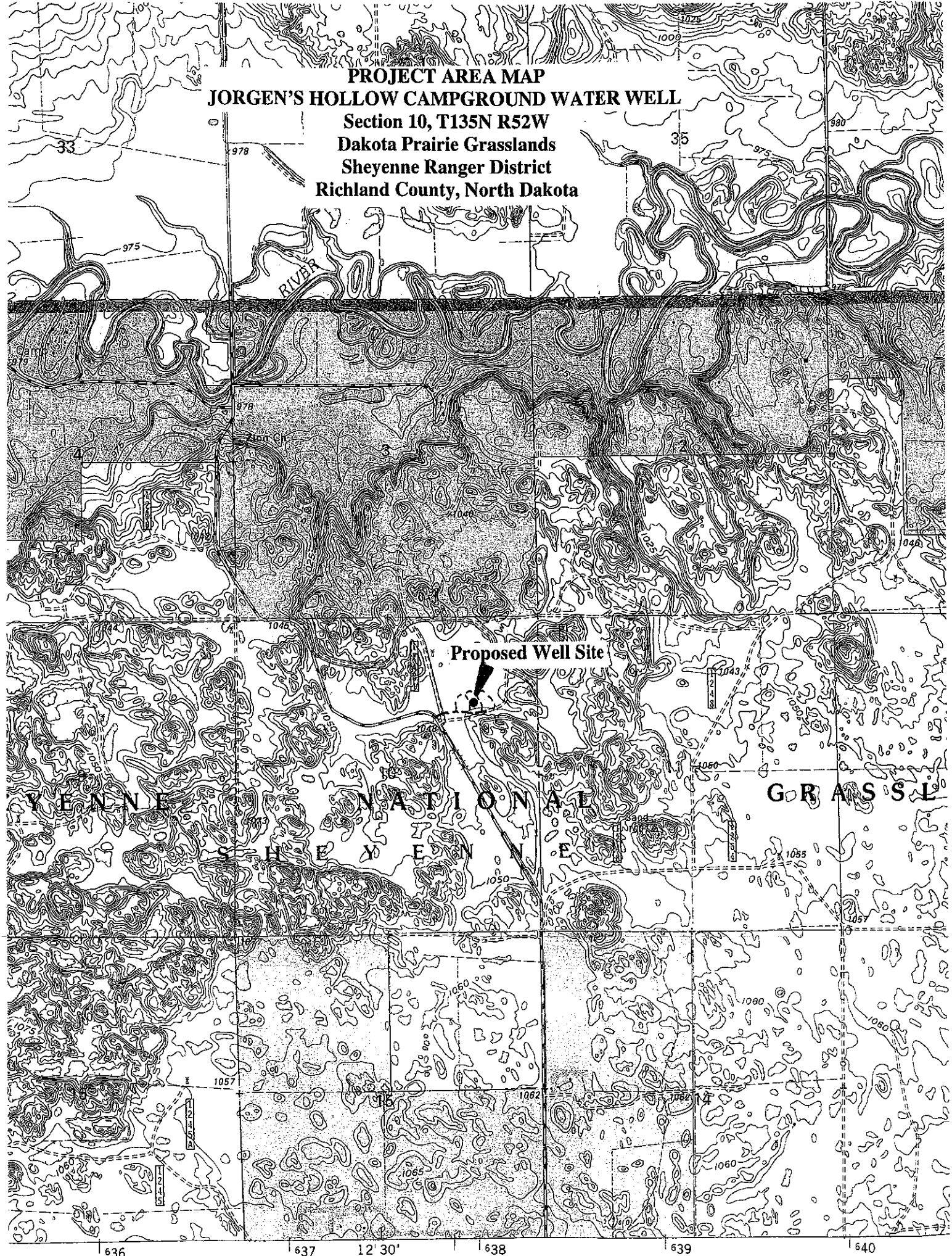
PROJECT AREA MAP
JORGEN'S HOLLOW CAMPGROUND WATER WELL
Section 10, T135N R52W
Dakota Prairie Grasslands
Sheyenne Ranger District
Richland County, North Dakota



SCALE 1:24 000

HAND PUMP INSTALLATION INSTRUCTIONS - [redacted] & 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 but may be used if preferred.

