



PWP2P5GC

2" Self-Priming Thermoplastic Centrifugal Pump Owner's Manual

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Specifications

Max Head: 35 meters (115 ft)
Max Capacity: 600L/min (160 gal.)
Engine: 5.0 HP Honda (GC)



Customer Service Hotline:
1-866-939-6666
visit our website:
www.kodiakpower.ca

IMPORTANT: Do not operate this equipment until you have read and understand all of the enclosed Owner's Manuals. Carefully read all Warnings, Safety Precautions, Assembly and Operating Instructions, Maintenance and Storage information.

Introduction

We would like to take this opportunity to thank you for choosing Kodiak Power Equipment. This specialty-purpose water pump has been designed to provide years of safe and dependable operation. To obtain the best performance from your unit please read the "Operating Manual" carefully before using this product.

This manual contains important Safety Precautions, Operating Instructions and Maintenance Instructions essential to the safe operation of your Kodiak water pump. Failure to abide by these instructions could result in personal injury or equipment damage.

This manual should be considered a permanent part of the pump and should remain with the pump if it is resold.

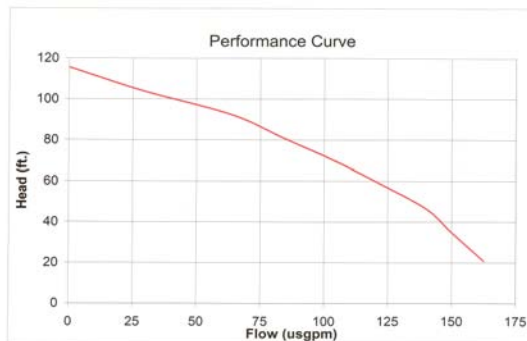
Overview

Note: Check for visible shipping damage. Shipping damage will cause problems in the operation of this unit. Contact the Customer Service Hotline immediately at **1-866-939-6666** if there are missing or damaged parts. DO NOT return this product to the store.

Product Specifications

Model	PWP2P5GC
Ports	2" x 2" (50 mm x 50 mm)
Max. Total Head	35 m (115 ft)
Suction Lift	6 m (20 ft)
Max. Capacity	600 L/min (160 US gpm)
Engine	Honda GC160QFC (5.0 hp)
Dimensions	550 mm x 400 mm x 410 mm
Weight	19.5 kg (43 lbs)

Performance Chart



Feet	21	35	46	58	69	81	92	104	116
PSI	9	15	20	25	30	35	40	45	50
GPM	163	150	140	123	105	84	64	29	0

This centrifugal pump includes a precision mechanical seal with stainless steel spring, EPDM seals, carbon face and ceramic seat and built-in check valve for better self-priming capabilities (up to 6 m). Features polypropylene construction and a removable/replaceable volute. A rugged 1" tubular steel frame provides easy portability and enhanced stability while pumping on uneven terrain.

Safety Precautions & Applications

Safety Overview

This unit was designed for specific applications. It should not be modified or used for any application other than that for which it was designed.

The Owner's Manual constitutes an essential part of the water pump and should be kept in a safe place for future reference. If you sell the water pump, all manuals should be provided to the new owner. Read this manual carefully before using the product – know your equipment.

Save these instructions. The Owner's Manual should remain with unit at all times.

IMPORTANT: The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Allow the engine to cool before storing the pump indoors.

Safety Precautions

The following safety precautions are essential for the safe operation of your pump. Make sure anyone who may be using this gas-powered pump is familiar with these important safety safety and equipment precautions.

If safety precautions are overlooked or ignored, personal injury or property damage may occur. Always heed these precautions, as they are essential when using any mechanical equipment.

1. Always make a pre-operation inspection before you start the engine. You may prevent a serious accident or equipment damage.
2. Secure and inspect all hoses before start-up, making certain that all connections are secure. Be sure to provide a means of pressure relief for the pump if the discharge line could be shut off or obstructed.
3. If the pump is located in an area subject to freezing temperatures the pump should be drained when not in operation.
4. Place the pump on a firm, level surface. If the pump is tilted or overturned fuel spillage may result.
5. Regularly check engine oil and fuel levels before initial start-up. Failure to maintain oil levels may result in voided engine warranty.

