RECOMMENDED SPARE PARTS LIST

P/N	DESCRIPTION	QTY. PER UNIT
U-104	PISTON SEAL (AFTER FEB 2003)	2
05714	PISTON GUIDE	2
905V	O-RING	4
2-010V	O-RING	4
8-010	BACK UP RING	8
KIT-F4-50V	FILTER ELEMENT	1
CV 6000-8	CHECK VALVE REBUILD KIT	1
SVRK	INLET VALVE REBUILD KIT	1
6682	VALVE SEAT REMOVAL TOOL	1

GENERAL MAINTENANCE

TO BE DONE EVERY SIX MONTHS OR WHEN REPLACING PISTON SEALS.

1. DISCONNECT ALL ELECTRICAL.
2. REMOVE COVER.
3. PRESSURE SYSTEM TO 2000 PSI AND "BUBBLE TEST" THE FITTINGS WITH SOAPY WATER OR AN APPROVED LEAK CHECK SOLUTION FOR OXYGEN.
4. REMOVE GAS PRESSURE AND TIGHTEN ANY LEAKING FITTINGS. REPRESSURIZE SYSTEM AND CHECK AGAIN FOR LEAKS. CONTINUE UNTIL ALL LEAKS ARE SEALED.
5. REMOVE PRESSURE FROM BOOSTER.
6. CHECK COMPONENTS FOR TIGHTNESS; MOTOR, FAN GAUGES, BELT AND ELECTRICAL.

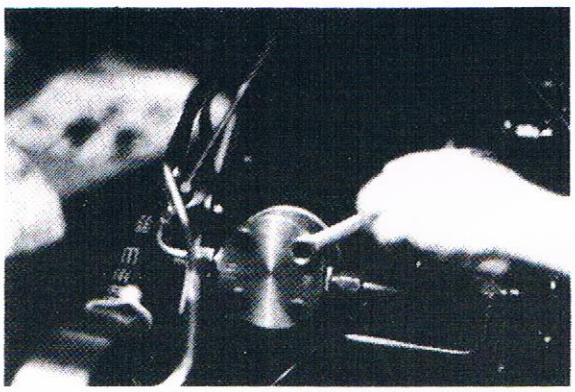
ANNUAL SERVICE

1. REMOVE HEADS - CLEAN AND INSPECT VALVE SPRINGS AND BALLS. REPLACE IF WORN OR BROKEN. REPLACE O-RINGS ON FITTINGS, P/N **905V** INSTALL SPRINGS, BALLS, AND FITTINGS IN HEAD. INSTALL NEW SEAL IN HEAD USING SEAL TOOL.
2. CHECK PISTON GUIDES FOR WEAR. REPLACE IF WORN, P/N **05714**.
3. CHECK PISTON FOR SIDE TO SIDE MOVEMENT. (PISTON SHOULD BE TIGHT.) IF PISTON MOVES THE PUMP MUST BE TORN DOWN AND BUSHINGS ON LOWER PISTON SKIRT MUST BE REPLACED.
4. CHECK PISTON FOR WEAR. IT MUST BE SMOOTH WITH NO RIDGES. IF IT IS WORN THE UPPER PISTON MUST BE REPLACED. (PISTON IS SECURED IN WITH LOCTITE AND YOU WILL NEED TO APPLY HEAT TO REMOVE.)
5. CHECK ROD BEARINGS. THE RODS WILL SOMETIMES WORK THEMSELVES OUT OF BEARINGS AND HIT THE COUNTER WEIGHTS. IF THIS OCCURS, REMOVE RODS AND APPLY LOCTITE TO BEARINGS AND RODS.
6. INSTALL HEADS ON BOOSTER. TORQUE HEAD BOLTS TO 175 INCH POUNDS.
7. REMOVE IN-LINE FILTER AND CHECK FOR GOOD FLOW. REPLACE WITH FILTER ELEMENT P/N **KIT-F4-50V**.
8. REMOVE CHECK VALVE ON BYPASS. INSTALL REBUILD KIT, P/N **CV6000-8.**
9. CHECK ALL FITTINGS FOR TIGHTNESS.
10. PRESSURIZE PUMP AND ALL TUBING. USE A SOAPY WATER SOLUTION AND CHECK FOR LEAKS. (PRESSURE SHOULD HOLD ON GAUGES WHEN ISOLATED.)

