



Model# PTG1080

# WALK BEHIND EDGER OPERATOR'S MANUAL



Warning: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



**DO NOT RETURN TO STORE!**

**HAVE QUESTIONS OR NEED SERVICE?**



866-591-8921






support@pulsar-products.com

# Safety Definitions

## • Save these instructions











### Safety Alert Symbols

The following symbols are used on the product and in this manual to alert the operator of potential safety hazards. Read them carefully, and understand their meaning.

 <b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 <b>WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 <b>CAUTION</b>	Indicates a potentially hazardous situation which, if not avoided, may result in minor/moderate injury.
<b>NOTICE</b>	Indicates a practice not related to personal injury which, if not avoided, may result in property damage.

The following symbols may be found on your tiller. Carefully read and understand their meaning.

### Safety Warning Symbols

	Look for this symbol to point out important safety precautions. It means: Attention! Become Alert! Your Safety Is Involved.
	Read operator's manual before operating this machine. Failure to follow directions could result in serious injury.
	Thrown objects. Remove all rocks, stones, and foreign objects which could be thrown by machine.
	Do not use if children or bystanders are present.
	Rotating tines can cause serious injury. Keep hands, feet, and clothing away.
	Wear eye protection complying with ANSI Z87.1 and hearing protection.
	Disconnect spark plug wire when not in use or before servicing, cleaning, or performing maintenance on the unit.
	Engine exhaust contains carbon monoxide, an odorless and deadly gas. NEVER run unit indoors or in a poorly ventilated area.
	DO NOT touch hot muffler or cylinder. These parts are extremely hot from operation and may remain hot for a short time after operation.
	To reduce risk of fire, clean spilled gas and oil and keep unit free from debris. Gasoline is extremely flammable. Allow machine to cool before refueling.



### Control and Operating Symbols

	<b>Oil Fill Location:</b> Do Not Overfill
	Choke/Cold Start
	Run/Warm Start

# Safety Definitions (Continued)

• Save these instructions

## Control and Operating Symbols (Continued)

	Depth Control Lever: Move lever forward to increase cutting depth  Start Position
	Start Lever: Release lever to stop engine. Engage lever to start/run engine

## Important Safety Information

• Save all instructions

### Responsibility of Operator

1. Carefully read and follow these safety instructions. Failure to do so can result in serious injury.
2. Know your product. Read and understand this manual before use. Compare the illustrations to unit. Learn location and function of all controls. Thoroughly understanding the unit before use will result in the best performance and safety.
3. Follow all instructions when assembling the unit. If the unit was purchased in assembled condition, the operator must check the unit carefully to make sure it was assembled according the instructions in the manual before use.
4. Regularly inspect the edger. Make sure parts are not bent, damaged, or loose.
5. Use this equipment for its intended purpose only.
6. Operate the unit only with guards, shields, and other safety items in place and working correctly.
7. Service the unit only with authorized or approved replacement parts.
8. Complete all unit maintenance and adjustments according to the instruction in this manual.

### ⚠ WARNING

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

To prevent accidental starting when setting up, transporting, adjusting or making repairs, always disconnect spark plug wire and put wire where it cannot contact the spark plug.

### Preparation Safety

### ⚠ WARNING

- Read, understand, and follow all instructions on the machine and in this manual. Be thoroughly familiar with the controls and the proper use of the edger before starting. Know how to stop the engine quickly.
- Familiarize yourself with all the safety and operating decals on this equipment.
- Thoroughly inspect the area where the edger is to be used and remove all foreign objects. Your equipment can propel small objects at high speed causing personal injury or property damage. Stay away from breakable objects, such as house windows, auto glass, greenhouses, etc.
- Check that all nuts and bolts are tight and equipment is in good condition.
- Always check that the ground wire is connected before starting engine.

# Important Safety Information<sub>(Continued)</sub>

- Save all instructions

## **Operation Safety**

- Never allow children or young teenagers to operate the edger.

### **⚠ WARNING**

- Keep area of operation clear of all bystanders, particularly small children and pets.
- Only allow responsible individuals, who are familiar with the instructions, to operate the edger.
- Do not operate the edger while under the influence of alcohol, drugs, or other medication which can cause drowsiness or affect your ability to operate this machine safely.
- Do not use this machine if you are mentally or physically unable to operate the machine safely.
- Always wear ANSI compliant safety goggles or safety glasses with side shields when operating edger to protect your eyes from foreign objects, which can be thrown from the unit.
- Wear appropriate clothing such as a long sleeved shirt or jacket. Also wear long trousers or slacks. Do NOT wear shorts. Do NOT wear loose clothing, which could get caught in this equipment.
- Always wear work gloves and sturdy footwear such as leather work shoes or short boots. These will protect ankles and shins from small sticks, splinters, and other flying debris, and improve traction.
- It is advisable to wear protective headgear to protect against being struck by small flying particles, or being struck by low hanging branches, twigs, or other objects, which may be unnoticed by the operator.

### **⚠ WARNING**

- Do not put hands or feet near or under rotating parts.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- Exercise caution to avoid slipping or falling. Always be sure of your footing; keep a firm hold on the handle and walk; never run. Never operate the edger at high transport speeds on slippery surfaces.
- Look behind and use care when backing.
- Never operate the edger without good visibility or light.

### **⚠ DANGER**

- Do not run the engine indoors or inside a closed area. The exhaust fumes are dangerous, containing CARBON MONOXIDE, an ODORLESS AND DEADLY GAS.
- Never leave the edger unattended when the engine is running. Stop the engine and make sure all moving parts have stopped. Remove the wire from the spark plug.
- Do not overload the edger capacity by attempting to till too deep at too fast a rate.
- If the edger should start to vibrate abnormally, stop the engine, disconnect the spark plug wire and prevent it from touching the spark plug. Check immediately for the cause. Vibration is generally a warning of trouble.
- Watch for holes, ruts, bumps, or other rough ground. Tall grass can hide obstacles.

## **Fuel Safety**

### **⚠ WARNING**

- Gasoline is extremely flammable, and gasoline vapors can explode if ignited. Handle with care.
- Use an approved container.
- Check fuel supply before each use, allowing space for expansion as the heat of the engine and/or sun can cause fuel to expand.
- Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- Do not smoke while refueling.
- After refueling, replace fuel tank cap securely and wipe up spilled fuel.
- Never store fuel or edger with fuel in the tank inside a building where fumes may reach an open flame.

