



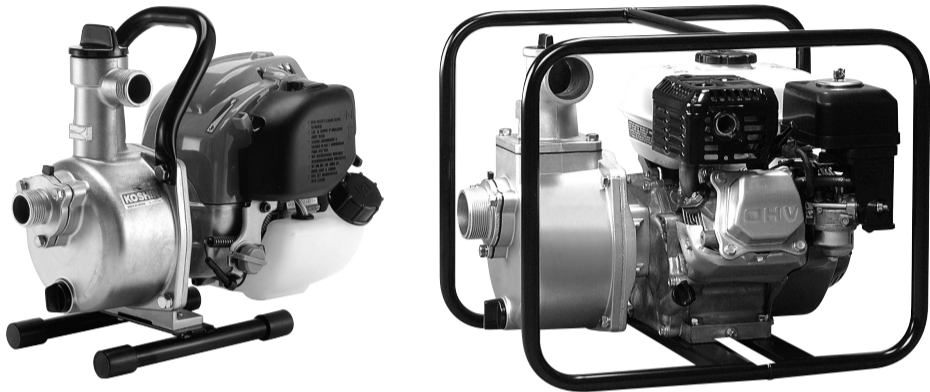
ENGINE PUMP

High Performance Self-Priming Engine Pump

OPERATION MANUAL

Common points for all series

- Thank you for choosing a Powermate® Engine Pump.
- This manual is prepared for your safety when operating pump. Please read carefully and comprehend fully before use. (Wrong usage could cause injury or death.)
- Please keep this manual handy for future reference.



Pramac America, LLC

4970 Airport Road P.O.Box 6001 Kearney, NE 68847

1-800-445-1805

09-12 012111301-1

CAUTION

1. Application

As this pump is design for agriculture use, do not apply with muddy water.

- * Trouble if you don't observe. Could damage mechanical seal.

2. Priming

As this pump is self-priming type, fill water fully into priming port before running.

- * Trouble if you don't observe. Impossible to start pumping and may damage mechanical seal.

3. Connection of suction hose

If pump does not work after filling water into priming port, it is likely due to poor connection of suction hose. In such case, check hose connection again before starting pump.

- * Trouble if you don't observe. Impossible to pump.

4. Engine oil

Fill engine oil into oiling port, shown in illustration, at the bottom of engine.

Change oil every 8 hours for the first 20 hours and every 50 hours thereafter.

Applied oil : SAE#30 (spring-summer),
SAE#20 (autumn-winter),
SAE10W-30 (cold district, below-10°C)

- * Trouble if you don't observe. Engine failure will occur.

5. Drain water after use

Water inside may freeze at below 0°C in winter and may damage pump.

After use, drain water from drain plug before storing.

- * Trouble if you don't observe. Breakage of pump casing.

6. Long storage

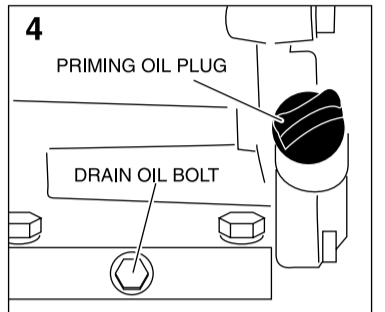
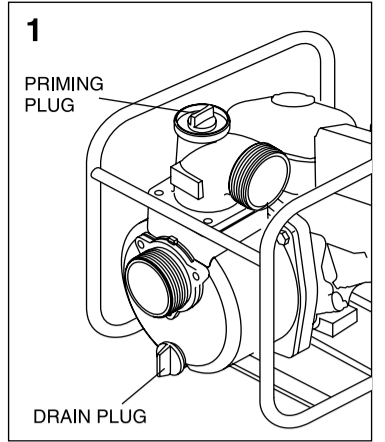
Discharge fuel from fuel tank and carburetor completely.

- * Trouble if you don't observe. Impossible to start engine in future. (Engine details, refer Engine Operation Manual.)

7. Prevent water hammer

Do not abruptly compress discharge hose during operation.

- * Trouble if you don't observe. Breakage of pump casing.



