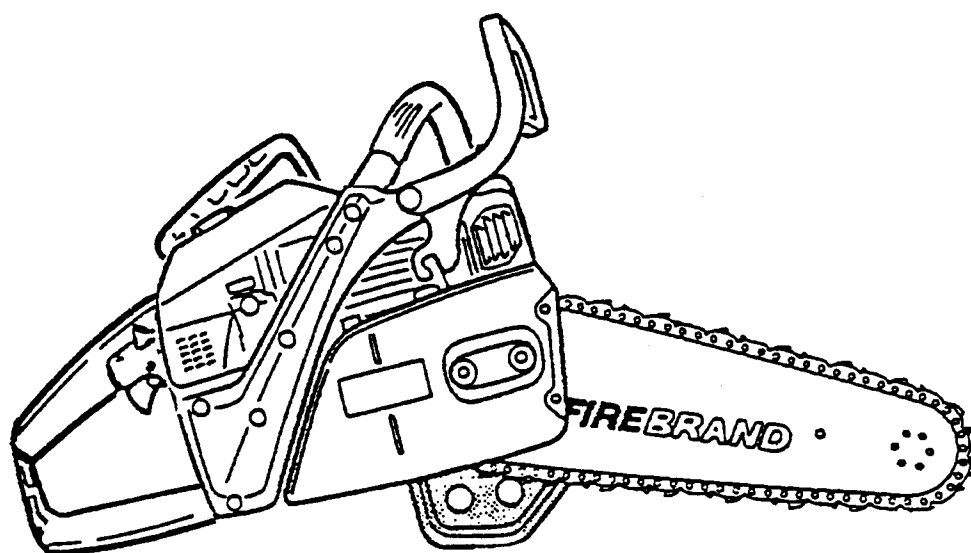




OPERATOR'S MANUAL

QUIKVENT™ SYSTEM



QV-6700 TYPE1
QV-8000 TYPE1

 **CAUTION**
READ RULES FOR SAFE OPERATION
AND INSTRUCTIONS CAREFULLY

OCCASIONAL USER SAW

X750 316-2500
898 610-32630

INTRODUCTION

The Echo QuikVent System is a chain saw specially designed for use by trained fire fighters to ventilate, trench and breach burning structures.

This manual provides the information necessary for operation and maintenance of the saw.

DANGER

This system is designed for use with a special bar and chain for fire department application. This system should not be used for conventional wood cutting applications.

DANGER

Review ECHO Safety Chain Saw Manual and note exceptions as listed below.

DANGER

If the unit is modified for conventional wood cutting operations, read rules for safe operation and instructions carefully in the corresponding CS-6700P or CS-8000P ECHO Chain Saw Operator's Manual and the ECHO Chain Saw Safety Manual.

Use only the guide bar and chain combinations listed in the operator's manual with a Kick Guard installed on the guide bar.

A free copy of the Chain Saw Safety Manual can be obtained from your ECHO dealer or by writing ECHO, INCORPORATED, 400 Oakwood Road, Lake Zurich, IL 60047.

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Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories, and may not include all standard equipment.

WARNING

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

SAFETY

FOLLOW INSTRUCTIONS IN THIS MANUAL

DANGER

Although this manual uses safety symbols to highlight the most serious potential hazards, all instructions must be followed to avoid some risk of serious injury or death to yourself and others.

UNDERSTAND SAFETY AND INFORMATION SYMBOLS



This symbol means "DO NOT DO" whatever is shown.



This symbol is used on DANGER signs to attract attention.



This symbol is used on CAUTION signs to attract attention.

**THIS EXAMPLE OF A
DANGER SIGN CONTAINS
THE ECHO DEFINITION OF
THE SIGNAL WORD
"DANGER."**

DANGER

This attention symbol and signal word DANGER indicate an immediate and grave danger or peril, a hazard producing irreversible damage or injury. To avoid this danger, the operator must heed the recommendation printed in the box.

**THIS EXAMPLE OF A
CAUTION SIGN CONTAINS
THE ECHO DEFINITION OF
THE SIGNAL WORD
"CAUTION."**

CAUTION

Signs headed CAUTION call attention to a danger or hazard capable of resulting in severe, but not irreversible, injury or damage – not a prohibitive warning, but one stressing certain precautions against a potential hazard.

SAFETY

**THIS EXAMPLE OF A NOTE
SIGN CONTAINS THE ECHO
DEFINITION OF THE
SIGNAL WORD "NOTE."**

NOTE

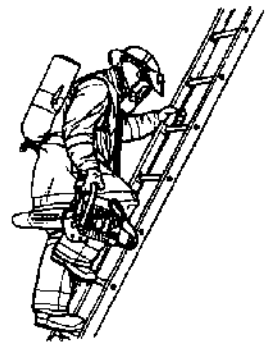
Signs headed NOTE concern things other than safety messages, such as potential damage to equipment or information of special importance.

READ AND UNDERSTAND THE ECHO CHAINSAW SAFETY MANUAL BEFORE USING THIS SAW.

The Safety Manual included with your Quikvent system and this Operator's Manual, covers terminology, safety features, practices and forces at work during cutting.

FOLLOW FIRE DEPARTMENT REGULATIONS

1. This manual covers operation and maintenance of the system only.
2. Follow Fire Department regulations on moving the system from the ground to the cutting site, ventilation techniques, etc.



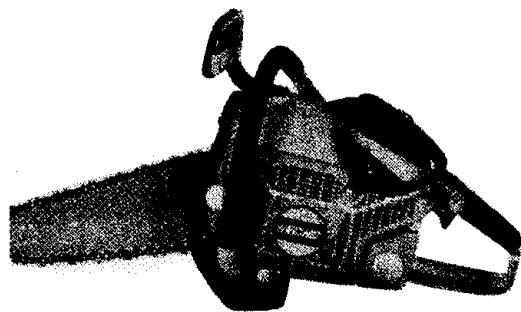
FOLLOW IFSTA PRACTICES

Follow safe and effective practices developed by The International Fire Service Training Association (IFSTA) for transport, venting and all other fire fighting techniques.

SAFETY

FOLLOW SAFETY DECALS

Locate the safety decals on your Quikvent system. Make sure the decals are legible and that you understand them and follow them.



FOLLOW ALL MAINTENANCE PROCEDURES

Follow all maintenance procedures outlined in the maintenance section of this manual to ensure that the saw will operate safely and will start and operate when needed.

HANDLE FUEL SAFELY



ALWAYS store gasoline in an approved container.

DO NOT smoke while handling gasoline.

ALWAYS stop the engine before refueling.

DO NOT refuel a hot engine. Wait until it cools.

ALWAYS remove the fuel cap slowly in order to relieve any pressure build-up in tank.

DO NOT overfill the tank and always clean up spilled fuel.

ALWAYS restart the engine at least 10 feet away from refueling point.



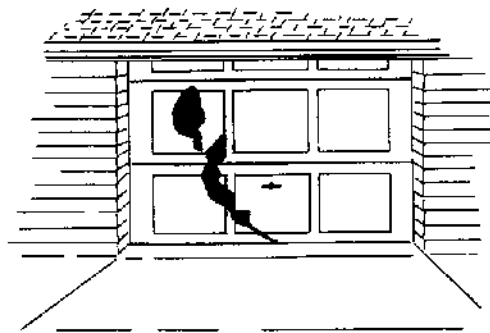
SAFETY

AVOID CARBON MONOXIDE



CAUTION

DO NOT operate system in a confined area.



WEAR PROTECTIVE CLOTHING AND EQUIPMENT

Wear full turn-out gear in accordance with your fire department's regulations.



KEEP A SAFE DISTANCE FROM CO-WORKERS

Make sure there is another person nearby when operating the system, but also make sure they are at a safe distance.

CLEAR WORK AREA

Make sure that hazardous debris such as glass or wire is cleared from the area to be ventilated.



SAFETY

OPERATE SAFELY

AVOID operating the system when you are fatigued.

ALWAYS remains alert when operating the system to avoid possible injury to yourself and others.

