the exposed mounting area of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.20.5 Remove ALL protective materials from a NEW or serviced and inspected 45 Cubic Inch Volume (57).

6.2.20.6 Install a NEW 4-3/4" I.D. o-ring (58) into the o-ring groove in the mounting face of the 45 Cubic Inch Volume (57), then install the Volume (57) on the laminate (70) and secure it in place using four 3/8" hex nuts (56).

6.2.20.7 Provide adequate protection to prevent dirt and/or moisture from entering the removed 45 Cubic Inch Volume and transport it to the shop.

6.2.21 90 CUBIC INCH VOLUME HOUSING & 20 CUBIC INCH VOLUME SPACER

6.2.21.1 **NOTE:** There are six 90 Cubic Inch Volume Housings (53) and three 20 Cubic Inch Volume Spacers (55) used in this equipment arrangement. The three Volume Spacers (55) are used with three of the 90 Cubic Inch Volume Housings to make three 110 Cubic Inch Volume Reservoirs. These 110 Cubic Inch Reservoirs are designated as Equalizing and Timing Reservoirs. The remaining three 90 Cubic Inch Volume Housings are designated as Volume and Sanding Reservoirs. O-ring seals are used between the volume spacers and the volume housings, and between the volume spacers and/or volume housings and the laminate. ALL of the units are removed in the same manner.

6.2.21.2 Remove the four 3/8" elastic stop nuts (52) which secure the Volume Housing (53, 54) or Volume Housing - Spacer subassemblies (53, 54, 55) to the laminate (70). SCRAP the elastic stop nuts (52).

6.2.21.3 Separate the 20 Cubic Inch Volume Spacer (55) from the 90 Cubic Inch Volume Housing (53), if applicable.



Operation & Maintenance Instruction

6.2.21.4 Remove and SCRAP the 4-3/4" I.D. o-ring (54) from the groove in the mounting face of the Volume Housing (53) and/or Volume Spacer (55). SCRAP the o-ring (54).

6.2.21.5 Inspect the exposed mounting area of the laminate (70) following the procedures of Section 6.2.8.1.

6.2.21.6 Remove ALL protective materials from a NEW or cleaned and inspected 20 Cubic Inch Volume Spacer (55) and/or a NEW or cleaned and inspected 90 Cubic Inch Volume Housing (53). Be sure that ALL tape is removed.

6.2.21.7 Install a NEW 4-3/4" I.D. o-ring (54) into the ring groove of the 20 Cubic Inch Volume Spacer (55) and/or the 90 Cubic Inch Volume Housing (53).

6.2.21.8 If the Volume Housing (53) and Volume Spacer (55) are to be used together to form a 110 Cubic Inch Volume Reservoir, install the 20 Cubic Inch Volume Spacer with o-ring subassembly (55, 54) in position on the laminate (70), then install the 90 Cubic Inch Volume Housing with o-ring subassembly (53, 54) onto the 20 Cubic Inch Volume Spacer (55). Secure the parts in place by installing four NEW elastic stop nuts (52). Equally tighten the nuts (52).

6.2.21.9 If the 90 Cubic Inch Volume Housing (53) is to be used alone in the equipment arrangement, install the 90 Cubic Inch Volume Housing with o-ring subassembly (53, 54) in position on the laminate (70). Secure the parts in place by installing four NEW 3/8" elastic stop nuts (52). Equally tighten the nuts (52).

6.2.21.10 Provide adequate protection to prevent dirt and/or moisture from entering the removed Volumes and/or Spacers and transport them to the shop.

6.2.22 THREE COMPARTMENT RESERVOIR, LAMINATE AND CARRIAGE BRACKET

6.2.22.1 These items will be covered in Section 7.0 of this publication.

6.2.23 TESTING & ADDITIONAL INFORMATION

6.2.23.1 IMPORTANT: Whenever ANY Component Portion or Device of the 26-LU-L Bracket-Carriage and Equipment is removed from the equipment arrangement for any reason, and it is reinstalled or replaced with a NEW or repaired and tested Portion or Device, a stationary vehicle test MUST BE made to be sure that the Portion or Device functions properly in the total equipment arrangement.

