

Rear Tine Tillers

Operating Manual

Model Nos TMO-39083A
TMO-39084A



Montgomery Ward



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Instructions given with this symbol are for personal safety. Be sure to follow them.

NOTICE: A data plate with the model number and serial numbers of your unit is located on the tine shield. Record these numbers in the spaces provided on the back cover of this guide.

BEFORE YOU CALL SERVICE

Check Spark Plug Wire

- Firmly attached?
- Wire terminal clean?

Check Crankcase Oil Level

- Overfilled/underfilled?

Check Fuel Tank

- Fuel in tank?
- Fuel dirty or stale?
- If tank has been empty for a long period, fill tank completely.

Check Air Cleaner

- Clean?
- Choke plate stuck?
- Governor spring free to move?

Check Starting Instructions

- Read instruction manuals and labels for specific instructions.



This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester muffler is available at your nearest engine authorized service center.



To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR TILLERS

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future reference and for ordering replacement parts.
2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Read this Owner's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.
5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
6. Keep the area of operation clear of all persons, particularly small children and pets.
7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
8. Do not wear loose fitting clothing that could get caught on the tiller.
9. Do not start the engine unless the shift lever is in the neutral (N) position.
10. Do not stand in front of the tiller while starting the engine.
11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.
12. Never attempt to make a wheel or depth bar adjustment while the engine is running.
13. Do not leave the tiller unattended with the engine running.
14. Do not walk in front of the tiller while the engine is running.
15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, when the engine is running, or while the engine is still hot. Wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.
17. Be careful not to touch the muffler after the engine has been running. It is hot.
18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.
20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.
21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.
22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.
23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

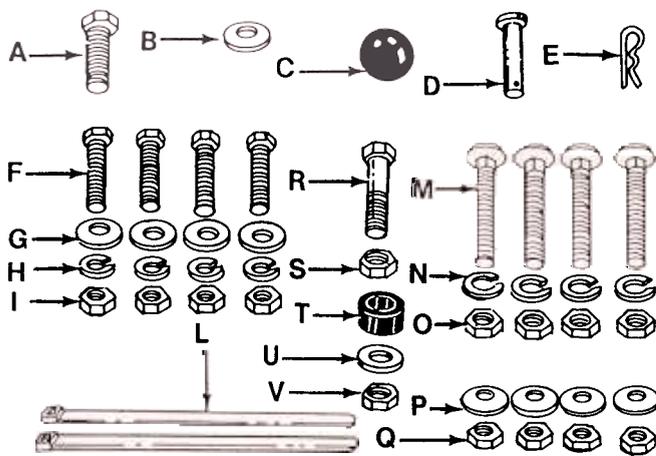


FIGURE 1.

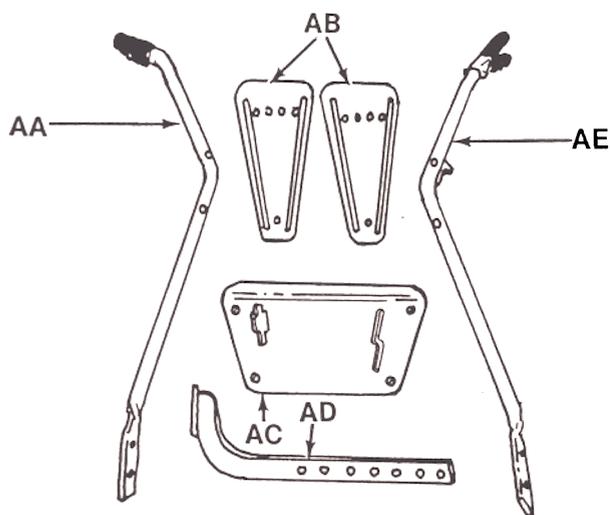


FIGURE 2.

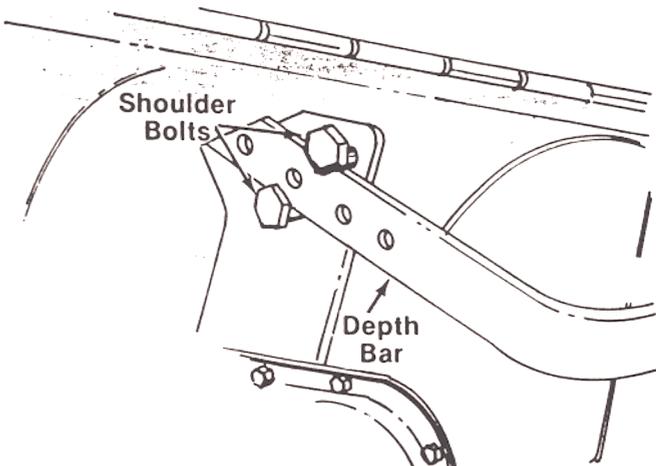


FIGURE 3.

ASSEMBLY



This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

Contents of Hardware Pack: (See Figure 1)

- A (1) Hex Bolt 3/8-16 x 3/4" Long
- B (1) Flat Washer 3/8" I.D.
- C (1) Ball Knob
- D (1) Clevis Pin
- E (1) Hairpin Cotter
- F (4) Hex Bolts 3/8-16 x 1.0" Long
- G (4) Belleville Washers 3/8" I.D.
- H (4) Lock Washers 3/8" I.D.
- I (4) Hex Nuts 3/8-16 Thread
- L (2) Cable Ties
- M (4) Carriage Bolts 5/16-18 x 1.75" Long
- N (4) Lock Washers 5/16" I.D.
- O (4) Hex Nuts 5/16-18 Thread
- P (4) Belleville Washers 5/16" I.D.
- Q (4) Hex Nuts 5/16-18 Thread
- R (1) Hex Bolt 1/4-28 x 1" Long
- S (1) Hex Lock Nut 1/4-28 Thread
- T (1) Rubber Washer
- U (1) Flat Washer 5/16" I.D. x 7/8" O.D.
- V (1) Hex Lock Nut 5/16-18 Thread
- W (1) Drive Clutch Lever

Loose Parts in Carton: (See figure 2)

- AA (1) Handle—R.H.
- AB (2) Side Shields
- AC (1) Handle Panel
- AD (1) Depth Bar Assembly
- AE (1) Handle—L.H.

1. Remove tiller, loose parts and hardware pack from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.

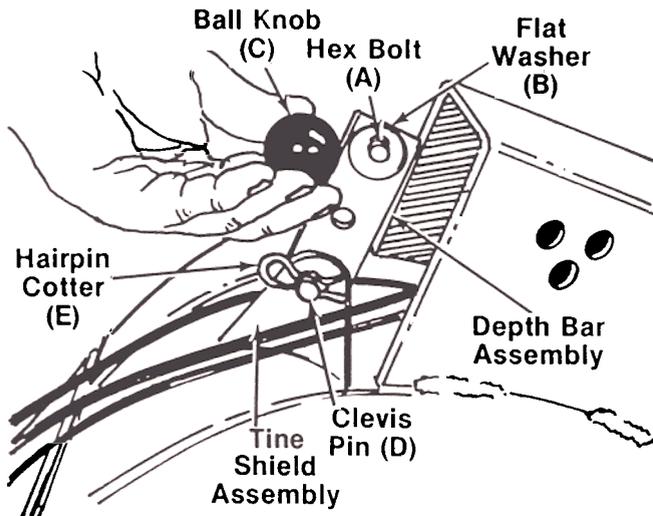
2. Extend the control cables attached to the tiller and place on the floor. Be careful not to bend or kink the cables.

DEPTH BAR INSTALLATION

1. Raise the tine shield hinge flap assembly. Insert the depth bar assembly (AD) between the two shoulder bolts and up through the tine shield assembly as shown in figure 3.

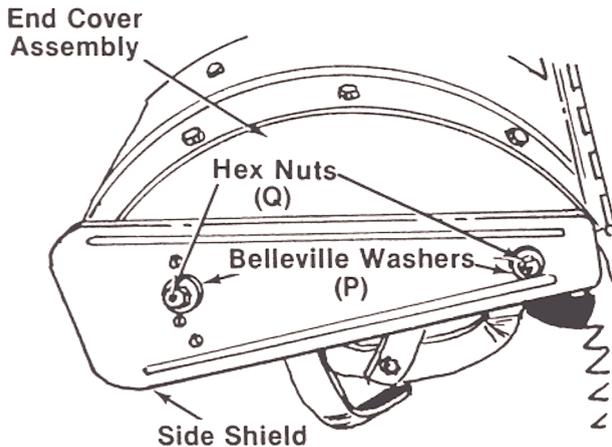


For clarity, figure 3 was taken with tiller raised on end. It is not necessary to raise the tiller.



2. Insert clevis pin (D) through the tine shield and depth bar assemblies. Secure with hairpin cotter (E). See figure 4.
3. Insert hex bolt (A) into the upper hole of the depth bar assembly. Place flat washer (B) onto the hex bolt and thread ball knob (C) onto the hex bolt. See figure 4. Tighten securely.

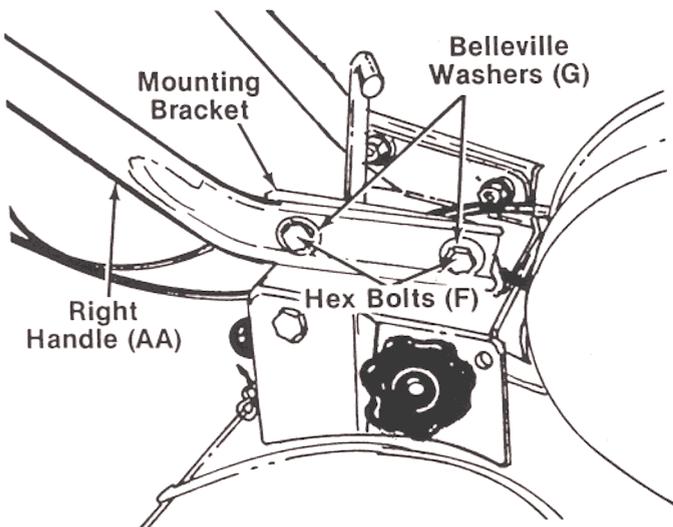
FIGURE 4.



SIDE SHIELD INSTALLATION

Mount side shields (AB) over the weld bolts on the end cover assemblies. Secure with belleville washers (P) and hex nuts (Q). See figure 5.

FIGURE 5.



HANDLE ASSEMBLY



Left and right is determined from the operator's position, standing behind the tiller.

1. Place right handle (AA) in position on the right side of the tiller. Insert hex bolts (F) through belleville washers (G), handle and mounting bracket. See figure 6. Secure with hex nuts (I) and lock washers (H).
2. Repeat step 1 for left handle (AE) on the left side of the tiller.

