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LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manu acturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.



This unit is equipped with an internal comt ustion 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 appl cable 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

 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 and regular reference and for ordering replacement parts.

A

- 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.
- 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, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and 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.
- Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
- 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.
- 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 3.

This unit is shipped WITHOUT GAS-OLINE 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.
- (4) Hex Nuts 3/8-16 Thread
- L (3) 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) Self-Tapping Screw (Not Shown)
- -Loose Parts in Carton: (See figure 2)
 - V (1) Handle-R.H.
 - W (2) Side Shields
 - X (1) Handle Panel
 - Y (1) Depth Bar Assembly
 - Z (1) Handle-L.H.

This owners manual covers various models of tillers. The units illustrated may vary from your unit. Follow the instructions which pertain to your unit.

- 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

 Raise the tine shield hinge flap assembly. Insert the depth bar assembly (Y) 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.

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- 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 (W) over the weld bolts on the end cover assemblies. Secure with belleville washers (P) — and hex nuts (Q). See figure 5.

FIGURE 5.



FIGURE 6—Model 405 Shown.

HANDLE ASSEMBLY



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

 Place right handle (V) 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).

NOTE

On models 402 and 404, handle height is determined by the three mounting holes. Refer to adjustment section.

2. Repeat step 1 for left handle (Z) on the left side of the tiller.



FIGURE 7.



FIGURE 8.



FIGURE 9.

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



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 selftapping 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.
- 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.



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.
- 4. Secure the throttle control to the handle panel using the self-tapping screw (R). See figure 8D.

ATTACHING THE CLUTCH CONTROL CABLES

The drive clutch and tine clutch control cables are already attached to the unit. There is a tag attached to the drive clutch cable (cable which appears to be shorter). This cable attaches to the right handle.

Both the drive clutch cable and the tine clutch cable are attached to springs, which are hooked to weld bolts as shown in figure 9. If either the cable or spring has come loose in shipping, it must be reassembled. Refer to page 18, reference numbers 1, 2, 89 and 98.

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

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FIGURE 10.

- 2. Hook the "Z" end of drive clutch cable into the hole in drive clutch lever.
- 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.



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



- 4. Attach the tine clutch cable (cable which appears to be longer) to the tine clutch lever on the left handle in the same manner as the drive clutch cable.
- Secure all the cables to the right handle as shown
 — in figure 11 with cable ties (L). In addition, secure
 the throttle cable directly to the tiller frame with
 cable tie.

FIGURE 11.

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 12.

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



FIGURE 12.

Tine Clutch Lever

The tine clutch lever is located on the left hand e. See figure 12.

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 right I andle. See figure 12.

Squeeze the lever down to engage the wheels. F elease the lever to disengage the wheels.

The drive clutch lever may be locked into position for easier handling. See figure 13.

- 1. Squeeze the lever down and press the locking pin up through the lever.
- 2. Release the lever until it catches on the locking pin.
- 3. To release the locking pin, squeeze the lever down and then release the lever.



FIGURE 13.

OPERATION



Engine is shipped without oil.

BEFORE STARTING

 Before operating tiller for the first time or f 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 14. (Figure 14 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 14.

- 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 the throttle control lever in START position.
- 2. Move choke lever to CHOKE position.

NOTE

A warm engine may not require choking.

- 3. Stand at side of tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat as necessary.
- 4. 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.
- 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 $1\frac{1}{2}$ inches of tilling depth (second hole from the top). Refer to figure 15. Use slow speed only.

Tilling depth is controlled by the depth bar which can be adjusted to five different settings. See figure 15. Adjust the side shields as shown in figure 16, as you adjust the depth bar. Be certain spark plug wire is disconnected and grounded against the engine.

 When using the tiller for the first time, use the second adjustment hole from the top (11/2" of tilling depth). See figure 15.



FIGURE 15.



FIGURE 16.

- 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.
- 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 15. 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 16. 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 8.
- 3. Engage drive and tine clutch levers.



the tine clutch lever.



