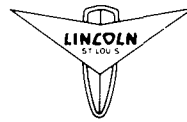


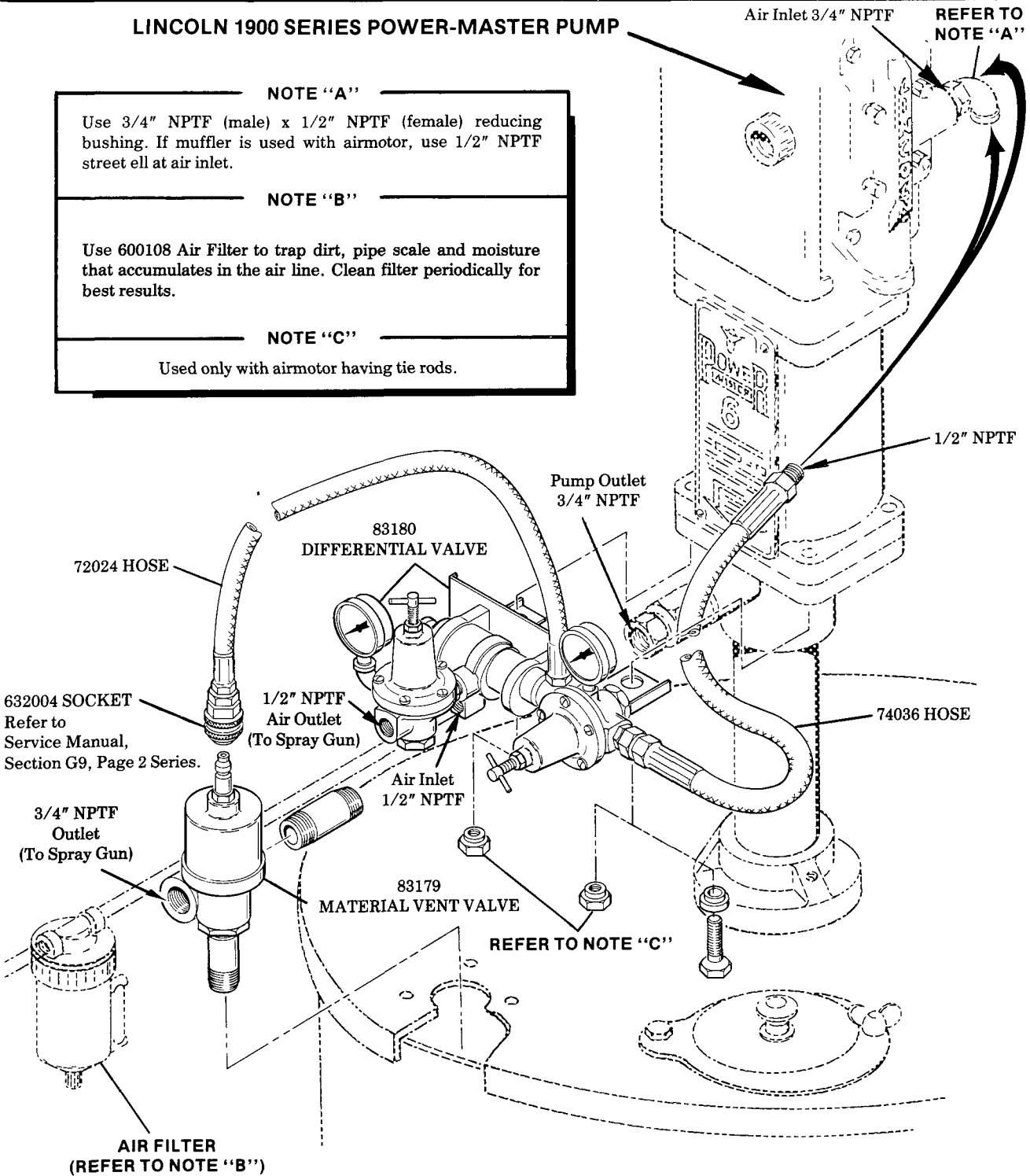
**MATERIALS DISPENSING SYSTEM
PRESSURE-FLO EQUALIZER
FOR USE WITH AIR ATOMIZING SPRAY GUNS**



