

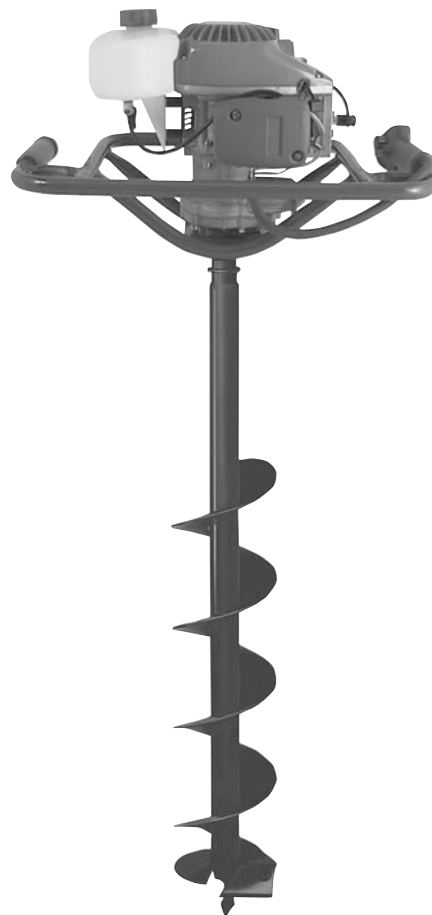


TR 1551 (3.06 cu.in)

en OPERATOR'S INSTRUCTION MANUAL

fr MANUEL D'UTILISATION ET D'ENTRETIEN

es MANUAL DE INSTRUCCIONES



We care

Quality Ethics Environment

ISO 9001 - SA 8000 - ISO 14001



To correctly use the earth auger and prevent accidents, do not start work without having first carefully read this manual. You will find explanations concerning the operation of the various parts plus instructions for necessary checks and relative maintenance.

Note: Illustrations and specifications in this manual may vary according to Country requirements and are subject to change without notice by the manufacturer.

THE OPERATOR'S MANUAL

Your operator's manual is for your protection. READ IT. Keep it in a safe place for reference. Know what you are doing before you begin assembly of the unit. Proper preparation and upkeep go hand-in-hand with satisfactory performance of the earth auger and safety.

Contact your dealer or the distributor for your area if you do not understand any of the instructions in this manual.

In addition to the operating instructions, this manual contains paragraphs that require your special attention.

Such paragraphs are marked with the symbols described below:

Warning: where there is a risk of an accident or personal injury or serious damage to property.

Caution: where there is a risk of damaging the machine or its individual components.



WARNING - To ensure safe and correct operation of the earth auger this operator's manual should always be kept with or near the machine. Do not lend or rent your earth auger without the operator's instruction manual.



WARNING: Allow only persons who understand this manual to operate your earth auger.

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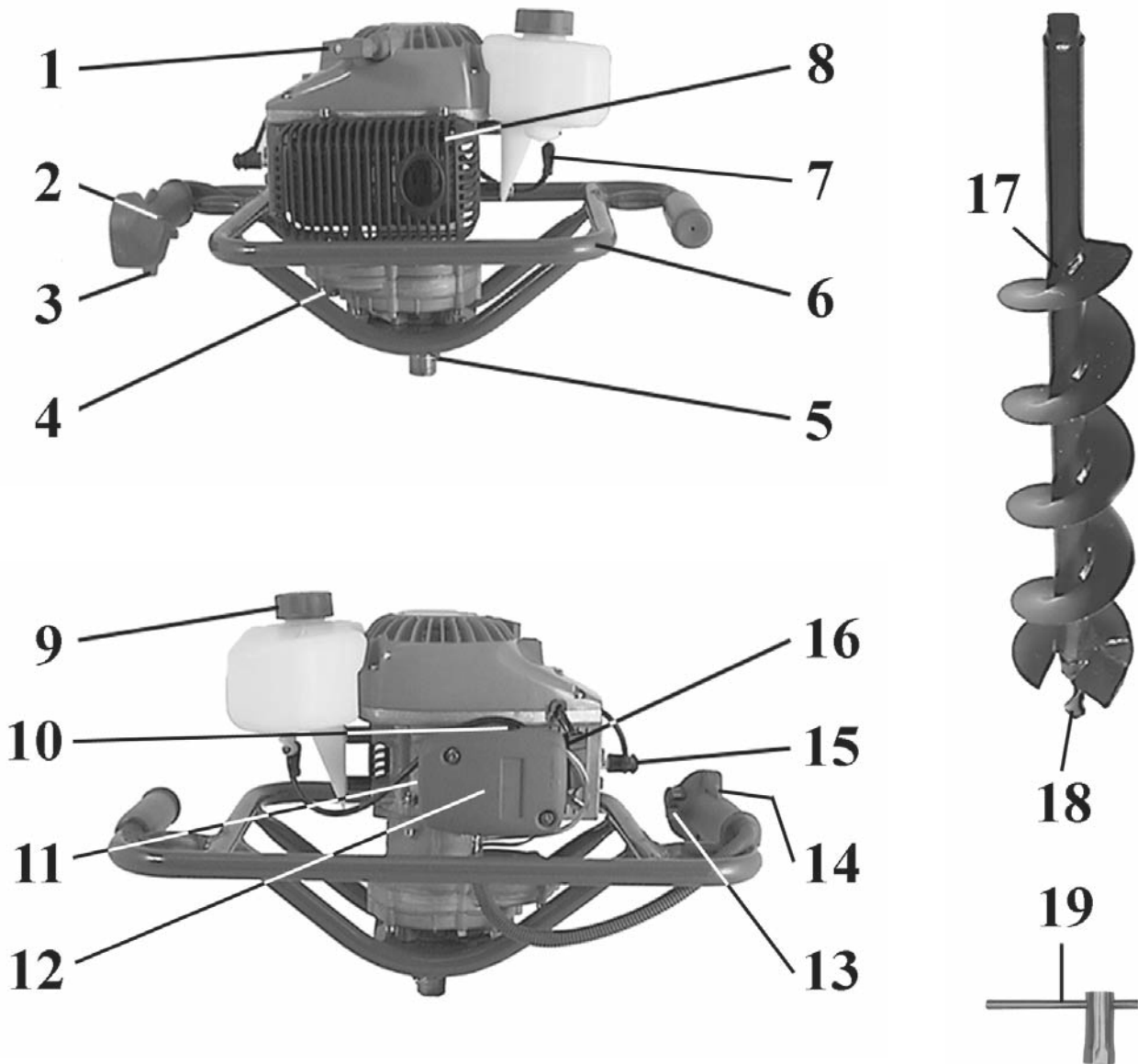
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Earth Auger Components

- | | |
|----------------------|-------------------------------|
| 1 - Starter Handle | 11 - Idle Speed Screw |
| 2 - On/Off Switch | 12 - Air Filter Cover |
| 3 - Throttle Trigger | 13 - Half Throttle Lock |
| 4 - Grease Cap | 14 - Throttle Trigger Lockout |
| 5 - Bit Stop Pin | 15 - Spark Plug |
| 6 - Bar | 16 - Choke Lever |
| 7 - Fuel Tap | 17 - Bit |
| 8 - Muffler Guard | 18 - Boring Tip |
| 9 - Fuel Tank Cap | 19 - Combination Wrench |
| 10 - Purge Bulb | |

Understanding Safety Labels



- This symbol indicates Warning, and Caution.



- Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. **PLEASE READ ALL THE INFORMATION CAREFULLY TO AVOID INJURY AND MACHINE DAMAGE.**



- Wear eye, hearing and head protection when operating this equipment.



- Wear non-slip, heavy-duty protective gloves when handling earth auger and bit.