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.

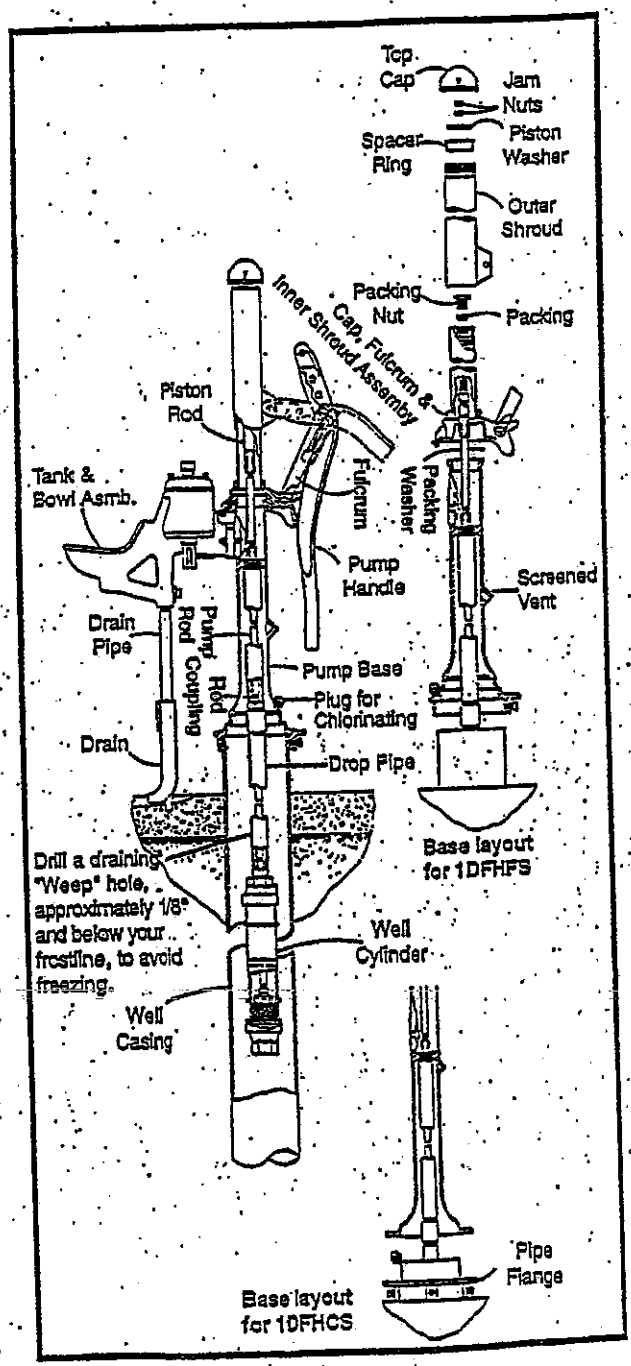
11. Attach pump handle to outer shroud using pin (HF61) and cotter pin (HF57).

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.

