FORM NO. 3312-662 REV. A

TORO®

MODEL No. 22030 — 6000001 THRU 7000001 & UP
MODEL NO. 22035 — 6000001 THRU 7000001 & UP

OPERATOR'S MANUAL

21" (0.53 m) COMMERCIAL REAR BAGGER



To assure maximum safety, optimum performance, and to gain knowledge of the mower, it is essential that you or any other operator of the mower read and understand the contents of this manual before the engine is started. Pay particular attention to the instructions highlighted by this safety alert symbol. Failure to comply with the safety instructions may result in personal injury. This product does not comply with the Consumer Product Safety Commission's standards for walk behind lawn mowers. The product is intended for commercial use only.

TORO
THIS UNIT CONFORMS TO ANSI B71.4 - 1984

MODEL 22030 SHOWN

FOREWORD

The Commercial Rear Bagger provides a new degree of mowing durability and convenience. If the mower is set up, operated and maintained properly, it will give long, dependable service.

To familiarize yourself with safety, set-up, operating and maintenance instructions, read this manual thoroughly. The major sections of this manual are:

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

Safety, mechanical, and some general information in this manual is emphasized. DANGER, WARNING, and CAUTION identify the safety messages. Whenever the safety symbol appears, it is followed by a safety message; therefore, refer to the safety instructions on page 3 and 4 for complete details. IMPORTANT identifies special mechanical information and NOTE identifies general information worthy of special attention.

OPTIONAL SPARK ARRESTER

In some areas there are local, state or federal regulations requiring that a spark arrester be used on the engine of this mower. If a spark arrester is required, order the following parts from your local Authorized Toro Dealer:

81-0200 Spark Arrester Assembly

When mower is used or operated on any California forest, brush or grass covered land, a working order spark arrester must be attached to muffler. If not, the operator is violating state law, Section 4442 Public Resources Code.

If help — concerning safety, set-up, operation and maintenance — is ever needed, contact the local Authorized TORO Service Dealer or Distributor. Refer to the "Yellow Pages" for assistance. In addition to skilled service technicians, the dealer and distributor have other TORO Products, as well as factory approved accessories and replacement parts. Keep your Toro all TORO. Buy genuine TORO replacement parts and accessories.

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SAFETY INSTRUCTIONS

Improper use or maintenance by the operator or owner of the mower can result in personal injury. To reduce the potential for injury, follow these safety instructions.

BEFORE OPERATING

1. Operate the mower only after reading this manual. A replacement manual is available by sending complete model and serial number to: The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420; Attn: Publications.

2. Never allow children to operate the mower or adults to operate it without proper instructions.

3. Become familiar with the controls and know how to stop the engine quickly.

4. Keep everyone, especially children and pets, away from the area of operation. Remove sticks, stones, wire and any other debris that might be picked up and thrown by the blade.

5. Keep all shields and safety devices in place. Before operating mower, check it for damage and abnormal wear. If a shield, safety device or decal is defective or damaged, repair or replace it before operation is commenced.

6. Wear long pants and substantial shoes. Do not operate mower while wearing sandals, tennis shoes, sneakers or shorts. Do not wear loose fitting clothing that could get caught in moving parts. Wearing safety glasses is advisable and required by some local ordinances and insurance regulations.

7. If long grass will be cut, set height-of-cut in highest position. After mowing, reinspect the area and remove all debris. Then lower the height-of-cut and mow grass again.

8. Gasoline is highly flammable; handle it carefully.

   A. Use an approved gasoline container.
   B. Do not fill fuel tank when engine is running, or until engine cools for several minutes after running.
   C. Do not smoke while handling gasoline.
   D. Fill fuel tank outdoors and up to about one-half inch (12.7 mm) from the top of the tank, not the filler neck.
   E. Wipe up any spilled gasoline.

WHILE OPERATING

9. Cutting grass with a rotary mower demands attention. Always maintain secure footing, balance and control.

10. Cut grass during the daytime or when there is adequate artificial light. Cut grass slopes from side to side. Avoid slopes when grass is wet. If possible, mow when grass is dry for best results.

11. Keep face, hands and feet away from the mower housing and cutter blade when the engine is running. Stay behind the handle until the engine stops.

12. When operating mower without the bag, the chute door must be closed. Whenever grass is being bagged, the engine must be shut off and the chute door closed before the bag is removed and emptied.

13. If the discharge opening is clogged, shut engine off and wait for all moving parts to stop. Disconnect high tension wire from the spark plug and clear the obstruction with a stick.

14. Since the blade rotates for a few seconds after throttle control is moved to STOP, stay behind the handle until all moving parts stop.

15. If a solid object is hit by the blade or if mower vibrates abnormally, shut engine off immediately and wait for all moving parts to stop. Disconnect high tension wire from spark plug and keep wire away from plug to prevent possibility of accidental starting. Check mower for possible damage, bent blade, bent crankshaft, an obstruction, or loose part(s). Make all repairs before using the mower.

16. Stop the engine before adjusting the height-of-cut.

17. If a gravel driveway, road or side walk must be crossed, stop the engine so loose sand and rocks are not thrown.

18. Before leaving the operator's position — behind the handle — stop the engine and wait for all moving parts to stop. Disconnect high tension wire from spark plug if mower will be unattended.

19. Do not touch any part of the engine while it is running or shortly after it has been stopped because the engine will be hot enough to cause a burn.

20. Before the mower is serviced or adjusted, stop the engine and disconnect high tension wire from spark plug. Keep the wire away from the plug to prevent the possibility of accidental starting.

MAINTENANCE

21. To assure the mower is in safe operating condition, frequently check, and keep all nuts, bolts and screws tight. Assure blade bolt is tightened to 50 ft-lb (68 N·m).

SAFETY INSTRUCTIONS

22. Perform only those maintenance instructions described in this manual. If major repairs are ever needed or if assistance is desired, contact an Authorized TORO Service Distributor or Dealer.

23. If mower must be tipped when it is serviced or adjusted, drain gasoline from the fuel tank.

24. If a guard, safety device or safety decal is damaged, replace the defective part(s) before operating the mower.

25. To reduce potential fire hazards, assure mower is free of excessive grease, grass, leaves and accumulations of dirt.

26. The grass bag must always be in good condition; therefore, check it before each use to assure the bag is not torn or deteriorated. Replace a defective grass bag.

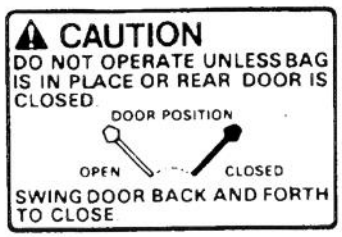
27. Allow engine to cool before storing mower in any enclosure such as a garage or storage shed. Do not store mower near any open flame or where gasoline fumes may be ignited by a spark.

28. Do not overspeed the engine by changing governor settings. Recommended speed of the engine is 3000 rpm. To assure safety and accuracy, have an Authorized TORO Service Distributor or Dealer check engine speed, 3000 rpm, with a tachometer.

29. At the time of manufacture the mower conformed to the safety standards in effect for rotary mowers. To assure optimum performance and continued safety certification of the mower, use genuine TORO replacement parts and accessories. Replacement parts and accessories made by other manufacturers may result in non-conformance with the safety standards, and that could be dangerous.

SAFETY DECALS

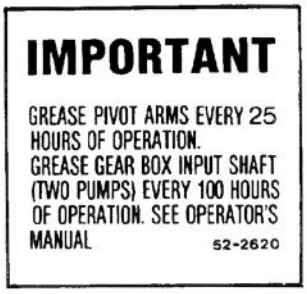
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged.



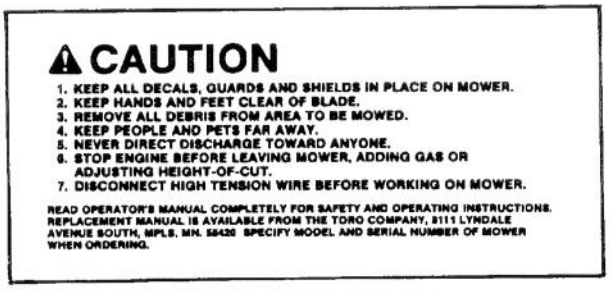
ON TOP OF REAR DISCHARGE



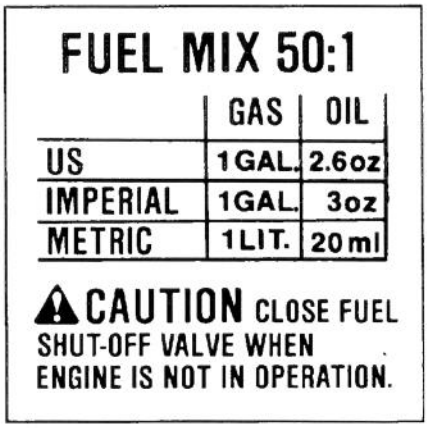
ON MOWER HOUSING
(Part No. 39-5770)



ON BELT COVER
(Model 22030, Part No. 52-2610)
(Model 22035, Part No. 52-2620)



ON DISCHARGE CHUTE
(Part No. 29-4720)



ON FUEL TANK
(Part No. 52-2350)

SPECIFICATIONS*

Engine: Toro 121cc, two-cycle, air cooled engine. Forged steel crankshaft, two-stage air cleaner and cast iron cylinder sleeve. 50:1 gas/oil mixture.

