



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.
2. **DO NOT** allow children in yard when machine is operated (even with the blade OFF).
3. **DO NOT** allow children or others to ride on machine or on attachments (even with the blades OFF). They may fall and be seriously injured.
4. **DO NOT** allow pre-teenage children to operate machine.
5. **ALLOW** only responsible adults & teenagers with mature judgment under close adult supervision to operate machine.
6. **DO NOT** operate blades in reverse. **STOP BLADES. LOOK and SEE** behind and down for children, pets and hazards before and while backing.
7. **USE EXTRA CARE** when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

PROTECTION AGAINST TIPOVERS

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra CAUTION. If you cannot back up the slope or if you feel uneasy on the slope, **DO NOT** mow it. Use extra care with grass catchers or other attachments; these affect the handling and the stability of the machine.

1. **DO NOT** operate machine on slopes exceeding 15 degrees (27% grade).
2. Exercise **EXTREME CAUTION** on slopes above 10 degrees (18% grade). Turn blades OFF when traveling uphill. Use a slow speed and avoid sudden or sharp turns.
3. **DO NOT** operate machine back and forth across face of slopes. Operate up and down. Practice on slopes with blades off.
4. **AVOID** uphill starts. If machine stops going uphill or tires lose traction, turn blades OFF and back slowly down the slope.

PROTECTION AGAINST TIPOVERS

(Continued From Previous Column)

5. **STAY ALERT** for holes and other hidden hazards. Tall grass can hide obstacles. Keep away from ditches, washouts, culverts, fences and protruding objects.
6. **KEEP A SAFE DISTANCE** (at least 3 feet) away from edge of ditches and other drop offs. The machine could turn over if an edge caves in.
7. Always begin forward motion slowly and with caution.
8. Use weights or a weighted load carrier in accordance with instructions supplied with a grass catcher. **DO NOT** operate machine on slopes exceeding 10 degrees (18% grade) when equipped with grass catcher.
9. **DO NOT** put your foot on the ground to try to stabilize the machine.
10. **DO NOT** operate machine on wet grass. Reduced traction could cause sliding.
11. **DO NOT** operate machine under any condition where traction, steering or stability is doubtful.

PREPARATION

1. Read, understand, and follow instructions and warnings in this manual and on the machine, engine and attachments. Know the controls and the proper use of the machine before starting.
2. Only mature, responsible persons shall operate the machine and only after proper instruction.
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 from machine. **DO NOT** smoke.
5. Practice operation of machine with **BLADES OFF** to learn controls and develop skills.
6. 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.



IMPORTANT SAFETY INSTRUCTIONS



PREPARATION

(Continued From Previous Page)

7. Keep people and pets out of mowing area. Immediately STOP blades, STOP engine, and STOP machine if anyone enters the area.
8. Check shields, deflectors, switches, blade controls and other safety devices frequently for proper operation and location.
9. Make sure all safety decals are clearly legible. Replace if damaged.
10. Protect yourself when mowing and wear safety glasses, long pants and substantial footwear.
11. Know how to STOP blades and engine quickly in preparation for emergencies.
12. Use extra care when loading or unloading the machine into a trailer or truck.
13. 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 worn spots.

OPERATION

1. Mount and dismount machine from left side.
2. Start engine from operator's seat, if possible. Make sure blades are OFF and parking brake is set.
3. DO NOT leave machine with engine running. STOP engine, STOP blades, SET brake, and Remove key before leaving operators position of any reason.
4. DO NOT operate machine unless properly seated with feet on feet rests or pedal(s).
5. STOP BLADES and ENGINE and make sure blades have stopped before removing grass catcher or unclogging mower to prevent loss of fingers or hand.
6. Blades must be OFF except when cutting grass. Set blades in highest position when mowing over rough ground.
7. Keep hands and feet away from rotating blades underneath deck. DO NOT place foot on ground while BLADES are ON or machine is in motion.
8. DO NOT operate machine without entire grass catcher or guards in place. DO NOT point discharge at people, passing cars, windows or doors.
9. Slow down before turning.
10. Watch out for traffic when near or crossing roadways.
11. STOP engine immediately after striking an obstruction. Inspect machine and repair damage before resuming operation.
12. Operate machine only in daylight or with good artificial light.
13. Move joystick (if equipped) SLOWLY to maintain control during speed and directional changes.

OPERATION

(Continued From Previous Column)

14. Exercise CAUTION when pulling loads. Limit loads to those you can safely control and attach loads to hitch plate as specified with SNAPPER attachment instructions.
15. DO NOT operate engine in enclosed areas. Engine exhaust gases contain carbon monoxide, a deadly poison.

MAINTENANCE

1. DO NOT store machine 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 the reach of children in a well ventilated, unoccupied building.
2. Keep 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. Check brakes frequently; adjust, repair or replace as needed.
5. Keep all bolts, nuts and screws properly tight. Check that all cotter pins are in proper position.
6. Always provide adequate ventilation when running engine. Exhaust gases contain carbon monoxide, an odorless and deadly poison.
7. Disconnect negative (black) cable from battery before performing maintenance or service. Cranking engine could cause injury.
8. DO NOT work under machine without safety blocks.
9. Service engine and make adjustments only when engine is stopped. Remove spark plug wire(s) from spark plug(s) and secure wire(s) away from spark plug(s).
10. DO NOT change engine governor speed settings or overspeed engine.
11. Lubricate machine at intervals specified in manual to prevent controls from binding.
12. Mower blades are sharp and can cut. Wrap the blades or wear heavy leather gloves and use CAUTION when handling them.
13. DO NOT test for spark by grounding spark plug next to spark plug hole; spark plug could ignite gas exiting engine.
14. Have machine serviced by an authorized SNAPPER dealer at least once a year and have the dealer install any new safety devices.
15. Use only genuine SNAPPER replacement parts to assure that original standards are maintained.
16. If battery is removed, DO NOT operate engine without insulating Positive + battery cable terminal with electrical tape, or sparking from battery cables can result.

Section 2 - OPERATING INSTRUCTIONS

WARNING
DO NOT leave machine with the engine running. Stop engine. Stop blade. Shift to neutral. Engage parking brake. Remove key.

