

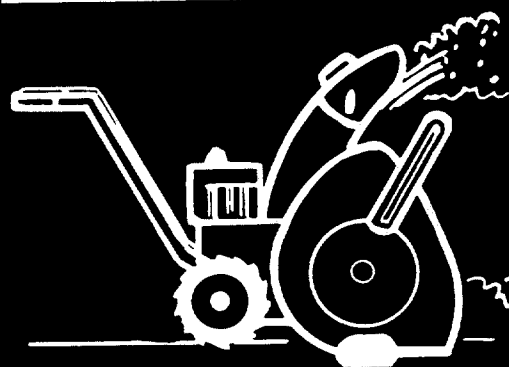
OWNER'S MANUAL



5 H.P. CHAIN DRIVE TILLER



**Model Number
213-381A**



**Important:
Read Safety Rules and
Instructions Carefully**

Thank you for purchasing an
American built product.

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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 manufacturer'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.



WARNING

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. Keep the area of operation clear of all persons, particularly small children and pets.
6. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
7. Do not wear loose fitting clothing that could get caught on the tiller.
8. Do not start the engine unless the shift lever is in the neutral (N) position.
9. Do not stand in front of the tiller while starting the engine.
10. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.
11. Never attempt to make a wheel or depth bar adjustment while the engine is running.
12. Do not leave the tiller unattended with the engine running.
13. Do not walk in front of the tiller while the engine is running.
14. 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.
15. Do not run the engine while indoors. Exhaust gases are deadly poisonous.
16. Be careful not to touch the muffler after the engine has been running. It is hot.
17. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
18. 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.
19. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.
20. 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.
21. Check the tine and engine mounting bolts at frequent intervals for proper tightness.
22. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
23. 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.

ASSEMBLY INSTRUCTIONS



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

Before any step is undertaken, the instructions for that step should be read thoroughly.

Tools Required:

- (2) 9/16" Sockets, open or box wrench
- (1) 1/4" Flat Screwdriver
- (1) Hammer

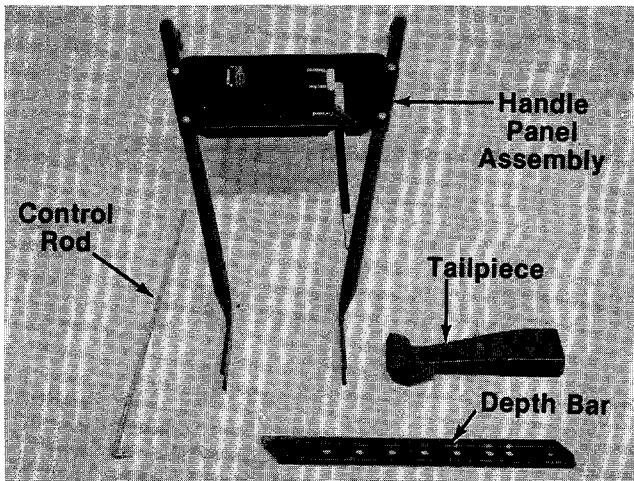


FIGURE 1.

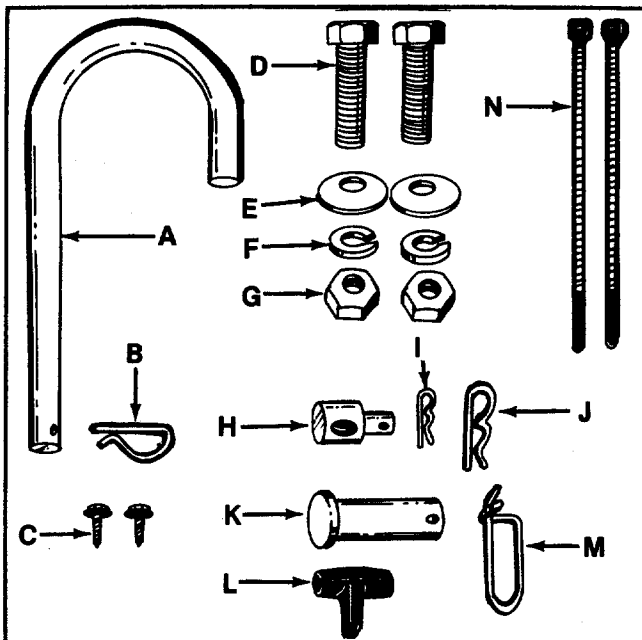


FIGURE 2.

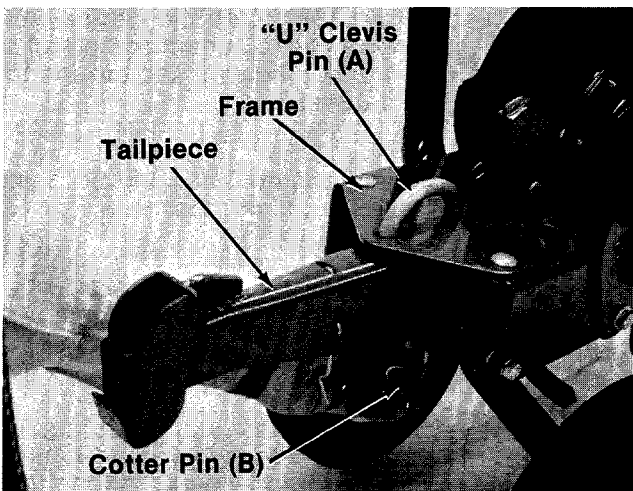


FIGURE 3.

Loose Parts in Carton: (See Figure 1)

- Handle Panel Assembly
- Depth Bar
- Tailpiece
- Control Rod
- Hardware Pack (Not Shown)

Contents of Hardware Pack: (See Figure 2)

- A (1) "U"-Clevis Pin .50" Dia.
- B (1) Internal Cotter Pin
- C (2) Self-Tapping Screws
- D (2) Hex Bolts 3/8-16 x 1.00" Lg.
- E (2) Belleville Washers 3/8" I.D.
- F (2) Lock Washers 3/8" I.D.
- G (2) Hex Nuts 3/8-16 Thd.
- H (1) Ferrule
- I (1) Hairpin Cotter
- J (1) Hairpin Cotter
- K (1) Clevis Pin
- L (1) Throttle Control Knob
- M (1) Spring Pin
- N (2) Cable Ties
- O (2) Grips (Not Shown)
- P (2) Carriage Bolts (Not Shown)
- Q (2) Lock Washers 5/16" I.D. (Not Shown)
- R (2) Hex Nuts 5/16-18 Thd. (Not Shown)

TAILPIECE INSTALLATION

Slide the tailpiece into the frame. Secure with

← "U"-clevis pin (A) and cotter pin (B). See figure 3.

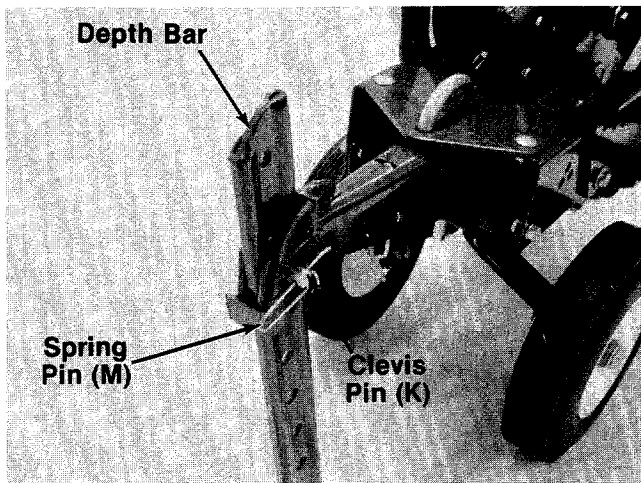


FIGURE 4.

DEPTH BAR INSTALLATION

Slide the depth bar into the tailpiece to desired depth. Secure with clevis pin (K) and spring pin (M). See figure 4.

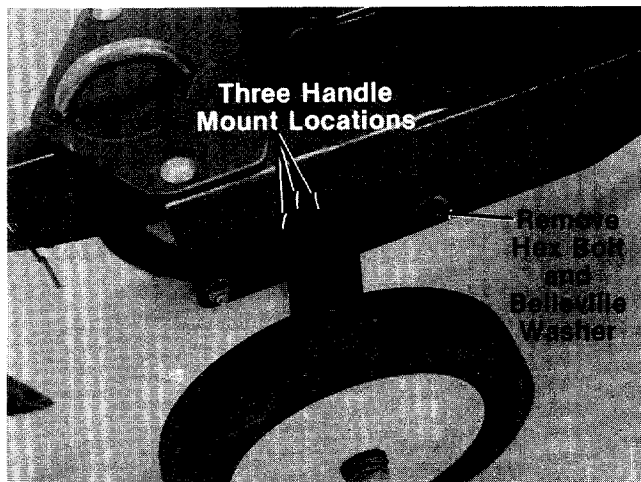


FIGURE 5.