FIGURE 6

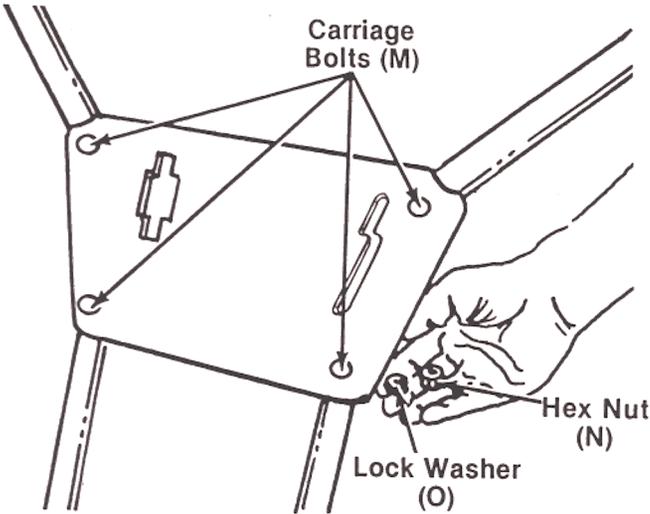


FIGURE 7.

3. Mount the handle panel (AC) to the handles. Secure with carriage bolts (M), lock washers — (N) and hex nuts (O). See figure 7.

NOTE

To align the holes in the handle panel and the handle, it may be necessary to loosen the cable brackets which are mounted to the back of the handles with self-tapping screws.

THROTTLE CONTROL INSTALLATION

Assemble the throttle control to the handle panel as follows.

1. Hold the throttle control assembly beneath the handle panel. Turn the control sideways and insert the lever up through the wide portion of the slot on the handle panel. See figure 8A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown — in figure 8B to slide it through the slot.

NOTE

The lever must be all the way to the back of the control housing as shown in figure 8B.

3. Push the control back into the slot in the handle panel and press in place. Be certain the control is locked securely into the slot.

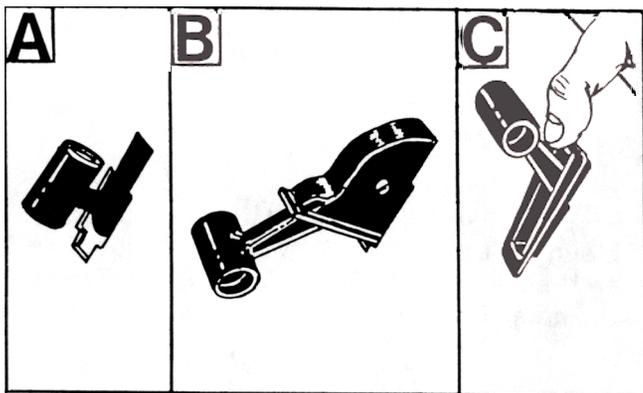


FIGURE 8.

ATTACHING THE TINE CLUTCH CONTROL CABLE

The clutch control cables are already attached to the unit. The tine clutch control cable has a “Z” fitting on the loose end. This cable attaches to the left handle.

NOTE

Both the drive clutch cables and the tine clutch cable are attached to springs, which are hooked to bolts. If either the cable or spring has come loose in shipping, it must be reassembled. Refer to page 18, reference numbers 2, 5, 11, 12, 15, 17 and 21.

1. Remove one nut and the lock washer from the end of the tine clutch cable (short cable). Slip the cable up through the slot on the cable bracket on the left handle. Rethread hex nut and lock washer on the end of the cable. See — figure 9. Do not tighten at this time.

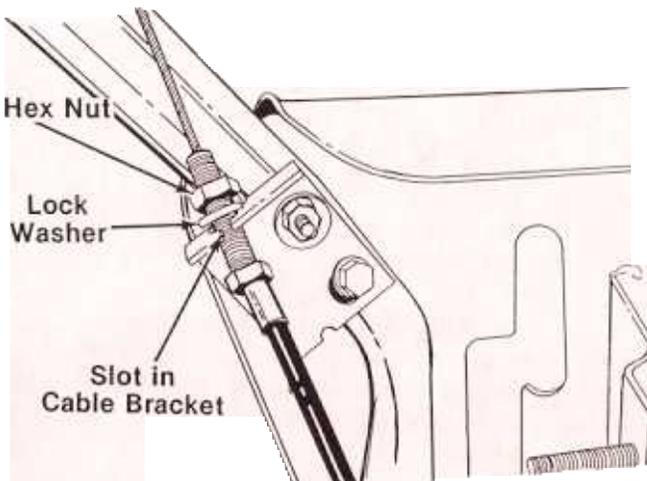


FIGURE 9.

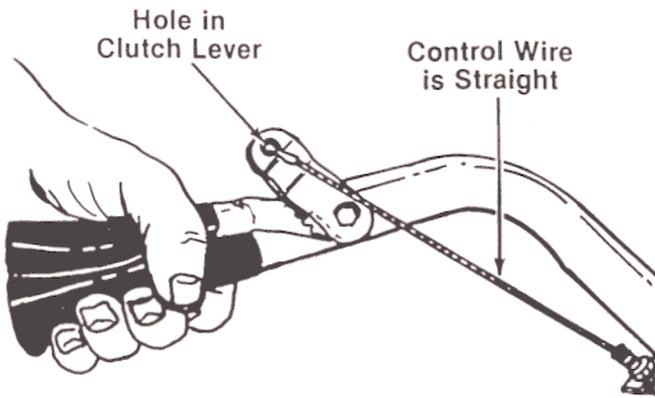


FIGURE 10.

2. Hook the "Z" end of tine clutch cable into the hole in tine clutch lever.
3. With the clutch lever released (in the "up" position), adjust the bottom nut at the cable bracket so there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket. Squeeze the clutch lever against the handle. The control wire —should now be straight. See figure 10.

NOTE

Do not overtighten control wire. Too much tension may cause it to break.

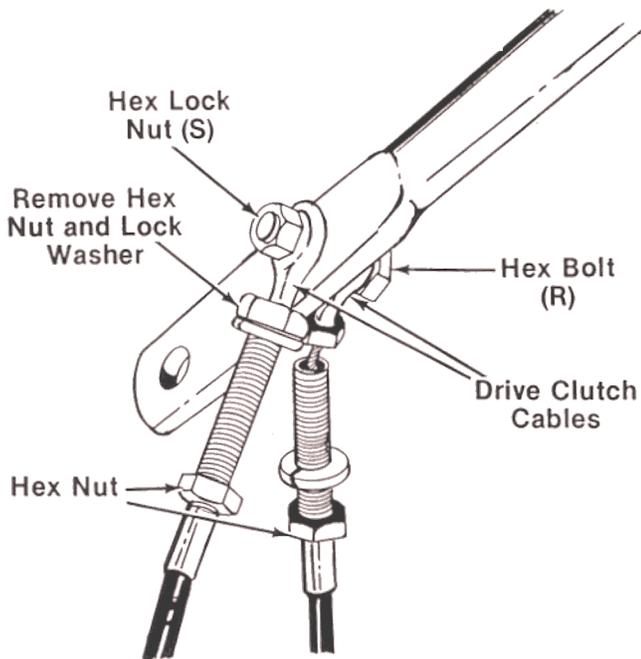


FIGURE 11.

ATTACHING THE DRIVE CONTROL CABLES

1. The drive clutch cables are already attached to the unit. Attach the other end of cables to the upper hole of drive clutch lever (W), one on each side, using hex bolt (R) and hex lock nut (S). See figure 11.
2. Remove one nut and the lock washer from the end of each drive clutch cable. Thread the other hex nut all the way down the cable as far as it will go as shown in figure 11.

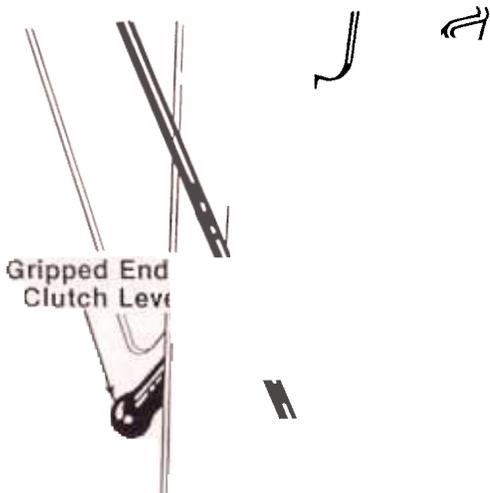


FIGURE 12.

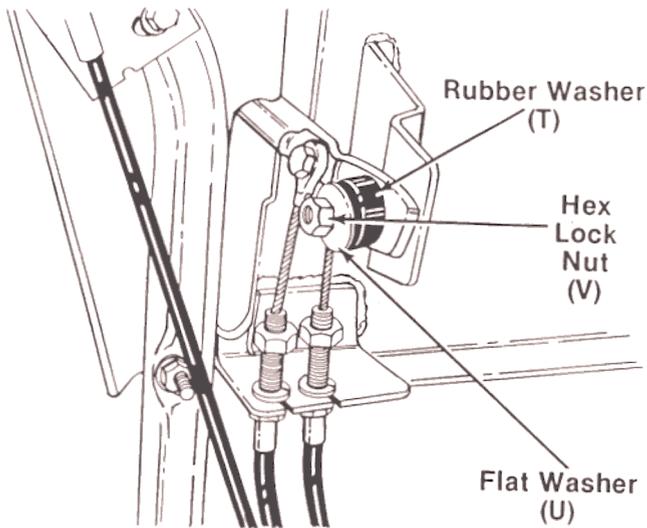


FIGURE 13.

6. Secure drive clutch lever to weld bolt with rubber washer (T), flat washer (U) and hex lock nut (V). See figure 13. Tighten hex nut.
7. Place the drive clutch lever in the neutral (N) position. Adjust the cables at the cable bracket so that the cables are tight, then tighten the hex nuts against the cable bracket.

→ IMPORTANT

Service engine with oil and gasoline before checking the drive clutch adjustment. Refer to the separate engine manual packed with your tiller.

8. Check the adjustment of the drive clutch as follows. Place the unit against a solid object (wall, fence, etc.). With the tine clutch lever released and the drive clutch lever in the neutral position, carefully start the engine. If the unit shows any signs of motion with the drive clutch lever in neutral, shut the engine off immediately and readjust the hex nuts at the cable bracket. Recheck the adjustment as necessary.
9. Secure the cables to the handles as with cable ties (L). Cut off excess ends of cable ties.

CONTROLS—Location and Use

Throttle Control

The throttle control lever is located on the right hand side of handle panel and controls the engine speed. See figure 14.

1. Start—Push throttle control lever forward (down) to start position.
2. Stop—Pull lever back (upward) to stop the engine.

