

## Hydraulic Hand Pump

# Introduction

The Portable Hydraulic Hand Pump is used for all types of low and high pressure testing, and many other shop, laboratory, and oilfield uses such as removing cores from core barrels, removing plungers from insert liner pumps, and testing valves,

fittings, tubing, and casing. It is also used for setting Cement Retainers where mud or cement pumps are not available, and as an actuator for hydraulically controlled valves and hydraulically operated systems.

## **Benefits/Features**

**Compact**. The Portable Hydraulic Hand Pump is an efficient, rugged, two stage force pump in a package weighing only 73 lb. It is small enough to be carried through manholes, into restricted quarters or to remote areas for spot testing.

**Easy to Operate**. The pump operates equally well whether the hydraulic medium is water or oil. Changing from the low to high pressure range requires only seconds.



## Constructions

The two pistons of the Hand Pump are positioned concentrically. The Low Pressure Piston has a 1-1/2 in. OD and 4-1/2 in. stroke; its capacity is 0.030 gal/stroke. The High Pressure Piston has a 3/4 in. OD and a 4-1/2 in. stroke with a capacity of 0.008 gal/stroke.

## Operation

Using the Low Pressure Piston, pressures up to 1,000 psi can be developed easily by hand; with the Handle Extension, up to 2,500 psi can be generated. Operation on the High Pressure Piston is accomplished simply by turning the Pressure Shifter; no disassembly or tools are required. With the pump operating on the High Pressure Piston, pressures up to 6,000 psi can be developed.

## High-Pressure Discharge Hose

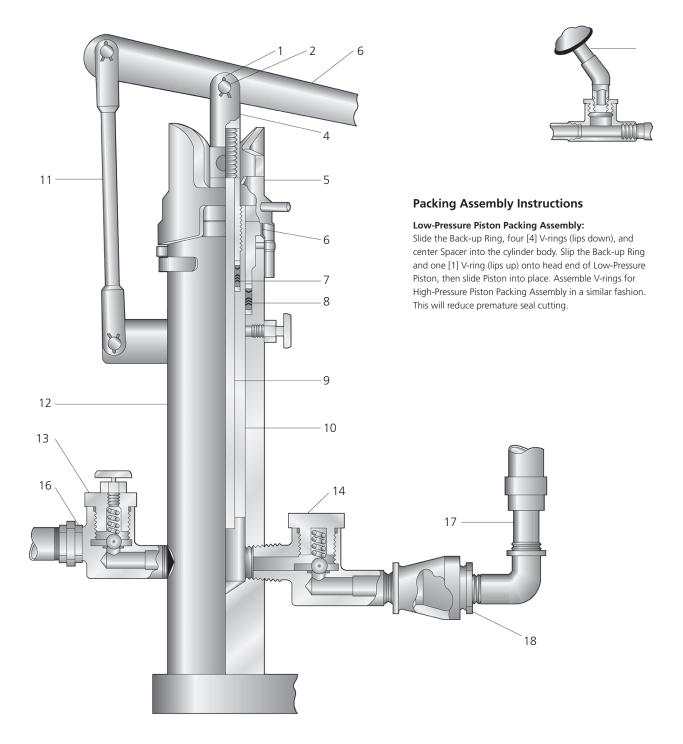
This unit is designed for use with the Portable Hydraulic Hand Pump for high pressure operation. It is a flexible, rubber covered hose with a tough, smooth exterior over a strong wire braid reinforcement. The interior of the hose is also smooth and made of special oil resistant rubber. The hose is equipped with small compact connections and has 1/2 in. NPT-pipe threads on both ends. A special 1 x 1/2 in. Extra Heavy Hydraulic Reducer is furnished with each hose order to facilitate connection of the hose to the Hand Pump.

## Pump Assembly and Spare Parts

Description		Material No.	Weight	Dim			
Portable Hydraulic Hand Pump for 6,000 WP	Buna-N	540010000	821b	30 X 6 X 22 in.			
	Viton®Seals	540010010					
All Hoses:							
10 ft High-Pressure Discharge Hose		540090110	?lb	-			
15 ft High-Pressure Discharge Hose		540090115	101b				
20 ft High-Pressure Discharge Hose		540090120	141b				
25 ft High-Pressure Discharge Hose		540090125	181b				
30 ft High-Pressure Discharge Hose		540090130	221b				
50 ft High-Pressure Discharge Hose		540090150	301b				
100 ft High-Pressure Discharge Hose		540091000	601b				
Repair Kit contains:		070789800	2 1b	4 x 4x 4 in.			
1 each: 011851100, 011851200							
2 each: WWB213H40, 010339600, WWT20SOO, WWB115H40							
Above Repair Kit with:							
Stainless Steel Ball		070789801	2 1b				
Viton® Seals and Stainless Steel Ball		070789802	2 1b				

