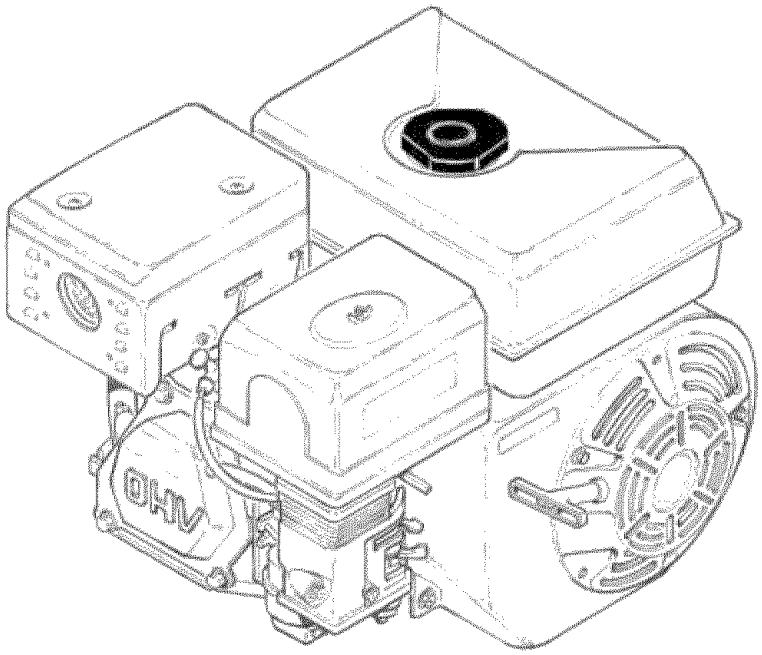
5.5 HP OHV HORIZONTAL SHAFT ENGINE

Item # 56055
Owner's Manual



DO NOT RETURN TO STORE

Questions? Problems?
Please call our customer help line:

(888) 315-3080 M-F 8-5 CT

Thank you for purchasing this engine. Keep this owner's manual handy, so you can refer to it at any time. This owner's manual is considered a permanent part of the engine and should remain with the engine if resold. The information and specifications included in the publication were in effect at the time of printing.

5.5 HP OHV HORIZONTAL SHAFT ENGINE

IDEAL FOR:

- ***Go Karts***
- ***Generators***
- ***Pumps***
- ***Compressors***
- ***Small Construction Equipment***
- ***…And More!***

Notice Regarding Emissions

Engines that are certified to comply with U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and may include the following emission control systems: (EM) Engine Modifications and (TWC) Three-Way Catalyst (if so equipped).

TABLE OF CONTENTS

GENERAL SAFETY PROCEDURES

Please familiarize yourself with the following safety symbols and words:

The safety alert symbol ⚠ is used with one of the safety words (**DANGER, CAUTION,** or **WARNING**) to alert you to hazards. Please pay attention to these hazard notices both in this manual and on the engine.

DANGER: Indicates a hazard that will result in serious injury or death if instructions are not followed.

WARNING: Indicates a strong possibility of causing serious injury or death if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

If you have any questions regarding the hazard and safety notices listed in this manual or on the product, please call (888) 315-3080 M-F 8-5CT before using the engine.

⚠ **DANGER: This engine produces poisonous carbon monoxide gas when running. This gas is both odorless and colorless. Even if you do not see or smell gas, carbon monoxide may still be present. Breathing this poison can lead to headaches, dizziness, drowsiness, and eventually death.**

- Use outdoors ONLY in non-confined areas.
- Keep several feet of clearance on all sides to allow proper ventilation of the engine..

⚠ **WARNING: The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.**

⚠ **WARNING: This engine may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death. A nearby open flame can lead to explosion even if not directly in contact with gas.**

- Do not operate near open flame.
- Do not smoke near engine.
- Always operate on a firm, level surface.
- Always turn engine off before refueling. Allow engine to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Do not overfill gas tank. Gas may expand during operation. Do not fill to the top of the tank.
- Always check for spilled gas before operating.
- Empty gasoline tank before storing or transporting the engine.
- Before transporting, turn fuel valve to off and disconnect spark plug.

⚠ **WARNING: This engine produces heat when running. Temperatures near exhaust can exceed 150° F (65° C).**

- Do not touch hot surfaces. Pay attention to warning markings on the engine denoting hot parts of the machine.
- Allow engine to cool several minutes after use before touching areas that heat during use.

Owner responsibilities

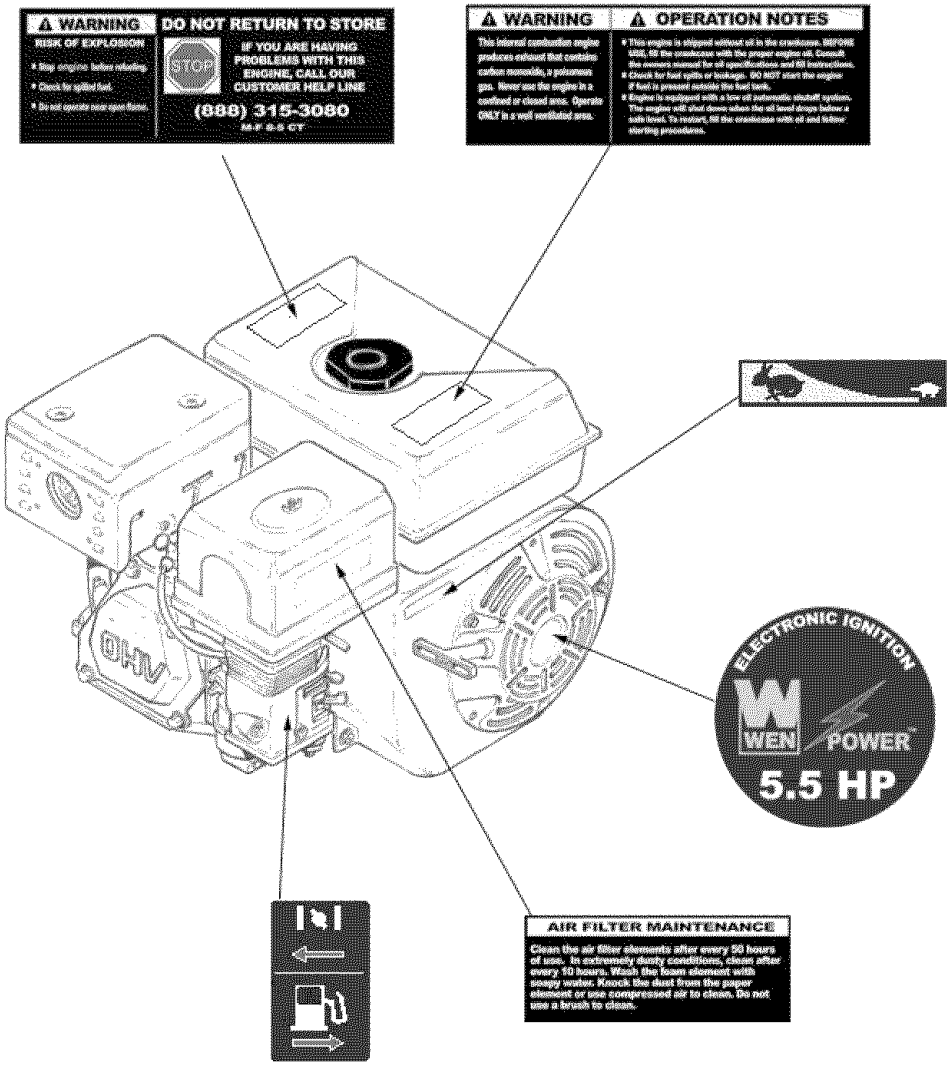
- The engines are designed to give safe and dependable service if operated according to instructions. Read and understand this owner's manual before operating the engine. Failure to do so could result in personal injury or equipment damage.
- Know how to stop the engine quickly, and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.
- Do not allow children to operate the engine. Keep children and pets away from the area of operation.