HANDLE ASSEMBLY

1. Secure handle panel to handles by placing carriage bolts (P) through the lower holes in the handle panel and through the handles. Secure with lock washers (Q) and hex nuts (R), finger tight only.
2. Remove hex bolt and belleville washer from each side of frame as shown in figure 5.

3. Place the handle panel assembly in position against the frame.

4. Start the hex bolt and belleville washer (removed in step 1) by hand in the bottom hole in handle. See figure 6.

5. Select height position for the handle by lining up one of the holes in the handle with desired hole in frame. See figure 5.

6. Place belleville washer (E) on hex bolt (D), and insert hex bolt through handle and frame. Secure with lock washer (F) and hex nut (G) on inside of frame. See figure 6.

7. Tighten all nuts and bolts securely.



The clutch rod must be readjusted whenever the handle height is changed.

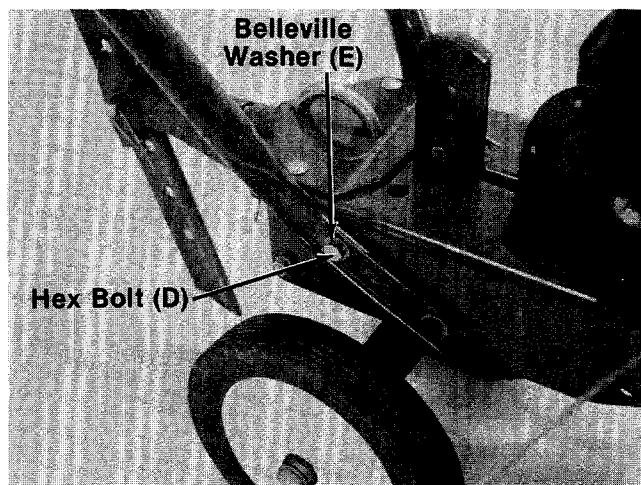


FIGURE 6.

8. Slip hand grips on the upper end of each handle. They will slip on more easily if you first soak them in warm soapy water.

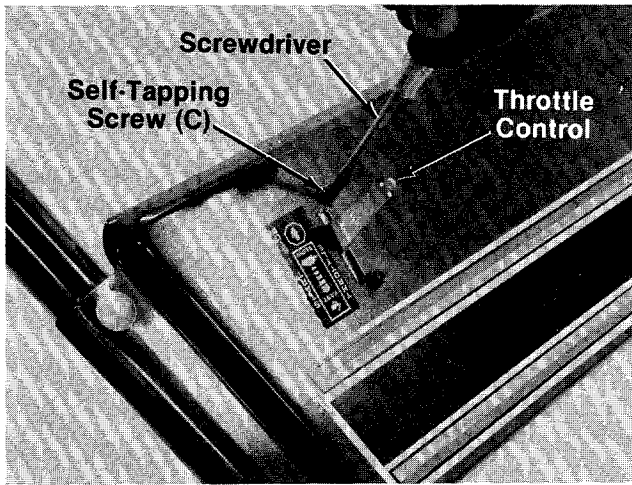


FIGURE 7.

THROTTLE CONTROL INSTALLATION

1. Place the throttle control up through the slot in the handle panel. Secure with two self-tapping screws (C). Tighten securely with a screwdriver. See figure 7.

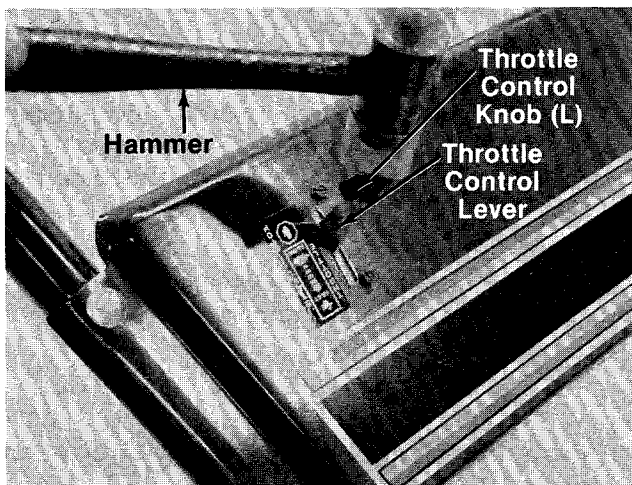


FIGURE 8.

2. Place the throttle control knob (L) over throttle control lever. Tap on with a hammer. See figure 8.
3. Secure throttle control cable to handle with cable ties (N). Cut off excess ends.

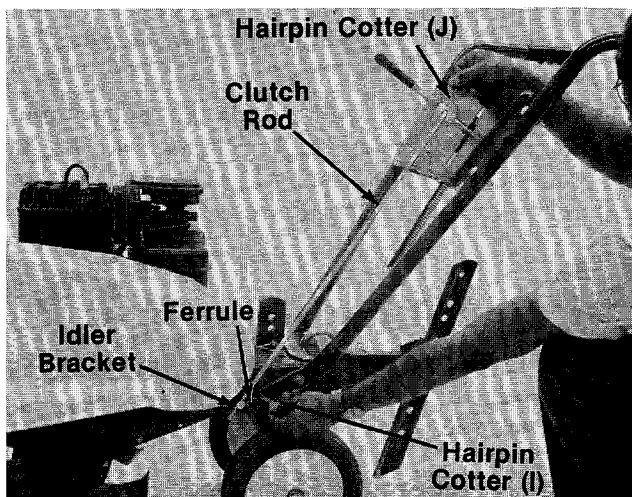


FIGURE 9.

CLUTCH CONTROL ROD INSTALLATION

1. Place shift lever (located on handle panel) in neutral (N) position. Place bent end of control rod into shift lever. Secure with hairpin cotter (J). See figure 9.
2. Thread ferrule (H) onto the other end of control rod so that the ferrule lines up with the hole in idler bracket. Secure with cotter pin (I). See figure 9.

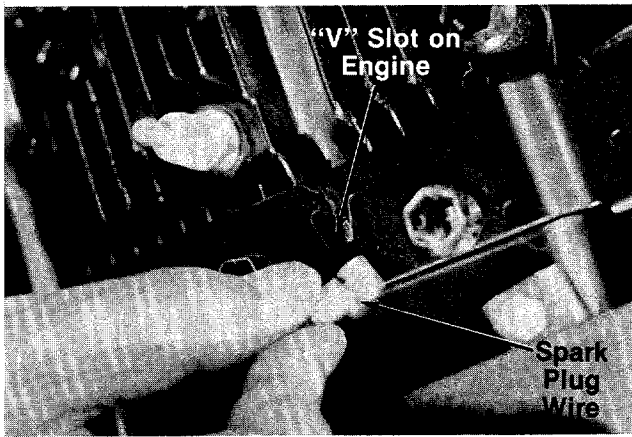


FIGURE 10.

3. Disconnect the spark plug wire from spark plug to prevent accidental starting. Secure end of spark plug wire in the "V" slot on the engine. See figure 10. With the clutch lever in neutral position, pull starter cord several times. **The tines should not turn.** If they do, remove the hairpin cotter and remove the control rod from the clutch lever. Thread the control rod in or out of the ferrule as necessary. Replace and check again for correct adjustment.

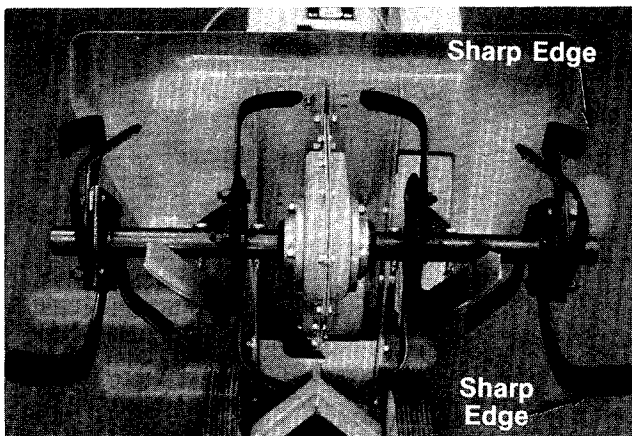


FIGURE 11.

TINE ASSEMBLIES

- Check to be certain the tine assemblies are on the tine shaft so that the sharp edge enters the soil first. See figure 11.

OPERATION

BEFORE STARTING ENGINE:

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

Fill here with gasoline

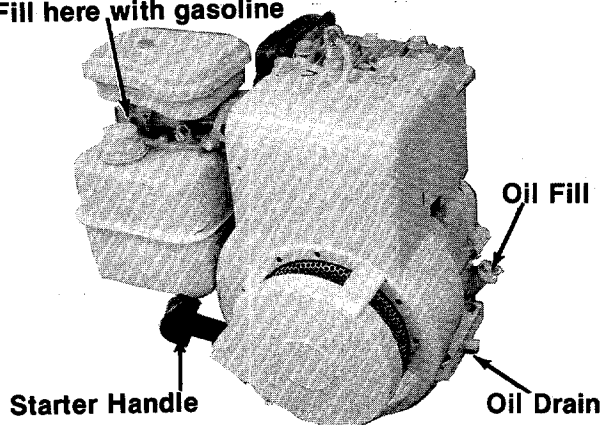


FIGURE 12.

