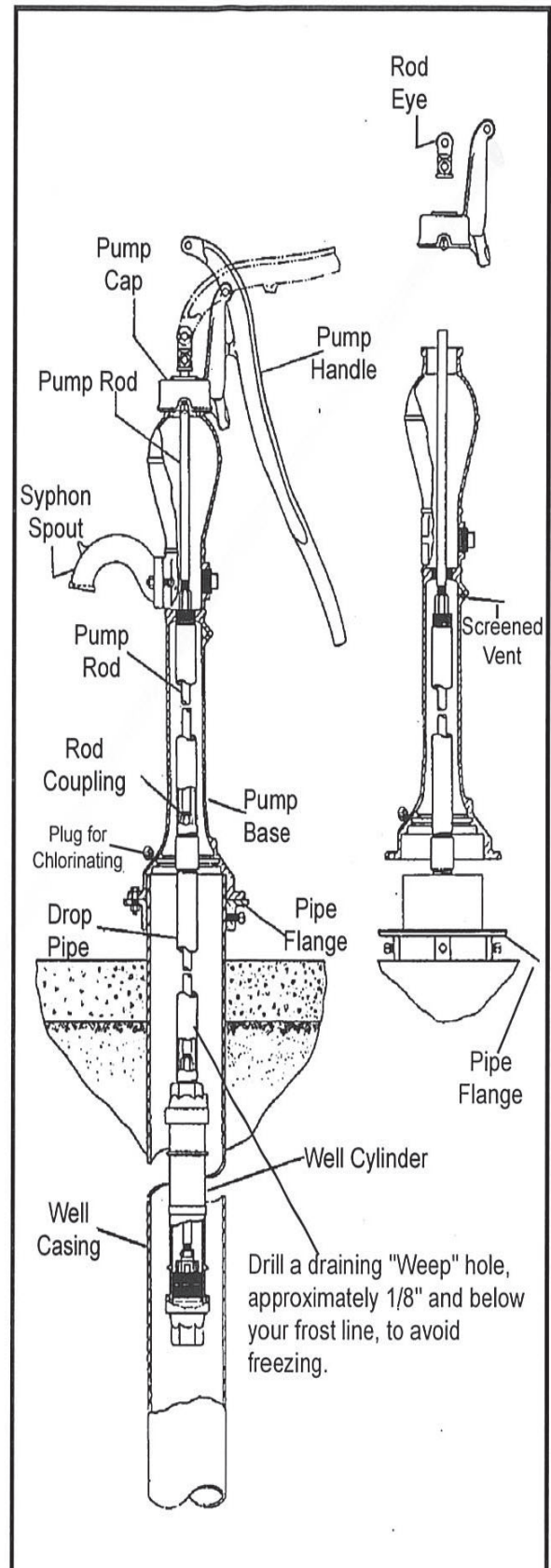


## HAND PUMP INSTALLATION INSTRUCTIONS - 11HA

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Attach HA52 pump rod to end of pump rod from well using a 7/16 x 7/16 rod coupling.
2. Slip pipe flange (must be ordered separately) over well casing.
3. Guide HD pump base over pump rod and attach to 1-1/4" drop pipe in well. Note: Base is internally tapped 1-1/4" NPT.
4. Place HA152 cap assembly over pump rod and onto top of base and align in direction you wish the handle to operate from (normally 180° from spout).
5. Tighten the (2) PS110 set screws securely.
6. Slip rod eye of HA153 pump handle assembly onto HA52 pump rod and tighten HF30 set screw securely.
7. Position pump handle into slot of pump cap HA152 and insert EP54 thru pump cap and handle. Secure pin with HF57 cotter pin.
8. Check for plunger striking bottom or top of cylinder with the pump handle in extreme upper or lower position respectively. Some adjustment in length of the Drop Pipe or Pump Rod may be required.
9. Lower pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.
10. Attach gasket (O80) and siphon spout (O9) to pump base using carriage bolts (HD70) and hex nuts (UB17).



