

## START-UP Procedure

Machine is shipped with hydraulic fluid.

1. Install provided hydraulic control levers (threaded rods with black ball handles).
2. **IMPORTANT:** BEFORE operation, remove the **RED** shipping plug from the hydraulic reservoir, and replace with the provided **BLACK** breather as shown below.



Remove **RED** shipping plug from the hydraulic reservoir



Remove **BLACK** breather from storage position



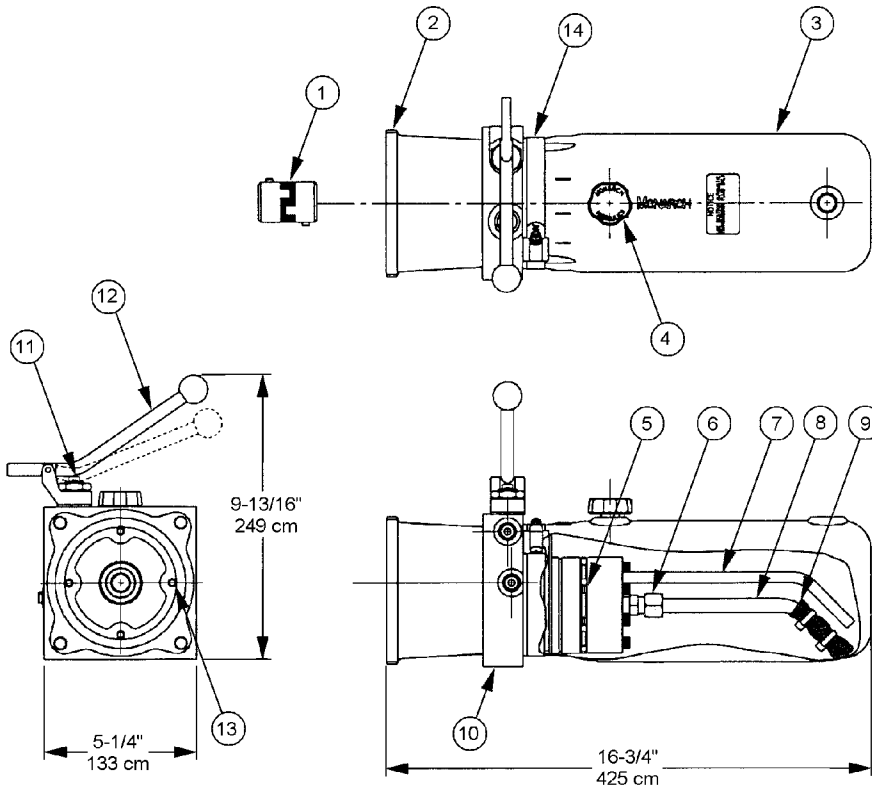
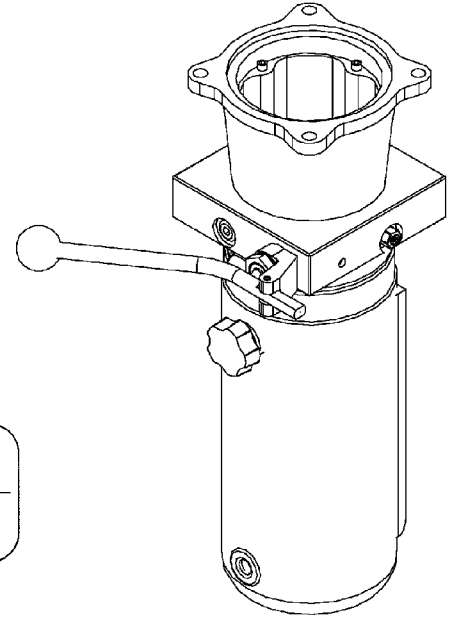
Install **BLACK** breather in place of **RED** shipping plug

### PARTS LIST AND DIAGRAM

for Morse Part Number M4509-P Hydraulic Power Pack

Used on: 400, 405 and 500 Series with 120 or 124 Option

Serial Number  
0802 to \_\_\_\_ (MMYY)



ITEM	QTY.	PART #	DESCRIPTION
1	1	M18002-P	COUPLING ASM, M4509, M4507
2	1	M01615-P	HOUSING, PUMP/ MOTOR ADAPTER
3	1	M04618-P	RESERVOIR, POLY, 4.5 X 12
4	1	M03171-P	PLUG, BREATHER, 3/8 NPT
5	1	M12172-200-P	PUMP ASM, M4509, M4507
6	1	M01490-P	CONNECTOR ASM, BRASS 1/2TX3/8
7	1	M13021-1050-P	TUBE, RETURN, 45DEG, 1/8 NPTF
8	1	M04297-08-P	TUBE, SUCTION, 45DEG 1/2 ALUM
9	1	M01315-P	FILTER, SUCTION, MON
10	1	M12481-P	BASE ASM, M4509, MON
11	1	M10802-P	VALVE, MANUAL, 2W/2P, NC
12 *	1	M11208-P	HANDLE ASM, M4509, MON
13	4	M07818-P	SHCS, 1/4-20 X 3
14	1	M07900-P	CLAMP, HOSE, WORM GEAR, RSV