DO NOT operate the system while under the influence of alcohol or drugs.



AVOID KICKBACK

DANGER

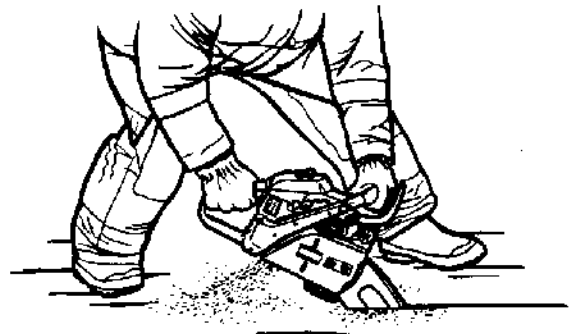
KICKBACK may occur when the nose or tip of the guide bar touches an object, or when the material being cut closes in and pinches the saw chain in the cut.

Tip contact in some cases may cause a lightning-fast reverse **REACTION**, kicking the guide bar up and back towards the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator. Either of these reactions could result in serious personal injury by causing you to lose control of the system. Do not rely exclusively upon the safety devices built into your saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.

IMPORTANT: For free copies of the Echo Chainsaw Safety Manual, contact Echo Inc., 400 Oakwood Rd., Lake Zurich, Ill. 60047

USE CORRECT TECHNIQUE

1. With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
2. Keep a good firm grip of the saw with both hands, the right hand on the rear handle, and the left hand on the front handle. When the engine is running, use a firm grip with thumbs and fingers encircling the chain saw handles. A firm grip will help you reduce kickback and maintain control of the saw. Do not let go.



SAFETY

3. Always work upwind.
4. Cut at high engine speeds.

5. Ventilation and breaching use "plunge cutting" which entails boring into a structure. There is always a chance of kickback even when the plunge cut is expertly done.
6. Keep the skid plate touching the cutting surface.

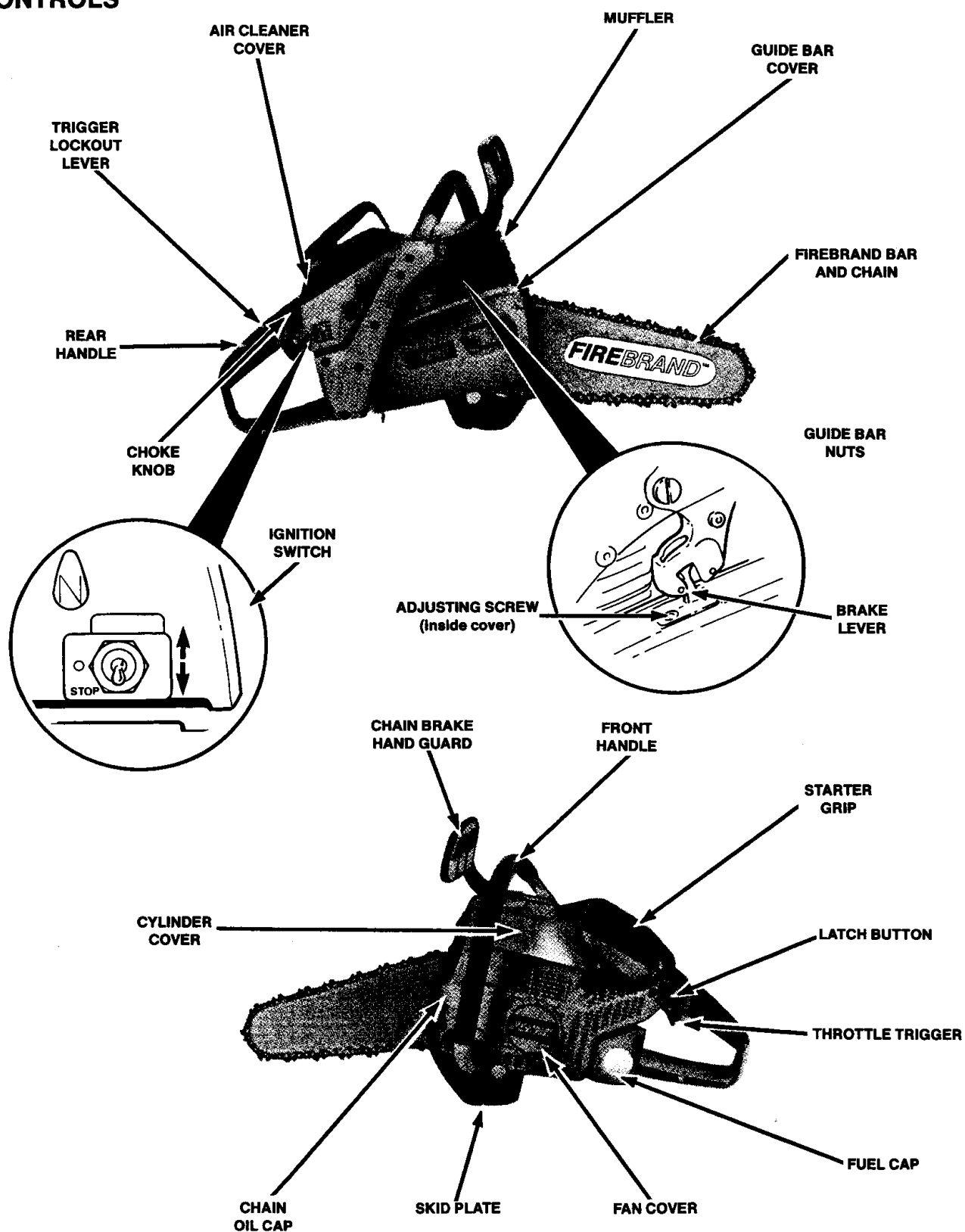
DANGER

Grasp both handles firmly and bring the saw to full throttle. Using a steady pressure, rock the tip of the saw into the roof surface, using the skid plate as a pivot point between the system and the roof. Keeping the weight of the system against the roof with a firm grip will increase operator comfort and control during this dangerous operation.

7. **Avoid cutting joists.**
8. Do not overreach or cut above shoulder height.
9. Follow manufacturer's sharpening and maintenance instructions for the saw chain.
10. Use only replacement bars and chains specified by ECHO, Inc.

DESCRIPTION

CONTROLS



OPERATION (Pre-Ventilation Procedures)

SAFE STARTING TECHNIQUES

1. **KNOW HOW TO STOP:** Keep hold of the rear handle, but release trigger and flick the switch to "STOP."
2. Hold the saw down securely on a flat surface with bar and chain in the clear. After setting the controls, hold the top of the front handle with your left hand. Slide the toe of your right boot through the rear handle to hold down the rear of the system. Grasp the starter handle with your right hand.

NOTE

Use short pulls, 1/2 to 2/3 rope length, when pulling starting rope.

NOTE

Do not allow the starter handle to snap back against the housing.

NOTE

Always hold the unit firmly.



CAUTION

Do not wrap starter rope around your hand or wrist (In case of engine backfire). Pull the handle to crank engine.

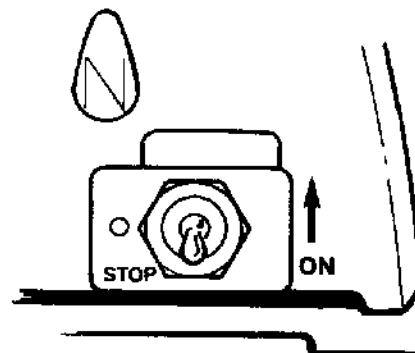
STARTING ENGINE (Cold Start)



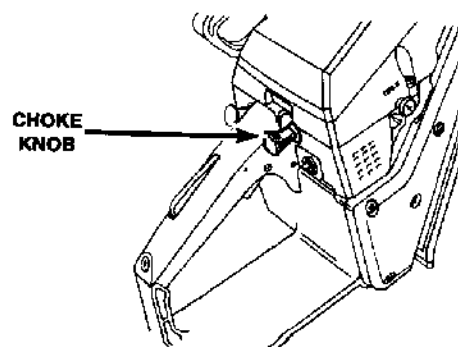
CAUTION

Always cold start engine and allow it to warm up before moving it to cutting area.

