



OPERATOR'S MANUAL

ECHO **HEDGE CUTTER/ TRIMMER**

RSAR-2500
RSAR-2501
RSAR-3000
RSAR-202A

CAUTION

Read Rules for safe Operation
and Instructions Carefully



INTRODUCTION

The ECHO hedge cutter/trimmer attachments are designed normally to trim weed and especially as an underwater trimming attachment.

When these attachments used with selected straight-shaft ECHO Trimmer/Brushcutters, allows you to efficiently trim submerged weeds near the edge of pond, lakes, streams and rivers, not to mention weeds on the land.

The unit has double-reciprocating blades for clean, quick trimming.

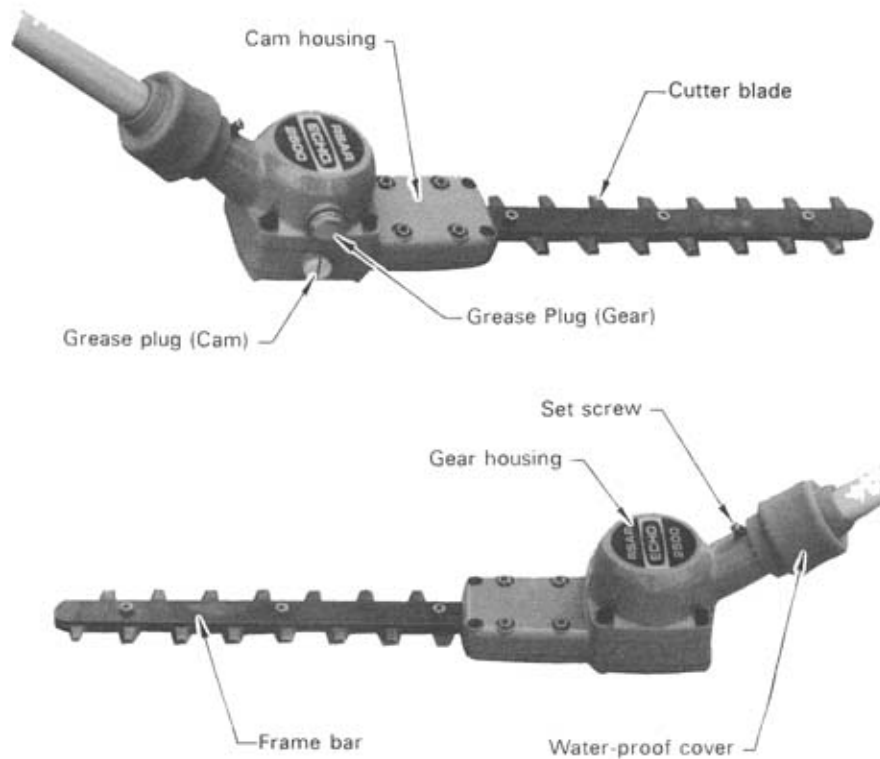
The transfer case is protected by a water-proof cover to ensure trouble free operation.

This manual provides the information necessary for assembly, safe operation and maintenance of your unit.

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NOMENCLATURE



TECHNICAL DATA

Model		RSAR-2500	RSAR-2501	RSAR-3000	RSAR-202A
L × W × H	mm (in.)	506 × 85 × 115 (19.9 × 3.3 × 4.5)			
Weight	kg (lb)	2.2 (4.9)			
Mounting bore	mm (in.)	25 (0.98)		28 (1.10)	
Coupling hole	mm (in.)	Involute splines 7 (0.28)	Square splines 5.4 × 5.4 (0.22 × 0.22)	Involute serrations 8 (0.31)	Square splines 6.5 × 6.5 (0.26 × 0.26)
Blade	Action	Reciprocating type (Double action blade)			
	Length	mm (in.)	275 (10.5)		
	Gear (Reduction ratio)	1 : 3.8			
	* Lubrication	"SHELL" ALVANIA EP-2 or a equivalent grade of grease			

* Gear housing and Cam housing.