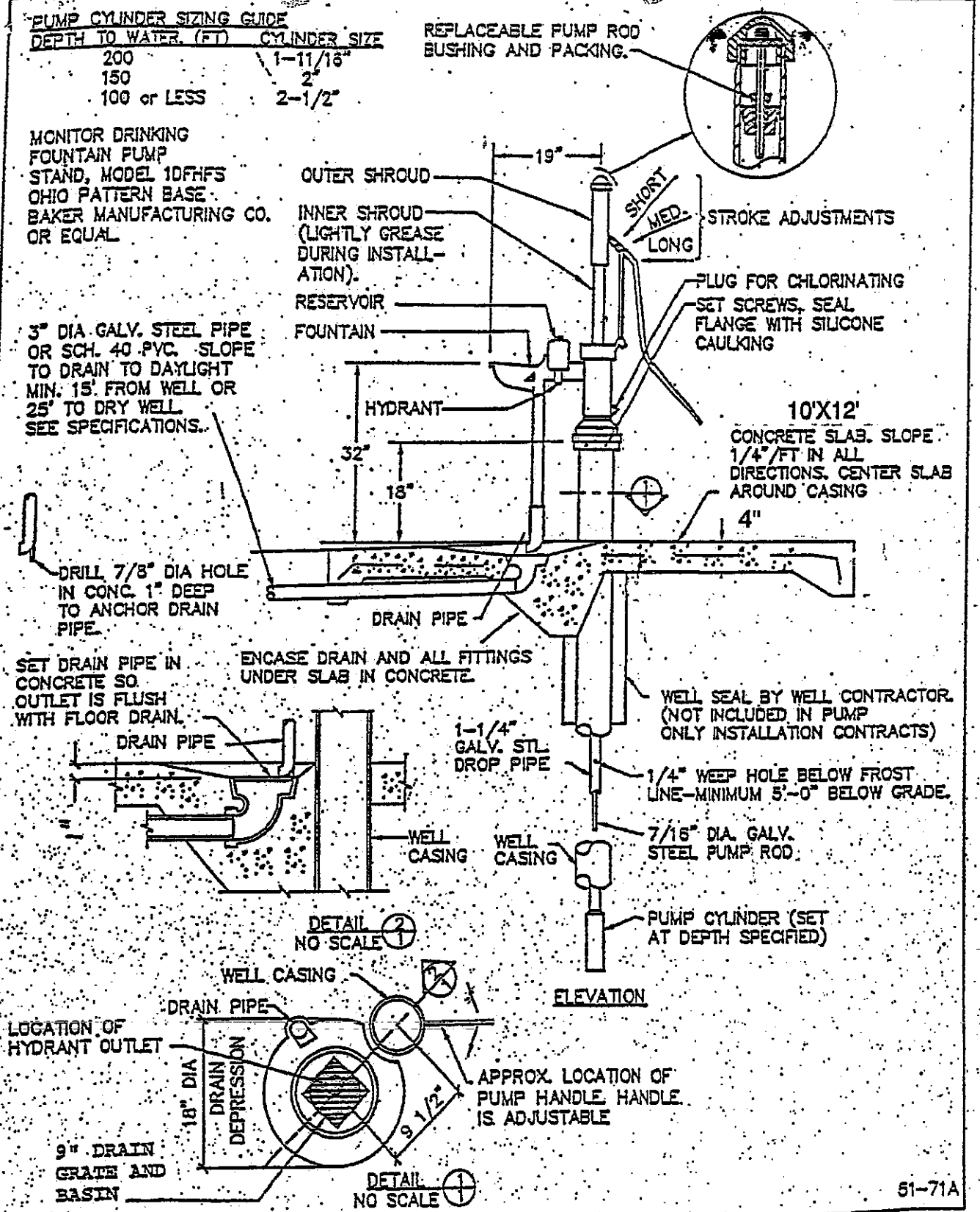
15. Screw drain pipe (DP18) into bottom of bowl assembly, followed by the drain (DP16). Note: Drain outlet to be directed away from pump operator.



PUMP CYLINDER SIZING GUIDE

DEPTH TO WATER (FT)	CYLINDER SIZE
200	1-11/16"
150	2"
100 or LESS	2-1/2"

MONITOR DRINKING FOUNTAIN PUMP STAND, MODEL 1DFHFS OHIO PATTERN BASE BAKER MANUFACTURING CO. OR EQUAL



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U.S. DEPARTMENT OF AGRICULTURE
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NORTHERN REGION
REGION ONE

Designed Kringler & McHenry Date 4-78
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Revisions 1-7-86 2-23-87 4-8-91 5-5-99
Revisions:

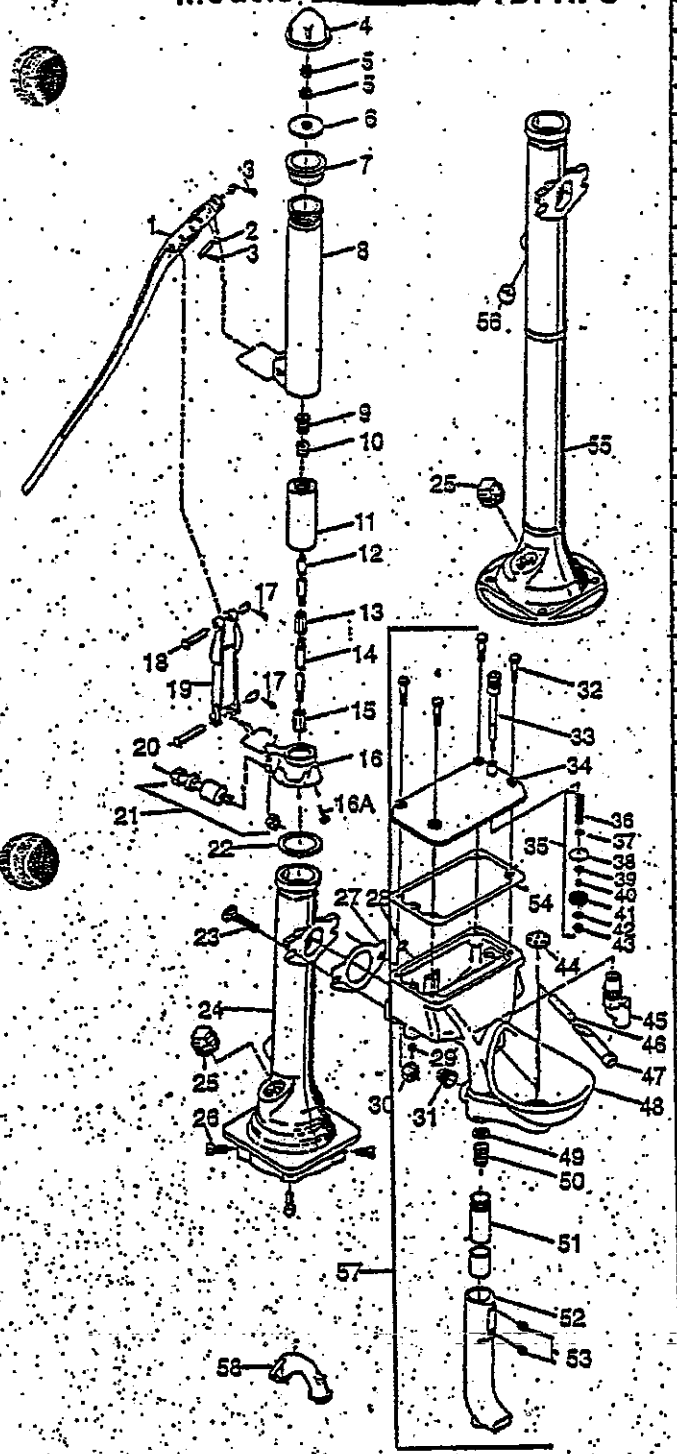
Sheet Title
HAND PUMP DETAIL

Scale

Sheet
of

Drinking Fountain Pumps

Models [redacted] 1DFHFS



Model No.			[redacted]
Item	Qty	Description	Ord. No.
1	1	Handle & Pin Assby. includes #2 & 3	HF153
2	1	Pump Pin	HF61
3	2	Cotter Pin	HF57
4	1	Top Cap	DP60P
5	2	Jam Nut	DP22
6	1	Piston Washer	DP62
7	1	Spacer Ring	DP61
8	1	Outer Shroud Assby	DP66P
9	1	Packing Nut	O31
10	1	Teflon Packing	DP134
11	1	Inner Shroud Assby	DP68P
12	1	Piston Rod 20 1/4" Long	DP72
13	1	Rod Coupling	7/16x7/16RC
14	1	Pump Rod Ext. (1DFHFS only) - 4-1/2" Pump Rod Ext. (1DFHCS only) - 13-3/8"	DP90 HD90
15	1	Rod Coupling	7/16x7/16RC
16	1	Cap	DP202P
16A	3	Set Screw 1/2-13NC x 1-1/2"	HD59
17	2	Cotter Pin	HD58
18	1	Fulcrum & Handle Pin	O54
19	1	Fulcrum	O400
20	1	Fulcrum & Cap Pin	O53
21	1	Rubber Bumper Assby.	10DP
22	1	Packing Washer	O81
23	2	Bolt-Tank to Base 7/16-14NC x 2" L	DP70
24	1	Base Includes #25, 26 & 27 for 1DFHFS	HF50
25	1	Pipe Plug, 1" NPT	SW33
26	4	Set Screw-Base 1/2-13NC x 2" L	HF33
27	1	Gasket-Tank to Base	DP21
28	1	Expansion Plug 1" Dia.	DP43
29	1	Screen Vent	PS585B
30	2	Nut, 7/16-14NC	PJ50
31	1	Pipe Plug- 3/4" NPT	DP20
32	4	Screw, 3/8-16 x 1-3/4" L	TX15
33	1	Valve Handle & Shaft Assby.	DP56
34	1	Cover	DP53FRO
35	1	Valve Parts includes # 36 - 43	DP59
36	1	Valve Spring	DP40
37	1	Snap Ring	DP46
38	1	Spring Washer Cupped	DP47
39	1	Washer (Back up)	SW54
40	1	Spacer	DP48
41	1	Valve	SW11
42	1	Washer-Brass	UN243
