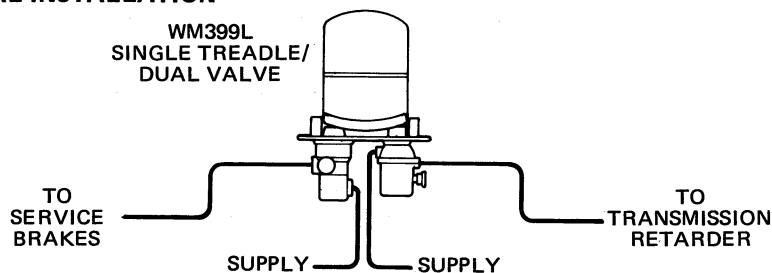
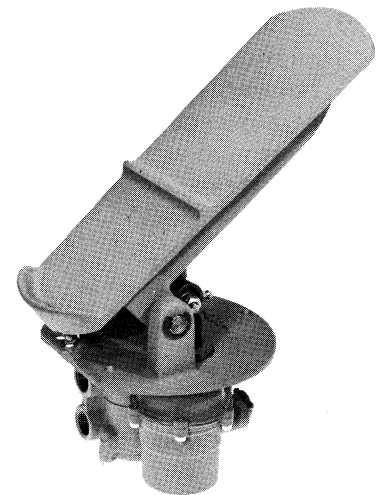
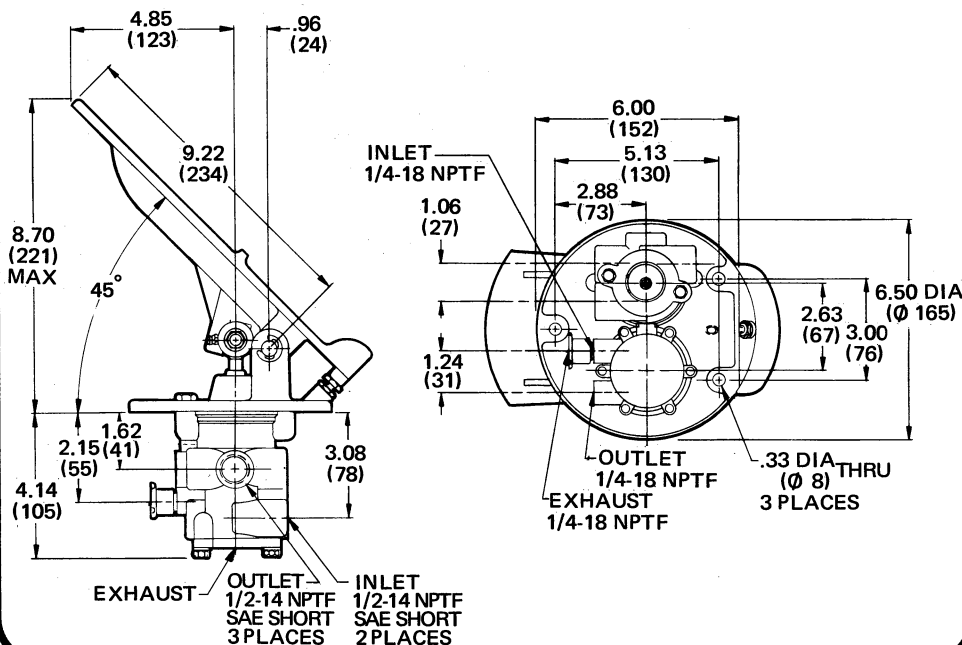
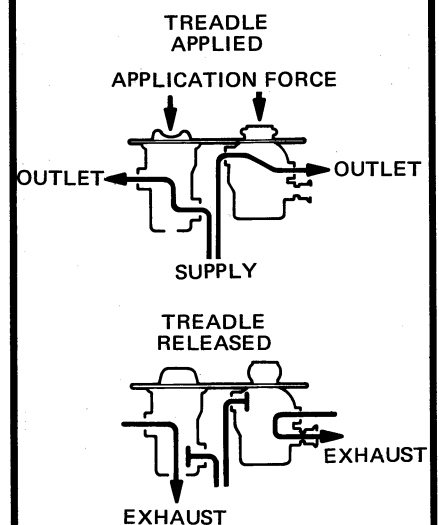
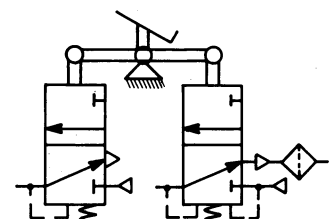


**PRODUCT DESCRIPTION**

**DESCRIPTION** The WM399L is a single treadle/dual valve designed for dual system applications. The unit consists of two compensating three-way pressure regulators mounted to a common plate. Each regulator valve has independent supply and delivery ports to insure dual function protection. Engineered for easy installation, the WM399L can be mounted through a single hole in the floor of the operator's compartment.