6. Do not run the engine in an enclosed area. Exhaust fumes contain carbon monoxide which is an odorless, poisonous gas; exposure can cause loss of consciousness and may lead to death.
7. To prevent fire hazards and to provide adequate ventilation, keep the pump at least 1 metre (3 feet) away from building walls or any flammable substances as well as other equipment during operation.
8. Do not place flammable objects close to the pump.
9. For safety, never pump flammable or corrosive liquids such as gasoline or acid.
10. To avoid pump corrosion, never pump sea water, chemical solutions, or caustic liquids such as used oil, wine, or milk.
11. Know how to stop the pump quickly, and understand the operation of all controls. Never permit anyone to operate the pump without proper instruction.
12. Keep the work area clean, uncluttered and properly lighted. Keep visitors at a safe distance from the work area. Children and pets must be kept away from the area of operation due to a possibility of burns from the hot engine components.
13. Periodically inspect pump and system components. Perform routine maintenance as required.
14. Release all pressure and drain all fluids from the pump before attempting to service any component.

Applications

Applications include pumping clear clean water, salt water, some liquid fertilizers and herbicides which are compatible with pump component materials. EPDM seals allow pumping the following:

Atrazine	Bladex	Bronco
Bullet	Dual	Fallowmaster
Lannate	Lasso	Modown
N-Serve 24	Pathway	Ranger
Roundup	Servin 4 Oil	Water
Liquid Nitrogen Solutions		
Phosphoric Acid Solutions		

NOTE: If your fertilizer is not compatible with EPDM rubber materials, do not use this pump.

Preparing the pump

1. Connect the suction hose.

Use commercially available hose, connectors and hose bands. The suction hose must be of a reinforced, non-collapsible construction.

The suction hose should not be longer than necessary, as pump performance is best when the pump is not far above the water level. Avoid using loops or sections of hose or fittings, which may cause air to become trapped. Self-priming time is also proportional to hose length. A suitable strainer should be attached to the suction hose to prevent large pieces of matter from being drawn into the pump. The maximum opening in the strainer should not be greater than 12 mm (1/4").

CAUTION: If connecting aluminum fittings to the pump apply at least 8 wraps of Teflon tape to the threads of both inlet & discharge ports before attaching the fitting. Failure to do so will cause galling of the thread and void warranty.

CAUTION: Always install the strainer on the end of the suction hose before pumping. The strainer will filter debris that can cause clogging or impeller damage.

NOTE: Tighten the hose connector and bands to prevent air leakage and loss of suction. A loosely connected suction hose will reduce pump performance and self-priming ability.

NOTE: Support the piping and fittings to reduce strain on the pump case.

2. Connect the discharge hose.

Use a commercially available hose, connectors and hose bands. A short, large diameter hose is most efficient. Longer hoses or small diameter increases fluid friction and reduces pump output.

NOTE: Tighten the hose band securely to prevent the hose from disconnecting under high pressure.

3. Add fuel as required.

Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.

NOTE: Do not add fuel while the engine is running or hot.

Operating Instructions

Always make a pre-operation inspection before you start the engine. You may prevent an accident or equipment damage. The engine is shipped without oil. Fill engine with the recommended oil to the indicated level before operating the unit. Failure to do this will cause severe damage to the engine and void the warranty. Please refer to the Engine Owner's Manual for details.

1. Priming the pump.

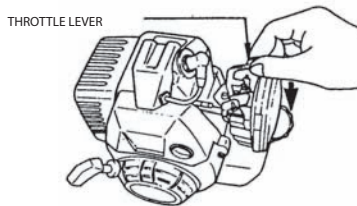
The pump chamber must be initially primed full with water before operating. Remove priming plug. Fill with water to prime pump. Replace priming plug.

