FORM NO. 3314-367

TORO®

MODEL NO. 09110 — 00001 & UP

OPERATOR'S MANUAL

GREENS AERATOR

To assure maximum safety, optimum performance, and to gain knowledge of the product, it is essential that you or any other operator of the aerator read and understand the contents of this manual before the engine is ever started. Pay particular attention to the SAFETY INSTRUCTIONS highlighted by this symbol —

The safety alert symbol means CAUTION, WARNING or DANGER — personal safety instruction. Failure to comply with the instruction may result in personal injury.

FOREWORD

The Greens Aerator has advanced concepts in engineering, design and safety; and if maintained properly, will give excellent service.

Since this is a high-quality product, Toro is concerned about the future use of the machine and safety of the user. Therefore, read this manual to familiarize yourself with proper set-up, operation and maintenance instructions. The major sections of the manual are:

1. Safety Instructions
2. Set-up Instructions
3. Before Operating
4. Operation
5. Maintenance

Certain information in this manual is emphasized. DANGER, WARNING and CAUTION identify personal safety-related information. IMPORTANT identifies mechanical information demanding special attention. Be sure to read this directive because it deals with the possibility of damaging a part or parts of the machine. NOTE identifies general information worthy of special attention.

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SAFETY INSTRUCTIONS

This safety alert symbol means CAUTION, WARNING or DANGER — "personal safety instruction". Read and understand the instruction because it has to do with safety. Failure to comply with the instruction may result in personal injury.

Improper use or maintenance of the machine can result in injury. To reduce the potential for injury, comply with the following safety instructions.

BEFORE OPERATING

1. Read and understand the contents of this Operator's Manual before operating the machine. Become familiar with all controls and know how to stop quickly. A free replacement manual is available by sending complete Model and Serial Number to:

   The Toro Company
   8111 Lyndale Avenue South
   Minneapolis, Minnesota 55420

2. Do not allow children to operate the machine. Do not allow adults to operate the machine without proper instruction.

3. Before attempting to start engine, disengage traction drive and move gear shift to neutral.

SAFETY INSTRUCTIONS

4. Remove all debris or other objects that might interfere with operation. Keep all bystanders away from the work area.

5. Keep all shields and safety devices in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operation is commenced. Also tighten any loose nuts, bolts and screws to assure machine is in safe operating condition.

6. Do not operate machine while wearing sandals, tennis shoes, sneakers or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses, safety shoes, ear protection and a helmet is advisable and required by some local ordinances and insurance regulations.

7. Fill fuel tank with gasoline before starting the engine. Avoid spilling gasoline. Since gasoline is flammable, handle it carefully.

A. Use an approved gasoline container.

B. Do not fill tank while engine is hot or running.

C. Do not smoke while handling gasoline.

D. Fill fuel tank outdoors and up to about one inch (25 mm) from top of the tank, not the filler neck.

E. Wipe up any spilled gasoline.

WHILE OPERATING

8. Start engine when traction drive is disengaged, and gear shift lever is in neutral.

9. Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.

10. Using the machine demands attention, and to prevent loss of control:

A. Use only in daylight or when there is good artificial light.

B. Watch for holes or other hidden hazards.

C. Do not transport machine close to a sand trap, ditch, creek or other hazard.

11. If the tines strike a solid object or the machine vibrates abnormally, shut the engine off. Remove high tension wire from spark plug to prevent possibility of accidental starting. Check coring head and traction unit for damage and defective parts. Repair any damage before restarting the engine and operating the tines. Be sure tines are in good condition and all bolts are tight.

12. Do not touch engine or muffler while engine is running or soon after it is stopped. These areas could be hot enough to cause a burn.

13. Before leaving the operator's position — behind handle or leaving machine unattended, raise coring head, raise lockup brackets, disengage traction drive, move gear shift to neutral and shut OFF engine.

MAINTENANCE

14. Disconnect high tension wire from spark plug to prevent accidental starting of the engine when servicing, adjusting or storing the machine.

15. If traction unit must be tipped to perform maintenance or an adjustment, drain gasoline from fuel tank and oil from crankcase.

16. To reduce potential fire hazard, keep the engine free of excessive grease, grass, leaves and accumulations of dirt.

17. Be sure machine is in safe operating condition by keeping nuts, bolts and screws tight. Check the tine mounting bolts and nuts frequently to be sure they are tightened to specification.

18. If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing and other parts of the body away from the tines and other moving parts.

19. Make sure all hydraulic line connectors are tight, and all hydraulic hoses and lines are in good condition before applying pressure to the system.

20. Keep body and hands away from pin hole leaks or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard, not hands, to search for leaks. Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and do serious damage. If fluid is ejected into the skin it must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

21. Before disconnecting or performing any work on the hydraulic system, all pressure in system must be relieved by stopping engine and lowering implement to the ground.

22. Do not overspeed the engine by changing governor settings. To be sure of safety and accuracy, have an Authorized TORO Distributor check maximum engine speed with a tachometer.

23. Engine must be shut off before checking oil or adding oil to the crankcase.

SAFETY INSTRUCTIONS

24. Allow engine to cool before storing machine in any enclosure such as a garage or storage shed. Make sure the fuel tank is empty if machine is to be stored in excess of 30 days. Do not store machine near any open flame or where gasoline fumes may be ignited by a spark. Always store gasoline in a safety-approved, red metal container.

25. Perform only those maintenance instructions described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Toro Distributor. To ensure optimum performance and safety, always purchase genuine TORO replacement parts and accessories to keep the Toro all TORO. NEVER USE "WILL-FIT" REPLACEMENT PARTS AND ACCESSORIES MADE BY OTHER MANUFACTURERS. Look for the TORO logo to assure genuineness. Using unapproved replacement parts and accessories could void the warranty of The Toro Company.

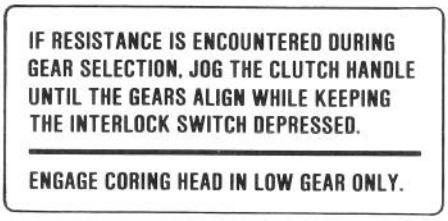
SAFETY AND INSTRUCTION DECALS

The following decals are installed on the machine. If any become damaged or illegible, replace it. The decal part number is listed below and in your parts catalog. Replacement can be ordered from your Authorized Toro Distributor.

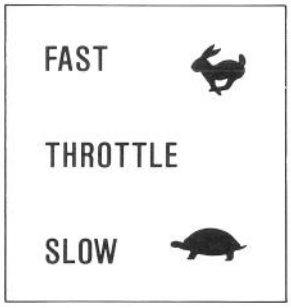
ON INTERLOCK
SWITCH ASSEMBLIES
(Part No. 59-9870)

ON SHIFT LEVER
RETAINER
(Part No. 66-4710)

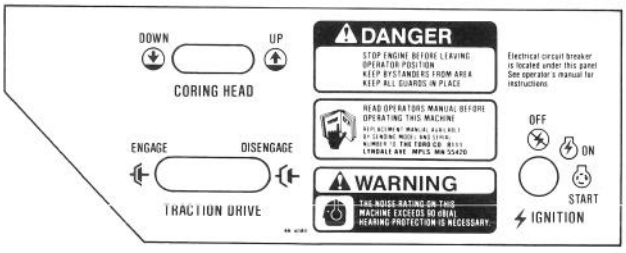
ON CONTROL PANEL
(Part No. 80-3880)



ON ENGINE
(Part No. 66-9050)



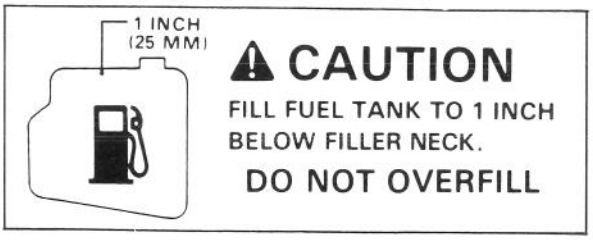
ON ENGINE
(Part No. 59-9530)



ON CONTROL PANEL
(Part No. 72-8680)

ON BRAKE HANDLE
(Part No. 59-9860)

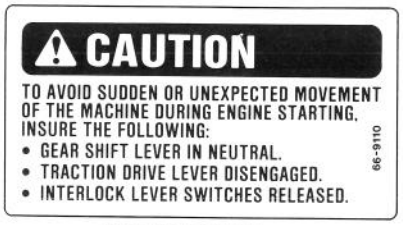
ON MUFFLER SHIELD
(Part No. 54-0910)



NEAR FUEL TANK CAP
(Part No. 61-9100)

ON FRONT OF
CORING HEAD COVER
(Part No. 59-9930)

ON FUEL TANK
(Part No. 53-4420)



ON ENGINE
(Part No. 66-9110)

SPECIFICATIONS

Engine: Kohler, 4 cycle, air cooled, 16 hp @ 3600 rpm, 35.90 cu. in (588 cc) displacement. Electric start. Heavy duty cast iron block. Stellite® intake and exhaust valve and rotator. Mechanical fuel pump, large capacity dual element air cleaner. 5¼ pints oil capacity. Electronic ignition.

Electrical: 12 volt battery, 32 amp-hour. 15 amp alternator. Ignition switch with interlocks on control handle, traction lever and gear shift lever.

Fuel Capacity: 1.5 gallons gasoline.

Traction Drive: Double banded V-belt from mechanical clutch on engine to Peerless Model 2361 transaxle. Two speeds forward — 1 reverse. Wheels driven individually by chains from transaxle.

Ground Speed:
1st Gear Forward: 1.1 mph @ 3600 rpm (coring).
2nd Gear Forward: 3.3 mph @ 3600 rpm (transport).
Reverse: 1.3 mph @ 1200 rpm.

Ground Clearance: 4 inches.

Tires/Wheels: Two steering tires (front): 13x5.0-6, 2 ply, Rib Tread tubeless, Two drive tires (rear): 18x9.50-8, 4 ply, Rib Terra tubeless. Drop center demountable rims, greaseable tapered roller bearings.

Frame: Welded steel construction — tricycle.

Service Brake: Disc type mounted to transaxle.

Controls: Clutch, hydraulic lift, and keyswitch on control console. Throttle and choke on engine. Transaxle shift on frame. Interlock switches and service brake on steering handle.

Implement Drive: Triple banded V-belt from engine to coring head.

Dimensions: Length: 79 inches. Width: 55.5 inches. Height: 39 inches. Wheelbase: 44 inches. Weight: 1275 pounds.

Coring Unit Construction: Welded steel frame construction with four crankshafts mounted in precision ball bearings. Crankshafts drive four coring arms/tine heads.

Drive: No. 50 O-ring chain from countershaft to coring crankshafts.

Lift: Single hydraulic cylinder powered by a Saginaw pump. Lift valve actuated by lift control lever.

Tine Heads: 4 individual heads each holding three tines. Discharge chutes direct cores rearward away from drive components.

Coring Width: 27 inches.

Hole Pattern: 2.25" x 2.5".

Coring Depth: Up to 3.5 inches.

Tines: Case hardened tubing, hollow tapered design. 5/8" tines standard.

Optional Accessories: 3/4" Tines, P/N 62-4600; 5/8" Tines, P/N 59-3670; 1/2" Tines, P/N 66-9140; 3/8" Tines, P/N 59-3690; 5/8" Long Wear Tines P/N 59-9770; Windrower Model 09150; Coring Head Stand, Model 09152; Tire Scrapers, Model 09151.

LOOSE PARTS

Note: Use this chart as a checklist to assure all parts have been received. Without these parts, total set-up cannot be completed.

Description	Qty.	Use
Set Screw	1	Install Handle Assembly
Key	1	
Roll Pin	1	
Thrust Washer	2	Install Front Wheels
Flat Washer	2	
Slotted Hex Nut — 3/4-16	2	
Cotter Pin — 1/8 x 1-1/2" lg.	2	
Hub Cap	2	
Lock Nut — 3/4-16	2	Install Rear Wheel Spindles
Lug Nut	8	Install Rear Wheels
Idler Cover	2	Install Chains and Guards
Roller Chain	2	
Connecting Link	2	
Offset Link	2	
Sprocket Guard — R.H.	1	
Sprocket Guard — L.H.	1	
Chassis Guard — R.H.	1	
Chassis Guard — L.H.	1	
Self Tapping Screw — 1/4-20 x 3/4" lg.	18	
Tine — 5/8"	12	Install on Coring Head
Ignition Key	2	
Frame Height Gauge	1	
Timing Rods	4	
Operators Manual	1	
Parts Catalog	1	
Set-Up Report Card	1	
Registration Card	1	

SET-UP INSTRUCTIONS

INSTALL HANDLE ASSEMBLY

1. Insert key into keyway on handle mounting shaft (Fig. 1).

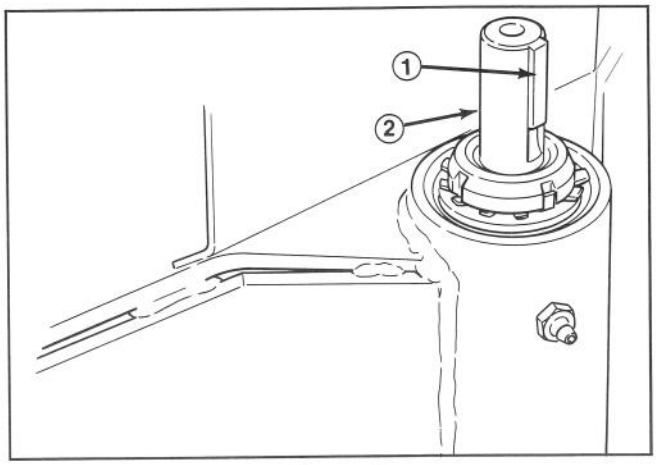


Figure 1

1. Key
2. Handle mounting shaft

2. Align keyway in handle assembly with key and slide handle onto shaft (Fig. 2).

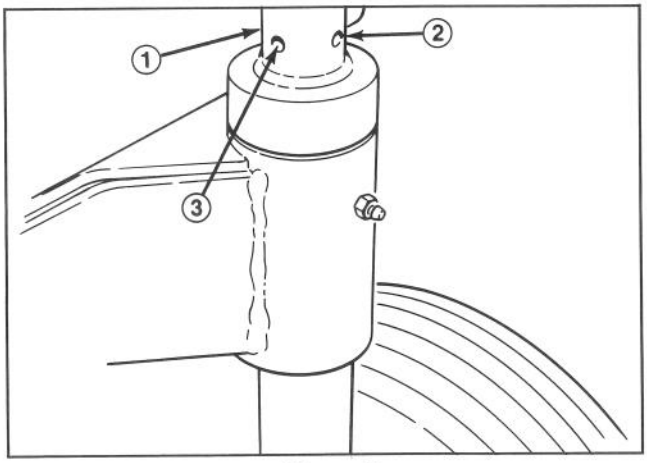


Figure 2

1. Handle assembly
2. Set screw
3. Roll pin

3. Insert roll pin into mounting hole and drive pin in until flush with edge of handle assembly (Fig. 2).

4. Apply loctite #242 to set screw. Install screw to handle assembly and tighten (Fig. 2).

INSTALL FRONT WHEELS

1. Slide (1) thrust washer and wheel onto one side of front axle. Position wheel so grease fitting and valve stem are outward.

