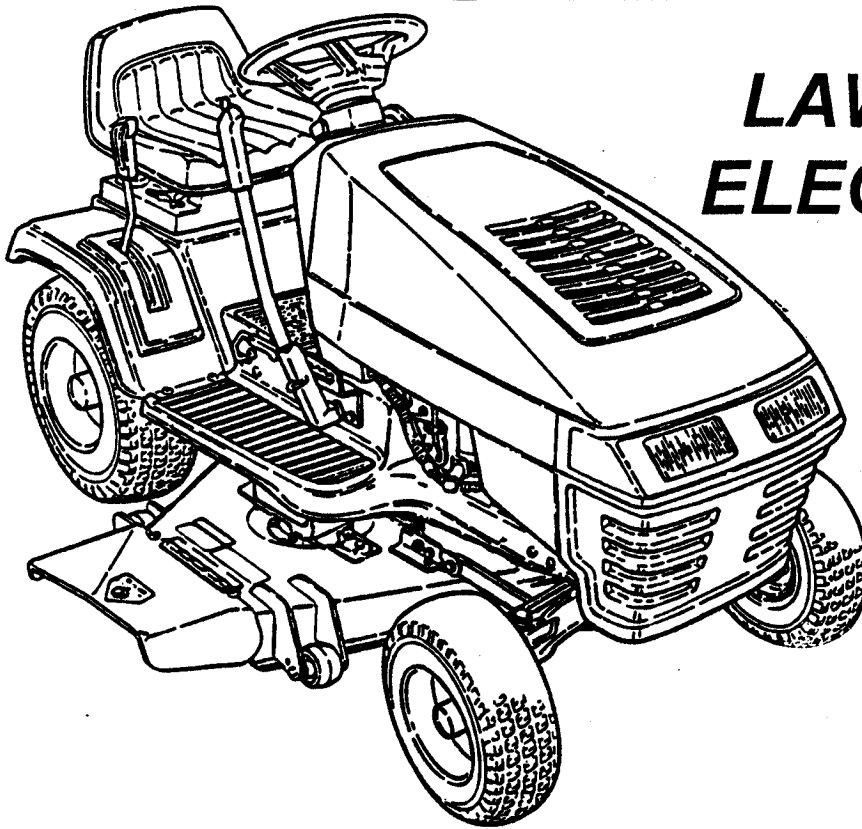


Safety Instructions & Operator's Manual for

SNAPPER®

LAWN TRACTORS ELECTRIC CLUTCH SERIES D



MODELS

LT160H42DBV
LT160H42DBV2
LT180H48DBV2

MODEL NUMBER EXPLANATION

LT 160 H 42 D B V 2

MODEL DESIGNATION

ENGINE HP

DRIVE SYSTEM TYPE

CUTTING WIDTH

ENGINE OPTIONS

ENGINE TYPE

ENGINE MODEL

SERIES DESIGNATION

LT - Model Designation

160 - 16.0 HP (Engine Horse Power)

180 - 18.0 HP (Engine Horse Power)

H - Hydrostatic Transmission Drive System

42 - 42" Cutting Width Mower Deck

48 - 48" Cutting Width Mower Deck

D - Series Designation

B - Briggs & Stratton Engine

V - Over Head Valve Type Engine

2 - Twin Cylinder Engine

Thank you for buying a SNAPPER product! Before operating the Lawn Tractor, read and follow the "IMPORTANT SAFETY INSTRUCTIONS" on pages 2 & 3, all other instructions contained in this manual and the accompanying booklet "About Power Mower Safety". Lawn mowers and all power equipment can be potentially dangerous if used improperly. REMEMBER: SAFETY REQUIRES CAREFULL USE IN ACCORDANCE WITH INSTRUCTIONS AND COMMON SENSE !

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 other passengers to ride on machine or on attachments (even with the blade 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. **BE SURE** the area is clear of others before mowing and turn machine OFF if anyone enters the area.
7. **DO NOT** mow in reverse unless absolutely necessary. **LOOK BEHIND** and down for small children before and when backing.
8. **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 it, **DO NOT** mow it. Use extra care with grass catchers or other attachments; these can change 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 blade OFF when traveling uphill. Use first speed and avoid sudden or sharp turns.
3. **DO NOT** mow back and forth across face of slopes. Mow up and down.

PROTECTION AGAINST TIPOVERS

(Continued From Previous Column)

4. **AVOID** uphill starts. If machine stops going uphill or tires lose traction, turn blade OFF and back slowly down the slope.
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 mower could turn over if an edge caves in.
7. Always begin forward motion in the #1 speed position.
8. Use weights or a weighted load carrier in accordance with instructions with a grass catcher on slopes above 10 degrees (18% grade).
9. **DO NOT** put your foot on the ground to try to stabilize the machine.
10. **DO NOT** mow on wet grass. Reduced traction could cause sliding.
11. **DO NOT** mow under any condition where traction, steering or stability is doubtful without first test driving over the terrain with blade OFF.

PREPARATION

1. Read this manual, get to know where all controls are located and practice how to use them before starting for the first time, and at the beginning of each season. Read and follow Warnings and Instructions on engine and machine. Read and follow operator's manual and instructions furnished with attachments.
2. Only mature, responsible persons shall operate the machine and only after proper instruction.
3. Handle fuel with extra care. Fuels are flammable and vapors are explosive. Use only an approved fuel container. Never 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.
4. Practice operation of machine with **BLADE OFF** to learn controls and develop skills.

(Continued on Next Page)

IMPORTANT SAFETY INSTRUCTIONS

PREPARATION

(Continued From Previous Page)

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.
6. Keep people and pets a safe distance from machine.
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.
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 worn spots.

