



99944200620

ProPaddle Attachment

FOR MODELS: SRM-2400SB, 260SB, 261SB, PAS-2400, 2601, 230, 231, 260, 261, 265, 266, 280

Operator's Manual

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.

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.

TABLE OF CONTENTS

Table of Contents	2
Introduction	3
The Operator's Manual	3
Servicing Information	3
Parts/Serial Number	3
Service	3
Echo Consumer Product Support	3
Product Registration	3
Additional or Replacement Manuals	3
Safety	4
Manual Safety Symbols and Important Information	4
International Symbols	5
Personal Condition and Safety Equipment	5
Equipment	8
Description	9
Contents	10
Assembly	11
ProPaddle Lower Drive Shaft Assembly to Gear Housing Assembly	11
ProPaddle Sweeper Drum Assembly	11
Power Head Shaft/Lower Shaft Assembly	12
Operation	14
Break-In	14
Sweeping Operation	14
Maintenance	16
Skill Levels	16
Maintenance Intervals	16
Lubrication	16
Gear Case	17
Storage	19
Storage Hook Installation	20
Specifications	21
Warranty Statements	22
Notes	24
Product Registration	25
Notes	26

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. You will find it easy to use and full of helpful operating tips and SAFETY messages.

The Operator's Manual

Keep it in a safe place for future reference. Contains specifications and information for safety, operation, maintenance, storage and assembly specific to this product.

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 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 8:00 am to 5:00 pm (Central Standard Time) Monday through Friday. Before calling, please know the model and serial number of your unit.

Product Registration

To ensure trouble free warranty coverage it is important that you register your ECHO equipment on-line at www.echo-usa.com or by filling out the product registration sheet included in this manual. 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 or by contacting ECHO Inc., 400 Oakwood Road, Lake Zurich, IL 60047 (800-673-1558). Always check the ECHO Web Site for updated information.



For more information
scan this QR code.

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

SAFETY

WARNING

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

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.

NOTICE

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.



CIRCLE AND SLASH SYMBOL

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

International Symbols

	Warning, See Operator's Manual		Safety/Alert		DO NOT USE BLADES - Line Head Only		Thrown objects
	Wear eye, ear and head protection		Finger Severing		Plan retreat path from falling objects		Hot Surface
	Wear hand and foot protection		Rotating Cutting Attachment	 		AVOID KICKOUT. Keep bystanders at least 15 meters (50 feet) away.	
	Wear Face Shield		Wear slip resistant foot wear			Beware Thrown Objects Wear Eye Protection	
	Keep feet away from blade		Do not operate closer than 15 M (50 ft.) from electrical hazards. Keep bystanders at least 15 meters (50 feet) away			Keep bystanders and helpers away 15 m (50 ft.).	

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

WARNING

- Eye protection that meets ANSI Z87.1 or CE requirements must be worn whenever you operate the unit.
- For additional safety, a full-face shield may be worn over safety glasses or goggles to provide protection from sharp branches or flying debris.

Hand Protection

Wear sturdy, no-slip, rubber work gloves to improve your grip on the handles. Gloves also provide protection against cuts and scratches, cold environments, and reduce the transmission of machine vibration to your hands.

Hearing/Ear Protection

ECHO recommends wearing hearing protection whenever unit is used.

Breathing Protection

Operators who are sensitive to dust or other common airborne allergens may need to wear a dust mask to prevent inhaling these materials while operating unit. Dust masks can provide protection against dust, plant debris, and other plant matter such as pollen. Make sure the mask does not impair your vision, and replace the mask as needed to prevent air restrictions.

Proper Clothing

Wear snug-fitting, durable clothing:

- Pants should have long legs, shirts should have 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.
- Keep clothing buttoned or zipped, and keep shirt tails tucked in.

Wear sturdy work shoes with nonskid rubber soles:

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

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

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.

WARNING

The components of this machine generate an electromagnetic field during operation, which may interfere with some pacemakers. To reduce the risk of serious or fatal injury, persons with pacemakers should consult with their physician and the pacemaker manufacturer before operating this machine. In the absence of such information, ECHO does not recommend the use of this machine by anyone who has a pacemaker.

Extended Operation / Extreme Conditions

CAUTION

Prolonged exposure to cold and/or vibration may result in injury. Read and follow all safety and operation instructions to minimize risk of injury. Failure to follow instructions may result in painful wrist/hand/arm injuries.

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.

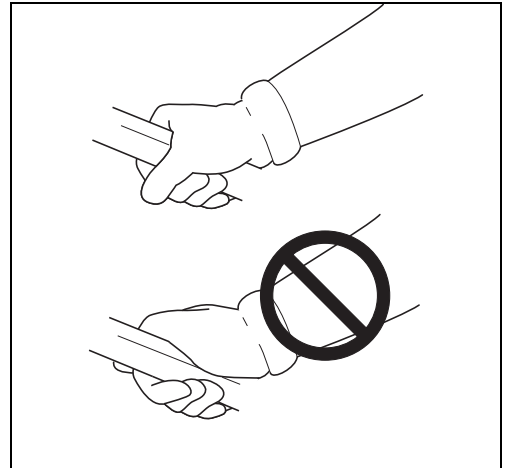


Repetitive Stress Injuries (RSI)

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

All over head electrical conductors and communications wires can have electricity flow with high voltages. This unit is not insulated against electrical current. Never touch wires directly or indirectly, otherwise serious injury or death may result.

⚠ 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

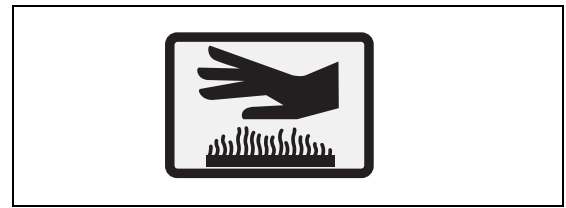
- Always hold throttle handle and support handle with thumbs and fingers tightly encircling the handles.

