



## **Trimmer Attachment**

### *Operator's Manual*

**MODEL            99944200540**

**FOR MODELS:**

- SRM-2100SB**
- SRM-2400SB**
- SRM-210SB/211SB/225SB**
- SRM-260SB/261SB**
- PAS-2100**
- PAS-2400**
- PAS-2601**
- PAS-210/211**
- PAS-225/225VP/225VPB**
- PAS-230/231**
- PAS-260/261**
- PAS-265/266**



#### **WARNING**

Users of this equipment risk injury to themselves and others if the unit is used improperly and/or safety precautions are not followed. ECHO provides an operator's manual. It must be read and understood for proper and safe operation. Failure to do so could result in serious injury.

## INTRODUCTION

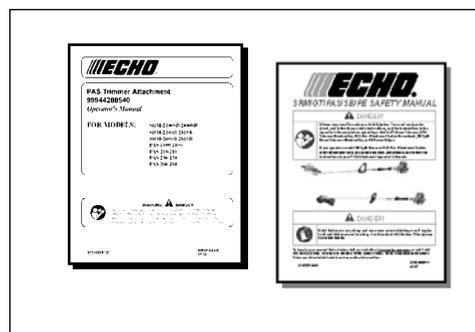
Welcome to the ECHO family. This ECHO product was designed and manufactured to provide long life and on-the-job dependability. Read and understand this manual and the SAFETY MANUAL before operation. You will find both easy to use and full of helpful operating tips and SAFETY messages.

### 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.....	11
- The Operator's Manual .....	2	- Skill Levels .....	11
- The Safety Manual.....	2	- Maintenance Intervals.....	11
Safety .....	3	- Lubrication.....	11
- Manual Safety Symbols & Important Information.....	3	- Nylon Line Replacement .....	12
- International Symbols .....	3	Storage .....	13
- Personal Condition and Safety Equipment.....	4	Specifications .....	13
- Equipment.....	6	Servicing Information .....	16
Description.....	6	- Parts/Serial Number .....	16
Contents .....	7	- Service .....	16
Assembly.....	8	- ECHO Consumer Product Support .....	16
- Power Head Shaft / Lower Shaft Assembly .....	8	- Warranty Card.....	16
- To Advance Trimmer Line .....	9	- Additional or Replacement Manuals .....	16
- Remove Nylon Line Head .....	9		
Operation.....	10		
- To Advance Trimmer Line.....	10		

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**

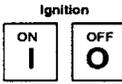
This enclosed message provides tips for use, care and maintenance of the unit.

#### **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
	*WARNING, SEE OPERATOR'S MANUAL		Hot Surface
	Wear eyes, ears and head protection		Fuel and oil mixture
	Rotating Cutting Attachment		Emergency stop
	Wear hand and foot protection		WARNING
	Keep bystanders and helpers away 15 m (50 ft.).		

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Carburetor adjustment - High speed mixture		Primer Bulb
	Carburetor adjustment - Idle speed		Ignition ON/OFF
	Carburetor adjustment - Low speed mixture		Engine choke control.
	DO NOT USE BLADES - Line Head Only		BEWARE - Thrown, Ricochet objects

## 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 handle. 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,** or clothing with loose or hanging items that could become entangled in moving parts or surrounding growth.

Wear sturdy work shoes with nonskid soles;

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

Wear no-slip, heavy duty work gloves.

Keep long hair away from engine and air intake. Retain hair with cap or net.

### ***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.

### ***Extended Operation/Extreme Conditions***

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 unit 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.

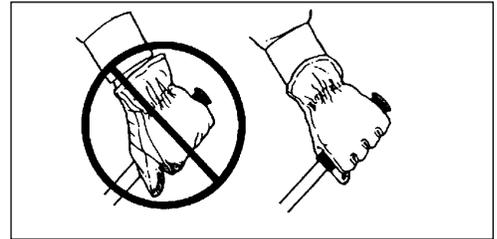


## ***Repetitive Stress Injuries***

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 exercise 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.