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

WARNING

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 (Models 402 and 4(4)

The handle may be adjusted to one of three height positions. See figure 17. To adjust the handle:

- 1. Loosen the bolts on the ends of the hancle.
- 2. Remove the hex bolts from the handle wh ch are closest to the operator.
- 3. Pivot the handle to the desired position and replace the hardware. Tighten securely.



FIGURE 17. HANDLE ADJUSTMENT (Model 405)

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. Model 405 Only.

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. Model 405 Only.

BELT TENSION ADJUSTMENT—Drive and Tine Clutches

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 12, 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.

NOTE

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



FIGURE 20.

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 dissassembled. 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.

Wheel Drive—The wheels are driven by pawl and ratchet drive. Lubricate the pawl and ratchet at least twice a season with a silicone type lubricant.

Figure 21 shows the left hub cap. To take off the hub caps, remove the two hex nuts and lock washers on the inside of the wheel. Remove the hub cap. A cotter pin holds the ratchet in place. The pawls must pivot freely. Clean with a solvent, replace any broken or worn parts, and lubricate.

The pawls and ratchet on the hub cap are assembled facing the opposite way.

After reassembling, test the operation of the drive without the engine running. Engage the drive clutch (on the right handle) and pull the tiller backwards. Both wheels should lock. Push the tiller forward and both wheels should rotate.



The wheels will "click" when the tiller is pushed forward.



FIGURE 21.

Tine and Wheel Drive Controls—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.

IMPORTANT

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 wir ed 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 gar reset every 25 hours of engine operation. Spark plug re placement is recommended at the start of each tiller season; check engine manual for correct plug type and gap specification.

BELT REPLACEMENT



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. 754-0253 1/2" x 43" Short Belt

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

Tine (Long) Belt Removal

1. Remove belt cover by removing the four selftapping screws. See figure 22.



FIGURE 22.

- 2. Lift the belt from under the flat idler pulley. See figure 23.
- 3. Remove the wire belt guard. See figure 23.



FIGURE 23.





- 4. Loosen, but do not remove, the hex bolt on the rear engine pulley. See figure 24.
- 5. Slip the engine pulley out until belt can be removed.
- 6. Install new belt.

Drive (Short) Belt Removal

- 1. Remove the tine belt as instructed in the previous section.
- 2. Remove the hex bolt, lock washer and flat washer from the rear engine pulley. See figure 24. Slip the rear engine pulley off the engine.
- 3. Loosen the two set screws on the front engine pulley. See figure 25.



Do not lose the square key on the engine shaft.



FIGURE 25.

- 4. Remove the lock nut on the "V"-idler pulley. See figure 25.
- 5. Slide the front engine pulley and "V"-idler pulley out as shown in figure 26.



FIGURE 26.

6. Remove the belt and install the new belt. Be sure the belt is routed around the guide pins as shown in figure 27.



Belt must be between the "V"-idler pulley and the idler bracket. See figure 27.



FIGURE 27.



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



FIGURE 28.



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 28.

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.

- 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.
- 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.

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

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SYMPTOM	POSSIBLE CAUSE(S)	SOLUTION
Engine fails to start	 Check fuel tank for gas. Spark plug lead wire disconnected. Faulty spark plug. 	 Fill tank if empty. Connect lead wire. Spark should jump gap between control electrode and side elec- trode. If spark does not jump, replace the spark plug.
Hard starting or loss of power	 Spark plug wire loose. Dirty air cleaner. 	 Connect and tighten spark plug wire. Clean air cleaner as described in engine manual.
Engine overheats	 Carburetor not adjusted properly. Air flow restricted. Engine oil level low. 	 Adjust carburetor. See engine manual. Remove blower housing and clean as described in the engine manual. Fill crankcase with the proper oil.
Controls do not engage	Belts worn and/or stretched.	Make control cable adjustment (see adjustment section) or replace belt.