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 and attachment bearing housing may become very hot, too hot to touch. 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 ProPaddle sweeper drums for damage and that they are firmly secured in place. Replace paddles if damaged or worn excessively.
- Check that the ProPaddle attachment is firmly attached and in safe operating condition.

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.

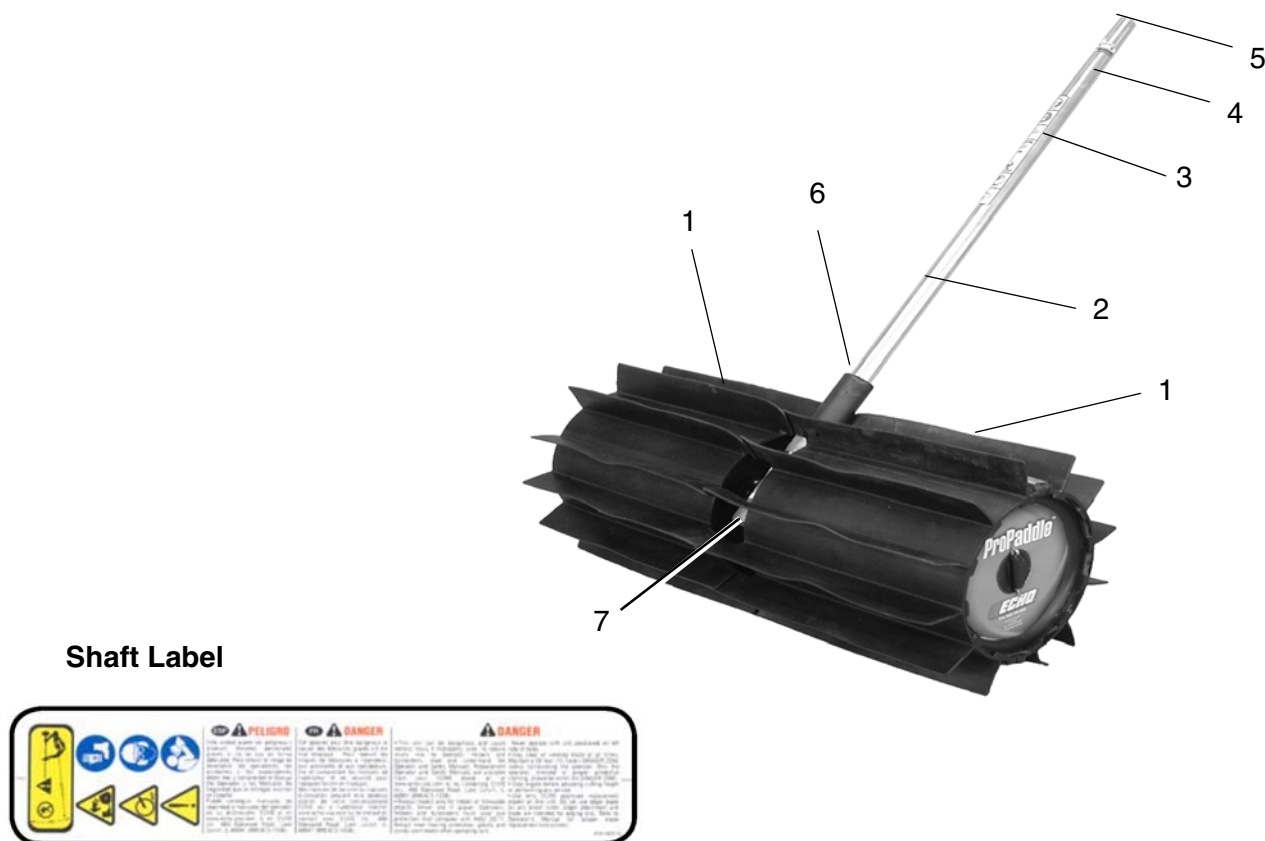
⚠ WARNING

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.*
- ◆ *DO NOT start or operate unit unless all guards and protective covers are properly assembled to unit.*
- NEVER reach into any opening while the engine is running. Moving parts may not be visible through openings.

DESCRIPTION

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



1. **PROPADDLE SWEEPER DRUM ASSEMBLIES** - Replaceable 12-fin rubber paddles provide efficient cleaning action on a wide variety of surfaces. Drums may be switched from side to side to help extend paddle life.
2. **LOWER DRIVE SHAFT ASSEMBLY** - Contains flexible drive cable, outer shaft housing, safety decal, model/serial number/coupling alignment decal, and protective cap for storage.
3. **SAFETY DECAL** - Provides important safety information that must be followed. See Page 4.
4. **MODEL LABEL** - Provides model number and serial number of ProPaddle attachment. Use this information to fill out warranty registration card.
5. **FLEXIBLE DRIVE CABLE** - Cable end fits into drive shaft coupler of Pro Attachment Series or Split Boom models. Lubricate drive cable every 25 hours of use with Echo Lube or high temperature automotive grease.
6. **TUBE PROTECTOR** - Reversible rubber sleeve protects lower driveshaft housing from wear.
7. **PROPADDLE GEAR HOUSING ASSEMBLY** - Sealed gear housing provides maintenance-free operation.

CONTENTS

The ECHO product you purchased has been factory pre-assembled for your convenience. Due to packaging restrictions, some assembly may be necessary.

