

## Section 2 General Information and Setup

### Know Your Water Pump



#### ⚠ WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

Read this manual thoroughly before assembling and operating this equipment. Save this manual for future and immediate reference. Replacement owner's manuals are available at [www.generac.com](http://www.generac.com).

Depending on the model, these pumps are designed to pump clear water or water with sediment and particulates up to 1 in. (2.54 cm) in diameter only. Do not use for pumping the following:

- Seawater
- Drinking water
- Kerosene
- Fuel, oil, or solvents
- Chemicals

### Product Specifications

Refer to the Product Specification Sheet for detailed information on product features and specifications.

### Emissions Information

The U.S. Environmental Protection Agency (and California Air Resource Board for equipment certified to CA standards) requires that this engine comply with exhaust and evaporative emission standards. Locate the emissions compliance decal on the engine to determine what standards the engine meets, and to determine which emissions warranty applies. The engine is certified to meet the applicable emission standards on gasoline. It is important to follow the maintenance specifications in [Maintenance and Troubleshooting](#) to verify that the engine complies with the applicable emission standards for the duration of the product's life. Tampering with or altering the emission control system may increase emissions and may be a violation of Federal or California Law. Acts that constitute tampering include but are not limited to:

- Removal or alteration of any part of the intake, fuel, or exhaust systems.
- Altering or defeating the governor linkage or speed-adjusting mechanism to cause the engine to operate outside its design parameters.

Have the engine inspected and repaired by a servicing dealer if these symptoms develop:

- Hard starting or stalling after starting
- Rough idle
- Misfiring or backfiring under load
- Afterburning (backfiring)
- Black exhaust smoke or high fuel consumption

**NOTE:** Maintenance, replacement, or repair of emissions control devices and systems may be performed by a small engine repair establishment or individual. The manufacturer recommends that all emissions control service work be performed by an Independent Authorized Service Dealer. See emissions warranty for further details.

### Remove Contents from Carton

1. Remove the loose parts, kits, and inserts included with water pump.
2. Open carton completely by cutting each corner from top to bottom.
3. Remove and verify carton contents prior to assembly. Carton contents should contain the following:
  - Main Unit
  - Loose Parts:
    - Oil
    - Funnel
    - Spark Plug wrench
    - Owner's Manual
    - Owner's Registration Card
    - Product Specifications Sheet
  - Wheel Kit (if equipped)
  - Hose Kit (if equipped)
4. If any items are missing from carton, please call Generac Customer Service at 1-888-436-3722. When calling for assistance, have the model and serial number from the data tag available.
5. Record model, serial number, and date of purchase on front cover of this manual.
6. Fill out and send in registration card.

## Add Engine Oil

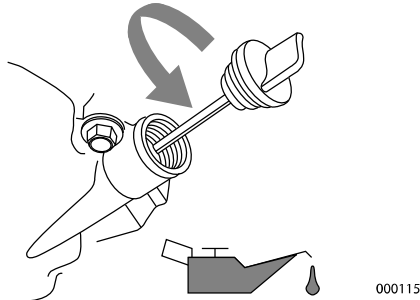
### CAUTION

Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage.

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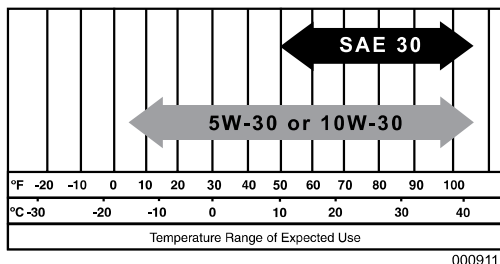
**There is no oil in the engine.** The crankcase must be filled before starting the engine for the first time.

1. Place water pump on a level surface.
2. Verify oil fill area is clean.
3. See [Figure 2-1](#). Remove oil fill cap and wipe dipstick clean.



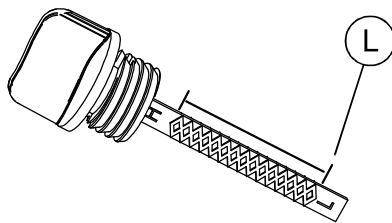
**Figure 2-1. Remove Dipstick**

4. See [Figure 2-2](#). Add recommended engine oil to the bottom of the oil fill hole (A). Only high-quality detergent oils classified for service SJ or higher are recommended. DO NOT use special additives. See [Figure 2-2](#). Climate determines proper engine oil viscosity.



**Figure 2-2. Recommended Oil**

5. Thread dipstick into oil filler neck. Oil level is checked with dipstick fully installed.
6. See [Figure 2-3](#). Remove dipstick and verify oil level is within safe operating range above the lower limit (L).



**Figure 2-3. Safe Oil Operating Range**

7. Install oil fill cap/dipstick and hand-tighten.

## Add Fuel

### DANGER



Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Add fuel in a well ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury.

(000105)

### DANGER



Explosion and Fire. Do not overfill fuel tank. Overfilling may cause fuel to leak and ignite or explode, resulting in death or serious injury.

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Fuel requirements are as follows:

- Clean, fresh, unleaded gasoline.
  - Minimum rating of 87 octane/87 AKI (91 RON).
  - Up to 10% ethanol (gasohol) is acceptable.
  - DO NOT use E85.
  - DO NOT use a gas oil mix.
  - DO NOT modify engine to run on alternate fuels.
  - Stabilize fuel prior to storage.
1. Verify equipment is OFF and cooled for a minimum of two minutes prior to fueling.
  2. Place equipment on level ground in a well ventilated area.
  3. Clean area around fuel cap and remove cap slowly.