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



Models 402, 404 and 405 PARTS LIST FOR MODELS 402, 404 AND 405 ROTARY TILLERS

REF	PART	COLÓR	PARTS LIST FOR MODELS						
NO		CODE	DESCRIPTION	PART	REF.	PART NO.	COLOR		NEW PART
1	711-0750		Clevis Pin 1/4" Dia. x 2.25"		49			L-Wash. 5/16" I.D.*	1 411
2			Grip		50	14975	463	Frame Rail—L.H.	
3	732-0442		Compression Spring .33"		51	726-0175		Clamp 5/16" Dia.	
1			O.D. x 1.2″ Lg.		52	736-0119		L-Wash. 5/16" I.D.*	
4	726-0106		Cap Speed Nut 1/4" Rod		53	712-0267		Hex Nut 5/16-18 Thd.*	
5	710-0458		Carr. Bolt 5/16-18 x 1.75" *		54	710-0118			
7	784-0031		Clutch Grip Ass'y.—L.H.		55	720-0165		Hex Bolt 5/16-18 x 3/4" Lg.*	
			(Tines)		56	736-0169		Ball Knob 1¼" Dia.	
9	15093		Clutch Cable Bracket		57			L-Wash. 3/8" I.D.*	
10	710-0607					712-0798		Hex Nut 3/8-16 Thd.*	
1.0	/10-000/		Hex Wash. S-Tap Scr. 5/16-18		58	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
11	712-0256		x .62" Lg.		59	15393		Brkt. Reinforcement (404, 405)	
			Hex Nut 5/16-24 Thd.			784-0087		Brkt. Reinforcement (402)	
12	736-0119		L-Wash. 5/16" I.D.*		60	710-0118		Hex Bolt 5/16-18 x .75″ Lg.*	
13	746-0484		Clutch Control Cable		61	784-0026		Tine Shield Ass'y. (405)	
14	712-0267		Hex Nut 5/16-18 Thd.*			14987		Tine Shield Ass'y. (404)	
15	736-0119		L-Wash. 5/16" I.D.*			784-0085		Tine Shield Ass'y. (402)	
16	784-0036		Handle Panel		62	714-0149		Hairpin Cotter	
17	749-0639		Handle—L.H. (402, 404)		63	711-0415		Clevis Pin 3/8" Dia.	
	749-0637	1	Handle—L.H. (405)		64	749-0636		Handlo DH (405)	
18	712-0798		Hex Nut 3/8-16 Thd.*		0-	749-0638		HandleR.H. (405)	
19	736-0169		L-Wash. 3/8" I.D.*		65			Handle—R.H. (402, 404)	
20	736-0105		Bell-Wash. 3/8" I.D.			720-0195		Hand Knob (405)	
21	710-0253				66	714-0127		Cotter Pin 1/16" Dia. x .75"	
			Hex Bolt 3/8-16 x 1.00" Lg.*					Lg.* (405)	
22	714-0507		Cotter Pin 3/32" Dia. x 3/4"*		67	712-0375		Hex Cent. L-Nut 3/8-16 Thd.	
23	725-0157		Cable Tie					(405)	
24	747-0432		Tiller Flap Rod (404, 405)		68	784-0029		Clutch Grip Ass'yR.H.	
	747-0501	-	Tiller Flap Rod (402)					(Wheels)	
25	14989	[]	End Cover Ass'y.—L.H.		69	738-0560		Shoulder Bolt .38" Dia. x	
	14990		End Cover Ass'y.—R.H.					1.53" Lg.	
		1	(Not Shown)		70	741-0402		Hox Elongo Directio Descina	
26	736-0242	1	Bell-Wash. 5/16" I.D.		71	738-0561		Hex Flange Plastic Bearing	
27	712-0267		Hex Nut 5/16-18 Thd.*		72	1		Shoulder Nut 1/4-20 Thd.	
28	15390		Side Shield		12	746-0502		Throttle Control Wire (404,	
29	15397					740.0540		_ 405)	
20	15597	1	.H. Tine Ass'y. Comp.		-	746-0512		Throttle Control Wire (402)	
	15000		(404, 405)		73	831-0692		Throttle Control Box Ass'y.	
	15398	1	R.H. Tine Ass'y. Comp.		74	736-0219		Bell-Wash40" I.D. x 1.13"	1