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 Gear Housing Assembly
- ___ 1 Lower Drive Shaft Assembly
- ___ 1 Tube Protector
- ___ 2 ProPaddle Sweeper Drum Assemblies
- ___ 2 Drum Axles
- ___ 2 Clevis Pins
- ___ 2 Hitch Pins
- ___ 2 Split Pins
- ___ 1 Operators Manual
- ___ 1 Storage Hook Assembly

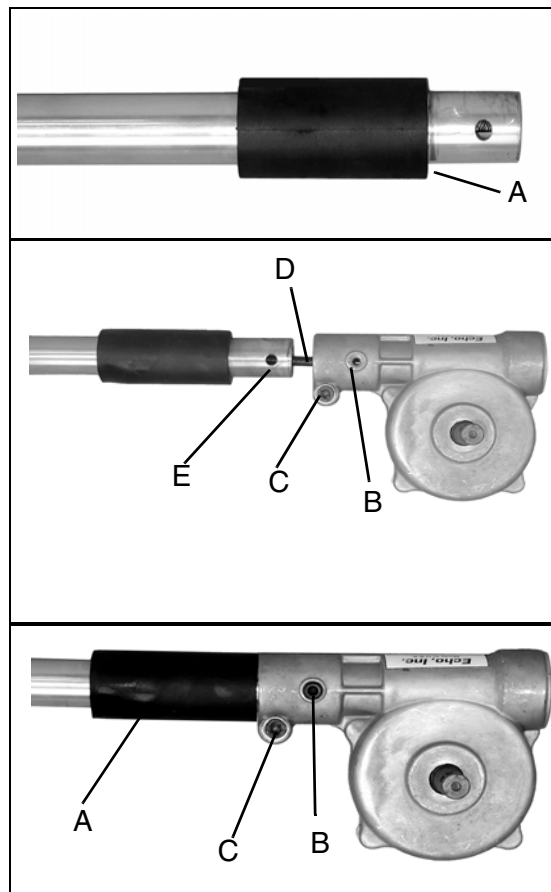


ASSEMBLY

ProPaddle Lower Drive Shaft Assembly to Gear Housing Assembly

Parts Required: ProPaddle Gear Housing Assembly, Lower Drive Shaft Assembly, Tube Protector

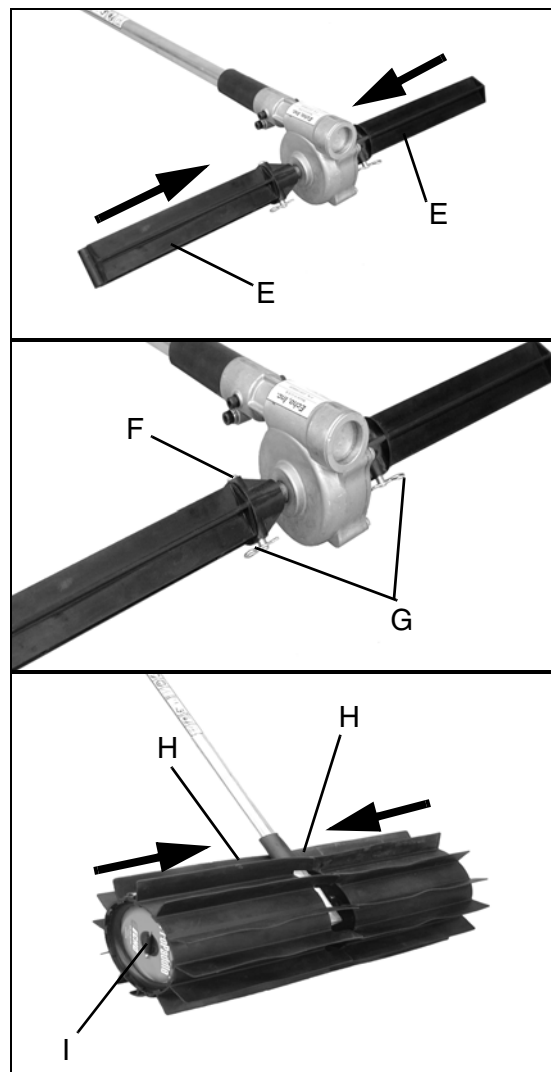
1. Remove vinyl cap from lower end of drive shaft tube (end without labels).
2. Remove gear housing shaft alignment screw (B) from right side of gearcase.
3. Loosen gear housing shaft clamp bolt (C).
4. Insert tip of flex shaft (D) into gear housing drive socket.
5. Align hole in drive shaft tube (E) with alignment hole in gear housing (B).
6. Insert lower driveshaft tube (end without model number/coupling alignment decal) into gear housing shaft mount.
7. Install and tighten alignment screw (B).
8. Tighten gear housing shaft clamp bolt (C).
9. Slide tube protector (A) flush against gearcase housing.



ProPaddle Sweeper Drum Assembly

Parts Required: ProPaddle Gear Housing/Lower Shaft Assembly, 2 ProPaddle Sweeper Drums, 2 Plastic Drum Axles, 2 Clevis Pins, 2 Hitch Pins, 2 Split Pins

1. Slide tapered end of plastic drum axles (E) onto gear housing output shafts.
2. Align mounting holes, and secure drum axles to shafts with clevis pins (F).
3. Insert hitch pins (G) through holes in tip of clevis pins to retain clevis pins.
4. Slide recessed ends of sweeper drums (H) onto plastic axles, and secure with split pins (I). Spread tips of split pins out to retain pins in axles.



Power Head Shaft/Lower Shaft Assembly

WARNING

Do not perform maintenance or assembly procedures with engine running.

Parts Required: PAS of 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.

⚠ CAUTION

Thrown objects hazard. Install lower drive shaft so that gear housing clamping bolt (F) faces downward. Otherwise debris will be thrown toward users.