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**Figure 2-4. Add Recommended Fuel**

4. Slowly add recommended fuel. Do not overfill.
5. Install fuel cap.



### DANGER

Risk of fire. Allow fuel spills to completely dry before starting engine. Failure to do so will result in death or serious injury.

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**IMPORTANT:** It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel hose or tank during storage. Alcohol-blended fuels (called gasohol, ethanol or methanol) can attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. See [Storage](#). Never use engine or carburetor cleaner products in the fuel tank as permanent damage may occur.

## Assembly



### ⚠ WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

## Connect the Hoses

### ⚠ CAUTION

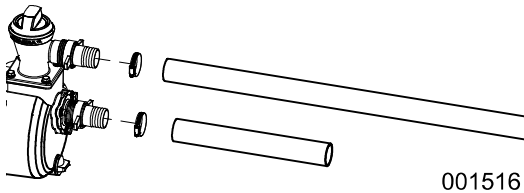
Equipment damage. Use only hoses and couplings designed for this pump. Incorrect hoses and couplings can cause performance issues and permanent equipment damage. (000197)

**NOTE:** Appearance of pump may vary. Discharge ports face 90° from inlet on certain models.

**NOTE:** Hose kit may be sold separately.

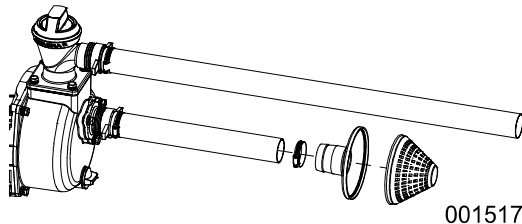
1. Place water pump in desired operating location.
2. Attach the flexible discharge hose to the flange (top) by sliding the hose over the barb and securing with a hose clamp.
3. See [Figure 2-5](#). Attach the suction hose to the flange (bottom) by sliding the hose over the barb and securing with a hose clamp.

**NOTE:** Hose attachment styles may vary.



**Figure 2-5. Typical Hose Attachment**

4. See [Figure 2-6](#). Attach the strainer to the suction hose.



**Figure 2-6. Typical Strainer Attachment**

### ⚠ CAUTION

Equipment damage. Use recommended strainer to prevent debris from entering the pump. Failure to do so could result in equipment damage. (000241)

## Priming the Pump

### ⚠ CAUTION

Equipment damage. Before starting engine, verify pump is primed with water and suction strainer is submerged. Failure to do so will cause pump damage and void the warranty. (000203)

Remove the orange priming cap from the pump and completely fill the pump chamber with clean water. Tighten the cap. **DO NOT** over tighten.



**Figure 2-7. Water Priming Plug**

## Section 3 Operation

### Operation and Use Questions

If you have any problems operating your water pump, please call Generac customer service at 1-888-GENERAC (888-436-3722).

### Placing Water Pump for Use



#### **⚠ DANGER**

Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury.

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#### **⚠ WARNING**

Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury.

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#### **⚠ WARNING**

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire.

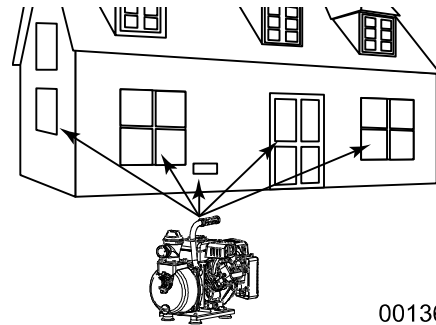
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It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrestor, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws. Place the pump on a level surface free from any obstructions or potential hazards. The pump should be placed close to the water level to ensure maximum performance.

- Only operate water pump outdoors in a well ventilated area. Never operate water pump indoors, or in a confined space. Be aware of building openings and ventilation systems where exhaust may enter during use.
- Keep at least five (5) ft (152 cm) of clearance on all sides of water pump including overhead.
- Verify water pump is placed on level ground to avoid tipping during operation.
- Submerge strainer.

**NOTE:** Suspend the strainer if there is any mud or sand present at the bottom of the water.

- Place discharge hose in appropriate location to drain water. Verify that the hose opening is unobstructed.



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**Figure 3-1. Five Feet of Minimum Clearance**

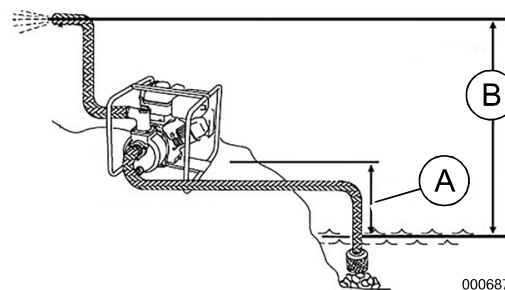
#### **⚠ CAUTION**

Equipment damage. The hose can be damaged if it comes in contact with the hot engine muffler. Keep hose away from muffler during operation.

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### Pump Output

See [Figure 3-2](#). Pump output will be affected by the type, length, and size of the suction and discharge hoses. Suction head is the distance (A) from the water intake to the suction port. The pumping height, total head, is the distance (B) from the water intake to the point of discharge. As total head increases, the pump output decreases. The discharge capacity is greater than the suction capacity. Therefore, it is important to keep the suction head less than the total head. The time required to draw water from the source to the pump (self-priming time) can be decreased by minimizing the suction head.



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**Figure 3-2. Pump Output**

### High Altitude Operation

This equipment produces maximum suction lift at elevations below 1000 ft (305 m). For every increase of 1000 ft (305 m) above sea level:

- the engine will lose about 3% of its power
- total head will be reduced by about 10 in (25 cm).

Lower atmospheric pressure results in slower engine speeds and reduced water flow through the pump.