PROCEDURE FOR REPLACEMENT OF PISTON SEAL AND PISTON GUIDE

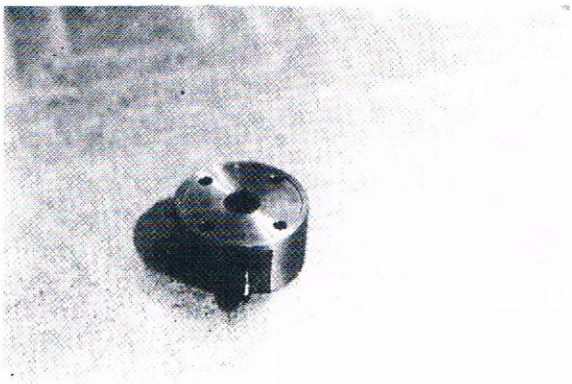
1. DISCONNECT POWER CORD FROM ELECTRICAL SOURCES.
2. BLEED OFF OR EXHAUST ALL PRESSURE FROM BOOSTER.
3. TAKE OUT ALL BOOSTER COVER SCREWS AND REMOVE COVER.

4. Disconnect inlet and outlet tube from each cylinder head. (Four places, total).

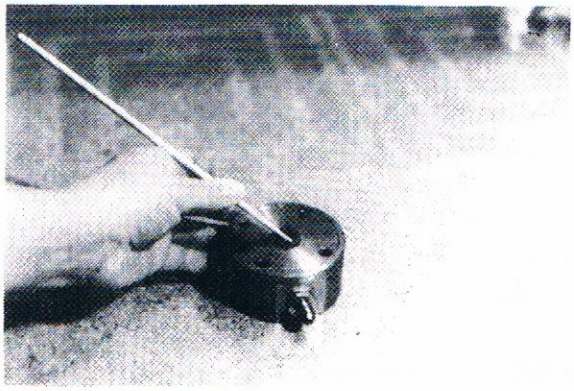


5. Remove four cylinder head bolts from each cylinder head. (Eight bolts, total).

6. Carefully slide, one at a time, each cylinder head off from piston.

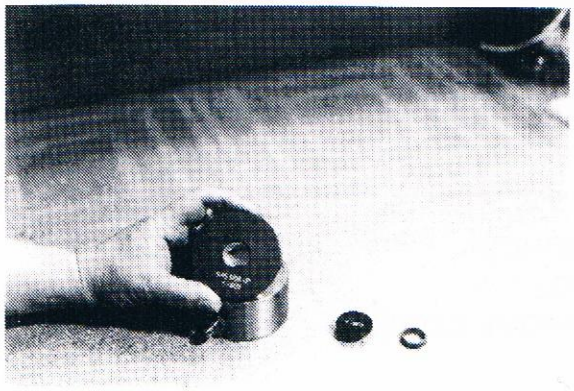


7. Lay each cylinder head on bench with piston seal up.



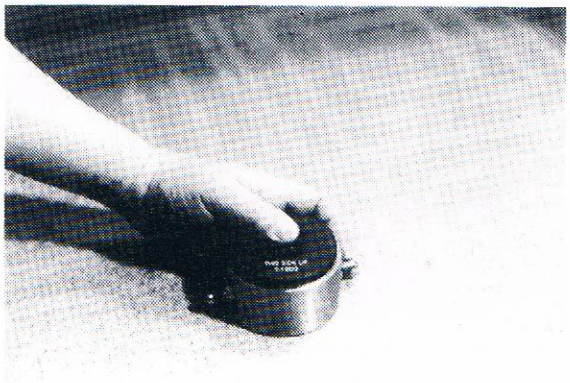
8. Remove piston seal ring from each cylinder head with finger. DO NOT use a screw driver or any sharp edged metal tool.

