CANADA FORM NO. 3320-219 Rev. A

TORO®

MODEL: 20765 – 0000001
THRU 1000001 & UP

OPERATOR'S MANUAL

21" (0.533 m) REAR BAGGER

FINGERTIP START, SELF PROPELLED

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.



PRICE $1.00

FOREWORD

The Rear Bagger, the most innovative walk power mower, provides a new degree of mowing efficiency 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 that must be read and understood. IMPORTANT identifies special mechanical information and NOTE identifies general information worthy of special attention.

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 still result in injury. To reduce the potential for any injury, comply with the following 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.

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 hot or running.

   C. Do not smoke while handling gasoline.

   D. Fill fuel tank outdoors and up to about one-half inch (13 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, ballance 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 OFF, 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, 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. Do not walk in front of the mower while the engine is running. 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.

SAFETY INSTRUCTIONS

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) and engine mounting bolts are tightened to 16 ft-lb (22 N·m).

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 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 2650 rpm. To assure safety and accuracy, have an Authorized TORO Service Dealer check engine speed, 2650 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.

DANGER

STOP ENGINE BEFORE:
LEAVING OPERATOR POSITION.
HANDLING GRASS CATCHER.
CLEARING CHUTE.
CHANGING HEIGHT OF CUT.

BE CAREFUL:
KEEP BYSTANDERS FROM AREA BEING MOWED.
KEEP ALL GUARDS IN PLACE.
REMOVE ALL DEBRIS FROM AREA.
KEEP HANDS & FEET AWAY FROM MOVING PARTS.

READ & UNDERSTAND OPERATOR'S MANUAL BEFORE OPERATING THIS MACHINE. FREE REPLACEMENT MANUAL AVAILABLE BY SENDING MODEL & SERIAL NUMBER TO:

ARRÊTEZ LE MOTEUR AVANT DE:
QUITTER VOTRE POSITION.
MANIPULER LE SAC À HERBE.
DÉBLOQUER L'ÉJECTEUR.
CHANGER LA HAUTEUR DE COUPE.

SOYEZ PRUDENT:
TENEZ TOUTES PERSONNES À L'ÉCART DU LIEU DE TRAVAIL.
GARDEZ TOUS LES PROTECTEURS EN PLACE.
ENLEVEZ TOUS LES DÉBRIS.
TENEZ VOS MAINS ET VOS PIEDS LOIN DES PIÈCES MOBILES.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DANS LE MANUEL AVANT D'UTILISER CETTE MACHINE. POUR OBTENIR UN MANUEL DE REMPLACEMENT GRATUIT, ENVOYEZ LE Nº DE MODÈLE ET LE Nº DE SÉRIE À:

THE TORO CO., 8111 LYNDALE AVE., MINNEAPOLIS, MINN. 55420

CAUTION
DO NOT OPERATE UNLESS BAG IS IN PLACE OR REAR DOOR IS CLOSED.



SWING DOOR BACK AND FORTH TO CLOSE.

ATTENTION
NE PAS UTILISER LA TONDEUSE A MOINS QUE LE SAC A HERBE NE SOIT EN PLACE OU LA PORTE ARRIERE FERMEE.



FAIRE OSCILLER LA PORTE D'AVANT EN ARRIERE POUR LA FERMER.

☑ SEE OWNER'S MANUAL FOR COMPLETE INSTRUCTIONS.

ENGINE OIL Use SAE 10W40 oil, class MS, SC, SD or SE only. With engine level, fill crankcase to full mark on dipstick. Change oil after first 2 hours and every 25 hours. Check oil level every 5 hours.

SPARK PLUG GAP—.030 in.

AIR CLEANER Clean and re-oil foam element every 25 hours—more often under dusty conditions. Wash in detergent and water. Dry thoroughly and re-oil. Squeeze foam to distribute oil evenly.

☑ VOIR LE MANUEL D'ENTRETIEN POUR DES INSTRUCTIONS COMPLÈTES.

HUILE À MOTEUR N'utiliser que de l'huile à moteur SAE 10W40, classification MS, SC, SD ou SE. S'assurer que le moteur est de niveau, et remplir le carter jusqu'à la marque de plein sur la jauge. Changer l'huile apres les 2 premières heures d'utilisation et toutes les 25 heures par la suite. Vérifier le niveau d'huile toutes les 5 heures.

ÉCARTEMENT DES ÉLECTRODES DE LA BOUGIE—.030 po.

FILTRE À AIR Nettoyer et huiler l'élement mousse toutes les 25 heures—plus souvent lorsqu'il est utilisé en atmosphère poussiéreuse. Laver avec de l'eau et du detergent, sécher soigneusement, huiler, puis presser l'élement mousse pour repartir l'huile uniformement.

SPECIFICATIONS

9.02 Cubic Inch (147.8 cc) Briggs & Stratton Engine. Four cycle, air cooled engine with output of 5.0 ft-lb (6.8 N·m) of torque @ 2700 rpm. Fuel tank capacity is 1.0 quart (0.946 l) and crankcase capacity is 20 oz (0.592 l). Air cleaner is removable, serviceable polyurethane type, and recoil starter is an easy-pull fingertip type.

Mower Housing: Die cast aluminum alloy housing has spiral grass chamber with rear bagging or mulching features. Width-of-cut is 21 inches (0.533 m).

Cutter Blade: Blade is 21 inches (0.533 m) long and heat treated for hardness.

Blade Tip Speed: Tip speed is 14,845 ft/min (75 413 m/s) @ 2700 engine rpm.

Folding Handles: Two handles are 7/8 inch (22 mm) diameter, 16 gauge (1.65 mm) welded steel tubing in two separable halves with chrome plating. Handle is adjustable to one of three operating positions.

Throttle Control: Control is mounted on left side of upper handle, and it has four positions: OFF, I, II and III.

Traction Control: Control is mounted on left side of upper handle. Hand operated control connects to and operates a spiral jaw clutch in gear case. Traction control has two positions: ENGAGE and DISENGAGE.

Traction Drive: Front wheel drive has a special 3L section V-belt that connects the front gear box to an output shaft on the engine. Engine to gear box reduction is 0.98:1.

Gear Case: Case is die cast aluminum. Input to output reduction is 6.25:1. Lubrication requirement is 1.5 oz of SAE 80W/90EP, A.P.I. GL-5, GL-6 gear lube.

Wheels: Polypropylene wheels with sintered iron bushings.

Front Wheel Reduction: Wheel reduction is 3:1.

Engine to Front Wheel Reduction: Reduction is 18.375:1.

Tires: Front and rear tires are 8" x 1.75" (20.3 cm x 44 mm) semi-pneumatic, diamond tread type.

Ground Speed: At 2100 engine rpm, ground speed is 2.43 mph (3.9 km/hr), 3.24 mph (5.2 km/hr) at 2500 engine rpm, and 3.44 mph (5.5 km/hr) at 2650 rpm.

Height-of-Cut: Height-of-cut is adjustable to one of five approximate settings: 1 inch; 1-1/2 inches; 2 inches; 2-1/2 inches; and 3 inches (25, 38, 51, 64 and 76 mm).

Dimensions:

Overall width is 21-3/4 inches (0.553 m) (approx).

Overall length without handle is 33-1/4 inches (0.845 m) (approx).

Height without handle and wheels set at 1 inch (25 mm) is 14 inches (0.356 m) (approx).

Weight: Dry weight of mower including bagging attachment is approximately 74-1/2 lb (331.4 N).

LOOSE PARTS

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

PART	QTY.	WHERE USED
Lower Handle Hair Pin Cotter	1 2	Install Lower Handle, page 6.
Upper Handle Curved Head Handle Bolt Knob Capscrews 1/4-20x2-1/2 Locknut Cable Clips	1 2 2 1 1 2	Install Upper Handle and Controls, page 6.
Bag Upper Bag Frame Capscrew Locknut	1 1 3 3	Assemble Bag Frame and Bag, page 7.
Operator's Manual Registration Card	1 1	Read manual before operating mower. Fill out card and send it to The Toro Company.

SET-UP INSTRUCTIONS

INSTALL LOWER HANDLE

1. Push ends of lower handle together and install handle on pivot pins. Slide hair pin cotters through both pivot pins (Fig. 1).

2. Move handle latches backward until handle studs fit into hole at end of latches (Fig. 1).

Note: If latches do not stay engaged with handle stud, bend latches outward until engagement is maintained.

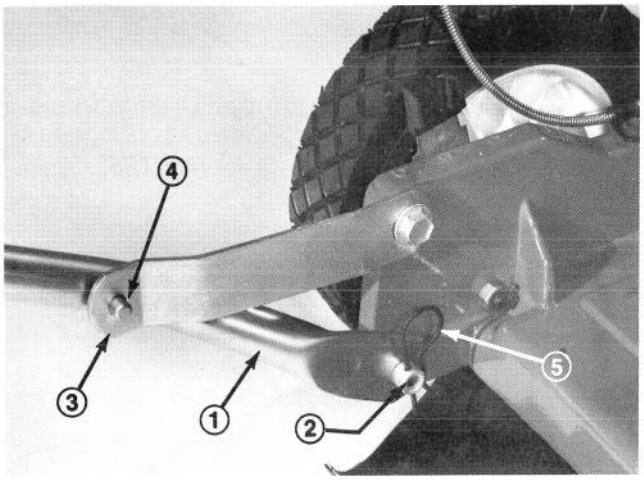

Figure 1

1. Handle
2. Pivot pin
3. Handle latch
4. Stud
5. Hair pin cotter

INSTALL UPPER HANDLE AND CONTROLS

1. The upper handle can be set at different heights for optimum operator comfort. To attach upper handle to lower handle, line up holes in both handles and secure them together with two curved-head handle bolts and knobs (Fig. 2). The knobs must be installed on outside of the handles.

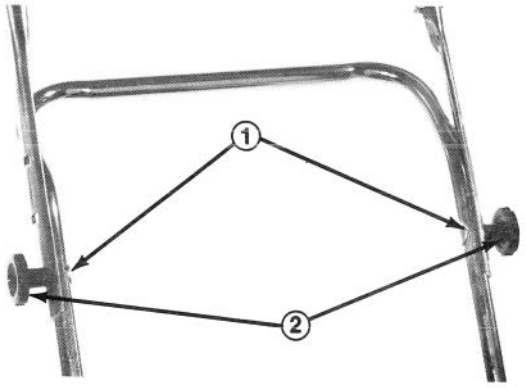

Figure 2

1. Curved-head handle bolts
2. Knobs

2. Mount traction control against outside of upper handle, throttle control against inside. Insert capscrew through controls and handle from outside toward the inside of the handle and install and tighten the locknut to secure the controls (Fig. 3). Do not over tighten because controls or handle could be damaged. Assure throttle and traction control cables are routed along front of the upper and lower handle.



