

OWNER'S MANUAL
10" - 1.6 H.P. CUL-TIL-VATOR
MODELS 1016-0001 & 1016-0002

WARRANTY

ONE YEAR LIMITED WARRANTY

For one (1) year from date of purchase by the first consumer for residential use (thirty (30) days commercial use), Western International Incorporated warrants that it will replace free of charge, including labor, any original part of any Western International Incorporated product found to be defective by any authorized Service Dealer or the factory.

This warranty does not cover battery (if so equipped) or engine (these items are covered by their manufacturer's own warranty). This warranty does not cover parts that have failed due to normal wear or parts that have failed subject to misuse or abuse. Transportation of the unit or part to and from an authorized Service Dealer or the factory is the responsibility of the owner.

A step by step explanation as to what procedure should be followed for this Warranty is:

1. If a part becomes defective, contact the store where the unit was purchased for the name and address of the authorized Service Dealer nearest to you.
2. If you cannot locate an authorized Service Dealer, write Service Department of Western International Incorporated for the name and address of the authorized Service Dealer in your area or call the Service Dept. at 1-800-247-7464 (outside Iowa), 1-515-265-3461 (Iowa).
3. Return the defective product, along with proof of purchase to such authorized Service Dealer for replacement of any defective part where covered by this warranty.

There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose are limited to one (1) year from date of purchase. Liability for incidental or consequential damages are excluded.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Western International Incorporated P.O. Box 377 Des Moines, Iowa 50302

UNIT PARTS AND SERVICE

This manual contains instructions for safety, assembly and maintenance. Read this manual carefully and completely so that you will know proper assembly, use and care of your unit. Also fill in and mail the registration card packed with the unit. For service other than covered in this manual, contact an authorized service dealer. A nationwide parts and service organization has been established to provide locally available parts and service. A list of authorized parts distributors has been included in this manual. When ordering repair parts, always give the following information: 1. The Part Name; 2. The Part Number; 3. The Quantity desired; 4. The Full (eight digit) Model Number of the unit. The model number will be found on a plate attached to the unit.



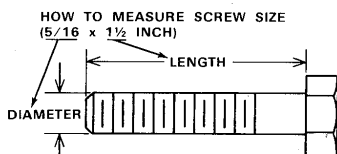
Look for this symbol.  It means - ATTENTION! BECOME ALERT! A HAZARD TO OPERATOR, BYSTANDERS, PROPERTY OR EQUIPMENT MAY EXIST.

WESTERN INTERNATIONAL INCORPORATED
P.O. BOX 377
DES MOINES, IOWA 50302

ASSEMBLY

CONTENTS OF SHIPPING CARTON

- 1 - 10 inch Cul-Til-Vator
- 1 - Engine Manual
- 1 - Owner's Manual
- 1 - Upper Handle
- 1 - Right Lower Handle
- 1 - Left Lower Handle
- 2 - Wheels
- 1 - Bag of Assembly Parts Containing:
 - 6 - Formed (Curved) Washers
 - 2 - 5/16 x 1 1/2 inch Curved Head Carriage Bolts
 - 2 - 5/16 inch Wing Nuts
 - 1 - Shut Off Switch
 - 1 - Upper Switch Mount Bracket
 - 1 - Lower Switch Mount Bracket
 - 1 - Switch Indicator Plate
 - 1 - Lockwasher (switch)
 - 1 - 15/32 inch Hex Nut (switch)
 - 2 - Cable Tie Straps
 - 2 - Hand Grips
 - 1 - Rubber Spacer
 - 2 - 5/16 inch Push Nuts
 - 4 - 1/4 x 1 3/8 inch Hex Head Screws
 - 4 - 1/4 inch Locknuts
 - 2 - 11/32 inch Flatwashers
 - 1 - No. 10 x 1 1/4 inch Phillips Head Screw
 - 1 - No. 10 x 1-1/16 inch Hex Lock Head Screw
 - 1 - No. 10 Kep Nut (star washer attached)
 - 1 - No. 10 Flat Nut



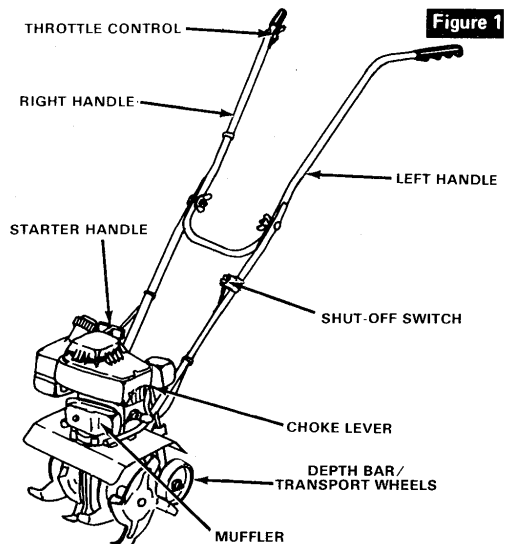
TOOLS REQUIRED FOR ASSEMBLY

- 1 - 5/16 inch Wrench (or adjustable wrench)
- 1 - 3/8 inch Wrench (or adjustable wrench)
- 2 - 7/16 inch Wrenches (or adjustable wrenches)
- 1 - Phillips Screwdriver
- 1 - Pair Scissors

CAUTION

- READ THE OPERATOR'S MANUAL.
- KNOW LOCATION AND FUNCTIONS OF ALL CONTROLS.
- KEEP ALL SAFETY DEVICES & SHIELDS IN PLACE.
- NEVER ALLOW CHILDREN OR UNINSTRUCTED ADULTS TO OPERATE TILLER.
- SHUT OFF ENGINE BEFORE UNCLOGGING TINES OR MAKING REPAIRS.
- KEEP BYSTANDERS AWAY FROM MACHINE.
- KEEP AWAY FROM ROTATING PARTS.

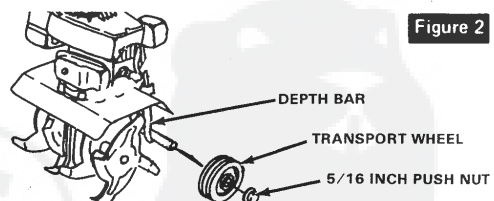
Your Cul-Til-Vator is completely assembled except for handles and controls. Figure 1 shows Cul-Til-Vator completely assembled. **NOTE:** The right and left sides of your Cul-Til-Vator are determined from operator's position behind unit.



To complete assembly, proceed as follows:

Lower handles have short bend at bottom end and curved at top end to allow upper handle to be placed between lower handles.