OPERATION

1. Mount and dismount machine from left side.
2. Start engine from operator's seat, if possible. Make sure blade is OFF and parking brake is set.
3. STOP blade, STOP engine, set parking brake and remove key when leaving machine.
4. DO NOT operate machine unless properly seated with feet on feet rests or pedal(s).
5. STOP BLADE and ENGINE and make sure blade has stopped before removing grass catcher or unclogging mower to prevent loss of fingers or hand.
6. Blade must be OFF except when cutting grass. Set blade in highest position when mowing over rough ground.
7. Keep hands and feet away from rotating blade underneath deck. NEVER place foot on ground while BLADE is ON or machine is in motion.
8. Deflector or entire grass catcher must be in place. NEVER 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. Mow only in daylight or with good artificial light.
13. Move joystick (if equipped) SLOWLY to maintain control during speed and directional changes.
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.

MAINTENANCE

1. Never 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 indoors. 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. Never 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. NEVER 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.

TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS.....	2-3	MAINTENANCE INSTRUCTIONS (Continued)	
TABLE of CONTENTS	4	Battery Service.....	19
FAMILIARIZATION.....	5-6	Battery Electrolyte Check	19
Serial & Model Number Location	5	Battery Removal.....	19
Controls	5	Battery Charging.....	19
Components	6	Activating New Battery	19
OPERATING INSTRUCTIONS	7-11	Mower Deck Removal/Reinstallation	20-21
Pre-start Checklist	7	Standard Mower Blade Service.....	21-22
Adjusting Operator's Seat	7	Standard Blade Wear Limits	21
Starting & Stopping Engine.....	7-8	Blade Removal/Replacement	21
Starting & Stopping Wheel Drive	9	42" Mower Blade.....	21
Setting & Releasing Parking Brake	9	Sharpening Standard Blade(s).....	21 & 22
Starting & Stopping Mower Blades.....	9	Ninja Mower Blade Service.....	22
Adjusting Cutting Height	10	Ninja Blade Wear Limits	22
Tips on Mowing.....	10	Ninja Blade Sharpening	22
Raising Chute Deflector	10	Belt Service	23-24
Rolling Tractor With Engine Off	11	Mower Drive Belt Removal/Replacement	23
ACCESSORIES	11	42" Deck Drive Belt	23
TROUBLESHOOTING GUIDE.....	12-13	Traction Drive Belt Service.....	24
MAINTENANCE INSTRUCTIONS	14-29	Traction Drive Belt Removal	24
Service Schedule	14	Traction Drive Belt Replacement	24
Maintenance Parts	14	Traction Drive Belt Adjustment	25
Hydrostatic Transmission Oil	15	Deck Level Adjustment.....	25-27
To Check Oil Level.....	15	Tires & Pressure	25
Changing Engine Oil	16	Side to Side Level	25-26
Lubrication (Tractor)	16-17	Front to Rear Level.....	27
Front Wheel Bearings	16	Sector Plates	27
Axle Spindles.....	16	Front Lift Cable	27
Steering Shaft.....	16	Shifter Adjustment	28
Clutch/Brake Pivot.....	17	Steering Adjustment	28
Steering Sector Gear	17	Wheel Brake Adjustment.....	29
Steering Drag Link.....	17	Blade Brake Note	29
Steering Tie Rod.....	17	ELECTRICAL SYSTEM.....	30-31
Park Brake Latch	17	20 Amp Fuse Protection	30
Deck Lift Mechanism	17	DIAGRAMS, Single Cylinder Models	30
Mower Deck Spindles	17	DIAGRAMS, Twin Cylinder Models.....	31
Engine Service	18	WARRANTY	32
Engine Air Pre-Cleaner.....	18	PRIMARY MAINTENANCE	33-36
Engine Air Cleaner	18		
Spark Plug.....	18		
Fuel Filter.....	18		
Engine Cooling System	18		

FAMILIARIZATION

SERIAL & MODEL NUMBER LOCATION

The Serial and Model numbers of your SNAPPER Series D Lawn Tractor are located on the rear face of the tractor frame as shown in Figure 1. Record these numbers in the spaces provided below. The numbers should be mentioned in all contacts regarding service or when ordering replacements or accessories for your tractor.

MODEL NUMBER

SERIAL NUMBER

DATE OF PURCHASE _____

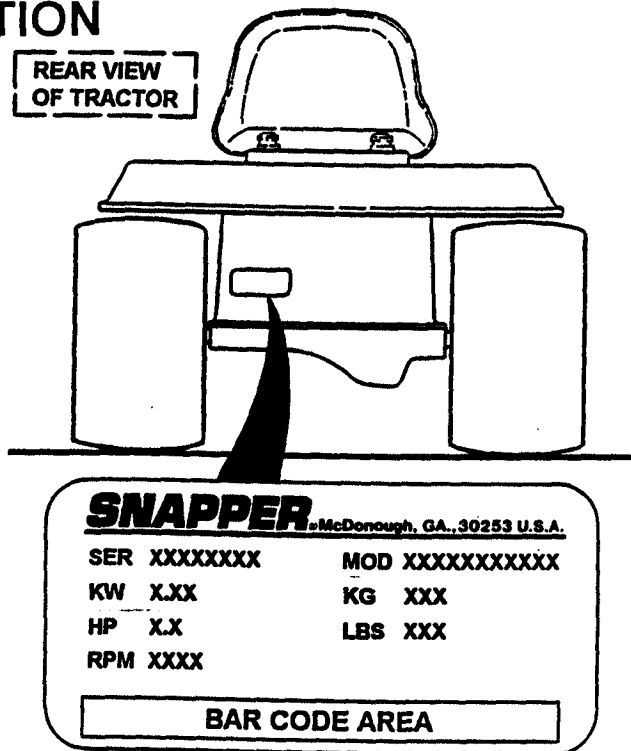


FIGURE 1

CONTROLS

All operators must become acquainted with the operator's controls before attempting start-up or operation of the Lawn Tractor. See Figures 2 and 3.

NOTE: STEERING WHEEL & OPERATOR'S SEAT NOT SHOWN IN THIS VIEW.