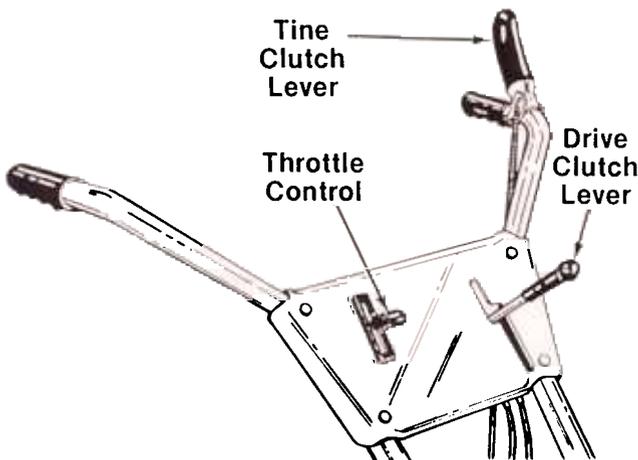


FIGURE 14.

Tine Clutch Lever

The tine clutch lever is located on the left handle. See figure 14.

Squeeze the lever down to engage the tines. Release the lever to disengage the tines.

Drive Clutch Lever

The drive clutch lever is located on the left hand side of handle panel. See figure 14.

The drive clutch lever may be placed in one of three positions.

1. Forward (F)—Move the drive clutch lever to the left and all the way forward to engage the drive mechanism to the wheels.
2. Neutral (N)—Move lever to the detent marked "N". Be certain lever is in neutral position when starting the engine.
3. Reverse (R)—Raise up on the handles to lift the tines out of the ground and pull the drive clutch lever back (upward) slowly to obtain reverse. Always use caution when using the reverse. When using reverse, if gear shift lever is released it will snap back into neutral (N).

OPERATION



Engine is shipped **without** oil.

BEFORE STARTING

1. Before operating tiller for the first time or if tines have been removed and reassembled for any reason, check to be certain the tines are assembled correctly. **The sharp edge of the tines must enter the soil first as shown in figure 15.** (Figure 15 illustrates the left hand tines, viewed from the left hand side of the tiller. Right hand tines rotate in the same direction as the left hand tines.)

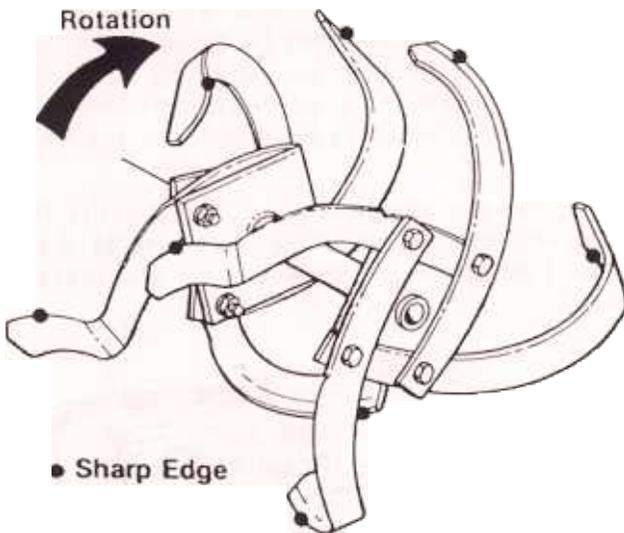


FIGURE 15.

2. Fill crankcase with oil as instructed in the separate engine manual packed with your unit.
3. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.

TO START ENGINE



BE SURE NO ONE IS STANDING IN FRONT OF THE TILLER WHILE THE ENGINE IS RUNNING OR BEING STARTED.

1. Place drive clutch lever in "Neutral" position. Be certain tine clutch lever is released.
2. Place the throttle control lever in "START" position.

3. Move choke lever to "CHOKE" position.



A warm engine may not require choking.

4. Stand at side of tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat as necessary.
5. After engine starts, move choke lever gradually to "OFF" position.

Refer to engine manual for additional engine information.

TO STOP ENGINE

1. Move throttle control to "OFF" position.
2. Disconnect spark plug wire and ground to prevent accidentally starting while equipment is unattended.

HOW TO USE YOUR TILLER



When operating the tiller for the first time, use the depth bar setting that gives 1 1/2 inches of tilling depth (second hole from the top). Refer to figure 16. Use slow speed only.

Tilling depth is controlled by the depth bar which can be adjusted to five different settings. See figure 16. Adjust the side shields as shown in figure 17, as you adjust the depth bar. Be certain spark plug wire is disconnected and grounded against the engine.

1. When using the tiller for the first time, use the second adjustment hole from the top (1 1/2" of tilling depth). See figure 16.

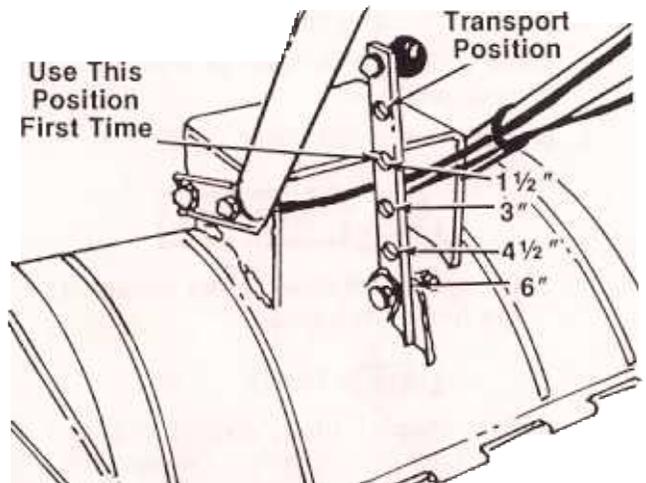


FIGURE 16.

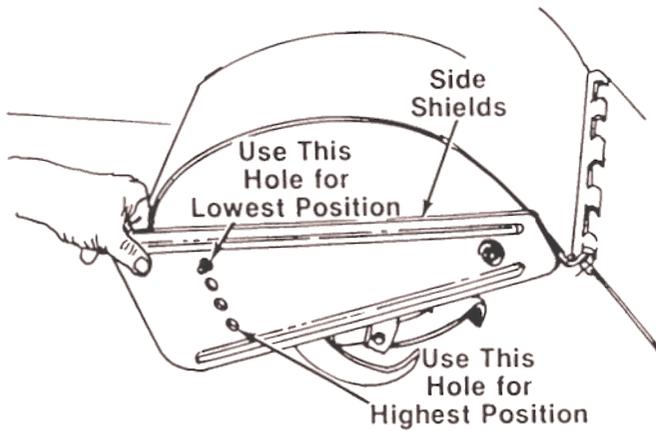


FIGURE 17.

2. When breaking up sod and for shallow cultivation, use the setting which gives 1½" of tilling depth (second hole from the top). Place the side shields in their lowest position. For further depth, raise the depth bar and side shields and make one or two more passes over the area.
3. When tilling loose soil, depth bar may be raised to its highest position (use bottom adjustment hole) to give the deepest tilling depth. Raise the side shields to their highest position.
4. To transport tiller, lower the depth bar (use top adjustment hole).

To adjust the depth bar, remove the clevis pin and hairpin cotter. See figure 16. Move the depth bar to the desired setting.

To adjust the side shields, remove the hex nut and belleville washer from the front and loosen the rear nut. See figure 17. Pivot the side shield to the desired position. Replace hex nut and belleville washer. Tighten securely.

To operate the tiller:

1. Select the depth bar setting.
2. Start engine as instructed on page 9.
3. Place drive clutch lever in either forward or reverse position.
4. Engage tine clutch lever.



Engage wheel drive before engaging the tine clutch lever.



To transport tiller, **do not** engage the tine clutch lever. Engage the wheel drive only.



Do not push down on the handles so that the wheels are lifted off the ground while the tine clutch is engaged, or the tiller could move backward and cause personal injury.

For best results, it is recommended the garden be tilled twice (lengthwise, then widthwise) to pulverize the soil.

ADJUSTMENTS

HANDLE ADJUSTMENT

The handle may be placed in one of nine different positions. The handle may be adjusted to one of three height positions, and also may be adjusted to be in line with the tiller, or swung to the left or right so the operator is not walking in the freshly tilled soil.

To adjust the handle height, remove the hand knob and locking pin shown in figure 18. Select one of the three adjustment holes and reassemble.

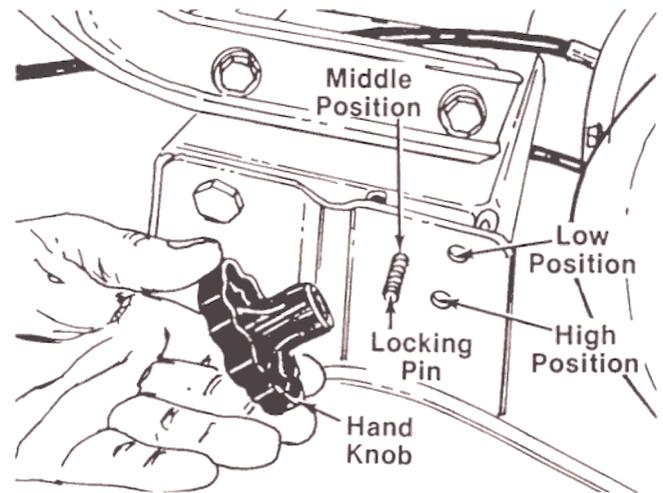


FIGURE 18.

To adjust the handle position from side to side, loosen the adjustment handle by turning it counterclockwise several turns. Pull the adjustment handle backward and pivot the tiller handle to desired position. Release and tighten the adjustment handle. See figure 19.

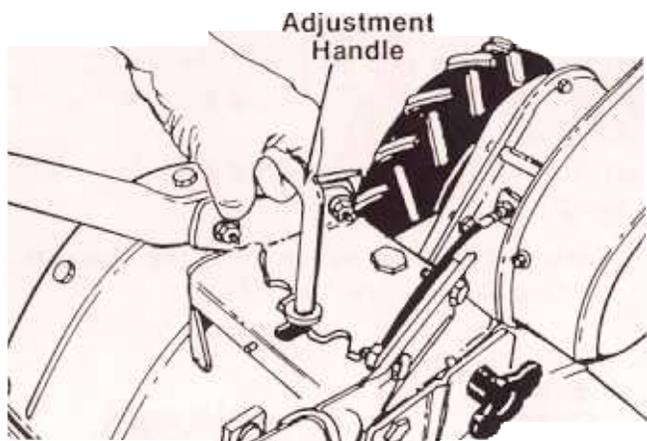


FIGURE 19.

BELT TENSION ADJUSTMENT

Tine Clutch

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. Adjustment is needed if the tines seem to hesitate while tilling, but the engine maintains the same speed.

To adjust, loosen the hex nuts at the cable bracket on the handle. See figure 20. With the clutch lever released as shown in figure 14, adjust the bottom nut so that there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket.



Do not overtighten control wire. Too much tension may cause it to break.