Model 83181

LINCOLN 1900 SERIES POWER-MASTER PUMP

<p>NOTE "A"</p> <p>Use 3/4" NPTF (male) x 1/2" NPTF (female) reducing bushing. If muffler is used with airmotor, use 1/2" NPTF street ell at air inlet.</p>
<p>NOTE "B"</p> <p>Use 600108 Air Filter to trap dirt, pipe scale and moisture that accumulates in the air line. Clean filter periodically for best results.</p>
<p>NOTE "C"</p> <p>Used only with airmotor having tie rods.</p>

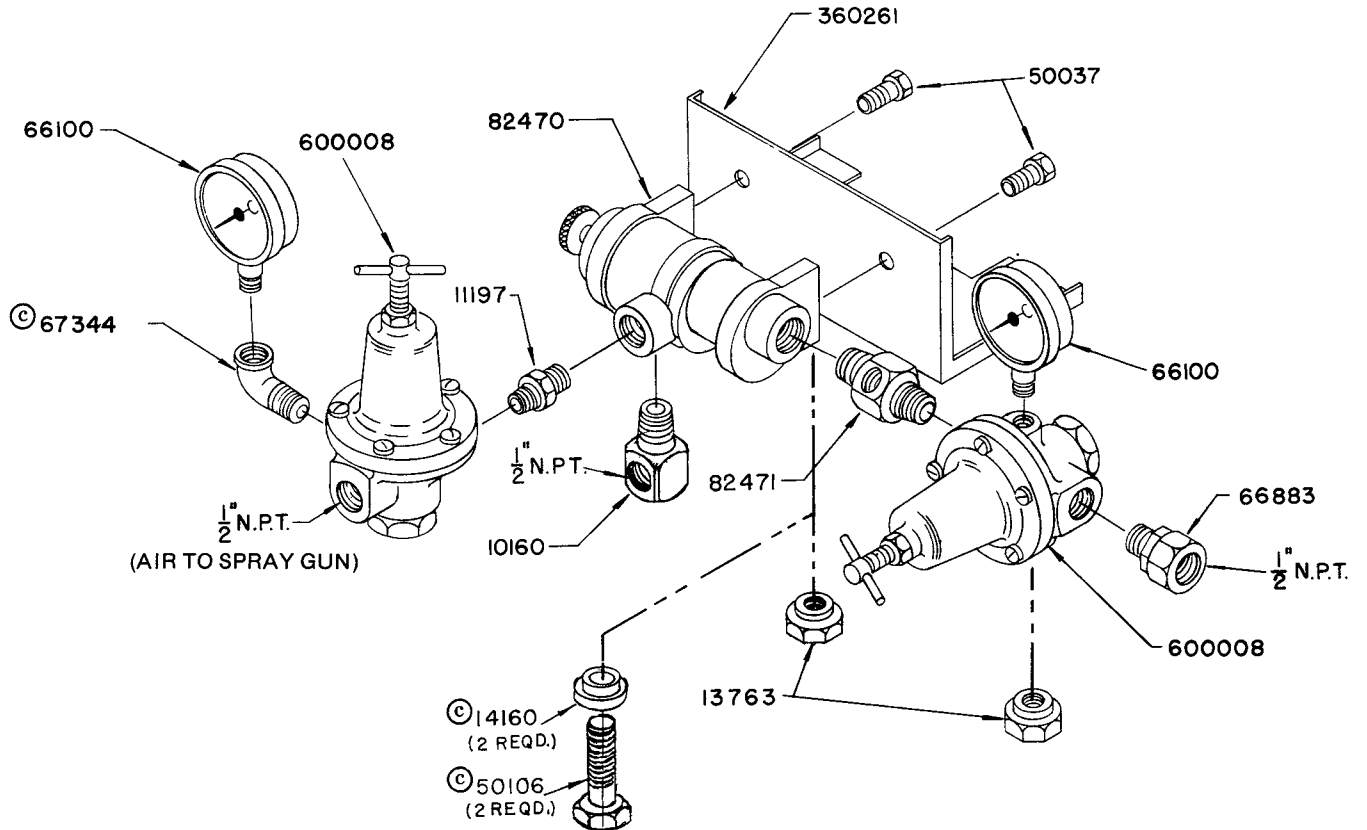


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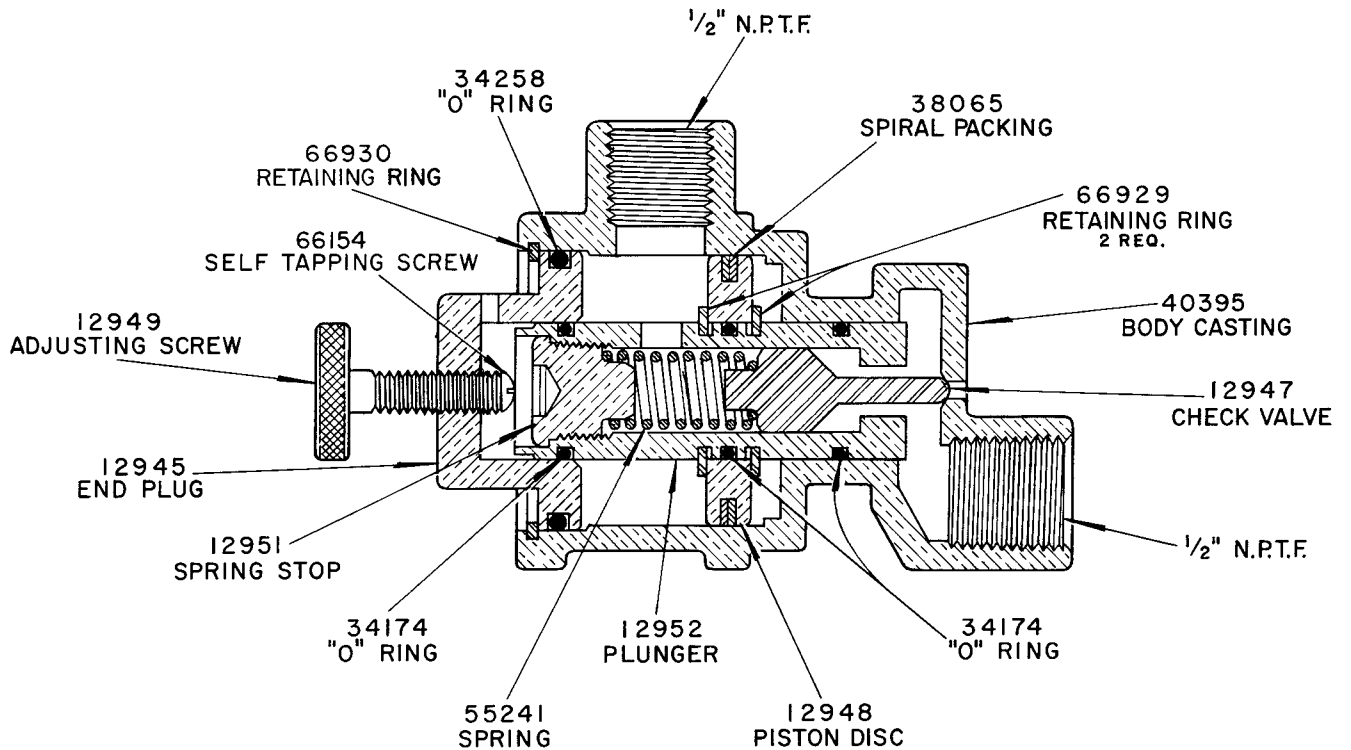
**SECTION - A52
PAGE - 3A**

