



Shaft Hedge Clipper Attachment

Operator's Manual

MODEL 99944200480

MODELS USED ON:

- SRM-2100SB/2400SB**
- SRM-210SB/211SB**
- SRM-260SB/261SB**
- PAS 2100/2400**
- PAS 210/211**
- PAS 230/231**
- PAS 260/261**
- PAS-2601**



WARNING

Read rules for safe operation and instructions carefully. ECHO provides an Operator's Manual and a Safety Manual for Pro Attachment Series power source or Split Boom Trimmer. Those manuals and this manual must be read and understood for proper and safe operation, otherwise serious personal injury may result.

INTRODUCTION

Welcome to the ECHO family. This ECHO product was designed and manufactured to provide long life and on-the-job-dependability. Read and understand this manual and the SAFETY MANUAL you found in the same package. You will find both easy to use and full of helpful operating tips and SAFETY messages.

THE OPERATOR'S MANUAL

Read and understand this manual before operation. Keep it in a safe place for future reference. It contains specifications and information for operation and maintenance specific to the attachment.

THE SAFETY MANUAL

Explains possible hazards and what measures you should take to insure safe operation.



TABLE OF CONTENTS

Introduction	2	Maintenance	9
- The Operator's Manual	2	- Skill Levels	9
- The Safety Manual	2	- Maintenance Intervals	9
Safety	3	- Lubrication	10
- Manual Safety Symbols and Important Information	3	- Sharpening Blades	12
- International Symbols	3	- Blade Adjustment	13
- Personal Condition and Safety Equipment	4	Storage	14
- Equipment	6	Specifications	14
Description	6	Servicing Information	16
Contents	7	- Parts/Serial Number	16
Assembly	8	- Service	16
- Power Head / Drive Shaft	8	- ECHO Consumer Product Support	16
- Loop Handle Removal	8	- Warranty Card	16
Operation	9	- Additional or Replacement Manuals	16
- Hedge Trimming	9		

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.

SAFETY

MANUAL SAFETY SYMBOLS AND IMPORTANT INFORMATION

Throughout this manual and on the product itself, you will find safety alerts and helpful, informational messages preceded by symbols or key words. The following is an explanation of those symbols and key words and what they mean to you.



DANGER

The safety alert symbol accompanied by the word “DANGER” calls attention to an act or condition which **WILL** lead to serious personal injury or death if not avoided.



WARNING

The safety alert symbol accompanied by the word “WARNING” calls attention to an act or condition which **CAN** lead to serious personal injury or death if not avoided.



CAUTION

The safety alert symbol accompanied by the word “CAUTION” calls attention to an act or condition which may lead to minor or moderate personal injury if not avoided.



CIRCLE AND SLASH SYMBOL

This symbol means the specific action shown is prohibited. Ignoring these prohibitions can result in serious or fatal injury.

NOTE

This enclosed message provides tips for use, care and maintenance of the unit.

IMPORTANT

The enclosed message provides information necessary for the protection of the unit.

INTERNATIONAL SYMBOLS

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Read and understand Operator's Manual.		Wear Face Shield
	Wear eyes, ears and head protection		Finger Severing Hazard
	Wear slip resistant foot wear.		Wear hand protection. Use two handed.
	Hot Surface		DO NOT smoke near fuel.
	Safety/Alert		DO NOT allow flames or sparks near fuel.

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Avoid all power lines. This unit is not insulated against electrical current.		Do not operate closer than 15 M (50 ft.) from electrical hazards.
	Keep bystanders at least 15 meters (50 feet) away.		Emergency stop
	Engine choke control.		Ignition ON/OFF
	Primer bulb		Carburetor adjustment - High speed mixture
	Carburetor adjustment - Low speed mixture		Carburetor adjustment - Idle speed

PERSONAL CONDITION AND SAFETY EQUIPMENT



WARNING

Users of this product risk injury to themselves and others if the unit is used improperly and/or safety precautions are not followed. Proper clothing and safety gear must be worn when operating unit.

