

Dewatering Pump

Technical Manual

061.000.284

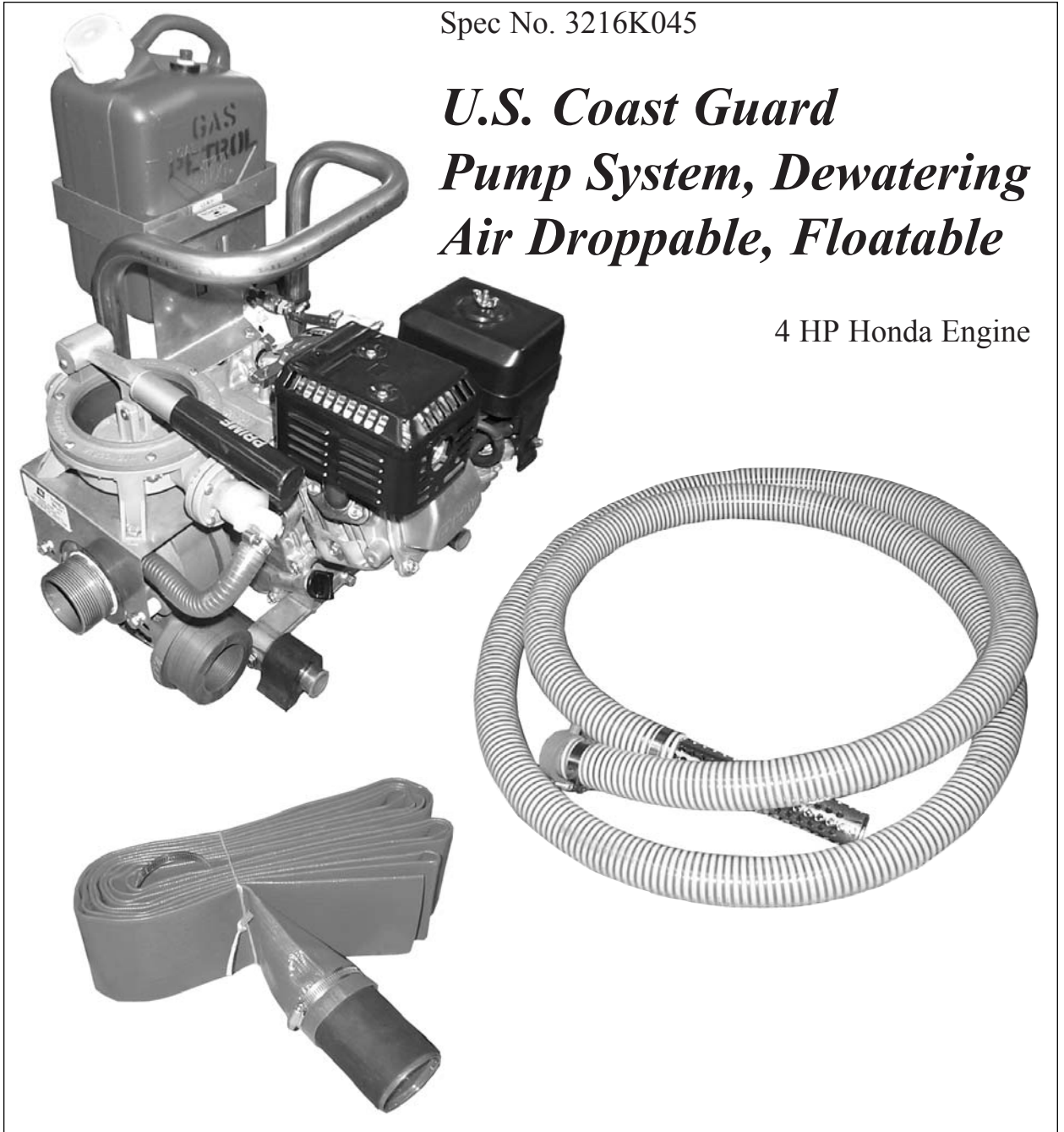
January 2005

Operation • Parts List • Maintenance

Spec No. 3216K045

***U.S. Coast Guard
Pump System, Dewatering
Air Droppable, Floatable***

4 HP Honda Engine



U.S. Coast Guard • Model CG-P1C • 4 HP

Scot Pump

A Division of Ardox Corporation

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DESCRIPTION OF EQUIPMENT

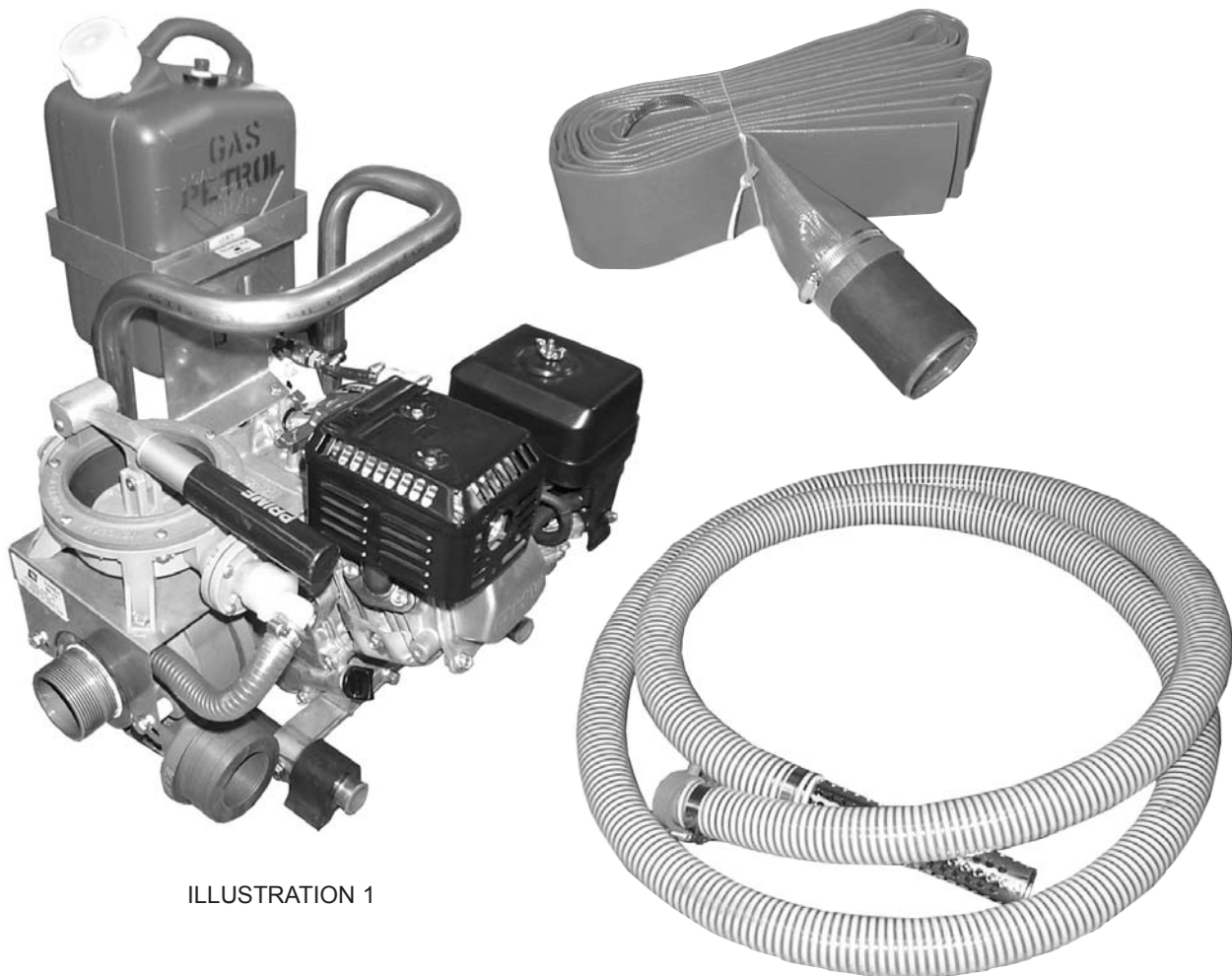


ILLUSTRATION 1

- Discharge Valve for Positive Priming
- 25 ft. Suction Lift Capability
- Lightweight Pump
- 13" x 17" x 26"
- 4 HP Honda Engine
- Removable 5 qt. Fuel Container with Quick Disconnect
- 2" Suction Hose with Strainer
- 3" Discharge Hose with Check Valve
- 150 Gallons per Minute with a 10 ft. Suction Lift

SCOT MANUAL PRIMED ENGINE DRIVEN SALT WATER PUMP SET INCLUDES:

- Manual Prime Pump
- Portable Engine Driven Pump, Aluminum Construction
- 15 ft. Suction hose with Coupling and Strainer
- 20 ft. Discharge Hose with Check Valve
- Remote 5 qt. Fuel Tank
- Instruction Card
- Technical Manual