CAUTION: Never attempt to operate the pump without priming water first or the pump will overheat. Extended dry operation will destroy the pump seal. If the unit has been operated dry, stop the engine immediately and allow the pump to cool before adding priming water.

PRELIMINARY CHECK: Before setting up the pump for operation, check to see that the motor and pump turn freely by hand. If it cannot be turned over by pulling on the recoil starter, open casing to check for obstructions lodged in pump.

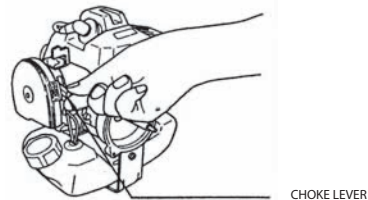
2. Starting the engine.

- 2.1 Turn the engine switch to the ON position
- 2.2 Move the throttle lever away from the SLOW position, about 1/3 of the way toward the FAST position.

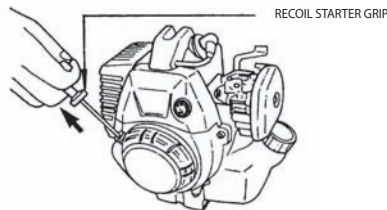


- 2.3 Turn the choke lever to the **CLOSED** position. To start a cold engine, move the choke lever to the OPEN position.

To start a warm engine, leave the choke lever in the **OPEN** position.



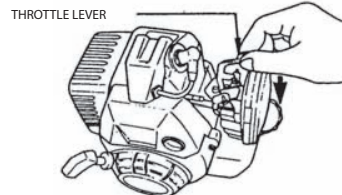
- 2.4 Pull the starter grip lightly until resistance is felt, and then pull it briskly. Return it gently to prevent damage to the starter.
- 2.5 As the engine warms up, gradually open the choke and set the throttle at the desired speed



Operating Instructions - continued

3. Stopping the engine.

- 3.1 Move the throttle lever all the way to the right (**SLOW** position)
- 3.2 Turn the engine switch to the **OFF** position



Maintenance

Periodic inspection and adjustment of the pump are essential if high level performance is to be maintained. Regular maintenance will also help to extend service life.

The required maintenance intervals and the kind of maintenance to be performed are described in the chart below.

Perform each item at every indicated month or operating hour, whichever comes first.		Daily	First Month or 20 hrs	Every 3 Months or 50 hrs	Every 6 Months or 100 hrs	Every Year or 300 hrs
Air/Fuel Filter	Check	m				
	Clean	m		m ¹		
Spark Plug	Check/Clean			m		
Fuel Tank and Strainer	Clean					m ²
Fuel Line	Check Replace if necessary	Every 2 years				
Impeller	Check					m ²
Impeller Clearance	Check					m ²
Pump Inlet Check Valve	Check					m ²

¹ Service more frequently when used in dusty areas

² These items should be serviced by an Authorized Service Centre.

On a daily basis be sure to check for any loose nuts, bolts or screws as well as any leaks in fuel or oil.

IMPORTANT: The engine becomes very hot during operation and remains hot for a while after it has been turned off. Be careful not to touch the engine while it is hot. Allow the engine to cool before storing the pump indoors.

WARNING: Shut off the engine before performing any maintenance. If the engine is to be left running make sure the area is well ventilated. The exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.

Storage, Winterizing & Transport

Storage & Winterizing

Always store pump in a location where the temperature will **NOT** fall below 0° C. Store the pump and accessories in a dry place, protected from freezing. The pump should **NOT** be placed near an open flame (i.e.. furnace, hot water heater, etc.)

WARNING: The pump is susceptible to permanent damage if frozen. Damage as a result of unit freezing is NOT covered by the warranty.

1. Be sure the storage area is free of excessive humidity and dust.
2. Clean the pump interior. Sediment will settle in the pump if it has been used in muddy or sandy water, water containing heavy debris.
3. Pump clean water through the pump before shutting down or the impeller may be damaged when restarting. After flushing remove the pump drain plug. Drain as much water as possible from the pump housing and reinstall the plug.
4. If storing the pump for a long period of time pump clean water through the pump and allow the engine to run dry of gas/oil mixture.