Physical Condition

Your judgment and physical dexterity may not be good:

- if you are tired or sick,
- if you are taking medication,
- if you have taken alcohol or drugs.

Operate unit only if you are physically and mentally well.

Eye Protection

Wear eye protection that meets ANSI Z87.1 or CE requirements whenever you operate the unit.

Hand Protection

Wear no-slip, heavy duty work gloves to improve your grip on the unit handles. Gloves also reduce the transmission of machine vibration to your hands.

Hearing Protection

ECHO recommends wearing hearing protection whenever unit is used.

Proper Clothing

Wear snug fitting, durable clothing;

- Pants should have long legs, shirts with long sleeves.
- **DO NOT WEAR SHORTS,**
- **DO NOT WEAR TIES, SCARVES, JEWELRY.**

Wear sturdy work shoes with non-skid soles;

- **DO NOT WEAR OPEN TOED SHOES,**
- **DO NOT OPERATE UNIT BAREFOOTED.**

Hot Humid Weather

Heavy protective clothing can increase operator fatigue which may lead to heat stroke. Schedule heavy work for early morning or late afternoon hours when temperatures are cooler.

Vibration and Cold

It is believed that a condition called Raynaud's Phenomenon, which affects the fingers of certain individuals, may be brought about by exposure to vibration and cold. Exposure to vibration and cold may cause tingling and burning sensations, followed by loss of color and numbness in the fingers. The following precautions are strongly recommended, because the minimum exposure which might trigger the ailment is unknown.

- Keep your body warm, especially the head, neck, feet, ankles, hands, and wrists.
- Maintain good blood circulation by performing vigorous arm exercises during frequent work breaks, and also by not smoking.
- Limit the hours of operation. Try to fill each day with jobs where operating the trimmer or other hand-held power equipment is not required.
- If you experience discomfort, redness and swelling of the fingers followed by whitening and loss of feeling, consult your physician before further exposing yourself to cold and vibration.

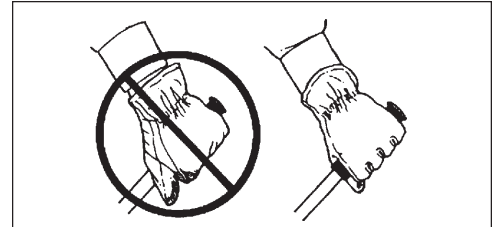


Repetitive Stress Injuries

It is believed that overusing the muscles and tendons of the fingers, hands, arms and shoulders may cause soreness, swelling, numbness, weakness, and extreme pain in those areas. Certain repetitive hand activities may put you at a high risk for developing a Repetitive Stress Injury (RSI). An extreme RSI condition is Carpal Tunnel Syndrome (CTS), which could occur when your wrist swells and squeezes a vital nerve that runs through the area. Some believe that prolonged exposure to vibration may contribute to CTS. CTS can cause severe pain for months or even years.

To reduce the risk of RSI/CTS, do the following:

- Avoid using your wrist in a bent, extended, or twisted position. Instead, try to maintain a straight wrist position. Also, when grasping, use your whole hand, not just the thumb and index finger.
- Take periodic breaks to minimize repetition and rest your hands.
- Reduce the speed and force with which you do the repetitive movement.
- Do exercises to strengthen the hand and arm muscles.
- Immediately stop using all power equipment and consult a doctor if you feel tingling, numbness, or pain in the fingers, hands, wrists, or arms. The sooner RSI/CTS is diagnosed, the more likely permanent nerve and muscle damage can be prevented.



WARNING

Do not operate this product indoors or in inadequately ventilated areas. Engine exhaust contains poisonous emissions and can cause serious injury or death.

Read the Manuals

- Provide all users of this equipment with the Operator's Manual and Safety Manual for instructions on Safe Operation.

Clear the Work Area

- Spectators and fellow workers must be warned, and children and animals prevented from coming nearer than 15 m (50 ft.) while the unit is in use.