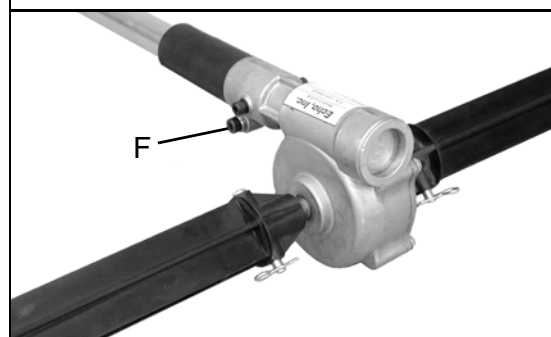
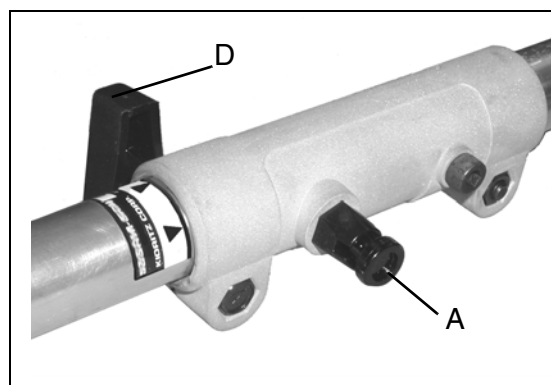
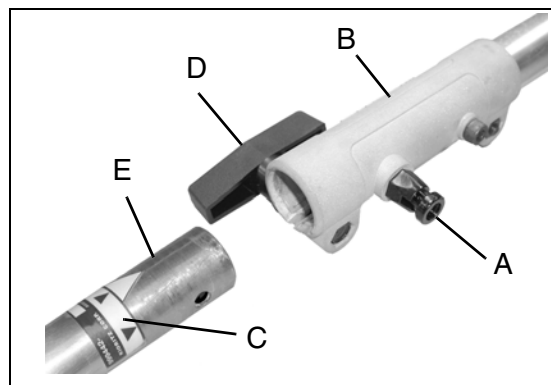
4. Remove cardboard spacer, if necessary.
5. Carefully fit attachment drive shaft assembly into coupler (B) to decal assembly line (C), making sure that the inner lower drive shaft engages the square upper drive shaft socket.

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.

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).



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.

Break-In

1. ProPaddle sweeper drums with new paddle belts must be broken-in before use to prevent the belts from gripping and dragging on hard surfaces.
2. Grip the handles firmly, and position ProPaddle well out in front of your body.
3. Run the ProPaddle at full throttle for 3 - 5 minutes on a rough, abrasive surface such as worn asphalt paving. Allow the ProPaddle's weight to fully rest on the paddle belts.
4. After break-in, the paddle belt fins will slide easily over the surface being cleaned, providing more efficient operation on a variety of surfaces.

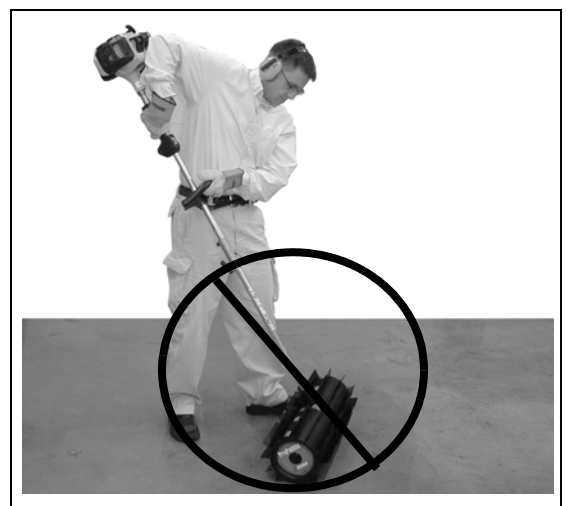


Sweeping Operation

1. Hold unit from left side, resting sweeper paddles on work surface.
2. Firmly grasp throttle grip with right hand and front handle with left hand.
3. Position ProPaddle well out in front of your body.
4. Accelerate to full throttle and allow paddles to push debris ahead. Sweep to an area where debris can be piled and collected.

WARNING

Do not operate ProPaddle with paddles close to your body, which could result in loss of control and possible serious injury.



5. Debris may be swept out and away from corners by turning unit over to reverse paddle direction. Grip unit securely using both hands. Operate throttle trigger with thumb of right hand. For extended use, reposition front handle to allow comfortable grip. Return handle to normal position for regular operation.

⚠ WARNING

Turning ProPaddle over to reverse sweeper drum rotation will cause debris to be swept toward operator. Reduce engine speed, and be alert for unstable footing caused by loose debris.

Note: Extended use of unit at low throttle settings could cause damage to clutch because of clutch slipping.



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 the 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.

ECHO offers **REPOWER™** Maintenance Kits and Parts to make your maintenance job easier.

Maintenance Intervals

COMPONENT/SYSTEM	MAINTENANCE PROCEDURE	SKILL LEVEL	Interval
Drive Shaft	Grease	1	Every 25 hours of Use [1]
Gear Case	Lubricate	2	Before Each Use
Paddles	Inspect/Switch/Replace*	1/2/2	Daily
Tube Protector	Inspect/Rotate/Reverse/Replace*	1/2/2/2	Weekly
Screws/Nuts/Bolts	Inspect/Tighten/Replace	1/1/1	Before Each Use

*Inspect parts at intervals indicated and service or replace as needed.

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

(1) Apply lithium based grease.

Lubrication

Level 1.

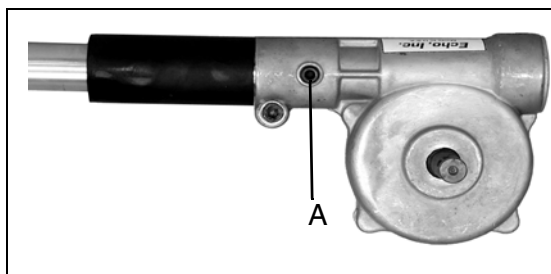
Parts Required: Lithium Base Grease, Mobil SHC634
synthetic gear oil

Drive Shaft

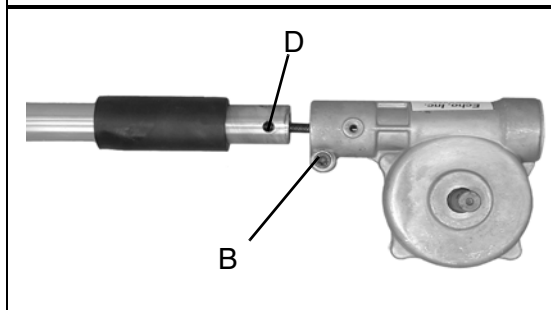
NOTICE

The lower attachment drive shaft must be lubricated with lithium based grease every 25 hours of operation, otherwise drive shaft assembly overheating and failure can result.