INSTALLATION

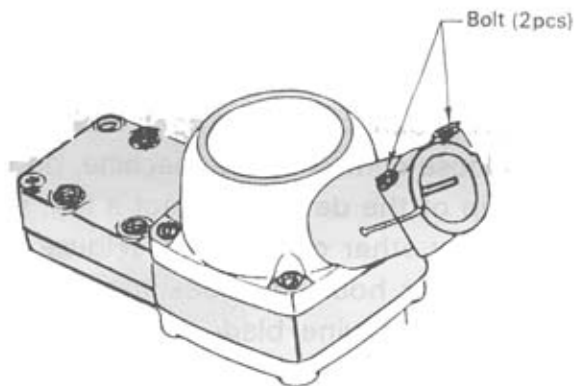
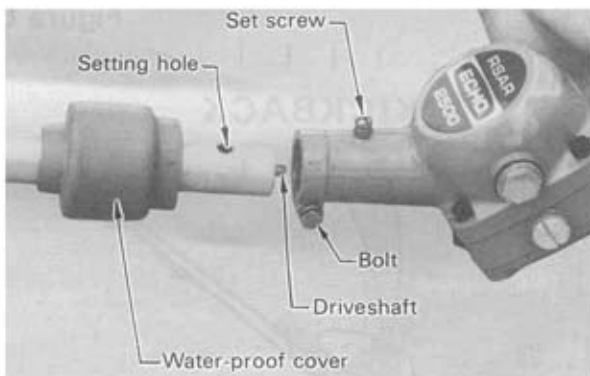
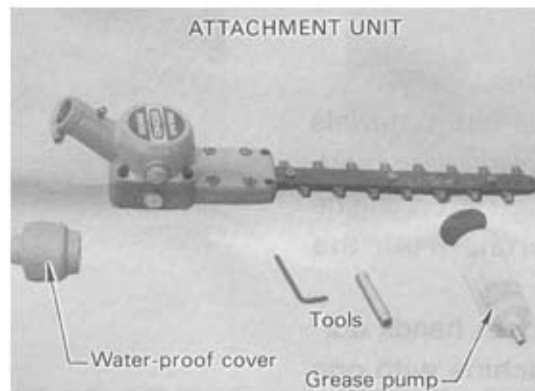
- Loosen both bolts^{*} provided on the connecting part.
Remove setting screw from the device.
- Set the water proof cover to the driveshaft ass'y as shown.
- Connect the device and driveshaft ass'y ensuring that the driveshaft is correctly engaged.
Set the device to the driveshaft ass'y so that hole
- for setting screw on the device fits to hole on the driveshaft ass'y.
- Tighten setting screw and both bolts of the connecting part.
- Cover the connecting part using waterproof cover as shown. (See photo on page 2.)

* (NOTE)

Model RSAR-3000 and RSAR-202A are fixed using both bolts.

Model RSAR-2500 is fixed using one bolt.

Photo shows model RSAR-2500.



Model : RSAR-3000, RSAR-202A
(Connecting part : Bolt, 2pcs)

PRECAUTIONS FOR OPERATION

1. Read carefully and follow precautions described on your grass trimmer/brushcutter Operator's Manual, your local regulations and this manual.
2. Use safety footwear, snug-fitting clothing, protective gloves and eye protection devices.
3. Use this device only with ECHO grass trimmer/brushcutter.
4. Do not allow other persons to be in the work area when operating. Keep bystanders and animals out of the work area.
5. Be careful, the blades should move right after engine starts. Do not let any part of your body coming into contact with the blades when starting engine or operating. It may cause dangerous bodily injury. Keep hands away from blades.
6. Do not attempt to remove cut materials sticking on the device while blades are moving. If such a case should happen, stop engine before removing cut materials from the device.
7. Always hold handle with both hands during operation. Using the machine with one hand may cause you to lose control of the machine resulting in bodily injury.
8. Do not work with the machine above shoulder height (Figure 5).
9. Do not work with the machine near your feet (Figure 6).
10. To avoid dangerous kickback which may lead to lose control of the machine, do not let the tip of the device contact a log, branch, or any other obstruction. (Figure 7)
11. The gear housing is designed for use with ECHO genuine blades. It should not be used for other purpose and with other blades.
12. When two or more operator's are working together, ensure that a safe distance is kept between them.