# Important Safety Information<sup>(Continued)</sup>

- Save all instructions

## **Storage Safety**

- Always refer to the operator's manual instructions for important details if the edger is to be stored for an extended period.
- Never store the edger with fuel in the fuel tank inside a building where ignition sources are present such as water heaters, space heaters, clothes dryers, etc.
- To reduce fire hazard, keep edger free of grass, leaves, or other debris build-up.
- Allow the engine to cool before storing in any enclosure.

## **Repair, Maintenance, and Adjustment Safety**

- After striking a foreign object, stop the engine. Remove the wire from the spark plug and keep the wire away from the plug to prevent accidental starting. Thoroughly inspect the edger for any damage. If damaged, have the equipment repaired by a trained technician before restarting and operating.

## **⚠ WARNING**

- Stop the engine before cleaning, repairing, or inspecting the unit. Make sure all moving parts have stopped. Let the engine cool, disconnect the spark plug wire and move it away from the spark plug.
- Never attempt to make any adjustments while the engine is running except when specifically recommended by the manufacturer.
- Keep the edger in safe working condition. Check all fasteners at frequent intervals for proper tightness.
- When servicing or repairing the edger, do not tip the machine over or up unless specifically instructed to do so in this Manual. Service and repair procedures can be done with the edger in an upright position. Some procedures will be easier if the machine is lifted on a raised platform or working surface.
- Use only original equipment or authorized replacement parts.
- Never tamper with safety devices. Check their proper operation regularly.
- Do not change the engine governor setting or over-speed engine.
- Clean and replace safety and instruction decals as necessary.
- To guard against engine over-heating, always have engine debris filter mounted and clean.

## **Children Safety**

## **⚠ WARNING**

- Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the edger and the edging activity.
- Keep children out of the edging area and under the watchful care of a responsible adult.
- Never assume that children will remain where you last saw them.
- Be alert and turn edger off if children enter the area.
- Before and while moving backwards, look behind and down for small children.
- Never allow children to operate the edger.
- Use extra care when operating near blind corners, shrubs, trees, or other objects that may obstruct vision.

# Edger Specifications

• Save all instructions

Unit Weight . . . . . 47 lbs.  
Cutting Depths . . . . . 1"-2.3"  
Blade Diameter . . . . . 9", 2 Point  
Gasoline Type . . . . . Regular Unleaded / 92 Octane (min.)  
Gasoline Capacity . . . . . 1.2L Oil  
Type (API SG-SL) . . . . . SAE10W-30 is recommended  
for all service temperatures .  
*See page 7 for additional information.*  
Oil Capacity . . . . . (400 ml)

Spark Plug Model . . . . . F6RTC  
Spark Plug Gap . . . . . 0.024-0.028 in. (0.6-0.7 mm)  
Engine Type . . . . . 4 Stroke OHV  
Displacement . . . . . 151cc  
RPM . . . . . 3000 RPM

## Parts & Features

1. Start Lever - Lever on handle which allows the engine to run. When lever is released, engine will stop.
2. Choke Control - Restricts the air intake. This allows for an enriched fuel-air mixture which helps to start the engine.
3. Muffler - Location of engine exhaust.
4. Adjustable Rear Wheel - Right rear wheel is adjustable to level the edger when edging along a curb (curb-hopping).
5. Adjustable Front Wheel - The front wheel can adjust down for curb-hopping.
6. Recoil Starter Handle - The engine is equipped with an easy pull recoil starter.
7. Blade - Rotating cutting element .
8. Blade Guard - Prevents stones and debris from being thrown at the operator.
9. Spark Plug/Spark Plug Wire - Provides spark to ignite air/fuel mixture. The Spark Plug Wire must be disconnected and moved away from the Spark Plug when servicing the unit.
10. Air Filter - Removes debris and contaminants from intake air, allowing engine to run smoothly with low exhaust.
11. Depth Selector Plate
12. Depth Control Lever
13. Control Rod - Used to control the edging depth of cut.

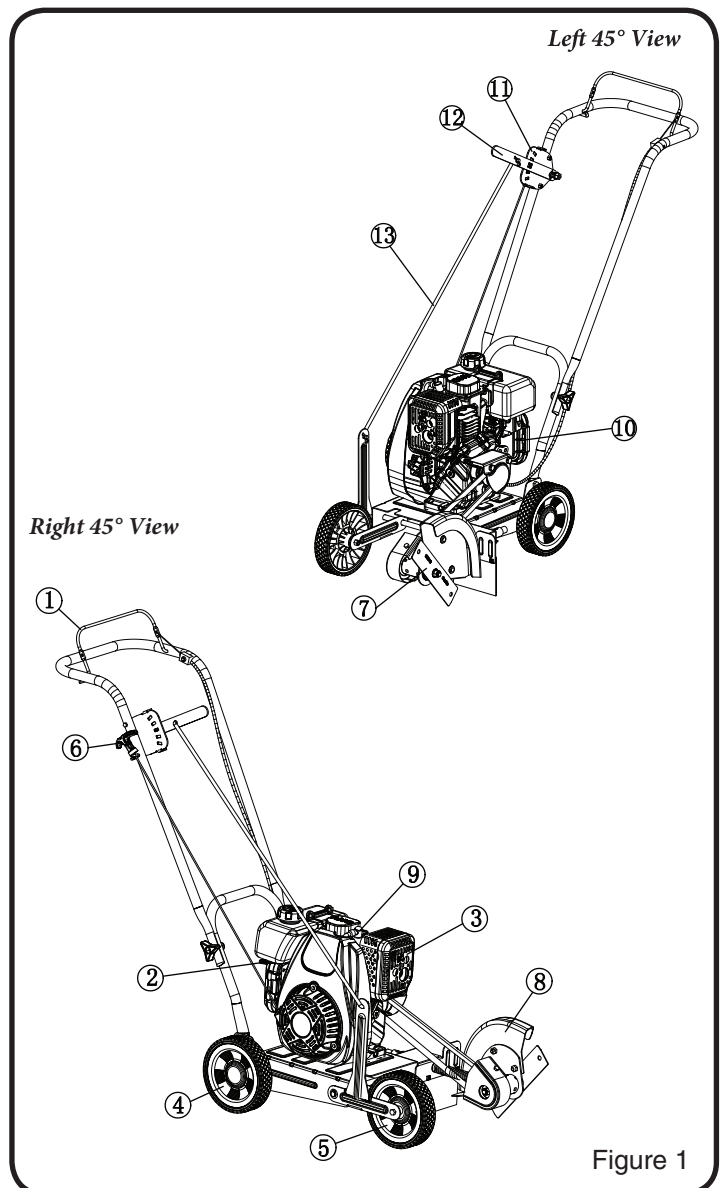


Figure 1

# Assembly

• Save all instructions

Read and follow the assembly instructions. Do not discard any parts or materials until the unit is assembled. References to the right or left side of the edger are from the viewpoint of the operator's position behind the edger.