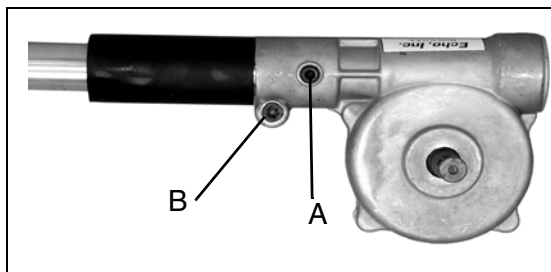
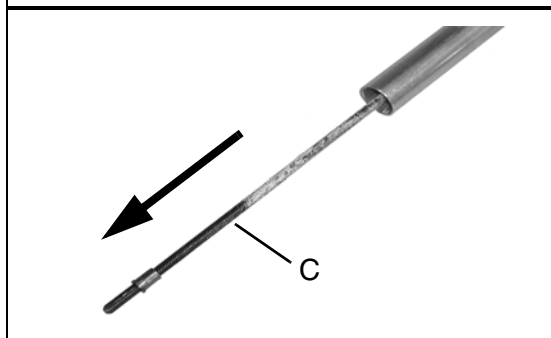
1. Remove right ProPaddle sweeper drum assembly and gear housing shaft alignment screw (A).
2. Loosen gear housing shaft clamp bolt (B).



3. Remove drive shaft assembly from gear housing.



4. Pull flexible cable (C) from gear housing end of drive shaft housing, wipe clean, and re-coat with a thin coating [15 ml (1/2 oz.)] of grease.
 5. Slide the flexible cable back in the drive housing. DO NOT get dirt on the flex cable.
 6. Insert tip of flex shaft into gear housing drive socket.
 7. Align hole in gear housing with positioning hole in shaft (D).
 8. Insert lower driveshaft tube (end without model number/coupling alignment decal) into gear housing shaft mount.
 9. Install and tighten alignment screw (A).
 10. Tighten gear housing shaft clamp bolt (B).
 11. Make sure tube protector is positioned against gear case housing.
- Note: Tube protector may be turned or reversed if worn.
12. Reinstall right ProPaddle sweeper drum assembly and secure with split pin.



Gear Case

The gearcase should be filled with 60 cc (2.0 fl.oz.) of Mobil SHC634 Synthetic Gear Oil. A maximum of 75-80 cc can be used, but never to exceed 80 cc. Operation with excessive oil level will result in high operating temperatures. **Do not overfill! Replacing the gearcase oil**

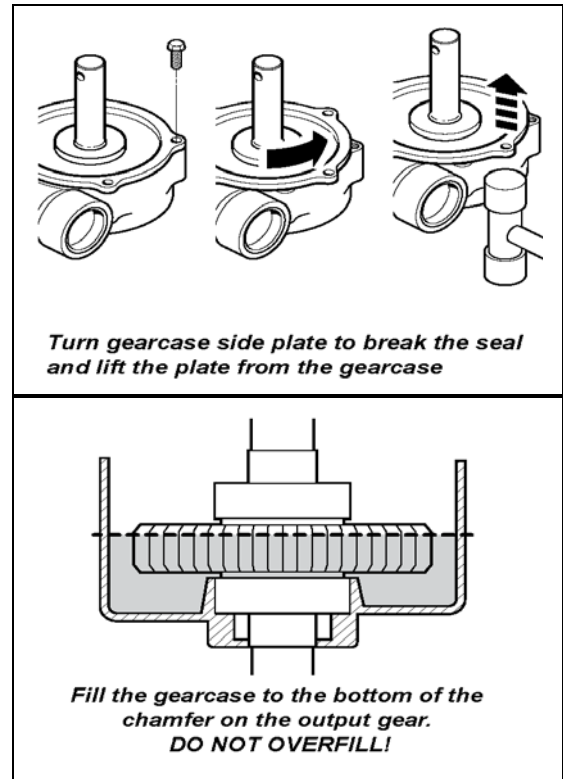
⚠ WARNING

BURN DANGER! The gearcase will be extremely hot after use!

1. Disconnect spark plug wire at engine.
2. Remove the LH Drum and axle assembly (as viewed from the operating position). Wipe the sideplate clean and remove four screws (it is not necessary to remove the gearcase from the outer tube).
3. Turn gearcase side plate to break the seal and lift the plate from the gearcase.

Note: It may be necessary to use a heat gun to soften the sealer material.

4. Turn gearcase side plate to break the seal and lift the plate from the gearcase.
5. Place the gearcase on the RH side and supported so the outer tube is parallel to the ground. Refill the gearcase with 60 cc (2.0 fl.oz) of Mobil SHC634 Synthetic Gear Oil to the bottom of the chamfer on the output gear. The correct oil depth is 5/8" (15.5 mm). **DO NOT OVERFILL!**
6. Inspect the sideplate for damage and clean off all remaining liquid gasket material with brake cleaner or acetone. Coat the outer sealing flange of the sideplate with silicon sealant.
7. Replace the cover and install the four sideplate screws. Tighten securely.
8. Reinstall the drum and axle assembly. Refer to the section "Assembly: Sweeper Assembly" for instructions.