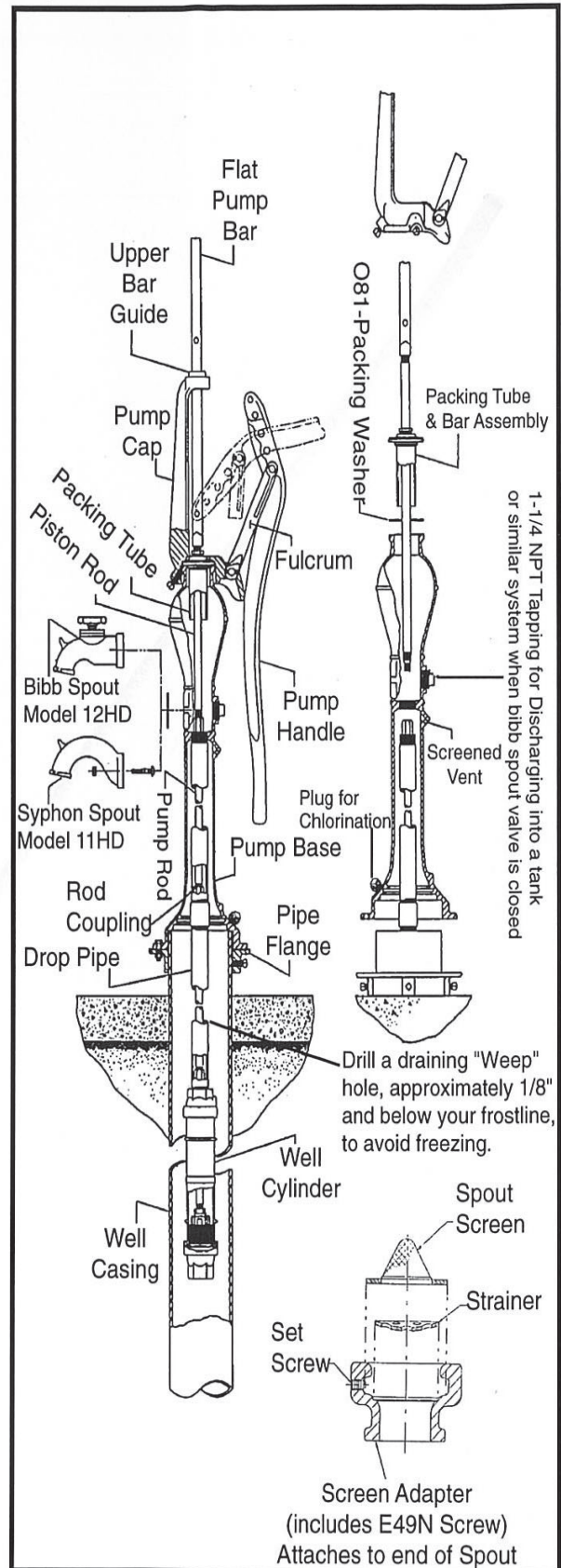
## Hand Pumps

# HAND PUMP INSTALLATION INSTRUCTIONS - 11HD & 12HD, 11HDA & 12HDA

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Slip pipe flange (must be ordered separately) over well casing. Flange not required but may be used if preferred.
  2. Unless already assembled, screw a 7/16 x 7/16 rod coupling to top of pump rod.
  3. Guide pump base over pump rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT. on 11HD & 12HD, 2" NPT. on 11HDA & 12HDA.
  4. Position rubber packing washer (O81) onto top of pump base.
  5. Attach bottom of round piston rod, of piston bar and packing tube assembly, to the 7/16 x 7/16 rod coupling attached to top of pump rod. Note: When tightening, grip the piston rod as close to the rod coupling as possible so as not to damage the rod surface that passes through packing tube assembly.
  6. Guide flat bar through pump cap (O200) and upper guide (O460) and attach pump cap to base by tightening the 3 set screws uniformly and securely.
  7. Attach pump handle to fulcrum (O400) using hole in pump handle as shown on drawing. In this position there will be a 10" stroke. Length of stroke may be varied to 7-1/2 inches or 5 inches simply by using one of the other holes available in pump handle.
- Note:** Check for cylinder plunger striking bottom or top of cylinder with pump handle in extreme upper or lower position respectively. Some adjustment in length of the drop pipe or pump rod may be required to utilize the 10 inch stroke.
8. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.
  9. Attach syphon spout (O9 for 11HD & 11HDA) or bibb spout (O7 for 12HD & 12HDA) along with gasket (O80) to base using the 2 carriage bolts and nuts furnished.
  10. Attach screen adapter assembly HPS (HD189, DP31, HD190) to end of spout, 1/4 turn and tighten set screw to lock to spout.