COMPLETE INSTRUCTION INCLUDED

PUMP PARTS DESCRIPTION

PORTABLE ENGINE DRIVEN CENTRIFUGAL PUMP WITH 4 H.P. HONDA GASOLINE ENGINE

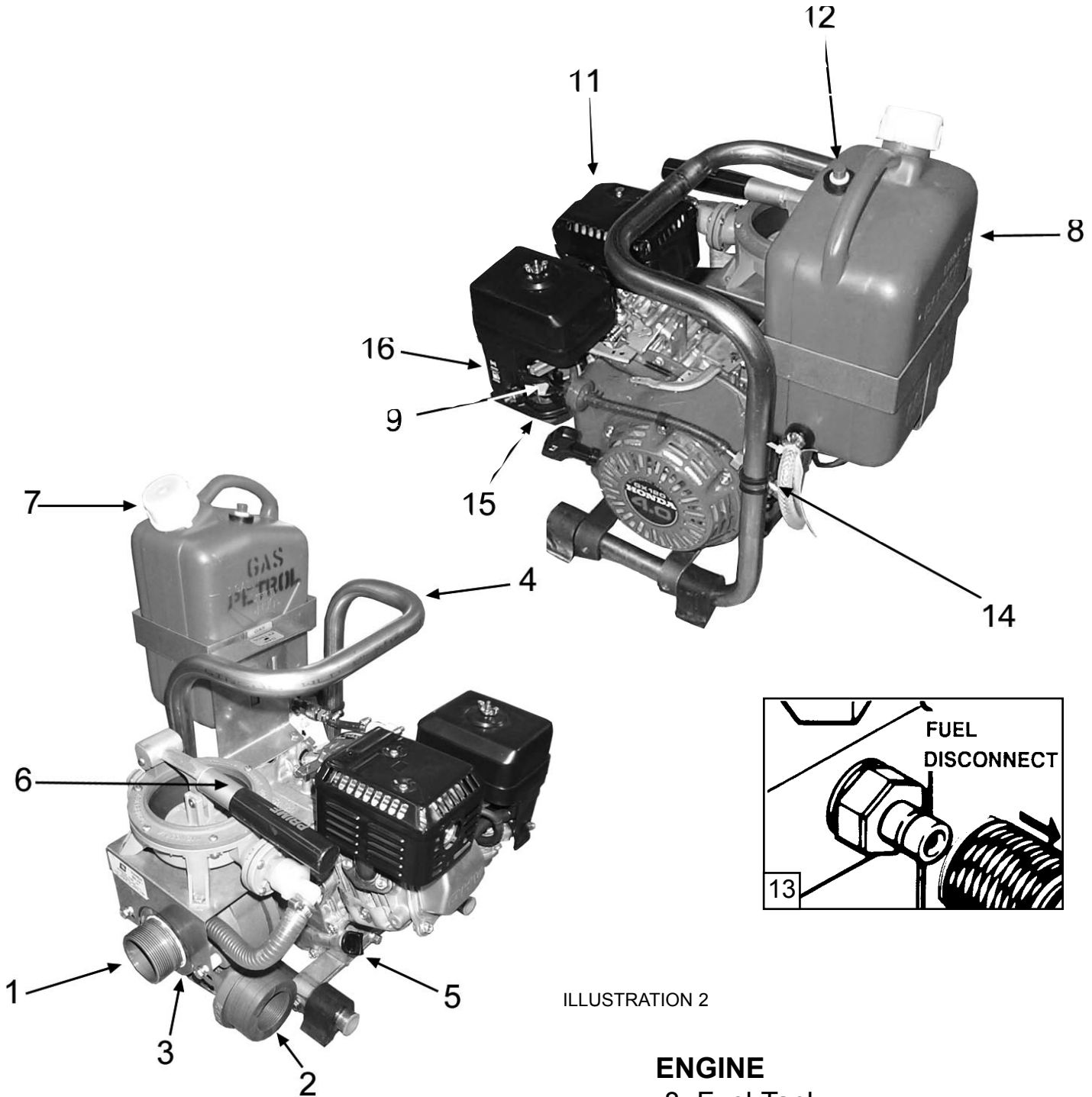


ILLUSTRATION 2

PUMP

- 1. Suction Hose
- 2. Discharge Hose
- 3. Case Drain Plug
- 4. Carrying Handle
- 5. Oil Fill
- 6. Prime Pump
- 7. Fuel Tank, Fill Cap

ENGINE

- 8. Fuel Tank
- 9. Choke
- 10. Air Cleaner
- 11. Muffler
- 12. Fuel Tank Vent
- 13. Fuel Fitting
- 14. On/Off Switch
- 15. Fuel Valve Lever
- 16. Throttle Lever