## **⚠ WARNING**

Do not operate edger if it is damaged or not completely and correctly assembled. Before doing any assembly or maintenance to the unit, remove the wire from the spark plug. Always wear ANSI compliant safety glasses with side shields while assembling the edger.

The following components will be found in the carton. Quantities shown in ( ).

1. (1) Edger
2. (1) Edger Operator's Manual
3. (1) Upper Handle
4. (1) Control Rod
5. (1) Parts bag containing the following:
  - (2) Hair Pins
  - (2) Plastic Wing Nuts (M8)
  - (2) M8x45mm Pipe Bolts
  - (2) Wire Tie
  - (2) Flat washer
  - (1) Clip
  - (1) Spark plug sleeve

NOTE: Depending on the model, the fasteners to attach the wheels will either be loosely assembled to the unit or in a separate plastic bag. *See assembly instructions.*

## **A** How to Remove Edger from Carton

1. Remove all parts and packaging components.
2. Use a utility knife to cut all 4 vertical edges and lay the side panels flat around the edger.
3. Remove any remaining packaging.
4. Roll the unit out from the carton, and place on a hard level surface.

## **B** How to Assemble the Handle

NOTE: Refer to Figure 2 when following steps below:

1. Assemble the upper handle to the lower handle with the (2) pipe bolts and the (2) plastic wing nuts. Firmly hand tighten the wing nuts.
2. Slide one end of the control rod into the hole of the Depth Control Lever. Secure with hairpin.
3. Slide the other end of the control rod through the hole of the quill arm. Secure with second hairpin.
4. Attach the recoil starter handle through the rope guide, by twisting it into position.

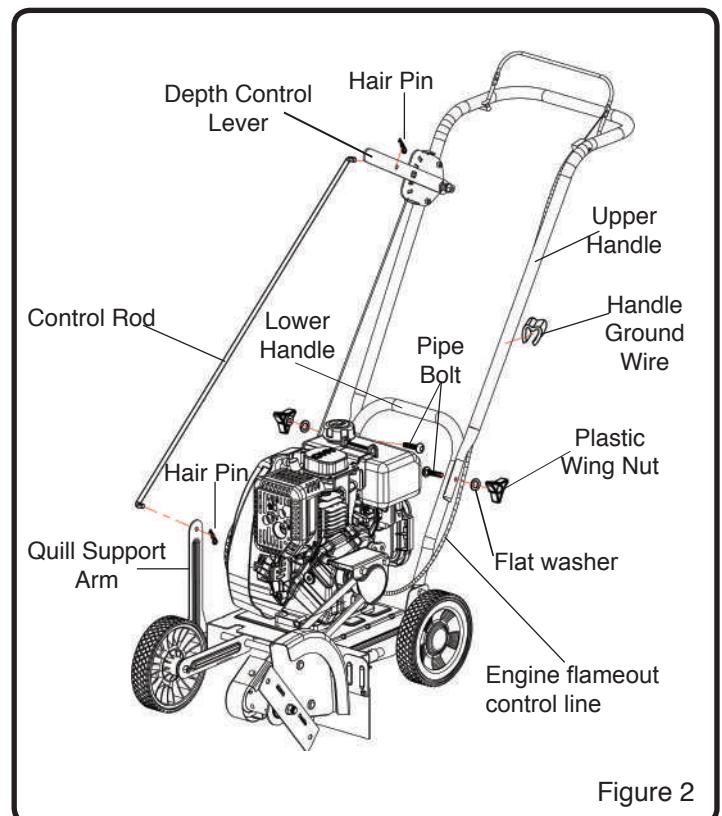


Figure 2



# Engine Preparation

- Save all instructions

## A Engine Oil

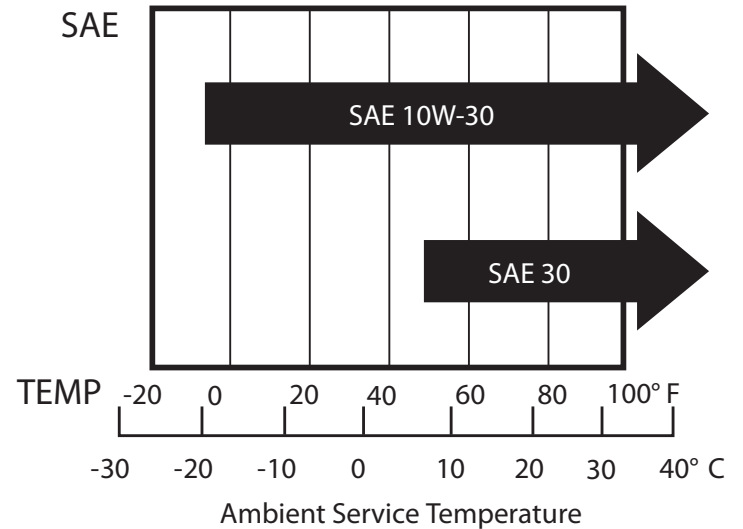
### NOTICE

Engine shipped without oil. Failure to add oil will result in serious engine damage.

Refer to the chart on the right for alternative oil types to use at different temperatures. Always use a high quality detergent oil classified “For Service, SG, SH, SJ” or higher. Do not use special additives.

Always use recommended oil type. Using dirty oil or incorrect oil type such as 2-stroke engine oil will shorten engine life.

NOTE: Engine Oil Capacity is 400 ml .





