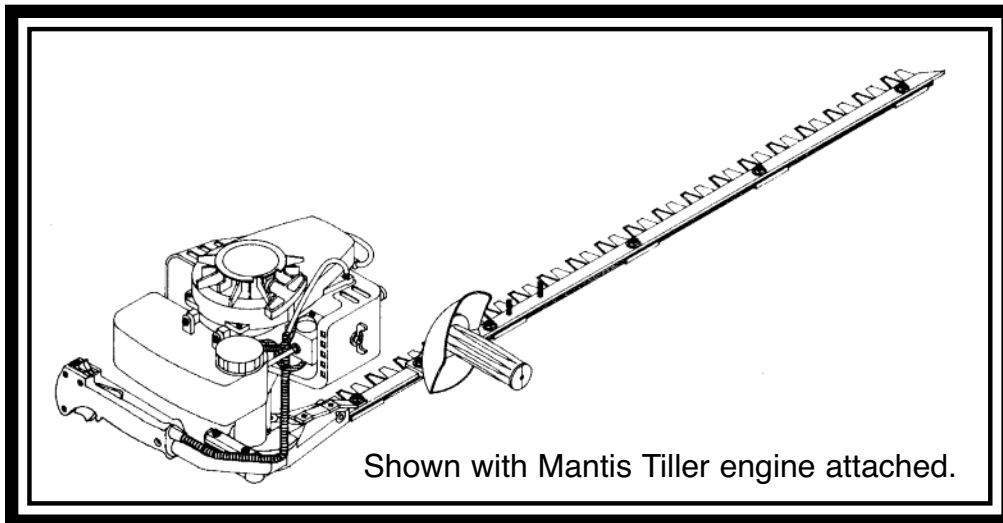




**OWNER'S MANUAL, ASSEMBLY
and SAFETY INSTRUCTIONS**

for Gasoline Hedge Trimmer Attachment



**Single Edge
Gasoline
Hedge Trimmer
Attachment**

AND

**Double Edge
Gasoline
Hedge Trimmer
Attachment**

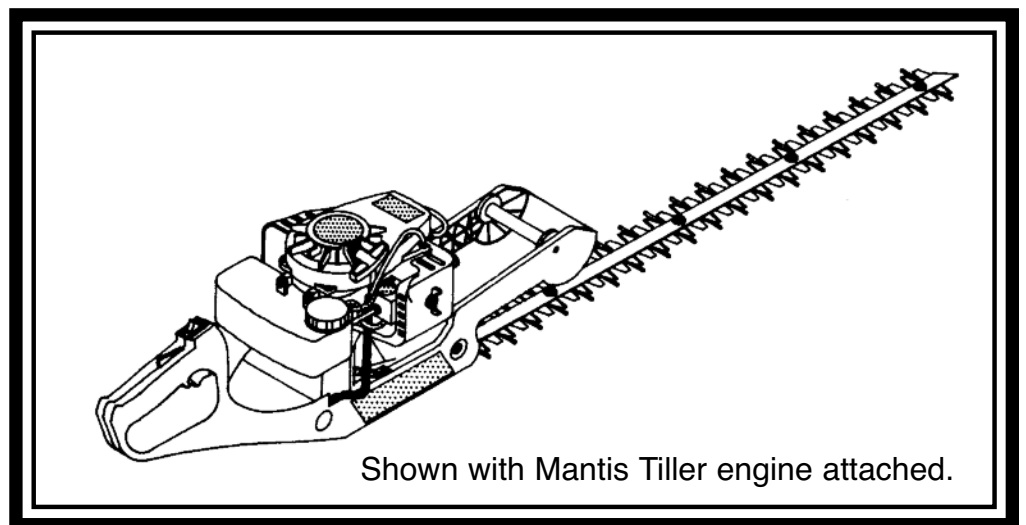


TABLE OF CONTENTS

Page

I. IMPORTANT INFORMATION

- A. Introduction2
- B. Special Safety Information2
- C. Fuel Safety Information.....3

II. SAFETY AND WARNINGS

- A. Safety Decals.....4
- B. Safety Decal Identification.....4
- C. General Safety Rules5
- D. Warnings — Don'ts5
- E. Warnings — Do's6

III. ASSEMBLY INSTRUCTIONS.....7 - 8

IV. OPERATION9

V. TRIMMING10

VI. MAINTENANCE

- A. Lubrication10
- B. Long Term Storage (over 60 days).....11

VII. SERVICE

- A. Trouble Shooting11
- B. Service Maintenance Guide11
- C. Blade Adjustment12

VIII. PARTS EXPLOSIONS12 - 16

SERVICE AND WARRANTY POLICY.....18

I. IMPORTANT INFORMATION

A. INTRODUCTION

On behalf of everyone at **Mantis** we would like to thank you for your purchase of a **Mantis** Gasoline Powered Hedge Trimmer.

This professional trimming machine was designed to the highest standards to ensure you many hours of uninterrupted service.

This manual provides the information necessary for safe and efficient operation and service. For your safety, it is critically important that you read and understand this entire manual before operating your hedge trimmer.

This manual contains different assembly instructions for both the Single Edge Gasoline Hedge Trimmers and the Double Edge Gasoline Hedge Trimmers.

Be sure to follow the proper instructions for your trimmer.

B. SPECIAL SAFETY INFORMATION

▲ WARNING DANGER ▲
ATTENTION: THIS SYMBOL POINTS OUT OUR IMPORTANT SAFETY INSTRUCTIONS.

WHEN YOU SEE THIS SYMBOL, ▲ HEED IT'S WARNING! STAY ALERT!!

▲ WARNING DANGER ▲
TO REDUCE THE POTENTIAL FOR ACCIDENTS, COMPLY WITH THE SAFETY INSTRUCTIONS IN THIS MANUAL. FAILURE TO COMPLY MAY RESULT IN SERIOUS PERSONAL INJURY AND OR EQUIPMENT AND PROPERTY DAMAGE.

C. Fuel Safety Information

! WARNING DANGER !
HANDLE FUEL WITH CARE, IT IS HIGHLY FLAMMABLE. FUELING A HOT ENGINE OR NEAR AN IGNITION SOURCE CAN CAUSE A FIRE AND RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE.

Don't fuel, refuel or check fuel while smoking or near an open flame or other ignition source. Stop engine and be sure it is cool before refueling.

Don't leave the engine running while the trimmer is unattended. Stop engine before putting the trimmer down or while transporting from one place to another.

Don't start, run or refuel this trimmer indoors, or in an improperly ventilated area as poisonous carbon monoxide and other gasses are emitted.

Don't run engine when electrical system causes spark outside the cylinder. During periodical checks of the spark plug, keep plug a safe distance from cylinder to avoid burning of evaporated fuel from cylinder.

Don't check for spark with spark plug or plug wire removed and grounded. Use an approved tester. Sparks can ignite fumes.

Don't crank engine with spark plug removed. If the engine is flooded, open the choke (push choke knob in) and pull recoil until engine starts. Follow instructions in Tiller manual.

Don't run engine when the odor of gasoline is present, or other explosive conditions exist.

Don't operate the unit if gasoline is spilled. Clean up spill completely before starting engine.

Don't operate the unit if there is an accumulation of debris around the muffler, and cooling fins.

Don't touch hot mufflers, cylinders or cooling fins as contact may cause serious burns.

Don't refuel indoors or in an improperly ventilated area.

Always pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent arm or hand injury.

Always operate engine with spark arrestor installed and operating properly. The use of spark arrestor mufflers is required by law in the state of California (Section 4442 of the California Public Resources Code), as well as in other states or municipalities. Federal laws apply on federal lands.

