



our **power**, your **passion**

PTX 2710 (1.65 cu.in)

en OPERATOR'S INSTRUCTION MANUAL

fr MANUEL D'UTILISATION ET D'ENTRETIEN

es MANUAL DE INSTRUCCIONES



To correctly use the pole pruner 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 pole pruner 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 contain 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 pole pruner, this operator's manual should always be kept with or near the machine. Do not lend or rent your pole pruner without the operator's instruction manual.



WARNING: Allow only persons who understand this manual to operate your pole pruner.

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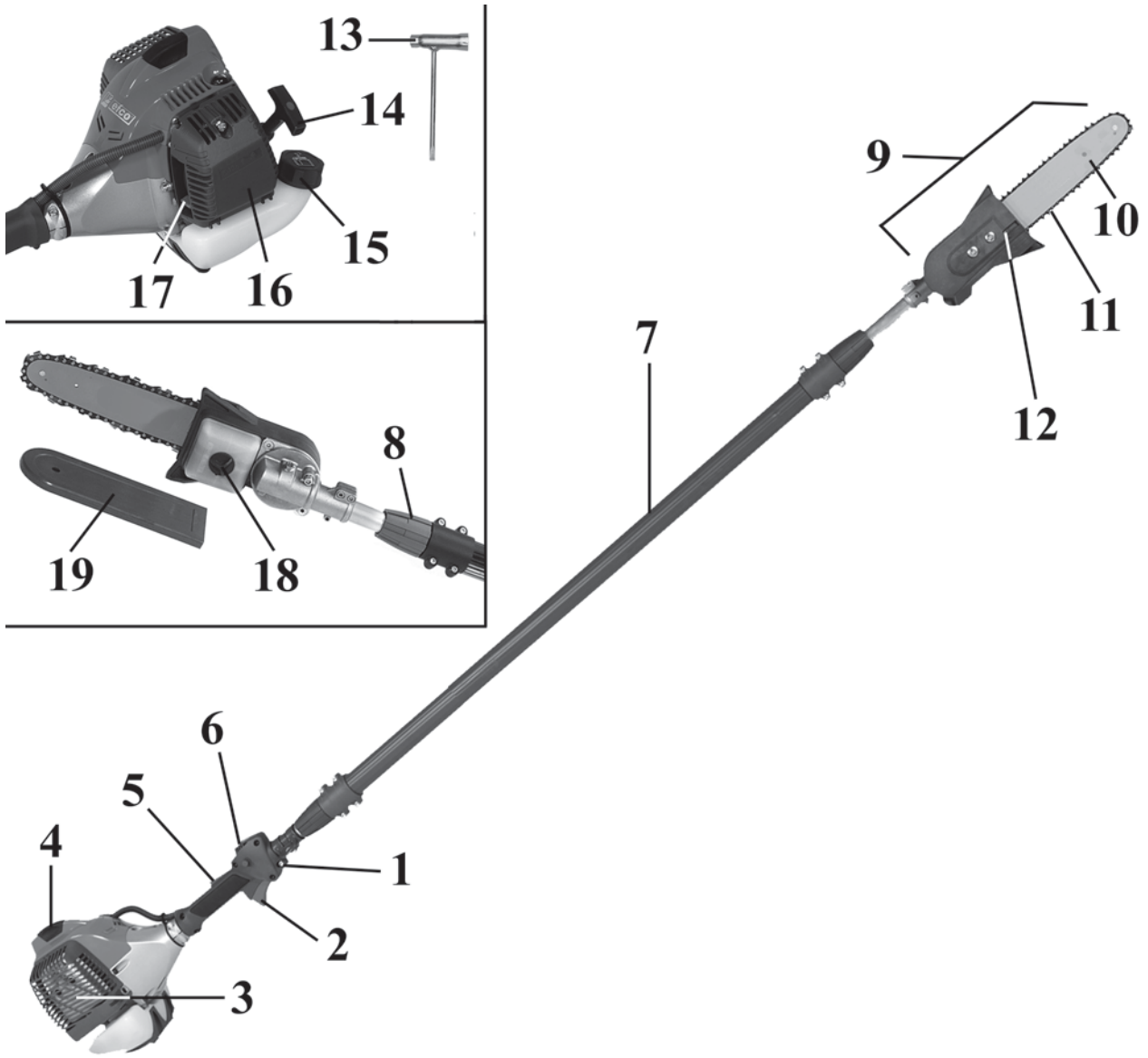
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PTX 2710 31



Pole pruner Components

- | | |
|-----------------------------|-------------------------------|
| 1. Harness attachment | 11. Chain |
| 2. Throttle Trigger | 12. Guide Bar Adjusting Screw |
| 3. Muffler Guard | 13. Combination Wrench |
| 4. Spark plug | 14. Starter Handle |
| 5. Throttle Trigger Lockout | 15. Fuel Tank Cap |
| 6. On/Off Switch | 16. Air Filter Cover |
| 7. Shaft arm | 17. Choke Lever |
| 8. Locking ring nut | 18. Oil Tank Cap |
| 9. Cutting implement | 19. Bar Cover |
| 10. Guide Bar | |

Understanding Safety Labels



- This symbol indicates Warning, and Caution.



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



- 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 non-slip, heavy-duty protective gloves when handling.



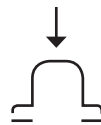
- Wear safety strong shoes or boots having skid-proof sole and anti-piercing insert.



- The machine is not electrically insulated so avoid contact with high voltage lines. **Never** approach the implement at **less than 10 metres** from electric lines. Keep bystanders away 15 m.



- **WARNING!** The surface can be hot!



- Purge bulb.

State and Local Requirements

Your pole pruner is equipped with a temperature limiting muffler, a spark arresting screen in order to comply 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.** If you operate a pole pruner in a state or locale where such regulations exist, you are legally responsible for maintaining the operating condition of these parts. Failure to do so is a violation of a law. **Spark arrester maintenance is described in the Maintenance-Spark Arresting Muffler Section of the manual.**

Note: When using a pole pruner 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 pole pruner, 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.



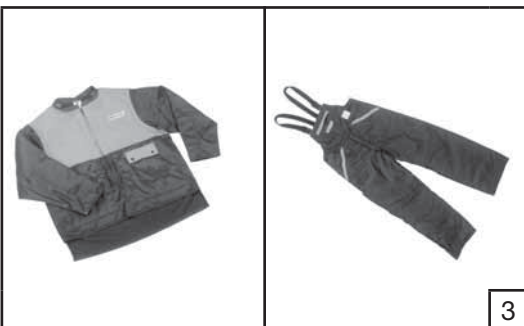
WARNING: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Operate your pole pruner outdoors only in a well ventilated area.



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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 pole pruner 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 a pole pruner.
- Do not handle or operate a pole pruner 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. Pole pruner work is strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a pole pruner (**Fig. 1**). Be more cautious before rest periods and towards the end of your shift.
- Keep children, bystanders, and animals a minimum of **35 feet (10 meters)** away from the work area. Do not allow other people or animals to be near the pole pruner when starting or operating the pole pruner (**Fig. 2**).
- Major cases of pole pruner accidents happen when the chain hits the operator. While working with the pole pruner, 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. **Anti-cut jackets (Fig.3), dungarees (Fig.3) and leggings are ideal.** Do not wear clothes, scarves, ties or bracelets that may get stuck in wood or 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 anti-cut gloves (Fig.6, page 8).**
- Only loan your pole pruner to expert users who are completely familiar with pole pruner operation and correct use. Give other users the manual with operating instructions, which they have to read before using the pole pruner.
- Check the pole pruner each day to ensure that each device, whether for safety or otherwise, is functional.
- Never use a damaged, modified, or improperly repaired or assembled pole pruner. Do not remove, damage or deactivate any of the safety devices. Only use bars of the length indicated by the manufacturer. Always replace bar, chain, immediately if it becomes damaged, broken or is otherwise removed.
- Carefully plan your pole pruning operation in advance. Do not start cutting until you have a clear work area, secure footing, and planned retreat path.
- All pole pruner service, other than the operations shown in the present manual, have to be performed by competent personnel.
- The pole pruner must only be used for cutting wood. It is unadvisable to cut other types of material.
- It is unadvisable to hitch tools or applications to the P.t.o. that are not specified by the manufacturer.



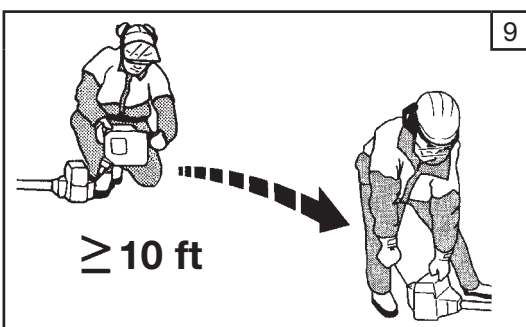
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Fuel Handling



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 pole pruner (Fig. 7).