# Engine Preparation (Continued)

• Save all instructions

## B How to check oil level and fill to proper level

### ⚠ WARNING

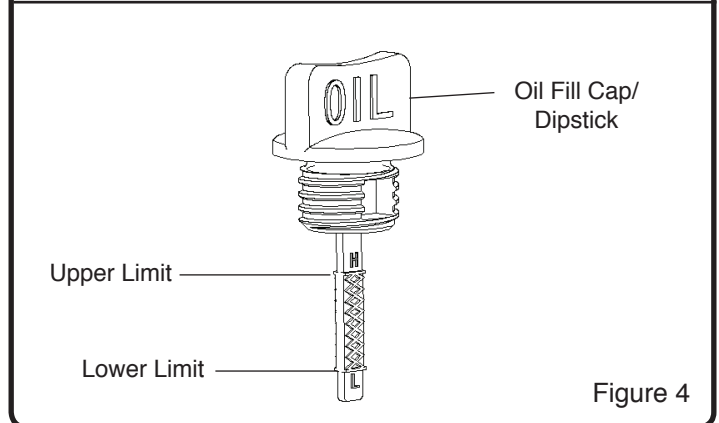
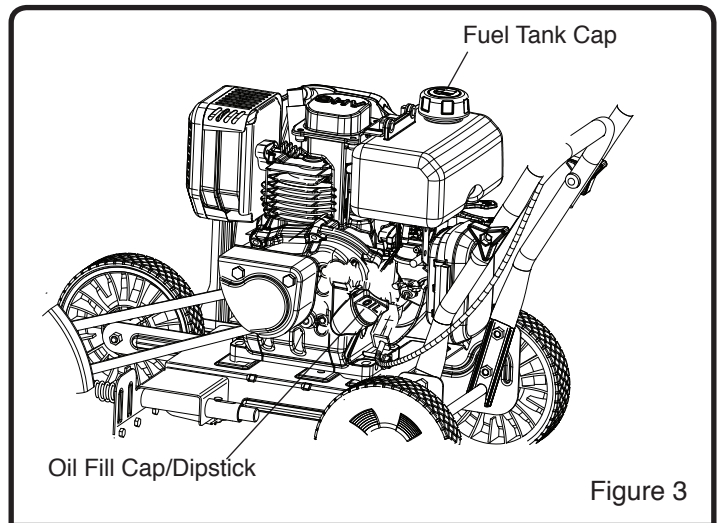
Before checking oil, make sure engine is off, and spark plug wire has been disconnected from spark plug.

1. Remove the oil fill cap/dipstick and wipe clean with cloth. (See Figure 3)
2. Insert dipstick into fill spout but do NOT screw in. Remove dipstick and check oil level.
3. When oil level is full, the oil will be at upper limit on dipstick. If oil level is near or below the lower limit, oil must be added. (See Figure 4)
4. Add oil slowly until the oil level reaches the upper limit of the dipstick. Use a funnel or nozzle to reduce spillage.

### NOTICE

Frequently check oil level while filling. DO NOT OVERFILL. DO NOT UNDERFILL. Running engine at improper oil level will seriously damage engine.

6. Replace and tighten dipstick.
7. Clean up any spilled oil.



## C Fuel

### ⚠ WARNING

Gasoline is extremely flammable and vapors can explode if ignited. Handle with care.

Use fresh unleaded gasoline with an octane rating of 87 or higher. Do not use gasoline containing more than 10% ethanol. Use of non-ethanol fuel is best. We recommend the continuous use of a fuel additive / stabilizer to counteract the effects of ethanol. These additives also prolong the shelf life of gasoline.

### NOTICE

Using incorrect fuel type or contaminated fuel will cause serious engine damage.

NOTE: Fuel tank capacity is approximately 1.2L

### How to Fill Engine with Fuel

### ⚠ WARNING

Turn engine off and let engine cool for several minutes before removing the fuel cap or adding fuel. Never fill fuel tank indoors. Do not smoke while adding fuel.

1. Clean surface around fuel tank cap to prevent contamination. (See Figure 3)
2. Loosen fuel cap slowly. After removing cap, place on a clean surface.
3. Pour fuel into the tank. Use care to avoid spillage.

NOTE: DO NOT overfill fuel. Allow space for the fuel to expand due to heat from engine and/or sun.

4. Before replacing the fuel cap, inspect and clean the fuel cap seal.
5. Replace the fuel cap and securely hand-tighten.
6. Clean up any spilled fuel.

# Operation

- Save all instructions

## A

### Before Starting the Engine

#### ⚠ WARNING

Before starting engine, read operator's manual. Become familiar with location and function of all controls. Know how to stop the engine quickly.

#### ⚠ WARNING

Before starting the engine, check that the ground wire terminals have been connected.

Before attempting to start the engine, review the following steps:

1. Unit has been assembled according to all assembly instructions.
2. Ground wire terminals are connected.
3. Unit has been inspected for any damaged or missing components.

4. No parts are remaining in the carton.
5. Engine oil is at proper level.
6. Fresh, clean, regular-unleaded gasoline has been added to fuel tank.
7. Spark plug wire is connected to spark plug.
8. Edger has been moved to desired location.
9. Edger is on level surface.

#### ⚠ WARNING

Keep all bystanders, especially CHILDREN, away during operation.

**IMPORTANT:** This unit's engine exhaust system is equipped with a spark-arresting muffler. Tampering with or removing the spark-arrestor violates section 4442 of the California Public Resources Code as well as other applicable state and federal law.

## B

### How to Start Engine

#### ⚠ DANGER

Never Run engine indoors or in a poorly ventilated area. Engine exhaust contains Carbon Monoxide, an ODORLESS and DEADLY gas.

#### ⚠ WARNING

Debris thrown from edger can cause severe eye damage. Always wear ANSI compliant safety glasses or eye shields when operating edger. If you wear eyeglasses, put an OSHA certified Wide-Vision Safety Mask over your eyeglasses.

1. Review ALL steps in the "BEFORE STARTING THE ENGINE" section.
2. Move the Depth Control Lever to the Start Position. (See Figure 6-①)
3. Rotate Choke to the Choke Position. (See Figure 5) **NOTE:** Not required when re-starting a warm engine.
4. Firmly grip the edger handle with your left hand, Pulling the Start Lever against the handle (See Figure 6-②) . **NOTE:** Engine will not start if the Start Lever is not pulled against the handle.
5. Firmly grip the Recoil Starter Handle with your right hand. (See Figure 6-③)
6. Pull the recoil slowly, until you feel tension in the starter rope. Then quickly pull the recoil starter handle to completely unwind the starter rope. DO NOT allow the starter rope to snap back. Let the starter rope slowly rewind.

