



PAS Rapid Loader™ Trimmer Attachment *Operator's Manual*

MODEL

99944200610

FOR MODELS:

SRM-2100SB TYPE 1/1E

SRM-2400SB TYPE 1/1E

SRM-210SB/211SB

SRM-260SB/261SB

PAS-2100 TYPE 1E

PAS-2400 TYPE 1E

PAS-2601 TYPE 1E

PAS-210/211

PAS-230/231

PAS-260/261



WARNING **DANGER**

Read rules for safe operation and instructions carefully. ECHO provides an Operator's Manual and a Safety Manual, with your original Split Boom/Pro Attachment Series™ Trimmer. Those manuals and this manual must be read and understood for proper and safe operation.

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.

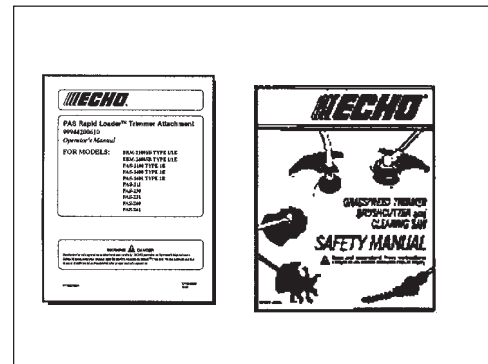


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Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories, and may not include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

SAFETY

MANUAL SAFETY SYMBOLS AND IMPORTANT INFORMATION

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



This symbol accompanied by the words **WARNING** and **DANGER** calls attention to an act or condition that can lead to serious personal injury to operator and bystanders.



The circle with the slash symbol means whatever is shown within the circle is prohibited.



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

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

INTERNATIONAL SYMBOLS

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Read and understand Operator's Manual.		Fuel and oil mixture
	Wear eyes, ears and head protection		Finger Severing
	Hot Surface		Wear hand protection. Use two handed.
	Safety/Alert		DO NOT smoke near fuel.
	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.		Plan retreat path from falling objects.

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	DO NOT allow flames or sparks near fuel.		Wear slip resistant foot wear.
	Emergency stop		Ignition ON/OFF
	Choke Control "Cold Start" Position (Choke Closed)		Primer bulb
	Choke Control "Run" Position (Choke Open)		Carburetor adjustment - High speed mixture
	Carburetor adjustment - Low speed mixture		Carburetor adjustment - Idle speed
	Keep bystanders and helpers away 15 m (50 ft.).		

PERSONAL CONDITION AND SAFETY EQUIPMENT

WARNING **DANGER**

Trimmer/Brush Cutter users risk injury to themselves and others if the trimmer/brush cutter is used improperly or safety precautions are not followed. Proper clothing and safety gear must be worn when operating a trimmer/brush cutter.

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 trimmer.

Hand Protection

Wear no-slip, heavy duty work gloves to improve your grip on the Trimmer/Brush Cutter 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.
- DONOTWEARSHORTS,
- DONOTWEARTIES,SCARVES,JEWELRY.

Wear sturdy work shoes with non-skid soles;

- DONOTWEAROPENTOEDSHOES,
- DONOTOPERATEUNITBAREFOOTED.

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.

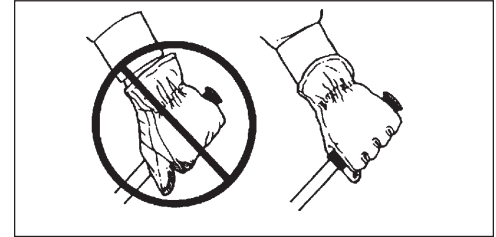


Repetitive Stress Injuries

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 DANGER

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

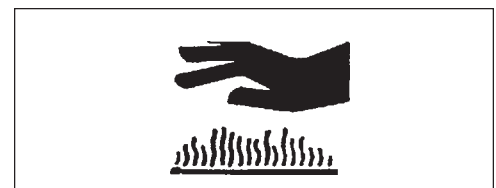
- Hold the front and rear handles with both hands, with thumbs and fingers tightly encircling the handles.

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

- During operation, the drive shaft housing, attachment bearing housing and muffler cover area may become very hot, too hot to touch. Avoid contact during and immediately after operation.