Always handle fuel with care; it is highly flammable. Never add fuel to a machine with a running or hot engine. Do not inhale fuel fumes as they are toxic.

Always know how to stop machine quickly in an emergency.

! Warning: !

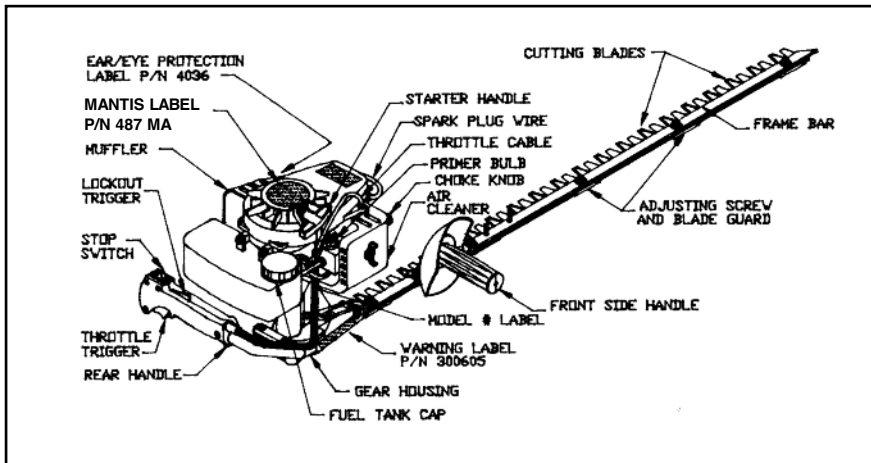
The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

II. SAFETY AND WARNINGS

! WARNING DANGER !
IF TRIMMER IS USED IMPROPERLY OR SAFETY PRECAUTIONS ARE NOT FOLLOWED, THE USER RISKS SERIOUS INJURY TO THEMSELVES AND OTHERS. READ AND UNDERSTAND THE FOLLOWING BEFORE ATTEMPTING TO OPERATE THIS HEDGE TRIMMER.

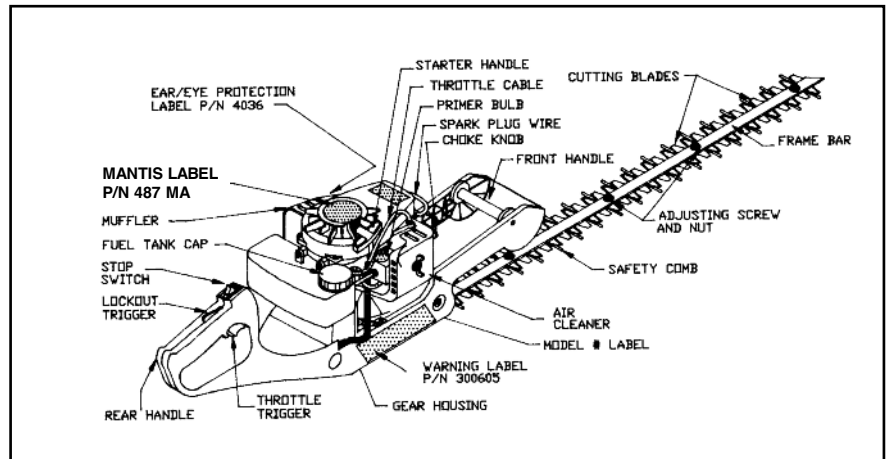
A. SAFETY DECALS

An important part of the safety system incorporated in this trimmer are the warning and informational decals found on various parts of the trimmer. These decals must be replaced in time due to abrasion, etc. It is your responsibility to replace the decals when they become hard to read. The part numbers for ordering decals are in Section B, Safety Decal Identification (shown at bottom of this page). The location of these decals is illustrated below.





Single Edge Gasoline Hedge Trimmers

Double Edge Gasoline Hedge Trimmers



B. SAFETY DECAL IDENTIFICATION

 WARNING 	P/N 300605
<ul style="list-style-type: none"> ■ READ AND UNDERSTAND OPERATOR'S MANUAL BEFORE USING! KEEP IN A SAFE PLACE! ■ KEEP BOTH HANDS ON HANDLES AND AWAY FROM BLADES! ■ KEEP A SURE FOOTING AND NEVER OVERREACH! WHEN REACHING HIGH, STAND ONLY ON A STABLE SUPPORT, AND NEVER ON THE TOP OF A LADDER! ■ BLADES COAST AFTER THROTTLE TRIGGER IS RELEASED OR ENGINE IS SWITCHED OFF! ■ NEVER OPERATE WITHOUT GUARDS, HANDLES, AND SAFETY DEVICES IN PLACE! 	

P/N 300605
Warning Label




P/N 4036
Ear and Eye Protection
(Located on your engine.)



Important Note: If Safety Decals are not found on your engine, they must be replaced. Call our Customer Service department for information at 215-355-9700.

C. GENERAL SAFETY RULES

1. Read and understand the owner's manual. Pay particular attention to all sections regarding safety.
2. Always keep a firm grip on both handles while the blades are moving and/or the engine is running. The right hand grasps the front handle on double edge hedge trimmers or the side handle on the single edge hedge trimmers. The left hand grasps the rear handle.
BE AWARE!! The blades coast after throttle trigger is released or engine is switched off. Make sure blades have come to a complete stop and the engine is off before releasing a handle.
3. Keep area clear of children, pets, and bystanders.
4. THIS MACHINE CAN CAUSE SERIOUS INJURIES. Read instructions carefully for the correct handling, preparation, maintenance, starting and stopping of the machine. Be familiar with all controls and the proper use of the machine. Pay particular attention to all sections regarding safety.
5. Maintain a firm footing and good balance, do not overreach while trimming. Before you start to trim, check the work area for obstacles that might cause you to lose footing, balance, or control of the machine. While operating the machine, always be sure of a safe and secure operating position especially when using steps or a ladder.
6. Blades coast after throttle trigger is released or engine is switched off.
7. Stop engine before checking, maintenance or working on the machine.
8. Never operate without guards, handles and safety devices in place.
9. Never attempt to use an incomplete machine or one fitted with an unauthorized modification.
10. To reduce fire hazard, keep engine and silencer free of debris, leaves, or excessive lubricant.
11. Know how to stop this machine in an emergency.

 **WARNING DANGER** 
IF TRIMMER IS USED IMPROPERLY OR SAFETY PRECAUTIONS ARE NOT FOLLOWED, THE USERS RISK SERIOUS INJURY TO THEMSELVES AND OTHERS.

READ AND UNDERSTAND THE FOLLOWING BEFORE ATTEMPTING TO OPERATE THIS HEDGE TRIMMER.

 **WARNING DANGER** 
THE BLADES COAST AFTER THROTTLE TRIGGER IS RELEASED OR ENGINE IS SWITCHED OFF. MAKE SURE BLADES HAVE COME TO A COMPLETE STOP AND ENGINE IS OFF BEFORE RELEASING A HANDLE

D. WARNINGS — DON'TS

- Don't** use trimmer with one hand; keep both hands on handles with fingers and thumbs encircling the handles, while blades are moving and engine is running.
- Don't** overreach or stand on unstable support. Do not stand on the top of a ladder while trimming. Use proper equipment for reaching higher heights. Keep a good footing at all times.
- Don't** ever grasp cutting blades for any reason.
- Don't** attempt to clear cut material while blades are moving, and the engine is running. Never try to remove jammed material before switching the engine off and making sure the blades have stopped completely.
- Don't** override safety features.
- Don't** allow children or incapable people to operate this trimmer.
- Don't** operate this hedge trimmer while under the influence of alcohol or drugs.
- Don't** attempt to repair this hedge trimmer. Have repairs made by a qualified dealer or repairman. See that only original **Mantis** parts are used.
- Don't** operate the machine with a damaged or excessively worn cutting device.