SAFETY PRECAUTIONS

Read this "Safety Precautions" before operation.

Below information should not be neglected for proper use of this product. Your understanding can prevent harm or danger to user or others.

Following information is very important for safety in handling this product. Be sure to observe them.

| | | |
|------------------|--------------------------------|--|
| | DANGER | Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. |
| | WARNING | Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. |
| | CAUTION | Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage. |
| IMPORTANT | PROHIBITED ALERT | |

DANGER

| | |
|--|---|
| | Avoid fire when refuel or maintenance. Highly flammable! |
| | Do not operate Hidels pump inside a room or under bad ventilation condition. Harmful substances are in exhaust gas. There is danger of gas poisoning. |
| | In case of operating Hidels Pump in a well or in a hollow, the person operating the pump must not enter the small space as there is danger of gas poisoning. |
| | Do not use pump on slope. Fuel spillage at tank cap or carburetor may cause fire. |
| | Do not put any obstacle around engine muffler. It may cause fire or breakage. |
| | Read carefully and understand fully before use. |
| | Keep children away from pump when in operation. |
| | Do not overhaul or repair, except by person who is trained to do so. |

CAUTION

| | |
|--------------|--|
| | Do not touch muffler or any part of the engine. It could cause burn. |
| | Use this pump for clean water or agriculture water. Not Suitable: drinking water, mud water, seawater, kerosene, light oil, heavy oil, gasoline, chemical, acid, alkaline etc. |
| | Use correct type of suction hose. Water temperature tolerance: 5 to 45°C. May cause breakage if use outside the mentioned range. |
| | Please don't run pump without water inside the pump. This will cause pump damage. |
| | Please use suction hose for suction side. Please purchase suitable hose to fit to connection dia and suitable length. |
| | Please firmly connect hose with coupling and hose band when you connect suction or delivery hose to pump. |
| LABEL | Replace name plate if damaged/peeled, please order from service center. |

BEFORE USE

1 Check accessories provided

List of accessories provided are printed on the pump manual.

2 Fuel / Engine oil **4-stroke engine** 4-stroke engine needs "**engine oil**"

There is **no engine oil in the engine**. Before starting engine, engine oil must be filled. If you start engine without engine oil, engine will burn out and it is difficult to repair.

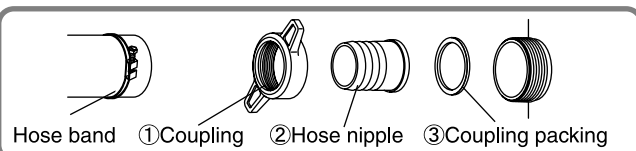
(Warranty does not cover such claim.)

Please use "**Non-Lead Gasoline for Automobile**".

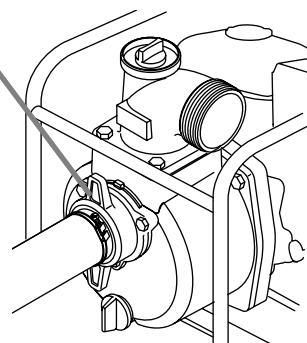
| | |
|--|---|
| | WARNING Inflammable!! Avoid fire when refuel or maintenance. |
| | Before starting engine, please check if engine oil is filled to required level. Without engine oil or shortage of engine oil can cause troubles for engine. |
| | Please read carefully Engine Operation Manual for engine oil instructions. |
| | Inflammable! Do not operate near open fire. |
| | Any fuel spillage must be cleaned completely. |
| | Check engine oil before operation. Check and refuel periodically. Please read Engine Operation Manual for instructions. |
| | Stop engine operation when refuel engine oil. Engine oil can be very hot after operation. |

3 How to install Coupling

CAUTION Different accessories are suitable for different models. Please check connection diameter and install correct parts.



Please install coupling in order of :
①⇒②⇒③
If you install coupling packing not in above order, air leakage may result, affecting water suction efficiency.
Do not change pump diameter by altering suction hose.