Other Equipment

Review the instructions provided with the equipment powered by this engine for any additional safety precautions that should be observed in conjunctions with engine startup, shutdown, operation, or protective apparel that may be needed to operate the equipment.

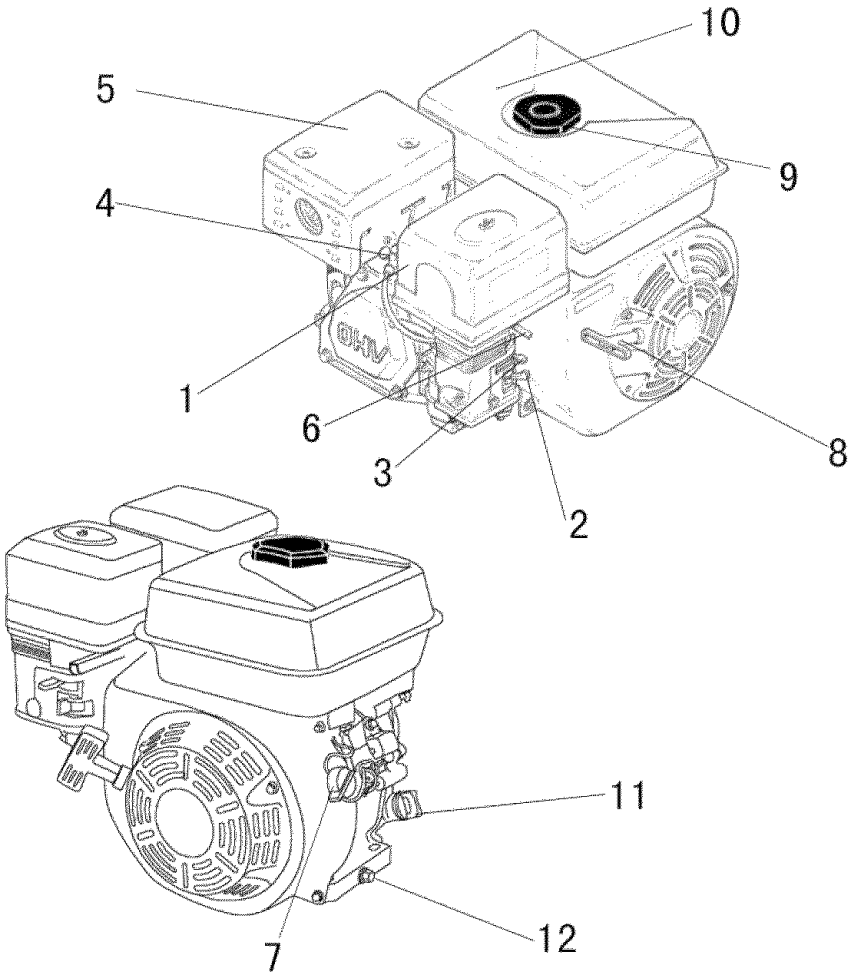
Engine Safety Labeling

In addition to the above safety notices, please familiarize yourself with the safety and hazard markings on the engine as shown on the next page.


⚠ WARNING
DO NOT RETURN TO STORE
RISK OF EXPLOSION
STOP
IF YOU ARE HAVING PROBLEMS WITH THIS ENGINE, CALL OUR CUSTOMER HELP LINE
(888) 315-3080
M-F 8-5 CT
⚠ WARNING
⚠ OPERATION NOTES
OHV
ELECTRONIC IGNITION
WEN
POWER
5.5 HP
AIR FILTER MAINTENANCE
Clean the air filter elements after every 50 hours of use. In extremely dusty conditions, clean after every 10 hours. Wash the foam element with soapy water. Knock the dust from the paper element or use compressed air to clean. Do not use a brush to clean.

ENGINE COMPONENTS

Please familiarize yourself with the locations and functions of the various components and controls of your engine.



(1) Air cleaner- removable and cleanable sponge and paper element that limit the amount of dirt pulled into the engine.
(2) Fuel Valve Lever- Controls flow of fuel into the engine.
(3) Choke lever- Adjusts the amount of air let into the engine.
(4) Spark plug- Provides proper engine ignition.
(5) Muffler- Reduces engine noise.
(6) Throttle Lever- Use to control engine speed.
(7) On/Off Switch- Used to start/stop engine.
(8) Recoil Starter Handle- Pull-cord for starting engine.
(9) Fuel Cap- Access to the fuel tank for adding fuel.
(10) Fuel Tank- Stores gas used to run engine.
(11) Oil Fill and Dipstick- Location for checking and filling engine oil.
(12) Oil Drain Plug- Location for draining oil.

PREPARING THE ENGINE FOR USE

Using the Engine for the First Time

The following section describes steps you must follow to prepare your engine for first-time use. If after reading this section, you are unsure about how to perform any of the steps please call (888) 315-3080 M-F 8-5 CT for customer service. Failure to perform these steps properly can damage your engine or shorten its life.

If you are using the engine for the first time, there are a few steps you must take to prepare it for operation:

Add Oil

The engine requires engine oil to operate properly. The engine, when new from the carton, contains *no* oil in the crankcase. You must add the proper amount of oil before operating the engine for the first time. This amount, which is equal to the oil capacity of the crankcase, is 20.2 fluid oz.
For general use, we recommend SAE 10W/30 oil to fill the engine crankcase.

To add oil, follow these steps:

1. Make sure the engine is on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine as shown in figure 1.
3. Using a funnel, add 20.2 fluid ounces of oil into the crankcase. You will know the crankcase is full when the oil level has reached the lower lip of the opening you have just poured the oil into (see figure 2).
4. Replace oil filler cap.

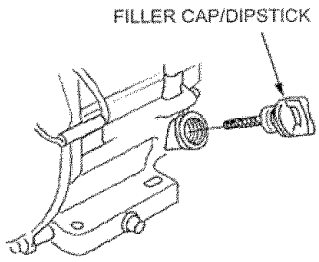


Figure 1- Unscrewing the oil cap

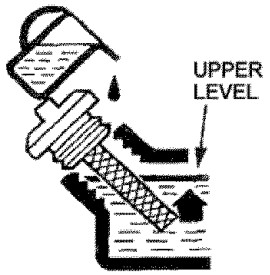


Figure 2- Adding oil

Add Gasoline

⚠ **WARNING: Gasoline and gas fumes are highly flammable.**

- **Do not fill tank near an open flame.**
- **Do not overfill. Always check for fuel spills.**

To ensure that the engine runs smoothly use only FRESH, UNLEADED GAS WITH AN OCTANE RATING OF 87 OR HIGHER. To add gasoline:

1. Make sure the engine is on a level surface.
2. Unscrew gas cap and set aside (NOTE: the gas cap may be tight and hard to unscrew).
3. Slowly add unleaded gasoline to the fuel tank. The capacity of the gas tank is 0.95 gallons. Be careful not to overfill. NOTE: Gas can expand. Do not fill the gas tank to the very top.
4. Replace fuel cap and wipe up any spilled gasoline with a dry cloth.