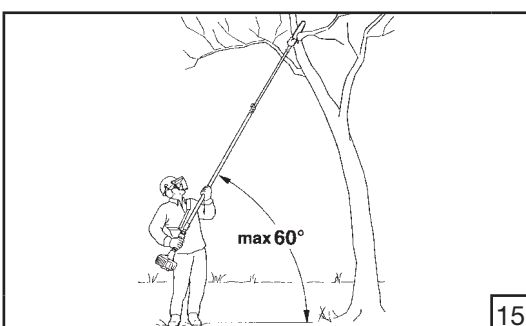
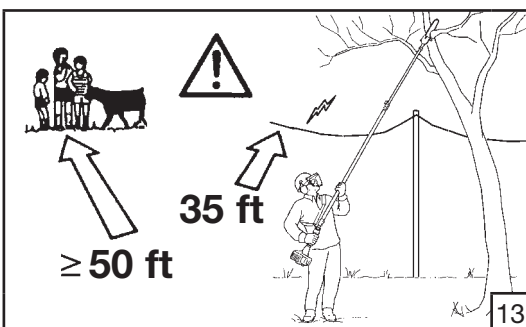
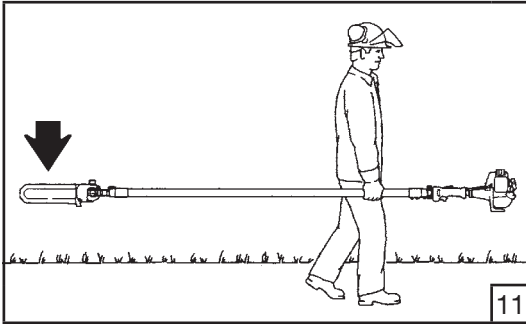
- To reduce the risk of fire and burn injury, handle fuel with care. It is highly flammable.
- Mix and store fuel in a container approved for gasoline (Fig. 8).
- Mix fuel outdoors where there are no sparks or flames.
- Select bare ground, stop engine, and allow to cool before refueling.
- Loosen fuel 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 pole pruner.
- Store fuel in a cool, dry, well ventilated place.
- Never place the pole pruner 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.

Operation and Safety



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

- Keep all parts of your body away from the pole pruner chain when the engine is running.
- Always carry the pole pruner with the engine stopped the guide bar and pole pruner chain to the rear, and the muffler away from your body. When transporting your pole pruner, use the appropriate guide bar scabbard (Fig. 11). When transporting in a vehicle, keep chain and bar covered with the chain guard. Properly secure your pole pruner to prevent turnover, fuel spillage and damage to the pole pruner.
- **Do not operate a pole pruner with one hand!** Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation. **A pole pruner is intended for two-handed use.**
- Before you start the engine, make sure the pole pruner chain is not contacting any object. Never try to start the pole pruner when the guide bar is in a cut.
- Shut off the engine before setting down the pole pruner. Do not leave the engine running unattended.



- Only use the pole pruner in well-ventilated places, do not operate the pole pruner in explosive or flammable atmospheres or in closed environments (**Fig. 12**). Beware of carbon monoxide poisoning.
- Do not operate pole pruner from a ladder or in a tree. Always cut from a firm-footed and safe position.
- Do not put pressure on the pole pruner at the end of the cut. Applying pressure can cause you to lose control when the cut is completed.
- Do not cut near electric cables (**Fig. 13**).
- Keep the handles dry, clean, and free of oil or fuel mixture.
- When the pole pruner is running, grip the front handle firmly with your left hand and the back handle with your right hand (**Fig. 10**).
- When cutting a limb that is under tension, be alert for springback so you will not be struck when the tension in the wood fibre is released.
- Take great care when cutting small branches or shrubs which can block the chain, be thrown back towards you or cause you to lose your balance.
- Never start up the pole pruner without the chain cover fitted.
- Do not use the pole pruner as a lever for lifting, moving or splitting objects. Do not lock it over fixed stands..
- Always begin cutting with the engine at full speed .

Maintain Control (Fig. 14-15)

- Keep a good, firm grip on the pole pruner with both hands when the engine is running and don't let go. A firm grip will help you reduce kickback and maintain control of the pole pruner. Keep your right hand completely around the rear handle whether you are right handed or left handed. Keep your left arm straight with the elbow locked.
- Position your left hand on the front handlebar so it is in a straight line with your right hand on the rear handle when making bucking cuts. Never reverse right and left hand positions for any type of cutting.
- Stand with your weight evenly balanced on both feet.
- Stand slightly to the left side of the pole pruner to keep your body from being in a direct line with the cutting chain.
- Do not overreach. You could be drawn or thrown off balance and lose control of the pole pruner.

Precautions to Reduce Vibration Risk

- The pole pruner is provided with anti-vibration (AV) system; never alter or modify it.
- Wear gloves and keep your hands warm.
- Keep the pole pruner chain sharp and the pole pruner, including the AV system, well maintained. A dull chain will increase cutting time, and pressing a dull chain through wood 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 pole pruner that is damaged, improperly adjusted, or is not completely and securely assembled.

- Be sure that the pole pruner chain stops moving when the throttle control trigger is released. If the pole pruner chain moves at idle speed, the carburetor may need adjusting, see Operation-Carburetor Adjusting Section.

If the pole pruner chain still 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 pole pruner service, other than items in the Operator's Manual maintenance instructions, have to be performed by competent pole pruner 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 pole pruner in any way.
- Keep the handles dry, clean, and free of oil or fuel mixture.

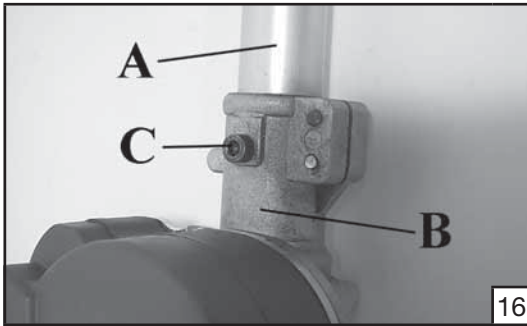


WARNING: Use only accessories and replacement parts recommended.

- Never touch the chain or attempt to service the pole pruner while the engine is running.
- Never use fuel for cleaning operations.
- Keep the pole pruner in a dry place, off the ground with the chain guard on and the tanks empty.
- If your pole pruner 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.



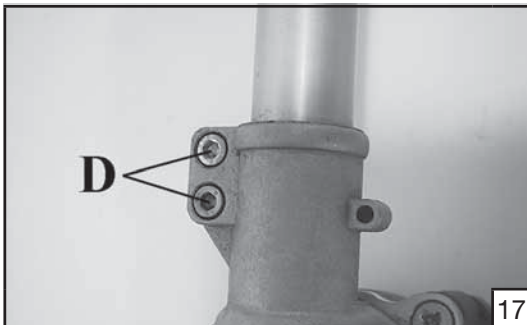
Cutting implement assemblage

Put the shaft arm (A, Fig.16) in the cutting implement (B), till the centering hole on the shaft matches that of the implement.

Fix the centering screw (C, Fig.16) first and then the two screws (D, Fig. 17).



WARNING! – For all operations before the use of cutting implement, consult accessory instruction manual.

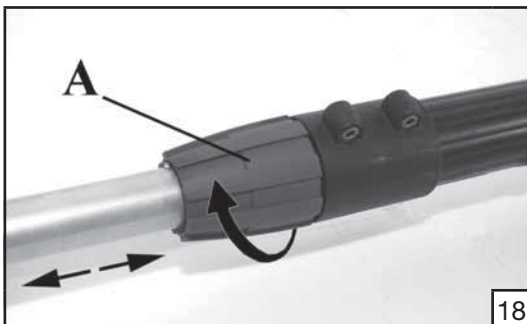


Shaft adjustment



WARNING – Shaft adjustment operations must be carried out while engine is switched off and chain cover fitted.

Unloose locking ring nut (A, Fig.18) clockwise. Adjust shaft to desired height. Tighten locking ring nut (A, Fig.19) anticlockwise.



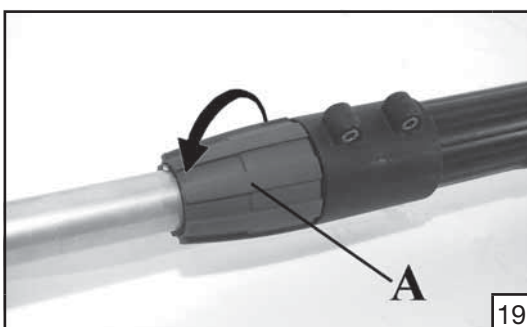
Cutting tool angular adjustment



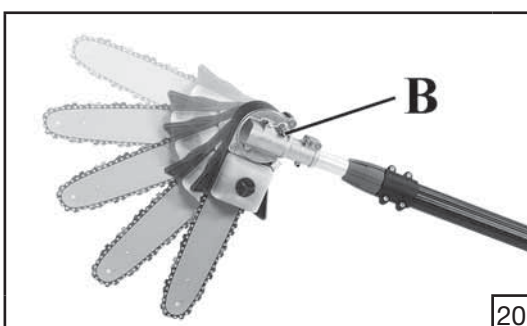
WARNING – The cutting tool angular adjustment must be carried out while engine is switched off and chain cover fitted.