## HAND PUMP INSTALLATION INSTRUCTIONS - 11HDS & 12HDS

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure.

1. Slip pipe flange (must be ordered separately) over well casing. Flange not required but may be used if preferred.

2. Screw 7/16 x 7/16 rod coupling (may already be installed) onto pump rod. Assemble pump rod extension (HD90) securely into rod coupling. Assemble rod coupling supplied with pump (7/16x7/16RC) onto top of rod extension followed by piston rod (DP72).

Note: When tightening piston rod into rod coupling, grip piston rod as close to rod coupling as possible to avoid damaging the rod surface that passes through packing assembly.

3. Guide pump base over piston rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT.

4. Position packing washer (O81) onto top of pump base.

5. Guide cap and inner shroud assembly over piston rod until it rests on top of packing washer and pump base. Tighten 3 set screws uniformly and securely to draw cap down tight upon base and washer.

6. Install Teflon packings (DP134), consisting of 3 rings, one ring at a time, into packing housing and around piston rod, being sure each ring is properly seated in bottom of housing. Note: Alternate cuts in ring approximately 90° from each other when installing.

7. Install packing nut (O31) and tighten down onto packing until a slight drag is felt on piston rod when raised. Note: It may be necessary to tighten further if leakage is noted when pump is in operation. Overtightening may make operating pump difficult.

8. Guide outer shroud (DP66P) over inner shroud followed by spacer ring (DP61) and spacer washer (DP62).

9. Install one jam nut (DP22) and tighten, then install other jam nut and tighten followed by top cap (DP60P).

10. Assemble pump handle (HF153) to fulcrum using pin (O54) and cotter pin (HD58). When installing pump handle with pin in position shown on drawing there will be a 10" stroke. Length of stroke may be varied to 7-1/2" or 5" simply by using one of the other holes available in pump handle.