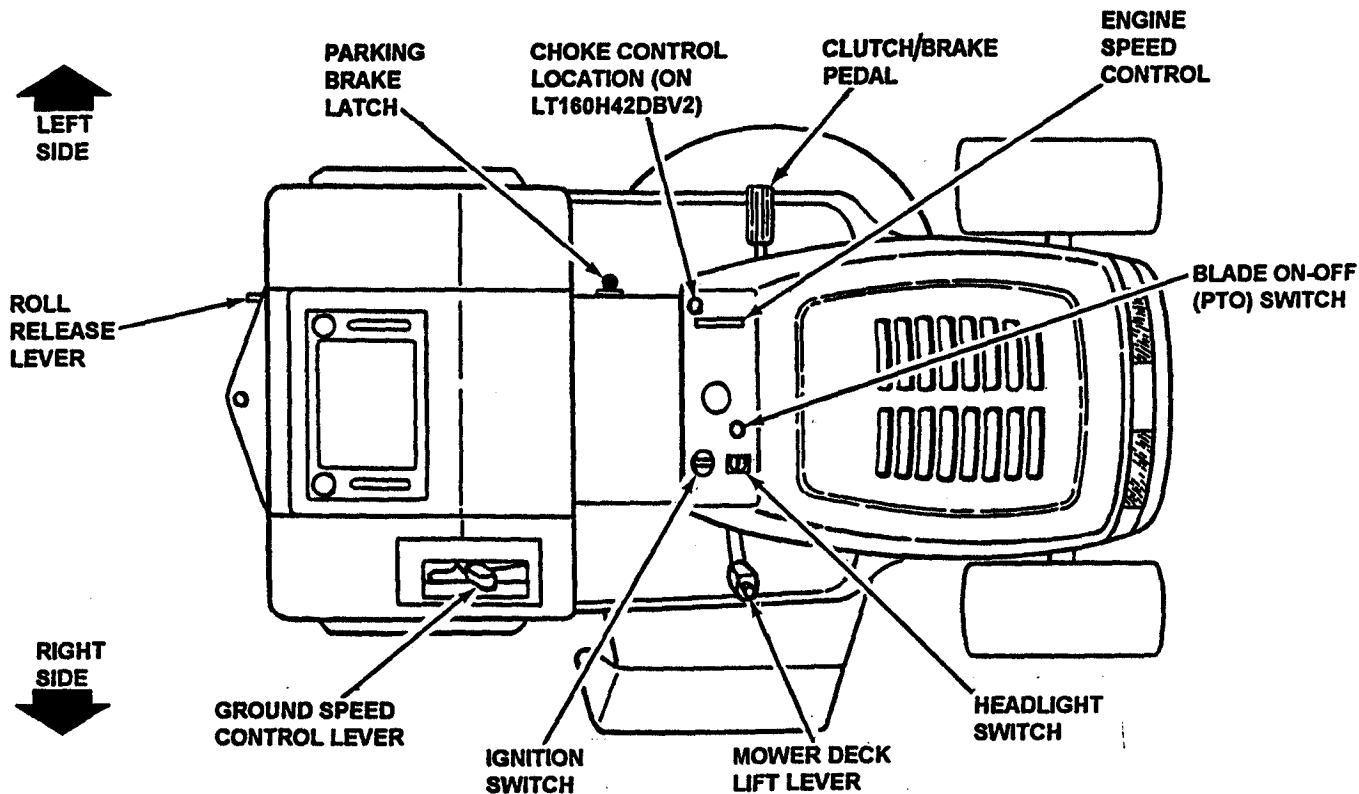


FIGURE 2 (TOP VIEW OF TRACTOR)

FAMILIARIZATION

COMPONENTS

Figures 2 and 3 show the location of essential components of the SNAPPER Series D Lawn Tractors. It is recommended that all operators of this equipment become thoroughly familiar with the components and their operation **BEFORE OPERATING**. Specific details involving the engine are found in the separate Engine Owner's Manual. Study the Important Safety Instructions in this Operator's Manual and the Engine Owner's Manual before operating this machine. Keep these manuals available for future reference.