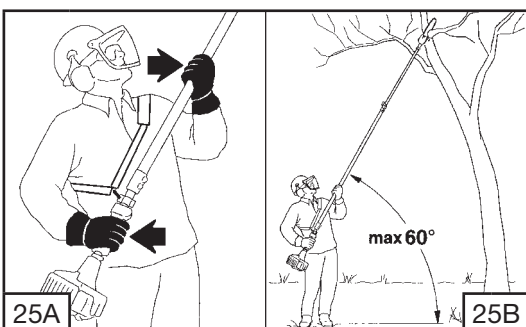
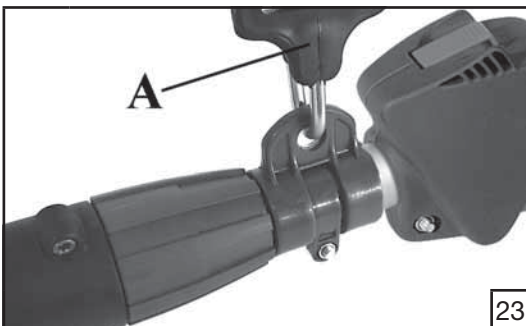
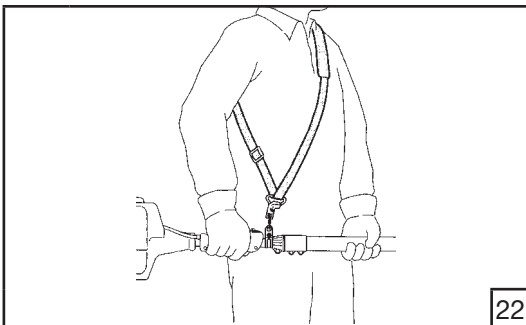
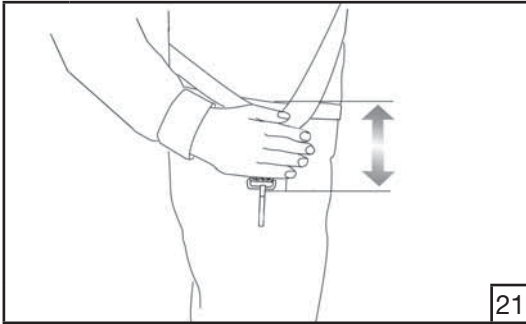
Cutting tool's angulations can be modified from 0° to 90° unscrewing screw (B, Fig.20). There are three intermediate positions between 0° and 90° (22° - 45° - 67°) which block the cutting tool.

After selecting the angle tighten the screw (B).



WARNING – Be aware to block the cutting device in one of the fifth positions; don't let it in an intermediate position.





Preparing to work

HARNESSES

Correct adjustment of the harness permits the pole pruner to be properly balanced and at an appropriate height from the ground (Fig. 21).

- Put on the single harness (Fig. 22).
- Hook the pole pruner to the harness using the hook (A, Fig. 23).
- Position the buckle (C, Fig. 24) to obtain the correct pole pruner height.

OPERATION

- Put on the harness and always keep both hands on the handle while operating the pole pruner (Fig. 25A).
- Use the pole pruner as illustrated in Fig. 25B.

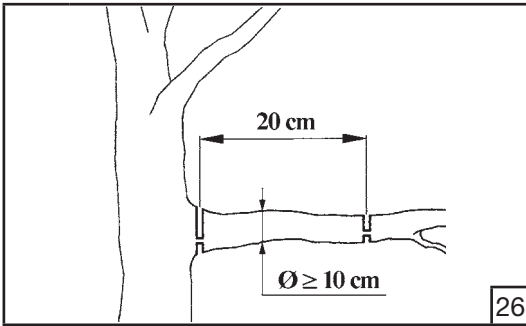


WARNING: Carefully read the safety precautions before using the pole pruner.

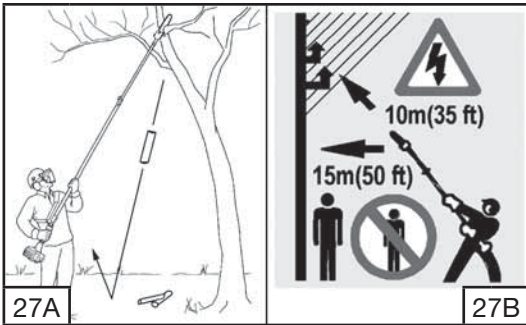
OPERATING INSTRUCTIONS



WARNING - The pole pruner must only be used for cutting branch. It is forbidden to cut other types of material. Vibrations and kickback vary with different materials and the requirements of the safety regulations would not be respected. Do not use the pole pruner as a lever for lifting, moving or splitting objects. Do not lock it over fixed stands. It is forbidden to hitch tools or applications to the P.t.o. that are not specified by the manufacturer.

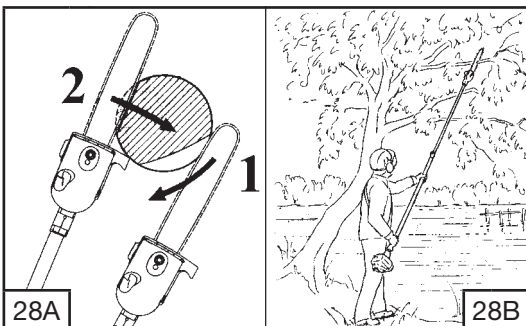


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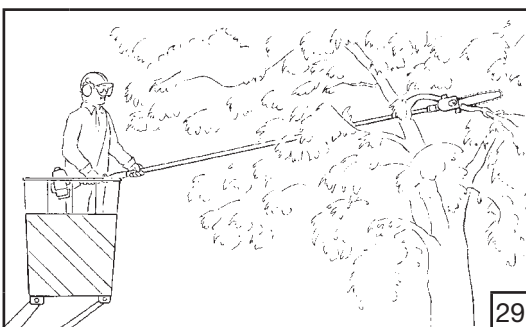
27A

27B



28A

28B



29

Operating techniques

Hold control grip with right hand and shaft (**Fig.25A**) with left hand. Optimum balance could be obtained with machine close the body. Standing 60° with the ground (**Fig.25B**) makes work less fatiguing.

To ease branch falling, cut lower branches first.

To cut larger branches (with diameter larger than 10 cm), cut it into more parts (max length 20 cm), never cut the whole branch (**Fig.26**). Always cut at full throttle.



WARNING – Never work under the branch you are cutting; beware of available space and falling pieces that bounce anomalously on the ground (**Fig.27A**).



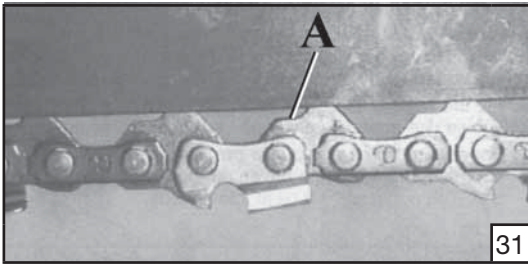
WARNING – Pay attention when working near electric lines. Falling branches could cause short circuit. Never approach the tool at less than 10 metres from electric lines (**Fig.27B**).

Flush-cutting (**Fig.28A**) - To avoid tearing the bark, kickbacks or bar pinching, always start by performing a relieving cut (1) on the underside of the branch. Perform the cross-cut (2).

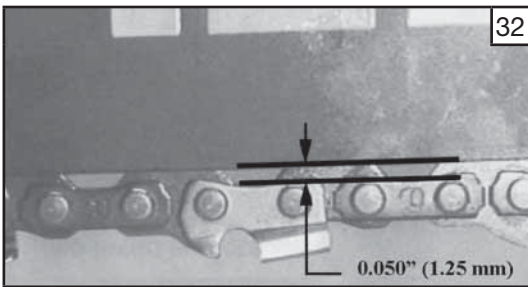
Particular cuts

The pole pruner permits:

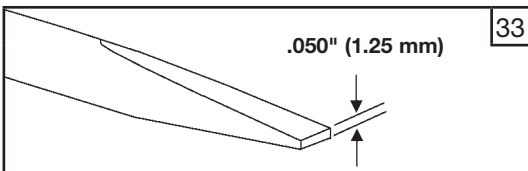
- pruning of branches that are overhanging obstacles (**Fig.28B**) such as rivers, lakes etc.
- pruning of branches from high rise buckets (**Fig.29**).



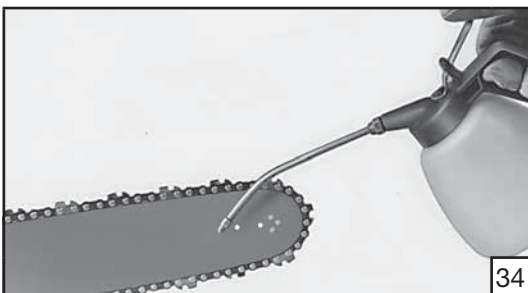
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Chain Tension



WARNING: Never touch or adjust the chain while the motor is running. The pole pruner chain is very sharp, always wear protective gloves when performing maintenance to the chain.