**OPERATION** Each regulator valve functions independently but both valves are actuated by the same pedal. When the pedal is depressed, the WM 90DB retarder valve modulates the delivery of air pressure. As illustrated in the performance curve, the WM 90DB retarder valve achieves its maximum rated output at approximately the same time that the WM352D brake valve begins to open. The operator must continue to exert force on the WM352D brake valve to obtain maximum output from this regulator. When the treadle is released, both valves will exhaust outlet pressure to the atmosphere.

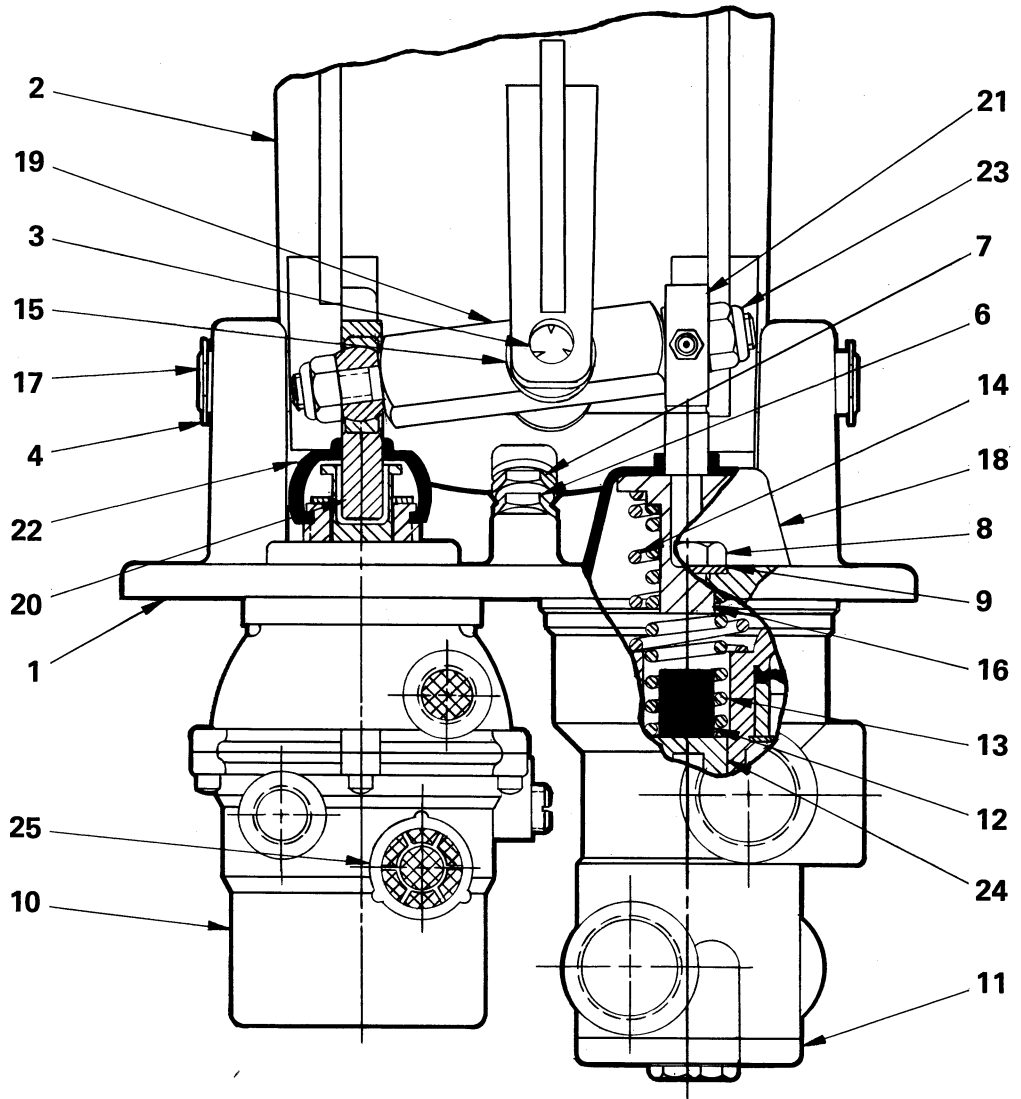
**APPLICATION** The WM399L single treadle/dual valve is designed for special industrial and vehicular dual system applications. The valve is commonly used to provide a pneumatic control signal to the transmission retarder and the braking system. In this type of application, the WM399L delivers maximum output to the retarder before supplying a pressure signal to the brakes. The WM399L can also be used as a clutch and drum brake control for crane/hoist applications.