IMPORTANT:

- Never use an oil/gasoline mixture.
- Never use old gas.
- Avoid getting dirt or water in the fuel tank.
- Gas can age in the tank and make it hard to start up the engine in the future. Never store engine for extended periods of time with fuel in the tank.

CONTROLS

Fuel Valve Lever

- The fuel valve opens and closes the line between the fuel tank and the carburetor.
- The fuel valve lever must be in the ON position for the engine to run.
- When the engine is not in use, leave the fuel valve lever in the OFF position to prevent carburetor flooding and to reduce the possibility of fuel leakage.

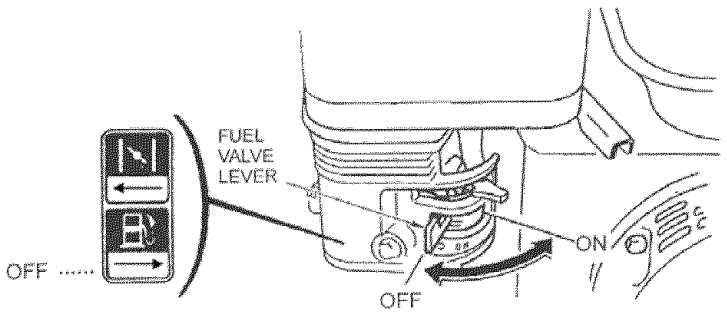


Figure 3- Fuel Valve Lever

Throttle Lever

- The throttle lever controls engine speed.
- Moving the throttle lever in the directions shown makes the engine run slower or faster.

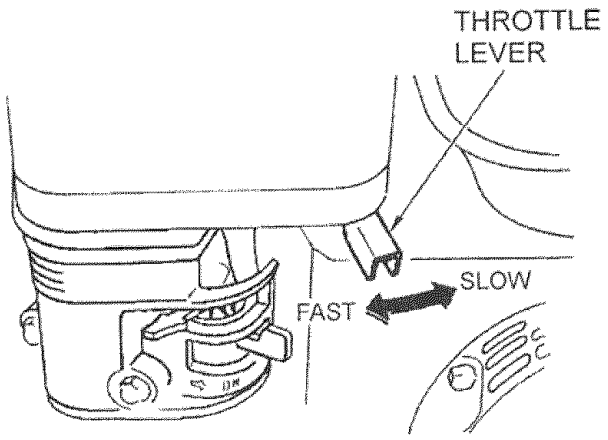


Figure 4- Throttle Lever

Engine Switch

- The engine switch enables and disables the ignition system.
- The engine switch must be in the ON position for the engine to run,
- Turning the engine switch to the OFF position stops the engine.

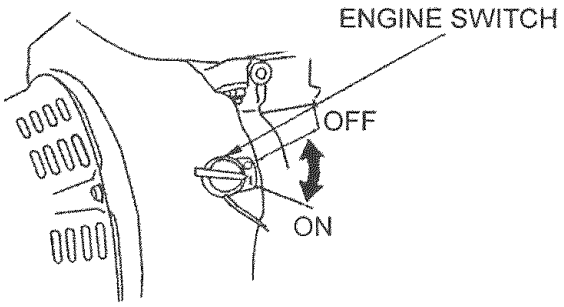


Figure 5- Engine Switch

Choke Lever

- The choke lever opens and closes the choke valve in the carburetor.
- The CLOSE position enriches the fuel mixture for starting a cold engine.
- The OPEN position provides the correct fuel mixture for operation after starting, and for restarting a warm engine.
- Some engine applications use a remotely-mounted choke control rather than the engine-mounted choke lever shown here.

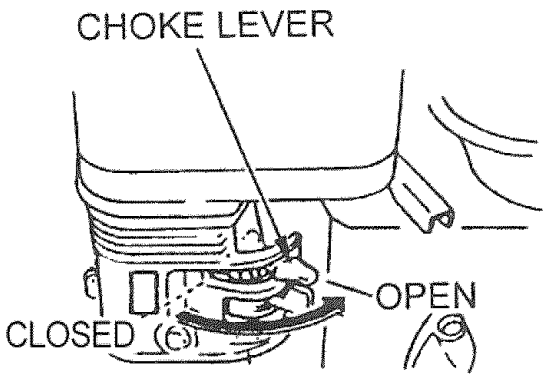


Figure 6- Choke Lever

Recoil Starter Handle

- Pulling the starter rope handle operates the recoil starter to crank the engine.

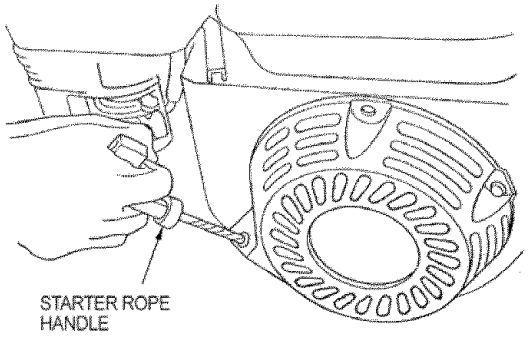


Figure 7- Starter Rope Handle

BEFORE OPERATING

For your safety, and to maximize the service life of your equipment, it is very important to take a few moments before you operate the engine to check its condition. Be sure to take care of any problem you find, or have your service center correct it, before you operate the engine.

Before beginning your preparation checks, be sure the engine is level and the engine switch is the OFF position.

The following section describes steps you must follow to check that your engine is ready for use. If after reading this section, you discover problems or concerns with the engine, or if you are unsure about how to perform any of the checks please call (888) 315-3080 M-F 8-5 CT for customer service.

Check the General Condition of the Engine

- Look around and underneath the engine for signs of oil or gasoline leaks.
- Remove any excessive dirt or debris, especially around the muffler and recoil starter.
- Look for any signs of damage
- Check that all shields and covers are in place and all nuts, bolts, and screws are tightened

Check the Engine

- Check the engine oil level. Running the engine with a low oil level can cause the engine damage.
- The Low Oil Automatic Shutoff will automatically stop the engine before the oil level falls below safe limits. However, to avoid the inconvenience of an unexpected shutdown, always check the engine oil before startup.
- Check the air filter. A dirty air filter will restrict air flow to the carburetor, reducing engine performance.
- Check the fuel level. Starting with a full tank will help eliminate or reduce operating interruptions for refueling.

Check the Equipment Powered by This Engine

Review the instructions provided with the equipment powered by this engine for any precautions and procedures that should be followed before the engine startup.