## **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***

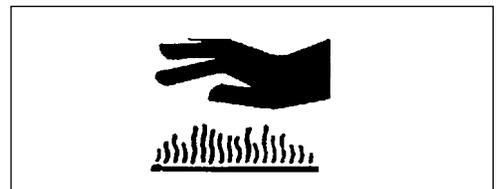
- Hold the front and rear handles with both hands, with thumbs and fingers encircling the handles.

## ***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

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.

- Check unit for loose/missing nuts, bolts, and screws. Tighten and/or replace as needed.
- Inspect shield for damage and ensure that the cut-off knife is securely in place. Replace if either 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.

### NOTE

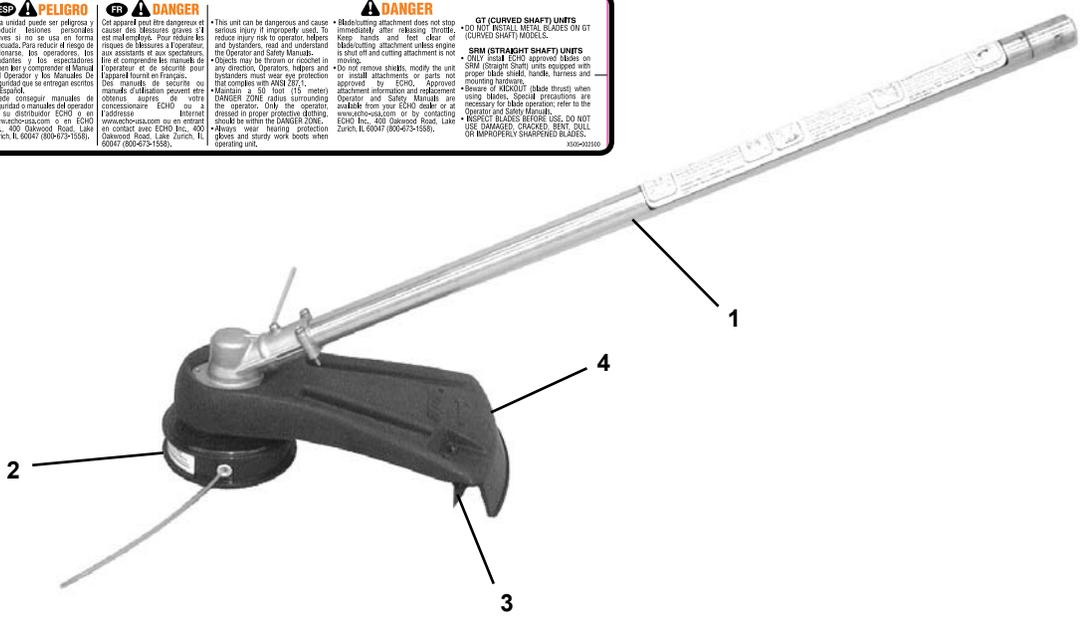
ECHO, INC. will not be responsible for the failure of cutting devices, attachments or accessories which have not been tested and approved by ECHO.

