

# INTRODUCTION



## BEFORE YOU BEGIN

Before you begin, read and understand all instructions before operating your pressure washer. This manual explains how to use your high pressure spray equipment. Be sure everyone who operates, maintains or repairs the pressure washer has read this manual. Warnings and precautions must be understood.

## UNITS AT A GLANCE

<b>Fuel</b>	Unleaded Gasoline Only
<b>Engine Oil</b>	SAE 10-30W
<b>Pump Oil</b>	Non-Detergent Mineral 30W



4HP



5HP



6.5HP



11HP



## CONTENTS

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# SAFETY INSTRUCTIONS



## SAFETY INSTRUCTIONS

- High pressure spray can cause serious injury. This product must be used **ONLY** by personnel that have been instructed in the safe use of this machine. Observe all warnings when you operate, maintain and repair the pressure washer.
- Use this equipment only in well ventilated areas and free of combustible materials, combustible fumes or dust. Failure to follow this warning may cause carbon monoxide build up, fire or explosion, and possible injury or death.
- To prevent injury wear the following protective clothing: Gloves, Hard Hat, Mask, Work Boots, Ear Plugs, Safety Goggles.

**INJECTION HAZARD:** Fluids under high pressure from spray or leaks can penetrate the skin and cause extremely serious injury, including death or the need for amputation. You must observe these precautions:

- NEVER point the spray gun at people, plants or animals.
- NEVER put your hand or fingers over the spray tip.
- NEVER try to stop or deflect leaks with your hand or body.
- NEVER purchase and use chemicals or detergents that are toxic, flammable, or high in acidic/alkaline base, and always request a material safety data sheet (MSDS) for the product you are purchasing.
- NEVER use a powder type detergent or chemical that is not manufactured for pressure washer use; i.e. dish detergent, laundry soap.

## GENERAL WARNINGS

Get emergency medical treatment at once if any fluid seems to penetrate your skin, even if the wound does not appear serious. tell the doctor exactly what fluid was injected and give him the material safety data sheet for the detergent or chemical product used.

- Be sure that all system components and accessory items are original equipment or equivalent.
- Understand ALL the information in this section before you begin to use the pressure washer.



# SAFETY INSTRUCTIONS



- Be sure the machine is properly located for safe operation.
- NEVER alter or modify the pressure washer as personal injury or death could result to humans, plants, or animals, and voids any warranty offered by the manufacturer.
- NEVER locate the equipment near combustible materials, combustible fumes, or dust, as personal injury or death could result from fire or explosion.
- NEVER spray flammable liquids, toxic chemicals (such as insecticide or weed killer) as personal injury or death could result from fire, explosion, or poisoning while damaging the environment.
- NEVER allow children or untrained adults to operate the machine.
- NEVER wear loose clothing and keep your body and clothing clear of moving parts when the machine is running.
- NEVER leave the pressure washer unattended once you have started it. If you must leave, follow complete shut down instructions to prevent unauthorized and untrained personnel from operating the machine.
- NEVER move the machine by pulling the hose.
- NEVER activate the gun with no nozzle in the wand. This will cause the "O" ring to become dislodged from the coupling and the unit will not function properly.
- NEVER put any type of trigger lock onto the gun.
- NEVER place hands on motor or pump when unit is running. Keep away from moving parts at all times.
- NEVER allow children or animals around your working area.
- ALWAYS face nozzle and wand to the ground when testing.
- NEVER exceed the pressure rating of the unit's recommended pressure.
- NEVER change quick couple nozzles with the nozzle under pressure and without the gun safety in the "on" or "lock" position.
- NEVER clean the machine by using its own spray wand.
- NEVER run the machine without water.

## LOCATION WARNINGS

- The machine must be used at or near the working area and always under trained operator supervision.
- The machine should be located as close as possible to the water supply.
- Locate the machine on a solid and level surface so that engine and pump crankcase oil lubricates components properly. Avoid areas where water can build up in the working area. Possible injury can occur caused by the surface becoming slippery from water build up.



# SAFETY INSTRUCTIONS



## LOCATION WARNINGS (continued)

- Locate the machine in a well-ventilated area and away from flammable materials or fumes. Be sure ventilation WARNINGS are observed. Keep pressure washer at least 18" away from flammable materials.
- Locate the machine so the operator has easy access to the pressure washer and its controls. Locate the machine so that it is protected from external damage.
- To prevent damage and excessive hose wear, locate the pressure washer so that the hose does not cross traffic areas.