Figure 3

1. Traction control
2. Throttle control
3. Capscrew

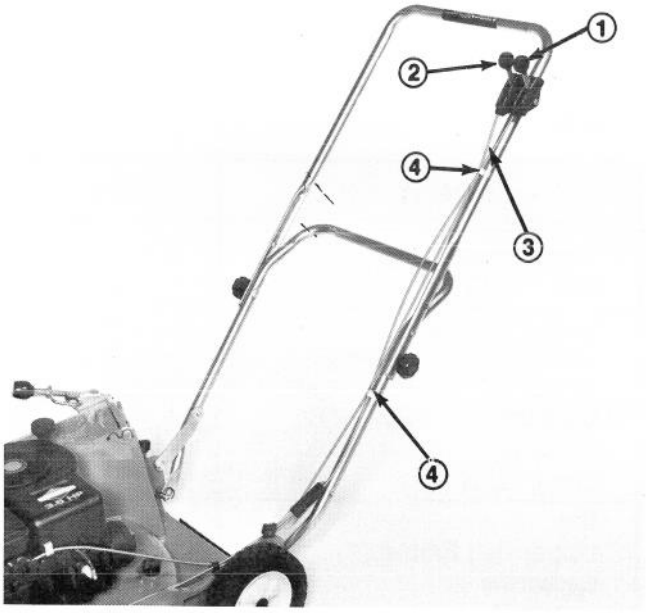

Figure 4

1. Traction control
2. Throttle control
3. Throttle and traction cable routing
4. Clip

SET-UP INSTRUCTIONS

ASSEMBLE BAG FRAME AND BAG

1. Lay the bag down so hard bottom contacts the floor.

2. Open door of bag. Slide upper frame into bag and secure upper frame against inside of front frame with three capscrews and locknuts (Fig. 5).

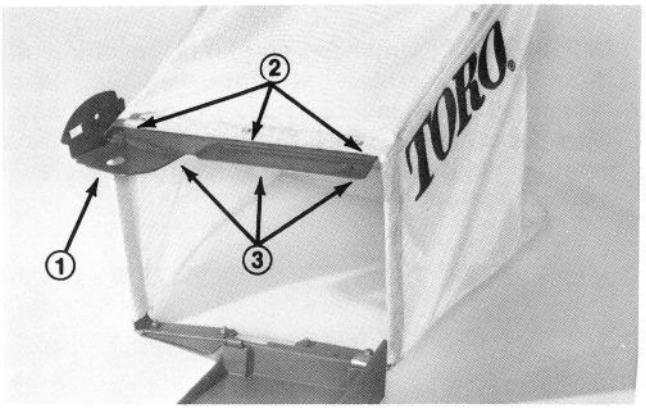

Figure 5

1. Upper frame
2. Capscrews
3. Locknuts



Figure 6

1. Drop lip on outside

Note: When installing the capscrews and locknuts, tighten the nuts, not the capscrews. Tightening the capscrews will twist the bag and possibly cause it to tear.

3. Close door of bag. Top and side of door must fit outside the frame (Fig. 6).

4. Assure chute door handle is fully forward and locked in place (Fig. 7).

5. Slide guide hole in upper bag frame onto locating stud on mower housing (Fig. 7); then set rear of bag frame onto lower handle.

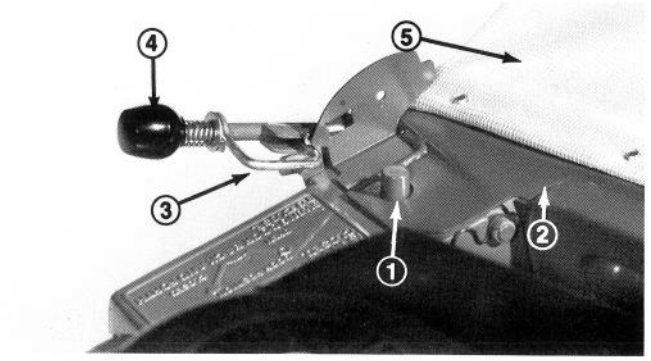

Figure 7

1. Locating stud
2. Bag frame
3. Lockout lever
4. Chute door handle
5. Bag

6. Squeeze lockout lever until it disengages the bag catch (Fig. 7). Then move handle backward until lockout lever locks in notch at rear of latch (Fig. 8). The chute door in mower housing is now open.

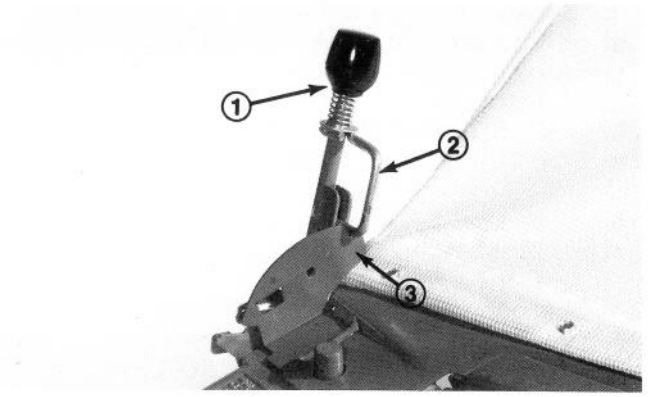

Figure 8

1. Chute door handle
2. Lockout lever
3. Notch

BEFORE OPERATING

FILL CRANKCASE WITH OIL

The engine does not have oil in the crankcase when it is shipped from the factory. If engine is started before oil is added to the crankcase, engine damage could result. Therefore, before engine is started for the first time:

1. Position mower on level surface.

2. Clean area around the oil dipstick to prevent foreign matter from entering the filler hole when dipstick is removed.

3. Remove dipstick by rotating cap counterclockwise (Fig. 9).

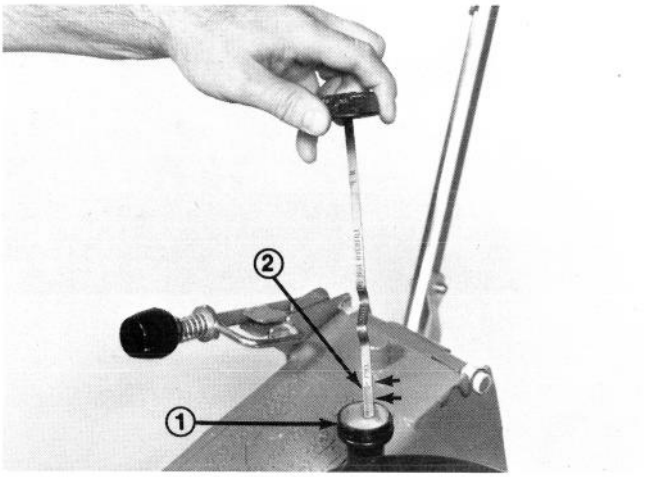

Figure 9

1. Filler neck 2. Read dipstick here

4. Slowly pour approximately 20 ounces (0.591 l) of oil into the filler neck. The engine uses any high quality detergent oil having the American Petroleum Institute – API – "service classification" MS, SC, SD or SE. The recommended oil to use is: SAE 10W-30 or 10W-40.

5. Wipe end of dipstick and insert it into filler neck. Rotate cap fully clockwise to lock. Then remove the dipstick and check level of oil by reading the dipstick (Fig. 9). If level of oil is low, add only enough oil to raise level to FULL mark on dipstick. DO NOT ADD OIL SO LEVEL RISES ABOVE FULL MARK BECAUSE ENGINE COULD BE DAMAGED WHEN IT IS STARTED.

6. Insert dipstick into filler neck and rotate cap fully clockwise to lock.

Note: Check level of oil after every 5 operating hours or each time the mower is used. Initially, change oil after the first 2 hours of operation; thereafter, when conditions are normal, change oil after every 25 hours of operation. However, change oil more frequently when mower is operated in dusty or dirty conditions.

FILL FUEL TANK WITH GASOLINE

1. Clean area around fuel tank cap and remove cap from tank (Fig. 10).

2. Fill fuel tank to within 1/2 inch (13 mm) from top of the tank with unleaded gasoline. Install fuel tank cap securely.

3. Wipe up spilled gasoline.

IMPORTANT: Unleaded gasoline is recommended. If unleaded gasoline is not available, leaded-regular gasoline can be used. Do not mix any oil with the gasoline, and never use premium gasoline, gasoline additives or white gas because engine damage could result.

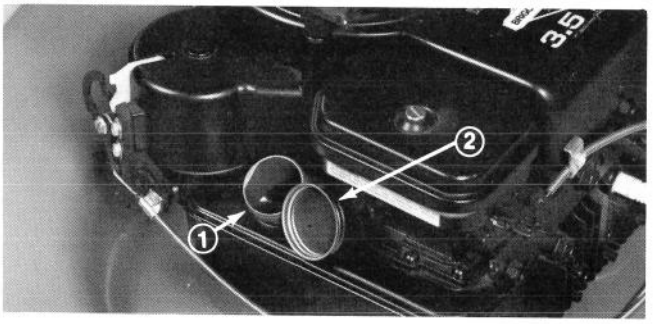

Figure 10

1. Fill hole 2. Fuel tank cap

CAUTION

Gasoline is a highly flammable fuel for internal combustion engines, and it is not recommended for any other use. Always handle it carefully. Since many children like the smell of gasoline, keep it out of their reach because the fumes are explosive and dangerous to inhale.

⚠ To assure the correct volatility, buy only a 30 day supply of gasoline and store the gasoline in a cool, well-ventilated place; never in the house or basement. Always use a clean, approved gasoline container, and keep the cap tight to prevent the escape of fumes from the container.

Fill fuel tank outdoors, use a funnel or spout to prevent spilling, and wipe up any gasoline that does happen to spill. Fill fuel tank only while engine is cool and not running. Fill the tank to about 1/2 inch (13 mm) from the top so there is room for expansion of the gasoline. While filling the fuel tank, stay away from open flame and electrical spark, and do not smoke.

CONTROLS

Throttle Control (Fig. 11) – The throttle control is used to stop the engine. The speed of the blade is also controlled by the movement of the throttle. Moving throttle forward increases engine speed and moving it backward decreases engine speed. When control is in no. III position, engine will run at maximum rpm.