▲ E. WARNINGS — Do's

Always read and follow all instructions.

Always stay alert. Watch what you are doing and use common sense. Do not operate unit when fatigued.

Always dress properly. Do not wear loose clothing or jewelry, they might get caught in moving parts. Use sturdy proper fitting, non-slip gloves. Gloves reduce the transmission of vibration to your hands. Prolonged exposure to vibration can cause numbness and other ailments. Wear non-skid footwear to ensure secure and proper footing.

Always wear ear and eye protection. Eye protection must meet ANSI Z 87.1. To avoid hearing damage we recommend hearing protection be worn whenever using the equipment.

Always keep both hands on both handles when trimmer is running. Severe injuries can result if you try to use the hedge trimmer with only one hand or with an insecure grip.

Always keep children, pets, and incapable persons away.

Always use trimmer properly. Cut only types

and size of growth described in the Trimming section of this manual. Overloading or abusing your hedge trimmer can cause premature failure and can result in injury. Use common sense.

Always keep a safe distance between two or more operators when working together simultaneously.

Always inspect your unit before each use and ensure that all handles, guards, safety devices and fasteners are secure, operating, and in place.

Always maintain and examine your trimmer with care. Follow maintenance instructions given in manual.

Always store trimmer in a sheltered area (a dry place) not accessible to children. The hedge trimmer as well as fuel should not be stored in a house.

Always be aware of power lines.

Always stop the engine before adjusting the working position of the cutting device.

Always make sure that the cutting blades are in the correct working position that you want before starting the engine.

Important: Always follow the Engine and Fuel Warnings found in your Tiller Manual.

If you don't have your Tiller Manual, call our Customer Service Department at 1-800-366-6268 to purchase a replacement or visit www.mantis.com to download a copy.

III. ASSEMBLY INSTRUCTIONS

⚠ WARNING DANGER ⚠
 BLADES ARE EXTREMELY SHARP. TO AVOID INJURY WHEN UNPACKING AND ASSEMBLING THE HEDGE TRIMMER, DO NOT GRASP THE BLADES.

A. DOUBLE EDGE GASOLINE HEDGE TRIMMERS (CAT # 2224DAHM)

NO HEDGE TRIMMER ATTACHMENT ASSEMBLY IS NEEDED.

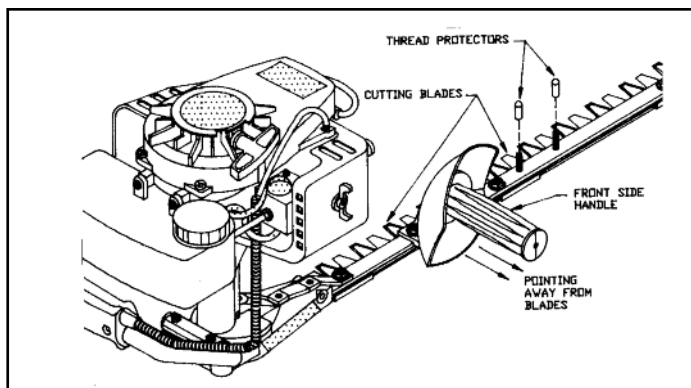
To attach your engine, see sections B 3, 4, 5, 6, 7, 8.

B. SINGLE EDGE GASOLINE HEDGE TRIMMERS (CAT # 2230SAM)

1. Remove the cutter bar assembly, throttle assembly with side handle, and hardware bag from their boxes.

The hardware bag consists of the following items:

P/N	Description	Qty
972	1/4-20 Lock Nut	2
300102	Handle Support Channel	2
300113	Spacer Tube	2
300111	Shock Absorber	4
300112	Support Plate	1
300505	1/4-20 x 2 1/2 Bolt	2
3036-B	1/4-28 Flange Locknut	2



2. Place the front side handle over the two 1/4-28 studs protruding from the frame bar in front of the gear housing. The handle grip **must** be pointing away from the cutting blades as illustrated below. On Model 2230SAH use the set of studs which places

the handle in the most comfortable position for you. Place the thread protectors over the set of studs that you choose not to use at this time to protect the threads. Secure the handle in place using two 1/4-28 flange locking nuts provided. The nuts should be tightened enough to keep the handle from moving but not so tight as to crush the plastic.

⚠ WARNING DANGER ⚠
 IMPROPER ASSEMBLY OF THIS TRIMMER CAN RESULT IN SERIOUS INJURY.

 MAKE SURE TO FOLLOW ALL INSTRUCTIONS CAREFULLY.

 IF YOU HAVE ANY QUESTIONS CALL 1-800-366-6268 AND ASK FOR SERVICE OR FOR THE NAME OF YOUR LOCAL MANTIS DEALER.

3. To remove the engine from your Mantis tiller you will need to identify which throttle cable connection you have. There are two different styles.

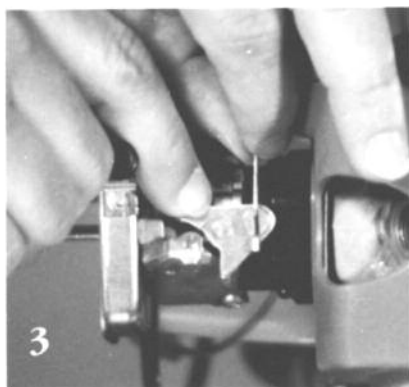
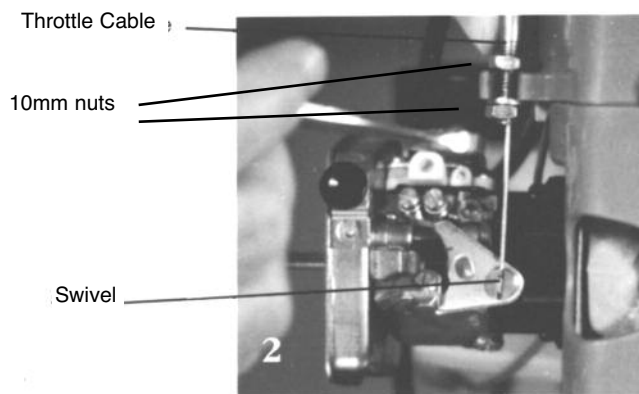


To remove the engine if your tiller has the connection shown in picture 1, (SV4 Engine models only). First remove the air cleaner cover and air filter.

If your tiller has an engine that looks like in picture 2, just follow the written instructions.



Detach the throttle cable at the carburetor by loosening the two 10mm nuts on the threaded end



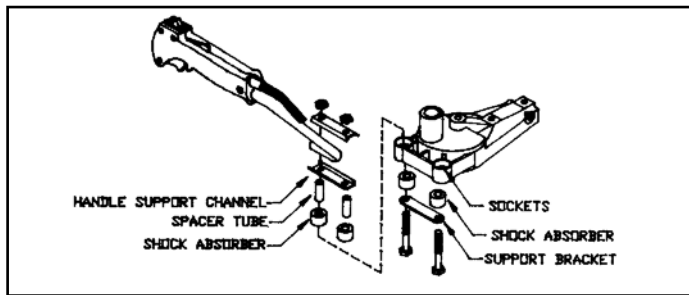
Slide the cable out and down to unhook it from the swivel. Separate the ground wire at the wire connection, which is approximately 3" from the engine.

Loosen the screw at the very bottom of the engine, just above where the handles are attached to the tiller. Then just lift the engine up.