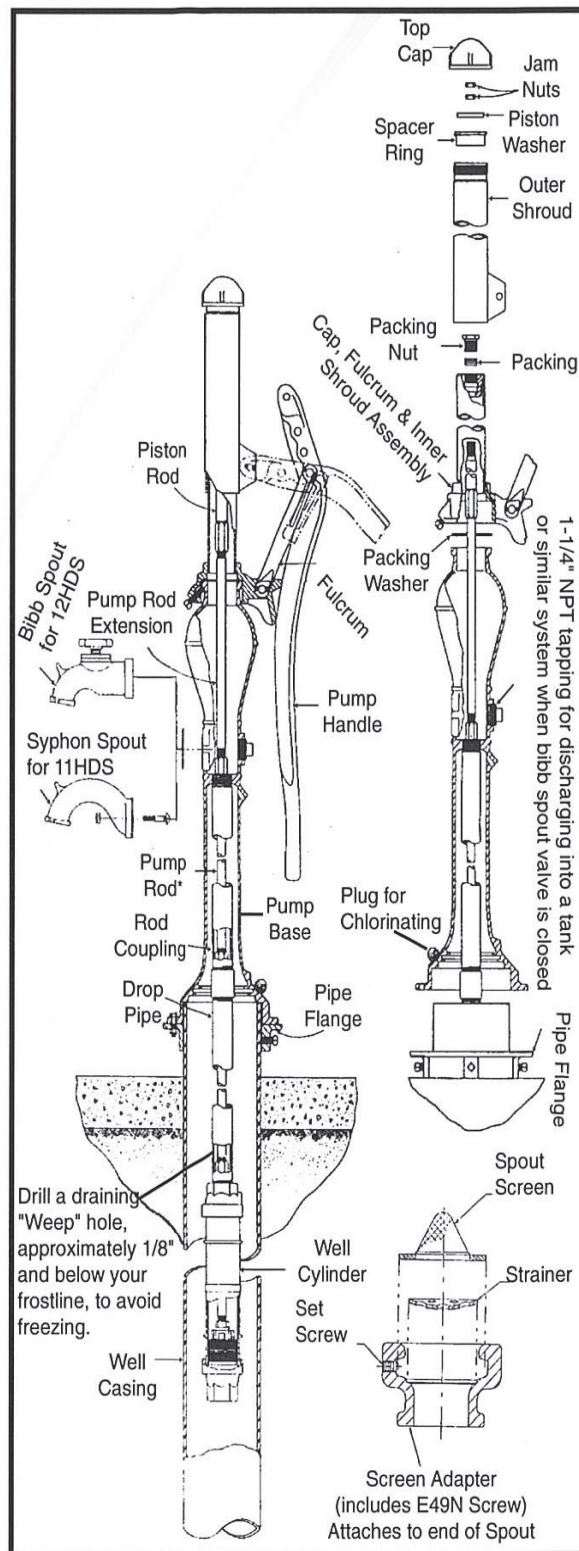
11. Attach pump handle to outer shroud using pin (HF61) and cotter pin (HF57).

12. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing.

13. With pump handle operated in the extreme upper or lower position, the cylinder plunger must not strike the bottom or top of cylinder in these positions respectively. Some adjustment in length of Drop Pipe or Pump Rod may be required to utilize the 10 inch stroke.

14. Attach syphon spout (O9) for 11HDS or bibb spout (O7 for 12HDS) along with gasket (O80) to base using the 2 carriage bolts and nuts provided.

15. Attach Screen Adapter Assembly (HD189, DP31, HD190) to end of spout, 1/4 turn and tighten set screw to lock to spout.



# Hand Pumps

## HAND PUMP INSTALLATION INSTRUCTIONS - 1DFHCS & 1DFHFS

With depth of well known, assemble cylinder to equal lengths of drop pipe and pump rod. Insert into well and continue to add drop pipe and pump rod of equal lengths allowing for a minimum of 2 feet between bottom of cylinder and bottom of well.

Assemble pump following the procedure below and drawings for 1DFHCS or 1DFHFS pumps respectively.

1. Slip pipe flange (must be ordered separately) over well casing (1DFHCS only). Flange not required on 1DFHFS pumps.

2. Screw a 7/16 x 7/16 rod coupling onto pump rod in well. Assemble pump rod extension (HD90 for 1DFHCS pumps) or extension (DP90 for 1DFHFS pumps) securely onto rod coupling followed by rod coupling (7/16x7/16RC), supplied with pump, onto other end of rod extension. Assemble piston rod (DP72) into other end of rod coupling.

Note: When tightening piston rod into rod coupling, grip piston rod as close to rod coupling as possible to avoid damaging the rod surface that passes through packing assembly.

3. Guide pump base over piston rod and attach base securely to drop pipe. Note: Base is internally tapped 1-1/4" NPT.

4. Position packing washer (O81) onto top of pump base.

5. Guide cap and inner shroud assembly over piston rod until it rests on top of packing washer and pump base. Tighten 3 set screws uniformly and securely to draw cap down tight against base and washer.

6. Install Teflon packings (DP134), consisting of 3 rings, one ring at a time, into packing housing and around piston rod, being sure each ring is properly seated in bottom of housing. Note: Alternate cuts in ring approximately 90° from each other when installing.