4 Make sure suction hose is connected properly

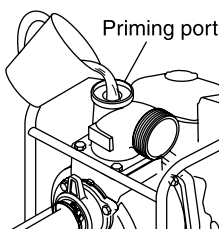
In case of no self-priming after filling pump with water and engine is started, check suction hose connection carefully again. Most cases of no self-priming are caused by improper hose connection.

CAUTION Use suction hose for suction side. Use couplings/hose band as provided in accessory and attach hose properly. Installation of strainer at the end of suction hose is necessary.

5 Fill pump with water before use

As pump is self-priming type, fill water fully from priming port into pump before running. Insufficient water can cause damage to pump.

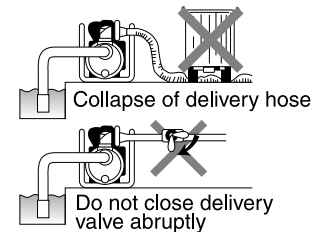
CAUTION Running without filling water can damage mechanical seal.



HOW TO USE

- 1 Ensure pump is fully filled up with water.
- 2 Ensure strainer at the end of suction hose is in water. (If any mud or sand is at the bottom of water, suspend hose avoiding the bottom.)
- 3 Ensure no obstacle is at delivery hose side.

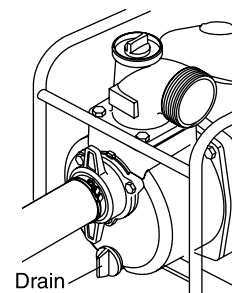
CAUTION **Beware of water hammering**
Do not allow any vehicle to run over the delivery hose. Do not close the delivery valve abruptly because water-hammer may occur. This may result in heavy damage to the pump.
For engine manual and notes, please refer Engine Operation Manual enclosed.



ATTENTION AFTER USE

- 1 Drain water after use.

CAUTION Water inside may freeze at below 0°C in winter and may damage pump. After use, drain water from drain plug before storing.



- 2 Long storage

Discharge fuel in fuel tank and carburetor completely. Unused fuel in tank (if kept more than 30days) may cause engine failure.
*Please refer Engine Operation Manual.

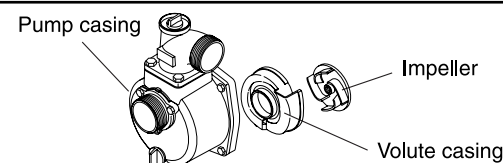
CAUTION Do not smoke as fuel is highly inflammable. Unused fuel must not remain in the tank for long term storage. Unused fuel may cause future engine failure.

TROUBLESHOOTING GUIDE

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|--|--|---|
| Cannot pull or hard to pull recoil starter | Old fuel | Replace to new fuel. If there is no improvement, repair engine. |
| | Rusting inside engine | Refer to Engine Operation Manual. (Repair) |
| | Burn out of engine | Refer to Engine Operation Manual. (Repair) |
| | Stick impeller | Dismantle & clean the impeller ⇒ SOLUTION ① |
| Not enough delivery volume | Obstacles at impeller | Dismantle & clean the impeller ⇒ SOLUTION ① |
| | Air leakage from suction side | Check piping at suction side ⇒ SOLUTION ② |
| | Output power down from engine | Check & Repair engine |
| | Damage of mechanical seal | Replace mechanical seal (Repair) |
| | Suction lift is high | Make suction lift lower |
| | Suction pipe is too long or smaller in diameter | Shorten suction pipe or enlarge diameter. |
| | Leakage of water from delivery hose or pipe | Check and stop leakage of water. |
| Pump does not prime water | Obstacles at impeller | Dismantle & clean the impeller ⇒ SOLUTION ① |
| | Wearing out of impeller | Replace the impeller (Repair) |
| | Air goes in from suction side | Check piping at suction side ⇒ SOLUTION ② |
| | Insufficient priming water inside pump casing | Pour more water into pump casing for priming. Refer [BEFORE USE] "5 Fill pump with water before use" |
| | Drain plug is not tighten | Tighten drain plug firmly. Please refer "ATTENTION AFTER USE" |
| Engine does not start. | Imperfect revolution of engine | Refer to Engine Operation Manual. |
| | Damage of mechanical seal (NOTE) | Replace mechanical seal (Repair) |
| | Wrong suction hose used | Use suction hose correctly |
| | Carburetor is choked | Repair |
| | Spark Plug is wet | Check & repair the plug ⇒ SOLUTION ③ |
| | Air cleaner dirty | Clean air cleaner. (Refer to Engine Operation Manual.) |
| | Too much engine oil (4-cycle engine) | Adjust engine oil to suitable level. |
| | Insufficient engine oil (4-stroke engine) | Function of oil alert (oil sensor) is working. (This function protects engine. If volume of engine oil is not suitable level, engine does not start.) |
| | Even if you check above points, still engine does not start. | Possibility of damage, inner parts of engine (Repair) |
| | Oil leakage from muffler or air cleaner | Fall of engine. Repair |