Fuel Tank Capacity: Three quart, steel tank.

Mower Housing: Die cast aluminum alloy housing with spiral grass chamber and high impact design. Rear bagging or mulching capability.

Cutter Blade: High carbon steel blade is heat treated for hardness and 21 inches long.

Blade Tip Speed: Tip speed of blade is 16,500 ft/min @ 3000 nominal engine rpm.

Handle: Single piece, one inch O.D. x 16 gauge welded steel tubing, black enamel paint with vinyl handle grip. 3 position handle height adjustment.

Ground Speed Control (Self Propelled Model): Control lever mounted on gearbox, positions are low (1), medium (2), high (3), neutral (N).

Traction Clutch (Self Propelled Model): Adjustable traction cable between control bar and transmission pivots gearbox to tighten or loosen belt for clutching function, when control bar is lifted to mower handle.

Traction Drive (Self Propelled Model): Rear wheel drive has a special 3L section V-belt that connects the gearbox to an output shaft on the engine. Engine to gearbox ratio is 1.27:1.

SPECIFICATIONS*

Gear Case (Self Propelled Model): Case is die cast aluminum. Bevel gear reduction 2.50:1. Spur gear reductions are low 4.33:1, Medium 3.00:1 and high 2.11:1. Lubrication requirement is 3 oz. lithium grease.

Wheels: Stamped steel wheels have two ball bearings.

Rear Wheel Reduction (Self Propelled Model): Wheel reduction is 2.80:1.

Engine to Rear Wheel Reduction (Self Propelled Model): Reduction is low (1) 38.5:1, medium (2) 26.7:1 and high (3) 18.8:1.

Tires: Front and rear tires are 8" x 2.0" radial semi-pneumatic, slanted rectangular tread.

Ground Speed (Self Propelled Model): Ground speed at 3000 RPM is low (1) 1.85 mph, medium (2) 2.67 mph and in high (3) 3.80 mph.

Height of Cut: Height of cut is adjustable to one of six positions, 3/4" to 3-1/4", in 1/2" increments.

Crankshaft Protector: Powdered bronze collar pressed into conical 11 gauge support mounted to housing.

Dimensions:
Overall width is 22 inches (approx.)
Overall length without handle is 35 inches (approx.)
Height without handle and wheels set at 1 inch height of cut is 15-1/2 inches (approx.)

Weight: Dry weight of self propelled model including bagging attachment is approximately 94 lbs. Hand propelled model is 84 lbs.

*Specifications subject to change without notice.

LOOSE PARTS

Carefully remove mower and other parts from carton. Use chart below to assure all parts have been shipped.

PART	QTY.	WHERE USED
Handle	1	Install Handle
Shoulder Screw	2	
Locknut 5/16-18	2	
Capscrew 5/16-18 x 1.50" Lg.	2	
Locknut 5/16-18	2	
Bag Support Rod	1	
Cap Locknut 1/4-20	2	
Bag	1	Assemble to Mower
Operator's Manual	1	Read Before Operating Mower
Parts Catalog	1	
Registration Card	1	Fill out card and send it to The Toro Company.

SET-UP INSTRUCTIONS

INSTALL HANDLE

1. Mount handle to outside of mower housing with (2) Shoulder screws and (5/16-18) locknuts (Fig. 1).

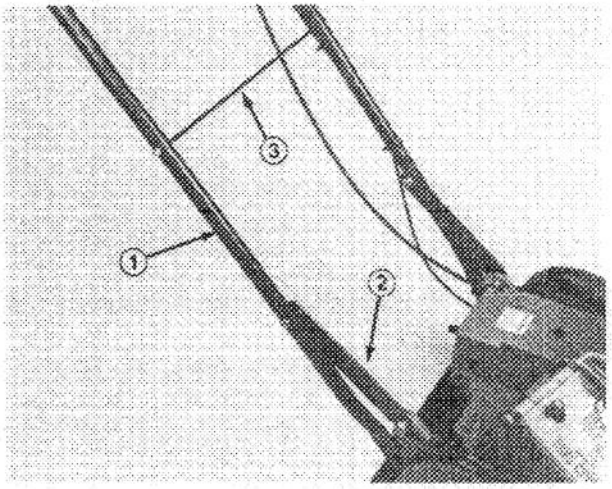


Figure 1

1. Handle 2. Handle latches 3. Bag support rod

2. Pivot handle latches backward and secure to handle with (2) (5/16-18 x 1.50 lg.) capscrews and (2) (5/16-18) locknuts (Fig. 1). Position locknuts on outside of handle.

3. Slide bag support rod thru mounting holes in handle and secure each end with (2) cap locknuts (Fig. 1).

Note: Handle height is adjustable for operator comfort. Stand behind mower handle to gauge height. If a lower or higher handle height is desired, reposition capscrews and locknuts securing handle latches to handle into other mounting holes in latches.

ASSEMBLE BAG TO MOWER

1. Assure chute door handle is fully forward and locked in place (Fig. 2).

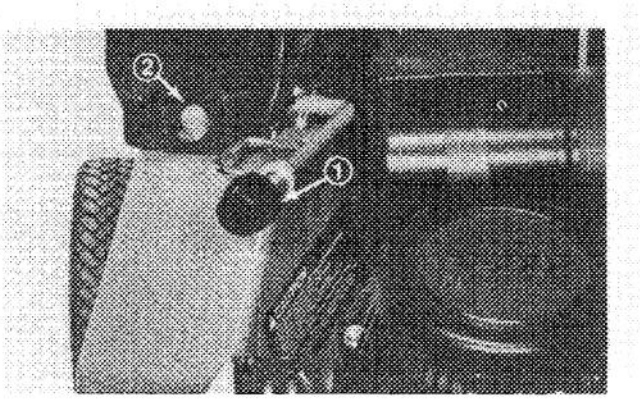


Figure 2

1. Chute door handle fully forward
2. Locating stud

2. Slide guide hole in bag door onto locating stud on mower housing (Fig. 2); then set rear of bag frame onto support rod.

3. Squeeze lockout lever until it clears the housing latch (Fig. 3). Then move handle rearward until lockout lever locks in notch at rear of bag door (Fig. 3). The chute door in mower housing is now open and mower is ready to bag grass clippings.

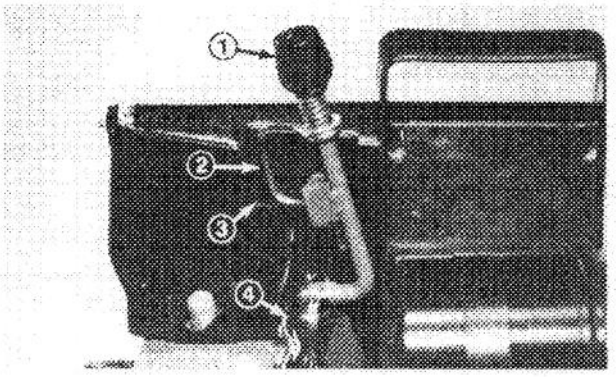


Figure 3

1. Chute door handle 3. Notch
2. Lockout lever 4. Housing latch

Note: Bag door may need to be forced downward onto housing latch to release the lockout lever.

BEFORE OPERATING

⚠ DANGER: Gasoline is extremely flammable and explosive under certain conditions. Do not smoke when handling fuel and keep fuel far away from open flames and sparks. Never buy more than a 30 day supply of gasoline. Store gasoline in an approved container and keep it out of the reach of children.

Refuel outdoors, only when engine is cold. Fill tank to within 1/4" to 1/2" (6 to 13 mm) from its top. This space is for expansion of fuel. Use funnel or spout to prevent spilling. Wipe up any spilled gas.

MIX GASOLINE AND OIL (Fig. 4)

1. APPROVED OIL — This lawnmower engine requires a mixture of unleaded gas and two-cycle oil. Toro two-cycle oil has been thoroughly tested and approved for use in the engine at a 50:1 ratio. Failure to use proper fuel mixture will cause serious engine damage. Since Toro oil is specially formulated, it has superior lubrication qualities, burns cleaner, promotes easy starts and prolongs engine life.

IMPORTANT: IN AN EMERGENCY, B.I.A. TC-W CERTIFIED OILS MAY BE SUBSTITUTED. NON B.I.A. APPROVED OILS HAVE NOT BEEN APPROVED FOR USE IN TORO PRODUCTS AND MAY VOID THE WARRANTY. NEVER USE FOUR-CYCLE AUTOMOTIVE OILS, SUCH AS SAE 30 OR 10 W 30 BECAUSE ENGINE DAMAGE MAY OCCUR.