1. Place a wheel onto each side of cross piece on depth bar (figure 2). Secure by driving a push nut onto each side.



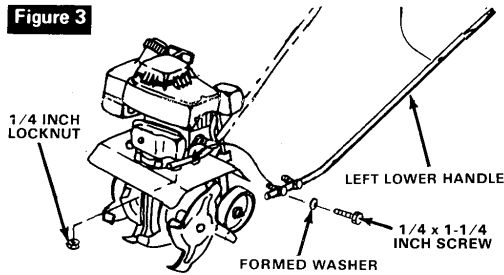
2. Unwind throttle control from around engine and straighten cable. **NOTE:** Use care that you do not kink cable.
3. Place a formed washer onto each of two 1/4 x 1 3/8 inch screws.

4. Place two screws (with formed washers) down through two holes in lower handle. **NOTE:** Attaching lower handles may be easier if tines are removed (see **Tine Replacement** paragraph in **Adjustments/Repairs** section of this manual).

5. Place handle at an angle under engine side and then rotate handle and push screws down through engine casting and tine shield (figure 3). Secure with two 1/4 inch locknuts. Tighten finger tight only at this time.

6. Repeat steps 3 through 5 with lower handle on opposite side.

Figure 3

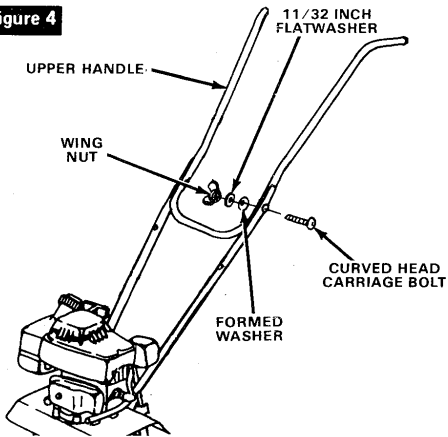


7. Place upper handle between lower handles (figure 4) and secure with two curved head carriage bolts, two formed washers, two 11/32 inch flatwashers and two wing nuts on inside of handle. Tighten finger tight only.

8. Using a 7/16 inch wrench, tighten locknuts on screws in lower ends of lower handles just enough to hold lower handles firmly in place. **CAUTION: Overtightening screws enough to change shape of handles can result in engine casting damage.**

9. Hold curved head carriage bolt against outside of lower handle while tightening wing nuts securely.

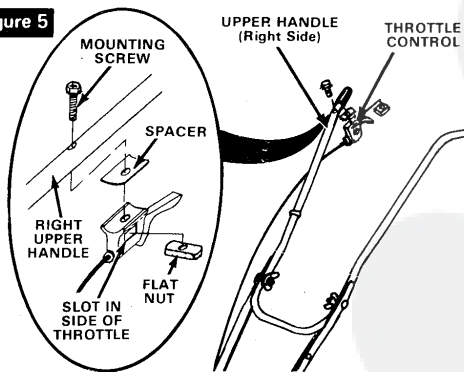
Figure 4



10. Place 1/4 inch phillips head screw down through hole in upper handle right side (see inset figure 5).

11. Place rubber spacer then throttle control on underside of handle.

Figure 5

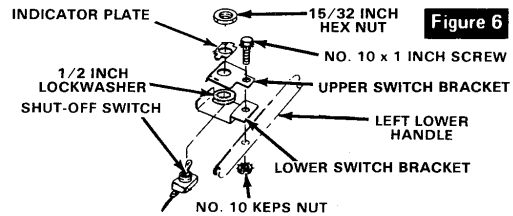


12. Place flat nut through slot in side of throttle control and hold ends of nut while tightening phillips head screw.

13. Assemble shut off switch as shown in (figure 6).

14. Attach assembled switch to left lower handle (switch on inside of handle) with a No. 10 x 1 inch hex head screw and a No. 10 keps nut. Tighten securely.

15. Push switch wire onto prong on bottom side of switch (figure 6).



16. Attach switch wire to left lower handle (figure 7) as close to the engine casting as possible with a cable tie strap.

17. Thread pointed end of strap through other (square) end of strap and pull tight around switch wire and lower handle. **NOTE: One side of tie strap is rough, other side is smooth. Rough side must be on inside of loop formed when ends are put together.**

18. Try to loosen strap. If it will loosen, it is put together with smooth side to inside of loop. Remove strap and reverse direction.

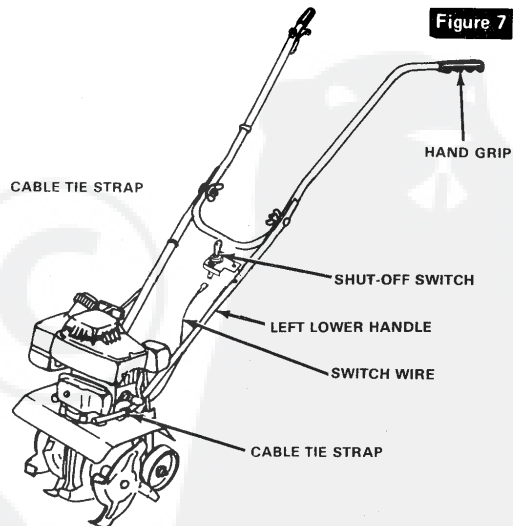
19. Cut off excess tie strap.

20. Attach throttle cable to right lower handle by threading a tie strap through hole in lower handle and around throttle cable on outside of handle.

21. Check tie strap installation as instructed in steps 17 through 19 above.

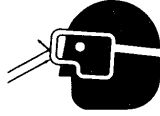
22. Push a hand grip onto each side of upper handle.

Figure 7



OPERATION

The operation of this Cul-Til-Vator can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating Cul-Til-Vator. We recommend standard safety glasses or Wide Vision Safety Mask for over spectacles.



Get to know your Cul-Til-Vator and its controls. Be sure you (or any other operator) have read and understood the **Operational Precautions** listed on page 2 of this manual.

WARNING

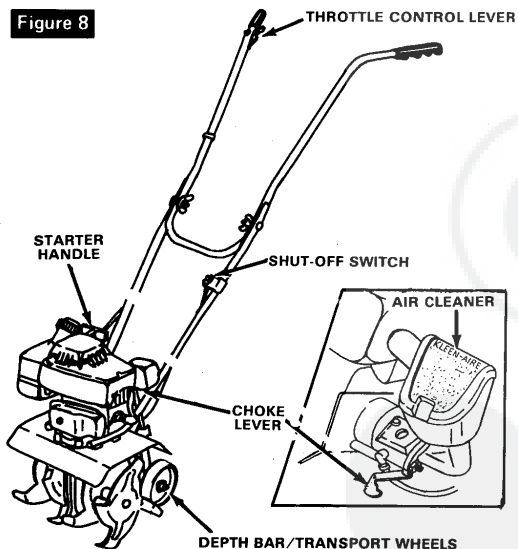
**KEEP AWAY FROM
ROTATING TINES.
ROTATING TINES CAN
CAUSE INJURY**

OPERATING CONTROLS

Figure 8 shows the controls on this Cul-Til-Vator. The controls and their functions are as follows:

- **Throttle Control Lever** - Controls engine speed and tine rotation. This Cul-Til-Vator is equipped with a centrifugal clutch that engages tines drive system when engine speed is increased.
- **Choke Control Lever** - Used to assist in starting a cold engine.
- **Shut-Off Switch** - Used to stop engine.
- **Starter Handle** - The engine on this Cul-Til-Vator is equipped with an easy pull recoil starter.
- **Depth Bar/Transport Wheels** - Used to adjust depth of cut. It also acts as a brake to help the operator control direction and speed of the Cul-Til-Vator. It is adjusted by removing the hair pin cotter and the clevis pin and moving bar to a different setting. Turn depth bar with wheels down to transport unit.