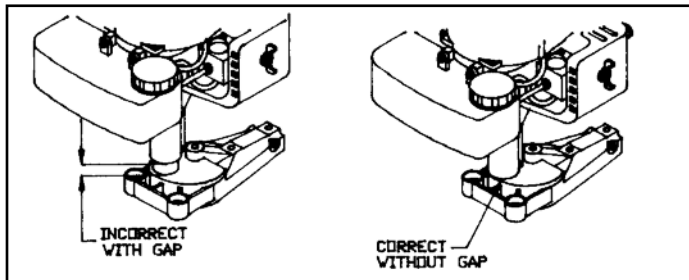
ATTACHING THE ENGINE TO EITHER THE SINGLE EDGE OR DOUBLE EDGE TRIMMER ATTACHMENT

4. First, fasten the black ground wire from the handle assembly to the ground screw. Use the screw that is located on the bottom of the engine, closest and to the right of the fuel tank. This ground wire has an eyelet connection. Therefore, when you want to remove the engine from the trimmer, just separate the wire connection. It is not necessary to unscrew the ground screw. See illustration.

5. Install the engine to the hedge trimmer by first aligning the hex drive on the trimmer gear housing with the hex socket in the



engine. Slide the engine over the 1" diameter stem containing the hex drive on the gear housing until it is seated all the way down on the gear housing (see illustration below).



6. Press shock absorbers into sockets on the gear housing followed by the spacer tubes. Secure handle and tubing support channels with the 1/4-20 hex bolts and locking nuts supplied. (See illustration at the top right)

7. Plug the red wire from the engine into the switch wire (rectangular flat connector) from the handle assembly.

8. Feed the throttle cable up between the fuel tank and the carburetor. Locate the metal "button" on the triangle. This is the swivel. The large end of the throttle cable must be inside the slot in this swivel. (See Picture 3.) Separate the two nuts and washers and slide them onto the engine. (See Picture 2.) Adjust the nuts so the triangle touches the carburetor case when you squeeze the trigger and hits the idle screw when the trigger is released. (Picture 2.) Tighten the two nuts until they are snug using a 10mm or an adjustable wrench. Throttle movement should be smooth and unobstructed. Align the engine and tighten the mounting screw. Reinstall the filter and filter cover.

IV OPERATION

⚠ WARNING DANGER ⚠
THE OPERATOR OF THIS HEDGE TRIMMER IS RESPONSIBLE FOR ACCIDENTS OR HAZARDS OCCURRING TO HIMSELF, OTHER PEOPLE OR THEIR PROPERTY.

CHECK YOUR TILLER MANUAL
FOR PROPER OPERATING INSTRUCTIONS FOR THE ENGINE

STARTING THE ENGINE WITH THE TRIMMER

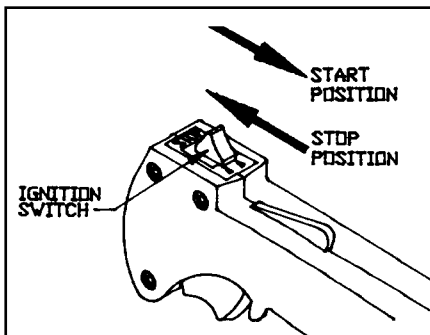
ATTACHMENT

1. Place the hedge trimmer flat on the ground, or other stable surface.
2. Slide the ignition switch to the START position.
3. Proceed with engine starting instructions found in your Tiller Manual.

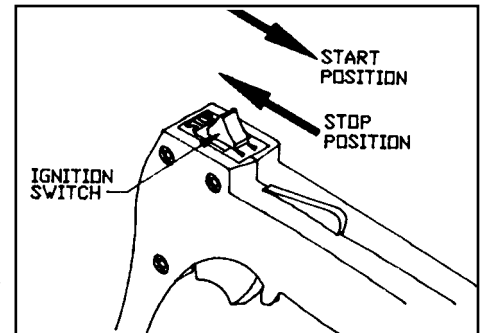
STOPPING THE ENGINE WITH THE TRIMMER

ATTACHMENT

1. Release the throttle trigger and allow engine to idle.
2. Slide ignition switch to the STOP position.
3. Make sure blades have come to a complete stop before releasing either handle.



Single edge hedge trimmer attachments



Double edge hedge trimmer attachments

⚠ WARNING DANGER ⚠
AVOID ACCIDENTAL BLADE ENGAGEMENT.

DO NOT SQUEEZE THE THROTTLE TRIGGER WHEN STARTING.

MAINTAIN PROPER IDLE SPEED ADJUSTMENT (2200-2300 RPM)

⚠ WARNING DANGER ⚠
IF ENGINE DOES NOT STOP WHEN SWITCH IS PUT IN THE STOP POSITION, RELEASE THE THROTTLE TRIGGER, ALLOW ENGINE TO IDLE.

PUT THE TRIMMER DOWN, AND PULL THE CHOKE BUTTON OUT TO COLD START (CLOSED) POSITION.

CHECK AND REPLACE IGNITION SWITCH BEFORE STARTING ENGINE AGAIN.

V. TRIMMING

⚠ WARNING DANGER ⚠
BLADES COAST AFTER RELEASING THROTTLE OR STOPPING ENGINE.

KEEP A FIRM GRIP WITH BOTH HANDS ON BOTH HANDLES WHILE BLADES ARE MOVING AND/OR ENGINE IS RUNNING.

DO NOT STAND ON THE TOP OF A LADDER WHILE TRIMMING.

MAKE SURE YOUR LADDER OR OTHER SUPPORT IS STABLE AND ON FIRM GROUND.

**KEEP A SURE FOOTING.
DO NOT OVERREACH.**

IF YOUR TRIMMER BECOMES JAMMED RELEASE THROTTLE AND STOP ENGINE. MAKE SURE BLADES HAVE STOPPED COMPLETELY. REMOVE THE SPARK PLUG CAP FROM THE SPARK PLUG, THEN REMOVE THE OBSTRUCTION.

1. **WARNING!** Read and follow all safety instructions in the manual before attempting to use this trimmer.

2. Only after you are familiar with your hedge trimmer and all of its controls and the functions should you start the engine.

3. Once the engine is started grasp the handles securely, the left hand should grasp the rear handle. The right hand should grasp the front (on the double edge hedge trimmer) or side (on the single edge hedge trimmer) handle.

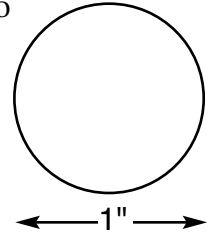
4. Squeeze the throttle to accelerate the engine and engage the blades.

5. Tilt the trimmer so the cutting teeth are angled slightly toward the hedge or shrub and

proceed to cut. Use overlapping sweeping motions away from your body to achieve a safe and even cut.

6. These units are designed to cut any type of hedge or shrub; however,

THICKNESS OF CUT SHOULD NOT EXCEED 1 INCH IN DIAMETER.



Misuse of this Hedge Trimmer will void the warranty.

ie: Cutting hedges or shrubs over 1" in diameter or foreign objects such as wires, rocks, or fences. Before trimming, check work area for foreign objects such as wires, cords, glass, fences, or rocks. Be sure to remove any foreign object from work area. Failure to properly maintain this hedge trimmer will void the warranty.

VI. MAINTENANCE

A. LUBRICATION

1. A few drops of a light #10 oil should be placed on the back edge of each blade guard, or protective comb, at each adjusting screw approximately after every 4 hours of normal operation.