OPERATION

Safe Operating Precautions

Before operating the engine for the first time, please review the **GENERAL SAFETY PROCEDURES** and the chapter entitled **BEFORE OPERATING**.

Review the instructions provided with the equipment powered by this engine for any safety precautions that should be observed in conjunction with engine startup, shutdown, or operation.

Starting the Engine

1. Move the fuel valve lever to the ON position as shown in figure 8.

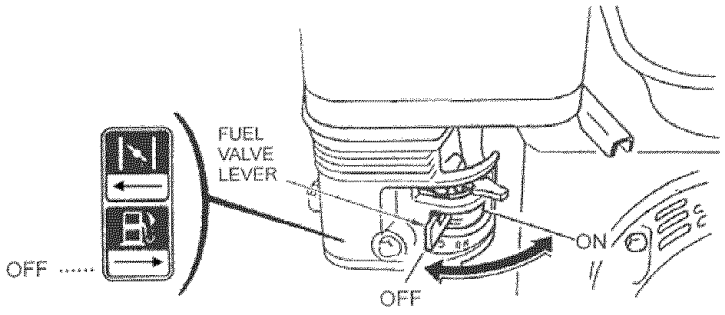


Figure 8- Fuel Valve Lever

2. To start a cold engine, move the choke lever to the CLOSED position (see figure 9). To restart a warm engine, leave the choke lever in the OPEN position.
   Some engine applications use a remotely-mounted choke control rather than the engine-mounted choke lever shown here.

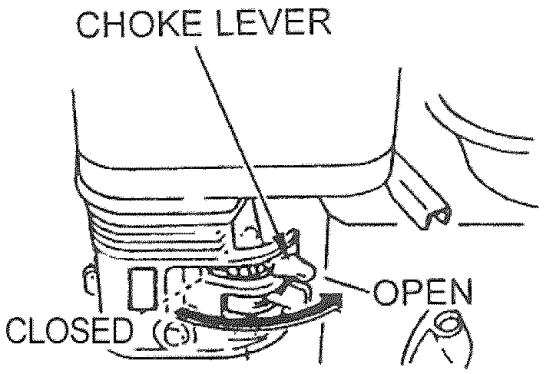


Figure 9- Choke Lever

3. Move the throttle lever away from the SLOW position, about 1/3 of the way toward the FAST position (see figure 10).
   Some engine applications use a remotely-mounted rather than the throttle shown here.

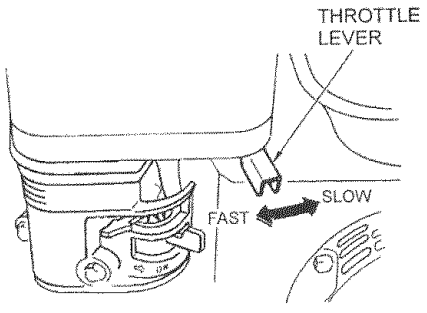


Figure 10- Throttle Lever

4. Turn the engine to the ON position (see figure 11).

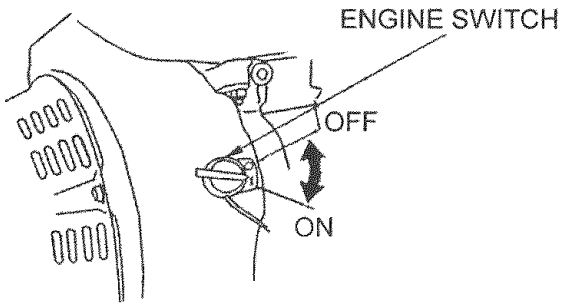


Figure 11- Engine Switch

5. Operate the starter. Pull the starter handle lightly until you feel resistance, then pull briskly.

   Gently return the handle to the original position. If the engine does not start up, repeat this step. If the engine still does not start after several sttenpts, please review the troubleshooting section for assistance.

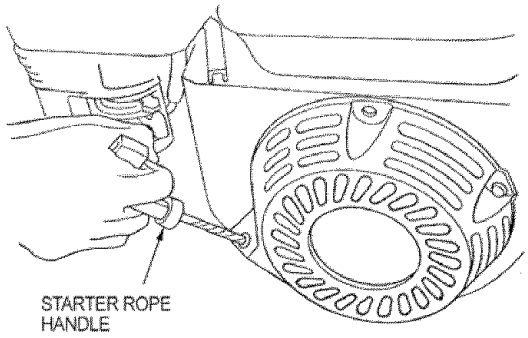


Figure 12- Pulling Recoil Starter Handle

6. If the choke lever has been moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.

STOPPING THE ENGINE

To stop the engine in an emergency, simply turn the engine switch to the OFF position Under normal conditions, use the following procedure.

1. Move the throttle lever to the SLOW position.

2. Turn the engine switch to the OFF position.

3. Turn the fuel valve lever to the OFF position.

MAINTENANCE / CARE

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution.

To help you properly care for your engine, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, of require special tools, are best handled by professionals and are normally performed by a technician or qualified mechanic.

The maintenance schedule in figure 13 applies to normal operation conditions. If you operate your engine under unusual conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, perform the routine maintenance schedule for oil change, air filter, sediment cup, and spark plug cleaning more frequently.

If you have questions about any of the maintenance procedures listed in this manual, please call (888) 315-3080 M-F 8-5CT.

CAUTION:

- **Never perform maintenance operations while the engine is running.**
- **To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks and flames away from all fuel-related parts.**
- **To ensure the best quality and reliability, use only new, genuine parts or their equivalents for repair or replacement.**

Recommended Maintenance Schedule

		each use	first month or 20 hrs	every 3 months or 50 hrs	every 6 months or 100 hrs	every year or 300 hrs
Engine oil	check level	X				
	replace		X		X	
Air cleaner	check	X				
	clean			X		
	replace paper element					X
Fuel filter cup	clean				X	
Spark plug	check/ clean				X	
	replace					X
Gas tank	check gas level	X				
	clean					X*
Idle speed	check-adjust					X*
Valve clearance	check-adjust					X*
Combustion chamber	Clean	After every 300 hours*				
Fuel line	Check	Every 2 years (replace if necessary)*				

* These items should be serviced by your servicing center unless you have the proper tools and are mechanically proficient. Refer to the manual for service procedures.

Figure 13- Recommended maintenance schedule

Refueling

1. With the engine stopped, remove the gas cap and check the gas level. Refill the tank if the gas level is low.
2. Refuel in a well-ventilated area before starting the engine. If the engine has been running, allow it to cool. Refuel carefully to avoid spilling fuel. Do not fill above the fuel strainer shoulder. After refueling, tighten the fuel cap securely.

Never refuel the engine inside a building where gasoline fumes may reach flames or sparks. Keep gasoline away from appliance pilot lights, barbecues, electronic appliances, power tools, etc.

Spilled gas is not only a fire hazard but it causes environmental damage. Wipe up spills immediately.

NOTICE: Gasoline can damage paint and plastic. Be careful not to spill when filling your gas tank. Damage caused by gas is not cover under warranty.