2.4 STOPPING - ENGINE, WHEEL DRIVE, BLADE

2.4.1. ENGINE

1. Stop engine by turning key to the "OFF" position. See Figure 2.13.

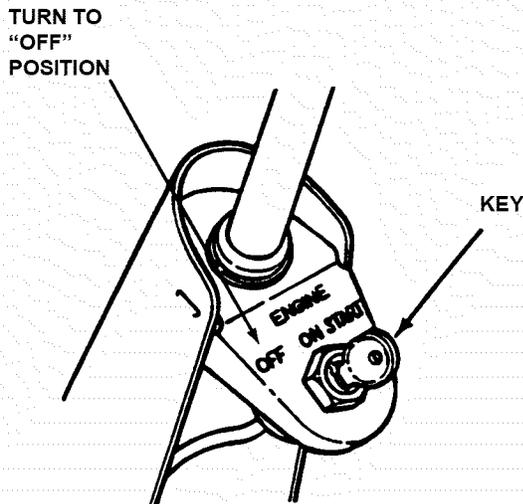


FIGURE 2.13

2.4.2. WHEEL DRIVE

1. Stop motion of Rear Engine Rider by pushing clutch/brake pedal all the way "DOWN" to apply brake. See Figure 2.14.

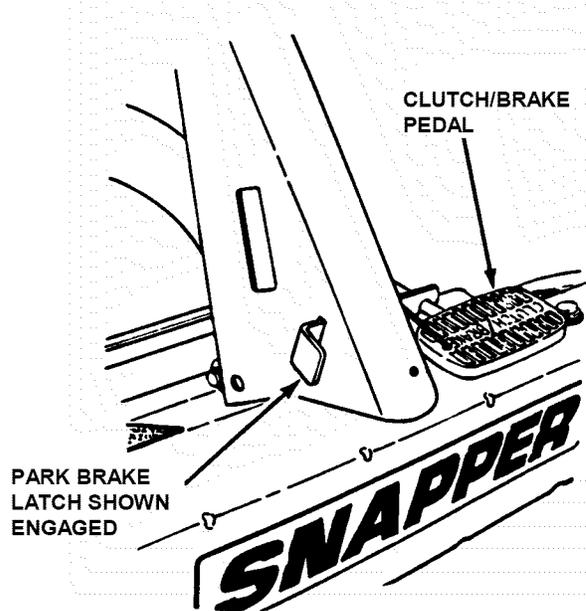


FIGURE 2.14

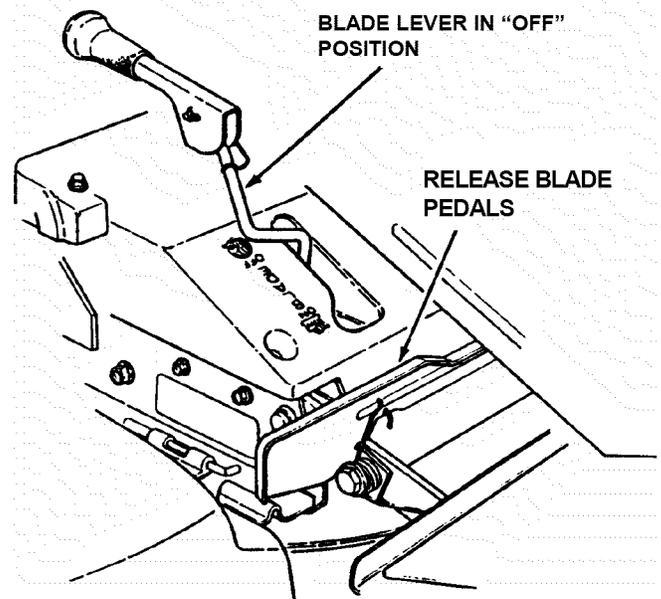


FIGURE 2.15

WARNING
Once blade is disengaged, it should come to a complete stop in 3 seconds or less. If the blade continues to rotate after 3 seconds, the blade brake must be adjusted. Refer to Section "BLADE BRAKE ADJUSTMENT" for adjustment procedures or return machine to an authorized SNAPPER dealer for adjustment. DO NOT CONTINUE to operate machine until blade brake is adjusted and functioning properly.

2.4.3. MOWER BLADE

1. Stop mower blade by releasing blade pedals or moving blade lever rearward to the "OFF" position. See Figure 2.15.

(Continued on Next Page)

Section 2 - OPERATING INSTRUCTIONS

2.4 STOPPING - ENGINE, WHEEL DRIVE, BLADE

2.4.4. PARK BRAKE

1. Engage park brake by pushing clutch/brake pedal "DOWN" and moving the park brake latch to the "ENGAGED" position. While holding the park brake latch "ENGAGED", release clutch/brake pedal to set park brake. See Figure 2.16.

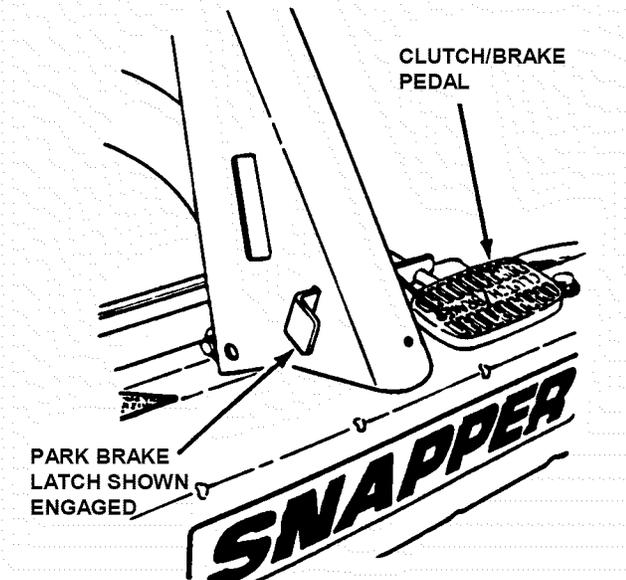


FIGURE 2.16

2. Release park brake by pushing down on the clutch/brake pedal, parking brake latch will move to the "OFF" position unassisted. See Figure 2.17.