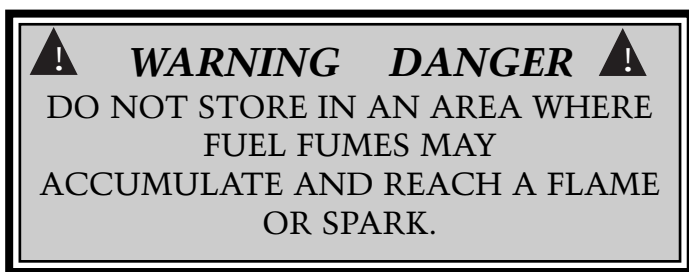
2. To obtain trouble free trimming, it is necessary to keep the blades lubricated and clean. The gum that collects and builds up on the blades can be removed with a 50-50 mixture of kerosene and #10 oil. As petroleum products can shorten the life of some plastics it is necessary to remove excess oil-kerosene mixture from the plastic parts.

3. When blades are replaced, or any other time that the bottom cover plate is removed, the grease level should be checked for proper amount (approximately 3/4 full in the area of the gears) and a new gasket should be used to insure proper seating of the cover plate. Use only Lubrico M3-3K-9K grease in the gear housing.

FOR ENGINE MAINTENANCE, SEE YOUR MANTIS TILLER MANUAL. IF YOU DON'T HAVE YOUR TILLER MANUAL, CALL OUR CUSTOMER SERVICE DEPARTMENT AT 800-366-6268 TO PURCHASE A REPLACEMENT. OR VISIT WWW.MANTIS.COM TO DOWNLOAD A COPY OF THIS MANUAL

B. LONG TERM STORAGE (OVER 60 DAYS)

1. Store your trimmer in a dry and dust free space, out of the reach of children.



2. Place the ignition switch in the stop position.

3. Clean the engine and blades thoroughly and

coat the blades with oil to prevent rust.

4. Perform all required maintenance and service found in this manual.

5. Drain the fuel tank and pull the starter rope several times to remove the fuel from the carburetor.

6. Remove the spark plug and pour 1/4 oz. of fresh, clean, two-stroke engine oil into the cylinder via the spark plug hole. Cover the hole with a rag and pull the starter rope 2-3 times.

7. While looking through the spark plug hole pull the starter rope until the piston reaches the top of it's stroke and stop.

8. Install the spark plug, but leave the ignition cable disconnected.

VII. SERVICE

A. TROUBLE SHOOTING

Problem	Cause	Remedy
1. Blades don't cut cleanly.	Blades are dull or not adjusted properly.	Have blades sharpened and adjusted.
2. Blades don't move when throttle is squeezed.	Engine is not seated properly on the gear housing. Blades are adjusted too tightly.	Re-install engine following the assembly instructions. Re-adjust blades following service instructions.

See your Tiller Manual for Engine Trouble Shooting

B. SERVICE MAINTENANCE GUIDE

Area	Maintenance	Frequency
Gear Housing	Check Grease	Monthly
Blades	Inspect / Clean / Lubricate	After Use
Fasteners	Inspect / Tighten / Replace	Before Use
Labels	Inspect / Replace	Before Use
Handles	Inspect / Replace	Before Use
Guards / Safety Devices	Inspect / Replace	Before Use

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

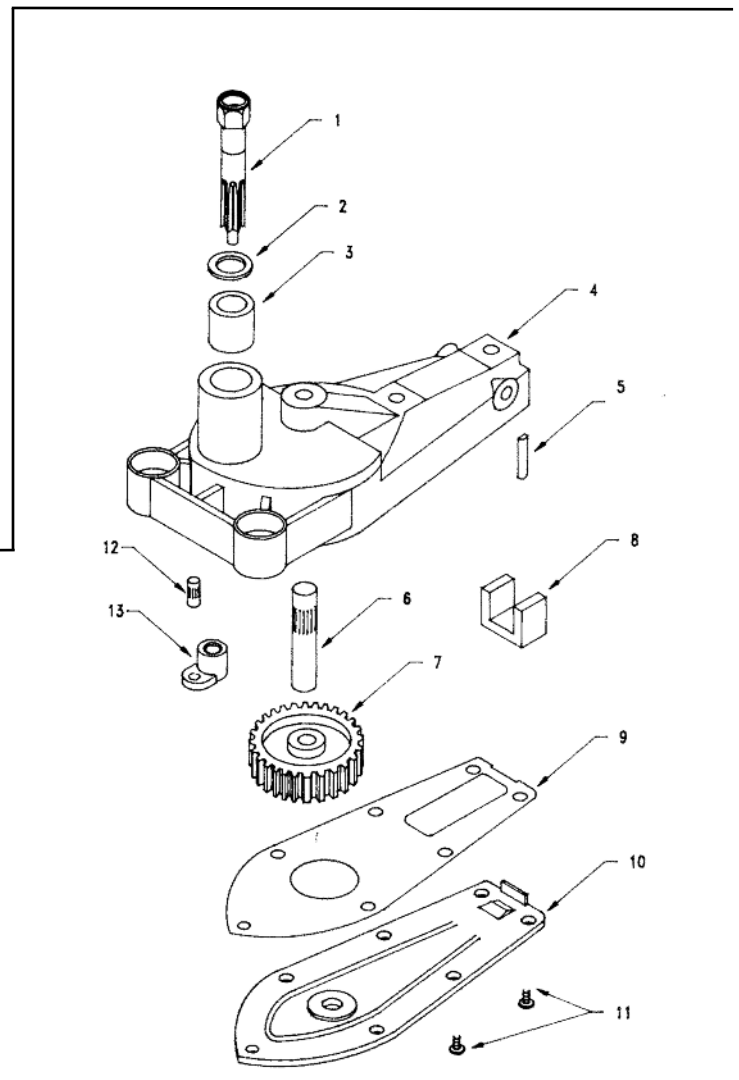
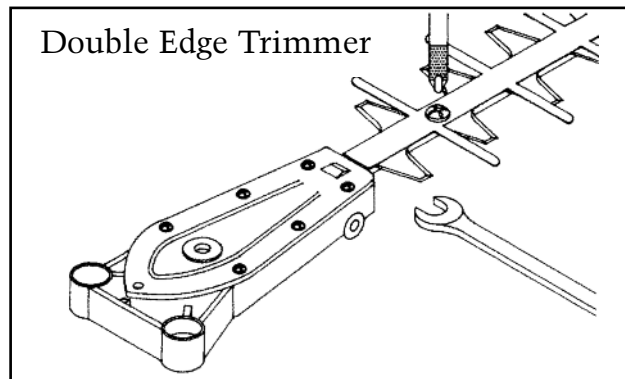
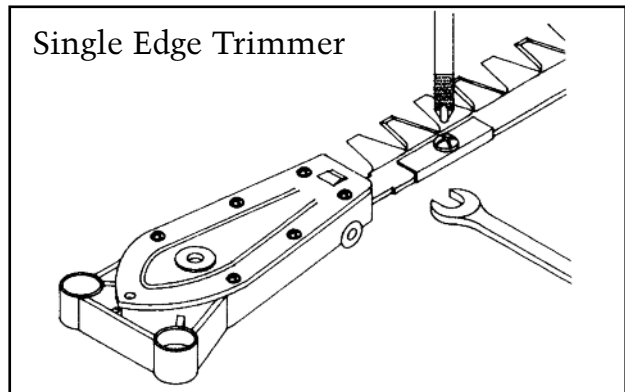
C. BLADE ADJUSTMENT

⚠ WARNING DANGER ⚠
 SWITCH OFF THE ENGINE BEFORE
 LUBRICATING OR ADJUSTING THE
 BLADES

The care and adjustment of the blades is most important to the efficient operation of the trimmer and especially to the long life of the engine.