Keep a Firm Grip

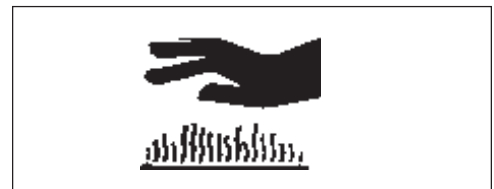
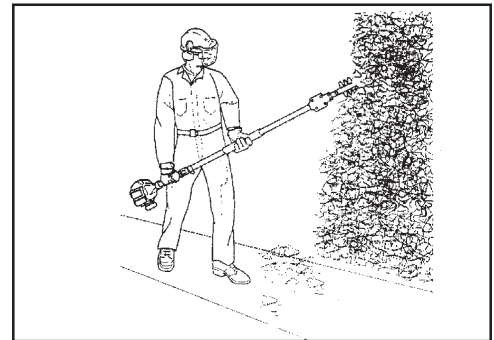
- Hold the front and rear handles with both hands, with thumbs and fingers encircling the handles.

Keep a Solid Stance

- Maintain footing and balance at all times. Do not stand on slippery, uneven or unstable surfaces. Do not work in odd positions or on ladders. Do not over reach.

Avoid Hot Surfaces

- Keep exhaust area clear of flammable debris. Avoid contact during and immediately after operation.



EQUIPMENT

WARNING DANGER

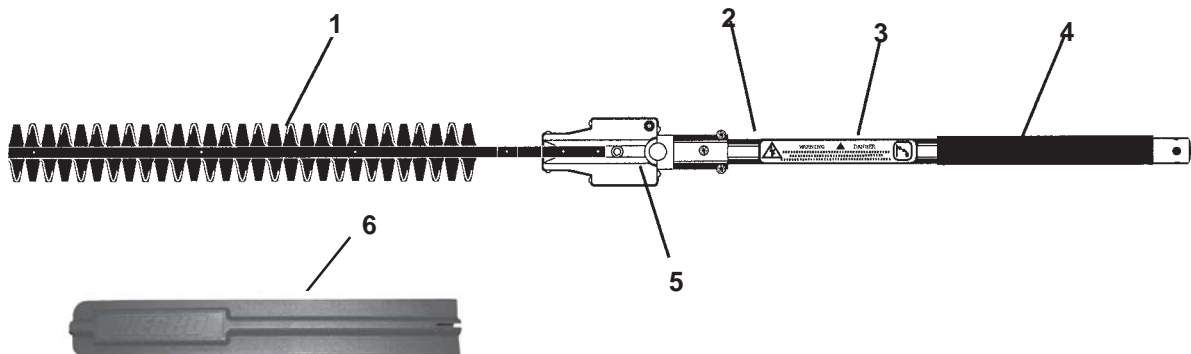
Use this attachment with ECHO approved models only. Serious injury may result from the use of this attachment combined with a non approved ECHO product.

Before operation a complete check of the unit must be performed;

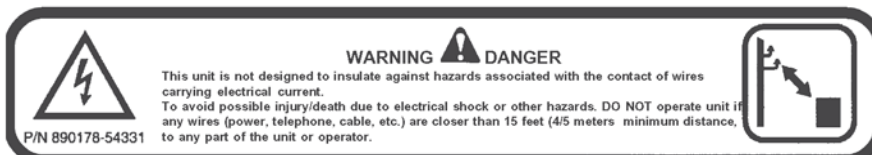
- Check unit for loose/missing nuts, bolts and screws. Tighten and/or replace as needed.
- Never adjust blades when the engine is operating.
- Check that the blade assembly is firmly attached and in safe operating condition. Dull, loose or damaged blades should not be used.

DESCRIPTION

Locate this safety decal on your attachment. Make sure the decal is legible and that you understand and follow the instructions on it. If it cannot be read, a new one can be ordered from your ECHO dealer. See PARTS ORDERING instructions for specific information.