		.	(404, 405) (Not Shown)	[O.D. (405)	
	784-0083	Į L	H. Tine Ass'y. Comp. (402)		75	784-0022		Handle Pivot Bracket (405)	
	784-0082	F	R.H. Tine Ass'y. Comp. (402)		76	738-0281		Shoulder Bolt 5/8" Dia. x	
			(Not Shown)					.165" Lg. (405)	
30	712-0241	ŀ	lex Nut 3/8-24 Thd.*		77	784-0019		Handle Mtg. Bracket (405)	
31	736-0169		-Wash. 3/8" I.D.*		78	784-0025			
32	710-0191		lex Bolt 3/8-24 x 1.25" Lg.*		79	712-0375	11	Adj. Handle Ass'y. (405)	
33	714-0149	l.	lairpin Cotter		13	, 12-03/3		Hex Cent. L-Nut 3/8-16 Thd.	
34	14978		ine Adapter Ass'y. (404, 405)		00	706 0105		(405)	
04	784-0084		The Adapter Ass y. $(404, 405)$	1	80	736-0105		Bell-Wash40" I.D. x .88"	
35	742-0106	ין ד	ine Adapter Ass'y. (402)					O.D. (405)	
			ine 12" R.H.		81	736-0253		Bell-Wash. 1⁄2" I.D. x 1.00"	1
36	742-0105		ine 12" L.H.					O.D. (405)	
37	711-0415		levis Pin 3/8" Dia.		82	711-0765	1	Lock Pin 5/16" Dia. x 8" (405)	
38	712-0267		lex Nut 5/16-18 Thd.*		83	784-0023	1	Lower Sliding Ass'y. (405)	
39	736-0119	L	-Wash. 5/16" I.D.*		84	736-0463		Fl-Wash291" I.D. x .62"	
40	14979	T	ine Shield Flap (404, 405)				1'	O.D. (405)	
40		Т	ine Shield Flap (402)		85	732-0145	1	Compression Spring .36"	ĺ
40	784-0088							O.D. x 1.00" Lg. (405)	
40		·	lex Bolt 5/16-18 x 1 0″ I a * ⊥						1
41	784-0088 710-0736	·	lex Bolt 5/16-18 x 1.0" Lg.*		86	739-0147		Shouldon Dalk 1/ " Di	
41 42	784-0088 710-0736 738-0507	F	hld. Bolt 1/2" Dia. x .426"		86	738-0147	5	Shoulder Bolt 1/2" Dia. x	
41 42 43	784-0088 710-0736 738-0507 736-0117	F F	hld. Bolt ½" Dia. x .426" I-Wash. 3/8" I.D. x 5/8" O.D.					Shoulder Bolt ½" Dia. x .170" Lg. (405)	
41 42 43 44	784-0088 710-0736 738-0507 736-0117 710-0216	L S F F	hld. Bolt ½" Dia. x .426" I-Wash. 3/8" I.D. x 5/8" O.D. lex Bolt 3/8-16 x 3/4" Lg.*			738-0147 710-0599		Shoulder Bolt ½" Dia. x .170" Lg. (405) Hex Wash. S-Tap Scr. ¼-20	
41 42 43 44 45	784-0088 710-0736 738-0507 736-0117 710-0216 14992	F S F F D	hld. Bolt ½" Dia. x .426" I-Wash. 3/8" I.D. x 5/8" O.D. lex Bolt 3/8-16 x 3/4" Lg.* hepth Bar Ass'y.		87	710-0599	ł	Shoulder Bolt ½" Dia. x .170" Lg. (405) Hex Wash. S-Tap Scr. ¼-20 x .50" Lg.	
41 42 43 44 45 46	784-0088 710-0736 738-0507 736-0117 710-0216 14992 712-0267	T O F T D T	hld. Bolt ½" Dia. x .426" I-Wash. 3/8" I.D. x 5/8" O.D. lex Bolt 3/8-16 x 3/4" Lg.* lepth Bar Ass'y. lex Nut 5/16-18 Thd.*		87 88	710-0599 736-0242	ł	Shoulder Bolt ½" Dia. x .170" Lg. (405) Hex Wash. S-Tap Scr. ¼-20 x .50" Lg.	
41 42 43 44 45	784-0088 710-0736 738-0507 736-0117 710-0216 14992	L O F L D H L	hld. Bolt ½" Dia. x .426" I-Wash. 3/8" I.D. x 5/8" O.D. lex Bolt 3/8-16 x 3/4" Lg.* Pepth Bar Ass'y.		87 88 89	710-0599	ŀ	Shoulder Bolt ½" Dia. x .170" Lg. (405) Hex Wash. S-Tap Scr. ¼-20	