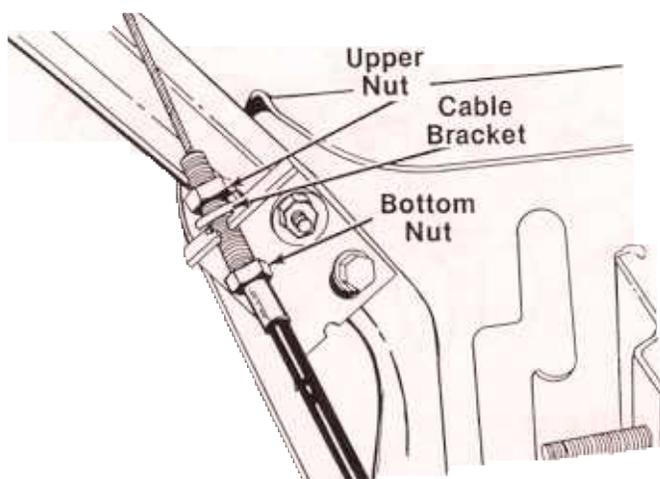


FIGURE 20.

Drive Clutch

If adjustment is needed, refer to steps 7 and 8 of Attaching the Drive Control Cables in Assembly Instructions.

CARBURETOR ADJUSTMENT



If any adjustments are made to the engine while the engine is running, (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Never make unnecessary adjustments. The factory settings are correct for most applications. If adjustments are needed, refer to the separate engine manual packed with your tiller.

LUBRICATION

Chain Cases—The chain cases are pre-lubricated and sealed at the factory. They require no checking unless the chain cases are disassembled. To fill with grease, lay the left half of the chain case on its side. Add 12 ounces of plastilube #0 grease to the tine chain case or 10 ounces to the wheel chain case. Assemble the right half to it. This grease can be obtained at your nearest authorized dealer. Order part number 737-0133.

Wheels—Lubricate the wheel bearings with a light oil after each fifteen hours of operation.

Tine Clutch Control—Lubricate the pivot points on the clutch levers and the cables at least once a season with light oil. The controls must operate freely in both directions.

Pivot Points—Lubricate all pivot points and linkages at least once a season with light oil.

MAINTENANCE



Disconnect the spark plug wire and ground it against the engine before performing any repairs or maintenance.



If for any reason the tines are removed from the tiller, be certain the tines are reassembled so that the sharp edge of the tines enter the soil first. Refer to item number one under "Operation."

ENGINE OIL

After the first two hours of operating a new engine, drain the oil from the crankcase while the engine is still hot and refill the crankcase with new oil; thereafter change the oil after every 25 hours of operation.

To avoid spilling gasoline on your lawn or driveway, plan to change the oil when the gasoline tank and carburetor are empty.

To change the oil, refer to the separate engine manual.

Check oil level every eight hours of operation. Be sure level is maintained full to point of overflowing.

AIR CLEANER

Under normal operating conditions, the air cleaner, located on top of the carburetor, must be serviced after every ten hours of use. Under extremely dusty operating conditions, the air cleaner must be serviced after every hour of operation.

To service the air cleaner, refer to the separate engine manual packed with your tiller.



IMPORTANT

Never run your engine without air cleaner completely assembled.

CLEANING ENGINE AND TINE AREA

Any fuel or oil spilled on the tiller should be wiped off promptly. Dirt, leaves and other debris must not be left to accumulate around the cooling fins or the engine or on any part of the tiller. Clean the underside of the tine shield after each use. The dirt washes off the tines easier if washed off immediately instead of after it dries.

SPARK PLUG

The spark plug should be cleaned and the gap reset every 25 hours of engine operation. Spark plug replacement is recommended at the start of each tiller season; check engine manual for correct plug type and gap specification.

BELT REPLACEMENT



NOTE

Do not use an off-the-shelf belt.

Your tiller has been engineered with belts made of special material (Kevlar Tensile) for longer life and better performance. They should not be replaced with an off-the-shelf belt.

If belt replacement is required, order belt or belts by part number from your nearest authorized dealer.

Part No. 754-0195 Tine Belt (1/2" x 54" Long)

Part No. 754-0190 Reverse Drive Belt (1/2" x 39" Long)

Part No. 765-0109 Forward Drive Belt (1/2" x 43" Long)

1. Remove belt cover by removing the four self-tapping screws. See figure 21.

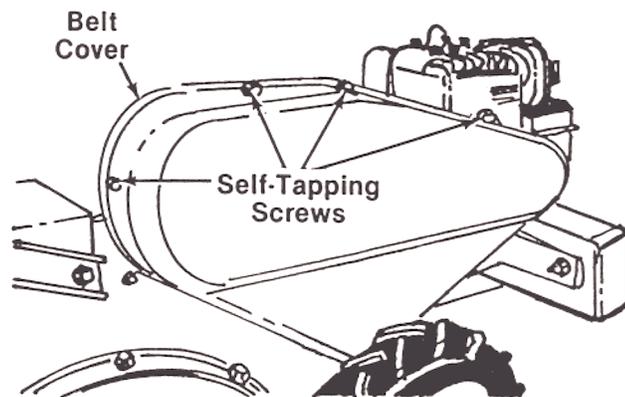


FIGURE 21.

2. To remove the tine belt, lift up on the idler pulley, and slip belt off tine chain case pulley as shown in figure 22. Remove belt from the two-step engine pulley.

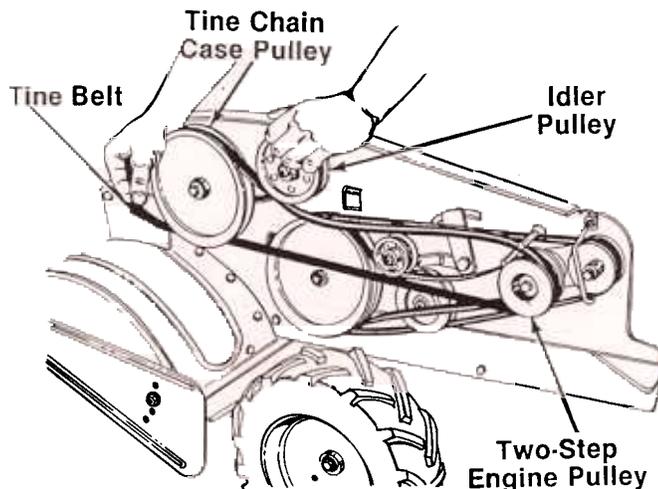


FIGURE 22.

3. To remove the reverse drive belt, lift up on small idler pulley as shown in figure 23. Slip belt off outside sheave of wheel chain case pulley. Then remove belt from two-step engine pulley.

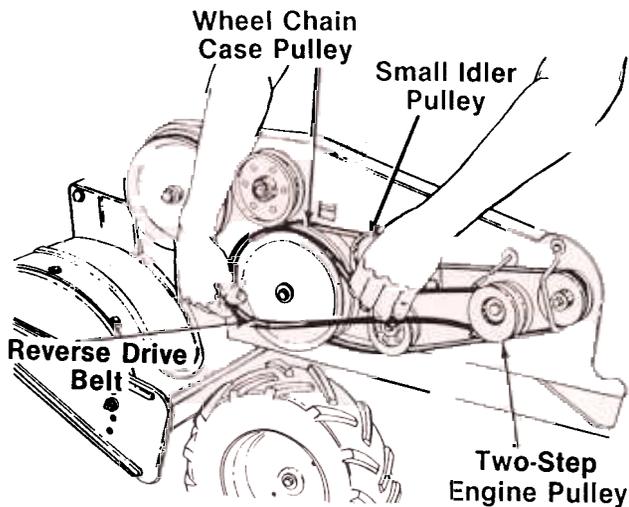


FIGURE 23.

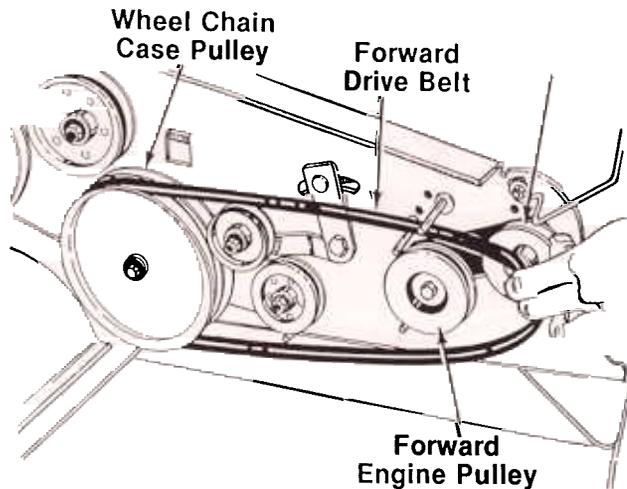


FIGURE 25.

4. To remove the forward drive belt, proceed as follows.

- A. Loosen (do not remove) the hex nut at the top of the wire belt keeper.
- B. Pull bottom of wire belt keeper out and then upward, pivoting it away from the forward engine pulley. See figure 24.

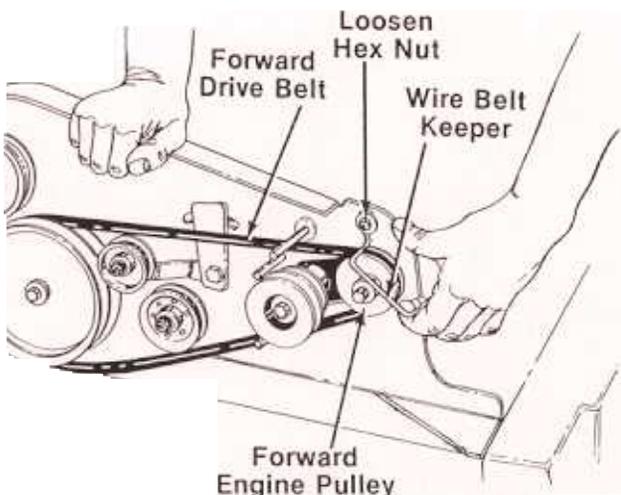


FIGURE 24.

- C. Lift belt off the forward engine pulley. See figure 25.
- D. Remove belt from inside sheave of wheel chain case pulley.

Reassemble new belts, following instructions in reverse order.

➡ IMPORTANT

When reassembling belts, be certain belts are routed around all belt keeper pins as shown in figure 26.

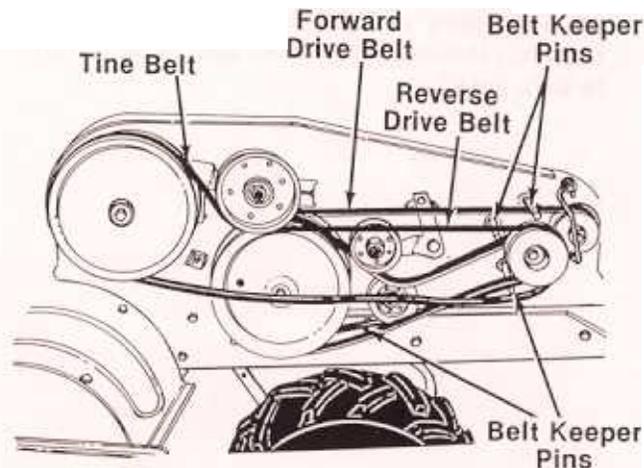


FIGURE 26.