7. Install packing nut (O31) and tighten down onto packing until a slight drag is felt on piston rod when raised. Note: It may be necessary to tighten further if leakage is noted when pump is in operation. Overtightening may make operating pump difficult.

8. Guide outer shroud (DP66P) over inner shroud followed by spacer ring (DP61) and spacer washer (DP62).

9. Install one jam nut (DP22) and tighten, then install other jam nut and tighten followed by top cap (DP60).

10. Assemble pump handle (HF153) to fulcrum using pin (O54) and cotter pin (HD58). When installing pump handle with pin in position shown on drawing there will be a 10" stroke. Length of stroke may be varied to 7-1/2" or 5" simply by using one of the other holes available in pump handle.

11. Attach pump handle to outer shroud using pin (HF61) and cotter pin (HF57).

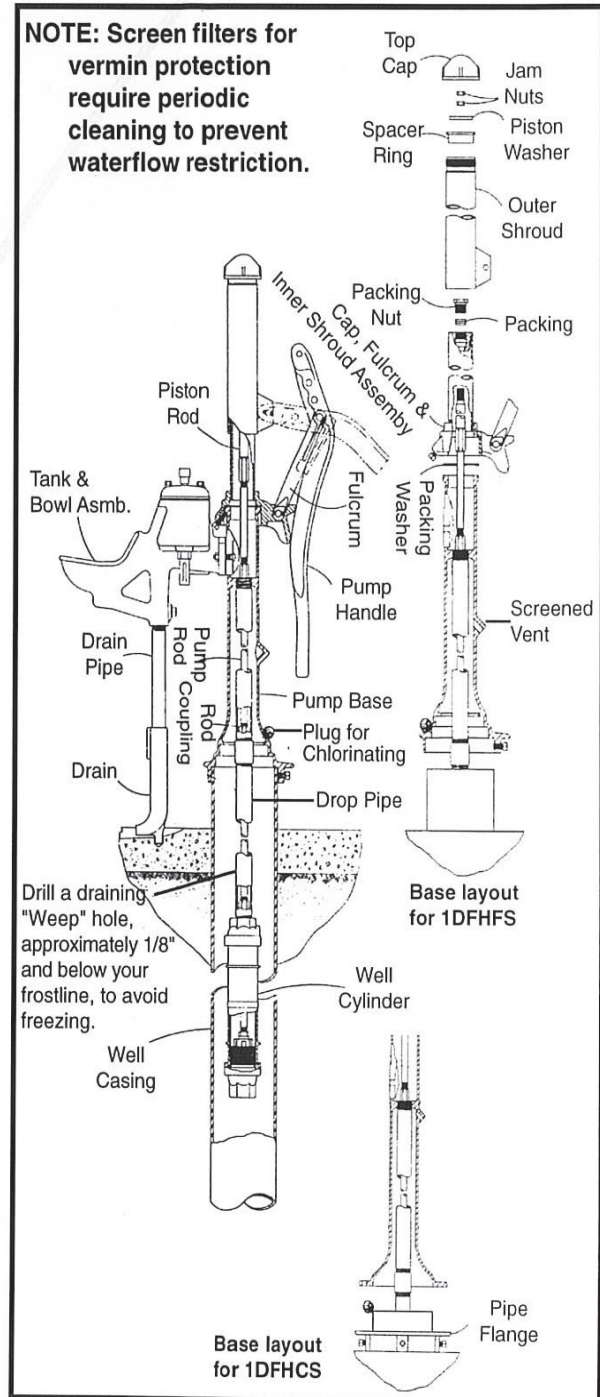
12. Lower the pump onto the pipe flange and secure to flange. Note: Be sure that pipe flange is properly secured to the well casing. This is for the pump model number 1DFHCS only. In the case of the model 1DFHFS, the base sets directly onto the casing and is secured by tightening the 4 set screws in the base, no flange is required.

13. With the pump handle in the extreme upper or lower position, the cylinder plunger must not strike the bottom or top of cylinder in these positions respectively. Some adjustment in length of the Drop Pipe or Pump Rod may be required to utilize

the 10 inch stroke.