2. Secure wheel to axle with (1) flatwasher, slotted hex nut and cotter pin. Install hub cap (Fig. 3).

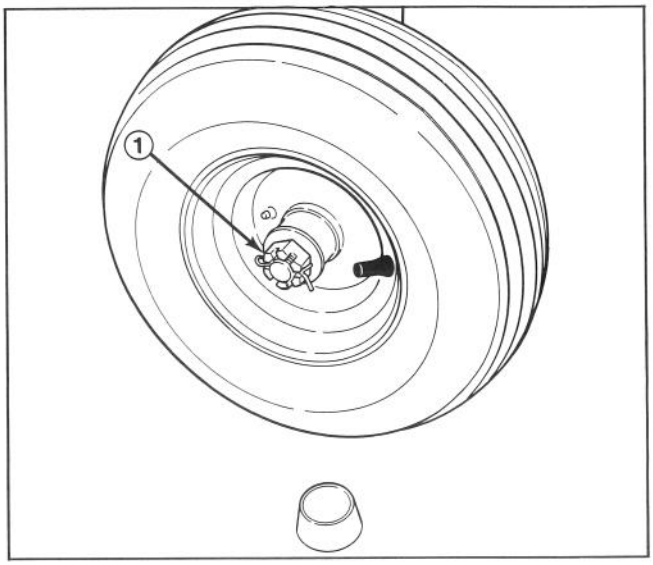


Figure 3

1. Flatwasher, slotted hex nut and cotter pin (shown)

3. Lubricate wheel w/No. 2 General Purpose Lithium Base Grease.

4. Repeat procedure on opposite side of axle.

INSTALL REAR WHEEL SPINDLES

1. Insert wheel spindle shaft through chassis and secure with a locknut (Fig. 4). Dust cap may have to be removed to hold slotted hex nut when tightening locknut.

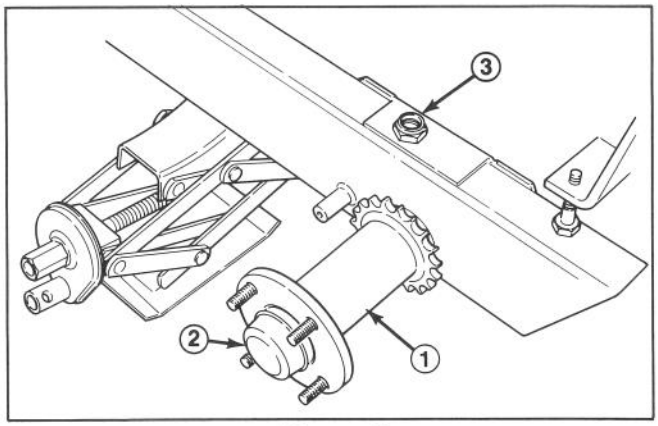


Figure 4

1. Rear wheel spindle
2. Dust cap
3. Locknut

2. Repeat procedure on opposite side.

INSTALL ROLLER CHAINS AND GUARDS

Note: Rear wheels may be installed at this time to remove machine from shipping pallet. Wheels must be removed to install chains and guards. Refer to Install Rear Wheels.

SET-UP INSTRUCTIONS

1. Route chain around rear spindle sprocket, idler sprocket and transaxle sprocket assembly as shown in Fig. 5.

2. Secure chain with connecting link (Fig. 5)

Note: Loosen idler sprocket mounting capscrew to gain additional slack when connecting chain.

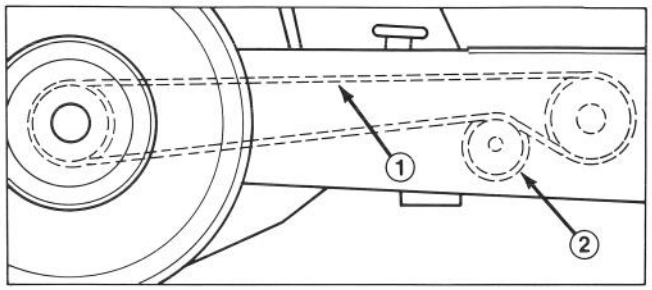


Figure 5
1. Roller chain
2. Idler sprocket

3. Slide chain guard onto chassis aligning mounting holes (Fig. 6).

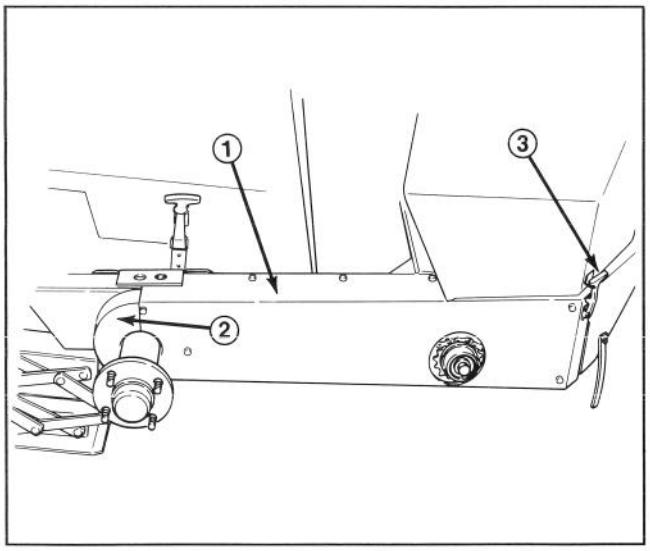


Figure 6
1. Chain guard
2. Sprocket guard
3. Clutch cover latch

4. Loosely secure top of guard to chassis with (4) 1/4-20x3/4" lg. self tapping screws.

Note: To gain access to top front mounting hole on left side, lift up and remove control cover (Fig. 7).

5. Slide sprocket guard into position aligning mounting holes. Front tab to be positioned under chain guard (Fig. 6).

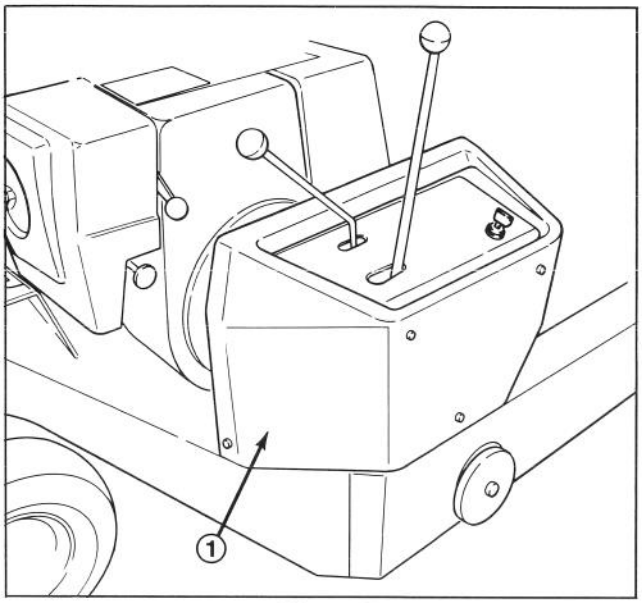


Figure 7
1. Control cover

6. Secure rear of sprocket guard to chassis with a 1/4-20x3/4" lg. self tapping screw. (Fig. 6).

7. Secure front of sprocket guard and (4) remaining chain guard mounting holes to chassis with (5) 1/4"-20x3/4" lg. self tapping screws. Tighten all fasteners.

8. Hook latch securing clutch cover to chain guard (Fig. 6).

9. Remove capscrew, lockwasher, washer and special nut securing idler sprocket to chassis (Fig. 6).

Note: Hold sprocket in position when removing.

10. Loosely install idler cover to sprocket with fasteners removed (Fig. 8).

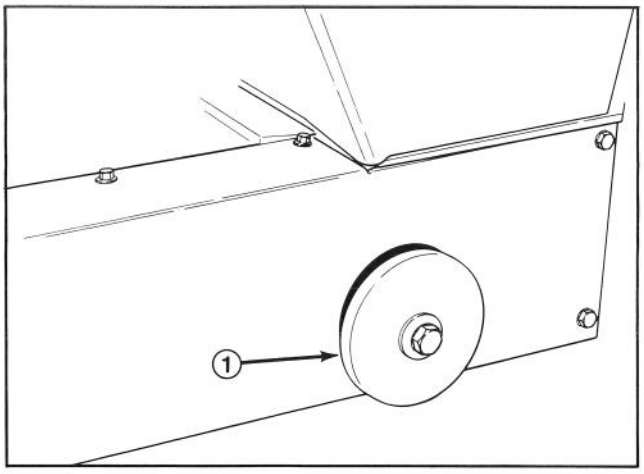


Figure 8
1. Idler cover

SET-UP INSTRUCTIONS

Note: Make sure special nut is positioned in slot in chassis.

11. Slide sprocket up into chain until firm resistance is felt, then tighten capscrew.

INSTALL REAR WHEELS

1. Secure wheels to spindle hubs with lug nuts (Fig. 9). Torque nuts to 65-90 ft-lb.

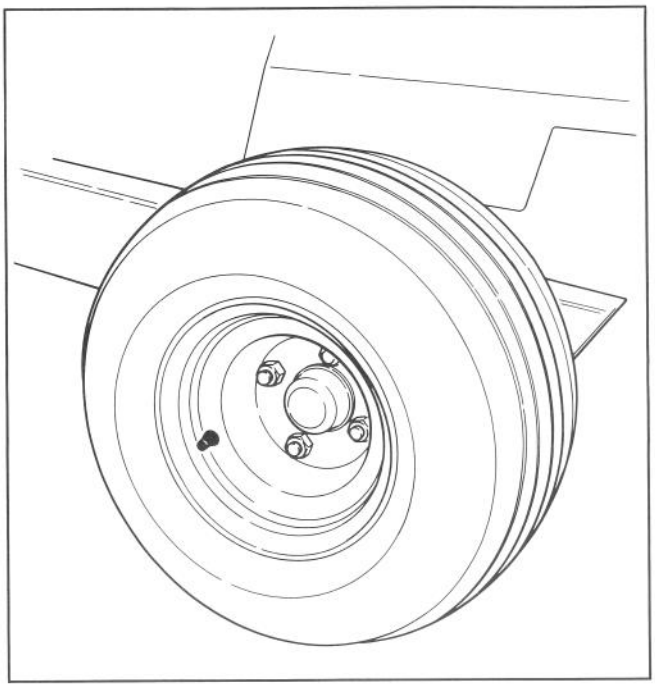


Figure 9

BEFORE OPERATING

ACTIVATE AND CHARGE BATTERY

1. Since battery is not filled with electrolyte or activated, bulk electrolyte with 1.260 specific gravity must be purchased from a local battery supply outlet.

CAUTION

Wear safety goggles and rubber gloves when working with electrolyte. Charge the battery in a well ventilated place so gasses produced while charging can dissipate. Since the gases are explosive, keep open flames and electrical spark away from the battery; do not smoke. Nausea may result if the gases are inhaled. Unplug charger from electrical outlet before connecting to or disconnecting charger leads from battery posts.

2. Unhook latches securing clutch cover to chassis, and remove cover (Fig. 10).

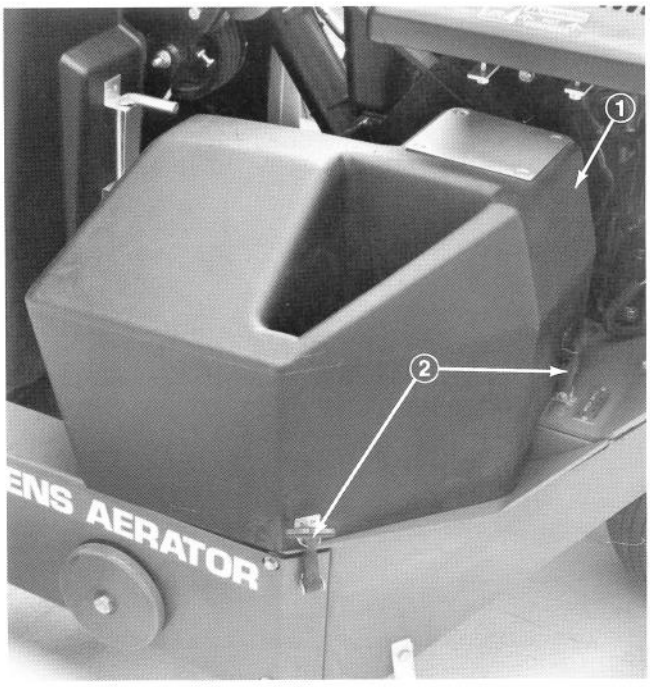


Figure 10

1. Clutch cover
2. Latches (3)

3. Remove wing nuts securing battery clamp and support rods and remove battery from machine. Remove filler caps from battery and slowly fill each cell until electrolyte is just above the plates (Fig. 11).