1. Place the trimmer in vise clamping on the frame bar. **Be careful! Blades are sharp!**
2. Using a 7/16" wrench, loosen all blade locknuts and unscrew the large head screws by two turns.
3. Starting with the screw nearest the gear housing, tighten the screw until the blade guard of the Single Edge trimmer or the protective comb of the Double Edge trimmer can just be moved with finger pressure and a .0015" (1 1/2 thou.) feeler blade just slips under the blade guard or comb. Tighten the locknuts while holding the screw stationary in its correctly adjusted position.
4. Repeat Step 3 on the screws in turn until all are correctly adjusted.

NOTE: CORRECT BLADE ADJUSTMENT CAN ONLY BE ACHIEVED ON CLEAN, OILED BLADES.

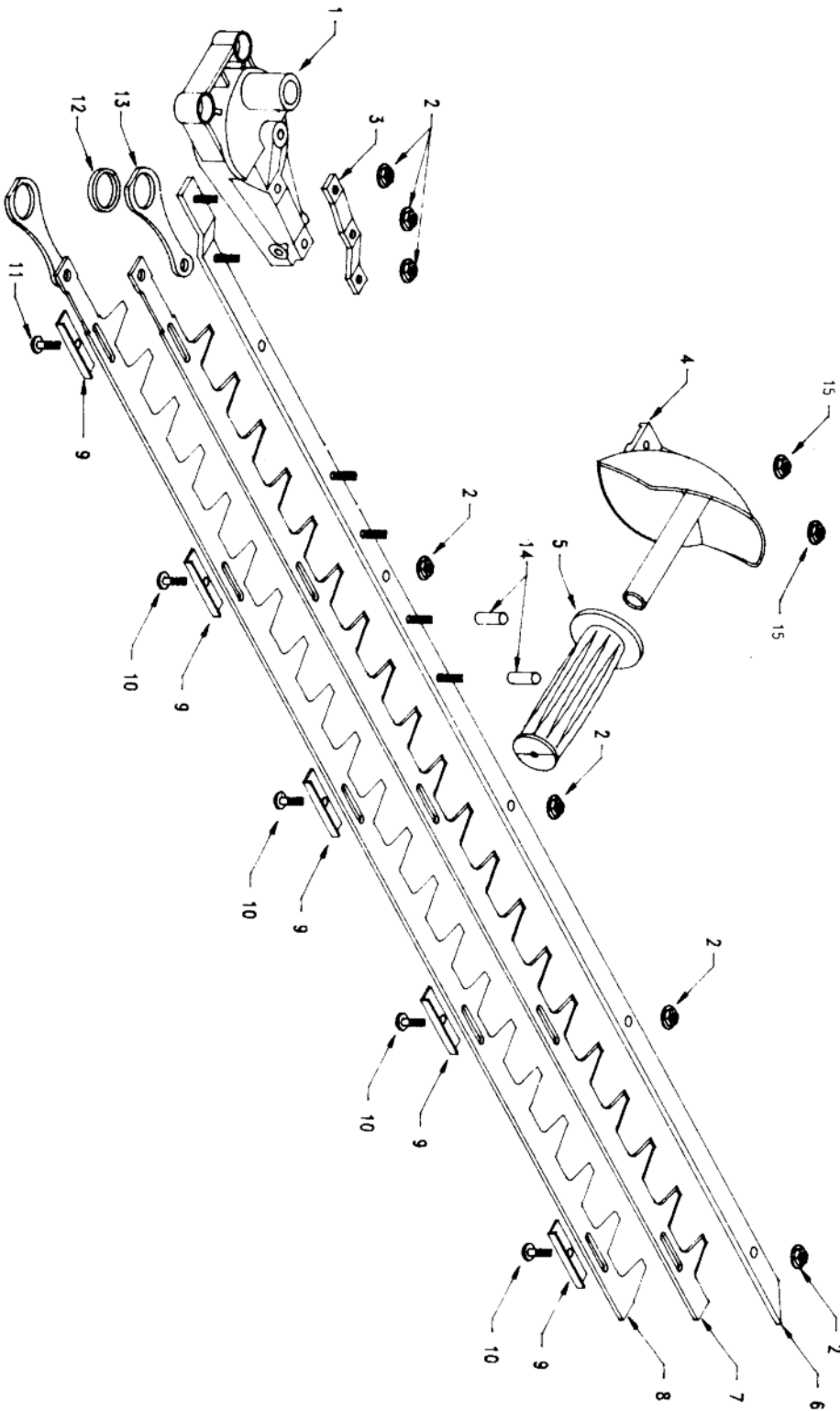


VIII. PARTS EXPLOSIONS GEAR HOUSING ASSEMBLY

Key No.	Part No.	Description	Qty.
1	371	Pinion	1
2	375	Washer	1
3	374	Upper Bushing	1
4	300000	Gear Hsg Assem. (inc. Key No. 3, 6, 12)	1
5	D16-56F	Wear Plate	1
6	16-61	Eccentric Shaft	1
7	372	Eccentric Gear	1
8	314	Felt	1
9	319	Gasket	1
10	316	Cover Plate	1
11	16-81	6-32 x 5/16 Screw Pack	1
12	16-80	Cover Plate Pin	1
13	373	Lower Bushing	1

Key No.	Part No.	Description	Qty.
1	300000	Gear Housing Assembly	1
2	16-54B	1/4-28 Whiz Flange Locknut	7
3	300300	Frame Bar Brace	1
4	300200	Side Handle	1
5	300201	Grip	1
6	300310	30" Frame Bar	1
7	30-2	30" Inside Blade	1

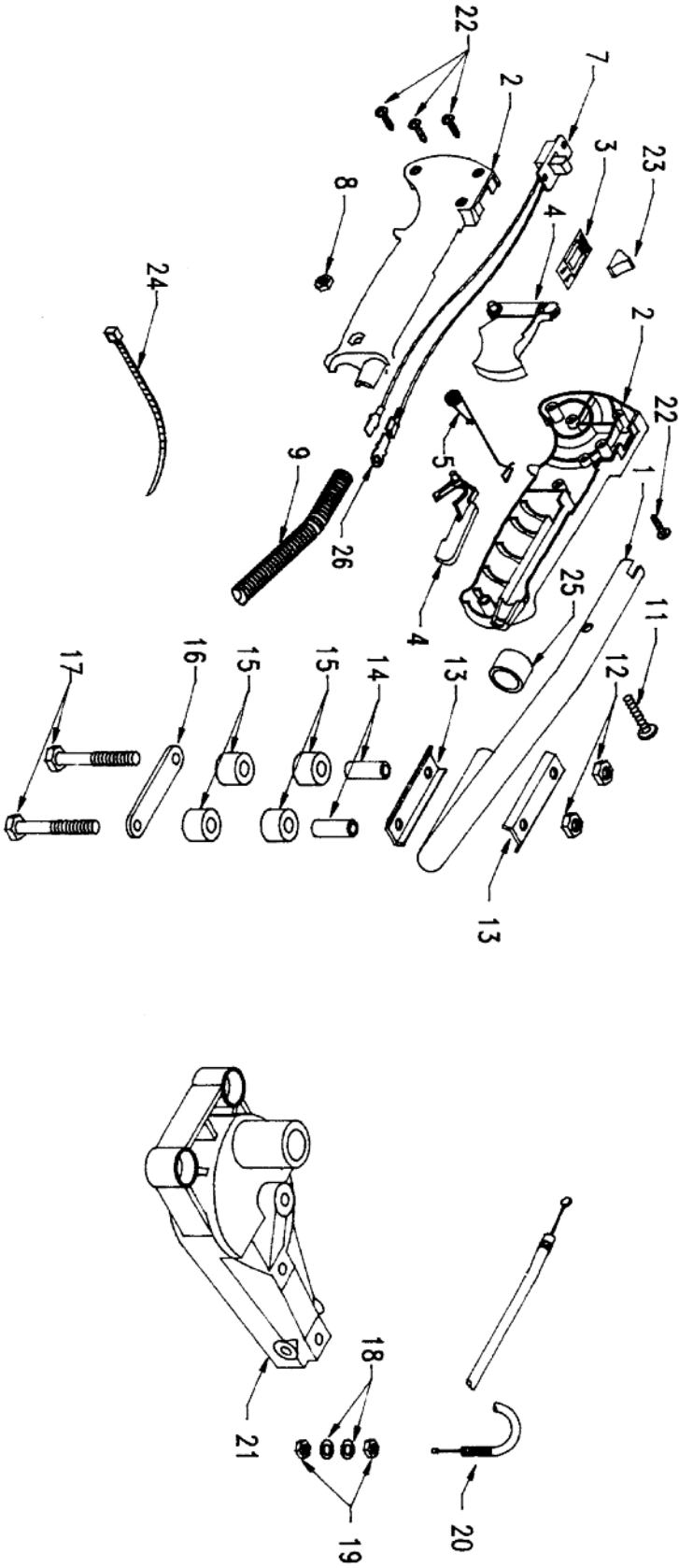
Key No.	Part No.	Description	Qty.
8	30-1	30" Outside Blade	1
9	16-93	Blade Guard	5
10	16-54A	Large Head Phillips Screw	4
11	300504	Large Head Screw 1/4-28 x 7/8	1
12	16-65	Connecting Rod Spacer	1
13	16-64	Connecting Rod	1
14	300316	Thread Protector	2
15	3036-B	1/4-28 Flange Locknut	2