14. Assemble the tank and bowl assembly (DP58) along with gasket (DP11) securely to base outlet using the 2 carriage bolts and nuts supplied.

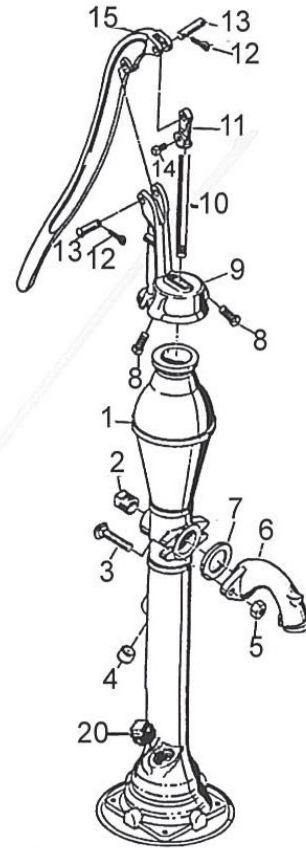
15. Screw drain pipe (DP18) into bottom of bowl assembly, followed by the drain (DP16). Note: Drain outlet to be directed away from pump operator.



# Hand Pumps

## Models 11HA

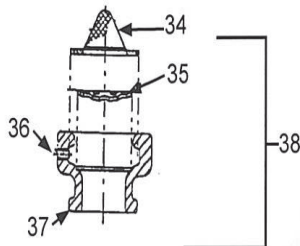
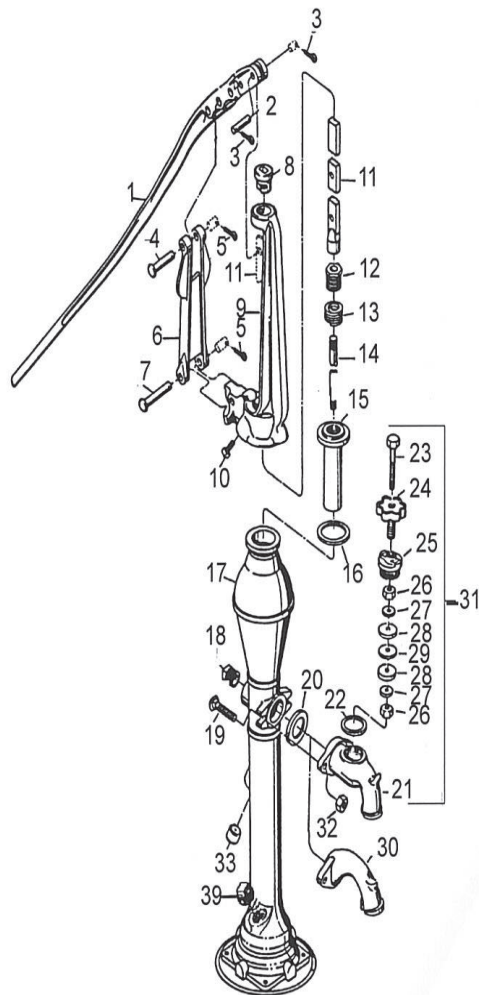
Lift Hand Pump			
Model No.			11HA
Item	Qty	Description	Ord. No.
1	1	Base & plug assembly	HD140
2	1	Standard Pipe plug 1-1/4" NPT	HD71
3	2	Bolt, 3/8"-16NC x 2-1/4"	HD70
4	1	Screen Vent	PS585A
5	2	Hex Nut 3/8-16NC	UB17
6	1	Siphon Spout	O9
7	1	Gasket	O80
8	2	Set Screw-1/2"-13NC x 1-1/4"	PS11Ø
9	1	Cap Assby includes item #8, 12 & 13	HA152
10	1	Pump Rod	HA52
11	1	Rod Eye & Set Screw Assby.	HA155
12	2	Cotter Pin	HF57
13	2	Pin, handle to cap 1/2" x 2-1/4" Long	EP54
14	1	Set screw, 1/2"-13NC x 1"	HF30
15	1	Handle, pin & rod eye assby includes #11, 12, 13 & 14	HA153
20	1	Pipe Plug, 1" NPT	SW33



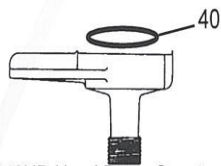
**Model 11HA**

# Hand Pumps

## Models 11HD & 11HDA, 12HD & 12HDA



Screen Adapter attaches to end of spout.