1. **Stop the engine before setting the chain tension.** Loosen the guide bar nuts slightly, turn the chain tensioning screw clockwise to tension the chain. Refer to Assembly-Assembling the Bar and Chain Section. Retighten guide bar nuts. A cold chain is correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding. For warm chain, see Item 3.
2. Chain must be retensioned whenever the flats (**A**) on the drive link tangs hang out of the bar groove. See **Fig. 31**.
3. During normal pole pruner operation, the temperature of the chain will increase. The drive link tangs of a correctly tensioned warm chain will hang approximately .050" (1.25 mm) out of the bar groove. See **Fig. 32**. To help determine the correct warm chain tension, the tip of the combination wrench (**Fig. 33**) can be used as a guide.



CAUTION: Chain tensioned while warm, may be too tight upon cooling. Check the "cold tension" before next use.



CAUTION: A new chain has to be retensioned more often than one that has been in use for some time.

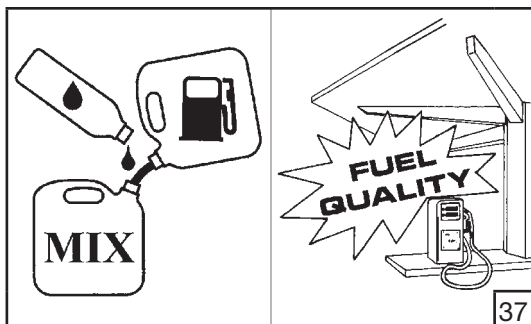
Breaking-in the Chain

New chains will stretch and must be tightened frequently.

Lift the chain out of the bar groove and lubricate the bar groove with additional oil, see **Fig. 34**. Place the pole pruner on a piece of cardboard or scrap plywood. Start the pole pruner (refer to Operation-Starting Engine Section) and allow it to run at moderate speed for approximately one (1) minute. **Stop the engine.** Check that the oil pump is working properly. The cardboard should have excess oil from the chain rotation if the oil pump is working properly, see **Fig. 35**. Adjust the chain tension (refer to Operation-Chain Tension Section). Start the pole pruner again and make a few cuts in a log to heat up the chain. Stop the engine and re-adjust chain again. Repeat this process until the chain retains proper warm tension adjustment as shown in **Fig. 32** in Operation-Chain Tensioning Section. **Never touch the ground with the chain.**



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Fueling (Do Not Smoke!) (Fig. 38)

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. 36).

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. 37).

Mix 2-Cycle Engine Oil with gasoline according to the instructions on the package. We strongly recommend the use of **2% (50:1)** 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% (25:1)** fuel/oil 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.

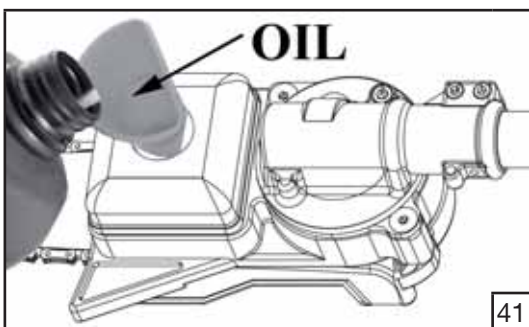
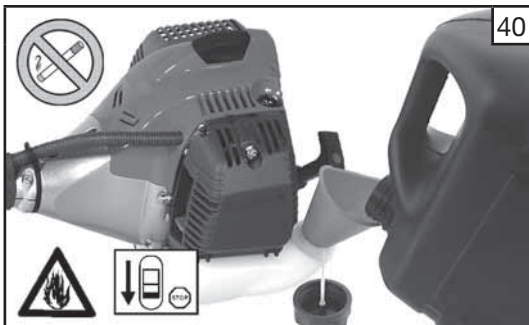
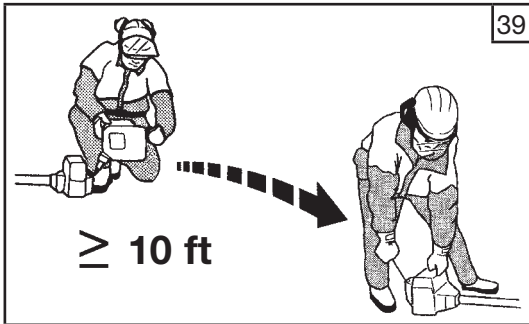
Gasoline Oxygenated with alcohol readily takes/up water when it is present; the water may be condensed out of humid air or be a contaminant in the fuel system, including tank.



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 (40 ml)

Filling the Tank (Fig. 40)

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 (3 m) from refueling site before starting engine (Fig. 39). **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.

Chain Oil System (Fig. 41)

The bar and chain require continuous lubrication. Lubrication is provided by the automatic oiler system when the oil tank is kept filled. Lack of oil will quickly ruin the bar and chain. Too little oil will cause overheating shown by smoke coming from the chain and/or discoloration of the bar. In freezing weather oil will thicken, making it necessary to thin bar and chain oil with a small amount (5 to 10%) of Diesel Fuel or kerosene. Bar and chain oil must be free flowing for the oil system to pump enough oil for adequate lubrication.

CAUTION: Never use waste oil. Always use biodegradable lubricant that is specific for bar and chain and that is better for the environment and pole pruner's parts.

CAUTION: Do not use dirty, used or otherwise contaminated oils. Damage may occur to the oil pump, bar, or chain.



WARNING: Do not use waste oil! Medical studies have shown that renewed contact with waste oil can cause skin cancer.

1. Fill the oil tank every time engine is fueled. Pole pruner should use approximately one tank of oil per tank of fuel.
2. The automatic oil pump is a positive displacement pump operated through gears driven off the clutch drum assembly. The pump will not oil at idle speed.

Preparation for Cutting

Proper Grip on Handles.

Refer to Safety Section for appropriate Safety Equipment.

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



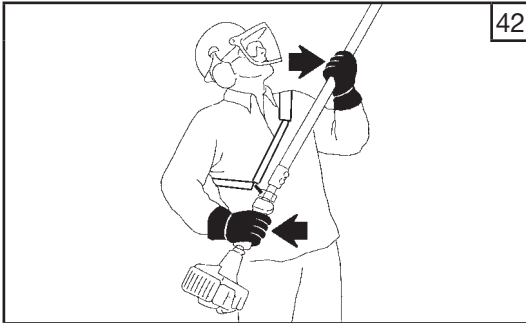
WARNING: Hold the pole pruner firmly with both hands. Always keep your LEFT HAND on the front handle and your RIGHT HAND on the rear (throttle) handle as shown in Fig. 42, so that your body is to the left of the chain line. Never use a cross-handed grip, or any stance which would place your body or arm across the chain line. Left-handers should follow these instructions too.

2. Maintain a proper grip on the pole pruner whenever the engine is running. The fingers should encircle the handle. Any grip in which the thumb and fingers are on the same side of the handle, is dangerous because a slight kick of the pole pruner can cause loss of control.

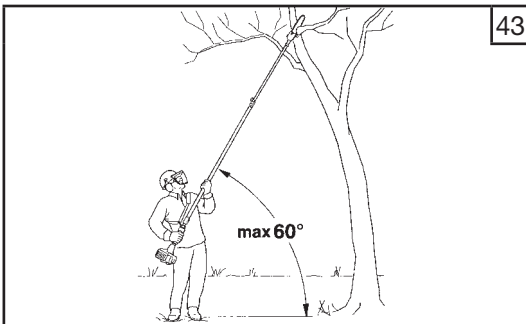


WARNING: Proper Cutting Stance (Fig. 43)

- Weight should be balanced on both feet - feet on solid ground.
- Your body should always be to the left of the chain line.



42

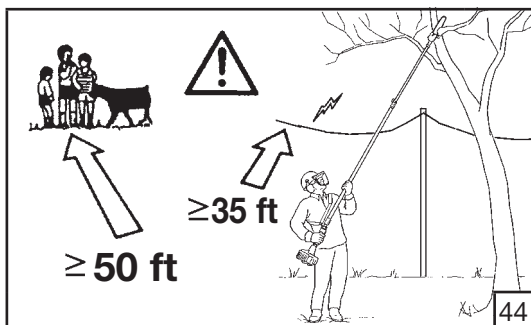


43

Basic Cutting Procedure

Practice cutting a few small logs using the following technique to get the "feel" of using your pole pruner before you begin a major pole pruning operation.

