

*Safety Instructions & Operator's Manual for*  
**SNAPPER®**

**21" 'EASY LINE'  
 WALK BEHIND  
 MOWERS**



**MODELS**

**S211  
 SP211  
 SPV211  
 SPV211S  
 SPV211E**

**MODEL NUMBER EXPLANATION**

**S P V 21 1 E**

MODEL DESIGNATION \_\_\_\_\_  
 SELF-PROPELLED \_\_\_\_\_  
 VARIABLE SPEED \_\_\_\_\_  
 OPTION DESIGNATION \_\_\_\_\_  
 SERIES DESIGNATION \_\_\_\_\_  
 CUTTING WIDTH \_\_\_\_\_

S - 'Easy Line'	V - Variable Speed Model	21 - 21" Cutting Width	S - Swivel Front Wheels
P - Self-Propelled Model		1 - Series 1	E - Electric Start

**Thank you for buying a SNAPPER Product! Before operating your machine, read this manual carefully and pay particular attention to the "IMPORTANT SAFETY INSTRUCTIONS" on Pages 2 - 4. Remember that all power equipment can be dangerous if used improperly. Also keep in mind that SAFETY requires careful use in accordance with the operating instructions and common sense!**

**NOTE:** Specifications are correct at time of printing and are subject to change without notice.  
 \* Actual sustained engine power will likely be lower due to operating limitations and environmental factors. Please refer to 'Engine Power Rating Information' on Page 4 for further information.

**SNAPPER®** McDonough, GA., 30253 U.S.A.



# IMPORTANT SAFETY INSTRUCTIONS



**WARNING:** This powerful cutting machine is capable of amputating hands and feet and can throw objects that can cause injury and damage! Failure to comply with the following SAFETY instructions could result in serious injury or death to the operator or other persons. The owner of the machine must understand these instructions and must allow only persons who understand these instructions to operate machine. Each person operating the machine must be of sound mind and body and must not be under the influence of any substance, which might impair vision, dexterity or judgment. If you have any questions pertaining to your machine which your dealer cannot answer to your satisfaction, call or write the Customer Service Department at SNAPPER, McDonough, Georgia 30253. Phone: (1-800-935-2967).

## PROTECTION FOR CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.

1. KEEP children out of the mowing area and under the watchful care of a responsible adult other than the operator.
2. DO NOT allow children in yard when machine is operated and turn machine OFF if anyone enters the area.
3. DO NOT allow pre-teenage children to operate machine.
4. ALLOW only responsible adults & teenagers with mature judgment under close adult supervision to operate machine.
5. DO NOT pull mower backwards unless absolutely necessary. LOOK and SEE behind and down for children, pets and hazards before and while backing.
6. USE EXTRA CARE when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

## SLOPE OPERATION

1. Slopes are a major factor related to slip and fall accidents, which can result in severe injury. All slopes require extra caution. If you feel uneasy on a slope, DO NOT mow it.
2. Mow across slopes, never up-and-down. Exercise extreme CAUTION when changing directions on slopes. DO NOT mow steep slopes or other areas where stability or traction is in doubt.
3. Use extra care with grass catchers or other attachments; these affect the handling and the stability of the machine.

## PREPARATION

1. Read, understand, and follow instructions and warnings in this manual and on the mower, engine and attachments. Know the controls and the proper use of the mower before starting.
2. Only mature, responsible persons shall operate the machine and only after proper instruction.

## PREPARATION

(Continued From Previous Column)

3. Data indicates that operators age 60 and above, are involved in a large percentage of mower-related injuries. These operators should evaluate their ability to operate the mower safely enough to protect themselves and others from serious injury.
4. Handle fuel with extra care. Fuels are flammable and vapors are explosive. Use only an approved fuel container. DO NOT remove fuel cap or add fuel with engine running. Add fuel outdoors only with engine stopped and cool. Clean spilled fuel and oil from machine. DO NOT smoke.
5. Check the area to be mowed and remove all objects such as toys, wire, rocks, limbs and other objects that could cause injury if thrown by blade or interfere with mowing. Also note the location of holes, stumps, and other possible hazards.
6. Keep people and pets out of the mowing area. Immediately, STOP Blade, Stop engine and Stop mower if anyone enters the area.
7. Check shields, deflectors, switches, blade controls and other safety devices frequently for proper operation and location.
8. Make sure all safety decals are clearly legible. Replace if damaged.
9. Protect yourself when mowing and wear safety glasses, long pants and substantial footwear. DO NOT mow barefooted or with sandals.
10. Know how to STOP blade and engine quickly in preparation for emergencies.
11. Use extra care when loading or unloading the machine into a trailer or truck.
12. Check grass catcher components frequently for signs of wear or deterioration and replace as needed to prevent injury from thrown objects going through weak or torn spots.

## SAFE HANDLING OF GASOLINE

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

1. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
2. Use only an approved fuel container.



# IMPORTANT SAFETY INSTRUCTIONS



## SAFE HANDLING OF GASOLINE

(Continued From Previous Page)

3. DO NOT remove fuel cap or add fuel with the engine running. Allow the engine to cool before refueling.
4. DO NOT refuel the machine indoors.
5. DO NOT store the machine or fuel container inside where there is an open flame, spark or pilot light such as on a water heater or other appliances.
6. DO NOT fill fuel containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place the containers on the ground away from the vehicle before filling.
7. Remove gas-powered equipment from the vehicle or trailer and refuel it on the ground. If this is not possible, then refuel equipment using a portable container, rather than a gasoline dispenser nozzle.
8. DO NOT start gas powered equipment in enclosed vehicles or trailers.
9. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. DO NOT use a nozzle lock-open device
10. If fuel is spilled on clothing, change clothing immediately.
11. DO NOT overfill a fuel tank. Replace fuel cap and tighten securely.

## OPERATION

1. DO NOT put hands or feet near or under rotating parts. Keep clear of discharge area while engine is running.
2. STOP engine when crossing gravel drives, walks, or roads, and under any conditions where thrown objects might be a hazard.
3. Mow only in daylight or good artificial light.
4. DO NOT operate mower while under the influence of alcohol or drugs.
5. After striking a foreign object or if mower vibrates abnormally, STOP the engine, disconnect and secure spark plug wire. Inspect the mower for any damage and repair the damage before starting.
6. DO NOT mow near drop offs, ditches or embankments. Operator could lose footing or balance.
7. STAY ALERT for holes and other hidden hazards. Tall grass can hide obstacles. Keep away from ditches, washouts, culverts, fences and protruding objects.
8. DO NOT mow on wet grass. Always be sure of your footing. Keep a firm hold on the handle and walk, never run. Slipping could cause injury.
9. ALWAYS stay behind handle when engine (motor) is running.
10. DO NOT leave the machine with the engine running. STOP BLADE and STOP ENGINE before leaving the operators position for any reason.

## OPERATION

(Continued From Previous Column)

11. Before cleaning, repairing or inspecting make certain engine, blade and all moving parts have STOPPED. Disconnect and secure spark plug wire away from plug to prevent accidental starting.
12. STOP engine and wait until the blade comes to complete STOP before removing grass bag and/or clearing grass.
13. DO NOT operate mower without the entire grass catcher, or guards in place discharge guard, rear guard or other safety devices in place and working. DO NOT point discharge at people, passing cars, windows or doors.
14. DO NOT discharge material against a wall or obstruction. Material may ricochet back towards the operator.
15. Slow down before turning.
16. Watch out for traffic when near or crossing roadways.
17. DO NOT operate engine in enclosed areas. Engine exhaust gases contain carbon monoxide, a deadly poison.
18. Only use accessories approved by the manufacturer. See manufacturer's instructions for proper operation and installation of accessories.

## MAINTENANCE AND STORAGE

1. DO NOT store mower or fuel container inside where fumes may reach an open flame, spark or pilot light such as in a water heater, furnace, clothes dryer or other gas appliance. Allow engine to cool before storing machine in an enclosure. Store fuel container out of reach of children in a well ventilated, unoccupied building.
2. Keep mower and engine free of grass, leaves or excess grease to reduce fire hazard and engine overheating.
3. When draining fuel tank, drain fuel into an approved container outdoors and away from open flame.
4. Keep all bolts, especially blade bolts, nuts and screws properly tight. Check that all cotter pins are in proper position.
5. Always provide adequate ventilation when running engine. Engine exhaust gases contain carbon monoxide, a deadly poison.
6. Service engine and make adjustments only when engine is stopped. Removed spark plug wire from spark plug and secure wire away from spark plug to prevent accidental starting.
7. DO NOT change engine governor speed settings or overspeed engine.
8. Check grass bag assembly frequently for wear or deterioration to avoid thrown objects and exposure to moving parts. Replace with new bag if loose seams or tears are evident. Replace slider or bag adapter if broken or cracked.



# IMPORTANT SAFETY INSTRUCTIONS



## MAINTENANCE AND STORAGE

(Continued From Previous Page)

9. Mower blades are sharp and can cut. Wrap the blades or wear heavy leather gloves and use CAUTION when handling them.
10. DO NOT test for spark by grounding spark plug next to spark plug hole; spark plug could ignite gas exiting engine.
11. Have machine serviced by an authorized SNAPPER dealer at least once a year and have the dealer install any new safety devices.
12. Use only genuine SNAPPER replacement parts to assure that original standards are maintained.

This manual contains safety information to make you aware of the hazards and risks associated with the machine and how to avoid them. This machine is designed and intended to be used and maintained according to the manual for finish cutting of established lawns and is not intended for any other purpose. It is important that you read and understand these instructions thoroughly before attempting to start or operate this equipment.

### Engine Power Rating Information

The gross power rating labels for individual gas engine models meet or exceed SAE (Society of Automotive Engineers) code J1940 (Small Engine Power & Torque Rating Procedure) and rating performance has been obtained and corrected in accordance with SAE J1995 (Revision 2002-05). Actual gross engine power may be lower and is affected by, but not limited to, ambient operating conditions and engine to engine variability. Given both the wide array of products on which engines are placed, and the variety of environmental issues applicable to operating the equipment, the gas engine will not develop the rated gross power when used in a given piece of power equipment (actual "on-site" or net horsepower). This difference is due to a variety of factors including, but not limited to, accessories (air cleaner, exhaust, charging, cooling, carburetor, fuel pump, etc.), application limitations, ambient operating conditions (temperature, humidity, altitude), and engine to engine variability.

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# Section 1 - FAMILIARIZATION

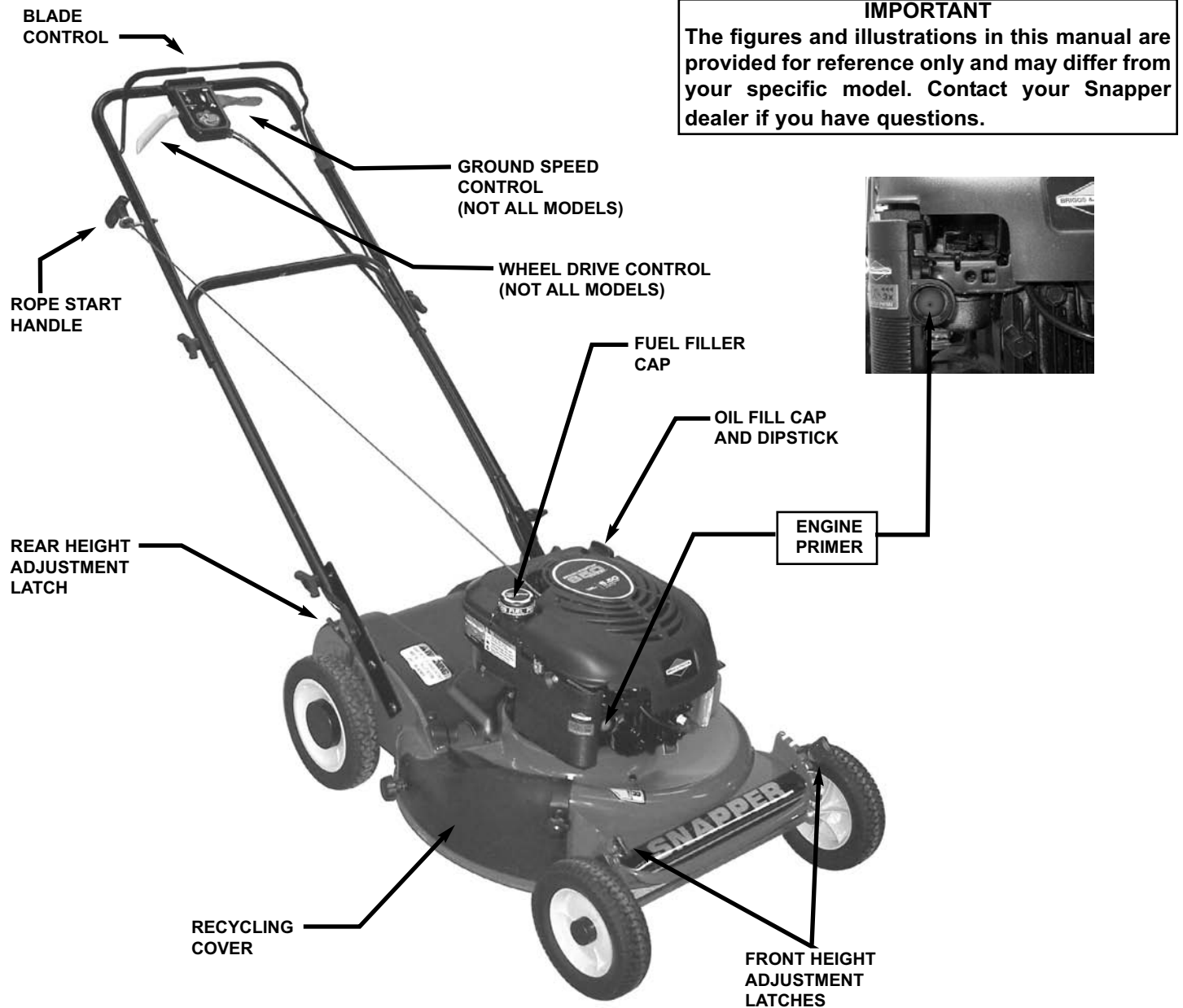


FIGURE 1.1  
(MODEL SPV211 SHOWN)

## 1.1 INTRODUCTION

This manual has been prepared for the operators of the SNAPPER 'EASY LINE' WALK BEHIND MOWERS. Its purpose, aside from recommending operating and routine service requirements, is to promote safety through the use of accepted operating practices. **Read, Understand and Follow** the "IMPORTANT SAFETY INSTRUCTIONS" on Pages 2 - 4 of this manual and all safety messages on the mower and attachments before operating the mower.

## 1.2 NOMENCLATURE

The nomenclature drawing above, Figure 1.1, shows the essential parts of the SNAPPER 'EASY LINE' WALK BEHIND MOWERS. It is recommended that all operators of the mower become thoroughly familiar with the controls, parts and operation of the mower before operating. Specific details involving the engine are found in the separate engine owner's manual. Study these manuals before operating and keep both handy for future reference.

## Section 2 - OPERATING INSTRUCTIONS

### 2.1 PRE-START CHECK LIST

Make the following checks and perform the service required before each start-up.

**2.1.1.** Check guards, deflectors, grass bag, adapter and covers to make sure all are in place and securely tightened.

**2.1.2.** Check blade control, wheel drive control, and ground speed control to insure they work freely. See Figure 2.1.

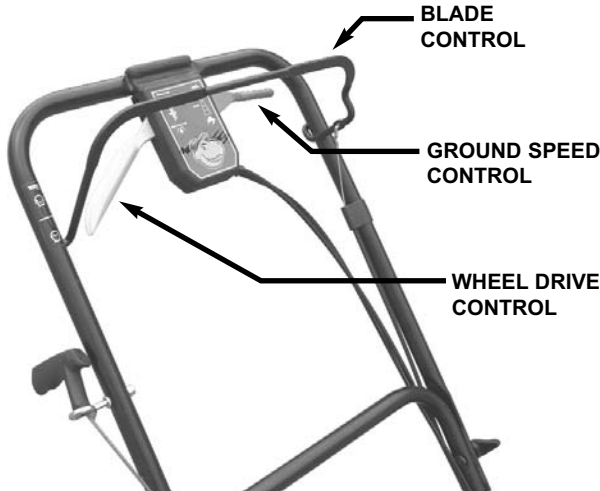


FIGURE 2.1

**2.1.3.** Check cutting height. Adjust to desired height. Refer to Section 'Cutting Height Adjustment'.

**2.1.4.** Check engine oil and add oil as needed to bring level up to the full mark. Refer to Engine Owner's Manual for oil specifications. See Figure 2.2.

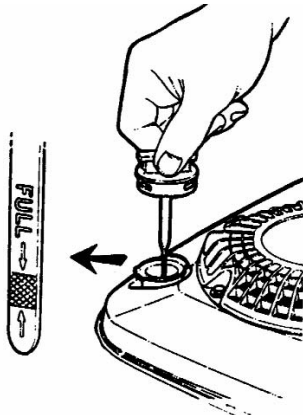


FIGURE 2.2

**2.1.5.** Add fuel to tank after pushing the mower outside where fumes can safely dissipate. Make sure cap is tightened after refueling. Refer to Engine Owners Manual for specifications.

**2.1.6.** Clean exterior surfaces of cutting deck and engine of any accumulation of spilled fuel, dirt, grass, oil, etc. Keep engine air intake screen and cooling fins clear at all times.

### 2.2 STARTING & OPERATION

#### 2.2.1. ENGINE & BLADE

**1.** Push primer button three times to start a cold engine. See Figure 2.3. **NOTE:** The primer should not be required to restart a warm engine.

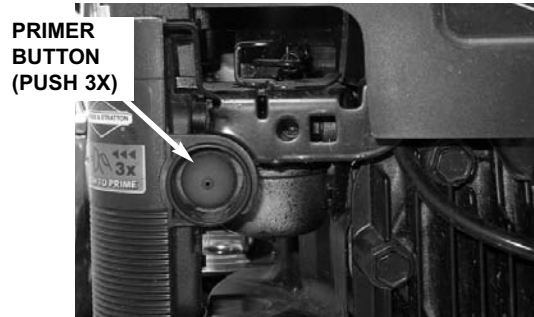


FIGURE 2.3

**2.** Pull blade control against handle. See Figure 2.4.

**3.** Start Mower:

Manual Start Models: Pull rope start handle to crank engine. See Figure 2.4.

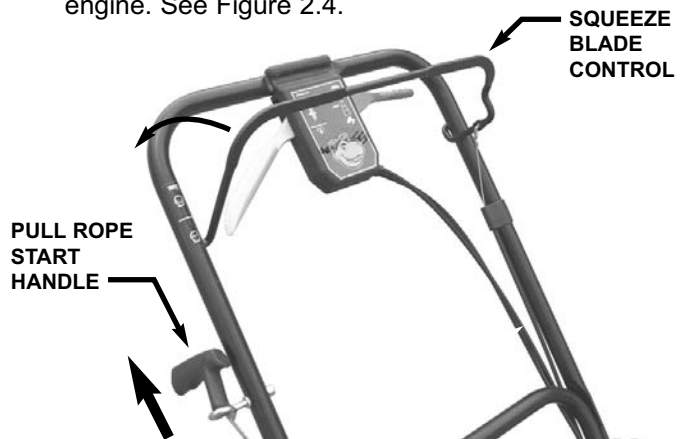


FIGURE 2.4

Electric Start Models: Insert key into ignition switch, located on right side of handle above rope guide. Turn key to crank engine. See Figure 2.5.

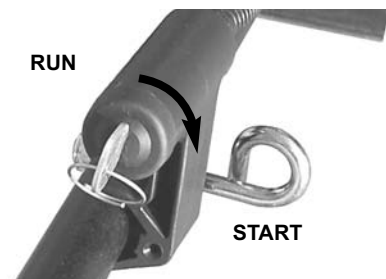


FIGURE 2.5

**4.** After engine starts, allow a brief warm-up until engine runs smooth before beginning mower operation.

**NOTE:** To stop the engine (and blade), release the blade control.

# Section 2 - OPERATING INSTRUCTIONS

## 2.2 STARTING & OPERATION 2.2.2. PROPELLING MOWER

(Self Propelled Models Only)

1. Start engine. Refer to Section “Starting & Operation – Engine & Blade”.
2. Move ground speed control to the desired speed position. See Figure 2.6.
3. Squeeze wheel drive control against handle to engage wheel drive and propel mower forward. Forward speed can be adjusted while mower is moving by changing position of ground speed control. See Figure 2.6.

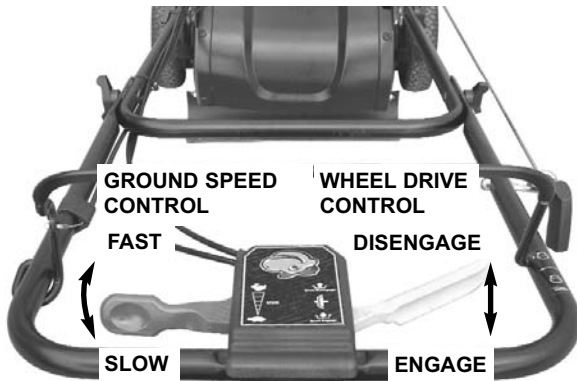


FIGURE 2.6

## 2.3 STOPPING

Stop forward motion of mower by releasing the wheel drive control. Stop engine and blade by releasing the blade control.

## 2.4 LOCKING SWIVEL WHEELS (SPV211S ONLY)

The left front swivel wheel on the SPV211S can be locked to keep the mower traveling in a straight line:  
1. Move mower straight forward to align caster stud pin with notches in swivel locking clip, located above left caster stud. See Figure 2.7.

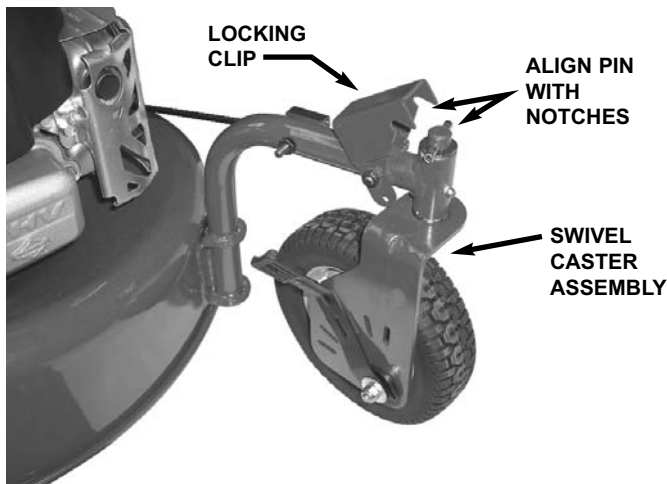


FIGURE 2.7

2. Move swivel caster lock lever, located on left side of handle assembly, to 'LOCK' position to lock clip down over caster stud. See Figure 2.8.
3. To release caster, simply move swivel caster lock lever back from locked position. See Figure 2.8.

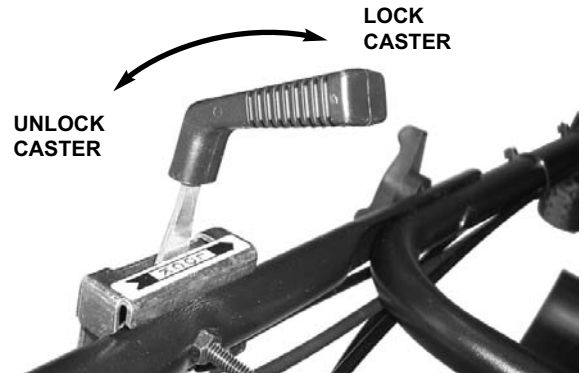


FIGURE 2.8

## 2.5 HANDLE HEIGHT ADJUSTMENT

The height of the mower handle can be adjusted as follows:

1. Remove T-knobs and carriage bolts securing lower handle to mounting brackets.
2. Align holes in handle assembly with one of three handle height adjustment holes in mounting bracket. See Figure 2.9.
3. Replace removed hardware, tightening securely.

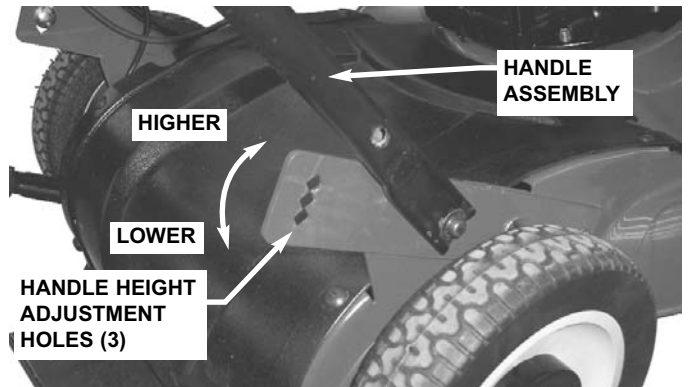


FIGURE 2.9

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.



# Section 2 - OPERATING INSTRUCTIONS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

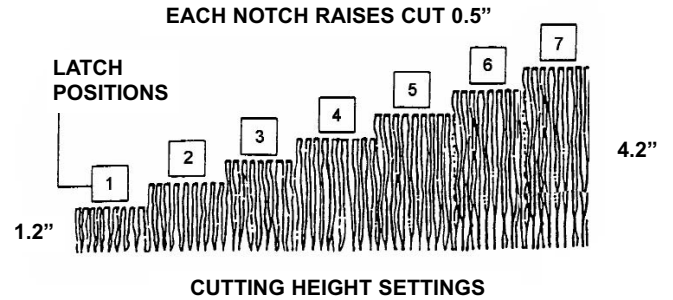


FIGURE 2.11

## 2.6 CUTTING HEIGHT ADJUSTMENT

1. Pull the height adjusting latch outward and move to desired cutting height. See Figure 2.10.

**WARNING**

Stop engine and mower blade by releasing the blade control before adjusting cutting height.

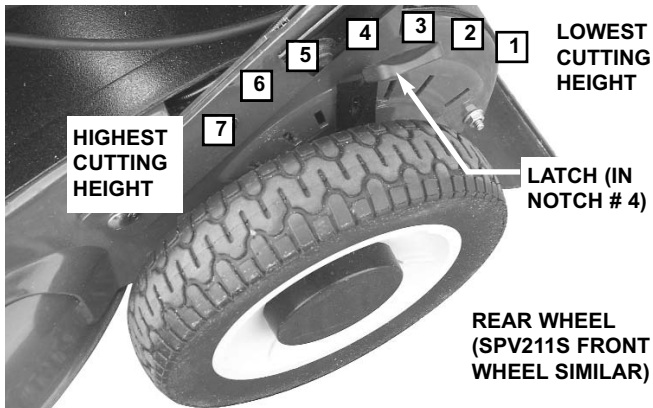
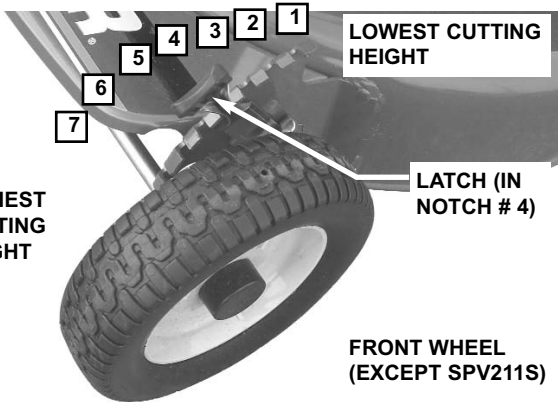


FIGURE 2.10

2. Set all wheels at the same cutting height. The highest cutting position is Notch 7. The lowest cutting position is Notch 1. See Figure 2.11.

## 2.7 RECYCLING OPERATION

**NOTE:** For best recycling results, cut up to a maximum of 1/3 of grass blade length and recycle ONLY when grass is dry.

1. Set all wheels in the highest cutting position (Notch 7). Refer to Section "Cutting Height Adjustment".
2. Move engine speed control to "FAST" (Rabbit) position.
3. Move ground speed control to slowest speed setting.
4. Proceed mowing slowly. If grass is very dense, lower each rear wheel latch one notch lower than the front wheel latches to improve recycling performance.

**NOTE:** The recycling cover should remain on the machine at all times, unless alternate discharge operations are desired, such as side discharging or bagging.

### TO REMOVE RECYCLING COVER:

Remove knob nuts and internal/external tooth lock washers securing recycling cover to mower deck. Remove cover. See Figure 2.12.



FIGURE 2.12

## Section 2 - OPERATING INSTRUCTIONS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

### 2.8 INSTALLATION OF SIDE DISCHARGE DEFLECTOR

**STEP 1:** Remove recycling cover. Refer to Section "Recycling Operation".

**STEP 2:** Install deflector to deck in place of recycling cover, making sure that: 1) front hole on outside front of deflector fits over stud where front of recycling cover was originally secured, 2) slot on top of deflector slips under restraining nut on top of deck (under right front corner of engine), and 3) slot on inside rear of deflector slips onto stud behind rear of discharge opening, where rear of recycling cover was originally secured. Install internal/external tooth lock washers and knob nuts onto studs and tighten securely. See Figure 2.13.

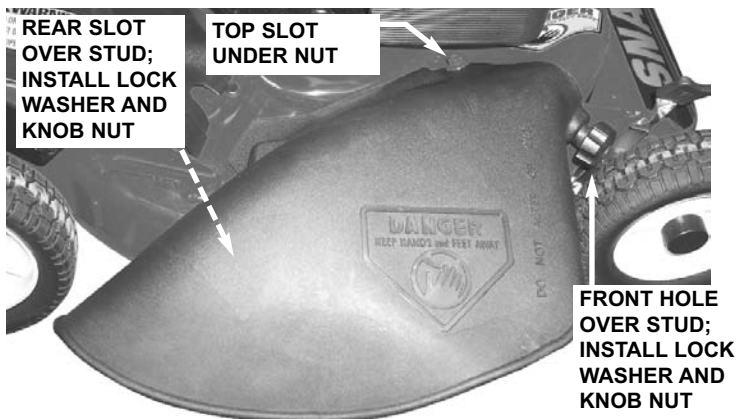


FIGURE 2.13

### 2.9 INSTALLATION OF GRASS BAG ADAPTER (Optional Accessory on Some Models)

**STEP 1:** Remove recycling cover. Refer to Section "Recycling Operation".

**STEP 2:** Install grass bag adapter to the deck in place of recycling cover, making sure that: 1) front hole on outside front of adapter fits over stud where front of recycling cover was originally secured, 2) slot on top of adapter slips under restraining nut on top of deck (under right front corner of engine), and 3) slot on bottom rear of adapter slips onto stud behind rear of discharge opening, where rear of recycling cover was originally secured. Install internal/external tooth lock washers and knob nuts onto studs and tighten securely. See Figure 2.14.

**STEP 3:** Route recoil rope around outside of rope guide pulley. See Figure 2.14. (NOTE: Recoil rope may need to be slackened. Refer to "Handle Assembly".)

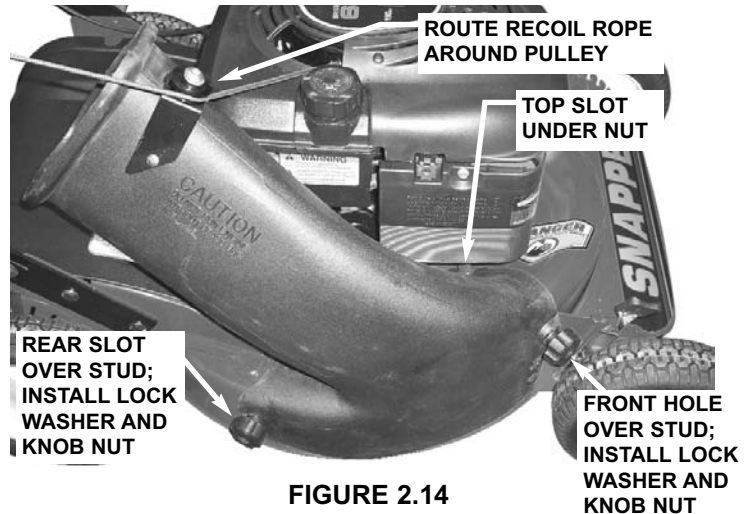


FIGURE 2.14

### 2.10 INSTALLATION OF GRASS BAG (Door Type Bag)

(Door Type Bag)

**STEP 1:** Install grass bag adapter. Refer to Section "Installation of Grass Bag Adapter".

**STEP 2:** Install grass bag by opening adapter cover and sliding connector over adapter flange. See Figure 2.15.

**STEP 3:** Attach grass bag hooks over middle handle cross bar. See Figure 2.15.



FIGURE 2.15

**WARNING**

DO NOT operate without entire Grass Catcher or guard in place. Grass Catcher components are subject to deterioration during normal use. Inspect frequently and replace worn or damaged components immediately.

Grass Catcher bags used on SNAPPER products are made of woven fabric, and are subject to deterioration and wear during normal usage. Check condition of bag before each use. Immediately replace worn or damaged catcher bags with only bags recommended by SNAPPER. The grass catcher is optional equipment on some models.

# Section 3 - MAINTENANCE

## 3.1 INTRODUCTION

To retain the quality of the mower, use genuine SNAPPER replacement parts only. Contact a local SNAPPER dealer for parts and service assistance. For the correct part or information for a particular mower, always mention model and serial number.

**WARNING**

**DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool. Wear heavy leather gloves when handling or working around cutting blades. Blades are extremely sharp and can cause severe injury.**

## 3.2 SERVICE - AFTER FIRST 5 HOURS

### 3.2.1. CHANGE ENGINE OIL

**IMPORTANT: Drain fuel tank before tipping machine. DO NOT tip machine with carburetor or spark plug down. Oil from crankcase will saturate the air filter and cause the engine to be hard to start or not start at all. If contamination does occur, the air filter will have to be replaced.**

1. Refer to Engine Manual for proper oil specifications, procedures and proper service intervals.

For simplest/cleanest oil change, simply turn mower on its side to drain oil, as shown in Figure 3.1. Drain oil through dipstick tube into a container. Allow sufficient time for all oil to drain.

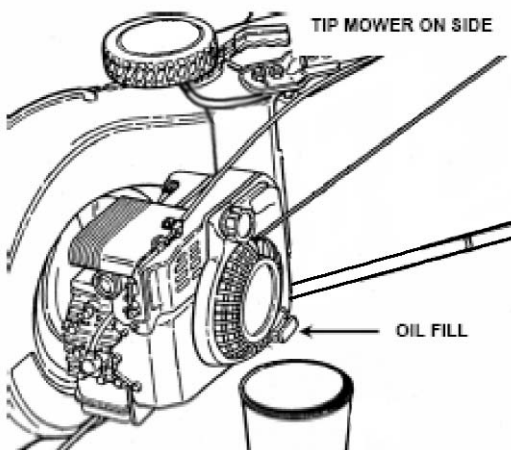


FIGURE 3.1

2. Dispose of drain oil properly.
3. Fill engine with oil as specified in Engine Manual. Do Not overfill.

### 3.2.2. CHECK MOWER BLADE

1. Disconnect spark plug wire and secure end away from plug.
2. Tilt mower up on its rear wheels for access to the blade cap screw. Do not tilt mower with spark plug or carburetor down. See Figure 3.2.
3. Check torque of blade retaining cap screw. Recommended torque should be 40 ft. lbs. See Figure 3.2.
4. Check blade for sharpness, wear and damage. Refer to Section "Blade Wear Limits".

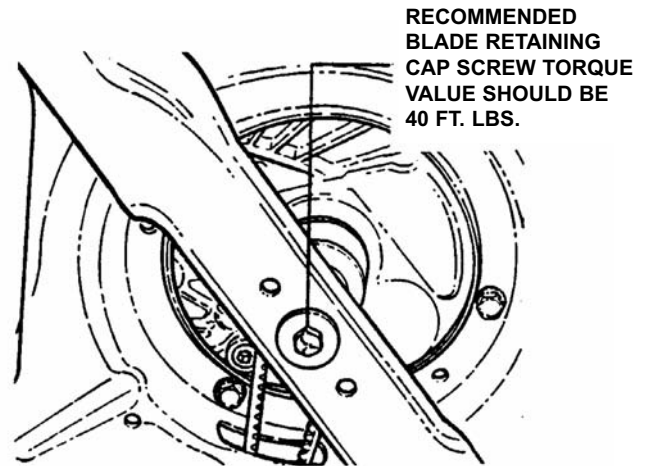


FIGURE 3.2

**IMPORTANT: Drain fuel tank before tipping mower. DO NOT tip machine with carburetor or spark plug down. Oil from crankcase will saturate the air filter and cause the engine to be hard to start or not start at all. If contamination does occur, the air filter will have to be replaced.**

### 3.2.3. CHECK ENGINE DRIVE BELT

1. Visually check engine drive belt for cracking, fraying, severed or belt strands exposed. If worn or damaged, replace belt before operating mower.

## 3.3 SERVICE - PERIODIC

Perform all maintenance as described in the "Service Schedule" section of this manual.

### 3.3.1. Engine

Service engine according to engine owner's manual.



### 3.3.2. Air Filter

Refer to engine owner's manual for service instructions.

### 3.3.3. Engine Oil

Refer to engine owner's manual for service instructions.

## Section 3 - MAINTENANCE

 <b>WARNING</b> 
<p><b>DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool. Wear heavy leather gloves when handling or working around cutting blades. Blades are extremely sharp and can cause severe injury.</b></p>

### 3.3.4. Wheel Drive Components

1. Remove rear cover. Refer to Section “Rear Cover Removal & Installation”.
2. Clean debris buildup on or around transmission, axles, idler, pulleys, belt, etc., as well as on underside of cover. Check components for wear or damage. Replace worn or damaged components immediately.
3. Replace rear cover.

**IMPORTANT:** DO NOT operate mower without rear cover securely in place.

### 3.4 STORAGE PROCEDURE

Refer to the Engine Owner’s Manual for directions regarding engine storage preparations. Prepare the mower for “end of season” storage as follows:

1. Drain fuel from fuel tank and let engine run until all fuel is out of the carburetor.
2. Disconnect and remove the spark plug wire away from spark plug before any other preparations are made!
3. Tape all openings closed to prevent spraying water into exhaust or air intakes during washing.
4. Tilt mower up on its rear wheels and thoroughly clean the underside of the deck. Do not tilt mower with spark plug or carburetor down. Scrape away any accumulation of grass with a putty knife and or wire brush.
5. Lubricate all exposed metal with a light coating of oil to prevent corrosion.
6. On self-propelled models, move ground speed control back to slow (“turtle”) position to prevent stretching of belt and/or idler spring.

7. Carefully fold the handles, “flexing” the control cables to prevent cable damage.

8. Store the mower in a shed or other dry area, protected from weather.

# Section 4 - REPAIR & ADJUSTMENTS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool. Wear heavy leather gloves when handling or working around cutting blades. Blades are extremely sharp and can cause severe injury.

## 4.1 MOWER BLADE REPLACEMENT

### 4.1.1. STANDARD BLADE WEAR LIMIT

1. Inspect blade frequently for signs of excessive wear or damage. See Figure 4.1.

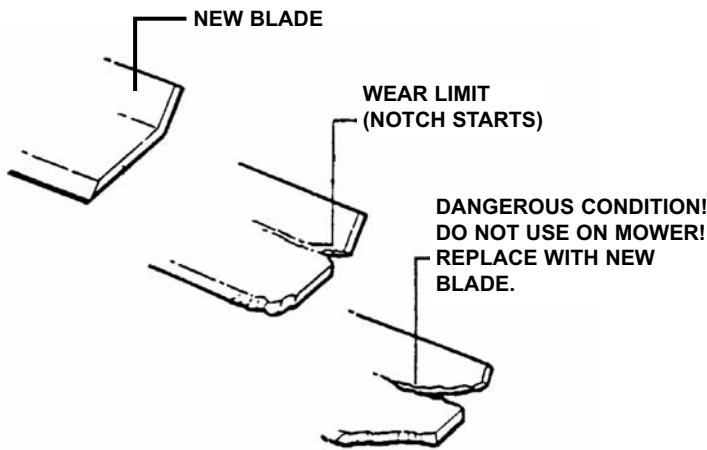


FIGURE 4.1

**WARNING**

DO NOT use a cutting blade that shows signs of excessive wear or damage. Refer to Section "MOWER BLADE REPLACEMENT" for proper blade inspection and service procedures.

### 4.1.2. BLADE SHARPENING

1. Disconnect spark plug wire and secure end away from plug.

**IMPORTANT: Drain fuel tank before tipping mower. DO NOT tip machine with carburetor or spark plug down.** Oil from crankcase will saturate the air filter and cause the engine to be hard to start or not start at all. If contamination does occur, the air filter will have to be replaced.

2. Tilt mower up on its rear wheels. Do not tilt mower with spark plug or carburetor down.
3. Remove blade. See Figure 4.2.

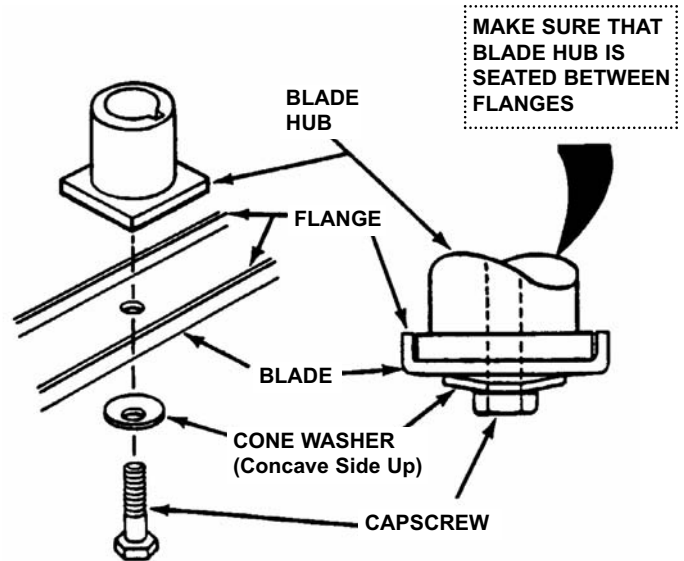


FIGURE 4.2

4. Sharpen blade on a grinding wheel at an angle of 22 to 28 degrees. DO NOT sharpen blade beyond original cutting edge. See Figure 4.3.

DO NOT SHARPEN BEYOND ORIGINAL CUTTING EDGE

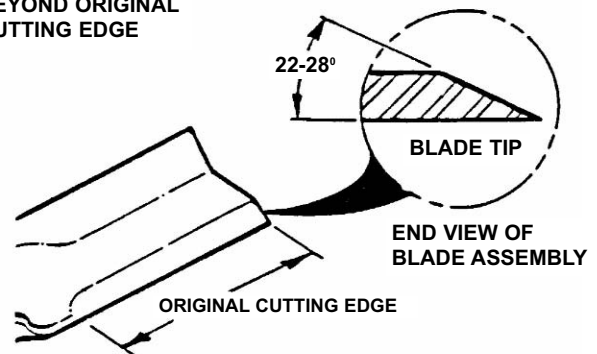


FIGURE 4.3

5. Check blade for balance. If necessary, correct balance by grinding heavy end of blade.

6. Reinstall blade. See Figure 4.2. Check torque of blade retaining cap screw. Recommended torque should be 40 ft. lbs.

# Section 4 - REPAIR & ADJUSTMENTS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

## 4.2 WHEEL DRIVE CONTROL ADJUSTMENT

The wheel drive control lever should engage the transmission when the lever is squeezed back against the handlebar, and disengage the transmission when the lever is released. See Figure 4.4.

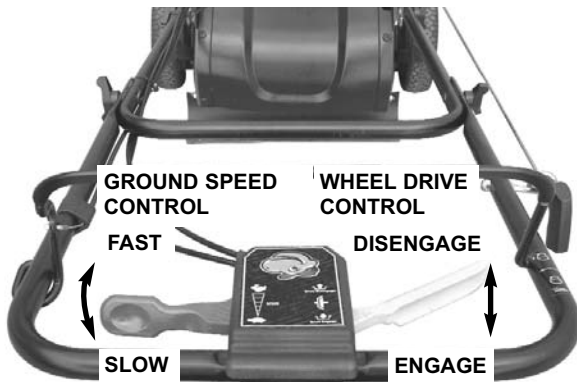


FIGURE 4.4

If the transmission does not fully engage or disengage, adjustment may be performed as follows:

1. Remove rear cover from mower. Refer to Section "Rear Cover Removal & Installation".
2. With wheel drive control lever in 'DISENGAGE' position (see Figure 4.4), spring on end of wheel drive control cable should have no tension. Measure overall length of unextended spring. See Figure 4.5.

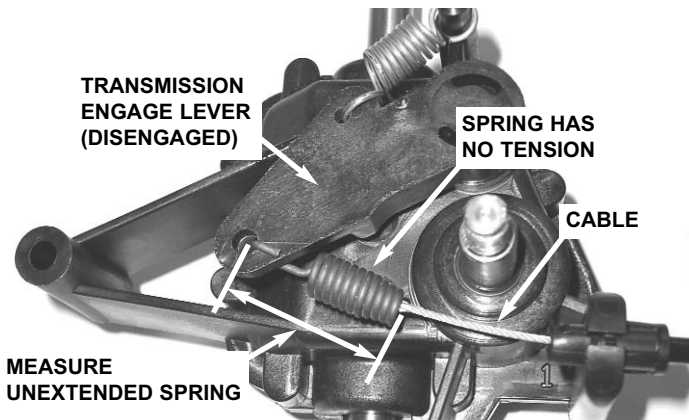


FIGURE 4.5

(Top of transmission; pulley removed for clarity)

3. Engage lever, and roll mower back and forth several times to ensure clutch dogs are fully engaged. With lever engaged, measure length of extended spring. Overall spring length should increase by 0.090 – 0.110" (3/32 – 7/64"). See Figure 4.5a.

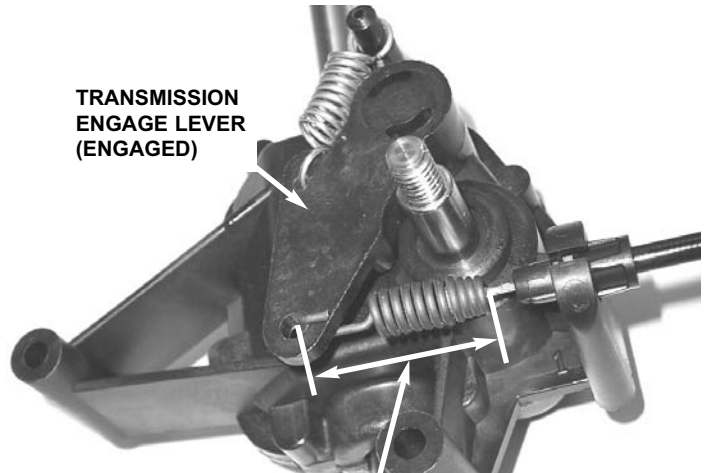


FIGURE 4.5a

4. To adjust spring extension:
  - a. Disengage lever.
  - b. To increase extended spring length, loosen jam nut, and rotate ferrule below adjustment turnbuckle, located on lower end of wheel drive control cable, 1/2 turn out from turnbuckle. Tighten jam nut. See Figure 4.5b.
  - c. To decrease extended spring length, loosen jam nut, and rotate ferrule 1/2 turn in toward turnbuckle. Tighten jam nut. See Figure 4.5b.

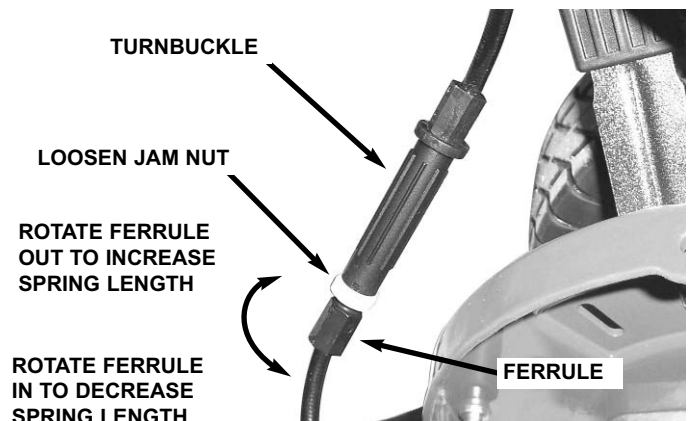


FIGURE 4.5b

5. Engage lever and recheck extended spring length. Repeat step 4 as needed.

**IMPORTANT: INCORRECT ADJUSTMENT CAN CAUSE DAMAGE TO THE TRANSMISSION.**

# Section 4 - REPAIR & ADJUSTMENTS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

### 4.3 GROUND SPEED CONTROL ADJUSTMENT

#### 4.3.1. IDLER SPRING TENSION ADJUSTMENT

Correct idler spring tension assures that mower will achieve fastest attainable speed when ground speed control lever is placed in 'FAST' position.

1. Remove rear cover from mower. Refer to Section "Rear Cover Removal & Installation".
2. Idler spring tension is adjusted properly when:
  - a. With lever in 'SLOW' position (see Figure 4.4), belt is relaxed, and idler spring on end of ground speed control cable has no extension. See Figure 4.6.

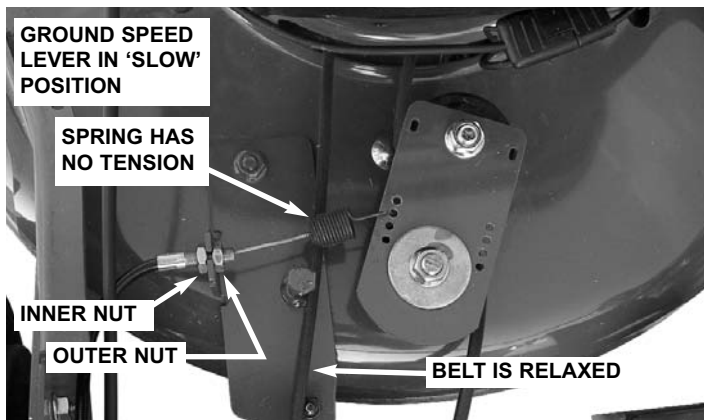


FIGURE 4.6

- b. With lever in 'FAST' position (see Figure 4.4), belt is tight, and idler spring on end of ground speed control cable is extended approx. 1". See Figure 4.7.

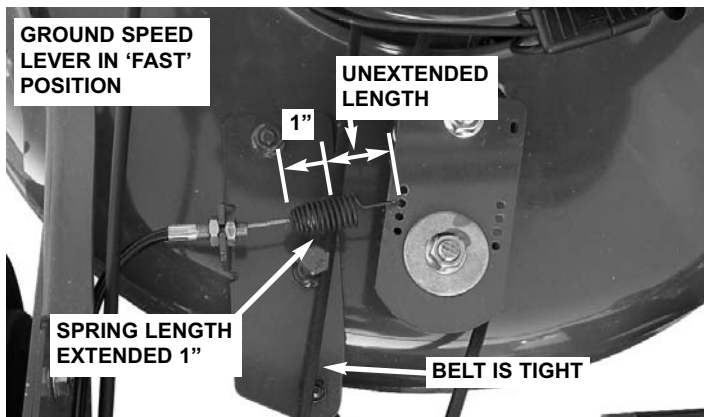


FIGURE 4.7

#### To adjust idler spring tension:

Loosen outer nut on end of ground speed cable, and run inner nut in toward cable (clockwise) or out from cable (counterclockwise) by 1/2 turn increments until correct adjustments are attained. See Figure 4.6. Be sure to tighten outer nut.

3. Replace rear cover.

#### 4.3.2. MINIMUM GROUND SPEED ADJUSTMENT

If mower is traveling too fast or too slow when ground speed control lever is placed in 'SLOW' position, minimum ground speed can be adjusted. **NOTE:** Before adjusting minimum ground speed, be sure idler spring tension is adjusted correctly, as idler spring tension may affect minimum ground speed. Refer to Section "Idler Spring Tension Adjustment".

1. Remove rear cover from mower. Refer to Section "Rear Cover Removal & Installation".
2. Place ground speed control lever in 'SLOW' position. See Figure 4.4.
3. Adjust minimum ground speed:

##### To decrease minimum ground speed:

Remove end of idler spring from current adjustment hole, and relocate spring one hole closer to idler arm pivot bolt. See Figure 4.7a.

##### To increase minimum ground speed:

Remove end of idler spring from current adjustment hole, and relocate spring one hole farther from idler arm pivot bolt. See Figure 4.7a.

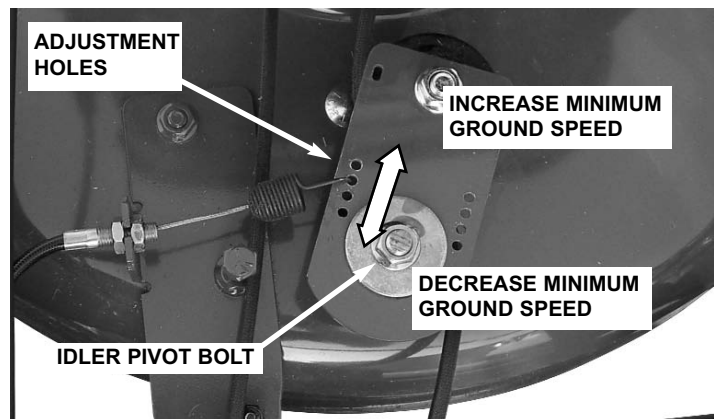


FIGURE 4.7a

**NOTE:** After adjusting minimum ground speed, readjustment of idler spring tension may be necessary.

4. Replace rear cover.
5. Check minimum ground speed; repeat adjustment as necessary.

**THE DRIVE BELT ON THIS UNIT IS SUBJECT TO WEAR, AND SHOULD BE CHECKED REGULARLY. REPLACE A WORN, FRAYED OR DAMAGED BELT IMMEDIATELY.**

# Section 4 - REPAIR & ADJUSTMENTS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

## 4.4 BELT SERVICE

On self-propelled mowers, the engine belt transmits power from the engine to the transmission that powers the rear wheels. Should the belt become worn, it could cause slippage, which would impair mower performance. The condition of the engine belt should be checked after every 25 hours of mower operation.

### 4.4.1. Engine Drive Belt Replacement

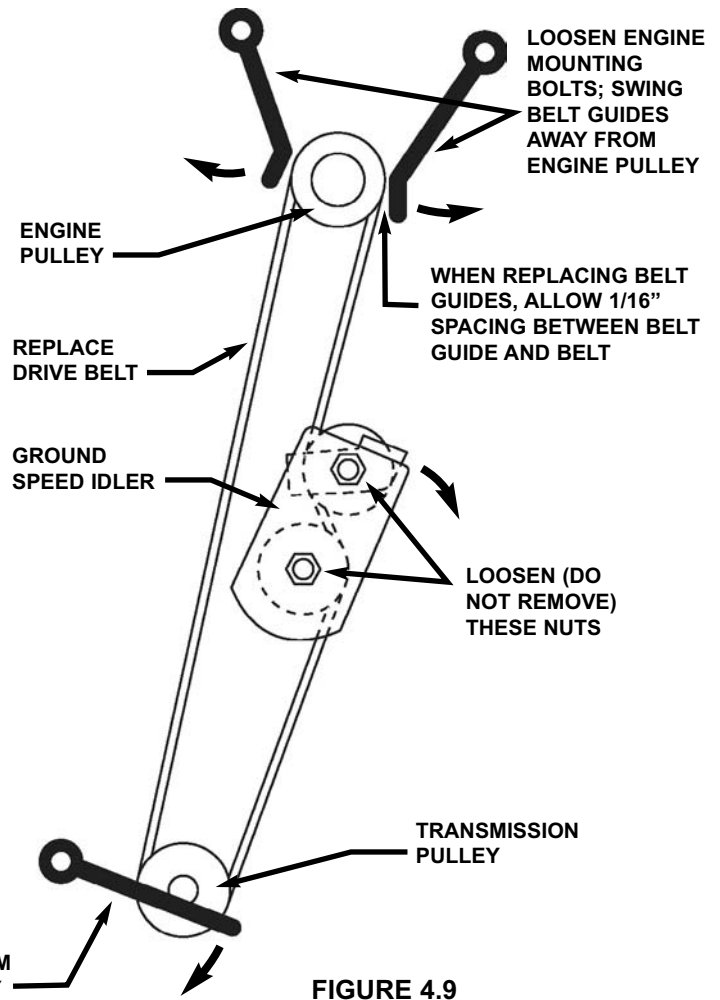
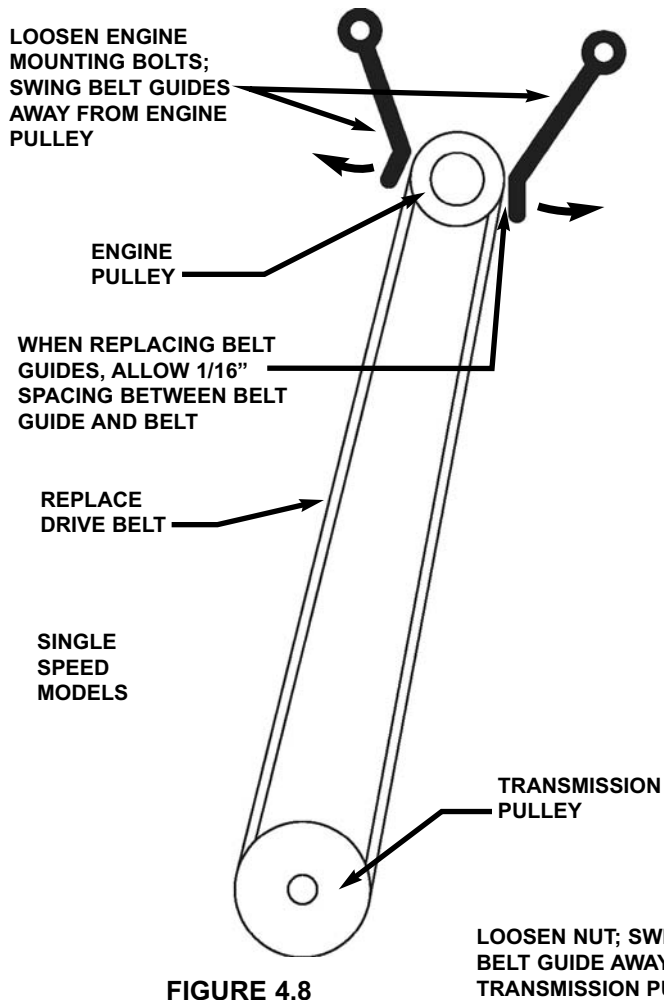
1. Empty fuel tank.
2. Remove blade. Refer to Section "Blade Sharpening".
3. Remove rear cover of mower. Refer to Section "Rear Cover Removal & Installation".

## 4. SINGLE SPEED MODELS

- a. Loosen (do not remove) engine mounting bolts securing belt guides, and swing belt guides out away from engine pulley. See Figure 4.8.
- b. Replace belt, noting belt routing in Figure 4.8.
- c. Replace belt guides, allowing approx 1/16" spacing between guides and belt. Torque engine mounting bolts to 40 ft-lbs.
- d. Replace blade and rear cover.

## 5. VARIABLE SPEED MODELS

- a. Loosen (do not remove) engine mounting bolts securing belt guides, and swing belt guides out away from engine pulley. Also loosen nut securing transmission belt guide, and swing guide back away from transmission pulley. See Figure 4.9.
- b. Loosen (do not remove) nuts securing ground speed idler pulleys to idler plate to ease removal of belt. See Figure 4.9.
- c. Replace belt, noting belt routing in Figure 4.9.
- d. Replace belt guides, allowing approx 1/16" spacing between guides and belt. Torque engine mounting bolts to 40 ft-lbs. Retighten idler pulley bolts, making sure idler belt guide is aligned as shown in Figure 4.9.
- e. Replace blade and rear cover.





# Section 4 - REPAIR & ADJUSTMENTS

**WARNING**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

### 4.5. BATTERY SERVICE

#### 4.5.1. NEW BATTERY PREPARATION

1. Remove battery from carton.
2. Place battery in a well ventilated area on a level non-concrete surface.
3. Test battery. Refer to Section "Battery Testing". If battery needs charging, charge battery. Refer to Section "Battery Charging".
4. Connect positive (+) lead (red) first, from battery harness to the positive terminal (+) on battery using bolt and nut plate supplied with battery. Connect negative (-) lead (black) last, to negative terminal (-) on battery using bolt and nut plate. Apply a small amount of grease over terminals to prevent corrosion. **NOTE:** Battery may come with harness already connected. If so, simply check to be sure terminal hardware is securely tightened.
5. Install battery into power unit.
6. Plug main harness battery harness connector.

**WARNING**

Shield the positive terminal with terminal cover located on battery harness. This prevents metal from touching the positive terminal, which could cause sparks.

#### 4.5.2. BATTERY SERVICE

1. Remove rear cover from mower. Refer to Section "Rear Cover Removal".
2. Test battery. Refer to Section "Battery Testing". If battery needs charging, charge battery. Refer to Section "Battery Charging".
3. If battery will not accept charge or is partially charged after charging per instructions, replace with new battery.

#### 4.5.3. BATTERY STORAGE

If Walk Behind is to be stored out of season on its rear bumper, it is recommended the battery be removed, charged and stored.

1. Remove battery.
2. Perform battery service. Refer to Section "Battery Service".
3. Store battery in an area away from the Walk Behind on a wood surface. DO NOT STORE BATTERY ON A CONCRETE SURFACE.

#### 4.5.4. BATTERY TESTING

Check the battery's state of charge using a voltmeter. Remember to hook the positive lead to the battery's positive terminal, and the negative lead to the negative terminal. Check reading against chart below. If voltage reads less than 12.80 volts, charge battery. Refer to Section "Battery Charging".

Battery Condition	
State of Charge	Digital Voltmeter
100% Charged	12.80v
75% Charged	12.40v
50% Charged	12.10v
25% Charged	11.90v
0% Charged	Less than 11.80v

#### 4.5.5. BATTERY CHARGING

**Supplied DC charger.** Plug charger connector into battery harness connector. See Figure 4.10. Plug charger into wall outlet and charge battery for 48 hours. (Longer periods will not damage battery.)

**Automotive-type charger.** Connect battery charger to battery terminals; RED to positive (+) and BLACK to negative (-) terminal. Slow charge battery at 0.4 amps for 5-10 hours. For quick charge, charge battery at 4.0 amps for 30 minutes.

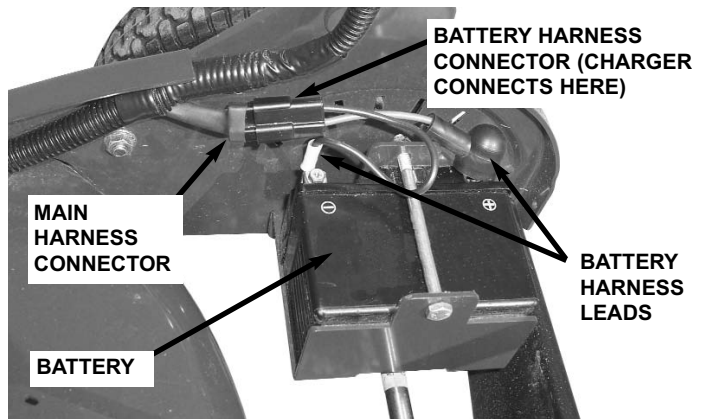


FIGURE 4.10

**WARNING**

Keep all sparks, flame and fire away from area when charging battery or when handling battery. Never use "BOOST" chargers on the battery.

## Section 4 - REPAIR & ADJUSTMENTS

**⚠ WARNING ⚠**

DO NOT attempt any maintenance, adjustments or service with engine and blade running. STOP engine and blade. Disconnect spark plug wire and secure away from spark plug. Engine and components are HOT. Avoid serious burns, allow sufficient time for all components to cool.

### 4.6. REAR COVER REMOVAL & INSTALLATION

1. To remove rear cover, remove six threaded fasteners securing rear cover to machine, and lift cover from machine. See Figure 4.11. Set components aside.
2. To install rear cover, place cover onto rear of mower, aligning holes in cover with holes in mower. Secure cover to mower with threaded fasteners. See Figure 4.11.

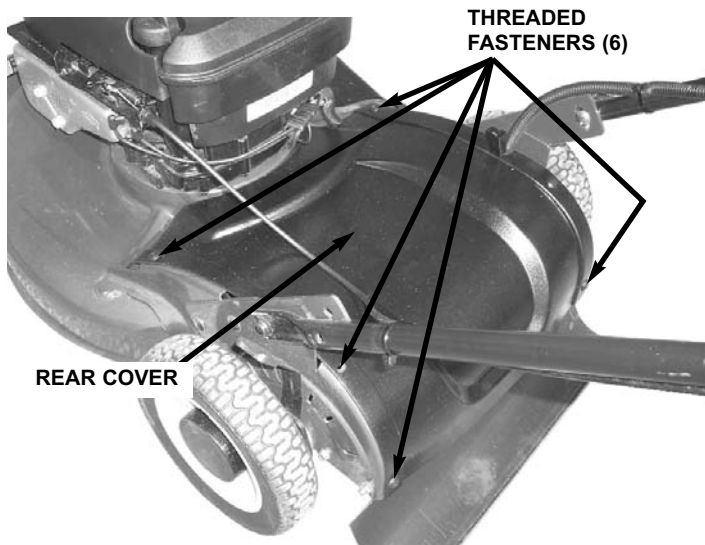


FIGURE 4.11

# TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
<b>Engine Will Not Start Using Recoil Starter</b>	1. Fuel tank empty.	1. Fill fuel tank with fresh fuel.
	2. Engine needs priming.	2. Prime. Check Engine Manual for Instructions.
	3. Spark plug wire disconnected.	3. Place spark plug wire onto spark plug.
<b>Engine Will Not Start (Electric Start Models)</b>	1. Fuel tank empty.	1. Fill fuel tank with fresh fuel.
	2. Engine needs priming.	2. Prime. Check Engine Manual for Instructions.
	3. Spark plug wire disconnected.	3. Place spark plug wire onto spark plug.
	4. Wiring harness disconnected.	4. Connect wiring harness.
	5. Battery dead.	5. Charge or replace battery.
<b>Engine Stalls or Stops After Running</b>	1. Blade control is released or is not being held securely against handle.	1. Blade control should be held securely against handle at all times during operation of mower.
	2. Fuel tank empty.	2. Fill with fuel to proper level.
	3. Engine air pre-cleaner and or air cleaner dirty.	3. Clean free of all debris.
	4. Spark plug defective or gap set improperly.	4. Service spark plug.
	5. Water, debris or stale fuel in fuel system.	5. Drain and clean fuel system.
<b>Engine Loses Power</b>	1. Engine air pre-cleaner or air cleaner dirty.	1. Clean or replace filters.
	2. Spark plug faulty.	2. Service spark plug.
	3. Water, debris or stale fuel in fuel system.	3. Drain and clean fuel system.
<b>Excessive Vibration</b>	1. Damaged, out of balance or bent mower blade.	1. Service mower blade.
	2. Loose blade components.	2. Service and tighten loose parts.
	3. Loose or missing air lift (if equipped).	3. Replace air lifts. Tighten to proper torque.
	4. Lumpy or frayed belt.	4. Replace belt.
<b>Mower Will Not Move Loss Of Traction (Self-Propelled Models)</b>	1. Build-up of debris on or around wheel drive components.	1. Clean debris.
	2. Transmission clutch cable adjustment required.	2. Adjust transmission clutch cable.
	3. Drive belt requires replacement.	3. Replace drive belt.
	4. Damaged transmission.	4. Contact authorized <b>SNAPPER</b> dealer.
<b>Transmission Noise (Self-Propelled Models)</b>	1. Transmission clutch cable adjustment required.	1. Adjust transmission clutch cable.
	2. Damaged transmission.	2. Contact authorized <b>SNAPPER</b> dealer.
<b>Ground Speed Too Fast / Too Slow; Unable to Adjust Ground Speed (Variable-Speed Self-Propelled Models)</b>	1. Build-up of debris on or around ground speed control components.	1. Clean debris.
	2. Ground speed control adjustment required.	2. Adjust ground speed control.
	3. Drive belt requires replacement.	3. Replace drive belt.
	4. Damaged transmission.	4. Contact authorized <b>SNAPPER</b> dealer.
<b>Cutting Grass Improperly</b>	1. Cutting height too low or high.	1. Adjust cutting height.
	2. Forward ground speed too fast.	2. Move ground speed control to a slower speed.
	3. Terraced cut, side to side.	3. Adjust height of cut with height adjust levers.
	4. Excessive deck pitch, front to rear.	4. Adjust height of cut with height adjust levers.
	5. Cutting blade dull or damaged.	5. Sharpen cutting edges or replace blade.
<b>Poor Grass Discharge</b>	1. Forward speed too fast.	1. Move ground speed control to a slower speed.
	2. Grass is wet.	2. Mow when grass is dry.
	3. Excessively worn or damaged blade.	3. Service mower blade.
	4. Build up of grass clippings and debris under deck.	4. Clean deck.
	5. Improper blade installed on deck.	5. Install proper <b>SNAPPER</b> blade.
	6. Blade installed improperly on deck.	6. Install blade properly.
<b>Oil Leaking</b>	1. Leaking engine case.	1. Contact authorized <b>SNAPPER</b> dealer.
		2. Check and tighten drain plug.
		3. Make sure dip stick or oil filler cap is securely in place.

# SERVICE SCHEDULE

ITEM	SERVICE PERFORMED	REF.	EACH USE	5 HRS	25 HRS	50 HRS	100 HRS	EACH SEASON
<b>Engine Oil</b>	Check Oil Level	Page 7	X					
	Initial Oil Change	Page 11		X				
	Periodic Oil Change	Page 11			X*			
<b>Air Pre-Cleaner</b>	Clean Sponge Element	Engine Manual			X**			
<b>Air Cleaner</b>	Clean or Replace	Engine Manual			X**			
<b>Spark Plug</b>	Replace	Engine Manual					X	
<b>Engine Cooling System</b>	Clean Shroud & Fins	Engine Manual					X**	
<b>Drive Belt</b>	Check for Wear and Tension	Page 11, 16			X	X		X
<b>Mower Blade</b>	Check for wear, Damage & Replacement	Page 13	X					
<b>Mower Deck</b>	Clean Debris Accumulation	Page 7	X					
<b>Wheel Drive Components</b>	Clean Debris Accumulation; Check for Wear or Damage	Page 12			X			
<b>Transmission Clutch Cable Spring Adjustment</b>	Check & Adjust	Page 14		X	X			X
<b>Front Caster Bushing (Swivel Wheel Models Only)</b>	Lubricate	Page 8			X			

\* Change oil every 25 hours when operating under heavy load or high temperatures.

\*\* Clean more often under dusty conditions or when air debris is present.

## MAINTENANCE/REPLACEMENT PARTS

<b>Blade Control Cable</b>	<b>7100074</b>
<b>Wheel Drive Control Cable (Self-Propelled Models)</b>	<b>7100263</b>
<b>Ground Speed Control Cable (Variable Speed Self-Propelled Models)</b>	<b>7100264</b>
<b>Cutter Blade (Double Wave)</b>	<b>7100242</b>
<b>Drive Belt (Self-Propelled Models)</b>	<b>7100058</b>
<b>Parts Manual for 21" Easy Line Walk Behind Mower</b>	<b>7006205</b>
<b>Parts Manual for 21" Easy Line Walk Behind Mower (Swivel-Wheel)</b>	<b>7006206</b>

# SNAPPER®

## 2 YEAR LIMITED WARRANTY

For two (2) years from purchase date for the original purchaser's residential, non-commercial use, **SNAPPER**, through any authorized **SNAPPER** dealer will replace, free of charge (except for taxes where applicable), any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

For ninety (90) days from purchase date for the original purchaser's commercial, rental, or other non-residential use, **SNAPPER**, through any authorized **SNAPPER** dealer will replace, free of charge, any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

All transportation costs incurred by the purchaser in submitting material to an authorized **SNAPPER** dealer for replacement under this warranty must be paid by the purchaser.

This warranty does not apply to certain transmissions, to engines and their components, and batteries, as these items are warranted separately. This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond the control of **SNAPPER**. This warranty does not cover any machine or component part that has been altered or modified changing safety, performance, or durability.

Batteries have a one (1) year warranty period with free replacement if required for one (1) year from the original purchase date. **SNAPPER** will not be responsible for any installation cost incurred. The battery warranty only covers original equipment batteries and does not cover damage to the battery or machine caused by neglect or abuse, destruction by fire, explosion, freezing, overcharging, improper maintenance, or use of improper electrolyte.

There is no other express warranty.

### DISCLAIMER OF WARRANTY

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential or other non-commercial use, and ninety (90) days from purchase for the original purchaser's commercial, rental or other non-residential use, and to the extent permitted by law, any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages, under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts, or 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.

**WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.**

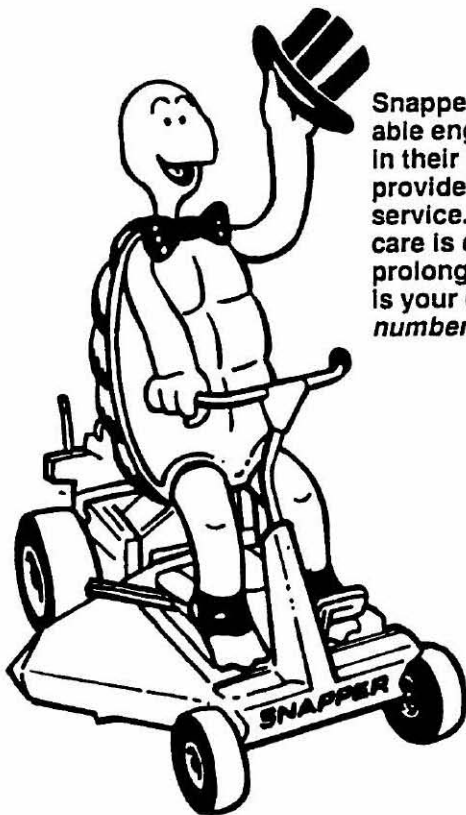
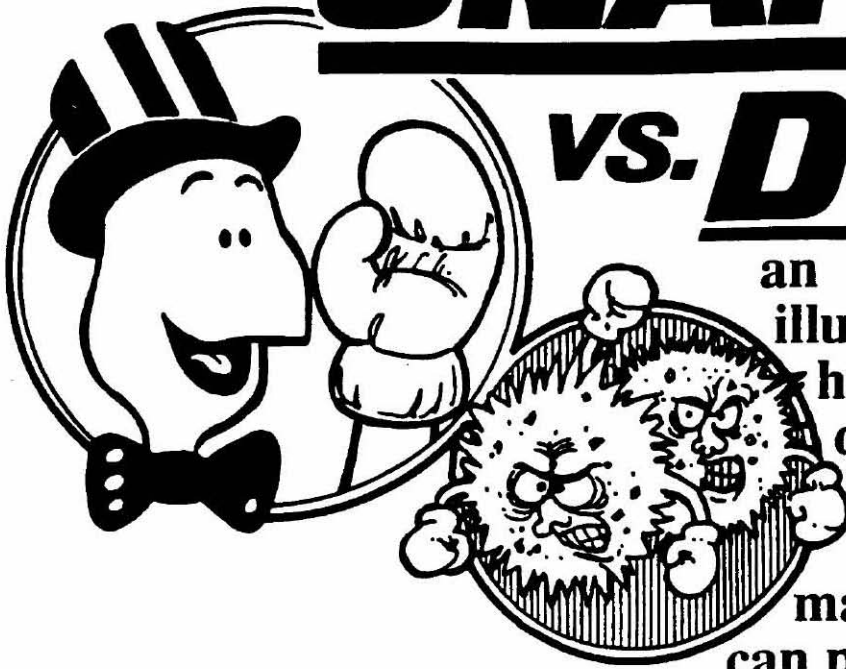
**IMPORTANT:** Please fill out the attached **SNAPPER** Product Registration Card immediately and mail to:  
**Snapper's Product Registration Center, P.O. Box 1379, McDonough, Georgia 30253**

PRIMARY MAINTENANCE

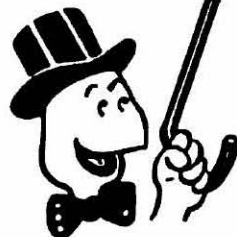
# SNAPPER®

## vs. DIRT!

an illustration of how dirt can damage your engine & how reasonable maintenance can protect it!

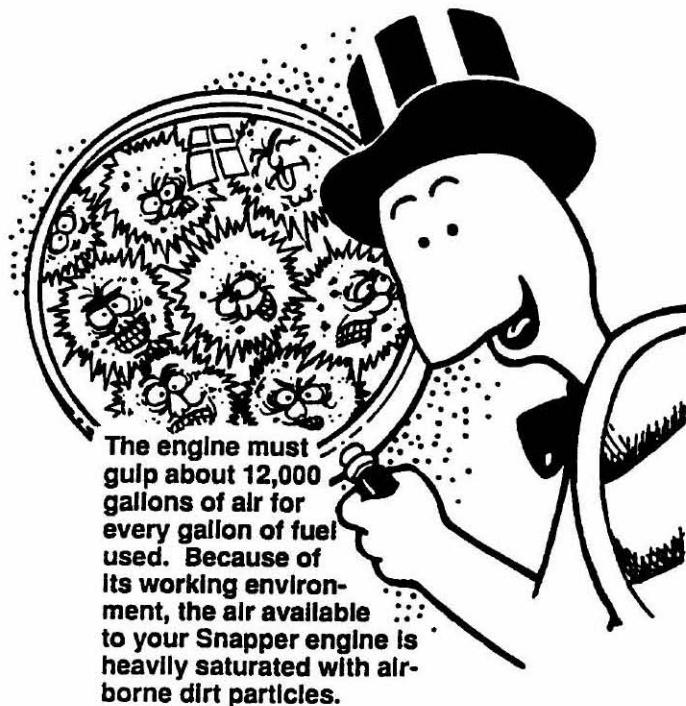


Snapper uses the best available engines and components in their products in order to provide long, satisfactory service. However, proper care is essential in prolonging engine life. Dirt is your engine's *enemy number 1!*



The engine on your Snapper product spends its entire life operating close to the ground at high speed creating a virtual storm of dust and dirt!

# PRIMARY MAINTENANCE



The engine must gulp about 12,000 gallons of air for every gallon of fuel used. Because of its working environment, the air available to your Snapper engine is heavily saturated with airborne dirt particles.



Knowing that dirt will quickly ruin an engine, manufacturers equip their engines with extremely efficient air cleaners to filter out the harmful dirt.

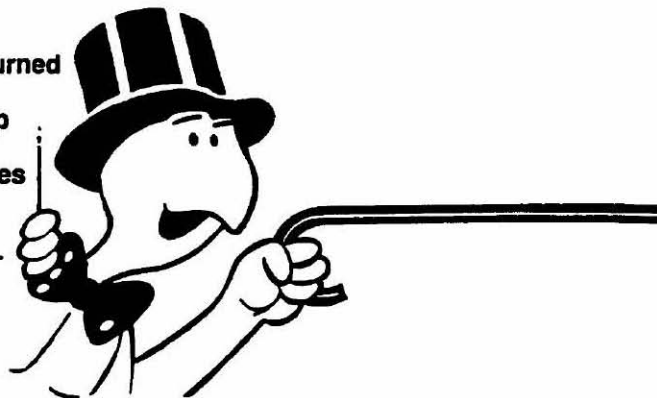
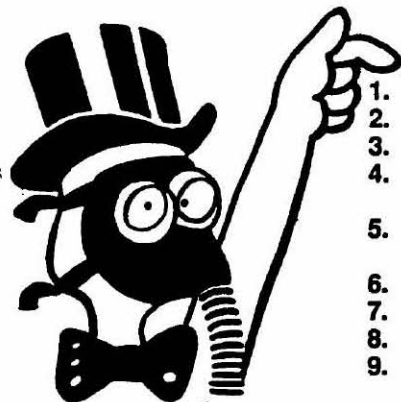
As the dirt particles are stopped, they build up and begin to clog the outside of the filter. This reduces the amount of air available to the engine and causes an over-rich fuel mixture which results in the following adverse effects:

An improperly serviced, dirt clogged air cleaner will:

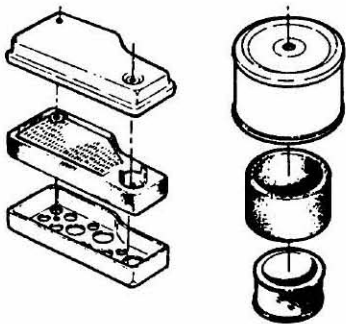
1. increase fuel consumption
2. cause power loss
3. result in hard starting
4. create smoke from unburned fuel
5. produce carbon build-up internally
6. foul spark plug electrodes
7. score cylinder walls
8. burn valves
9. wear out the engine prematurely
10. COST YOU MONEY!

Damage caused by a poorly serviced air cleaner is not covered under the engine warranties. So, save yourself unnecessary expenses and undue aggravation by keeping the air cleaner properly serviced at the intervals specified in the engine owner's manual.

It doesn't take long to service an air cleaner. Follow the specific instructions in the engine owner's manual for the type filter used. Prevent dirt from falling into the carburetor intake when servicing your air cleaner. Make sure components are installed in correct sequence after servicing to prevent unfiltered air from entering the engine. Some servicing hints on several common types are:



# PRIMARY MAINTENANCE



Generally, wash foam-type filters in a dishwashing detergent and water solution. Rinse and wring dry, then saturate with oil and squeeze out excess. *Failure to re-oil this type filter will ruin the engine.*

Clean paper elements by tapping lightly. Blowing with air will rupture paper elements.

Use a flashlight to detect clogged or torn paper elements - replace if damaged in any way.



Air is also needed to keep your engine cool. Dirt, dust & debris build up to restrict and clog cooling air intake screens and fins. Clean screens and fins at frequent intervals. The engine blower housing and shrouds should be removed at least once each season or more often under dry, dusty conditions for a thorough cleaning of fins.



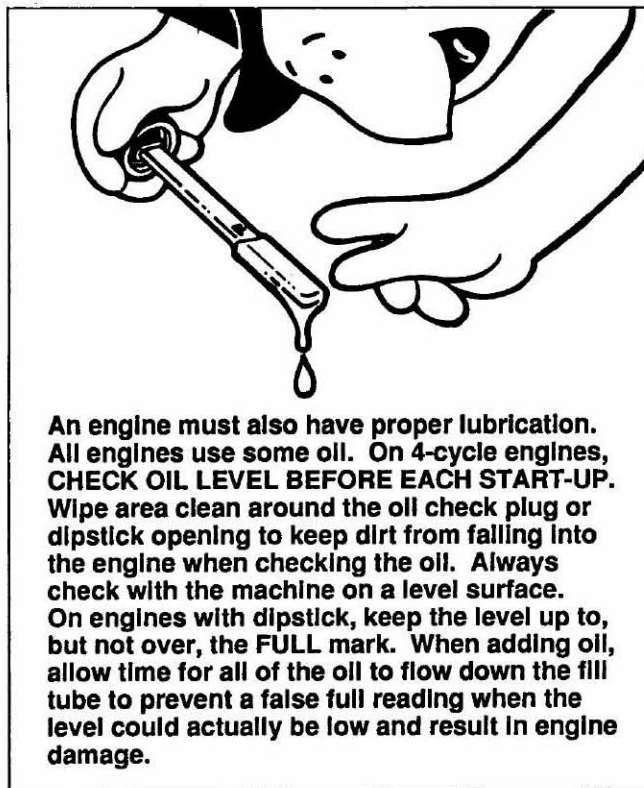
Failure to keep external surfaces clean not only presents fire hazards, but causes overheating and resulting engine damages such as:

1. distorted valve guides
2. sticking valves
3. scuffed, scored cylinder walls
4. overspeeding
5. loss of power
6. complete failure of engine.



Dirt can also be introduced into an engine in dirty fuel from a contaminated container. Always use clean fresh fuel from a clean container to guard against dirt, sludge and water contamination.

Be aware that fuel breaks down in storage and forms gummy compounds which will block carburetor passages. Never use fuel more than 3 months old. Drain tank then run the engine out of fuel before storing during the off-season.

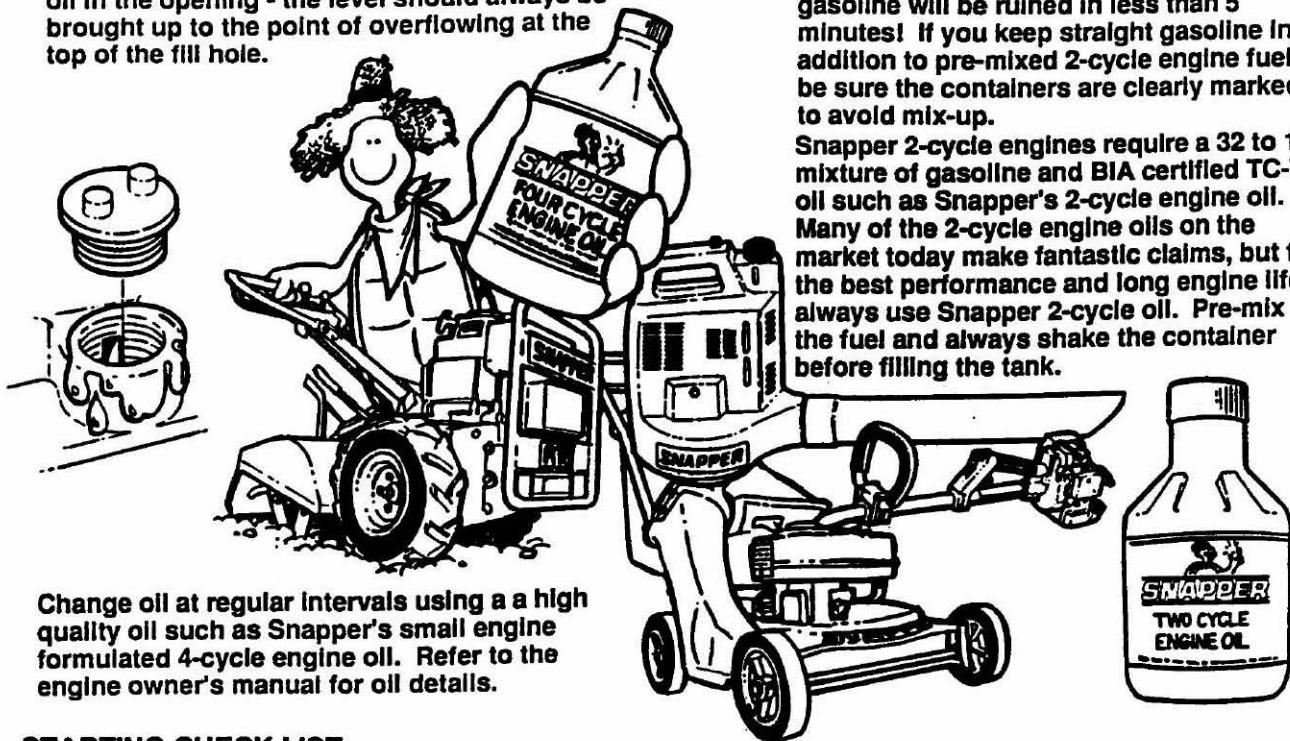


An engine must also have proper lubrication. All engines use some oil. On 4-cycle engines, **CHECK OIL LEVEL BEFORE EACH START-UP.** Wipe area clean around the oil check plug or dipstick opening to keep dirt from falling into the engine when checking the oil. Always check with the machine on a level surface. On engines with dipstick, keep the level up to, but not over, the FULL mark. When adding oil, allow time for all of the oil to flow down the fill tube to prevent a false full reading when the level could actually be low and result in engine damage.



# PRIMARY MAINTENANCE

On 4-cyle engines with an oil level plug, don't be fooled into thinking the engine has sufficient lubricating oil if you can see "some" oil in the opening - the level should always be brought up to the point of overflowing at the top of the fill hole.



On 2-cycle engines, lubrication must be provided by an exact mixture of gasoline and 2-cycle air-cooled engine oil. A 2-cycle engine that is mistakenly run on straight gasoline will be ruined in less than 5 minutes! If you keep straight gasoline in addition to pre-mixed 2-cycle engine fuel, be sure the containers are clearly marked to avoid mix-up.

Snapper 2-cycle engines require a 32 to 1 mixture of gasoline and BIA certified TC-W oil such as Snapper's 2-cycle engine oil. Many of the 2-cycle engine oils on the market today make fantastic claims, but for the best performance and long engine life, always use Snapper 2-cycle oil. Pre-mix the fuel and always shake the container before filling the tank.

Change oil at regular intervals using a high quality oil such as Snapper's small engine formulated 4-cycle engine oil. Refer to the engine owner's manual for oil details.

## STARTING CHECK LIST

- |                              |  |
|------------------------------|--|
| 1. Engine Oil                | <ul style="list-style-type: none"> <li>• To full level (4-cycle)</li> <li>• Properly mixed with gas (2 cycle)</li> </ul>             |
| 2. Air Cleaner               | <ul style="list-style-type: none"> <li>• Clean and properly serviced</li> <li>• Full fresh clean gasoline</li> </ul>                 |
| 3. Fuel Tank                 | <ul style="list-style-type: none"> <li>• Fuel valve open</li> <li>• Cap vent open</li> <li>• Inline filter clean</li> </ul>          |
| 4. Choke                     | <ul style="list-style-type: none"> <li>• Operating properly</li> </ul>   |
| 5. Primer (on some engines)  | <ul style="list-style-type: none"> <li>• Used properly</li> </ul>  |
| 6. Safety Interlock Switches | <ul style="list-style-type: none"> <li>• In proper position</li> <li>• All wires properly connected</li> </ul>                       |
| 7. Switch & Blade Control    | <ul style="list-style-type: none"> <li>• Switch On</li> <li>• Blade control properly positioned on walk mower</li> </ul>             |
| 8. Spark plug                | <ul style="list-style-type: none"> <li>• Wire connected</li> <li>• Good connection</li> </ul>  |
| 9. Throttle control          | <ul style="list-style-type: none"> <li>• Start position</li> </ul>   |
| 10. Blade                    | <ul style="list-style-type: none"> <li>• Properly installed and torqued</li> <li>• Sharpened</li> </ul>                              |
| 11. Muffler                  | <ul style="list-style-type: none"> <li>• Good condition</li> <li>• Not clogged</li> <li>• Grass &amp; leaves cleaned away</li> </ul> |

Read and follow all safety instructions in safety booklets and manuals.

Keep in mind that dirt is your engine's *enemy #1* both internally and externally! Internally, dirt will quickly ruin an engine and externally it will cause overheating and resulting internal damages. Damage caused by improper lubrication, poor air cleaner service or overheating due to dirt cannot be covered under warranty.

It only takes a few moments to service the engine (and equipment) on a routine basis but the rewards will be a quick starting, responsive engine that will provide long satisfactory service with minimum maintenance cost. The prestart checklist in the next column and instructions in your Snapper Operator's Manual are designated to help you keep your Snapper in top operating condition with minimum effort!

# **SNAPPER PRODUCT REGISTRATION FORM**

**IMPORTANT: KEEP THIS INFORMATION FOR YOUR PERSONAL RECORDS  
(Complete the following information on your Snapper purchase)**

**Model Number** \_\_\_\_\_

**Serial Number** \_\_\_\_\_

**Date of Purchase** \_\_\_\_\_

**Retailer** \_\_\_\_\_

**Retailer's Phone Number** \_\_\_\_\_

**It is very important that you register your purchase with Snapper to ensure warranty coverage. Please mail your product registration card to:**

**Snapper at P.O. Box 777, McDonough, Georgia 30253.**

**Or you may register on line at [www.snapper.com](http://www.snapper.com).**

**You can contact us at our web site or if you would like to speak with a Customer Service Representative. Call us at the Snapper Customer Relations Center. For faster service please have your Serial Number and Model Number available.**

**Call the Snapper Customer Relations Center at 1-800-935-2967.**



## Safety Instructions & Operator's Manual for

# SNAPPER®

## 21" 'EASY LINE' WALK BEHIND MOWERS

### IMPORTANT

Snapper products are built using engines that meet or exceed all applicable emissions requirements on the date manufactured. The labels on those engines contain very important emissions information and critical safety warnings. Read, Understand, and Follow all warnings and instructions in this manual, the engine manual, and on the machine, engine and attachments. If you have any questions about your Snapper product, contact your local authorized Snapper dealer or contact Snapper Customer Service at Snapper, McDonough, GA. 30253. Phone: (1-800-935-2967).

#### WARNING

BATTERY POSTS, TERMINALS AND RELATED ACCESSORIES CONTAIN LEAD AND LEAD COMPOUNDS, CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. WASH HANDS AFTER HANDLING.

#### WARNING

ENGINE EXHAUST, SOME OF ITS CONSTITUENTS, AND CERTAIN VEHICLE COMPONENTS CONTAIN OR EMIT CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR OTHER REPRODUCTIVE HARM.

**SNAPPER**® McDonough, GA., 30253 U.S.A.