## DESCRIPTION

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

### Shaft Decal

	<p><b>ESP PELIGRO</b></p> <p>Este unidad puede ser peligrosa y producir lesiones o lesiones graves si no se usa en forma adecuada. Para reducir el riesgo de lesiones, los operadores deben leer y comprender el Manual del Operador y los Manuales de Seguridad que se entregan con esta unidad.</p> <p>Use this unit only as instructed in the Operator and Safety Manuals. Do not use this unit unless you have read and understand the Operator and Safety Manuals.</p> <p>Use this unit only as instructed in the Operator and Safety Manuals.</p>	<p><b>FR DANGER</b></p> <p>Cet appareil peut être dangereux et causer de graves blessures si n'est pas utilisé correctement. Pour réduire les risques de blessures, les opérateurs doivent lire et comprendre les manuels de l'opérateur et de sécurité qui sont fournis avec cet appareil.</p> <p>Use this unit only as instructed in the Operator and Safety Manuals. Do not use this unit unless you have read and understand the Operator and Safety Manuals.</p>	<p><b>EN DANGER</b></p> <p>This unit can be dangerous and cause serious injury if improperly used. To reduce injury risk to operator, helpers and bystanders, read and understand the Operator and Safety Manuals. Objects may be thrown or ricochet in any direction. Operators, helpers and bystanders must wear eye protection that complies with ANSI Z87.1.</p> <p>• Maintain a 50 foot (15 meter) DANGER ZONE around surrounding the operation. Only the operator should be within the DANGER ZONE.</p> <p>• Always wear hearing protection (gloves) and sturdy work boots when operating unit.</p>	<p><b>CAUTION</b></p> <p>Blade/cutting attachment does not stop immediately after releasing trigger. Keep hands and feet clear of blade/cutting attachment unless engine is running.</p> <p>• Do not remove shields, modify the unit or install attachments or parts not approved by ECHO. Approved attachment information and replacement Operator and Safety Manuals are available from your ECHO dealer or at <a href="http://www.echo-usa.com">www.echo-usa.com</a> or by contacting ECHO Inc., 400 Oakwood Road, Lake Zurich, IL 60047 (800-475-1555).</p>	<p><b>GT (CURVED SHAFT) UNITS</b></p> <p>• DO NOT INSTALL METAL BLADES ON GT (CURVED SHAFT) MODELS.</p> <p><b>SRM (STRAIGHT SHAFT) UNITS</b></p> <p>• ONLY INSTALL ECHO approved blades on SRM (Straight Shaft) units equipped with proper blade shield, handle, harness and routing hardware.</p> <p>• Beware of KICKOUT (blade thrust) when using blade. Special precautions are necessary for blade operation; refer to the Operator and Safety Manuals.</p> <p>• RESPECT BLADES BEFORE USE. DO NOT USE DAMAGED, STUCKED, BENT, DULL OR IMPROPERLY SHARPENED BLADES.</p> <p>9000-02222</p>
---	---	---	---	---	---



1. **DRIVE SHAFT ASSEMBLY** - Contains a specially designed liner and the flexible drive shaft.
2. **NYLON CUTTING ATTACHMENT** - Contains replaceable nylon trimming line that advances when the trimmer head is tapped against the ground while the head is turning at normal operating speed.
3. **CUT-OFF KNIFE** - Automatically trims line to the correct length: 5 in. after head is tapped on the ground. If trimmer is operated without a cut-off knife the line will become too long, the engine will overheat, and engine damage may occur.
4. **PLASTIC DEBRIS SHIELD ASSEMBLY** - Shield assembly includes the Cut-Off Knife. Helps protect the operator by deflecting debris produced during the trimming operation. This shield must be replaced with the steel shield for blade use.

## CONTENTS

The ECHO product you 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 - PAS Trimmer Attachment
- \_\_\_\_\_ 1 - Operator's Manual
- \_\_\_\_\_ 1 - Warranty Registration Card
- \_\_\_\_\_ 1 - Storage Hook Assembly



## ASSEMBLY

### POWER HEAD SHAFT/LOWER SHAFT ASSEMBLY

*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 upper drive shaft socket.

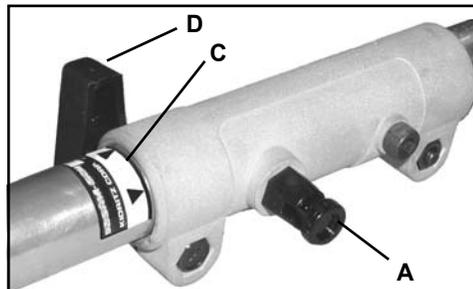
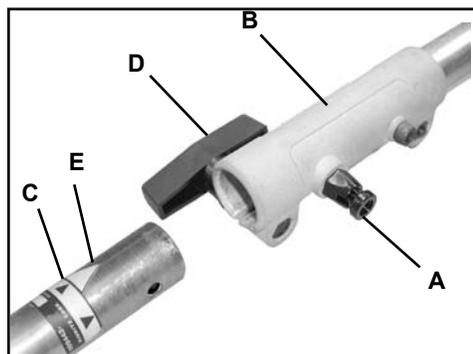
#### NOTE

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).

#### NOTE

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

5. 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.
6. Secure lower shaft assembly to coupler by tightening clamping knob (D).



## TO ADVANCE TRIMMER LINE

See Maintenance Section for nylon line replacement.

### NOTE

To advance trimmer line, tap trimmer head against the ground while the head is turning at normal operating speed.