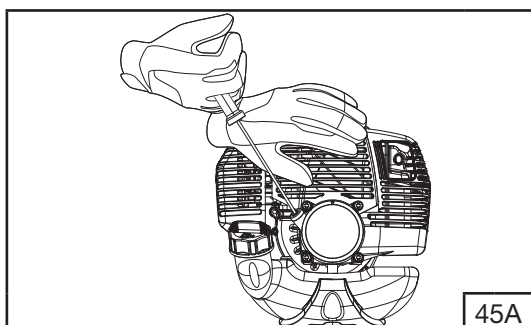
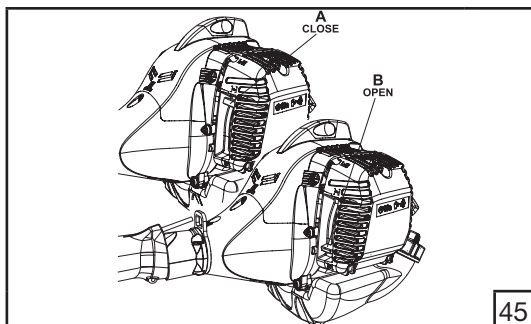
1. Take the proper stance in front of the wood with the pole pruner idling.
2. Accelerate the engine to full throttle just before entering the cut by squeezing the throttle trigger.
3. Keep the engine at full throttle the entire time you are cutting.
4. Allow the chain to cut for you; exert only light downward pressure. If you force the cut, damage to the bar, chain, or engine can result.
5. Release the throttle trigger as soon as the cut is completed, allowing the engine to idle. **If you run the pole pruner at full throttle without a cutting load, unnecessary wear or damage can occur to the chain, bar, and engine.**
6. Do not put pressure on the pole pruner at the end of the cut.



Work Area Precautions

WARNING: Cut only wood or materials made from wood. Do not cut metal, plastics, masonry, or non-wood building materials.

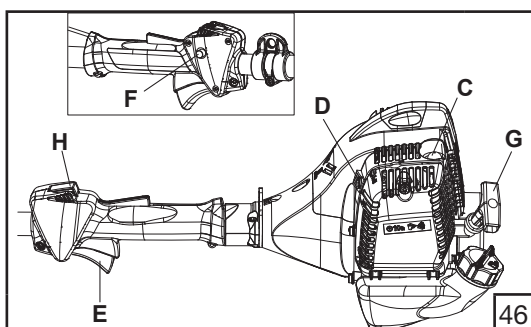
- Never allow children to operate your pole pruner. Only allow others to use this pole pruner who have read this Operator's Manual or received adequate instructions for the safe and proper use of this pole pruner.
- Keep everyone - helpers, bystanders, children, and animals a safe distance from the cutting area (**Fig. 44**).
- Always cut with both feet on solid ground to prevent being pulled off balance.
- Do not cut above chest height, as a pole pruner held higher is difficult to control against kickback forces.
- Do not work near electrical wires or buildings. Leave this operation for professionals.
- Cut only when visibility and light are adequate for you to see clearly.
- **Do not cut from a ladder, this is extremely dangerous.**
- Stop the pole pruner if the chain strikes a foreign object. Inspect the pole pruner and repair parts as necessary.
- Keep the chain out of dirt and sand. Even a small amount of dirt will quickly dull a chain and increase the possibility of kickback.
- Stop the engine before setting the pole pruner 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.



Starting The Engine

WARNING: Keep body to the left of the chain line. Never straddle the pole pruner or chain, or lean over past the chain line.

- Do not start the engine with the arm not mounted.
- Place the pole pruner on level ground and ensure that no objects or obstructions are in immediate vicinity which could come in contact with the bar and chain.
Hold the body of the machine on the ground using your left hand (**CAUTION! Not with your foot!**), see **Fig. 45A**.



Start-up procedure

- 1) Slowly push the purge bulb 4 times (C, Fig.46).
- 2) Pull the choke lever (D, Fig.46) in the **CLOSE** position (A, Fig.45)
- 3) Pull the throttle lever (E, Fig.46) and stop it at half-throttle by pressing the button (F), then release the lever (E).
- 4) Place the pole pruner on the ground in a stable position. Check that the cutting attachment is free. Holding the pole pruner down (Fig.45A), pull the starter rope until the first kick over of the engine is heard (no more than 3 pulls). A new unit may require additional pulls.
- 5) Push the choke lever (D, Fig.46) in **OPEN** position (B, Fig.45).
- 6) Pull the starter cord to start the engine. Once the machine is started, warm up the machine for about few seconds, without touch the throttle lever. The machine could need more seconds

to warm up with cold weather or at high altitudes. Finally, put the choke lever (E, Fig.46) for deactivate the automatic half-throttle.

**CAUTION:**

- Never wrap the starter cord around your hand.
- 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 starter handle (G, Fig.46) and let the rope rewind slowly.



WARNING: Do not cut material with the choke lever at the CLOSE position. Do not operate your pole pruner with the starting throttle lock engaged. Cutting with the starting throttle lock engaged does not permit the operator proper control of the pole pruner.

NOTE - STARTING WARM ENGINE:

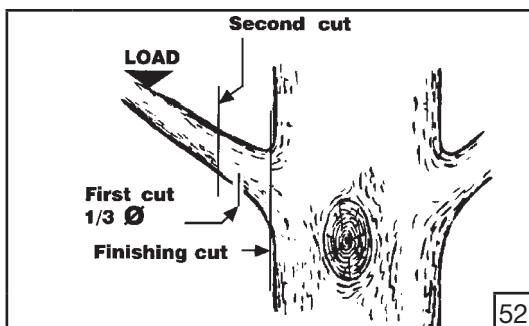
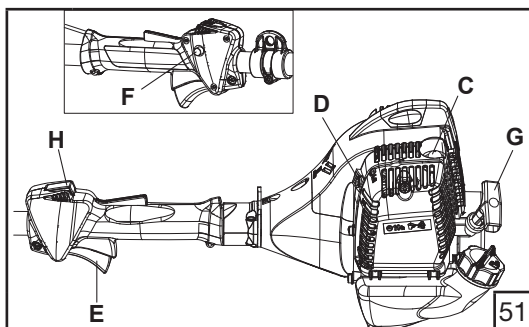
Follow above starting instructions, but do not use the CLOSE position for start up again.



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

Keep the engine at full throttle the entire time you are cutting.

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



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 breakingin 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 above. 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 30).

Engine is Flooded

- Engage a suitable tool in the spark plug boot.
- 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 choke lever to **OPEN** position – even if engine is cold.
- Now start the engine.

Stopping The Engine

Set the throttle lever to idle position (E, Fig.51) and wait a few seconds to let the engine cool off.

Turn off the engine, pushing the STOP button (H).

Pre-operation checking



WARNING : THE CUTTING ATTACHMENT SHOULD NEVER TURN AT IDLE. Turn the idle speed screw "T" counter-clockwise to reduce the idle RPM, or contact a Servicing Dealer for adjustment and discontinue use until the repair is made. Serious personal injury may result from the cutting attachment turning at idle.

A damaged clutch may cause a cutting attachment to rotate at idle speed and increase the risk of personal injury from loss of control and from contact with the cutting tool.

Working Techniques

Unusual Hazardous Working Techniques Conditions



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



WARNING: Never cut, when visibility is poor or in very high or low temperatures or in freezing weather.



WARNING: Do not cut near electrical wires or buildings. If the tree makes contact with any utility line, the utility company should be notified immediately.



WARNING: Check the tree for damaged or dead branches that could fall and hit you during working.

- Carefully plan your pole pruning operation in advance.
- Clear the work area. You need a clear area all around the tree so you can have secure footing.

Look for decay and rot. If the branch is rotted, it can snap and fall toward the operator.

Make sure there is enough room for the branch to fall. Maintain a distance of 2-1/2 tree lengths from the nearest person or other objects. Engine noise can drown out a warning call. Remove dirt, stones, loose bark, nails, staples, and wire from the tree where cuts are to be made.

Pick your escape route (or routes in case the intended route is blocked). Clear the immediate area around the tree, and make sure there are no obstructions in your planned path of retreat.



WARNING: Never turn pole pruner upside down to undercut. The pole pruner cannot be controlled in this position. Always make your first cut on the compression side of the branch. The compression side of the branch is where the pressure of the branch's weight is concentrated.

Pruning

- Be alert for springback. Watch out for branches that are bent or under pressure. Avoid being struck by the branch or the pole pruner when the tension in the wood fibers is released.
- Keep a clear work area. Frequently clear branches out of the way to avoid tripping over them.