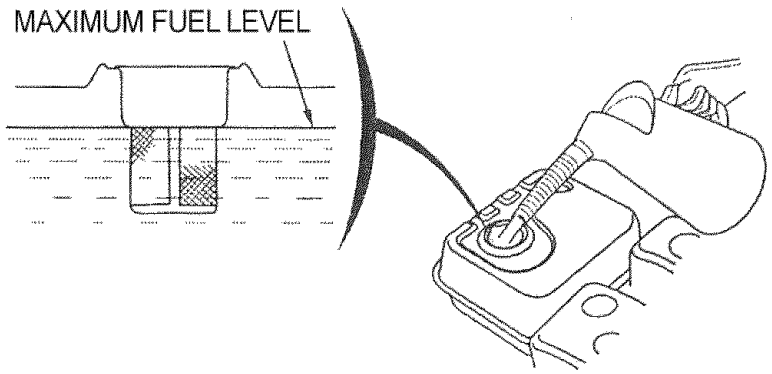


Figure 14- Adding Gas

FUEL RECOMMENDATIONS

Use unleaded gasoline with a pump octane rating of 87 or higher.

These engines are certified to operate on unleaded gasoline. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

Occasionally you may hear a light "spark knock" or "pinging" (metallic rapping noise) while operating under heavy loads, this is no cause for concern.

If a spark knock or pinging occurs at a steady engine speed, under normal load, change brands of gasoline. If spark knock or pinging persists, see your servicing center.

NOTE: Running the engine with persistent spark knock or pinging can cause engine damage. Running the engine with persistent spark knock or pinging is considered misuse, and the Limited Warranty does not cover parts damaged by misuse.

Engine Oil Level Check

Check the engine oil level with the engine stopped and in a level position.

1. Remove the filler cap/dipstick and wipe it clean (see figure 15).
2. Insert and remove the dipstick without screwing it into the filler neck, Check the oil level shown on the dipstick.
3. If the oil level is low, fill to the edge of the oil filter hole with the recommended oil.
4. Screw in the filler cap/dipstick securely.

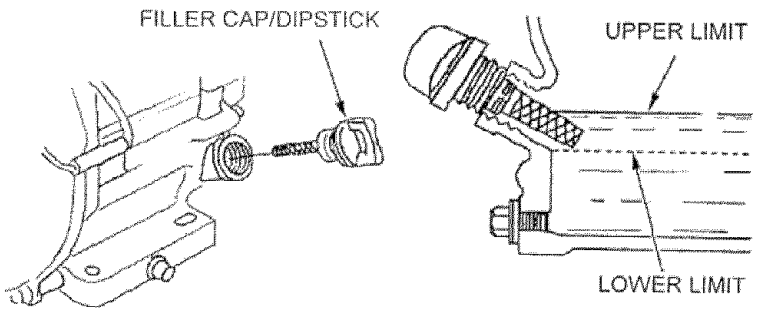


Figure 15- Checking Oil

NOTE: Running the engine with a low level oil can cause engine damage.

The Low Oil Automatic Shutoff system will automatically stop the engine before the oil level falls below safe limit. However, to avoid the inconvenience of a shutdown, always check the engine oil level before startup.

Engine Oil Change

Drain the used oil while the engine is still warm. Warm oil drains quickly and completely.

1. Place a suitable container below the engine to catch the used oil, and then remove the filler cap/dipstick and then drain the plug.
2. Allow the used oil to drain completely, and then reinstall the drain plug, and tighten it securely.

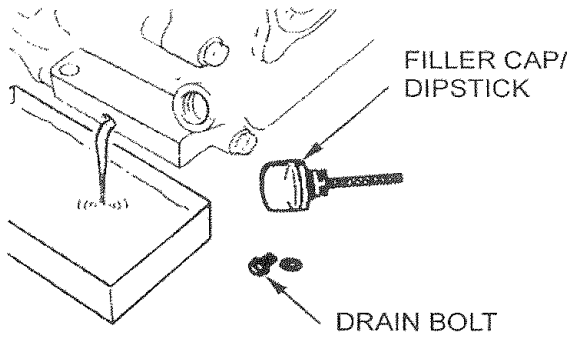


Figure 16- Draining Oil

Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take the used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or down the drain.

3. With the engine in a level position, fill to the outer edge of the oil filler hole with the recommended oil.
4. Screw in the filler cap/dipstick securely.

ENGINE OIL RECOMMENDATIONS

- Oil is a major factor affecting performance and service life. Use 4-stroke automotive detergent oil.

- SAE 10W-30 is recommended for general use. Other viscosities shown in the chart may be used when the average temperature in your area is within the recommended range.

- The SAE oil viscosity and service classification are in the API label on the oil container. We recommend that you use API SERVICE Category SE or SF oil.

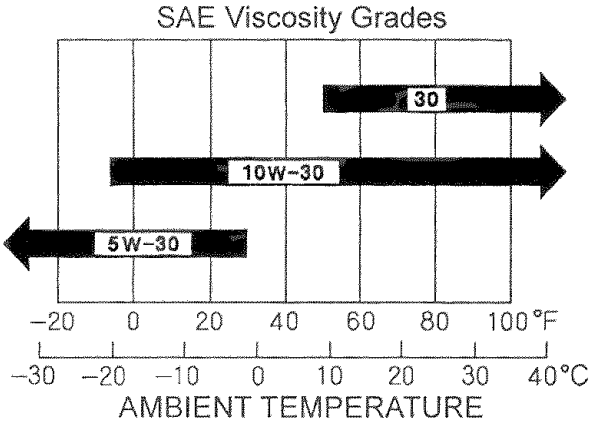


Figure 17- Oil Recommendations

Air Filter Maintenance

Remove the air cleaner cover and inspect the filter. Clean or replace dirty filter elements. Always replace damaged filter elements.

A dirty air filter will restrict air flow to the carburetor, reducing engine performance.

If you operate the engine in very dusty areas, clean the air filter more often than specified in the MAINTENANCE SCHEDULE.

NOTE: Operating the engine without an air filter, or with a damaged air filter, will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by Limited Warranty.

To service the air filter, perform the following steps:

1. Remove the wing nut from the air cleaner cover, and remove the air cleaner cover.

2. Remove the wing nut from the air filter, and remove the filter.
3. Remove the foam filter from the paper filter.
4. Inspect both air filter elements, and replace them if they are damaged. Always replace the paper air element at the scheduled interval.
5. Clean the air filter elements if they are to be reused.

Paper air filter element: Tap the filter element several times on a hard surface to remove dirt, or blow compressed air [not exceeding 30psi] through the filter element from the inside. Never try to brush off dirt; brushing will force dirt into the fibers.

Foam air filter element: Clean in warm soapy water, rinse, and allow drying thoroughly. Or clean in nonflammable solvent and allow to dry. Dip the filter element in clean engine oil, and then squeeze out all excess oil. The engine will smoke when started if too much oil is left in the foam.

6. Wipe dirt from the inside of the air cleaner base and cover, using a moist rag. Be careful to prevent dirt from entering the air duct the leads to the carburetor.
7. Place the foam air filter element over the paper element, and reinstall the assembled air filter. Be sure the gasket is in place beneath the air filter. Tighten the air filter wing nut securely.
8. Install the air cleaner cover, and tighten the cover wing nut securely.