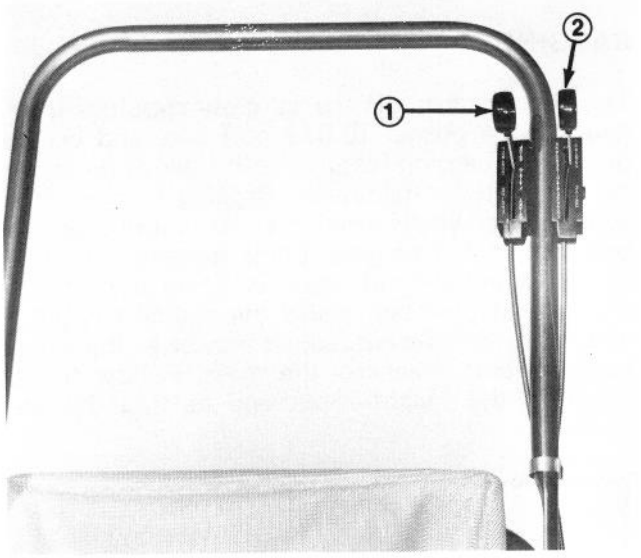

Figure 11

1. Throttle control
2. Traction control

Traction Control (Fig. 11) – The traction control has two positions: ENGAGE and DISENGAGE. Move control to the right and forward to engage front wheels. Pull control backward into detent position to disengage front wheels. The detent holds traction control in DISENGAGE position. Traction control must be in DISENGAGE detent before engine can be started.

Recoil Starter (Fig. 12) – Pull fingertip starter to start the engine.

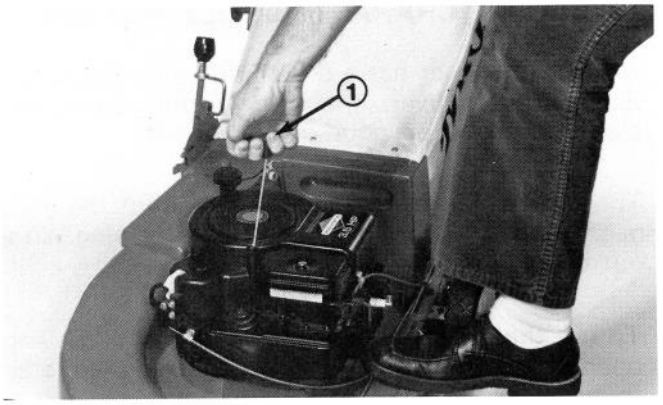

Figure 12

1. Recoil starter

Height-of-Cut Adjusters (Fig. 13) – Height-of-cut is adjustable to one of five approximate settings: 1 inch, 1-1/2 inches, 2 inches, 2-1/2 inches, or 3 inches (25, 38, 51, 64 and 76 mm). In addition, front wheels have a 5/8 inch (16 mm) setting that can be used with the 1 inch (25 mm) rear wheel setting. When cutting thatch or heavy, thick grass, raise rear wheel one setting above the front wheel setting to assure optimum power to the blade.

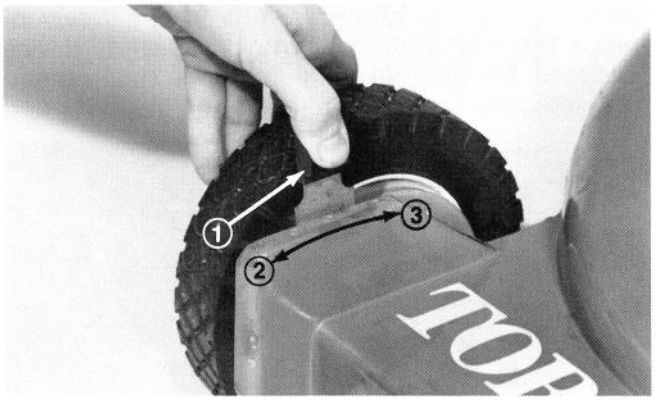

Figure 13

1. Height-of-cut adjuster
2. Low
3. High

OPERATING INSTRUCTIONS

ADJUST HEIGHT-OF-CUT

The height-of-cut is adjustable from approximately 1 to 3 inches (25 to 76 mm) in 1/2 inch (13 mm) increments, and letters cast into the housing represent each graduated increment.

a = 1 Inch (25 mm)
b = 1-1/2 Inches (38 mm)
c = 2 Inches (51 mm)
d = 2-1/2 Inches (64 mm)
e = 3 Inches (76 mm)

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. 13).

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. Then pivot the wheel and adjuster to the desired height-of-cut and release adjuster so locating pin engages notch in housing.

OPERATING INSTRUCTIONS

OPERATING CHARACTERISTICS AND TIPS

The Rear Bagger has a 9.02 cubic inch (147.8 cc) engine that delivers the blade turning force necessary to produce a good quality-of-cut.

The mower can be used with or without the grass bag: refer to Bagging, page 10 and Mowing Without the Bag, page 12.

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 it is no longer expanded.

The mower is equipped with a rear shield (Fig. 14), 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.

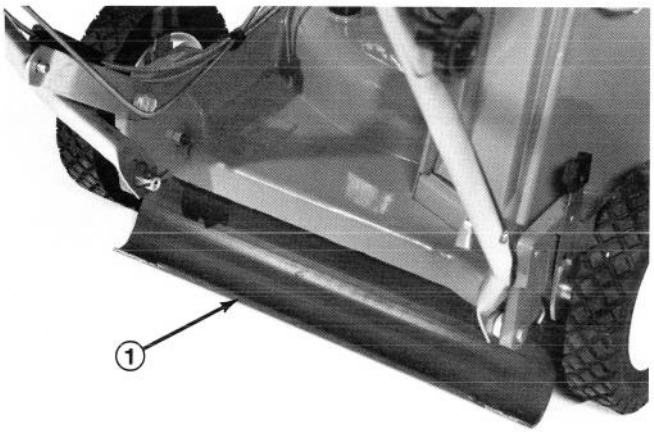

Figure 14

1. Rear shield

After the mower is used, it must be cleaned and maintained so it is ready for the next cutting. Use the wash-out port to clean the underside of the mower housing. However, avoid getting water directly onto the engine or electrical connections because damage could result. Periodically, check the blade, and assure the blade bolt is tightened to 50 ft-lb (68 N·m). The oil in the crankcase must be changed after the first 2 hours of operation and after every 25 hours thereafter. Assure level of oil is always in the SAFE range, as shown on the dipstick; however, never fill oil over the FULL mark because engine damage could result. 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.

BAGGING

The Rear Bagger discharges grass clippings into a large, 2-1/4 bushel (0.079 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 contain and catch 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 warning or a similar one.

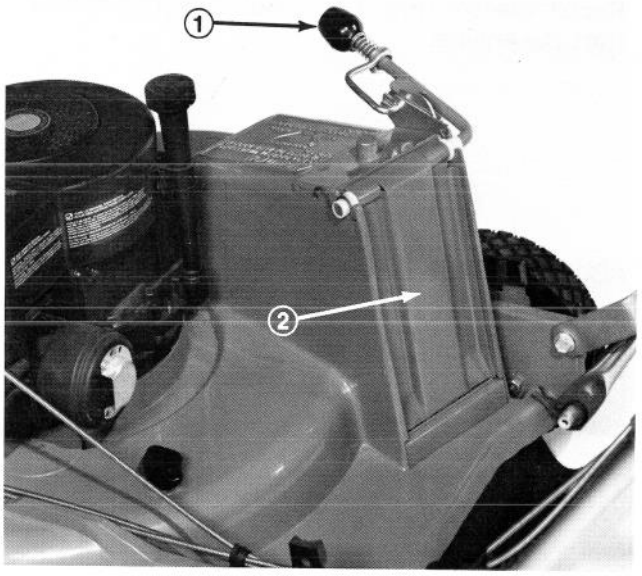

Figure 15

1. Handle 2. Chute door

OPERATING INSTRUCTIONS

To bag the grass with the mower:

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

2. Assure chute door handle is fully forward and lockout lever is released into catch (Fig. 15). The chute door of the mower housing is now closed.

3. Slide guide hole in upper bag frame onto locating stud on mower housing (Fig. 16); then set rear of bag frame onto lower handle (Fig. 18).

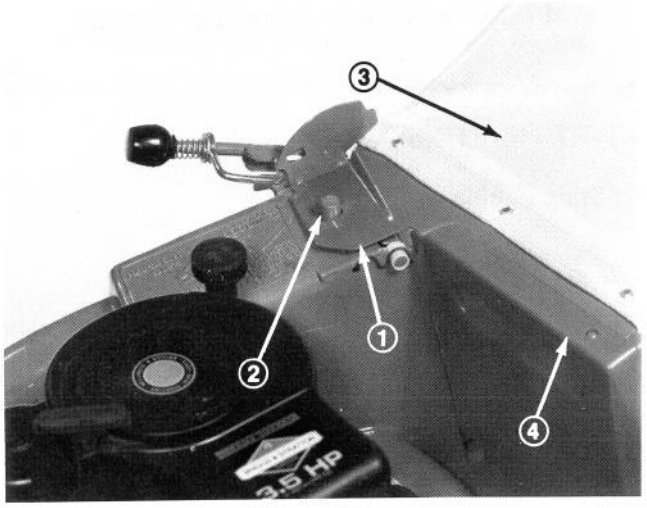

Figure 16

1. Bag frame
2. Locating stud
3. Bag
4. Bag door

4. Squeeze lockout lever until it disengages the bag catch. Then move handle backward until it locks in notch at rear of bag latch (Fig. 17). The chute door in mower housing is now open, and mower is ready to bag grass.

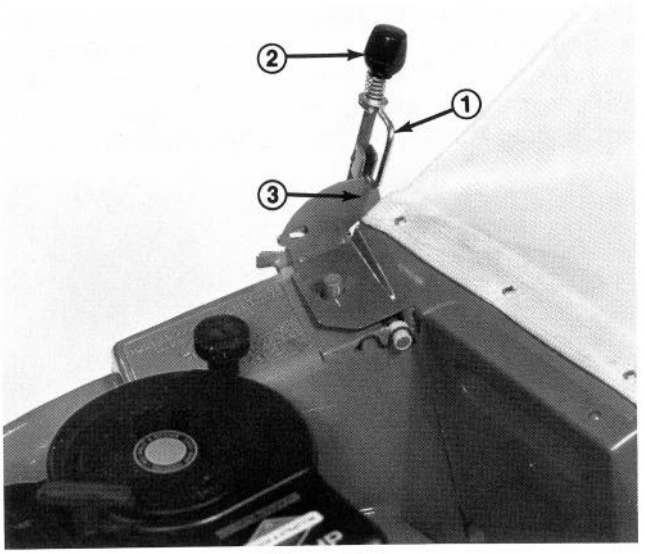

Figure 17

1. Lockout lever
2. Chute door handle
3. Notch

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 catch. Then lift bag straight up so clippings stay in the bag rather than falling out the opening (Fig. 18).