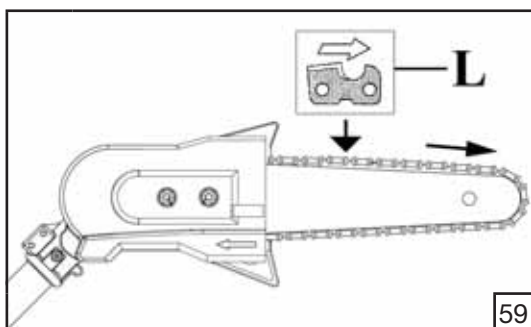
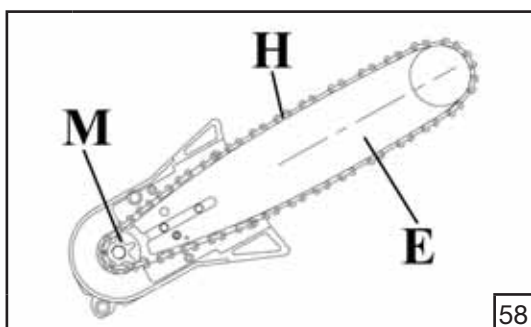
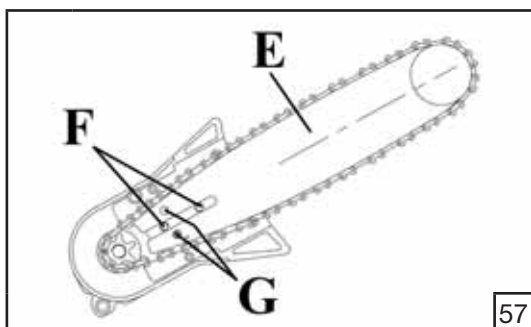
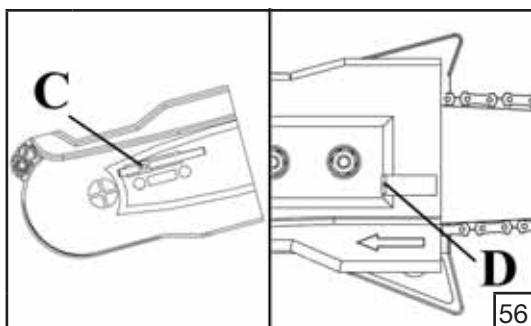
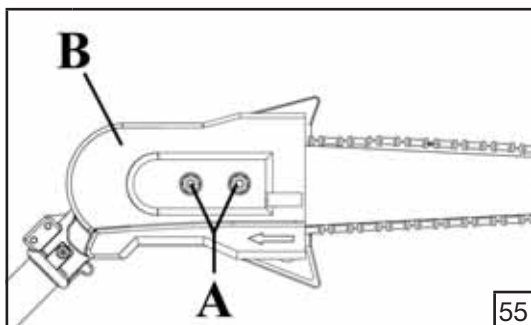
WARNING: Never climb into a tree to limb or prune. Do not stand on ladders, a log or in any position which can cause you to lose your balance or control of the pole pruner.

Pruning Operation (Fig. 52)

- When pruning trees it is important not to make the flush cut next to the main limb or trunk until you have cut off the limb further out to reduce the weight. This prevents stripping the bark from the main member.
- Underbuck the branch 1/3 through for your first cut, your second cut should overbuck to drop the branch off.
- Now make your finishing cut smoothly and neatly against the main member so the bark will grow back to seal the wound.

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		
Oil Tank	Inspect (Leaks, Cracks, and Wear)	X	X					
	Clean					X		
Fuel Filter	Inspect				X			
	Clean, Replace Filter Element						X	Every 6 Months
Chain Lubrication	Check Output	X	X					
Saw Chain	Inspect (Damage, Sharpness, and Wear)	X	X					
	Check Tension	X	X					
	Sharpen (Check Gauge Depth)						X	X
Guide Bar	Inspect (Damage and Wear)	X	X					
	Clean Bar groove and Oil Passages	X						
	Rotate				X			
	Lubricate Sprocket Nose				X			
	Deburr				X			
	Replace						X	X
Rim Sprocket	Inspect (Damage and Wear)				X			Replace with every new chain
Chain Catcher	Inspect (Damage and Wear)	X	X					
	Replace						X	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



Assembling the Bar and Chain



WARNING: Check the chain tension frequently when operating the pole pruner. Never touch or adjust the chain while the engine is running. The pole pruner chain is very sharp, always wear protective gloves when performing maintenance to the chain.

1. Remove the two (2) bar nuts (A, Fig. 55) and the cover (B).
2. Adjust the chain tensioning pin (C) fully towards the cover band by turning the chain tensioning screw (D) counterclockwise as shown in inset (Fig. 56).
3. The guide bar (E, fig. 57) contains a bar stud slot that fits over the bar studs (F). The guide bar also contains two chain tensioning pin holes (G) and two lubrication holes, one per side. The bar is reversible and either tensioning pin hole may be utilized with the chain tensioning pin.
4. Place the guide bar (E) onto the bar studs (F) as shown in Fig. 57.
5. Position the guide bar (E) tip through the chain (H) loop as shown in Fig. 58. The cutters on the top of the guide bar should face toward the bar nose, in the direction of the chain rotation. See inset (L) of Fig. 59.
6. Fit the chain (H, fig. 58) over the rim sprocket (M) and into bar groove.



CAUTION: Severe damage can occur to the rim sprocket, clutch drum, guide bar and chain, if the chain is not correctly seated into the rim sprocket.

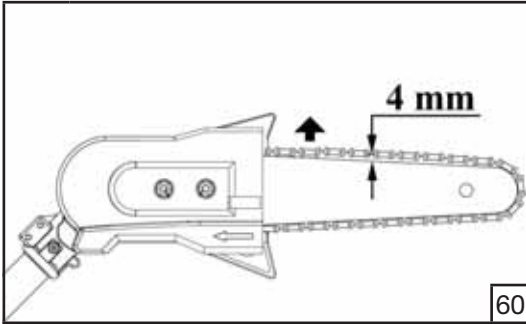
7. Replace the cover (B). Turn the chain tensioning screw (D) clockwise until the chain tensioning pin (C) fits into the chain tensioning pin hole (G). Install the two bar nuts (A). Tighten the bar nuts finger tight only. The bar must be free to move for tension adjustment.



CAUTION: Failure to ensure that the chain tensioning pin is in the chain tensioning pin hole will result in severe damage to the pole pruner during reassembly of the sprocket cover.

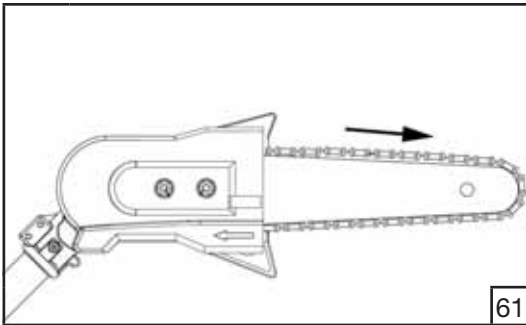
8. Remove all slack from chain by turning the chain tensioning screw (D) clockwise, assuring that the chain seats into the bar groove during tensioning.
9. Lift the tip of the guide bar up to check for sag, see Fig. 60, pag. 24. Release the tip of the guide bar, and turn the chain tensioning screw (D) 1/2 turn clockwise. Repeat this process until sag does not exist.
10. Hold the tip of the guide bar up and tighten the bar nuts (A) securely as shown in Fig. 55.
11. Chain is correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding, see Fig. 61.

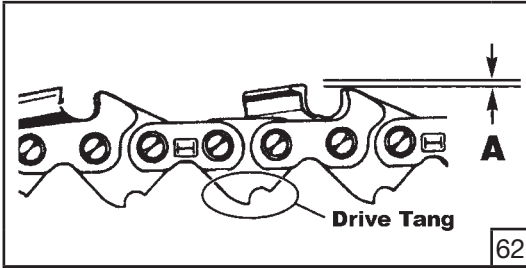
NOTE: If chain is too tight, it will not rotate. Loosen bar nuts slightly and turn adjusting screw 1/4 turn counterclockwise. Lift the tip of the guide bar up and retighten bar nuts.



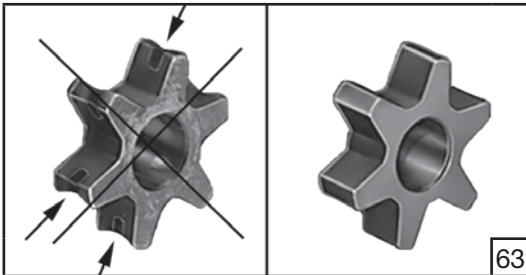
WARNING: If the pole pruner is operated with a loose chain, the chain could jump off the guide bar and result in serious injury.

WARNING: Never start the pole pruner with the sprocket cover loose.