- Wear safety strong shoes or boots having skid-proof sole and anti-piercing insert.

State and Local Requirements

This engine is **NOT** equipped with a Spark Arrester System complying with the requirements of SAE Recommended Practice J335 and California Codes 4442 and 4443. **All national forest land and land managed by the states of California, Maine, Washington, Idaho, Minnesota, New Jersey and Oregon require internal combustion engines to be equipped with a spark arrester screen by law. Other states and federal agencies are enacting similar regulations.**

Operating this engine in a state or locale where such regulations apply, could result in a violation of the law.

Note: When using this machine for logging purposes, refer to Code of Federal Regulations, Parts 1910 and 1928.



WARNING: The ignition system of your unit produces an electromagnetic field of a very low intensity. This field may interfere with some pacemakers. To reduce the risk of serious or fatal injury, persons with pacemaker should consult their physician and the pacemaker manufacturer before operating this tool.



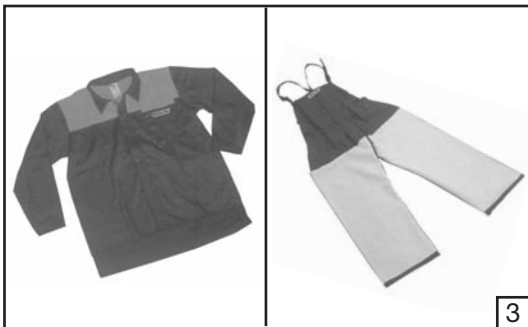
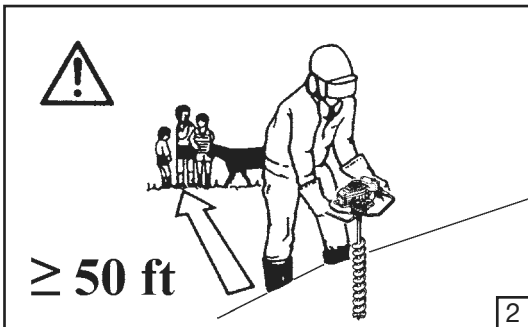
WARNING: Muffler surfaces are very hot during and after operation of the earth auger, keep all body parts away from the muffler. Serious burns may occur if contact is made with the muffler.



WARNING: Exposure to vibrations through prolonged use of gasoline powered hand tools could cause blood vessel or nerve damage in the fingers, hands, and wrists of people prone to circulation disorders or abnormal swellings. Prolonged use in cold weather has been linked to blood vessel damage in otherwise healthy people. If symptoms occur such as numbness, pain, loss of strength, change in skin color or texture, or loss of feeling in the fingers, hands, or wrists, discontinue the use of this tool and seek medical attention.



WARNING: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Operate your earth auger outdoors only in a well ventilated area.



Basic Safety Precautions

- Read this manual carefully until you completely understand and can follow all safety rules, precautions, and operating instructions before attempting to use the unit.
- Restrict the use of your earth auger to adult users who understand and can follow safety rules, precautions, and operating instructions found in this manual. Minors should never be allowed to use an earth auger.
- Do not handle or operate a earth auger when you are fatigued, ill, or upset, or if you have taken alcohol, drugs, or medication. You must be in good physical condition and mentally alert. Earth auger work is strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a earth auger (**Fig. 1**). Be more cautious before rest periods and towards the end of your shift.
- Keep children, bystanders, and animals a minimum of **50 feet (15 meters)** away from the work area. Do not allow other people or animals to be near the earth auger when starting or operating the earth auger (**Fig. 2**).
- While working with the earth auger, always use safety protective approved clothing. The use of protective clothing does not eliminate injury risks, but reduces the injury effects in case of accident. Consult your trusted supplier to choose equipment in compliance with legislation. The clothing must be proper and not an obstacle. Wear adherent anti-cut clothing. **Protective jackets (Fig.3) and dungarees (Fig.3) are ideal.** Do not wear clothes, scarves, ties or bracelets that can stick in to twigs. Tie up and protect long hair (example with foulards, cap, helmets, etc.). **Safety shoes or boots having skid-proof sole and anti-piercing insert (Fig.4).** **Wear protective helmet (Fig.5) in places where there can be falling objects. Wear protective goggles or face screens. Use protections against noises: for example noise reduction ear guards (Fig.5) or earplugs.** The use of protections for the ear requests much more attention and caution, because the perception of danger audio signals (screaming, alarms, etc.) is limited. **Wear gloves (Fig.6, page 8).**
- Only loan your earth auger to expert users who are completely familiar with earth auger operation and correct use. Give other users the manual with operating instructions, which they have to read before using the earth auger.
- Check the earth auger each day to ensure that each device, whether for safety or otherwise, is functional.
- Never use a damaged, modified, or improperly repaired or assembled earth auger. Do not remove, damage or deactivate any of the safety devices. Always replace bit immediately if it becomes damaged, broken or is otherwise removed.
- Carefully plan your working operation in advance. Do not start cutting until you have a clear work area, secure footing.
- All earth auger service, other than the operations shown in the present manual, have to be performed by competent personnel.
- The earth auger must only be used for making bores in soil. It is forbidden to cut other types of material. Do not use the earth auger as a lever to lift, move or break objects, nor lock it on fixed supports. It is forbidden to apply tools or applications that are not the ones indicated by the manufacturer onto the earth auger's power take-off.
- It is inadvisable to hitch tools or applications to the P.t.o. that are not specified by the manufacturer.



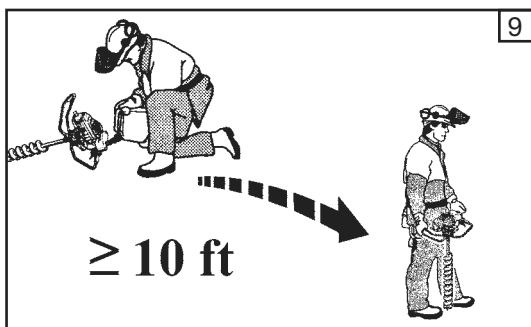
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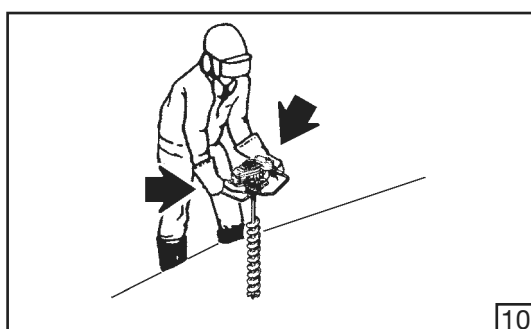
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Fuel Handling



WARNING: Gasoline is an extremely flammable fuel. Use extreme caution when handling gasoline or fuel mix. Do not smoke or bring any fire or flame near the fuel or the earth auger (Fig.7).

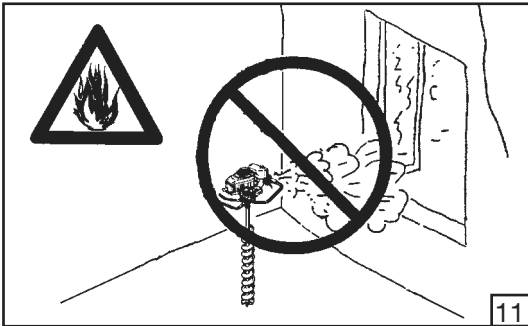
- To reduce the risk of fire and burn injury, handle fuel with care. It is highly flammable.
- Mix and store fuel in a container approved for gasoline (Fig.8).
- Mix fuel outdoors where there are no sparks or flames.
- Select bare ground, stop engine, and allow to cool before refueling.
- Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- Tighten fuel cap securely after refueling. Unit vibration can cause an improperly tightened fuel cap to loosen or come off and spill quantities of fuel.
- Wipe spilled fuel from the unit. Move **10 feet (3 m)** away from refueling site before starting engine (Fig.9).
- Never attempt to burn off spilled fuel under any circumstances.
- Do not smoke while handling fuel or while operating the earth auger.
- Store fuel in a cool, dry, well ventilated place.
- Never place the earth auger in a combustible area such as dry leaves, straw, paper, etc.
- Store the unit and fuel in an area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.
- Never take the cap off the tank when the engine is running.
- Never use fuel for cleaning operations.
- Take care not to get fuel on your clothing. If you get fuel on your clothing substitute them immediately.

