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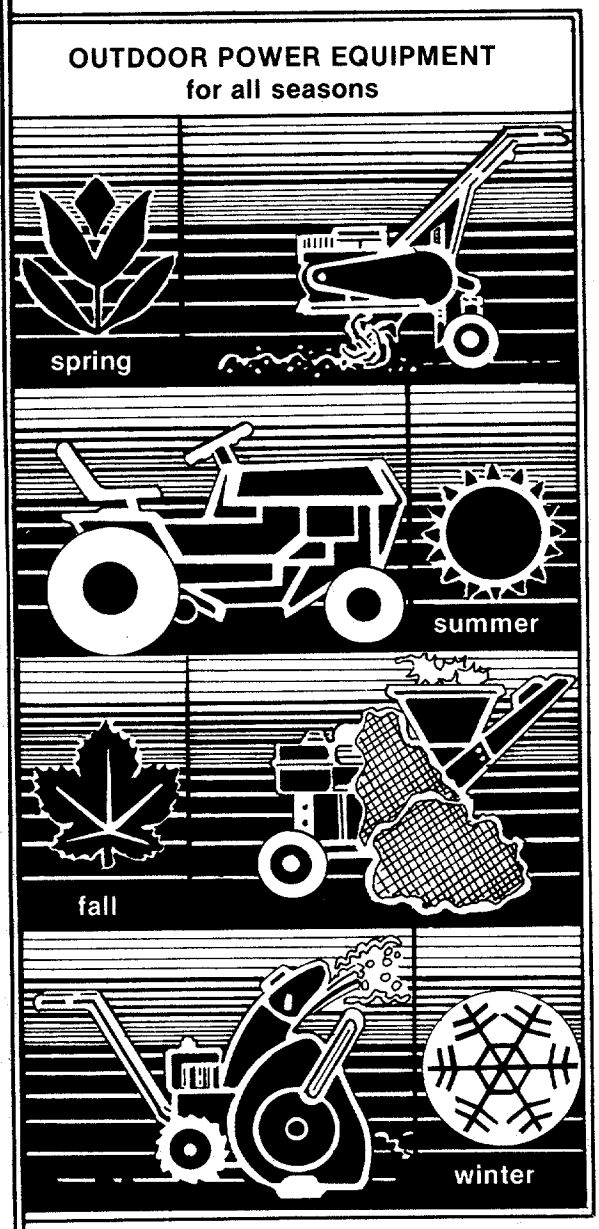
OWNER'S GUIDE



8 H.P. REAR TINE TILLERS

Model Numbers
215-412-000
215-418-000
GRT8

Important:
Read Safety Rules and Instructions Carefully

Thank you for purchasing an American-built product.

PRINTED IN U.S.A.

FORM NO. 770-4033

INDEX

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

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. 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.

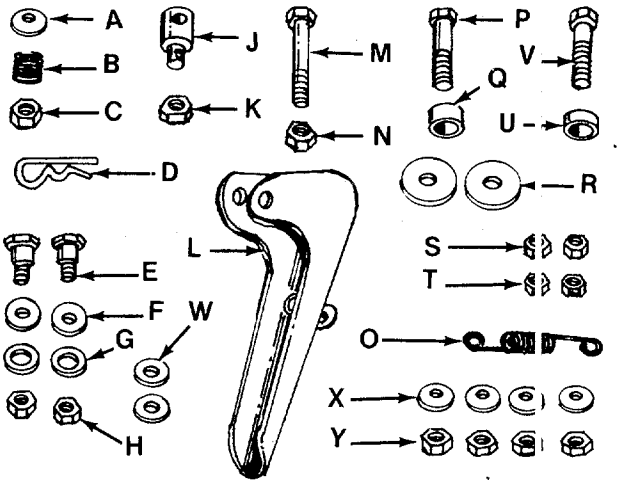


FIGURE 1.

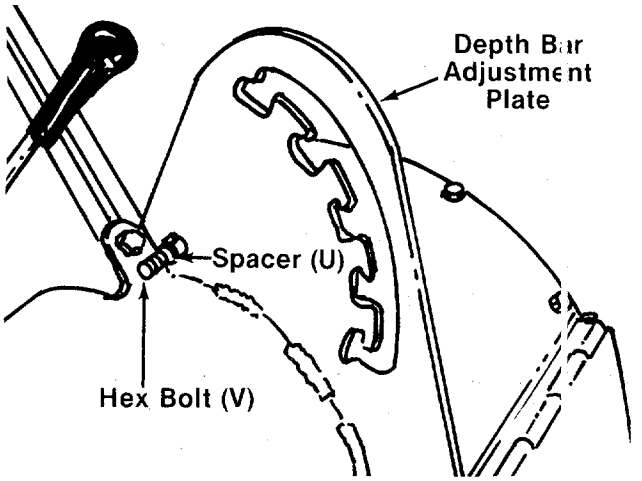


FIGURE 2.

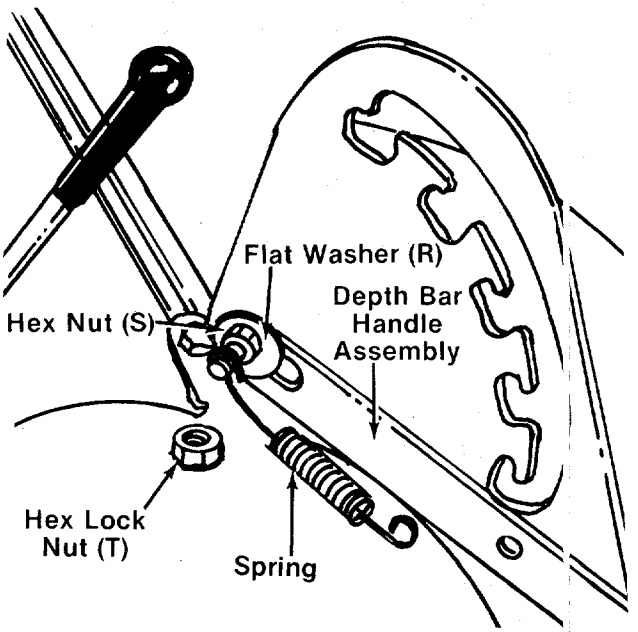


FIGURE 3.

ASSEMBLY

NOTE

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) Belleville Washer 3/8" I.D.
B (1) Compression Spring
C (1) Hex Lock Nut 3/8-24 Thread
D (1) Hairpin Cotter
E (2) Shoulder Bolts
F (2) Belleville Washers ½" I.D.
G (2) Flat Washers ½" I.D.
H (2) Hex Top Lock Nuts 3/8-16 Thread
J (1) Ferrule
K (1) Hex Jam Nut 3/8-24 Thread
L (1) Handle Adjustment Lever
M (1) Hex Bolt ¼-20 x 1.75" Long
N (1) Hex Lock Nut ¼-20 Thread
O (1) Spring
P (1) Hex Bolt 3/8-16 x 1.75" Long
Q (1) Spacer .38" Long
R (2) Flat Washers 3/8" I.D.
S (2) Hex Nuts 3/8-16 Thread
T (2) Hex Lock Nuts 3/8-16 Thread
U (1) Spacer .18" Long
V (1) Hex Bolt 3/8-16 x 1.5" Long
W (2) Flat Washers ¼" I.D.
X (4) Belleville Washers 5/16" I.D.
Y (4) Hex Nuts 5/16-18 Thread

DEPTH BAR INSTALLATION

1. Grease the depth bar adjustment slots with an automotive chassis grease.
2. Place hex bolt (V) through the hole in the depth bar adjustment plate as shown in figure 2. The head of the bolt must be to the right side of the tiller. Place smaller spacer (U) on the hex bolt.

NOTE

The right and left side of your tiller is determined from operator's position.

3. Place slot in depth bar handle assembly over the spacer and hex bolt. Secure with flat washer (R) and hex nut (S), tightening securely. Place one end of spring (O) onto the bolt. Thread hex lock nut (T) on the bolt until the two nuts are approximately 1/8" apart. See figure 3.

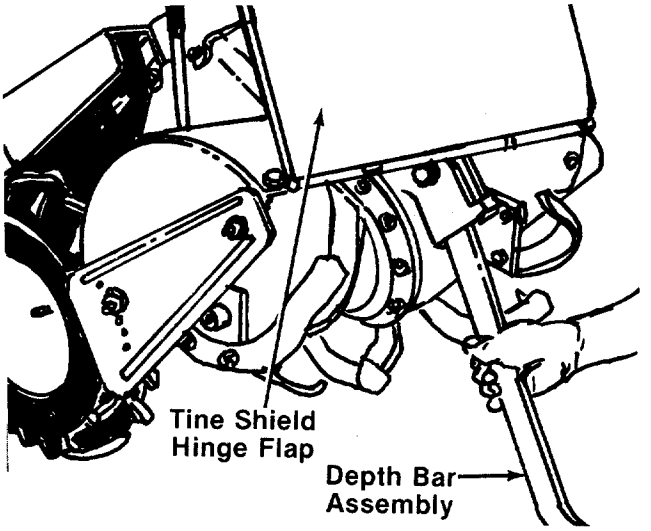


FIGURE 4.

4. Raise the tine shield hinge flap assembly. Insert the depth bar assembly up through the tine shield assembly as shown in figure 4.

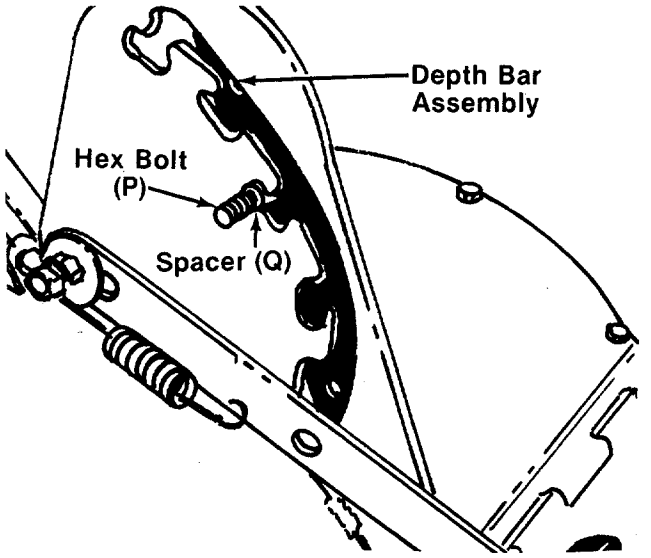


FIGURE 5.

5. Place hex bolt (P) through depth bar assembly and through notches in depth bar adjustment plate. Head of hex bolt must be to right side of the tiller. Place spacer (Q) on hex bolt. See figure 5.

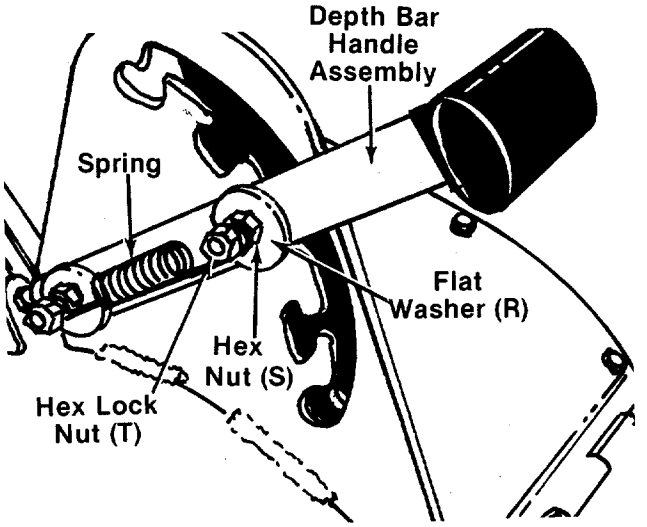


FIGURE 6.