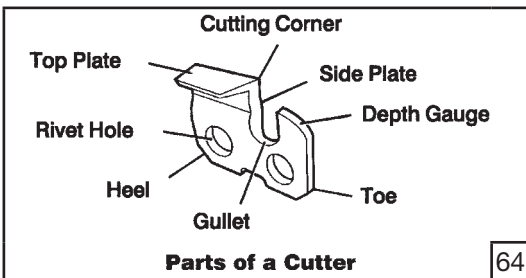




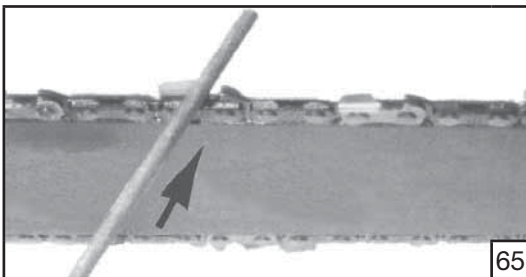
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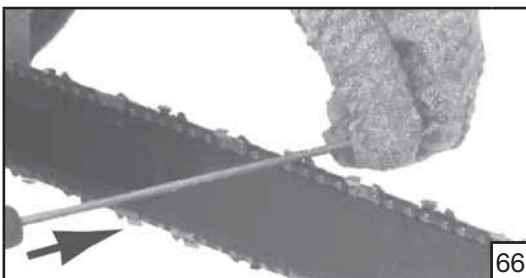
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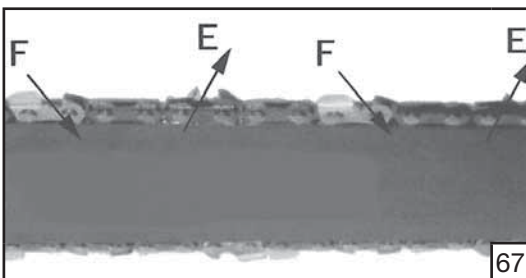
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65



66



67

Chain Maintenance

For smooth and fast cutting, raker chain needs to be maintained properly. The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. During maintenance of your chain, consider the following:

1. Improper filing angle of the side plate can increase the risk of a severe kickback.
2. Raker (depth gauge) clearance (**A, Fig. 62**): Too much increases the potential for kickback; not enough decreases cutting ability.
3. If cutter teeth have hit hard objects such as nails and stones, or have been abraded by mud or sand on the wood, have Servicing Dealer sharpen chain.
4. In rare instances drive tangs could flare resulting in chain not rotating freely. Replace chain if necessary.

NOTE: Inspect the rim sprocket for wear or damage when replacing the chain. If signs of wear or damage are present in the areas indicated in **Fig. 63**, have the rim sprocket replaced by a Servicing Dealer.

How to Sharpen the Cutters (Fig. 64)

Be careful to file all cutters to the specified angles and to the same length, as fast cutting can be obtained only when all cutters are uniform.

1. Wear gloves for protection. Tighten the chain tension enough that the chain does not wobble. Do all of your filing at the mid-point of the bar. See Operation-Chain Tension.
2. Use a 5/32" (4 mm) diameter round file and holder.
3. Keep the file level with the top plate of the tooth as shown in **Fig. 65**. Do not let the file dip or rock.
4. Using light but firm pressure, stroke towards the front corner of the tooth as shown in **Fig. 66**. Lift file away from the steel on each return stroke.
5. Put a few firm strokes on every tooth. File all left hand cutters (**E, Fig. 67**) in one direction. Then move to the other side and file the right hand cutters (**F**) in the opposite direction. Occasionally remove filings from the file with a wire brush.



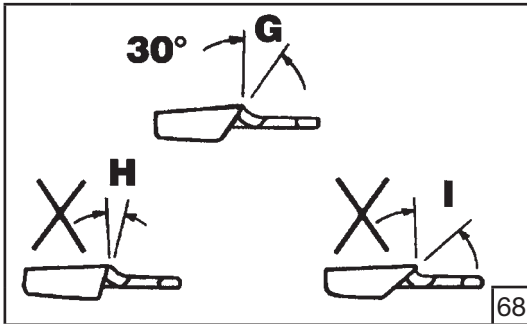
CAUTION: Dull or improperly sharpened chain can cause excessive engine speed during cutting which may result in severe engine damage.



WARNING: It is absolutely essential to comply with the angles and dimensions specified below. If the pole pruner chain is incorrectly sharpened – and in particular if the depth gauge is set too low – there is a risk of increased kickback of the pole pruner, with resulting risk of injury.

Failure to replace or repair damaged chain can cause serious injury.

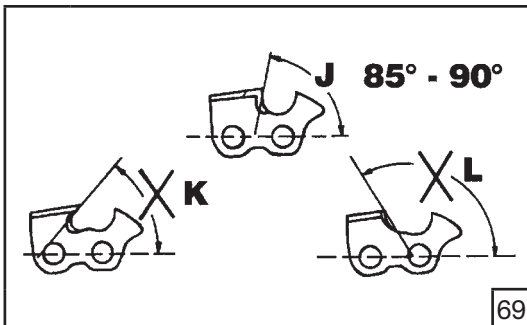
The pole pruner chain is very sharp, always wear protective gloves when performing maintenance to the chain.



Top Plate Angle

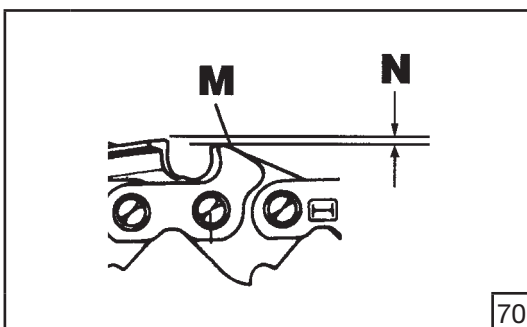
File holders are marked with guide marks to align file properly to produce correct TOP PLATE ANGLE (Fig. 68).

- G) CORRECT- 30°
- H) LESS THAN 30° - For Cross Cutting.
- I) MORE THAN 30°- Feathered Edge Dulls Quickly.



Side Plate Angle (Fig. 69)

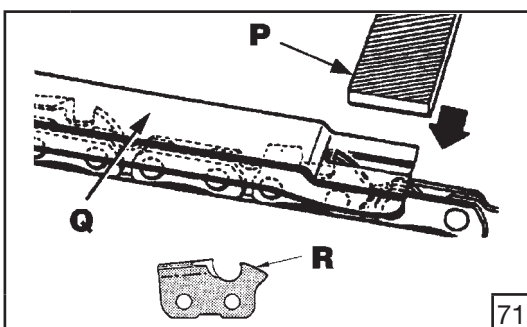
- J) CORRECT- 85° - 90°
Produced automatically if correct diameter file is used in file holder.
- K) "HOOK"- "Grabs" and dulls quickly. Increases potential of **KICKBACK**.
Results from using a file with diameter too small, or file held too low.
- L) BACKWARD SLOPE- Needs too much feed pressure, causes excessive wear to bar and chain.
Results from using a file with diameter too large, or file held too high.



Depth Gauge Clearance

1. The depth gauge (M, Fig. 70) should be maintained at a clearance (N) between .020 (0.5 mm) and .024" (0.6 mm). Use a depth gauge tool for checking the depth gauge clearances.
2. Every time the chain is filed, check the depth gauge clearance.

Use a Flat File and a Depth Gauge Jointer to lower all gauges uniformly (Fig. 71).

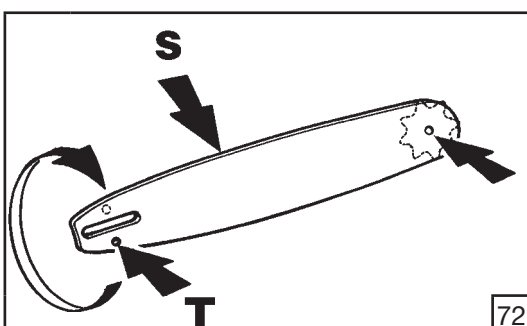


P) FLAT FILE

Q) DEPTH GAUGE JOINTER

Depth gauge jointers available in .020" to .035" (0.5mm to 0.9mm). After lowering each depth gauge, restore original shape by rounding the front (R). Be careful not to damage adjoining drive links with the edge of the file.

CAUTION: After sharpening, clean the chain thoroughly, remove filings or grinding dust – lubricate the chain thoroughly.



Guide Bar Maintenance

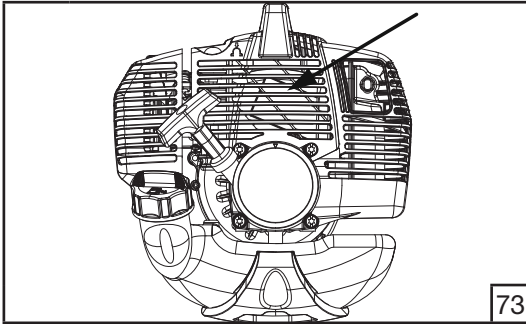
Every day of use, reverse the guide bar on the pole pruner to distribute the wear for maximum bar life (see Fig. 72). The bar should be cleaned every day of use and checked for wear and damage.

Feathering or burring of the bar rails is a normal process of bar wear. Such faults should be smoothed with a file or stone as soon as they occur.

A bar with any of the following faults should be replaced:

- Wear inside the bar rails which permits the chain to lay over sideways.
- Bent guide bar.
- Cracked or broken rails.
- Spread rails.

In addition, guide bars with a sprocket at their tip must be lubricated periodically with a grease syringe to extend the guide bar life. Turn the guide bar and check that the lubrication holes (T) and chain groove (S) are free from impurities.