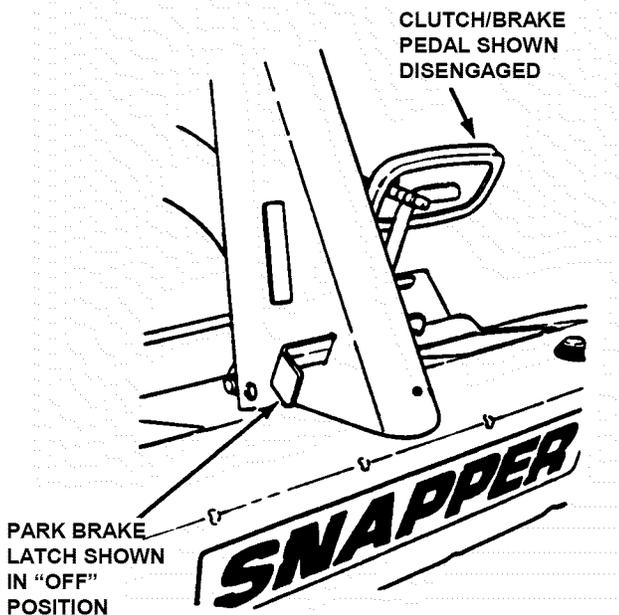


FIGURE 2.17

2.5. CUTTING HEIGHT ADJUSTMENT

1. Adjust cutting height as desired to any one of five positions using deck lift lever. Move deck lift lever up or down to desired cutting height and then move over to secure in the height of cut notch. See Figure 2.18.

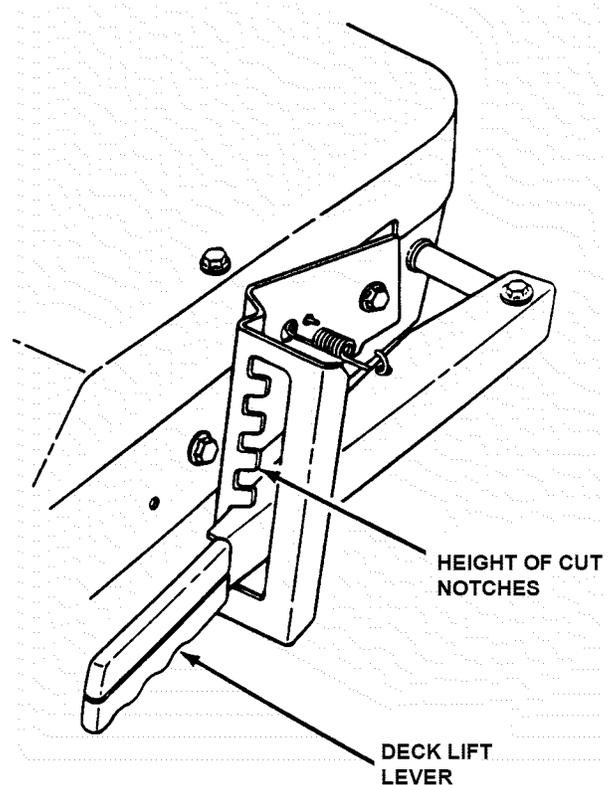


FIGURE 2.18

Section 2 - OPERATING INSTRUCTIONS

2.6 REVERSE LOCKOUT MECHANISM

Data indicates that tragic back-over accidents occur each year. These accidents usually involve unsupervised children. Many times these children have been given rides on the machine and have been trained to view this potentially dangerous piece of machinery as fun rather than being taught how to avoid danger.

This riding mower has a Reverse Lockout Mechanism. This mechanism prevents the mower from being shifted into reverse with the blade running. To shift into reverse you must first stop the blade by releasing the blade pedals and then shift to reverse. It is our recommendation that this mechanism remain functional and the operator of this equipment develop the habit of never backing up with the blade running. As the Safety Instructions Indicate, **DO NOT operate blades in reverse. STOP BLADES, LOOK AND SEE BEHIND AND DOWN for children, pets and hazards before and while backing.**

We realize that this could cause a change to your previous mowing method but we encourage you to adjust to this new system. Do not defeat the Reverse Lockout Mechanism.

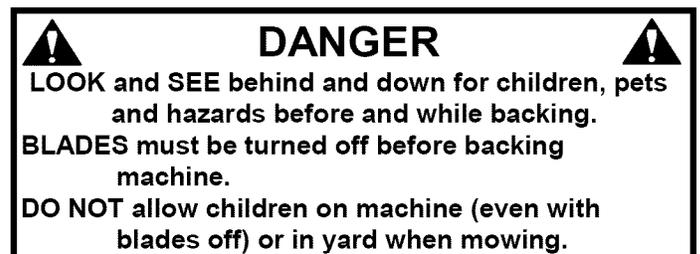
If you operate your mower near roadways or use attachments that require quicker shifting to reverse, there is an override lever provided. This lever can be pushed and held before starting the blade and will allow reverse operation until the blade pedals are released, at which time the system will return to its Reverse Lockout mode. This feature should never be selected unless you are absolutely sure that no children or others are present in the mowing area and that all children are away and supervised by a responsible adult.

2.6.1. Reverse Lockout Mechanism Override

1. Stop machine. Stop blade.
2. Depress and hold Override Lever.
3. Depress and hold Blade Pedals. Release Override Lever.
4. Move blade lever forward to "ON" position.



IMPORTANT: DO NOT use the Reverse Lockout Mechanism Override as the normal operating mode. To return to the Reverse Lockout Mechanism mode, release blade pedals to turn blade off. The Override will reset to Reverse Lockout. Check the Reverse Lockout Mechanism frequently for proper function. With the blade pedals depressed, the shift lever must not go into reverse. DO NOT operate machine if Reverse Lockout Mechanism is not functioning properly. Contact your local Snapper dealer for assistance.



Section 3 - MAINTENANCE

WARNING

DO NOT attempt any adjustments, maintenance, service or repairs with the engine running. STOP engine. STOP blade. Engage parking brake. Remove key. Remove spark plug wire from spark plug and secure away from plug. Engine and components are HOT. Avoid serious burns, allow all parts to cool before working on machine. Fuel Filler Cap and vent must be closed securely to prevent fuel spillage.

3.1 INTRODUCTION

To retain the quality of the Rear Engine Rider, 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 Rear Engine Riding Mower, always mention the model and serial number. SNAPPER recommends returning the Rear Engine Rider to an authorized SNAPPER dealer annually for inspection and addition of any new devices which might upgrade the safety of the Rear Engine Rider. For the nearest SNAPPER dealer in your area, check the yellow pages under the heading LAWN MOWERS. For engine parts and service, look for the engine manufacturer's dealers under the heading, ENGINES - gasoline.