2. GASOLINE — THE TORO COMPANY STRONGLY RECOMMENDS THE USE OF CLEAN, FRESH UNLEADED REGULAR 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. LEADED GASOLINE CAN BE USED IF UNLEADED IS NOT AVAILABLE.

NOTE: NEVER USE METHANOL, GASOLINE CONTAINING METHANOL, GASOHOL CONTAINING MORE THAN 10% ETHANOL, GASOLINE ADDITIVES, PREMIUM GASOLINE, OR WHITE GAS BECAUSE ENGINE FUEL SYSTEM DAMAGE COULD RESULT.

3. MIXING — In an approved gasoline container, thoroughly mix prescribed amount of gasoline and two-cycle oil (refer to Fuel Mixing Chart). DO NOT MIX FUEL IN MOWER FUEL TANK. FOR BETTER MIXING, OIL SHOULD BE AT ROOM TEMPERATURE.

4. Fill mower fuel tank to within 1/4" to 1/2" (6 to 13mm) from top of tank, not the filler neck. Install fuel tank cap securely.

50:1
Fuel Mixing Chart

Toro two-cycle oil is available in easy mix four ounce pouches and eight ounce cans.

U.S. GALLON		IMPERIAL GALLON	
Gasoline	**Oil**	**Gasoline**	**Oil**
1 gallon	2.6 oz.	1 gallon	3 oz.
1½ gallons	4 oz. pouch	1½ gallons	4.5 oz. pouch
2 gallons	5.2 oz.	2 gallons	6 oz.
2½ gallons	6.5 oz.	2½ gallons	7.5 oz.
3 gallons	8 oz. can	3 gallons	9 oz. can

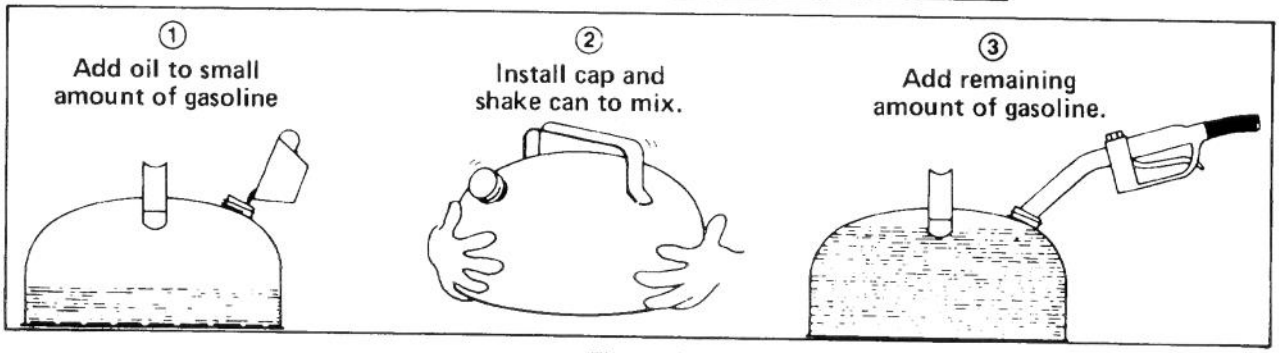


Figure 4

CONTROLS

Throttle Control — The throttle control (Fig. 5) has four positions: CHOKE, STOP, SLOW and FAST. Move control to CHOKE to start engine. Move throttle control between SLOW and FAST to operate engine at various speeds. To stop engine, move throttle control to STOP.

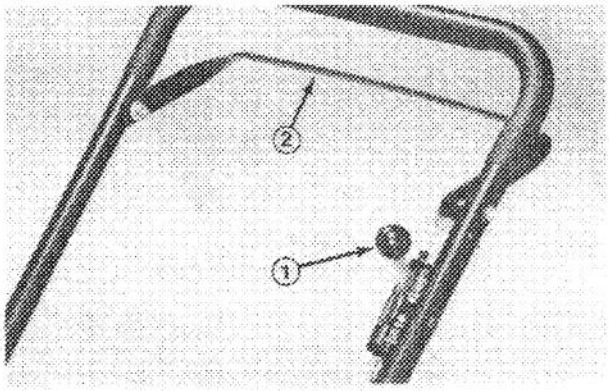


Figure 5

1. Throttle control
2. Traction control handle

Ground Speed Control (Self Propelled Model) (Fig. 6) — The ground speed control has four positions: NEUTRAL (N), LOW (1), MEDIUM (2) and HIGH (3). Positioning lever in different speed settings changes ground speeds of mower.

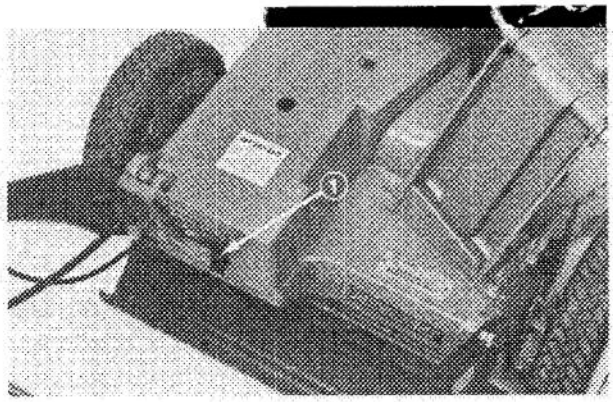


Figure 6

1. Ground speed control

Traction Control Handle (Self Propelled Model) (Fig. 5) — The traction control has two positions: ENGAGE and DISENGAGE. With engine running and ground speed control in one of the ground speed selections, traction operation is accomplished by squeezing traction control handle. Mower can be operated at variable speed in any gear by squeezing traction control handle partially. Mower ground speed, dependent upon speed allowed by gear selection, will increase as traction handle is squeezed to upper handle. Mower traction operation is stopped by releasing traction control handle and allowing it to return to its DISENGAGE position.

Recoil Starter (Fig. 7) — Pull fingertip starter to start the engine.

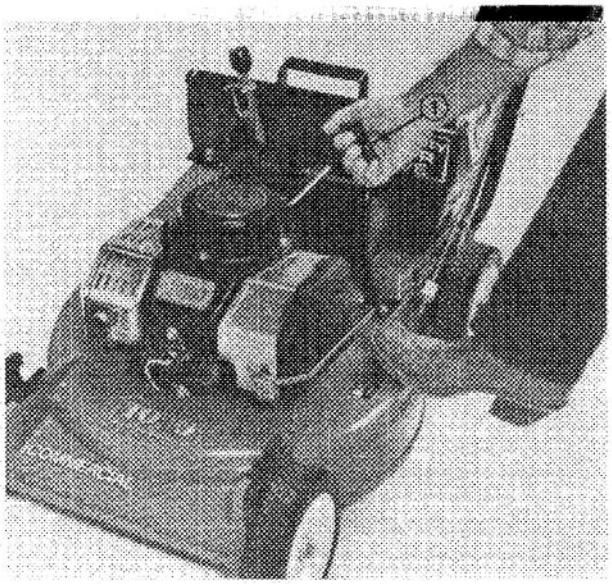


Figure 7

1. Recoil starter

Height-of-Cut Adjusters (Fig. 8) — Height-of-cut is adjustable to one of six approximate settings: 3/4 inch (19 mm), 1-1/4 inches (32 mm), 1-3/4 inches (45 mm), 2-1/4 inches (60 mm), 2-3/4 inches (70 mm) or 3-1/4 inches (83 mm).

OPERATING INSTRUCTIONS

ADJUST HEIGHT-OF-CUT

The height-of-cut is adjustable from approximately 3/4 to 3-1/4 inches (19 mm to 83 mm), in 1/2 (12.7 mm) increments. Moving height-of-cut adjuster forward raises height-of-cut.

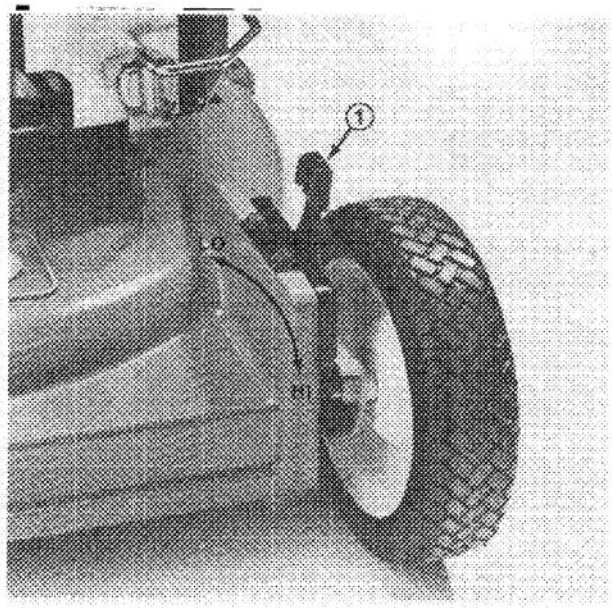


Figure 8

1. Height-of-cut adjuster

1. ⚠ Assure engine is not running before adjusting height-of-cut because contact with the blade will cause personal injury.