TO START ENGINE:



CAUTION

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

1. Place the shift lever in the neutral (N) position. See figure 13.

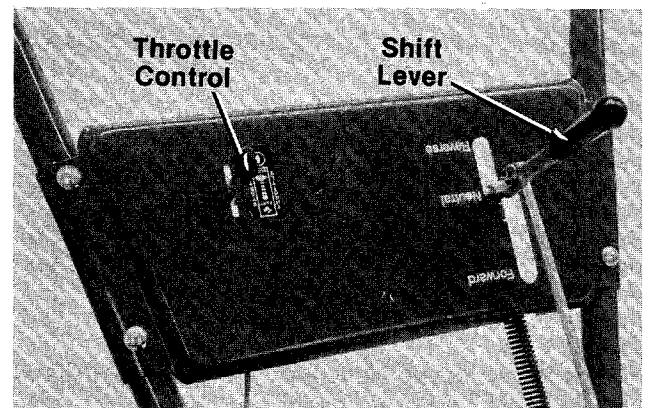


FIGURE 13.

2. Pull choke knob out to choke engine. See figure 14.



Warm engine does not require choking.

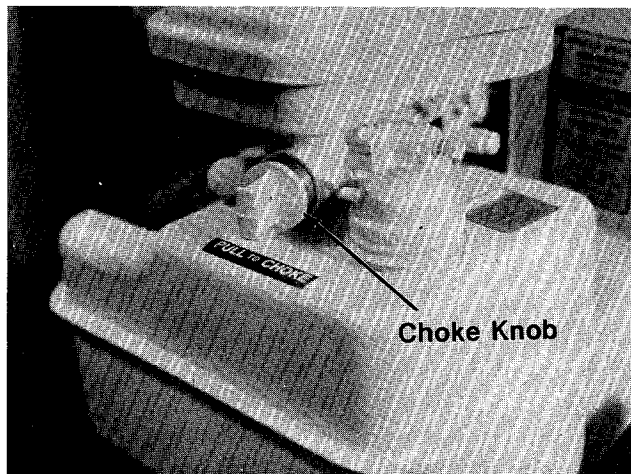


FIGURE 14.

3. Move throttle control lever forward to "START" position. See figure 12.
4. Stand at side of the tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat if necessary.
5. After engine starts, push choke knob in gradually to "OFF" position.

TO STOP ENGINE:

1. Move throttle control lever to "STOP" position. See figure 12.
2. Remove spark plug wire from spark plug to prevent accidental starting while equipment is unattended.

HOW TO USE YOUR TILLER

The tiller is a precision built machine designed for seed bed preparation, cultivating, furrowing and mulching. It is engineered to minimize the hardest work in the vegetable or flower garden, to till the soil for planting and cultivating, and to perform many other useful labor saving tasks in the garden. With the proper amount of care and maintenance, this machine will provide the owner with many years of excellent service.

WHEEL POSITION

The tiller is shipped with the wheels adjusted such that the unit sits level. During digging as the tines enter the ground and the front of the tiller

lowers, the wheels must be raised to level the unit. This is essential for proper engine operation. This adjustment is made by removing the clevis pin and hairpin cotter from wheel yoke, raising the wheels to the desired height, and replacing the clevis pin and hairpin cotter. See figure 15.

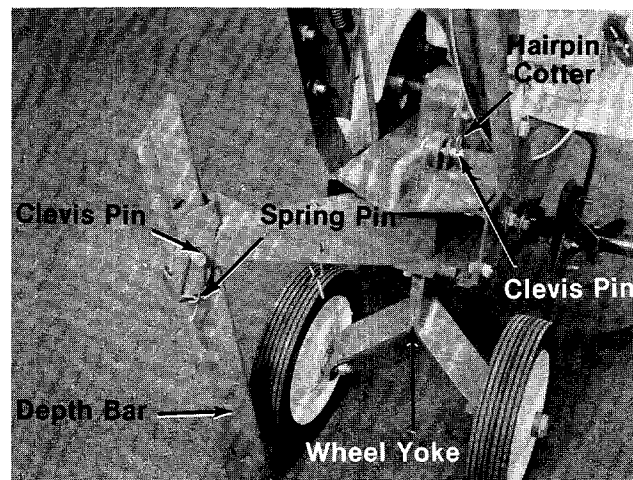


FIGURE 15.

CONTROLLING SPEED AND TILLING DEPTH:

1. **Wheel Yoke Adjustment:** Place wheel yoke so that the wheels are forward (nearest point between wheels and tines) for shallow tilling, cultivating and transport. This will increase the forward speed. See figure 16. Turn yoke around (farthest point between wheels and tines) for deep tilling. Forward speed will decrease. See figure 16.

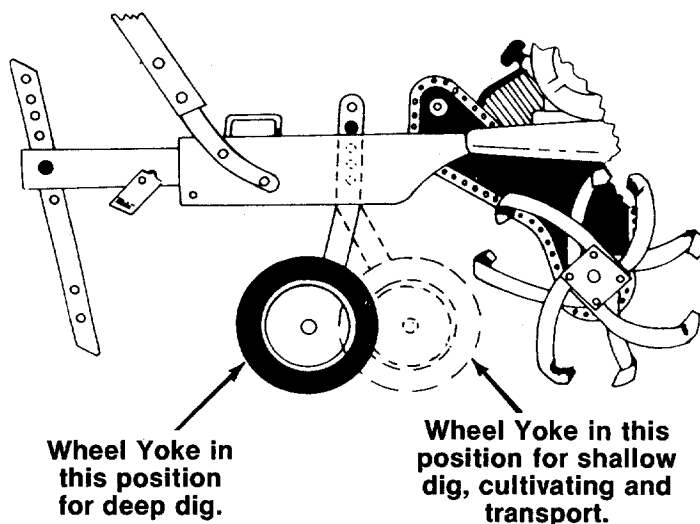


FIGURE 16.

2. **Depth Bar Adjustment:** The depth bar acts as a brake for the tiller and controls the depth and speed at which the machine will operate. See figure 17. Remove the clevis pin and spring pin to raise or lower depth bar.

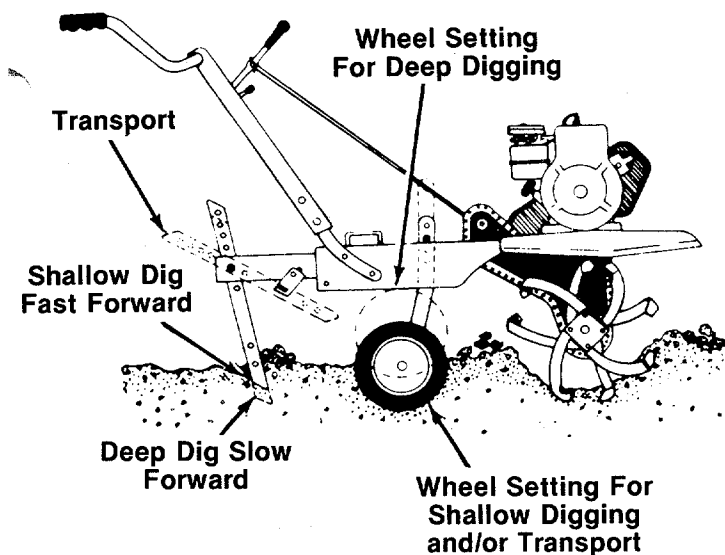


FIGURE 17.

By increasing the depth of the depth bar, the forward speed of the machine is reduced, and the working depth is increased. When the depth bar is raised, the working depth of the machine is reduced and the forward speed is increased. The working depth of the machine may be predetermined by setting the depth bar and wheels so that the wheels are about four inches from the ground when the tines and depth bar are resting on the ground. This setting will permit a working depth of about four inches. Use maximum engine speed for deep tilling. When presetting the working depth, the handles should be a little above waist height because the tiller will be lower when the tines and depth bar penetrate the ground. The best method will be determined by the soil condition. In some soils, the desired depth is obtained the first time over the garden. In other soils, the desired depth is obtained by going over the garden two or three times. In the latter case, the depth bar should be lowered before each succeeding pass over the garden. Passes should be made across the length and width of the garden alternately. Rocks which are turned up should be removed from the garden area.

3. **Handle Pressure:** Further control of tilling depth and travel speed can be obtained by variation of pressure on the handles. A downward pressure on the handles will reduce the working depth and increase the forward speed. An upward pressure on the handles will increase the working depth and reduce the forward speed. The type of soil and working conditions will determine the actual setting of the depth bar and the handle pressure required.