## GAS ENGINE PRECAUTIONS

***A fire or explosion can occur resulting in personal injury if the following instructions are not followed:***

- DO NOT fill gasoline tank while engine is running. Allow engine to cool for two minutes before refueling.
- DO NOT operate the engine when an odor of gasoline is present, or other explosive conditions exist.
- IF GASOLINE IS SPILLED, move the machine away from the area of the spill and avoid creating any source of ignition until the gasoline has evaporated.
- DO NOT store, spill, or use gasoline near an open flame, or devices such as a stove, furnace, water heater which utilize a pilot light, or devices which can create a spark.
- REFUEL OUTDOORS preferably, or in well-ventilated areas with UNLEADED GAS ONLY.
- DO NOT operate engine without muffler. Operating without a muffler, or with a muffler that leaks because of rust or damage, can permit an increased exhaust noise level. Inspect muffler periodically and replace if necessary.
- DO NOT use this engine on any forest covered, brush covered or grass covered unimproved land unless a spark arrestor is attached to the muffler.
- DO NOT operate engine if air cleaner or cover directly over the carburetor air intake is removed.
- DO NOT choke the carburetor to stop the engine.
- DO NOT TAMPER WITH THE GOVERNOR SPRINGS, GOVERNOR LINKS OR OTHER PARTS WHICH MAY INCREASE THE GOVERNED ENGINE SPEED.
- DO NOT tamper with the engine speed selected by the original equipment manufacturer.
- CAUTION - DO NOT RUN AT EXCESSIVE SPEEDS. Operating engine at excessive speeds increases the danger of personal injury.



# SAFETY INSTRUCTIONS



- DO NOT TOUCH hot mufflers, cylinders or fins, as contact may cause burns.
- TO PREVENT HAND OR ARM INJURY, always pull starter chord rapidly to avoid kickback.
- READ ENGINE OWNERS/OPERATORS MANUAL BEFORE USING OR ATTEMPTING TO SERVICE THIS MACHINE.

## **PUMP PRECAUTIONS**

- NEVER allow the pump to run for more than a 2 minute period without opening the gun. (This will cause pump damage due to excessive water temperature and void the warranty)
- NEVER let the pump run when the machine is not connected to the water supply. This causes cavitation and voids the warranty.
- NEVER run acids or hard caustics (such as lye) through the pump.
- NEVER use chemicals or agents which are not compatible with the Buna-N and PVC (polyvinyl) or neoprene covering of the hose. (Always use citrus based detergents.)
- NEVER use water with a temperature over 140 degrees F.
- Check for leaks. Tighten connections if necessary.
- Check for missing O-rings in the couplers.



Be sure to know and understand all of the Safety Instructions before continuing.



# 4 HP UNITS



## BASIC COMPONENT LIST

Below is a Top View of a typical 4HP pressure washer. Numbered items correspond to Start-Up steps for quick reference.

# Correspondes to Start-Up procedures.

# Additional features of importance.



Engine Oil 1

Engine Fuel 2

High Press Hose and M22 fitting 3

Garden Hose Inlet 4

Spray Gun and Lance 5

Throttle 6

Primer 7

Starter Cord 8

Vari-Nozzle 9



# START-UP PROCEDURE



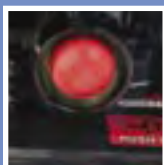
**1.** Check engine oil (SAE 10-30W). Oil Level should read between the hash marks on dipstick.



**3.** Attach high pressure hose to outlet M22 Quick-Connect fitting on frame.



**5.** Pull trigger on gun to purge system of air (until a steady stream of water comes out the nozzle).



**7.** Push primer bulb firmly 3 times.

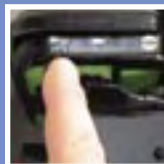
**2.** Fill gas tank on engine with unleaded gasoline only.



**4.** Attach Garden hose to inlet garden hose connector on frame, and turn on water.



**6.** Slide throttle control left to "FAST" position.



**8.** While holding gun trigger open with one hand, pull starter cord on engine.



If engine does not start after 3 pulls, push primer bulb 3 more times, then pull starter cord again.