2. Place thumb against height-of-cut adjuster and fingers on outside of wheel (Fig. 8).

3. Raise mower housing until wheel is off the ground. Squeeze height-of-cut adjuster toward wheel so its locating pin disengages notch in mower housing wear plate. Then pivot the wheel and adjuster to the desired height-of-cut and release adjuster so locating pin engages notch in wear plate.

STARTING/STOPPING THE ENGINE

1. Assure high tension wire is pushed onto spark plug.

2. Move ground speed control to desired speed selection (SP model). Move throttle control to CHOKE position (Fig. 9).

Note: CHOKE may not be required when warm engine is being started.

3. Place foot on step at left side of mower housing (Fig. 10) and keep other foot from beneath the housing. Pull fingertip starter handle up gently

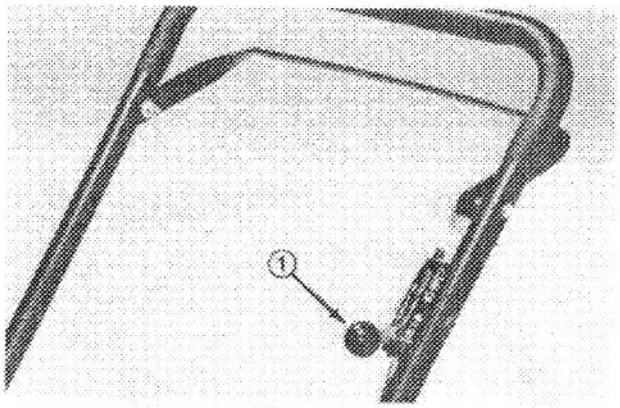


Figure 9

1. Position throttle control in START

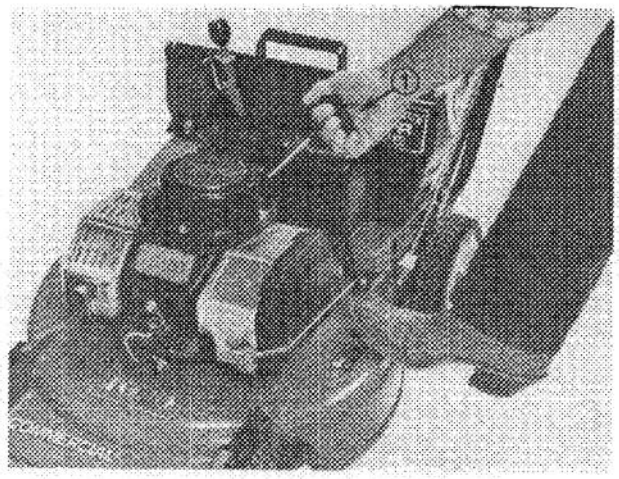


Figure 10

1. Recoil starter

until positive engagement results, and pull handle quickly to start the engine. Allow starter rope to retreat slowly. Do not pull starter rope to its limit or let go of the handle when rope is pulled out because starter mechanism or rope may break.

4. To stop engine, move throttle control to STOP position.

5. Pull high tension wire off spark plug to prevent possibility of accidental starting when mower is unattended or not used.

TRACTION SYSTEM OPERATION (Self Propelled Model)

Operate the Rear Bagger traction control system in the following manner:

1. Shift ground speed control to desired position, assure traction control is DISENGAGED and start engine; refer to Starting/Stopping The Engine, page 10.

OPERATING INSTRUCTIONS

2. Stand behind the handle in the operating position. Squeeze the traction control handle to achieve traction operation (Fig. 11). Mower can be operated at variable speed in any gear by squeezing traction control handle partially (Fig. 12). Mower ground speed, dependent upon speed allowed by gear selection, will increase as traction handle is squeezed. To stop traction operation, release the traction control handle allowing it to return to the DISENGAGE position. To move mower in reverse direction, release traction control and pull back on the upper handle.

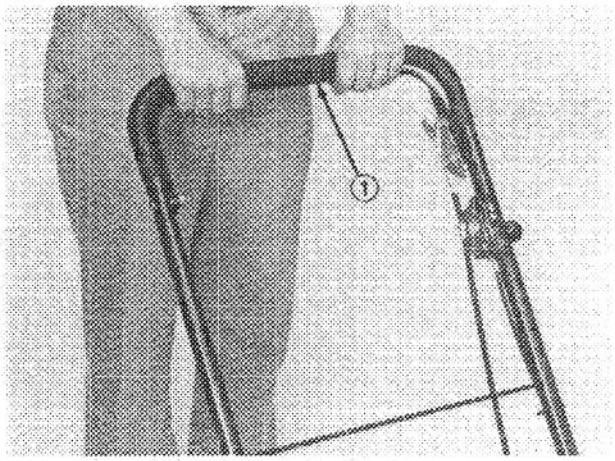


Figure 11

1. Squeeze control handle to achieve traction

3. If operating on rough turf areas, shift the ground speed control lever to a lower setting (Fig. 12) and operate the traction control at the full up position (Fig. 12). At this slower ground speed the mower will follow ground contours, preventing excessive mower bouncing and providing a more acceptable turf appearance.

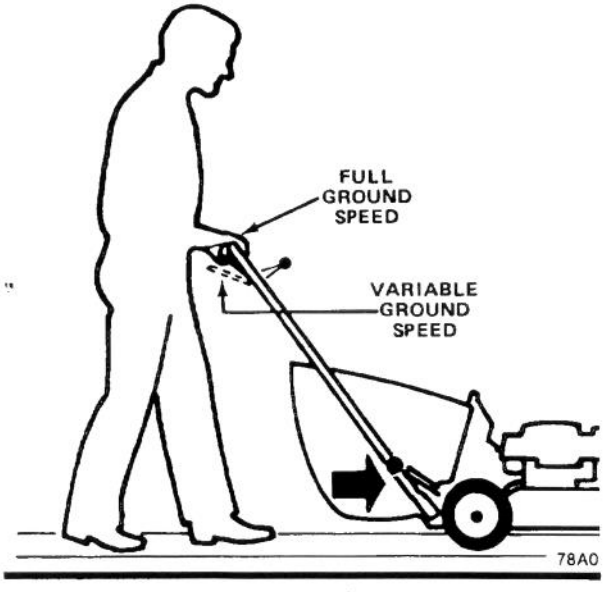


Figure 12

4. Always shift the ground speed control lever to NEUTRAL (N), when operations are completed.

5. If mower has a tendency to creep (move forward) when traction control handle is in DISENGAGE position, drive belt may be too tight. If there is slow or no ground speed, even though ground speed control handle is in one of the gear selections and traction control handle is pushed fully forward, drive belt is too loose.

If either of the above two conditions have occurred, traction control must be adjusted; refer to Adjusting Traction Control, page 18.

OPERATING CHARACTERISTICS AND TIPS

The mower can be used with or without the grass bag: refer to Bagging, page 12 and Mowing Without Bagging, page 13. Bagging can be accomplished by opening the chute door in the mower housing when bag is installed or mowing without using the bag by closing the door.

To use the mower for bagging grass, install the bag, open the chute door in mower housing and start the engine. Notice that the grass bag expands at the sides and top. This expansion by the bag is caused by the air currents, generated by the blade, flowing through the bag. As grass is cut and discharged into the bag, the air currents through the bag decrease gradually as it is being filled. While the bag is expanded, grass can be cut. Stop the engine and empty the bag when expansion of the bag has discontinued.

The mower is equipped with a rear shield (Fig. 13), which helps protect from objects that might be thrown rearward and from possible contact with the blade. Because of its flexible design, maneuverability of the mower is unaffected. Never remove the rear shield because it is a safety device, designed for your protection. If the shield is ever damaged, replace it before operating the mower.