OPERATION

BEFORE STARTING PUMP

- Fill engine crankcase with oil - see more complete instructions in the Engine Operating Instruction Manual.
- Attach fuel tank to engine fuel tank bracket.
- Connect fuel tank line to engine fuel fitting (Illustration 2, Item 13)
- Fill fuel tank with fresh, clean lead-free gasoline. Leaded gasoline may be used if lead-free is not available. A minimum of 77 octane is recommended. the use of lead-free gasoline results in fewer combustion deposits and longer valve life.
- Secure fuel tank fill cap.
- Connect suction hose coupling to pump suction nipple. Tighten securely. Put strainer end of suction inlet hose into water being pumped. Be sure strainer and end of hose are submersed. If air gets into inlet hose or strainer, pump will not pump. If strainer is not used, large solids may plug or damage pump.
- Attach discharge (outlet hose over discharge hose barbs. Hose should be lid out with minimum kinks or sags and placed overboard.
- Prime the pump by actuating hand pump until water discharges from hand pump outlet.
- Move the fuel valve lever to the ON position.
- To start a cold engine, move the choke lever to the CLOSED position.
- To restart a warm engine, leave the choke lever in the OPEN position.
- Move the throttle lever away from the SLOW position, about 1/3 of the way toward the FAST position.
- Turn the engine switch to he ON position.

RECOIL STARTER (all engine types):

Pull the starter grip lightly until you feel resistance, then pull briskly. Return the starter grip gently.

- After starting, position the throttle lever for the desired engine speed.
- After pump and engine are started, actuate hand priming pump until pump is pumping water.
- Be sure inlet hose and strainer are kept under water.

WARNING

- Stop engine before adding gasoline.
- Stop engine before adding or checking oil.
- Keep pump and engine as nearly level as possible (within 15° level).

TO STOP ENGINE AND PUMP

- Under normal conditions, move the throttle lever to the SLOW position. Turn the engine switch to the OFF position.
OR
- To stop the engine in an emergency, simply turn the engine switch to the OFF position.

EXTENDED ENGINE STORAGE INSTRUCTIONS

Engines to be stored over 30 days should have the spark plug removed and about a tablespoon of oil put into the cylinder. Turn the engine over several times to distribute oil. Replace spark plug.

READINESS CHECK RUN

Pump must be inspected after each use, as well as run monthly, for a check of all components. Operate pump, hose and strainer under pressure for 15 minutes. Correct any problems before replacing kit. Visually inspect all kit components and make corrections such as paint touch-up, etc. Be sure engine oil is clean, in good condition and that oil is at full level. Flush interior of pump with fresh water. Clean exterior with fresh water, Dry thoroughly.

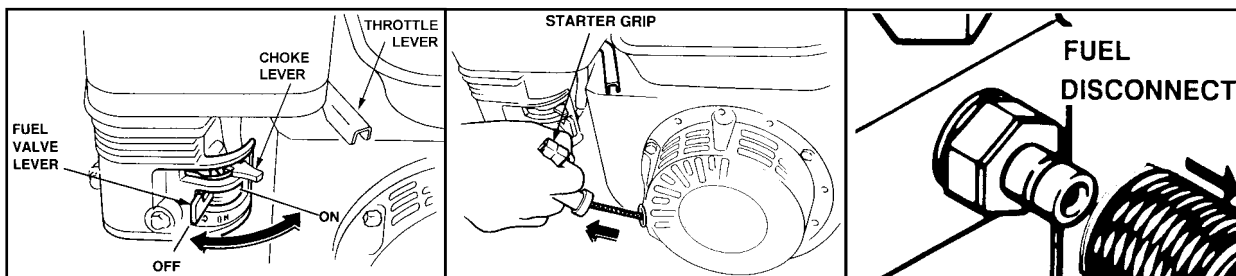


ILLUSTRATION 3

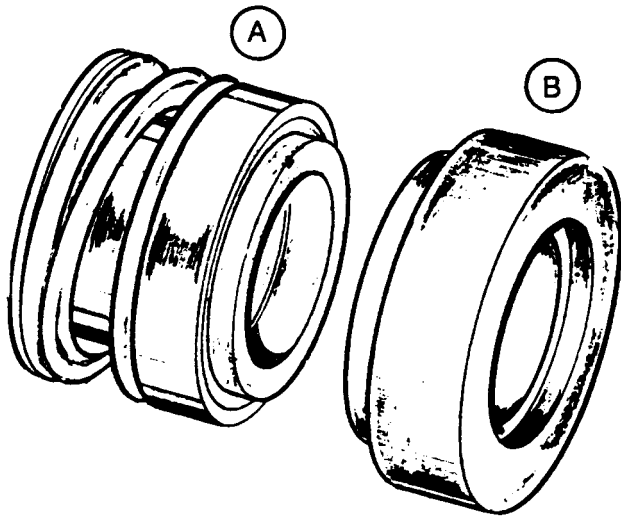
ILLUSTRATION 4

ILLUSTRATION 5

CAUTION: Never attempt to rotate engine except in direction of rotation, which is clockwise looking at the cranking end of the engine. Reverse rotation could result in an unscrewing action on some of the pump parts and perhaps split open the engine crankcase.