146HD Hand Pump Spout to hose thread adapter.  
Used on Force Pumps only.  
Optional.

### Force Hand Pumps

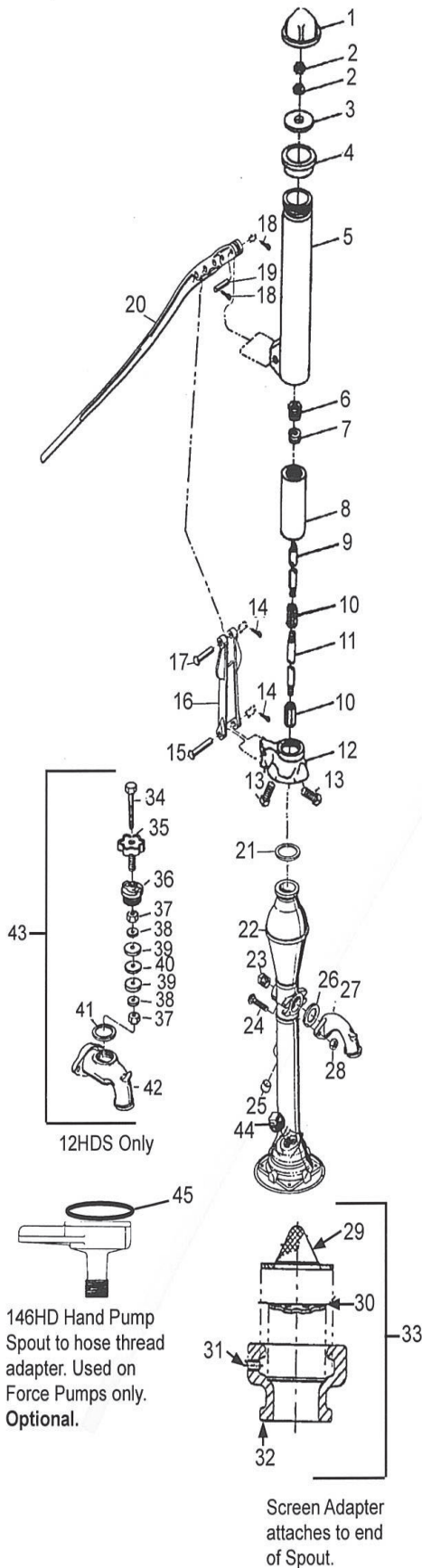
#### Model No. 11HD, 11HDA, 12HD & 12HDA