**TYPICAL INSTALLATION**

**EXTERNAL CONFIGURATION**

**SINGLE  
TREADLE/  
DUAL VALVE**
**FUNCTIONAL DIAGRAM**

**I.S.O. SYMBOL**


**PARTS IDENTIFICATION**

ITEM	DESCRIPTION	QTY.
1	MOUNTING BRACKET	1
2	TREADLE	1
3	PIN	1
4	RETAINING RING	1
6	NUT	1
7	SCREW	1
8	SCREW	2
9	LOCKWASHER	2
10	WM 90DB REGULATOR	1
11	WM352D VALVE	1
12	RUBBER SPRING	1
13	SPRING	1
14	SPRING	1
15	WASHER	1
16	SPRING CUP	1
17	TREADLE PIN	1
* 18	DUST BOOT	1
19	PIVOT ARM	1
20	BEARING & ROD ASSY.	1
21	BEARING & ROD ASSY.	1
* 22	DUST BOOT	1
23	LOCKNUT	2
24	SPACER	1
25	WM111A EXH. BREATHER	1

Service this unit with repair kit 114340. Repair kit includes parts to service the WM 90DB regulator and WM352D control valve assemblies. To replace only the WM 90DB regulator, order part number 111302. To replace only the cartridge in the WM 90DB, order part number 101355. To replace only the WM352D control valve, order part number 112471. To replace only the cartridge in the WM352D, order part number 101979. To replace WM111A exhaust breather (Item 25), order part number 111411. \*Asterisk designates parts included in repair kit 114340.



**SPECIFICATIONS**

PORT SIZES: Retarder Valve (WM 90DB) . . . . . 1/4-18 NPTF  
 Brake Valve (WM352D) . . . . . 1/2-14 NPTF

MAXIMUM OPERATING PRESSURE . . . . . 200 PSI (1379,0 kPa)

OPERATING TEMPERATURE\* . . . -20°F to 200°F (-28,9°C to 93,3°C)

**FLOW RATING:**

Retarder Valve . . . 35 SCFM @ 100 PSI (1,0 m<sup>3</sup>/min @ 690 kPa)

Brake Valve . . . . . 160 SCFM @ 100 PSI (4,5 m<sup>3</sup>/min @ 690 kPa)

**COMPENSATING RANGE:**

Retarder Valve . . . . . 0-75/85 PSI (0-517,1/586,1 kPa)

Brake Valve . . . . . 0-120/140 PSI (0-827,4/965,3 kPa)

TREADLE ANGLE . . . . . 45° to Mounting Surface

**TREADLE TRAVEL:**

To Achieve Maximum Output in Retarder Valve . . . . . Approx. 17°

To Achieve Maximum Output in Brake Valve . . . . . Approx. 30°

MOUNTING . . . . . Bracket Secured to Floor

MOUNTING ATTITUDE . . . . . Optional

MATERIALS: Body Castings . . . . . Die Cast Zinc and Aluminum Alloys

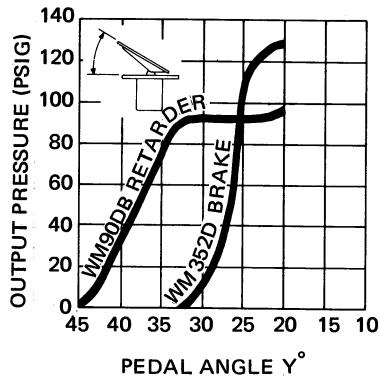
Treadle . . . . . Die Cast Aluminum Alloy

Rubber Spring & Dust Boots . . . . . Chloroprene Rubber

O-Ring & U-Cup Seals . . . . . Buna N

NET WEIGHT . . . . . 9 lbs. (4,1 kg)

\*For continuous operation beyond this range, contact factory.



**TO ORDER, SPECIFY**  
**WM399L**  
 Model Number  
**PART NUMBER 112799**