INSTALLATION INSTRUCTIONS

TYPE 6 SHAFT SEAL



The seal assembly consists of these components:

- A** ROTARY SEAL HEAD with spring
- B** STATIONARY SEAT

CAUTION: This seal is a precision product and should be handled accordingly. Be especially careful of the lapped sealing surface of the rotary washer and stationary seat.

THE SEAL IS SUPPLIED WITH A PACKET OF LUBRICANT.

LAPPED RUNNING FACES

The lapped running surfaces of the rotary seal head and stationary seat must be treated with care. KEEP CLEAN. DO NOT SCRATCH. Use a clean, soft cloth during installation. Protect the faces. Install both the seat and rotary square to the shaft. Check the stationary seat installation from behind the seal cavity for squareness.

STATIONARY SEAT INSTALLATION (B)

Clean the seal seat cavity of the adapter and lubricate. Lubricate the seat O-ring or cup and press the stationary seat in seal cavity of the adapter squarely and evenly using an arbor press and the cardboard disc supplied with the seal. Be careful not to scratch or touch the lapped surface of stationary seat.

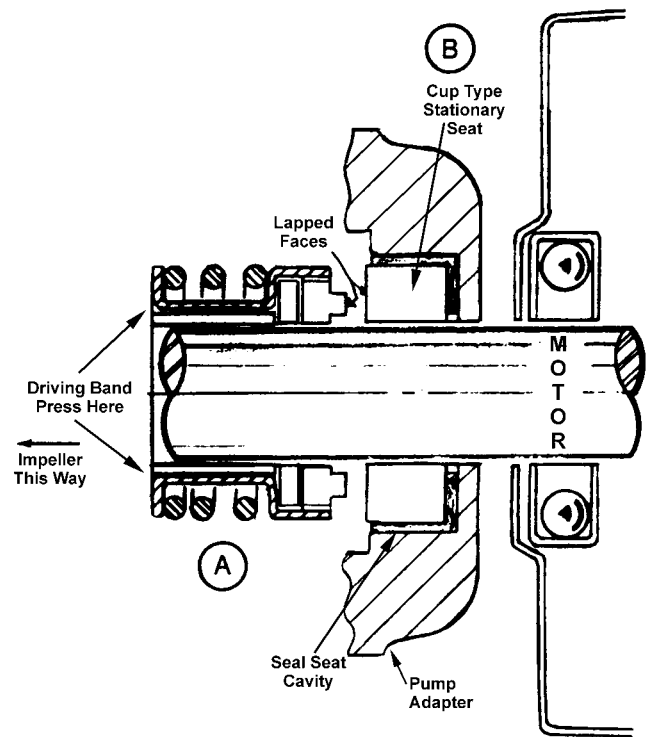
Inspect the face of the stationary seat to be certain there is no dirt on face. If there is any dirt or fingerprints on the face, wipe it off carefully with a soft cloth.

ROTARY SEAL HEAD INSTALLATION (A)

Clean, polish and lubricate the shaft (or shaft sleeve).

Check lapped faces on the stationary seat and rotary seal head. Be certain no dirt is on either face. Lubricate lightly.

Slide the rotary seal head on the shaft with the carbon rotating ring facing the stationary seat. Press the drive band until the head seats firmly against the seat. Install spring (and spring retainer washer if used). Install impeller which will compress the spring to proper length assuring correct pressure on the lapped faces.