Figure 8



GASOLINE AND OIL MIXTURE

⚠ DANGER ⚠

Gasoline is flammable and caution must be used when handling or storing it. Do not fill fuel tank while Cul-Til-Vator is running, hot, or when Cul-Til-Vator is in an enclosed area. Keep away from open flame, electrical spark, and **DO NOT SMOKE** while mixing fuel or filling the fuel tank. Never fill fuel tank completely; but fill the tank to within ¼ - ½ inch from the bottom of fuel tank fill neck to provide space for expansion of fuel. Always fill fuel tank outdoors and use a funnel or spout to prevent spilling. Make sure to wipe up any spilled fuel before starting the engine.

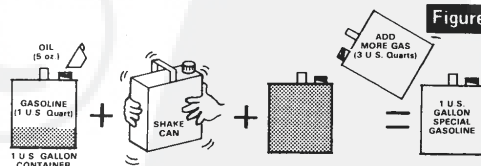
Store gasoline in a clean, approved container, and keep the cap in place on the container. Keep gasoline in a cool, well ventilated place; never in the house. Never buy more than a 30 day supply of gasoline to assure volatility. Gasoline is intended to be used as a fuel for internal combustion engines; therefore, do not use gasoline for any other purpose. Since many children like the smell of gasoline, keep it out of their reach because the fumes are dangerous to inhale, as well as being explosive.

GASOLINE AND OIL MIXTURE

The two cycle engine used on this Cul-Til-Vator requires a mixture of gasoline and oil for lubrication of bearings and other moving parts. The correct fuel mixture ratio is 24:1 (see **Fuel Mix Chart**). Gasoline and oil must be premixed in a clean gasoline container. Always use fresh gasoline. **CAUTION: DO NOT use gasoline containing any amount of alcohol as it can cause serious damage or significantly reduce performance.** Mix gasoline and oil (as shown in figure 9) as follows:

1. Pour 1 U.S. quart of fresh, clean UNLEADED REGULAR grade automotive gasoline into a 1 gallon container.
2. Pour 5 ounces of a clean, high quality SAE 30/40 two cycle oil into the gasoline container. **CAUTION: DO NOT use multiviscosity oils, such as 10W-30 or 10W-40.**
3. Reinstall the cap on the gasoline container and shake container vigorously so the oil mixes with the gasoline.
4. Add an additional 3 U.S. quarts of gasoline to the gallon container and shake container again.

Figure 9



FUEL MIX CHART (Mixture 24:1)

U.S.		S.I. Metric	
Gas	Oil	Gas	Oil
1 Gal.	5 oz.	4 Liters	.167L
2 Gal.	11 oz.	8 Liters	.333L
5 Gal.	27 oz.	20 Liters	.833L

5. This completes the special gasoline mixing (24:1) procedure. It can now be poured into the Cul-Til-Vator fuel tank. **IMPORTANT: DO NOT fill fuel tank with gasoline that does not have oil mixed in it. DO NOT use gasoline additives because the engine may be damaged. Shake gasoline container before each filling of fuel tank.**

⚠ DANGER ⚠
The muffler and surrounding areas become very hot after running engine. Avoid this area.

TO START ENGINE

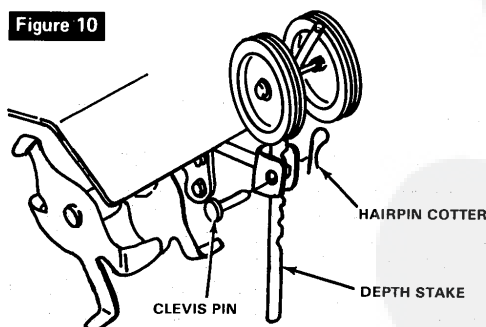
Before starting engine, be certain you (or any other operator) have read and understood all the instructions on the preceding pages.

1. Fill fuel tank (to ¼ to ½ inch below bottom of fill neck) with fresh fuel mix and reinstall fuel tank cap securely. Never use fuel that may be stale from long periods of storage.
2. Move shut-off switch to ON (down or away from operator) position.
3. Move choke control lever (figure 8) to FULL choke (all the way to the right or toward handle) position. **NOTE:** A warm engine should not require choking.

⚠ DANGER ⚠
DO NOT touch the throttle control lever while starting engine. Cul-Til-Vator will propel itself if engine speed is advanced from idle.

4. Tilt Cul-Til-Vator back on depth stake to raise tines off ground.
5. Grasp upper right handle firmly to stabilize Cul-Til-Vator and pull starter handle with short quick pulls. Do not allow the starter rope to snap back, but rewind slowly while keeping hold of the starter handle. **NOTE:** It will take a few pulls on starter handle to feed gas from tank to carburetor.
6. Move choke to ½ choke position when engine begins to flutter.
7. Squeeze and release throttle lever two or three times, then move choke lever to OFF (left or toward engine position). **NOTE:** If tines do not stop when throttle is released, adjust carburetor idle speed as instructed in **Step 5 of Carburetor Adjustment** paragraph in **Adjustments/Repairs** section of this manual.
8. To stop engine, release throttle lever and move shut-off switch to OFF (up or toward operator) position.
9. If engine becomes flooded, see **Spark Plug Maintenance** paragraph in **Maintenance** section of this manual.

Figure 10



TILLING HINTS

Tilling is digging into, turning over, and breaking up packed soil before planting. Loose unpacked soil helps root growth. Best tilling depth is 4 to 6 inches. A tiller will also clear the soil of unwanted vegetation. The decomposition of this vegetation matter enriches the soil. Depending on the climate (rainfall and wind), it may be advisable to till the soil at the end of the growing season to further condition the soil.

Avoid tilling soil that is too dry as the soil pulverizes and produces a dust that will not hold water. Likewise, tilling soil that is too wet will produce unsatisfactory clods besides being hard on the machine.