Operation and Safety



WARNING: Always hold the earth auger with both hands when the engine is running. Use a firm grip with thumbs and fingers encircling the earth auger handles (Fig.10).

- Keep all parts of your body away from the earth auger when the engine is running.
- Always carry the earth auger with the engine stopped the bit to the rear, and the muffler away from your body. When transporting in a vehicle, properly secure your earth auger to prevent turnover, fuel spillage and damage to the earth auger.
- **Do not operate a earth auger with one hand!** Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation.
An earth auger is intended for two-handed use.
- Before you start the engine, make sure the earth auger is not contacting any object.
- Shut off the engine before setting down the earth auger. Do not leave the engine running unattended.
- Only use the earth auger in well-ventilated places, do not operate the earth auger in explosive or flammable atmospheres or in closed environments (Fig.11). Beware of carbon monoxide poisoning.



- Do not operate earth auger from a ladder. Always cut from a firm-footed and safe position.
- Do not work near electric cables.



WARNING – Contact with electrical cables or wires can cause serious injury or death as a result of electrical shock (Fig.12). This unit is not insulated.

- Keep the handles dry, clean, and free of oil or fuel mixture.
- When the earth auger is running, grip the left handle firmly with your left hand and the right handle with your right hand (Fig.10).
- Never raise the earth auger above shoulder height.



WARNING – Striking a hard object in the earth with the turning auger and the resulting slowing or stopping of the auger creates reactive forces. The transfer of rotational (reactive) forces can cause the auger powerhead and handles to rotate suddenly in a counterclockwise direction and can result in loss of control or cause the handle frame to hit the operator or throw him to the ground, resulting in serious injury.



WARNING – Thrown objects may ricochet and strike the operator. Therefore, to reduce the risk of injury to your eyes never operate an earth auger unless wearing goggles or properly fitted protective glasses with adequate top and side protection complying with ANSI Z 87.1 (or your applicable national standard).

Precautions to Reduce Vibration Risk

- Wear gloves and keep your hands warm.
- Keep the bit sharp and the earth auger, well maintained. A dull bit will increase cutting time, will increase the vibrations transmitted to your hands.
- Maintain a firm grip at all times, but do not squeeze the handles with constant, excessive pressures, take frequent breaks. All the above mentioned precautions do not guarantee that you will not sustain whitefinger disease or carpal tunnel syndrome. Therefore, continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

Maintenance Precaution



WARNING: Never operate a earth auger that is damaged, improperly adjusted, or is not completely and securely assembled.



WARNING: Be sure that the bit stops moving when the throttle control trigger is released. If the bit moves at idle speed, the carburetor may need adjusting, see Operation-Carburetor Adjusting Section. If the bit moves at idle speed after adjustment has been made, contact a Servicing Dealer for adjustment and discontinue use until the repair is made.



WARNING: All earth auger service, other than items in the Operator's Manual maintenance instructions, have to be performed by competent earth auger service personnel. (If improper tools are used to remove the flywheel or clutch, or if an improper tool is used to hold the flywheel in order to remove the clutch, structural damage to the flywheel could occur which could subsequently cause the flywheel to burst and serious injury could result.)

- Never modify your earth auger in any way.
- Keep the handles dry, clean, and free of oil or fuel mixture.



WARNING: Use only accessories and replacement parts recommended.

- Never touch the bit or attempt to service the earth auger while the engine is running.
- Never use fuel for cleaning operations.
- Keep the earth auger in a dry place, off the ground with the tanks empty.
- If your earth auger is no longer usable, dispose of it properly without damaging the environment by handing it in to your local Dealer who will arrange for its correct disposal.
- Replace immediately any safety device when damaged or broken.



WARNING: The muffler and other parts of the engine (e.g. fins of the cylinder, spark plug) become hot during operation and remain hot for a while after stopping the engine. To reduce risk of burns do not touch the muffler and other parts while they are hot.



WARNING – To reduce the risk of injury from a turning drilling tool or from reactive forces, the throttle trigger must move freely and return immediately to the idle position when it is released. Regular maintenance is important in this respect. Check the condition and the tightness of the drilling tool.



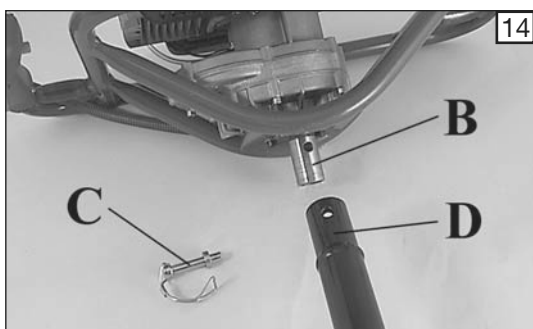
Lubricant for reduction gearbox (Fig.13)

WARNING! - The earth auger is supplied with TAMOIL TAMLITH GREASE 2 (150 g) grease in the reduction gearbox.

Remove the screw (A) under the reduction gearbox and check for the presence of grease.

Fitting bits (Fig.14-15)

Fit the reduction shaft (B) into the seat on the bit (D) and secure it using the appropriate gudgeon pin (C).



WARNING! - Do not change the ratio of the reduction gearbox. The characteristics of the machine could change and unforeseen reactions could occur.

Optional earth augers accessories

Augers (Fig.16)

Equipped with tip and flute made of special steel to ensure top performance and excellent resistance to wear.



Description

- Single flute auger \varnothing 3" x 39.3"
- Single flute auger \varnothing 4" x 39.3"
- Single flute auger \varnothing 6" x 39.3"
- Single flute auger \varnothing 8" x 39.3"

Part number

- 375100028A
- 375100029A
- 375100030A
- 375100031A

Extensions (Fig.16)

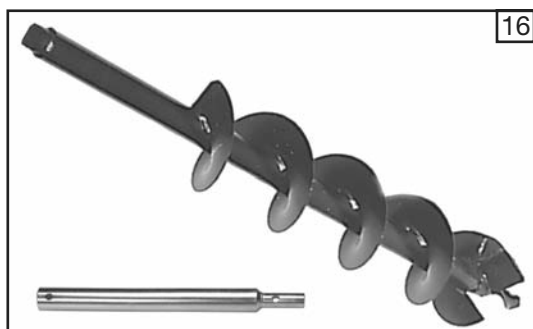
To obtain greater drilling depth.

Description

- 12" extension

Part number

- 375100101



Ice augers (Fig.17)

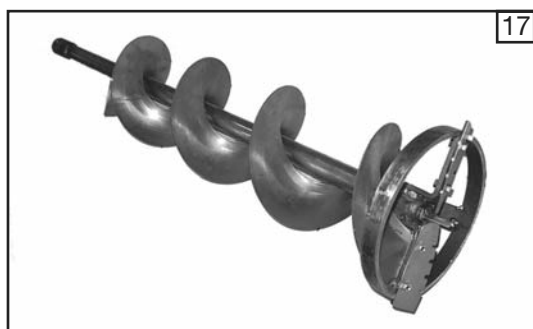
For drilling through ice.