4. **Throttle Control:** The throttle control lever is located on the right side of handle panel.



Right hand side is determined from the operator's position standing behind the tiller.

The throttle control lever adjusts the engine speed. It also gives fingertip control of the carburetor and magneto stop switch. With the throttle control knob pushed completely forward, the carburetor is in "START" position. Pulling the throttle control knob back slightly adjusts the engine speed to "FAST." Pulling the throttle back further reduces the engine speed to "SLOW." When the throttle is pulled completely back, the magneto stop switch grounds out the spark and stops the engine.

Use maximum engine speed for deep tilling. Move the throttle control to slow when transporting the tiller. When the tiller is being moved to or from the garden, the depth bar should be pivoted forward until it engages the depth bar spring pin. The machine may be moved under its own power, without damaging grass areas as long as it is allowed to move freely. If the operator holds back, it will start to dig.

CULTIVATING

For cultivating, a two to three inch depth is desirable. Setting the wheels and depth bar so that the wheels are about two inches above the ground while the tiller is resting on the tines and depth bar will allow the machine to work at cultivating depth. The throttle should be set to control forward movement to a slow walking speed. With standard tines, the working width of the machine is 26 inches. For cultivation, this may be reduced to 14 inches by removing the outer tines. See figures 18 and 19.

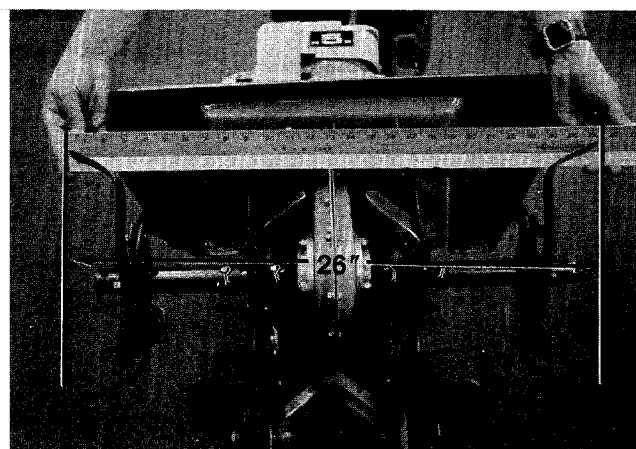


FIGURE 18.

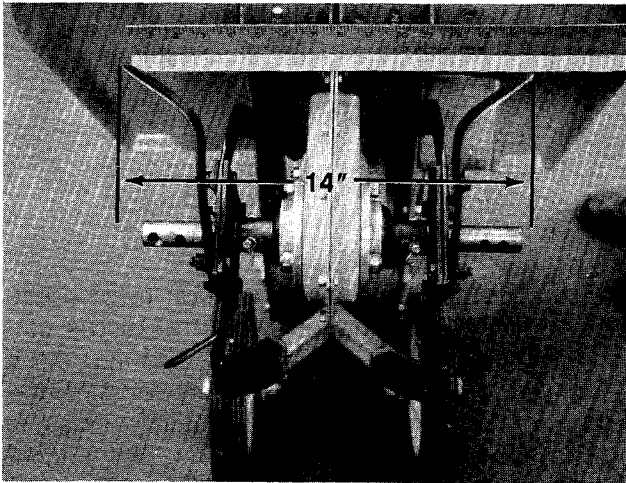


FIGURE 19.

When laying out plant rows, be sure to allow enough width to permit cultivation between the rows. In growing corn or similar crops, check-row planting will permit cross cultivation and practically eliminate hand hoeing.

The tiller has many uses other than tilling and cultivating a garden. One of these is the preparation of lawn area for seeding. The tiller will prepare a deep seed bed which will be free of hard untilled spots, allowing a better stand of grass to grow. The tiller is very useful for loosening hard soil for excavation with a shovel. No tedious hand pickwork will be necessary. Your tiller may be used for mixing compost in the pile, or for mixing it with the soil in your garden. This should be done after the soil has been broken to the full working depth. The compost should be worked in to a depth of six to eight inches. This may be done by working the length of the garden, and then by mixing separate passes across its width. The addition of decayed organic matter will substantially increase the fertility of your garden. For proper decaying action, fertilizer should be applied and worked in with the mulch materials. Breaking up leaves and straw and mixing it with several inches of soil causes the soil to hold moisture longer and allows proper aeration of the plant root system. It also retards the growth of weeds.

The U.S. Department of Agriculture and various state and local agencies offer published booklets and expert advice on all phases of gardening. They should be consulted regarding soil information, planting dates, and the most satisfactory varieties of crop for your particular area.

ADJUSTMENTS



WARNING

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

CLUTCH CONTROL ROD

To adjust the clutch control rod, refer to clutch control rod installation, step number 3 under Assembly Instructions.

WHEEL ADJUSTMENTS

To adjust the wheel yoke and wheel position, refer to "How To Use Your Tiller" on page 8.

DEPTH BAR ADJUSTMENT

To adjust the depth bar, refer to "How To Use Your Tiller" on page 8.

CARBURETOR ADJUSTMENT



WARNING

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.

Do not make unnecessary adjustments. Factory settings are correct for most applications. If adjustments are needed, refer to the separate engine manual packed with your tiller.

LUBRICATION



IMPORTANT

Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on tiller.

CHAIN CASE

The chain case is pre-lubricated and sealed at the factory. It requires no checking unless the chain case is disassembled. To fill with grease, lay the left half of the chain case on its side, add 14 ounces of Plastilube #0 grease and assemble the right half to it. This grease can be obtained at your nearest authorized dealer.

MAINTENANCE



WARNING

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

ENGINE OIL

Check oil level every five operating hours. Make sure oil level is maintained full to point of overflowing.

Change the oil in the crankcase after the first two hours of operation of your new engine and after each 25 hours of use thereafter to insure proper lubrication of internal parts. Take care to remove dirt around filler plug. See figure 20.

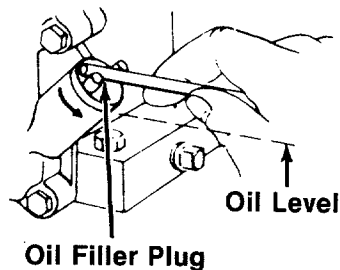


FIGURE 20.

To change oil, remove drain plug while engine is warm and tip the tiller forward. See figure 21. Replace drain plug. Remove oil filler cap and refill with new oil of proper grade. Replace filler cap.

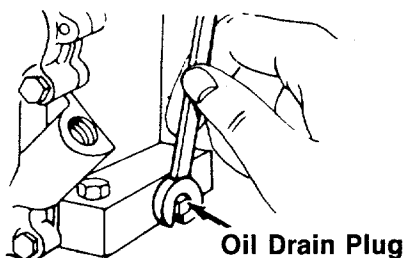


FIGURE 21.

AIR CLEANER

The air cleaner prevents damaging dirt, dust, etc. from entering the carburetor and being forced into the engine and is important to engine life and performance.

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

Never run your engine without air cleaner completely assembled.

CLEAN ENGINE

This is an air-cooled engine which operates most efficiently when the cooling fins are clean.

Clean cylinder fins and underside of tank or housing thoroughly of all accumulated grass and debris.

SPARK PLUG

The spark plug should be cleaned and the gap reset at least once a season or when oil is changed. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specification.

BELT REPLACEMENT

Your tiller has been engineered with belts made of special material (Kevlar Tensile). Replacement should not be made with an off-the-shelf belt.

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

Forward Drive Belt—Part No. 754-0154 1/2" x 37" Lg.
Reverse Drive Belt—Part No. 754-0201 1/2" x 41" Lg.

Removing and Replacing the Forward Drive Belt.

1. Remove the belt guard, by removing four (4) hex self-tapping screws.
2. Press down on the left side of the tine shield and slip off the belt guard. See figure 22.

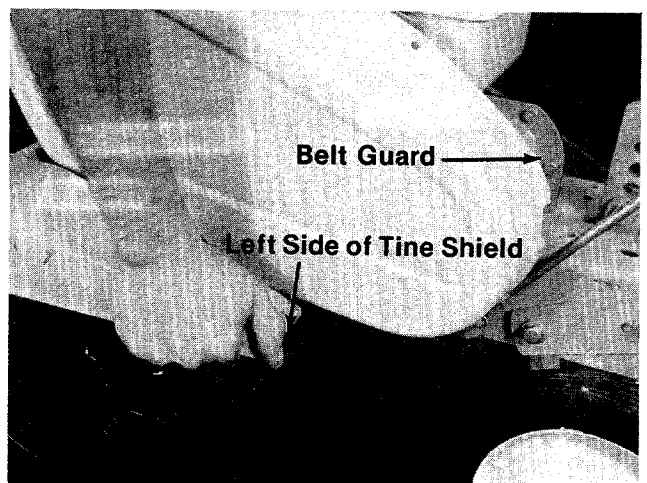


FIGURE 22.