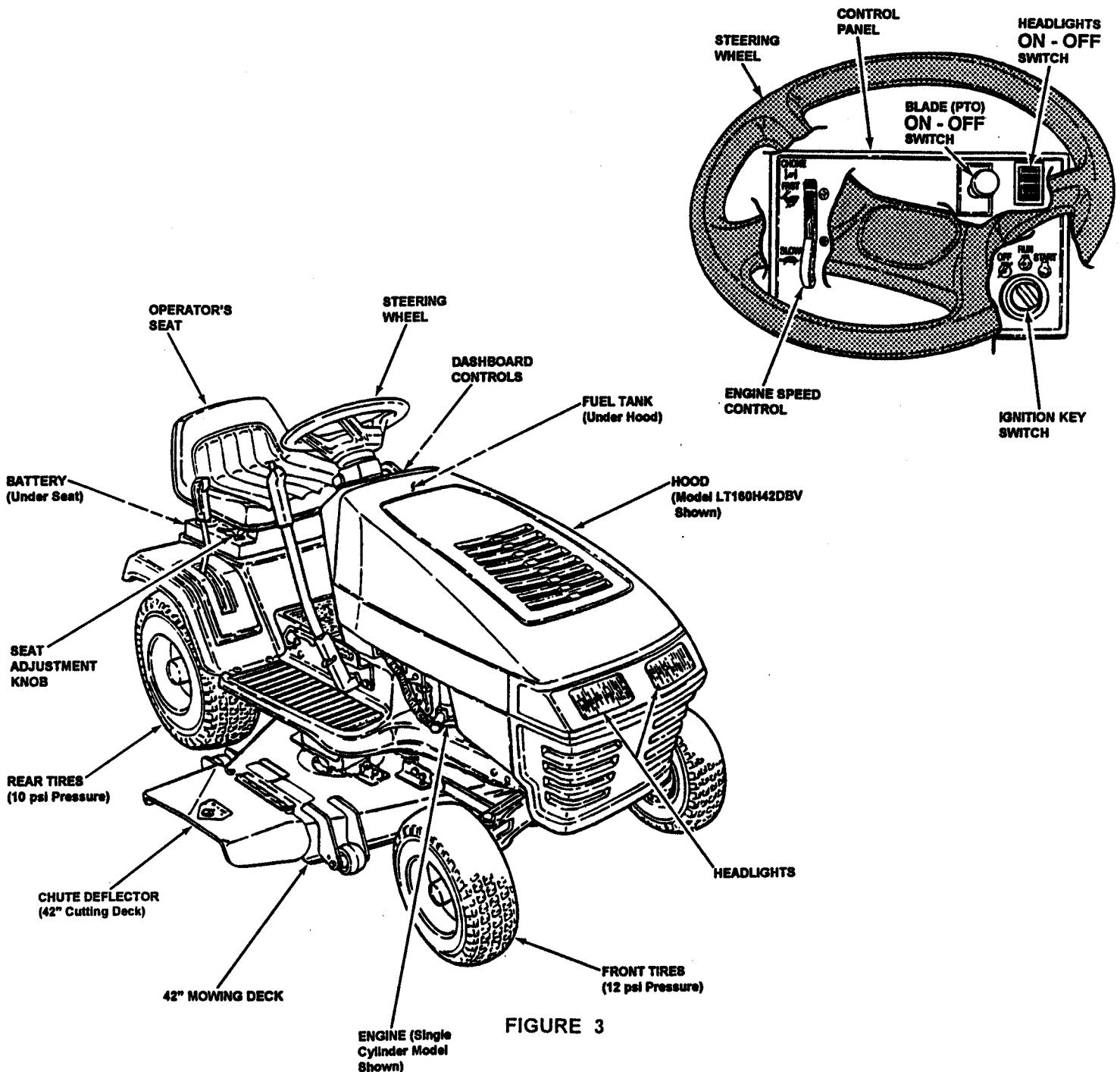


FIGURE 3

OPERATING INSTRUCTIONS

PRE-START CHECKLIST

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

Check tires and add air as needed to bring pressure to 12 psi in front tires and 10 psi in rear tires.

Check guards, deflectors and covers to make sure all are in place and securely tightened. If guards are missing or damaged, replace before operating mower.

Check operator's seat readjust as needed following instructions in the next column on this page.

Clean exterior surfaces of cutting deck, engine and tractor from any accumulation of grass clippings and debris. Keep engine air intake screens and cooling fins clean at all times.

Raise Hood by lifting lower rear edges until spring latch releases then tilt hood forward.

Check engine oil. Add oil as needed to bring up to, but not over, the full mark. Refer to the Engine Owner's Manual for oil specifications.

With engine "OFF", move the tractor outside, raise hood and add fuel to the fuel tank. Securely tighten fuel cap after refueling. See figure 4. Refer to Engine Owner's Manual for fuel specifications. Lower hood.

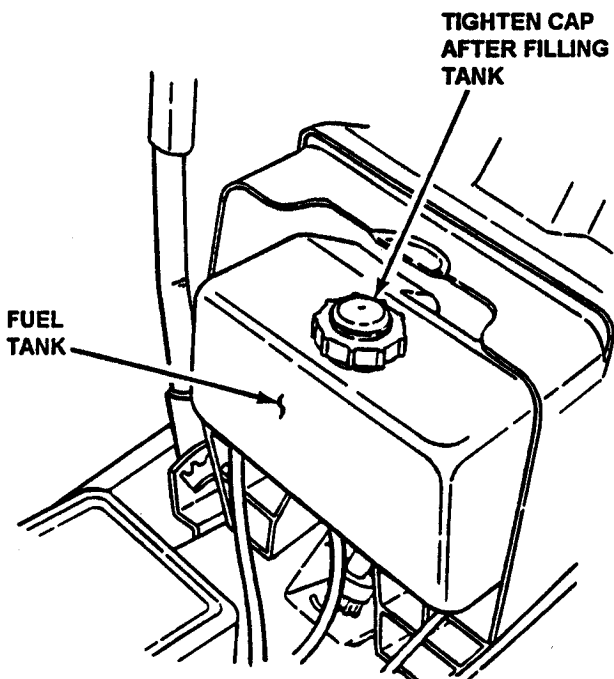


FIGURE 4

ADJUSTING OPERATOR'S SEAT

With engine "OFF", raise operator's seat and loosen the two adjusting knobs on the seat support. See Figure 5.

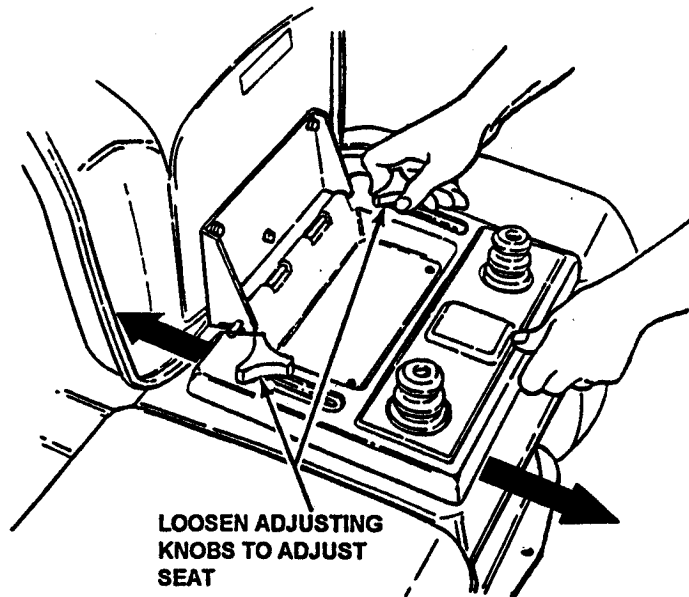


FIGURE 5

Lower the seat.

Sit in the operator's seat and slide the seat forward or backward until the clutch/brake pedal can be fully depressed comfortably.