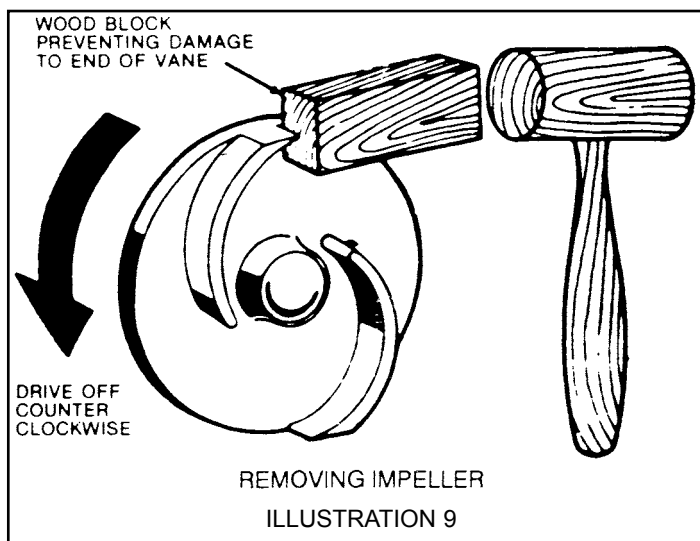
CAUTION: Never operate the lapped running faces dry. The liquid being handled ensures proper lubrication.

In some cases a short period of operation is required to clear up slight leakage.

NOTE: The lubricant supplied with the seal is the only approved lubricant. DO NOT USE OTHER LUBRICATING LIQUIDS!

PUMP MAINTENANCE AND REPAIR

- Keep the suction hose connection air tight. Check the suction hose for leaks. If gasket is worn, replace.
- No lubrication or maintenance is required on the prime pump. Avoid damaging the rubber diaphragm. Check the diaphragm frequently for damage.
- No lubrication is required on the centrifugal pump. The shaft seal is self-lubricating and will handle clean or dirty liquids.
- To disassemble the centrifugal pump, it is first necessary to remove the prime pump assembly. Remove the primer inlet hose from the inlet elbow. disconnect the fuel line from the prime pump bracket. Remove the two hex screws holding the bracket and engine adapter to the engine. Remove the prime pump and bracket as an assembly. Remove the four hex screws holding the case to the engine adapter and remove the case. It is necessary to remove the impeller to service the seal. To remove the impeller, place a piece of wood against the outer end of one of the impeller vanes. Hit the wood with a hammer so as to turn the impeller in the same direction as the rotation of the engine, that is, counter-clockwise, until the impeller is loosened and can be screwed off the engine crankshaft.



- If the impeller is badly worn, it should be replaced to regain the best performance. When replacing, insert impeller shim between sleeve and impeller to obtain approximately 1/64" clearance between the impeller and pump case faces.
- The rotating seal parts can be pulled out with the fingers. To remove the stationary seal ring, it is best to remove the engine adapter from the engine and push the seal ring out from the back. When replacing seal, sleeve and seal surfaces must be clean and smooth. Use glycerin on the sleeve, seal seat and sealing faces when reassembling. Do not damage seal parts when handling. For detailed instructions, see page 11.

PERIODIC MAINTENANCE SCHEDULE AFTER EACH USE

- Visually inspect all components
 - fittings for damage, lost or defective gaskets
 - suction hose and strainer for obstructions and other damage
 - all hose clamps
- Clean interior and exterior with fresh water and dry thoroughly
- Check engine oil level and be sure oil is clean
- Check compression
- Check fuel filter for evidence of dirt or lint build up, replace if clogged

EVERY 25 HOURS

- Change oil
- Replace fuel filter

EVERY 100 HOURS

- Clean or replace spark plug as required
- Remove carbon deposits
 - clean combustion chamber
 - clean top of piston
 - clean around both valves

PUMP PARTS LIST

Model CG-P1C
Spec No. 3216K045

KEY NO	PART NO	QTY	DESCRIPTION
	118.000.490	1	FUEL TANK ASSEMBLY Consisting of items below:
1	102.000.178C	1	Fuel tank, red
2	108.000.354B	1	Fuel line, clear ¼" ID x 7½" L
3	106.000.325	2	Clamp, fuel line
4	119.000.279A	1	Bracket, fuel tank
5	102.000.178D	1	Cap, fuel tank
6	102.000.246	2	Grommet
10	102.000.247A	1	Fitting, quick connect
68	117.000.488	3	Label, gas
71	102.000.248	1	Connector
72	102.000.249X	1	Vent
*	061.000.202X	1	Instruction tag w/ tie
	118.000.290B	1	PRIME PUMP ASSEMBLY Consisting of items below:
13	118.000.299B	1	Pump, prime
13A	102.000.263	1	Grip
14	106.000.370	2	Clamp
15	108.000.267	1	Elbow
16	108.000.268B	1	Hose, inlet ½" ID x 10" L
			PUMP ASSEMBLY Consisting of items below:
17	132.000.264	1	Adapter
18	130.000.254	1	Case
19	131.000.640	1	Impeller
20	110.000.137	1	Sleeve
21	101.000.102	1	Seal
22	116.000.141	1	O-Ring, Buna
*	105.000.203	4	Screw, hex hd. cap. 15/16-24 x 3/4". stn stl
*	104.000.148	4	Lockwasher, 5/16" med stn stl
*	105.000.161	4	Screw, hex hd. cap. 3/8-16 x 1", stn stl
*	104.000.130	4	Lockwasher, 3/8" med stn stl
23	108.000.126	1	Plug, drain
24	108.000.259	1	Barb, primer
25	137.001.570	1	Nipple, hose connector
26	104.000.179	1	Flinger
27	104.000.142	1	Shim (if required)
28	137.001.595	1	ENGINE †
	118.000.289	1	DISCHARGE HOSE ASS'Y Consisting of items below:
32	108.000.227	1	Hose, discharge, 3" ID x 20' L
33	108.000.228	1	Check valve, sleeve
34	121.000.137A	1	Tape, ¾" x 12" L
35	106.000.137B	2	Clamp, pump
36	119.000.276	1	Check valve, body
*	118.000.286	1	Check valve, assembly Includes items 33, 34, 36