3. Loosen (do not remove) the hex screw and nut holding the belt retainer, using two 7/16" wrenches. See figure 23.



CAUTION

When reassembling the belt, be certain to secure the belt retainer against the tab on the clutch mounting plate. Incorrect placement of the belt retainer can cause excessive wear on the belt.

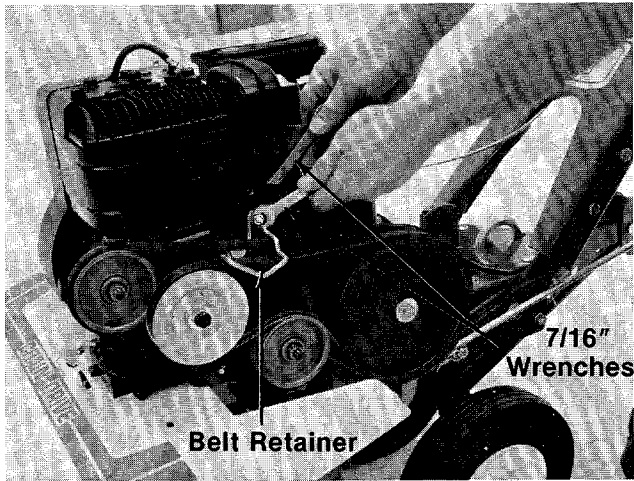


FIGURE 23.

4. Pull the shift lever back into reverse (R) position. Lift the forward drive belt off the engine pulley, flat idler and chain case pulley. See figure 24.

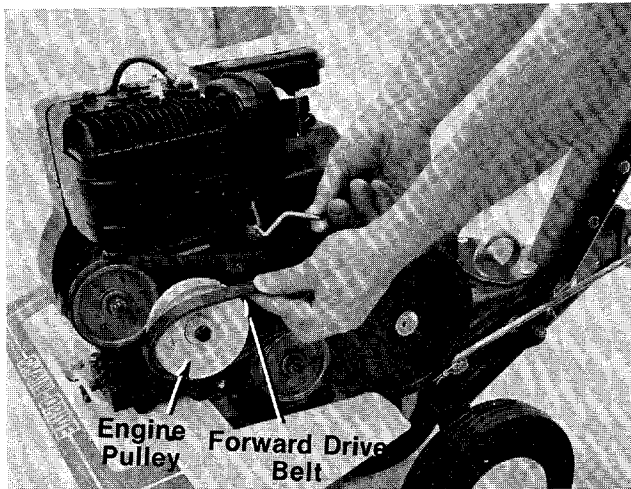


FIGURE 24.

Reassemble the new belt with the "V" side of belt to the inside. Assemble in reverse order.

Removing and Replacing the Reverse Drive Belt.

1. To remove the reverse drive belt, you must remove the forward drive belt first. See removing the forward drive belt section, steps 1, 2, 3 and 4.

2. With the shift lever in neutral (N) position, slip the reverse drive belt off the chain case pulley and "V"-Groove of engine pulley. See figure 25.

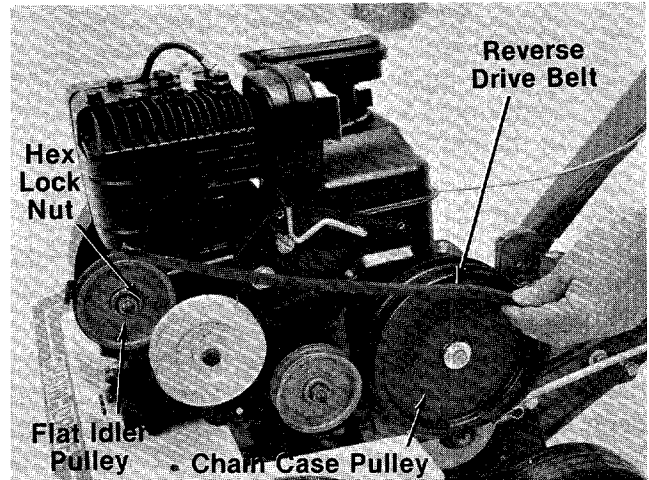


FIGURE 25.

3. Place the shift lever in reverse (R) position. Remove hex lock nut holding the flat reverse idler pulley. See figure 25. Pull the idler bracket forward with one hand. Slip off flat idler and belt together. See figure 26.

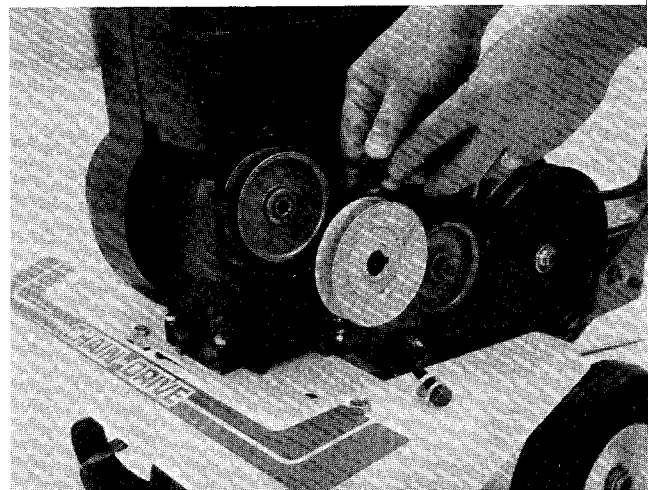


FIGURE 26.

4. When reassembling new reverse drive belt, make sure the V-portion of belt is to the outside and flat side is to the inside. Loop one end of belt over flat idler pulley and place flat idler pulley and belt back in position on idler bracket. Secure idler pulley with hex lock nut.



NOTE

Flat idler pulley must be installed with the sleeve side towards the idler bracket. See figure 27.

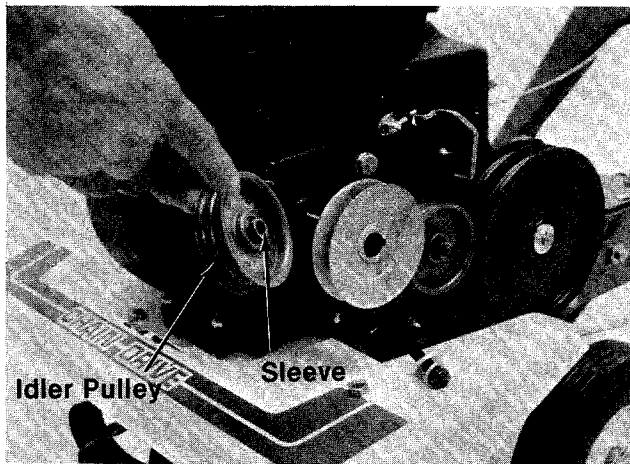


FIGURE 27.

OFF-SEASON STORAGE

If the tiller is not to be used for a while, the following procedure should be followed. The tines, depth bar, gear case and wheels should be cleaned of all dirt. It is very important that the unit be stored in a level position to prevent engine oil from draining into the cylinder head cavity.

Engines on tillers to be stored between seasons should be completely drained of fuel to prevent gum deposits forming on essential carburetor parts, and fuel tank.

- (a) All fuel should be removed from fuel tank. Run the engine until it stops from lack of fuel. The small amount of fuel that remains in the sump of the tank should then be removed by absorbing it with a clean dry cloth.
- (b) Clean dirt and chaff from cylinder, cylinder head fins and blower housing.

- (c) Remove spark plug, pour 2 or 3 tablespoons of SAE-30 oil into cylinder and pull crank cord out slowly to distribute oil. Replace spark plug.

Just as your automobile needs professional mechanical maintenance from time to time, so does your air-cooled engine. Cleaning and adjusting of the carburetor and periodic replacement of the spark plug and ignition points is made necessary by NORMAL use.

Professional Air-Cooled Engine Service is as close as your telephone book.

A yearly checkup or tune-up by an authorized engine dealer is a good idea to avoid breakdowns or delay...do it at the end of the season, then you're ready for the next.

TILLER WINTERIZING INSTRUCTIONS FOR USE WITH SNOW BLADE:

1. For cold weather (below 32°F.), drain oil from tiller engine crankcase and replace with SAE 10W or 10W-20 detergent oil.
2. Replace any remaining fuel on hand or in the engine fuel tank with a fresh supply of winter grade fuel. Winter fuels contain additives for faster starts. Keep fuel tank full.