Raise seat and tighten the adjusting knobs to secure seat in position.

STARTING & STOPPING ENGINE

STARTER INTERLOCK NOTE:

Engine will not start if :

1. **BLADE (PTO) SWITCH** is in **ON** position.
2. **PARK BRAKE NOT** set or **CLUTCH/BRAKE** pedal is **NOT** fully depressed.

OPERATOR PRESENCE CONTROL NOTE:

Engine will shut down if operator leaves the seat without :

1. Pushing the **BLADE (PTO) SWITCH "IN"** to the **OFF** position.
2. Setting the **PARK BRAKE LEVER**.

OPERATING INSTRUCTIONS

WARNING
DO NOT continue to operate your tractor if the interlocks controlling any of the above functions fail. Contact an authorized SNAPPER dealer to have the interlock system repaired.

STARTING/STOPPING ENGINE

After being seated on Tractor, look around before starting to make sure that the area you are going to mow is clear of people, children, and pets. Take NOTE of and be prepared to avoid all stationary obstacles!

1. Push Blade (PTO) Switch down to the OFF position. See Figure 6.

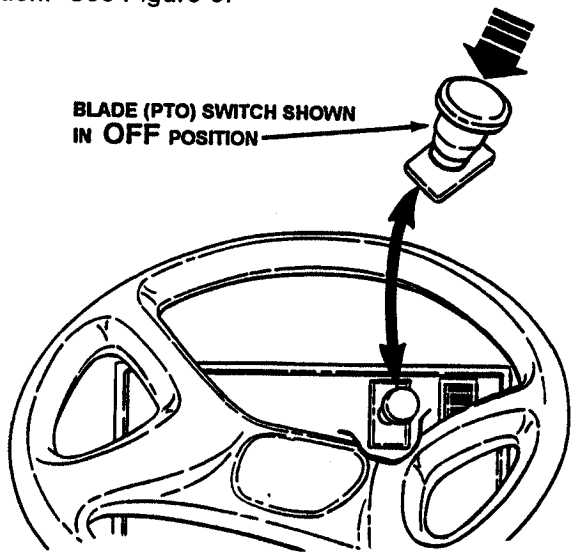


FIGURE 6

2. Push Clutch/Brake Pedal ALL the way down! The engine cannot be started if this is NOT done. See Figure 7.

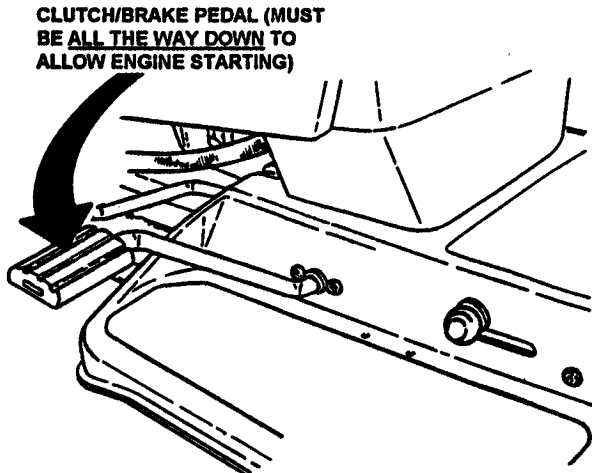


FIGURE 7

3. Shift Speed Control Lever to "N" Neutral.
4. Choke engine for cold starting by moving engine speed control up to "CHOKE" position, or by pulling choke knob out on twin cylinder models. Little or no choking will be needed when restarting a warm engine. See Figure 8.
5. Insert Key in Ignition Switch.

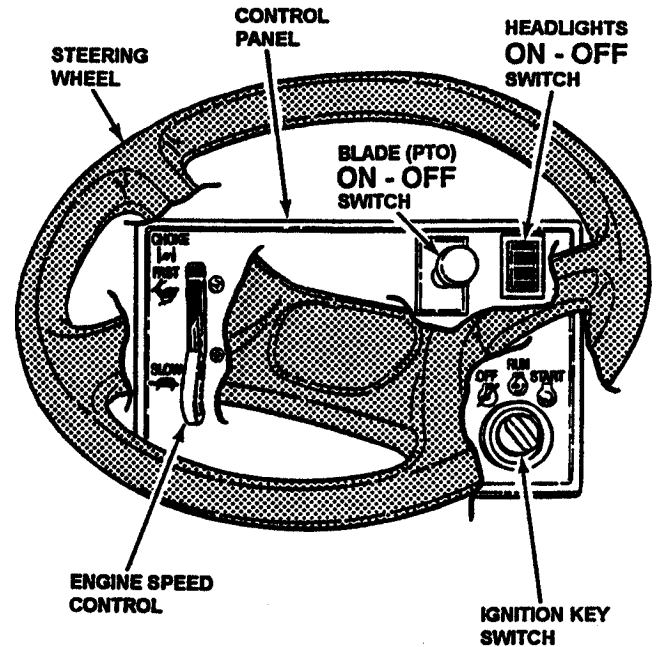


FIGURE 8

6. Turn key to **START** position to crank engine and hold until engine starts (see "LIMIT CRANKING TIME" note), then release key. Key will return to **RUN** position and stay there until moved to **OFF**.

NOTE: LIMIT CRANKING TIME: DO NOT crank engine for more than five seconds at a time to prevent the electric starter from overheating and/or running down the battery. If the engine does not start after being cranked 5 seconds, locate and correct the cause of the starting problem.

7. After engine starts, release key, move the engine speed control out of "CHOKE" to the "FAST" position or, on twin cylinder models, push choke knob in, then allow engine to warm up before proceeding. See Figure 8.
8. **STOP ENGINE** by moving ignition key to **STOP** position.

WARNING
Before leaving machine, **STOP ENGINE**. Stop blades. Shift to neutral. Engage park brake. Remove key. **DO NOT** park on slopes.