Better growth will be obtained in tilled ground if a relatively small area is tilled properly and the tilled ground used soon after tilling to preserve the moisture content.

The depth bar located on the back of the Cul-Til-Vator (figure 10) serves a double purpose. It helps regulate the depth of the cut to a uniform level and also acts as a brake to help the operator control the speed of the Cul-Til-Vator. Also, with wheels down, it is used for transporting unit.

Lowering the depth bar will slow the Cul-Til-Vator and make it till deeper. Raising the depth bar will allow the Cul-Til-Vator to move faster and till more shallow.

If Cul-Til-Vator stops forward motion and tries to dig deeper than necessary, move handles from side to side to start forward motion.

CULTIVATING HINTS

When cultivating (weed killing) it is best to till not deeper than 1½ inches. Tilling deeper will only pull to the surface ungerminated weed seeds. When cultivating, you may want to raise the depth bar to lessen braking action.

When cultivating around plants or close areas you may want to remove outside tines (see **Tine Replacement** paragraph in **Adjustment/Repairs** section of this manual).

TO OPERATE CUL-TIL-VATOR

1. Start engine, tilt unit back on depth bar/transport wheels until tines are off ground and squeeze throttle control lever all the way up against hand grip. **NOTE:** The engine is governor controlled and should always be run at full throttle.
2. Grasp handles firmly and slowly tilt unit forward to begin tilling action.
3. As the tines begin to make contact with the ground, hold back on the handles so that tines will dig and not ride forward over the ground. Hold back until the tines dig into soil.
4. If tilled depth is too deep or too shallow, proceed as follows:
 - A. Move engine shut-off switch to OFF position.
 - B. Remove hairpin cotter from clevis pin securing depth bar (figure 8). Remove clevis pin and adjust depth bar upward to dig shallower or downward to dig deeper. Reinstall clevis pin and hairpin cotter.
 - C. Move shut-off switch to ON position and repeat steps 1 through 3.
 - D. If tilled depth is still unsuitable, repeat steps A through C.
5. In some soil conditions, it may be necessary to move handles from side to side to keep Cul-Til-Vator moving forward.

KEEP CUL-TIL-VATOR CLEAN

Always remove dirt and debris from Cul-Til-Vator after each use. Remove any string, wire or vegetation that may become wound around tine shaft. If rocks or other debris become lodged in mechanism and stops tine rotation, proceed as follows:

1. Release throttle control lever and move shut-off switch to OFF position and disconnect spark plug wire.
2. Grasp shaft between transmission and tine shield (figure 11) with a pair of pliers and turn shaft from left to right (viewed from front) to rotate tines backwards.
3. Remove lodged item, reconnect spark plug wire, and restart engine.

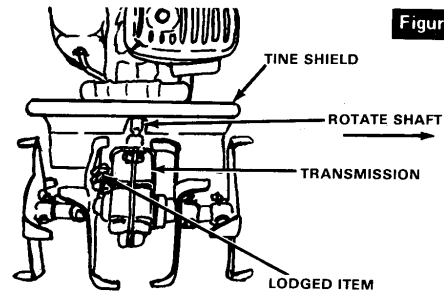


Figure 11

MAINTENANCE

The warranty on this Cul-Til-Vator does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain

Cul-Til-Vator as instructed in this manual. The following **Maintenance Check List** is supplied to assist operator to properly maintain tiller/cultivator.

MAINTENANCE CHECK LIST						SERVICE RECORD																	
	AFTER FIRST 2 HOURS	FREQUENTLY	EVERY 25 HOURS	BEGINNING EACH SEASON	BEFORE STORAGE	FILL IN DATES AS YOU COMPLETE REGULAR SERVICE																	
Tighten All Screws and Nuts	●	●																					
Clean/Re-Oil Air Cleaner Filter			●	●																			
Check Spark Plug			●	●																			
Lubricate Tine Shaft			●	●																			
Lubricate Transmission			●	●																			

LUBRICATION

Every 25 hours and/or at beginning of each season, transmission should be filled with grease. Tubes of gear lube are available from most automotive supply stores. Use portable tool grease such as **Lubriplate 630AA** (Product No. 06787 - 1 3/4 oz. tube) or **Lubriplate GR-132** (Product No. 15892 - 10 oz. tube). Tine shaft should have oil applied before storage and after cleaning if Cul-Til-Vator is flushed with water. **CAUTION: Allow transmission to cool before filling with grease.**

1. Remove both right side tines (See **Adjustments/Repairs** section).
2. Remove air vent screw (figure 12) from top right side of transmission.
3. Remove hex socket head plug (figure 12) from lower right side of transmission.
4. Using a tube of grease or a grease gun, fill transmission through lower hole until new grease (white) begins to come out top hole where screw was removed. **NOTE:** This may require more than one 1 3/4 oz. tube of grease.
5. Reinstall top screw and bottom plug.
6. Check condition of felt washer in side of transmission at tine shaft. Replace washer if it is damaged (see **Unit Repair Parts** section).
7. Clean tine shaft and spread a few drops of oil on shaft in tine placement areas. Reinstall tines.

8. Remove left side tines. Check felt washer for damage, clean and oil tine shaft. Reinstall tines.

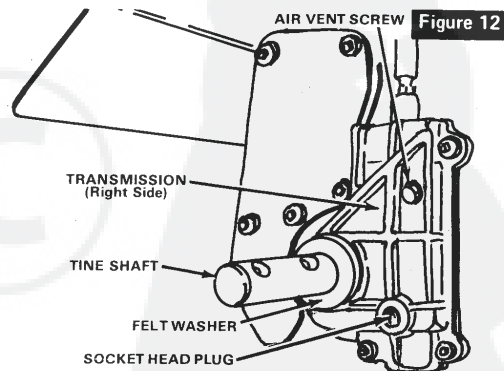
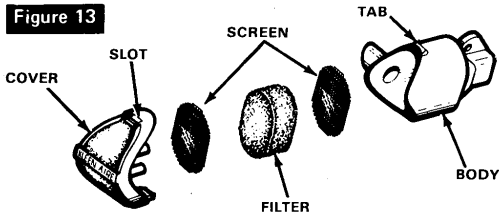


Figure 12

AIR CLEANER MAINTENANCE

The air cleaner filter should be cleaned and re-oiled after every 25 hours of use. Clean more often under dusty conditions. **IMPORTANT:** The engine can be worn out in a very short period of time if dirt or grit is allowed to enter engine. To clean air filter.

1. Pull tab on either side of cover (figure 13) and remove cover.
2. Remove top screen, filter and bottom screen. Wipe inside of housing body clean.