P/N 89017854331



P/N 89018721460



1. **BLADES** - Double reciprocating blades mounted to a blade support bar. Double-sided blade is capable of cutting on either side of the blade.
2. **DRIVE SHAFT ASSEMBLY** - Lightweight aluminum drive shaft extends reach. 4-position shaft design permits blade position to be rotated in 90-degree steps.
3. **SAFETY DECALS** - Contain important safety information that must be followed. (See Page 3.)
4. **LEFT HAND SHAFT GRIP** - Cushioned grip for left hand.
5. **GEARHOUSING ASSEMBLY** - Commercial grade, low weight, fast cutting speed. Grease fitting simplifies lubrication.
6. **BLADE COVER** - Used to cover blade during transport and storage. Remove blade cover before using unit.

CONTENTS

The ECHO product you have purchased has been factory pre-assembled for your convenience.

After opening the carton, check for damage. Immediately notify your retailer or ECHO Dealer of damaged or missing parts. Use the contents list to check for missing parts.

- _____ 1 - Shaft Hedge Clipper Attachment
- _____ 1 - Operators Manual
- _____ 1 - Safety Manual
- _____ 1 - Warranty Card
- _____ 1 - Blade Cover
- _____ 1 - Storage Hook Assembly



ASSEMBLY

POWER HEAD SHAFT/LOWER SHAFT ASSEMBLY

Tools Required: None

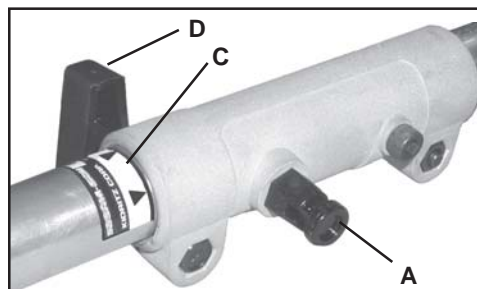
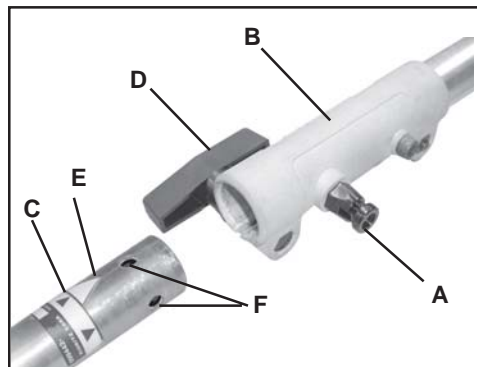
Parts Required: PAS or SRM-SB Power Head w/Shaft & Coupling.

1. Set Power Head/Shaft Assembly on a level surface.
2. Pull locator pin (A) out, and turn counter-clockwise 1/4 turn to lock-out position.
3. Remove vinyl cap from attachment drive shaft.
4. Carefully fit attachment drive shaft assembly into coupler (B) to decal assembly line (C), making sure that the inner lower drive shaft engages into the square drive shaft socket.

NOTE

Earlier model Power Heads may have shorter couplings. Short couplings fit flush to decal point (E). New couplings are 4-3/4 in. long, and fit flush to line (C).

5. Select desired blade position by aligning one of the holes (F) in lower shaft with locator pin position.
6. Rotate locator pin (A) 1/4 turn clockwise to engage lower shaft hole. Insure locator pin is fully engaged by twisting lower drive shaft. Locator pin should snap flush in coupler. Full engagement will prevent further shaft rotation.
7. Secure lower shaft assembly to coupler by tightening clamping knob (D).



FRONT LOOP HANDLE REMOVAL

Tools Required: Screwdriver.

Parts Required: None

NOTE

Front loop handles/loop handles with barrier bars are not recommended for use with Hedge Clipper attachment.

1. Remove front handle assembly, barrier bar (if installed), and mounting hardware from PAS or SRM-SB power head.
2. Retain parts for future use.



OPERATION

HEDGE TRIMMING

1. Hold trimmer firmly and squeeze throttle trigger to accelerate engine.
2. Tilt trimmer so cutting teeth are angled slightly toward the hedge or shrub and proceed to cut.