# Product Family No. H54001

## Parts Illustration



# Parts and Weights

1Cotter Pin6WWWW003090.13/16 x 1 in.2Link and Cross Head Pin30100108000.2-4Piston Cross-Head10100103002-5Pressure Shifter1011010007-6Low-Pressure Paching Nut1011011007-7High-Pressure Paching Nut10118512000.1-8Low-Pressure Paching Assembly10118512000.1-9High-Pressure Pach Packing Assembly1010112003-10Low-Pressure Pach Packing Assembly10101376003-11Compensating Link10101300312Cylinder Body and Base Pate Assembly1013346600313Discharge Vake Assembly10133266000.114Discharge Vake Assembly1013346600315Discharge Vake Assembly10133466000.116Eacharge Vake Assembly10133466000.117Spring1013346600318Body10132465000.111N19Suction Vake Bonnet10132465000.11-10Spring10132465000.310Outring	ltem No.	Description	No. Req'd	Material No.	Wt lb	Dimensions in.
3Handle10100103008.5·Piston Cross-Head10100109002-Pressure Shifter10110110003-6Low-Pressure Packing Nut10100110000.1-7Hgh-Pressure Packing Assembly10118511000.1-8Low-Pressure Packing Assembly10110112001.5-9Hgh-Pressure Pach Roking Assembly10100112003-10Low-Pressure Pach10100113003-11Compensating Link10100113003-12Cylinder Body and Base Plate Assembly10137650144430x 6x 2 in.13Discharge Valve Somothy*101322667000.2-14Spring10103286000.1-15Spring10132465000.2-0-ring1WWW151M400.1-14Suction Valve Assembly*10132465000.3-15Suction Valve Assembly*10132465000.3-16Suction Valve Assembly*10132465000.3-16Suction Valve Assembly*10132465000.1-16Spring10132465000.117Body10132465000.118Suction Valve Assembly*10132465000.11- <td>1</td> <td>Cotter Pin</td> <td>6</td> <td>WWWX00319</td> <td>0.1</td> <td>3/16 x 1 in.</td>	1	Cotter Pin	6	WWWX00319	0.1	3/16 x 1 in.
4     Piston Cross-Head     1     010010900     2     .       5     Pressure Shifter     1     011301800     3        6     Low-Pressure Paton Packing Assembly     1     01181100     0.1        7     High-Pressure Paton Packing Assembly     1     011851100     0.1        8     Low-Pressure Paton Packing Assembly     1     011851100     0.1        9     High-Pressure Paton     1     010011300     3        10     Low-Pressure Paton     1     010011500     2        11     Compensating Link     1     013175501     444     30 x 6 x 2 in.       11     Discharge Valve Assembly*     1     0132264700     0.2        12     Cylinder Body and Base Plate Assembly     1     0132264700     0.2        13     Staction Valve Assembly*     1     0132264700     0.1        14     Body     1     013246700     3        15 <td>2</td> <td>Link and Cross Head Pin</td> <td>3</td> <td>010010800</td> <td>0.2</td> <td>-</td>	2	Link and Cross Head Pin	3	010010800	0.2	-
5     Pressure Shifter     1     011301800     3        6     Low-Pressure Packing Aut     1     010011100     7        7     High-Pressure Piston Packing Assembly     1     011851100     0.1        9     High-Pressure Piston Packing Assembly     1     010011200     15        10     Low-Pressure Piston     1     010011300     3        11     Compensating Link     1     010011300     3        12     Cylinder Body and Base Plate Assembly*     1     013726501     444     30 x 6 x 2 ln.       13     Discharge Vake Sombly*     1     0132266700     0.2        14     Spring     1     010324650     0.2        15     Spring     1     01324650     0.2        16     Spring     1     01324650     0.2        16     Oring     1     01234650     0.2        10     013246500     0.3 <td>3</td> <td>Handle</td> <td>1</td> <td>010010300</td> <td>8.5</td> <td>-</td>	3	Handle	1	010010300	8.5	-
6     Low-Pressure Packing Nut     1     010011100     7	4	Piston Cross-Head	1	010010900	2	-
1     High-Pressure Piston Packing Assembly     1     011851100     0.1     -       8     Low-Pressure Piston Packing Assembly     1     011851200     0.1     -       9     High-Pressure Piston     1     010011200     1.5     -       10     Low-Pressure Piston     1     010011300     3     -       11     Compensating Link     1     010011300     3     -       12     Cylinder Body and Base Plate Assembly     1     013176501     44     30.6 k2 in.       12     Cylinder Body and Base Plate Assembly     1     013176501     44     30.6 k2 in.       13     Discharge Valve Assembly*     1     013246600     3     -       14     Discharge Valve Assembly*     1     01324650     0.2     -       15     Bedy     1     01324650     0.2     -     -       10     Oring     1     013246700     3.3     -     -       14     WWW1205000     0.1     -     -     -     -	5	Pressure Shifter	1	011301800	3	-
8Low-Pressure Piston Packing Assembly10118512000.1.9High-Pressure Piston1010011300310Low-Pressure Piston1010011300311Compensating Link1010011300312Cylinder Body and Base Plate Assembly10131765014430 x 6 x 2 in.13Olischarge Valve Assembly*1013246600314Discharge Valve Assembly*10122647000.20-ring1WWR2314400.114Body10133466000.20-ring1WWR2314400.115Steel BallA10132465000.316Suction Valve Assembly*1013246700317Suction Valve Assembly*10132465000.318Suction Valve Assembly*10132465000.119Suction Valve Assembly*10132465000.310Spring10132465000.310Spring10132465000.110Spring10132465000.111Suction Valve Assembly*10132465000.1 <td>6</td> <td>Low-Pressure Packing Nut</td> <td>1</td> <td>010011100</td> <td>7</td> <td>-</td>	6	Low-Pressure Packing Nut	1	010011100	7	-