Models 402, 404 and 405



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Models 402, 404 and 405

PARTS LIST FOR MODELS 402, 404 AND 405 ROTARY TILLERS

	PART	COLC		NEV	REF	. PART	COLOR	DESCRIPTION	NEW
-	NO. 1 746-0484		Clutch Control Cable	PAR			CODE		PART
			(Wheels)		57	750-0442	2	Spacer 3/4" I.D. x 1.12" O.D. x 1.56" Lg.	
			Hex Cent. L-Nut 1/4-20 Thd.		58	756-0396		¹ / ₂ " "V"·4L Pulley 3/4" I.D.	
			Hex Cent. L-Nut 3/8-16 Thd.* Sq. Key 3/16" Dia. x .75		50	710 0117		× 2.59″ O.D.	
5			Engine		59 60	710-0117		Hex Bolt 5/16-24 x 1.0" Lg.	
6			Hex Bolt 5/16-18 x 1.50" La.*		61	736-0343		L-Wash. 5/16" I.D.* Fl-Wash. 5/16" I.D. x 1.25"	
			Hex Bolt 5/16-18 x .75" Lg.*					O.D. (402, 404, 405)	
1 2	711-0494		Spacer .51" I.D. x 3/4" O.D.		62	712-0116		Hex L-Nut 3/8-24 Thd.	
10	714-0131		x .39" Lg. (404, 405) Hi-Pro Key #5 Woodruff		63 64	754-0195		"V"Belt 1/2" x 54" Lg.	
11			Set Scr. ¼-28 x .25″ Lg.		04	750-0405		Fl-Idler Pulley 3.75" O.D. x 3/8" I.D.	
12			Hex Bolt 5/16-18 x 3.0" Lg.*		65	736-0176	ļ	FI-Wash25" I.D. x .93" O.D.	
13	14981		Chain Case Ass'y. Comp.— Tines					x .120	
14	14963		Chain Case Ass'y. Comp		66	736-0329		L-Wash. 1/4" I.D.*	
			Wheels (404, 405)		68	710-0412		Hex Bolt ¼-28 x .75" Lg.* Split Pulley 6" Dia. x 5/8" I.D.	
	784-0102		Chain Case Ass'y Comp.		69	714-0388		Hi-Pro Key	
16	14973	463	Wheels (402)		70	750-0472		Spacer	
17		403	Engine Mounting Plate L-Wash. 5/16" I.D.*		71	738-0183		Shld. Bolt 1/2" Dia. x .210" Lg.	
18	712-0267		Hex Nut 5/16-18 Thd.*		72 73	712-0267 736-0119		Hex Nut 5/16-18 Thd.*	
19			Hex Bolt 3/8-24 x 3.0" Lg.*		74	14991		L-Wash. 5/16" I.D.* Side Plate Ass'y.	
20 21	14975 723-0340		Frame Rail—L.H.		75	732-0445		Ext. Spring .50" O.D. x 1.55" Lo	
22	710-0786		Counter Weight Hex Bolt 1/2-13 x 4.0" Lg.*		76	14971	463	Idler Bracket Ass'y.—Tines	
23	736-0326		Fl-Wash. ½" I.D. x 1.0" O.D.		77	756-0387		Pulley 6" Dia. x 5/8" I.D.	
28	736-0921		L-Wash. 1/2" I.D.*		79	754-0109		Hex Bolt ¼-28 x 1.50" Lg.* "V"Belt ½" x 43" Lg.	