## REMOVE NYLON LINE HEAD



### Caution

Wear Gloves or personal injury may result:

- Cutoff knife is sharp.
- Gearcase and surrounding area may be hot.

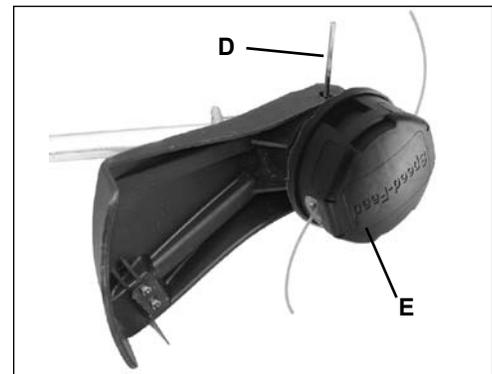
### NOTE

Do not disassemble nylon line head.

1. Align locking hole in upper plate with notch in edge of gear housing and insert head locking tool (D).
2. Remove line head (E) by turning it clockwise until head is completely off of shaft.
3. Remove locking tool (D).

### IMPORTANT

Semi-automatic nylon line heads must be used only with plastic debris shield with cut-off knife. Using nylon line heads with metal debris shield can result in trimmer damage, caused by operation with excessive line length.



## OPERATION



### **WARNING**

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all openings. Always stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit. Allow unit to cool before performing service. Wear gloves to protect hands from sharp edges and hot surfaces.



### **WARNING**

The attachment will operate immediately when the engine starts and could result in loss of control and possible serious injury. Keep movable parts of the attachment off the ground and away from objects that could become entangled or thrown.

### **NOTE**

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

### **NOTE**

Refer to the Grass Trimmer / Brush Cutter Safety Manual for proper and safe trimming techniques.



### **WARNING**

Inspect starting area for hazards such as rocks, glass, debris etc. which could be contacted by the cutting attachment when starting. Keep helpers and bystanders at least 15 m (50 ft.) from starting area, otherwise serious personal injury may result.

## MAINTENANCE



### WARNING

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all openings. Always stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit. Allow unit to cool before performing service. Wear gloves to protect hands from sharp edges and hot surfaces.

Your ECHO unit is designed to provide many hours of trouble-free service. Regular scheduled maintenance will help your unit 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 a task is not listed, see your ECHO Dealer for repairs.

### SKILL LEVELS

**Level 1** = Easy to do. Common tools may be required.

**Level 2** = Moderate difficulty. Some specialized tools may be required.

### MAINTENANCE INTERVALS

Component	Maintenance Procedure	Skill Level	Interval
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

**IMPORTANT** - Time intervals shown are maximum. Actual use and your experience will determine the frequency of required maintenance.

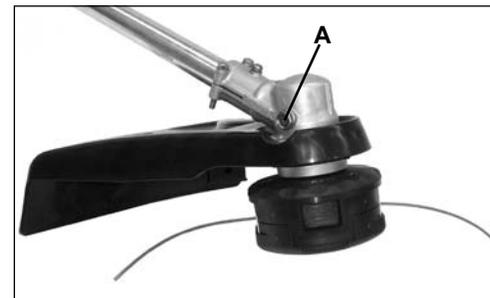
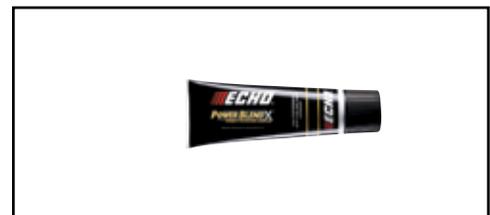
### LUBRICATION

#### Level 1.

*Parts Required:* POWER BLENDX™ 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. Add grease if necessary. DO NOT over-fill.