OPERATING INSTRUCTIONS

STARTING & STOPPING WHEEL DRIVE

STARTING WHEEL DRIVE

1. Shift Speed Control Lever to neutral.
2. Start engine.
3. Release Brake Pedal.
4. Slowly shift the Speed Control Lever forward for forward motion or to the rear for reverse motion. See Figure 9.

IMPORTANT: This tractor is equipped with a hydrostatic transmission. The transmission SPEED CONTROL LEVER, allows you to select the direction of motion (FORWARD or REVERSE) and the speed of motion. The CLUTCH/BRAKE PEDAL does not have to be depressed when shifting the SPEED CONTROL LEVER. Use caution and move lever slowly when shifting SPEED CONTROL LEVER.

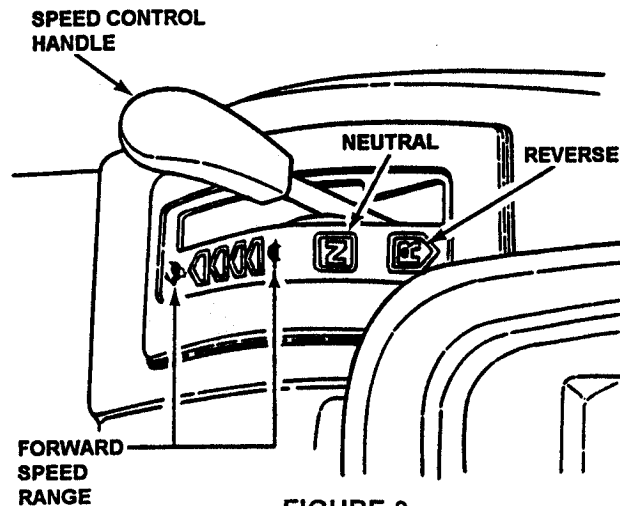


FIGURE 9

STOPPING WHEEL DRIVE

Fully depress Clutch/Brake Pedal to stop wheel drive. See Figure 10.

NOTE: When the tractor is moving forward and the Clutch/Brake Pedal is pushed all the way down, the Speed Control Handle will automatically return to approximately 1/3 of full forward speed. Move handle to desired position after releasing Brake Pedal.

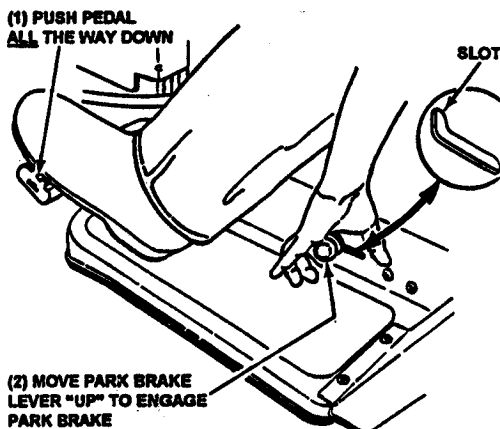


FIGURE 10

SETTING & RELEASING PARK BRAKE

SETTING PARK BRAKE

1. Fully depress Clutch/Brake Pedal with your foot.
2. Pull the Park Brake Lever as shown in Figure 10 up into the slot to set Park Brake. See inset in Figure 10.
3. Remove your foot from the Clutch/Brake Pedal.

RELEASING PARK BRAKE

Fully depress the Clutch/Brake Pedal. The Park Brake will release automatically.

WARNING
DO NOT park the machine on slopes.

STARTING & STOPPING BLADES

1. Start the engine.
2. Pull the BLADE (PTO) Switch "OUT" to the ON position to start the BLADES. See Figure 11.
3. Push the BLADE (PTO) Switch "IN" to the OFF position to stop the BLADES. See Figure 11.

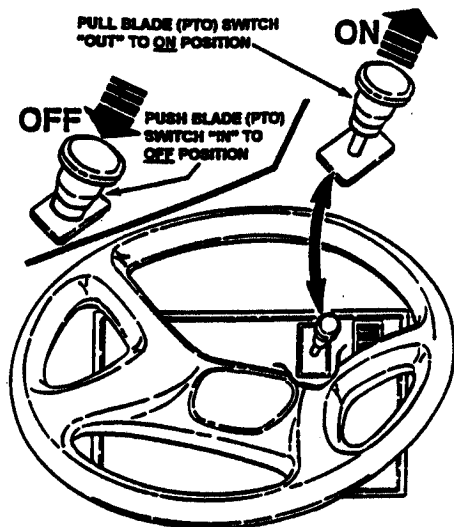


FIGURE 11

WARNING

Pushing Blade Switch in to the OFF position should cause blades to come to a complete STOP in 5 seconds or less. DO NOT operate machine if blades continue to rotate longer than 5 seconds. Contact your authorized SNAPPER dealer for inspection and repair.

PULL (PTO) SWITCH "OUT" TO TURN CUTTING BLADES ON

PUSH (PTO) SWITCH "IN" TO TURN THE BLADES OFF

OPERATING INSTRUCTIONS

ADJUSTING CUTTING HEIGHT

1. Depress the lock button on Deck Lift Lever shown in Figure 12 and pull lever backward to go to higher cutting height or push lever forward to go to lower cutting height. Release button to lock at new setting.
2. The six cutting height positions provide a range of from 1-1/4" in low setting up to 3-3/4" in highest.

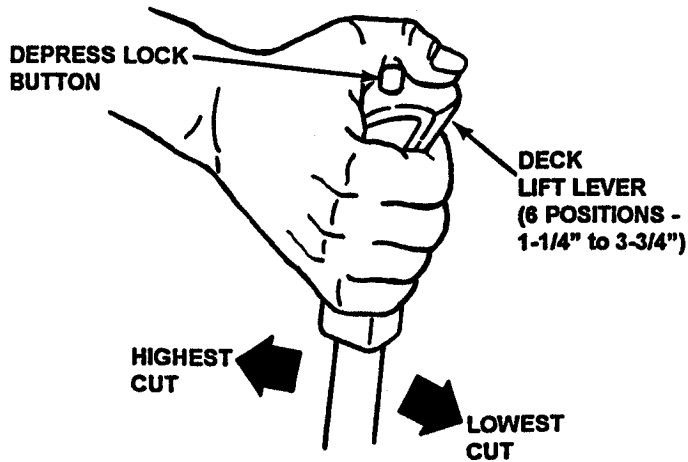


FIGURE 12

TIPS ON MOWING

FOR BEST RESULTS, USE THE FOLLOWING TIPS WHEN MOWING:

When mowing, cut only 1/3 off of grass height. Cutting grass deeper could be harmful to your lawn.