9     High-Pressure Piston     1     010011200     1.5     .       10     Low-Pressure Piston     1     010011500     2     .       11     Compensating Link     1     010011500     2     .       12     Cylinder Body and Base Plate Assembly     1     013176501     44     30 x 6 x 2 in.       13     Discharge Valve Assembly*     1     013276600     0.2     .       14     Obicharge Valve Assembly*     1     013264700     0.2     .       15     Spring     1     012264700     0.2     .     .       15     Spring     1     012246700     0.1     .     .       10     Obicharge Valve Assembly*     1     01324650     0.2     .     .       10     Discharge Valve Bornet     1     012246700     3.3     .     .       10     Suction Valve Bornet     1     012250900     0.3     .     .       14     Spring     1     012250900     0.3     .     <	7	High-Pressure Piston Packing Assembly	1	011851100	0.1	-
10     Low-Pressure Piston     1     010011300     3        11     Compensating Link     1     010011500     2        12     Cylinder Body and Base Plate Assembly     1     013176501     44     30 x 6 x 2 in.       13     Discharge Valve Assembly*     1     013246600     3        0-ring     1     01325601     0.2         0-ring     1     010339600     0.1         13     Steel Ball^A     1     WWW813H400     0.1        14     Discharge Valve Bonnet     1     WWW1205000     0.4     3/4 in. Dia       14     Suction Valve Bonnet     1     01324550     0.2        14     Suction Valve Bonnet     1     01324500     0.3        14     Suction Valve Bonnet     1     012250900     0.3        15     Suction Valve Bonnet     1     0103395600     0.1        16     Forged Steel Ball^A	8	Low-Pressure Piston Packing Assembly	1	011851200	0.1	-
11     Compensating Link     1     010011500     2     .       12     Cylinder Body and Base Plate Assembly     1     013176501     444     30 x 6 x 2 in.       13     Discharge Valve Assembly*     1     013246600     3        0-ring     1     01224700     0.2     .     .       0-ring     1     01234600     0.1     .     .       Spring     1     01324650     0.1     .     .       13     Body     1     0132450     0.2     .     .       0-ring     1     WWT05000     0.4     3/4 in. Dia     .     .       14     Body     1     01324500     0.1     .     .       14     Suction Valve Assembly*     1     01324500     3     .     .       14     Spring     1     010339600     0.1     .     .       14     Spring     1     01032500     2     .     .       15     Body     1<	9	High-Pressure Piston	1	010011200	1.5	-
12     Cylinder Body and Base Plate Assembly     1     013176501     44     30 x 6 x 2 in.       Discharge Valve Assembly*     1     013246500     3     -       Discharge Valve Bonnet     1     012246700     0.2     -       O-ring     1     WWB213H40     0.1     -       Spring     1     01333600     0.4     3/4 in. Dia       Body     1     01324650     0.2     -       O-ring     1     WWWT205000     0.4     3/4 in. Dia       Body     1     01324650     0.2     -       O-ring     1     WWW205000     0.4     3/4 in. Dia       Suction Valve Assembly*     1     013246500     3     -       Suction Valve Assembly*     1     01324500     3     -       O-ring     1     WW205000     0.4     3/4 in. Dia       Suction Valve Bonnet     1     013246500     2     -       O-ring     1     WW205000     0.4     3/4 in. Dia       Suction Valve Bonnet	10	Low-Pressure Piston	1	010011300	3	-
Discharge Valve Assembly*     1     013246600     3        Discharge Valve Bonnet     1     012264700     0.2        O-ring     1     012264700     0.2        Spring     1     01033600     0.1        Steel Ball^     1     010334650     0.2        O-ring     1     01324650     0.2        O-ring     1     WWT205000     0.4     33/4 in. Dia       Body     1     01324650     0.2        O-ring     1     WWWX20007     0.1     1/6       Suction Valve Assembly*     1     013246700     3        Suction Valve Assembly*     1     013246700     0.3        Suction Valve Assembly*     1     013246700     0.3        14     Spring     1     013246700     0.3        15     O-ring     1     010339600     0.1        16     Body     1     <	11	Compensating Link	1	010011500	2	-