3. Clean filter by washing in a non-flammable solvent or strong solution of water and household detergent. Squeeze out all liquid.
4. Cover ends and side of filter with same oil used in fuel mixture. Knead filter between fingers to distribute oil throughout the filter and to squeeze out excess oil.
5. Clean screens in water/detergent solution and air dry.
6. Service air filter carefully, inspecting for deterioration or damage. A defective, improperly serviced, or misassembled air filter will allow dirt particles to enter engine.

7. Reassemble filter as shown in figure 13. Place cover onto body so that groove in cover aligns with top of body. Snap cover over lugs on top of body.

CAUTION

Never run the engine without the air cleaner element installed. A defective air cleaner can result in loss of engine power and can cause excessive wear or damage to engine components if dirt or dust is permitted to enter engine through carburetor. An air cleaner that is clogged with dust or dirt should be cleaned and recoiled.

SPARK PLUG MAINTENANCE

If engine is flooded, clean area around plug base to prevent foreign material from entering cylinders when the plug is removed. Remove and dry plug. Regap electrodes to .035 if necessary. If new spark plug is needed use identical plug or equivalent. Tighten plug firmly. If torque wrench is available, torque plug to 15 foot pounds.

CYLINDER EXHAUST PORTS

The cylinder exhaust ports should be cleaned after each seventy-five (75) to one hundred (100) hours of operation. For this procedure we recommend that you take your unit to a technician trained to work on two cycle engines.

ADJUSTMENTS/REPAIRS

TINE REPLACEMENT

Cul-Til-Vator is left hand or right hand as viewed from the operator position.

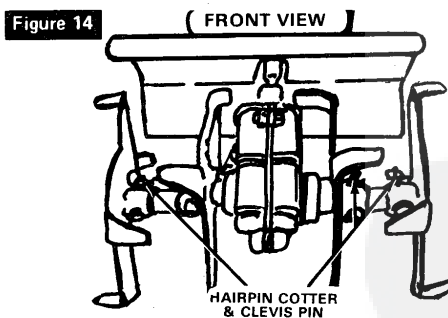
All four tines on this unit are different and cannot be interchanged. Tines must be properly installed as shown in figure 14 and 15 or Cul-Til-Vator will not function properly. **NOTE:** Outside tines may be removed to reduce tilling width to about 6 inches, for close work around plants or in small areas, if desired. When reinstalling outside tines see Step 5.

⚠ DANGER ⚠

Tines are self-sharpening and will become quite sharp from use. Handle carefully.

Tines will all wear fairly even. If tines are being replaced because of wear, we recommend that all four tines be replaced at same time. To replace tines:

1. Turn switch to OFF position and disconnect spark plug wire.



2. Remove hairpin cotters and clevis pins from tines on one side of the unit and remove tines.

3. Clean tine shaft and oil shaft at tine locations.

4. Place inside tine on tine shaft and reinstall clevis pin and hairpin cotter. **NOTE:** When properly installed, a letter "R" will be visible from outside on tine mounted on right side of unit (letter "L" on left side). This letter should appear opposite the small hole in side of tine.

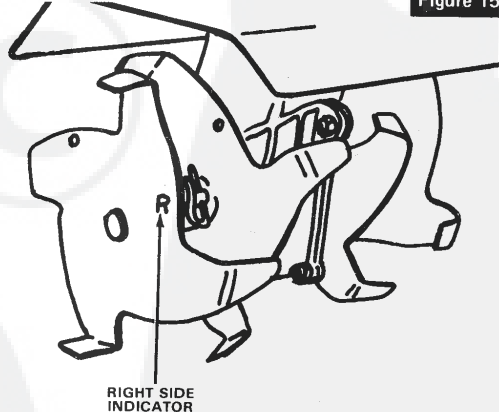
5. Place outside tine on tine shaft and reinstall clevis pin and hairpin cotter.

6. Repeat steps 1 through 4 on opposite side of unit.

7. Check to make sure tines are installed on proper sides of unit. The letter "R" on right side, "L" on left side must be visible from outside at all times.

PROPERLY INSTALLED RIGHT TINES

Figure 15



CARBURETOR ADJUSTMENT

A dirty air cleaner will cause engine to run improperly and/or smoke excessively. Be sure air cleaner is clean before adjusting carburetor. Never make unnecessary adjustments to the carburetor. The carburetor was set at the factory to operate efficiently for most applications. However, if adjustments are required, we recommend you contact a competent repairman. If you feel that you are competent to make carburetor adjustments, proceed as follows.

⚠ DANGER ⚠

Use extreme care when making adjustments that require engine to be running. Keep hands, feet, hair and loose clothing away from any moving part.

1. Turn mixture adjustment screw (figure 16) clockwise (↻) to close. **IMPORTANT:** Tighten adjusting screw finger tight only to prevent damage to carburetor or adjusting screw.
2. Turn mixture screw open counterclockwise (↺) one (1) turn.
3. Start the engine (see **To Start Engine** paragraph) and let it warm up approximately 3 to 5 minutes. Do not adjust carburetor when engine is cold. **NOTE:** If engine falters or stops after choke lever is moved to OFF position, open the mixture adjusting screw an additional 1/8 turn counterclockwise (↺).
4. With engine running, release throttle lever (idle position) to make mixture adjustments.
 - A. Turn mixture adjusting screw (figure 14) slowly clockwise (↻) until engine falters. Remember this location.
 - B. Turn mixture adjusting screw slowly counterclockwise (↺) until engine just starts to sputter. Remember this location.

- C. Turn mixture adjusting screw clockwise (↻) until it is halfway between first position where engine falters and second position where engine started to sputter.

5. Idle speed may need to be adjusted after making mixture adjustment. If tines do not turn when engine is running and throttle is released, idle speed will not need adjusting. If tines do turn when throttle is released, proceed as follows:

- A. Have someone hold Cul-Til-Vator back on depth stake with tines off ground.
- B. Start engine.
- C. Turn idle speed adjustment screw (figure 14) counterclockwise (↺) until tines stop rotating.

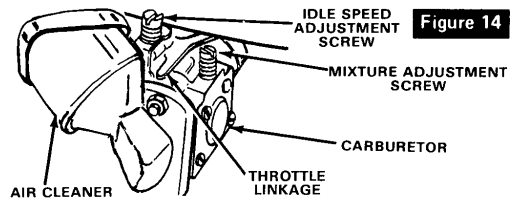


Figure 14

⚠ DANGER ⚠

Never tamper with engine governor which is factory set for proper engine speed. Over-speeding engine above factory high speed setting can be dangerous. If you think the engine governed high speed needs adjusting, contact a competent repairman who has the proper equipment and experience to make any necessary adjustments.

STORAGE

⚠ DANGER ⚠

Never store engine with fuel in tank indoors or in enclosed, poorly ventilated enclosures, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer, etc.

Handle gasoline carefully. It is highly flammable and careless use could result in serious fire damage to your person and/or property.