➡ NOTE

Upon reassembly, refer to illustration on page 18 for correct assembly of wire belt guard for your model tiller.

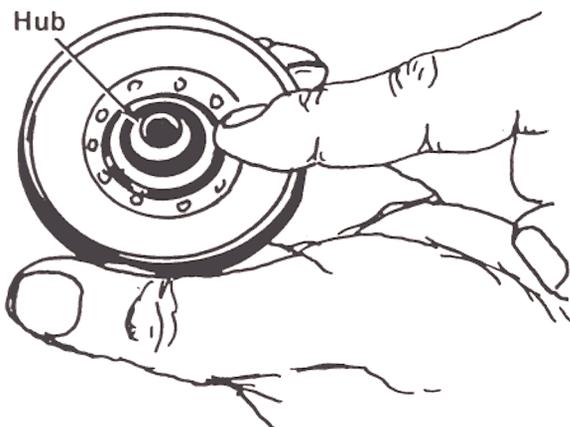


FIGURE 27.

NOTE

If the “V”-idler or flat idler pulleys are removed for any reason, be sure to install with hub side against the idler bracket. See figure 27.

OFF-SEASON STORAGE

If the tiller is to be inoperative for a period longer than 30 days, the following precautions are recommended. Keep your tiller in a weatherproof, dry area. If stored for over 30 days the following steps will protect the essential engine parts from gum deposits.

1. Working outdoors, drain all fuel from the fuel tank. Use a clean, dry cloth to absorb the small amount of fuel remaining in the tank, then run the engine until all fuel in carburetor is exhausted.



DO NOT DRAIN FUEL WHILE SMOKING, OR IF NEAR AN OPEN FIRE.

2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with clean new oil as instructed in the engine manual.
3. Protect the inside of the engine for storage as instructed in the separate engine manual packed with your unit.
4. Clean the exterior of engine and the entire tiller thoroughly.
5. Wipe tines with oiled rag to prevent rust.

NOTE

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any springs, bearings and cables.

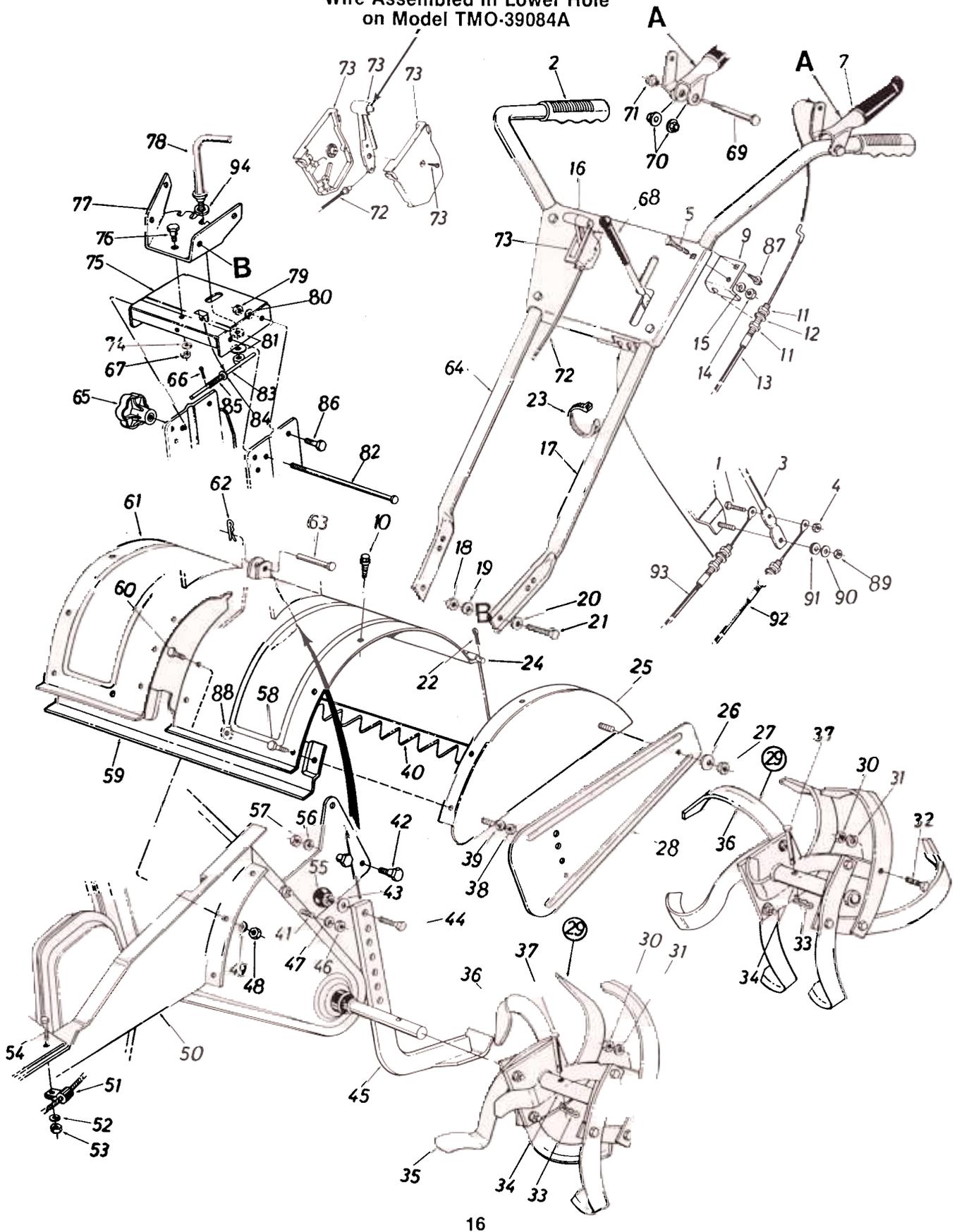
TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	SOLUTION
Engine fails to start	<ol style="list-style-type: none"> 1. Check fuel tank for gas. 2. Spark plug lead wire disconnected. 3. Faulty spark plug. 	<ol style="list-style-type: none"> 1. Fill tank if empty. 2. Connect lead wire. 3. Spark should jump gap between control electrode and side electrode. If spark does not jump, replace the spark plug.
Hard starting or loss of power	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Clean air cleaner as described in engine manual.
Engine overheats	<ol style="list-style-type: none"> 1. Carburetor not adjusted properly. 2. Air flow restricted. 3. Engine oil level low. 	<ol style="list-style-type: none"> 1. Adjust carburetor. See engine manual. 2. Remove blower housing and clean as described in the engine manual. 3. Fill crankcase with the proper oil.
Controls do not engage	Belts worn and/or stretched.	Make control cable adjustment (see adjustment section) or replace belts.

NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

TMO-39083A TMO-39084A

Wire Assembled in Upper Hole
on Model TMO-39083A
Wire Assembled in Lower Hole
on Model TMO-39084A