CUTTING BAR AND SIDE HANDLE ASSEMBLY
Single Edge Trimmers

Key No.	Part No.	Description	Qty.
1	300101	Handle	1
2	300103	Grip (Set)	1
3	300117	Switch Plate	1
4	300122	Trigger Set	1
5	300108	Trigger \ Lockout Springs	1
6	-----	-----	-
7	300120	Switch/With Leads	1
8	973	10-32 Lock Nut	1
9	300116	Conduit	1
11	300503	10-32 x 1 1/4" Machine Screw	1
12	972	1/4-20 Lock Nut	2
13	300102	Handle Support Channel	2

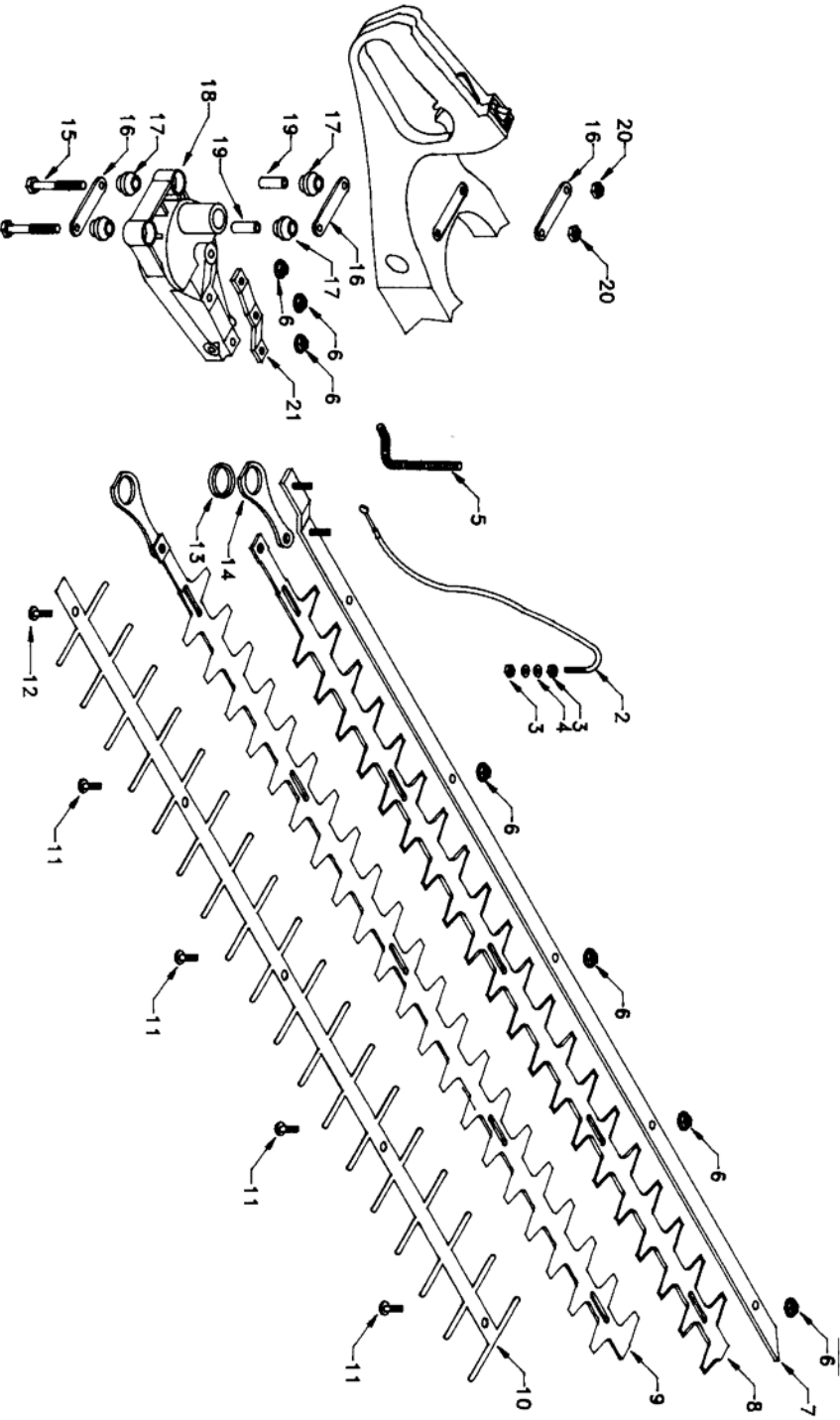
Key No.	Part No.	Description	Qty.
14	300113	Spacer	2
15	300111	Shock Absorber	4
16	300112	Support Plate	1
17	300505	1/4-20 x 2 1/2" Bolt	2
18	300502	6MM Star Lock Washer	2
19	300500	6MM Nut	2
20	300115	Throttle Cable	1
21	300000	Gear Housing Assembly	1
22	300511	7/8" Phillips Pan Head Screw	4
23	300109	Switch Cap	1
24	300118	Cable Tie	1
25	376-1	Handle End Cap	1
26	300121	Eyellet Spade Terminal	1



REAR HANDLE ASSEMBLY
Single Edge Trimmers

Key No.	Part No.	Description	Qty.
2	300115	Throttle Cable	1
3	300500	6MM Nut	2
4	300502	6MM External Star Lockwasher	2
5	300119	Conduit	1
6	16-54B	1/4 - 28 Whiz Flange Locknut	7
7	300308	24" D.E. Frame Bar w/Studs (for model 2224DAH)	1
7	300312	30" D.E. Frame Bar w/Studs	1
8	24-2D	24" D.E. Inside Blade	1
8	30-2D	30" D.E. Inside Blade	1
9	24-1D	24" D.E. Outside Blade	1
9	30-1D	30" D.E. Outside Blade	1