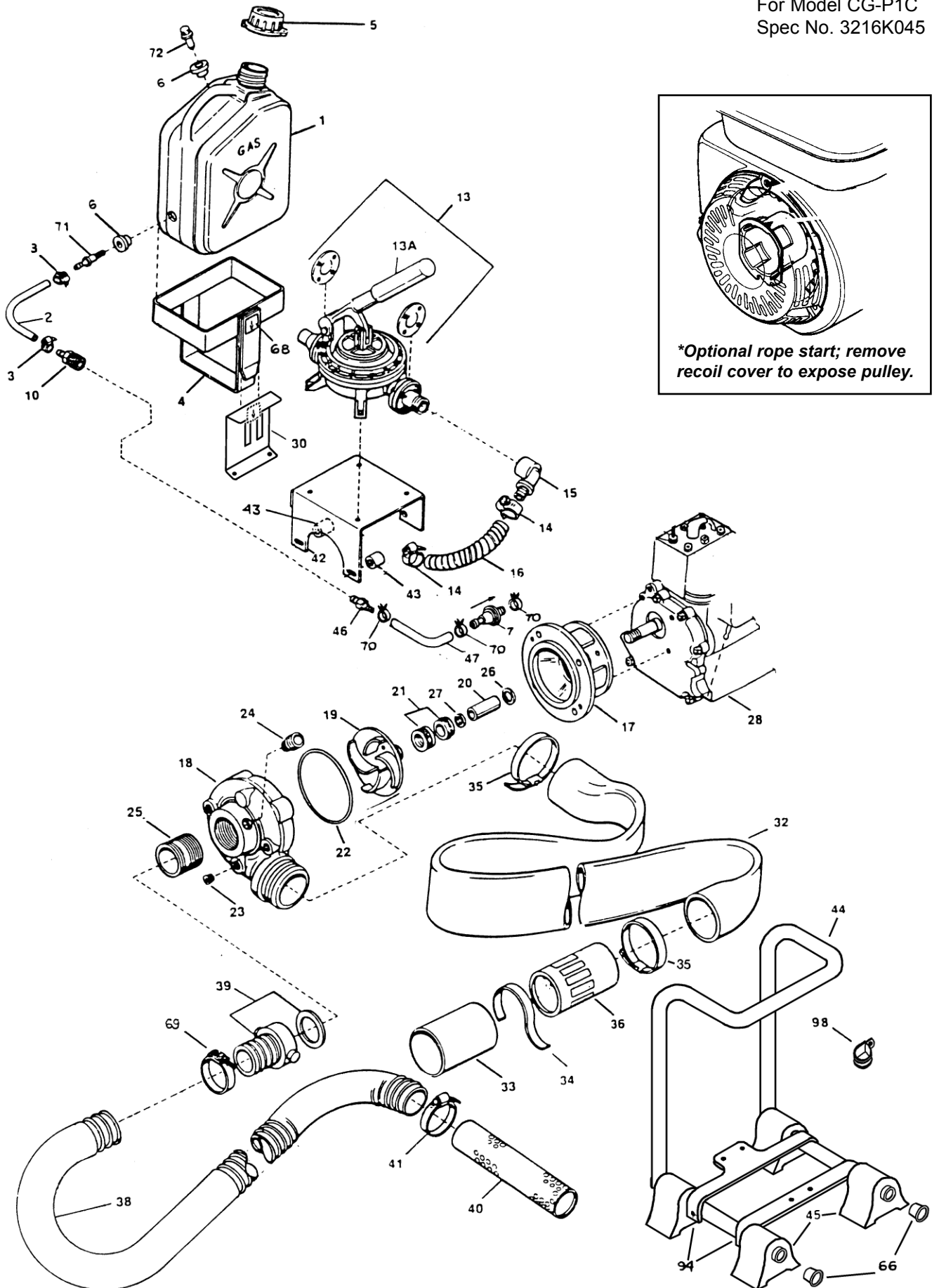
KEY NO	PART NO	QTY	DESCRIPTION
	118.000.288A	1	SUCTION HOSE ASS'Y Consisting of items below:
38	108.000.276B	1	Hose, suction, 2" ID x 15' L
39	108.000.197	1	Coupling
39A	116.000.249	1	Gasket only
40	119.000.227	1	Strainer, suction
41	106.000.399	1	Clamp
69	106.000.413	1	Clamp
			MISCELLANEOUS
30	137.001.569	1	Bracket, fuel tank
42	119.000.277	1	Bracket, prime pump mount
*	105.000.209	4	Screw, hex hd. cap. ¼-20 x ½". stn stl
*	104.000.134	8	Lockwasher, ¼ med. Stn stl
*	105.000.118	6	Nut, ¼-20, stn stl
*	105.000.381	2	Screw, hex hd. cap. ¼-20 x 1-3/8", stn stl
43	110.000.297	2	Spacer, prime pump
44	137.001.566	1	Cradle, engine
45	119.000.456	4	Bumper
98	137.001.630	1	Cushioned Clamp
*	105.000.372	4	Carriage bolt, stn stl 5/16-18 x 2-1/2"
*	105.000.116	4	Nut, hex hd. 5/16-18 stn stl
*	104.000.148	8	Lockwasher 5/16 med. stn stl
*	137.000.367	4	Screw, self tapped #8 x 3/4 stn stl
*	137.000.501	4	Washer, flat, .21 x .50"
66	199.000.400	2	Plug cradle
*	061.000.285X	1	Instruction card w/tie
*	061.000.284	1	Technical manual
*	119.000.223X	-	Aluminum container 23" H
*	119.000.335	-	Plastic container
94	137.001.567	1	Bracket, front
	137.001.568	1	Bracket, back
46	102.000.247	1	Fitting, male
47	108.000.232B	1	Hose, fuel, ¼" ID x 2.5" L
68	117.000.488	1	Label, gas w/ mylar cvr
70	106.000.325	3	Clamp, hose
7	†	1	Fuel Filter
**	†	1	Rope (optional)
*	118.000.548	1	Nameplate 3216K045