83180 DIFFERENTIAL VALVE ASSEMBLY

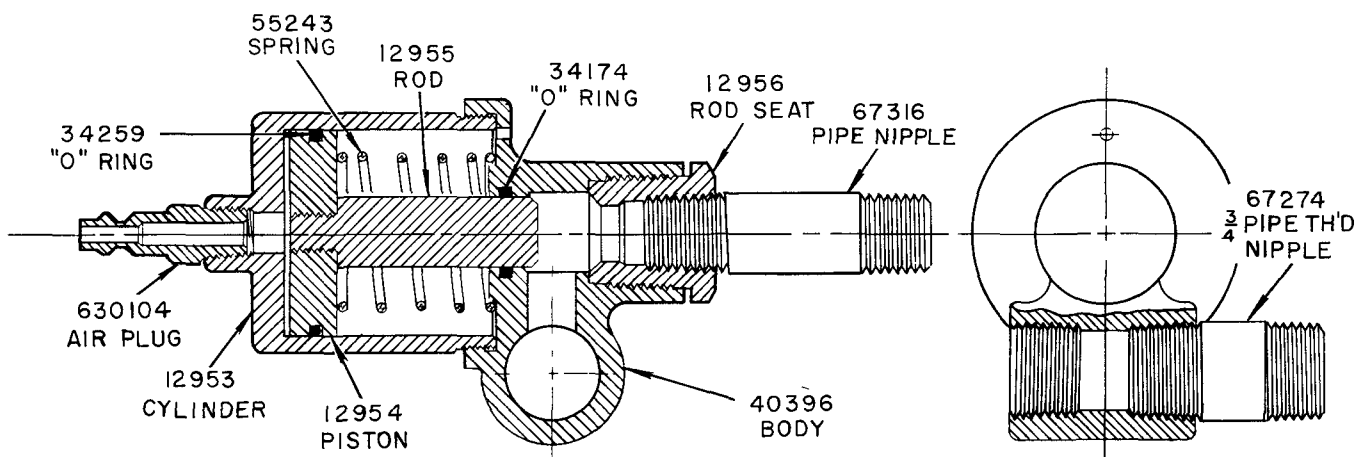


© Indicates change

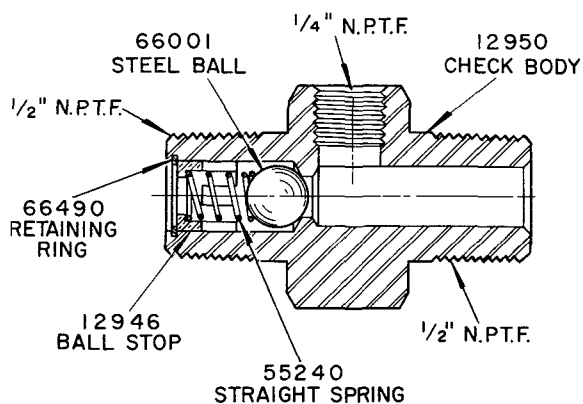
82470 DIFFERENTIAL VALVE



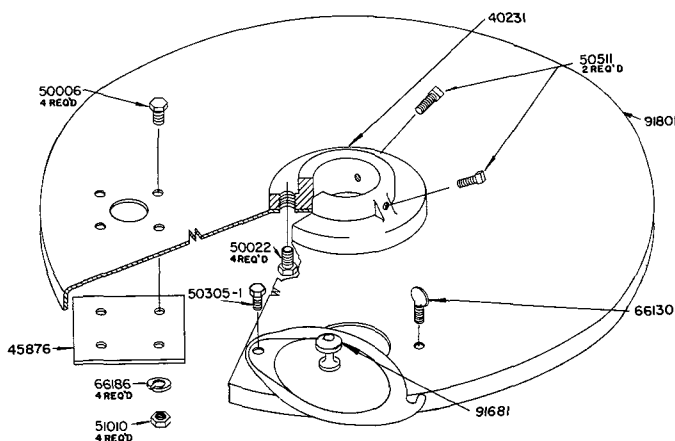
83179 MATERIAL VENT VALVE



82471 CHECK VALVE



83166 DRUM COVER

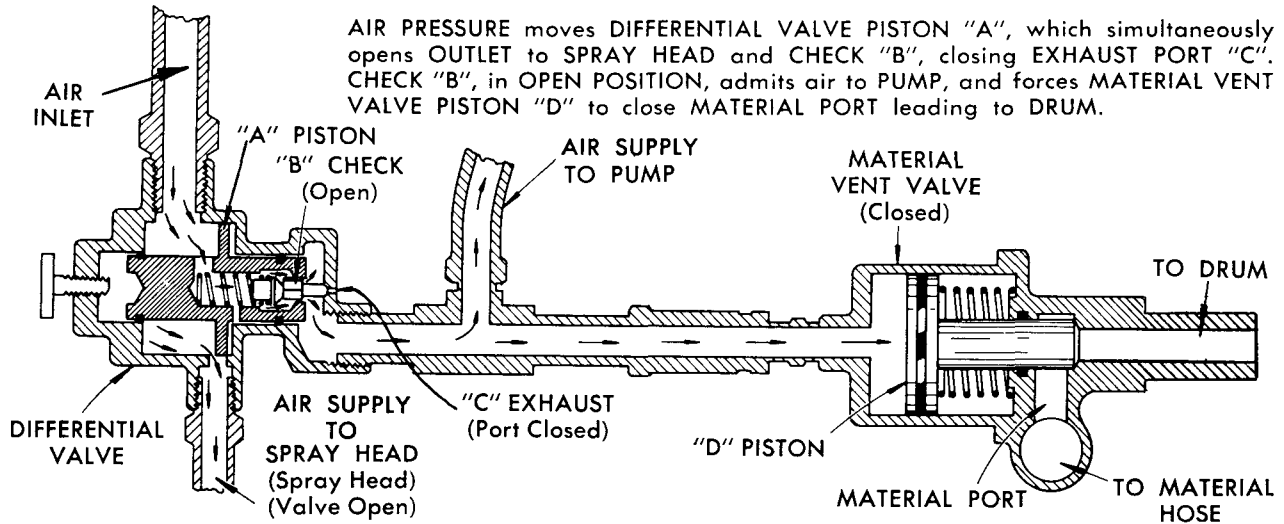


SERVICE PARTS

PART	QUAN.	DESCRIPTION	PART	QUAN.	DESCRIPTION
10160	1	Street elbow	50511	2	Set screw
11197	1	Nipple	51010	4	Nut
12945	1	End plug	55240	1	Spring
12946	1	Ball stop	55241	1	Spring
12947	1	Check valve	55243	1	Spring
12948	1	Piston disc	66001	1	Steel ball
12949	1	Adjusting screw	66100	2	Air gauge
12950	1	Check body	66130	1	Thumb screw
12951	1	Spring stop	66154	1	Self-tapping screw
12952	1	Plunger	66186	4	Lockwasher
12953	1	Cylinder	66490	1	Retaining ring
12954	1	Piston	66883	1	Adapter union
12955	1	Rod	66929	2	Retaining ring
12956	1	Rod seat	66930	1	Retaining ring
13763	2	Bracket nut	67274	1	Nipple
14160	2	Spacer	67316	1	Nipple
34174	4	O-ring	67344	1	Street elbow
34258	1	O-ring	72024	1	Hose
34259	1	O-ring	74036	1	Hose
38065	1	Spiral packing	82470	1	Differential valve
40231	1	Pump flange	82471	1	Check valve
40395	1	Body casting	83179	1	Material vent valve
40396	1	Body	83180	1	Differential valve assembly
45876	1	Cover plate	91681	1	Cover plate
50006	4	Bolt	91801	1	Drum cover
50022	4	Screw	360261	1	Bracket
50037	2	Screw	600008	2	Air regulator
50106	2	Screw	630104	1	Plug
50305-1	1	Bolt	632004	1	Socket assembly