6. Place hole in depth bar handle assembly over the spacer and hex bolt. Secure with flat washer (R) and hex nut (S), tightening securely, then backing off one turn. Handle must be able to pivot freely. See figure 6.
7. Place end of spring onto hex bolt. Thread hex lock nut (T) on the bolt until the two nuts are approximately 1/8″ apart. See figure 6.

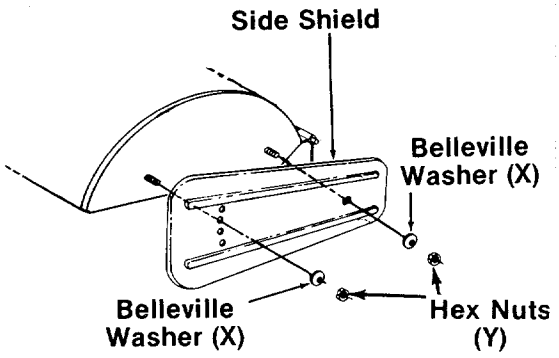


FIGURE 7.

Assemble the side shields to the tine shield as shown in figure 7, using belleville washers (X) (cupped side against the side shields) and hex nuts (Y). Side shields will be adjusted up or down as the depth bar is adjusted, as described in the Operation section.

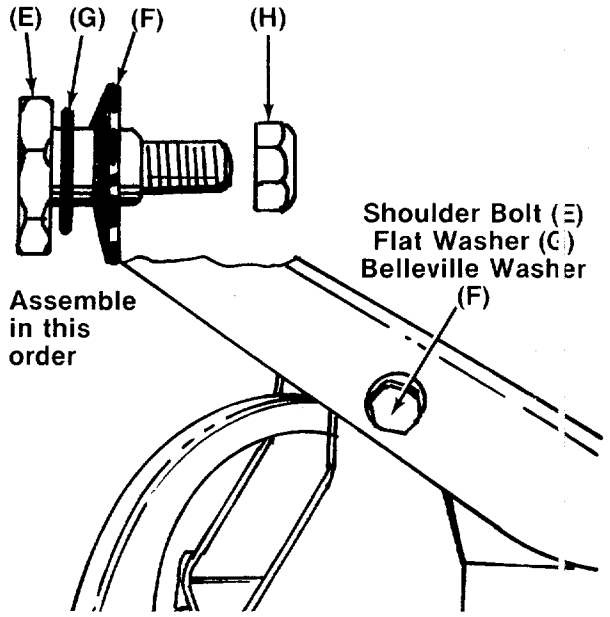


FIGURE 8.

HANDLE ASSEMBLY

1. Place the handle assembly in position on the tiller so that the holes in handle line up with holes in mounting bracket.
2. Place flat washer (G) and belleville washer (F) over shoulder on shoulder bolt (E). Place shoulder bolt through handle mounting holes. Secure with hex top lock nut (H) from the inside of handle. See figure 8.

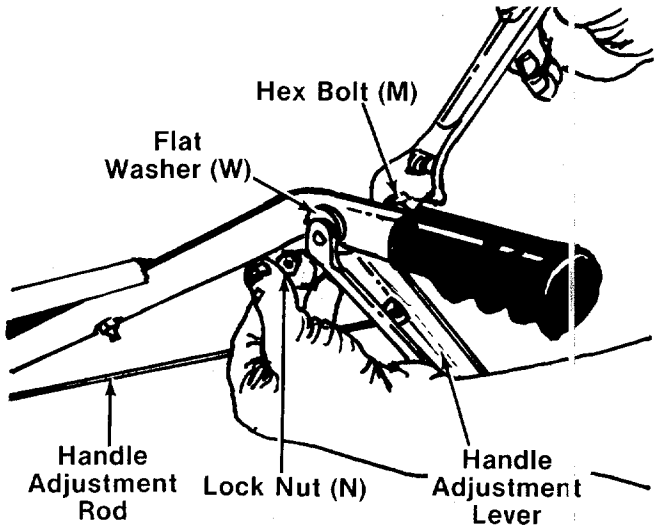


FIGURE 9.

3. To assemble the handle adjustment lever (L), hook handle adjustment rod (already on handle) into lever. Hook to the outside.
4. Place a flat washer (W) on either side of the handle inside of the handle adjustment lever. Secure with hex bolt (M) and lock nut (N). See figure 9. Do not over tighten. Handle adjustment lever must pivot freely.

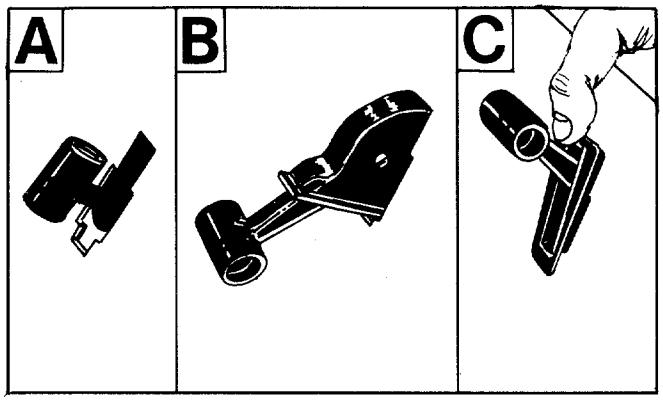


FIGURE 10.

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 10A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown in figure 10B 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 10B.

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.

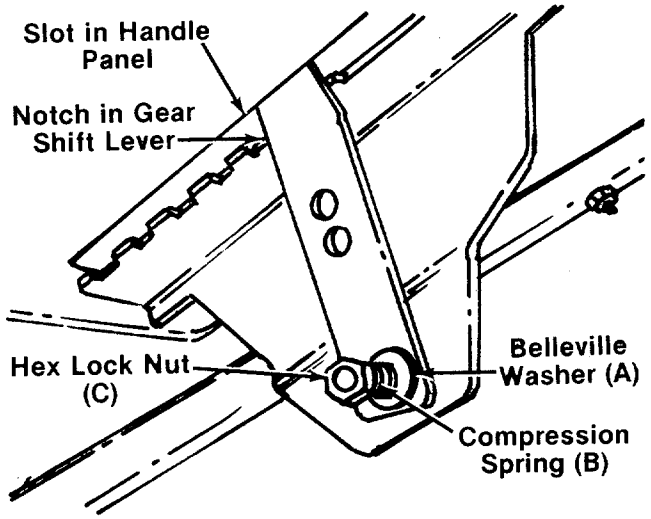


FIGURE 11.

GEAR SHIFT ROD INSTALLATION

1. Assemble notched edge of gear shift lever so notch faces forward. Place gear shift lever through slot in handle panel. Place bottom hole in gear shift lever over weld stud. Secure with belleville washer (A), compression spring (B) and hex lock nut (C). See figure 11.
2. Tighten hex lock nut until nut is flush with stud. See figure 11.

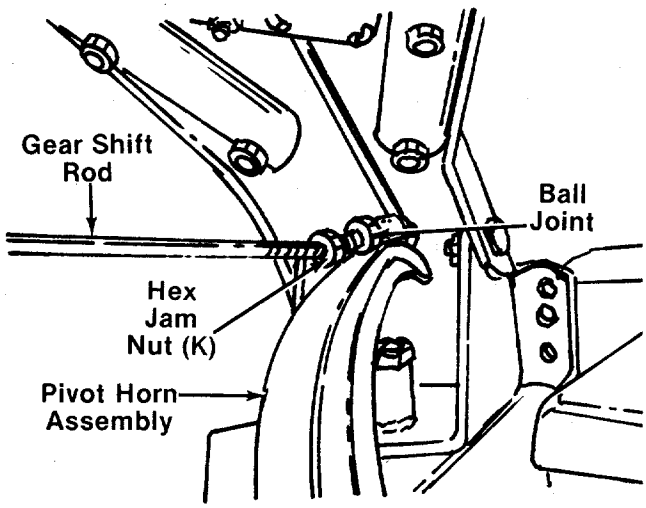


FIGURE 12.

3. Thread hex jam nut (K) on one end of gear shift rod. Then thread gear shift rod into ball joint on the top of pivot horn assembly 10 to 12 complete turns, approximately ½ inch. See figure 12. Lock hex jam nut against ball joint.

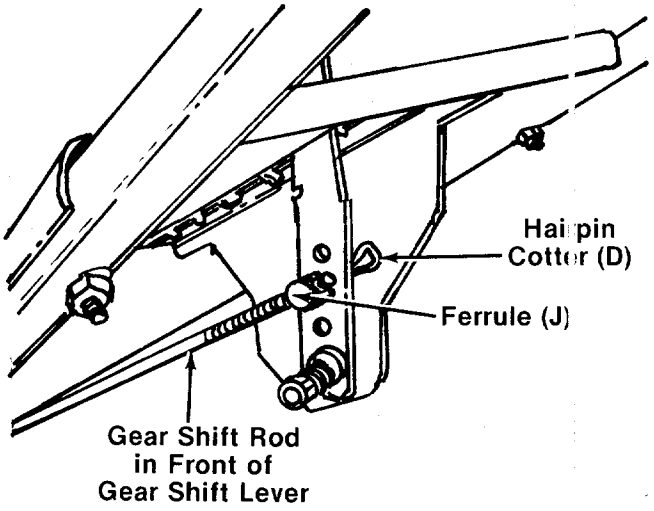


FIGURE 13.

4. Thread ferrule (J) on other end of gear shift rod. See figure 13.
5. Secure ferrule in gear shift lever as shown in figure 13 with hairpin cotter (D).

WARNING

After all assembly is completed, **the gear shift rod must be adjusted prior to initial operation.**

Gear Shift Rod Adjustment

IMPORTANT

Service engine with oil and gasoline before making this adjustment. Refer to the separate engine manual packed with your tiller.

1. Place the gear shift lever in "NEUTRAL" (N) position.
2. Place the tine engagement lever in the **disengaged** position. See figure 22.
3. Place wheel engagement lever in the **disengaged** position. See figure 23.
4. Place the throttle in the "START" position.
5. Move choke lever to "CHOKE" position (if engine is cold).
6. Start the engine.
7. Engage the gear shift lever through the five gears with the engine running and return to "NEUTRAL" (N).
8. Stop the engine.
9. Remove the hairpin from ferrule and pull out of gear shift lever.
10. Place gear shift lever in first gear (and pull lever to rear of slot). Adjust the ferrule to fit gear shift lever, and replace the hairpin.
11. **Repeat steps 6 through 10** to make the final adjustment.

CONTROLS—Location and Use

Gear Shift Lever

The gear shift lever is located in the center of handle panel.

NOTE

The engine must be running to move the gear shift lever. Shifting gears with the engine off will cause damage to the clutch control rod.