4. Replace filler caps and connect a 3 to 4 amp battery charger to the battery posts. Charge the battery at a rate of 3 to 4 amperes for 4 to 8 hours.

5. When battery is charged, disconnect charger from electrical outlet and battery posts.

6. Remove filler caps. Slowly add electrolyte to each cell until level is up to fill ring. Install filler caps.

IMPORTANT: Do not overfill battery. Electrolyte will overflow onto other parts of the machine and severe corrosion and deterioration will result.

REINSTALL BATTERY

1. Mount battery on battery pad with terminal posts forward (Fig. 11).

2. Secure battery with clamp, support rods and wing nuts (Fig. 11).

3. Install the positive cable (rubber boot over end) to the positive (+) terminal and the negative cable (black) to the negative (—) terminal of the battery and secure with carriage bolts, lockwashers and nuts. Slide the rubber boot over the positive terminal to prevent possible short-out from occurring (Fig. 11).

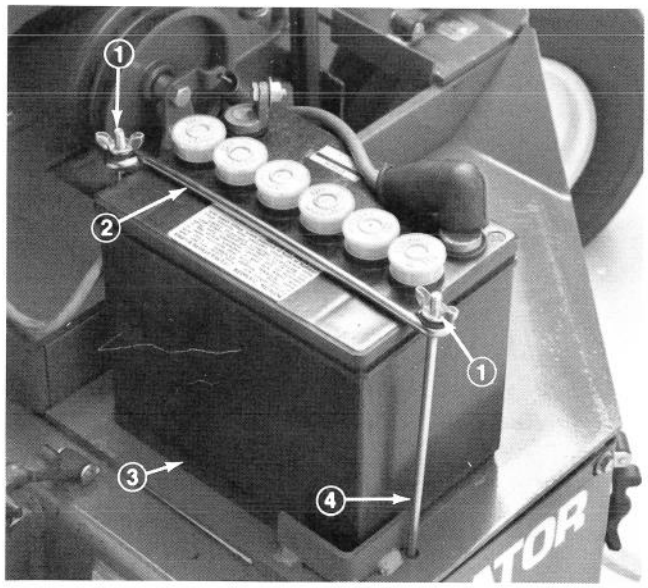


Figure 11

1. Wing nuts
2. Clamp
3. Battery pad
4. Support rods

CHECK CRANKCASE OIL

The Kohler engine is shipped with 5¼ pints of oil in the crankcase; however, level of oil must be checked before and after the engine is first started.

1. Position machine on a level surface.

2. Remove dipstick and wipe it with a clean rag. Push dipstick down into dipstick tube and make sure it is seated fully. Pull dipstick out and check level of oil (Fig. 12). If oil level is low, add enough oil to raise level to FULL mark on dipstick.

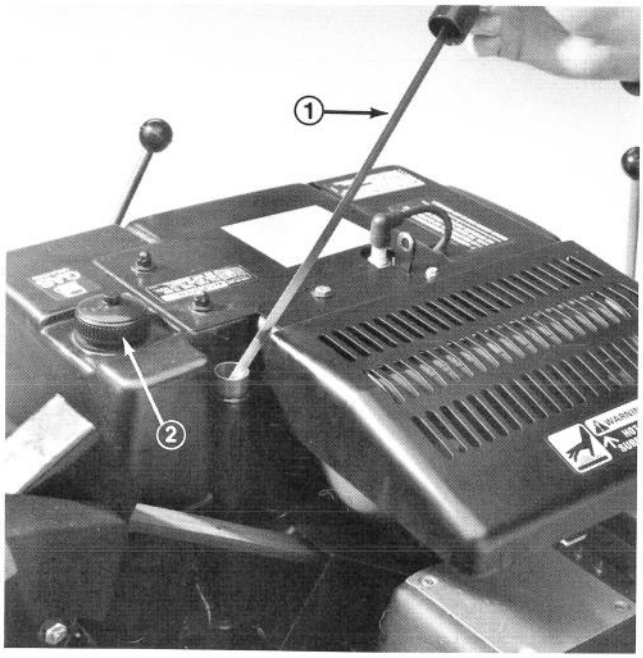


Figure 12

1. Dip stick
2. Fuel tank cap

3. Remove filler cap and pour oil into filler neck until level is at the FULL mark on dipstick. The Kohler engine uses any high-quality oil having the American Petroleum Institute — API — "service classification" SF. Oil viscosity — weight — must be selected according to ambient temperature. Temperature/viscosity recommendations are:

A. Above +32° F (0°C) — Use SAE 30, and if it is not available, 10W-30 or 10W40 are acceptable substitutes.

B. Below +32°F (0°C) — Use SAE 5W-20 or 5W-30, and if they are not available, 10W30 or 10W-40 are acceptable substitutes.

IMPORTANT: Check level of oil every 5 operating hours or daily. Initially, change oil after the first 5 hours of operation; thereafter, under normal conditions, change oil after every 25 hours of operation. However, change oil more frequently when engine is operated in extremely dusty or dirty conditions.

BEFORE OPERATING

FILL FUEL TANK WITH GASOLINE

THE TORO COMPANY STRONGLY RECOMMENDS THE USE OF FRESH CLEAN, UNLEADED REGULAR GRADE GASOLINE IN TORO GASOLINE POWERED PRODUCTS. UNLEADED GASOLINE BURNS CLEANER, EXTENDS ENGINE LIFE, AND PROMOTES GOOD STARTING BY REDUCING THE BUILD-UP OF COMBUSTION CHAMBER DEPOSITS.

Note: Do not mix oil with gasoline. Never use methanol, gasoline containing methanol, gasohol, gasoline additives, premium gasoline, or white gas because engine/fuel system damage could result.

DANGER

Because gasoline is flammable, caution must be used when storing or handling it. Do not fill fuel tank while engine is running, hot or when machine is in an enclosed area. Vapors may build up and be ignited by a spark or flame source many feet away. DO NOT SMOKE while filling the fuel tank to prevent the possibility of an explosion. Always fill fuel tank outside and wipe up any spilled gasoline before starting engine. Use a funnel or spout to prevent spilling gasoline before starting engine and fill tank to about 1 inch (25 mm) below the filler neck. Store gasoline in a clean safety-approved container and keep the cap in place on the container. Keep gasoline in a cool, well-ventilated place; never in an enclosed area such as a hot storage shed. To assure volatility, do not buy more than a 30 day supply of gasoline. Gasoline is a fuel for internal combustion engines; therefore, do not use it for any other purpose. Since many children like the smell of gas, keep it out of their reach because the fumes are explosive and dangerous to inhale.

1. Remove cap from the fuel tank (Fig. 12) and fill the 1.5 gallon tank to within 1 inch from the top with unleaded gasoline. Install fuel tank cap tightly.

2. Wipe up gasoline that may have spilled to prevent a fire hazard.

CHECK HYDRAULIC SYSTEM FLUID

The hydraulic system is designed to operate on SAE 10W-30 engine oil or, as a substitute, SAE 10W-40 engine oil. The machine's reservoir is filled at the factory with approximately 2.7 pints of SAE 10W-30 engine oil. However, check level of hydraulic fluid before engine is first started and daily thereafter.

1. Position machine on a level surface and raise coring head to the full up position.

2. Remove dipstick cap (Fig. 13) from filler neck and wipe it with a clean rag. Insert dipstick cap into filler neck; then remove it and check level of fluid. If level is not within 1/2 inch from the full mark on dipstick, add SAE 10W-30 engine oil to raise level to full mark. Do not overfill.

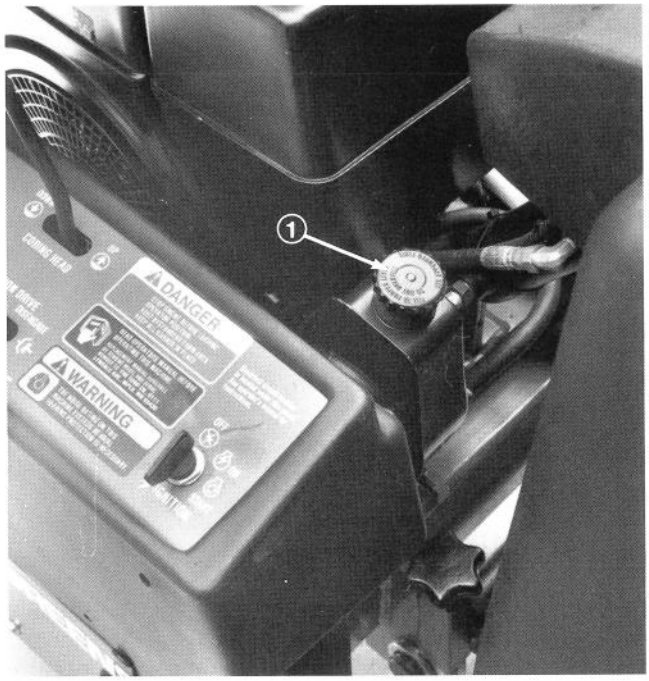


Figure 13

1. Dip stick cap

3. Install dipstick filler cap onto filler neck.

4. Run engine for approximately 1 minute, recheck level of fluid and add oil as required.

CONTROLS

Ignition Switch (Fig. 14) — The ignition switch, which is used to start and stop the engine, has three positions: OFF, ON and START. Rotate key clockwise — START position — to engage starter motor. Release key when engine starts. The key will automatically return to the ON position. To shut engine off, rotate key counterclockwise to the OFF position.

Choke (Fig. 14) — To start a cold engine, close carburetor choke by pulling choke control outward to the ON position. After engine starts, regulate choke to keep engine running smoothly. As soon as possible, open the choke by pushing it inward to the OFF position. A warm engine requires little or no choking.

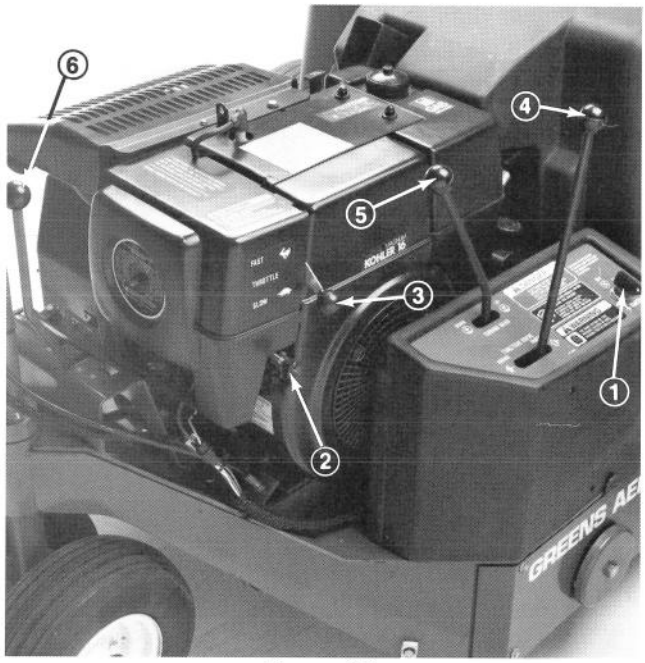


Figure 14

1. *Ignition switch*
2. *Choke*
3. *Throttle*
4. *Traction drive lever*
5. *Coring head lever*
6. *Gear shift lever*

Throttle (Fig. 14) — Throttle is used to operate engine at various speeds. Moving throttle upward increases engine speed — FAST; rearward decreases engine speed — SLOW. The throttle controls the speed of the coring head and, in conjunction with traction clutch, controls ground speed of the machine.

Traction Drive Lever (Fig. 14) — Shift to desired gear and move traction drive lever to engage position to move forward or reverse.

Coring Head Lever (Fig. 14) — Raises and lowers coring head.

Gear Shift Lever (Fig. 14) — Transmission has two forward speeds, neutral and reverse, and has an in-line shaft pattern. Do not shift while unit is moving, as transmission damage may occur.

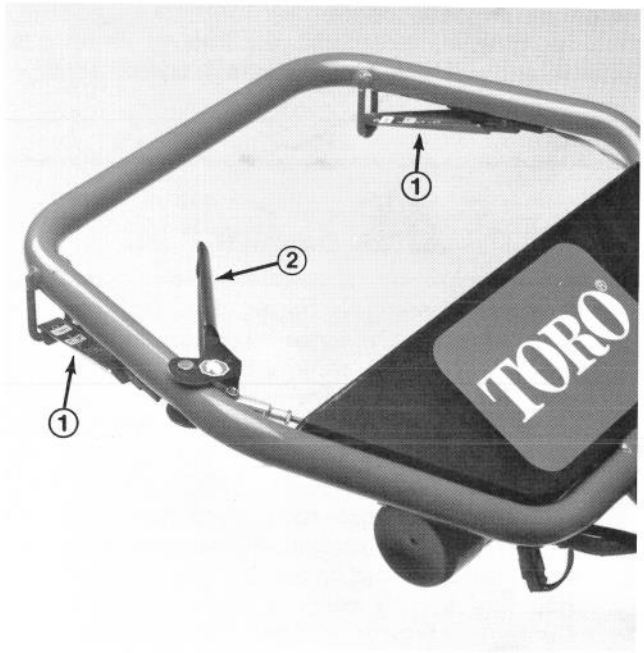


Figure 15

1. *Interlock lever switches*
2. *Service brake*

Interlock Lever Switches (2) (Fig. 15) — Switches permit engine operation when coring head is lowered. They also hold the traction drive lever in engaged position. One handle switch must be activated before engaging traction drive or lowering the coring head, when engine is running.

Service Brake (Fig. 15) — Used to slow down traction operation.