## VARIABLE NOZZLE ADJUSTMENTS

### **Spray Pattern**

Left: Shrink  
Right: Widen



Left

Right

### **Pressure**

Out: Decrease  
In: Increase



Out

In

# 5 HP GC SERIES DIRECT DRIVE



## BASIC COMPONENT LIST

Below is a Top View of a typical 5 or 6HP pressure washer. Numbered items correspond to Start-Up steps for quick reference.

# Correspondes to Start-Up procedures.

# Additional features of importance.



Engine Oil 1

Oil Sight Glass Pump Oil 2

Engine Fuel 3

High Pressure Hose Quick-Connect 4

High Pressure Hose 5

Garden Hose Inlet 6

Spray Nozzle Quick Connect 7

Spray Gun and Lance 8

Choke 9

Throttle 10

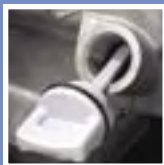
Starter Cord 11

Pressure Adjustor (Unloader) 12

Chemical Injector 13



# START-UP PROCEDURE



**1.** Check engine oil (SAE 10-30W). Oil Level should read between the hash marks on dipstick.



**3.** Fill gas tank on engine with unleaded gasoline only.



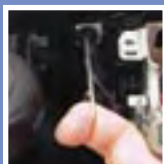
**5.** Attach high pressure hose to base of Spray Gun.



**7.** Attach nozzle to tip of Lance.



***\* For soaper use only - will provide low pressure.***



**9.** Pull choke control to "OFF" (out) position



**11.** Pull starter cord on engine.

**2.** Check pump oil (30W non-detergent). Oil level should read on the middle or just below on the sight glass. *\*Your pressure washer may not be equipped with a sight glass. See Pg. 18 for more info.*

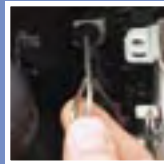
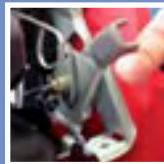
**4.** Attach high pressure hose to outlet Quick-Connect fitting on pump.

**6.** Attach Garden hose to inlet garden hose connector on pump, and turn on water.

**8.** Pull trigger on gun to purge system of air (until a steady stream of water comes out the nozzle).

**10.** Slide throttle control (up) to "FAST" position

**12.** Let engine warm up for 20 seconds and then push choke to "ON" (in) position.



# 5.5/6.5 GX SERIES DIRECT DRIVE



## BASIC COMPONENT LIST

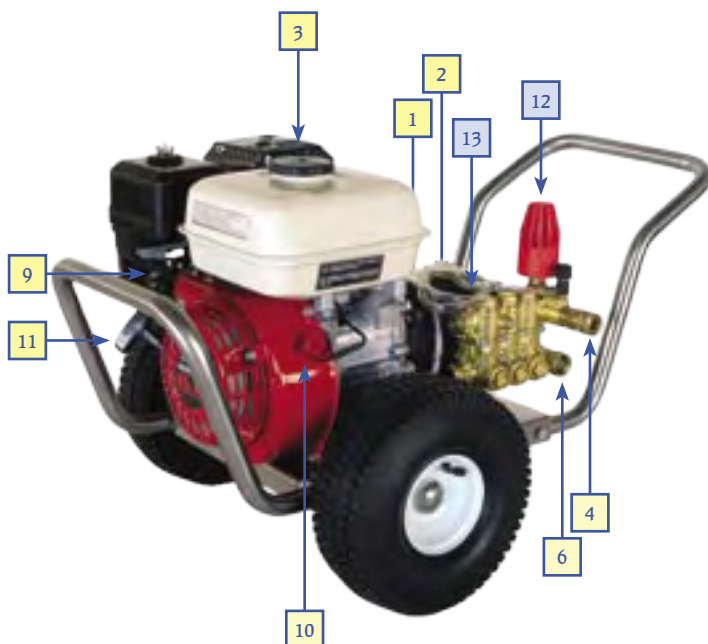
Below is a Top View of a typical 5.5 or 6.5HP pressure washer. Numbered items correspond to Start-Up steps for quick reference.



Correspondes to Start-Up procedures.



Additional features of importance.



