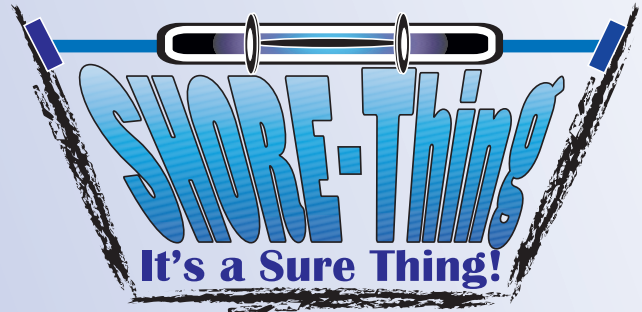


SHORING PRESSURE PUMPS

Model ST-312 • 3 GPM • 2000 PSI



RICE Hydro introduces our new gas powered hydraulic shoring pressure pump, the ST-312; it's a SHORE-Thing! Designed for use with bio-degradable anti-freeze the ST-312 offers a 20 gallon tank reservoir, a pressure adjusting valve up to 2000 PSI with bypass relief, and NO flat polyurethane tires. Constructed in a vertical ergonomic design the ST-312 has increased mobility, with reduced operator stress and user fatigue. A heavy gauge welded steel eye-hook allows for quick and easy jobsite relocation. Developed under the guidance of a local rental yard and two major construction companies, the ST-312 carries a 1 year FULL product warranty from manufacturer's defect.

- Heavy duty welded steel eye-hook for job site relocation
- Stainless-steel liquid filled gauge for accurate readings
- Available in gas or pneumatic driven
- Enclosed in a rugged roll cage for pump protection

S P E C I F I C A T I O N S

- INLET: 4" fill, with twist lock cap
- OUTLET: 50 foot high pressure outlet hose
Pressure regulating valve to 2000 PSI
- PUMP: Triplex Ceramic Plunger pump, with inner oil bath
- OUTPUT FLOW: 3 GPM
- OUTPUT PRESSURE: 2000 PSI
- ENGINE: 5.5 HP 163 CC, Honda engine with oil alert
- SHIPPING DIMENSIONS: 26 x 28 x 48
- SHIPPING WEIGHT: 200 pounds
- UNIT WEIGHT: 175 pounds



3500 Arrowhead Drive

Carson City

Nevada

89706

web site:

www.ricehydro.com

e-mail:

ricehydro@ricehydro.com

Phone:

(775) 885-1280

Fax:

(800) 998-7423

RICE HYDRO, INC. - MANUFACTURER'S OPERATING INSTRUCTIONS

ST-312, SHORE - THING

FOR WARRANTY REGISTRATION CALL: 1-800-245-4777

REMEMBER THESE CAUTIONS

1. Check all fluid levels prior to operating pump.
2. Use a sound 3/8" or larger outlet hose rated for at least 2000 psi.
3. DO NOT run dry or pump chlorine thru unit, if water or chlorinated water has been ran thru the unit, you must immediately flush system with anti-freeze to neutralize chlorine and prevent rust or corrosion damage.
4. Protect the pump from freezing, FLUSH with anti-freeze.

BEFORE USING ST-312:

1. Check oil level in engine, use 10W30. Unleaded gasoline.
2. Visually inspect components and all aspects of unit; loose fittings, hoses for rips or tears, gauge set on zero, and overall operating condition.

OPERATING THE PUMP:

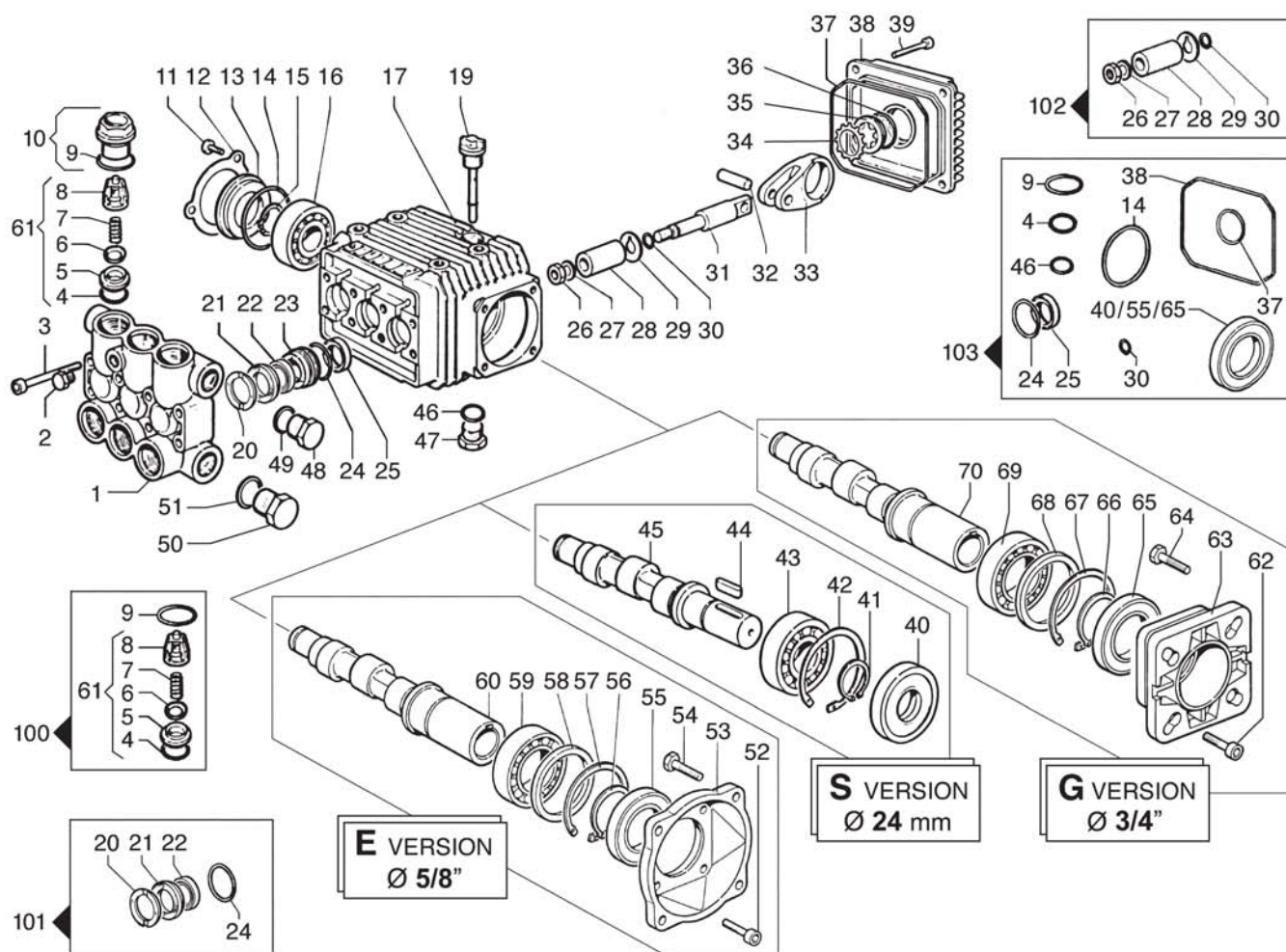
1. Fill the tank with fluid (designed for use with biodegradable anti-freeze).
2. Connect the high pressure outlet hose provided, to the outlet port on unit located down line from pressure gauge.
3. Connect hose to shoring ram or device.
4. Start the engine.
5. Turn off the **Bleed** ballvalve that is located to the right of the gauge, closing the system from running in bypass, allowing pressure to build.
6. Control handle with black knob on valve; push handle forward to engage valve and pressure will begin to build. Handle will lock forward and continue to build pressure up to around 600 PSI. This is a valve with a detent-pin, after 600 PSI you will need to manually hold the handle forward allowing pressure to continue to build. This is a built in safety feature, to prevent damage from over pressurizing, or personal injury. Valve is set to a maximum of 1200 PSI, at which time the unit will kick into bypass and fluid will be recirculated back to reservoir tank.
7. Once desired pressure is met, pull control handle back into neutral position, there is an inline one-way checkvalve to prevent pressure from bleeding off or back into the unit. Close or disconnect hose from shoring device. At this time open bleedvalve and relieve fluid in hose still under pressure back into reservoir tank.
8. Repeat steps as necessary; remember when shutting down the unit or when moving hose between devices to open bleedvalve and relieve pressure from hose. Not doing so will stop you from being able to get the hose quick release to actually disconnect.