6.2.23.2 IMPORTANT: Whenever ANY Component Portion or Device of the 26-LU-L Bracket-Carriage and Equipment is removed from the equipment arrangement for any reason, and it is reinstalled or replaced with a NEW or repaired and tested Portion or Device, NEW mounting gaskets, or mounting seals MUST BE used.

6.2.23.3 IMPORTANT: Remove ALL wheel chocks and warning placards before attempting to move the locomotive.

6.2.23.4 Information on the Wabtec Corporation 26-L Locomotive Air Brake Equipment may be found in Wabtec Corporation Publication 5071-6. This Publication can be obtained through your Wabtec Corporation Representative.

6.2.23.5 Consult your Wabtec Corporation Representative if additional information is required.

7.0 MAINTENANCE PROCEDURES - "IN-SHOP"

7.1 IMPORTANT: Maintenance procedures for Component Portions and Devices, with the exception of the Filling Piece Portion, Choke Plugs, Volume Housings, Volume Spacers, Hose, Fittings, and the Three Compartment Reservoir may be found in the Wabtec Corporation Operation and Maintenance Information Publications listed in the following tabulation. The listed publications may be obtained through your Wabtec Corporation Representative. Requests should include the Portion or Device Part Name, Piece Number, and Publication Number. Maintenance information for Choke Plugs, the Filling Piece Portion, Blanking Cover, Volume Housing, Volume Spacers, Hose, Fittings, Three Compartment Reservoir and the Bracket and Carriage, used as components of the 26-LU-L Bracket-Carriage and Equipment may be found in Sections 7.2 to 7.9 of this Publication.

7.1.1 J-1.6-16 Relay Valve Portion
O. & M Publication 4231-12, S.2

7.1.2 A-1 Charging Cut-Off Pilot Valve
O. & M Publication 4216-15A

7.1.3 26-F Control Valve Service Portion
O. & M Publication 4220-5, S.3.1

7.1.4 Check Valve Portion
O. & M Publication 4216-24, S.4

7.1.5 24-C Double Check Valve Portion
O. & M Publication 4216-24, S.3.1

7.1.6 26-F Control Valve Quick Release Portion



Operation & Maintenance Instruction

7.1.7 1" Combined Cut-Out Cock and Strainer Portion
O. & M Publication 4216-4, S.7

7.1.8 P-2-A Brake Application Valve Portion
O. & M Publication 4230-26, S.1

7.2 CHOKE PLUGS

7.2.1 **IMPORTANT:** The cleanliness and size of choke plugs is important. DO NOT use any metal tools of any kind to clean choke plugs as the size and shape of the orifice MUST NOT be changed.

7.2.2 Choke plugs are to be cleaned one at a time. After cleaning, inspecting and lubricating the threads of a choke plug, it is recommended that it be placed in a plastic bag with the Part Number and size of the choke indicated on the bag. This manner of servicing choke plugs will assist in preventing the possible mixing of similar size plugs. Refer to the current issue of the Wabtec Corporation Parts Catalog 3201-15 and to Section 6.1.3 of this publication for choke plug part number, size, and port location.

7.2.3 Clean the choke plug by washing it in a bath of the cleaning solvent as described in Section 5.1.

7.2.4 After cleaning, the choke plug MUST BE dried completely. Use a low pressure jet of clean, dry air to blow the plug dry.

7.2.5 Inspect the choke plug to be sure that it is clean and unrestricted and that the orifice size has not been damaged or changed. Refer to Parts Catalog 3201-15 and Section 6.1.3 of this publication for choke sizes and part number. Choke plugs which are damaged or changed are to be SCRAPPED.

7.2.6 Apply a light coating of the oil and graphite compound, as described in Section 6.3, to the threads of the choke plug.

7.2.7 Place the cleaned, inspected, and lubricated choke plug into a plastic bag which has been tagged or marked with the choke plug part number and size.