Engine Oil

1

Oil Sight Glass  
Pump Oil

2

Engine Fuel

3

High  
Pressure Hose  
Quick-Connect

4

High Pressure  
Hose

5

Garden Hose  
Inlet

6

Spray Nozzle  
Quick Connect

7

Spray Gun and  
Lance

8

Fuel Switch  
and Choke

9

On/Off Switch

10

Starter Cord

11

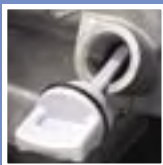
Pressure  
Adjuster  
(Unloader)

12

Chemical  
Injector

13

# START-UP PROCEDURE



**1.** Check engine oil (SAE 10-30W). Oil Level should read between the hash marks on dipstick.



**3.** Fill gas tank on engine with unleaded gasoline only.



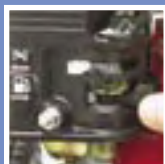
**5.** Attach high pressure hose to base of Spray Gun.



**7.** Attach nozzle to tip of Lance.



*\* For soaper use only - will provide low pressure.*



**9.** Pull choke control to "OFF" (out) position



**11.** Pull starter cord on engine.

**2.** Check pump oil (30W non-detergent). Oil level should read on the middle or just below on the sight glass. *\*Your pressure washer may not be equipped with a sight glass. See Pg. 18 for more info.*

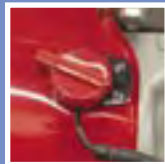
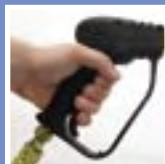
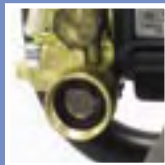
**4.** Attach high pressure hose to outlet Quick-Connect fitting on pump.

**6.** Attach Garden hose to inlet garden hose connector on pump, and turn on water.

**8.** Pull trigger on gun to purge system of air (until a steady stream of water comes out the nozzle).

**10.** Turn ON/OFF switch to ON.

**12.** Let engine warm up for 20 seconds and then push choke to "ON" (in) position.



# 13HP GX DIRECT DRIVE



## BASIC COMPONENT LIST

Below is a Top View of a typical 13HP pressure washer. Numbered items correspond to Start-Up steps for quick reference.

#

Correspondes to Start-Up procedures.

#

Additional features of importance.



Engine Oil

1

Oil Sight Glass  
Pump Oil

2

Engine Fuel

3

High  
Pressure Hose  
Quick-Connect

4

High Pressure  
Hose

5

Garden Hose  
Inlet

6

Spray Nozzle  
Quick Connect

7

Spray Gun and  
Lance

8

Fuel Switch  
and Choke

9

On/Off Switch

10

Starter Cord

11

Nozzles

12

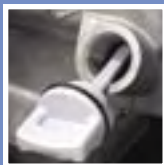
Pressure  
Adjustor  
(Unloader)

13

Chemical  
Injector

14

# START-UP PROCEDURE



**1.** Check engine oil (SAE 10-30W). Oil Level should read between the hash marks on dipstick.



**3.** Fill gas tank on engine with unleaded gasoline only.



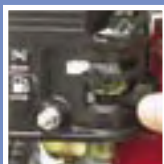
**5.** Attach high pressure hose to base of Spray Gun.



**7.** Attach nozzle to tip of Lance.



*\* For soaper use only - will provide low pressure.*



**9. A)** Slide throttle control (UP) to "FAST" position.

**B)** Slide Fuel Switch to the "ON" position.

**C)** Slide Choke to the "ON" position.



**11.** Pull starter cord on engine.

**2.** Check pump oil (30W non-detergent). Oil level should read on the middle or just below on the sight glass. *\*Your pressure washer may not be equipped with a sight glass. See Pg. 17 for more info.*

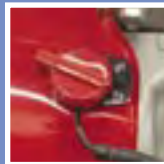
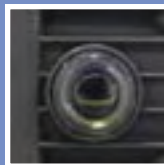
**4.** Attach high pressure hose to outlet Quick-Connect fitting on pump.

**6.** Attach Garden hose to inlet garden hose connector on pump, and turn on water.

**8.** Pull trigger on gun to purge system of air (until a steady stream of water comes out the nozzle).

**10.** Turn ON/OFF switch to ON.

**12.** Let engine warm up for 20 seconds and then slide choke to "OFF" position.



# BASIC OPERATIONS



## OPERATION PROCEDURES FOR ALL UNITS

Be sure to follow the appropriate Start-Up procedure for your pressure washer before following the below Operation steps.