STORAGE

1. Remove ProPaddle sweeper drum assemblies and drum axles.

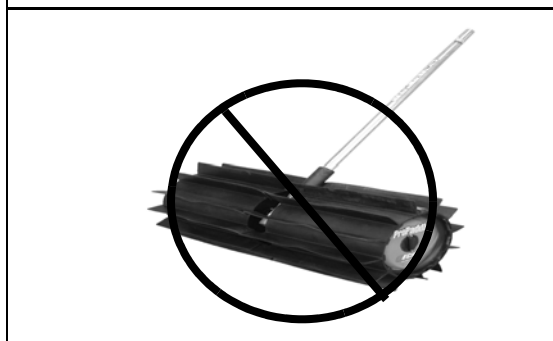
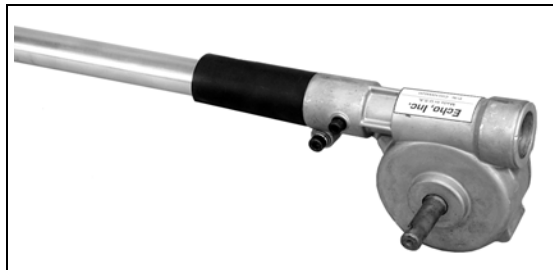
NOTICE

Do not immerse the gearcase or driveshaft in water. Water will enter gear housing and damage gears, bearings and seals.

2. Inspect ProPaddle belts and fins for excessive wear and damage. Have Echo dealer replace paddle belts if fins are worn excessively or distorted, or if belts are damaged.
3. Clean ProPaddle sweeper drums and reusable belts with water.
4. Insert plastic drum axles into drums, and install assembly hardware on axles to avoid loss during storage.
5. Stand drums on outer ends to prevent paddle fins from deforming during storage.
6. Apply a thin coating of oil to gearcase output shafts to prevent rust.
7. Lubricate lower drive shaft with grease. (Refer to Lubrication instructions.)
8. Store ProPaddle components in a cool, dry place. Store gearcase/ lower driveshaft assembly with gearcase down to prevent lubricant leakage from open shaft end.

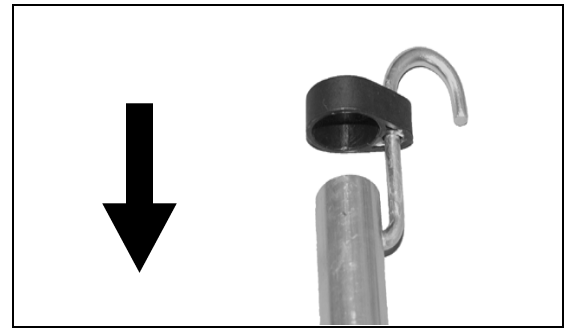
NOTICE

DO NOT allow ProPaddle attachment to rest on paddle fins during prolonged storage, or fins may become flattened.



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

ProPaddle Attachment : Approved for use on PAS and SRM SB Models

MODEL	99944200620
Attachment Length	927.1 mm (36.5 in.)
Attachment Width	571.5 mm (22.5 in.)
Attachment Height	266.7 mm (10.5 in.)
Weight	5.09 kg (11.22 lb.)
Drive shaft	6.35 mm (1/4 in.) Flex Shaft
Rotating Direction	Counterclockwise (viewed from operator's right side)
Paddle Diameter	266.7 mm (10.5 in.)
Rubber Fins	571.5 mm (22.5 in.) W x 42 mm (1.65 in.) H x 12
Lubrication	Drive Shaft - Lithium Base Grease
Gear Reduction Ratio	40 : 1
Sweeper Operating	200 RPM
Engine Wide Open Throttle/attachment	7,700 - 8,500 RPM

WARRANTY STATEMENTS

ECHO LIMITED WARRANTY STATEMENT FOR PRODUCT SOLD IN USA AND CANADA BEGINNING 01/01/2010

ECHO'S RESPONSIBILITY

ECHO Incorporated's Limited Warranty, provides to the original purchaser that this ECHO product is free from defects in material and workmanship. Under normal use and maintenance from date of purchase, ECHO agrees to repair or replace at ECHO's discretion, any defective product free of charge at any authorized ECHO servicing dealer within listed below application time periods, limitations and exclusions. **THIS LIMITED WARRANTY IS ONLY APPLICABLE TO ECHO PRODUCTS SOLD BY AUTHORIZED ECHO DEALERS. IT IS EXTENDED TO THE ORIGINAL PURCHASER ONLY, AND IS NOT TRANSFERABLE TO SUBSEQUENT OWNERS EXCEPT FOR EMISSION RELATED PARTS.** Repair parts and accessories replaced under this warranty are warranted only for the balance of the original unit or accessory warranty period. Any damage caused by improper installation or improper maintenance is not covered by this warranty. All parts or products replaced under warranty become the property of ECHO, Inc. This warranty is separate from the Emission control warranty statement supplied with your new product. Please consult the Emission Control Warranty Statement for details regarding emission related parts. For a list of Authorized ECHO Dealers refer to WWW.ECHO-USA.COM or call 1-800-432-ECHO.

OWNER'S RESPONSIBILITY

To ensure trouble free warranty coverage it is important that you register your ECHO equipment on-line at 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 if we find it necessary to contact you.

The owner shall demonstrate reasonable care and use, and follow preventative maintenance, storage, fuel and oil usage as prescribed in the operator's manual. Should a product difficulty occur, you must, at your expense, deliver or ship your ECHO unit to an authorized ECHO servicing dealer for warranty repairs (within the applicable warranty period), and arrange for pick-up or return of your unit after the repairs have been made. For your nearest authorized ECHO servicing dealer, call ECHO's Dealer Referral Center, at 1-800-432-ECHO or you can locate an ECHO servicing dealer at WWW.ECHO-USA.COM. Should you require assistance or have questions concerning ECHO's Warranty Statement, you can contact our Consumer Product Support Department at 1-800-673-1558 or contact us through the web at WWW.ECHO-USA.COM.

PRODUCT WARRANTY PERIOD

HOMEOWNER APPLICATION

- **5 YEAR WARRANTY** - All units for homeowner, or non-income producing use will be covered by this limited warranty for **five (5) years** from date of purchase.