29 30	712-0206		Hex Nut 1/2-13 Thd.*					(404, 405)	
30	750-0579		Spacer 3/8" I.D. x 5/8" O.D.			754-0207		"V"Belt 1⁄2" x 42" Lg. (402)	
31	736-0169		x 2.18" Lg. L-Wash. 3/8" I.D.*		80 81	712-0117		Hex Cent. L-Nut 1/4-28 Thd.*	
32	712-0241		Hex Nut 3/8-24 Thd.*		82	756-0166 756-0386		"V"-Idler Pulley 2-5/8″ O.D. ½″ "V"-Pulley 2¼″ O.D. x	
33	734-1129		Comp. Wheel Ass'vL.H.					.50" I.D.	
34 37	14974 734-1130		Frame Rail-R.H.		83	738-0147		Shld. Bolt 1/2" Dia. x .160" Lo.	
38	741-0227		Comp. Wheel Ass'y.—R.H. Flange Brg. 7/8" I.D. x		84 85	14969		Idler Bracket Ass'y-Wheels	
			1.12" Lg.		60	732-0445		Ext. Spring .50" O.D. x 1.55"	
39	748-0292		Ratchet Wheel	·		732-0444		Lg. (404, 405) Ext. Spring .50" O.D. x 1.97"	
40 41	10622 748-0291		Nylon Spring					Lg. (402)	
42	14967		Pawl .44″ I.D. Wheel Cover		86	712-0287		Hex Nut 1/4-20 Thd.*	
43	710-0874		Hex Bolt 5/16-18 x 1.25" La.*		87 88	736-0270 15399		Bell-Wash. ¼" I.D. Belt Keeper Ass'y.	
44	712-0329		Special Hex Nut 5/16-24 Thd.		89	732-0387	.	Ext. Spring	
45 46	714-0470		Cotter Pin 1/8" Dia. x 1.25"*		90	710-0118		Hex Bolt 5/16-18 x .75"* (405)	
40	750-0214		Fl-Wash. 7/8" I.D. x 1-3/8" O.D. x .06		91	15093		Clutch Cable Brkt. (405)	ľ
48	710-0600		Hex Wash. Self-Tap Scr.		92 93	736-0119 712-0267		_ock Washer 5/16" I.D.* (405)	
	750 0		5/16-24 x .50″ Lg.		94	747-0507		Hex Nut 5/16-18 Thd.* (405)	
49	750-0470		Spacer 5/16" I.D. x 16 Ga.		95	710-0106		Hex Bolt 1/4-20 x 1.25" Lg.*	
52	14980	447	x .96″ Lg. Belt Co v er		~	740.000	ĺ	(402)	
53	710-0599		Hex Wash. S-Tap Scr. 1/4-20		96	710-0237		Hex Bolt 5/16-24 x .62" Lg.*	
			x .50″ Lg.		97	736-0242	ſ	(402) Bell-Wash. 5/16" I.D. (405)	
54	710-0653		Hex Wash. S-Tap Scr. 1/4-20		98	746-0484	Ċ	Clutch Control Cable (Tines)	
55	736-0270		x 3/8″ Lg. Bell-Wash. ¼″ I.D.					(402, 404)	
56	750-0219		Spacer 3/8" I.D. x ½" O.D.			746-0535	C	Clutch Control Cable (Tines)	
			x 2.0" Lg.					(405)	

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PARTS LIST FOR MODELS 402, 404 AND 405 TILLER CHAIN CASE 14981 (TINES)