Description

- Ice augers

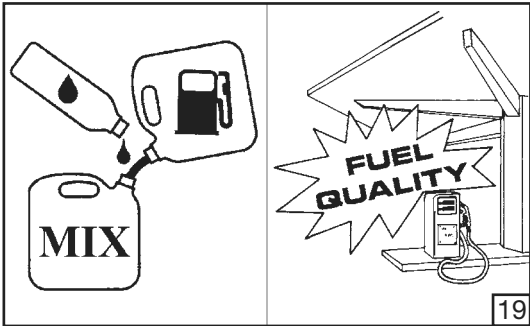
Part number

- 375100110





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Fueling (Do Not Smoke!) (Fig.20)

This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle oil. Pre-mix unleaded gasoline and 2-cycle engine oil in a clean container approved for gasoline (Fig.18). **RECOMMENDED FUEL:** THIS ENGINE IS CERTIFIED TO OPERATE ON UNLEADED GASOLINE INTENDED FOR AUTOMOTIVE USE WITH AN OCTANE RATING OF 89 ((R+M)/2) OR HIGHER (Fig.19).

Mix 2-Cycle Engine Oil with gasoline according to the instructions on the package.

We strongly recommend the use of 2% (1:50) Efco Two Cycle Engine Oil, which is specifically formulated for all Efco air-cooled two-stroke engines.

The correct oil / fuel proportions shown in the table below are suitable when using the Efco Two Cycle Engine Oil or an equivalent high-quality engine oil (JASO specification FD or ISO specification L-EGD).

When oil specifications are NOT equivalent or unknown use 4% (1:25) oil / fuel mixing ratio.

CAUTION: DO NOT USE AUTOMOTIVE OIL OR 2-CYCLE OUTBOARD OIL.

CAUTION: Never use a fuel with an alcohol percentage higher than 10%; gasohol up to 10% alcohol or E10 fuel are acceptable.

When using an Oxygenated Gasoline a good practice of Fuel Management is necessary. Gasoline Oxygenated with alcohol readily takes/up water when it is present; the water may be condensed out of humid air or be a contaminant in the fuel system, including tank.

CAUTION:

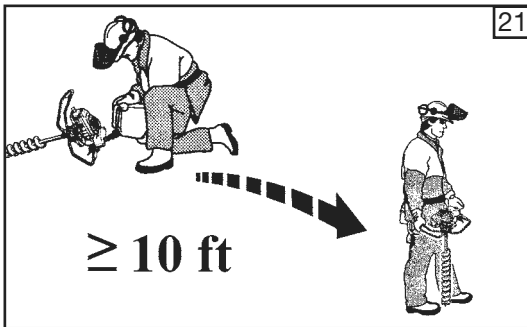
- Match your fuel purchases to your consumption; don't buy more than you will use in one or two months;
- Store gasoline in a tightly-closed container in a cool, dry place.

The use of Oxygenated Gasoline may cause the occurrence of vapor-lock easier.

NOTE: 2-Cycle Engine Oil contains a fuel stabilizer and will stay fresh up to 30 days. DO NOT mix quantities larger than usable in a 30 day period. A 2-cycle oil containing a fuel stabilizer is recommended.

Fuel Mixture 2-Cycle Engine Oil (25:1) 4%	
Gasoline	Oil
1 Gallon (US)	5.2 oz.
1 Liter	40 cc (40 ml)

High Quality 2-Cycle Engine Oil (50:1) 2%	
Gasoline	Oil
1 Gallon (US)	2.6 oz.
1 Liter	20 cc (20 ml)



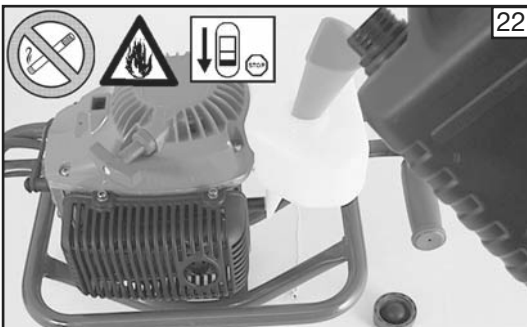
Filling the Tank (Fig.22)



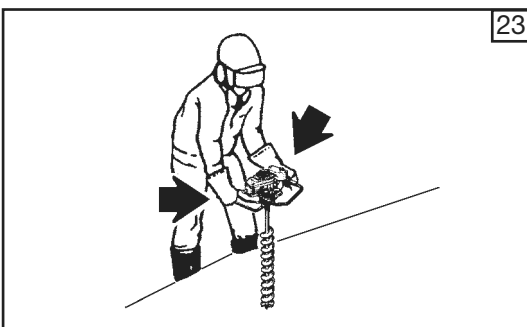
WARNING: Follow safety instruction for fuel handling. Always shut off engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 10 feet (3m) from refueling site before starting engine (Fig.21). DO NOT SMOKE!

1. Clean surface around fuel cap to prevent contamination.
2. Loosen fuel cap slowly.
3. Carefully pour fuel mixture into the tank. Avoid spillage.
4. Prior to replacing the fuel cap, clean and inspect the gasket.
5. Immediately replace fuel cap and hand tighten. Wipe up any fuel spillage.

NOTE: It is normal for smoke to be emitted from a new engine during and after first use.



WARNING: Check for fuel leaks, if any are found, correct before use. Contact a Servicing Dealer if necessary.



Preparation for Working

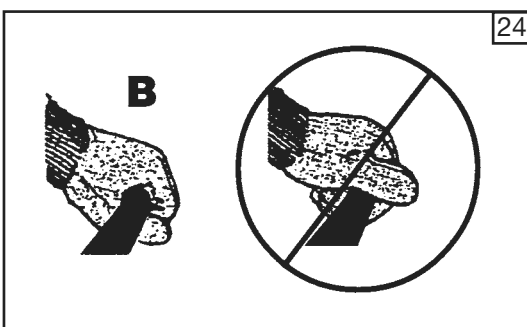
Proper Grip on Handles.

1. Wear non-slip gloves for maximum grip and protection.



WARNING: Hold the earth auger firmly with both hands. Always keep your LEFT HAND on the left handlebar and your RIGHT HAND on the throttle handle as shown in Fig.23. Never use a cross-handed grip. Left-handers should follow these instructions too.

2. Maintain a proper grip (**B**, Fig.24) on the earth auger whenever the engine is running. The fingers should encircle the bar and the thumb is wrapped under the bar.

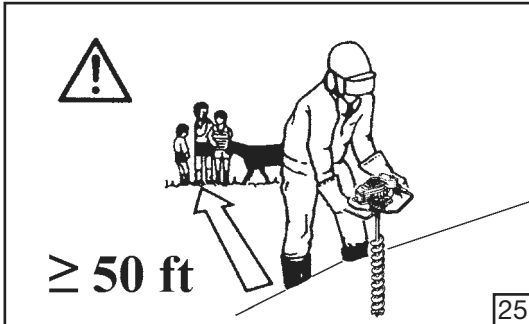


Working Conditions

Striking something hard in the earth, such as a rock or gravel, may cause the drilling tool to slow down suddenly or stop. In such a situation, some or all of the rotational force (reactive force) is transferred to the powerhead and handle frame of the earth auger which can cause the auger powerhead and handles to rotate suddenly in a counterclockwise direction.