SOLUTION ①

Remove obstacle in impeller. (Please don't remove impeller)



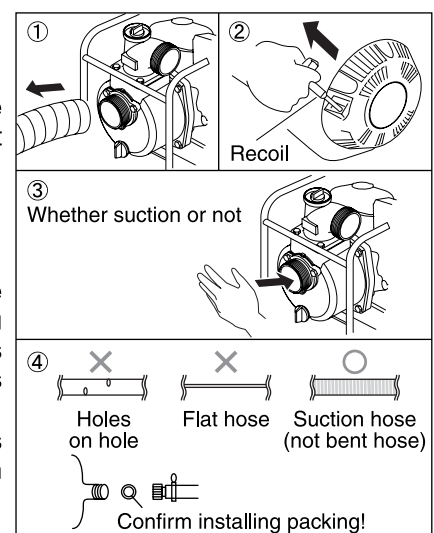
SOLUTION ②

Check suction pipe.

In case of no suction or small delivery, the cause is usually due to air leakage at suction side.

In such case :

- 1 Remove suction hose
- 2 Start engine with water inside the pump.
- 3 Press the palm of your hand to cover the suction hole and wait 30 seconds. If you feel suction on your palm, the pump is working fine but hose connection needs correction.
- 4 Please check if rubber packing is installed and if there is any hole on suction hose



SOLUTION ③

Confirm spark plug if wet or stained.

Please clean plug with cloth if spark plug is wet or stained.



Confirm gap between spark plug.

Plug gap should be 0.6~0.7mm. Adjust gap to be within this range.

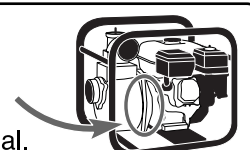


- New spark plug may be required, if engine cannot start even after you clean plug or adjust gap of plug.

CAUTION There are many different types of spark plugs. Please check and select correct plugs according to Engine Operation Manual.

NOTE

In case of water leakage between engine and pump, usually the cause is damaged mechanical seal. Please ask shop for assistance and replace mechanical seal.



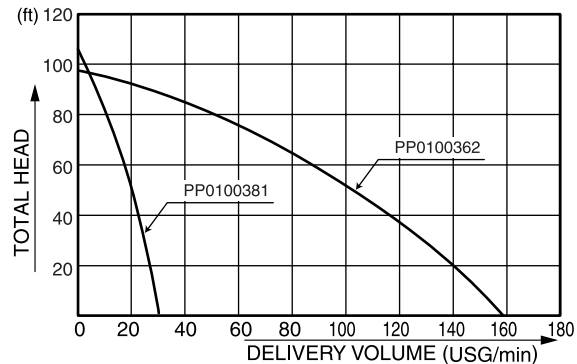
CAUTION For assistance and repair, please ask your nearest service center for after sales service.