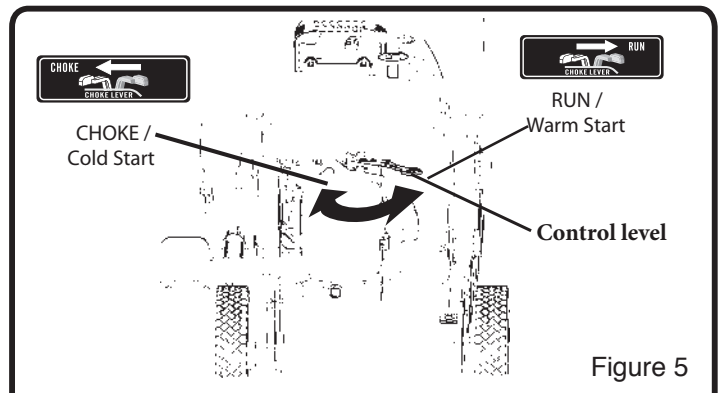


Figure 5

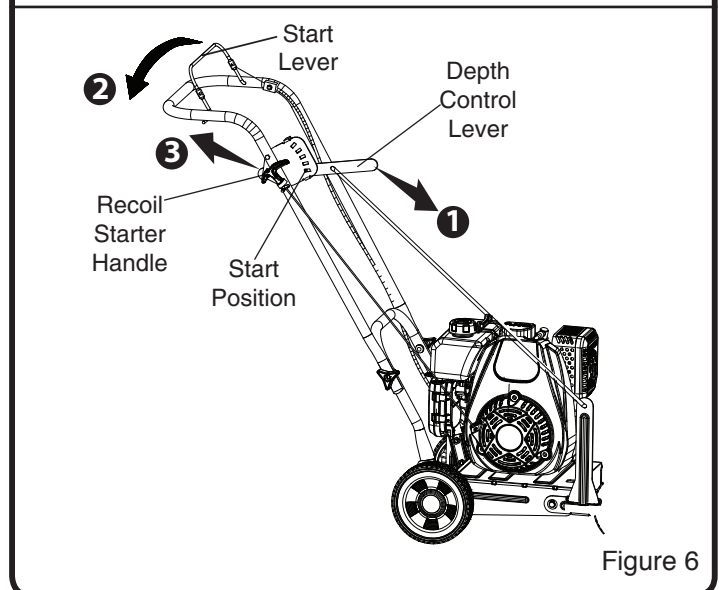


Figure 6

# Operation (Continued)

- Save all instructions

## B How to Start Engine (Continued)

7. After the engine starts, wait 2-5 seconds and rotate the choke back to the RUN position.
8. If engine fails to start after 5 or 6 more attempts, see instructions in the "Troubleshooting Chart".

### ⚠ WARNING

Keep hands, feet, hair, and loose clothing away from any moving parts. Avoid touching muffler and surrounding areas temperatures can exceed 150 degrees. Keep all safety devices and shields in place.

## C How to Stop the Edger

Release the start lever (See Figure 6). This will ground out the engine through the ground wire, causing the engine to stop.

## D How to Change the Edger Cutting Depth

Move the Depth Control Lever forward to increase the depth. (See Figure 7)

NOTE: There are 5 cutting depth settings from approximately ground level to 60 mm deep.

### NOTICE

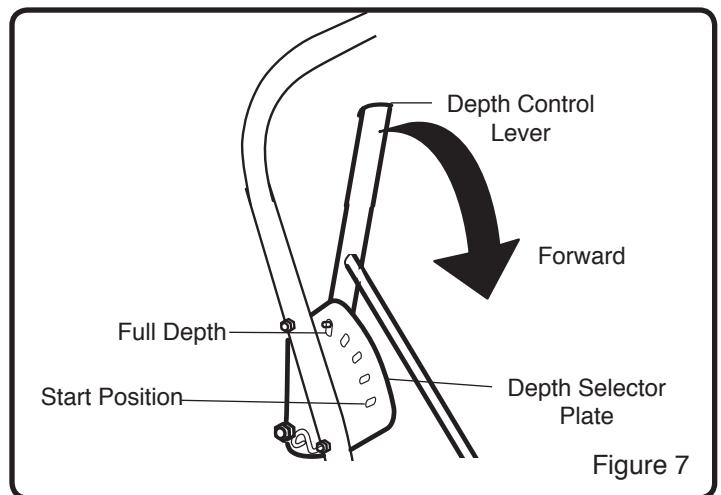
Do not overload the edger capacity by attempting to edge too deep at too fast a rate. To edge at deeper settings, make multiple passes, first cutting at shallow depths.

### Edging Tips

#### ⚠ WARNING

Read the Operator's manual. Know location and functions of all controls. Keep all safety devices and shields in place. Never allow children or uninstructed adults to operate the edger. Keep bystanders away from machine. Keep away from the blade and all rotating parts, which cause injury.

- Edging is best performed when conditions are dry. If the soil is too wet, dirt becomes packed around the blade causing premature belt wear and decreased performance.
- If dirt does become packed around the blade, stop the engine and remove the wire from the spark plug. Remove the packed dirt and debris from the blade.
- For deep edging, first cut at shallow depths. Then, cut at greater depths until the desired depth is obtained.
- Edging can be customized by varying the number of passes and the distance between the blade and the edge of sidewalk, driveway, or curb.



## HIGH ALTITUDE OPERATION

- If operating equipment with engines regularly at altitudes over 5,000 feet, the carburetor's air-fuel mixture will be too rich and emissions may increase. On engines not built for the United States the carburetor can be adjusted to operate under this condition. The carburetor should be returned to its normal setting if regular operation is less than 5,000 feet. Contact your service center to modify the carburetor.

# Maintenance

• Save all instructions

## A Maintenance Schedule

### ⚠ WARNING

Before performing any maintenance, turn engine off and remove the wire from the spark plug to prevent accidental starting and serious injury.

**IMPORTANT** The warranty on this edger does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the edger as instructed in this manual, and only use genuine replacement parts. The following table lists required periodic maintenance.

PERIODIC MAINTENANCE SCHEDULE TABLE

Service Records- Fill in dates as you complete regular service	Before Each Use	After Every 10 Hours of Use	After Every 25 Hours of Use	After Every 50 Hours of Use	After Every 100 Hour of Use	Before Each Season	Before Storage	See Note Below
Check Engine Oil Level, Fill to Proper Level	✓					✓		
Clean Debris From Unit	✓					✓	✓	
Lubricate All Pivot Points		✓				✓	✓	
Check Fasteners for Tightness		✓				✓		
Check Drive Belt Replace if Necessary		✓				✓		
Check Blade for Wear or Damage Replace if Necessary		✓				✓		
Check Fuel Line Replace if Necessary			✓			✓		
Lubricate Wheel Axles			✓			✓	✓	
Check Spark Plug Replace if Necessary			✓			✓		
Change Engine Oil				✓		✓	✓	
Clean Air Filter Replace if Necessary			✓			✓		
Replace Spark Plug					✓			
Clean Combustion Deposits from Cylinder, Piston, and Valves					✓			

### ⚠ CAUTION

**IMPORTANT** (Notes about Maintenance schedule)

1. Re-check tightness of all fasteners after first 2 hours of initial use.
2. Change engine oil after first 5-8 hours of initial use.
3. Change oil every 25 hours if operating under heavy load or in high temperatures.
4. Clean air filter every 10 hours if operating under dusty conditions.