WARNING – Work carefully in rock ground or where other solid objects may be present. Keep throttle feed pressure to a minimum. If you feel or hear the drilling tool strike a solid object, release the throttle trigger immediately and remove the object before drilling is continued. When drilling in heavy clay soil, bore about 1/3 way and remove the auger from the hole. Clean off auger then continue in slow steps frequently clearing drill.



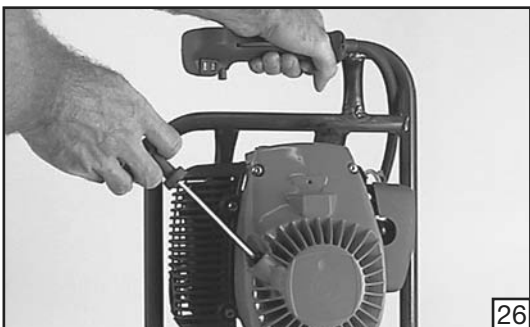
WARNING – You should hold your earth auger firmly to control sudden jolts and reactive forces. Be prepared to release the throttle completely if the forces become too great. If reactive forces are not controlled, rotation of the handles may result in severe jerking and loss of control and may cause the handle frame to strike you or throw you to the ground.



WARNING – To reduce the risk of electrocution and damage to property, always be alert for underground pipes and cables and for overhead wires. Before drilling, obtain the necessary plans and permits. Contact your local utility company or your locator service, such as “Miss Utility” or “One Call”, for information as to cable and pipes locations. Where necessary, confirm actual locations by use of devices such as cable detectors and/or by carefully dug trenches. Stay clear of overhead electrical wires when backing the drilling tool out of the hole. If any portion of the machine strikes a wire, it will cause electrical shock or death.

Work Area Precautions

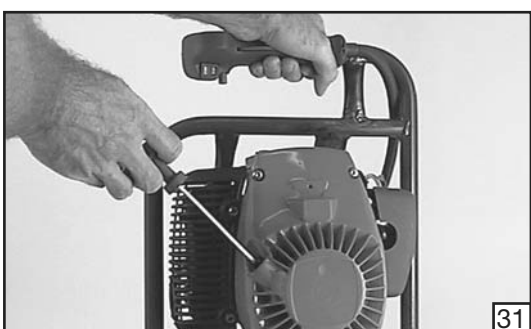
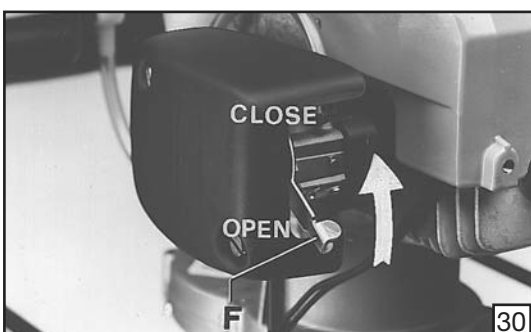
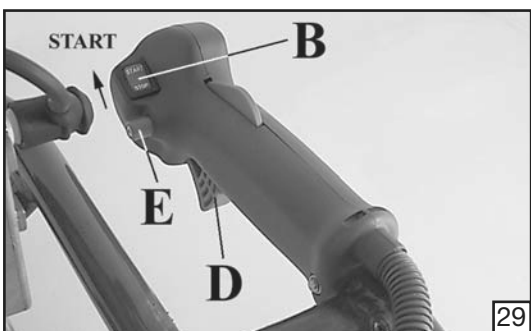
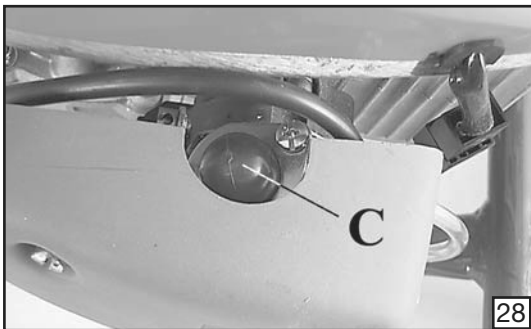
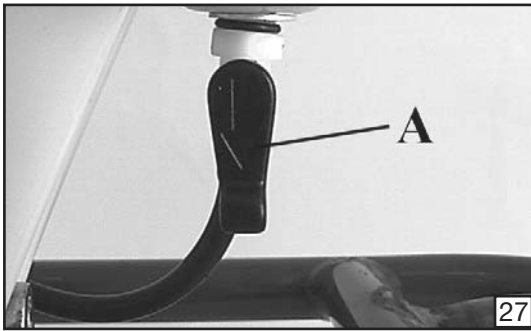
- Never allow children to operate your earth auger. Only allow others to use this earth auger who have read this Operator’s Manual or received adequate instructions for the safe and proper use of this earth auger.
- Keep everyone - helpers, bystanders, children, and animals a safe distance from the working area (**Fig.25**).
- Always work with both feet on solid ground to prevent being pulled off balance.
- Do not work above chest height.
- Do not work near electrical wires or buildings. Leave this operation for professionals.
- Work only when visibility and light are adequate for you to see clearly.
- **Do not work from a ladder, this is extremely dangerous.**
- Stop the engine if the bit strikes a foreign object. Inspect the bit and repair parts as necessary.
- Stop the engine before setting the earth auger down.
- Be particularly cautious and alert while wearing hearing protection because such equipment may restrict your ability to hear sounds indicating danger (calls, signals, warnings, etc).
- Be extremely cautious when working on slopes or uneven ground.



WARNING – To reduce the risk of falling, be careful when carrying or operating the machine in slippery conditions when the ground is wet, icy or snow covered. Special care must also be taken on embankments and slopes.

Starting The Engine

- Place the earth auger on level ground and ensure that no objects or obstructions are in immediate vicinity which could come in contact with the bit. Hold the right handle firmly with the left hand and put your right foot onto the base of the left handle, see **Fig.26**.
- Don’t press on the unit or the auger with your foot.
- Make sure that the throttle lever works properly.



- Open the fuel tap (A, Fig.27).
- Fill the carburetor by pushing primer bulb a couple of times (C, Fig.27).
- Put the ON/OFF switch (B, Fig.28) in the "I" position.
- Put the choke lever (F, Fig.29) in the CLOSE position.
- Pull throttle lever (D, Fig.29) and lock it in the half-throttle position by pressing button (E), then release lever (D).
- Grip the handle on the throttle side, lean the bar against your body and pull the starter rope until it meets resistance (Fig.31). Pull the starter rope hard a few times and when the engine begins to turn, bring the choke lever (F, Fig.30) back to the original position «OPEN». Repeat the procedure until the engine starts. Once the engine is running, press the throttle (D, Fig.29) to release it from the half-throttle position and let the engine idle.
- When pulling the starter rope, do not use the full extent of the rope as this can cause the rope to break. Do not let starter rope snap back. Hold the handle and let the rope rewind slowly.
- When the engine starts at starting-throttle, engine speed will be fast enough for the clutch to engage and move the cutting tool.



WARNING: Do not cut material with the choke/fast idle lever at the FULL CHOKE position. Do not operate your earth auger with the starting throttle lock engaged. Cutting with the starting throttle lock engaged does not permit the operator proper control of the earth auger speed.

NOTE - STARTING WARM ENGINE:

Follow above starting instructions, but do not use the OPEN (Fig.30) Choke position for start up again. To set fast idle for warm engine starting, pull choke out completely and push back in to the original CLOSE (Fig.30) Position.



WARNING: Weather conditions and altitude may affect carburetion. Do not allow bystanders close to the earth auger while adjusting the carburetor.