1. Turn ignition switch to START position.

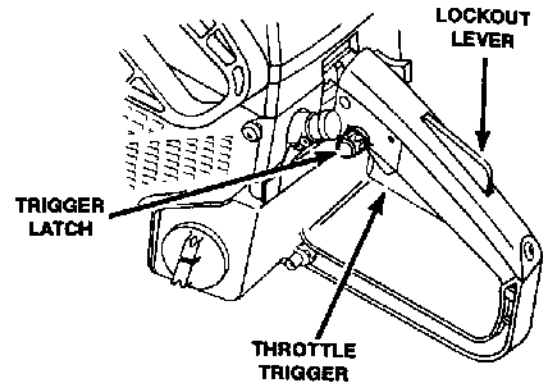


2. Pull choke knob all the way out.



OPERATION (Pre-Ventilation Procedures)

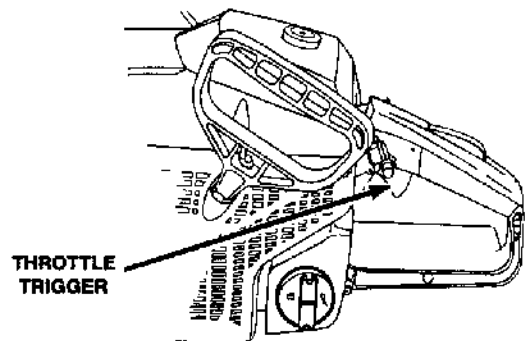
3. Depress lockout lever and squeeze throttle trigger fully.
4. Push trigger latch in and release throttle trigger.



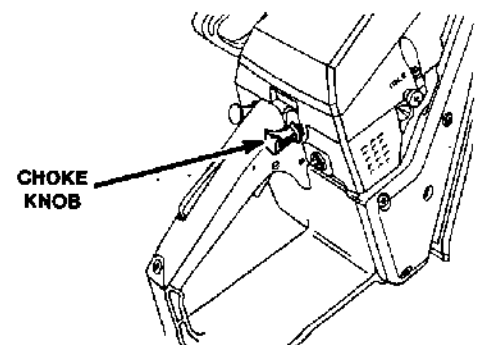
5. Pull starter rope until engine fires.



6. Squeeze throttle trigger to release trigger latch.

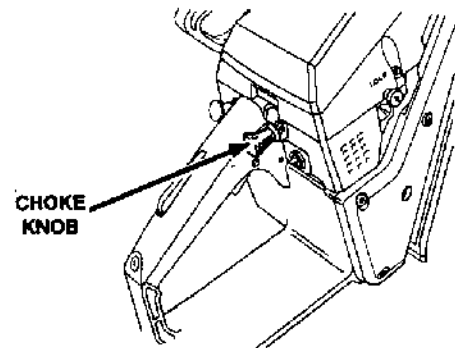


7. Push choke halfway in.



OPERATION (Pre-Ventilation Procedures)

8. Pull starter handle to start engine.
9. Squeeze throttle trigger to keep engine running.
10. Push choke knob all the way in as engine warms up.



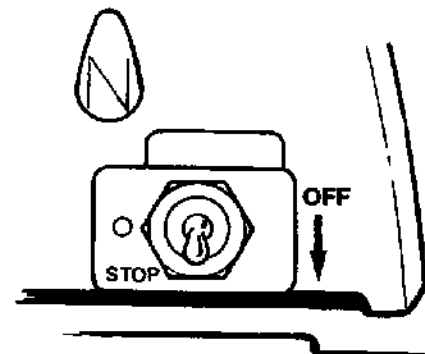
STOPPING ENGINE

1. Allow engine to idle for 2 minutes.
2. Turn ignition switch to off.



CAUTION

If engine does not stop, choke engine by pulling choke knob all the way out. Check and replace stop switch before using saw again.



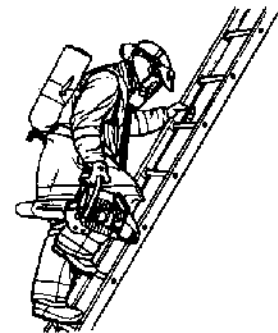
TRANSPORTING SYSTEM

1. Transport system to cutting area with blade to rear.



CAUTION

Follow fire department procedures for transporting power equipment.



STARTING ENGINE (Warm Start)

1. Hold system firmly, gripping front handle with hand and placing foot through rear handle.
2. Turn ignition switch to on.
3. Pull starter handle until engine starts.



OPERATION (Ventilation Procedures)

SAFE OPERATION TIPS (Ventilation Procedures)

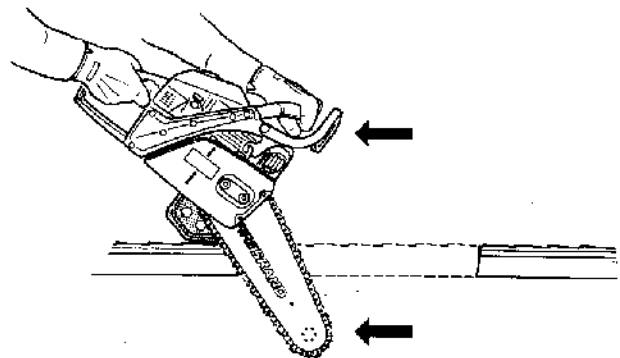
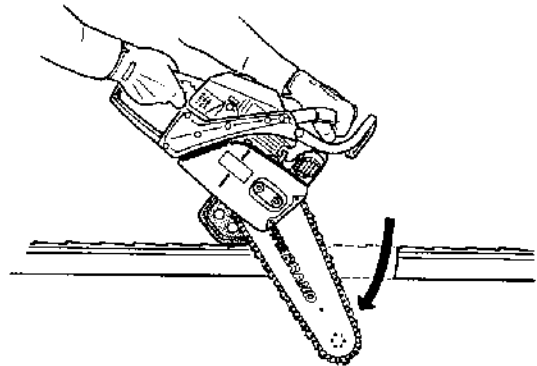
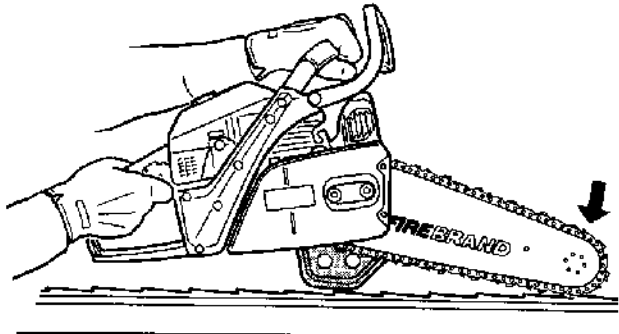
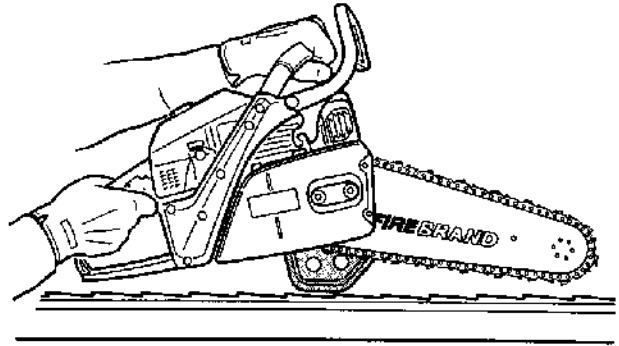
1. Follow all fire department procedures on safe ventilation techniques and on avoidance of cutting near gas and electric services.
2. Keep both hands on handles when engine is running.
3. Always operate the saw at full throttle when making a cut.
4. Always bury the tip of the cutting bar in the cutting surface.
5. Make sure the skid plate is in contact with cutting surface.
6. Avoid cutting above shoulder height and overreaching.

⚠ DANGER

7. Boring – Ventilation and breaching uses “plunge cutting” which entails boring into a structure. There is always a chance of kickback even when the plunge cut is expertly done. Keep the skid plate touching the surface.