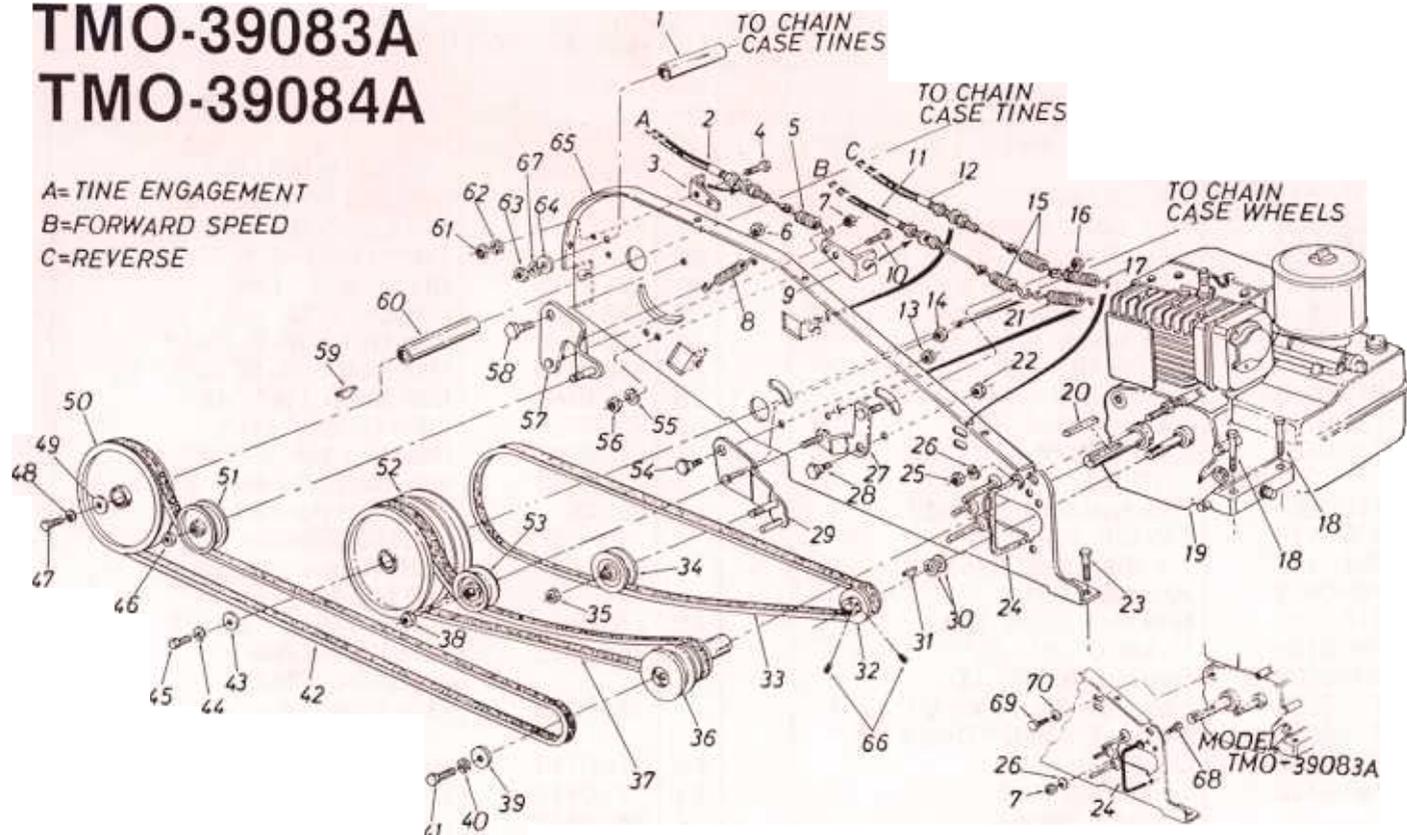


REAR TINE TILLERS
PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0299		Hex Bolt 1/4-28 x 1.0" Lg.*		46	712-0267		Hex Nut 5/16-18 Thd.*	
2	720-0180		Grip		47	736-0119		L-Wash. 5/16" I.D.*	
3	747-0517		Clutch Lever	N	48	712-0267		Hex Nut 5/16-18 Thd.*	
4	712-0117		Hex Cent. L-Nut 1/4-28 Thd.		49	736-0119		L-Wash. 5/16" I.D.*	
5	710-0458		Carr. Bolt 5/16-18 x 1.75"*		50	14975 —615		Frame Rail—L.H.	
7	784-0031		Clutch Grip Ass'y.—L.H.		51	726-0175		Clamp 5/16" Dia.	
9	15093		Clutch Cable Bracket		52	736-0119		L-Wash. 5/16" I.D.*	
10	710-0607		Hex Wash. S-Tap Scr. 5/16-18 x .62" Lg.		53	712-0267		Hex Nut 5/16-18 Thd.*	
11	712-0256		Hex Nut 5/16-24 Thd.		54	710-0118		Hex Bolt 5/16-18 x 3/4" Lg.*	
12	736-0119		L-Wash. 5/16" I.D.*		55	720-0165		Ball Knob 1 1/4" Dia.	
13	746-0535		Clutch Control Cable (Tines)		56	736-0169		L-Wash. 3/8" I.D.*	
14	712-0267		Hex Nut 5/16-18 Thd.*		57	712-0798		Hex Nut 3/8-16 Thd.*	
15	736-0119		L-Wash. 5/16" I.D.*		58	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
16	784-0133		Handle Panel Ass'y.	N	59	15393		Brkt. Reinforcement (TMO-39084A)	
17	749-0643		Handle—L.H.			784-0087		Brkt. Reinforcement (TMO-39083A)	N
18	712-0798		Hex Nut 3/8-16 Thd.*		60	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
19	736-0169		L-Wash. 3/8" I.D.*		61	784-0026		Tine Shield Ass'y. (TMO-39084A)	
20	736-0105		Bell-Wash. 3/8" I.D.			784-0085		Tine Shield Ass'y. (TMO-39083A)	N
21	710-0253		Hex Bolt 3/8-16 x 1.00" Lg.*		62	714-0149		Hairpin Cotter	
22	714-0507		Cotter Pin 3/32" Dia. x 3/4"*		63	711-0415		Clevis Pin 3/8" Dia.	
23	725-0157		Cable Tie		64	749-0642		Handle—R.H.	
24	747-0432		Tiller Flap Rod (TMO-39084A)		65	720-0195		Hand Knob	
	747-0501		Tiller Flap Rod (TMO-39083A)		66	714-0127		Cotter Pin 1/16" Dia. x .75"*	
25	14989		End Cover Ass'y.—L.H.		67	712-0375		Hex Cent. L-Nut 3/8-16 Thd.	
	14990		End Cover Ass'y.—R.H. (Not Shown)		68	720-0143		Grip	
26	736-0242		Bell-Wash. 5/16" I.D.		69	738-0575		Shoulder Bolt .375" Dia. x 1.37" Lg.	
27	712-0267		Hex Nut 5/16-18 Thd.*		70	741-0402		Hex Flange Plastic Bearing	
28	15390 —615		Side Shield		71	738-0561		Shoulder Nut 1/4-20 Thd.	
29	15397		L.H. Tine Ass'y. Comp. (TMO-39084A)		72	746-0502		Throttle Control Wire (TMO-39084A)	
	15398		R.H. Tine Ass'y. Comp. (TMO-39084A) (Not Shown)			746-0512		Throttle Control Wire (TMO-39083A)	
	784-0083		L.H. Tine Ass'y. Comp. (TMO-39083A)		73	831-0692		Throttle Control Box Ass'y.	
	784-0082		R.H. Tine Ass'y. Comp. (TMO-39083A) (Not Shown)		74	736-0219		Bell-Wash. .40" I.D. x 1.13"	
30	712-0241		Hex Nut 3/8-24 Thd.*		75	784-0022		Handle Pivot Bracket	
31	736-0169		L-Wash. 3/8" I.D.*		76	738-0281		Shoulder Bolt 5/8" Dia. x .165" Lg.	
32	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*		77	784-0019		Handle Mtg. Bracket	
33	714-0149		Hairpin Cotter		78	784-0025		Adj. Handle Ass'y.	
34	14978		Tine Adapter Ass'y. (TMO-39084A)		79	712-0375		Hex Cent. L-Nut 3/8-16 Thd.	
	784-0084		Tine Adapter Ass'y. (TMO-39083A)		80	736-0105		Bell-Wash. .40" I.D. x .88"	
35	742-0106		Tine 12" R.H.		81	736-0253		Bell-Wash. 1/2" I.D. x 1.00"	
36	742-0105		Tine 12" L.H.		82	711-0765		Lock Pin 5/16" Dia. x 8"	
37	711-0415		Clevis Pin 3/8" Dia.		83	784-0023		Lower Sliding Ass'y.	
38	712-0267		Hex Nut 5/16-18 Thd.*		84	736-0463		FI-Wash. .291" I.D. x .62"	
39	736-0119		L-Wash. 5/16" I.D.*		85	732-0145		Compression Spring .36" O.D. x 1.00" Lg.	
40	14979		Tine Shield Flap (TMO-39084A)		86	738-0147		Shoulder Bolt 1/2" Dia. x .170" Lg.	
	784-0088		Tine Shield Flap (TMO-39083A)	N	87	710-0599		Hex Wash. S-Tap Scr. 1/4-20 x .50" Lg.	
41	710-0736		Hex Bolt 5/16-18 x 1.0" Lg.*		88	736-0242		Bell-Wash. 5/16" I.D.	
42	738-0507		Shld. Bolt 1/2" Dia. x .426"		89	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
43	736-0117		FI-Wash. 3/8" I.D. x 5/8" O.D.		90	736-0159		FI-Wash. .344" I.D. x .87"	
44	710-0216		Hex Bolt 3/8-16 x 3/4" Lg.*		91	735-0126		Rubber Wash. .33 I.D. x .87"	
45	14992		Depth Bar Ass'y.		92	746-0572		Control Cable (Forward)	
					93	746-0571		Control Cable (Reverse)	
					94	736-0285		FI-Wash. .62" I.D. x 1.57"	

TMO-39083A TMO-39084A

A=TINE ENGAGEMENT
B=FORWARD SPEED
C=REVERSE



REAR TINE TILLERS

PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	750-0219		Spacer .375" I.D. x .500" O.D. x 2.00" Lg.		22	712-0266		Hex Cent. L-Nut 3/8-16 Thd.	
2	746-0535		Clutch Control Cable (Tines)		23	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
3	15093		Clutch Cable Bracket		24	747-0507		Belt Keeper (TMO-39084A)	
4	710-0118		Hex Bolt 5/16-18 x .75" Lg.*			747-0506		Belt Keeper (TMO-39083A)	
5	732-0387		Extension Spring .50" O.D. x 2.50" Lg.		25	712-0287		Hex Nut 1/4-20 Thd.*	
6	712-0266		Hex Cent. L-Nut 3/8-16 Thd.		26	736-0270		Bell-Wash. .265" I.D. x .75" O.D.	
7	712-0107		Hex Cent. L-Nut 1/4" Thd.		27	784-0131		Idler Brkt. Ass'y. (Wheel Reverse)	
8	732-0445		Extension Spring .50" O.D. x 1.55" Lg.		28	738-0147		Shld. Bolt .500" Dia. x .170	
9	15093		Clutch Cable Bracket		29	784-0127		Idler Brkt. Ass'y. (Wheel Forward)	
10	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		30	736-0326		FI-Wash. .510" I.D. x 1.0" O.D.	
11	746-0571		Clutch Control Cable 42" Lg. (Forward)		31	714-0131		#5 Hi-Pro-Key 1/8" x 5/8" Dia.	
12	746-0572		Clutch Control Cable 41" Lg. (Reverse)		32	756-0386		1/2" V-Pulley 2.25" O.D. x .503" I.D.	
13	712-0266		Hex Cent. L-Nut 3/8-16 Thd.		33	754-0109		"V"-Belt 1/2" x 43.0" Lg.	
14	712-0107		Hex Cent. L-Nut 1/4-20 Thd.		34	756-0166		"V"-Belt Idler 2.62" O.D.	
15	—		Springs (Part of Ref. No. 11 and 12)		35	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
16	712-0107		Hex Cent. L-Nut 1/4-20 Thd.		36	756-0465		1/2" "V"-Pulley Ass'y.	
17	732-0486		Extension Spring .41" O.D. x 2.05" Lg.		37	754-0190		"V"-Belt 1/2" x 39.0" Lg.	
18	710-0442		Hex Bolt 5/16-18 x 1.50" Lg.*		38	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
19	—		Engine		39	736-0231		FI-Wash. .344" I.D. x 1.125" O.D.	
20	714-0105		Sq. Key 3/16 x 1.00" Lg.		40	736-0119		L-Wash. 5/16" I.D.*	
21	732-0433		Extension Spring .50" O.D. x 2.75" Lg.		41	710-0117		Hex Bolt 5/16-24 x 1.00" Lg.*	
					42	754-0195		"V"-Belt 1/2" x 54.0" Lg.	

