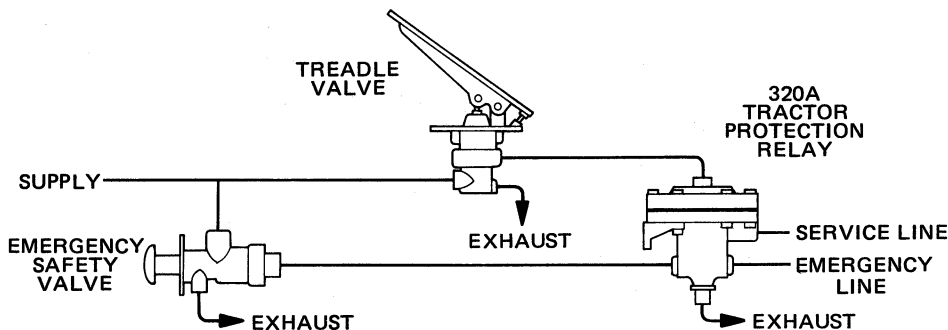
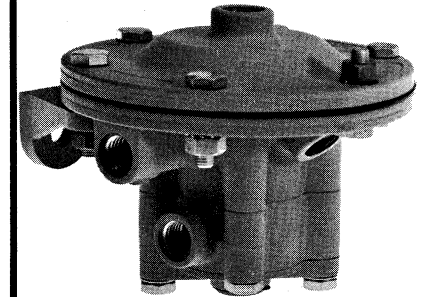
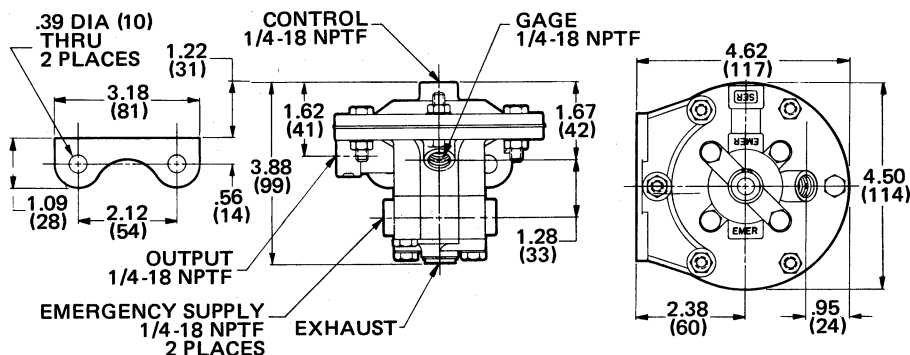
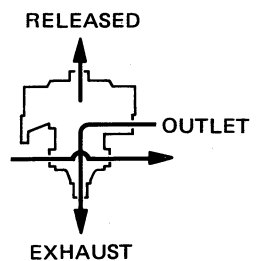
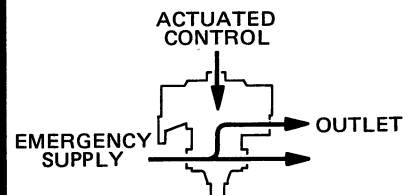
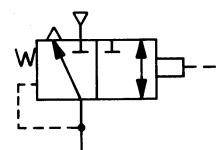


PRODUCT DESCRIPTION

DESCRIPTION Engineered for tractor-trailer braking systems, the WM320A is a pilot pressure-operated tractor protection relay valve. This three-way, compensating relay delivers an output that is proportional to the control signal applied. The output/control pressure ratio is fixed on the WM320A at 1 to 1. To order a ratio relay valve with an adjustable rather than a fixed ratio, review the information on the WM318A catalog page.