7.2.8 Repeat the procedure for ALL choke plugs.

7.2.9 Consult your Wabtec Corporation Representative if additional information is required.

7.3 FILLING PIECE PORTION

7.3.1 **NOTE:** The Filling Piece Portion is used in this equipment arrangement between the laminate (70) and the "J-1.6-16" Relay Valve Portion (23) and 24-C Double Check Valve Portion (20). It is secured in place by the hex nuts which secure the Relay Valve Portion and Check Valve Portion in place. Two mounting gaskets (26, 27) are required between the Filling Piece Portion (25) and the laminate (70). These gaskets (26, 27) and are to be SCRAPPED and replaced with NEW gaskets when the Filling Piece Portion is changed or reinstalled. There are no moving parts in the Filling Piece Portion.

7.3.2 Filling Piece Portion is to be cleaned by washing it in a bath of the cleaning solvent as described in Section 5.1.

7.3.3 After the Portion is cleaned, it MUST BE completely dried. Use a low pressure jet of clean, dry air to blow the Portion dry. Be sure that the internal passages are dried.

7.3.4 Inspect the Filling Piece Portion.

Be sure that all ports and passages are clear and unrestricted.

SCRAP the Filling Piece Portion if it is cracked, cut, broken, shows signs of wear or any damage to either mounting face, or if the Portion is in such a condition that may result in the unsatisfactory operation of the 26-LU-L Bracket-Carriage and Equipment or any other Component Valve Portion.

7.4 45 CUBIC INCH VOLUME

7.4.1 **NOTE:** The 45 Cubic Inch Volume has no internal moving parts.

7.4.2 Wash the 45 Cubic Inch Volume in a bath of the cleaning solvent as described in Section 5.1. A clean, lint-free rag or cloth, which has been saturated with the prescribed cleaning solvent may be used to assist in cleaning the interior and exterior surfaces of the Volume.

7.4.3 After the Volume has been cleaned, it MUST BE completely dried. Use a low pressure jet of clean dry air to blow all surfaces dry.

7.4.4 Inspect the Volume. If it is cracked, cut, broken, shows signs of excessive wear, damaged in any way, or if it is in such a condition that may result in the unsatisfactory operation of the 26-LU-L Bracket-Carriage and Equipment, it is to be replaced with a NEW 45 Cubic Inch Volume.



Operation & Maintenance Instruction

7.4.5 **IMPORTANT:** When installing a 45 Cubic Inch Volume on the 26-LU-L Bracket-Carriage Equipment, a NEW 4-3/4" I.D. mounting o-ring MUST BE used. This o-ring MUST BE ordered as an individual item.

7.5 90 CUBIC INCH VOLUME HOUSING,

NOTE: There are no moving parts in the 90 Cubic Inch Volume Housing.

7.5.1 Wash the 90 Cubic Inch Volume Housing in a bath of the cleaning solvent as described in Section 5.1. A clean, lint-free cloth or rag, which has been saturated with the prescribed cleaning solvent may be used to assist in cleaning the internal and external surfaces of the Volume Housing.

7.5.2 After the 90 Cubic Inch Volume Housing has been cleaned, it MUST BE completely dried. Use a low pressure jet of clean dry air to blow the surfaces dry.

7.5.3 Inspect the 90 Cubic Inch Volume Housing. If it is cracked, cut, broken, shows signs of excessive wear, damaged in any way, or if it is in such a condition that may result in the unsatisfactory operation of the 26-LU-L Bracket-Carriage and Equipment, it is to be replaced with a NEW 90 Cubic Inch Volume Housing.

7.5.4 **IMPORTANT:** When installing the 90 Cubic Inch Volume Housing in the 26-LU-L Bracket-Carriage and Equipment, a NEW 4-3/4" I.D. mounting o-ring MUST BE ordered as an individual item.

7.6 20 CUBIC INCH VOLUME SPACER

7.6.1 **NOTE:** There are no moving parts in the 20 Cubic Inch Volume Spacer.

7.6.2 Wash the 20 Cubic Inch Volume Spacer in a bath of the cleaning solvent as described in Section 5.1. A clean, lint-free cloth or rag, which has been saturated with the prescribed cleaning solvent, may be used to assist in the cleaning of the interior and exterior surfaces of the volume spacer.

7.6.3 After the volume spacer has been cleaned, it MUST BE completely dried. Use a low pressure jet of clean dry air to blow the surfaces dry.