Item	Qty	Description	Ord. No.
1	1	Handle & Pin Assby, includes #2 & 3	HF153
2	1	Pump Pin	HF61A
3	2	Cotter Pin	HF57
4	1	Fulcrum & Handle Pin 5/8" x 3"	O54
5	2	Cotter Pin	HF57
6	1	Fulcrum includes #4, 5 & 7	O400
7	1	Fulcrum & Cap Pin 5/8" x 3-3/4"	O53
8	1	Upper Piston Bar Guide	O460
9	1	Pump Cap includes #10	O200
10	3	Set Screw 1/2"-13NC x 1-1/2"	HD59
11	1	Flat Piston Bar	O50
12	1	Packing Nut	O31
13	1	Valve Stem Packg-Graphite rope 3/16" x 19"	HD67
14	1	Piston Rod (16 7/8" long) 303 S.S.	O52
15	1	Packing Flange	O6
16	1	Packing Washer 1/16" in. thick	O81
17	1	Base & Plug Assby. - 1-1/4"	HD140
17	1	Base & Plug Assby. - 2"	HD140A
18	1	Pipe Plug, 1-1/4" NPT	HD71
19	2	Bolt, 3/8"-16NC x 2-1/4"	HD70
20	1	Gasket 1/8" thick	O80
21	1	Bibb Spout Body Casting	O37FRO
22	1	Packing Washer	TP82
---	1	Valve Assby. includes #22 thru 29	HD155
23	1	Hex Head Cap Screw 3/8" x 3-1/2"	HD34
24	1	Hand wheel & screw assby.	HD156FRO
25	1	Cap	O38FRO
26	2	Nut 3/8"-16NC	UB17
27	2	Backing Washer	O41
28	2	Rubber Valve Disk	O43
29	1	Separating Washer	O42
30	1	Siphon Spout for 11HD	O9
31	1	Bibb Spout Assby. includes #21-29	O7
32	2	Hex Nut, 3/8" - 16NC	UB17
33	1	Screen Vent	PS585A
34	1	Spout Screen	HD190
35	1	Strainer	DP31
36	1	Set screw, 1/4" x 20 x 3/8" L	E49N
37	1	Screen Adapter includes #36	HD189
38	1	Hand Pump Screen Adapter Kit	1HPS
39	1	Pipe Plug, 1" NPT	SW33
40	1	Gasket	HD69



# Hand Pumps

## Models 11HDS & 12HDS



Force Hand Pumps			
Model No.			11HDS & 12HDS
Item	Qty	Description	Ord. No.
1	1	Top Cap	DP60P
2	2	Jam Nut	DP22
3	1	Piston Washer	DP62
4	1	Spacer Ring	DP61
5	1	Outer Shroud Assby	DP66P
6	1	Packing Nut	O31
7	1	Teflon Packing	DP134
8	1	Inner Shroud Assembly	DP68P
9	1	Piston Rod	DP72
10	2	Rod Coupling	7/16x7/16RC
11	1	Pump Rod extension 13-3/8" L.	HD90
12	1	Cap (includes #13)	DP202P
13	3	Set Screw 1/2-13NC x 1-1/2" L.	HD59
14	2	Cotter Pin	HF57
15	1	Fulcrum & Cap Pin, 5/8" x 3-3/4"	O53
16	1	Fulcrum includes 14, 15, 17	O400
17	1	Fulcrum & Handle Pin, 5/8" x 3"	O54
18	2	Cotter Pin	HF57
19	1	Pump Pin	HF61A
20	1	Handle & Pin Assby, includes #18 & 19	HF153
21	1	Packing Washer	O81
22	1	Base & Plug Assby.-1-1/4"	HD140
---	1	Valve Assby. includes #34 thru 41	HD155
23	1	Standard Pipe Plug, 1-1/4" NPT	HD71
24	2	Bolt, 3/8"-16NC x 2-1/4" L	HD70
25	1	Screen Vent	PS585A
26	1	Gasket	O80
27	1	Siphon Spout for 11HD	O9
28	2	Hex Nut, 3/8"-16NC	UB17
29	1	Spout Screen	HD190
30	1	Strainer	DP31
31	1	Screw, 1/4" x 20 x 3/8" L.	E49N
32	1	Screen Adapter includes #31	HD189
33	1	Hand Pump screen adapter kit	1HPS
34	1	Hex Head cap screw 3/8" x 3-1/2"	HD34
35	1	Handwheel & Screw Assby.	HD156FRO
36	1	Cap	O38FRO
37	2	Hex Nut 3/8" x 16NC	UB17
38	2	Backing Washer	O41
39	2	Rubber Valve Disk	O43
40	1	Separating Washer	O42
41	1	Packing Washer	TP82
42	1	Bibb Spout Body Casting	O37FRO
43	1	Bibb Spout Assby. includes #34-42	O7
44	1	Pipe Plug, 1" NPT	SW33
45	1	Gasket	HD69