Figure 18

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 by the compacted grass.

⚠ 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.

6. To dump grass out of bag, open door at front of bag. While shaking the bag, gradually tip it forward so grass sifts out (Fig. 19). Do not try to dump all the grass at once.

7. Reinstall bag by repeating steps 3 and 4.

OPERATING INSTRUCTIONS



Figure 19

MOWING WITHOUT THE BAG

The Rear Bagger can be used for shredding dry grass or leaves. However, this is effective when only about 1/4 of the grass blade is cut. During the shredding 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 the bag:

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 catch (Fig. 20).

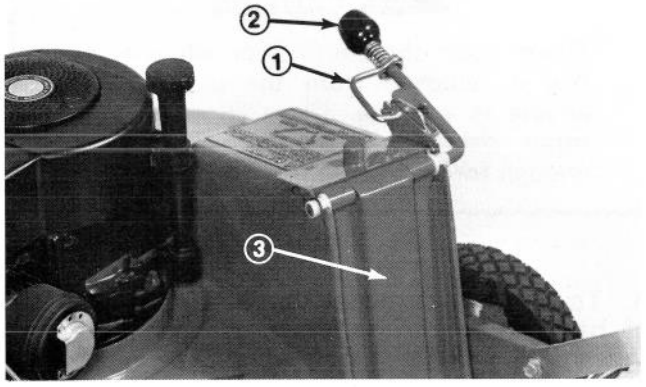

Figure 20

1. Lockout lever 3. Chute door
2. Handle

The chute door of mower housing is now closed, and mower is ready for use.

Note: If desired, the grass bag may remain on the mower.

⚠ CAUTION

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

STARTING/STOPPING THE ENGINE

To Start Engine

1. Push high tension wire onto spark plug.

2. Move traction control into DISENGAGE detent. Also move throttle control to no. III position.

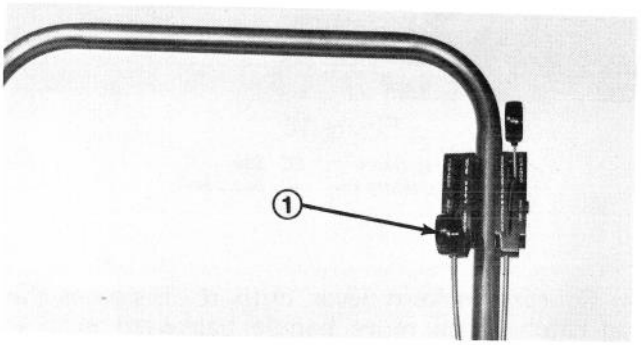

Figure 21

1. Throttle control

3. Put one foot on STEP at left side of mower housing and keep other foot away from beneath the housing. Pull fingertip starter up until positive engagement results; then pull vigorously to start engine. Allow start rope to retract slowly.

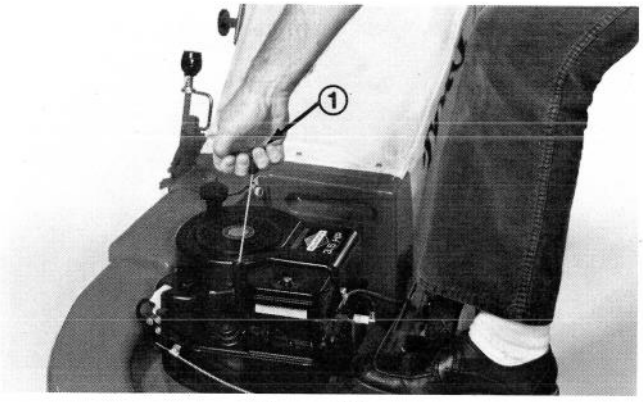

Figure 22

1. Recoil starter

OPERATING INSTRUCTIONS

IMPORTANT: Do not pull recoil rope to its limit or let go of fingertip starter when rope is pulled out, because starter mechanism or rope may break.

4. After engine starts and is running smoothly, move throttle control to desired speed.

To Stop Engine

1. To stop engine, move traction control into DISENGAGE detent, and throttle control to OFF position.

2. ⚠ Stay behind the handle until all parts stop moving.

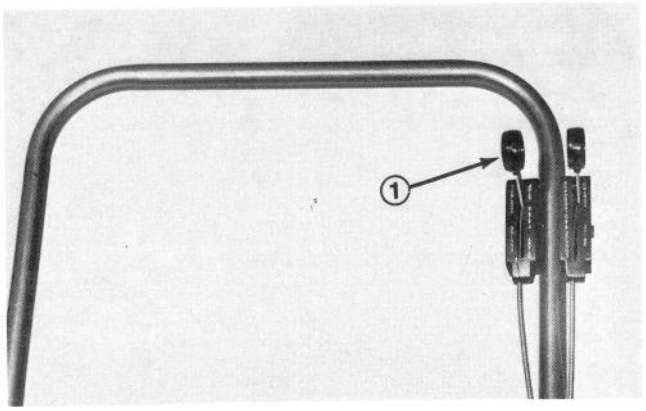

Figure 23

1. Throttle control

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

USING WASH-OUT PORT

After mower is used, underside of mower housing must be cleaned to prevent grass clippings from adhering to the housing. To clean underside of mower housing, use the wash-out port

1. ⚠ Stop the engine and wait for all moving parts to stop. Close chute door and remove bag to prevent discharge of water when wash-out port is used.

2. Set height-of-cut in the "a" position and open the wash-out port.

⚠ CAUTION

Be careful while working around muffler as it will be hot and could cause injury.

3. Start the engine. Insert end of hose, without nozzle, into wash-out port opening (Fig. 24). Using moderate water pressure, allow water and engine to run for approximately two minutes. The action created by the rotating blade and water flushes accumulations of grass clippings from underside of mower housing. When grass is no longer discharged and color of discharged water is clear again, stop the engine. Pull high tension wire off spark plug after all parts stop moving.

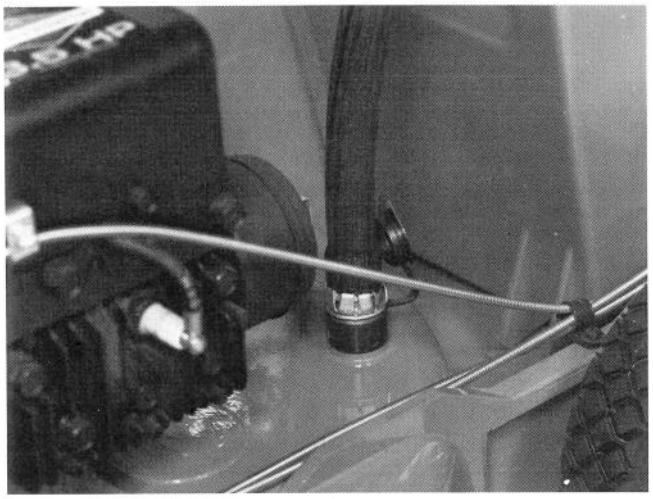

Figure 24

Note: Dry bulky accumulations of grass clippings must be cleaned with a scraper: refer to Cleaning Mower Housing, page 18.

4. Wipe the mower with a clean rag to remove excess water.

MAINTENANCE

CAUTION

To reduce potential accidents, never perform an adjustment or maintenance procedure while the engine is running. Pull high tension wire (Fig. 25) off spark plug and install end in notch to prevent an accidental start.

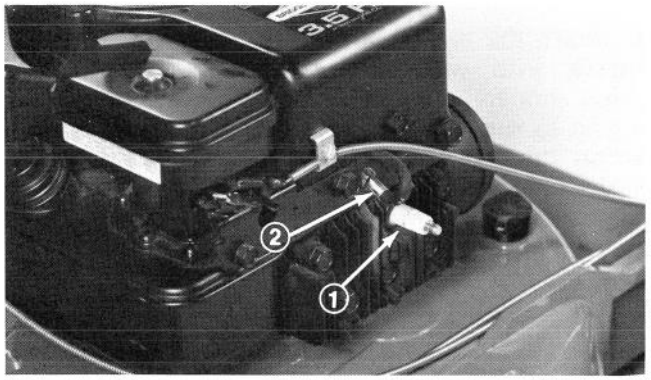

Figure 25

1. Spark plug
2. High tension wire in notch

LUBRICATION

Wheels, Controls And Cables:

1. After every 25 hours of operation or at the end of the mowing season, apply 2 or 3 drops of light oil on the inside of all the wheel bolts (Fig. 26). Spin the wheel to distribute oil into the wheel bushings. Wipe up any excess oil.

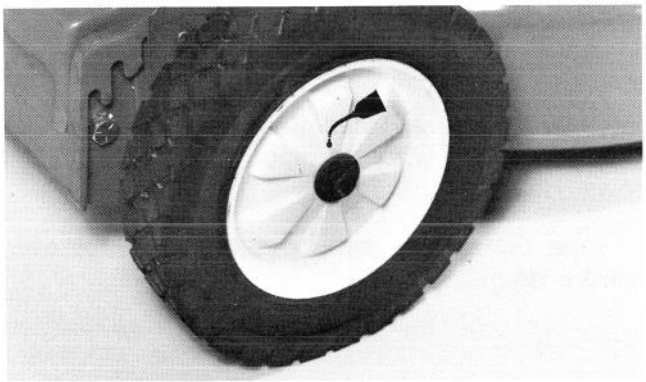

Figure 26

2. The throttle and traction cables must be lubricated after every 25 hours of operation or at the end of the mowing season, whichever comes first. Apply light oil onto the cable (Fig. 27), especially where it bends. Also, squirt oil onto the cable where it enters throttle control housing. Operate the controls to distribute the oil. Wipe up excess oil.



Figure 27

Grease Front Pivots:

1. To ensure longer trouble-free life, grease the front pivot bushings after every 25 hours of operation or at the end of the mowing season, whichever comes first:
Note: Either a tube of self-propelled Pivot Arm Lubricant, Toro Part No. 37-1520, or a grease gun equipped with a tapered end fitting and filled with No. 2 Multi-purpose Lithium Base Grease must be used. The tube can be acquired from your local Authorized Toro Service Dealer. The grease gun and other materials from your local automotive supply dealer.