Grasp both handles firmly and bring the saw to full throttle. Using a steady pressure, rock the tip of the saw into the surface using the skid plate as a pivot point between the system and the surface. Keeping the weight of the system against the surface with a firm grip will increase operator comfort and control during this dangerous operation.

8. Cutting – After penetration, follow the contour of the skid plate until the bar has reached the approximate angle illustrated at the right. Position the skid plate on the flat surface, maintaining full throttle and steady pressure while keeping the saw on the surface. Pull the saw back, ripping through the surface. Avoid cutting through joists and rafters.



TROUBLESHOOTING

| TROUBLE | CAUSE | WHAT TO DO |
|--------------------------------|--|---|
| 1. Engine fails to start. | No fuel in tank. Fuel filter clogged. Fuel line clogged. Spark plug shorted or fouled. Spark plug broken (cracked porcelain or electrodes broken). Ignition lead wire shorted, broken or disconnected from spark plug. Ignition inoperative (no spark from lead wire). | Fill tank. Replace filter. Clean fuel line. Install new spark plug. Replace spark plug. Replace lead wire or attach to spark plug. Contact your nearest authorized dealer. |
| 2. Engine hard to start. | Water in gasoline or stale fuel mixture. Too much oil in fuel mixture. Engine over or under choked. Carburetor out of adjustment. Gasket leaks (carburetor or cyl. base gasket). Weak spark at spark plug. | Drain entire system and refill with fresh fuel. Drain and refill with correct mixture. If flooded by over choking, proceed according to instructions in previous section. If under choked, move choke lever to closed position and crank two or three times. See "Carburetor Adjustment." Contact your nearest authorized dealer. Contact your nearest authorized dealer. |
| 3. Engine misses. | Dirt in fuel line or carburetor. Carburetor improperly adjusted. Spark plug fouled, broken or incorrect gap setting. Weak or intermittent spark at spark plug. | Remove and clean. See "Carburetor Adjustment" in maintenance section. Clean or replace spark plug – set gap to 0.6-0.7 mm (0.024-0.028 in.). Contact your nearest authorized dealer. |
| 4. Engine lacks power. | Air cleaner clogged. Carburetor out of adjustment. Muffler clogged. Clogged exhaust ports. Poor compression. | Clean air cleaner. See "Carburetor Adjustment." Clean carbon from muffler. Remove muffler, rotate engine until the piston is at bottom of cylinder. With a wooden scraper or blunt tool, remove all carbon from exhaust ports. Be careful not to scratch or damage piston or cylinder walls. Blow out loose carbon with compressed air. Start engine and run briefly to remove all carbon, then install muffler and gasket. Contact your nearest authorized dealer. |
| 5. Engine overheats. | Insufficient oil in fuel mixture. Air flow obstructed. | Mix fuel as shown in starting instructions. Clean flywheel and cylinder fins. |
| 6. Engine noisy or knocking. | Spark plug incorrect heat range. Worn bearings, piston rings or cylinder walls. | Replace with plug specified for engine. Contact your nearest authorized dealer. |
| 7. Engine "stalls" under load. | Carburetor main adjustment too "lean." Engine overheats. | See "Carburetor Adjustment." See "Cleaning Cylinder Fins" in maintenance section. |

TROUBLESHOOTING

| TROUBLE | CAUSE | WHAT TO DO |
|-------------------------------|---|---|
| 8. No oil on chain. | Empty oil tank. Oil filter clogged. Automatic oiler output set too low. | Fill tank. Replace filter. Adjust oiler output. |
| 9. Chain brake fails to work. | Chain brake cartridge out of adjustment. | Adjust cartridge. |
| 10. Chain binds. | Chain tension too tight. | Adjust chain tension. |
| 11. Chain is loose on bar. | Chain tension is too loose. | Adjust chain tension. |

MAINTENANCE

MAINTENANCE SCHEDULE

| REQUIRED CARE | AFTER EACH USE | AS NEEDED | WEEKLY | EVERY 60 DAYS | PAGE NO. |
|------------------------------|----------------|-----------|--------|---------------|----------|
| Clean Entire System | * | | | | 15 |
| Tighten Nuts and Bolts | * | | | | 15 |
| Clean Air Filter | * | | | | 16 |
| Inspect Chain | * | | | | — |
| Sharpen Chain | | * | | | 16 |
| Adjust Chain Tension | * | | | | 16 |
| Adjust Chain Brake Cartridge | * | | | | 18 |
| Refill Fuel Tank | * | | | | 19 |
| Test Saw | * | | * | | 20 |
| Mix Fuel | | * | | | 20 |
| Check Spark Plug | | * | | | 21 |
| Inspect Muffler Assembly | | * | | | 21 |
| Drain and Replace Fuel | | | | * | 21 |
| Replace Fuel Filter | | * | | | 21 |
| Replace Oil Filter | | * | | | 22 |
| Adjust Carburetor | | * | | | 22 |
| Clean Cylinder Fins | | * | | | 24 |
| Rewind Starter | | * | | | 25 |
| Adjust Automatic Oiler | | * | | | 25 |
| Refill Chain Oil Tank | * | | | | 25 |

CLEAN ENTIRE SYSTEM (After Each Use)

1. Clean bar and chain with a 50-50 mixture of kerosene and machine oil.
2. Remove the guide bar and clean the clutch and brake mechanism with a 50-50 mixture of kerosene and machine oil.
3. Clean the exterior of the saw with a non-flammable solvent.

TIGHTEN NUTS AND BOLTS (After Each Use)

1. Make sure all fasteners on the saw are tight.
2. Replace those found to be faulty.

MAINTENANCE

CLEAN AIR FILTER (After Each Use)

QV-8000

1. Close choke.
2. Loosen thumb bolt and remove air filter cover.
3. Remove any loose particles from area.
4. Remove air filter.

NOTE

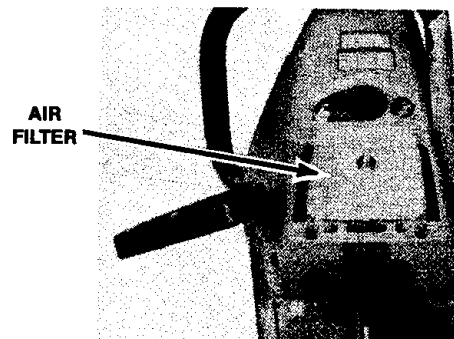
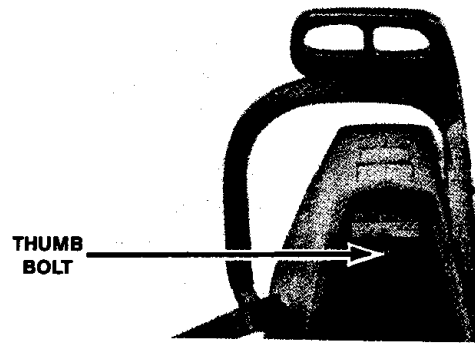
If air filter is excessively dirty, or no longer fits properly, replace it.

5. Carefully brush dirt from filter or clean with a non-flammable solvent if necessary.

NOTE

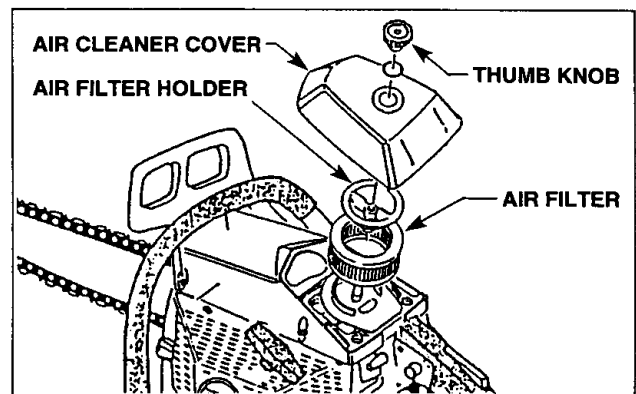
Allow all parts to air dry.