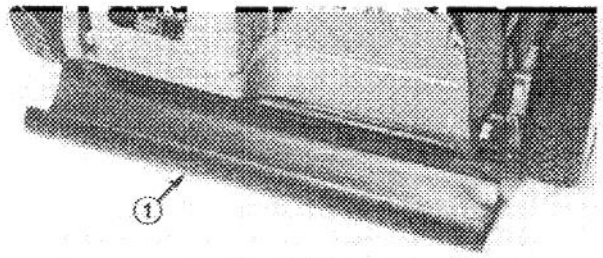


Figure 13

1. Rear shield

After the mower is used, it must be cleaned and maintained so it is ready for the next cutting. Clean underside of the mower housing by spraying with garden hose and scraping out any grass that

OPERATING INSTRUCTIONS

water will not remove. However, avoid getting water directly onto the engine or electrical connections because damage could result. Frequently check the blade, and assure the blade bolt is tightened to 50 ft-lb (68 N·m). If a solid object is hit by the blade or if mower vibrates abnormally, shut engine off immediately and wait for all moving parts to stop. Disconnect high tension wire from spark plug and keep wire away from plug to prevent possibility of accidental starting. Check mower for possible damage, bent blade, bent crankshaft, an obstruction, or loose part(s). Make all repairs before using the mower. After every 25 hours of engine operation the air cleaner must be cleaned. If mower is used in dusty or dirty conditions, check air cleaner more frequently.

Whenever the mower is being operated, adjusted or maintained, the safety instructions at the front of this manual must be kept in mind. Safe operation is your responsibility.

CUTTING TIPS

1. When cutting long grass, using highest height of cut, lower rear wheels one setting to increase cutting surface of blade, therefore improving appearance of cut.

2. To assure optimum cutting performance, install a sharp blade at the start of each cutting season. During the year, file down small nicks to maintain a fine cutting edge.

BAGGING

The Rear Bagger discharges grass clippings into a large 2-1/2 bushel (0.088 m^3) bag, and because of the rear bagging feature, both sides of the mower can be used for trimming. Bagging is most effective when engine is running at maximum speed and only about 1/3 of grass blade is being cut. If an excessive amount of grass is being cut off, the mower can plug and cause the engine to stall. If long grass must be cut, adjust mower to the highest height-of-cut; then cut the grass. Follow this by lowering the height-of-cut and cutting the grass again.

WARNING

The grass bag material will catch and contain the majority of foreign objects, such as small stones and other similar debris. The bag material, however, is subject to normal wear and deterioration. So check the bag frequently, and if it is defective, install a new, genuine TORO replacement bag that has this or similar warning.

To bag the grass with the mower:

1. ⚠ Assure engine has stopped running so that cutter blade is not moving.

2. Assure chute door handle is fully forward and lockout lever is released into latch (Fig. 14). The chute door is now closed.

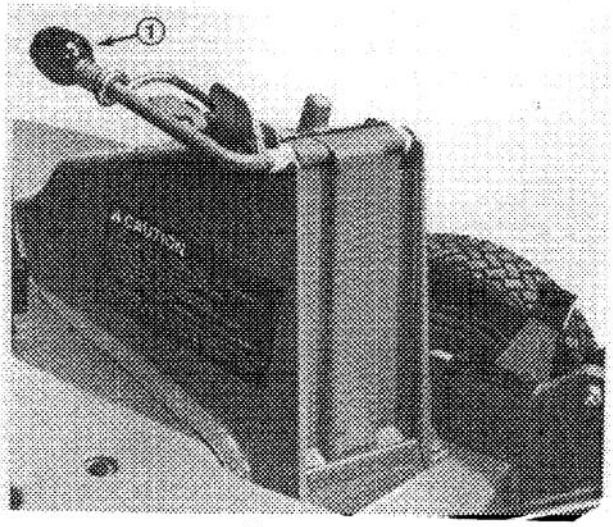


Figure 14

1. Handle forward and door closed

3. Slide guide hole in bag door onto locating stud on mower housing (Fig. 15), then rest rear of bag frame onto support rod on handle.

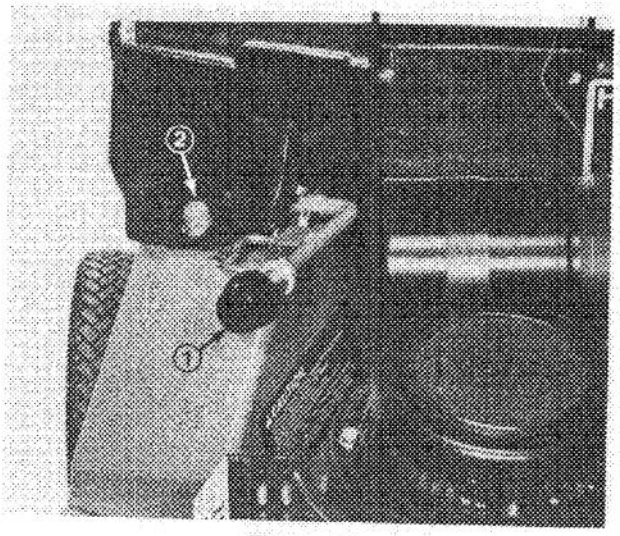


Figure 15

1. Chute door handle fully forward
2. Locating stud

4. Squeeze lockout lever until it clears the housing latch. Then move handle rearward until it locks in notch at rear of bag latch (Fig. 16). The chute door in mower housing is now open and mower is ready to bag grass.

OPERATING INSTRUCTIONS

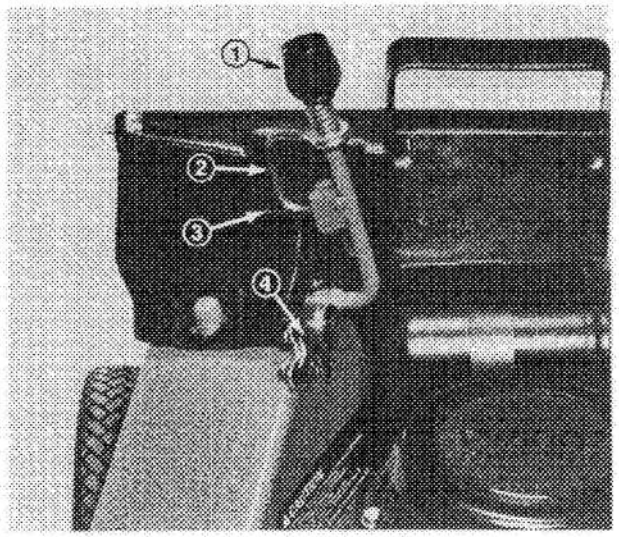


Figure 16

1. Chute door handle
2. Lockout lever
3. Notch
4. Housing latch

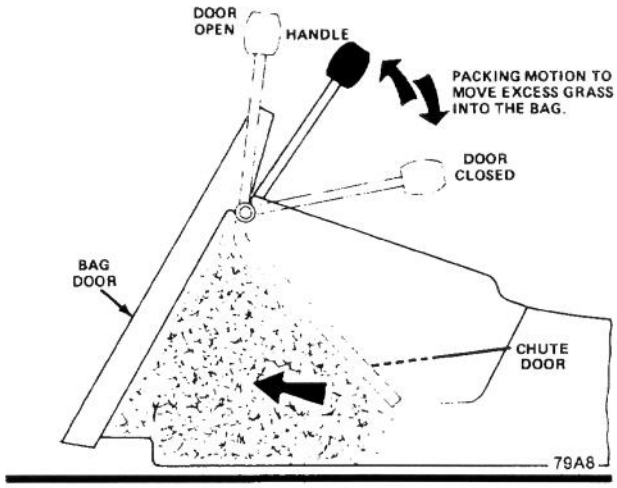


Figure 17

5. ⚠ When bag must be emptied, stop the engine and wait for all parts to stop moving. Move chute door handle forward until it locks in the latch. Then lift bag straight up so clippings stay in the bag rather than falling out the opening.

⚠ CAUTION

Never open the chute door when grass bag is removed from the mower and engine is running. Grass clippings and other debris will be discharged with enough force to cause personal injury. Do not operate mower unless complete bag assembly is attached and properly positioned or chute door is completely closed.

IMPORTANT: If chute door of mower cannot be closed because grass clippings clog the discharge area, move chute door gently, back and forth. Do this until clippings are pushed into the bag and chute door can be closed completely. DO NOT FORCE THE CHUTE DOOR CLOSED because door or handle may be damaged.

6. To dump grass out of bag, grasp handle at rear of bag and open door at front of bag. While shaking the bag, gradually tip it forward so grass sifts out. Do not try to dump all the grass at once.

7. Reinstall bag by repeating steps 3 and 4.

MOWING WITHOUT BAGGING

The Rear Bagger can be used for shredding leaves or dry grass. However, this is the most effective when only about 1/4 of the grass blade is cut. During this process, the blade slices the cut pieces of grass again and again, so very fine particles of grass are deposited on the lawn. These fine grass clippings eventually decompose.

To mow without bagging:

1. ⚠ Assure engine is not running and cutter blade is not moving.

2. Squeeze lockout lever, move chute door handle fully forward, and release lever into housing latch (Fig. 18). The chute door in mower housing is now closed, and mower is ready for mowing operation. Leave bag on mower.