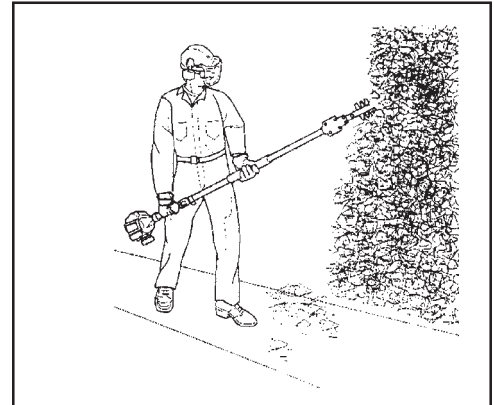
WARNING

Never remove hands from unit when blades are moving.



WARNING

The engine continues running even when the blades have stopped due to an obstruction. If this occurs, stop the engine, disconnect ignition cable and remove the obstruction.



MAINTENANCE

Your ECHO product is designed to provide many hours of trouble free service. Regular scheduled maintenance will help achieve that goal. If you are unsure or are not equipped with the necessary tools, you may want to take your unit to an ECHO Service Dealer for maintenance. To help you decide whether you want to DO-IT-YOURSELF or have the ECHO Dealer do it, each maintenance task has been graded.

SKILL LEVELS

- Level 1** = Easy to do. Most required tools come with unit.
Level 2 = Moderate difficulty. Some specialized tools may be required.
Level 3 = Experience required. Specialized tools are required.

MAINTENANCE INTERVALS

<u>Component/System</u>	<u>Maintenance Procedure</u>	<u>Skill Level</u>	<u>Frequency</u>
Drive Shaft	Grease	1	Every 25 hours of use
Gear Housing	Grease	1	Every 15-25 hours of use
Screws/Nuts/Bolts	Inspect/Tighten/Replace	1	Before each use
Blades	Lubrication	1	Every 15 - 25 hours of use
Blades	Sharpen	3	As needed
Blades	Adjustment	2	Every 40 hours of use

LUBRICATION

Blades

Level 1

Tools Required: Clean rag, brush, oil can

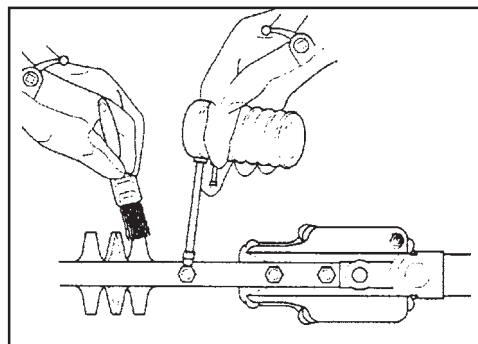
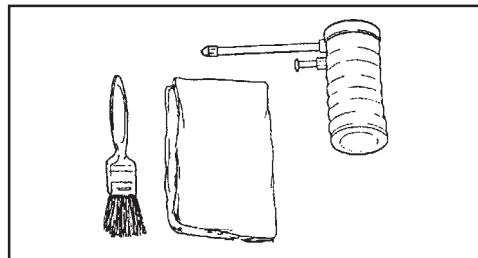
Parts Required: 20W Engine Oil (lubrication), 50-50 mixture of kerosene and 20W oil (cleaning).



WARNING

Blades are very sharp. Wear gloves to protect hands, otherwise serious personal injury may result.

1. Brush loose debris from blade and coat both sides of blade with the 50-50 cleaning mixture.
2. Allow cleaning mixture to soften the remaining gummy residue then wipe it from the blade.
3. Apply clean oil to the entire length of the blade. Be certain the blade bolts are lubricated.
4. Wipe excess oil from the blade before putting the unit back in service.



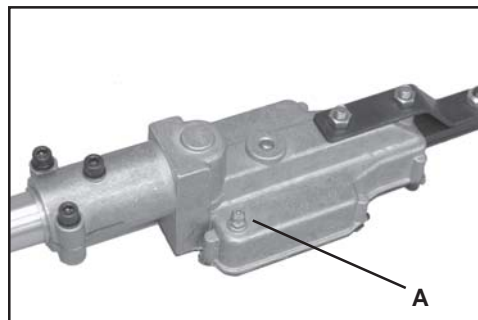
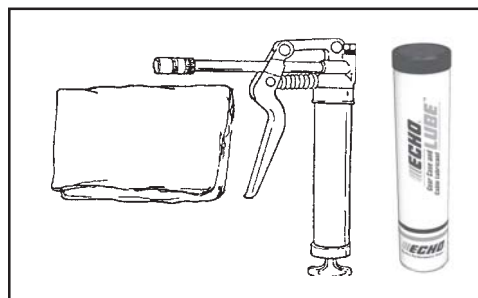
Gear Housing Assembly