RECOMMENDED PERIODIC MAINTENANCE PROCEDURE

Change engine oil after the first 5 hours of operation thereafter every 80 hours of use or every season.



WARNING: Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, operate and service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to: www.p65warnings.ca.gov



| N° | Cod. | Descrizione | Description | Note | Qty | Model |
|----|-----------|-------------------------|-------------------------|------------|-----|-------|
| 1 | 3218 0317 | Testata Pompa Ottone | Brass Pump Manifold | Ø15 | 1 | |
| 2 | 3202 0018 | Tappo | Cap | G1/8 | 1 | |
| 3 | 3609 0108 | Vite | Screw | M6x55 | 8 | |
| 4 | 1210 0046 | Guarnizione OR | O-Ring | 2,62x17,13 | 6 | |
| 5 | 3009 0087 | Sede Valv. Aspir./Mand. | Suct./Del. Valve Seat | | 6 | |
| 6 | 3604 0017 | Valvola Aspir./Mand. | Suct./Del. Valve | | 6 | |
| 7 | 1802 0177 | Molla Valv. Asp./Mand. | Suct./Del. Valve Spring | | 6 | |
| 8 | 1205 0025 | Gabbia Valv. Asp./Mand. | Suct./Del. Valve Cage | | 6 | |
| 9 | 1210 0048 | Guarnizione OR | O-Ring | 2,62x20,24 | 6 | |
| 10 | 3202 0312 | Tappo + OR | Cap + O-Ring | | 6 | |
| 11 | 3609 0088 | Vite | Screw | M5x10 | 3 | |
| 12 | 1004 0012 | Flangia Tenuta | Crankcase Flange | | 1 | |
| 13 | 0402 0172 | Coperchio | Cover | | 1 | |
| 14 | 1210 0386 | Guarnizione OR | O-Ring | 3,53x44,04 | 1 | |
| 15 | 3019 0011 | Seeger Esterno | Outer Seeger | | 1 | |
| 16 | 0438 0066 | Cuscinetto a Sfere | Ball Bearing | 20x52x15 | 1 | |
| 17 | 0403 0128 | Carter Pompa | Pump Crankcase | | 1 | |
| 19 | 3200 0051 | Asta Livello Olio | Oil Dipstick | | 1 | |
| 20 | 0009 0196 | Anello Pressione | Packing Head Ring | Ø15 | 3 | |
| 21 | 1241 0065 | Guarnizione Tenuta | Packing | Ø15 | 3 | |
| 22 | 1241 0030 | Guarnizione Tenuta | Packing | Ø15 | 3 | |
| 23 | 0009 0198 | Anello Portaguarniz. | Packing Retainer | Ø15 | 3 | |
| 24 | 1210 0223 | Guarnizione OR | O-Ring | 1,78x26,7 | 3 | |
| 25 | 0019 0095 | Anello Tenuta | Oil Seal | 15x24x5 | 3 | |
| 26 | 0600 0048 | Dado Speciale | Special Bolt | | 3 | |
| 27 | 2811 0080 | Rondella | Washer | 8,2x14x1,5 | 3 | |