A. Pull high tension wire off spark plug and install end in notched hole (Fig. 25).

B. Raise front of mower until wheel is off floor. Squeeze height-of-cut adjuster toward wheel until locating pin clears housing. Pivot adjuster and wheel forward until adjuster is below front edge of housing and resting against lower casting projection (Fig. 28).

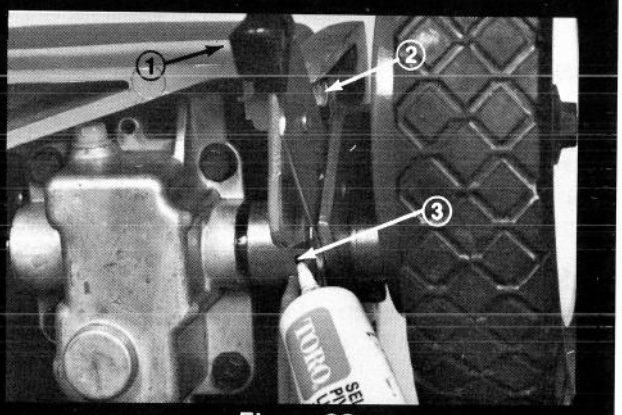

Figure 28

1. Height-of-cut adjuster
2. Casting projection
3. Pivot hole

C. Tip front of mower further up and locate hole in pivot housing (Fig. 28). Insert tapered end of tube into hole and apply grease. Keep applying grease until an excess amount can be seen coming out between pivot and drive shaft.

D. Return height-of-cut adjuster to original height-of-cut setting.

E. Repeat greasing operation on remaining front pivot.

MAINTENANCE

SERVICING AIR CLEANER

The air cleaner element must be cleaned after every 25 hours of engine operation if the engine is operated in clean air conditions. The element must be cleaned more frequently, however, when mower is operated in dusty or dirty conditions.

1. ⚠ Assure engine is not running, traction control is in DISENGAGE detent and high tension wire is pulled off spark plug.

2. Remove screw and cover to expose air cleaner. Remove cover (Fig. 29) and clean dirt from inside and outside surfaces.

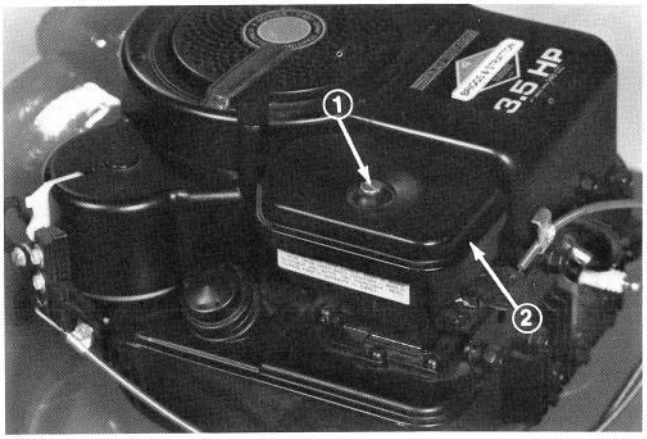

Figure 29

1. Air filter screw 2. Air filter cover

3. Look at top of air cleaner element (Fig. 30). If it is dirty, the element must be removed from air cleaner body (Fig. 30) and cleaned.

A. WASH 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 element with 5 teaspoons (25 ml) SAE 30 engine oil. Squeeze element to remove excess oil and to distribute the oil thoroughly. A damp element is desirable.

D. Place element and spacer into the air cleaner body (Fig. 30). Assure narrow edge of spacer is parallel with side of air cleaner body.

4. Install cover on air cleaner body and assure cover and element form a seal. Mount air cleaner assembly on top of carburetor with long screw (Fig. 29).

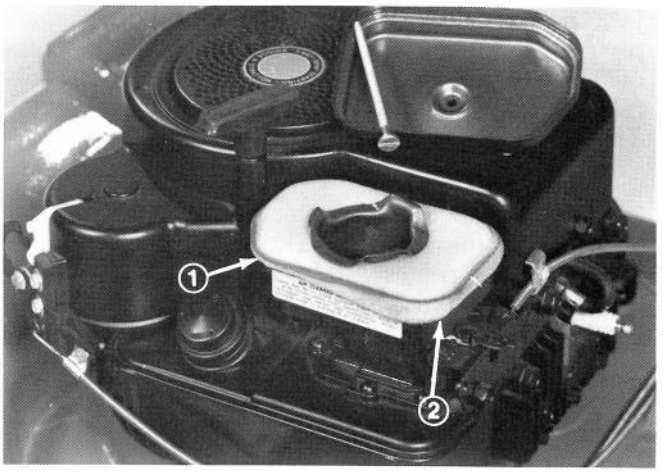

Figure 30

1. Air cleaner element 2. Air cleaner body

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

REPLACING SPARK PLUG

Recommended spark plug to use is a Champion RJ-8 or equivalent, and correct air gap is 0.030 of an inch (0.76 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 (Fig. 31).

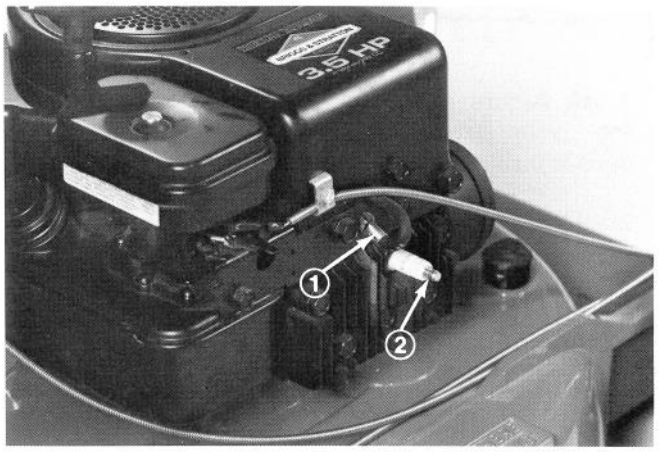

Figure 31

1. High tension wire in notch 2. Spark plug

MAINTENANCE

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 0.030 of an inch (0.76 mm) (Fig. 32). Install the correctly gapped spark plug with gasket and tighten plug to 15 ft-lb (20.4 N·m). If torque wrench is not used, tighten plug firmly.

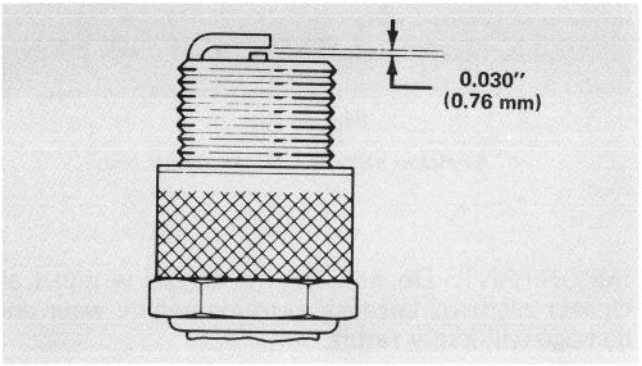

Figure 32

DRAINING GASOLINE FROM FUEL TANK

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, traction control is in DISENGAGE detent 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.

CHANGING CRANKCASE OIL

To prevent premature engine failure due to low oil level, check oil level after every 5 hours of operation or each time mower is used. Change oil after the first two 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 dusty or sandy conditions or engine damage will occur. If possible, run engine just before changing oil because warm oil flows better and carries more contaminants than cold oil.

1. Pull high tension wire off spark plug. Assure that wire does not contact plug accidentally (Fig. 31).

2. ⚠ Drain gasoline from fuel tank to prevent a potential hazard.

3. Tip mower on its right side and remove oil drain plug (Fig. 33).

4. Tip mower upright over drain pan and allow oil to drain.

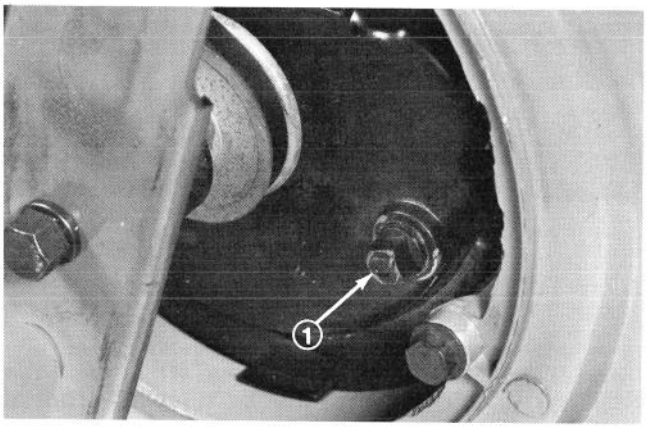

Figure 33

1. Oil drain plug

5. Tip mower on right side, install drain plug and tip mower upright.

6. Add engine oil: refer to Fill Crankcase With Oil, page 8.

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 Gasoline, page 16.

3. Tip mower on its right side (Fig. 34), which is opposite its spark plug side, and allow it to remain tipped for a short time. Avoid rotating the blade when mower is tipped because starting problems may result.

MAINTENANCE

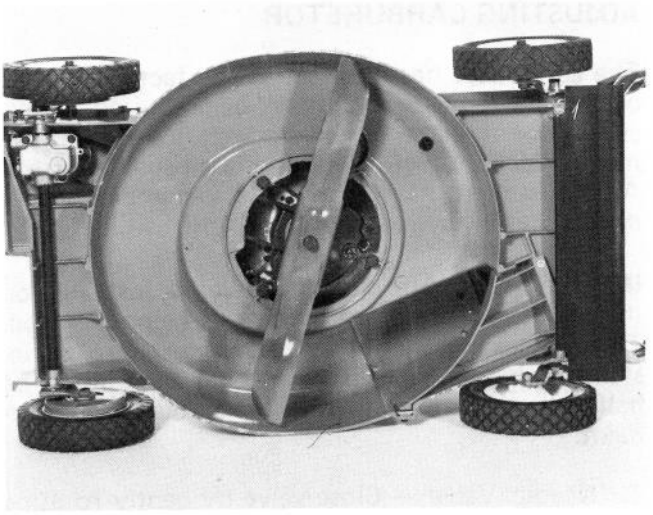

Figure 34

4. Examine cutting ends of the blade carefully, especially where the flat and curved parts of the blade meet (Fig. 35A). 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. 35B), replace the blade: refer to Sharpening or Replacing Cutter Blade, page 17.

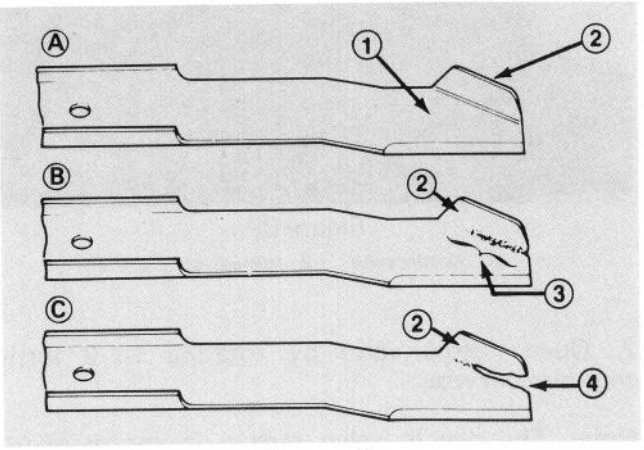

Figure 35

1. Flat part of blade
2. Sail
3. Wear
4. Slot formed

CAUTION

If the blade is allowed to wear, a slot will form between the sail and flat part of the blade (Fig. 35C). Eventually, a piece of the blade may break off and be thrown from under the housing, possibly resulting in serious injury to yourself or bystander.

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 Gasoline, page 16.

3. Tip mower on its right side, which is opposite its spark plug side and allow it to remain tipped for a short time. 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. Remove blade bolt, lockwasher and blade (Fig. 36).

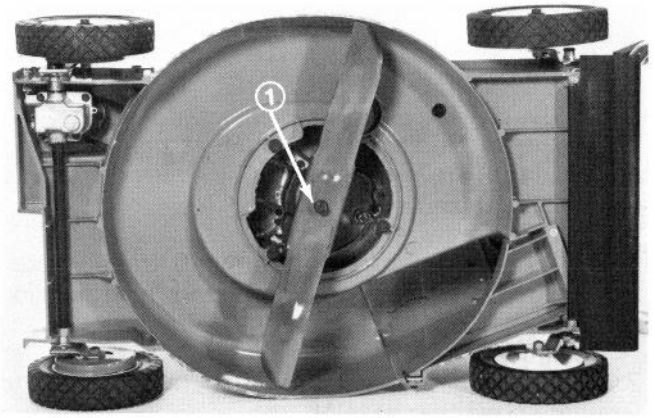

Figure 36

1. Blade bolt and lockwasher

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. 37).

IMPORTANT: Sharpen top side of blade and maintain original cutting angle to assure a sharp cutting edge (Fig. 37). The blade will remain balanced if same amount of material is removed from both cutting edges.

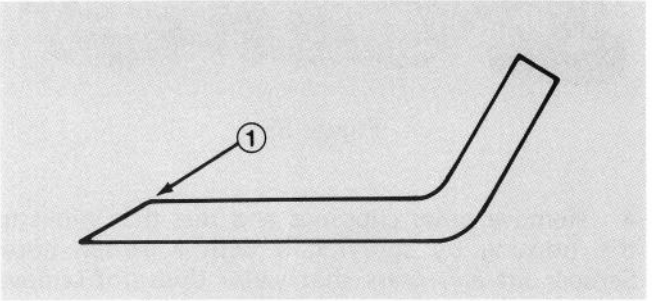

Figure 37

1. Sharpen at original angle

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 some metal off heavy "end" of the blade, not off the cutting edge. 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 blade bolt. Sail part of the blade must point toward the mower housing to assure correct installation. Tighten blade bolt 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, traction control is in DISENGAGE detent and high tension wire is pulled off the spark plug.

2. ⚠ Drain gasoline from fuel tank: refer to Draining Gasoline, page 16.

3. Tip mower on its right side (Fig. 38), which is opposite the spark plug side, and allow it to remain tipped for only a short time. Avoid rotating the blade when mower is tipped because starting problems may result.

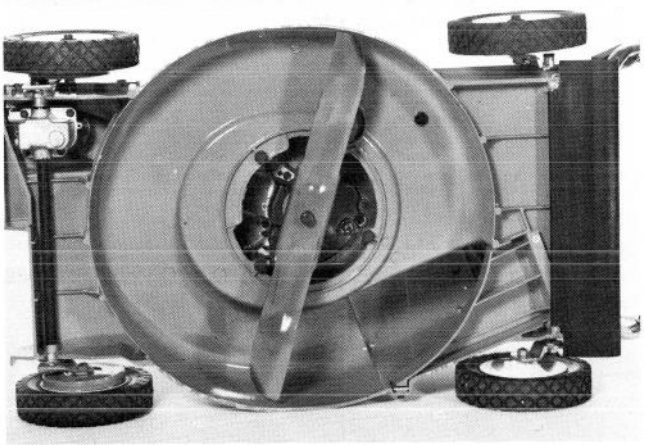

Figure 38

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 with a wooden scraper.

5. Set mower upright.

ADJUSTING CARBURETOR

The carburetor has been set at the factory, but an occasional adjustment may be required. However, do not make unnecessary carburetor adjustments, because factory settings are usually correct. An adjustment may be required to compensate for differences in fuel, temperature, and altitude.

IMPORTANT: Air cleaner must be installed on the engine whenever carburetor is being adjusted. The air cleaner mounting screw must also be installed when engine is run. Fuel tank must be half full of gasoline to get best carburetor adjustment.

1. Needle Valve – Close valve by gently rotating it clockwise (Fig. 39).

IMPORTANT: Do not close needle valve too tight, because valve and seat in carburetor will likely be damaged.

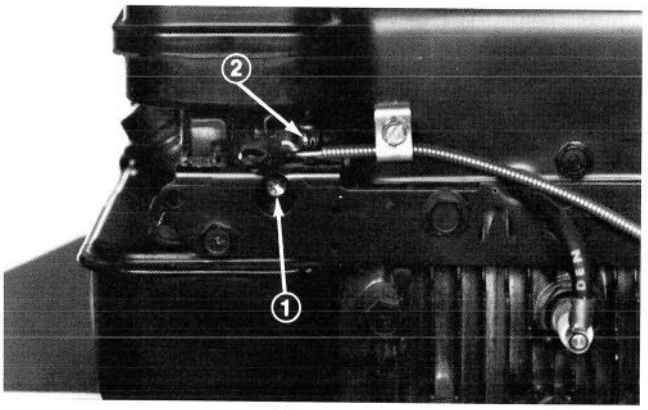

Figure 39

1. Needle valve 2. Idle adjusting screw

2. Open needle valve by rotating 1-1/2 turns counterclockwise.

Note: The needle valve setting is approximate; however, the setting will allow engine to be started so carburetor can be fine tuned.

3. Start engine and let it warm up for approximately two minutes. Next, move throttle control to no. III position.

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 cutter blade, underside of the housing, and the discharge chute.

4. Rotate needle valve clockwise 1/8 turn at a time until engine starts to lose speed. Let engine react to each 1/8 turn setting.

5. Rotate needle valve counterclockwise (outward) 1/8 turn at a time until engine first starts to run rough. Let engine react to each 1/8 turn setting.

6. Rotate needle valve clockwise (inward) very slowly until engine starts to run smoothly. This setting, under no load, may be slightly rich; however, the slightly rich setting will assure proper operation when engine is under load.

7. Move throttle control to no. I. Next, rotate idle adjusting screw until engine speed is 1750 rpm.

Note: Rotate idle adjusting screw clockwise to increase idle rpm. By contrast, rotate idle adjusting screw counterclockwise to decrease idle rpm.

8. Check carburetor adjustment by quickly moving throttle control from no. I to no. III. Engine speed should increase without hesitation. If engine tends to stall or die out, rotate needle valve 1/8 turn counterclockwise until engine accelerates smoothly.

9. After carburetor is adjusted, shut engine off. If mower will not be used immediately, pull high tension wire off spark plug and install end in notched hole to prevent accidental starting.

ADJUSTING THROTTLE CONTROL

If engine does not stop or start, or if throttle control is replaced, an adjustment may be required.

1. Pull high tension wire off spark plug and install end in notched hole. Move handle-mounted throttle control to full OFF position (Fig. 40).

2. Loosen cable clamp screw until throttle cable is free to slide (Fig. 40).

3. Move throttle arm to the right until it contacts grounding bracket.

4. Pull throttle cable slightly to remove any slack; then tighten cable clamp screw.

5. If mower will be used immediately, push high tension wire onto spark plug. However, do not install high tension wire if mower will not be used: accidental starting will be prevented.

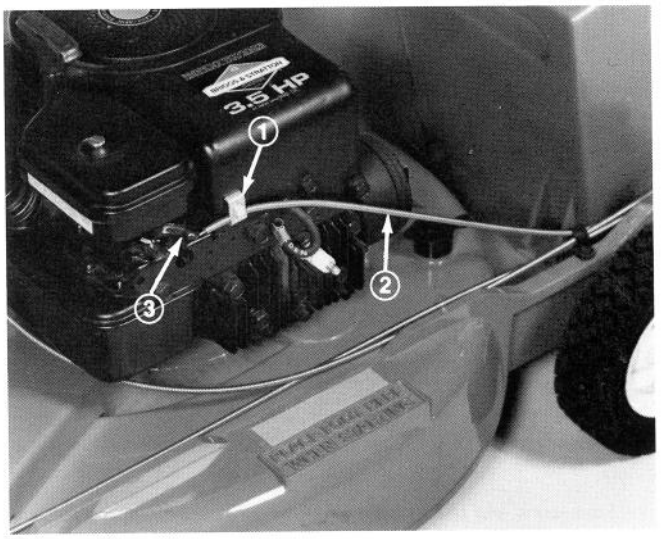

Figure 40

1. Screw
2. Throttle cable
3. Control arm

CHECKING GEAR CASE

The gear case is filled with oil and sealed at the factory. However, check gear case periodically for oil leaks between sides of case and axle (Fig. 41). If oil leak is excessive or continuous, have mower inspected by an Authorized TORO Service Dealer.

Slight leakage may be occurring which will not be obvious. Therefore, check the oil level in the gear case at least every 25 hours of operation.

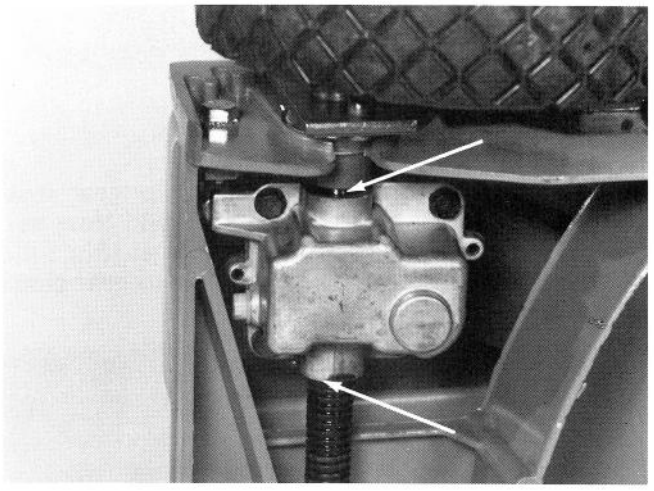

Figure 41

1. ⚠ Disconnect high tension wire from the spark plug and install end in notched hole.

2. Remove three screws securing POW-R-DRIVE cover and set cover aside.

3. Set height-of-cut for all four wheels in "e" position and remove stop screw and bracket assembly (Fig. 42).

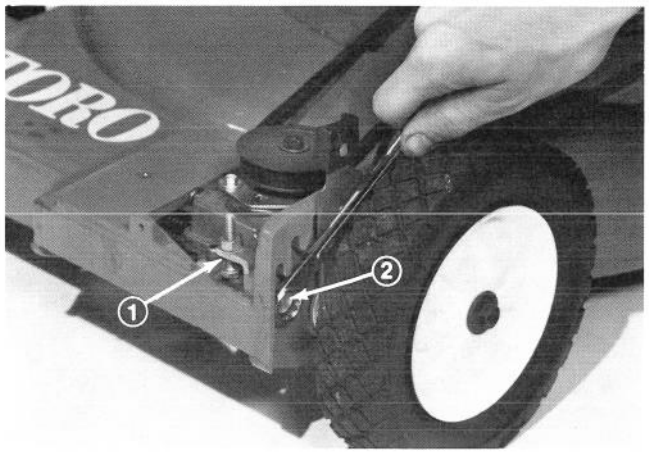

Figure 42

1. Stop screw and bracket assembly 2. Bracket mounting capscrew

4. Tip gear case upward, remove belt assembly from pulley, clean area around plastic plug and remove plastic plug from gear case (Fig. 43).

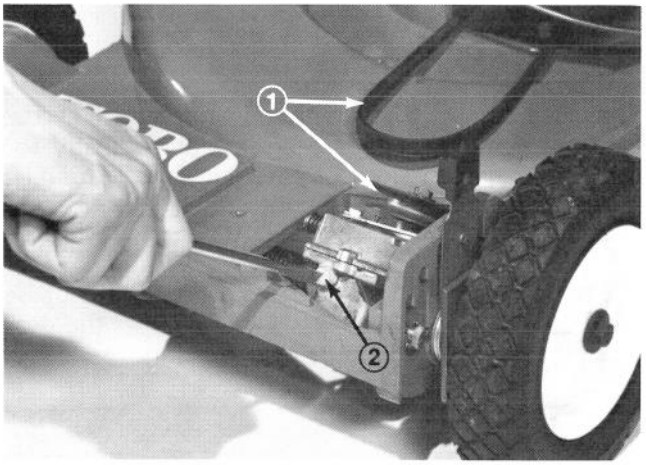

Figure 43

1. Belt and pulley 2. Plastic plug

5. With mower on level surface, tip gear case forward to a level position. Gear oil will flow out hole in gear case if filled to proper level (Fig. 44). If no gear oil is evident, add gear oil to gear case: proceed to item 6.

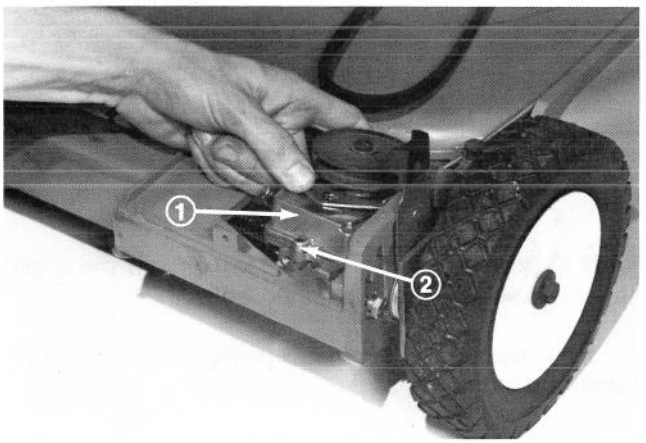

Figure 44

1. Gear case in level position 2. Oil level check hole

6. Tip gear case upward and add SAE 80W/90 E.P. API Class GL-5, GL-6 gear oil to gear case through oil level check hole (Fig. 45). Add until gear oil leaks out when gear case is levelled.



Figure 45

1. Add gear oil here

Note: Only the gear oil recommended should be used. Substitute gear oil will cause premature failure of the gear case components. A Plews type oil container or any other container with a small tip can be used for installation of gear oil. Clean the container thoroughly before filling with gear oil to avoid contaminating gear case.

7. Install plastic plug. Take care not to overtighten so plug threads will not strip out.

8. Install belt, rotate gear case forward and mount stop screw and bracket assembly (Fig. 42).

9. Install POW-R-DRIVE cover and set height-of-cut to desired setting.

ADJUSTING TRACTION CONTROL

If traction control does not engage or disengage the front wheels, an adjustment may be required.

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

2. Remove three screws holding POW-R-DRIVE cover and put cover aside.

Note: Check the stop screw (Fig. 46) to be sure it contacts tab at front of gear case. If contact is not evident, loosen jam nut and adjust the stop screw. The screw prevents the gear case from moving.

3. Loosen cable retaining screw until control cable is free to slide (Fig. 46).

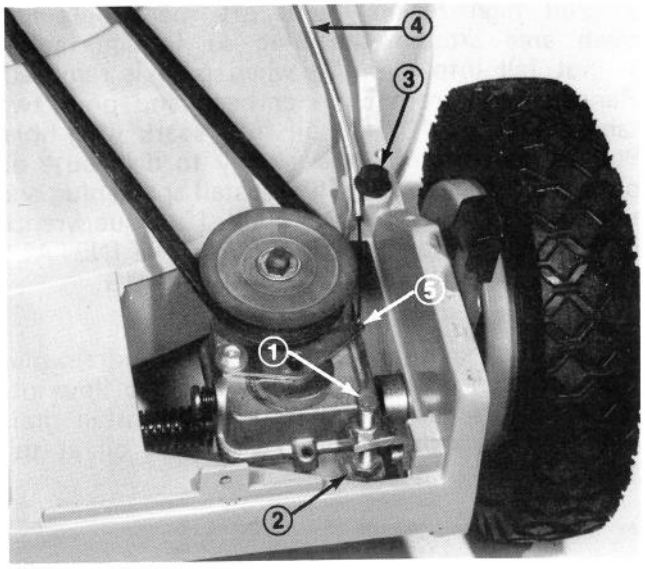

Figure 46

1. Stop screw
2. Tab
3. Retaining screw
4. Cable
5. Arm

4. Move the traction control rearward into the DISENGAGE detent.

5. Push shifter arm backward until it stops and hold shifter in place. Pull control cable and wire backward to remove all slack, and secure cable in place by tightening the cable retaining screw (Fig. 46). Install cover with three screws.

6. Adjust the traction lockout: refer to Adjusting Recoil Traction Lockout, page 21.

ADJUSTING RECOIL TRACTION LOCKOUT

There is a recoil lockout arm at front of engine. In conjunction with traction control, it disengages the recoil starter so engine cannot be started when traction control is in the ENGAGE position. Unless the control cable and wire break and are replaced, an adjustment should not be required.

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

2. Adjust the traction control: refer to Adjusting Traction Control, steps 1-5, page 20.

3. Make sure handle-mounted traction control is is DISENGAGE position.

4. Loosen cable clamp screw until cable is free to slide (Fig. 47).

5. Grasp recoil handle and pull it slowly until interlock arm moves outward, and hold recoil in this position so arm stays out.

6. Move cam lever so interlock arm contacts the inside of the "V" that is formed at end of cam

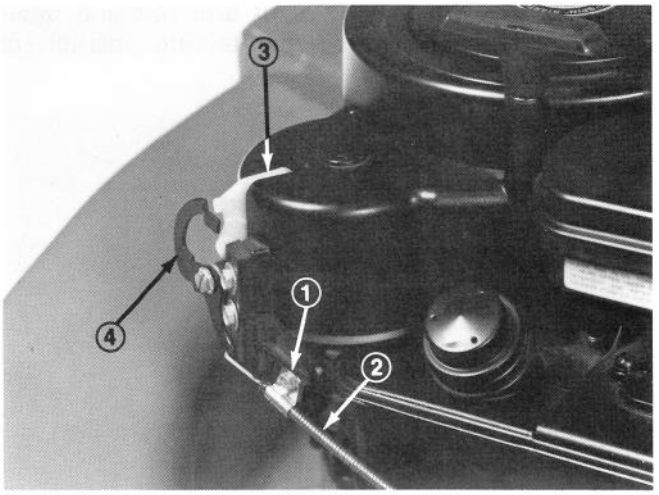

Figure 47

1. Clamp and screw
2. Cable
3. Interlock arm
4. Cam lever

lever. Maintain cam lever and interlock arm position, and release the recoil handle; then tighten cable clamp screw.

7. Test the adjustment by moving traction control to ENGAGE. Pull recoil starter slowly: it must be very easy to pull, and engine must not turn over. If engine turns over, repeat the adjustment.

8. If mower will be used immediately, push high tension wire onto end of spark plug. However, do not install high tension wire if mower will not be used: accidental starting will be prevented.

INCREASING TRACTION

Traction can be increased by moving rear wheels backward. This is advantageous when bagging moisture-saturated or lush grass that is heavier than normal, dry grass.

1. Pull high tension wire off spark plug.

2. Loosen pivot bolt and lock nut (Fig. 48) until nut is at end of bolt.

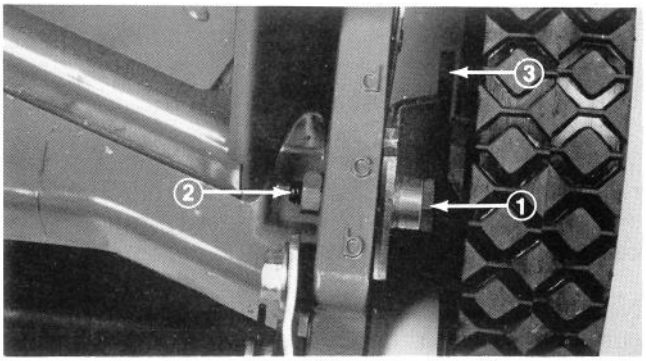

Figure 48

1. Pivot bolt
2. Locknut
3. Pivot arm

3. Pull the wheel with pivot arm out and move wheel to the rear while maintaining position of spring arm (Fig. 49).

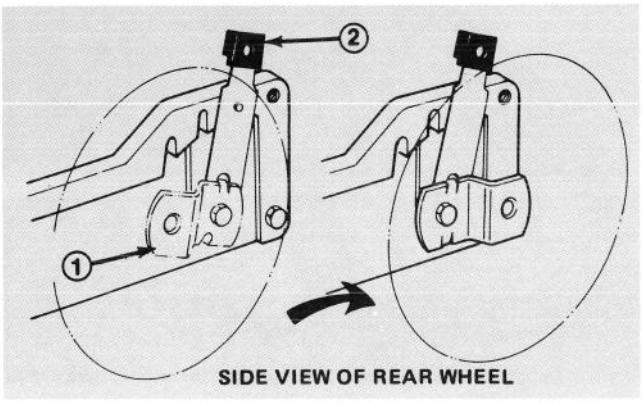

Figure 49

1. Pivot arm 2. Spring arm

4. When tab in pivot arm engages slot in spring arm, tighten pivot bolt and lock nut (Fig. 48).

IMPORTANT: Assure pivot arm tab engages slot in spring arm. If parts are not seated properly, spring arm will be pinched between shoulder of pivot bolt and mower housing.

5. After rear wheels are moved backward for increased traction, letters for height-of-cut settings do not correspond. To keep height-of-cut adjusted equally, use the corresponding settings in the chart below.

IMPORTANT: Incorrect height-of-cut settings will cause improper pitch of the blade, resulting in loss of power and poor quality of cut.

Front Wheel Setting		Rear Wheel Setting
a	1" (25 mm)	e
b	1-1/2" (38 mm)	d
c	2" (51 mm)	c
d	2-1/2" (64 mm)	b
e	3" (76 mm)	a

PREPARING MOWER FOR STORAGE

1. Drain gasoline from fuel tank and fuel line: refer to Draining Gasoline, page 16. Start the engine and let it run at idle speed until it stops because all gasoline is used.

Note: All gasoline must be expended to prevent gum-like, varnish deposits from forming in the carburetor, fuel line and fuel tank. Such deposits, if allowed to form, will cause starting problems and poor engine operation.

2. Pull high tension wire off spark plug and clean area around the plug so foreign matter cannot fall into cylinder when plug is removed. Remove plug from cylinder head and pour two tablespoons of 10W-40 oil into spark plug hole. Pull recoil starter handle slowly to distribute oil on inside of cylinder. Then install spark plug and tighten it to 15 ft-lb (20.4 N·m). If torque wrench is not used, tighten plug firmly. DO NOT INSTALL HIGH TENSION WIRE ON SPARK PLUG.

3. Tip mower on its left side, remove drain plug from bottom of engine and allow oil to flow into drain pan. After all oil is drained, install drain plug but do not fill crankcase with oil at this time.

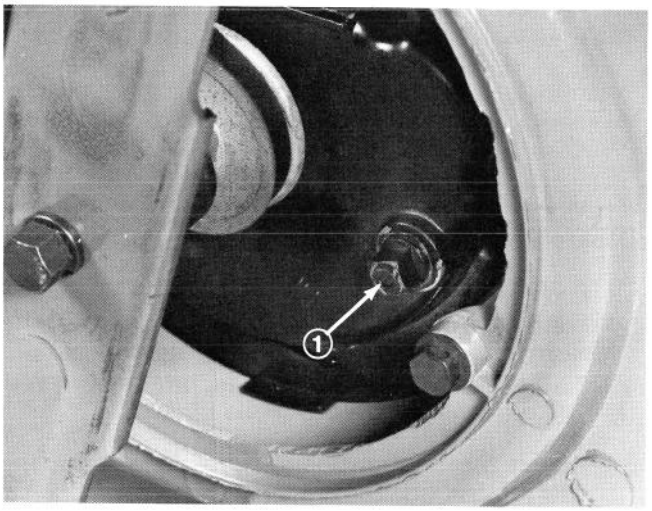

Figure 50

1. Oil drain plug

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

5. Clean underside of mower housing: refer to Cleaning Mower Housing, page 18.

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

7. Check and tighten all capscrews, bolt, screws, nuts and mating parts. If any part is damaged, repair or replace it.

8. Lubricate wheel bushings and throttle cable with oil: refer to Lubrication, page 14. Lubricate front axle pivots with grease and check gear case oil level.

9. Wash the air cleaner element in a liquid soap detergent and water: refer to Servicing Air Cleaner, page 15.

MAINTENANCE

10. Fill crankcase with oil: refer to Fill Crankcase With Oil, page 8.

11. "Touch up" all rusted or chipped paint surfaces. Make sure to sand affected area before painting.

Note: TORO Re-Kote "touch-up" paint is available from any Authorized TORO Service Dealer. The spray paint dries in minutes to a glossy factory-finish.

12. Store the mower in a clean, dry place. For convenience, upper handle can be folded for more compact storage. Cover the mower to protect it and keep it clean.

13. Handle may be folded for storage (Fig. 51).

Note: Assure upper handle is in proper position and handle knobs are securely tightened before resuming operation.



Figure 51

IDENTIFICATION AND ORDERING

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 the rear of the mower housing. In any correspondence concerning the mower, supply model and serial numbers to assure correct information and replacement parts are obtained.

To order replacement parts from an Authorized TORO Service Dealer, supply the following information:

1. Model and serial numbers of the mower.

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

TROUBLE SHOOTING

Problem	Possible Causes	Correction Action
Engine does not start.	1. Throttle not in start position.	1. Move throttle to position no. III.
	2. Gas tank is empty.	2. Fill fuel tank with gasoline: refer to Fill Fuel Tank With Gasoline, page 8.
	3. Air cleaner element is dirty.	3. Clean air cleaner element: refer to Servicing Air Cleaner, page 15.
	4. Spark plug loose.	4. Tighten spark plug to 15 ft-lb (20.4 N·m).
	5. High tension wire loose or disconnected from spark plug.	5. Install high tension wire on plug.
	6. Spark plug gap is incorrect.	6. Set gap between electrodes at 0.030 of an inch (0.76 mm).
	7. Spark plug is defective.	7. Install new, correctly gapped plug: refer to Replacing Spark Plug, page 15.
	8. Carburetor is flooded with gasoline.	8. Remove air cleaner element and pull starter rope continuously until carburetor clears itself and engine starts. When engine starts, stop it and install air cleaner element.
	9. Blade bolt is loose.	9. Tighten blade bolt to 50 ft-lb (68 N·m).
	10. Faulty points or condenser.	10. Contact TORO Service Dealer.
Engine starts hard or loses power.	1. Dirt or water in gas tank.	1. Drain gas and clean fuel tank. Fill tank with clean, fresh gasoline: refer to Fill Fuel Tank With Gasoline, page 8.
	2. Vent hole in fuel tank cap is plugged.	2. Clean or replace fuel tank cap.
	3. Air cleaner is dirty.	3. Clean the air cleaner element: refer to Servicing Air Cleaner, page 15.
	4. Blade bolt is loose.	4. Tighten blade bolt to 50 ft-lb (68 N·m).
Engine operates erratically.	1. Spark plug is defective.	1. Install new, correctly gapped plug: refer to Replacing Spark Plug, page 15.
	2. Spark plug gapped incorrectly.	2. Set gap between electrodes at 0.030 of an inch (0.76 mm).
	3. Air cleaner is dirty.	3. Clean the air cleaner element: refer to Servicing Air Cleaner, page 15.
	4. Carburetor maladjusted.	4. Adjust carburetor: refer to Adjusting Carburetor, page 18.
Engine idles poorly.	1. Air cleaner is dirty.	1. Clean the air cleaner element: refer to Servicing Air Cleaner, page 15.
	2. Oil level in crankcase is low.	2. Add oil to crankcase: refer to Fill Crankcase With Oil, page 8.
	3. Cooling fins and air passages under engine blower housng are plugged.	3. Remove obstruction from cooling fins and air passages.

TROUBLE SHOOTING

Problem	Possible Causes	Corrective Action
Engine misfires at high speed.	1. Air gap between electrodes of spark plug is too close.	1. Set air gap at 0.030 of an inch (0.76 mm).
Engine overheats.	1. Cooling air flow is restricted.	1. Remove any obstruction from blower housing, air passages, and cooling fins on engine.
	2. Oil level in crankcase is low.	2. Add oil to crankcase: refer to Fill Crankcase With Oil, page 8.
	3. Incorrect spark plug.	3. Install Champion RJ-8 spark plug that is gapped at 0.030 of an inch (0.76 mm).
Mower vibrates abnormally.	1. Blade bolt is loose.	1. Tighten blade bolt to 50 ft-lb (68 N·m).
	2. Cutter blade is unbalanced.	2. Sharpen cutter blade and check the balance: refer to Sharpening or Replacing Cutter Blade, page 17. Replace the blade if it cannot be balanced.

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Air Cleaner Service	Lubrication	Sharpen Blade	Winter Storage	Spring Service	Spark Plug

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Air Cleaner Service	Lubrication	Sharpen Blade	Winter Storage	Spring Service	Spark Plug

MAINTENANCE RECORD

Date	Hours Used	Oil Change	Air Cleaner Service	Lubrication	Sharpen Blade	Winter Storage	Spring Service	Spark Plug

The Toro Promise

A ONE YEAR LIMITED WARRANTY

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

Residential Product	1 Year
Residential Products Used Commercially . . .	45 Days

The costs of parts and labor are included, but the customer pays the transportation costs. Just return any residential product to an Authorized TORO Service Dealer or TORO Distributor.

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

1. Contact any Authorized TORO Service Dealer, TORO Master Service Dealer, or TORO Distributor (the Yellow Pages of your telephone directory is a good reference source).
2. He will either instruct you to return the product to him or recommend another Authorized TORO Service outlet which might be more convenient.
3. Bring the product along with your original sales slip, or other evidence of purchase date, to the service dealer.
4. The servicing dealer will inspect the unit, advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without extra charge to you.

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

Write:

TORO Consumer Service Department
8111 Lyndale Avenue South
Minneapolis, Minnesota 55420

The above remedy of product defects through repair by an Authorized TORO Service 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 operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized TORO Service Dealer using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Service Account 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.

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