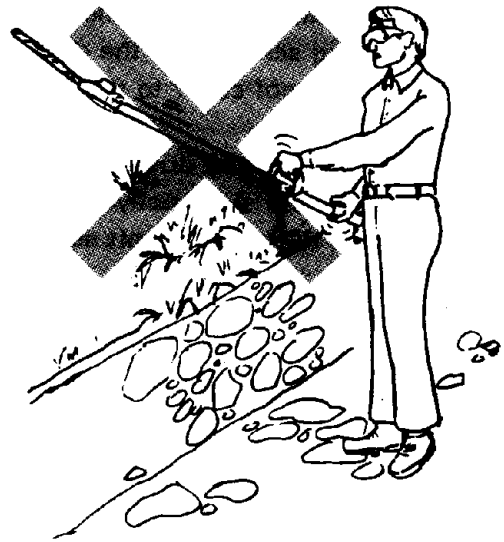


Figure 5



Figure 6

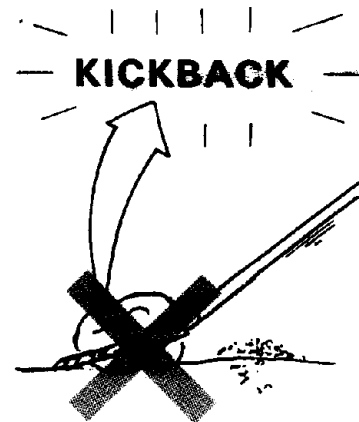


Figure 7

MAINTENANCE AND CARE

— ALWAYS KEEP THE UNIT CLEAN —

LUBRICATION (GEAR HOUSING AND CAM HOUSING)

- As sufficiently lubricated prior to delivery from the factory, lubrication is not required before use. (SUPPLYING LUBRICATION.)

GEAR HOUSING

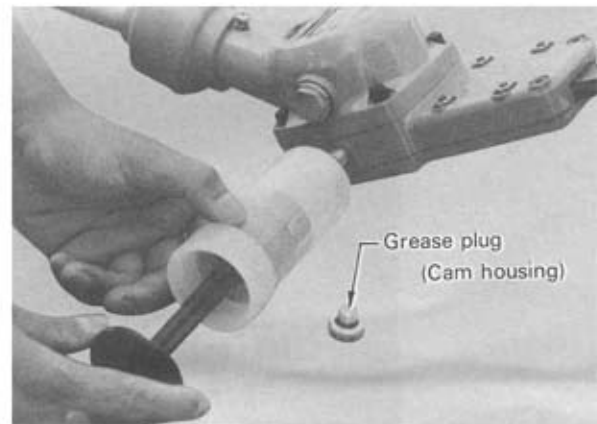
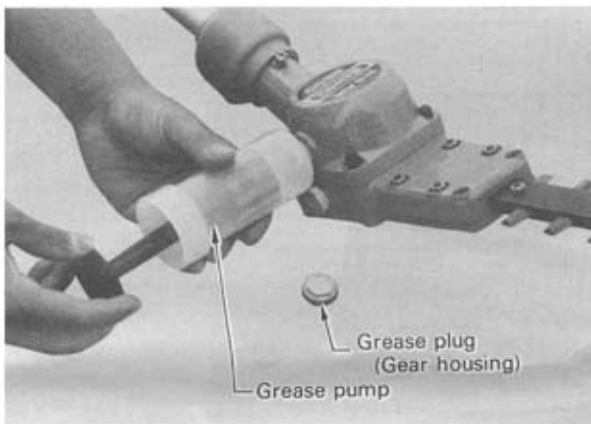
- Apply grease to gear housing every 50 hours of use.
- Remove grease plug of the gear housing and fill with grease approximately 1/3 of the grease pump provided as an accessory.

CAM HOUSING

Apply grease to cam housing every 20 hours of use. Remove grease plug of the cam housing and fill with grease approximately 1/2 of the grease pump.

(NOTE)

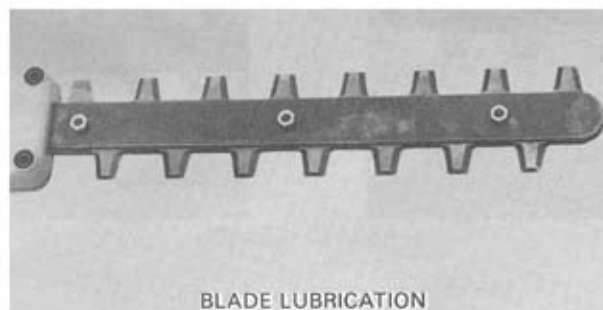
“SHELL” ALVANIA EP-2 or aequivalent grade of grease (Litum based) is recommended for use.



