Specifications

MODEL	**HP20V**
WEIGHT	**54 LBS.**
SIZE (LXW)	**24" X 10.4" X 6"**
IMPACT ENERGY	**80 LB-FT**
IMPACT RATE	**1200-1500 BPM**
OPERATING PRESSURE	**1650 PSI**
REQUIRED OIL FLOW	**5 GPM**
MAX PRESSURE	**2500 PSI**
HOSE SIZE	**3/8" DIA.**

THIS MANUAL IS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT SERIAL NUMBER

_____

SKIDRIL
P.O. BOX 8041
GREENSBORO, NC 27419
TEL: 800-843-3745

SKIDRIL

OPERATION & PARTS MANUAL

HYDRAULIC POST DRIVER MODEL HP20V

ANY PERSON OPERATING THIS MACHINE SHOULD READ AND UNDERSTAND THIS MANUAL FIRST!

FOLLOW ALL SAFETY INSTRUCTIONS

1-800-843-3745

Service Notes

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Parts List Continued

No.	Code	Descriptions	Q'ty
49	IUIS 35.5, 45, 6	U-cup packing	1
50	LBI 35.5, 43.5,5, 6.5	Dust seal	1
51	FD2149A0	Dust seal	1
*52	MB38X005A	Front cap	1
53	BPH1-PT1/8	Plug	1
54	MB38Z014A	Nut (M16)	2
55	BH-10x40	Bolt	10
56	MB38Z011A	Chisel bushing	1
57	MB38Z024A	Flange	1
58	MB38Z019A	Boss	2
59	WP-12	Washer	2
60	WS-12	Washer	2

No.	Code	Descriptions	Q'ty
61	BH-12x35	Bolt	2
62	MB38Z012A	Anvil	1
63	PFB-8x32	Pin	2
64	MB18Y070A	Post cover	1
65	KH01Z572A	3/8 O-ring port hose	2
66	OP-14	O-ring	2
67	QC-03M	Coupler (male)	1
68	QC-03F	Coupler(female)	1
69	CO 7772A	O-ring	1
70	GN-01	Grease nipple	1
71	MB38Z028A	Label	1
72	MB29Z023A	Label	1

Assembly Parts

No	Code	Descriptions	Q'ty	Content
A1	MB38Z501A	Accumulator Assy	1	2,3,4,5,6,7,8
A2	MB24Z508A	Cap nut Assy	1	2,3
A3	MB24Z509A	Cap bolt Assy	1	4,5
A4	MB38Z506A	Operating grip Assy	1	16,17
A5	MB38Z502A	Valve body Assy	1	24,25,26(3),27,28,29
A6	M1XTZ505A	Valve rod Assy	1	32,33,34
A7	M1XTZ510A	Valve guide Assy	1	35,36
A8	MB38Z503A	Inner tube Assy	1	28,41,42,43
A9	MB38Z504A	Cylinder Assy	1	28(4),45,47(3),48
A10	MB38Z505A	Front cap Assy	1	51,52,53,56
A11	MB38Z500A	Seal kit Assy	1	3,5,13,14,31,33,34,36,37,40,45,46(4),49,50,51

Operation

PREPARATION FOR USE

1. Be Sure the power supply you are using provides the correct flow and pressure for the BH163D. (SEE SPECIFICATIONS).

2. Be sure your hydraulic power supply has the correct type and amount of hydraulic oil.

* Use *ONLY* Hydraulic oil ISO VG-32 or equivalent.

3. Connect the driver to the hoses from the power supply (pressure goes into top hose on driver (SEE COMPONENT IDENTIFICATION SECTION).

4. Inspect all hoses, connections, fittings and fasteners on the post driver for damage before each use.

5. By pulling down on the control handle the driver will begin to pound the post.

6. Release the control handle when the post is driven the correct distance.

7. Shut down power supply and continue to next post. Repeat steps 1-6 for the next post installation.

NOTICE!

ALWAYS
Be sure your power source provides the correct pressure and flow as damage may occur, or performance may be reduced!
**** ALWAYS***
Connect hydraulic hoses to the the tool before starting the power supply
****ALWAYS be sure couplers are clean and free of debris before connecting!***
****ALWAYS use the driver on a power unit with proper cooling and***

WARNING!