### ⚠ WARNING

Use only GENUINE replacement parts. Other parts may damage the unit or result in injury.

# Maintenance (Continued)

- Save all instructions

## B Lubrication

Add a small amount of engine oil to lubricate parts and pivot points. Refer to “Periodic Maintenance Schedule Table” for time intervals to lubricate parts.

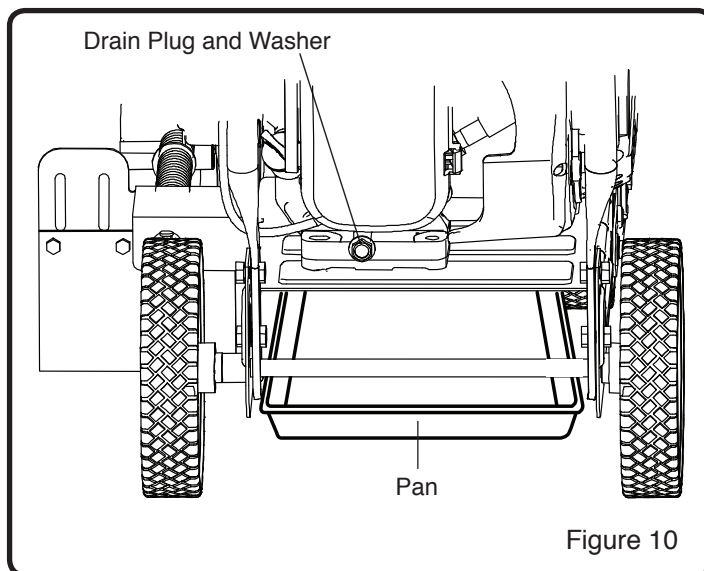
## C How to Change the Engine Oil

NOTE: Refer to Figure 10 when following the steps below:

1. Stop the engine and let it cool.
2. Disconnect spark plug wire from the spark plug.
3. Raise the front of the unit, by lowering the height of the front wheel. Refer to *How to Edge Along a Curb*.
4. Insert a flat pan under the edger, underneath the oil drain plug and frame hole.
5. Remove oil dipstick. (See Figure 3)
6. Remove the oil drain bolt and washer.
7. Allow all oil to drain through the frame hole into the pan.

IMPORTANT: Used oil is a hazardous waste. Place oil in a sealed container and take to your local recycling center. Do NOT discard with household waste.

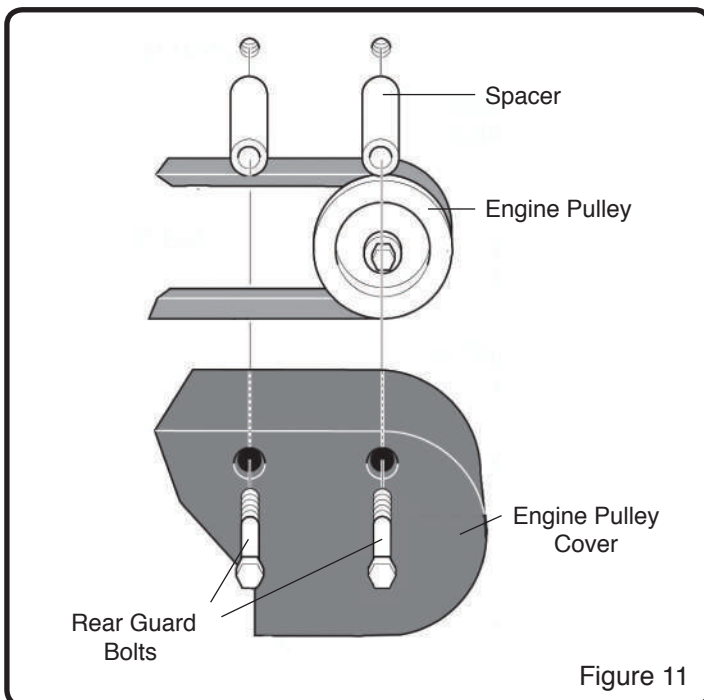
8. Replace and tighten the oil drain plug and washer.
9. To re-fill engine with oil, see engine preparation section *How to Check Oil and Fill to Proper Level*.



## D How to Replace the Belt

IMPORTANT: Only use a replacement belt from the manufacturer. To order spare parts call us at 866-591-8921.

1. Disconnect the spark plug wire from the spark plug.
2. To ease the replacement of a belt, remove the control rod (See Figure 2). This will allow the quill arm to rotate back creating slack in the belt.
3. Remove the two rear guard bolts to remove the engine pulley cover. (See Figure 11)



# Maintenance (Continued)

- Save all instructions

## E How to Replace the Belt (Continued)

4. Remove the two Front Guard Screws and the Belt Guard. (See Figure 12)
5. Remove the old belt from the engine and quill assembly pulleys.
6. To install a replacement belt from the manufacturer, reverse the steps above.

NOTE: The rear guard bolts should be tightened to 13-16 foot-pounds [18-22N-m].

NOTE: The front guard screws should be tightened to 4-6 foot-pounds [6-8N-m].

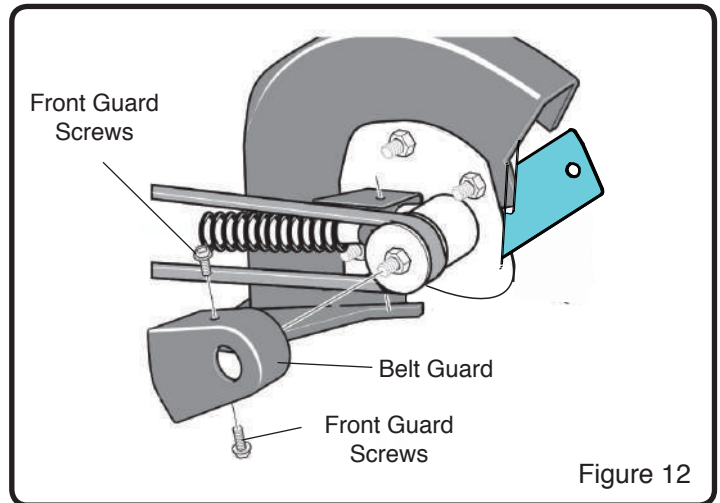


Figure 12

## F How to Change the Blade

### ⚠ WARNING

Do not sharpen the blade. Sharpening can damage the blade and cause it to break, which can cause injury to you or to others.