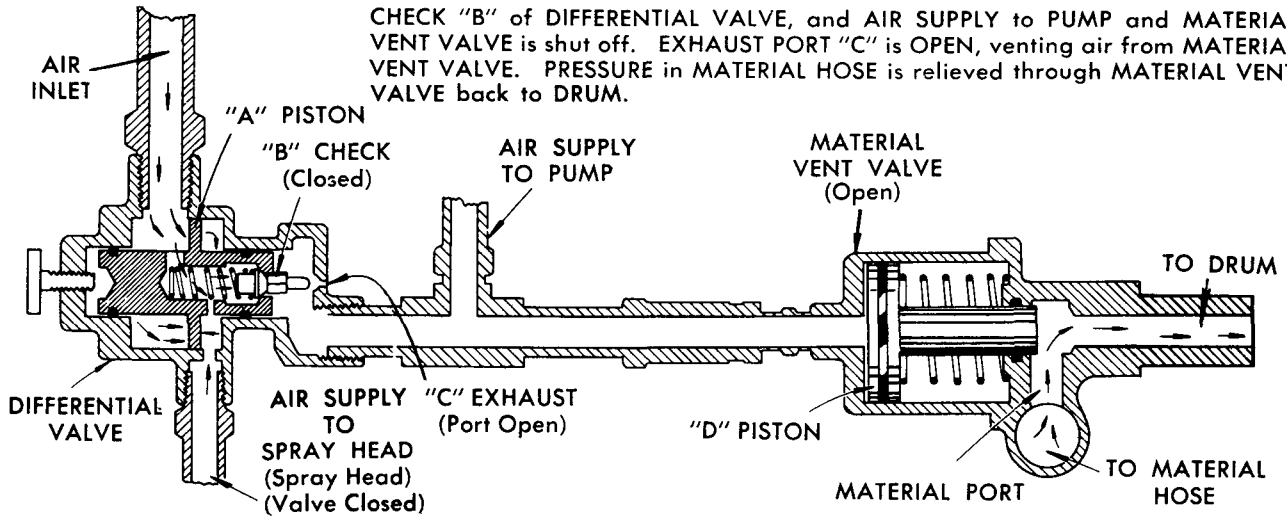
OPERATION

FIG. A—SPRAY HEAD VALVE OPEN



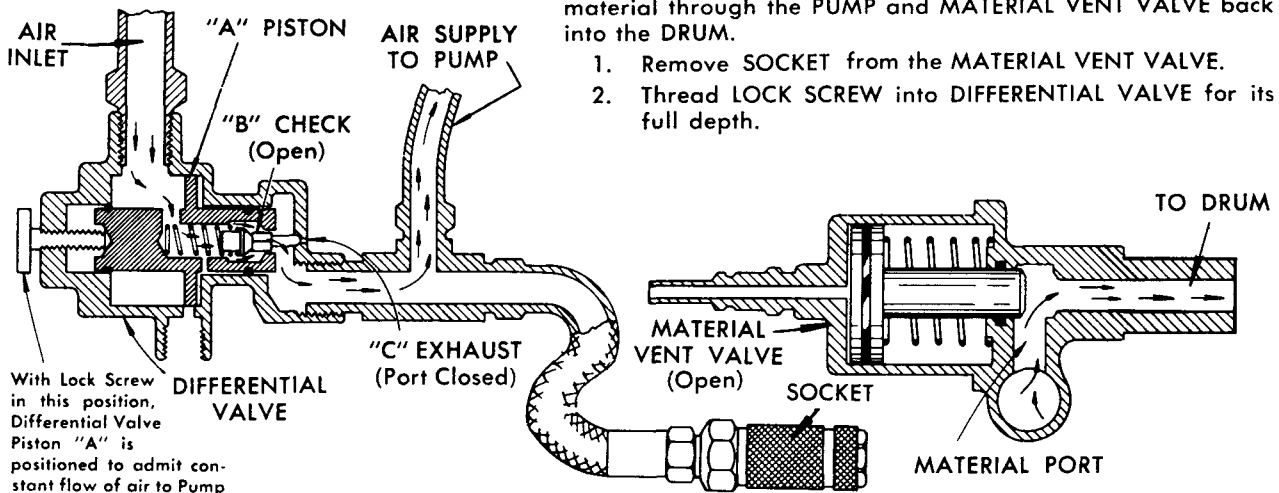
AIR PRESSURE moves DIFFERENTIAL VALVE PISTON "A", which simultaneously opens OUTLET to SPRAY HEAD and CHECK "B", closing EXHAUST PORT "C". CHECK "B", in OPEN POSITION, admits air to PUMP, and forces MATERIAL VENT VALVE PISTON "D" to close MATERIAL PORT leading to DRUM.

FIG. B—SPRAY HEAD VALVE CLOSED



CHECK "B" of DIFFERENTIAL VALVE, and AIR SUPPLY to PUMP and MATERIAL VENT VALVE is shut off. EXHAUST PORT "C" is OPEN, venting air from MATERIAL VENT VALVE. PRESSURE in MATERIAL HOSE is relieved through MATERIAL VENT VALVE back to DRUM.

FIG. C—TO PRE-AGITATE MATERIAL



The PRESSURE-FLO EQUALIZER can be used to pre-agitate material in the DRUM prior to spraying by circulating the material through the PUMP and MATERIAL VENT VALVE back into the DRUM.

1. Remove SOCKET from the MATERIAL VENT VALVE.
2. Thread LOCK SCREW into DIFFERENTIAL VALVE for its full depth.

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.

LINCOLN ST. LOUIS provides a Distributor Network that stocks equipment and replacement parts.

A list of Authorized Service Departments will be furnished upon request.