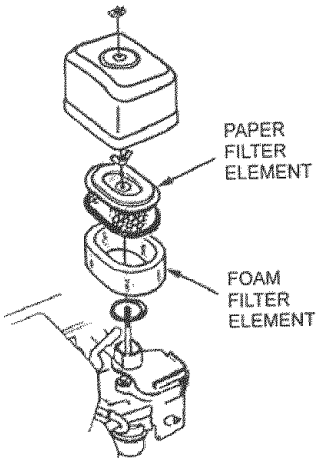


Figure 18- Air Filter Components

Sediment Cup Cleaning

⚠ **WARNING: Gasoline and gas fumes are highly flammable.**

- **Do not fill tank near an open flame.**
- **Do not overfill. Always check for fuel spills.**

1. Move the fuel valve to the OFF position, and then remove the sediment cup and O-ring.
2. Wash the sediment cup and O-ring in nonflammable solvent, and dry them thoroughly.
3. Place the O-ring in the fuel valve, and install the sediment cup. Tighten the sediment cup securely.

4. Move the fuel valve to the ON position, and check for leaks. Replace the O-ring if there is any leakage.

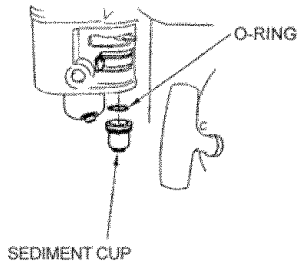


Figure 19- Sediment Cup

Spark Plug Maintenance

The spark plug is important for proper engine operation. A good spark plug should be intact, free of deposits, and properly gapped.

NOTE: An incorrect spark plug can cause engine damage.

To inspect you spark plug:

1. Disconnect the spark plug wire, and remove any dirt from around the spark plug area.

2. Remove the spark plug with a spark plug wrench.

3. Inspect the spark plug. Replace it if the electrodes are worn, or if the insulator is cracked or chipped.

4. Measure the spark plug electrode gap with a suitable gauge.
   The gap should be 0.028 –0.031 in (0.70 – 0.80 mm). Correct the gap, if necessary, by carefully bending the side electrode.

5. Install the spark plug carefully, by hand, to avoid cross-threading.

6. After the spark plug seats, tighten with a spark plug wrench to compress the washer.

   If reinstalling the used spark plug, tighten 1/8 –1/4 turn after the spark plug seats.
   If installing a new spark plug, tighten ½ turn after the spark plug seats.

NOTE:A loose spark plug can over heat and damage the engine.
Over tightening the spark plug can damage the threads in the cylinder head.

7. Attach the spark plug wire.

Recommended spark plugs: F6RTC or other equivalents.

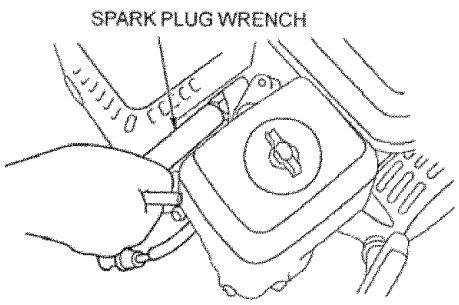


Figure 20- Removing the Spark Plug

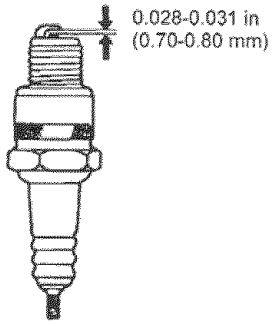


Figure 21- Spark Plug Gap

STORING YOUR ENGINE

Storage Preparation

Proper storage preparation is essential for keeping your engine trouble free and looking good. The following steps will keep rust and corrosion from impairing your engine's function and appearance, and will make the engine easier to start after storage.

Cleaning

If the engine had been running, allow it to cool for at least half an hour before cleaning. Clean all exterior surfaces, touch up any damaged paint, and coat other areas that may rust with a light film of oil.

NOTE

- Using a garden hose or pressure washing equipment can force water into the air cleaner or muffler opening. Water in the air cleaner will soak the air filter, and water that passes through the air filter of muffler can enter the cylinder.

- Water contacting a hot engine can cause damage. If the engine has been running, allow it to cool for at least half an hour before washing.

Fuel

Gasoline will oxidize and deteriorate in storage. Old gasoline will cause hard starting and leaves gum deposits that clog the fuel system. If the gasoline in your engine deteriorates during storage, you may need to have the carburetor and other fuel system components serviced or replaced.

The length of time that gasoline can be left in your fuel tank and carburetor without causing functional problems will vary with such factors as gasoline blend, your storage temperature, and whether the fuel tank is partially or completely filled. The air in a partially filled fuel tank promotes fuel deterioration. Very warm storage/temperatures accelerate fuel deterioration. Fuel deterioration problems may occur within a few months, or even less if the gasoline was not fresh when you filled the fuel tank.

The Limited Warranty does not cover fuel system damage or engine performance problems resulting from neglected storage preparation.

You can extend fuel storage life by adding a fuel stabilizer that is formulated for that purpose, or you can avoid fuel deterioration problems by draining the fuel tank and carburetor.

Adding a Fuel Stabilizer to Extend Fuel Storage Life

When adding a fuel stabilizer, fill the fuel tank with fresh gasoline. If only partially filled, air in the tank will promote fuel deterioration during storage. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline.

1. Add fuel stabilizer following the manufacturer's instructions.

2. After adding a fuel stabilizer, run the engine outdoors for10 minutes to be sure that treated gasoline has replaced the untreated gasoline in the carburetor.

3. Stop the engine, and move the fuel valve to the OFF position.

Draining the Fuel Tank Carburetor

1. Place an approved gasoline container below the carburetor and use a funnel to avoid spilling fuel.

2. Remove the carburetor drain bolt and sediment cup, and then move the fuel valve lever to the ON position (see figure 22).

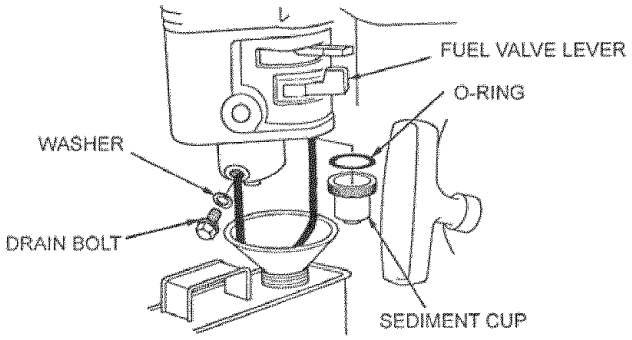


Figure 22- Draining the Fuel Tank Carburetor.

3. After all the fuel has drained into the container, reinstall the drain bolt and sediment cup. Tighten them securely.

Storage Precautions

1. Change the engine oil.

2. Remove the spark plug.

3. Pour a tablespoon of clean engine oil into the cylinder

4. Pull the starter rope several times to distribute the oil in the cylinder.

5. Reinstall the spark plug.

6. Pull the starter rope slowly until resistance is felt. This will close the valves so moisture cannot enter the engine cylinder. Return the starter rope gently.

If your engine will be stored with gasoline in the fuel tank and carburetor, it is most important to reduce the hazard of gasoline vapor ignition. Select a well-ventilated storage area. Avoid any area with a spark-producing electric motor, where power tools are operated.

