

RICE HYDRO, INC.
MANUFACTURER'S OPERATING INSTRUCTIONS
EL-SERIES MODEL TEST PUMPS

FOR WARRANTY REGISTRATION CALL 800-245-4777.

CONNECTING THE PUMP:

1. With switch in off position, connect power cord on motor to standard wall Outlet. Extension cord: when needed, a 12 gauge 3 wire, **max 25 foot length**, plugged into a 20amp breaker is required.
2. Connect **CLEAN** pressurized water source to the inlet of the pump. *It is recommended that the unit be pressure fed.* For gravity feed locate water within 8 feet and above level of unit, and then prime the pump.
3. Connect high-pressure outlet hose to the pump and your test environment.

OPERATING THE PUMP:

1. Turn the outlet ballvalve to the open position, start the motor.
2. The pressure regulator has been preset at factory. **To change this setting you must make this adjustment while the water is flowing freely, under no pressure.** To adjust pressure, first loosen the locknut. Turn the **T-handle/knob** clockwise to increase and counter-clockwise to decrease the pressure. Place a ballvalve or similar open and close valve at the end of the outlet hose, open and close ballvalve to check pressure setting and re-adjust as necessary. After any adjustments on regulator, bleed off system / test environment to "0" PSI; restart the test from "0" ensures the most accurate reading of pressure. It also recommended that you **OFTEN** open and close the RICE bleed valve to remove excess air from piping and ensure accurate pressure readings. Once desired setting is reached, **IT IS VERY IMPORTANT THAT YOU RE-TIGHTEN THE LOCK/JAM NUT,** do not leave adjustment handle free to move or vibrate out of setting. If unloader valve handle does fall out see attached diagram to replace parts correctly. **CAUTION: IT IS VERY COMMON TO REPLACE POPPET/BUTTON BACKWARDS, THE LONGER LEG WITH STEEL BALL FACES AWAY FROM THE SPRING.** With the ballvalve open begin building pressure in test environment. Bleed air thru RICE bleed valve at least once during this process. Once test pressure has been reached, **shut off motor and close ballvalve.**
3. Once the outlet ballvalve is closed and your test begins, you have now isolated the test pump from your test environment; any loss of pressure is due to leaks or trapped air in the line.