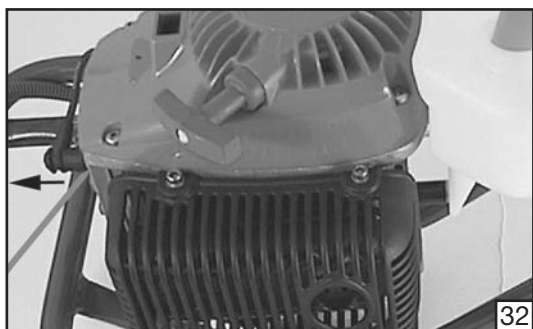
WARNING: Never attempt to start the earth auger when the bit is in a cut or kerf.

Breaking-in the Engine

The engine reaches the maximum power after 5-8 hours of activity. During this period of breaking-in do not make the machine function idly at full throttle, to avoid excessive functioning stress.



CAUTION! – During the breaking-in period do not vary the carburetion to obtain a presumed power increment; the engine can be damaged.



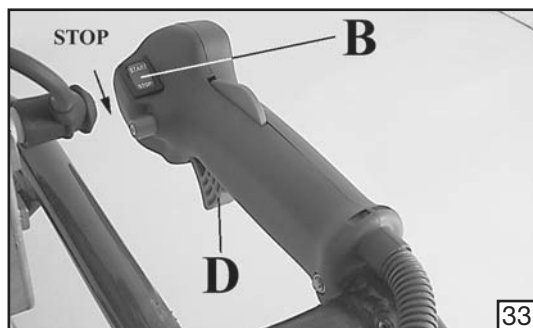
Difficult Starting (or starting a flooded engine)

The engine may be flooded with too much fuel if it has not started after 10 pulls. Flooded engines can be cleared of excess fuel by following the warm engine starting procedure listed below. Ensure the ON/STOP switch is in the ON position. Starting could require pulling the starter rope handle many times depending on how badly the unit is flooded. If engine fails to start refer to the TROUBLESHOOTING TABLE (page 23).

Engine is Flooded

If you did not move the choke lever to warm start, quickly enough after the engine began to fire, the combustion chamber is flooded.

- Set the on/off switch to **STOP**.
- Engage a suitable tool in the spark plug boot (**Fig.32**).
- Pry off the spark plug boot.
- Unscrew and dry off the spark plug.
- Open the throttle wide.
- Pull the starter rope several times to clear the combustion chamber.
- Refit the spark plug and connect the spark plug boot, press it down **firmly**.
- Set the on/off switch to I, the starting position.
- Set the choke lever to warm start – even if engine is cold.
- Now start the engine.



Stopping The Engine

Release the throttle trigger (**D, Fig.33**) and let the engine return to idle.

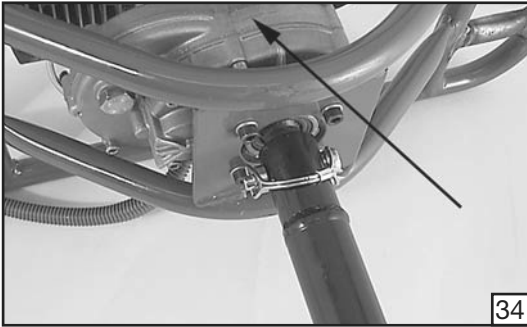
To stop the engine, move the on/off switch (**B**) to the “ **STOP** ” position. Do not put the earth auger on the ground when the bit is still moving.

In the event that the “ **STOP** ” position of the switch will not function, pull the choke lever in CLOSE position (refer to **Fig.30**) to stop the engine.

Pre-operation checking



WARNING: THE EARTH AUGER SHOULD NEVER MOVE AT IDLE. Turn the idle speed screw “**T**” counterclockwise to reduce the idle RPM and stop the bit, or contact a Servicing Dealer for adjustment and discontinue use until the repair is made. Serious personal injury may result from the bit moving at idle.



Working Techniques

General Working Instructions



WARNING: Do not work during periods of high wind or heavy precipitation.



WARNING: Never work, when visibility is poor or in very high temperatures.



WARNING: Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection.



WARNING: Faulty bits can increase the risk of accidents.



WARNING - If correctly used, the earth auger is a quick, easy to handle and efficient tool; if used improperly or without the due precautions it could become a dangerous tool. **THE MACHINE CAN CAUSE SERIOUS INJURY.** For pleasant and safe work, always strictly comply with the safety rules that follow and throughout this manual.

- The gear housing gets hot when the machine has been in use (**Fig.34**). To avoid burning yourself do not touch the gear housing.
- Check the working attachment. Never use bits that are dull, cracked or damaged.
- Check that the machine is in perfect working order. Check that all nuts and screws are tight.

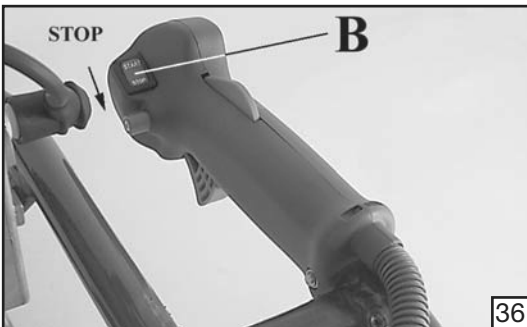
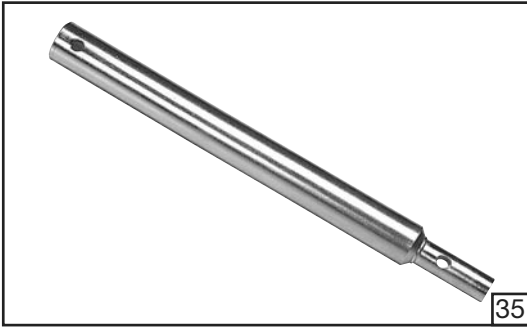


WARNING: The complete clutch cover and gear housing must be fitted before the machine is started, otherwise the clutch may come loose and cause personal injury.



WARNING: If you encounter a situation where you are uncertain how to proceed you should ask an expert. Contact your dealer or your service workshop. Avoid all usage which you consider to be beyond your capability.

- When the engine is switched off, keep your hands and feet away from the cutting attachment until it has stopped completely.
- Check the working area for foreign objects such as electricity cables, insects and animals, etc, or other objects that could damage the bit, such as metal items.



- If any foreign object is hit or if high vibrations occur stop the machine immediately. Disconnect the HT lead from the spark plug. Check that the machine is not damaged. Repair any damage.
- If anything jams in the bits while you are working, switch off the engine and wait until it has stopped completely before cleaning the bits. Disconnect the HT lead from the spark plug.
- Always wear heavy-duty gloves when repairing the cutting attachment. This is extremely sharp and can easily cause cuts.
- Release the throttle trigger as soon as the cut is completed, allowing the engine to idle. **If you run the earth auger at full throttle without a cutting load, unnecessary wear or damage can occur to the bit and engine.**

Local regulations

Observe all country-specific and local regulations and ordinances regarding soil working.

Preparations

Before starting work, scare away small animals so that they cannot be injured.

Working techniques



WARNING! - Do not use damaged or excessively worn bits. If the bit gets jammed, turn off engine before removing the obstruction.

The auger becomes trapped in the drill hole, turn off the engine immediately and remove as described in the chapter entitled "Removing a trapped auger".



WARNING - To reduce the risk of injury, never touch a rotating drilling tool or drilling spindle with your hand or any part of your body. It continues to rotate for a short period after the throttle lever is released. Always shut off the engine before putting the machine down or transporting it over a long distance. When taking the drilling tool out of the hole, lift the machine vertically so that the tool comes out straight without canting. Cover and clearly mark boreholes, to prevent anyone from stepping in a hole.

Working with shaft extension (optional special accessory, Fig.35)

Do not fit the shaft extension until the full length of the auger is in the hole.