Discharge Valve Bonnet     1     012264700     0.2     -       0-ring     1     WWB213H40     0.1     -       Spring     1     010339600     0.1     -       Body     1     010339600     0.1     -       Body     1     01324650     0.2     -       O-ring     1     WWW12S1M40     0.1     -       Petcock     1     WWW010070     0.1     1/8 in.       Suction Valve Assembly*     1     013246700     3     -       O-ring     1     WWW219H40     0.1     -       Suction Valve Assembly*     1     013246700     3     -       Suction Valve Assembly*     1     013246700     3     -       Suction Valve Assembly*     1     013246700     3     -       O-ring     1     WWW21205000     0.4     3/4 in. Dia       Body     1     013245500     2     -       O-ring     1     WWW205000     0.4     3/4 in. Dia	12	Cylinder Body and Base Plate Assembly	1	013176501	44	30 x 6 x 2 in.
O-ring1WW8213H400.1-Spring10103396000.1-Steel Bal/A1WW72050000.43/4 in. DiaBody1012346500.2-O-ring1WW8115H400.1-Petcock1WWW810070.11/8 in.Suction Valve Assembly*10122509000.3-O-ring10122509000.3-Suction Valve Assembly*10122509000.1-Suction Valve Bonnet10103396000.1-O-ring1WW8213H400.1-Steel Bal/A10103396000.43/4 in. DiaBody10132465002-O-ring1WW8115H400.1-Body10155906003-O-ring1WWW00F0110.11 × 5 in.Forged Steel GJ Union10155906003-IfExtra Strong Nipple10155906003-IfForged Steel GJ Union1011 × 5 in.IfForged Steel GJ Union1<		Discharge Valve Assembly*	1	013246600	3	-
Spring     1     010339600     0.1     -       Steel Bal/A     1     WWT205000     0.4     3/4 in. Dia       Body     1     01324650     0.2     -       O-ring     1     WWT205000     0.4     3/4 in. Dia       Body     1     01324650     0.2     -       Petcock     1     WWWX00007     0.1     1/8 in.       Suction Valve Assembly*     1     013246700     3     -       O-ring     1     WWWX00007     0.1     1/8 in.       O-ring     1     010339600     0.1     -       Suction Valve Bonnet     1     010339600     0.1     -       Suction Valve Assembly*     1     013246500     2     -       O-ring     1     WWT205000     0.4     3/4 in. Dia       Body     1     013246500     2     -       O-ring     1     015590600     3     -       Extar Strong Nipele     1     WWW001002     0.1     1.		Discharge Valve Bonnet	1	012264700	0.2	-
13Steel Ball^1WWT2050000.43/4 in. DiaBody1013246500.2-O-ring1WW8115H400.1-Petcock1WWW0000070.11/8 in.140132467003-Suction Valve Assembly*10132467003O-ring10122509000.3-O-ring10103396000.1-Suction Valve Bonnet10103396000.1-O-ring10132465002-Body10132465002-O-ring1WW12050000.43/4 in. DiaBody10132465002-O-ring1WW12050000.43/4 in. DiaBody10132465002-O-ring1WW12050003-Extra Strong Nipple1015906003-Suction Hose Assembly*1015906003-Suction Hose Assembly*10158640003-Punch Lok Band, No.81WWW0010040.11.x 54 in.Hose, Neoprene1WWW0010040.11.x 54 in.Bushing1015907002-Suction Strainer Assembly*10155907000.11.1/12 x 3/4 in.18Gauge Assembly*1015907000.11.1/12 x 3/4 in.19Sundard Street Ell1WWW0000010.1 <td></td> <td>O-ring</td> <td>1</td> <td>WWB213H40</td> <td>0.1</td> <td>-</td>		O-ring	1	WWB213H40	0.1	-
Steel Bal/^     1     WWT205000     0.4     3/4 in. Dia       Body     1     01324650     0.2     -       Petcock     1     WWWX00007     0.1     1/8 in.       Suction Valve Assembly*     1     01324650     3.3     -       Suction Valve Assembly*     1     013246500     3.3     -       O-ring     1     WWW200007     0.1     1/8 in.       O-ring     1     013246500     0.3     -       O-ring     1     010339600     0.1     -       Steel Ball/A     1     0103246500     2     -       Body     1     013246500     2     -       O-ring     1     WWW120500     0.4     3/4 in. Dia       Body     1     013246500     2     -       O-ring     1     WWW1205000     0.4     3/4 in. Dia       Body     1     015590600     3     -       Facestarge Attachment Assembly*     1     015590600     3     -		Spring	1	010339600	0.1	-
O-ring1WWB15H400.1-Petcock1WWW2000070.11/8 in.Suction Valve Assembly*10132467003.3-O-ring1012267000.3-O-ring1012267000.3-O-ring10123267000.3-O-ring10103396000.1-O-ring10103396000.1-Steel Ball^10103396000.43/4 in. DiaBody10132465002-O-ring1WWB15H400.1-Body10132465003-Steel Ball^10132465003-Forged Steel GJ Union1WWW00F0110.11 k 6 in.Forged Steel GJ Union10155906003-Suction Hose Assembly*10155840003-Suction Strainer Assembly*10155907002-Suction Strainer Assembly*10155907002-Standard Pipe Niple1WWW00F0110.11 x 54 in.Suction Strainer Assembly*10185097002-Standard Pipe Reducer1WWW00F0010.11.1/2 x 3/4 in.Bushing11WWW00F0010.11.1/2 x 3/4 in.Standard Pipe Reducer10184008009-Bushing10184008009Standard Ripe Reducer<	13	Steel Ball^	1	WWT20S000	0.4	3/4 in. Dia
Petcock     1     WWWX00007     0.1     1/8 in.       Suction Valve Assembly*     1     013246700     3     -       O-ring     1     012246700     3     -       O-ring     1     012246700     3     -       O-ring     1     012329600     0.3     -       Spring     1     010339600     0.1     -       Steel Ball^     1     WWB213H40     0.1     -       Body     1     013246500     2     -       O-ring     1     WWB115H40     0.1     -       Body     1     015590600     3     -       Coring Nipple     1     WWW00F011     0.1     1 × 6 in.       Forged Steel G Union     1     WWW00F01     0.1     1 × 6 in.       Standard Pipe Nipple     1     WWW00F001     0.1     3/4 × 4 in.       Standard Pipe Nipple     1     WWW00F001     0.1     1 × 54 in.       Standard Pipe Reducer     1     WWW001000     1     - <td></td> <td>Body</td> <td>1</td> <td>01324650</td> <td>0 2</td> <td>-</td>		Body	1	01324650	0 2	-