Fuel Shut-Off Valve — Located at rear of engine. Close fuel shut-off valve when storing machine.

OPERATING INSTRUCTIONS

STARTING/STOPPING ENGINE

1. Make sure wire is installed on spark plug and fuel valve is open.

2. Make sure traction drive is disengaged and gear shift lever is in Neutral.

3. Pull choke lever out to ON position — when starting a cold engine — and throttle lever to half throttle position.

4. Insert key into ignition switch and rotate it clockwise to start the engine. Release key when engine starts. Gradually return the choke lever to the OFF position (lever all the way in) after the engine starts and warms up.

IMPORTANT: To prevent overheating of the starter motor, do not engage starter longer than 10 seconds. After 10 seconds of continuous cranking, wait 60 seconds before engaging starter motor again.

5. Make sure coring head is in the raised position.

Note: When engine is started for the first time, or after overhaul of the engine, transmission or axle, operate the machine in forward and reverse for one to two minutes to be sure of proper operation of all parts.

6. To stop the engine, move throttle control downward to SLOW position and turn ignition key to "OFF".

INSTALL TINES

1. Start the engine: refer to Starting/Stopping instructions.

2. Move coring head lever to "UP" position to raise coring head.

3. Stop engine and raise lock-up brackets on each side of chassis (Fig. 16). Lower coring head until it rests on brackets.

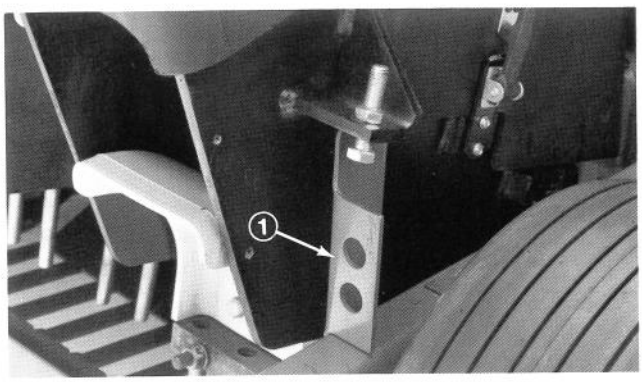


Figure 16

1. Lock-up bracket

4. Loosen (2) hex nuts on each tine block until tines can be inserted. Insert tines until they bottom out on flange in tine block (Fig. 17).

Figure 17

1. Tine block
2. Mounting nut

5. Tighten mounting nuts to 100-110 ft/lb. torque (Fig. 18).

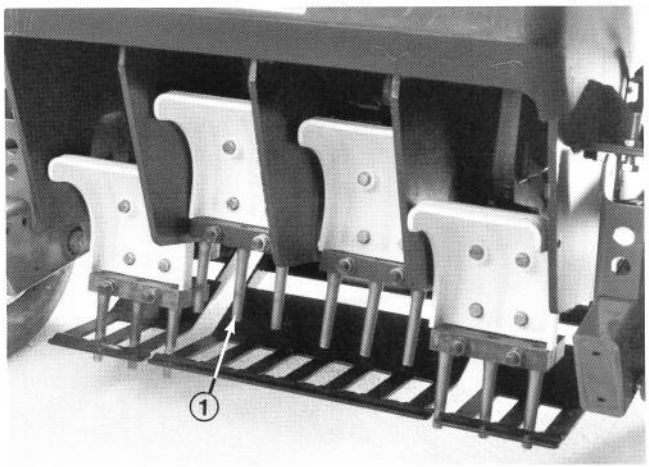


Figure 18

1. Tine

ADJUST CORING DEPTH

1. Raise coring head and engage lock-up brackets.

2. Loosen jamnut on top of adjusting bracket (Fig. 19).

3. Thread adjusting screw into bracket to increase coring depth and out to decrease depth (Fig. 19).

OPERATING INSTRUCTIONS

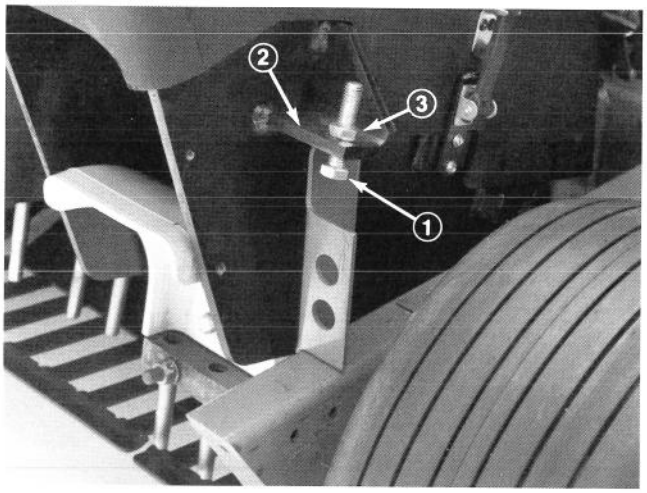


Figure 19

1. Coring depth adjustment screw
2. Adjusting bracket
3. Jam nut

4. Maximum recommended coring depth is achieved when distance from end of screw head to bracket is 11/16" (.69) (Fig. 19).

IMPORTANT: Do not adjust screw to a setting less than 11/16" (.69) or damage to turf guards may occur.

5. Make sure adjustments are the same on both sides of coring head and tighten jam nuts.

CHECK FRAME HEIGHT

1. Position machine on a level surface.

2. Slide short end of frame height gauge under front axle to verify height. Gauge should contact axle when on floor. Check both sides (Fig. 20).

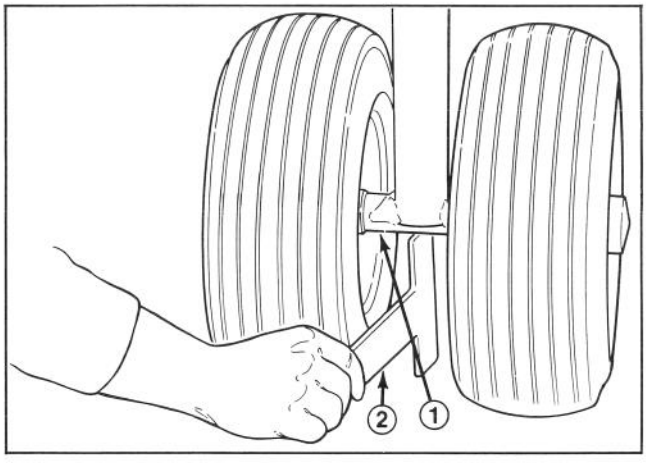


Figure 20

1. Front axle 2. Height gauge

3. Increase or decrease tire pressures to attain required height.

4. Repeat procedure using long end of height gauge on each rear wheel spindle (Fig. 21).

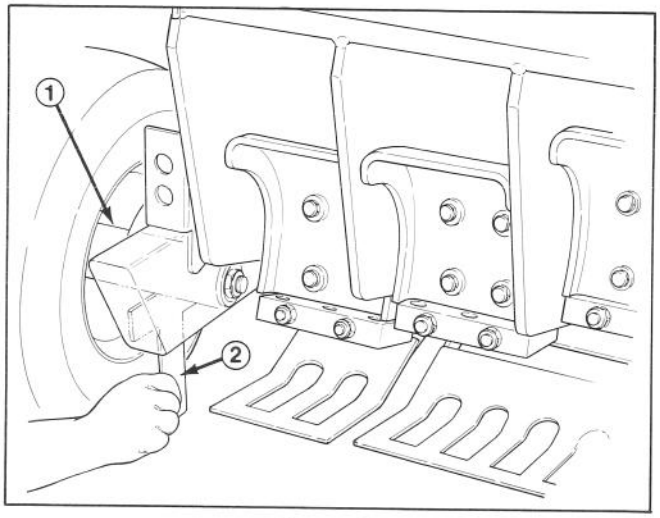


Figure 21

1. Rear wheel spindle
2. Height gauge

5. Regulate tire pressure as required.

OPERATING PROCEDURE

1. Make sure wire is installed on spark plug and fuel valve is open.

2. Start the engine: refer to Starting/Stopping instructions.

3. Make sure coring head is in the up position.

4. Squeeze left interlock lever against handle.

5. Move shift lever to "L" (low) for Coring or "H" (high) for Transport.

Note: If resistance is encountered during gear selection, jog the clutch handle until the gears align. Do not shift gears while machine is moving. **DO NOT FORCE SHIFT LEVER AS DAMAGE WILL OCCUR.**

6. Move traction drive lever to engage position.

7. To engage and lower coring head, move coring head lever to down position and hold until coring head is completely lowered.

CHECK INTERLOCK SYSTEM

The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the traction drive lever is disengaged and the coring

head is raised. It also interrupts engine operation if a handle mounted interlock lever is not activated when the coring head is lowered.

To check interlock system:

1. Position machine on a flat, open area. Start the engine: refer to Starting and Stopping instructions.

2. Check clutch switch (Fig. 22) with a continuity tester or ohm meter and replace if damaged. The switch must be closed when the gear shift lever is in a gear. The switch must open when shifting between Neutral, First, and Second gears.

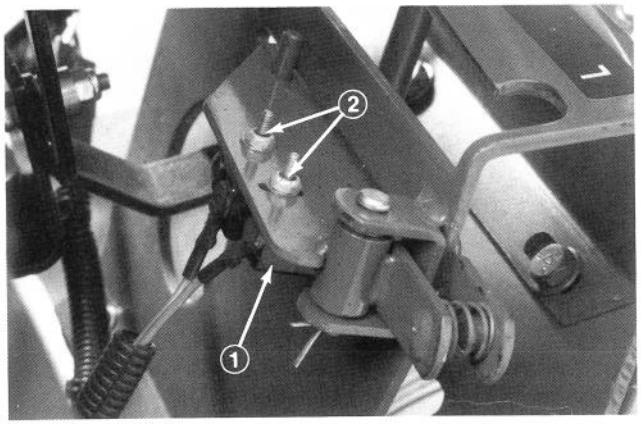


Figure 22

1. Clutch switch 2. Mounting screws

3. To adjust switch, loosen mounting screws and reposition switch as required.

4. If coring head is in raised position and engine will not start, or engine continues to run when coring head is down and interlock lever(s) released, there is a defect in the interlock system, proceed to step 5.

5. Check coring head switch (Fig. 23) with a continuity tester or ohm meter and replace if damaged. The switch plunger must be depressed when the coring head is in the raised position.

Note: Before coring head switch can be adjusted, coring head drive belt must be properly adjusted; refer to instructions for adjusting coring head drive belt on page 23.

6. If an adjustment to the switch is required, proceed as follows:

A. Stop engine and lower coring head onto frame.

B. Remove override pin from storage bracket on front of coring head cover.

C. Push down on override lever (Fig. 25) until holes in lever bracket and coring bracket are aligned, then insert pin thru holes.

D. Loosen adjusting screw jam nut and (2) flange nuts.

E. Turn ignition switch to start position, but do not start engine.

F. While holding ignition switch in the start position, tighten adjusting screw until engine cranks.

G. Release ignition switch and tighten adjusting screw one more turn.

H. Tighten adjusting screw jam nut and (2) flange nuts.

I. Restart the engine and raise the coring head.

J. Stop the engine, remove the override pin and reinstall in storage bracket.

K. Start engine and check all modes of operation. Coring head should not run when on coring head lock-up brackets.

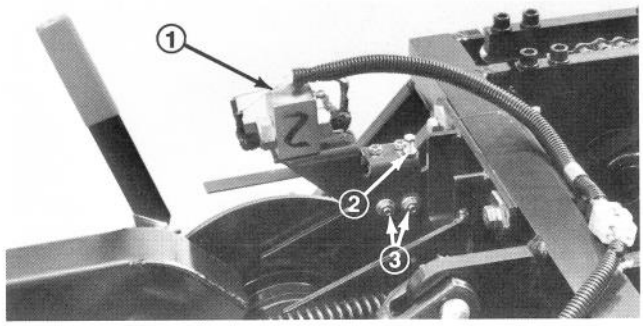


Figure 23

1. Coring head switch
2. Adjusting screw & jam nut
3. Flange nuts

OVERRIDE SYSTEM

The coring head is equipped with a release mechanism which allows the engine to be started when the coring head is in the lowered position.

1. Remove override pin from storage bracket on front of coring head cover (Fig. 24).

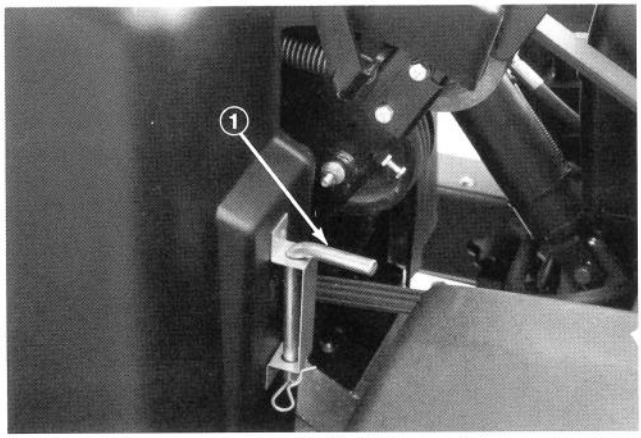


Figure 24

1. Override pin

2. Push down on override lever until holes in lever bracket and coring head are aligned, then insert pin thru holes (Fig. 25).