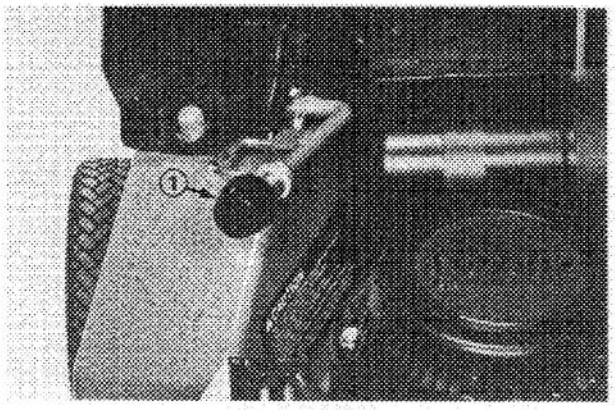


Figure 18

1. Handle forward and door closed

⚠ DANGER

Never, open chute door when mowing without bag installed because grass clippings or other debris will be discharged with enough force to cause personal injury.

MAINTENANCE

DANGER

To prevent personal injury, use extreme care when an adjustment or maintenance procedure must be performed while the engine is running. Pull high tension wire off spark plug if engine does not have to be running while performing adjustment or maintenance procedures.

LUBRICATING AXLE PIVOTS
(Self Propelled Model)

After every 25 operating hours, to prevent premature bearing failure, grease the rear axle pivots with No. 2 Multi-Purpose Lithium Base Grease.

1. Set height-of-cut to center height setting.

2. Wipe grease fitting with clean rag to prevent dirt from entering bearing area (Fig. 19).

3. Install grease gun onto fitting and gently apply grease (Fig. 19). (Approximately 2-3 pumps.) Excessive grease pressure may damage seals.

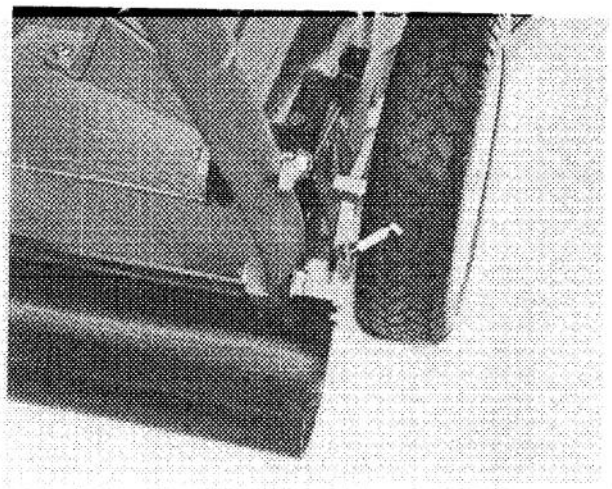


Figure 19

1. Grease fitting

4. Wipe excess grease away and reset height-of-cut to normal setting.

5. Repeat steps 1-4 on rear pivot on opposite side.

LUBRICATING GEAR CASE
(Self Propelled Model)

After every 100 operating hours, grease the gear case with No. 2 multi-purpose lithium base grease.

1. Remove bag.

2. Install grease gun onto fitting thru belt cover opening (Fig. 20). Gently apply 1-2 pumps of grease.

3. Reinstall bag.

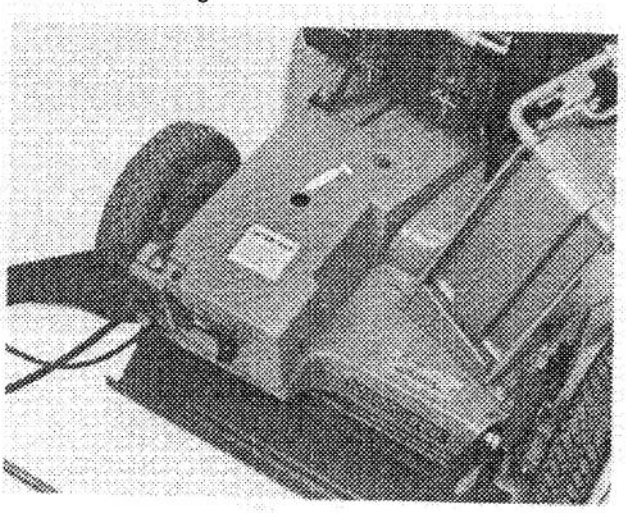


Figure 20

SERVICING AIR CLEANER

The air cleaner foam element must be cleaned after every 50 hours of engine operation if the engine is operated in clean air conditions. The foam element must be cleaned more frequently, however, when mower is operated in dusty or dirty conditions.

1. ⚠ Assure engine is not running and high tension wire is pulled off spark plug.

2. Raise rear of air cleaner protection rod and pivot outward (Fig. 21). Lift tabs at top of air cleaner cover (Fig. 21) and pivot cover outward. Clean cover thoroughly.

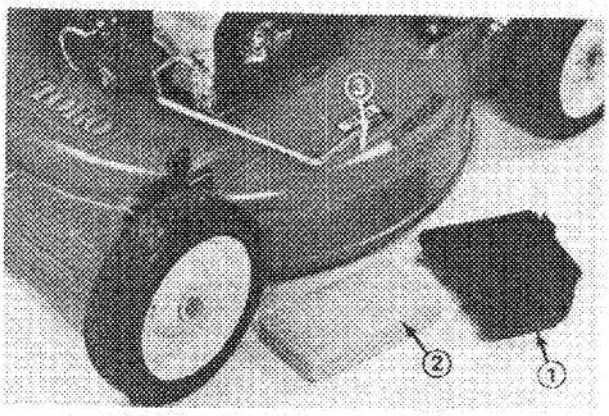


Figure 21

1. Cover
2. Foam element
3. Protection rod

3. Look at foam element around filter. If it is dirty, the element must be removed from air cleaner body and cleaned (Fig. 21).

A. WASH foam element in a solution of liquid soap and warm water. Squeeze the element to remove dirt. Do not twist element because it may tear.

B. DRY the element by wrapping it in a clean rag. Squeeze the rag and element until element is dry.

C. SATURATE foam element with 5 teaspoons (25 ml) of SAE30 engine oil. Squeeze element to remove excess oil and to distribute the oil thoroughly. A damp element is desirable. Be sure it is not saturated.

4. Install foam element into air cleaner body. Insert tabs at bottom of air cleaner cover into slots at bottom of air cleaner body and snap cover in place. Install air cleaner protection rod.

IMPORTANT: Do not operate engine without complete air cleaner because extreme engine wear and damage will likely result.

REPLACING SPARK PLUG

Recommended spark plug to use is an NGK BPMR4A or equivalent, and correct air gap is 0.032 of an inch (0.81 mm). Since air gap between center and side electrodes of the spark plug increases gradually during normal engine operation, remove plug after every 25 hours of engine operation and check its condition.

1. ⚠ Assure engine is not running. Then pull high tension wire off spark plug.

2. Clean area around spark plug so foreign matter does not fall into cylinder when plug is removed. Remove plug from cylinder head with spark plug socket (Fig. 22).

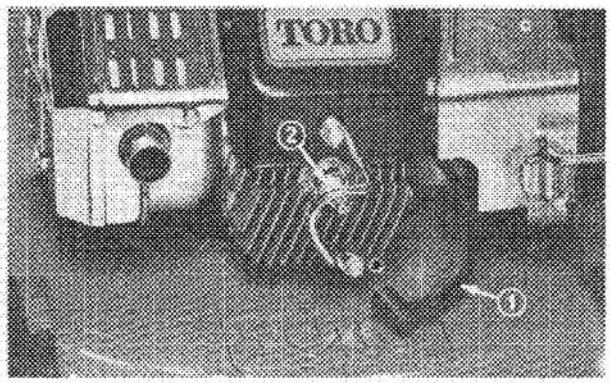


Figure 22

1. High tension wire 2. Spark plug

IMPORTANT: A cracked, fouled or dirty spark plug must be replaced. Do not sand blast, scrape or clean electrodes, because grit may eventually release from the plug and fall into the cylinder. The result will likely be engine damage.

3. Set air gap between electrodes at 0.032 of an inch (0.81 mm) with a spark plug gapping tool (Fig. 23). Install the correctly gapped spark plug with gasket seal and tighten plug to 10 ft-lb (13.6 N·m). If torque wrench is not used, tighten plug firmly.

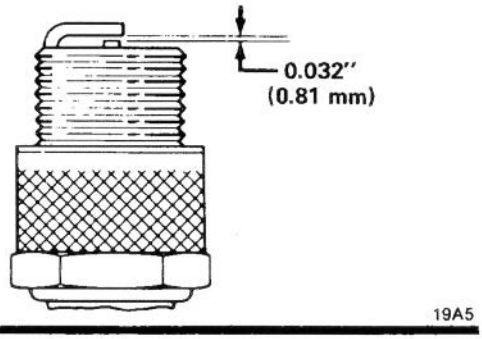


Figure 23

DRAINING FUEL

⚠ CAUTION

Since gasoline is highly flammable, drain it outdoors and make sure engine is cool to prevent a potential fire hazard. Wipe up any gasoline that may have spilled. Do not drain gasoline near any open flame or where gasoline fumes may be ignited by a spark. Do not smoke a cigar, cigarette, or a pipe when handling gasoline.