TMO-39083A

TMO-39084A

REAR TINE TILLERS

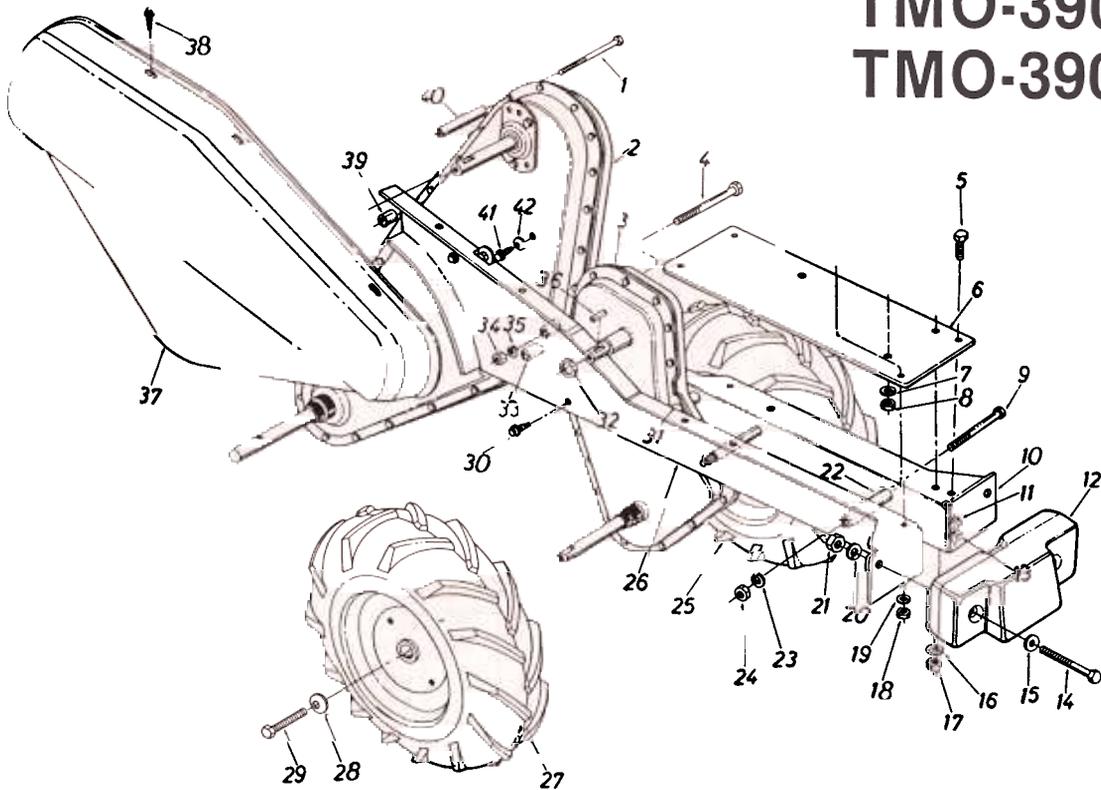
PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A (CONTINUED)

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
43	736-0176		FI-Wash. 1/4" I.D. x .93" O.D.		57	784-0129		Idler Brkt. Ass'y.—Tines	
44	736-0329		L-Wash. 1/4" I.D.*		58	738-0183		Shld. Bolt. .500" Dia. x .215" Lg.	
45	710-0412		Hex Bolt 1/4-28 x .75" Lg.					#61 Hi-Pro-Key 3/16" x 5/8" Dia.	
46	712-0116		Hex Ins. L-Nut 3/8-24 Thd.		59	714-0388		Spacer .647" I.D. x 2.75" Lg.	
47	710-0412		Hex Bolt 1/4-28 x .75" Lg.		60	750-0551		Hex Nut 5/16-18 Thd.*	
48	736-0329		L-Wash. 1/4" I.D.*		61	712-0267		L-Wash. 5/16" I.D.*	
49	736-0176		FI-Wash. 1/4" I.D. x .93" O.D.		62	736-0119		Hex Nut 5/16-18 Thd.*	
50	756-0389		FI-Pulley w/Flanges 6.0" O.D.		63	712-0267		FI-Wash. .406" I.D. x .750" O.D.	
51	756-0405		FI-Idler w/Flanges 3.75" O.D.		64	736-0185		Side Plate Ass'y.	
52	756-0464		Double FI-Pulley 5/8" I.D. x 6.0" O.D.		65			Set Scr. 1/4-28 x .25" Lg.	
53	756-0313		FI-Idler with Flanges 2.12" O.D.		66			L-Wash. 5/16" I.D.*	
54			Shld. Bolt .500" Dia. x .170" Lg.		67			Hex Bolt 1/4-20 x 1.25" Lg.* (TMO-39083A)	
55			L-Wash. 5/16" I.D.*		68			Hex Bolt 5/16-24 x .62" Lg. (TMO-39083A)	
56			Hex Nut 5/16-18 Thd.*		69	710-0237		Bell-Wash. 5/16" I.D.	
					70	736-0242			

*Common Hardware—May be purchased locally.
Important: **Do not** order by reference number (Ref. No.).
Note: Specifications subject to change without notice or obligation.

Part No.	Description
8406-08825	Hardware Pack
777-4522	Plastic Logo—Belt Cover
777-3727	Label—Handle Panel
788-0615	Red Spray Paint
788-0452	Black Spray Paint
770-4095	Operating Manual

TMO-39083A TMO-39084A

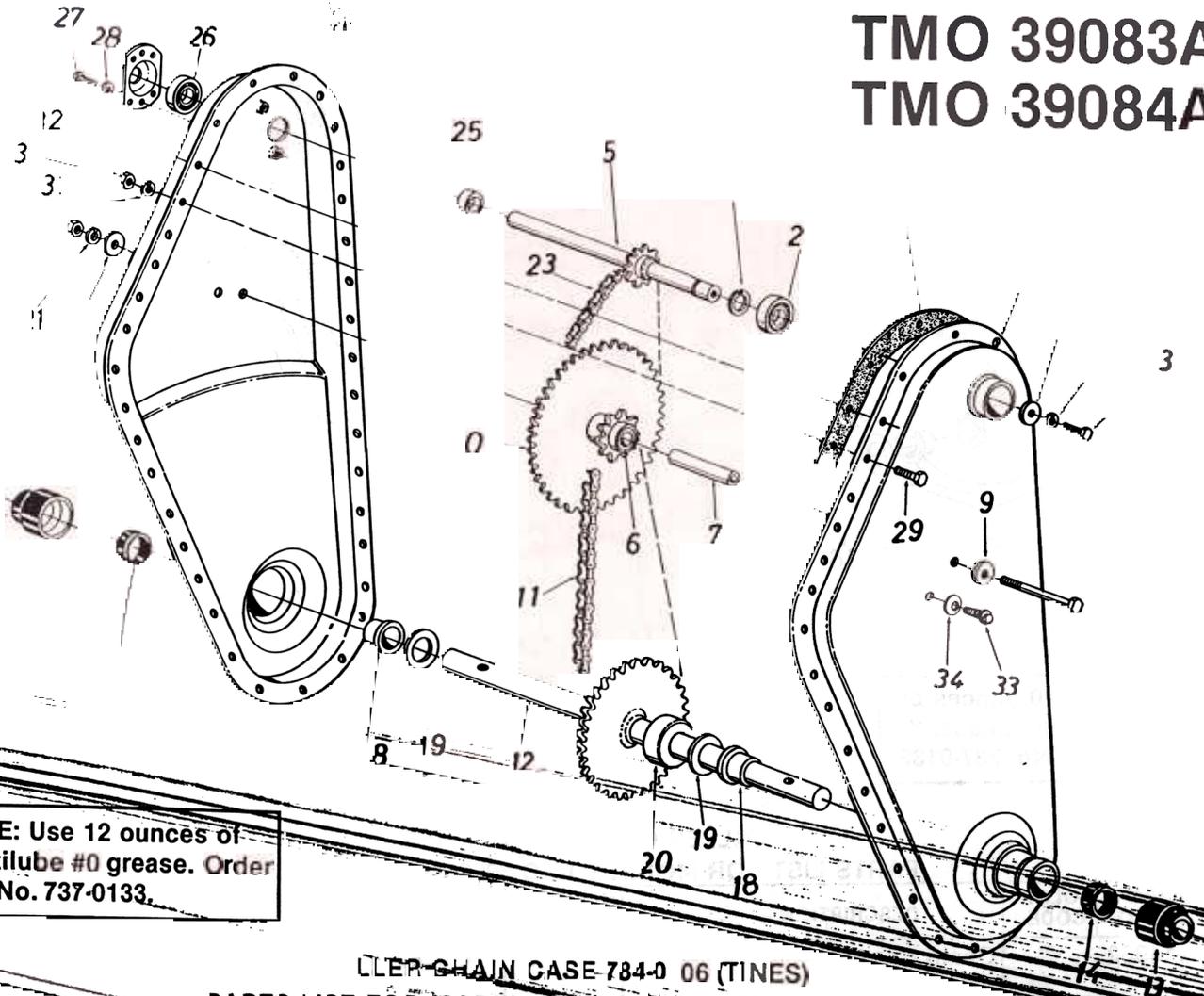


REAR TINE TILLERS

PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0189		Hex Bolt 5/16-18 x 3.00" Lg.*		25	734-1255		Wheel Ass'y. Comp. 12.5 x 3.5—L.H.	
2	784-0106		Chain Case Ass'y. Comp.—Tines		26	14974		Frame Rail—R.H.	
3	784-0104		Chain Case Ass'y. Comp.—Wheels (TMO-39084A)		27	734-1254		Wheel Ass'y Comp. 12.5 x 3.5—R.H.	
	784-0105		Chain Case Ass'y. Comp.—Wheels (TMO-39083A)		28	736-0242		Belleville Wash. .345" I.D. x .88" O.D.	
4	710-0189		Hex Bolt 5/16-18 x 3.00" Lg.*		29	710-0237		Hex Bolt 5/16-24 x .62" Lg.*	
5	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		30	710-0600		Hex Wash. Hd. SF-Tap Scr. 5/16-24 x .50" Lg.	
6	14973		Engine Mounting Plate		31	750-0470		Spacer .326" I.D. x .47" O.D. x .96" Lg.	
7	736-0119		L-Wash. 5/16" I.D.*		32	736-0256		Fl-Wash. .635" I.D. x 1.00" O.D.	
8	712-0267		Hex Nut 5/16-18 Thd.*		33	750-0470		Spacer .326" I.D. x .47" O.D. x .96" Lg.	
9	710-0830		Hex Bolt 3/8-24 x 3.00" Lg.*		34	712-0267		Hex Nut 5/16-18 Thd.*	
10	14975		Frame Rail—L.H.		35	736-0119		L-Wash. 5/16" I.D.*	
11	736-0119		L-Wash. 5/16" I.D.*		36	714-0122		Sq. Key 3/16 x .75" Lg.	
12	723-0340		Weight 35#		37	14980		Belt Cover	
13	712-0267		Hex Nut 5/16-18 Thd.*		38	710-0599		Hex Wash. Hd. SF-Tap Scr. 1/4-20 x .50" Lg.	
14	710-0786		Hex Bolt 1/2-13 x 4.00" Lg.*		39	750-0470		Spacer .326" I.D. x .47" O.D. x .96" Lg.	
15	736-0326		Fl-Wash. .510" I.D. x 1.0" O.D.		40	750-0219		Spacer .375" I.D. x .500" O.D. x 2.00" Lg.	
16	736-0119		L-Wash. 5/16" I.D.*		41	710-0599		Hex Wash. Hd. SF-Tap Scr. 1/4-20 x .50" Lg.	
17	712-0267		Hex Nut 5/16-18 Thd.*		42	736-0270		Bell-Wash. .265" I.D. x .75" O.D.	
18	712-0267		Hex Nut 5/16-18 Thd.*						
19	736-0119		L-Wash. 5/16" I.D.*						
20	736-0921		L-Wash. 1/2" I.D.*						
21	712-0206		Hex Nut 1/2-13 Thd.*						
22	750-0579		Spacer .38" I.D. x .62" O.D. x 2.18" Lg.						
23	736-0169		L-Wash. 3/8" I.D.*						
24	712-0241		Hex Nut 3/8-24 Thd.*						