CAUTION: Always remove gasoline from the engine if storing the pump indoors.

Transport

1. Avoid severe burns or fire hazards; let the engine cool before transporting the pump.
2. When transporting the pump, turn the fuel valve to the OFF position, and keep the pump level to prevent fuel spillage. Spilled fuel or fuel vapors may ignite.

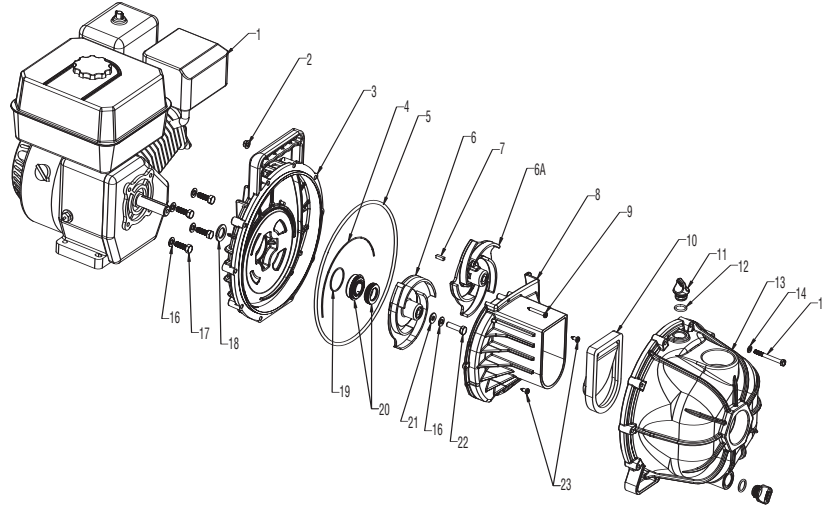
Troubleshooting

Symptom	Possible Cause	Corrective Action
Pump will not prime, or retain prime after operating	Air leak in suction hose	Repair or replace
	Flapper valve fouled or defective	Clean or replace
Flow rate is low	Incorrect engine speed	Adjust to 3600 rpm
	Hoses are fouled or damaged	Clean or replace
	Clogged or worn impeller	Clean or replace
	Discharge hose restricted or undersized	Flush out hose or replace
Pump runs but no fluid	Faulty suction hose	Replace
	Pump located too far from fluid source	Relocate
	Gate valve closed	Open
	Clogged strainer	Clean or replace
	Fouled flapper valve	Clean or replace
	Discharge height too great	Lower the height
Liquid drips from point where shaft enters the pump casing when pump is full of liquid	Damaged mechanical seal	Replace
Pump starts and then stops pumping	Fouled impeller	Clean
	Faulty mechanical seal	Replace
	Leak in suction hose	Repair
	Leak in flapper valve	Repair or replace
	Engine seizure	Repair
Excessive noise while pump is in operation	Pump is not secured to a firm foundation	Secure properly
	Hoses not supported to relieve any strain on pump assembly	Make necessary adjustments
	Restricted suction hose	Clean or correct

If you encounter any difficulties not listed above, please contact the Customer Service hotline.

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Parts Breakdown



Seal Repair Kit 3430-0635 contains:

(1) Ref. 4 Diffuser Gasket, (1) Ref. 5 Pump Body O-Ring, (1) Ref. 19 Seal O-Ring, (1) Ref. 20 Mechanical Seal, and (1) Ref. 21 Impeller Gasket

Viton Seal Repair Kit 3430-0659 contains:

(1) Ref. 4 Diffuser Gasket, (1) Ref. 5 Pump Body O-Ring, (1) Ref. 10 Flapper Valve, (1) Ref. 19 Seal O-Ring, (1) Ref. 20 Mechanical Seal, and (1) Ref. 21 Impeller Gasket

Pump Head Kit 3430-0637 (1542P-3SP) Includes all items less 1, 6A and 7.