43	1	Hex Lock Nut	DP49
44	1	Strainer	DP31
45	1	Spout	DP39
46	1	Nozzle Screen	DP197
47	1	Nozzle	DP30
48	1	Reservoir Assby, includes #27, 28, 29, 31, 44, 45, 46, 47, 49, 50 & 54	DP58
49	1	Filter Washer	DP196
50	1	Holding Spring	DP195
51	1	Drain Pipe 1" Std. Pipe x 23-3/16" L	DP18
52	1	Drain Assby, includes #53	DP16
53	2	Set Screw 7/16-14NC x 1/2" L	DP17
54	1	Cover Gasket	DP12
55	1	Base, Includes #27, 25 & 56 for 1DFHCS	HC50
56	1	Screen Vent	PS585A
57	1	Fountain Assembly	158DP
—		Fountain Screening Kit inc. #29,46,49,50,54	199DP
58	1	Syphon Spout	HF9

Warranty Statement

Baker warrants the goods manufactured by it to be free from defects in material or workmanship under normal use or service, for a period of one year from date of shipment.

This warranty does not apply to goods or parts not manufactured by Baker. Instead Baker's obligation for these goods or parts is limited to the actual warranty extended to Baker by the manufacturer.

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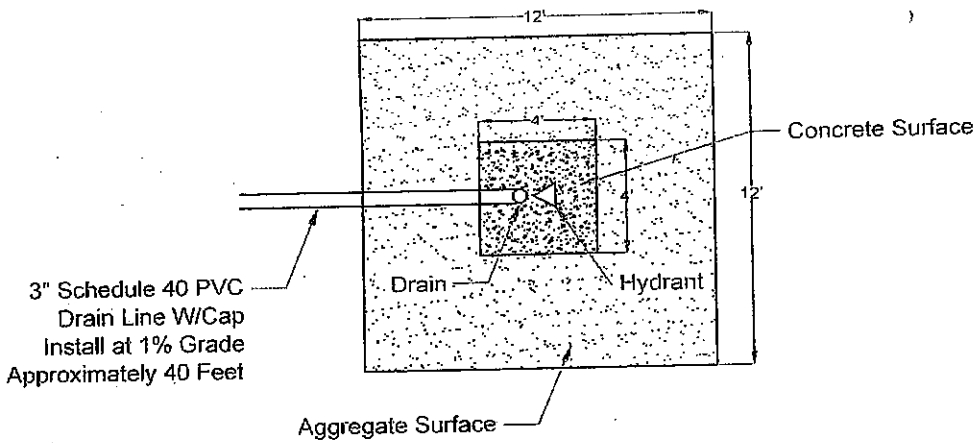
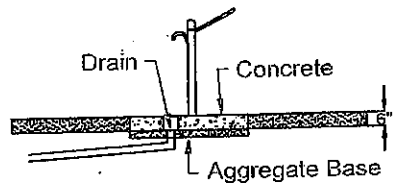
Plan View





Profile

Notes:

Install 9" Plastic Round or Square Drain Grate in Concrete Slab.
The Drain Line Shall be Installed at a minimum 1% Grade.
$\frac{3}{4}$" Aggregate with 5 Bag Mix for Concrete Slab.
Slope Finished Surface of Concrete to Drain to the Installed Drain.
Provide Light Broom Finish to Concrete Surface.
Slope Surface Outside Slab to Drain Away.