**** DO NOT operate the driver with damaged hoses, fittings or fasteners.***

**** DO NOT substitute hoses for another make/ type.***

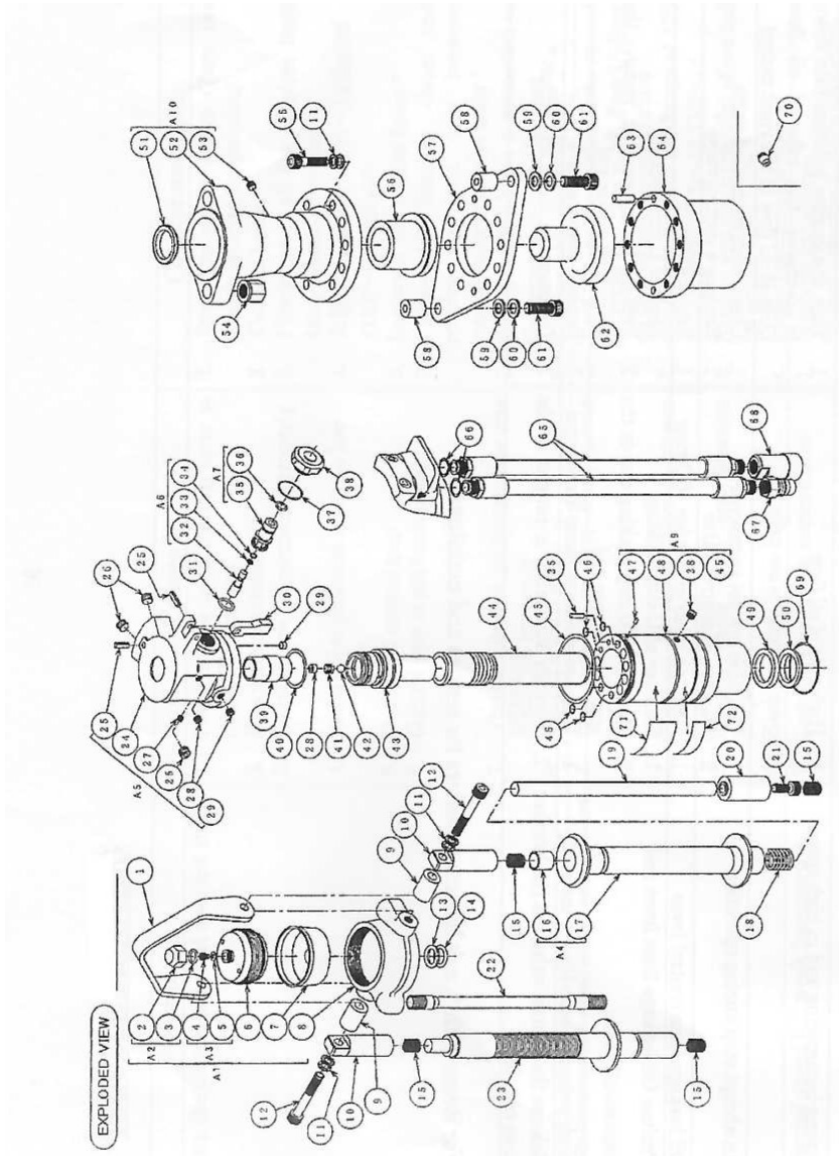
**** DO NOT use with driver over your head.***

****DO be sure that the driver adapter (see component identification) snugly fits the post you are driving!***

****DO check for overhead wires or utilities.***

****DO call for a locate of underground utilities.***

Exploded View - Driver



Troubleshooting

1. The Driver does not operate when the control handle is actuated.

POSSIBLE CAUSE	SOLUTION
Power supply is not operating.	Start power pack per manufacturers instruction manual.
Disconnected hose.	Stop power supply. Connect the hoses.
Incompletely connected couplings.	Stop power supply. Check each coupling to ensure they are competely engaged.
Control valve malfunction. **	Disassemble driver. Clean all debris from valve body. Reassemble. **
Broken control valve. **	Replace control valve. **

2. The Driver operates, but the impact rate is low.

POSSIBLE CAUSE	SOLUTION
Low hydraulic fluid flow rate.	Check with power supply manufacturer to confirm correct pressure/flow for the driver (see driver specifications)
Relief valve setting too low. **	Adjust relief valve setting. **
Oil temperature too hot.	Confrim your power supply has sufficient oil volume and cooling capability. Test by allowing power supply to cool down for 15-30 minutes, then try again. If Driver operates contac power suply manufacturer.
Control valve malfunction. **	Disassemble driver and clean all from valve body. Reassemble.**
Hydraulic oil level too low.	Add hydraulic oil to your power supply (contact manufacturer).