Pump Head Kit 3430-0648 (1542P-5SP) Includes all items less 1 and 6.

Optional Viton Pump Head Kit 3430-0660 (1542P-3SP) Includes all items less 1, 6A and 7.

Optional Viton Pump Head Kit 3430-0661 (1542P-5SP) Includes all items less 1 and 6.

Ref#	Torque Spec.
#17	10 ft-lbs.
#22	10 ft-lbs.
#15	45 in-lbs.

REF. NO.	QTY.	PART NO.	DESCRIPTION	REF. NO.	QTY.	PART NO.	DESCRIPTION
1	1	2549-0039	5.5 HP PowerPro Gas Engine (1542P-3SP)	12	2	1720-0035	Plug O-Ring
1A	1	2549-0041	6.5 HP PowerPro Gas Engine (1542P-5SP)	13	1	0100-1540P	Pump Housing
2	10	2250-0087	Hex Flange Nut, M6	14	10	2270-0115	Flat Washer 6M
3	1	0750-1540P	Mounting Flange	15	10	2210-0141	Bolt 6M X1 X 60
4	1	1700-0209	Diffuser Gasket	16	5	2270-0114	Washer 5/16 SS
5	1	1720-0229	Pump Body O-Ring	17	4	2210-0143	Mounting Bolt 5/16-24 X 1
6	1	0400-1540P	3 Vane Impeller (1542P-3SP)	18	1	1410-0083	Slinger Ring
6A	1	0401-1540P	5 Vane Impeller (1542P-5SP)	19	1	1720-0231	Seal O-Ring
7	1	1610-0044	Key 3/16 X 5/8 SS (1542P-5SP)	20	1	2120-0044	Mechanical Seal
8	1	0150-1540P	Diffuser	21	1	1700-0210	Impeller Gasket
9	1	2210-0144	Diffuser Mounting Screw (Long)	22	1	2210-0142	Impeller Bolt 5/16-24 X 1-1/4
10	1	1700-0208	Flapper Valve	23	2	2210-0145	Diffuser Mounting Screw (Short)
11	2	2404-0350P	Fill/Drain Plug				

Warranty

Engine Warranty

The engine is warranted for a period of two years by the Honda Motor Company Limited.

In the unlikely event that you have a problem with the engine you must contact an authorized Honda Service Center. Please call the Honda toll-free hotline at 1-866-939-6666 to locate the Service Center nearest you.

Water Pump Warranty

This product is warranted to be free from defects in materials and workmanship under normal use and service, for a period of one year from the date of purchase, when operated and maintained in accordance with the Maintenance and Operating Instructions supplied with the unit. Warranty period commences on date of purchase. This warranty is extended only to the original purchaser.

The warranty herein is expressly conditioned upon the customer's compliance with all precautions and instructions contained in the Owner's Manual.

If the machine is still under warranty, the customer has a valid receipt, and the machine meets the warranty criteria, then the repair will be made at no charge to the customer. Units and parts should be returned at the customer's expense to the nearest Authorized Service Center. Include original purchase receipt with any claim, making sure to keep a copy for your files. Be sure to pack the unit in a strong carton and pad tightly to avoid damage.

Damage in transit is NOT covered by warranty.

Warranty is void if any devices or accessories other than those distributed or recommended by Kodiak are attached to or connected with the equipment in such a manner that the original factory construction is altered.

Warranty is void if repairs are attempted by anyone other than an Authorized Service Center. In the event that a difficulty develops with the product, you should contact the nearest Authorized Service Center. Only these locations are authorized to make repairs to the product or affect replacement of defective parts, which will be done at no charge within a reasonable time after receipt of the product.

This warranty shall not apply to any problem which is due to misuse, neglect, accident, abuse, improper handling, freezing, normal wear and tear, use of improper detergents/chemicals, or non-compliance with precautions and instructions contained in the Owner's Manual. This warranty is non-transferable.

The liability of John Brooks Company Limited is limited to repair of the product and/or replacement of parts, and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no expressed warranties other than those specified herein.

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