| N° | Cod. | Descrizione | Description | Note | Qty | Model |
|----|-----------|--------------------|-------------------|-------------|-----|--------|
| 28 | 0202 0020 | Bussola Ceramica | Ceramic Bushing | Ø15 | 3 | |
| 29 | 2812 0038 | Rondella | Washer | | 3 | |
| 30 | 1210 0055 | Guarnizione OR | O-Ring | 1,78x6,07 | 3 | |
| 31 | 2409 0044 | Pistone Guida | Piston Guides | | 3 | |
| 32 | 3011 0014 | Spinotto | Gudgeon Pin | | 3 | |
| 33 | 0205 0048 | Kit Biella | Con. Rod Assembly | | 3 | |
| 34 | 3019 0033 | Seeger Esterno | Outer Seeger | Ø28 | 1 | |
| 35 | 3201 0026 | Spia Livello Olio | Oil Indicator | | 1 | |
| 36 | 1210 0333 | Guarnizione OR | O-Ring | 1,78x23,52 | 1 | |
| 37 | 1210 0621 | Guarnizione OR | O-Ring | 3,0x94 | 1 | |
| 38 | 0402 0142 | Coperchio Carter | Crankcase Cover | | 1 | |
| 39 | 3609 0041 | Vite | Screw | M6x25 | 4 | |
| 40 | 0019 0094 | Anello Tenuta | Oil Seal | 25x62x10/7 | 1 | |
| 41 | 3019 0006 | Seeger Esterno | Outer Seeger | | 1 | |
| 42 | 3020 0012 | Seeger Interno | Inner Seeger | | 1 | |
| 43 | 0438 0075 | Cuscinetto a Sfere | Ball Bearing | 25x62x17 | 1 | |
| 44 | 1602 0045 | Linguetta | Key | 8x7x25 | 1 | |
| 45 | 0001 0286 | Albero Passante | Throughshaft | Ø24 | 1 | 2015 S |
| 46 | 0001 0332 | Albero Passante | Throughshaft | Ø24 | 1 | 3020 S |
| 47 | 1210 0441 | Guarnizione OR | O-Ring | 2x14 | 1 | |
| 48 | 3200 0007 | Tappo | Plug | 3/8 GAS | 1 | |
| 49 | 3200 0007 | Tappo | Plug | 3/8 GAS | 1 | |
| 50 | 2811 0084 | Rondella | Washer | 16,7x22x1,5 | 1 | |
| 51 | 3202 0015 | Tappo | Plug | G1/2 | 1 | |
| 52 | 2811 0086 | Rondella | Washer | 21,2x27x1,5 | 1 | |
| 53 | 3609 0032 | Vite | Screw | M6x20 | 4 | |

3400 RPM

| N° | Cod. | Descrizione | Description | Note | Qty | Model |
|----|-----------|-------------------------|---------------------------|-----------------|-----|-----------------|
| 53 | 3016 0016 | Flangia | Flange | NEMA 56 C | 1 | |
| 54 | 3607 0200 | Vite Testa Esagonale | Hexagonal Screw | 3/8"16 UNF3/4" | 4 | |
| 55 | 0019 0075 | Anello Tenuta Olio | Oil Seal | 35x62x7 | 1 | |
| 56 | 3019 0004 | Seeger Esterno | Outer Seeger | Ø35 | 1 | |
| 57 | 3020 0012 | Seeger Interno | Inner Seeger | Ø62 | 1 | |
| 58 | 2812 0064 | Rondella Distanziale | Spacer | | 1 | |
| 59 | 0438 0015 | Cuscinetto a Sfera | Ball Bearing | 35x62x14 | 1 | |
| 60 | 0001 0336 | Albero Femmina | Hollow Shaft | Ø 5/8" | 1 | 2015 E - 2020 E |
| | 0001 0337 | Albero Femmina | Hollow Shaft | Ø 5/8" | 1 | 3020 E |
| | 0001 0532 | Albero Femmina | Hollow Shaft | Ø 5/8" | 1 | 3522 E |
| 61 | 1220 0030 | Gruppo Valv. Asp./Mand. | Suct./Del. Valve Assy kit | | 6 | |
| 62 | 3609 0032 | Vite | Screw | M 6x20 | 4 | |
| 63 | 3016 0012 | Flangia | Flange | SAE J 609 A | 1 | |
| 64 | 3607 0199 | Vite Testa Esagonale | Hexagonal Screw | 5/16"24 UNF3/4" | 4 | |
| 65 | 0019 0075 | Anello Tenuta Olio | Oil Seal | 35x62x7 | 1 | |
| 66 | 3019 0004 | Seeger Esterno | Outer Seeger | Ø35 | 1 | |
| 67 | 3020 0012 | Seeger Interno | Inner Seeger | Ø62 | 1 | |
| 68 | 2812 0064 | Rondella Distanziale | Spacer | | 1 | |