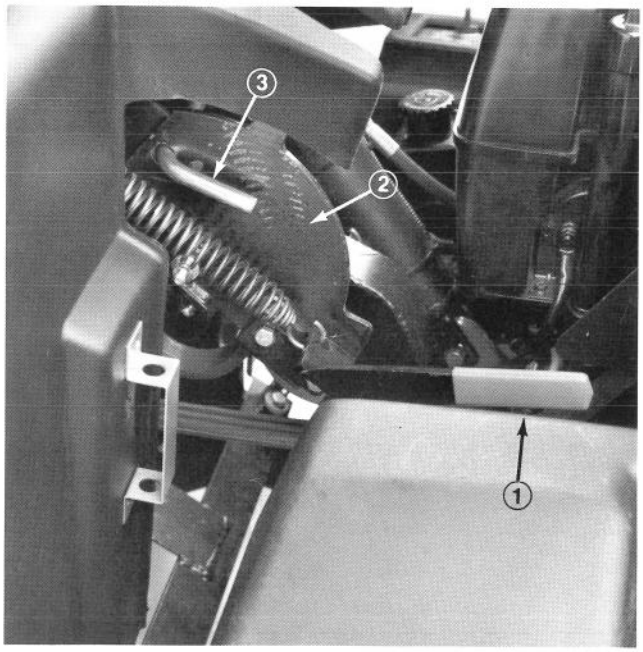


Figure 25

1. Override lever
2. Lever bracket
3. Override pin

3. Restart the engine and raise the coring head.

4. Stop the engine, remove the pin and reinstall in storage bracket.

TRAINING PERIOD

Before aerating greens with the Greens Aerator, it is suggested that you find a clear area and practice starting and stopping, raising and lowering coring head, turning, etc. This training period will be beneficial to the operator in gaining confidence in the performance of the Greens Aerator.

BEFORE AERATING

Inspect the green for debris and determine the best direction and pattern to operate machine.

AERATING PROCEDURES

1. Approach the green with the gear shift lever in the "L" (low) postion.

2. Lower coring head when desired starting position is attained. Make sure coring head is engaged before the tines are within one inch of the turf.

3. Use rubber guides hanging from front of chassis to align rows.

TRANSPORT OPERATION

Make sure coring head is in the up position and coring head lock-up brackets are up. Set the gear shift lever in the "H" (high) position if faster ground speed is required. Use the service brake to slow the machine while going down steep hills to avoid loss of control. Always approach rough areas at a reduced speed and cross severe undulations carefully.

INSPECTION AND CLEAN-UP AFTER USE

At the completion of operation, thoroughly wash the machine with a garden hose without a nozzle so excessive water pressure will not cause contamination and damage to seals and bearings. After cleaning, it is recommended the machine be inspected for possible hydraulic fluid leaks, damage or wear to hydraulic and mechanical components and the tines checked for sharpness.

LUBRICATION

LUBRICATION

The Aerator has 10 grease fittings that must be lubricated daily with No. 2 General Purpose Lithium Base Grease. Damper pivots must be lubricated every 4 hours of operation.

The bearings and bushings that must be lubricated are: front wheels (Fig. 26), rear wheel spindles (Fig. 27), front handle shaft (Fig. 28), damper pivots (4) (Fig. 29), and traction roller latch pin (Fig. 30).

Figure 26

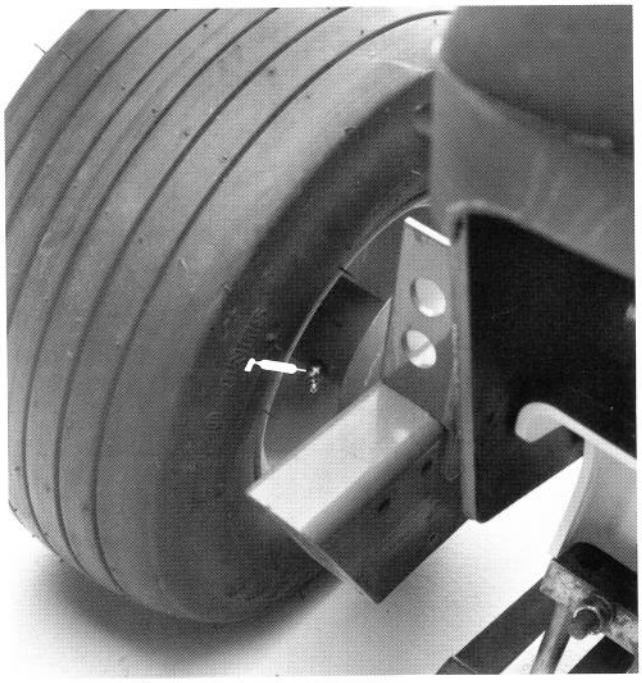


Figure 27

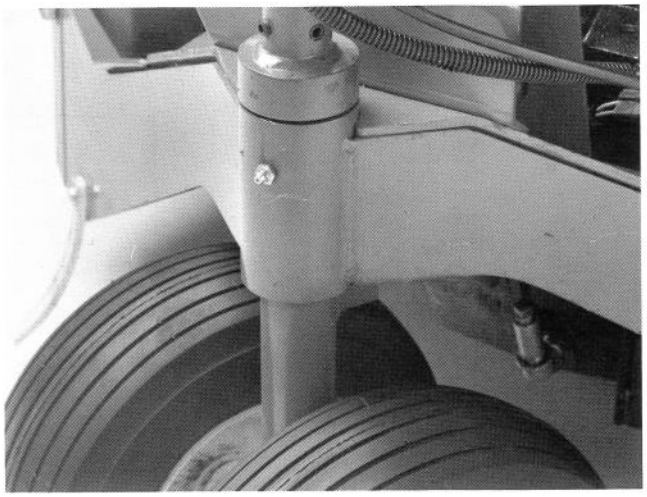


Figure 28

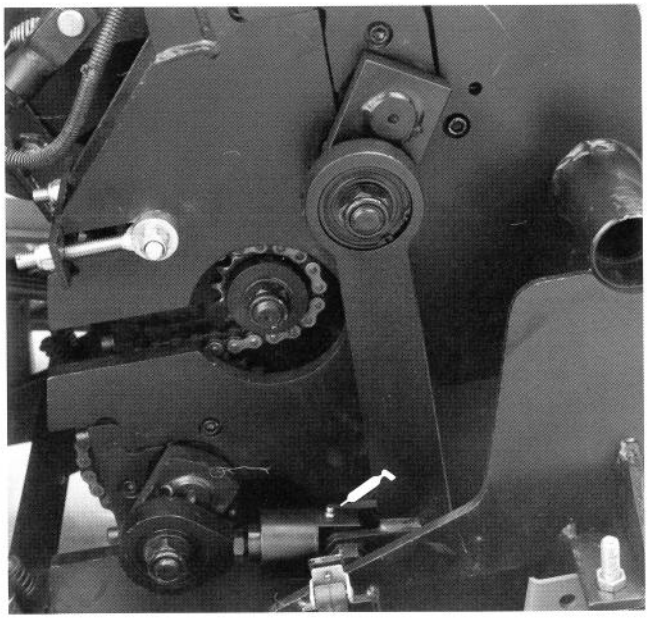


Figure 29

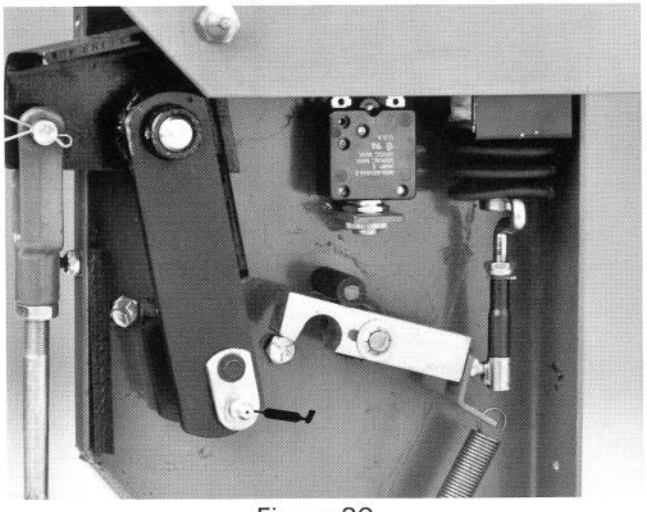


Figure 30

HOLE QUALITY TROUBLESHOOTING

(i.e. Hole Depth, Hole Roundness or Turf Tearing)

MAINTENANCE

CHANGING CRANKCASE OIL

For new engines, change oil after first 5 operating hours. Thereafter, under normal conditions, change oil after every 25 hours of engine operation. However, an engine operated in dusty or dirty conditions requires more frequent oil changes. If possible, run engine just before changing oil. Warm oil flows more freely and carries more contaminants than cold oil.

1. Place an oil drain pan below the drain plug on bottom of crankcase. Clean area around drain plug (Fig. 31).

Note: Cover brake caliper before draining oil.

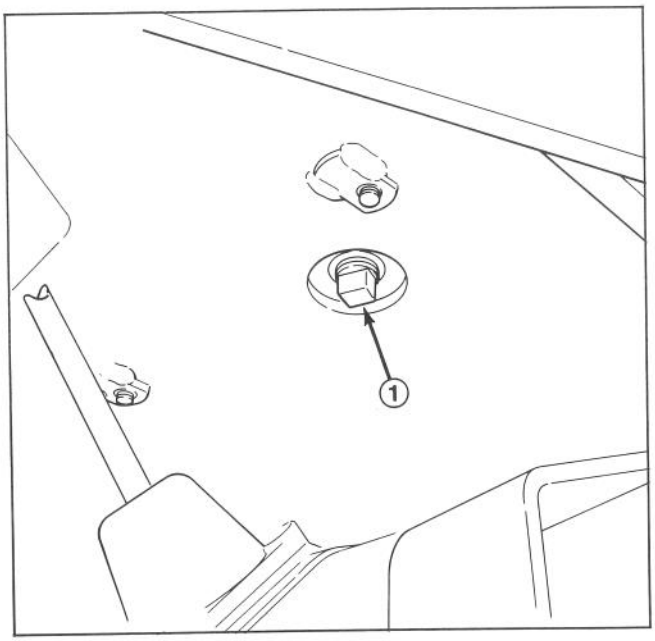


Figure 31

1. Drain plug

2. Remove drain plug and allow oil to flow into drain pan. After oil is drained, reinstall oil drain plug.

3. Remove filler cap and pour approx. 5¼ pints of oil having the API "service classification" SF into the filler neck. Oil viscosity — weight — is selected according to anticipated ambient temperature. Temperature/viscosity recommendations are:

A. Above +32°F (0°C) — Use SAE 30, and if it is not available, 10W-30 or 10W-40 are acceptable substitutes.

B. Below 32°F (0°C) — Use SAE 5W-20 or 5W-30, and if they are not available, 10W-30 or 10W-40 are acceptable substitutes.

4. Check oil and make sure level is up to the FULL mark on dipstick. Add more oil if level is low; however, DO NOT OVERFILL.

SERVICING AIR CLEANER

The foam pre-cleaner must be cleaned and re-oiled after every 25 hours engine operation if engine is operated in clean air conditions. However, air cleaner must be cleaned every few hours if operating conditions are extremely dusty or sandy.

1. Remove wing nut and cover (Fig. 32).

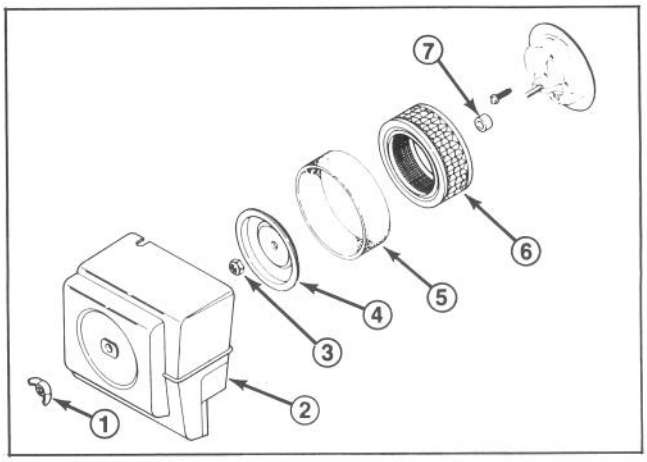


Figure 32

1. Wing nut
2. Cover
3. Nut
4. Element cover
5. Foam precleaner
6. Paper element
7. Cover seal

2. Remove foam pre-cleaner by sliding it off the paper element (Fig. 32).

3. a. Wash foam pre-cleaner in detergent soap and warm water.

b. Wrap foam pre-cleaner in cloth and squeeze dry. Do not wring precleaner.

c. Saturate foam pre-cleaner in engine oil. Squeeze to remove excess oil.

4. Reinstall on paper cartridge.

Inspect paper element every 50 hours of operation and replace when dirty or damaged. Do not wash paper element or do not clean with compressed air as damage will occur.

Note: With air cleaner disassembled, check air cleaner components for damage. Replace if necessary. Make sure rubber tube in base plate is securely in place or severe engine damage may occur.

5. Reinstall element with pre-cleaner, element cover seal, air cleaner element cover, nut, air cleaner cover and wing nut (Fig. 32).

6. Tighten wing nut 1/2 to 1 turn after nut contacts cover. Do not overtighten.

MAINTENANCE

CLEANING CYLINDER HEAD FINS

To avoid overheating and possible engine damage, clean cooling fins on cylinder head every day if necessary.

1. Pull high tension wire off spark plug.

2. Clean dirt, grass and chaff from outside of cylinder, cylinder head fins and air intake screen.

3. Push high tension wire onto spark plug.

ADJUSTING CARBURETOR

Lack of power accompanied by black sooty exhaust smoke is usually caused by a rich carburetor setting. Since a dirty air cleaner element causes the same conditions, check it before adjusting carburetor.

IMPORTANT: Check to make sure the choke is operating correctly before the carburetor is adjusted.

1. Main fuel screw (Fig. 33) — Close screw by gently rotating it clockwise.

IMPORTANT: Do not close the screw too tight because the screw will likely be damaged.

2. Rotate — open — the main fuel screw 3-1/2 turns counterclockwise.

3. Idle fuel adjusting screw (Fig. 33) — Close screw by gently rotating it clockwise. Open screw by rotating it 2-1/2 turns counterclockwise.