Level 2

Tools required: Grease gun, clean rag

Parts required: ECHO[®] LUBE™ 14 oz. cartridge P/N 91015 or Lithium Based Grease

1. Clean dirt from grease fitting (A).
2. Carefully pump grease in fitting. **DO NOT** force grease. Too much pressure will force grease past seals and cause damage. Apply 1-2 pumps of grease every 15-25 hours of operation.



Drive Shaft Assembly

Level 1.

NOTE

Hedge Clipper drive shaft should be greased every 50 hours of operation.

Tools required: 4 mm hex wrench, clean rag, small brush

Parts required: **ECHO[®] LUBE[™]** 8 oz. (P/N91014) or Lithium Based Grease.



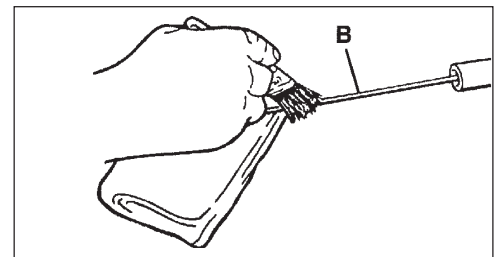
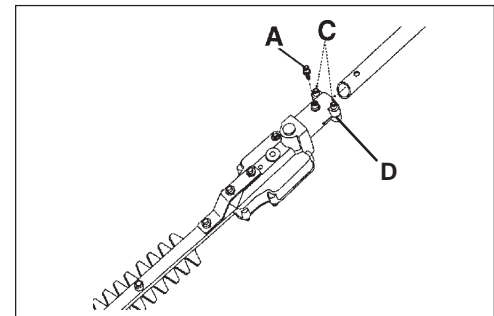
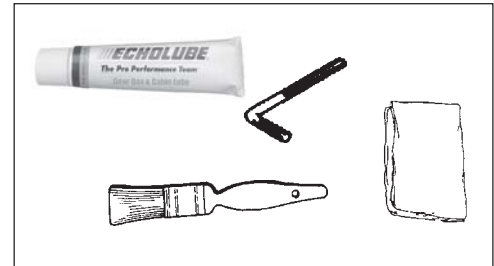
WARNING

Blades are very sharp. Wear gloves to protect hands, otherwise serious personal injury may result.

1. Loosen gear housing locating screw (A) and mounting screws (C). Remove the gear housing assembly from the drive shaft housing.
2. Pull the drive shaft (B) from the housing, wipe clean and re-coat with a thin coating [1/2 oz. (15 ml)] of grease.
3. Slide the flexible shaft back in the drive housing being careful not to get dirt on the flex shaft.
4. Install the gear housing assembly.

IMPORTANT

Flat edge of washers (D) must be against drive shaft.



SHARPENING BLADES

Level 3.

Tools required: Flat file, round file, screwdriver

Parts required: None



WARNING

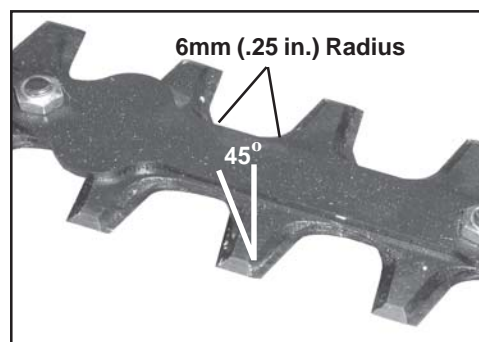
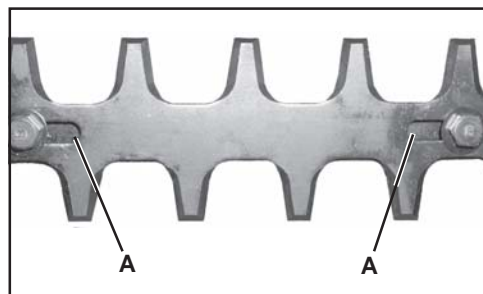
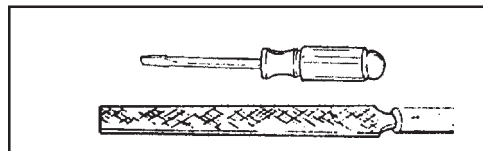
Hedge Clipper Blades are very sharp. Wear gloves to protect hands.