If possible, avoid storage areas with high humidity, because that promotes rust and corrosion.

Unless all fuel has been drained form the fuel tank, leave the fuel valve lever in the OFF position to reduce possibility of fuel leakage.

Position the equipment so the engine is level. Tilting can cause fuel or oil leakage.

With the engine and exhaust system cool, cover the engine to keep out dust. A hot engine and exhaust system can ignite or melt some materials. Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the engine, promoting rust and corrosion.

REMOVAL FROM STORAGE

Check your engine as described in the chapter BEFORE OPERATING.

If the fuel was drained during storage preparation, fill the tank with fresh gasoline. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline. Gasoline oxidizes and deteriorates over time, causing hard starting.

If the cylinders were coated with oil during storage preparation, the engine may smoke briefly at startup. This is normal.

TRANSPORTING

If the engine has been running, allow it to cool for at least 15 minutes before loading the engine-powered equipment on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some materials.
Keep the engine level when transporting to reduce the possibility of fuel leakage. Move the fuel valve lever to the OFF position.

CARBURETOR MODIFICATION FOR HIGH ALTITUDE OPERATION

At high altitude, the standard carburetor air-fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs form that at which this engine was certified, for extended periods of time, may increase emissions.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your engine at altitudes above 5,000 feet (1,500 meters), have your servicing center perform this carburetor modification. This engine, when operated at high altitude with the carburetor modified for high altitudes use, will meet each emission standard throughout its useful life.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 1,000-foot (300-meter) increase in altitude. The effect of altitude in horsepower will be greater then this if no carburetor modification is made.

NOTE
When the carburetor has been modified for high altitude operation, the air-fuel mixture will be too lean for a low altitude use. Operation at altitudes below 5,000 feet (1,500 meters) with modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have your servicing center return the carburetor to original factory specifications.

TROUBLESHOOTING

IMPORTANT: If trouble persists please call our customer help line at **(888) 315-3080** M-F 8-5.

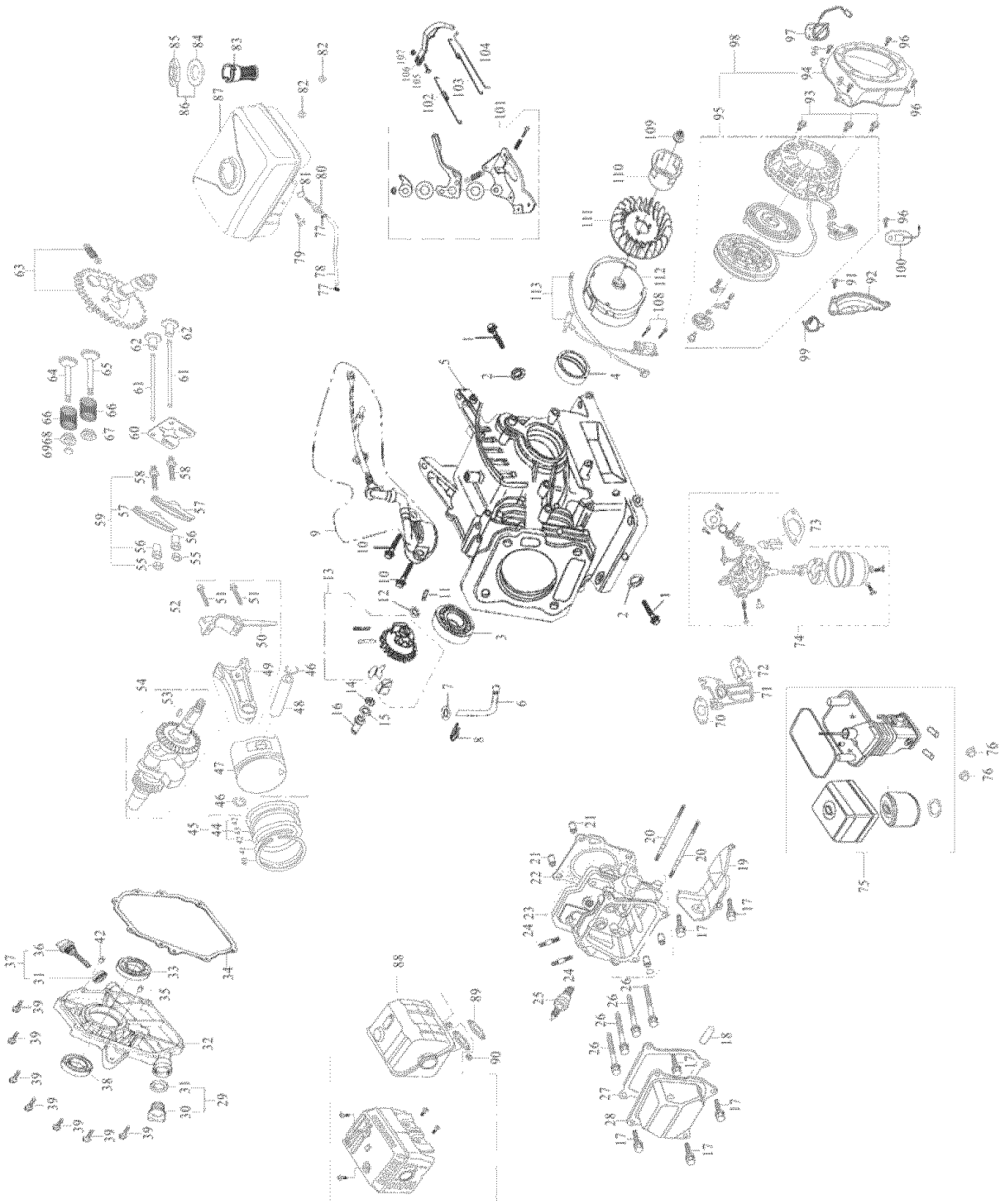
Engine Will Not Start	Cause	Solution
1. Check control positions	Fuel valve OFF.	Move lever to "ON" position.
	Choke OPEN.	Move lever to "CLOSED" position unless engine is warm.
	Engine switch OFF.	Turn engine switch to "ON" position.
2. Check fuel.	Engine is out of gas.	Add gas.
	Engine is filled with contaminated or old gas	Change the gas in the engine.
3. Check oil.	Low engine oil level automatic shutoff engaged.	Fill crankcase with proper oil.
4. Remove and inspect spark plug.	Spark plug is dirty, faulty, or improperly gapped.	Gap, clean, or replace spark plug.
	Spark plug is wet with gas (flooded engine).	Dry and reinstall spark plug. Start engine with throttle lever in the "FAST" position.
5. Take engine to an authorized servicing dealer.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valve stuck, etc.	Replace or repair faulty components as necessary.

Engine Lacks Power	Cause	Solution
1. Check air filter.	Filter elements clogged.	Clean or replace filter elements.
2. Check Gas	Engine is filled with contaminated or old gas	Change the gas in the engine.
3. Take engine to an authorized servicing center or refer to manual.	Fuel filter clogged, carburetor malfunction, ignition malfunction, valve stuck, etc.	Replace or repair faulty components as necessary.