***** WARNING! To avoid risk of injury or death, troubleshooting solutions marked with a red double-asterisk (**) should only be performed by an authorized service center or trained professional .***

Troubleshooting Continued

3. Driver striking rate is normal, but impact force is weak.

POSSIBLE CAUSE	SOLUTION
Low nitrogen accumulator gas pressure. **	Charge nitrogen accumulator to 50kg/ cm2. **
Broken accumulator diaphragm. **	Replace accumulator diaphragm. **
Oil temperature too high.	Stop power supply. Check/fill oil level. Contact you power supply manufacturer.

4. The Driver suddenly stops during operation.

POSSIBLE CAUSE	SOLUTION
Disconnected quick-coupling.	Stop power supply. Re-connect quick coupling. Check all other hose connections.
Broken control valve.	Replace control valve.**

5. Oil is leaking from the control handle mechanism.

POSSIBLE CAUSE	SOLUTION
Worn or hardened O-ring. **	Replace O-ring. **

*** WARNING! To avoid risk of injury or death, troubleshooting solutions marked with a red double-asterisk (**) should only be performed* by an authorized SKIDRIL service center or trained professional .

Troubleshooting Continued

6. Oil is leaking from the front end of the driver.

POSSIBLE CAUSE	SOLUTION
Worn U-cup packing on driver.	Replace U-cup packing.
U-cup packing damaged by scored piston rod.	Smooth out scored areas on piston rod with oilstone, and then replace the U-cup Packing.

7. The high pressure hose vibrates intensely.

POSSIBLE CAUSE	SOLUTION
The nitrogen accumulator diaphragm is damaged. **	Replace diaphragm. **

8. The Driver does not stop impacting when the control handle is released.

POSSIBLE CAUSE	SOLUTION
Debris is causing the control valve rod to stick open. **	Disassemble and remove debris from valve assembly. Reassemble. **

** WARNING! To avoid risk of injury or death, troubleshooting solutions marked with a red double-asterisk (**) should only be performed by an authorized SKIDRIL service center or trained professional .

PERIODIC MAINTENANCE

*CHECK FOR LOOSE MISSING OR DAMAGED HOSES, DRIVE ADAPTER OR FASTENERS AND HAVE REPAIRED OR REPLACED BEFORE USING FURTHER. *GREASE HAMMER END OF DRIVER	**DAILY**
**RECHARGE OF ACCUMULATOR	300 HOURS OR AT LEAST EVERY YEAR
**REPLACE ACCUMULATOR DIAPHRAGM	500 HOURS OR AT LEAST EVERY TWO YEARS
**REPLACE VALVE ROD O-RING	500 HOURS OR AT LEAST EVERY TWO YEARS
**REPLACE U-CUP PACKING	500 HOURS OR AT LEAST EVERY TWO YEARS
**REPLACEMENT OF ALL O-RINGS	EVERY 3 YEARS

NOTE ALL ITEMS IN RED SHOULD BE PERFORMED BY AND AUTHORIZED SKIDRIL SERVICE CENTER!

Parts List

PARTS LIST (I)