SPECIFICATIONS

| Model | | PP0100381 | PP0100362 | |
|---------------------------|--|--|-----------------------------|----------------------------|
| PUMP | Connection Dia | 25 mm (1") | 50mm (2") | |
| | Connection Thread | Outer Pipe Thread | NPT Thread | |
| | Total Head | 105 ft (32 m) | 98 ft (30 m) | |
| | Delivery Volume | 30 USG/min (115 L/min) | 158 USG/min (600 L/min) | |
| | Max. Suction Head | 26 ft (8 m) | | |
| ENGINE | Model | HONDA GX25 | HONDA GX120 | |
| | | Forced Air-cooled 4-stroke Gasoline Engine | | |
| | Exhaust Volume | 25 cc | 118 cc | |
| | Output | Rated Power | — | 2.1 kW (2.9PS) / 3600 rpm |
| | | Max. Power | 0.72 kW (1.0 PS) / 7000 rpm | 2.6 kW (3.5 PS) / 4000 rpm |
| | Fuel | Automotive Unleaded Gasoline | | |
| | Fuel Tank Capacity | 0.15 USG (0.58 L) | 0.53 USG (2.0 L) | |
| | Starting Method | Recoil Starter | | |
| Coutinuous Operating Time | Approx.1hr (full tank) | Approx.2hrs (full tank) | | |
| Standard Accessories | 1 Strainer, 2 Hose Couplings, 3 Hose Bands (ϕ 32), 1 Engine Tool Set | 1 Engine Tool Set | | |
| Net Weight | 12.1 lbs (5.5 kg) | 50.7 lbs (23 kg) | | |

*For the purpose of improvement, specifications are subject to changes without notice.

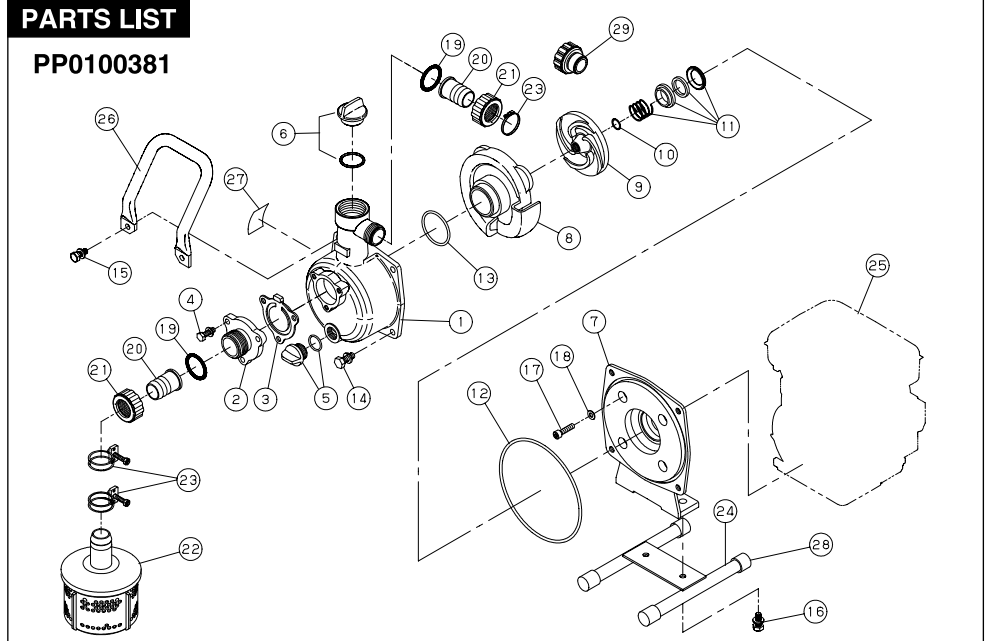
PERFORMANCE CURVE



*Performance ratings are guaranteed minimum, not inflated maximum.