6. Install air filter.
7. Install air filter cover and tighten thumb bolt.



QV-6700

1. Check before every use.
2. Loosen thumb knob and remove the air filter cover.
3. Loosen air filter holder and remove the air filter.
4. Brush or blow off lightly



NOTE

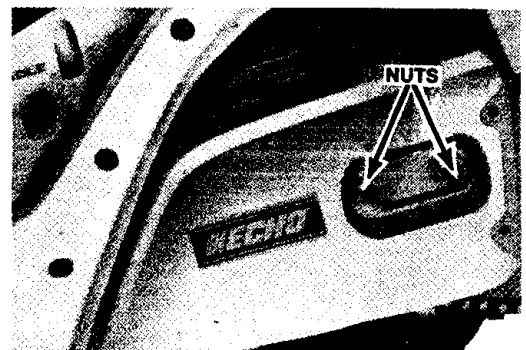
Do not sharpen carbide chain with standard file.

SHARPEN CHAIN (As Needed)

1. Follow instructions included with sharpening kit.
2. Refer to page 26 for Echo part number.

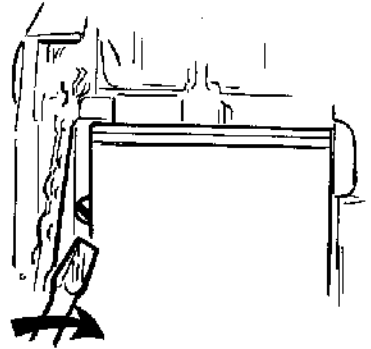
ADJUST CHAIN TENSION (After Each Use)

1. Loosen nuts just enough to allow guide bar to slide when tension screw is turned.

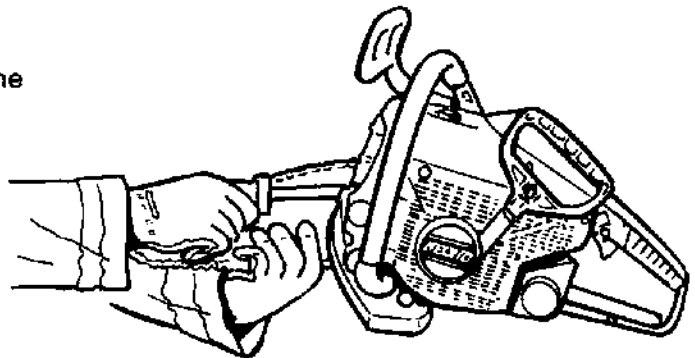


MAINTENANCE

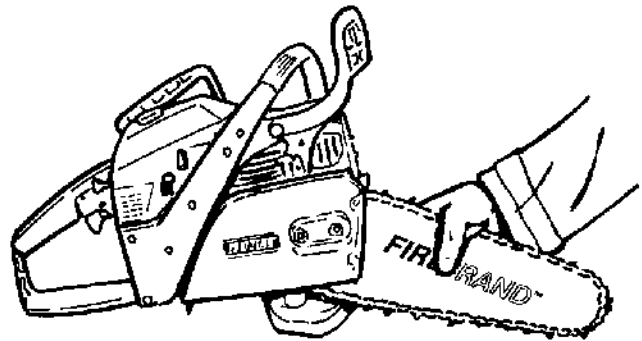
2. Turn tension screw clockwise to take up chain slack.



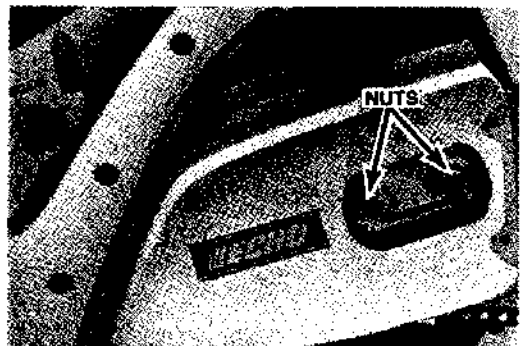
3. Hold the nose of the bar up with your gloved hand.
4. Gradually turn tension screw clockwise until the drive links are drawn up into the bar.



5. Pull chain along bar with your gloved hand to check for binding.
6. Back off tension screw if necessary.



7. Tighten nuts while holding bar in position.



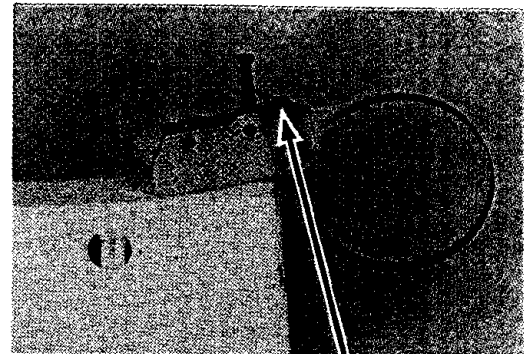
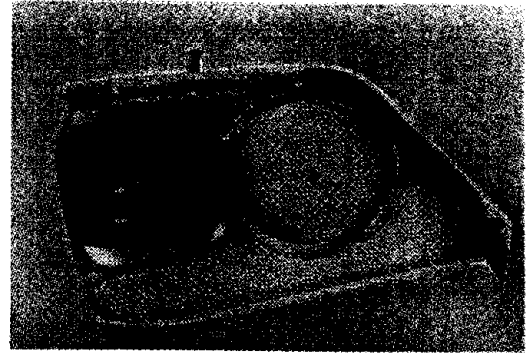
MAINTENANCE

INSPECT AND ADJUST CHAIN BRAKE CARTRIDGE (After Each Use)

NOTE

Clean parts as you remove them.

1. Remove the guide bar cover.
2. Remove the bar and chain.
3. Remove the guide bar plate and cartridge from the guide bar cover.
4. Inspect clutch drum and brake band for wear and replace if necessary.
5. Turn the tension screw clockwise to increase tension or counterclockwise to decrease tension.
6. Reinstall the cartridge and guide bar plate in the guide bar cover.
7. Install guide bar cover.
8. Reinstall bar and chain.
9. Set chain tension. SEE ADJUST CHAIN TENSION IN THIS SECTION.



TENSION
SCREW

10. Activate the chain brake with the guard and with a gloved hand try to pull the chain along the top of the guide bar.

WHAT HAPPENED?

WHAT DO YOU DO?

Chain Moves

Increase Tension

Chain Does Not Move

Go to Next Step

11. Move chain with hand guard in unbraked position.

WHAT HAPPENED?

WHAT DO YOU DO?

Brake Spring Rubs
on Drum

Decrease Tension and Go
to Next Step

Chain Rotates Smoothly
without Drag

Go to Next step

MAINTENANCE

12. Start the engine.
13. Depress throttle fully and activate the brake.

WHAT HAPPENED?

WHAT DO YOU DO?

Chain Slows to a Stop

Increase Tension

Brake Spring Rubs
on Drum

Decrease Tension

Chain Stops Immediately Brake is Adjusted Properly



CAUTION

If proper brake adjustment cannot be obtained,
Take your unit to your authorized ECHO MASTER
servicing dealer before further use of system.

REFILL FUEL TANK (After Each Use)

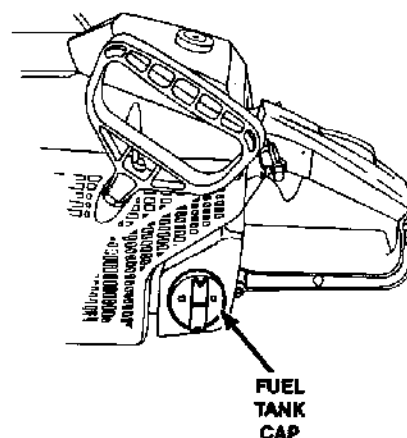
FUEL STATEMENT

GASOLINE - Use 89 Octane [$\frac{R+M}{2}$] gasoline or gasohol known to be good quality. Gasohol may contain maximum 10% ethyl (grain) alcohol or 15% MTBE (methyl tertiary-butyl ether). Gasohol containing methyl (wood) alcohol is not approved.