Suction Valve Assembly*     1     013246700     3        Suction Valve Bonnet     1     012250900     0.3        O-ring     1     WWB213H40     0.1        Steel Ball^     1     010339600     0.1     -       Steel Ball^     1     WWT205000     0.4     3/4 in. Dia       Body     1     013246500     2     -       O-ring     1     WWT205000     0.4     3/4 in. Dia       Body     1     013246500     2     -       O-ring     1     WWT205000     0.4     3/4 in. Dia       Body     1     013246500     2     -       Forged Steel Gulion     1     WWW01000     0.1     -       Suction Hose Assembly*     1     015864000     3     -       Suction Hose Assembly*     1     015864000     3     -       10     Suction Strainer Assembly*     1     015864000     3     -       11     WWW001004     0.1     1 x 54 in.<		O-ring	1	WWB115H40	0.1	-
Suction Valve Bonnet     1     012250900     0.3		Petcock	1	WWWX00007	0.1	1/8 in.
O-ring1WW8213H400.1.Spring10103396000.1Steel Ball^1WW72050000.43/4 in. DiaBody10132465002.O-ring1WW8115H400.1.O-ring1WW815H400.1.Extra Strong Nipple1WWW000013.Forged Steel GJ Union1WWW000020.111 k 6 in.Forged Steel GJ Union1WWW0000020.11 in.Suttion Hose Assembly*1015596003.Standard Pipe Nipple1WWW0000020.11 k 6 in.Punch Lok Band, No. 81WWW000000.1.Hose, Neoprene1WWW000000.1.Hose Strainer Assembly*10155907002.Standard Pipe Reducer1WWW0000010.11 k 54 in.Brass Strainer1WWW0000010.1.Brass Strainer1WWW0000010.1.Brass Strainer1WWW0000010.1.Brass Strainer10184008009.Standard Street Ell10184008009.Standard Ell1WWW000010.1.Nipple, Extra Heavy10184008009.Nipple, Extra Heavy1WWW00F0130.11 k 4 in.Nipple, Extra Heavy1WWW00F0130.11 k 4 in.<		Suction Valve Assembly*	1	013246700	3	-
Image: spring      101     Sum		Suction Valve Bonnet	1	012250900	0.3	-
Image     Image <th< td=""><td></td><td>O-ring</td><td>1</td><td>WWB213H40</td><td>0.1</td><td>-</td></th<>		O-ring	1	WWB213H40	0.1	-
Body10132465002-O-ring1WWB115H400.1-Accessory EquipmentDischarge Attachment Assembly*10155906003-Extra Strong Nipple10155906003-Forged Steel GJ Union1WWW00F0110.11 x 6 in.Forged Steel GJ Union1WWW00F0010.11 x 6 in.Suction Hose Assembly*10158640003-Punch Lok Band, No. 81WWW00F0010.13/4 x 4 in.Punch Lok Band, No. 81WWW00F0010.11 x 54 in.Bosction Strainer Assembly*101559070022Bandard Pipe Reducer1WWW0010040.11 x 54 in.Brass Strainer1WWW0000050.11 -1/2 x 3/4 in.Bushing1018408009-Standard Street Ell1018408009-Standard Ell1WWW00F0120.11/2 x 45 in.Mipple, Extra Heavy1WWW00F0120.11/2 x 45 in.Mipple, Extra Heavy1WWW00F0120.11 x 1/2 in.Nipple, Extra Heavy1WWW00F0130.11 x 4 in.	14	Spring	1	010339600	0.1	-
Oring1WWB115H400.1-Accessor EquipmentDischarge Attachment Assembly*10155906003-16Discharge Attachment Assembly*10155906003-Extra Strong Nipple1WWW00F0110.11 x 6 in.Forged Steel GJ Union1WWW00F0010.11 in.3uction Hose Assembly*10158640003-Standard Pipe Nipple1WWW00F0010.13/4 x 4 in.Punch Lok Band, No. 81WWW00F0010.11 x 54 in.Hose, Neoprene1WWW0010040.11 x 54 in.Suction Strainer Assembly*10155907002-Standard Pipe Reducer1WWW0001000.1-Bass Strainer1WWW0000050.11-1/2 x 3/4 in.Bushing1WWW0000050.11-1/2 x 3/4 in.Bushing10184008009-Standard Ell1WWW0000040.11/2 x 45 in.Nipple, Extra Heavy1WWW00F0120.11/2 x 45 in.Nipple, Extra Heavy1WWW00F0120.11 x 1/2 in.Nipple, Extra Heavy1WWW00F0130.11 x 1/2 in.Nipple, Extra Heavy1WWW00F0130.11 x 4 in.		Steel Ball^	1	WWT205000	0.4	3/4 in. Dia
Accessory Equipment       Discharge Attachment Assembly*     1     015590600     3     -       16     Discharge Attachment Assembly*     1     015590600     3     -       16     Extra Strong Nipple     1     WWW00F011     0.1     1 x 6 in.       17     Forged Steel GJ Union     1     WWW00F001     0.1     1 in.       17     Suction Hose Assembly*     1     015864000     3     -       18     Suction Hose Assembly*     1     015864000     3     -       19     Punch Lok Band, No. 8     1     WWW00F001     0.1     1 x 54 in.       10     Suction Strainer Assembly*     1     015590700     2     -       18     Suction Strainer Assembly*     1     015590700     2     -       18     Brass Strainer     1     WWW000001     0.1     1-1/2 x 3/4 in.       19     Bushing     1     WWW000003     0.1     1/2 x 4/3 in.       19     Gauge Assembly*     1     018400800     9     -		Body	1	013246500	2	-