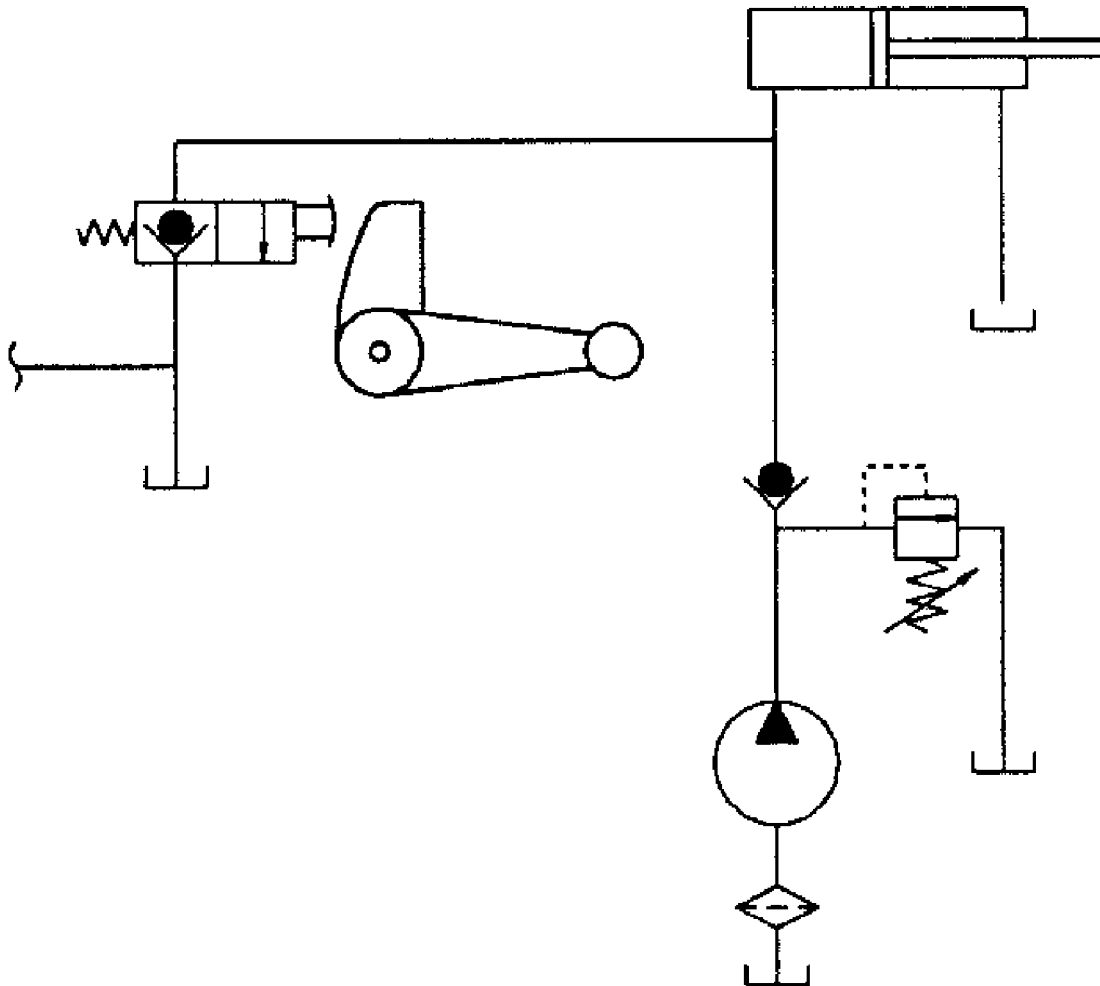
\* Recommended spare parts

## HYDRAULIC SCHEMATIC

for Morse Part Number M4509-P Hydraulic Power Pack

Used on: 400, 405 and 500 Series with 120 or 124 Option

Serial Number 0802 to \_\_\_\_ (MMYY)



## Maintenance for Hydraulic Power Pack

### Maintenance info for Hydraulic Pump

Recommended oil is petroleum based Dexron III ATF or equivalent (non-synthetic).  
Change oil yearly.

#### Recommended Operating Conditions:

- Oil Temperature Range: 10°F to 170°F (-25°C to 77°C)
- Operating Temperature: 50°F to 130°F (10°C to 54°C)

#### Oil Viscosity:

- Optimum 100 to 350 SUS (Cst = .22 X SUS – 135/SUS)
- Minimum 100 SUS at Operating
- Maximum Start Up 4000 SUS

#### Recommended Filtration:

- 10 micron nominal or better

The system should not be disassembled in the field for maintenance. These are pass or fail components.

If the valve or pump fails it will need to be replaced due to wear on components.

The root cause for the failure needs to be taken into account to avoid contaminating the new components or to avoid exposing them to the same fail parameters.