The blade is subject to nicks, scratches, and dents, which will generally not affect function. The blade is also subject to wear – reducing the cutting depth. Replace a worn blade by following the steps below:

**IMPORTANT: Only use a replacement blade from the manufacturer. To order spare parts call us at 866-591-8921.**

NOTE: Replacing the blade requires two (2) 12" adjustable wrenches, or two (2) 3/4 in. [19mm] wrenches.

1. Shut off engine.
2. Disconnect the spark plug wire from the spark plug.
3. Remove the blade locknut that holds the blade to the drive shaft. (See Figure 13)

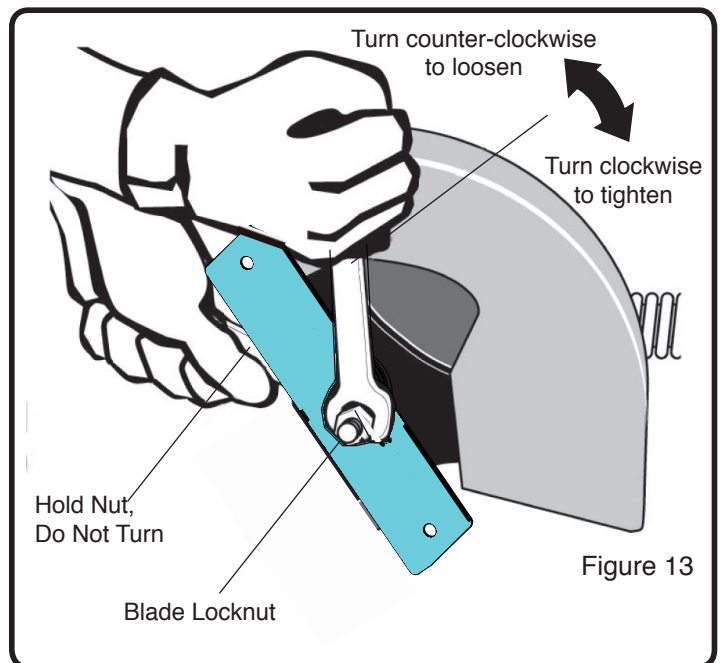


Figure 13

### ⚠ WARNING

To remove or tighten the blade locknut, always use the method shown in Figure 13. Always position the holding wrench on the nut behind the blade.

4. Remove the blade.
5. Replace with new blade from the manufacturer by reversing the above steps.

NOTE: Tighten the blade locknut to 35-45 foot-pounds (47-61 N-m).



# Maintenance (Continued)

- Save all instructions

## G How to Clean the Air Filter

A dirty air filter will restrict air intake. Regular maintenance of air cleaner will help improve engine performance and reduce emissions.

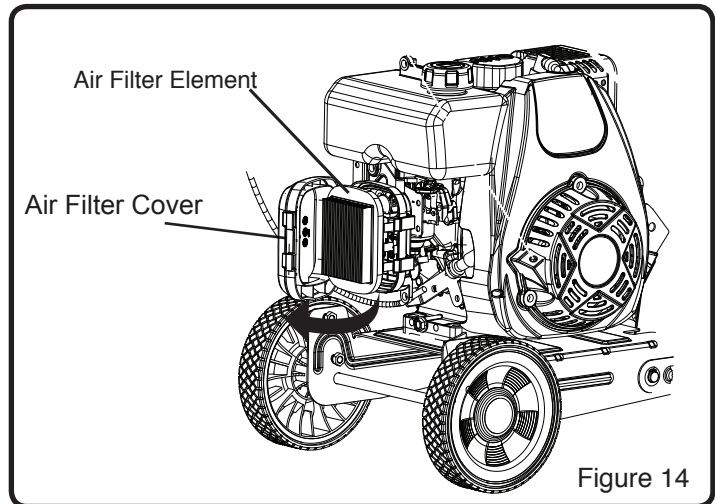
### ⚠ WARNING

Never clean air filter with gasoline or an easily ignited solvent because it may cause explosion.

NOTE: Refer to Figure 14 when following the steps below:

1. Open the air filter cover.
2. Remove the air filter cover.
3. Carefully remove air filter element to prevent dirt from falling into carburetor.
4. Clean all parts. Wash the air filter element in a nonflammable or high burning point solvent, and allow to dry thoroughly; dip the filter element in clean oil, and squeeze out all excess oil.

5. Reinstall the air filter element. Replace.
6. Close the air filter cover.



## H How to Check the Spark Plug

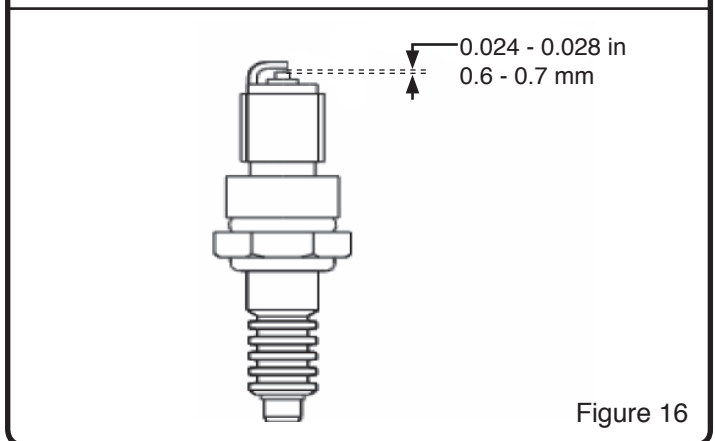
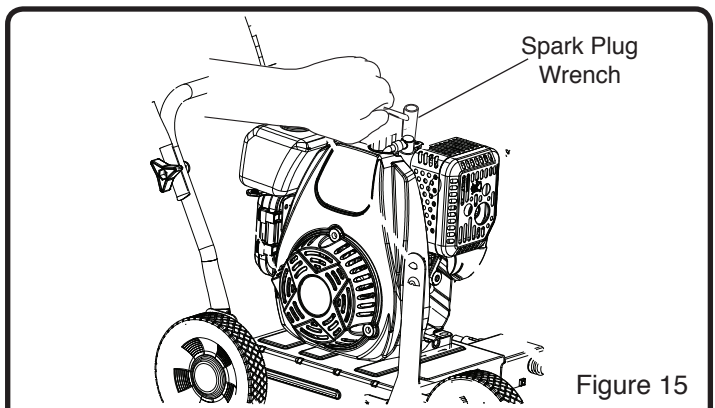
Spark Plug Model: Torch E7RTC

### ⚠ CAUTION

Only use the recommended spark plug or a spark plug with the same temperature range. Using an improper spark plug, an incorrect spark plug gap, or a dirty/fouled spark plug can reduce engine performance and cause damage.