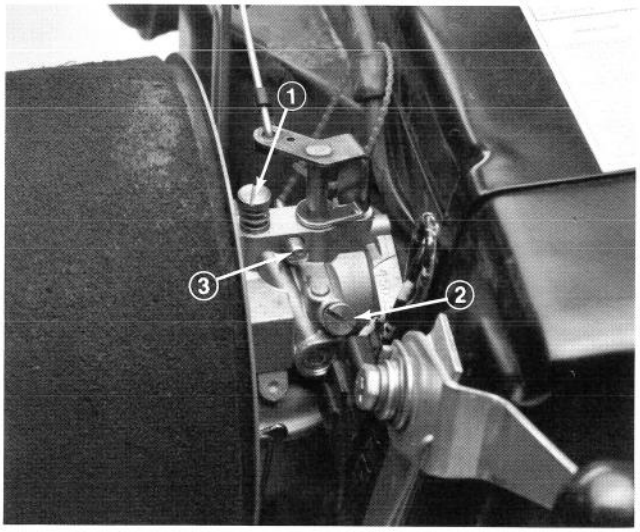


Figure 33

1. Main fuel screw
2. Idle fuel adjusting screw
3. Idle speed setting

IMPORTANT: Do not close the screw too tightly because the screw will likely be damaged.

Note: These settings are approximate; however, the settings will allow engine to be started so carburetor can be fine tuned — steps 4-7.

WARNING

Engine must be running so final adjustment of the carburetor can be performed. To guard against possible personal injury, keep hands, feet, face and other parts of the body away from the muffler, other hot parts of the engine, and other moving or rotating parts of the engine. Assure traction drive is DISENGAGED and gear shift is in NEUTRAL.

4. Start engine and let it run for 5-10 minutes at half throttle to warm up. Engine must be warm before making final adjustments.

5. Move throttle to FAST position. Turn main fuel screw in until speed decreases and note position of screw. Now turn screw out — the engine speed may first increase, then it will decrease as screw is turned. Note the position of screw when engine speed starts to decrease. Set the screw at the midpoint of the two positions noted.

6. To adjust idle fuel adjusting screw, follow same procedure as for main fuel but move throttle to SLOW after 5-10 minute warm up and make adjustment.

7. Idle Speed Setting (Fig. 33) — Run engine at half-throttle for 5-10 minutes to warm up. Move throttle to SLOW and set engine speed to 1300 RPM by turning the idle speed adjusting screw clockwise or counterclockwise.

CHECKING AND REPLACING SPARK PLUG

Since air gap between center and side electrodes increases gradually during normal engine operation, check condition of electrodes at 100 hour intervals. The correct spark plug to use in the engine is Champion RH-10 or equivalent. Set air gap at .025".

1. Clean area around spark plug so dirt does not fall into cylinder when plug is removed (Fig. 34).

2. Pull wire off spark plug and remove plug from cylinder head (Fig. 34).

3. Check condition of center and side electrodes to determine operating temperature of engine.

A. Light brown insulator tip indicates correct spark plug and heat range.

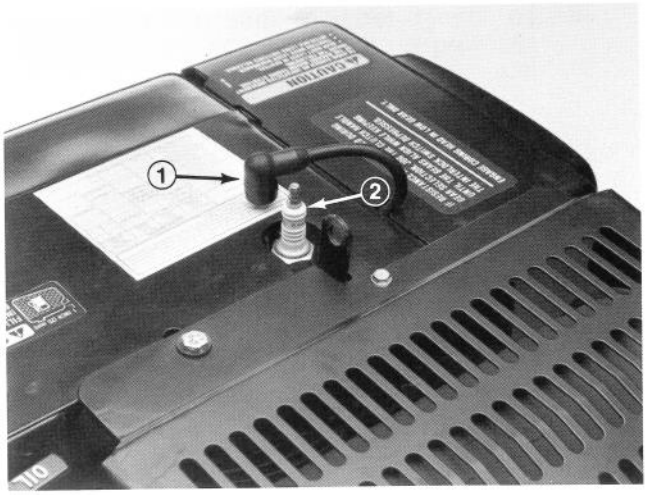


Figure 34

1. Spark plug wire
2. Spark plug

B. Black or oily insulator tip indicates an excessively rich fuel mixture, possibly caused by a dirty air cleaner element or a carburetor that is set too rich.

C. Light gray or blistered-white insulator indicates overheating caused by a lean carburetor setting or incorrect spark plug (heat range too high).

IMPORTANT: A cracked, fouled or dirty spark plug must be replaced. Do not sandblast, scrape or clean electrodes by using a wire brush because grit may release from the plug and enter combustion chamber resulting in engine damage.

4. After setting air gap at .025", install spark plug in cylinder head. Tighten the plug to 10-15 ft-lb. Push wire onto spark plug.

CHANGING HYDRAULIC SYSTEM OIL

The hydraulic system oil must be changed immediately when any contamination, sludge, water or condensation appears.

1. Remove tines from tine blocks and lower coring head; refer to Install Tines, page 13.

2. Position a drain pan under chassis below pump assembly (Fig. 35).

3. Remove hose clamp securing return hose to pump. Disconnect hose from pump allowing oil to flow into drain pan.

4. Connect return hose to pump and secure with hose clamp.

Figure 35

1. Dip stick cap

5. Fill pump reservoir; refer to checking Hydraulic System Fluid, page 11.

6. Check all connections for possible leaks.

CHANGE TRANSAXLE OIL

Each year oil in transaxle must be changed. If possible run machine just before changing oil. Warm oil flows more freely and carries more contaminants than cold oil.

1. Place a drain pan below drain plug on axle. Clean area around drain plug (Fig. 36).

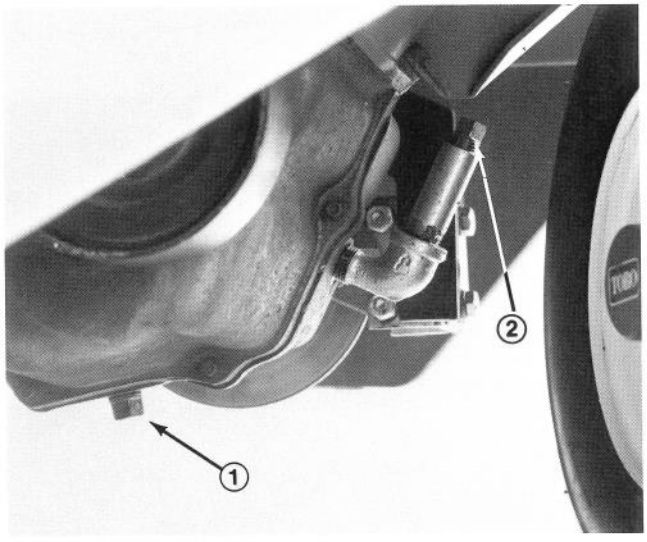


Figure 36

1. Drain plug
2. Fill plug

2. Remove drain plug and allow oil to flow into drain pan. After oil is drained, reinstall drain plug.

3. Remove fill plug (Fig. 36) and pour approx. 64 oz. of SAE E.P. 90 wt. oil into extension tube. Stop when oil level reaches top of tube.

4. To check oil level in the future: remove plug, and add oil as required to bring level to top of tube.

BELT ADJUSTMENTS

Make sure belts are properly tensioned to assure correct operation of unit and unnecessary wear. Check all belts midway in the span of the belt.

1. The belt tension on the hydraulic pump (Fig. 37) must have a maximum deflection of 5/32 of an inch with a 2 to 3 pound load applied.

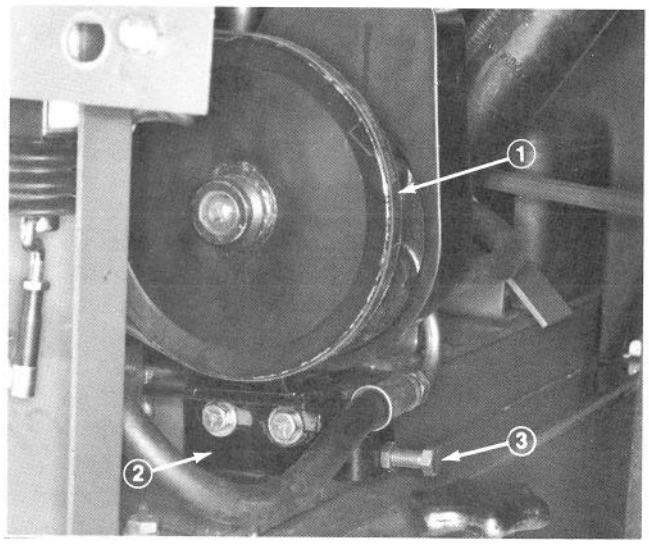


Figure 37

1. Hydraulic pump belt
2. Pump support bracket
3. Adjusting screw

Figure 38

1. Control cover

A. Remove control cover to expose adjusting screws (Fig. 38).

B. To adjust tension, loosen (2) capscrews securing pump support bracket to chassis (Fig. 37).

C. Loosen jam nuts on adjusting screw.

D. Rotate adjusting screw until desired belt tension is achieved.

E. Tighten jam nuts and pump support screws.

F. Recheck belt deflection.

G. Reinstall control cover.

2. The transaxle belt (Fig. 39) is properly adjusted when there is a gap of 1/4" between drive take up bracket and end of step bolt, when clutch is engaged.

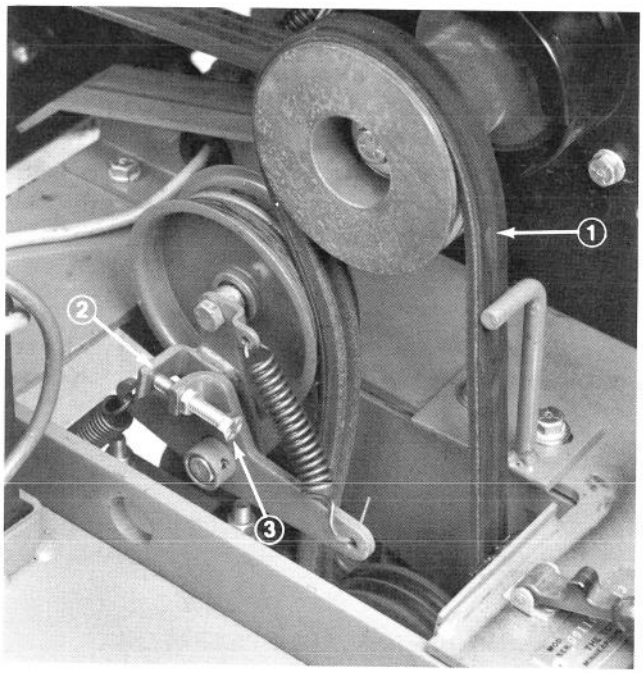


Figure 39

1. Transaxle belt
2. Drive take up bracket
3. Step bolt

A. Unlatch and remove clutch cover (Fig. 40).

B. Loosen jam nut on step bolt.

C. Engage clutch lever and adjust step bolt until desired dimension is attained.

D. Reinstall clutch cover and hook latches.

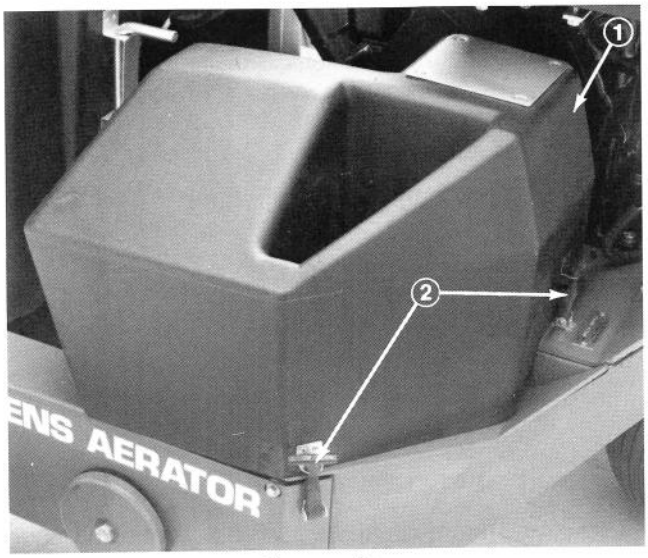


Figure 40

1. Clutch cover
2. Latches (3)

3. If coring head drive belt (Fig. 41) does not properly engage or disengage when entering or exiting the ground, check belt adjustment. Coring head mechanism should begin rotating 1" before tines contact turf.

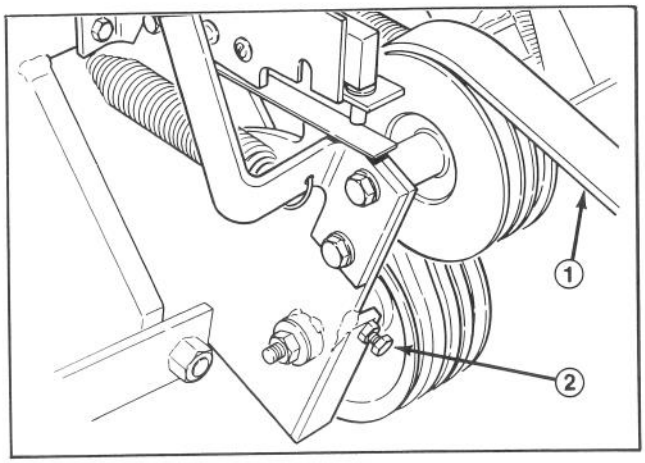


Figure 41

1. Coring head drive belt
2. Adjusting screw

A. Unlatch and remove coring head cover (Fig. 42).

B. Lower coring head onto lock-up brackets.

C. Loosen adjusting screw jam nut (Fig. 41) on top of idle pulley bracket.

D. With engine running at idle speed, rotate adjusting screw (Fig. 41) until coring head just barely starts to creep or stops. Then tighten adjusting screw one more turn. Tighten jam nut.