OIL - ECHO brand premium two-stroke 50:1 oil is preferred, ECHO brand 32:1 two-stroke oil is also approved. Mix oil and gasoline/gasohol according to Instructions on the oil container label.

MIXING - Following directions on the oil container.

1. Remove fuel tank cap.
2. Pour fuel/oil mixture into fuel tank.
3. Install fuel cap and wipe up any spilled fuel.



IMPORTANT

Stored fuel ages. Do not mix more fuel than you expect to use in thirty (30) days, ninety (90) days when a fuel stabilizer is added.

Stored two-stroke fuel may separate. ALWAYS shake fuel container thoroughly before each use.

MAINTENANCE

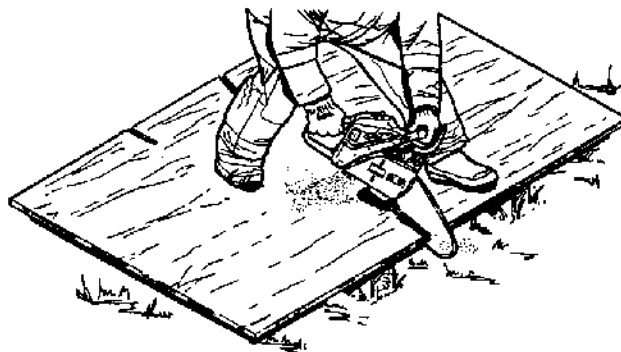
TEST SAW

(After Each Use/Weekly)

1. Start the engine and make practice cut in a piece of 3/4-inch-thick plywood. Make cuts using the ventilating procedure outlined in this manual.
2. Replace faulty parts and make necessary adjustments.

NOTE

For assistance in diagnosing problems, consult the troubleshooting section in this manual.



MIX FUEL

(As Needed)



CAUTION

Follow all safety rules in safety section.

• 50:1 Mixture

Mix one part, "Specially blended ECHO branded 50:1 two cycle engine oil," with 50 parts unleaded gasoline. (minimum octane-89)

• 32:1 Mixture

Mix one part, "Specially blended ECHO branded 32:1 two cycle engine oil," with 32 parts unleaded gasoline. (minimum octane-89)

GASOLINE

Use the branded 89 octane ($\frac{89}{89}$) unleaded gasoline or gasohol (maximum 10% ethyl alcohol, no methyl alcohol).

NOTE

Use of non-recommended oils or failure to follow mixing instructions voids the warranty.

NOTE

Do not mix fuel in engine fuel tank.

1. Pour 1/2 of the gasoline into a safe approved container.
2. Add oil to gas and mix thoroughly.
3. Add remaining gasoline and remix thoroughly.
4. Add gas stabilizer to fuel/oil mixture.
5. Install container cap and wipe up any spilled fuel from container and area.

CHAIN LUBRICANT

Proper lubrication of the chain while in operation reduces the friction to a minimum between the chain and the guide bar, and assures faster cutting and longer bar and chain life.

- The QuikVent system should be used only with special ECHO detergent bar and chain oil. Refer to page 26 for accessory part number.
- When refilling fuel mixture, fill up chain oil at the same time.

MAINTENANCE

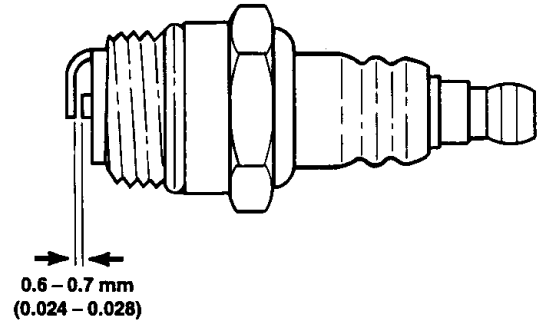
CHECK SPARK PLUG (As Needed)

1. Check plug gap.

NOTE

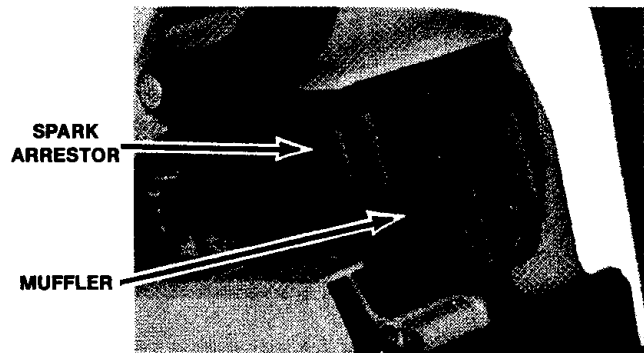
Proper gap is 0.6 – 0.7 mm (0.024 – 0.028 in.).

2. Inspect electrode for wear.
3. Inspect insulator for oil or other deposits.
4. Replace plug if needed and torque to 145 – 155 kg-cm (125 – 135 in. lb.).



INSPECT MUFFLER ASSEMBLY (As Needed)

1. Inspect spark arrestor screen for holes or warpage.
2. Inspect muffler body, studs and screws.
3. Replace damaged parts.



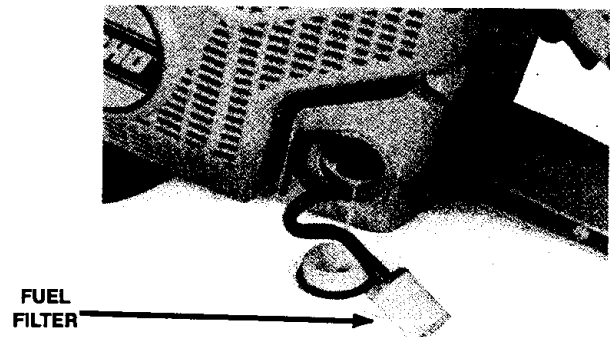
DRAIN AND REPLACE FUEL (Every 60 Days)

NOTE

If the fuel/oil mixture in the fuel tank of the saw has been there for 60 days, it should be dumped and replaced with fresh mixture. See REFILL FUEL TANK in this section.

REPLACE FUEL FILTER (As Needed)

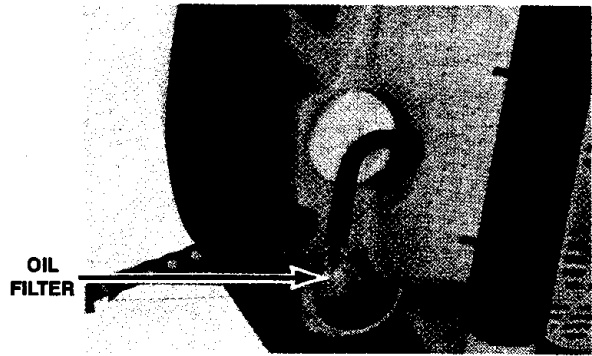
1. Pick up fuel filter through fuel tank opening with a piece of steel wire.
2. Remove filter and install new filter.



MAINTENANCE

REPLACE OIL FILTER (As Needed)

1. Pick up oil filter through oil tank opening with a piece of steel wire.
2. Remove filter and install new filter.



ADJUST CARBURETOR (As needed) GENERAL INFORMATION

The idle speed adjustment screw controls the throttle opening at idle position.

The low (LO) speed adjustment screw controls the volume of fuel/oil mixture at low engine speed. It also controls the supplementary fuel required to obtain smooth progression from idling to high speed.

The high speed screw controls the volume of fuel/air mixture at full throttle.