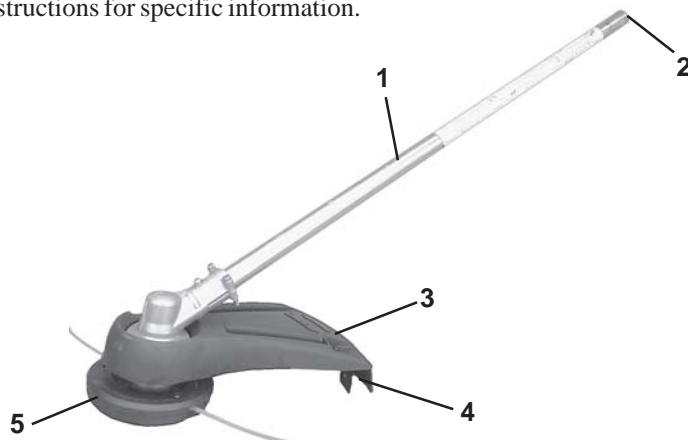
EQUIPMENT

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.
- Inspect shield for damage and ensure that cut-off knife is **securely** in place. Replace if shield is damaged or missing.
- Check that the cutting attachment is firmly attached and in safe operating condition.
- Check that front loop handle and shoulder strap/ or shoulder/waist harness are adjusted for safe, comfortable operation. See Assembly Section for proper adjustment.

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.



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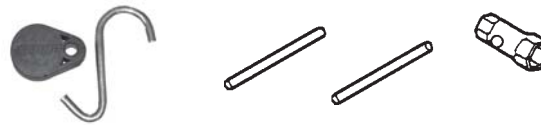
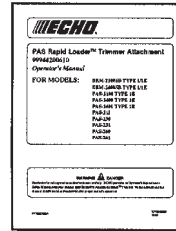


1. **LOWER DRIVE SHAFT ASSEMBLY** - Includes the Debris Shield Assembly, Gear Housing assembly, Flexible Drive Cable, Rapid Loader™ Head and Safety Decals.
2. **FLEXIBLE DRIVE CABLE** - Cable end fits into upper drive shaft coupler. Lubricate drive cable every 25 hours with ECHO® LUBE™ grease.
3. **PLASTIC DEBRIS SHIELD ASSEMBLY** - Included in plastic bag (co-pack). **MUST** be installed on unit before use, see Assembly Instructions. Shield assembly includes the Cut-Off Knife. Mounts on the Gear Housing Assembly just above the cutting attachment. Helps protect the operator by deflecting debris produced during the trimming operation. This shield must be replaced with the steel shield for blade use.
4. **CUT-OFF KNIFE** - Trims line to the correct length.
5. **RAPID LOADER™ HEAD** - Contains replaceable nylon trimming lines.

CONTENTS

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 - Pro Attachment Series™ Trimmer Attachment
- 1 - Operator's Manual
- 1 - Safety Manual
- 1 - Warranty Registration Card
- 2 - Locking Tools
- 1 - Wrench 17 x 14.5
- 1 - Rapid Loader™ Head
- 1 - Nut
- 1 - Washer 10x32x1.2
- 1 - Plastic Debris Shield
- 1 - Split Pin
- 1 - Shield plate
- 3 - 5mm x 16mm Screws (shield mounting)
- 1 - Storage Hook Assembly



ASSEMBLY

WARNING DANGER

Do not perform maintenance or assembly procedures with engine running.

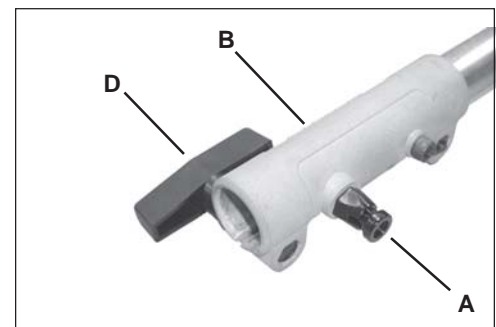
Tools Required: Screwdriver, Head Locking Tool, 17x14.5mm Wrench, Needle Nose Pliers

Parts Required: Power Head Shaft, Attachment Lower Shaft Assembly, Plastic Shield, Shield Plate, three (3) 5mm x 16mm screws, Rapid Loader™ Head