SPECIFICATIONS

Engine Type	4-Stroke, Overhead Valve, Single Cylinder
LxWxH (in)	12 x 14-3/8 x 13-3/16 (305mm x 365 mm x 335 mm)
Dry Weight	30.8 lbs
Displacement [Bore x Stroke]	9.9 cubic in. (163 cubic cm) [2.7 in x 1.8 in (68 mm x 45 mm)]
Compression Ratio	8.5:1
Maximum Output	5.5 HP @ 3600 RPM
Maximum Torque	6.63 ft. lbs @ 3000 RPM
Engine Oil Capacity	20.2 fl. oz. (0.6 L)
Engine Oil Type	SAE 10W-30, API SE or SF, for general use
Fuel Tank Capacity	0.95 gal (3.6 L)
Cooling System	Forced air
Ignition System	Transistorized Magneto Ignition
P.T.O. (in)	2-7/16 x ¾ dia. Tapped 5/16 24 UNF
P.T.O. Shaft Rotation	Counterclockwise (from P.T.O. side)
Valve Clearance	IN: 0.15 (±) 0.02 mm (cold) EX: 0.20 (±) 0.02 mm (cold)
Spark Plug Type	F6TC or equivalent
Spark Plug Gap	0.028-0.031 in (0.70-0.80 mm)
Carburetor Idle Speed	1700 (±) 150 rpm

EXPLODED VIEW AND PARTS LIST



Item	Part #	Qty	Description
1	11212	2	Oil drain plug
2	11213	2	Washer
3	GB276-89	1	Bearing 6205
4	13180	1	Crankshaft oil seal
5	11100	1	Crankcase
6	26311	1	Regulating sway bar
7	26329	1	Washer
8	26321	1	Split pin
9	37810	1	Oil sensor
10	GB5787-86	2	M6×14 bolt
11	25151	1	Regulating shaft
12	25165	1	Washer
13	25120	1	Regulator gear assembly
14	25164	1	Snap ring
15	25132	1	Washer
16	25131	1	Sleeve
17	GB5787-86	6	M6×12 bolt
18	20651	1	Air duct
19	19721	1	Wind cover
20	12252	2	M6×113 bolt
21	12218	2	Set pin φ10×16
22	12220	1	Cylinder head gasket
23	12210	1	Cylinder head Assembly
24	12253	2	M8×34 bolt
25	34200	1	Spark plug
26	12256	4	Bolt
27	12312	1	Cylinder head cover gasket
28	12310	1	Cylinder head cover assembly
29	15650	1	Oil plug assembly
30	15651	1	Oil plug
31	15612	2	Seal
32	11311	1	Crankcase cover
33	GB276-89	1	Bearing 6205
34	11119	1	Crankcase gasket
35	11118	2	Set pin
36	15611	1	Oil dipstick
37	15610	1	Oil dipstick assembly
38	13180	1	Crankshaft oil seal
39	GB5787-86	7	M8×32 bolt
40	13311	1	Piston ring (Ⅰ)
41	13312	1	Piston ring (Ⅱ)
42	13322	2	Side rail
43	13321	1	Expander
44	13320	1	Scraper ring set
45	13300	1	Piston ring assembly
46	13222	2	Piston pin clip
47	13211	1	Piston
48	13221	1	Piston pin
49	13131	1	Shank
50	13132	1	Connecting rod cover
51	13133	2	Bolt
52	13130	1	Connecting rod assembly
53	13118	1	Woodruff key
54	13110	1	Crankshaft assembly
55	14416	2	Lock nut
56	14413	2	Sleeve
57	14411	2	Valve rocker
58	14415	2	Adjusting bolt for valve gap
59	14410	2	Valve rocker assembly
60	14261	1	Pusher guide
61	14250	2	Pusher
62	14455	2	Tappet
63	14100	1	Camshaft assembly
64	14721	1	Exhaust valve
65	14711	1	Intake valve
66	14755	2	Valve spring
67	14751	1	Intake valve spring seat
68	14757	1	Exhaust valve spring seat
69	14758	1	Cap
70	12254	1	Inlet gasket
71	16141	1	Connecting block
72	16142	1	Carburetor gasket
73	17330	1	Air cleaner gasket
74	16100	1	Carburetor assembly
75	17100	1	Air cleaner
76	GB6177-86	2	M6 nut
77	16937	2	Pipe clamp
78	16931	1	Outlet pipe
79	GB5787-86	1	M6×22 bolt
80	16950	1	Connector
81	16961	1	Packing ring
82	GB6177-86	2	M6 nut
83	16916	1	Filter cup
84	16521	1	Packing ring
85	16510	1	Fuel cap
86	16500	1	Fuel cap with assembly
87	16610	1	Fuel tank
88	18000	1	Exhaust muffler
89	12255	1	Exhaust gasket
90	GB6177-86	1	M6 nut
91	GB5787-86	1	M6×22 bolt
92	19810	1	Crankcase side plate assembly
93	GB5787-86	3	M6×8 bolt
94	19710	1	Fan hood assembly
95	27300	1	Recoil starter
96	GB5787-86	5	M6×12 bolt
97	35410	1	Engine switch
98	27100	1	Recoil starter assembly
99	32211	1	Plastic clip
100	37850	1	Diode
101	26410	1	Regulating frame assembly
102	26363	1	Back spring
103	26364	1	Regulating spring
104	26341	1	Pulling rod
105	26362	1	Lock bolt
106	26331	1	Regulating arm
107	GB6177-86	1	M6 nut
108	GB5787-86	2	M6×25 screw
109	27515	1	M14×1.5 nut
110	27370	1	Starting flange
111	19722	1	Flywheel fan
112	27500	1	Flywheel
113	34500	1	Ignition coil assembly

NOTES:

LIMITED WARRANTY FOR POWER PRO™ ENGINES FROM WEN POWER™

Remember to save your receipt and to accurately fill out and mail your product registration card. You must provide proof of purchase for all warranty work.

Power Pro™ engines are warranted to be free from defects in materials and workmanship for a period of one (1) year from date of original purchase. Engines used for Commercial or Rental use have a warranty period of 90 days from date of original purchase. Keep purchase receipt and mail in the product registration card for proof of purchase.

Power Pro™ by WEN Power™ will repair or replace, at its discretion, any part that is proven to be defective in materials or workmanship under normal use during the one (1) year warranty period. Warranty repairs or replacements will be made without charge for parts or labor. Parts replaced during warranty repairs will be considered as part of the original product and will have the same warranty period as the original product.

To exercise the warranty, **DO NOT RETURN TO RETAILER**. Instead, call the toll free Customer Service number: **(888) 315-3080** and you will be instructed on where to take the engine for warranty service. Take the engine and proof of purchase (your receipt) to the repair facility recommended by the Customer Service Representative.

The warranty does not extend to engines damaged or affected by fuel contamination, accidents, neglect, misuse, unauthorized alterations, use in an application for which the product was not designed and any other modifications or abuse.

Power Pro™ by WEN Power™ is not liable for any indirect, incidental or consequential damages from the sale or use of this product. Any implied warranties are limited to one (1) year as stated in this written limited warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages. Some states do not allow limitation on the length of an implied warranty. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

Power Pro by Wen Power™. Elgin, IL 60123. www.wenproducts.com.