MAKE INITIAL CARBURETOR ADJUSTMENT

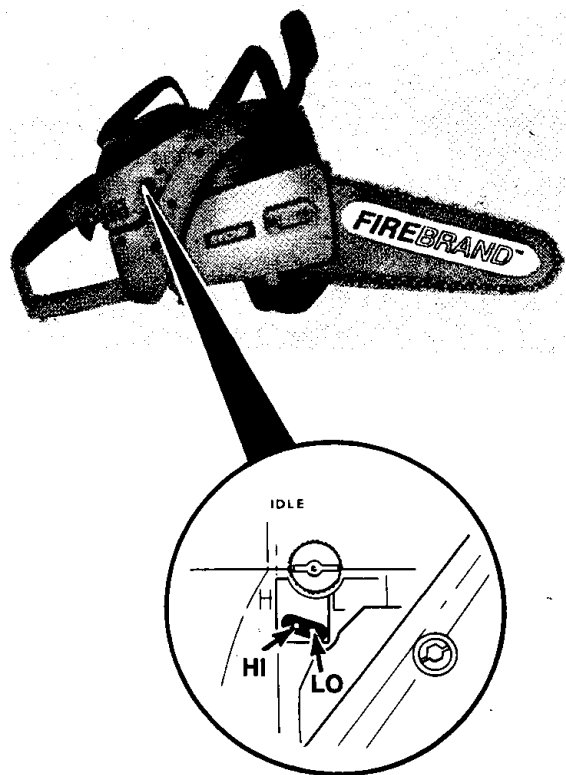
NOTE

The needle screws have a sharp point. To avoid carburetor damage, do not use excessive force, while seating the needles.

1. Turn HI and LO screws clockwise until seated lightly in carburetor body.
2. Turn the LO screw counterclockwise one and one half turns.
3. Start engine and allow it to run at high idle until warm.

NOTE

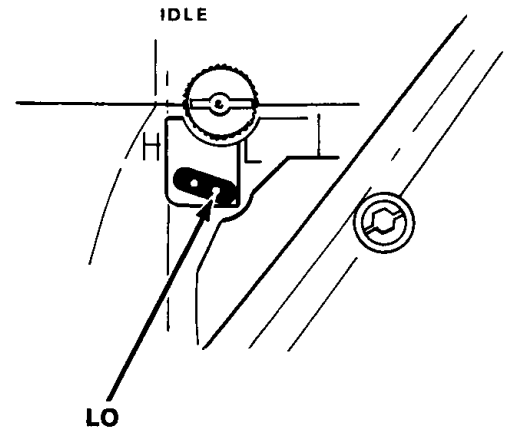
Idle speed screw may have to be readjusted to keep engine from stalling.



MAINTENANCE

MAKE LOW SPEED CARBURETOR ADJUSTMENT

1. Slowly turn the LO screw clockwise and note the position when engine speed drops due to lean mixture.
2. Turn the LO screw counterclockwise and note position when engine speed drops, from overrich mixture.
3. Set the LO screw midway between these points.
4. Turn the idle speed screw clockwise until the chain begins to move.
5. Reduce engine speed by turning idle speed screw counterclockwise one half turn.



MAKE HIGH SPEED CARBURETOR ADJUSTMENT

NOTE

Engine must be at normal operating temperature.

1. Turn the HI screw counterclockwise one and one half turns.



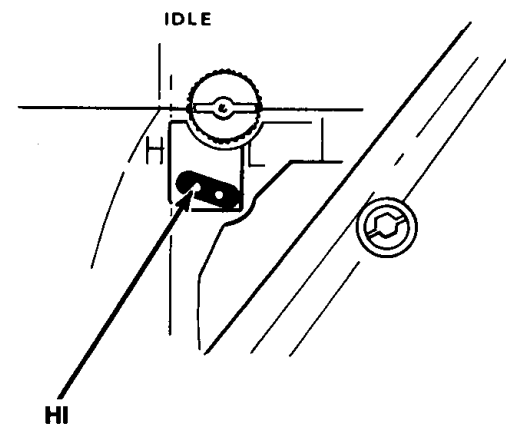
CAUTION

Do not run the engine at full throttle longer than 5-6 seconds to avoid damage to engine.

2. While running the engine at full throttle, turn the HI screw slowly clockwise until the engine runs smoothly without four stroking under no load.
3. Turn the HI screw counterclockwise one eighth to one quarter turn to obtain optimum fuel for full power under load conditions.

NOTE

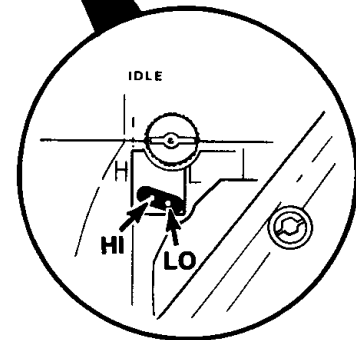
Under no-load conditions, the engine should four stroke slightly.



MAINTENANCE

CAUTION

It should be noted that during adjustment of HI speed needle, engine speeds can reach 13,000 RPM on a lean mixture. Running engine at full throttle for more than five or six seconds will cause major engine failures due to lack of lubrication. The engine should be idled between three and four seconds after each full throttle testing to allow engine to cool and become fully lubricated before further adjustments at HI speed should be made.



IMPORTANT: To ensure proper lubrication during critical break-in period of the unit, do not readjust the HI speed mixture until two tankfuls of fuel have been used. The HI speed needle has been preset by the factory at 1-1/8 – 1-1/4 turns from seated position. After breaking, if carburetor adjustment is required, make sure the adjustment of needles is never less than listed below:

LO speed: 7/8 – 1-1/8

HI speed: 7/8 – 1-1/4

IMPORTANT: Maximum no-load speed with properly tensioned bar and chain should not exceed:

QV-6700: 13,000 RPM

QV-8000: 13,000 RPM

CLEAN CYLINDER FINS (As Needed)

NOTE

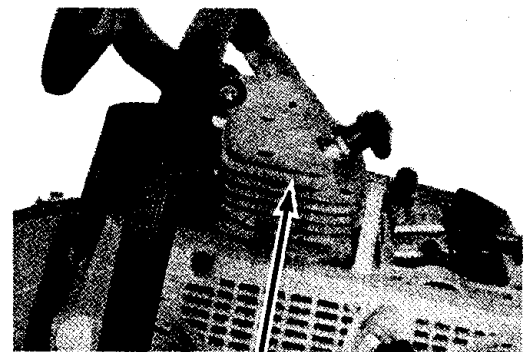
Clogged fins will cause poor engine cooling.

1. Remove air filter assembly.
2. Carefully remove housing and clean dirt and dust from fins.
3. Reinstall housing.

NOTE

Be sure to fit the carburetor seal snugly around hole in housing.

4. Install air filter assembly.



CYLINDER
FINS

MAINTENANCE

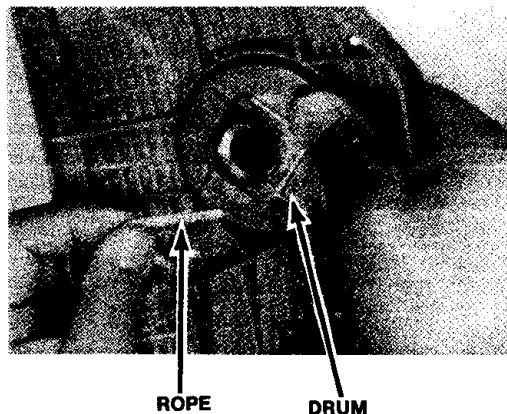
REWIND STARTER (As Needed)

1. Remove screws and remove starter assembly from housing.
2. Pull starter rope out 1-1/2 feet and prevent drum from rewinding.
3. Grasp the rope between notch and cover and wind both rope and drum one turn clockwise.
4. Hold drum in place and pull rope straight out through hole in cover.
5. Allow starter to rewind.
6. Repeat above process if more tension is needed.

NOTE

Do not add more tension than required to draw the handle against the cover, or starter trouble may develop.

7. Place starter assembly on powerhead and slowly pull the handle until the ratchets engage properly and the fan cover fits flush against the powerhead.
8. Secure starter assembly with screws.



ADJUST AUTOMATIC OILER (As Needed)

NOTE

If chain runs dry of oil during operation, it is most likely due to a misadjusted automatic oiler.