PARTS LIST

PP0100381



PP0100381

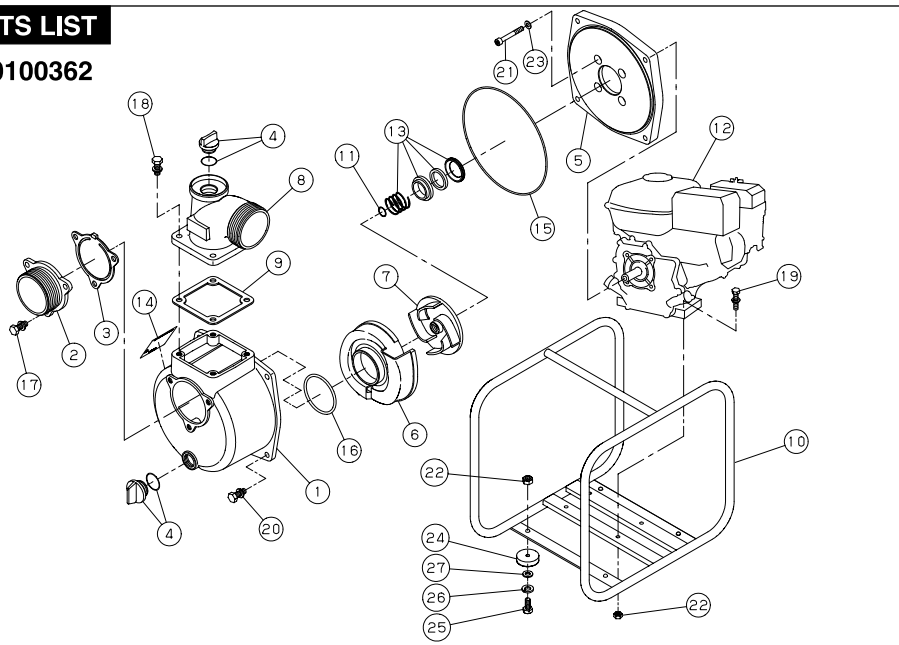
| REF. NO. | PART NO. | DESCRIPTION | QTY |
|----------|--------------|-------------------|-----|
| 1 | PPK0115108 | Pump Casing | 1 |
| 2 | PPK0113325 | Suction Flange | 1 |
| 3 | PPK0113326 | Check Valve | 1 |
| 4 | PPK743119032 | Bolt HH M6 × 20 | 3 |
| 5 | PPK0148010 | 15A Plug Set | 1 |
| 6 | PPK0118450 | 32A Plug Set | 1 |
| 7 | PPK0114992 | Flange Bracket | 1 |
| 8 | PPK0112528 | Volute Casing | 1 |
| 9 | PPK0114993 | Impeller | 1 |
| 10 | PPK0113944 | Adjusting Washer | 3 |
| 11 | PPK0116054 | Mechanical Seal | 1 |
| 12 | PPK890255031 | Oring 1517-31 | 1 |
| 13 | PPK889855042 | Oring P42 | 1 |
| 14 | PPK743119045 | Bolt HH M8 × 20 | 2 |
| 15 | PPK743119046 | Bolt HH M8 × 22 | 2 |
| 16 | PPK743119043 | Bolt HH M8 × 16 | 2 |
| 17 | PPK734532274 | Screw SHC M5 × 40 | 4 |
| 18 | PPK854255005 | Seal Washer | 4 |
| 19 | PPK0340065 | Gasket | 2 |
| 20 | PPK0340782 | Hose Nipple | 2 |
| 21 | PPK0340781 | Coupling | 2 |
| 22 | PPK0118193 | Strainer | 1 |
| 23 | PPK940019032 | Hose Band | 3 |
| 24 | PPK0118267 | Base Set | 1 |
| 25 | Note A | Engine Honda GX25 | 1 |

| REF. NO. | PART NO. | DESCRIPTION | QTY |
|----------|------------|-------------------|-----|
| 26 | PPK0114277 | Handle | 1 |
| 27 | PPK0121118 | Name Plate | 1 |
| 28 | PPK0112576 | Pipe Rubber Cover | 4 |
| 29 | PPK0120424 | Hose Adapter | 1 |

Note A: Pramac America, LLC will not provide engines as replacement parts. Engines are covered through the engine manufacturer's warranty. Consult the accompanying engine manual or contact our service department for assistance.