WARNING - Starting hole with the shaft extension fitted increases the risk of personal injury because the unit is then at chest height and cannot be kept properly under control. For the same reason the shaft extension must be removed before the auger is pulled out of the hole.

Removing a trapped auger

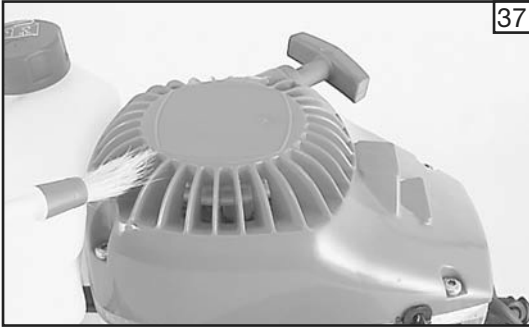
If the auger jams in the drill hole, shut off the engine immediately. Move on/off switch in direction of STOP (B, Fig.36).

Transportation

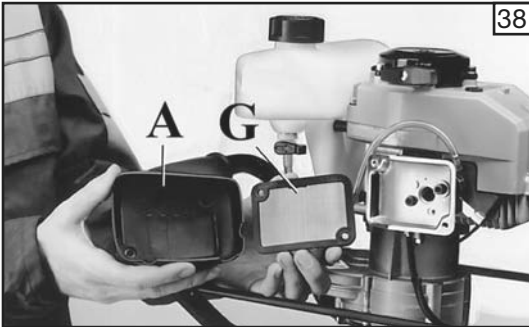
When you walk with your earth auger, turn off the engine. Grip the front handle and keep the bits behind you.

Maintenance Chart

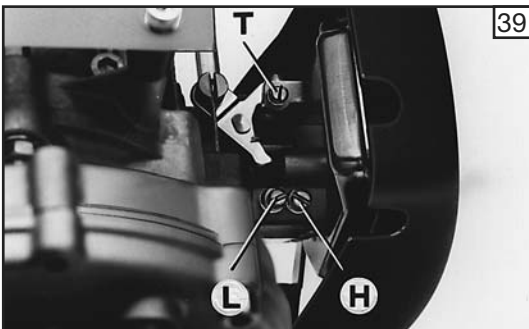
Please note that the following maintenance intervals apply for normal operating conditions only. If your daily work requires longer than normal or harsh cutting conditions are present the suggested intervals should be shortened accordingly.		Before Each Use	After Each Refueling Stop	After Finishing Daily Work	Weekly	Monthly	If Damaged or Faulty	As Required
Complete Machine	Inspect (Leaks, Cracks, and Wear)	X	X					
	Clean			X				
Controls (Ignition Switch, Choke Lever, Throttle Trigger, Trigger Interlock)	Check Operation	X	X					
Fuel Tank	Inspect (Leaks, Cracks, and Wear)	X	X					
	Clean					X		
Grease Cap	Inspect (Leaks, Cracks, and Wear)	X	X					
	Clean					X		
Fuel Filter	Inspect				X			
	Clean, Replace Filter Element						X	Every 6 Months
Bit	Inspect (Damage, Sharpness, and Wear)	X	X					
	Sharpen						X	X
Clutch Drum	Inspect (Damage, and Wear)				X			
	Replace						X	
All Accessible Screws and Nuts (Not Adjusting Screws)	Inspect	X						
	Retighten				X			
Air Filter	Clean	X						X
	Replace						X	Every 6 Months
Cylinder Fins	Clean					X		
Starter System Vents	Clean			X				
Starter Rope	Inspect (Damage and Wear)				X			
	Replace						X	
Carburetor	Check Idle (Chain must not rotate at Idle)	X	X					
Spark Plug	Check Electrode Gap					X		
	Replace						X	Every 6 Months



37



38



39



40

Carburetor Adjustment

Before adjusting the carburetor, clean the starter cover vents as shown in Illustration **Fig.37**, and air filter as shown in Illustration **Fig.38**, refer to Operation-Starting Unit and Maintenance-Air Filter Sections for details. Allow the engine to warm up prior to carburetor adjustment.

This engine is designed and manufactured in order to comply with EPA (Environmental Protection Agency) Phase 1 regulations.

The carburetor is factory set and should not require adjusting.

The carburetor will permit only limited adjustment of the “L” (Low Jet) and “H” (High Jet) needles (**Fig. 39**). Any adjustment should be done by a Servicing Dealer.

Under no circumstances should the “L” (Low Jet) and “H” (High Jet) needles be forced outside the range of adjustment.



WARNING: Serious damage can occur to the engine if improper adjustments are made to the “L” and “H” needles. Do not force the “L” and “H” needles outside the adjustment range in such case the engine will not run in compliance with emissions regulations.

Idle Speed Adjustment

- If the engine starts, runs, and accelerates but will not idle; turn the idle speed screw “T” clockwise to increase idle speed (**Fig.39**).
- If the earth auger turns at idle, turn the idle speed screw “T” counterclockwise to reduce the idle RPM and stop the bit movement. If the bit still moves at idle speed, contact a Servicing Dealer for adjustment and discontinue use until the repair is made.



WARNING: Don't tamper with the carburetor.



WARNING: With the engine idling (2600 rpm), the bit should not move. We recommend that you have the dealer or an authorised mechanic carry out any carburetor adjustments.



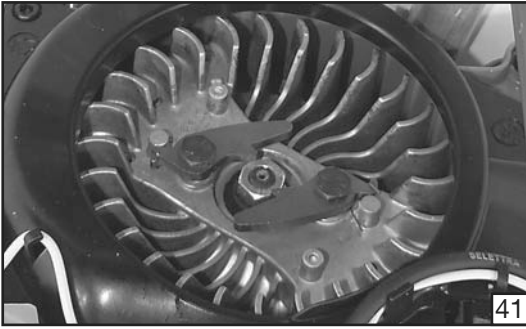
WARNING: Weather conditions and altitude may affect carburation.



WARNING: Do not allow anyone to stay close to the earth auger while working or while adjusting the carburetor.

Fuel Filter

Check the fuel filter (**B, Fig.40**) periodically. Replace it if contaminated or damaged.

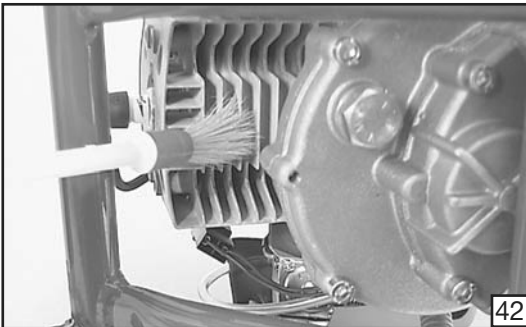


Air Filter



WARNING: Do not clean filter in gasoline or other flammable solvent to avoid creating a fire hazard or producing harmful evaporative emissions.

Open air filter cover (A, Fig.38) and check the air filter (G) each day; shake the filter. Reinstall the air filter. Close the air filter cover. An used air filter can never be completely cleaned. It is advisable to replace your air filter with a new one after six month of operation.



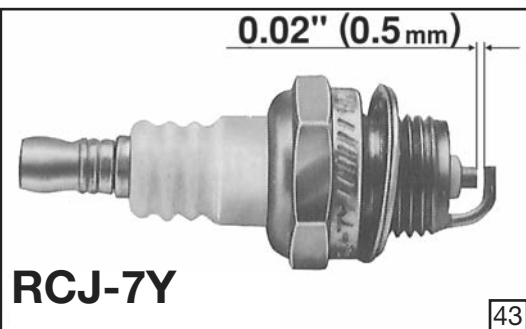
CAUTION: Never run the engine without the air filter, serious damage could result. Make sure the air filter is correctly placed in the air filter cover before reassembly. Always replace damaged filters. Do not clean a filter with a brush.