1. Forward (1 thru 5)—Move the lever to the left and forward for each gear. See figure 14.

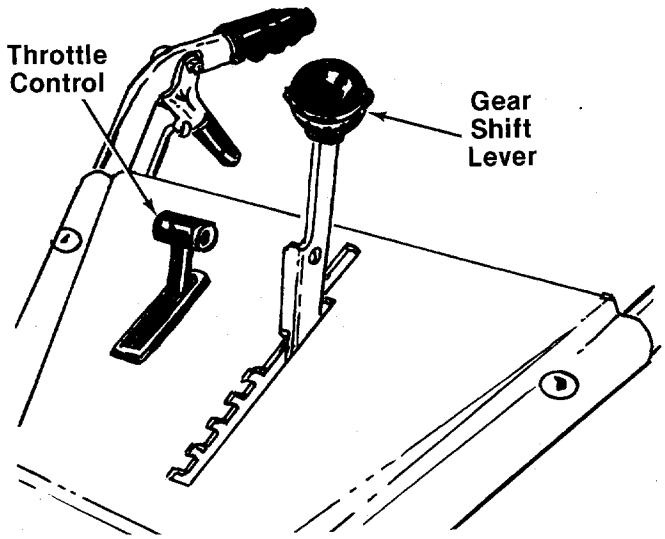


FIGURE 14.

A. Use (1) first and (2) second gears when breaking the sod for the first time.
B. Use (3) third and (4) fourth gears when tilling soil which has been tilled before.
C. Use (5) fifth gear for pulverizing soil or for transporting the tiller.

WARNING

Use first speed only when operating the tiller for the first time.

2. Neutral (N)—Move lever to detent marked "N."
3. Reverse (R)—Raise up on the handles to lift the tines out of the ground and pull the gear shift 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). See figure 15.

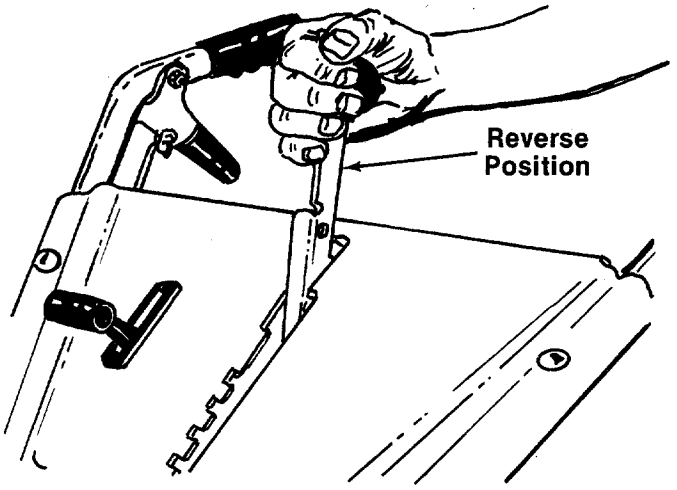


FIGURE 15.

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.

Handle Adjustment Lever

The handle adjustment lever is located on the right hand handle bar. See figure 16.

Squeeze handle adjustment lever and move the handle to one of nine (9) positions. The handle has three vertical positions in the center. See figure 17. It also has three vertical positions when swung to the left or swung to the right.

If the locking pin does not withdraw from the handle positioner assembly or if the locking pin does not seat securely into the holes in the handle positioner assembly, adjustment is required. Refer to Adjustment Section on page 12.

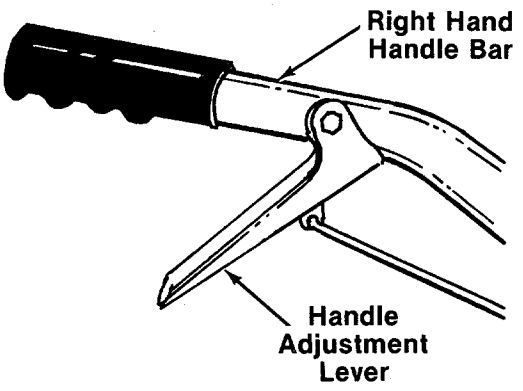


FIGURE 16.

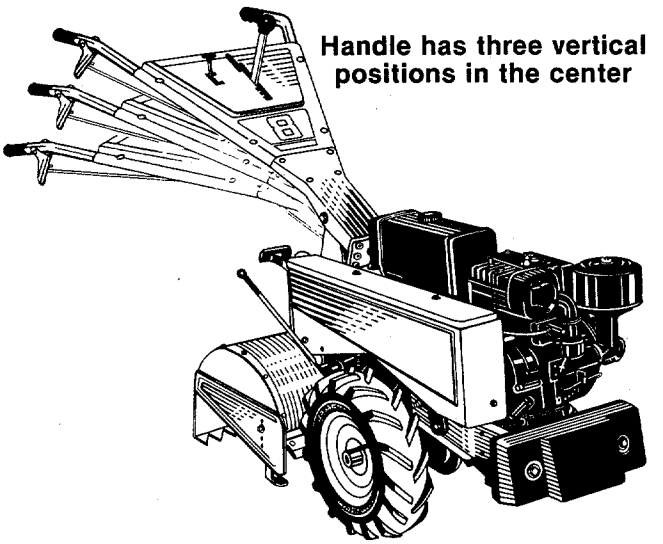


FIGURE 17.

WARNING

Before using the tiller, check to be certain the tines are assembled properly (sharp edge of the tines must enter the soil first). Refer to Operation Section.

WARNING

The gear shift lever must be in **Neutral (N)** position before engaging or disengaging the tine and wheel engagement levers.

Tine Engagement Lever

The tine engagement lever is located on the left side of tiller.

To engage tines, move the lever outward. To disengage tines, move the lever inward. See figure 18.

NOTE

It may be necessary to slightly engage gear shift lever to align the gears.

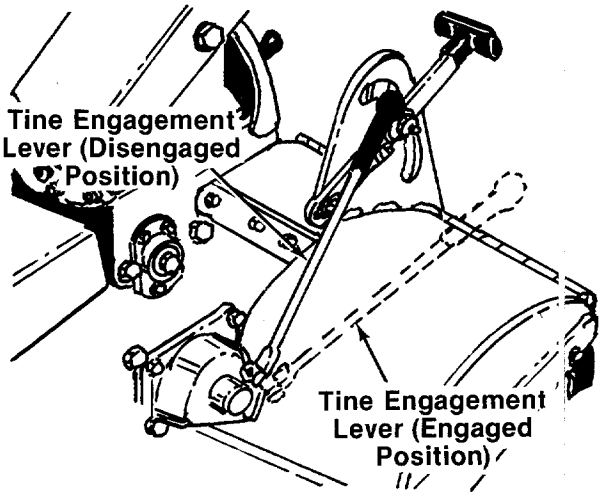


FIGURE 18.

Wheel Engagement Lever

The wheel engagement lever is located on the right side of tiller.

To engage wheels, move the lever outward. To disengage or stop wheels, move lever inward. See figure 19.

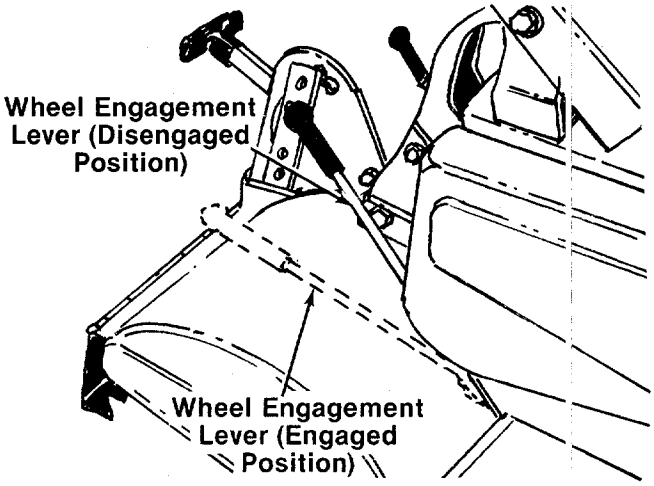


FIGURE 19.

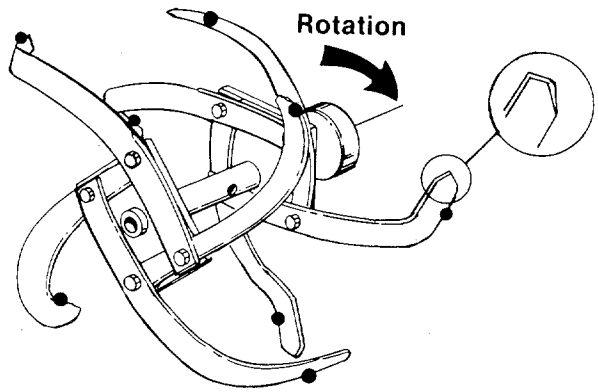
OPERATION

IMPORTANT

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 20.** (Figure 20 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.)



- Sharp Edge

FIGURE 20.

2. Fill crankcase with oil as instructed in the separate engine manual packed with your unit. Check oil level before each use.
3. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.
4. **Model 412 Only:** Open fuel shut-off valve.

TO START ENGINE

WARNING

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

1. Place the gear shift lever in "NEUTRAL" (N) position. See figure 14.
2. Place the tine engagement lever in the disengaged position. See figure 18.

3. Place the wheel engagement lever in the disengaged position. See figure 19.
4. Place the throttle control lever in "START" position.
5. Move choke lever to "CHOKE" position. See figure 21.

NOTE

A warm engine may not require choking.

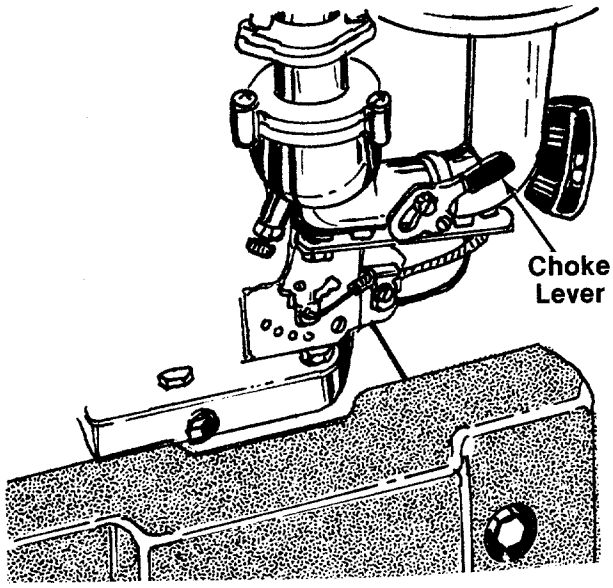


FIGURE 21A.—Model 412

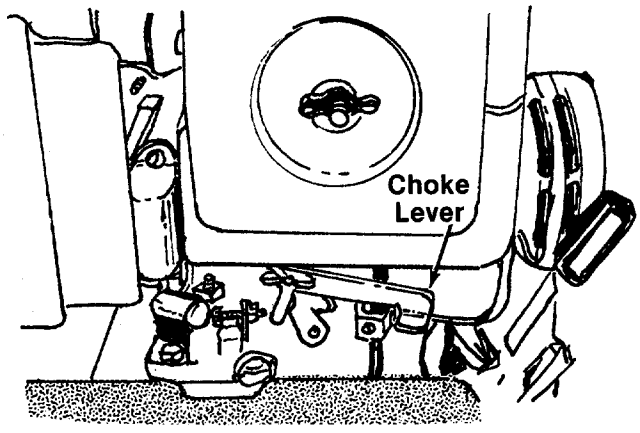


FIGURE 21B.—Model 418

6. Stand at side of tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat as necessary.
7. 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

WARNING

When operating the tiller for the first time, use the depth bar setting that gives 1 inch of tilling depth (second slot from the bottom). Refer to figure 22. Use first speed only.

Your tiller has a variable speed pulley which allows you to change gears, First (1) through Fifth (5), without stopping. The gear shift lever is located on the top center of handle panel. There are Five (5) forward speeds, Neutral (N) and Reverse (R).

A. Forward speeds: First and second speeds are generally used for tilling sod or soil which has not been tilled before. Third and fourth speeds are usually used for fine tilling or cultivating. The fifth speed is for pulverizing soil or for transporting the tiller. The soil conditions in your area will determine the speed you will want to use.

IMPORTANT

Do not shift gears unless the engine is running. If the engine should stall while in gear, you **must** proceed as follows:

1.) Disconnect and ground the spark plug wire against the engine.

2.) Move tine and wheel engagement levers to the disengaged position.

3.) Pull the recoil starter rope, and at the same time pull back on gear shift lever. Pull the rope out as many times as it takes to move the gear shift lever into neutral (N) position. **Do Not** force shift lever back into neutral at any time.

4.) Move the gear shift lever through the forward speeds, neutral and reverse. Readjust control rod if necessary.

B. Neutral (N): The neutral detent on the handle panel is used when starting and stopping the tiller and going from a forward speed to reverse.

C. Reverse (R) Gear: The reverse gear is a deadman type. If you put the tiller into reverse to back up or to unclog the tines, and you let go of gear shift lever, the reverse motion will **stop.** Reverse will **only** work when you pull the gear shift lever back and hold it in that position.

Raise the handles and lift the tines out of the ground before putting the tiller in reverse gear.

IMPORTANT

Placing the tiller in reverse with the tines in the ground will cause premature wear of the reversing disc.

TILLING

Tilling depth is controlled by the depth bar which can be adjusted to five different settings. See figure 22. Adjust the side shields as shown in figure 22 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 slot from the bottom (1" of tilling depth). See figure 22.

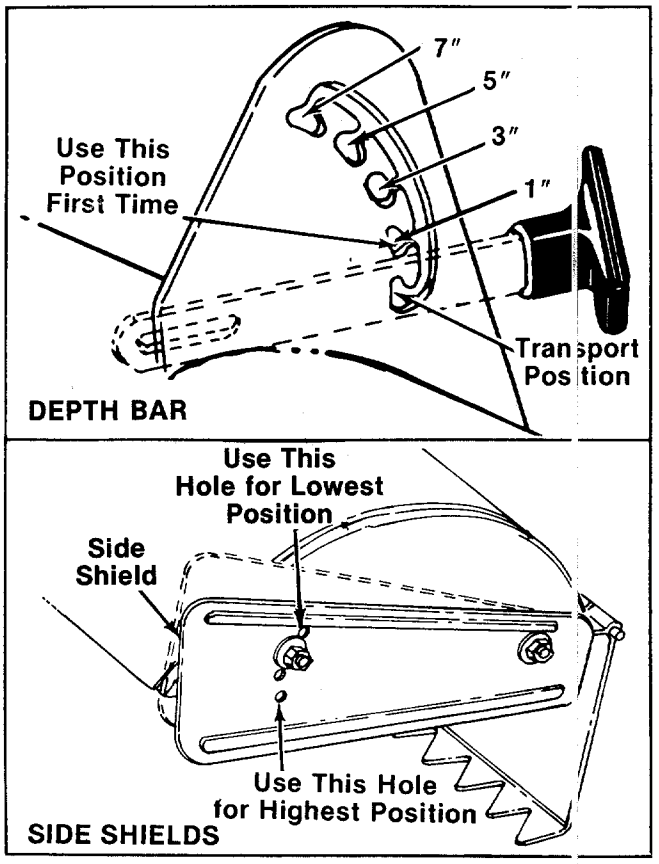


FIGURE 22.

2. When breaking up sod and for shallow cultivation, use the setting which gives 1" of tilling depth (second slot from the bottom). 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 the top slot to give the deepest tilling depth. Raise the side shields to their highest position.
4. To transport tiller, lower the depth bar (use bottom adjustment slot).

To adjust the depth bar, lift up on the tiller handles. Pull the depth bar handle assembly and move the depth bar to desired setting. Release the handle. See figure 22.

To operate the tiller:

1. Select the depth bar setting.
2. Start engine as instructed on pages 10 and 11.
3. Engage wheel and tine engagement levers.
4. Move gear shift lever to first speed position (wheels and tines will be moving).

WARNING

Engage wheel drive before engaging the tine engagement lever.

NOTE

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

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

ADJUSTMENTS

HANDLE ADJUSTMENT LEVER (See Figure 23)

NOTE

Figure 23 is viewed from the bottom of handle panel.

Position A. Use if not enough free play.

Position B. Normal setting.

Position C. Use if pin will not withdraw completely from bracket.

To make the adjustment, loosen hex lock nut and reposition the rod in Position A, B or C. See figure 23.

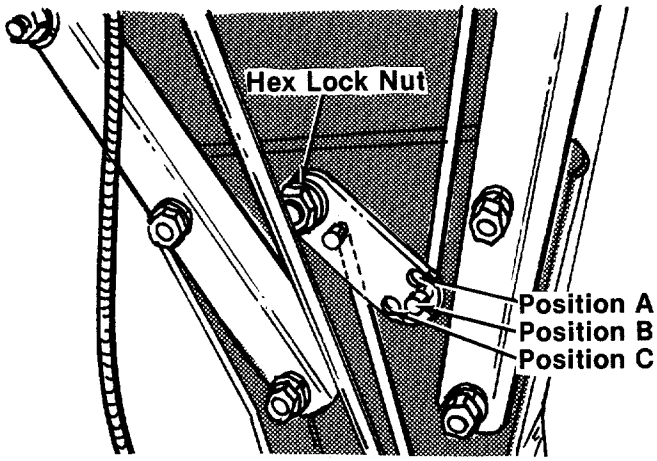


FIGURE 23.
CONTROL BRACKET ADJUSTMENT

When the belt has become worn and/or stretched or the friction wheel has become worn, make the following adjustment.

Move the control bracket to the bottom hole on the pivot horn assembly and readjust the gear shift rod. See figure 24.

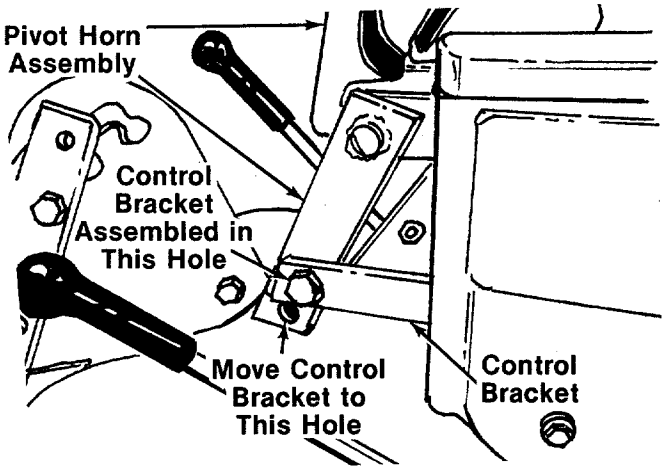


FIGURE 24.
THROTTLE CONTROL CABLE ADJUSTMENT

1. Place the throttle control lever in "STOP" position.
2. Loosen the casing clamp screw and move the throttle control wire in (Model 412) or up (Model 418) as far as possible.
3. Tighten the casing clamp screw.

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.

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

TRANSMISSION

The transmission is lubricated and sealed at the factory. It requires no additional lubrication unless the transmission is disassembled. To fill with grease, lay the left half of the transmission on its side, add 28 ounces of Plastilube #0 grease and assemble the right half to it. This grease can be purchased from your nearest service dealer. (Order Part No. 737-0133.)

DEPTH BAR ADJUSTMENT SLOTS

Clean and grease the depth bar adjustment slots at least once a season with an automotive chassis grease.

PIVOT POINTS

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

MAINTENANCE

WARNING

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 before each use. Be sure level is maintained full to point of overflowing on Model 412 and to full mark on dipstick on Model 418.

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.

FUEL SHUT-OFF VALVE AND FILTER
Model 412 Only

The valve and filter is located on the bottom of the gasoline tank located on top of the tiller.

Turn the valve knob in to shut off the fuel flow. Turn the valve knob out to operate the tiller. See figure 25.

The entire valve can be pulled out to clean the filter. When reassembling, place the rubber grommet into the gasoline tank first, then push the valve all the way in.

IMPORTANT

Only use factory approved parts if repairs are needed on the gasoline tank, grommet, valve or gasoline line.

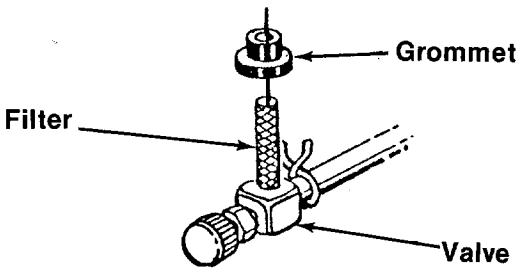


FIGURE 25.—Model 412 Only

LIMITED TORQUE CLUTCH

If the limited torque clutch is disassembled for any reason, reassemble as shown on page 20 or 22.

NOTE

Torque setting is 550 to 650 in. lbs.

If you do not have a torque wrench, proceed as follows:

1. Run the first nut on until it touches the spring bell washer.
2. Mark nut and plate with a scrib line.
3. Tighten nut 3/4 of a turn clockwise.
4. Then lock in place with the second hex jam nut.

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. 754-0220	Part No. 754-0268
5/8" x 27" Short Belt	5/8" x 51" Long Belt

Front (Short) Belt Removal

1. Remove belt cover by removing the four self-tapping screws and flat washers. See figure 26.

WARNING

Muffler may be **hot** in the area of belt cover. Only remove the belt cover when engine is cool.

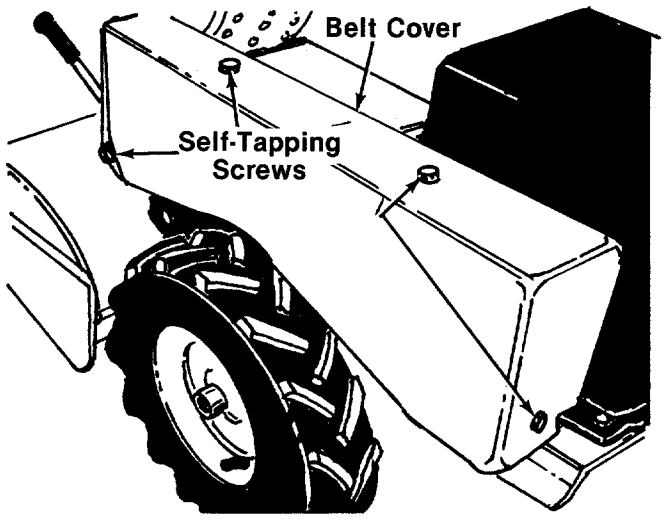


FIGURE 26.

2. Place gear shift lever in neutral position. Hold friction disc with one hand. Remove three hex bolts and lock washers which hold the friction disc to the variable speed pulley. See figure 27. Lift belt off the variable speed pulley.

NOTE

Upon reassembly of friction disc, tighten the three bolts equally.

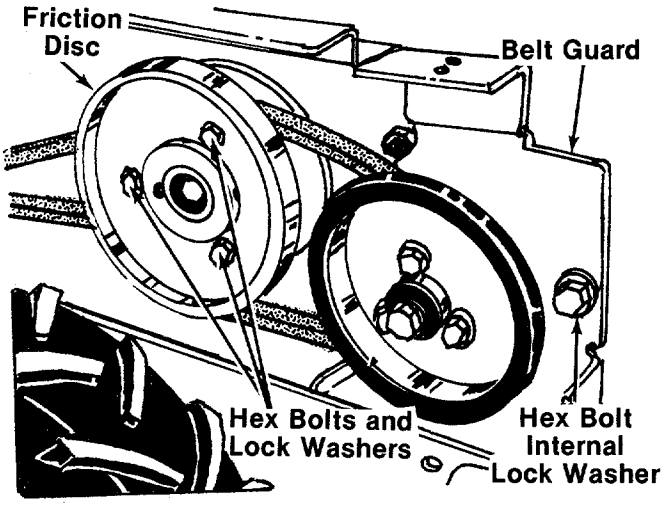


FIGURE 27.

3. Remove the hex bolt and internal lock washer which holds the belt guard to the engine. See figure 27. Remove the belt guard. Remove and replace the belt.

Rear (Long) Belt Removal

1. Follow step numbers 1 and 2 under "Front Belt Removal."
2. Place the gear shift lever in one of the forward gears (as far forward as possible).
3. Lift up on the idler pulley by hand, and remove the belt from beneath the idler pulley. Lift belt off the transmission pulley and variable speed pulley. See figure 28.

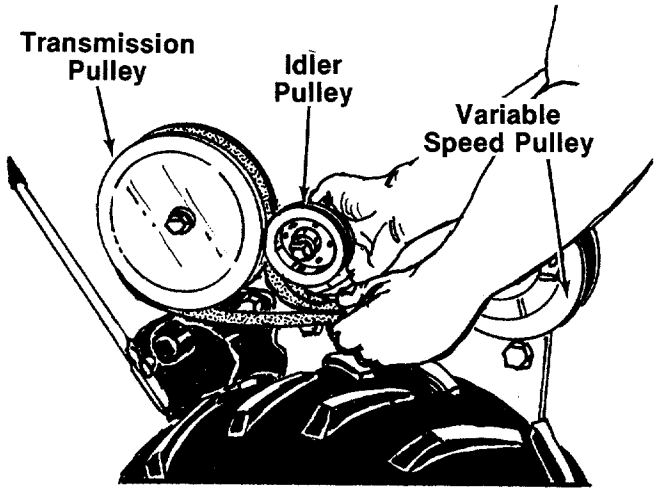


FIGURE 28.

4. Reassemble in reverse order with the new belt.

NOTE

Be certain to assemble the new rear belt in the second groove on the variable speed pulley.

TIRE CHAINS

It may be necessary to move the right hand wheel assembly to the extreme outside position when using tire chains. See figure 29.

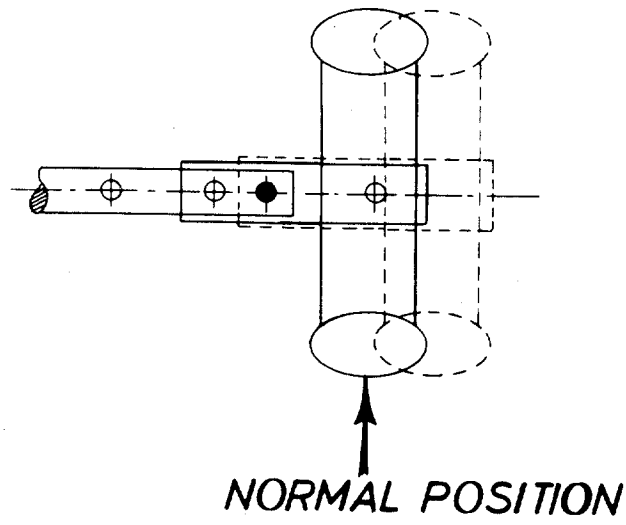


FIGURE 29.

OFF-SEASON STORAGE

If the tiller is to be inoperative for a period longer than 30 days, the following precautions are recommended.

1. Working outdoors, drain all fuel from the fuel tank as instructed in the separate engine manual.

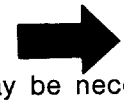
DO NOT DRAIN FUEL WHILE SMOKING, OR IF NEAR AN OPEN FIRE.

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.
3. Follow the instructions found in the engine manual for protecting the inside of the engine for storage.
4. Clean the exterior surfaces of the 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.

TILLER WINTERIZING INSTRUCTIONS FOR USE WITH SNOW BLADE:

1. For cold weather (below 32°F.), drain oil from tiller engine crankcase and replace with grade of oil recommended for cold weather in engine manual.
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.

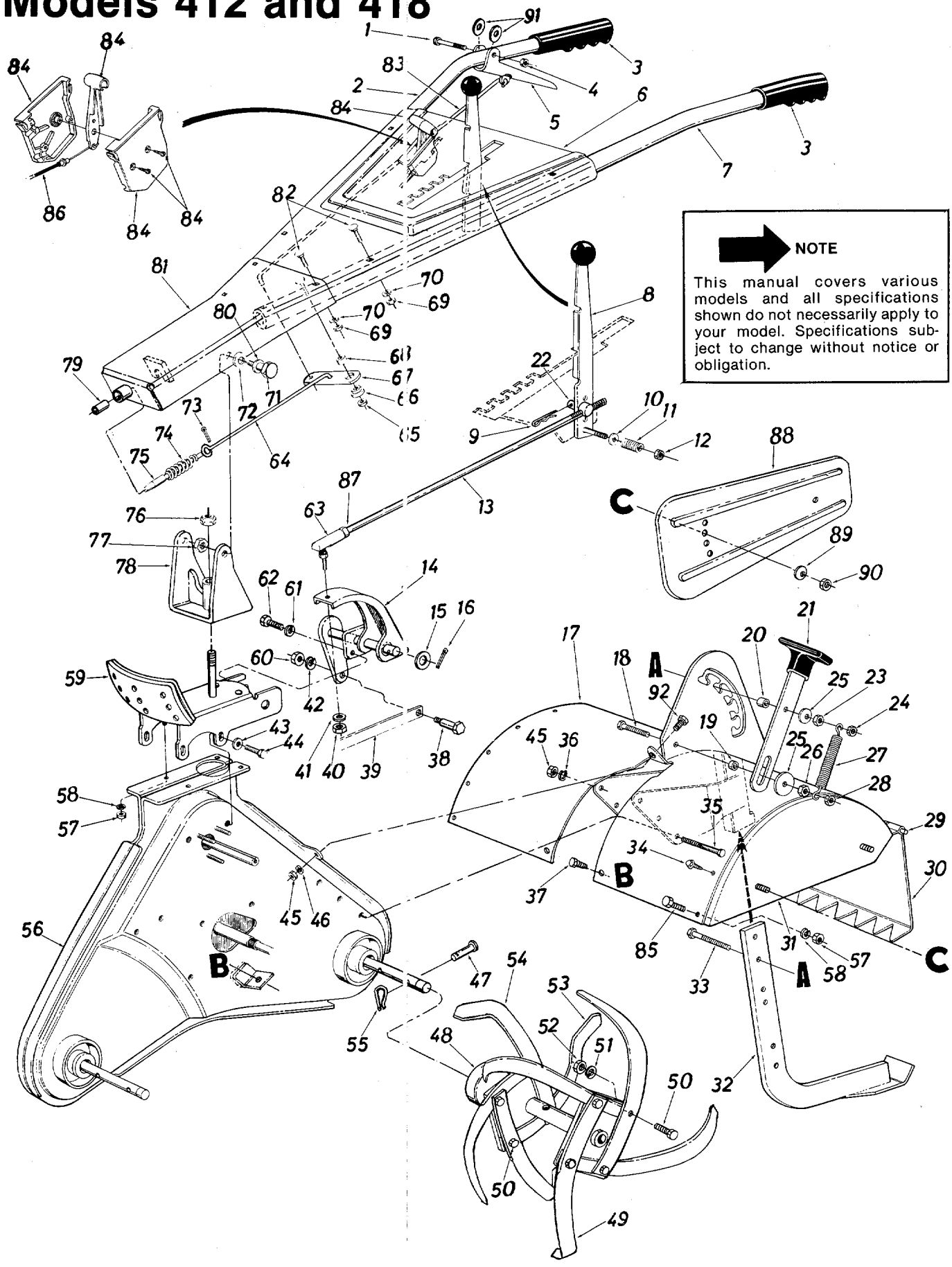
3. In the spring of the year, before the tilling season, be sure to change engine oil back to SAE 30W detergent oil.

TROUBLE SHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	SOLUTION
Engine fails to start	1. Check fuel tank for gas. 2. Spark plug lead wire disconnected. 3. Faulty spark plug.	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	1. Spark plug wire loose. 2. Dirty air cleaner.	1. Connect and tighten spark plug wire. 2. Clean air cleaner as described in engine manual.
Engine overheats	1. Carburetor not adjusted properly. 2. Air flow restricted. 3. Engine oil level low.	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 bracket adjustment. See adjustment section of manual.

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

Models 412 and 418



NOTE

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

Models 412 and 418

PARTS LIST FOR MODELS 412 AND 418 TILLERS

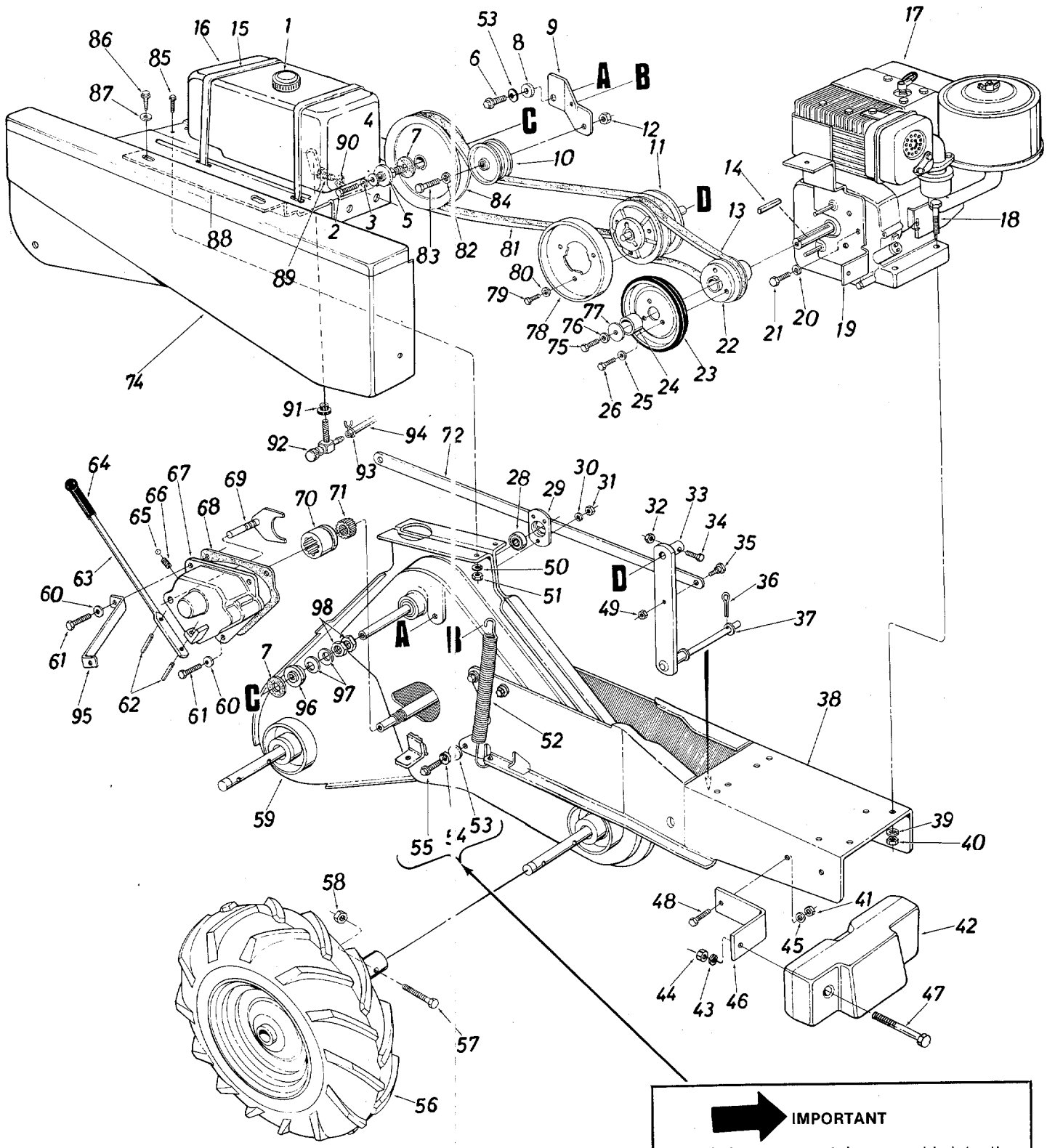
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0136		Hex Bolt ¼-20 x 1.75" Lg.*	
2	749-0268		Handle—R.H.	
3	720-0180		Grip	
4	712-0107		Hex Cent. L-Nut ¼-20 Thd.	
5	14844		Clutch Grip	
6	04831		Handle Panel Ass'y.	
7	749-0269		Handle—L.H.	
8	04810		Clutch Handle Ass'y.	
9	714-0149		Hairpin Cotter	
10	736-0105		Belleville Wash. .38" I.D.	
11	732-0193		Compression Spring .88" O.D. x .81" Lg.	
12	712-0214		Hex Cent. L-Nut 3/8-24 Thd.	
13	747-0278		Gear Shift Rod	
14	14734		Pivot Horn Ass'y.	
15	736-0290		Fl-Wash. .630 I.D. x 1.0" O.D. x .063	
16	714-0474		Cotter Pin 1/8" Dia. x .75" Lg.*	
17	15381		Tine Shield Ass'y.	
18	710-0344		Hex Bolt 3/8-16 x 1.5" Lg.*	
19	750-0527		Spacer .38 I.D. x .50 O.D. x .18 Lg.	
20	750-0528		Spacer .38 I.D. x .50 O.D. x .38 Lg.	
21	14843		Depth Bar Handle Ass'y. w/Knob	
22	711-0198		Ferrule	
23	712-0798		Hex Nut 3/8-16 Thd.*	
24	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
25	736-0227		Fl-Wash. .38 I.D. x 1.50 O.D. x .13	
26	712-0798		Hex Nut 3/8-16 Thd.*	
27	732-0416		Spring—Depth Bar	
28	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
29	747-0252		Hinge Rod	
30	04804		Tine Shield Hinge Flap Ass'y.	
31	15389		Side Cover Tine Shield—L.H.	
	15388		Side Cover Tine Shield—R.H. (Not Shown)	
32	14731		Depth/Drag Bar Ass'y.	
33	710-0347		Hex Bolt 3/8-16 x 1.75" Lg.*	
34	710-0604		Hex Wash. Hd. Self-Tap Scr. 5/16-18 x .62" Lg.	
	712-0292		Speed Nut	
35	710-0830		Hex Bolt 3/8-24 x 3.0" Lg.	
36	736-0169		L-Wash. 3/8" I.D.*	
37	710-0623		Hex Wash. Hd. Self-Tap Scr.	
38	738-0258		Shoulder Bolt .50" Dia. x .25" Lg.	
39	04841		Control Bracket	
40	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
41	736-0169		L-Wash. 3/8" I.D.*	
42	736-0169		L-Wash. 3/8" I.D.*	
43	736-0105		Belleville Wash.	
44	710-0623		Hex Wash. Hd. Self-Tap Scr.	
45	712-0241		Hex Nut 3/8-24 Thd.*	
46	736-0169		L-Wash. 3/8" Scr.*	
47	711-0679		Clevis Pin	
48	15295		Tine Adapter Ass'y.	
49	15387		L.H. Tine Ass'y. Comp.	
	15386		R.H. Tine Ass'y. Comp. (Not Shown)	
50	710-0192		Hex Bolt 3/8-24 x 1.25" Lg.*	
51	736-0169		L-Wash. 3/8" I.D.*	
52	712-0241		Hex Nut 3/8-24 Thd.*	
53	742-0244		Tine—R.H.	
54	742-0243		Tine—L.H.	
55	714-0149		Hairpin Cotter	
56	15385		Chain Case Ass'y. Comp.	
57	712-0267		Hex Nut 5/16-18 Thd.*	
58	736-0119		L-Wash. 5/16" I.D.*	
59	14744		Handle Positioner Ass'y.	
60	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
61	736-0119		L-Wash. 5/16" I.D.*	
62	710-0601		Hex Wash. Hd. Self-Tap Scr.	
63	723-0156		Rod End 3/8-24 Thd.	
64	747-0254		Lower Handle Control Rod	
65	712-0158		Hex Nut 5/16-18 Thd.*	
66	748-0516		Pivot Handle Brg.	
67	04819		Pivot Handle Link	
68	736-0289		Bushing Wash.	
69	712-0267		Hex Nut 5/16-18 Thd.*	
70	736-0119		L-Wash. 5/16" I.D.*	
71	738-0143		Shld. Bolt .500" Dia. x .660	
72	736-0253		Belleville Wash. .505" I.D. x 1.00" O.D.	
73	714-0474		Cotter Pin 1/8" Dia. x .75" Lg.*	
74	732-0132		Compression Spring	
75	711-0663		Locking Pin	
76	712-0221		Hex Ins. L-Nut 5/8-16 Thd.	
77	712-0181		Hex Top L-Nut 3/8-16 Thd.	
78	04812		Pivot Brkt. Ass'y.	
79	748-0150		Sleeve Brg. .50" I.D. x .62" O.D. x 1.12" Lg.	
80	736-0192		Fl-Wash. .50" I.D. x 1.00" O.D. x .090	
81	04792		Handle Mtg. Brkt. Ass'y.	
82	710-0458		Carriage Bolt 5/16-18 x 1.75" Lg.*	
83	747-0255		Handle Lock Rod	
84	831-0692		Throttle Control Box Ass'y.	
85	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
86	746-0502		Throttle Control Wire	
87	712-0711		Hex Jam Nut 3/8-24 Thd.	
88	15390		Side Shield	
89	736-0170		Bell-Wash.	
90	712-0267		Hex Nut 5/16-18 Thd.	
91	736-0173		Fl-Wash. ¼" I.D.	
92	710-0191		Hex Bolt 3/8-24 x .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 code shown above. (e.g. Top Flite Red—04820 (463).)

Model 412


A
B
C
D
IMPORTANT
The chain case must be assembled to the frame with 3/4" hex bolt, lock washer and belleville washer as shown.

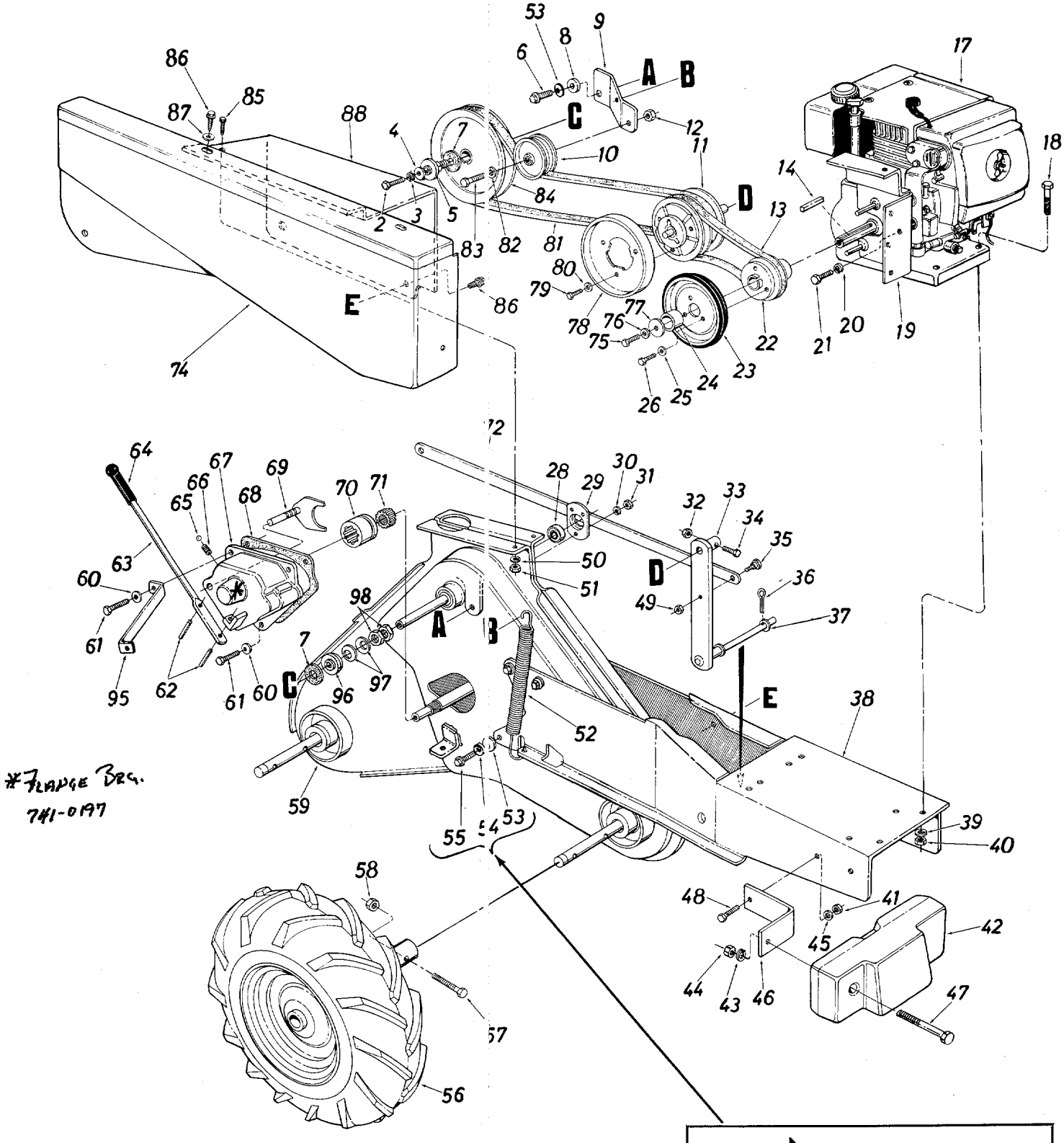
Model 412

PARTS LIST FOR MODEL 412 TILLER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	723-0365		Gas Cap	
2	710-0876		Hex L-Bolt 5/16-24 x 1.5" Lg.	
3	736-0119		L-Wash. 5/16" I.D.*	
4	736-0231		Fl-Wash. 5/16" I.D. x 1.125" O.D.	
5	15727		Friction Disc Ass'y.	
6	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.	
7	761-0189		Friction Pad	
8	738-0372		Shoulder Spacer	
9	14740		Idler Bracket	
10	756-0225		Fl-Idler 2.75" Dia.	
11	717-0343		Variable Speed Ass'y.	
12	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
13	754-0220		"V"-Belt 5/8" x 27.0" Lg.	
14	714-0118		Sq. Key ¼" x 1.50" Lg.*	
15	726-0153		Cable Tie	
16	751-0225		Gas Tank	
17	—		Engine	
18	710-0380		Hex Bolt 5/16-18 x 1.75" Lg.*	
19	14826		Belt Cover Support Ass'y.	
20	736-0114		Internal L-Wash. ½" I.D.	
21	710-0121		Hex Bolt ½-20 x .75" Lg.	
22	756-0296		Engine Pulley Ass'y.	
23	05080		Friction Wheel Ass'y.	
24	750-0381		Spacer	
25	736-0119		L-Wash. 5/16" I.D.*	
26	710-0621		Hex Bolt 5/16-18 x .50" Lg.*	
28	741-0155		Ball Bearing	
29	05034		Bearing Housing 1-3/8" O.D.	
30	736-0329		L-Wash. ¼" I.D.*	
31	712-0138		Hex Nut ¼-28 Thd.*	
32	712-0324		Hex Ins. L-Nut ¼-20 Thd.	
33	04837		Variable Speed Brkt. Ass'y.	
34	710-0106		Hex Bolt ¼-20 x 1.25" Lg.*	
35	738-0380		Shld. Bolt ½" Dia. x .25" Lg.	
36	714-0115		Cotter Pin 1/8" Dia. x 1.0" Lg.*	
37	736-0237		Fl-Wash. .686" I.D. x 1.25" O.D.	
38	14741	—452	Frame Ass'y.	
39	736-0119		L-Wash. 5/16" I.D.*	
40	712-0267		Hex Nut 5/16-18 Thd.*	
41	712-0214		Hex Cent. L-Nut 3/8-24 Thd.	
42	723-0340		Weight	
43	736-0326		Fl-Wash. .50" I.D. x 1.0" O.D.	
44	712-0206		Hex Nut ½-13 Thd.*	
45	736-0169		L-Wash. 3/8" I.D.*	
46	04860		Weight Mtg. Brkt.	
47	710-0496		Hex Bolt ½-13 x 4.50" Lg.*	
48	710-0152		Hex Bolt 3/8-24 x 1.00" Lg.*	
49	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
50	736-0329		L-Wash. ¼" I.D.*	
51	712-0138		Hex Cent. L-Nut ¼-28 Thd.	
52	732-0384		Spring Idler Bracket	
53	736-0105		Belleville Wash. 3/8" I.D.	
54	736-0169		L-Wash. 3/8" I.D.*	
55	710-0623		Hex Self-Tap Scr. 3/8-16 x .75" Lg.	
56	734-0806		Wheel Ass'y. Comp.—R.H.	
	734-0807		Wheel Ass'y. Comp.—L.H. (Not Shown)	
57	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*	
58	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
59	15385		Chain Case Ass'y. Comp.	
60	736-0119		L-Wash. 5/16" I.D.*	
61	710-0601		Hex Tap Tite Scr. 5/16-18 x .75" Lg.	
62	715-0139		Headed Spiral Pin 3/16 x 13/16" Lg.	
63	747-0265		Engagement Lever	
64	720-0143		Grip	
65	741-0862		Ball Detent .250" Dia.	
66	732-0863		Compression Spring	
67	719-0238		Shift Housing—R.H.	
	719-0237		Shift Housing—L.H. (Not Shown)	
68	721-0162		Gasket—Shift Housing	
69	04858		Shift Yoke Ass'y.—R.H.	
	04859		Shift Yoke Ass'y.—L.H. (Not Shown)	
70	717-0383		Clutch Dog	
71	717-0382		Clutch Dog Driver	
72	04841		Control Brkt.	
74	15287		Shroud Belt Cover	
75	710-0314		Hex Bolt 7/16-20 x 1.00" Lg.	
76	736-0171		L-Wash. 7/16" I.D.	
77	736-0319		Fl-Wash. .44 I.D. x 1.38" O.D.	
78	04836		Friction Disc	
79	710-0230		Hex Bolt ¼-28 x .50" Lg.	
80	736-0329		L-Wash. ¼" I.D.*	
81	754-0268		"V"-Belt 5/8" x 51" Lg.	
82	736-0169		L-Wash. 3/8" I.D.*	
83	710-0344		Hex Bolt 3/8" x 1.50" Lg.*	
84	756-0410		Input Pulley—Chain Case	
85	710-0195		Hex Bolt ¼-28 x .62" Lg.	
86	710-0599		Hex Wash. Hd. Self-Tap Scr.	
87	736-0173		Fl-Wash. ¼" I.D.	
88	15290		Tank Mounting Brkt.	
89	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
90	736-0119		L-Wash. 5/16" I.D.*	
91	735-0149		Bushing—Gas Line	
92	751-0171		Shut-Off Valve	
93	723-0157		Clamp Gas Line	
94	751-0173		Gas Line 14½" Lg.	
95	15291		Brace	
96	748-0296		Floating Disc	
97	736-0352		Spring Bell-Wash.	
98	712-0331		Hex Jam Nut 1.0-14	

NOTE: 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."

Model 418



IMPORTANT

The chain case **must be** assembled to the frame with 3/4" hex bolt, lock washer and belleville washer as shown.

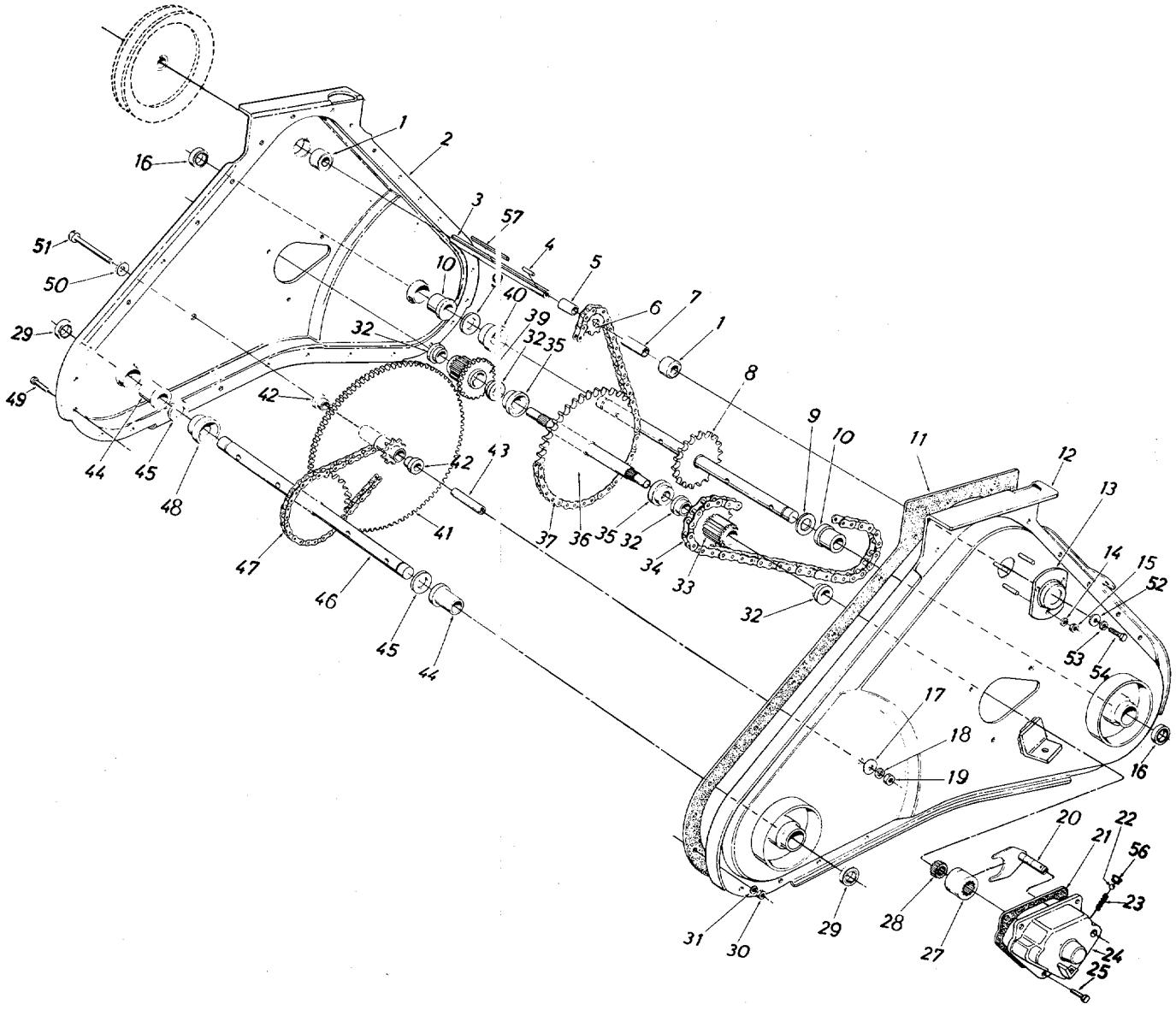
Model 418

PARTS LIST FOR MODEL 418 TILLER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
2	710-0876		Hex L-Bolt 5/16-24 x 1.5" Lg.	
3	736-0119		L-Wash. 5/16" I.D.*	
4	736-0231		Fl-Wash. 5/16" I.D. x 1.125" O.D.	
5	15727		Friction Disc Ass'y.	
6	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.	
7	761-0189		Friction Pad	
8	738-0372		Shoulder Spacer	
9	14740		Idler Bracket	
10	756-0225		Fl-Idler 2.75" Dia.	
11	717-0343		Variable Speed Ass'y.	
12	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
13	754-0220		"V"-Belt 5/8" x 27.0" Lg.	
14	714-0114		Sq. Key ¼" x 2.00" Lg.*	
17	—		Engine	
18	710-0380		Hex Bolt 5/16-18 x 1.75" Lg.*	
19	784-0044		Belt Cover Support Ass'y.	
20	736-0114		Internal L-Wash. ½" I.D.	
21	710-0121		Hex Bolt ½-20 x .75" Lg.	
22	756-0296		Engine Pulley Ass'y.	
23	05080		Friction Wheel Ass'y.	
24	750-0598		Spacer	
25	736-0119		L-Wash. 5/16" I.D.*	
26	710-0621		Hex Bolt 5/16-18 x .50" Lg.*	
28	741-0155		Ball Bearing	
29	05034		Bearing Housing 1-3/8" O.D.	
30	736-0329		L-Wash. ¼" I.D.*	
31	712-0138		Hex Nut ¼-28 Thd.*	
32	712-0324		Hex Ins. L-Nut ¼-20 Thd.	
33	04837		Variable Speed Brkt. Ass'y.	
34	710-0106		Hex Bolt ¼-20 x 1.25" Lg.*	
35	738-0380		Shld. Bolt ½" Dia. x .25" Lg.	
36	714-0115		Cotter Pin 1/8" Dia. x 1.0" Lg.*	
37	736-0237		Fl-Wash. .686" I.D. x 1.25" O.D.	
38	784-0043		Frame Ass'y.	
39	736-0119		L-Wash. 5/16" I.D.*	
40	712-0267		Hex Nut 5/16-18 Thd.*	
41	712-0214		Hex Cent. L-Nut 3/8-24 Thd.	
42	723-0340		Weight	
43	736-0326		Fl-Wash. .50" I.D. x 1.0" O.D.	
44	712-0206		Hex Nut ½-13 Thd.*	
45	736-0169		L-Wash. 3/8" I.D.*	
46	04860		Weight Mtg. Brkt.	
47	710-0496		Hex Bolt ½-13 x 4.50" Lg.*	
48	710-0152		Hex Bolt 3/8-24 x 1.00" Lg.*	
49	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
50	736-0329		L-Wash. ¼" I.D.*	
51	712-0138		Hex Cent. L-Nut ¼-28 Thd.	
52	732-0384		Spring Idler Bracket	
53	736-0105		Belleville Wash. 3/8" I.D.	
54	736-0169		L-Wash. 3/8" I.D.*	
55	710-0623		Hex Self-Tap Scr. 3/8-16 x .75" Lg.	
56	734-0806		Wheel Ass'y. Comp.—R.H.	
	734-0807		Wheel Ass'y. Comp.—L.H. (Not Shown)	
57	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*	
58	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
59	15385		Chain Case Ass'y. Comp.	
60	736-0119		L-Wash. 5/16" I.D.*	
61	710-0601		Hex Tap Tite Scr. 5/16-18 x .75" Lg.	
62	715-0139		Headed Spiral Pin 3/16 x 13/16" Lg.	
63	747-0265		Engagement Lever	
64	720-0143		Grip	
65	741-0862		Ball Detent .250" Dia.	
66	732-0863		Compression Spring	
67	719-0238		Shift Housing—R.H.	
	719-0237		Shift Housing—L.H. (Not Shown)	
68	721-0162		Gasket—Shift Housing	
69	04858		Shift Yoke Ass'y.—R.H.	
	04859		Shift Yoke Ass'y.—L.H. (Not Shown)	
70	717-0383		Clutch Dog	
71	717-0382		Clutch Dog Driver	
72	04841		Control Brkt.	
74	15287	—463	Shroud Belt Cover	
75	710-0483		Hex Bolt 7/16-20 x 2.25" Lg.	
76	736-0171		L-Wash. 7/16" I.D.	
77	736-0319		Fl-Wash. .44 I.D. x 1.38" O.D.	
78	04836		Friction Disc	
79	710-0230		Hex Bolt ¼-28 x .50" Lg.	
80	736-0329		L-Wash. ¼" I.D.*	
81	754-0268		"V"-Belt 5/8" x 51" Lg.	
82	736-0169		L-Wash. 3/8" I.D.*	
83	710-0344		Hex Bolt 3/8" x 1.50" Lg.*	
84	756-0410		Input Pulley—Chain Case	
85	710-0195		Hex Bolt ¼-28 x .62" Lg.	
86	710-0599		Hex Wash. Hd. Self-Tap Scr.	
87	736-0173		Fl-Wash. ¼" I.D.	
88	784-0046		Belt Cover Shroud	
95	15291		Brace	
96	748-0296		Floating Disc	
97	736-0352		Spring Bell-Wash.	
98	712-0331		Hex Jam Nut 1.0-14	

NOTE: 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."

Models 412 and 418



NOTE: Use 28 ounces of Plastilube #0 grease. Order part no. 737-0133.

Models 412 and 418

PARTS LIST FOR CHAIN CASE ASSEMBLY 15385

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	741-0155		Ball Bearing .62" I.D. x 1.38" O.D. x .44	
2	15384		Chain Case R.H. Half	
3	738-0379		Input Shaft .62" Dia.	
4	714-0122		Sq. Key 3/16" x 3/16" x .75" Lg.	
5	750-0379		Spacer .637" I.D. x .781" O.D. x .85" Lg.	
6	717-0210		Sprocket 9 Tooth x .62" Shaft	
7	750-0378		Spacer .637" I.D. x .781" O.D. x 1.44" Lg.	
8	14899		Tine Shaft Ass'y.	
9	736-0350		Fl-Wash. 1.28" I.D. x 1.62" O.D.	
10	741-0381		Flange Bearing 1.25" I.D.	
11	721-0163		Gasket—Housing	
12	15383		Chain Case L.H. Half	
13	05034		Bearing Housing 1-3/8" O.D.	
14	736-0329		L-Wash. ¼" I.D.*	
15	712-0138		Hex Nut ¼-28 Thd.	
16	721-0192		Seal 1.25" I.D.	
17	736-0219		Belleville Wash.	
18	736-0169		L-Wash. 3/8" I.D.*	
19	712-0214		Hex Cent. L-Nut 3/8-24 Thd.	
20	04859		Shift Yoke Ass'y.—L.H.	
	04858		Shift Yoke Ass'y.—R.H. (Not Shown)	
21	721-0162		Gasket—Shift Housing	
22	741-0862		Ball Detent .250 Dia.	
23	732-0863		Compression Spring	
24	719-0237		Shift Housing—L.H.	
	719-0238		Shift Housing—R.H. (Not Shown)	
25	710-0601		Hex Tap-Tite 5/16-18 x .75" Lg.	
27	717-0383		Clutch Dog	
28	717-0382		Clutch Dog Driver	
29	721-0102		Seal 1.0" I.D. x 1.38" O.D.	
30	712-0138		Hex Nut ¼-28 Thd.*	
31	736-0329		L-Wash. ¼" I.D.*	
32	741-0229		Flange Brg. 1.00" I.D.	
33	14746		Sprocket Brg. Sleeve Ass'y.	
34	713-0313		#50 Chain—5/8" Pitch x 50 Links—Endless	
35	750-0352		Stepped Spacer 1.0" I.D. x 1.75" O.D.	
36	04823		Clutch Shaft Ass'y.	
37	713-0250		#420 Chain 1/2" Pitch x 58 Links—Endless	
39	717-0512		Gear Bearing—Sleeve Ass'y.	
40	750-0563		Spacer 1.25" I.D. x 2.0" O.D. x .68" Lg.	
41	717-0511		Sprocket and Gear Ass'y.	
42	748-0184		Flange Brg. .628" I.D. x .753" O.D.	
43	750-0374		Hub Sleeve .38" I.D. x .625" O.D.	
44	741-0189		Flange Brg. 1.00" I.D. x 1.188" O.D.	
45	736-0259		Fl-Wash. 1.0" I.D. x 1.62" O.D.	
46	04835		Axle Shaft Ass'y.	
47	713-0312		#420 Chain ½" Pitch 46 Links—Endless	
48	750-0314		Spacer 1.0" I.D. x 2.0" O.D.	
49	710-0195		Hex Bolt ¼-28 x .62" Lg.	
50	736-0219		Belleville Wash.	
51	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*	
52	736-0159		Fl-Wash. 5/16" I.D.	
53	736-0119		L-Wash. 5/16" I.D.*	
54	710-0627		Hex L-Bolt 5/16-24 x .75" Lg.	
56	721-0165		Cap Plug .250" Dia.	
57	714-0139		Sq. Key 3/16" x 2.0" Lg.	

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

31-0106 Depth Gauge Wheels (Pair)
31-0107 6-Tine Cultivator (Must be used with 31-0106 Depth Gauge Wheels)
31-0110 8" Furrower Opener
31-0111 15" Sweep Cultivator
31-0114 Wheel Weights (Pair)
31-0116 32" Leveling/Snow Blade (Must be used with 31-0121 Front Hitch Mount)
31-0121 Front Hitch Mount (For 32" Blade)
31-0144 "V"-Bar Cultivating Kit
Kit Includes: "V"-Bar Frame, 4-Point Cultivating Tines, Hiller/Furrower, Depth Gauge Wheels (Pair).

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

1. Remove the tine shield hinge flap assembly.
2. Remove the depth bar assembly (except when using the 8" furrower opener and 15" sweep cultivator).
3. Remove the tines.

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 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.	6601 N. Washington St.	80229
FLORIDA	**JACKSONVILLE**	
Radco Distributors	4909 Victor St. Box 5459	32207
	HIALEAH	
Small Eng. Dist.	7995 W. 26th Court	33016
GEORGIA	**EAST POINT**	
East Point Cycle & Key Inc.	2834 Church St.	30344
ILLINOIS	**LYONS**	
Keen Edge Co.	8615 Ogden Ave.	60534
INDIANA	**ELKHART**	
Parts & Sales Inc.	2101 Industrial Pkwy.	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**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-Frazer Supply Co.	8th and Monterey	64503
	ST. LOUIS	
Henzler, Inc.	2015 Lemay Ferry Rd.	63125
NEW JERSEY	**BELLMAWR**	
Lawnmower Parts Inc.	717 Creek Rd.	08030
NEW MEXICO	**ALBUQUERQUE**	
Spitzer Eng. & Parts Co.	1023 Third Ave. N.W.	87103
NEW YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave.	13619
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
	SCRANTON	
Scranton Auto Ignition Co.	1133-35 Wyoming Ave.	18509
TENNESSEE	**KNOXVILLE**	
Master Repair Service	2000 Western Ave.	37921
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	7520[illegible]
	FORT WORTH	
Woodson Sales Corp.	6733 Baker Blvd. Hwy. 10	76118
	HOUSTON	
Bullard Supply Co.	2409 Commerce St.	77003
	SAN ANTONIO	
Engine House Inc.	8610 Botts Lane P.O. Box 17867	78217
UTAH	**BOUNTIFUL**	
Powered Products	485 N 500 W.	84010
VIRGINIA	**ASHLAND**	
RBI Corp.	101 Cedar Ridge Dr.	23005
WASHINGTON	**SEATTLE**	
Equip. Northwest	1410 14th Ave.	98122
WISCONSIN	**CHILTON**	
Horst Dist. Inc.	444 N. Madison St.	53014
NORTH CAROLINA	**GOLDSBORO**	
Smith Hardware Co.	515 N. George St.	27530
	GREENSBORO	
Dixie Sales Company	335 N. Green	27402

WARRANTY PARTS AND SERVICE POLICY (0484)

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.**

MTD PRODUCTS INC • P.O. BOX 36900 • CLEVELAND, OHIO 44136