Drain fuel into approved container outdoors, away from open flame.

The Cul-Til-Vator should be immediately prepared for storage at the end of the season or if the unit is to be un-used for 30 days or more.

1. Remove all fuel mixture from fuel tank to prevent gum deposits from forming and causing possible malfunction of engine. **Drain fuel into approved container outdoors, away from open flame.**
2. Start and run engine until it stops due to lack of fuel.
3. Pull starter handle slowly until resistance is felt due to compression pressure, then stop. Release starter handle **slowly** to prevent engine from reversing due to compression pressure. This position will close the intake and exhaust parts to prevent corrosion of the piston and cylinder bore.

4. Clean thoroughly, removing all dirt and debris from unit and engine.
5. Remove tines and oil tine shaft and reinstall tines (see **Adjustments/Repairs** section).
6. Loosen wing nuts that secure upper handle to lower handle.
7. Carefully fold upper handle down being sure that throttle cable is not kinked. Tighten wing nuts.
8. The cross piece of upper handle (between lower handles) can now be used as a carry handle or can be hooked over a wall hook to store Cul-Til-Vator up off floor out of the way.
9. Store tiller/cultivator in a protected area and cover for additional protection.

IMPORTANT: A yearly checkup or tuneup by a competent repair man is a good way of insuring that your Cul-Til-Vator will provide maximum performance for the next season.

TROUBLE SHOOTING

DANGER: ALWAYS DISCONNECT SPARK PLUG WIRE BEFORE ATTEMPTING ANY REMEDY.

TROUBLE	LOOK FOR	REMEDY
Dificult starting; Engine runs erratic; Engine will not run at full speed	Stale fuel mixture	Drain fuel tank. Fill with fresh mixture.
	Too much oil in mixture	Check fuel mix chart and mix fresh fuel.
	Dirt in fuel tank or out of fuel	Clean fuel tank. Fuel tank should be half full when starting engine.
	Carburetor out of adjustment	Adjust carburetor.
	Fouled spark plug	Clean and regap plug.
	Plugged air cleaner	Clean and re-oil air cleaner.
Engine speed does not increase properly	Debris interfering with throttle linkage.	Blow dirt and debris off top of carburetor.
Engine smokes excessively	Plugged air cleaner	Clean and re-oil air cleaner.
	Too much oil in fuel mixture	Check fuel mix chart and mix fresh fuel.
Tines continue to rotate when throttle is released	Carburetor out of adjustment	Adjust carburetor idle speed. See Carburetor Adjustment paragraph in Adjustments/Repairs section of this manual.
Tines will not turn	Foreign object lodged in tines	Remove lodged item. See Keep Cul-Til-Vator Clean paragraph in Operation section of this manual.
Unit does not till properly	Incorrect tine installation	Check tines for proper installation. See Tine Replacement paragraph in Adjustments/Repairs section of this manual.

SEE, CALL OR WRITE ONE OF THE FOLLOWING DISTRIBUTORS FOR PARTS FOR: HOMKO - LAWN SCOUT - AMF - TURFMASTER - DYNAMARK - OR ANY OTHER WESTERN INTERNATIONAL INCORPORATED PRODUCT.

ALABAMA

Automotive Elect. Service, 415 Meridian St., Huntsville, AL 35801, (205) 539-2131, AL WATS 800-536-3394 *b,c,f,g,h
Warlick-Miller A/C Eng., 630 N. 20th St., Bessemer, AL 35020, (205) 424-8288, AL WATS 800-292-8123
MS WATS 800-292-4494 *b,c,f,g,h

CALIFORNIA

Billiou's, 75 No. D, Porterville, CA 93257, (209) 784-4102 *b,c,f,g,h
The Lawn Mower Shop, 1340 El Camino Real, San Carlos, CA 94070, (415) 593-4716 *a,d,f,g

COLORADO

Spitzer Ind. Prod. Co., 6601 N. Washington, Thornton, CO 80229, (303) 287-3414 *b,d,h

FLORIDA

G.L.O. Products Inc., 13201 Belcher Rd. S., Largo, FL 33543, (813) 530-9723 *a,c,h

Radco Distributors Inc. 4909 Victor St., Box 5459, Jacksonville, FL 322070459, (904) 733-7957 *a,c,f,g,h

ILLINOIS

Cox Tire & Battery, 603 N. Market, Marion, IL 62959, (618) 993-2607
IL WATS 800-642-4351 *a,c,f,g,h

Garmoe Distr. Inc., 2620 N. Mannheim Road, Franklin Park, IL 60131, (312) 455-3588 *a,c,f,g,h

Small Engine Parts, 3515 Auburn St., Rockford, IL 61103, (815) 964-1754 *b,c,f,g,h

INDIANA

Thompson Sales & Service, 2400 W. Ridge Road, Gary, IN 46408, (219) 980-3282 *a,b,c,f,g,h

IOWA

Bruce Engine, 1829 N.W. 86th, Des Moines, IA 50322, (515) 278-5151 *a,c,f,g,h

KANSAS

Colladay Hdwe. Co., 201 N. Plum, Box 766, Hutchinson, KS 67501, (316) 663-4477 *a,c

KENTUCKY

Auto-Electric Inc., 715 W. Hwy 80, Box 671, Somerset, KY 42501, (606) 679-1171 *c,f,g,h

Cayce Mill Supply Co., 1st & Douglas St., Hopkinsville, KY 42240, (502) 886-3335 *f,g,i

Ellingsworth Auto Electric, 1003-08 E. Broadway, Louisville, KY 40204 (Serving Southern Indiana), (502) 585-5055, KY WATS (800) 722-5061. *b,c,f,g,h

LOUISIANA

United Engine Service, Inc., 11923 Cloverland Ave., Baton Rouge, LA 70809, (504) 291-2622 *a,d,f,g,h

MARYLAND

Center Supply Co., 6867 New Hampshire Ave., Takoma Park, MD 20912, (301) 270-1690 *b,c,f,g,h

Kunkel Service Co., 6252 Frankford Ave., Baltimore, MD 21206, (301) 377-4008, MD WATS 800-492-8886 *b,c,f,g,h

MASSACHUSETTS

Morton B. Collins Co., 300 Birnie Ave., Box 70058, Springfield, MA 01107, (413) 732-7449 *a,c,g,h

Crandall-Hicks Co., 250 Eliot St., Ashland, MA 01721, (617) 881-6122 *a,d

MICHIGAN

Air Cooled Engine Div., 615 First St., Menominee, MI 49858, (906) 863-8011, MI WATS (906 area only) 800-562-4825 *a,c,f,g,h

Heat Engineering Inc., 7700 Southfield Road, Detroit, MI 48228, (313) 271-7550 *a,c,f,g,h