1. ⚠ Assure engine is not running and high tension wire is pulled off spark plug.

2. Remove cap from fuel tank.

3. Using a pump-type syphon, drain gasoline into a clean gas can. This is the only recommended method of draining gasoline.

CLEANING MUFFLER AND EXHAUST PORT

Clean end of muffler pipe and exhaust port after every 75 hours of operation.

1. Use hard wood scraper and remove carbon from end of muffler pipe (Fig. 24).

MAINTENANCE

CAUTION

Clean muffler and exhaust port only after engine and muffler are cool. A hot engine and muffler can cause burns.

2. Remove screw and two nuts and lockwashers (Fig. 24). Slide muffler off mounting pins.

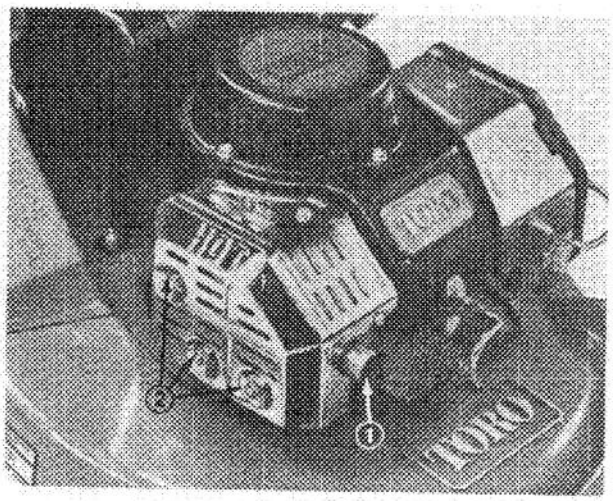


Figure 24

1. End of muffler pipe
2. Screw, nuts and lockwashers

3. Pull wire off spark plug. Slowly pull recoil starter until piston covers exhaust port (Fig. 25).

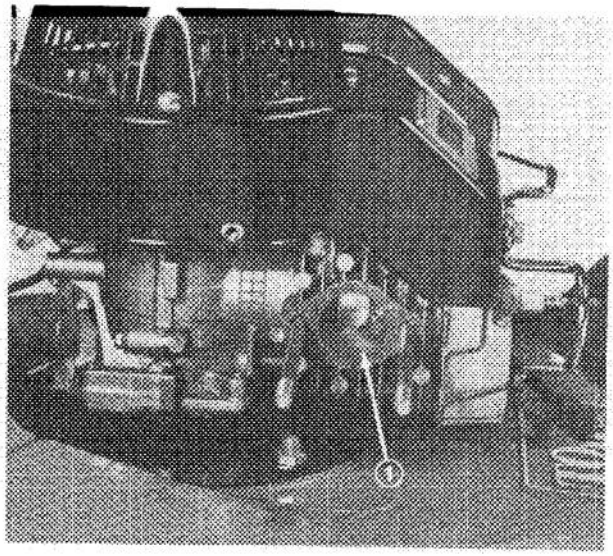


Figure 25

1. Exhaust port

4. Clean carbon from exhaust port (Fig. 25) with flat, hard wood scraper. After cleaning exhaust port make sure muffler gasket is still useable.

IMPORTANT: Do not use a metal scraper or similar object to clean exhaust port because accidental damage to the piston or cylinder could easily occur.

5. Install muffler with screw, two nuts and lockwashers (Fig. 24).

INSPECTING CUTTER BLADE FOR DAMAGE

1. ⚠ Assure engine is not running and high tension wire is pulled off spark plug.

2. ⚠ Drain gasoline from fuel tank: refer to Draining Fuel, page 15.

3. Tip mower on its right side (Fig. 27). Avoid rotating the blade when mower is tipped because starting problems may result.

4. Examine cutting ends of the blade carefully, expecially where the flat and curved parts of the blade meet (Fig. 26A). Since sand and abrasive material can wear away the metal that connects the flat and curved parts of the blade, check the blade before using the mower. If any wear is noticed (Fig. 26B), replace the blade: refer to Sharpening or Replacing Cutter Blade, page 17.

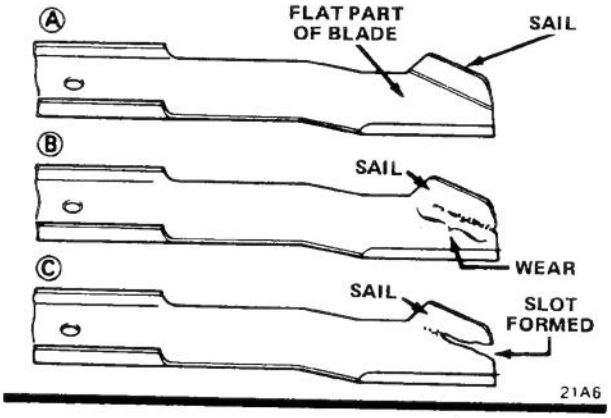


Figure 26

CAUTION

If the blade is allowed to wear, a slot will form between the sail and flat part of the blade (Fig. 26C). Eventually, a piece of the blade may break off and be thrown from under the housing, possibly resulting in serious injury to yourself or bystanders.

MAINTENANCE

SHARPENING OR REPLACING CUTTER BLADE

1. ⚠ Assure engine is not running and high tension wire is pulled off spark plug.

2. ⚠ Drain gasoline from fuel tank: refer to Draining Fuel, page 15.

3. Tip mower on its right side. Avoid rotating the blade when mower is tipped because starting problems may result.

4. Grasp end of blade using a rag or thickly padded glove. Using a socket or wrench, remove bladebolt, lockwasher, and blade (Fig. 27).

Note: To assure optimum cutting performance, install a new blade at the start of the cutting season. During the year, file down small nicks to maintain a fine cutting edge.

5. Using a file, sharpen cutting edge at both ends of the blade (Fig. 28).

IMPORTANT: Sharpen top side of blade and maintain original cutting angle to assure a sharp cutting edge (Fig. 28). The blade will remain balanced if same amount of material is removed from both cutting edges.

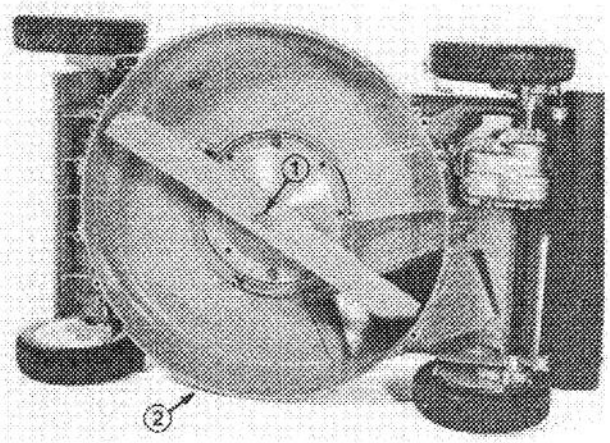


Figure 27

1. Bladebolt, lockwasher and blade
2. Mower tipped on right side

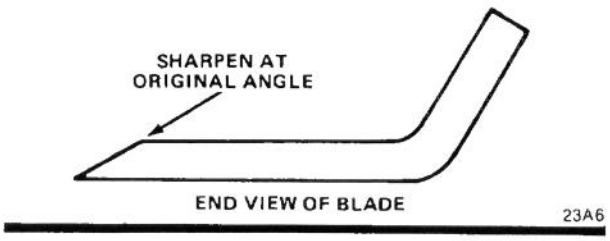


Figure 28

6. Check balance of blade by putting it on a blade balancer. A balanced blade will stay in a horizontal position on the balancer. By contrast, a blade that is not balanced will settle to the heavy side. If blade is not balanced, file more metal of cutting edge on heavy end of the blade. Then check the blade balance again.

Note: An inexpensive blade balancer can be purchased at a hardware store.

7. Install sharp, balanced blade with lockwasher and bladebolt. Sail part of the blade must point toward top of the mower housing to assure correct installation. Tighten bladebolt to 50 ft-lb (68 N·m).

8. Set mower upright.

CLEANING MOWER HOUSING

To assure a good cut and efficient grass bagging, underside of mower housing and inside of discharge area must be kept clean.

1. ⚠ Assure engine is not running and high tension wire is pulled off the spark plug.

2. ⚠ Drain gasoline from fuel tank: refer to Draining Fuel, page 15.

3. Tip mower on its right side (Fig. 27). Avoid rotating the blade when mower is tipped because starting problems may result.

4. Remove grass clippings and dirt that sticks to the housing by spraying it with a garden hose. Scrape out any grass that water does not remove from housing. Take care to avoid any burrs or sharp edges.