EXCEPTIONS:

- For two-stroke engine powered products, the electronic ignition module, flexible drive cables, SRM solid drive shafts, and TC tines are warranted for the **life*** of the product on parts only.
- Cutting attachments such as, but not limited to, bars, chains, sprockets, blades, and nylon trimmer heads for homeowner or non-income producing use will be covered for failures due to defects in material or workmanship for a period of **60 days** from original product purchase date. Any misuse from contact with concrete, rocks, or other structures is not covered by this warranty.
- ECHO's Rapid Loader String Head carries a lifetime warranty on the line locking system, parts only; no labor. Refer to your operator's manual for string head installation and maintenance instructions.
- All SB-Series and PRO ATTACHMENT SERIES Split Shaft attachments carry the same warranty duration as the units they are designed to fit.

COMMERCIAL APPLICATION

- **1 YEAR WARRANTY** - All Chain Saws, QuikVent Saws, and Cut-Off Saws for commercial, institutional, agricultural, industrial, or income producing use will be covered by this limited warranty for one **(1) year** from the date of purchase.
- **2 YEAR WARRANTY** - All other units for commercial, institutional, agricultural, industrial, or income producing use will be covered by this limited warranty for two **(2) years** from the date of purchase.

EXCEPTIONS:

- For two-stroke engine powered products, the electronic ignition module, flexible drive cables, SRM solid drive shafts and TC tines, are warranted for the **life*** of the product on parts only.
- Cutting attachments such as, but not limited to, bars, chains, sprockets, blades, and nylon trimmer heads for commercial, institutional, agricultural, industrial, rental, or income producing will be covered for failures due to defects in material or workmanship for a period of **30 days** from original product purchase date. Any misuse from contact with concrete, rocks, or other structures is not covered by this warranty.
- ECHO's Rapid Loader String Head carries a lifetime warranty on the line locking system, parts only; no labor. Refer to your operator's manual for string head installation and maintenance instructions.
- All SB-Series and PRO ATTACHMENT SERIES Split Shaft attachments carry the same warranty duration as the units they are designed to fit.

RENTAL APPLICATION - 90 DAYS WARRANTY

- Units for rental use will be covered against defects in material and workmanship for a period of 90 days from the date of purchase.

* ECHO's liability under the "Lifetime" coverage is limited to furnishing parts specified under the PRODUCT WARRANTY PERIOD section of this warranty statement for "**Life**" free of charge for a period of ten (10) years after the date of the complete unit's final production.

ECHO does not offer an over the counter exchange program. Any ECHO product re-built other than by ECHO or sold through an unauthorized dealer, or an unauthorized outlet store, is sold without ECHO's limited warranty coverage. The ECHO Limited Warranty coverage is extended to the original purchaser only, and is not transferable except for emission related parts. Repair parts and accessories replaced under this warranty are warranted only for the balance of the original unit or accessory warranty period. Any damage caused by improper installation or improper maintenance is not covered by this warranty. All parts or products replaced under warranty become the property of ECHO.

PURCHASED REPAIR PARTS, SHORT BLOCKS AND ACCESSORIES

- 90-day homeowner, or non-income producing warranty
- 30-day commercial, institutional, agricultural, industrial, income producing, or rental application warranty

ATTENTION TWO-STROKE ENGINE POWER PRODUCT OWNERS

This ECHO two-stroke engine power product is a quality-engineered unit which has been manufactured to exact tolerances to provide superior performance. To help ensure the performance of the unit, it is required to use two-stroke oil which meets the ISO-L-EGD Standard per ISO/CD 13738 and JASO M345FD Standards. **ECHO Power Blend™ Two-Stroke Oil** is a premium two-stroke oil specifically formulated to meet ISO-L-EGD (ISO/CD 13738) and JASO M345FD Standards. The use of two-stroke oils designed for other applications, such as for outboard motors or lawnmowers can result in severe engine damage, and will void your two-stroke engine limited warranty.

THIS WARRANTY DOES NOT COVER DAMAGE CAUSED BY:

- Lack of lubrication or engine failure, due to the use of two-stroke oils that do not meet the ISO-L-EGD (ISO/CD 13738) and JASO M345FD Standards. Engine problems due to inadequate lubrication caused by failure to use an ISO-L-EGD compliant and JASO M345FD registered oil, will void the two-stroke engine limited warranty. **ECHO Power Blend™ Two-Stroke Oil** meets the ISO-L-EGD and JASO M345FD Standard. Emission related parts are covered for 5 years homeowner use or 2 years commercial use regardless of two-stroke oil used, per the statement listed in the EPA or California Emission Defect Warranty Explanation.
- Damage caused by use of gasohol, containing methanol (wood alcohol), or gasoline containing less than 89 octane. Only use gasoline which contains 89 octane or higher. Gasohol which contains a **maximum** 10% ethanol (grain alcohol) or 15% MTBE (methyl/tertiary/butyl/ether) is also approved. The prescribed mixing ratio of gasoline to oil is listed on the ECHO oil label and covered in your operator's manual.
- Engine damage caused by use of ether or any starting fluids.
- Damage caused by tampering with engine speed governor or emission components, or running engines above specified and recommended engine speeds as listed in your operator's manual.
- Operation of the unit with improperly maintained/removed cutting shield or removed/damaged air filter.
- Damage caused by dirt, pressure or steam cleaning the unit, salt water, corrosion, rust, varnish, abrasives, and moisture.
- Defects, malfunctions or failures resulting from abuse, misuse, neglect, modifications, alterations, normal wear, improper servicing, or use of unauthorized attachments.
- Incorrect storage procedures, stale fuel, including failure to provide or perform required maintenance services as prescribed in the operator's manual. Preventative maintenance as outlined in the operators manual is the customer's responsibility.
- Failures due to improper set-up, pre-delivery service or repair service by anyone other than authorized ECHO servicing dealer during the warranty period.
- Certain parts and other items are not warranted, including but not limited to: lubricants, starter cords, and engine tune-ups.
- Use of spark plugs other than those meeting performance and durability requirements of the OEM spark plug listed in the Operator's Manuals.
- Overheating or carbon scoring failures due to restricted, clogged exhaust port or combustion chamber, including damage to spark arrester screen.
- Adjustments after the first (30) thirty days and beyond, such as carburetor adjustment and throttle cable adjustment.
- Damage to gears or gear cases caused by contaminated grease or oil, use of incorrect type or viscosity of lubricants, and/or failure to comply with recommended grease or oil change intervals.
- Damage caused by loading SHRED 'N' VAC® beyond recommended capacity.
- Damage caused by pump or sprayer running dry, pumping or spraying caustic or flammable materials, or lack of or broken strainers.
- Additional damage to parts or components due to continued use after operational problem or failure occurs. Should operational problem or failure occur, the product should not be used, but delivered as is to an authorized ECHO servicing dealer.