PARTS LIST

PP0100362



PP0100362

| REF. NO. | PART NO. | DESCRIPTION | QTY |
|----------|--------------|---------------------|-----|
| 1 | PPK0112578 | Pump Casing | 1 |
| 2 | PPK0112822 | Suction Flange | 1 |
| 3 | PPK0112665 | Check Valve | 1 |
| 4 | PPK0118078 | Plug and O-Ring | 2 |
| 5 | PPK0112579 | Flange Bracket | 1 |
| 6 | PPK0114640 | Volute Casing | 1 |
| 7 | PPK0113532 | Impeller | 1 |
| 8 | PPK0111359 | Delivery Flange | 1 |
| 9 | PPK0110541 | Flange Packing | 1 |
| 10 | PPK0117086 | Base Set | 1 |
| 11 | PPK0110466 | Adjusting Washer | 3 |
| 12 | Note A | Engine Honda GX120 | 1 |
| 13 | PPK0110688 | Mechanical Seal | 1 |
| 14 | PPK0121120 | Name Plate | 1 |
| 15 | PPK0115014 | Oring 1517-42.5 | 1 |
| 16 | PPK0112792 | Oring P54 | 1 |
| 17 | PPK743119045 | Bolt M8 x 20 | 3 |
| 18 | PPK743119047 | Bolt M8 x 25 | 4 |
| 19 | PPK743119051 | Bolt M8 x 35 | 4 |
| 20 | PPK743119046 | Bolt M8 x 22 | 4 |
| 21 | PPK734532076 | Socket bolt M8 x 60 | 4 |
| 22 | PPK827419008 | Nut M8 | 8 |
| 23 | PPK854255008 | Seal Washer | 4 |
| 24 | PPK0110515 | Cushion Rubber | 4 |
| 25 | PPK735719148 | Bolt M8 x 20 | 4 |

| REF. NO. | PART NO. | DESCRIPTION | QTY |
|----------|--------------|---------------|-----|
| 26 | PPK843822008 | Spring Washer | 4 |
| 27 | PPK846007008 | Washer | 4 |

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CUSTOMER SERVICE

Call our toll free number 1-800-445-1805

8 a.m. to 5 p.m. C.S.T. or www.powermate.com to obtain warranty service information or order replacement parts or accessories. Please have the following information available:

1. Model Number.
2. Serial Number.
3. Date and where purchased.
4. Replacement numbers if you are ordering part

Pramac America, LLC 4970 Airport Road P.O. Box 6001 Kearney, NE 68847
Attention: Warranty Service Department
www.powermate.com

LIMITED WARRANTY

Warranty Coverage: Pramac America, LLC (the Company) warrants to the original retail customer in North America that it will repair or replace, free of charge, any parts found by the Company or its authorized service representative to be defective in material or workmanship. This warranty covers the cost of replacement parts and labor for defects in material or workmanship.

Not Covered:

- Transportation charges for sending the product to the Company or its authorized service representative for warranty service, or for shipping repaired or replacement products back to the customer; these charges must be borne by the customer.
- Engine is covered exclusively by a separate warranty from the engine manufacturer, included with the engine Manual.
- Damages caused by abuse or accident, and the effects of corrosion, erosion and normal wear and tear.
- Warranty is voided if the customer fails to install, maintain and operate the product in accordance with the instructions and recommendations of the Company set forth in the owner's manual, or if the product is used as rental equipment.
- The Company will not pay for repairs or adjustments to the product, or for any costs or labor, performed without the Company's prior authorization.

Warranty Period: Two (2) years from the date of purchase on products used solely for consumer applications; if a product is used for business or commercial applications, the warranty period will be limited to one (1) year from the date of purchase.

For warranty service, the customer must provide dated proof of purchase and must notify the Company within the warranty period.

For warranty service: Call toll free 800-445-1805, or write to Pramac America, LLC, Product Services, 4970 Airport Road, P. O. Box 6001, Kearney, NE 68847.

Exclusions And Limitations: The company makes no other warranty of any kind, express or implied. Implied warranties, including warranties of merchantability and of fitness for a particular purpose, are hereby disclaimed. The warranty service described above is the exclusive remedy under this warranty; Liability for incidental and consequential damages is excluded to the extent permitted by law.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow a disclaimer of implied warranties, or the exclusion or limitation of incidental and consequential damages, so the above disclaimers and exclusions may not apply to you.