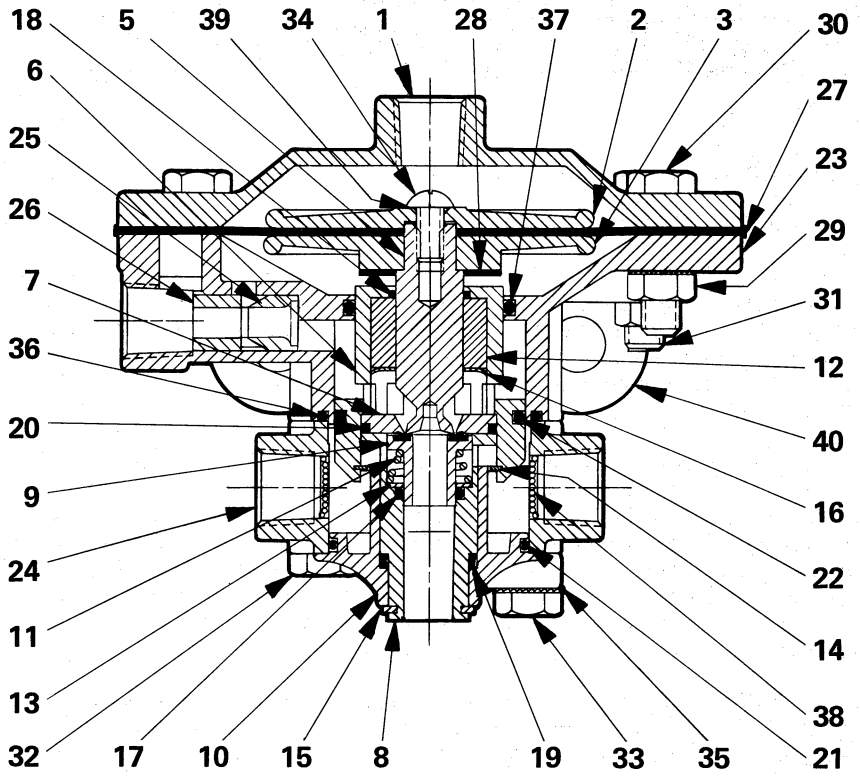
OPERATION When pilot pressure is applied to the WM320A, an internal diaphragm expands. The stem poppet blocks the exhaust vent, and the supply poppet unseats to allow pressure delivery. The outlet pressure increases and balances against the control pressure on the other side of the diaphragm. When a balanced condition is achieved, the supply poppet seats. To maintain this balanced condition, the valve compensates for any increase in control pressure or decrease in downstream pressure. As the control pressure decreases, the valve exhausts the outlet pressure to the atmosphere.

APPLICATION In tractor-trailer braking systems, the WM320A relay is used as a tractor protection valve. Because the control pressure cannot escape through the open service line, the relay valve protects pressure in the brake system when the service brakes are applied. Used in applications that require a relay valve with a fixed 1:1 output/control pressure ratio, this valve is furnished with an integral mounting bracket for installation on the truck or tractor.

TYPICAL INSTALLATION

EXTERNAL CONFIGURATION

**TRACTOR
PROTECTION
VALVE**
FUNCTIONAL DIAGRAM

I.S.O. SYMBOL


PARTS IDENTIFICATION

ITEM	DESCRIPTION	QTY.
1	COVER	1
2	UPPER PLATE	1
3	LOWER PLATE	1
5	EXHAUST STEM	1
6	INLET CAGE	1
7	INLET SEAT	1
8	STEM	1
* 9	POPPET	1
10	CARTRIDGE BODY	1
11	SPRING	1
12	STEM GUIDE	1
13	WASHER	1
* 14	RETAINING RING	1
* 15	RETAINING RING	1
* 16	RETAINING RING	1
* 17	O-RING	1
* 18	O-RING	1
* 19	O-RING	2
* 20	O-RING	1
* 21	O-RING	1
* 22	O-RING	1
23	BODY	1
24	EMERGENCY BODY	1
25	EJECTOR TUBE	1
26	EXPANSION TUBE	1
* 27	DIAPHRAGM	1
* 28	BUMPER	1
29	LOCKNUT	6
30	SCREW	3
31	SCREW	3
32	SCREW	2
33	SCREW	2
34	SCREW	1
35	LOCKWASHER	2
* 36	O-RING	1
* 37	O-RING	1
* 38	SCREEN	2
* 39	WASHER SEAL	1
40	BRACKET (105182)	1



SPECIFICATIONS

PORT SIZE 1/4-18 NPTF
 MAXIMUM OPERATING PRESSURE 150 PSI (1034,2 kPa)
 OPERATING TEMPERATURE* . . . -20°F to 200°F (-28,9°C to 93,3°C)
 FLOW RATING 50 SCFM @ 100 PSI (1,5 m³/min @ 690 kPa)
 CRACKING PRESSURE . . . 1.5 PSI (10.3 kPa) w/100 PSI (690 kPa) Supply
 OUTPUT/CONTROL PRESSURE RATIO Fixed @ 1:1
 MOUNTING . . With Integral Bracket & Two Customer-Supplied Fasteners
 MOUNTING ATTITUDE Control Port Up Recommended
 MATERIALS: Body Castings Die Cast Zinc Alloy
 Diaphragm Fabric-Reinforced Buna N
 Poppet Chrome-Plated Brass w/ Buna N Insert
 Bumper & O-Rings Buna N
 NET WEIGHT 3.25 lb. (1,5 kg)

*For continuous operation beyond this range, contact factory.

Service this unit with repair kit number 114264. Repair kit includes parts to service the cartridge assembly. To replace the cartridge assembly, order part number 102067. Other replaceable items are followed by part numbers. *Asterisk designates parts included in repair kit 114264.

TO ORDER, SPECIFY
WM320A
 Model Number
PART NUMBER 112211