3.2 SERVICE - AFTER FIRST 5 HOURS

Routine maintenance is important to the performance and life of your Rear Engine Rider. Service performed properly and at the recommended interval is essential. Refer to Section "MAINTENANCE SCHEDULE" in this manual and in the Engine Owner's Manual. Carefully complete all of the recommended service procedures.

3.2.1. CHANGE ENGINE OIL

1. Place bricks or wooden blocks under the front wheels to lower rear of engine.
2. Loosen or remove oil fill cap on engine.
3. Loosen oil drain plug.
4. Place a 2 quart minimum capacity container under the end of the oil drain. Open oil drain. See Figure 3.1 for oil drains used on the Rear Engine Riders.

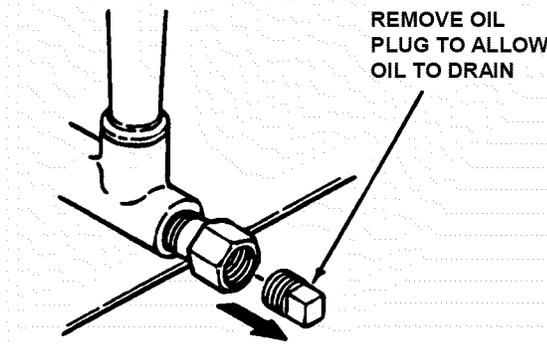


FIGURE 3.1

5. After all the oil has drained, close the drain and wipe up any oil that may have spilled. See Figure 3.1. Dispose of used oil properly.
6. Fill engine crankcase with new oil. Refer to your engine owner's manual for oil specifications.

3.2.2. SERVICE ENGINE AIR CLEANER

The engine is equipped with a dual element air cleaner. Both the foam pre-cleaner and cartridge require service. Refer to Engine Owner's Manual for recommended service procedures.

3.2.3. CHECK MOWER BLADE

1. Follow **WARNING** statement found on this page.
2. Check fuel level in tank. If over 3/4 full, remove tank. Refer to Section "REMOVING FUEL TANK". If 3/4 or less, proceed to next step.
3. Carefully stand Rear Engine Rider on rear bumper.

WARNING

Remove the battery if the Rear Engine Rider will be left standing on the rear bumper for longer than 2 hours. See Section on BATTERY REMOVAL. DO NOT use a cutting blade that shows signs of excessive wear or damage on the Rear Engine Rider. Refer to Section on MOWER BLADE REPLACEMENT for proper blade inspection and service procedures.

4. Check torque of blade mounting bolts. As necessary, torque to 30 to 40 ft. lbs. See Figure 3.2.
5. Check blade for sharpness, wear and damage. See Section on BLADE WEAR LIMITS.

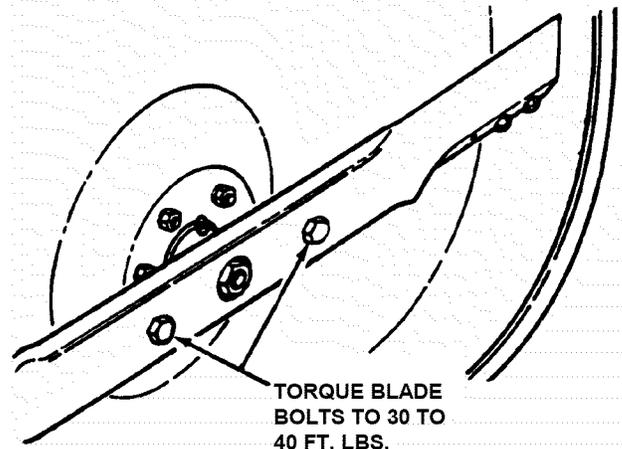


FIGURE 3.2

6. Check blade for straightness. Refer to Section "ADJUSTING MOWER BLADE".

Section 3 - MAINTENANCE



WARNING



DO NOT attempt any adjustments, maintenance, service or repairs with the engine running. STOP engine. STOP blade. Engage parking brake. Remove key. Remove spark plug wire from spark plug and secure away from plug. Engine and components are HOT. Avoid serious burns, allow all parts to cool before working on machine. Fuel Filler Cap and vent must be closed securely to prevent fuel spillage.

3.2 SERVICE - AFTER FIRST 5 HOURS

3.2.4. CHECK BLADE DRIVE BELT

The blade drive consists of a single belt from the engine to the deck. Inspect for signs of deterioration and proper tension.

1. Lower deck to lowest setting.
2. Remove four self-tapping screws, two on each side of mower drive belt cover. See Figure 3.3.
3. Slide cover back and rotate out.

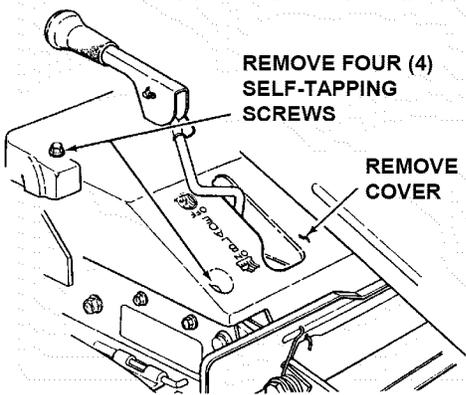


FIGURE 3.3

4. With engine "OFF" and deck in 3rd height of cut position, move blade lever back to the "ON" position and depress blade pedals.

5. Measure the belt spacing at idler pulley. See Figure 3.4. The belt spacing should be 1 1/4" but no less 1". If the measurement is less than 1", the belt tension should be adjusted. Refer to Section "MOWER DRIVE BELT ADJUSTMENT".