TMO 39083A TMO 39084A

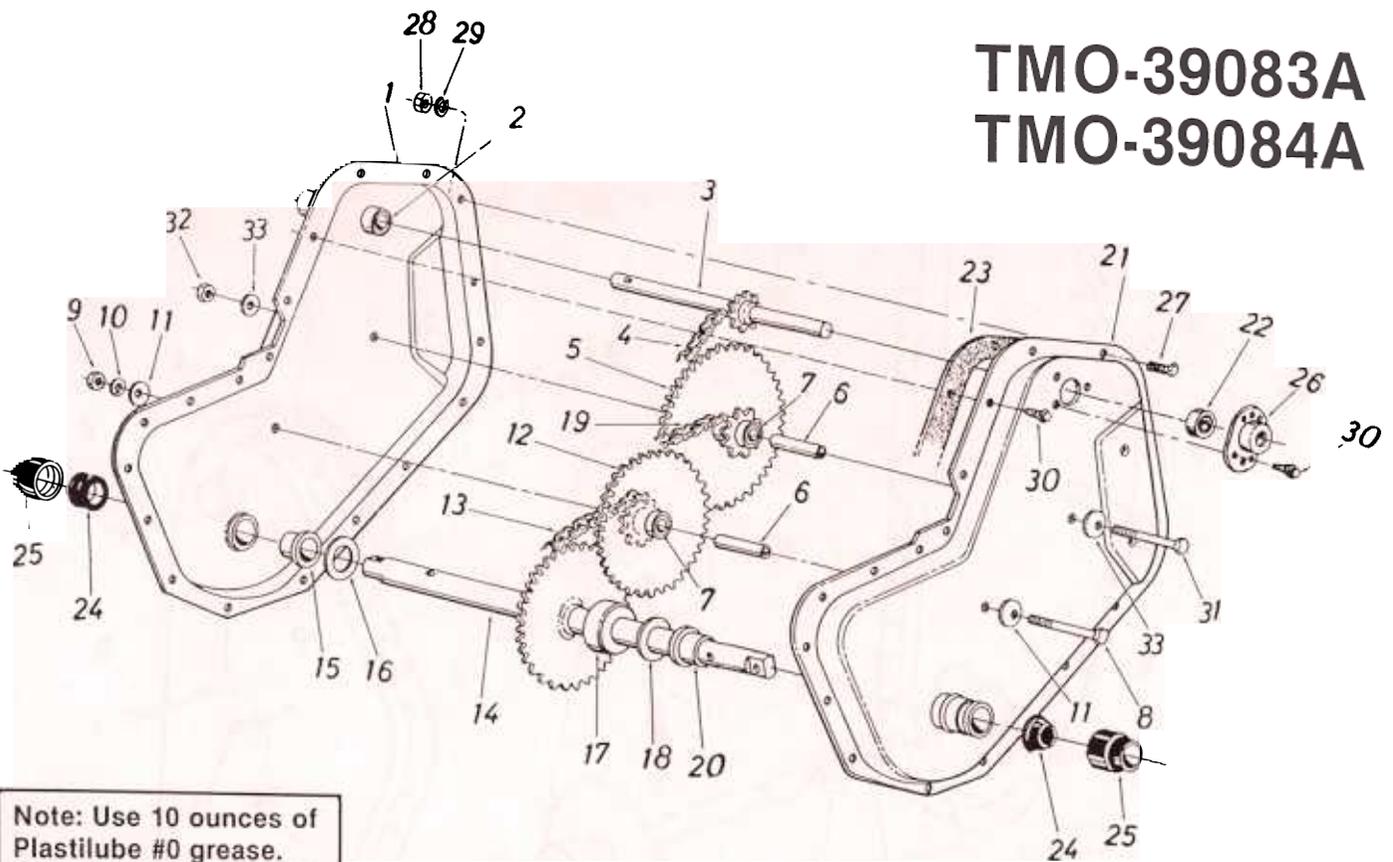


NOTE: Use 12 ounces of Plastilube #0 grease. Order Part No. 737-0133.

TILLER CHAIN CASE 784-0 06 (TINES) PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	736-0176		Fl-Wash. 1/4" I.D. x .93" O.D. x .120		19	736-0163		Fl-Thrust-Wash 1.0" I.D. x .03 Thk.	
2	736-0329		L-Wash. 1/4" I.D.*		20	750-0570		Step Spacer	
3	710-0513		Hex Bolt 1/4-28 x .62" Lg. w/Patch		21	736-0169		L-Wash. 3/8" I.D.*	
4	716-0131		External Snap Ring—5/8" Dia.		22	712-0711		Hex Nut 3/8-24 Thd.*	
5	784-0139		Input Shaft Ass'y.		23	713-0327		#35 Chain 3/8" Pitch x 52 Links Endless	
6	741-0304		Bearing 5/8" I.D. x 3/4" O.D. x 1.860" Lg.		24	05034		Bearing Housing 1.38" I.D. Spacer	
7	750-0275		Sprocket Hub Tubing 3/8" I.D. x 5/8" O.D. x 1.90		25	750-0471		Ball Bearing .625" I.D. x 1.38" O.D. x .437	
8	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*		26	741-0155		Hex Wash. SF-Tap Scr. 1/4-20 x .50" Lg.	
9	736-0258		Fl-Wash. 3/8" I.D. x 1.25" O.D. x .10		27	710-0599		L-Wash. 1/4" I.D.*	
10	713-0331		Sprocket Ass'y.		28	736-0329		Hex Bolt 5/16-18 x .75" Lg.*	
11	713-0323		#50 Chain 5/8" Pitch x 46 Links Endless		29	710-0118		Hex Nut 5/16-18 Thd.*	
12	14986		Tine Shaft Ass'y.		30	712-0267		L-Wash. 5/16" I.D.*	
13	731-0487		Dust Cup		31	736-0119		Hex Wash. SF-Tap Scr. 1/4-20 x .50" Lg.	
14	721-0175		Seal Ring Single Lip, Springless		32	710-0599		Hex Wash. Hd. Tap Scr. 1/4-20 x .38" Lg.	
15	14984		Ass'y. Tiller Housing—R.H.		33	710-0653		Bell-Wash. .265" I.D. x .75" O.D.	
16	721-0170		Gasket		34	736-0270		Grease—Plastilube #0 (12 oz.)	
17	14985		Ass'y. Tiller Housing—L.H.			737-0133			
18	731-0374		Flange Brg. 1.00" I.D.						

TMO-39083A TMO-39084A



Note: Use 10 ounces of
Plastilube #0 grease.
Order Part No. 737-0133.

TILLER CHAIN CASE (WHEELS) PARTS LIST FOR MODELS TMO-39083A AND TMO-39084A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	14962		Chain Case Half Ass'y.— R.H.		18	736-0265		Fl-Wash. .88" I.D. x 1.50" O.D. x .03	
2	748-0154		Bearing 5/8" I.D. x .813" O.D. x 1.31" Lg.		19	713-0267		#420 Chain 1/2" Pitch x 30 Links Endless	
3	784-0136		Input Shaft Ass'y.	N	20	741-0227		Flange Bearing	
4	713-0325		Chain #35—3/8" Pitch x 44 Links		21	15797		Chain Case Half Ass'y.— L.H.	
5	713-0316		Sprocket and Hub Ass'y.		22	741-0155		Bearing	
6	750-0351		Bearing Inner Axle		23	721-0156		Gasket	
7	741-0228		Sleeve Brg. 5/8" I.D. x 3/4" O.D. x 1.50		24	721-0157		Seal	
8	710-0369		Hex Bolt 3/8-24 x 2.50" Lg.*		25	731-0486		Dust Cup	
9	712-0116		Hex Ins. L-Nut 3/8-24 Thd.		26	05034		Bearing Housing	
10	736-0169		L-Wash. 3/8" I.D.*		27	710-0195		Hex Bolt 1/4-28 x 5/8" Lg.	
11	736-0219		Bell-Wash. .41" I.D. x 1.13" O.D. x .03		28	712-0138		Hex Nut 1/4-28 Thd.	
12	713-0330		Sprocket & Hub Ass'y. 9T-22T		29	736-0329		L-Wash. 1/4" I.D.*	
13	713-0326		#420 Chain 1/2 Pitch x 28 Links Endless		30	710-0599		Hex Wash. S-Tap Scr. 1/4-20 x .50" Lg.	
14	784-0126		Wheel Shaft Ass'y. (TMO-39084A)	N	31	710-0378		Hex Bolt 5/16-18 x 2.5" Lg.	
	784-0125		Wheel Shaft Ass'y. (TMO-39083A)		32	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
15	741-0227		Flange Bearing		33	736-0159		Fl-Wash. 5/16" I.D.	
16	736-0265		Fl-Wash. .88" I.D. x 1.5" O.D. x .03			737-0133		Grease—Plastilube #0 (10 oz.)	
17	750-0354		Spacer 7/8" I.D. x 1 3/4" O.D. x .68" Lg.			784-0104		Wheel Chain Case Comp. (TMO-39084A)	
						784-0105		Wheel Chain Case Comp. (TMO-39083A)	

Heavy Duty Rear Tine Garden Tiller Attachments Available for All-Season Use

- 31-0110 8" Furrower Opener
- 31-0144 "V"-Bar Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes: "V"-Bar Frame, 4-Point Cultivating Tines, Hiller/Furrower, Depth Gauge Wheels (Pair).
- 31-0145 Depth Stake Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes: 8" Furrower Opener, 15" Sweep Cultivator, 32" Leveling Rake, Extra Depth Stake.
- 31-0178 Adapter

To use these attachments on the tiller, it is necessary to:

1. Remove the tine shield flap assembly.
2. Remove the depth bar assembly (except when using the 8" furrower opener).

Note: Attachments are available through your local dealer or from the factory:
Agri-Fab Inc., 303 W. Raymond Street, Sullivan, Illinois 61951 (217) 728-4334.

SERVICE NATIONWIDE

Montgomery Ward



HOW TO OBTAIN REPLACEMENT PARTS AND SERVICE

The merchandise you have purchased from us has been carefully engineered and manufactured under Wards rigid quality standards and should give you satisfactory and dependable operation. However, like all mechanical merchandise, it may occasionally require adjustment, replacement parts or maintenance. Should you ever need technical assistance or parts, please contact or write your nearest Wards Retail Store, Central Service Center, Catalog Store or Catalog House.

Provide the following:

1. Model, serial number and all of the other data shown on the model plate.
2. The date and the Wards branch from which you purchased your merchandise.
3. State briefly the trouble you are having.
4. Also give the part number or numbers as shown in the parts list that came with the product.

Replacement Parts will be made available at current prices. If requested, prices will be quoted in advance when not listed.

If you order parts by mail, you will pay the transportation charges from the shipping point.

UNIT MODEL NO. _____

UNIT SERIAL NO. _____

ENGINE MODEL NO. _____

TYPE NO. _____

CODE NO. _____