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** Thank you for choosing Koshin Hidels 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.

**DANGER**

Avoid fire when refuel or maintenance. Highly inflammable!

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.

**WARNING**

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.

**CAUTION**

Do not abruptly compress discharge hose during operation.

Discharge fuel from fuel tank and carburetor completely.

* Trouble if you don’t observe. Impossible to start engine in future.

Never oil engine without water.

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

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

Any fuel spillage must be cleaned completely before starting the engine.

Inflammable! Do not smoke when mixing fuel and refuel near open fire.

Any fuel spillage must be cleaned completely before starting the engine.

Stop engine and wait until the engine has cooled down before refueling.

Fuel around the bottom of drum contains dirt, impurities and water.

Do not use old fuel over 30 days. Fuel should be clean and fresh.

Fuel / Engine oil

**2-stroke engine**

Use "Unleaded gasoline mixed with lubricant*" only.

Ratio

Unleaded gasoline

Use "2-stroke oil" only.

Mixing

25:1

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<td>DRAIN OIL BOLT</td>
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**BEFORE USE**

1. Check accessories provided

List of accessories provided are printed on the pump manual.

2. Fuel / Engine oil

2-stroke engine

Please use "Unleaded gasoline mixed with lubricant*" only.

* Please use "2-stroke oil" only.

**WARNING**

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Inflammable! Do not smoke when mixing fuel and refuel near open fire.

Any fuel spillage must be cleaned completely before starting the engine.

Stop engine and wait until the engine has cooled down before refueling.

Do not use old fuel over 30 days. Fuel should be clean and fresh.

Fuel around the bottom of drum contains dirt, impurities and water.

Unused fuel in tank (if kept more than 30 days) may cause engine failure.

**CAUTION**

Engine oil

Fill engine oil into oiling port, shown in illustration, at the bottom of engine. Change oil every 6 hours for the first 20 hours and every 50 hours thereafter.

Applied oil: SAE30 (spring-summer), SAE20 (autumn-winter), SAE10W-30 (cold district, below-10˚C)

* Trouble if you don’t observe. Impossible to start pump.

Engine oil

Do not overhaul or repair, except by person who is trained to do so.

Could damage mechanical seal.

Engine oil

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 start pump.

Engine oil

Discharge from priming port is possible when pump is not operated properly.

* Trouble if you don’t observe. Impossible to start pump.

Engine oil

High quality engine oil is recommended to high performance self-priming engine pump.

* Trouble if you don’t observe. Impossible to start pump.

Engine oil

Priming oil plug

Be sure to observe them.

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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.

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Keep children away from pump when in operation.

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Engine oil

Priming oil plug

Be sure to observe them.
### Troubleshooting Guide

#### Problem:
- **Cannot pull or hard to pull recoil starter**
- **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."**

#### Solution:
- **Replace to new fuel. If there is no improvement, repair engine.**
- **Refer to Engine Operation Manual.**
- **(Repair)**
- **Replace mechanical seal.**
- **Check & repair the plug**
- **Check & Repair engine (Repair)**
- **Refer to Engine Operation Manual.**
- **Remove obstacle in impeller.**
- **Replace mechanical seal (Repair)**
- **Replace to new fuel.**
- **If there is no improvement, repair engine.**
- **Refer to Engine Operation Manual.**
- **Check & repair the plug.**
- **Check & Repair engine (Repair)**
- **Refer to Engine Operation Manual.**
- **Remove obstacle in impeller.**
- **Replace mechanical seal (Repair)**

#### How to Install Coupling

1. **Choose the correct parts:***
   - Please check connection diameter and install correct parts.
   - Do not change pump diameter by affecting water suction efficiency.

2. **Installation of strainer at the end of suction hose is necessary.***
   - Make sure suction hose is connected properly.
   - In case of no self-priming after filling pump with water and engine is started, check suction connection carefully again.
   - Most cases of no self-priming are caused by improper hose connection.

3. **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.

#### Attention After Use

1. **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.

2. **Long storage**
   - Discharge fuel in fuel tank and carburetor completely.
   - Unused fuel in tank (if kept more than 30 days) may cause engine failure.

3. **Remove obstacle in impeller.**
   - Used fuel must not remain in the tank for long term storage.
   - Unused fuel may cause future engine failure.

#### 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.**

- **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.

- **ATTENTION AFTER USE**
  - Ensure no obstacle is at delivery hose side.
  - Ensure strainer at the end of suction hose is in water.
  - Ensure pump is fully filled up with water.
  - Ensure no obstacle is at delivery hose side.

#### 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.**

#### Before Use

1. **Dismantle & clean the impeller**
   - As pump is self-priming type, fill water fully from priming port into pump before running. Insufficient water can cause damage to pump.
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