BLADE LUBRICATION

- Small amount of oil should be put into space between frame bar and cutter blades approximately every 4 hours of normal use.
- To obtain trouble free trimming, it is necessary

to remove gum that corrects on the blades. This should be done with a 50—50 mixture of kerosene and machine oil after each use.



REPLACEMENT OF CUTTER BLADES

— ALWAYS USE PROPER TOOLS —

- When edges of the blades has worn or become dull after long time use, replace with the new one as follows.
- Remove cam housing lid.
- Remove nuts and bolts. (Nuts 6pcs and bolts 4pcs)
- Remove nuts and bolts that fixed the cutter blades. (each 3pcs)
- Remove felt, both blades and frame bar.
(To remove blades easily, place the connecting rod (upper) on dead point.)

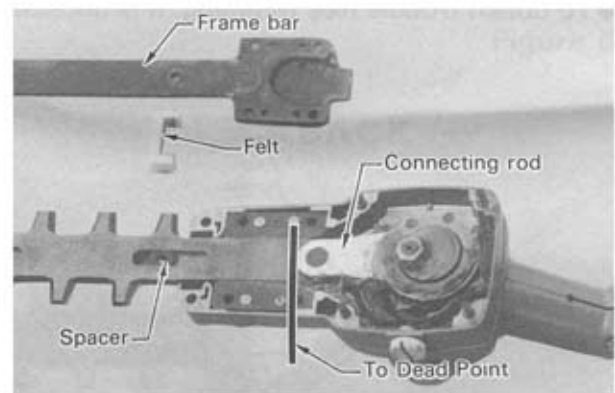
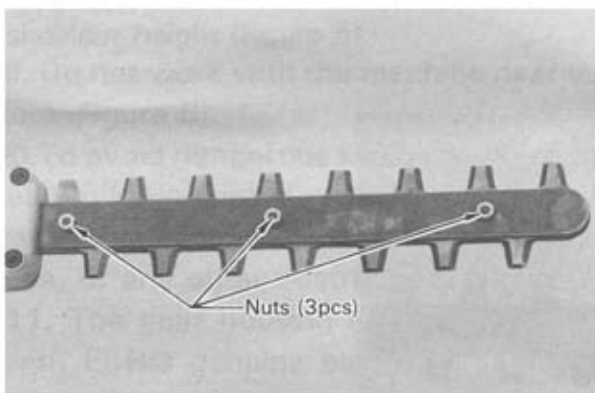
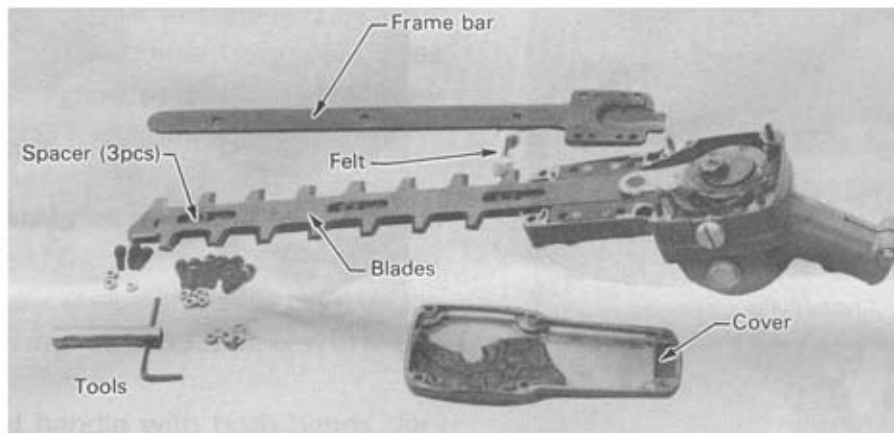
Install removed parts and new cutter blades in reverse order.

(NOTE)

When blades are replaced or any other case that cam housing is removed, check for proper amount of grease.

It is recommended to use a new gasket to insure proper seating of cam housing.

AS FOR LUBRICATION REFER TO PAGE



STORAGE AFTER USE

Inspect and adjust every part of the unit.

- Completely clean every part, and repair, if necessary.
- Apply thin coating of oil to metal parts to prevent rust.
- Remove the device and apply sufficient oil coating and wrap up in plastic film.
- Store in a dry area and out of reach of children.