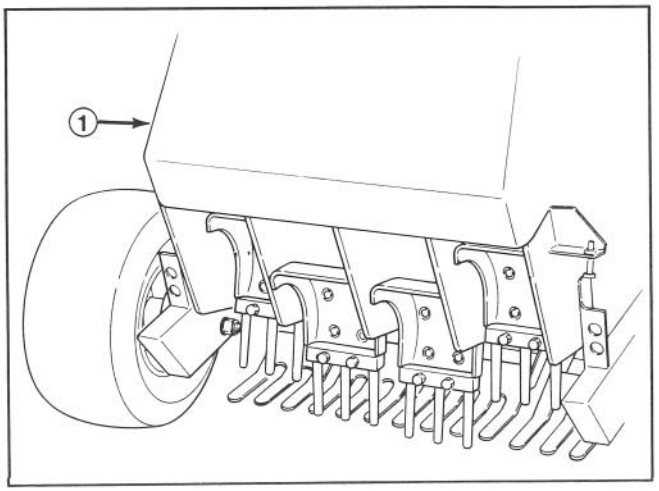


Figure 42

1. Coring head cover

E. Stop the engine and loosen adjusting screw jam nut on opposite side of pulley.

F. Rotate adjusting screw until contact is made, then tighten jam nut.

G. Reinstall coring head cover and hook latches.

ADJUSTING SERVICE BRAKE

If brake lever (Fig. 43) contacts control handle when brake is applied, an adjustment to the brake cable is required. When the brake is fully applied, the end of the lever should be a maximum of 1/2 inch from control handle.

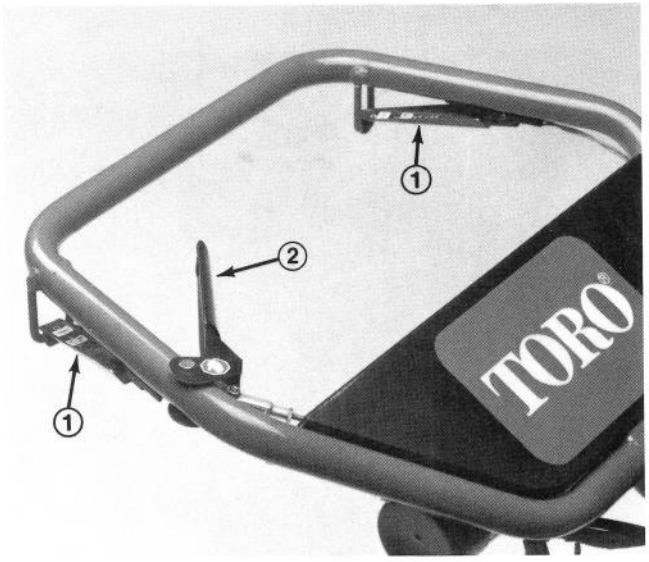


Figure 43

1. Interlock lever switches
2. Service brake

1. Remove screw and nut securing cable clevis to brake lever (Fig. 44).

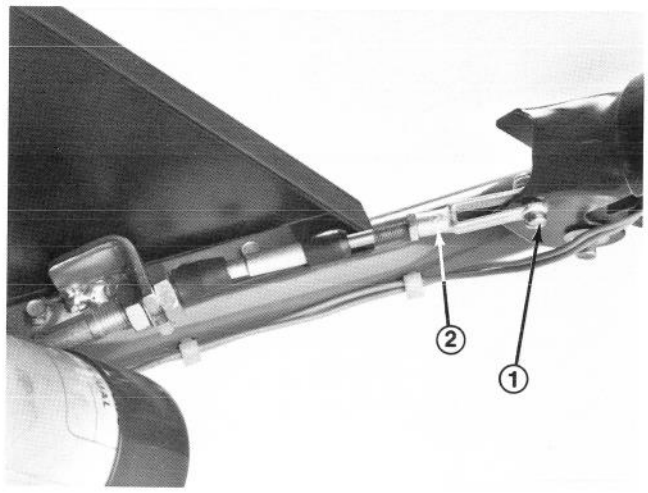


Figure 44

1. Screw and nut 2. Cable clevis

2. Thread cable clevis onto cable as required to attain the 1/2 inch dimension.

3. Reinstall cable clevis to brake lever with screw and nut.

CHECK CORING HEAD CHAINS

After the first 5-10 hours of operation, tension on both coring head chains must be checked and adjusted if required.

1. Depress chain in span between the idler sprocket and upper crank arm sprocket. Applying 8-12 lbs. of force on designated area, chain should deflect .25 inch ± .03 (Fig. 45).

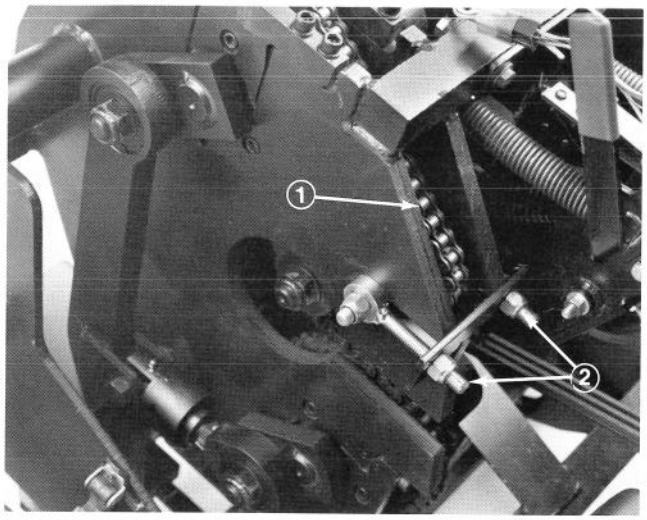


Figure 45

1. Coring head chain 2. Eyebolt nuts

2. Tighten or loosen each eyebolt nut to increase or decrease chain tension. Make sure each eyebolt is adjusted equally (Fig. 45).

3. Check adjustment by repeating previous steps.

4. To make sure eyebolts are adjusted equally, measure distance from center of idler shaft to center of upper crank shaft on both sides of shaft (Fig. 45).

5. Repeat procedure on other chain.

SERVICING ROLLER CHAINS

Cleaning — When cleaning coring head chains, use kerosene, fuel oil or diesel fuel.

Lubrication — Lubricate chains with SAE 30 oil.

CORING HEAD TIMING

The coring head must be correctly timed to assure proper tine engagement angle and assure proper hole quality.

1. Locate the four (4) timing holes, two (2) on each side of coring head and on crank sprockets (Fig. 46).

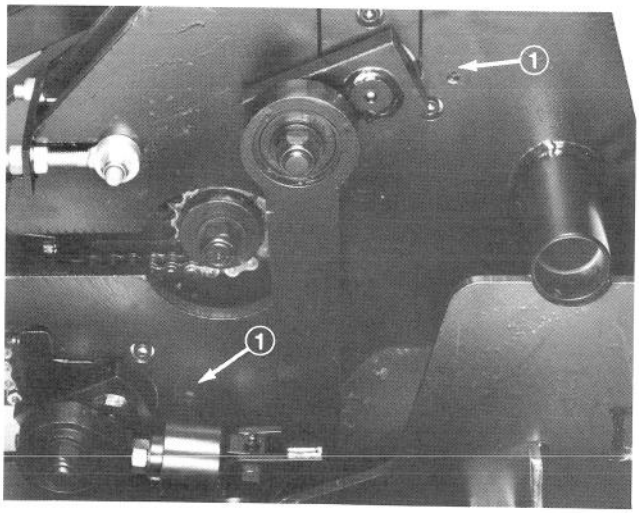


Figure 46

1. Timing holes(s)

2. To check the timing you will need the (4) timing rods, included with unit.

3. Rotate the coring assembly by hand, aligning each of the (4) timing holes so that the timing rods can be inserted through coring head and sprocket.

4. If any of the rods cannot be inserted through the coring head and into sprocket the unit is out of time.

5. To correct timing, locate and remove master link in drive chain.

6. Rotate the drive sprocket until all timing holes are aligned.

7. Make sure all the rods pass through each of the timing holes and reinstall chain.

REMOVING CORING HEAD

1. Start the engine, raise the coring head and remove tines from tine blocks.

2. Position the coring head lock-up brackets in the down position.

3. Unlatch and remove coring head cover.

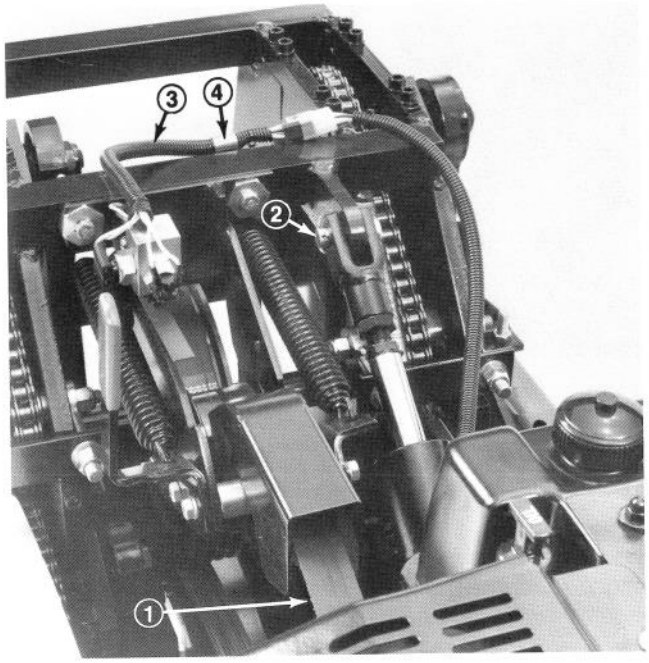


Figure 47

1. Drive belt
2. Lift cylinder pin
3. Wire harness
4. Wire harness clamp

4. Remove the coring head drive belt from the engine pulley (Fig. 47).

5. Slide coring head stand (optional) under coring head.

6. Lower coring head onto stand.

7. Remove hair pin cotter from lift cylinder pin connected at coring head (Fig. 47), and remove pin.

8. Remove nut securing wire harness clamp to chassis (Fig. 47).

9. Disconnect wire harness from coring head interlock switch.

10. Loosen (2) coring head pivot module knobs (Fig. 48).

11. Pull traction unit straight away from coring head (Fig. 49).

12. Reverse procedure to reinstall coring head.

Figure 48

1. Pivot module knobs

CHECK DAMPER ADJUSTMENT

If coring head damper assemblies are ever removed for servicing, make sure they are installed so distance between center of tine arm shoulder bolt and center of crank shaft is 5.56-5.62 inches (Fig. 49).

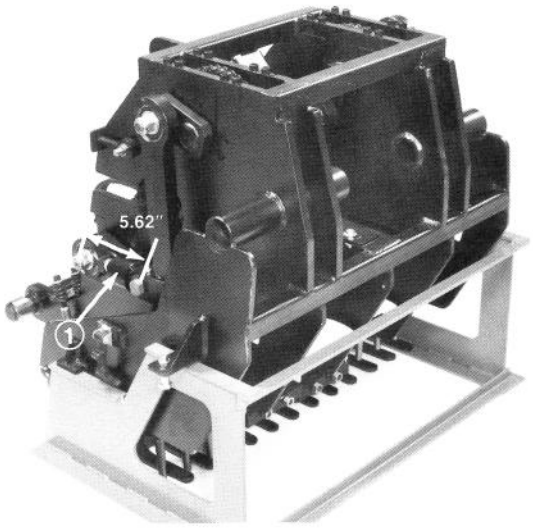


Figure 49

1. Damper assembly

ADJUSTING BRAKE ASSEMBLY

If the machine does not stop when declutching, an adjustment to the brake assembly is required.

1. Engage the clutch lever.

2. Tighten the caliper brake adjustment nut (Fig. 50) until the brake disc cannot be rotated by hand.

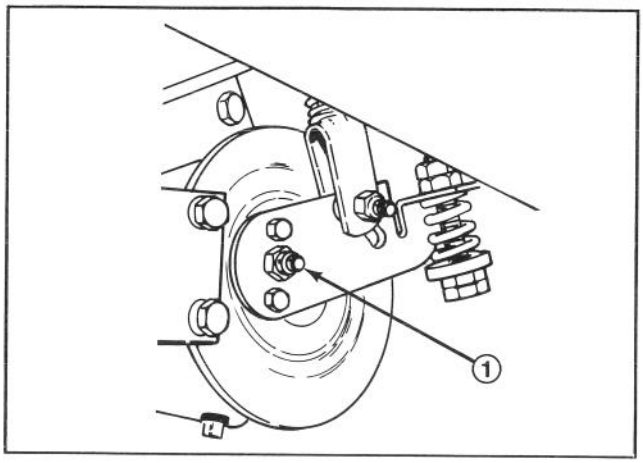


Figure 50

1. Brake adjusting nut

3. Back the caliper brake nut off until the disc can just be rotated by hand.

4. Disengage the clutch and tighten the jam nut on the brake.

ADJUSTING CLUTCH SOLENOID

If traction drive lever will not stay engaged, an adjustment to the clutch solenoid may be required.