7.6.4 Inspect the volume spacer. If it is cracked, cut, broken, excessively worn, damaged in any way, or if it is in such a condition that may result in the unsatisfactory operation of the 26-LU-L Bracket-Carriage and Equipment, it MUST BE replaced with a NEW 20 Cubic Inch Volume Spacer.

7.6.5 **IMPORTANT:** When installing the 20 Cubic Inch Volume Spacer in the 26-LU-L Bracket-Carriage and Equipment, a NEW 4-3/4" I.D. mounting o-ring MUST BE used. This o-ring MUST BE ordered as an individual item.

7.7 CARRIAGE AND EQUIPMENT BRACKET, THREE COMPARTMENT RESERVOIR, HOSE & FITTINGS

7.7.1 DISASSEMBLY

7.7.1.1 Remove all free dirt from the exterior surfaces of the Carriage and Equipment Bracket (65) by wiping with a clean lint-free cloth or rag that has been saturated with the cleaning solvent described in Section 5.1 or by blowing the surfaces clean with a low pressure jet of clean dry air.

WARNING: Exercise care so that no dirt is blown into the exposed ports of the laminate (70).

7.7.1.2 Remove the two cable ties from the three sections of hose (60), then disconnect the sections of hose (60) at the 3/8" NPT x 1/2" Tube Connector Fittings (61) and the three 1/2" NPT x 1/2" Tube Elbow Fitting (62). Remove and SCRAP the three sections of hose (60).

7.7.1.3 Remove the 3/8 NPT x 1/2" Tube Connector Fittings (61) from the laminate (70).

7.7.1.4 Remove the 1/2" NPT x 1/2" Tube Elbow Fittings (62) from the bushings (63) of the three compartment reservoir (64).

7.7.1.5 Remove the three compartment reservoir (64) by first attaching a suitable lifting and/or support device to the reservoir (64), then remove the four 1/2" elastic stop nuts (66) and the 1/2" x 1-1/2" hex head cap screws (67) which secure the reservoir to the carriage and bracket (65). Lift the reservoir from the carriage and bracket (65). SCRAP the elastic stop nuts (66).

7.7.1.6 Remove the three 3/4" x 1/2" reducing bushings (63) from the reservoir (64).

7.7.1.7 Attach a proper lifting and/or support device to the laminate assembly (70), then remove the four 1/2" elastic stop nuts (68), the four 1/2" x 3-1/2" hex head cap screws (69) to free the laminate assembly (70). SCRAP the stop nuts (68). Lift the laminate assembly (70) from the carriage and bracket (65).

7.7.1.8 Remove the four retaining rings (75) which secure the 26-L carriage rollers (76) to the front and rear roller shafts of the carriage (81).



7.7.1.9 Carefully remove the 3/8" x 5" hex head cap screw (77) from each assembly.

7.7.1.10 Using a spanner wrench to hold each front roller shaft, remove the 3/8" spline elastic stop nut (79) from each of the two front roller shafts (80), then remove the roller shafts (80) from the carriage (81). **SCRAP** the elastic stop nuts (79).

7.7.1.11 Visually inspect the two brackets (71 & 74) to be sure that they are not damaged and that the 1/2" elastic stop nuts (72) and the 1/2" x 1-1/2" hex head cap screws (73) are securely in place. It is not necessary to remove these parts from the carriage (81) unless the carriage (81) or brackets (71 & 74) are damaged. If there is any damage to these parts, they are to be disassembled and replaced. Use **NEW** 1/2" elastic stop nuts (72) when assembling the parts.

7.7.2 CLEANING AND INSPECTING

7.7.2.1 THREE COMPARTMENT RESERVOIR

7.7.2.1.1 Clean the three compartment reservoir by blowing with a jet of clean, dry air.

7.7.2.1.2 Inspect the reservoir for damage. This reservoir is not repairable and **MUST BE** replaced if damaged.

7.7.2.1.3 The three compartment reservoir **MUST BE** hydrostatically tested at 25% over the operating pressure of 150 psi for each compartment. If the reservoir does not pass the test, it is to be replaced with a **NEW** three compartment reservoir.

7.7.2.2 LAMINATE ASSEMBLY

7.7.2.2.1 Clean the external surface of the laminate by wiping with a clean, lint-free cloth or rag that has been saturated with the cleaning solvent as described in Section 5.1.