If cutting extremely tall grass, make one cutting with the deck in its highest cutting position, then lower the deck to desired position and make a second cut.

Mow when lawn is dry for best cutting.

Mow often. Shorter grass clippings decompose more quickly.

Keep mower blades sharp. A dull blade tears and shreds grass instead of cutting. Refer to "MOWER BLADE SERVICE" in the Maintenance Section.

Alternate the mowing pattern every other time to reduce the possibility of grass matting.

Mow with engine speed control in **FAST** and ground speed control handle in a **SLOW** position.

Clean deck, removing all grass clippings and debris from the top and underside of deck after each use.

RAISING CHUTE DEFLECTOR

(For Clearance Through Gates or For Transporting Tractor).

1. Remove wing-nuts and flat washers (if used) securing the Chute Deflector to the deck. See Figure 13.
2. Raise Chute Deflector and re-install flat washers and wing-nuts onto deck studs to prevent loss.
3. Transport the tractor to the desired location.
4. Be sure to return the Chute Deflector to the down position and secure it to the deck before mowing.

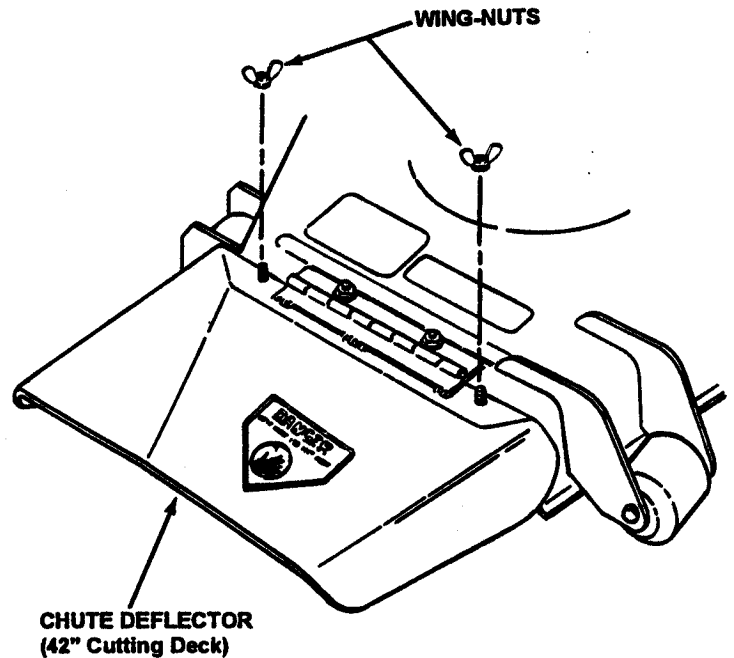
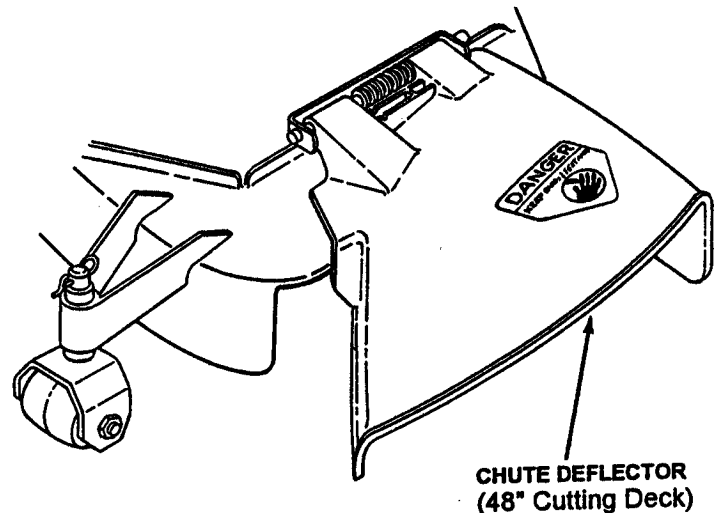


FIGURE 13



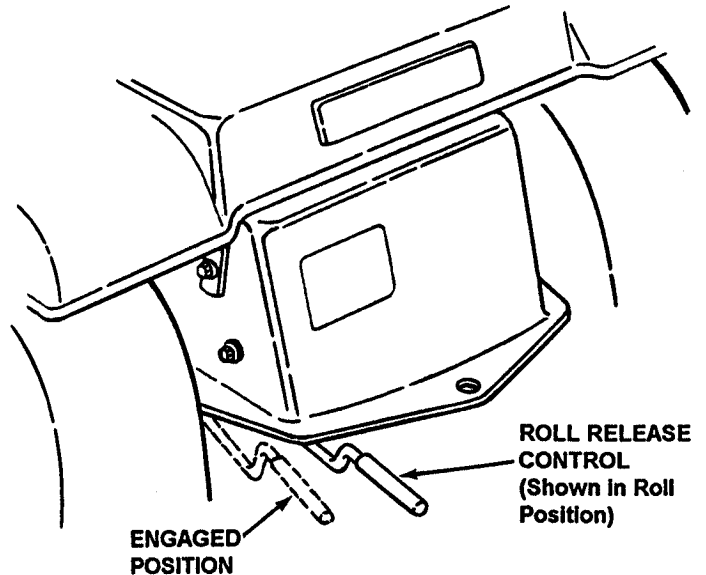
OPERATING INSTRUCTIONS

ROLLING TRACTOR (With Engine OFF)

1. With engine "OFF" and Parking Brake set, move to the rear of tractor.
2. Move the Roll Release Control to the right and down. This disengages the hydro transmission and allows the tractor to be rolled. See Figure 14.
3. Release the Park Brake.
4. Push or pull tractor to desired location.