Discharge Attachment Assembly*10155906003-Extra Strong Nipple11WWW00F0110.11 x 6 in.Forged Steel GJ Union11WWW00L0020.11 in.Suction Hose Assembly*110158640003-Tamas Age Strandard Pipe Nipple11WWW00F0010.13/4 x 4 in.Punch Lok Band, No. 811WWW0010040.11 x 54 in.Hose, Neoprene11WWW0010040.11 x 54 in.Suction Strainer Assembly*110155907002-Standard Pipe Reducer11WWW0010040.1-Bass Strainer11WWW000100.1Bushing11WWW0000050.1Standard Street Ell11WWW0000030.13/4 x 3/4 in.Standard Ell110184008009-Standard Ell110184008009-Standard Ell11WWW001010.11/2 x 45 in.Nipple, Extra Heavy110184008009-Fee, 6,000 lb11WWW00F0120.11 x 1/2 in.Nipple, Extra Heavy11WWW00F0130.11 x 1/2 in.Nipple, Extra Heavy11WWW00F0130.11 x 4 in.		O-ring	1	WWB115H40	0.1	-
16     Extra Strong Nipple     1     WWW00F011     0.1     1 x 6 in.       Forged Steel GJ Union     1     WWW00L002     0.1     1 in.       17     Suction Hose Assembly*     1     015864000     3     -       17     Suction Hose Assembly*     1     015864000     3     -       17     Standard Pipe Nipple     1     WWW00F001     0.1     3/4 x 4 in.       18     Punch Lok Band, No. 8     1     WWW007008     0.1     -       18     Suction Strainer Assembly*     1     015590700     2     -       18     Suction Strainer Assembly*     1     015590700     2     -       18     Suction Strainer Assembly*     1     015590700     2     -       18     Brass Strainer     1     WWW000005     0.1     -       19     Gauge Assembly*     1     018400800     9     -       19     Gauge Assembly*     1     018400800     9     -       19     Gauge Assembly*     1		А	ccessory Equip	oment		
Forged Steel GJ Union     1     WWW00L002     0.1     1 in.       Forged Steel GJ Union     1     015864000     3     -       Marcel Assembly*     1     015864000     3     -       Standard Pipe Nipple     1     WWW00F001     0.1     3/4 x 4 in.       Punch Lok Band, No. 8     1     WWW007008     0.1     -       Hose, Neoprene     1     WWW001004     0.1     1 x 54 in.       Suction Strainer Assembly*     1     015590700     2     -       Standard Pipe Reducer     1     WWW000005     0.1     -       Brass Strainer     1     WWW000003     0.1     -       Bushing     1     WWW000003     0.1     3/4 x 3/4 in.       Standard Street Ell     1     WWW000003     0.1     3/4 x 3/4 in.       Mipple, Extra Heavy     1     018400800     9     -       Standard Ell     1     WWW001004     0.1     1/2 x 45 in.       Mipple, Extra Heavy     1     WWW001004     0.1     1/2 x 6 in.		Discharge Attachment Assembly*	1	015590600	3	-
Suction Hose Assembly*     1     015864000     3     -       17     Standard Pipe Nipple     1     WWW00F001     0.1     3/4 x 4 in.       Punch Lok Band, No. 8     1     WWW007008     0.1     -       Hose, Neoprene     1     WWW007008     0.1     1 x 54 in.       Suction Strainer Assembly*     1     015590700     2     -       Standard Pipe Reducer     1     WWW000100     0.1     -       Brass Strainer     1     WWW00000     0.1     -       Bushing     1     WWW00000     0.1     -       Standard Street Ell     1     WWW00000     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW00000     0.1     3/4 x 3/4 in.       19     Gauge Assembly*     1     018400800     9     -       19     Mipple, Extra Heavy     1     WWW000004     0.1     1/2 x 45 in.       10     WipW000004     0.1     1/2 x 45 in.     1/2 x 6 in.     1/2 x 6 in.       10     WipW000101	16	Extra Strong Nipple	1	WWW00F011	0.1	1 x 6 in.
Standard Pipe Nipple     1     WWW00F001     0.1     3/4 x 4 in.       Punch Lok Band, No. 8     1     WWW007008     0.1     -       Hose, Neoprene     1     WWW001004     0.1     1 x 54 in.       Suction Strainer Assembly*     1     015590700     2     -       Standard Pipe Reducer     1     WWW001004     0.1     1 x 54 in.       Brass Strainer     1     015590700     2     -       Bushing     1     WWW000005     0.1     -       Standard Street Ell     1     WWW000005     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW000003     0.1     3/4 x 3/4 in.       facessory Equipment (Www00003     0.1     1/1/2 x 3/4 in.     3/4 x 3/4 in.       facessory Equipment (Www00003     0.1     1/1/2 x 4/4 in.     3/4 x 4/4 in.       facessory Equipment (Www000004     0.1     1/1/2 x 4/4 in.     3/4 x 4/4 in.       19     Gauge Assembly*     1     018400800     9     -       Standard Ell     1     WWW000004     0.1 <t< td=""><td></td><td>Forged Steel GJ Union</td><td>1</td><td>WWW00L002</td><td>0.1</td><td>1 in.</td></t<>		Forged Steel GJ Union	1	WWW00L002	0.1	1 in.
17     Punch Lok Band, No. 8     1     WWW007008     0.1     -       Hose, Neoprene     1     WWW001004     0.1     1 x 54 in.       8     Suction Strainer Assembly*     1     015590700     2       Standard Pipe Reducer     1     WWW001004     0.1     1 x 54 in.       18     Brass Strainer     1     WWWX00010     0.1     -       Bushing     1     WWW00005     0.1     -       Standard Street Ell     1     WWW001003     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW001003     0.1     3/4 x 3/4 in.       Funch Lok Bandy Street Ell     1     018400800     9     -       Standard Street Ell     1     018400800     9     -       Standard Ell     1     018400800     9     -       Inple, Extra Heavy     1     WWW001004     0.1     1/2 x 45 in.       Inple, Extra Heavy     1     WWW001004     0.1     1 x 1/2 x 6 in.       Inple, Extra Heavy     1     WWW001001     0.1		Suction Hose Assembly*	1	015864000	3	-