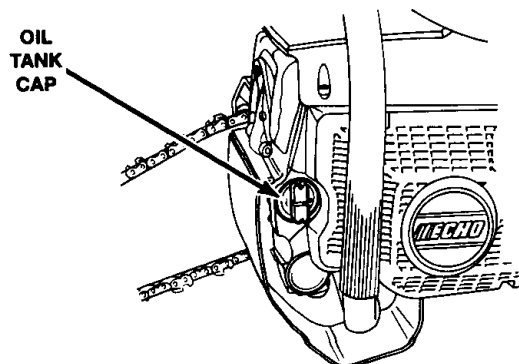
1. Turn automatic oiler clockwise to increase oil output or counterclockwise to decrease output.

AUTOMATIC OILER



REFILL CHAIN OIL TANK (After Each Use)

1. Remove oil tank cap.
2. Add oil: **ECHO HIGH DETERGENT OIL.**
3. Install oil tank cap.



MAINTENANCE

ACCESSORIES

- Special Chain Maintenance Kit
Part No. 999 440 0003 0
Includes:
Bench Grinder
Special Diamond Grinding
Wheel
Depth Gauge Kit
Complete Sharpening
Instructions
- Special Echo Detergent Bar and Chain Oil Part No. 36880 (one gal.)
- Special Replacement Bar (12" angle bar .063 gauge)
Part No. 359860
- Special Carbide Replacement Chain (3/8 pitch .063 gauge) Part No. 7562505

ASSEMBLY

MOUNTING GUIDE BAR AND CHAIN

- Remove the sprocket guard with outer side plate, leaving the inner side plate in position.
- Mount the guide bar ensuring that the chain tensioner fits in the hole provided.
- Holding the bar in this position, feed the chain around the sprocket and into the guide bar groove.
- Fit sprocket guard and nuts. Secure the nuts hand tight.

NOTE

1. The inner side plate is fitted with a narrow lubricating oil slot at the top.
2. The guide bar must be installed with the droop pointing down.
3. Ensure that the chain is installed with the cutters directed forward on the top of the bar.
4. Refer to page 16 for proper chain tension.

STORAGE

PARTS BOOKS

To obtain a replacement Parts Book, complete this order form and enclose a check or money order for \$2.00. Make payable to ECHO, INCORPORATED, and mail to:

ECHO, INCORPORATED
P.O. Box 67
Lake Zurich, IL 60047

ATTN: Technical Publications

Purchaser's Name

Address (Street)

(City) (State) (Zip Code)

ECHO Model No. QV-6700 Parts Book No. 898-614-3263-0

ECHO Model No. QV-8000 Parts Book No. 898-614-3173-0

SPECIFICATIONS

QV-6700

ENGINE

| | |
|-------------------|--|
| Type | Air-cooled, single-cylinder, 2-stroke |
| Displacement | 4.1 cu. in. (66.8 cc) |
| Bore | 1.97 in. (50 mm) |
| Stroke | 1.34 in. (34 mm) |
| Compression Ratio | 7.3:1 |
| Bearings | Heavy-duty, ball bearings on crank shaft, matched caged needles on connecting rod & piston pin |
| Max. Engine Speed | 13,000 rpm (no load) |

IGNITION SYSTEM

| | |
|----------------|--|
| Type | Electronic: CDI with SAIS (sloped advance ignition timing) |
| Spark Plug Gap | .024 – .028 in. (0.6 – 0.7 mm) |

FUEL & ENGINE LUBRICATION

| | |
|-------------------|---|
| Gasoline | Mixture of gasoline (unleaded, 89 octane minimum) and specially blended 32:1 or 50:1 ECHO two cycle engine oil. Use an approved type fuel container. Never mix fuel directly in the saw tank. Do not smoke near fuel. Pour half of the gasoline into the container, then all of the oil. Mix thoroughly before adding the remainder of the gasoline. Then mix thoroughly again. Fill the saw tank with fuel and tighten the fuel cap to prevent leakage. Wipe up any spillage. Always move away a safe distance from the fueling site before starting the engine. NOTE: Use of non-recommended oils or failure to follow above instructions may result in engine malfunction and will void the warranty. |
| Octane Rating | |
| Fuel/Oil Mix | |
| | |
| Gasoline Capacity | 21 oz. (.62 liter) |

GUIDE BAR

| | |
|--------|---|
| Length | 12" angle bar with industrial sprocket nose |
| Gauge | .063 |

SPROCKET SYSTEM

| | |
|----------|-----------------|
| Rim Size | 3/8" x 7" tooth |
|----------|-----------------|

SAW CHAIN

| | |
|--------------------------|------------------|
| Papco Firebrand Carbide | #75DG-50E, 400-S |
| Chain Pitch | 3/8" |
| Drive Link Gauge | .063 |
| Chain Speed at 9,500 RPM | 4,150 fpm |

SAW CHAIN LUBRICATION SYSTEM

| | |
|-------------------|--|
| Type | Automatic/adjustable & manual override |
| Bar Lubricant | Detergent bar oil |
| Oil Tank Capacity | 10.5 oz. (.31 liter) |

WEIGHT

| | |
|---|-----------|
| CSF-6700 with Bar & Chain, Full Gas & Oil | 18.5 lbs. |
| Powerhead Only, Dry Weight | 15.2 lbs. |

OTHER FEATURES

Chain brake; Patented skid/stand for safer operation of equipment; Anti-vibration system; Throttle safety catch; Front & rear handles; Chain catcher; Large starter handle for use with gloves.

SPECIFICATIONS

QV-8000

ENGINE

| | |
|-------------------|--|
| Type | Air-cooled, single-cylinder, 2-stroke |
| Displacement | 4.92 cu. in. (80.7 cc) |
| Bore | 2.05 in. (52 mm) |
| Stroke | 1.50 in. (38 mm) |
| Compression Ratio | 7.3:1 |
| Bearings | Heavy-duty, ball bearings on crank shaft, matched caged needles on connecting rod & piston pin |
| Max. Engine Speed | 12,500 rpm (no load) |

IGNITION SYSTEM

| | |
|----------------|--|
| Type | Electronic: CDI with SAIS (sloped advance ignition timing) |
| Spark Plug Gap | .024 – .028 in. (0.6 – 0.7 mm) |

FUEL & ENGINE LUBRICATION

| | |
|-------------------|---|
| Gasoline | Mixture of gasoline (unleaded, 89 octane minimum) and specially blended 32:1 or 50:1 ECHO two cycle engine oil. Use an approved type fuel container. Never mix fuel directly in the saw tank. Do not smoke near fuel. Pour half of the gasoline into the container, then all of the oil. Mix thoroughly before adding the remainder of the gasoline. Then mix thoroughly again. Fill the saw tank with fuel and tighten the fuel cap to prevent leakage. Wipe up any spillage. Always move away a safe distance from the fueling site before starting the engine. NOTE: Use of non-recommended oils or failure to follow above instructions may result in engine malfunction and will void the warranty. |
| Octane Rating | |
| Fuel/Oil Mix | |
| Gasoline Capacity | 27 oz. (.82 liter) |

GUIDE BAR FIREBRAND

| | |
|--------|---|
| Length | 12" angle bar with industrial sprocket nose |
| Gauge | .063 |

SPROCKET SYSTEM

| | |
|----------|-----------------|
| Rim Size | 3/8" x 7" tooth |
|----------|-----------------|

SAW CHAIN

| | |
|--------------------------|------------------|
| Papco Firebrand Carbide | #75DG-50E, 400-S |
| Chain Pitch | 3/8" |
| Drive Link Gauge | .063 |
| Chain Speed at 9,500 RPM | 4,150 fpm |

SAW CHAIN LUBRICATION SYSTEM

| | |
|-------------------|--|
| Type | Automatic/adjustable & manual override |
| Bar Lubricant | Detergent bar oil |
| Oil Tank Capacity | 13.6 oz. (.4 liter) |

WEIGHT

| | |
|---|-----------|
| CSF-6700 with Bar & Chain, Full Gas & Oil | 22.0 lbs. |
| Powerhead Only, Dry Weight | 18.3 lbs. |

OTHER FEATURES

Patented skid/stand for safer operation of equipment; Large starter handle for use with gloves; Chain brake; Anti-vibration system; Throttle safety catch; Front & rear handles; Chain catcher.