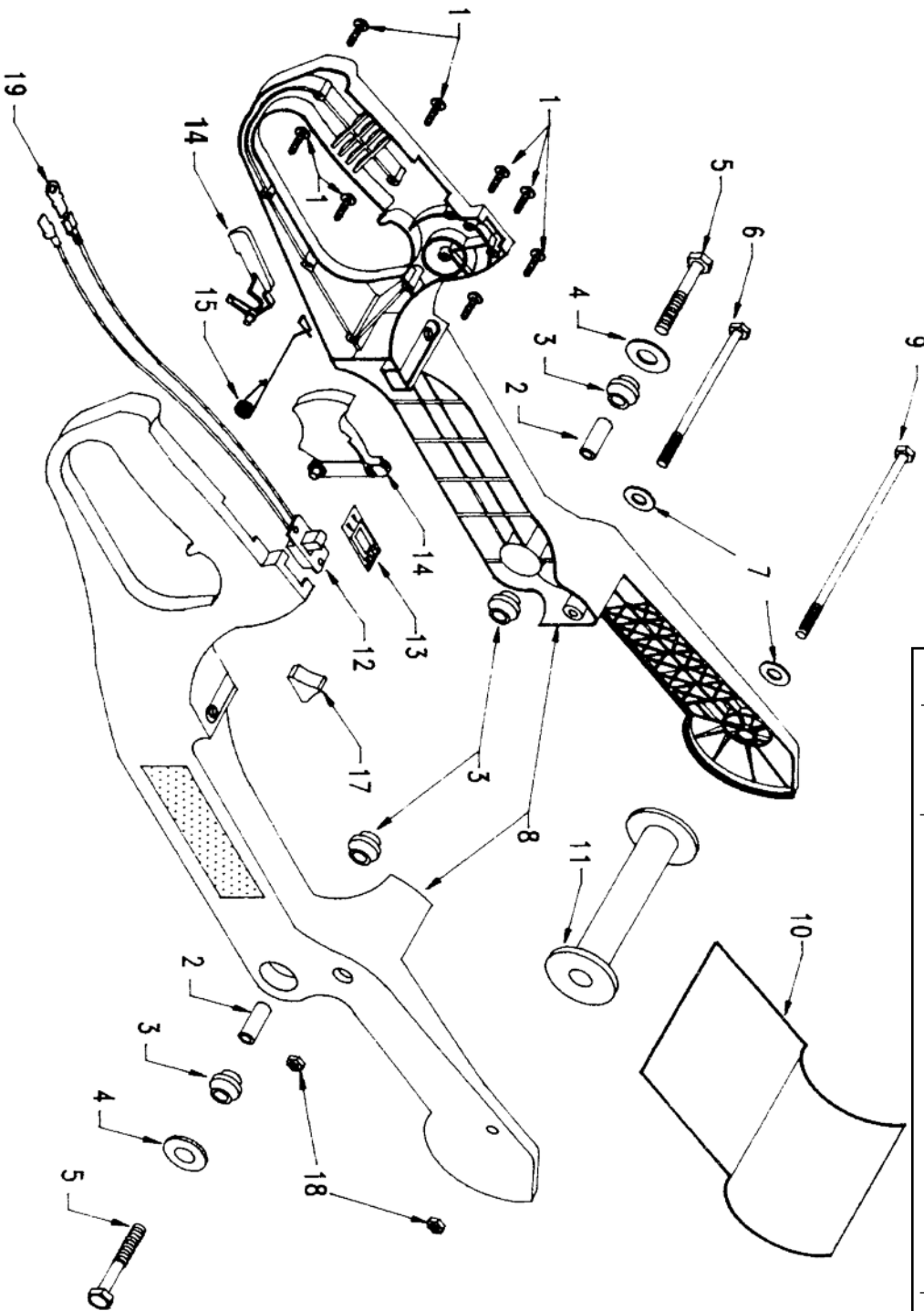
Key No.	Part No.	Description	Qty.
10	24-42	24" Protective Comb	1
11	16-54A	Large Head Phillips Screw	3
12	300504	7/8" Large Head Phillips Screw	1
13	16-65	Connecting Rod Spacer	1
14	16-64	Connecting Rod	1
15	300512	1/4 - 20 x 2 1/4 Bolt	2
16	300112	Support Plate	3
17	300403	Shock Absorber	8
18	300000	Gear Housing Assembly	1
19	300113	Spacer Tube	4
20	972	1/4 - 20 Locknut	2
21	300300	Frame Bar Brace	1



CUTTING BAR ASSEMBLY
Double Edge Trimmers

Key No.	Part No.	Description	Qty.
1	300511	7/8" Phillips Pan Head Screw	8
2	300113	Spacer Tube	4
3	300403	Shock Absorber	8
4	328	1/4" Flat Washer	2
5	300506	1/4-28 x 1 5/8 Hex Head Bolt	2
6	300510	10-32 x 4 Hex Head Bolt	1
7	300508	#10 Flat Washer	2
8	300400	Grip Set	1
9	300507	10-32 x 5 1/2 Hex Head Bolt	1

Key No.	Part No.	Description	Qty.
10	300405	Hand Guard	1
11	300404	Front Handle	1
12	300120	Switch With Leads	1
13	300117	Switch Plate	1
14	300122	Trigger Set	1
15	300108	Trigger/Lockout Spring	1
16	-----	-----	-
17	300109	Switch Cap	1
18	973	10-32 Locknut	2
19	300121	Eyelet Spade Terminal	1



HANDLE ASSEMBLY
Double Edge Trimmers

Return Information

If you are having any trouble with any Mantis product, please call us. Ask for Customer Service. Usually, we can solve most problems over the phone.

If we are unable to solve your problem and you still want to return the attachment...

**Always call first —
1-800-366-6268**

to receive your Return Authorization number.

Please have the following information when you call:

1. Date of purchase
2. Date attachment was first used
3. Customer number, if available

IF YOU NEED TO RETURN A PRODUCT

Very few customers ever need to return a Mantis product, but just in case you have to...here are some simple instructions that will help us serve you quicker and better.

Please clean the product if it has been used. (Remove dirt from attachment).

Give us as much information as possible, so that we can help you as quickly as possible.

Please provide the following information and **send this completed form with your product.**

Name _____

Phone: Day () _____

Address _____

Evening () _____

City State Zip _____

Customer No: _____

(not necessary but helpful)

Product(s) being returned _____

What do you want us to do? Repair Refund Other _____

If you are requesting a refund, please tell us why:

Product is different than I expected Not satisfied with performance

Not satisfied with quality Other _____

For repair service, please continue on other side of this form.

ATTACHMENT LIMITED SERVICE & WARRANTY POLICY

The Mantis Tiller and its attachments are guaranteed against defects in material and workmanship for a period of TWO YEARS FROM DATE OF PURCHASE. All tines for the tiller are guaranteed for life against breakage. Any Mantis products or parts found to be defective within the warranty period are to be returned to our factory at Southampton, PA

Transportation charges on parts and units submitted for repair or replacement under this warranty must be paid by the purchaser.

THIS WARRANTY shall not be effective if the product has been the subject of misuse, negligence or accident or if the product has been repaired or altered outside of our Southampton factory in any respect which affects its condition or operation.

Mantis shall not be liable for any special indirect or consequential damages arising from defective equipment. Any implied warranty, including merchantability or fitness for a particular purpose, shall not extend beyond the written warranty period.



1028 Street Road • Southampton, PA 18966
(215) 355-9700 • 1-800-366-6268

Warning: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

For additional information on the care and use of any Mantis attachment, please call our Service Department at 800-366-6268

If you are returning a product for repair or for a repair cost estimate, please tell us what appears to be broken or what performance needs to be improved:

Disassemble and pack your product in the original shipping carton or any other strong corrugated box. Ship the returned product, prepaid, by UPS or USPS (Post Office).

When shipping through the Post Office, be sure to insure your product for replacement value and ship certified.

**FOR REPAIR or REFUNDS:
MANTIS**

1028 Street Road
Southampton, PA 18966