Lorenz Service Co., 2500 S. Pennsylvania Ave., Lansing, MI 48910, (517) 484-1361 *b,c,f,g,h

MINNESOTA

Northern Automotive Co., 1401 W. Broadway, Minneapolis, MN 55411, (612) 522-6666 *a,c,f,g,h

MISSISSIPPI see Bessemer, Alabama

MISSOURI

Gunther's Service & Supply, 7320 Wornall Road, Kansas City, MO 64114, (816) 523-1952 *a,f,g,h

Wilson Engine & Parts Inc., 4159 Shoreline Drive, Jct. I-70 & 270, Earth City, MO 63045, (314) 739-1313, MO WATS 800-392-4063, WATS (outside MO only) 800-367-2787 *a,b,d,f,g,h

NEW JERSEY

Power Distributors, Inc., 102 Mayfield Ave., Edison, NJ 08837, (201) 225-4922 *i

NEW YORK

Loegler & Ladd Inc., 3950 Broadway, Box 214, Buffalo, NY 14225, (716) 684-0600 *a,c

Stiefvater Distr. Inc., Clinton Road, Route 12B, New Hartford, NY 13413, (315) 853-5581 *a,c,f,g,h

NORTH CAROLINA

Carswell Distr. Co., 3750 N. Liberty St., Box 4193, Winston-Salem, NC 27105, (919) 767-7700 *g,i

Dixie Sales Co., Inc., 335 N. Green, Box 1408, Greensboro, NC 27402, (919) 274-0490, NC WATS 800-632-1276 *b,c,f,g,h

OHIO

American Power Distr., 2430 Tremainsville Rd., Box 8515, Toledo, OH 43613, (419) 475-7261 *f,g,h

Small Engine Distr., 5250 N. Dixie, Box 1481, Dayton, OH 45414, (513) 278-8241 *b,f,g,h

OKLAHOMA

Albro's, 2921 W. Hefner Rd., Oklahoma City, OK 73120, (405) 751-1711 *a,c,f,g,h

PENNSYLVANIA

Bluemont Co., 11101 Frankstown Road, Pittsburg, PA 15235, (412) 242-2522 *a,b,c,f,g,h

Scranton Auto Ignition, 1133 Wyoming Ave., Scranton, PA 18509, (717) 342-8133 *b,c,f,g,h

SOUTH CAROLINA

Magneto & Elect. Service, 103 Assembly St., Columbia, SC 29201, (803) 771-4044, SC WATS 800-922-1118 *a,c,f,g,h

TENNESSEE

American Sales & Serv., 3035 Bellbrook Dr., Memphis, TN 38116, (901) 332-2210 *a,d,f,g,h

Chilton A/C Engines, 319 4th Ave. S., Box 15806, Nashville, TN 37201, (615) 254-1634 *b,c,f,g,h

Ace Distr., Inc., 2103 E. Magnolia Ave., Box 3587, Knoxville, TN 37917, (615) 524-5359, TN WATS 800-332-9904 *a,c,f,g,h

TEXAS

Marr Bros. Inc., 423 E. Jefferson, Dallas, TX 75203, (214) 948-7387 *a,c,f,g,h

Midland Small Engine Sales, 106 Carlton, Box 4215, Midland, TX 79704, (915) 682-1409 *b,f,g,h

VIRGINIA

Norva Small Engines, 8120 E. Wellington Rd., Manassas, VA 22110, (703) 369-3387 *a,c,f,g,h

RBI Corporation, 101 Cedar Ridge Rd., Lakeridge Park, Ashland, VA 23005, (804) 798-1535 *a,c,f,g,h

WASHINGTON

Pacific A/C Engine Inc., 4030 1st Ave. S., Box 84783, Terminal Annex, Seattle, WA 98124, (206) 682-4677 *a,c,f,g,h

WEST VIRGINIA

Interstate Radiator, 1611 4th Ave., Charleston, WV 25312, (304) 345-1724 *a,d,f,g,h

WISCONSIN

Reliable Hdwe., 8010 N. 76th St., Milwaukee, WI 53223, (414) 355-2900 *b,c,f,g,h

Wiggert Brothers, 3rd & Jay, Box 1267, La Crosse, WI 54601, (608) 784-4790 *a,b,c,f,g,h

CANADA

Suntester Equipment Ltd., 5466 Timberlea Blvd., Mississauga, Ontario, Canada L4W 2T7, (416) 624-6200 *g,i

Yetman's Ltd., 949 Jarvis Ave., Winnipeg, Manitoba, Canada R2X 0A1, (204) 586-8046, WATS (Manitoba & Sask.) 800-665-8623 *b,c,f,g