Cooling System

To keep the working temperature as low as possible the machine is equipped with a cooling system. The cooling system consists of:

1. Fins on the flywheel (Fig.41).
2. Cooling fins on the cylinder (Fig.42).

Clean the cooling system with a brush once a week, more often in demanding conditions. A dirty or blocked cooling system results in the machine overheating which causes damage to the piston and cylinder.



WARNING: The coil spring is under tension and could fly apart causing serious injuries. Never try to disassembly or modify it.



WARNING: Never run the earth auger without all the parts, securely in place. Because parts can fracture and pose a danger of thrown objects, leave repairs to the flywheel and clutch to trained Servicing Dealers.

Spark Plug

This engine uses a Champion RCJ-7Y with .02" (0.5 mm) electrode gap (Fig.43). Use an exact replacement and replace every six months or more frequently, if necessary.



WARNING: Never test the ignition system with ignition wire connector removed from spark plug or with unseated spark plug, since uncontained sparking may cause a fire. A loose connection between spark plug terminal and ignition wire connector in the boot may create arcing that could ignite combustible fumes and cause a fire.



Use only resistor type spark plugs of the approved range.

Factors such as:

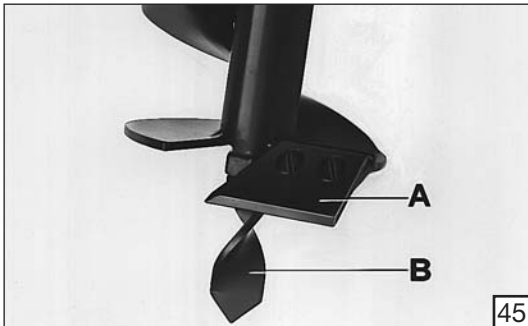
- too much oil in fuel mix;
- dirty air filter;
- unfavourable running conditions, e.g. operating at part load; may result in rapid deterioration of the spark plug.

Muffler

Free the engine and silencer of twigs, leaves and excess lubricant to prevent the risk of fire.



WARNING: Do not operate your earth auger if the muffler is damaged, missing or modified. An improperly maintained muffler will increase the risk of fire and hearing loss.



Gear Housing

There is a grease cap and a plug for filling lubricant on the gear housing (Fig.44). Use a grease gun to fill with grease. This should be done after every 100 working hours.



CAUTION: The gear housing must not be filled completely with grease. The grease expands as the machine heats up during operation. If the gear housing was completely filled with grease it could damage the seals and lead to leakage of grease.



WARNING! - Do not change the ratio of the reduction gearbox. The characteristics of the machine could change and unforeseen reactions could occur.



Bit Maintenance

Clean (don't use grease solvent) any resin and plant residue from the bits before and after using the machine.



WARNING: Do not try to sharpen a damaged bit: change it or take it to a Service Dealer. Check that the bit is not damaged or distorted. Replace the bit if it is bent or damaged. Never repair damaged bit by welding, straightening or modifying the shape.



Always check the drill bit. Check the share (A, Fig.45) and the starting tip (B) regularly. Sharpen or replace if worn.

Using Troubleshooting Chart

WARNING: Always stop unit and disconnect spark plug before performing all of the recommended remedies below except remedies that require operation of the unit.

When you have checked all the possible causes listed and you are still experiencing the problem, see your Servicing Dealer. If you are experiencing a problem that is not listed in this chart, see your Servicing Dealer for service.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Engine will not start or will run only a few seconds after starting. (Make sure Ignition switch is in start position "I")	1. No spark 2. Flooded engine.	1. Check Spark. Remove spark plug from cylinder. Reattach the spark plug wire and lay spark plug on top of cylinder. Pull the starter rope and watch for spark at spark plug tip. If there is no spark, repeat test with a new spark plug (RCJ-7Y). 2. With the ignition switch off, remove spark plug. Move choke lever to Run position (pushed in completely) and pull starter cord 15 to 20 times. This will clear excess fuel from engine. Clean and reinstall spark plug. Pull the choke lever all out and then insert it completely in order to activate the semi-acceleration device. Pull starter three times with choke lever at run. If engine does not start, move choke lever to choke and repeat normal starting procedure. If engine still fails to start, repeat procedure with a new spark plug.
Engine does not reach full speed and / or emits excessive smoke	1. Check oil fuel mixture. 2. Air filter dirty. 3. Muffler dirty.	1. Use fresh fuel and the correct 2-cycle oil mix. 2. Clean per instruction in Maintenance-Air Filter Section. 3. Clean per instructions in Maintenance-Muffler Section.
Engine starts, runs, and accelerates but will not idle.	Carburetor requires adjustment.	Turn idle speed screw "T" clockwise to increase idle speed. (If bit moves at idle, turn idle speed screw "T" counterclockwise to decrease speed); see Operation-Carburetor Adjustment.
Engine starts and runs, but bit is not moving	1. Incorrect assembly. 2. Bit damaged. 3. Clutch drum damaged.	1. Contact a Servicing Dealer. 2. Contact a Servicing Dealer. 3. Contact a Servicing Dealer.
<p> WARNING: Never touch the bit while the engine is running.</p>		

***Note:** This engine complies with EPA (Environmental Protection Agency) regulations which require exhaust emission control. If your unit exhibits specific performance problems that can not be corrected by the Trouble Shooting Section, the unit should be taken to a Servicing Dealer for repair.

Storing Earth Auger



WARNING: Stop engine and allow to cool, and secure the unit before storing or transporting in a vehicle. Store unit and fuel in an area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc. Store unit with all guards in place. Position so that any sharp object cannot accidentally cause injury to a passersby. Store the unit out of reach of children and other unauthorized persons.

1. Drain and clean the fuel tank in a well ventilated area.
2. Drain all fuel from tank into a container approved for gasoline. Run engine until it stops. This will remove all fuel-oil mix which could become stale and leave varnish and gum in the fuel system.
3. Clean all foreign material from the earth auger. Keep away from corrosive agents such as garden chemicals and de-icing salts.
4. Abide by all Federal and local regulations for the safe storage and handling of gasoline. Excess fuel should be used in other 2-cycle engine powered equipment.
5. Remove the spark plug and pour a small amount of oil into the cylinder (**Fig.46, page 22**). Using the starting rope (**Fig.47**), rotate the crankshaft to distribute the oil. Put the spark plug back in.



CAUTION: It is important to prevent gum deposits from forming in essential fuel system parts such as the carburetor, fuel filter, fuel hose, or fuel tank during storage. Alcohol blended fuels (called gasohol or E10 or using ethanol, methanol) can attract moisture which leads to fuel mixture separation and formation of acids during storage. Acidic gas can damage the engine.

TECHNICAL DATA

TR 1551

ENGINE:

Displacement: 3.06 cu. in (50.2 cc)

PERFORMANCE:

Idle Speed: 2,600 RPM

WOT: 9,900 RPM

Power: **2.2 HP/1.6 kW (6,500 RPM)**

FUEL SYSTEMS:

Carburetor: Multi Position Diaphragm

Fuel Tank Capacity: 35.5 oz. (1,050 ml)

Fuel Mix: See Operation-Fueling Section

IGNITION SYSTEM:

Spark Plug: Champion RCJ-7Y

Spark Plug Gap: 0.02 in. (0.5 mm)

BORING SYSTEM:

Auger sizes: 3 - 4 - 6 - 8 in.

WEIGHT (without augers): 20.1 lb (9.1 kg)