9. Blow out piston cavity and wipe clean seal counterbore of each cylinder head to remove worn seal material. *See step 16 also.

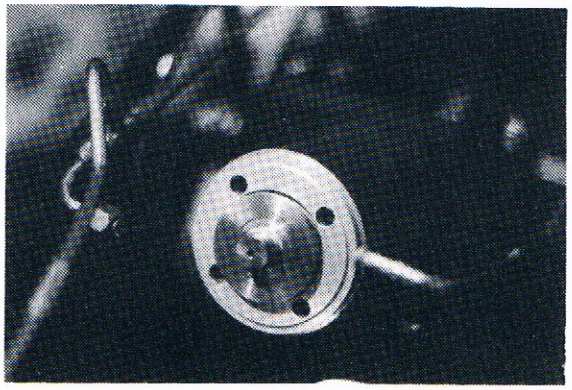


10. Place Seal Tool on cavity side of cylinder head. Use 5/8" tool for 5/8" piston and 1 1/4 tool for 1 1/4" piston

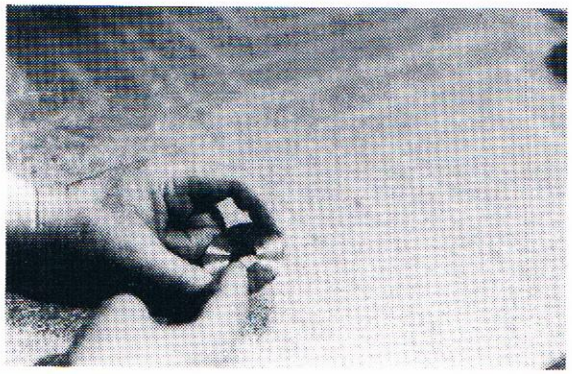
11. Start new seal by hand, **OPEN SIDE OF SEAL DOWN**, into tapered bore of tool plate.



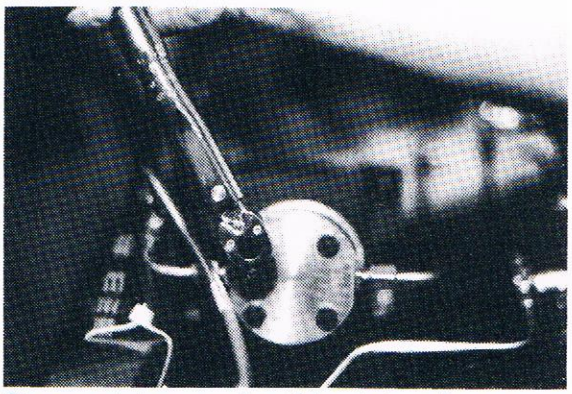
12. Place tool button on seal and push seal through tool plate and into counterbore on cylinder head. Repeat procedure for remaining cylinder head.



13. Rotate piston to push guideplate out of counterbore. Clean piston Thoroughly.



14. Clean and inspect piston guide plate for wear when replacing seals. Guide bushing should have .002 clearance form the piston. Replace guideplate if worn.



15. *Clean piston and guideplate of any seal material or grease. Install head with inlet connection facing front panel. (ON TWO STAGE PUMPS INSTALL UPPER HEAD WITH INLET FACING REAR) Torque cylinder head bolts to 175 in. Lbs.

16. *Before installing head, check valves for leakage. This is done by blowing into each fitting on head. You should not be able to blow through he valves. If you can blow through valves remove fitting from head and clean or replace spring and ball. Replace O-Ring on fittings if damaged.

17. Re-install inlet and outlet tubing. Pressurize system to 500 psi and check for leaks. Tighten fittings as necessary to stop leaks.