### WARNING

Do not allow unit to run for more than 2 minutes without pulling the trigger. Letting the unit idle for too long can cause the pump to burn out. If it is necessary to stop your work for more than 3 minutes, turn off the engine (see Shut Down procedures).

**1.** Grasping the gun and lance with Both Hands, hold spray nozzle 8-24 inches away from cleaning surface.

**2.** Pull trigger to spray water.



## NOZZLE USAGE



**0°**

Thin and powerful stream of water. Used for difficult to remove stains.



**15°**

Uses a small angle of spray for focused cleaning.



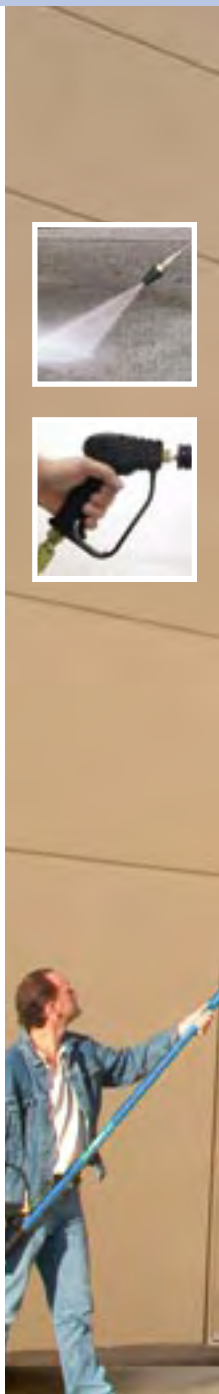
**40°**

Largest angle of spray used for cleaning surfaces quickly.



### **SOAPER**

Soaper nozzle is used in conjunction with a cleaning fluid. This is the only nozzle that can be used with cleaning solution.





# CHEMICAL INJECTOR



## CHEMICAL INJECTOR OPERATIONS

The chemical injector is used in conjunction with the Soaper Nozzle and a Cleaning Solution.

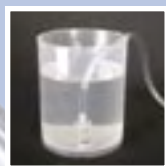


The PSI will be much lower in this application. The soap will only draw with High Flow and Low Pressure.

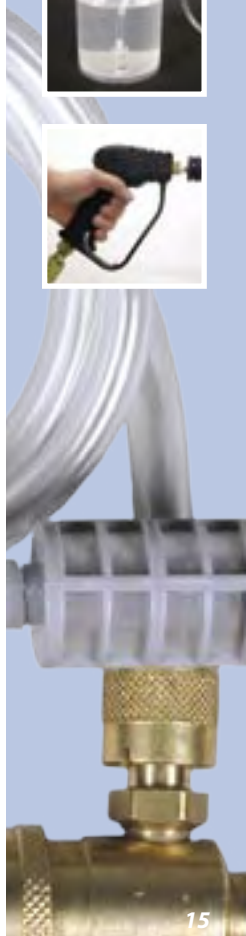
**1.** Attach soaper nozzle to the tip of the Lance.



**2.** Drop soap hose filter in detergent container.



**3.** Spray with gun as normal.



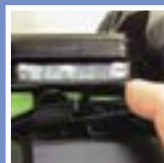
# SHUTTING DOWN



**1.** Follow the step on the right that corresponds with the unit that you are using: 4 HP, 5 HP, 6.5 HP/higher.

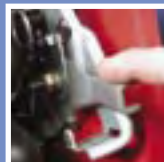
## Vertical Direct Drive

Slide Throttle Control (RIGHT) to "STOP" position.



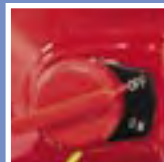
## GC Series Direct Drive

Slide Throttle Control (DOWN) to "STOP" position.



## GX Series Direct Drive

Turn ON/OFF switch to "OFF".



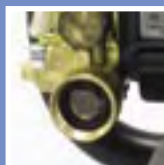
**2.** Turn off Water Source.



**3.** Pull gun trigger to release water pressure from system.



**4.** Disconnect garden hose from Inlet Garden Hose attachment on pump.



**5.** Disconnect high pressure hose from quick connection on Outlet of pump.



Your pressure washer is now Shut Down. See "Winterizing your Pressure Washer" for storage instructions.