| N° | Cod. | Descrizione | Description | Note | Qty | Model |
|----|-----------|--------------------|--------------|----------|-----|-----------------|
| 69 | 0438 0015 | Cuscinetto a Sfera | Ball Bearing | 35x62x14 | 1 | |
| 70 | 0001 0334 | Albero Femmina | Hollow Shaft | Ø 3/4" | 1 | 2020 G |
| | 0001 0406 | Albero Femmina | Hollow Shaft | Ø 3/4" | 1 | 2520 G - 2525 G |
| | 0001 0451 | Albero Femmina | Hollow Shaft | Ø 3/4" | 1 | 3020 G - 3025 G |
| | 0001 0383 | Albero Femmina | Hollow Shaft | Ø 3/4" | 1 | 3515 G - 3522 G |

Kit Ricambi

Spare Parts Kit

| | | | | | | |
|-----|-----------|-----------------------|----------------|--------------------|---|---|
| 100 | 5025 0011 | Kit Valvole | Valve Kit | | 1 | |
| 101 | 5019 0035 | Kit Guarnizioni Acqua | Water Seal Kit | Ø15 | 1 | |
| 102 | 2409 0071 | Kit Pistone | Piston kit | Ø15 | 1 | |
| 103 | 5019 0040 | Kit Guarnizioni Olio | Oil Seal Kit | Male/Solid | 1 | 2015 S - 3020 S |
| | 5019 0041 | Kit Guarnizioni Olio | Oil Seal Kit | Femmina/ Hollow | 1 | 2015 E - 2020 E 2020 G - 2520 G 2525 G - 3020 G 3020 E - 3025 G 3515 G - 3522 G 3522 E |

PARTS BREAKDOWN FOR MODEL ST-312

RICE HYDRO, INC.

** For models manufactured after 10/2022 **

PUMP PARTS:

| REF# | PART NUMBER.. | DESCRIPTION.. | QTY REQ'D |
|------------|---------------|---------------------|--------------|
| 1 | LWD-3218-0317 | BRASS PUMP MANIFOLD | 1 |
| 2 | LWD-3202-0018 | CAP | 1 |
| 3 | LWD-3609-0108 | SCREW | 8 |
| 9 | LWD-1210-0048 | O-RING | 6 |
| 10 | LWD-3202-0312 | CAP & O-RING | 6 |
| 11 | LWD-3609-0088 | SCREW | 3 |
| 12 | LWD-1004-0012 | CRANKCASE FLANGE | 1 |
| 13 | LWD-0402-0172 | COVER | 1 |
| 14 | LWD-1210-0386 | O-RING | 1 |
| 15 | LWD-3019-0011 | OUTER SEEGER | 1 |
| 16 | LWD-0438-0066 | BALL BEARING | 1 |
| 17 | LWD-0403-0128 | PUMP CRANKCASE | 1 |
| 19 | LWD-3200-0051 | OIL DIPSTICK | 1 |
| 20 | LWD-0009-0196 | PACKING HEAD RING | 3 |
| 21 | LWD-1241-0065 | PACKING | 3 |
| 22 | LWD-1241-0030 | PACKING | 3 |
| 23 | LWD-0009-0198 | PACKING RETAINER | 3 |
| 24 | LWD-1210-0223 | O-RING | 3 |
| 25 | LWD-0019-0095 | OIL SEAL | 3 |
| 26 | LWD-0600-0048 | SPECIAL BOLT | 3 |
| 27 | LWD-2811-0080 | WASHER | 3 |
| 28 | LWD-0202-0020 | CERAMIC BUSHING | 3 |
| 29 | LWD-2812-0038 | WASHER | 3 |
| 30 | LWD-1210-0055 | O-RING | 3 |
| 31 | LWD-2409-0044 | PISTON GUIDES | 3 |
| 32 | LWD-3011-0014 | GUDGEON PIN | 3 |
| 33 | LWD-0205-0048 | CONNECTING ROD ASSY | 3 |
| 34 | LWD-3019-0033 | OUTER SEEGER | 1 |
| 35 | LWD-3201-0026 | OIL INDICATOR | 1 |
| 36 | LWD-1210-0333 | O-RING | 1 |
| 37 | LWD-1210-0621 | O-RING | 1 |
| 38 | LWD-0402-0142 | CRANKCASE COVER | 1 |
| 39 | LWD-3609-0041 | SCREW | 4 |
| 46 | LWD-1210-0441 | O-RING | 1 |
| 47 | LWD-3200-0007 | DRAIN PLUG | 1 |
| 48 | LWD-3200-0007 | PLUG | 1 |
| 49 | LWD-2811-0084 | WASHER | 1 |
| 50 | LWD-3202-0015 | PLUG | 1 |
| 51 | LWD-2811-0086 | WASHER | 1 |
| 61 | LWD-1220-0030 | VALVE ASSY KIT | 6 |
| 62 | LWD-3609-0032 | SCREW | 4 |
| 63 | LWD-3016-0012 | FLANGE | 1 |
| 64 | LWD-3607-0199 | HEXAGONAL SCREW | 4 |
| 65 | LWD-0019-0075 | OIL SEAL | 1 |
| 66 | LWD-3019-0004 | OUTER SEEGER | 1 |
| 67 | LWD-3020-0012 | INNER SEEGER | 1 |
| 68 | LWD-2812-0064 | SPACER | 1 |
| 69 | LWD-0438-0015 | BALL BEARING | 1 |
| 70 | LWD-0001-0451 | HOLLOW SHAFT | 1 |
| REF# KITS: | | | |
| 100 | LWD-5025-0011 | VALVE KIT | 1 |
| 101 | LWD-5019-0035 | WATER SEAL KIT | 1 |
| 102 | LWD-2409-0071 | PISTON KIT | 1 |
| 103 | LWD-5019-0041 | OIL SEAL KIT | 1 |

PARTS BREAKDOWN FOR MODEL ST-312

RICE HYDRO, INC.

**** For models manufactured after 10/2022 ****

MISC PARTS..

| PART NUMBER.. | DESCRIPTION.. | QTY REQ'D |
|----------------------|-----------------------------------|--------------|
| HONDA-GX200UT2-QX2 | 196 CC FLANGE MOUNT HONDA ENGINE | 1 |
| BRIGG-130G32-0022-F1 | 206 CC FLANGE MOUNT BRIGGS ENGINE | 1 |
| PUMP-PLGR-3.0/20 | TRIPLEX PLUNGER PUMP | 1 |
| VALVE-RELIEF-2000PSI | 200-2000 PSI PRESSURE REGULATOR | 1 |
| GAUGE-2000 | 0-2000 PSI GAUGE | 1 |
| BALLVALVE-3/4 | 3/4" BALLVALVE | 1 |
| BALLVALVE-3/8HP | 3/8" HIGH PRESSURE BALLVALVE | 1 |
| CHECKVALVE-1/2M | 1/2" MXM INLINE CHECKVALVE | 1 |
| LINESTRAINER-3/4-80 | 80 MESH LINESTRAINER ASSEMBLY | 1 |
| HYD-VALVE-SHORE | HYDRAULIC VALVE | 1 |
| TANK-B200-LD | TANK FOR SHORING UNIT | 1 |
| TANK-CAP-ASSY | LID, FLANGE, SCREWS & CHAIN | 1 |
| QC-BODY-1/4-2WAY | QUICK CONNECT - ENDS OF HOSE | 2 |
| QC-PLUG-1/4-2WAY | QUICK CONNECT - OUTLET PIPING | 1 |
| HOSE-3/8X50-ST312 | 3/8" 50 FOOT OUTLET HOSE | 1 |
| WHEEL | NO FLAT TIRES | 4 |
| LABEL-KIT-ST312 | INSTRUCTION AND CAUTION STICKERS | 1 |