1. Remove control panel cover (Fig. 51).

2. If required, reset circuit breaker button (Fig. 52).

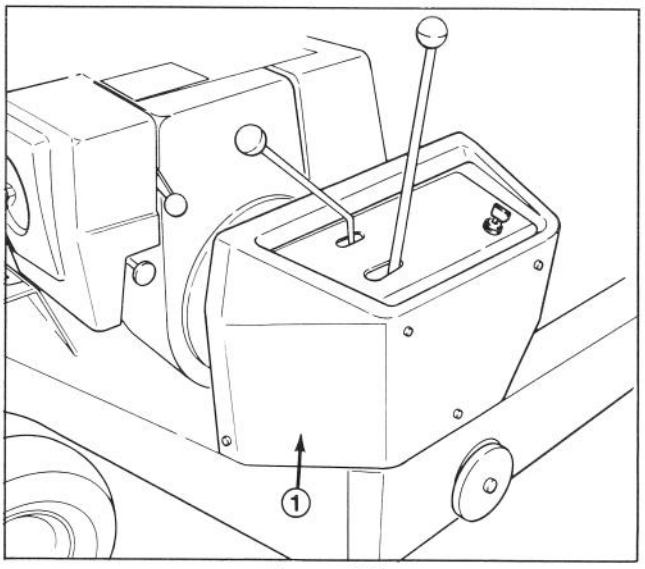


Figure 51

1. Control cover

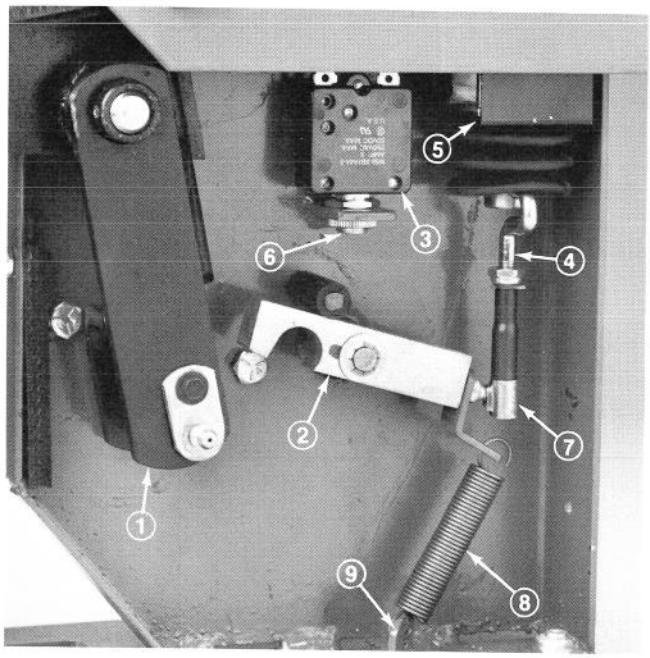


Figure 52

1. Clutch lever
2. Latch
3. Circuit breaker
4. Adjusting rod
5. Solenoid
6. Circuit breaker reset button
7. Bail joint
8. Return spring
9. Spring bracket

3. Turn ignition key to the "ON" position (Do not start machine) and squeeze one of the interlock levers.

4. Check adjustment of solenoid rod. Rod to be adjusted so that when solenoid is energized the latch will engage the clutch lever roller. There should be a small amount of freeplay between the latch and the roller. The solenoid plunger must be fully retracted, so the switch on the solenoid has opened and the electrical current is approximately 1.5 amps.

When the solenoid is energized, it should be possible to manually disengage by pushing the clutch lever forward.

When the solenoid is deenergized the latch should release from the clutch lever roller and the traction drive system should declutch.

If the solenoid plunger is not fully retracted and the electrical current exceeds 5 amps the circuit breaker will trip. The circuit breaker will also trip if the capacitor has an internal electrical short. The circuit breaker must be reset before commencing operation.

5. If an adjustment to the rod is required, proceed with the following:

   A. Unlock ball joint from latch ball (Fig. 52).

   B. Loosen lock nut and rotate ball joint in or out until desired adjustment is achieved.

   C. Tighten lock nut securely against ball joint.

MAINTENANCE

IMPORTANT: Make sure rod is positioned squarely as shown in Fig. 52.

Note: Make sure there is no tension on return spring when rod is in the disengaged (down) position. Loosen spring bracket capscrew and rotate bracket in or out until spring tension is relieved on spring. Tighten capscrew. Spring is to be hooked on latch from inside out as shown in Fig. 52.

D. Recheck adjustment and readjust if required.

BATTERY CARE

1. Battery electrolyte level must be properly maintained and the top of the battery kept clean. If the Aerator is stored in a location where temperatures are extremely high, the battery will run down more rapidly than if the machine is stored in a location where temperatures are cool.

2. Check the electrolyte level every 25 operating hours or, if machine is in storage, every 30 days.

3. Maintain cell level with distilled or demineralized water. Do not fill cells above the bottom of the split ring inside each cell.

4. Keep top of battery clean by washing periodically with a brush dipped in ammonia or bicarbonate of soda solution. Flush the top surface with water after cleaning. Do not remove the fill caps while cleaning.

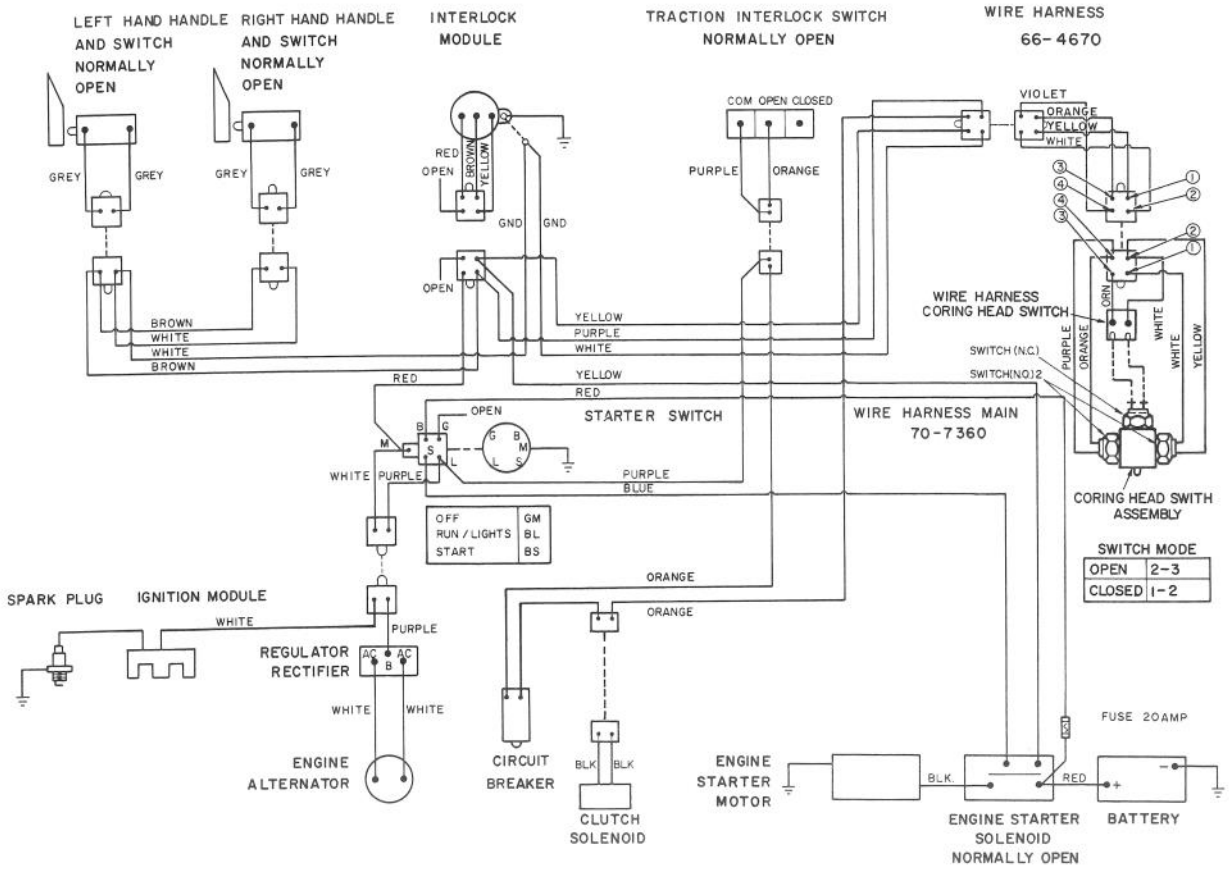
5. Battery cables must be tight on terminals to provide good electrical contact.

6. If corrosion occurs at terminals, disconnect cables, negative (-) cable first and scrape clamps and terminals separately. Reconnect cables, positive (+) cable first and coat terminals with petroleum jelly.

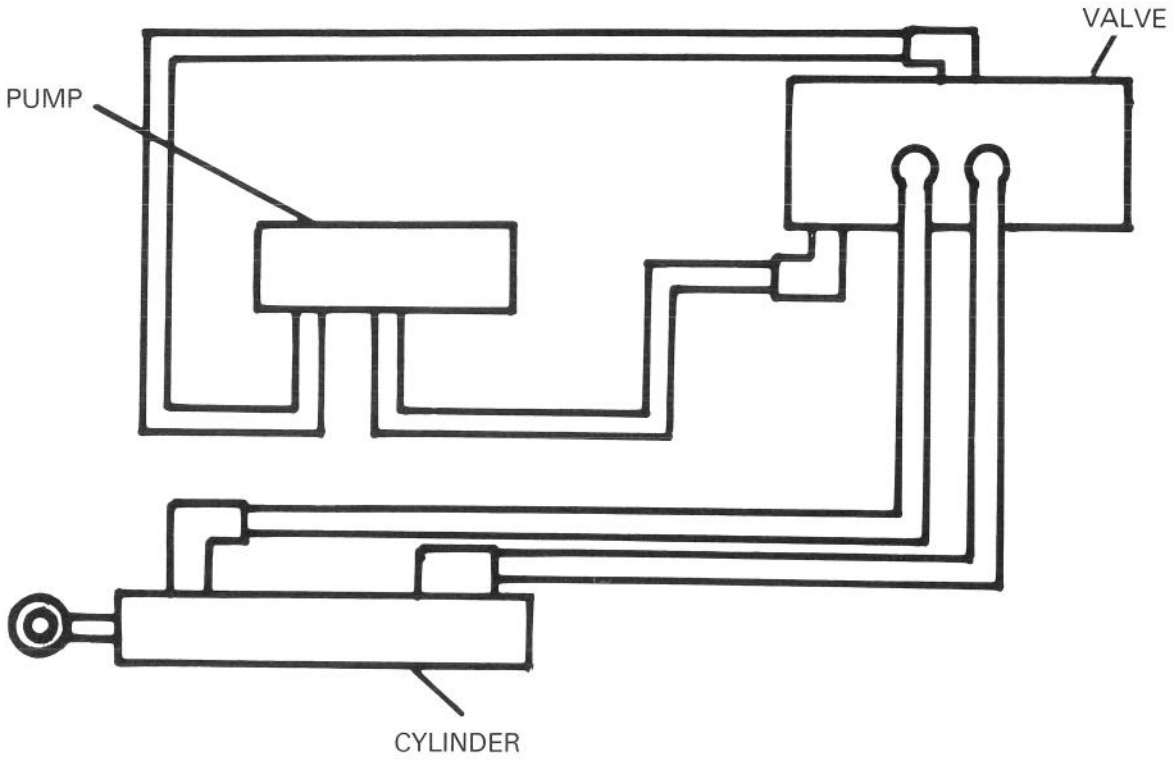
BATTERY STORAGE

If the machine will be stored more than 30 days, remove the battery and charge it fully. Either store it on the shelf or on the machine. Leave the cables disconnected if stored on the machine. Store the battery in a cool atmosphere to avoid quick deterioration of the charge in the battery.

ELECTRICAL SCHEMATIC



HYDRAULIC SCHEMATIC



IDENTIFICATION AND ORDERING

MODEL AND SERIAL NUMBERS

The GREENS AERATOR traction unit and coring head each have two identification numbers: a model number and a serial number. The two numbers are stamped on a plate which is riveted to each frame member. In any correspondence concerning the GREENS AERATOR, supply model and serial numbers to be sure that correct information and replacement parts are obtained.

To order replacement parts from an authorized TORO Distributor, supply the following information:

1. Model and serial numbers of the machine.

2. Part number, description and quantity of parts desired.

Note: Do not order by reference number if a parts catalog is being used; use the part number.

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Lubrication	Air Cleaner Service	Battery Service	Spark Plug Gap

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Lubrication	Air Cleaner Service	Battery Service	Spark Plug Gap

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Lubrication	Air Cleaner Service	Battery Service	Spark Plug Gap

The Toro Promise

A ONE YEAR LIMITED WARRANTY

The costs of parts and labor are included, but the customer pays the transportation costs on walk rotary mowers with cutting unit widths of less than 25".

Commercial Products . . . . . 1 Year

The costs of parts and labor are included, but the customer pays the transportation costs on walk rotary mowers, trimmers and blowers.

If you feel your TORO product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact your Authorized TORO Distributor or Commercial Dealer (the Yellow Pages of your telephone directory is a good reference source).
2. The TORO Distributor or Commercial Dealer will advise you on the arrangements that can be made to inspect and repair your product.
3. The TORO Distributor or Commercial Dealer will inspect the product and advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without an extra charge to you.

If for any reason you are dissatisfied with the distributor's analysis of the defect or the service performed, you may contact us.

Write:

TORO Commercial Products Service Department
8111 Lyndale Avenue South
Minneapolis, Minnesota 55420

The above remedy of product defects through repair by an Authorized TORO Distributor or Commercial Dealer is the purchaser's sole remedy for any defect.

THERE IS NO OTHER EXPRESS WARRANTY. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper condition is the responsibility of the owner.

All warranty repairs reimbursable under the Toro Promise must be performed by an Authorized TORO Commercial Dealer or Distributor using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Distributor or Commercial Dealer are not reimbursable under the Toro Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

THE TORO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OR EXPENSE OF PROVIDING SUBSTITUTE EQUIPMENT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.

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.

COUNTRIES OTHER THAN THE UNITED STATES OR CANADA

Customers who have purchased TORO products exported from the United States or Canada should contact their TORO Distributor (Dealer) to obtain guarantee policies for your country, province or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO importer. If all other remedies fail, you may contact us at The Toro Company.

Compliance with Radio Interference Regulations Certified.
Certifie Conforme au Reglement sur le Brouillage Radioelectrique.

Litho in U.S.A.