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Carburetor Adjustment

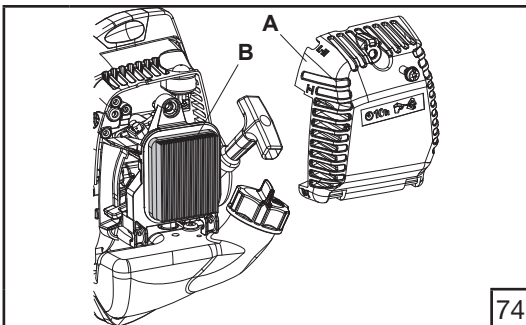
Before adjusting the carburetor, clean the cover vents and air filter as shown in Illustration (Fig.73-74), refer to Operation-Starting Unit and Maintenance-Air Filter Sections for details. Allow the engine to warm up prior to carburetor adjustment. This engine is designed and manufactured in order to comply with EPA (Environmental Protection Agency) Phase 3 regulations.



WARNING: Don't try to force the screws outside the range!



WARNING: Don't modify the carburetor in any way in such case the engine will not run in compliance with emissions regulations.



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Idle Speed Adjustment

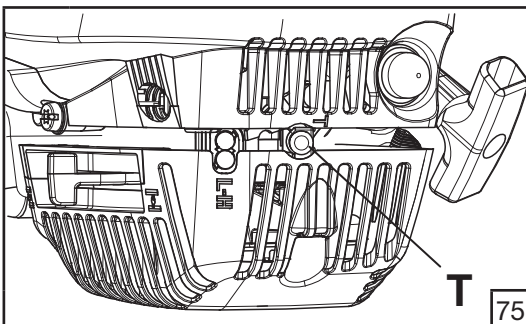
- If the engine starts, runs, and accelerates but will not idle; turn the idle speed screw "T" clockwise to increase idle speed (Fig. 75).
- If the cutting attachment turns at idle, turn the idle speed screw "T" counter-clockwise to reduce the idle RPM and stop the cutting attachment movement.



WARNING: If the cutting attachment still moves at idle speed, contact a Servicing Dealer for adjustment and discontinue use until the repair is made.



WARNING: Weather conditions and altitude may affect carburation.



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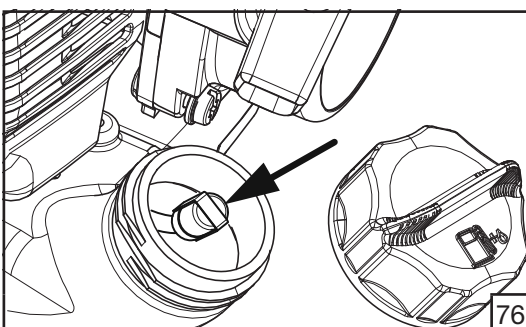
Fuel Filter

Check the fuel filter (Fig. 76) 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.



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If a power drop is noticed, check the air filter. Open the air filter cover (A) and check the air filter (B, Fig.74) each day, change the filter if heavily clogged or damaged.

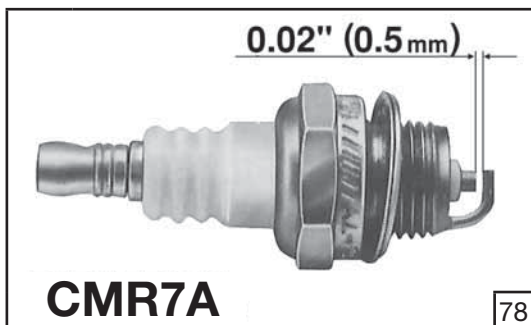
Blow with compressed air, at a distance. Reinstall the air filter into cover. Place the air filter cover onto the pole pruner. Tighten the air filter cover screw securely.

A 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.

Make sure the cover and the support are clean before fitting the new filter.



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! **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.

Starter Unit

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

Engine

Clean the cylinder fins with compressed air or a brush periodically. Dangerous overheating of engine may occur due to impurities on the cylinder.

! **WARNING:** Never run the machine without all the parts, including the starting housing, 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 NGK CMR7A with .02" (0.5 mm) electrode gap (Fig. 78). 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.

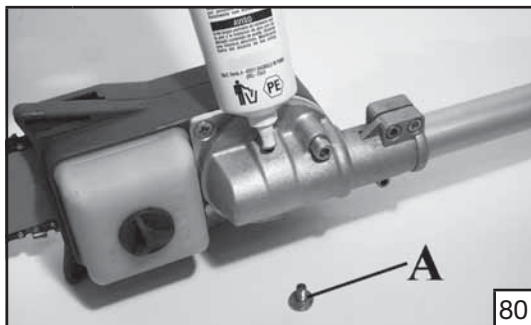
Use only resistor type spark plugs of the approved range.

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

! **WARNING!** – This muffler is fitted with a catalytic converter needed for the engine to be in compliance with the emissions requirements. Never modify or remove the catalytic converter: failure to do so is a violation of law.



WARNING! – Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!



CAUTION! - If the muffler is damaged, it must be replaced. If the muffler frequently becomes blocked, this could be an indication that the efficiency of the catalytic converter is limited.



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

Gear Housing

Every 30 working hours, remove screw (A, Fig. 80) on the gear housing and check the quantity of grease. Use high quality molybdenum bisulfide grease.

Extra maintenance advisable

It is advisable to inspect the machine by a specialized technician at an authorized service network at the end of season, if used intensively, and every two years if with normal use.



ATTENTION: All maintenance operations not reported in this manual must be carried out by an authorized Service Center. To ensure steady and regular pole pruner operation, remember that parts must only be replaced with **ORIGINAL SPARES**.


Any unauthorized changes and/or use of non-original replacement parts may result in serious injury or death to the operator or third parties.

Using Trouble shooting 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 air filter cover. 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 (CMR7A). 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 starts but will not accelerate properly:	Carburetor requires "L" (Low jet) adjustment.	* Contact a Servicing Dealer for carburetor adjustment.
Engine starts but will not run properly at high speed.	Carburetor requires "H" (High jet) adjustment.	* Contact a Servicing Dealer for carburetor adjustment.
Engine does not reach full speed and / or emits excessive smoke	1. Check oil fuel mixture. 2. Air filter dirty. 3. Carburetor requires "H" (High jet) adjustment.	1. Use fresh fuel and the correct 2-cycle oil mix. 2. Clean per instruction in Maintenance-Air Filter Section. 3. *Contact a Servicing Dealer for carburetor adjustment.
Engine starts, runs, and accelerates but will not idle.	Carburetor requires adjustment.	Turn idle speed screw "T" clockwise to increase idle speed. (If chain turns at idle, turn idle speed screw "T" counterclockwise to decrease speed); see Operation-Carburetor Adjustment.
Bar and Chain Running Hot and Smoking	1. Chain oil tank empty. 2. Chain tension too tight. 3. Oiler function.	1. Oil tank should be filled every time that fuel tank is filled. 2. Tension chain per instructions in Operation-Chain Tension section. 3. Run at full throttle 15 to 30 seconds. Stop pole pruner and check for oil dripping from bar tip guard and guide bar. If oil is present the chain may be dull or bar may be damaged. If no oil contact a Servicing Dealer.
Engine starts and runs, but chain is not rotating	1. Chain tension too tight. 2. Guide bar and chain assembly. 3. Chain and/or guide bar damaged. 4. Clutch drum and/or rim sprocket damaged.	1. Tension chain per instructions in Operation-Chain Tension section. 2. Refer to Assembly-Assembling the Bar and Chain Section. 3. Refer to Maintenance-Chain and/or Maintenance-Guide Bar Section. 4. Replace if necessary - contact a Servicing Dealer.

 **WARNING: Never touch the chain while the engine is running.**

***Note:** This engine complies with EPA (Environmental Protection Agency) regulations which require exhaust emission control. As a result, the carburetor adjustment needles are equipped with plastic caps that limit the rotation from the original factory adjustment. 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 Pole pruner



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 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 pole pruner. 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.



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

PTX 2710

ENGINE:

Displacement:	1.65 cu. in (27.0 cc)
Bore:	1.34 in (34 mm)
Stroke:	1.18 in (30 mm)

PERFORMANCE:

Idle Speed:	2,800 RPM
WOT (With Bar & Chain):	10.000 ÷ 10.500 RPM
Power:	1.3 HP/1 kW (7,500 RPM)

FUEL AND OIL SYSTEMS:

Carburetor:	Multi Position Diaphragm Carburetor
Fuel Tank Capacity:	19.6 oz. (580 ml)
Fuel Mix:	See Operation-Fueling Section
Oil Tank Capacity:	6.22 oz. (184 ml)
Chain Lubrication:	Automatic Speed Controlled Positive Displacement Pump

IGNITION SYSTEM:

Spark Plug:	NGK CMR7A
Spark Plug Gap:	0.02 in. (0.5 mm)

OVERALL LENGHT MACHINE: 102"-150"/2.6-3.8 m

CHAIN: 3/8"x.043"

BAR: 10" (25 cm)