* only can be supplied as assembly parts

No.	Code	Descriptions	Q'ty	No.	Code	Descriptions	Q'ty
1	MB38Z021A	Hook	1	25	PR-6x20	Pin	3
*2	M1KTE108A	Cap nut	1	26	BPH1-PT1/4	Plug	3
3	OS-22.4	O-ring	1	27	MB13Z018A	Orifice plug(ϕ4.0)	1
*4	1120-413-D	Cap bolt	1	28	BPH1-PT1/8	Plug	6
5	WS-06<<<<<BH	Seal washer	1	29	BPH1-PT1/16	Plug	1
6	M1XTE110A	Lid	1	30	MB38Z023A	Cam	1
7	MB02E006A	Diaphragm	1	31	FR307W	O-ring	1
8	MB38Y001A	Shell	1	*32	M1KTE111A	Valve rod	1
9	MB38Z022A	Caller	2	33	OP-5	O-ring	1
10	MB38Z018A	Spring holder A	2	34	OBP-5	Back up ring	1
11	NL-10	Washer	12	*35	M1KTZ280A	Valve guide	1
12	BH-10x65	Bolt	2	36	CO-0601	O-ring	1
13	OBP-22	Back-up ring	1	37	CO-0621	O-ring	1
14	OP-22	O-ring	1	*38	M1KTZ281A	Bush	1
15	51-1635	Spring	4	39	MB38Z007A	Control valve	1
16	K5B1620	DU bush	1	40	OP-38	O-ring	1
*17	MB38Y016A	Operating grip	1	41	M1HTE107A	Spring (P)	1
18	5549	Spring	1	42	QB-5/16	Steel ball	1
19	MB38Z015A	Handle shaft	1	*43	MB38Y008A	Inner tube	1
20	MB38Z020A	Spring holder B	1	44	MB38Y009A	Piston	1
21	BH-10x25	Bolt	1	45	OG-75	O-ring	1
22	MB38Z013A	Through bolt	2	46	FR0329W	O-ring	4
23	MB38Z017A	Handle pipe	1	47	MB850-040	Kenick expander	3
*24	MB38X003A	Valve body	1	*48	MB38X010A	cylonder	1

Component Identification

Item

1. **Accumulator**
2. **Control handle**
3. **Return Port**
4. **Pressure Port**
5. **Anvil**
6. **Drive Adapter**

SAFETY FIRST

READ, UNDERSTAND AND FOLLOW SAFETY GUIDELINES AND SAFE WORK

TAKE NOTE OF ***WARNINGS*** IN THIS MANUAL AS THEY IDENTIFY INSTRUCTIONS INTENDED TO PREVENT INJURY TO YOU OR OTHERS.

NOTICE: ***NOTICES:***, ARE INTENDED TO PREVENT DAMAGE TO THE MACHINE OR PROPERTY.

WARNING!

DO NOT: USE EQUIPMENT IN APPLICATIONS FOR WHICH IT IS NOT INTENDED.

DO NOT: USE IMPROPERLY TRAINED OR UNQUALIFIED PERSONNEL TO OPERATE OR PERFORM REPAIRS ON THIS EQUIPMENT.

DO NOT: LEAVE MACHINE RUNNING UNATTENDED OR WHEN NOT IN USE.

DO NOT: REFUEL OR ADD HYDRAULIC OIL TO A HOT OR RUNNING MACHINE.

DO NOT: SPILL FUEL OR HYDRAULIC OILWHEN FILLING THE MACHINE.

DO NOT: ATTACH OR DETACH THE DRIVER HOSES WHILE THE POWER SUPPLY IS ON OR RUNIING.

DO NOT: REFUEL NEAR AN OPEN FLAME OR SPARK.

DO NOT: OPERATE THE MACHINE WITHOUT PROPER SAFETY PROTECTION SUCH AS PROTECTIVE EYEWEAR, SAFETY BOOTS, EAR PROTECTION, HARD HAT, GLOVES ETC.

DO NOT: MODIFY THE MACHINE IN ANY WAY OR USE WITH NON SKIDRIL PARTS.

DO NOT: OPERATE THE MACHINE WITHOUT SOLID FOOTING OR WITH THE MACHINE ELEVATED ABOVE YOUR HEAD.

DO NOT: STORE THE MACHINE IN A PLACE OR POSITION THAT IT MAY FALL , DROP OR SLIDE FROM WHEN NOT IN USE.

DO NOT: OPERATE THE MACHINE WITH LOOSE, DAMAGED OR MISSING PARTS.

Helpful Tips & Service

When using the Driver to drive posts, use drive adapters which are correctly matched to the post your installing. Call *SKIDRIL* if you have any questions about drive adapters or tools.

To maximize driving power, do not use more than 25' of hose from the pack to the driver.

To prevent dirt from entering the quick-connect couplings, and possibly damaging the driver or power supply, be sure to clip couplings together after disconnecting driver.

Your *SKIDRIL* requires regular service (at least annually) to maintain it in good running order, and ensure long life.

Where to obtain service:

***SKIDRIL* services the products it sells so send it to SKIDRIL INC., 235 Labrador Drive, Randleman, NC USA 27317**

How to ship:

NOTICE: Use a ground freight carrier .
Most major carriers can deliver the machine to us and back to you.

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