Punch Lok Band, No. 8     1     WWW007008     0.1     -       Hose, Neoprene     1     WWW001004     0.1     1 x 54 in.       Mose, Neoprene     1     015590700     2     -       Suction Strainer Assembly*     1     015590700     2     -       Standard Pipe Reducer     1     WWWX00010     0.1     -       Bushing     1     WWWX00005     0.1     -       Standard Street Ell     1     WWW00K001     0.1     3/4 x 3/4 in.       Standard Street Ell     1     018400800     9     -       Standard Ell     1     018400800     9     -       Standard Ell     1     WWW00F012     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1 x 1/2 in.       Fee, 6,000 lb     1     WWW00F013     0.1     1 x 4 in.		Standard Pipe Nipple	1	WWW00F001	0.1	3/4 x 4 in.
Suction Strainer Assembly*     1     015590700     2       Standard Pipe Reducer     1     WWWX00010     0.1     -       Brass Strainer     1     WWWX00005     0.1     -       Bushing     1     WWW00K001     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW00J003     0.1     3/4 x 3/4 in.       Cecessory Equipment (WWW00J003     0.1     3/4 x 3/4 in.       Gauge Assembly*     1     018400800     9     -       Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00F013     0.1     1 x 4 in.	17	Punch Lok Band, No. 8	1	WWW007008	0.1	-
Standard Pipe Reducer     1     WWWX00010     0.1     -       18     Brass Strainer     1     WWWX00005     0.1     -       Bushing     1     WWWX00005     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW00J003     0.1     3/4 x 3/4 in.       Cecessory Equipment (WWW00J003     0.1     3/4 x 3/4 in.       Cecessory Equipment (WWW00J003     0.1     3/4 x 3/4 in.       Gauge Assembly*     1     018400800     9     -       Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00F013     0.1     1 x 4 in.		Hose, Neoprene	1	WWW001004	0.1	1 x 54 in.
18Brass Strainer1WWWX000050.1Bushing1WWW00K0010.11-1/2 x 3/4 in.Standard Street Ell1WWW00J0030.13/4 x 3/4 in.Accessory Equipment (Www00J0030.13/4 x 3/4 in.Baushing10184008009-Standard Ell10184008009-Standard Ell1WWW00J0040.11/2 x 45 in.Nipple, Extra Heavy1WWW00F0120.11/2 x 6 in.Tee, 6,000 lb1WWW00H0010.11 in.Nipple, Extra Heavy1WWW00F0130.11 x 4 in.		Suction Strainer Assembly*	1	015590700	2	
Bushing     1     WWW00K001     0.1     1-1/2 x 3/4 in.       Standard Street Ell     1     WWW00J003     0.1     3/4 x 3/4 in.       Accessory Equipment (WWW00J003     0.1     3/4 x 3/4 in.       Maine     Maine     1     018400800     9     -       Standard Ell     1     018400800     9     -     -       Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Tee, 6,000 lb     1     WWW00H001     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4/ in.		Standard Pipe Reducer	1	WWWX00010	0.1	-
Standard Street Ell     1     WWW00J003     0.1     3/4 x 3/4 in.       Accessory Equivent (Wirent Ordered Only)       Gauge Assembly*     1     018400800     9     -       Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00F013     0.1     1 x 4 in.	18	Brass Strainer	1	WWWX00005	0.1	
Gauge Assembly*     1     018400800     9     -       Standard Ell     1     018400800     9     -       Nipple, Extra Heavy     1     WWW00J004     0.1     1/2 x 45 in.       Bushing     1     WWW00K002     0.1     1/2 x 6 in.       Tee, 6,000 lb     1     WWW00H001     0.1     1 x 1/2 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.		Bushing	1	WWW00K001	0.1	1-1/2 x 3/4 in.
Gauge Assembly*     1     018400800     9     -       Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00H001     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.		Standard Street Ell	1	WWW00J003	0.1	3/4 x 3/4 in.
Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00F013     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.		Accessory Eq	uipment (Wh	en Ordered Only)		
Standard Ell     1     WWW00J004     0.1     1/2 x 45 in.       Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00F013     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.		Gauge Assembly*	1	018400800	9	-
Nipple, Extra Heavy     1     WWW00F012     0.1     1/2 x 6 in.       Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00H001     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.			1	WWW00J004	0.1	1/2 x 45 in.
19     Bushing     1     WWW00K002     0.1     1 x 1/2 in.       Tee, 6,000 lb     1     WWW00H001     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.			1			
Tee, 6,000 lb     1     WWW00H001     0.1     1 in.       Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.	19				1	
Nipple, Extra Heavy     1     WWW00F013     0.1     1 x 4 in.			1			
	-				1	