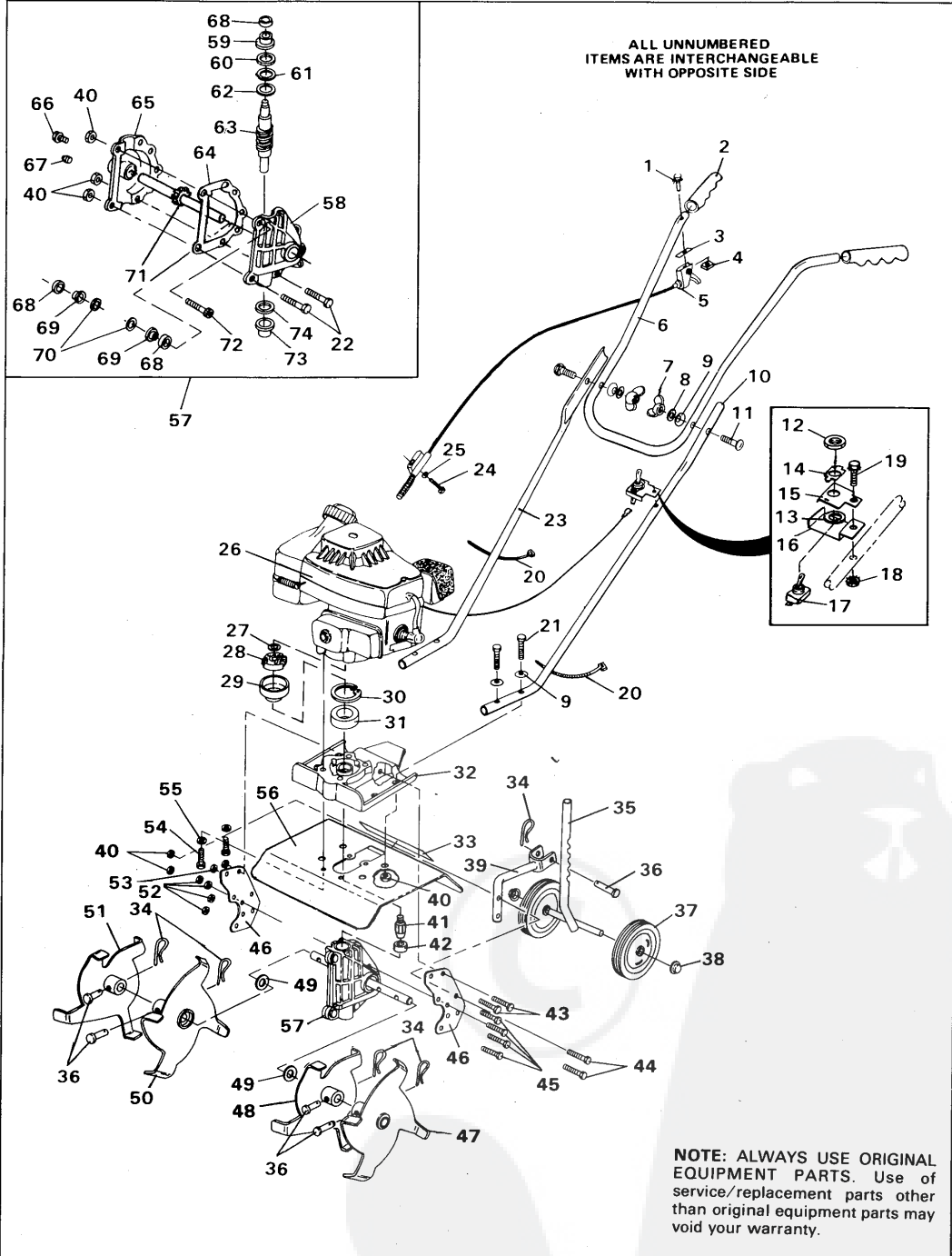
Revised 1/20/86

(*) General Information Codes:

- (a) Advance Payment Preferred
- (b) Accepts Credit Cards
- (c) C.O.D. okay
- (d) No. C.O.D.
- (e) C.O.D. only
- (f) Briggs & Stratton dealer or distributor
- (g) Tecumseh/Peerless dealer or distr.
- (h) Foote dealer or distributor
- (i) Dealer sales only, contact for closest dealer.

UNIT REPAIR PARTS

10" CUL-TIL-VATOR MODELS 1016-0001 & 1016-0002



10" CUL-TIL-VATOR MODELS 1016-0001 & 1016-0002

ALWAYS GIVE THE FOLLOWING INFORMATION WHEN ORDERING REPAIR PARTS:

1. The PART NUMBER; 2. The PART NAME; 3. QUANTITY DESIRED; 4. The MODEL NUMBER (As shown on Model Plate)

SEND PART ORDERS AS PER INSTRUCTIONS ON THE FRONT PAGE

YOUR UNIT IS RIGHT HAND (RH) OR LEFT HAND (LH) AS YOU STAND BEHIND IT.

DO NOT USE KEY NUMBERS WHEN ORDERING REPAIR PARTS, ALWAYS USE PART NUMBERS.

All replacement parts will be supplied in current production colors or in a neutral color.

A handling fee is applicable to small parts orders.

Key No.	Part No.	Description	Key No.	Part No.	Description
1	159962	Screw, Phil. Hd, No. 10-24 x 1 1/4 In.	39	56147	Depth Bracket Assembly
2	56139	Hand Grip	40	9424215	Locknut, 1/4-20 Thd.
3	56814	Spacer	41	56612	Shaft
4	56904	Nut, Flat, No. 10-24 Thd.	42	56613	Coupling
5	56141	Throttle Control	43	180078	*Screw, Hex Hd, 5/16-18 x 7/8 In.
6	56093	Handle, Upper	44	180022	*Screw, Hex Hd, 1/4-20 x 1 In.
7	997206	Wing Nut, 5/16-18 Thd.	45	56131	Screw, Hex Hd, 1/4-20 x 1 In.
8	120393	*Flatwasher, 11/32 In.	46	56096	Plate, Support
9	8728	Formed Washer	47	56107	Outer Tine Assy., L.H.
10	56095	Handle, Lower, L.H.	48	56105	Inner Tine Assy., L.H.
11	35475	Screw, Curved Hd, 5/16-18 x 1 1/2 In.	49	56158	Washer, Felt
12	45877	Nut, Hex 15/32-32 Thd.	50	56106	Inner Tine Assy., R.H.
13	45878	Lockwasher, Switch	51	56108	Outer Tine Assy., R.H.
14	56248	Plate, On/Off Indicator	52	56862	Locknut, 1/4-20 Thd.
15	56236	Bracket, Switch Mount, Upper	53	9422295	Locknut, 5/16-18 Thd.
16	56822	Bracket, Switch, Lower	54	180037	*Screw, Hex Hd, 1/4-20 x 1 1/2 In.
17	56143	Switch	55	120380	*Lockwasher, Split, 1/4 In.
18	271166	*Nut, Keps, No. 10-24 Thd.	56	56097	Tine Shield
19	57019	Screw, Wa. Hd., Ex. Lock No. 10-24 x 1-1/16 In.	57	56098	Gear Box Assembly
20	55050	Wire Tie	58	56363	Gear Case Assembly, L.H.
21	180033	*Screw, Hex Hd, 1/4-20 x 1 1/2 In.	59	56208	Bearing, Flange
22	180020	*Screw, Hex Hd, 1/4-20 x 3/4 In.	60	56125	Washer, Thrust
23	56094	Handle, Lower, R.H.	61	56124	Needle Bearing
24	56781	Screw, Hex Hd, No. 8-32 x 1 1/2 In.	62	56113	Washer, Thrust
25	9414106	Flatwasher, 3/16 In.	63	55868	Shaft, Worm
26	Engine	§See Footnote Below	64	51279	Gasket, Gear Case
27	56694	Washer	65	56364	Gear Case Assembly, R.H.
28	56693	Rotor	66	35258	Screw, Hex Wa. Tap, No. 10-24 x 3/8 In.
29	56692	Drum	67	56423	Pipe Plug
30	56120	Snap Ring	68	24274	Oil Seal
31	56132	Bearing	69	50304	Bearing, Flange
32	55815	Casting, Engine Mount	70	56115	Washer, Thrust
33	70328	Decal, Caution	71	56111	Tine Shaft & Gear Assembly
34	56180	Cotter Pin	72	426816	Screw, Soc. Hd, 1/4-20 x 3/4 In.
35	56215	Depth Rod Assembly	73	50221	Bearing, Flange
36	56123	Pin, Clevis	74	996418	Flatwasher
37	56213	Wheel	75	62893	Owner's Manual (Not Illustrated)
38	55776	Push Nut			

*Standard Hardware Items - May Be Purchased Locally.

Revised 3/12/86

§Contact Engine Manufacturer's authorized service dealer (See Engine Manual) for parts and warranty.