1. Disconnect spark plug wire from spark plug.
2. Slide blades to allow file clearance using slots (A) on bottom of blades. Do not pry against cutting edges.
3. Follow the original shape, and file each cutting edge carefully to avoid damage to adjacent teeth. Maintain 6 mm (.25 in.) radius at base of each tooth.

IMPORTANT

If a power grinder is used, **DO NOT** allow blade to over heat.

4. Lubricate blades. See "Lubrication" on page 10.
5. Connect spark plug wire.



BLADE ADJUSTMENT

Level 2.

Tools required: (2) 10 mm wrenches

Parts required: None

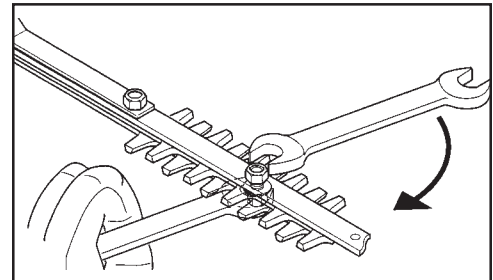
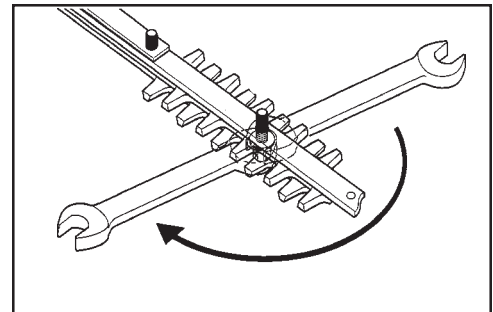
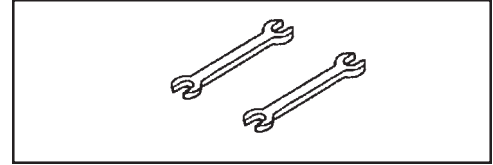
IMPORTANT

Blades should only be removed and reinstalled by an Authorized ECHO Servicing Dealer, otherwise premature wear or internal damage may occur.

1. Tighten blade bolts until snug, then loosen blade bolts 1/2 turn.
2. Hold blade bolts from turning using 10 mm wrench, and tighten blade lock nuts with other 10 mm wrench.

NOTE

Locking ability of Hedge Clipper blade lock nuts will diminish each time they are removed. Replace if turning resistance is not felt when installing locknuts.



STORAGE

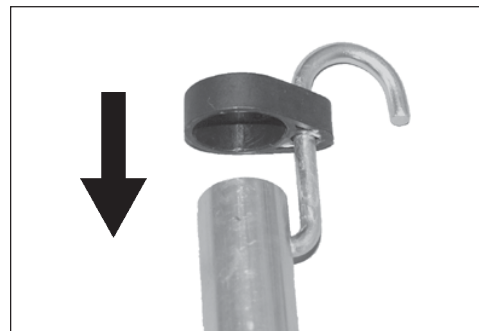
IMPORTANT

Always store and transport hedge clippers in a stable, horizontal position. Support gear case and cutting blades to prevent excessive flexing which may cause damage to the cutting attachment. Always install blade cover when transporting or storing unit.

1. Clean and lubricate cutting blades and gear case.
2. Sharpen cutting blades as required.
3. Apply a light coating of clean 20W engine oil along entire length of blades and on blade bolts.
4. Install blade cover onto hedge clipper cutting blades.
5. Store hedge clipper attachment in a dry, dust free place out of the reach of children, using supplied storage hook.