POWER HEAD SHAFT/ATTACHMENT LOWER SHAFT ASSEMBLY

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



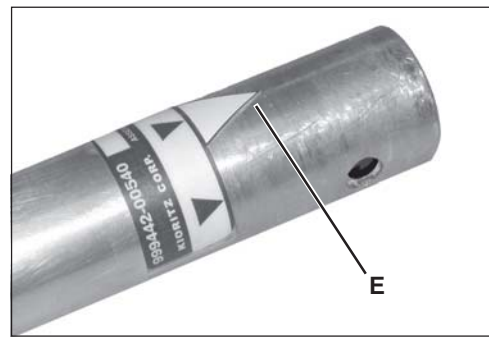
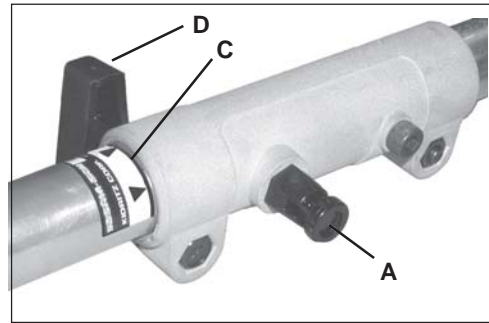
NOTE

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).

NOTE

Lower bearing housing and head assembly must be in line with the engine.

6. Rotate locator pin (A) 1/4 turn clockwise to engage lower shaft hole. Insure locator pin is fully engaged by gently twisting lower drive shaft. Locator pin (A) should snap flush in coupler. Full engagement will prevent further shaft rotation.
7. Secure lower shaft assembly to coupler by tightening clamping knob (D).



PLASTIC SHIELD INSTALLATION (for Nylon Line Operation)

NOTE

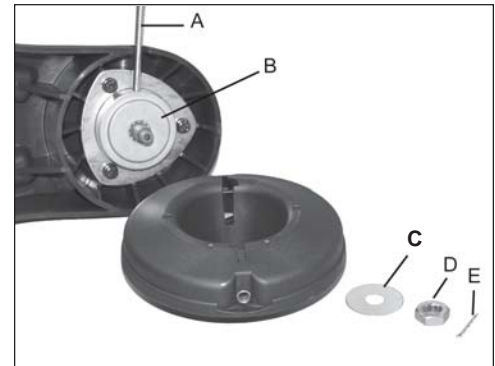
The plastic shield is for use with the Nylon Line Head only. Install Metal Shield when using plastic or metal blades.

1. Remove plastic threaded shaft sleeve and adapter plate (C) from PTO shaft (A).
2. Place the shield on the bottom of the bearing housing flange.
3. Place shield plate (B) on shield, align holes. Install three (3) screws from bottom through plate and shield into gear case.
4. Assemble upper plate (C) onto PTO shaft.



NYLON LINE HEAD INSTALLATION

1. Align hole in upper plate with notch in edge of gear housing and insert head locking tool (A). Remove plastic sleeve from PTO shaft.
2. Be sure upper plate (B) remains on PTO shaft.
3. Place line head onto PTO shaft, followed by large metal washer (C).
4. Thread L.H. nut (D) on PTO shaft. Tighten securely.
5. Install new split pin (E).
6. Remove locking tool (A).



OPERATION

NOTE

Refer to your Split Boom\Pro Attachment Series™ Operator's Manual for correct engine fueling, starting and stopping instructions.

IMPORTANT

Never wear line shorter than 1-1/2 inch extension from head, otherwise overspeeding and engine damage may result.

MAINTENANCE

Your ECHO trimmer is designed to provide many hours of trouble free service. Regular scheduled maintenance will help your trimmer 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. If the task is not listed see your ECHO dealer for repairs.

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

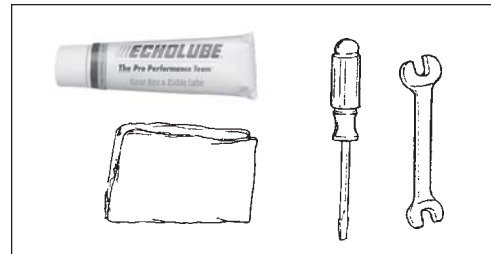
<u>Component/System</u>	<u>Maintenance Procedure</u>	<u>Skill Level</u>	<u>Frequency</u>
Drive Shaft	Grease	1	Every 25 hours of use
Gear Housing	Grease	1	Every 50 hours of use
Screws/Nuts/Bolts	Inspect/Tighten/Replace	1	Before each use

LUBRICATION

Level 1.

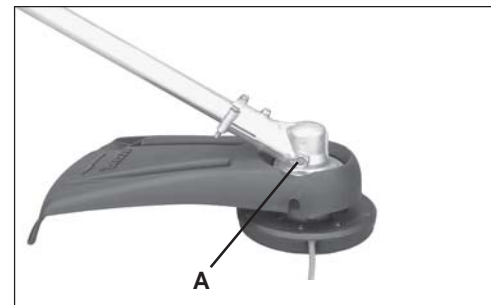
Tools Required: 8 mm Open End Wrench, Screwdriver, Clean Rag.