It is a dealer's and/or customer's responsibility to complete and return the warranty registration card supplied with your ECHO product or by visiting WWW.ECHO-USA.COM. Your receipt of purchase including date, model and serial number must be maintained and presented to an authorized ECHO servicing dealer for warranty service. Proof of purchase rests solely with the customer. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so you may also have other specific legal rights which vary from state to state. This limited warranty is given by ECHO Incorporated, 400 Oakwood Rd., Lake Zurich, IL 60047.

DISCLAIMER OF IMPLIED WARRANTIES

This limited warranty is in lieu of all other expressed or implied warranties, including any warranty of FITNESS FOR A PARTICULAR PURPOSE OR USE and any implied warranty of **MERCHANTABILITY** otherwise applicable to this product. ECHO and its affiliated companies shall not be liable for any special incidental or consequential damage, including lost profits. There are no warranties extended other than as provided herein. This limited warranty may be modified only by ECHO.

99922201032
11/18/2011

NOTES

PRODUCT REGISTRATION

Thank you for choosing ECHO Power Equipment

Please go to <http://www.echo-usa.com/Warranty/Register-Your-ECHO> to register your new product on-line. It's **FAST** and **EASY!** NOTE: your information will never be sold or misused by ECHO, Inc. Registering your purchase enables us to contact you in the unlikely event of a service update or product recall, and verifies your ownership for warranty consideration.

If you do not have access to the Internet, you can complete the form below and mail to:

ECHO Inc., Product Registration, PO Box 1139, Lake Zurich IL 60047.



ECHO PRODUCT REGISTRATION CARD : TARJETA DE REGISTRO : CARTE D'ENREGISTREMENT DU PRODUIT

ONLINE OPTION: Register online and save a stamp! You will be alerted of product updates and/or be sent new ECHO product information and special offers. Simply go to:
www.echo-usa.com

OPCION POR INTERNET: Regístrese en la página web y ahorre una estampilla. Le alertarán sobre actualizaciones del producto y le enviarán información y ofertas especiales. Simplemente visite:
www.echo-usa.com

OPTION EN LIGNE: Enregistrer en ligne et épargner un timbre! Vous serez informé sur les nouveaux produits ECHO et les mises à jour de produit ainsi que les offres spéciales. Simplement visitez le: www.echo-usa.com

Please Print : Por Favor Escriba Con Letra De Molde : En Lettre Carré S.V.P.

Confidential: Information provided will not be shared or sold

Purchaser's Name : Nombre del Comprador : Nom de l'acheteur	
Address : Dirección : Adresse	
City : Ciudad : Ville	State : Estado : Province
Zip Code : Código Postal : Code Postal	
E-Mail Address : Dirección De Correo Electrónico : Courrier Électronique	
Phone Number : Número De Teléfono : Téléphone	Date of Purchase : Fecha de la Compra : Date de l'achat
Where Purchased : Nombre del Almacén donde fue Comprado : Lieu d'achat	
Model Number : Numero del Modelo : No. de modèle	Serial Number : Numero de Serie : No. de série

Primary use of tool: ☐ Professional ☐ Homeowner ☐ Rental Equip.

Uso primario de la herramienta: ☐ Profesional ☐ Dueño de casa ☐ Alquiler

Usage principal : ☐ Professionnel ☐ Résidentiel ☐ Location

Do you wish to receive periodic ECHO product information and special offers by e-mail? ☐ Yes ☐ No

¿Desea usted recibir información periódica y ofertas especiales por correo electrónico sobre el producto ECHO? ☐ Yes ☐ No

Souhaitez-vous recevoir périodiquement de l'information sur les produits ECHO et les offres spéciales par courrier électronique ? ☐ Oui ☐ Non

Did you visit the ECHO website before purchasing your product? ☐ Yes ☐ No

Visité usted la página web ECHO antes de comprar su producto? ☐ Si ☐ No

Avez-vous visité le site d'ECHO avant de procurer votre produit? ☐ Oui ☐ Non

What factor(s) most influenced your purchase?

☐ Performance ☐ Price ☐ Dealer

☐ Reliability ☐ Prior Experience ☐ Quality ☐ Warranty

☐ Friend/Family ☐ Brand ☐ Predict

☐ Funcionamiento ☐ Precio ☐ Distribuidor

☐ Confiabilidad ☐ Experiencia Anterior ☐ Calidad

☐ Amigo/Familia ☐ Marca ☐ Garantía

Quel facteur (facteurs) vous a influencé le plus?

☐ Performance ☐ Prix ☐ Marchand

☐ Fiabilité ☐ Expérience ☐ Qualité

☐ Ami/Famille ☐ Marque ☐ Garantie

Registering your purchase enables us to contact you in the unlikely event of a service update or product recall and verifies your ownership for warranty consideration. We will never sell or misuse your information.

Como el tiempo de servicio o la renovación del producto y verificación de propiedad en caso de robo o pérdida.

L'enregistrement de votre achat nous permettra de vous contacter dans le cas improbable de modifications des instructions d'entretien ou du rappel du produit et vérifier que vous êtes le propriétaire en cas de vol ou de perte.

ECHO INC., 400 Oakwood Rd., Lake Zurich, IL 60047

1.800.432.ECHO WWW.ECHO-USA.COM

X7572270206 02-2012

NOTES



ECHO, INCORPORATED

400 Oakwood Road
Lake Zurich, IL 60047
www.echo-usa.com

S09000001001/S09000999999