* Not shown
** See inset box

**† For Honda engine repair parts,
see Honda Parts Catalog #GX120K1
To order Honda engine parts,
contact your local Honda distributor
listed on the last page of the manual.**

ILLUSTRATED PARTS BREAKDOWN (PUMP)

For Model CG-P1C
Spec No. 3216K045



WARNING

- Do not smoke when filling fuel tank
- Refuel only in well ventilated areas
- If gasoline is spilled, move pump away from spill
- Do not refuel gasoline tank while engine is running. Allow engine to cool for two minutes before refueling.
- Do not run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odorless, colorless poison.
- To prevent accidental starting always remove the spark plug from engine before working on engine or equipment
- Do not tamper with exhaust system
- Do not operate engine if air cleaner is removed (except for adjustment)
- Always keep hands and feet clear of rotating parts
- Do not disconnect either suction or discharge hose during pumping operation
- Do not check oil or fuel level while engine is running
- Use caution handling pump during and after running until engine has cooled
- Do not use to pump flammable liquids

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Prime Pump Will Not Prime	<ol style="list-style-type: none"> 1. Leaking discharge check valve 2. Hole in diaphragm 3. Air leak in suction hose or connections 4. Air leak on prime pump hose or connections 	<ul style="list-style-type: none"> Repair discharge check valve or replace discharge hose assembly Replace prime pump Repair leak or replace suction hose Repair leak or replace hose
Loss of Suction	<ol style="list-style-type: none"> 1. Air leak in suction line 	<ul style="list-style-type: none"> Repair or replace suction line assembly
Little or No Discharge	<ol style="list-style-type: none"> 1. Casing not filled with water 2. Impeller plugged 3. Hole or leak in suction line 4. Impeller worn or damaged 5. Strainer or suction line not submerged deep enough in water 6. Discharge hose kinked 	<ul style="list-style-type: none"> Actuate hand primer Disassemble pump and clean impeller Repair or replace suction line Replace impeller Submerge lower in water Straighten out

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The SCOT PUMP main office and manufacturing facility is located twenty miles north of downtown Milwaukee and three miles west of I-43, in the community of Cedarburg, Wisconsin.