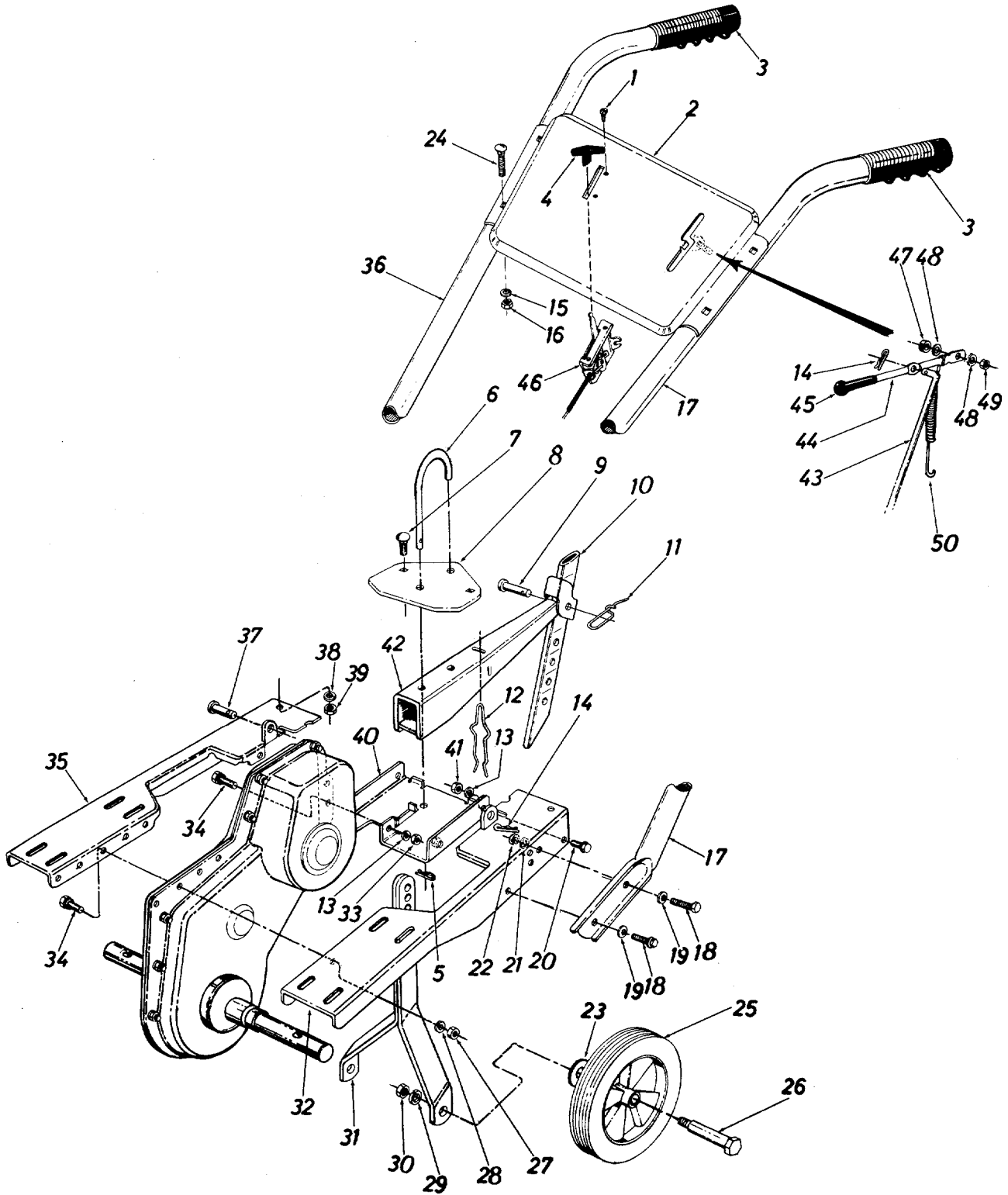


It may be necessary to enrich the carburetor idle and high speed jets 1/8 to 1/4 turn (counterclockwise) for good performance.

3. In the spring of the year, before the tilling season, be sure to change engine oil back to SAE 30W detergent oil.

Model 381

IF YOU WRITE TO US ABOUT THIS ARTICLE
OR IF YOU ORDER REPLACEMENT PARTS AL-
WAYS MENTION THIS MODEL & SERIAL NO
MODEL



Model 381

PARTS LIST FOR MODEL 381 TILLER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0160		Hex Wash Hd. AB Tap Scr. #8 x .62" Lg.		27	712-0267		Hex Nut 5/16-18 Thd.*	
2	15278	—463	Handle Panel Ass'y.		28	736-0119		L-Wash. 5/16" I.D.*	
3	720-0180		Handle Grip		29	736-0921		L-Wash. 1/2" I.D.*	
4	731-0108		Throttle Control Knob		30	712-0200		Hex Inst. L-Nut 1/2-20 Thd.	
5	714-0149		Internal Cotter Pin		31	06813	—463	Wheel Bracket Ass'y.	
6	04602		"U"-Clevis Pin .500" Dia.		32	06792		Engine "U"-Channel Ass'y.—L.H.	
7	710-0451		Carriage Bolt 5/16-18 x .75" Lg.*		33	712-0267		Hex Nut 5/16-18 Thd.*	
8	04586		"U"-Channel Plate		34	710-0322		Hex Sems Bolt 5/16-18 x 1.00" Lg.*	
9	711-0231		Clevis Pin .500" Dia.		35	06794		Engine "U"-Channel Ass'y.—R.H.	
10	04668	—463	Depth Bar		36	749-0356		Handle—R.H.	
11	732-0194		Spring Pin		37	711-0599		Clevis Pin	
12	732-0290		Depth Bar Spring		38	736-0119		L-Wash. 5/16" I.D.*	
13	736-0119		L-Wash. 5/16" I.D.*		39	712-0267		Hex Nut 5/16-18 Thd.*	
14	714-0145		Internal Cotter Pin		40	06816		"U"-Channel Bracket Ass'y.	
15	736-0119		L-Wash. 5/16" I.D.*		41	712-0267		Hex Nut 5/16-18 Thd.*	
16	712-0267		Hex Nut 5/16-18 Thd.*		42	04589		Tailpiece Ass'y.	
17	749-0502		Handle—L.H.		43	747-0183		Control Rod	
18	710-0253		Hex Bolt 3/8-16 x 1.00" Lg.*		44	747-0182		Clutch Lever	
19	736-0105		Belleville Wash. 3/8" I.D.		45	720-0143		Grip	
20	710-0118		Hex Bolt 5/16-18 x .75" Lg.*		46	746-0369		Throttle Control Ass'y. Comp.	
21	736-0169		L-Wash. 3/8" I.D.*		47	735-0126		Rubber Wash.	
22	712-0798		Hex Nut 3/8-16 Thd.*		48	736-0159		FI-Wash. .344" I.D. x .880 O.D. x .06	
23	736-0253		Belleville Wash. .505 I.D. x 1.00" O.D.		49	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
24	710-0458		Carriage Bolt 5/16-18 x 1.75" Lg.*		50	732-0191		Extension Spring .75" O.D. x 11.0" Lg.	
25	734-0968		Wheel Ass'y. 9 x 1.75						
26	738-0318		Shoulder Bolt .625" Dia. x 2.75" Lg.						

*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.