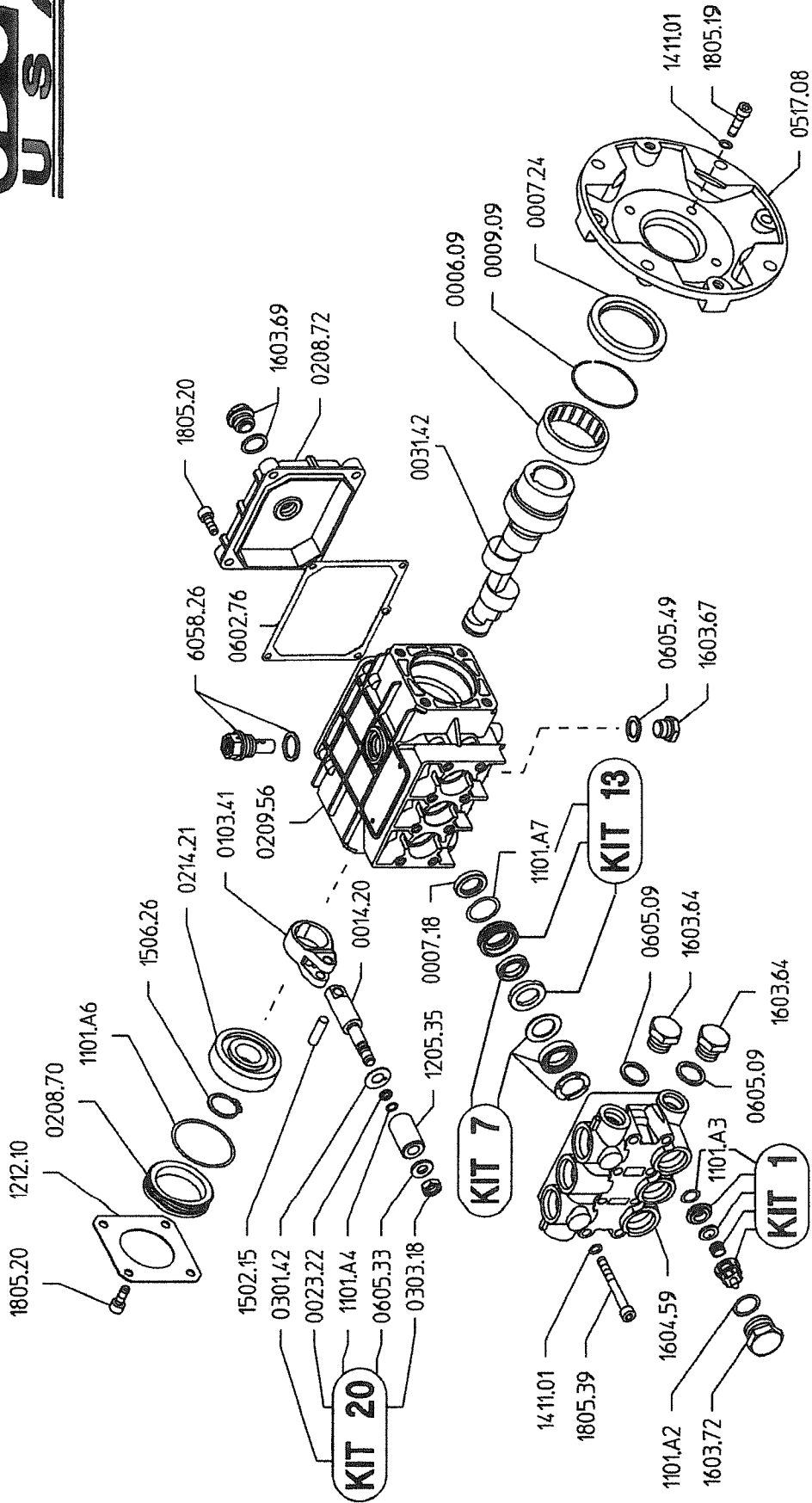
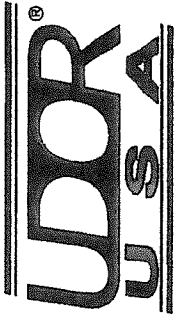
REMEMBER THESE CAUTIONS:

1. Power source must match voltage requirement of electric motor and if needed an Extension cord of at least 12 gauge wire.
2. Use a sound 3/4" or larger supply hose.
3. DO NOT run dry or pump chlorine through the unit.
4. Protect the pump from freezing, FLUSH with anti-freeze.

MAINTENANCE:

1. Plunger pumps use non-detergent 30wt oil.

PNL 3.0/20-Z



PNL 3.0/20-Z Quick Reference

Maximum Flow	3.0 GPM	Valve Kit	04-KIT UD-1
Maximum Pressure	2000 PSI	Seal Kit	04-KIT UD-7
Rated Pump Speed	3400 RPM	Brass Kit	04-KIT UD-13
Oil Capacity	12 oz. UDOR LUBE	Plunger Bolt Kit	04-KIT UD-20
	or SAE 30W	Plunger Part #	04-1 205.35
	Non-Detergent Oil	Plunger Diameter	15 MM