Parts Required: ECHO[®] LUBE™ 8 oz. (P/N 91014) or Lithium Base Grease.



Gear Housing

1. Clean all loose debris from gear box.
2. Remove plug (A) and check level of grease.
3. Fill gear case with grease.
4. Install plug (A).

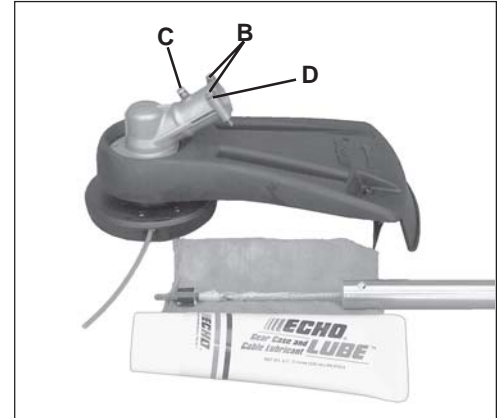


Drive Shaft (Lower)

IMPORTANT

Lower and upper drive shaft must be lubricated with ECHO[®] LUBE™ grease every 25 hours of operation, otherwise drive shaft assembly overheating and failure can result.

1. Loosen two (2) 8 mm upper gear housing bolts (B) and locator screw (C). Remove gear case assembly.
2. Remove flex cable, wipe clean and apply a thin coating 15 ml, of grease.
3. Install flex cable. Make sure cable end engages upper drive shaft adaptor.
4. Install gear case assembly onto drive shaft aligning locator screw with hole in drive shaft.
5. Tighten two 8 mm bolts (B) and locator screw (C).



IMPORTANT

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

NYLON LINE REPLACEMENT

Level 1.

Tools Required: None

Parts Required: Pre-cut Nylon Line

MODELS	REQUIRED LINE SIZES
SRM-2100SB SRM-210SB/211SB PAS-210/211 PAS-230/231	.080 - .095 in.
SRM-2400SB	.095 - .130 in.
SRM-260SB/261SB PAS-2601 PAS-260/261	.095 - .155 in. .095 - .155 in. .095 - .155 in.

1. Insert pre-cut 204 mm (8 in.) length of nylon cutting line (recommended sizes 2.4 mm [.095 in.] to 3.9 mm [.155 in.]) through outside openings of trimmer head. Minimum of 153mm (6 in.) of line should extend from each opening. 3.9mm [.155 in.] line not recommended for trimmers under 26cc.



NOTE

Insert cutting line ends to center of head recess to insure easy removal of used lines.

NOTICE:

Nylon line can damage plastic shield. When installing line segments, make sure line does not curve upward toward shield.

STORAGE

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

PAS Rapid Loader™ Attachment

Shaft Length -----	838mm (33 in.)
Attachment Width -----	178mm (7 in.)
Attachment Height -----	229mm (9 in.)
Weight (dry) w/blade -----	1.36 kg. (3.1 lb.)
Drive Shaft -----	6.35 mm (1/4 in.) Flex Shaft
Rotating Direction -----	Counter-clockwise viewed from the top
Cutter Head -----	Rapid Loader™ head (2-lines) with .095 Cross Fire™ Line

NOTE Install and use U-Handle when operating any model with blade.

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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 CARD

This card is our means of registering all original owners of ECHO equipment. The card plus proof of purchase provides you the assurance that authorized warranty work will be done. It also provides a direct link between you and ECHO if we find it necessary to contact you.

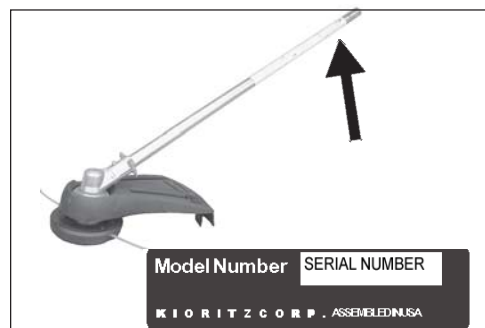
ADDITIONAL OR REPLACEMENT MANUALS

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, INCORPORATED

400 OAKWOOD ROAD
LAKE ZURICH, IL 60047
www.echo-usa.com

001001/999999