7.7.2.2.2 After cleaning, promptly dry the laminate by blowing with a low pressure jet of clean dry air. Exercise care so that no dirt is blown into the ports or passages of the laminate.

7.7.2.2.3 Choke plugs located in port/passagage 10A & 24A of the "P-2-A" Brake Application Valve Portion mounting face and port/passagage 1A, 10, 6 and 5A of the 26-F Control Valve Service Portion mounting face should have already been serviced. If these choke plugs were not serviced, this procedure should be done at this time. Service **ONLY ONE** choke plug at a time by following the procedure of Section 7.2.

7.7.2.2.4 Check each of the studs of the laminate to be sure that they are free of damage and secure. Refer to the current issue of Parts Catalog 3201-15 for stud sizes and location. If it is necessary to replace or resecure any studs, Locking Sealant Retaining Compound, Wabtec Corporation Specification M-7499-6 is to be used on the threads of the stud to secure it in place.

7.7.2.3 REMAINING PARTS

7.7.2.3.1 Wash **ALL** remaining parts in a bath of the cleaning solvent as described in Section 5.1.

7.7.2.3.2 After the parts have been cleaned, they **MUST BE** completely dried.

7.7.2.3.3 Inspect the parts. Replace any retaining ring that is not elastic enough to hold securely. Replace any part that is cracked, cut, broken, bent, excessively worn, damaged in any way, or that is in such a condition that may result in the unsatisfactory operation of the 26-LU-L Bracket-Carriage and Equipment.

7.7.2.3.4 **IMPORTANT:** **ALL** elastic stop nuts are to be **SCRAPPED** and replaced with **NEW** Wabtec Corporation parts during the assembly procedures.

7.7.3 ASSEMBLY

(See Figure 1)

7.7.3.1 If the brackets (71 & 74) were removed during the disassembly procedure, they are to be installed at this time. Place each bracket (71 & 74), one at a time, in position on the carriage (81) and secure each bracket (71 & 74) in place by installing two 1/2" x 1-1/2" hex head cap screws (73) and two **NEW** 1/2" elastic stop nuts (72). Equally tighten the stop nuts.

7.7.3.2 Install the two front roller shafts (80) in position in the carriage (81). Using a spanner wrench to hold each shaft (80), secure them in place by installing a **NEW** 3/8" spline elastic stop nut (79). Tighten the nut securely.

7.7.3.3 Install a 3/8" x 5" hex head cap screw (77) into each of the assembled front roller shafts (75).

7.7.3.4 Apply a light coating of EPO Grease - Lithium Base with 3% Molybdenum Disulfide, Wabtec Corporation Specification M-7672-1 to the roller bearing surfaces of the two front roller shafts (80), the roller bearing surfaces of the two rear roller shafts of the carriage (81) and to the bearing surface of each of the "26-L" carriage rollers (76) which will contact the roller shafts.



Operation & Maintenance Instruction

7.7.3.5 Install one "26-L" carriage roller (76) on each of the front roller shaft assemblies (75) and to each of the rear roller shafts of the carriage (81).

7.7.3.6 Secure each "26-L" carriage roller (76) in place by installing a retaining ring (75). Be sure that the retaining ring (75) "snaps" into its groove on the roller shaft. Check to be sure that the rollers (76) are secured in place and that they roll easily.

7.7.3.7 Attach the proper lifting or support device to the laminate assembly (70). Carefully position the laminate assembly (70) on the carriage and bracket (65).

7.7.3.8 Secure the laminate assembly (70) on the carriage and bracket (65) by installing four 1/2" x 3-1/2" hex head cap screws (69) and four NEW 1/2" elastic stop nuts (68). Equally tighten the stop nuts (68).

7.7.3.9 Remove the lifting and/or support device from the laminate assembly (70).

7.7.3.10 Apply a light coating of Pipe Sealant with Teflon, Wabtec Corporation Specification M-7499-15 to the threads of the three 3/4" x 1/2" reducing bushings (63).

7.7.3.11 Install the three 3/4" x 1/2" bushings (63) in place in the three compartment reservoir (64). Tighten the bushings (63) to air seal.