RICE HYDRO, INC. PARTS BREAKDOWN LISTING
 MODELS: EL1, EL1A, EL2, EL3

PART NUMBER..	DESCRIPTION	QTY REQ'D
UD04-0006.09	BEARING	1
UD04-0007.18	SEAL	3
UD04-0007.24	SEAL	1
UD04-0009.09	RETAINER CLIP	1
UD04-0014.20	PLUNGER ROD P SERIES	3
UD04-0023.22	SUPPORT RING	1
UD04-0031.42	CRANKSHAFT - EL2	1
UD04-0031.45	CRANKSHAFT - EL1	1
UD04-0103.41	ALUM CONNECTING ROD P SERIES	3
UD04-0208.70	BACK COVER P-SERIES	1
UD04-0208.72	CRANKCASE COVER	1
UD04-0209.56	CRANKCASE P SERIES	1
UD04-0214.21	BEARING	1
UD04-0301.42	SLINGER RING	1
UD04-0303.18	PLUNGER NUT	1
UD04-0517.08	ELECTRIC FLANGE P-SERIES	1
UD04-0602.76	GASKET	1
UD02-0605.09	GASKET	1
UD04-0605.33	PLUNGER WASHER	1
UD04-0605.49	O-RING	1
UD04-1101.A2	O-RING	6
UD04-1101.A3	VALVE O-RING	6
UD04-1101.A4	O-RING	1
UD04-1101.A6	O-RING	1
UD04-1101.A7	O-RING	1
UD04-1205.35	PLUNGER - 15 MM	3
UD04-1212.10	SIDE PLATE P-SERIES	1
UD04-1411.01	WASHER	12
UD04-1502.15	CONNECTING ROD PIN	3
UD04-1506.26	SNAP RING	1
UD04-1603.64	DISCHARGE PLUG - 3/8	1
UD02-1603.67	DRAIN PLUG	1
UD04-1603.69	SIGHT GLASS	1
UD04-1603.72	VALVE CAP P SERIES	6
UD04-1604.C7 (USE 1604.59)	MANIFOLD P SERIES 15MM	1
UD04-1805.19	BOLT	4
UD04-1805.20	BOLT	8
UD04-1805.39	BOLT	8
UD04-6058.26	OIL VENT CAP P SERIES	1
HOSE & COUPLERS:		
HOSE-1/2X8-RH (EL1/1A)	8 FOOT OUTLET HOSE	1
FITTING-1/2-MPIPE (EL1/1A)	RIGID HOSE END FITTING	1
FITTING-1/2-MPX (EL1/1A)	SWIVEL HOSE END FITTING	1
HOSE-1/2-2500XFT (EL1/1A)	HIGH PRESSURE HOSE	8
HOSE-3/8X8-RH (EL2/3)	8 FOOT OUTLET HOSE	1
FITTING-3/8-MPIPE (EL2/3)	RIGID HOSE END FITTING	1
FITTING-3/8-MPX (EL2/3)	SWIVEL HOSE END FITTING	1
HOSE-3/8-3000XFT (EL2/3)	HIGH PRESSURE HOSE	8
COUPLERPLUG-3/8M	QUICK CONNECT MALE	1
COUPLERBODY-BR-3/8F	QUICK CONNECT FEMALE	1
COUPLERBODY-1/2	QUICK CONNECT FEMALE	1
COUPLERPLUG-1/2	QUICK CONNECT MALE	1
MOTORS & PUMPS:		
MOTOR-1.5HP-50/60HZ	ELECTRIC MOTOR FOR EL3	1
MOTOR-1/2HP-EL1- L	ELECTRIC MOTOR	1
MOTOR-1HP-CFACE (EL1A/2)	ELECTRIC MOTOR	1
SPEC-PND-3.0/15-ZA (EL1/1A)	TRIPLEX PLUNGER PUMP	1
SPEC-PNL3.0/20-Z (EL2/3)	TRIPLEX PLUNGER PUMP	1

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HOESWIVEL-1/2	HOSE SWIVEL INLET	1
HOESCREEN&WASHER	INLET HOSE SCREEN	1
BALLVALVE-1/2	OUTLET BALLVALVE	1
BALLVALVE-3/8HP	OUTLET BALLVALVE	1
VALVE-RELIEF-500PSI	PRESSURE REGULATOR	1
BLUE SPRING 50-500 PSI		
EL1, EL1A, FH3, EL-FHT		
VALVE-RELIEF-2000PSI	PRESSURE REGULATOR	1
YELLOW SPRING 200-2000 PSI		
EL3		
VALVE-RELIEF-900PSI	PRESSURE REGULATOR	1
RED SPRING 100 -900 PSI EL2		
GAUGE-600	0-600 PSI LIQUID FILLED	1
GAUGE-1500	0-1500 PSI LIQUID FILLED	1
NEEDLEVALVE-1/4	AIR BLEED VALVE	1
KING-EL1A	SHIPPING BOX	1

KITS:

UD04-KIT-UD1	VALVE KIT P-SERIES
UD04-KIT-UD7	SEAL KIT P-SERIES
UD04-KIT-UD13	BRASS KIT P 15MM
UD04-KIT-UD20	PLUNGER O-RING KIT 15MM

*Kits are all inclusive

Prices subject to change without notice
Revised 09/01/14