1. Stop engine and allow it to cool.
2. Remove spark plug wire from spark plug. Remove spark plug (See Figure 15)
3. Visually inspect the spark plug for cracks or damage. If cracked, replace spark plug.
4. Clean carbon deposits. If excessive carbon build up, replace spark plug.
5. Check that the gap of the spark plug is 0.024-0.028 in. (0.6-0.7 mm). (See Figure 16)
6. Re-insert the spark plug and tighten using a spark plug wrench. (See Figure 15)
7. Reattach spark plug wire to spark plug.

NOTE: Torque of spark plug is 18-22 foot-pounds (25-30 Nm).





# Maintenance (Continued)

- Save all instructions



## How to Prepare for Storage

### **WARNING**

Never store the edger indoors with fuel in the fuel tank. Never store in an enclosed, poorly ventilated area where fumes could reach an open flame, a spark or a pilot light as on a furnace, water heater or clothes dryer. Allow engine to cool before storing unit.

### **WARNING**

Do not remove gasoline while inside a building, near a fire, or while you smoke. Gasoline fumes can cause an explosion or a fire.

**NOTE:** A yearly checkup or tune-up at an authorized service center will make sure that the edger will provide maximum performance for the next season.

To prevent fuel gum deposits and corrosion in the unit's carburetor and fuel system, it is highly recommended to use a fuel additive/stabilizer formulated for ethanol fuels. Follow the stabilizer manufacturer's instructions. Run the engine for at least 5 minutes after adding stabilizer.

When the edger is put in storage for thirty days or more, the following steps should be followed to make sure the edger is in good condition the next season.

1. Let the engine run until it is out of gasoline. Remove the carburetor screw from bowl and drain fuel. Tilt unit slightly to remove all fuel. Replace screw.
2. Change the oil by following instructions under *How to Change the Oil*.
3. Remove the spark plug from the cylinder. Pour one ounce (US) of oil into the cylinder. Slowly pull the recoil-start grip so that the oil will protect the cylinder. Install a new spark plug in the cylinder. Pull starter handle slowly a few times to distribute oil. Pull recoil slowly until resistance is felt. This will close the cylinder valves.

### **WARNING**

Do not attach spark plug wire to spark plug when storing unit.

4. Clean edger. Remove all dirt, leaves, debris, grease, etc. from the edger - including cylinder cooling fans, recoil starter cover holes, under fuel tank, and under muffler.
5. Check the edger for worn or damaged parts. Have damaged parts replaced if necessary.
6. Tighten any loose hardware.
7. Apply lubrication as directed in *Maintenance section*.
8. Put the unit in a building that has good ventilation.
9. Cover the edger with a breathing material.

# Troubleshooting

• Save all instructions

PROBLEM	POSSIBLE CAUSE(S)	SOLUTION(S)
Engine difficult to start	<ol style="list-style-type: none"> <li>1. Out of fuel</li> <li>2. Start lever is not compressed</li> <li>3. Choke in "Run / Warm Start" position</li> <li>4. Spark plug wire disconnected</li> <li>5. Fouled spark plug</li> <li>6. Dirty Carburetor</li> <li>7. Clogged air filter</li> <li>8. Clogged fuel filter</li> <li>9. Contaminated Fuel</li> </ol>	<ol style="list-style-type: none"> <li>1. Add fresh fuel</li> <li>2. Pull start lever against handle</li> <li>3. Rotate Choke lever to "Choke / Cold Start" position</li> <li>4. Attach spark plug wire to spark plug</li> <li>5. Remove spark plug. Inspect. Replace if necessary</li> <li>6. Take unit to an authorized service center for Carburetor cleaning</li> <li>7. Remove and clean air filter</li> <li>8. Remove fuel filter. Inspect. Replace if necessary</li> <li>9. Drain fuel tank. Clean fuel tank. Fill with fresh fuel</li> </ol>
<u>Engine Problems</u> Engine smokes excessively Engine runs very "rough" Engine runs erratically Engine cannot maintain full speed	<ol style="list-style-type: none"> <li>1. No Engine Oil</li> <li>2. Engine oil not at proper level</li> <li>3. Fouled spark plug</li> <li>4. Clogged air filter</li> <li>5. Clogged fuel filter</li> <li>6. Contaminated Fuel</li> <li>7. Carburetor out of adjustment</li> <li>8. Choke in "Choke / Cold Start" position</li> </ol>	<ol style="list-style-type: none"> <li>1. Add engine oil</li> <li>2. Check engine oil. Add or drain engine oil if necessary</li> <li>3. Remove spark plug. Inspect. Replace if necessary</li> <li>4. Remove and clean air filter</li> <li>5. Remove fuel filter. Inspect. Replace if necessary</li> <li>6. Drain fuel tank. Clean fuel tank. Fill with fresh fuel</li> <li>7. Take unit to an authorized service center for Carburetor adjustment</li> <li>8. Rotate Choke to "Run / Warm Start" position</li> </ol>
Excessive vibration / noise	<ol style="list-style-type: none"> <li>1. Loose parts</li> <li>2. Engine problems (above)</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten all fasteners</li> <li>2. Refer to engine solutions (above)</li> </ol>
Blade will not rotate	<ol style="list-style-type: none"> <li>1. Debris interfering with blade</li> <li>2. Blade loose</li> <li>3. Belt Loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove debris from around blade</li> <li>2. Tighten blade nuts</li> <li>3. Replace Belt</li> </ol>
Engine will not stop	Engine flameout control line is too tight.	Adjust the engine flameout control line tighten nut to make the control line loose.
Blade will not cut properly	Damaged or worn blade	Replace blade
Frequent engine stalling	<ol style="list-style-type: none"> <li>1. Excessive edging speed / depth</li> <li>2. Engine problems (above)</li> </ol>	<ol style="list-style-type: none"> <li>1. Edge at a moderate pace. Make multiple passes</li> <li>2. Refer to engine solutions (above)</li> </ol>