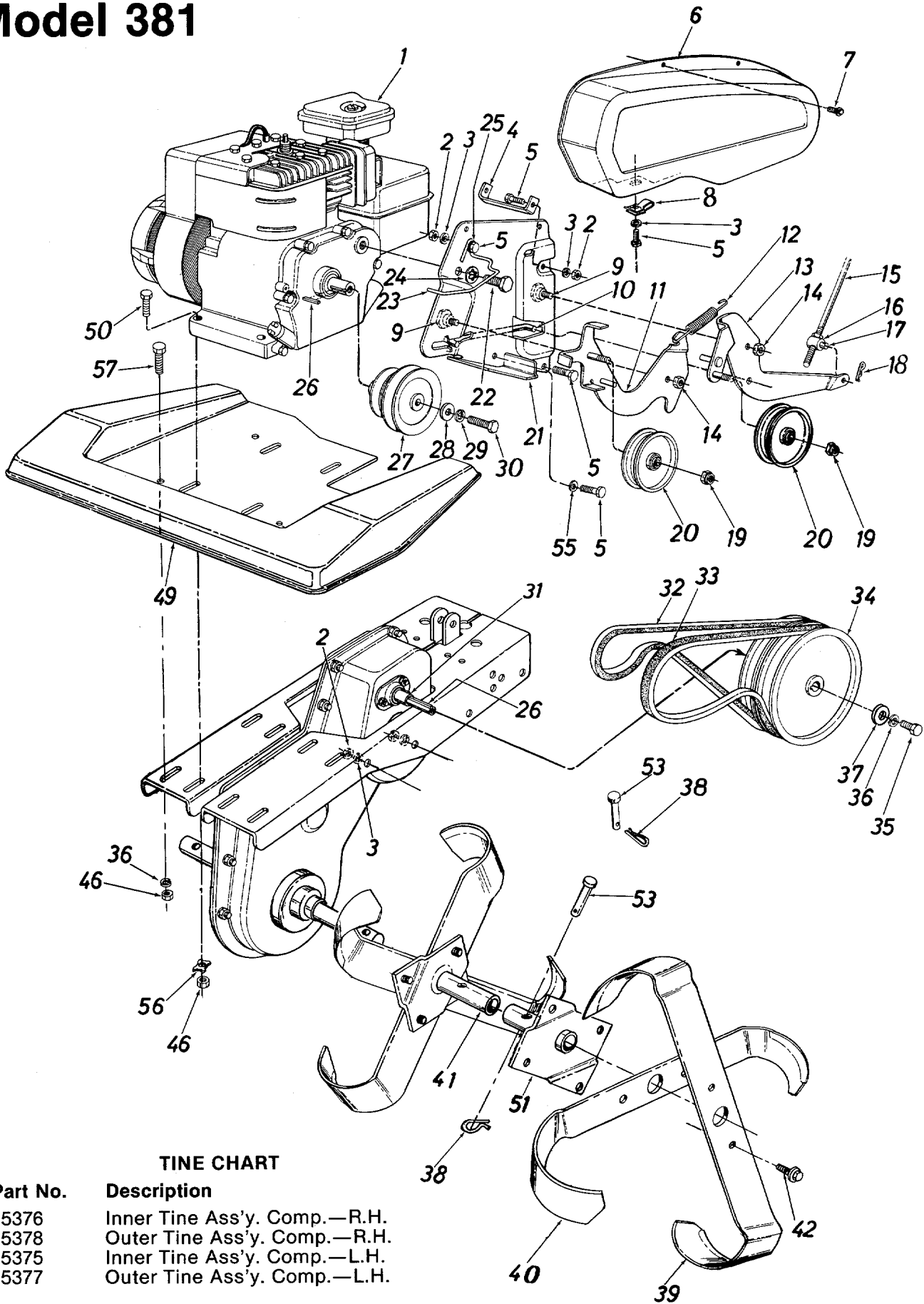
(463—Top Flite Red) When ordering parts if color or finish is important, use the appropriate color (447—Patina Silver) code shown at left. (e.g. Top Flite Red Finish—15278 (463).)

The engine is not under warranty by the tiller manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."



This instruction manual covers various models and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

Model 381



TINE CHART

Part No.	Description
15376	Inner Tine Ass'y. Comp.—R.H.
15378	Outer Tine Ass'y. Comp.—R.H.
15375	Inner Tine Ass'y. Comp.—L.H.
15377	Outer Tine Ass'y. Comp.—L.H.

Model 381

PARTS LIST FOR MODEL 381 TILLER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	—		Engine		27	756-0261		Engine Pulley	
2	712-0287		Hex Nut 1/4-20 Thd.*		28	736-0258		FI-Wash. 3/8" I.D. x 1.00" O.D.	
3	736-0329		L-Wash. 1/4" I.D.*					L-Wash 3/8" I.D.*	
4	06801		Support Bracket		29	736-0169		Hex Bolt 3/8-24 x 1.25" Lg.*	
5	710-0252		Hex Bolt 1/4-20 x .75" Lg.*		30	710-0191		Spacer .635 I.D. x .88 O.D. x 1.035 Lg.	
6	06796	—447	Belt Guard		31	750-0229		"V"-Belt 1/2" x 41" Lg. Reverse	
7	710-0599		Thread Rolling Scr. 1/4-20 x .50" Lg.		32	754-0201		"V"-Belt 1/2" x 37" Lg. Forward	
8	712-0185		"U"-Type Speed Nut		33	754-0154		Chain Case Pulley 6.0" Dia.	
9	738-0281		Shoulder Bolt .625" Dia. x .170" Lg. (2 Req'd.)		34	756-0262		Hex Bolt 5/16-18 x 1.25" Lg. Special	
10	747-0180		Control Rod		35	710-0573		Shake-Proof Wash.	
11	06786		Reverse Idler Brkt. Ass'y.		36	736-0170		FI-Wash. 5/16" I.D. x 1.120 O.D.	
12	732-0433		Spring—Idler Brkt.		37	736-0231		Internal Cotter Pin 1/2" Dia.	
13	06784		Forward Idler Brkt. Ass'y.		38	714-0149		Tine Blade—L.H.	
14	712-0375		Hex Cent. L-Nut 3/8-16 Thd. (2 Req'd.)		39	742-0209		Tine Blade—R.H.	
15	747-0183		Clutch Control Rod		40	742-0210		Inner Tine Adapter Ass'y.	N
16	712-0195		Speed Nut 3/8-24 Thd.		41	15379		Hex Wash. Hd. Self-Tap Scr. 5/16-18 x .50" Lg.	
17	711-0392		Ferrule		42	710-0600		Tine Shield	
18	714-0104		Inter. Cotter Pin		49	04598		Hex Bolt 5/16-18 x 1.50" Lg.*	
19	712-0262		Hex Jam Nut 3/8-24 Thd. (2 Req'd.)		50	710-0442		Outer Tine Adapter Ass'y.	N
20	756-0225		FI-Idler w/Flanges 3.12 O.D. x .75 (2 Req'd.)		51	15380		Clevis Pin	
21	06803		Clutch Mounting Plate		53	1545-029		Bell-Wash.	
22	710-0121		Hex Bolt 1/2-20 x .75 Spec.		55	736-0175		Shake-Proof Wash.	
23	747-0181		Belt Guard Rod		56	736-0170		Hex Bolt 5/16-18 x .75" Lg.*	
24	736-0114		Internal L-Wash. 1/2" I.D.		57	710-0118			
25	736-0463		FI-Wash. 1/4" I.D.						
26	714-0133		Sq. Key 3/16" x 1.50" Lg.*						

*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.

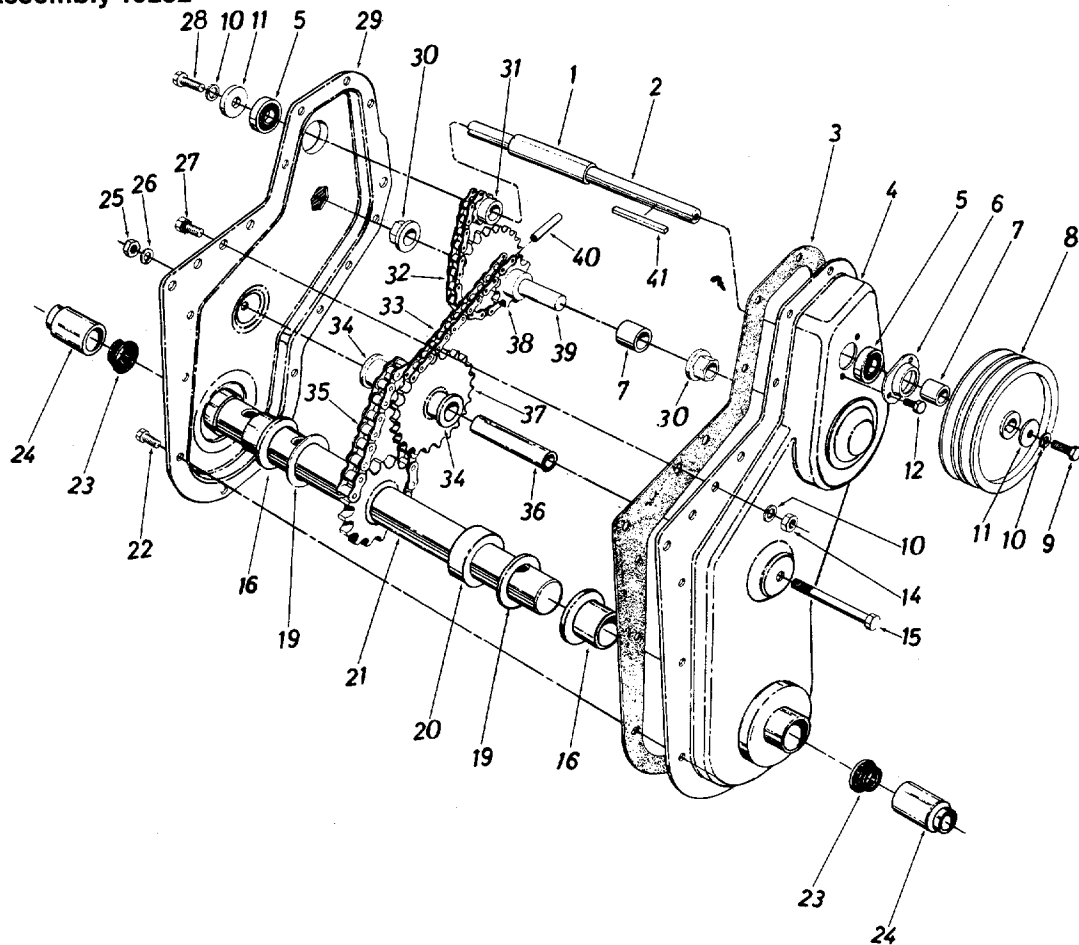
Heavy Duty Garden Tiller Attachments Available for All-Season Use