NOTE: Be prepared to stop tractor from rolling too quickly in this free wheeling mode by depressing Parking Brake Pedal, or by shifting the Roll Release Control back into the engaged position.

5. Move Roll Release Control up and to the left to engage hydro transmission.
6. Set Park Brake.



NOTE: The transmission will not propel the tractor if the Roll Release Control is left in the "ROLL" position.

FIGURE 14

AVAILABLE ACCESSORIES

The SNAPPER Series D Lawn Tractor can be equipped with a variety of Accessories that increase its versatility. The Accessories available for each model are listed in the chart below. Contact an authorized SNAPPER Dealer for ordering any of the Accessories desired.

AVAILABLE ACCESSORIES	SERIES D LAWN TRACTOR MODEL	
	LT160H42DBV	LT160H42DBV2
Thatcherizer	6-1247	6-1247
Snow Blower*	6-1352	6-1352
Dozer Blade Support Kit	6-1370	6-1301
2-Stage Snow Thrower**	8-0871	8-0871
Snow Thrower Support Kit	6-1802	6-1802 & 6-1811
Weight Kit	6-1245	6-1245
Tire Chains	6-1399	6-1333
Ninja Kit	6-1220	6-1220
Single Bag Catcher***	6-1249	6-0944
Dump Cart	6-0697	6-0697
Twin Bag Catcher***	Not Available	Not Available
Adapter Mounting Kit	6-1334	6-1334
Air Lift Kit	6-0735 (2)	6-0735 (2)
Bag-N-Wagon	NA	NA
Bag-N-Wagon Hitch Kit	NA	NA
Hitch/Sub-Frame Kit****	6-1879	6-1879
38" Snow Thrower****	6-1880	6-1880
46" Dozer Blade (Spring Trip)****	6-1881	6-1881
Debris Blower Kit ****	6-1883	6-1883
Utility Trailer Kit	6-1910	6-1910
Aerator Kit	6-1911	6-1911
De-thatcher Kit	6-1912	6-1912
Lawn Sweeper Kit	6-1913	6-1913
Lawn Sweeper (De-thatcher) Kit	6-1914	6-1914
Lawn Roller	6-1915	6-1915
Broadcast Spreader	6-1916	6-1916

* Requires Dozer Blade Support Kit

** Requires Snow Thrower Support Kit

*** Requires Adaptor Mounting Kit

**** Requires Hitch/Sub-Frame Kit (6-1879)

TROUBLESHOOTING GUIDE (Part 1)

When using the Trouble-Shooting Guides on this page and the next, don't overlook the simplest cause first, even though it may seem too obvious to consider. For example, if the engine will not start, it simply may be out of fuel. The Guides generally list the most simple causes first in each problem category to help you locate the cause through the process of elimination.

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Starter Will Not Crank Engine	1. Battery dead.	1. Service battery.
	2. Blown fuse.	2. Replace fuse.
	3. Electrical connections loose or corroded.	3. Clean and check connections for good contact.
	4. Defective ignition switch.	4. Contact authorized SNAPPER dealer.
	5. Starter Spins without engaging.	5. Release Start key and repeat attempt. If starter continues to spin, contact Dealer.
Engine Will Not Start	1. Blade engagement switch in the "ON" position.	1. Move blade engagement switch to "OFF".
	2. Park brake not set.	2. Set park brake.
	3. Fuel tank empty.	3. Fill fuel tank with fresh fuel.
	4. Engine needs choking.	4. Move engine speed control to "CHOKE".
	5. Spark plug wire disconnected.	5. Place spark plug wire onto spark plug.
	6. Battery weak or dead.	6. Service battery.
	7. Faulty interlock switch.	7. Contact authorized SNAPPER dealer.
Engine Stalls After Running	1. Operator not in seat.	1. Sit in operator's seat.
	2. Engine speed control in the "CHOKE" position.	2. Move engine speed control to "FAST".
	3. Fuel tank empty.	3. Fill with fuel to proper level.
	4. Engine air pre-cleaner and/or air cleaner dirty.	4. Clean free of all debris.
	5. Spark plug defective or gap set improperly.	5. Service spark plug.
	6. Fuel filter stopped up.	6. Replace fuel filter.
	7. Water, debris or stale fuel in fuel system.	7. Drain and clean fuel system.
Engine Loses Power	1. Excessive load on engine.	1. Lessen load by slowing ground speed.
	2. Engine air pre-cleaner or air cleaner dirty.	2. Clean or replace filters.
	3. Engine oil level low.	3. Fill with engine oil to proper level.
	4. Engine cooling fins and air screens excessively dirty.	4. Clean free of all debris.
	5. Spark plug faulty.	5. Service spark plug.
	6. Water, debris or stale fuel in fuel system.	6. Drain and clean fuel system.
Engine Backfires When Turned To "STOP"	1. Engine speed control set too "FAST".	1. Set engine speed control to "SLOW" and allow engine to idle. Then, turn key to "OFF".
Excessive Vibration	1. Damaged or bent mower blades.	1. Service mower blade(s).
	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.

(Continued on next Page)

TROUBLESHOOTING GUIDE (Part 2)

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Tractor Will Not Move Or Loss Of Traction	1. Speed control handle in the neutral "N" position.	1. Place speed control in desired speed.
	2. Roll release control in "ROLL" position (Hydro Models Only).	2. Move roll release control to the engaged position.
	3. Low transmission oil level (Hydro Models Only).	3. Bring oil to proper level.
	4. Shifter out of adjustment.	4. Adjust shifter.
	5. Traction drive belt requires adjustment.	5. Adjust traction drive belt.
	6. