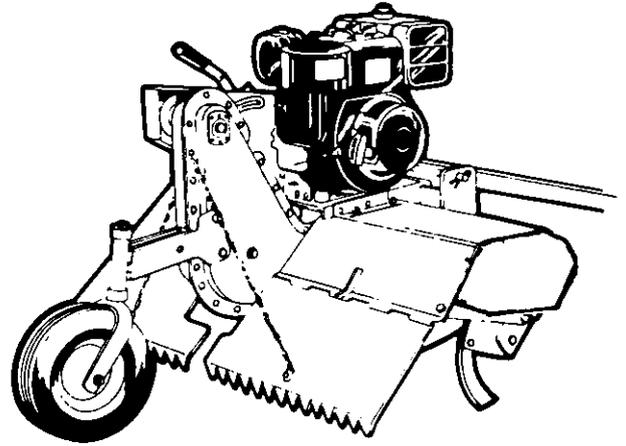


Cub Cadet

Owner's Manual

**38" TILLER
ATTACHMENT**



**Model Number
190-400-100**

Important:

**Read Safety Rules and
Instructions Carefully**

Thank you for purchasing an
American built product.



Cub Cadet Corporation Limited One Year Warranty For Outdoor Power Products

Cub Cadet Corporation's Promise To You

We promise you, the first user purchaser, that we will replace or repair any part or parts of your new outdoor power product which is defective in material or workmanship without charge for either parts or labor during the first year following delivery to you.

What You Must Do

We recommend that you take the product back to the dealership where you purchased it at your expense; however, you may also take it to the most convenient authorized Cub Cadet dealer. Transportation charges are your responsibility.

Replacement Parts Warranty

Cub Cadet parts which are furnished and installed under this warranty are themselves within the coverage of this warranty for the duration of the original one year warranty period or for ninety days after installation, whichever period shall expire last.

What Is Not Covered

Tires and tubes are not covered by this warranty, but are warranted by their manufacturer. Regular maintenance replacement items such as spark plugs, ignition points, condensers, filters, and lubricants and maintenance adjustments such as fuel system cleaning, engine tune-up, brake and/or clutch inspection or adjustment, when such replacement or adjustments are made as part of normal maintenance service are excluded from coverage. Any non-Cub Cadet product which you may have installed in or upon the product is also excluded.

No person is authorized to give any other warranties or to assume any other liabilities on the Company's behalf unless made or assumed in writing by the Company, and no person is authorized to give any warranties or to assume any liabilities on the seller's behalf unless made or assumed in writing by the seller.

Limitations On Our Responsibility

Please carefully note that this is a two-way agreement. We promise to make free repairs or replacements as stated, but you agree that except for our obligation to make good on this promise we shall not be responsible for any expenses or inconvenience which you might incur or experience with respect to our product, nor shall we be liable for defects, damage, or failures caused by unauthorized alterations, unreasonable use, accident, or abuse, including failure to provide reasonable and necessary maintenance, after our product has been delivered to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Personal Use

The foregoing paragraphs constitute Cub Cadet Corporation's entire warranty with respect to any product purchased and used for personal, family, or household purposes as distinguished from commercial usage.

Commercial Use

In the event our product is used for commercial purposes, INCLUDING FARMING OPERATIONS, the following additional limitations upon the application of this warranty will be applicable to such product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE EXCLUDED, AS ARE ALL OTHER REPRESENTATIONS TO THE USER-PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF THE COMPANY OR THE SELLER.

Cub Cadet Corporation, P.O. Box 36930 Cleveland, Ohio 44136



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.



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.

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.

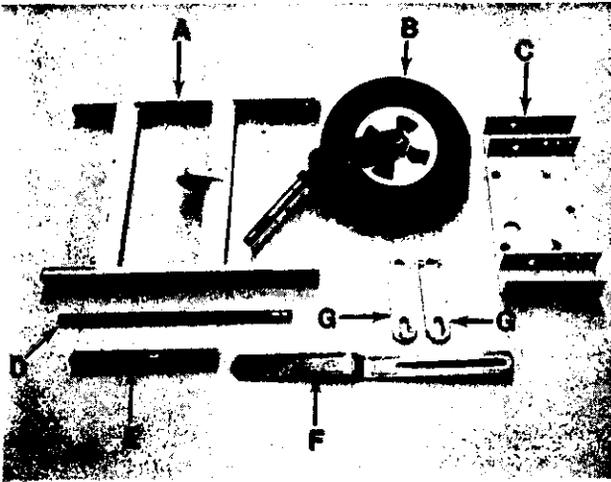


FIGURE 1.

← Loose Parts in Carton: (See Figure 1.)

- A (1) Hitch Bar Assembly
- B (1) Swivel Wheel Assembly
- C (1) Mounting Plate Assembly
- D (1) Hitch Rod
- E (1) Hitch Shaft
- F (1) Stabilizer Link
- G (2) Links

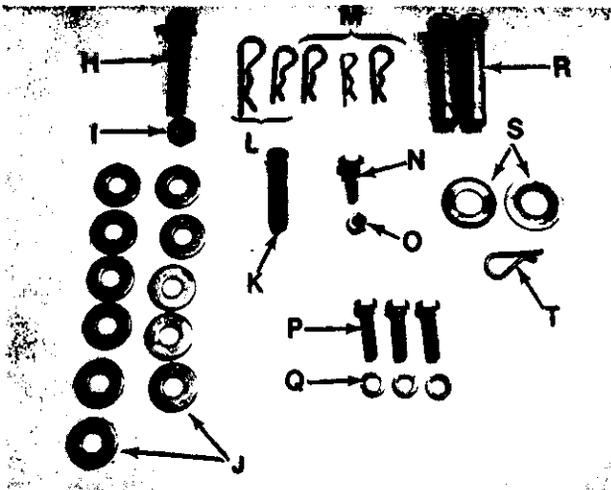


FIGURE 2.

← Contents of Hardware Pack: (See Figure 2.)

- H (1) Hex Bolt 1/2-13 x 3" Long
- I (1) Hex Lock Nut 1/2-13 Thread
- J (11) Flat Washers 1/2" I.D. x 1.25" O.D.
- K (1) Clevis Pin 1/2" Dia. x 2.17" Long
- L (2) Hairpin Cotter Pins 5/8" Shaft
- M (3) Hairpin Cotter Pins 1/2" Shaft
- N (1) Shoulder Bolt
- O (1) Hex Nut 5/16-18 Thread
- P (3) Hex Bolts 3/8-16 x 1.25" Long
- Q (3) Lock Washers 3/8" I.D.
- R (2) Clevis Pins 5/8" Dia. x 3-1/16" Long
- S (2) Flat Washers 3/4" I.D. x 1 1/2" O.D.
- T (1) Internal Cotter Pin

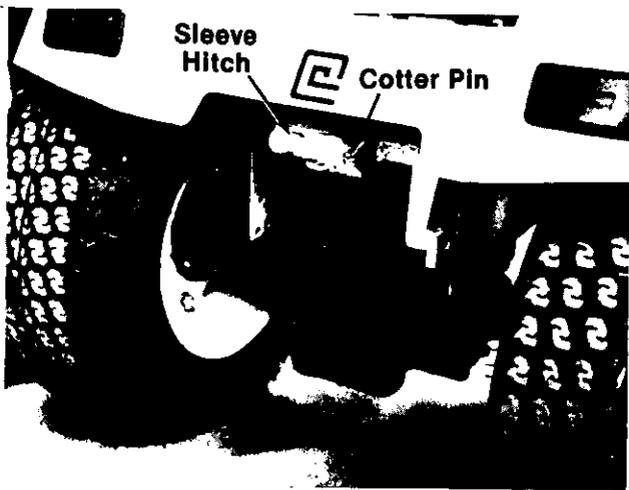


FIGURE 3.

1. Remove the tiller, all loose parts and hardware parts pack from the carton before discarding the carton.
2. Remove the sleeve hitch on tractor by removing the cotter pin. See figure 3.

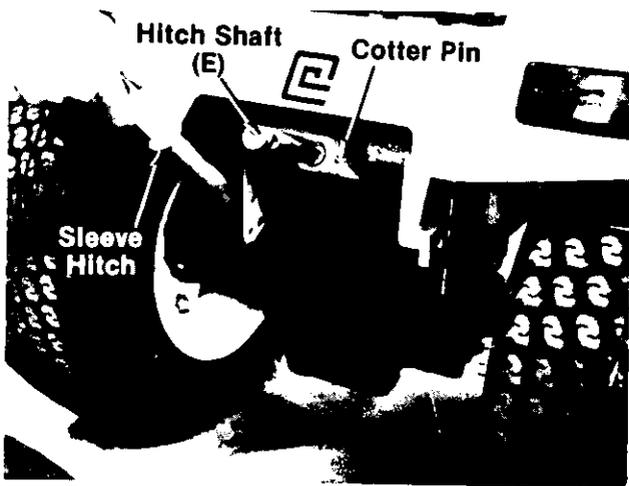


FIGURE 4.

3. Assemble new hitch shaft (Ref. E) with cotter pin removed in step 2. See figure 4.

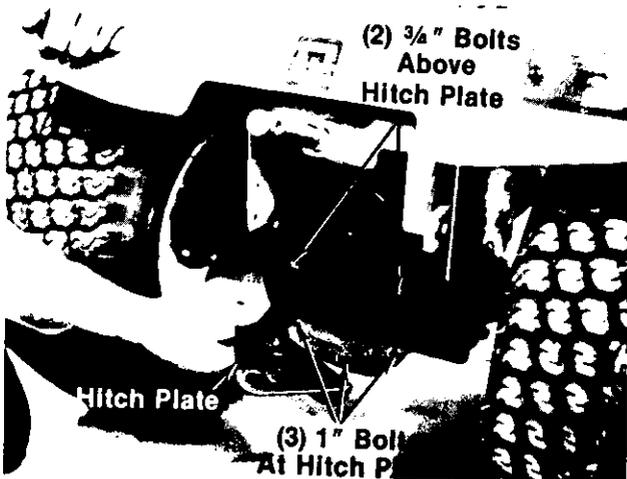
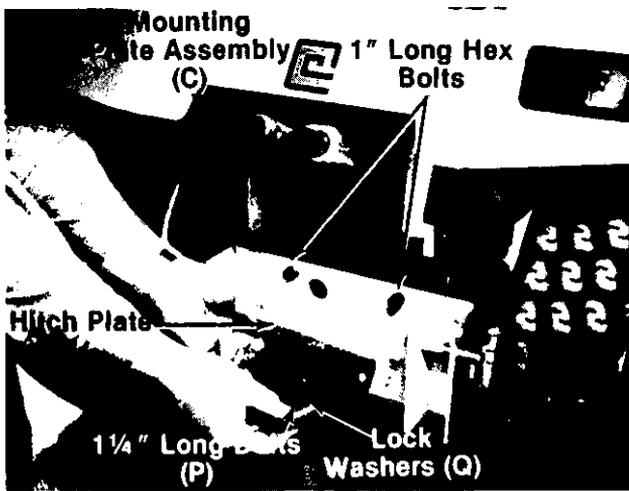


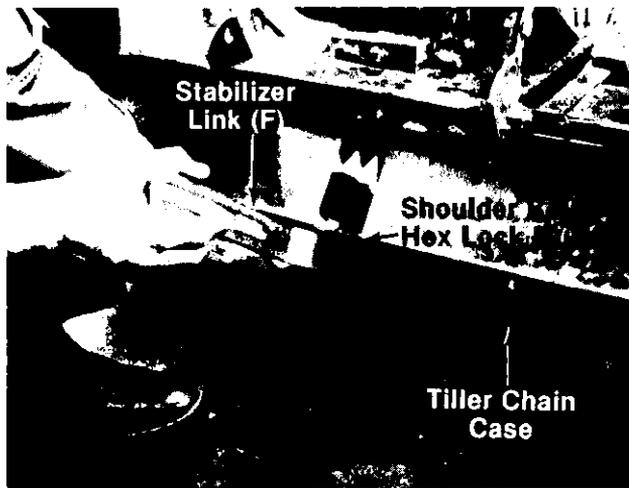
FIGURE 5.

4. Remove two (2) hex bolts $\frac{3}{4}$ " long and lock washers from back of tractor, just above the hitch plate. See figure 5.
5. Remove three (3) hex bolts 1" long and lock washers from hitch plate. Remove hitch plate. See figure 5.



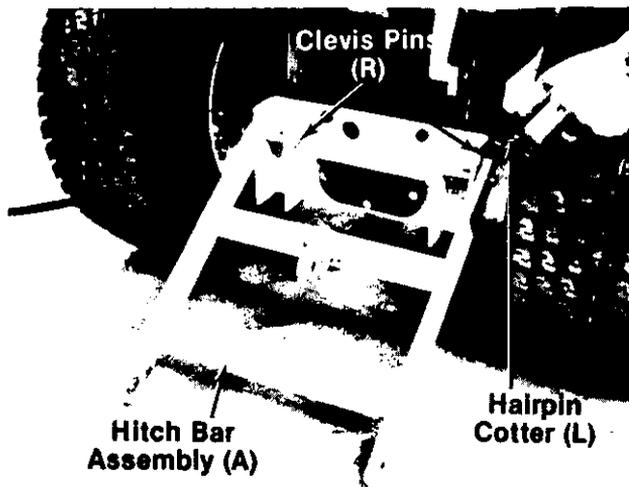
6. Assemble the mounting plate assembly (Ref. C) to back of tractor. Reuse two (2) 1" long hex bolts removed in step 5. See figure 6.
7. Reassemble the hitch plate with three (3) 1 1/4" long bolts (Ref. P) and lock washers (Ref. Q) provided in hardware pack. See figure 6.

FIGURE 6.



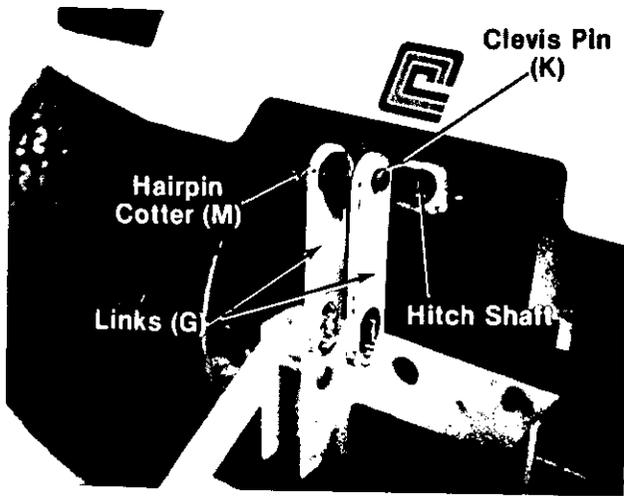
8. Assemble the stabilizer link (Ref. F) to front of tiller chain case. See figure 7. Secure with shoulder bolt (Ref. N) and hex lock nut (Ref. O). See figure 7.

FIGURE 7.



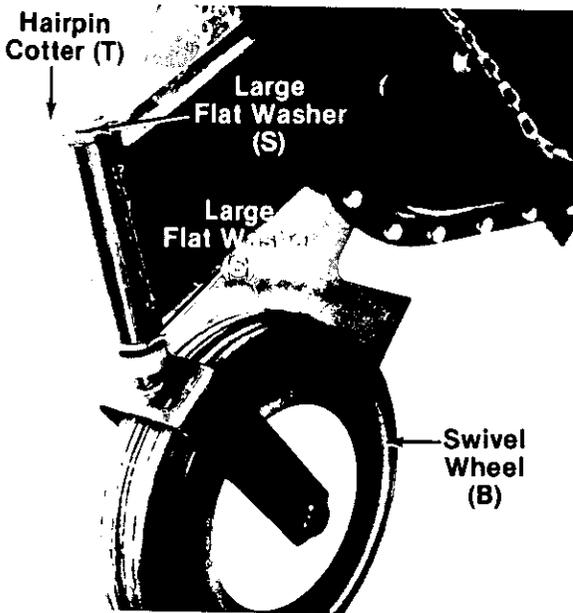
9. Assemble the hitch bar assembly (Ref. A) to the mounting plate with two (2) clevis pins (Ref. R) and hairpin cotters (Ref. L). See figure 8.

FIGURE 8.



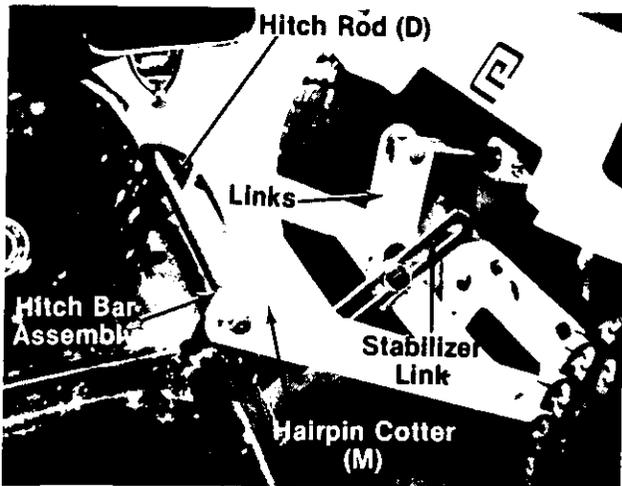
10. Assemble the two (2) links (Ref. G) to hitch shaft with clevis pin (Ref. K) and hairpin cotter (Ref. M). See figure 9.

FIGURE 9.



11. Place one flat washer (Ref. S) over swivel wheel (B). Place swivel wheel in position on tiller. See figure 10. Next, place other flat washer (S) over swivel wheel shaft and secure with hairpin cotter (T). See figure 10.

FIGURE 10.



12. Place tiller behind tractor. Secure the hitch bar assembly to tiller with hitch rod (Ref. D) and two (2) hairpin cotters (Ref. M). See figure 11.
13. Place the stabilizer link (on tiller) up to the hitch bar assembly, then place the links from hitch shaft down to hitch bar. See figures 11 and 12.

FIGURE 11.

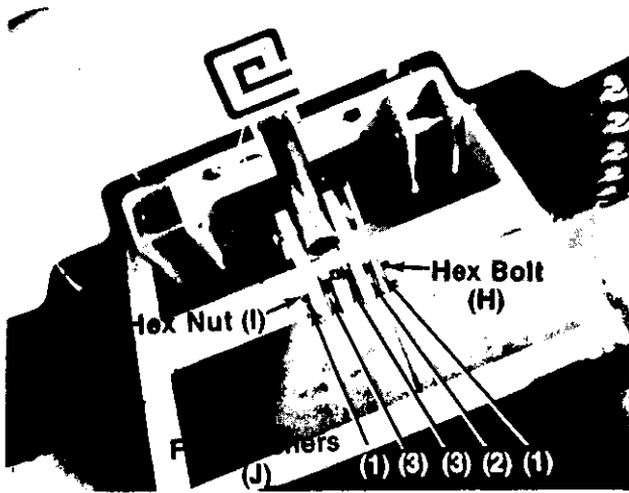


FIGURE 12.

14. Secure links and stabilizer link to hitch bar assembly with hex bolt (Ref. H), ten (10) flat washers (Ref. J) and hex nut (Ref. I). See figure 12.
15. Raise and lower the tractor lift lever a couple of times to ensure that the tiller tines are going up and down.

This tiller attachment is **not** designed to be raised off of the ground by the tractor lift lever. It is designed to trail behind the tractor. The lift lever is only used to raise and lower the tines.

OPERATION

BEFORE STARTING ENGINE

Read this owner's manual carefully.

Fill Crankcase with Oil (Approximately 2¼ pints)

Use a high quality detergent engine oil, meeting A.P.I. (Americal Petroleum Institute) service classification SC, SD, or SE. Nothing should be added to the recommended oil.

Use oil with viscosity grade SAE 30 or SAE 10W-30 or SAE 10W-40.

Place engine level. Clean area around oil fill before removing dipstick. See figure 13.

Remove cap and dipstick and fill to full mark on dipstick. Pour slowly. Capacity approximately 2¼ pints. When checking oil level, push dipstick firmly but slowly until cap bottoms on tube. Do not overfill. Dipstick assembly must be pushed fully into tube at all times when engine is operating.

Fill Fuel Tank

Use clean, fresh, regular automotive grade gasoline. Fill the tank completely. See figure 13.

Do not mix Oil with Gasoline.

STARTING THE ENGINE

1. Place the tine clutch rod in the **disengaged** position. See figure 14.

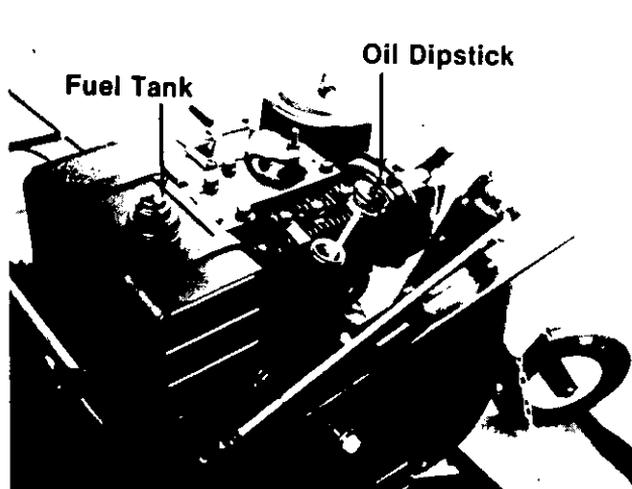


FIGURE 13.

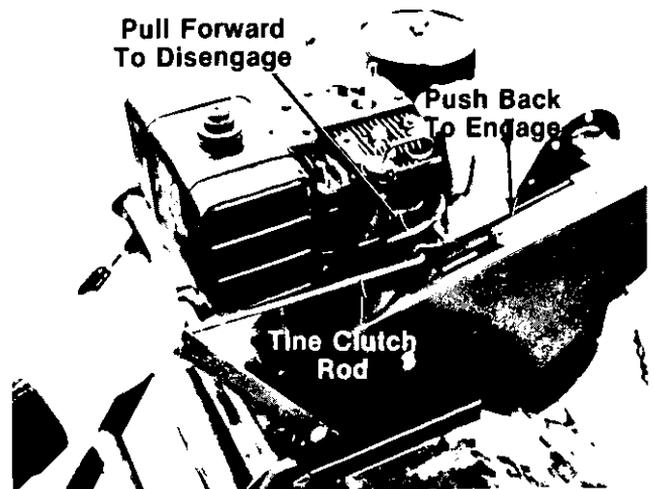


FIGURE 14.

2. Push the "CHOKE" lever down all the way. Set the throttle in the "FAST" position. See figures 15 and 16.



A warm engine requires less choking.

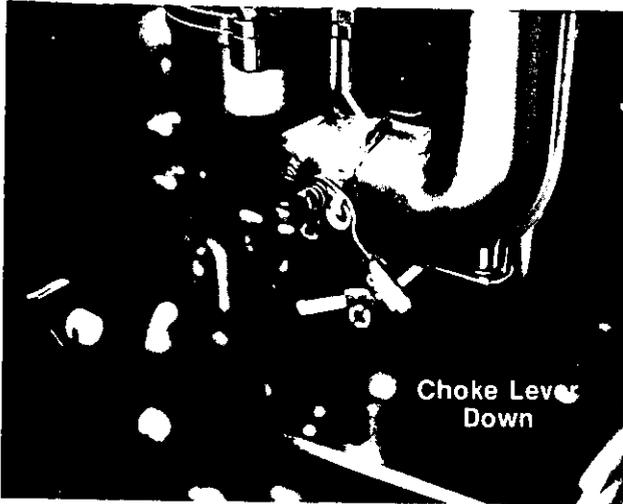


FIGURE 15.

STOP ENGINE

To stop the engine move the throttle control lever to the "STOP" position. See figure 16.

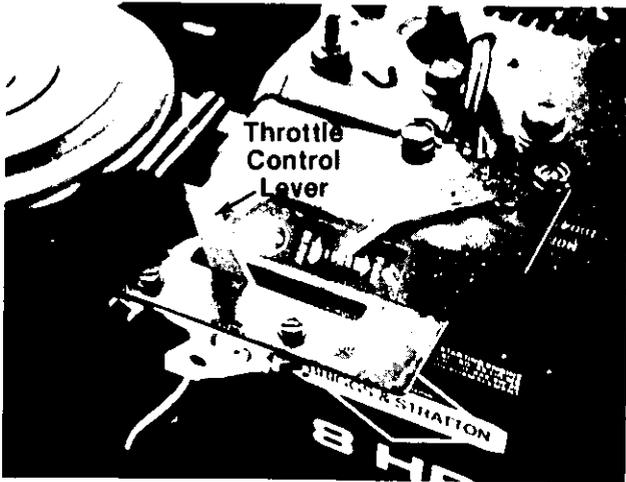


FIGURE 16.

MAINTENANCE



WARNING

Be sure to disconnect and ground the spark plug wire before performing any repairs or maintenance.

ENGINE OIL

Check Oil Level Regularly—at least after every 5 hours of operation. Remove the dipstick and maintain the oil between the ADD and FULL marks.

Change Oil after first 5 hours of operation. Thereafter change oil every 25 hours of operation. Remove drain plug and drain oil while engine is warm. Replace drain plug. Remove dipstick and refill with new oil of proper grade (approximately 2¼ pints). Replace dipstick. See figure 17.

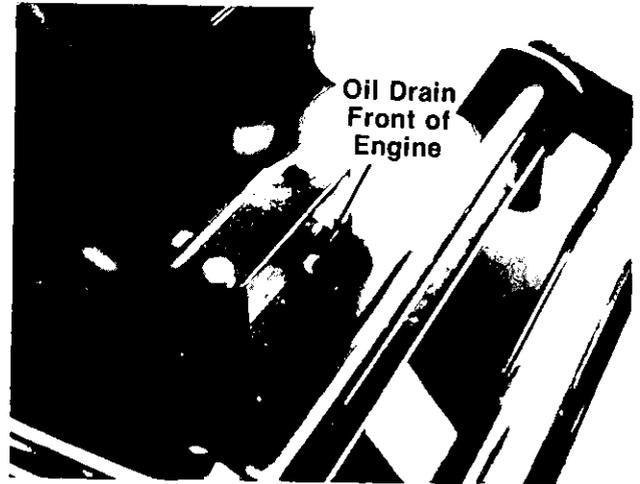


FIGURE 17.

AIR CLEANER

Clean and re-oil foam pre-cleaner at 3 month intervals or every 25 hours, whichever occurs first.

1. Remove upper wing nut and cover.
2. Remove foam pre-cleaner element by sliding it off of the paper cartridge.
3. A. Wash foam in liquid detergent water.
B. Squeeze dry.
C. Oil with one ounce of engine oil. Squeeze to distribute oil evenly. Remove excess oil.
4. Install foam element over paper cartridge. Install cover and screw wing down tight.

Yearly or every 100 hours, whichever occurs first, remove paper air filter cartridge. Clean by tapping gently on flat surface. If very dirty, replace cartridge, or wash in liquid detergent and water. Rinse until water remains clear. Cartridge must be air dried thoroughly before re-using. See figures 18 and 19.

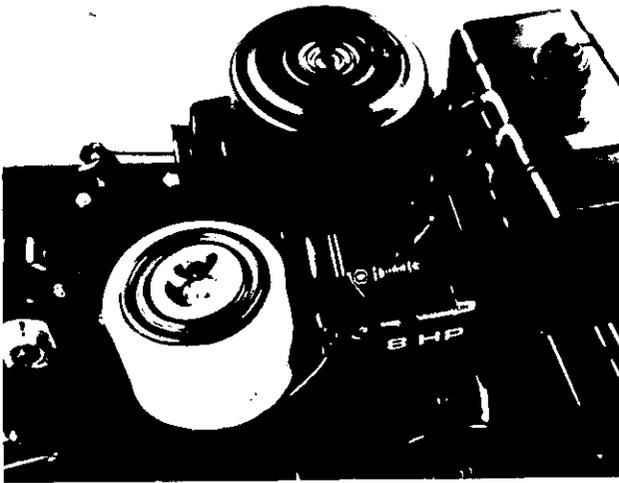


FIGURE 18.

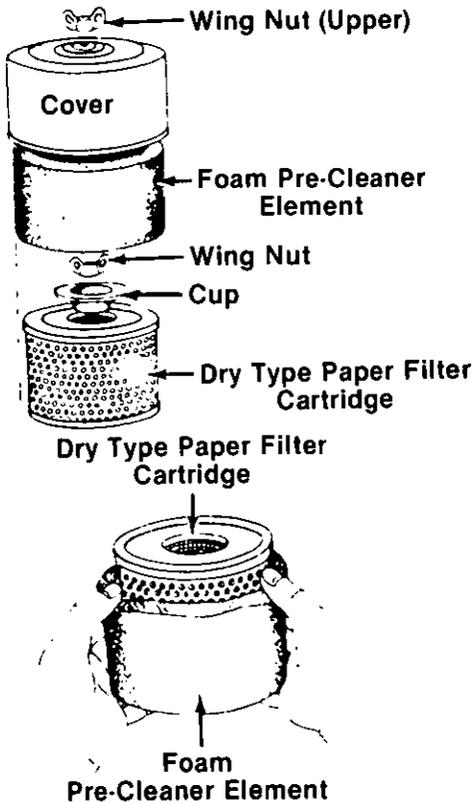


FIGURE 19.

BELT REMOVAL

1. Remove the tine clutch rod by removing the cotter pin in the hooked end of rod. See figure 20.

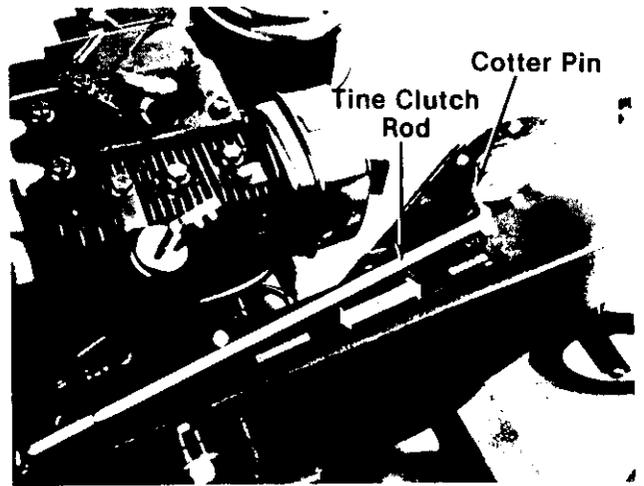


FIGURE 20.

2. Slide the tine clutch rod out of the belt cover.
3. Remove the belt cover by removing three hex head self-tapping screws with a 3/8" wrench. See figure 21.

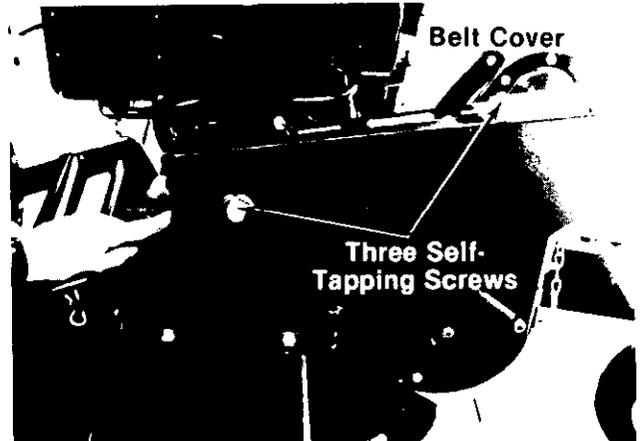


FIGURE 21.

4. Move the idler bracket forward (disengaged position) to remove the belt tension. Lift the belt off the engine pulley and chain case pulley. See figures 22 and 23.

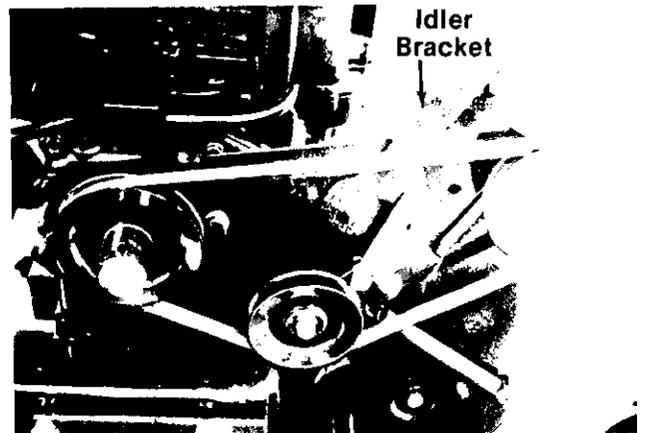


FIGURE 22.

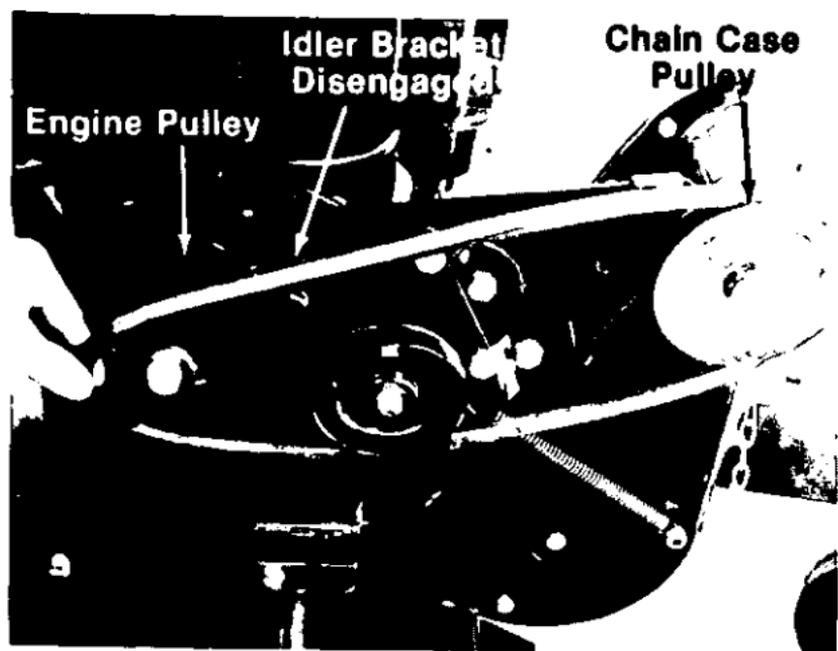


FIGURE 23.

- Using two 9/16" wrenches, remove the hex lock nut holding the idler pulley and idler belt keeper. Slip off the belt. See figure 24.

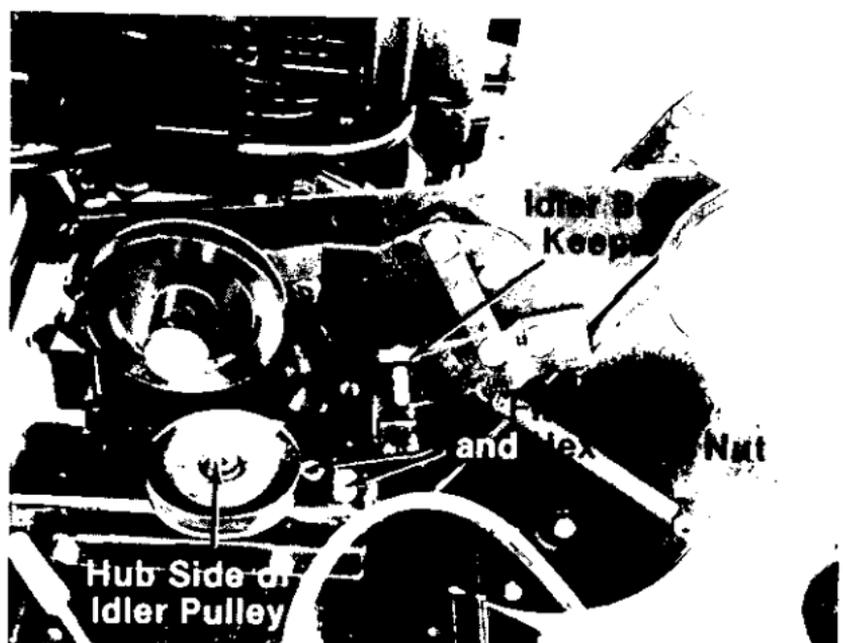


FIGURE 24.

- Upon reassembly of new belt, the idler pulley must be installed with the hub side towards the chain case. See figure 24.
- Reverse steps 1 through 5 for installing the new belt.

CHAIN CASE LUBRICATION

The chain case is sealed at the factory and does not require checking or changing.

If the chain case is disassembled for repair, replace the grease with 12 ounces of plastilube "O" grade grease (factory number 737-0133, 14 ounce container).