31-0106	Depth Gauge Wheels (Pair)	31-0123	Lawn Aerator (Use with 31-0114 Wheel Weights for added penetration)
31-0107	6-Tine Cultivator (Must be used with 31-0106 Depth Gauge Wheels)	31-0144	"V"-Bar Cultivating Kit Kit Includes: "V"-Bar Frame, 4-Point Cultivating Tines, Hiller/Furrower, Depth Gauge Wheels (Pair).
31-0110	8" Furrower Opener	31-0145	Depth Stake Cultivating Kit Kit Includes: 8" Furrower Opener, 15" Sweep Cultivator, 32" Leveling Rake, Extra Depth Stake.
31-0111	15" Sweep Cultivator		
31-0113	Pneumatic Tires, 13 x 5.00-6 (Pair)		
31-0114	Wheel Weights (Pair)		
31-0115	Tire Chains, 13 x 5.00 (2 Link) (Pair)		
31-0119	Tine Cultivating Shields w/Adapters (Pair)		

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

Model 381

Chain Case Assembly 15282



PARTS LIST FOR CHAIN CASE 15282 (MODEL 381 TILLER)

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	750-0315		Spacer .657" I.D. x .78" O.D. x 2.19" Lg.		24	731-0487		Dust Cap	
2	738-0182		Jackshaft		25	712-0798		Hex Nut 3/8-16 Thd.*	
3	721-0132		Housing Gasket		26	736-0169		L-Wash. 3/8" I.D.*	
4	15276		Housing Ass'y.—L.H. Half		27	710-0322		Hex Sems Bolt 5/16-18 x 1.00" Lg.*	
5	741-0155		Ball Bearing .625" I.D. x 1.375" O.D.		28	710-0538		Hex Bolt 5/16-18 x .62" Lg. (Special)	
6	05034		Bearing Housing		29	15274		Housing Ass'y.—R.H. Half	
7	750-0229		Spacer .635" I.D. x .88" O.D. x 1.03" Lg.		30	748-0229		Hex Flange Bearing	
8	756-0262		Chain Case Pulley 6.0" Dia.		31	713-0206		Sprocket 10 Tooth 1/2" Pitch	
9	710-0643		Hex Bolt 5/16-18 x 1.0" Lg. (Special)		32	713-0131		#41 Chain 1/2" Pitch x 34 Links	
10	736-0119		L-Wash. 5/16" I.D.*		33	713-0186		#420 Chain 1/2" Pitch x 48 Links	
11	736-0231		Fl-Wash. .344" I.D. x 1.125" O.D.		34	748-0855		Flange Bearing .625" I.D.	
12	710-0599		Hex Wash. Hd. Self-Tap Scr. 1/4-20 x .50" Lg.		35	713-0187		#50 Chain 5/8" Pitch x 28 Links	
14	712-0267		Hex Nut 5/16-18 Thd.*		36	738-0320		Sprocket Shaft	
15	710-0644		Hex Bolt 3/8-16 x 3.25" Lg.*		37	713-0182		Sprocket Bearing Sleeve Ass'y.	
16	731-0374		Flange Bearing (Plastic)		38	713-0181		Sprocket Sleeve Ass'y.	
19	736-0163		Flat Thrust Wash.		39	738-0308		Sprocket Shaft	
20	750-0314		Step Spacer		40	715-0114		Spring Pin Spiral 1/4" Dia. x 1.50" Lg.	
21	15273		Tine Shaft Ass'y.		41	714-0133		Square Key 3/16 x 3/16 x 1.50" Lg.*	
22	710-0599		Hex Wash. Hd. Self-Tap Scr. 1/4-20 x .50" Lg.						
23	721-0175		Seal Ring						



PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service for all MTD manufactured power equipment 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 quantity 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 made.

ALABAMA	BIRMINGHAM
Auto Electric & Carburetor Co.	2625 4th Ave. S. 35233
ARKANSAS	NORTH LITTLE ROCK
Sutton's Lawn Mower Shop	5301 Roundtop Drive
	Box 368, Rt. 4 72117
CALIFORNIA	PORTERVILLE
Billious	75 North D Street 93257
COLORADO	DENVER
Spitzer Industrial Products Co.	Box 29114, 6601
	N. Washington St. 80229
FLORIDA	JACKSONVILLE
Radco Distributors	4909 Victor St.
	Box 5459 32207
	OPA LOCKA
Small Eng. Dist.	2351 N.W. 147th St. 33054
GEORGIA	EAST POINT
East Point Cycle & Key	2834 Church St. 30344
ILLINOIS	LYONS
Keen Edge Co.	8615 Ogden Ave. 60534
INDIANA	ELKHART
Parts & Sales Inc.	2101 Industrial Pkwy. 46514
IOWA	DUBUQUE
Power Lawn & Garden Equip.	2551 J.F. Kennedy 52001
LOUISIANA	MONROE
Mid-South Power	700 Pine St. 71201
	NEW ORLEANS
Suhren Engine Co.	8330 Earhart Blvd. 70118
MARYLAND	TAKOMA PARK
Center Supply Co.	6867 New Hampshire
	Ave. 20912
MASSACHUSETTS	SPRINGFIELD
Morton B. Collins Co.	300 Birnie Ave. 01107
MICHIGAN	LANSING
Lorenz Service Co.	2500 S. Pennsylvania 48910
	MOUNT CLEMENS
Power Equipment Dist.	340 Hubbard 48043
MINNESOTA	HOPKINS
Hance Distributing Inc.	420 Excelsior Ave. W. 55343
MISSISSIPPI	BILOXI
Biloxi Sales & Service, Inc.	506 Caillavet St. 39533
MISSOURI	KANSAS CITY
Automotive Equip. Service	3117 Holmes St. 64109
	ST. JOSEPH
Ross-Frazier Supply Co.	8th and Monterey 64503
	ST. LOUIS
Henzler, Inc.	2015 Lemay Ferry
	Road 63125
NEW JERSEY	BELLMAWR
Lawnmower Parts Inc.	717 Creek Rd. 08030
NEW MEXICO	ALBUQUERQUE
Spitzer Eng. & Parts	1023 Third Ave. N.W. 87103
NEW YORK	CARTHAGE
Gamble Dist., Inc.	West End Ave. 13619

NORTH CAROLINA	GOLDSBORO
Smith Hardware Co.	515 N. George St. 27530
	GREENSBORO
Dixie Sales Company	335 N. Green 27402
OHIO	CARROLL
Stebe's Mid-State Mower Supply	Box 366, 71 High St. 43112
	CLEVELAND
Bleckrie, Inc.	7900 Lorain Ave. 44102
	WADSWORTH
National Central	687 Seville Rd. 44281
	YOUNGSTOWN
Burton Supply Co.	1301 Logan Ave.
	Box 929 44501
OKLAHOMA	MUSKOGEE
Victory Motors, Inc.	605 S. Cherokee 74401
OREGON	PORTLAND
Kenton Supply Co.	8216 N. Denver Ave. 97217
PENNSYLVANIA	HARRISBURG
EECO Inc.	4021 N. 6th St. 17110
	PHILADELPHIA
Thompson Rubber Co.	5222-24 N. Fifth St. 19120
	PITTSBURGH
Bluemont Co.	11125 Frankstown Rd. 15235
	PUNXSUTAWNEY
Frank Roberts & Sons	R.D. 2 15767
TENNESSEE	KNOXVILLE
Master Repair Service	2000 Western Ave. 37921
	MEMPHIS
American Sales & Service, Inc.	3035-43 Bellbrook 381
TEXAS	DALLAS
Marr Brothers, Inc.	423 E. Jefferson 75203
	FORT WORTH
Woodson Sales Corp.	1702 N. Sylvania 76111
	HOUSTON
Bullard Supply Co.	2409 Commerce St. 77003
	SAN ANTONIO
Engine House Inc.	8610 Botts Lane
	P.O. Box 17867 78217
UTAH	SALT LAKE CITY
A-1 Engine & Mower Co.	439 E. 900 So. 84111
VIRGINIA	ASHLAND
RBI Corp.	Lake Ridge Rd.
	101 Cedar Run Dr. 23005
WASHINGTON	SEATTLE
Bailey's Inc.	1414 14th Ave. 98122
WISCONSIN	MARSHFIELD
Power Pac	301 E. 29th St. 54449
	APPLETON
Appleton Automotive Supply Co.	123 S. Linwood Ave.
	P.O. Box 798 54911
	TWIN LAKES
E-K on Small Engine Spec.	122 Lance Dr. 53181

WARRANTY PARTS AND SERVICE POLICY

(0782)

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 assume 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.