5. Set mower upright.

ADJUSTING THROTTLE

Throttle control adjustment may be required if engine does not start or stop. Whenever a new throttle control cable is installed, throttle must be adjusted.

1. Stop engine and pull wire off spark plug.

2. Move throttle control to FAST.

3. Loosen cable clamp screw until throttle cable slides (Fig. 29). Align holes in choke arm and throttle bracket. A small dia. pin may be inserted into aligned holes to hold adjustment. Push throttle cable until throttle arm makes contact with choke arm. Tighten cable clamp. Remove pin if used.

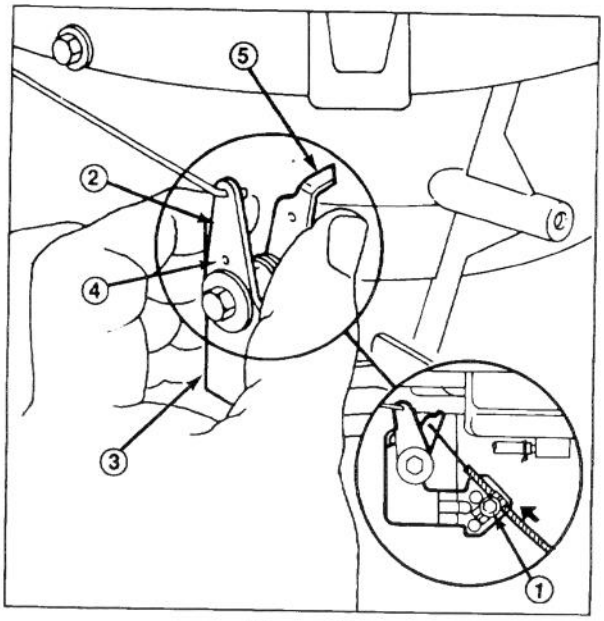


Figure 29

1. Cable clamp screw
2. Choke arm
3. Throttle bracket
4. Aligned holes
5. Throttle arm

SERVICING WHEELS

Removal

1. Remove capscrew, wheel spacer, and locknut mounting wheel to pivot arm (Fig. 30).

2. Separate wheel halves from tire by removing (4) flange capscrews and locknuts (Fig. 30).

Note: If bearings are to be removed from bearing support hub, remove by pressing on bearing spacer.

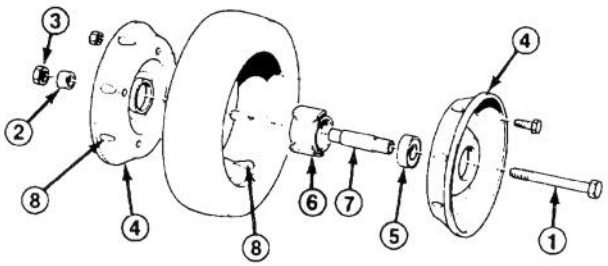


Figure 30

1. Capscrew
2. Wheel spacer
3. Locknuts
4. Wheel half
5. Bearing (2)
6. Bearing support hub
7. Bearing spacer
8. Lug

Assembly

1. Position tire onto (1) wheel half aligning lugs on each (Fig. 30).

2. Place bearing support hub into center hole of wheel half. Make sure legs of hub are positioned over flange of hole.

3. Place other wheel half onto bearing support hub aligning wheel and tire lugs and mounting holes.

4. Using (2) ¼-20 x 1.50" lg. fully threaded screws or bolts and non locking nuts, loosely secure wheel halves together. Mount screws or bolts in opposing holes.

5. Check alignment of all parts and tighten screws alternating from side to side for a uniform fit, until wheel halves are drawn together.

6. Install (2) flange capscrews and locknuts, previously removed, in remaining holes in wheel halves and tighten. Remove two long screws or bolts and replace with (2) flange capscrews and locknuts.

7. Reinstall wheel to pivot arm with capscrew, spacer, and locknut. Make sure spacer is positioned between wheel hub and pivot arm.

ADJUSTING TRACTION CONTROL

An adjustment to Traction control may be required if the loss of traction occurs, or if mower has a tendency to creep forward when traction control handle is in DISENGAGE position.

1. Assure engine is not running and high tension wire is pulled off the spark plug.

2. Close door in mower housing and remove bag.

3. Rotate adjustment knob (Fig. 31) 1/2 turn clockwise to tighten drive belt, or 1/2 turn counterclockwise to loosen belt. Hold control cable while rotating knob to prevent cable from turning.

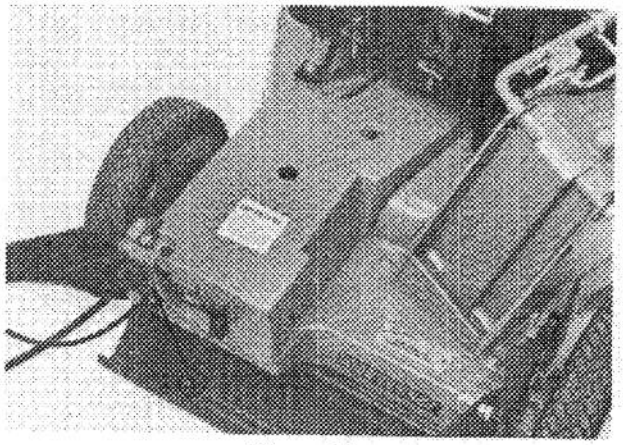


Figure 31

1. Adjustment knob

CAUTION

Over-adjusting cable may cause mower to move without engaging traction drive.

MAINTENANCE

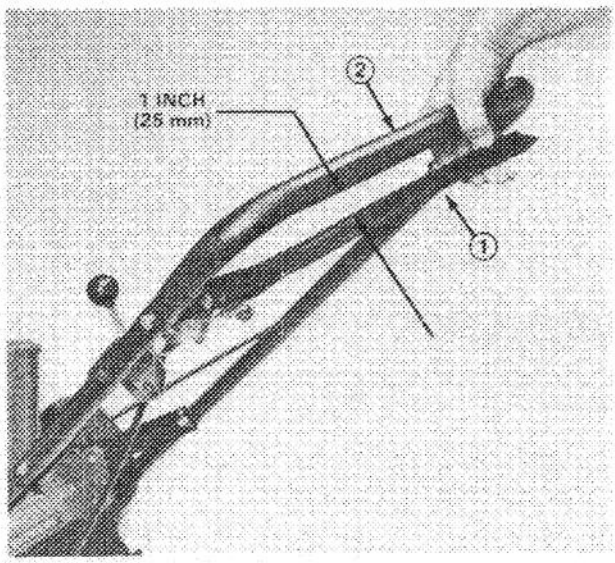


Figure 32

1. *Control bar*
2. *Upper handle*

4. Check traction adjustment by slowly pulling mower rearward while slowly squeezing traction control lever toward upper handle. Mower will no longer move rearward when traction drive engages. Traction control lever should be approximately 1 inch (25 mm) from upper handle when traction drive engages (Fig. 32). If loss of traction still occurs after readjustment, repeat steps 4-6.

PREPARING MOWER FOR STORAGE

1. Drain fuel: refer to Draining Fuel, page 16. Then start engine and let it idle until all fuel is consumed and engine stops. If fuel is not drained completely, gum-like varnish deposits will form and cause poor engine operation, even starting problems.

2. Remove spark plug and pour 2 teaspoons of Toro two-cycle oil into hole in cylinder. Pull starter rope slowly to coat inside of cylinder. Install spark plug and tighten to 10 ft-lb (13.6 N·m). DO NOT INSTALL HIGH TENSION WIRE ON SPARK PLUG.

3. Clean underside of housing: refer to Cleaning Mower Housing, page 17.

4. Check condition of blade: refer to Inspecting Cutter Blade for Damage, page 16.

5. Tighten all nuts, bolts and screws.

6. Clean dirt and chaff from cylinder, cylinder head fins and blower housing. Also remove grass clippings, dirt and grime from external parts of the engine, shrouding and top of mower housing.

7. Clean air cleaner: refer to Servicing Air Cleaner, page 14.

8. Lubricate rear pivots: refer to Lubricating Axle Pivots, page 14.

9. Check gear case oil: refer to Lubricating Gear Case, page 14.

10. Touch up all rusted or chipped paint surfaces. Toro Re-Kote paint is available from an Authorized TORO Service Dealer.

11. Store mower in a clean dry place. Cover mower to keep it clean and protected.

PRODUCT IDENTIFICATION

MODEL AND SERIAL NUMBERS

The Rear Bagger has two identification numbers: a model number and a serial number. The two numbers are stamped into a decal located at rear of the mower housing, near the discharge door. Always refer to these specific numbers in any correspondence or when replacement parts are needed.

The Toro Promise

A ONE YEAR LIMITED WARRANTY
Model 22030 and Model 22035 Commercial Rear Baggers

The Toro Company promises to repair your TORO Product if defective in materials or workmanship. The following time periods from the date of purchase apply:

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.