# WINTERIZING



## WINTERIZING YOUR PRESSURE WASHER

Whenever your machine will be subjected to freezing temperatures, severe damage could occur caused by freezing inside components. To prevent costly repairs, follow the steps below (Freeze damage is NOT covered by manufacturers warranty).

1. Be sure the Machine is OFF (See "Shutting Down"), water supply is disconnected and pressure has been relieved.
2. Obtain a one-gallon container of Nontoxic (RV) antifreeze.
3. Disconnect your high pressure hose, gun, and wand. Attach a 4 ft. piece of garden hose to the inlet of the pressure washer. Using a funnel, fill the garden hose with RV antifreeze and hold in the air above the pressure washer. Turn the engine ON/OFF switch to the "OFF/STOP" position. Pull the start cord until the antifreeze is coming out the high pressure quick connect coupler (Approximately 5-20 times). Disconnect the 4 ft. piece of hose.
4. If possible, store the gun, wand, and hose indoors where they won't freeze. Ensure any leftover water has been drained from the gun, wand and hose. Gas in the engine should be drained or use a fuel stabilizer to prevent the fuel from going bad. When refilling the unit later, make sure to use fresh gas and not gas that has sat over winter.
5. To reuse pressure washer, simply reconnect to pressure system water supply, attach high pressure hose, turn water on and squeeze trigger allowing water to pass through system (do not start engine). Once water becomes clear, you are ready to operate your pressure washer.



# TROUBLE SHOOTING



## POINTS TO CHECK IF A PROBLEM OCCURS

1. Are the engine and fuel switches in the "ON" position?
2. Check oil and gas levels on the engine.
3. If your unit has a sight glass, the pump oil needs to be checked and will need to be replaced when needed. The oil for the pump is a 30W non-detergent mineral oil.  
**Do not fill over halfway on the sight glass.**  
 If your pump does not have a sightglass then the Pump Oil does not need to be replaced. There is 4.5 ounces of oil in the pump which will last the life of the pump. (AXD & SJV)
4. Is the water tap open?
5. Check the choke and throttle levers.
6. Is the correct nozzle in the lance? Is the nozzle plugged?
7. Only the black nozzle is for soaping at low pressure.
8. Is the water-inlet screen clogged?
9. Hold the gun trigger open while pull starting the engine.
10. Check for O-Rings in the lance and quick couplers.
11. Make sure the engine is turned off after each use. It should not be left running without use for longer than 2 minutes as the pump can overheat.
12. Check throttle position and ensure Air Filter & Spark Plug is clean.
13. Vertical Units: Ensure Variable Nozzle is clicked back into high pressure mode.



Prior to boxing and shipping, your unit has been tested to ensure quality. As a result, trace amounts of gasoline may be present. The engine and pump are also filled to the required levels.



# MAINTENANCE



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## BREAK IN PERIOD

After the first 50 hours of use or first season, change pump and engine oil. GXD and VRX do not require pump oil to be changed.

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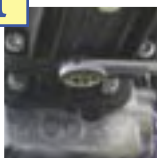
## CHECK PUMP AND ENGINE OIL BEFORE EVERY USE.

<b>Fuel</b>	Unleaded Gasoline Only
<b>Engine Oil</b>	SAE 10-30W
<b>Pump Oil</b>	30W Non-Detergent Mineral

***Change Pump/Engine oil every 300 hours or as needed.***

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## CHANGE YOUR PUMP OIL



Using an allen key unthread the drain plug on the bottom of the pump. Refill via the vented cap on the top of the pump until the oil level is halfway up the site glass w/ 30W Non-Detergent Pump Oil

***\*Units with a VRX or GXD Maintenance free pump do not require the oil to be changed. If it must be changes the GXD pump takes 4.5oz of oil.***

i

## CHANGE YOUR ENGINE OIL



### **HONDA GC/GX ENGINE**

Loosen the drain plug to drain the oil into an oil drain pan or container. Refill with 10W30 motor oil via the fill plug/oil check dipstick.

### **BRIGGS ENGINE**

Drain and fill oil via the engine oil dipstick.

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## ENGINE MAINTENANCE



Visually inspect the spark plug electrode and air filter and replace as necessary.



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## WATER INLET FILTER



Visually inspect before every use, clean any debris and replace when damaged or lost. Do not operate without a filter.

i

## LEAKS



If any leaks are present, inspect the O-rings in the coupler and replace when damaged or lost.