\*These **should** be ordered as subassembly.

^Stainless Steel Ball (WWT21S0SS) available upon request.

# Hand Pump Priming Instructions

- 1. Move Pressure Shifter item 5 to low pressure position.
- 2. Connect fluid supply to item 14 (oil or water).
- 3. Connect pressure gage and "dead head" to item 13.
- 4. Remove bonnet of item 14, remove spring and make sure ball is free. For now leave bonnet cap off.
- 5. Using the palm of your hand cover the top of item 14. Move handle from low position to high position. Remove your hand.
- 6. Allow the handle to come down a little see that fluid comes out of the top of item 14. Replace the spring and bonnet and tighten. Do not let the handle come down during the reassemble of item 14.
- 7. Open the wing nut on item 13 and on the side of the vertical cylinder.
- 8. Move the handle down to the bottom of its stroke. Fluid and air should come out of the wing nut.
- 9. Close the wing nut on item 13. Move handle to up position.
- 10. Stoke down air should come out of the cylinder wing nut. Move handle down until it is solid. Close the wing nut.
- 11. Open the wing nut on item 13. Move the handle to the bottom of the stroke. Close the wing nut on item 13.
- 12. Shift item 5 to the high pressure position. Move handle to top of stroke.
- 13. Open wing nut on side of cylinder. Move handle down. Air should bleed out the wing nut. Move handle until it is solid.
- 14. Pump should be primed at this point.

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No 51 Benoi Road #06-00 Singapore 629 908 Singapore **65.6465.4850**  Our goal is to become the leading provider of mission critical oilfield products and related services in terms of customer satisfaction, safety and financial performance.

Our experienced management team and employees are dedicated to solving our customers' problems. We invest in long term relationships and cooperate on product development with our clients, we consider them our partners.

## **Our Core Values**

### No one gets hurt

The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

#### Integrity

In everything we do, in every interaction, both internally and externally, we strive to operate with the utmost integrity and mutual respect.

### Customer focused

Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

### Good place to work

We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.

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