7.7.3.12 Attach the proper lifting and/or support device to the three compartment reservoir (64). Carefully move the three compartment reservoir (64) into position on the carriage and bracket (65). Use four 1/2" x 1-1/2" hex head cap screws (67) and four NEW 1/2" elastic stop nuts (66) to secure the three compartment reservoir (64) in place. Equally tighten the nuts (66). Remove the lifting and/or support device from the reservoir.

7.7.3.13 Apply a light coating of Pipe Sealant with Teflon, Wabtec Corporation Specification M-7499-15 to the threads of the three 1/2" NPT x 1/2" tube elbow fittings (62).

7.7.3.14 Install one of the 1/2" NPT x 1/2" tube elbow fittings (62) into each of the bushings (63) located in the three compartment reservoir (64). Position and tighten the elbow fittings (63) to accept the hose from the laminate when it is installed.

NOTE: A NEW hose connector ferrule **MUST BE** used on each of the connector fittings (61) when installing the hose.

7.7.3.15 Install the three sections of NEW hose (60) (cut to length) between the connector fittings (61) and the elbow fittings (62). Use NEW ferrules on the connectors and elbows when installing the hose (60).

7.7.3.16 Install the two cable ties to secure the three pieces of hose (60) together.

7.7.3.17 Install a NEW 4-3/4" I.D. o-ring (54) into the o-ring groove of the six 90 cubic inch volume housings (53) and into the o-ring groove of the three 20 cubic inch volume spacers (55).

7.7.3.18 Install the 20 cubic inch volume spacers (55) and/or the 90 cubic inch volume housings (53) in place on the laminate (70) and secure each of them in place by installing four NEW 3/8" elastic stop nuts (52). Equally tighten the nuts (52).

7.7.3.19 Install a NEW 4-3/4" I.D. o-ring (58) into its groove in the mounting face of the 45 cubic inch volume (57), then install the volume (57) on the laminate (70) and secure it in place by installing four NEW 3/8" elastic stop nuts (56). Equally tighten the nuts (56).

7.7.3.20 Install a NEW blanking cover mounting gasket (18) and the bypass blanking cover (17) in position on the laminate (70) and secure these parts in place by installing two 3/8" hex nuts (16). Equally tighten the nuts (16).

7.7.3.21 Install two NEW filling piece gaskets (26, 27) and the filling piece (25) on the laminate (70). These parts will be secured in place by the nuts which secure the Relay Valve Portion (23) and Check Valve Portion (20) in place on the filling piece (25).

7.7.3.22 Install the remaining Portions and their NEW mounting gaskets and ring seals following the procedures listed for each Portion in Section 6.2.

IMPORTANT: NEW mounting gaskets and/or ring seals **MUST BE** used.

8.0 TESTING AND ADDITIONAL INFORMATION

8.1 **IMPORTANT:** After the 26-LU-L Bracket-Carriage Equipment has been assembled, **BUT BEFORE** it is returned to service, it **MUST PASS** a series of tests following the current Wabtec Corporation testing procedures. Testing information may be obtained by contacting your Wabtec Corporation Representative. Testing is to be done in accordance with the recommended maintenance schedule requirements.



8.2 **IMPORTANT:** Whenever **ANY** component Portion or Device is removed from the 26-LU-L Bracket-Carriage and Equipment for any reason, and it is reinstalled or replaced with a NEW or repaired and tested Portion or Device, NEW mounting gaskets and/or mounting seals **MUST BE** used.

8.3 **IMPORTANT:** Whenever any Component Portion or Device is removed from the 26-LU-L Bracket-Carriage and Equipment for any reason, and it is reinstalled or replaced with a NEW or repaired and tested Portion or Device, or whenever the 26-LU-L Bracket-Carriage and Equipment is removed from the locomotive for any reason, and it is reinstalled or replaced with a NEW or overhauled (repaired) and tested 26-LU-L Bracket-Carriage and Equipment, a stationary vehicle test **MUST BE** made to be sure that the 26-LU-L Bracket-Carriage and Equipment function properly in the total locomotive equipment arrangement.

8.4 Consult your Wabtec Corporation Representative if additional information is required.

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