REF.		COLOR CODE	DESCRIPTION	NEW PART		PART NO.	COLOR CODE	DESCRIPTION	NEW PART
NO.	NO.	CODE	FI-Wash. ¼" I.D. x .93" C .D.		17	14985		Ass'y. Tiller Housing—L.H.	
1	736-0176		x .120		18	731-0374		Flange Brg. 1.00" I.D.	
2	736-0329		L-Wash. ¼″ I.D.*		19	736-0163		FI-Thrust Wash. 1.0" I.D. x	
3	710-0513		Hex Bolt 1/4-28 x .62" Lg.					.03 Thk.	
10	/ 10-0310		w/Patch		20	750-0570		Step Spacer	
4	716-0131		External Snap Ring-5/8"		21	736-0169		L-Wash. 3/8" I.D.*	
1 -	/ 10 0101		Dia.		22	712-0711		Hex Nut 3/8-24 Thd.*	
5	04956		Input Shaft Ass'v.		23	713-0327	1	#35 Chain 3/8" Pitch x 52	1 1
6	741-0304		Bearing 5/8" I.D. x 3/4" O D.					Links Endless	
Ĭ			x 1.860" Lg.		24	05034		Bearing Housing 1.38" I.D.	
7	750-0275		Sprocket Hub Tubing 3/8'		25	750-0471	1	Spacer	
1		1	1.D. x 5/8" O.D. x 1.90		26	741-0155		Ball Bearing .625" I.D. x 1.38" O.D. x .437	
8	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*			740 0500		Hex Wash. SF-Tap Scr. 1/4-20	
9	736-0258		FI-Wash. 3/8" I.D. x 1.25'		27	710-0599		x .50" Lg.	
			O.D. x .10		00	736-0329		L-Wash. ¼″ I.D.*	
10	713-0331		Sprocket Ass'y.		28 29	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
11	713-0328		#50 Chain 5/8" Pitch x 40		30	712-0267		Hex Nut 5/16-18 Thd.*	
			Links Endless		31	736-0119		L-Wash. 5/16" I.D.*	
12	14986		Tine Shaft Ass'y.		32	710-0599		Hex Wash. SF-Tap Scr. 1/4-20	1
13	731-0487		Dust Cup		102	/ 10-0000		x .50" Lg.	
14	721-0175		Seal Ring Single Lip,		_	737-0133	3	Grease-Plastilube #0	
			Springless					(12 oz.)	
15	14984		Ass'y. Tiller Housing—R.H.						
16	721-0170		Gasket						



*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list. (463—Top Flite Red)

When ordering parts, if color or finish is important use the appropriate color code shown above. (e.g. Top Flite Red—04820 (463).)

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 Wr eels (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, Ex ra 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 {" 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.

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quant ty of each part required.

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing Engines—Gasoline, Briggs & Stratton or Tecumseh Lauson.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be mad >.