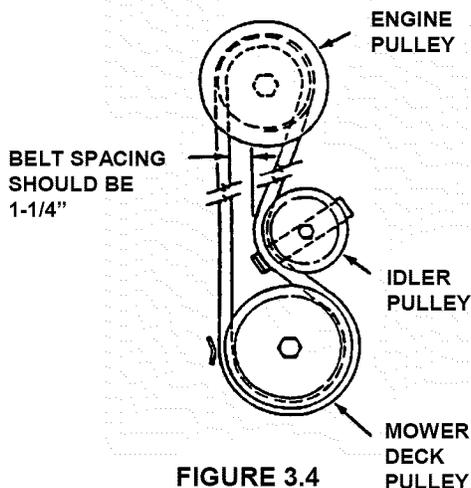


FIGURE 3.4

3.2.5. BLADE BRAKE

1. Check blade brake for proper function. Blade should stop rotating in 3 seconds or less after moving the blade control lever to the "OFF" position or after releasing the blade pedals.



WARNING



Blades must stop rotating in 3 seconds or less after the blade has been turned off. DO NOT operate machine until blade brake has been adjusted and functioning properly.

2. If the blade continues to rotate longer than 3 seconds do not operate machine. Refer to Section "BLADE BRAKE ADJUSTMENT" or contact your SNAPPER dealer for assistance.

3.2.6. SERVICE BRAKE / PARK BRAKE

1. Check machine brake for proper function. Engage park brake. Push machine. Rear tires should skid. Drive machine forward and apply brake. Machine should come to a complete stop in less than 5 ft.

2. If brakes are not functioning properly brake adjustment must be completed before operating machine. Refer to Section "SERVICE BRAKE - PARK BRAKE ADJUSTMENT".

3.2.7. INTERLOCK SYSTEM

Check interlock controls for proper function:

The engine MUST NOT start if:

1. Blade Control is "ON" and/or clutch/brake pedal is released.

The engine and blades MUST STOP if:

2. The operator leaves the operator position with Blade Control "ON" and/or clutch/brake pedal is released.



WARNING



DO NOT operate machine if interlock system is not functioning properly. Contact your SNAPPER dealer immediately for assistance.

3.2.8. REVERSE LOCKOUT MECHANISM

Check function of Reverse Lockout Mechanism with engine off.

1. Depress and hold blade pedals.
2. Depress and hold clutch/brake pedal.
3. Shift lever must not go into reverse.



WARNING



DO NOT operate machine if Reverse Lockout Mechanism is not functioning properly. Contact your SNAPPER dealer immediately for assistance.

Section 4 - ADJUSTMENTS & REPAIR

WARNING

Once blade is disengaged it should come to a stop in 3 seconds or less. If the blade continues to rotate after 3 seconds the blade brake must be adjusted. **DO NOT** continue to operate the machine if the blade brake is not operating properly.

4.2.2. BLADE BRAKE ADJUSTMENT

The automatic Blade Brake should stop the blades within 3 seconds anytime the blades are disengaged by moving blade lever to the "OFF" position or by releasing the Blade Pedals. When the Blade Brake is properly adjusted there should be 1/16" to 1/8" clearance between the Blade Engagement Lever and the back of the Latch Plate. Check this by disengaging the Blade Lever and depressing the Blade Pedals as shown in Figure 4.2. If clearance is greater than 1/4" perform the following adjustment.

1. Remove Belt Cover. Refer to Section "BLADE BELT COVER REMOVAL".
2. With the blade engagement lever disengaged, hold the blade pedals down and measure the distance between the front of the blade lever and the rear of the latch plate. The dimension should be 1/16" to 1/8" clearance between lever and plate. See Figure 4.5. If the dimension is incorrect go to step 3.
3. If dimension is greater than 1/8", rotate nut clockwise to increase brake tension. If dimension is less than 1/16", rotate nut counter-clockwise to decrease brake tension. See Figure 4.4.
4. Reinstall spindle cover.

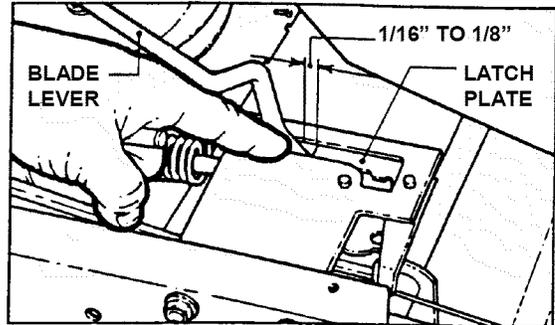


FIGURE 4.5

WARNING

DO NOT attempt any adjustments, maintenance, service or repairs with the engine running. Stop engine. Stop blade. Engage parking brake. Remove key. Remove spark plug wire from spark plug and secure away from plug. Engine and components are HOT. Avoid serious burns, allow all parts to cool before working on machine. Fuel Filler Cap and Vent must be closed securely to prevent fuel spillage.

4.2.3. MOWER DECK ADJUSTMENT (Side-To-Side Levelness)

Before making deck leveling adjustments, check the tire pressure. Front tires 12 psi, rear tires 12 psi. If tires are properly inflated and mowing is still uneven, adjust side-to-side deck levelness.

1. Place Rider on a smooth level surface.
2. Follow **WARNING** statement found on this page.
3. Place a piece of angle iron, pipe, or similar object under center of deck at the rear.
4. Remove rear hanger chains and allow center, rear of deck to rest on angle iron.
5. Measure the distance from blade tips to floor. If the measurement is within 1/8" from side-to-side, the deck attitude is satisfactory. If difference from side-to-side is greater than 1/8", continue with adjustment.
6. Loosen the carriage bolt and nut retaining the left side of the front lift arm and adjuster. Only loosen the bolt and nut to the point where some tension remains but lift arm can be moved.

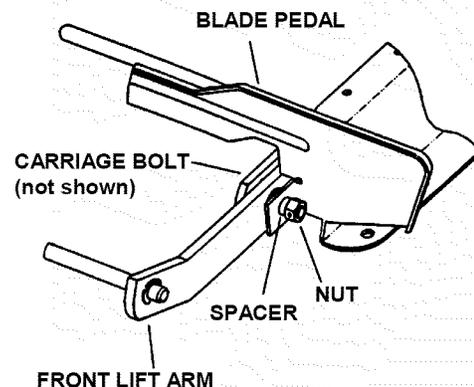


FIGURE 4.6

WARNING

DO NOT operate machine until blade brake is adjusted and functioning properly. If blade stop time can not be achieved with the adjustment procedure described above, take machine immediately to an authorized Snapper dealer.

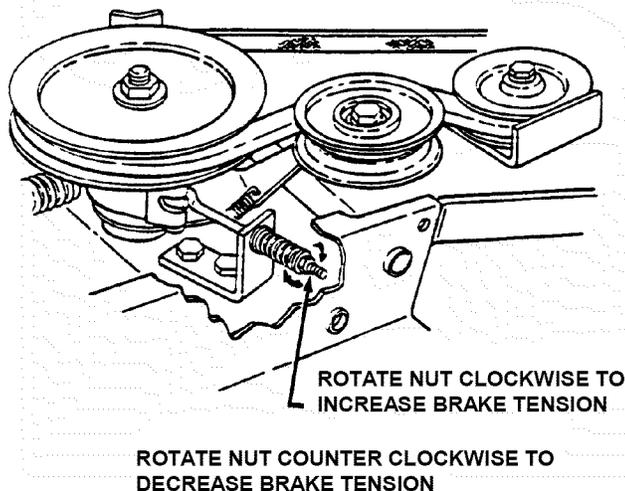


FIGURE 4.4

Section 4 - ADJUSTMENTS & REPAIR

WARNING

DO NOT attempt any adjustments, maintenance, service or repairs with the engine running. Stop engine. Stop blade. Engage parking brake. Remove key. Remove spark plug wire from spark plug and secure away from plug. Engine and components are HOT. Avoid serious burns, allow all parts to cool before working on machine. Fuel Filler Cap and Vent must be closed securely to prevent fuel spillage.

4.3 REAR ENGINE RIDER DRIVE COMPONENTS

Your Snapper rider is equipped with a patented smooth start clutch. The clutch should operate smoothly and provide ample traction. If problems are experienced, contact your Snapper dealer for repair.

4.3.1. SERVICE BRAKE/PARK BRAKE ADJUSTMENT

Test the wheel brake on a dry concrete surface. When properly adjusted, the Rear Engine Rider will stop within 5 feet from fastest speed. If stopping distance is more than 5 feet, the wheel brake should be adjusted as follows:

1. Follow **WARNING** statement found on this page.
2. Check fuel level in tank. If over 3/4 full, remove tank. Refer to Section "REMOVING FUEL TANK". If 3/4 or less, proceed to next step.
3. Carefully stand Rear Engine Rider on rear bumper.
4. Depress clutch/brake pedal all the way down. Move and hold the park brake latch in the "ENGAGED" position and release the clutch/brake pedal to set the park brake. See Figure 4.8.

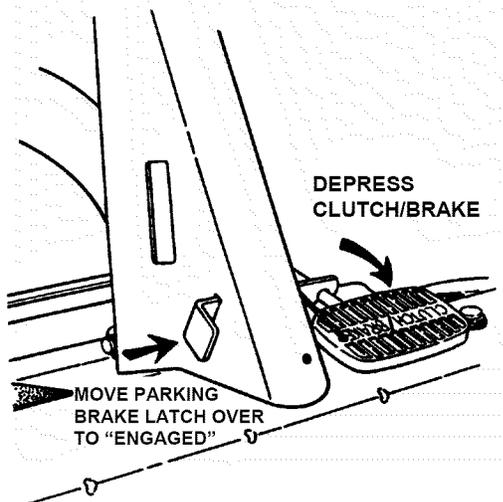


FIGURE 4.8

5. Measure the distance between end of clutch/brake cable and bottom of housing. Measurement should be 3/4". See inset of Figure 4.9.

6. If measurement is less than 3/4", loosen the two jam-nuts. See Figure 4.10. Hold the clutch/brake cable to the chain case bracket.

7. Adjust cable up or down using the jam-nuts to obtain a distance 3/4" between end of clutch/brake cable (adjustment shown in inset of Figure 4.9) and bottom of housing. See Figure 4.9.

8. After adjustment is complete, securely tighten cable jam-nuts.

9. Retest wheel brake function.

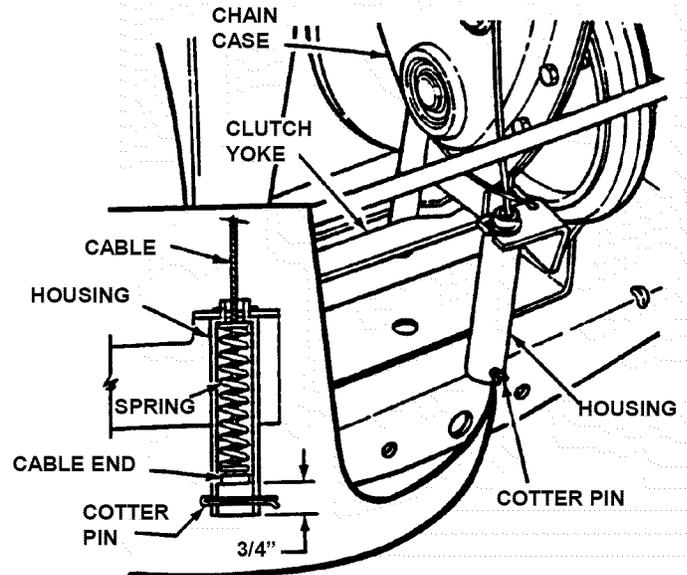


FIGURE 4.9

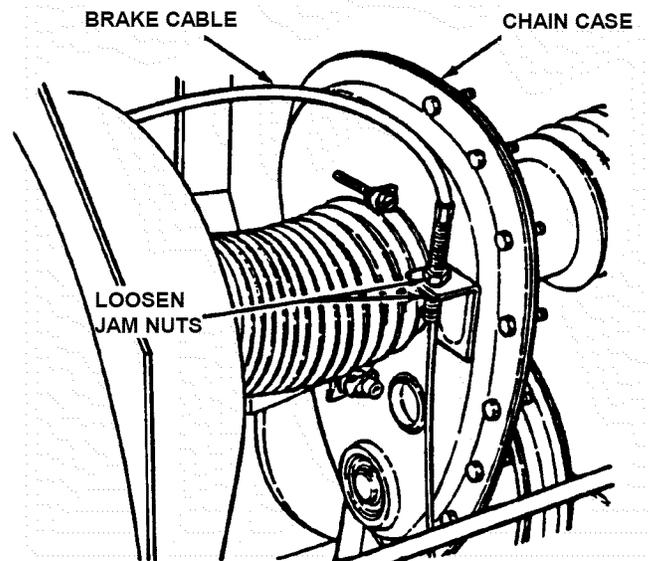


FIGURE 4.10

Section 4 - ADJUSTMENTS & REPAIR

WARNING

DO NOT attempt any adjustments, maintenance, service or repairs with the engine running. STOP engine. STOP blade. Engage parking brake. Remove key. Remove spark plug wire from spark plug and secure away from plug. Engine and components are HOT. Avoid serious burns, allow all parts to cool before working on machine. Fuel Filler Cap and vent must be closed securely to prevent fuel spillage. DO NOT use a cutting blade that shows signs of excessive wear or damage on the Rear Engine Rider. On Rear Engine Riders equipped with a grass catcher attachment, the air lifts should be replaced when the blade is replaced.

4.4 MOWER BLADE REPLACEMENT

4.4.1. BLADE WEAR LIMITS

1. Inspect blade frequently for signs of excessive wear or damage. See Figure 4.11.

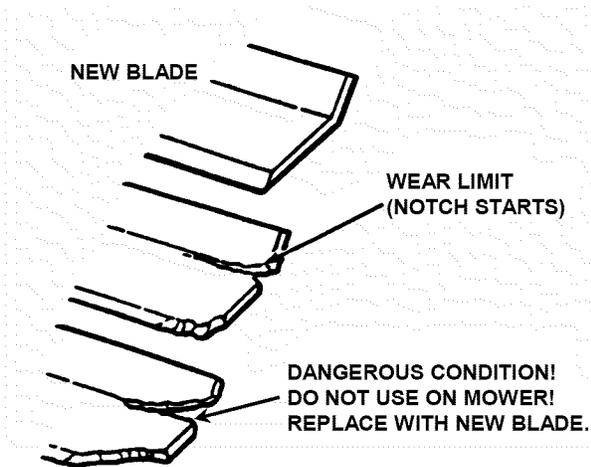


FIGURE 4.11

WARNING

Blades are extremely sharp and can cause severe injuries. Wear heavy leather gloves when working on or handling blades. DO NOT use blades that show signs of wear or damage.

4.4.2. BLADE SHARPENING

1. Follow **WARNING** statement found on this page.
2. Check fuel level in tank. If over 3/4 full, remove tank. Refer to Section "REMOVING FUEL TANK". If 3/4 or less, proceed to next step.
3. Carefully stand Rear Engine Rider on rear bumper.
4. Remove blade. See Figure 4.12.

5. Inspect condition of blade. See Figure 4.11.
6. If blade is in good condition, sharpen at 22 to 28 degrees. DO NOT sharpen beyond existing cutting edge. See Figure 4.13.
7. Check blade balance after sharpening. If necessary, correct blade balance by grinding the heavy end of blade.
8. Reinstall blade. See Figure 4.12. Torque blade mounting bolts to recommended range of 30 to 40 ft. lbs.

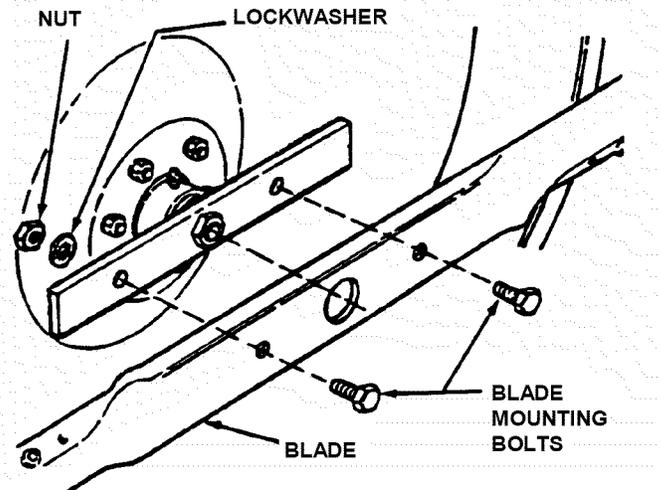


FIGURE 4.12

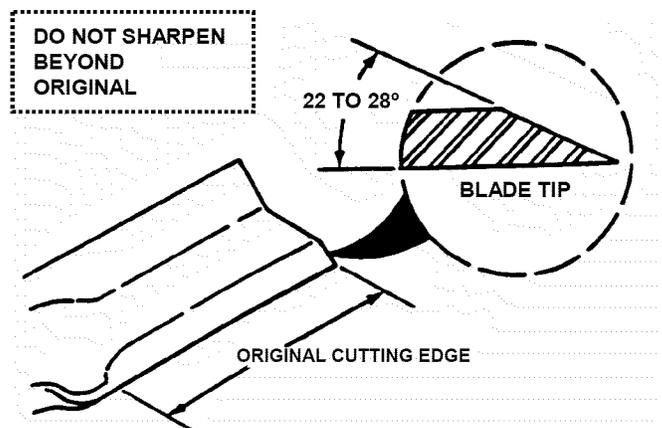


FIGURE 4.13

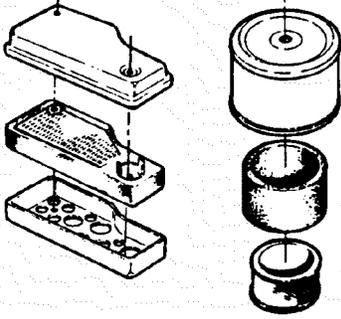
MAINTENANCE SCHEDULE

| SUBJECT | SERVICE TO BE PERFORMED | REFERENCE PAGES | EACH USE | 5 HOURS | 25 HOURS | 50 HOURS | 100 HOURS | EACH SEASON |
|-------------------------------------|---|------------------|----------|---------|----------|----------|-----------|-------------|
| Engine | Check Oil Level | Page 6 | X | | | | | |
| Engine | Initial Oil Change | Page 13 | | X | | | | |
| Engine | Periodic Oil Change | Page 13 | | | | X* | | |
| Air Pre-Cleaner | Service Sponge Pre-Cleaner Element | Engine Manual | | | X** | | | |
| Air Cleaner | Replace Element | Engine Manual | | | X** | | | |
| Spark Plug | Replace Plugs | Engine Manual | | | | | X | |
| Fuel Filter | Replace Filter | Page 17 | | | | | X | |
| Engine Cooling System | Clean Shrouds & Fins | Engine Manual | | | | | X** | |
| Battery | Check Electrolyte | Page 25 | | | X | | | X |
| Battery | Charge Battery | Page 24 & 25 | | | | | | X |
| Tires | Check Pressures | Page 6 | X | | | | | |
| Drive Belts | Check For Wear And Tension | Pages 14, 18, 23 | | | X | | | X |
| Mower Blades | Check For Wear And Damage | Pages 22 | | | X | | | |
| Mower Deck | Clean Debris Accumulation | Page 15 | X | | X | | | X |
| Lubrication Points | Grease or Oil | Pages 15 & 16 | | | X | | | X |
| Lubricate Chain Case & Transmission | Check Grease Level | Pages 16 | | | | | X | X |
| Blade Brake Stopping Time | Check blade stopping for proper operation | Pages 14 & 19 | X | | | | | X |
| Clutch/Brake System | Check Clutch/Brake for proper operation | Page 14 & 21 | X | | | | | X |
| Reverse Lockout Mechanism | Check function | Page 6 & 14 | X | X | | | | |
| Interlock System | Check function | Page 14 | 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

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.

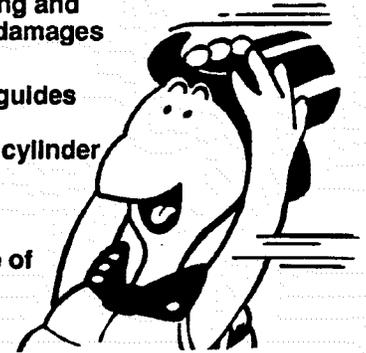
Use a flashlight to detect clogged or torn paper elements - replace if damaged in any way.



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.

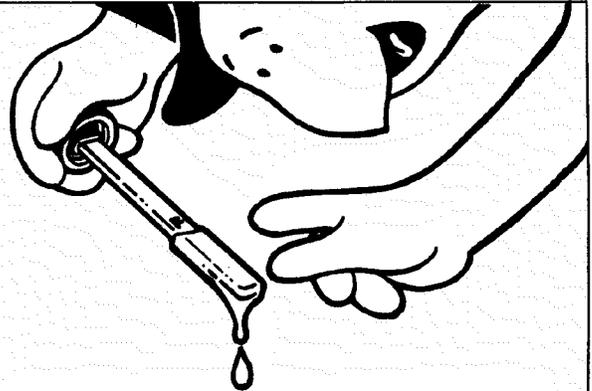
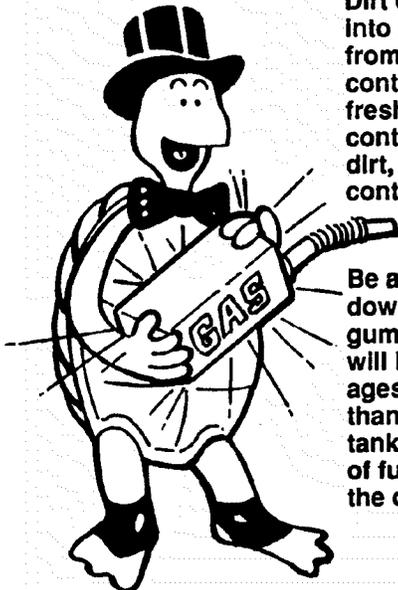
Failure to keep external surfaces clean not only presents fire hazards, but causes overheating and resulting engine damages such as:

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.

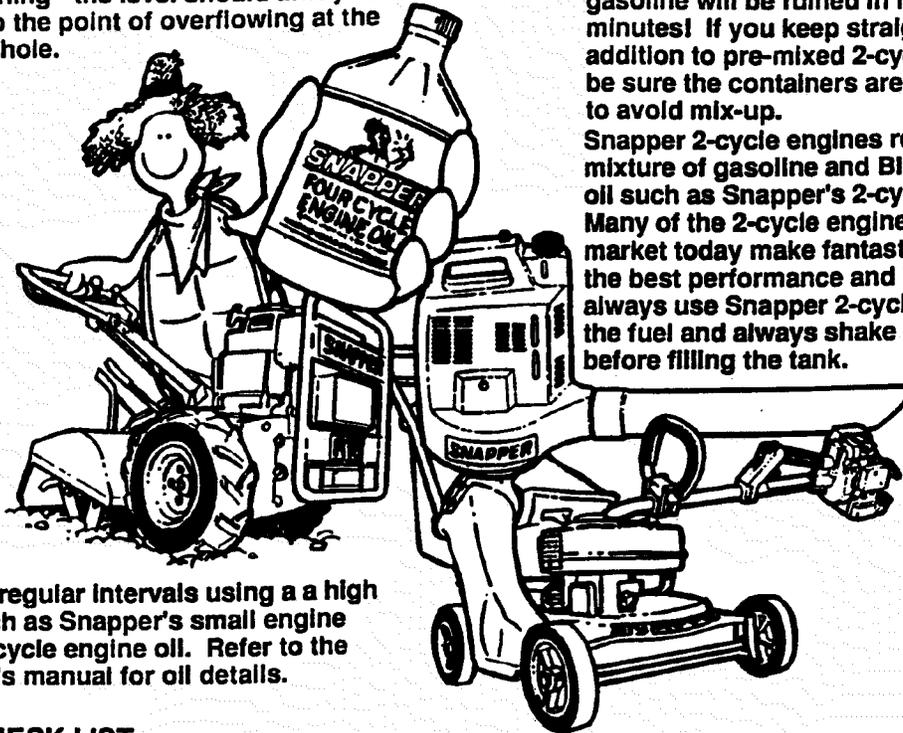
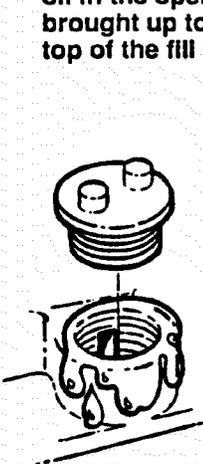
Be aware that fuel breaks down in storage and forms gummy compounds which will block carburetor passages. Never use fuel more than 3 months old. Drain tank then run the engine out of fuel before storing during the off-season.



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 reading when the level could actually be low and result in engine damage.

PRIMARY MAINTENANCE

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

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!