## Drive Shaft (Lower)

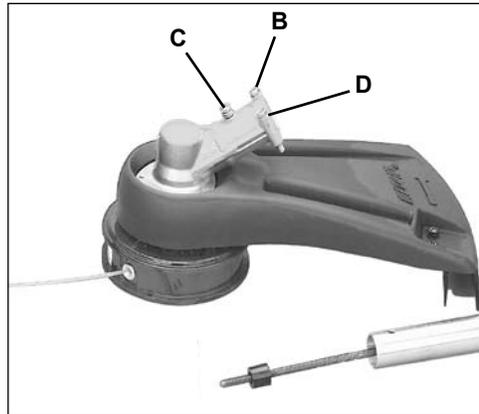
### IMPORTANT

Lower and upper drive shaft must be lubricated with high temperature automotive grease every 25 hours of operation, otherwise drive shaft assembly overheating and failure can result.

1. Loosen two (2) screws (B) and remove center locating screw (C). Pull gear box and shield from drive shaft housing.
2. Pull flexible cable from the drive shaft housing, wipe clean and re-coat with a thin coating [15 ml (1/2 oz.)] of grease.
3. Slide the flexible cable back in the drive housing. DO NOT get dirt on the flex cable.
4. Install the gear housing and shield assembly.

### IMPORTANT

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



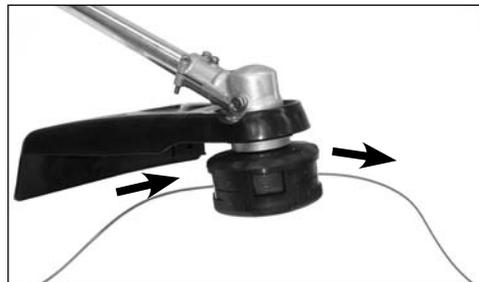
## NYLON LINE REPLACEMENT

1. Cut one piece of line to recommended length.  
**.080 (2.0 MM) DIA. - 10' (3 M)**  
**.095 (2.4 MM) DIA. - 10' (3 M)**
2. Align arrows on top of knob with openings in eyelets.
3. Insert one end of trimmer line into an eyelet, and push line equal distance through trimmer head.
4. Hold trimmer head while turning knob clockwise to wind line onto spool until about 5" (13 cm) of each line remains exposed.

**TRIMMER HEAD IS NOW FULLY LOADED AND READY FOR OPERATION.**

### NOTE:

Trimmer head is pre-wound with .095" (2.4mm) Crossfire™ trimmer line.





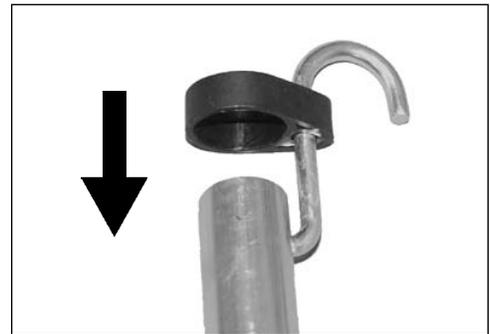
**IMPORTANT**

When the wear indicators located at the bottom of the Speed-Feed® head are worn smooth, replacement of the cover or the entire Speed-Feed® head is required.

**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**

<b>MODEL</b> -----	<b>PAS Trimmer Attachment</b>
Shaft Length -----	870 mm (34.3 in.)
Attachment Width -----	178 mm (7.0 in.)
Attachment Height-----	255 mm (10.0 in.)
Weight (dry) w/line head-----	1.43 kg (3.15 lb.)
Drive Shaft-----	1/4" Flex Shaft
Direction of Rotation-----	Counter clockwise viewed from the top
Cutter Head -----	Speed-Feed® 375 LH Nylon line head
Line Capacity-----	3.1m (10 ft.)

NOTES

**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, Type and Serial Number of the unit with you. You can find these numbers on the engine housing. 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). Dealer information is also available on our Web Site. 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.

### WARRANTY REGISTRATION

To ensure trouble free warranty coverage it is important that you register your ECHO equipment on-line at [www.echo-usa.com](http://www.echo-usa.com) 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

**Replacement Operator, Safety Manuals, and Parts Catalogs** are available from your ECHO dealer or at [www.echo-usa.com](http://www.echo-usa.com) or by contacting ECHO Inc., 400 Oakwood Road, Lake Zurich, IL 60047 (800-673-1558). Always check the ECHO Web Site for updated information.

**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](http://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](http://WWW.ECHO-USA.COM)

S06400001001/S06400999999