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ALABAMA	BIRMINGHAM 2625 4th Ave. S 35233
Auto Electric & Carburetor Co.	2625 4th Ave. S 35233
ALABAMA Auto Electric & Carburetor Co ARKANSAS Sutton's Lawn Mower Shop CALIFORNIA Billious	NORTH LITTLE ROCK
Sutton's Lawn Mower Shop	. 5301 Roundtop Drive
Sutton's Lawn month energy	Box 368, Rt. 4
	PORTERVILLE
Billious	75 North D Street 93257
COLOBADO	DENVER
Spitzer Industrial Products Co.	6601 N.
Opilizer interes	Washington St
FLORIDA	JACKSONVILLE 4909 Victor St. Box 5459
Radco Distributors	4909 Victor St.
	HIALEAH 23016
Small Eng. Dist	
GEORGIA	EAST POINT
East Point Cycle & Key Inc	HIALEAH
ILLINOIS	LYONS 60534
Keen Edge Co	LYONS
INDIANA	ELKHARI
Parts & Sales Inc.	ELKHART 2101 Industrial Pkwy 46516
Power Lawn & Garden Equip.	
LOUISIANA	NEW ORLEANS 2000 Earbort Blvd 70118
Suhren Engine Co.	NEW ORLEANS
MARYLAND	
Center Supply Co	6867 New Hampshire 20912
MASSACHUSETTS	200 Birnie Ave 01107
Morton B. Collins Co	
MICHIGAN	area o Deprevilyopia (18910)
Lorenz Service Co.	MOUNT CLEMENS
	48043
Power Equipment Dist	MOUNT CLEMENS
MINNESOTA	420 Excelsior Ave. W 55343
Hance Distributing inc.	KANSAS CITY
MISSOURI	64109
Automotive Equip. Service	ST. JOSEPH Sth and Monterey
Deep Frezer Supply CO	8th and Monterey64503
Ross-Flazer Supply Co.	ST. LOUIS
Nepzler Inc	2015 Lemay Ferry Rd
NEW JERSEY	BELLMAWR
Lowpmower Parts Inc.	717 Creek Rd
Spitzer Eng. & Parts Co	ALBOQUERQUE 1023 Third Ave. N.W87103
NEW YORK	CARTHAGE West End Ave
Gamble Dist., Inc.	West End Ave
Guillolo Broth, Inter	

NORTH CAROLINA	GOLDSBORO 515 N. George St27530 GREENSBORO
Smith Hardware Co.	515 N. George St 27530
O	GREENSBORO
Dixie Sales Company	GREENSBORD
OHIO	CARROLL
Stebe's Mid-State Mower Suppl	y Box 366, 71 High St 43112
0.000	CLEVELAND
Bleckrie, Inc.	y Box 366, 71 High St43112 CLEVELAND 7900 Lorain Ave44102 WADSWORTH 687 Seville Rd44281 YOUNGSTOWN
	WADSWORTH 44281
National Central	
	YOUNGSTOWN 1301 Logan Ave. Box 929
Burton Supply Co	1301 Logan Ave. 44501
	Box 929
OKLAHOMA	COS Charokee 74401
Victory Motors, Inc.	PORTLAND
OREGON	9216 N. Denver Ave
Kenton Supply Co.	HARRISBURG
PENNSYLVANIA	17110
EECO Inc.	WILLOW GROVE
	850 Davisville Rd 19090
Thompson Rubber Co.	WILLOW GROVE
	11125 Frankstown Rd., 15235
Bluemont Co.	PUNXSUTAWNEY
•	DDO 15767
Flank hoberts & Gone Prese	SCRANTON
Screpton Auto Ignition Co.	1133-35 Wyoming Ave. 18509
TENNESSEE	KNOXVILLE
	KNOXVILLE
	MEMPHIS
American Sales & Service, Inc.	3035-43 Bellbrook 38116
TEXAS	DALLAS FORT WORTH
Marr Brothers, Inc.	423 E. Jefferson 75205
	FORI WORTH
Woodson Sales Corp	6733 Baker Bivu. 76118
	FORT WORTH
	HOUSTON
Bullard Supply Co	SAN ANTONIO
Engine House Inc	P.O. Box 17867
	ALT LAKE CITY
UTAH	SALT LAKE CITT 1661 N. Beck St
Powered Products	ASHLAND
VIRGINIA	101 Cedar Ridge Dr23005
	SEATTLE
Equip Northwest	1410 14th Ave
WISCONSIN	MILWAUKEE
Wisconsin Magneto Inc.	4727 N. Teutonia St53209
Wiscononi magnete	

WARRALITY PARTS AND SERVICE POLICY

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot as: ume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

- 1. Replacement of Missing Parts on new equipment
- 2. Replacement of Defective Parts within the warranty period.
- 3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

- 1. Model Number of unit involved.
- 2. Date unit was purchased or first put into service."
- 3. Date of failure.
- 4. Nature of failure.

P.O. BOX 36900 MTD PRODUCTS INC .

CLEVELAND, OHIO 44136

(0685)