Storage Hook Installation

1. Insert small end of hook into locating hole on attachment shaft.
2. Slide plastic cap onto end of attachment shaft.



SPECIFICATIONS

MODEL ----- **Shaft Hedge Clipper Attachment**

Length ----- 1264mm (49.75 in.)

Width ----- 76 mm (3.0 in.)

Weight ----- 2.3 kg (5.10 lbs.)

Gear Case ----- 5.62:1

Cutter ----- Double Reciprocating Blade - Double Edge

Effective Length ----- 475 mm (18.7 in.)

Pitch ----- 35 mm (1.4 in.)

Maximum Cut

Soft Materials ----- 25.4 mm (1 in.) Diameter

Woody Materials ----- 13 mm (1/2 in.) Diameter

NOTES

SERVICING INFORMATION

PARTS/SERIAL NUMBER

Genuine ECHO Parts and ECHO REPOWER™ Parts and Assemblies for your ECHO products are available only from an Authorized ECHO Dealer. When you do need to buy parts **always** have the Model Number and Serial Number of the attachment with you. You can find these numbers on the driveshaft model/serial number label. For future reference, write them in the space provided below.

Model No. _____ SN. _____

SERVICE

Service of this product during the warranty period must be performed by an Authorized ECHO Service Dealer. For the name and address of the Authorized ECHO Service Dealer nearest you, ask your retailer or call: 1-800-432-ECHO (3246). When presenting your unit for Warranty service/repairs, proof of purchase is required.

ECHO CONSUMER PRODUCT SUPPORT

If you require assistance or have questions concerning the application, operation or maintenance of this product you may call the ECHO Consumer Product Support Department at 1-800-673-1558 from 8:30 am to 4:30 pm (Central Standard Time) Monday through Friday. Before calling, please know the model and serial number of your unit to help your Consumer Product Support Representative.

WARRANTY REGISTRATION

To ensure trouble free warranty coverage it is important that you register your ECHO equipment on-line at www.echo-usa.com. Other registration options are by automated phone at 1-800-432-3246 or by filling out the warranty registration card supplied with your unit. Registering your product confirms your warranty coverage and provides a direct link between you and ECHO if we find it necessary to contact you.

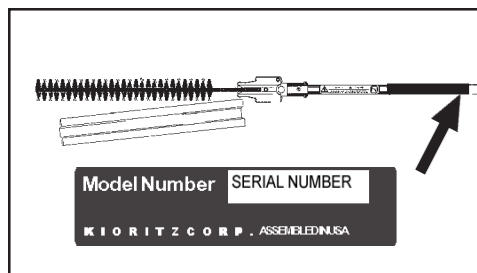
ADDITIONAL OR REPLACEMENT MANUALS

Safety Manuals in English/Spanish or English/French are available, free of charge, from your ECHO dealer or at www.echo-usa.com.

Operator's and Parts Manuals are available by:

- Downloading free from www.echo-usa.com
- Purchasing from your Echo Dealer.
- Manuals are available by sending a written request stating the model number and serial number of your Echo unit, part number of the manual, your name and address, and mail to the address below.

Safety Videos are available from your Echo dealer. A \$5.00 shipping charge will be required for each video.



DEALER?

Call

1-800-432-ECHO

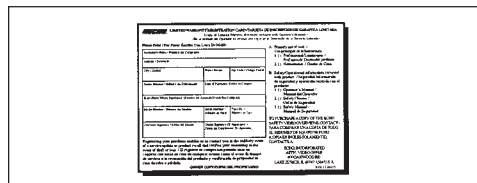
or

www.echo-usa.com

CONSUMER PRODUCT SUPPORT

1-800-673-1558

8:30 - 4:30 Mon - Fri C.S.T.



ECHO®

ECHO, INCORPORATED

400 OAKWOOD ROAD

LAKE ZURICH, IL 60047-1564

www.echo-usa.com

001001/999999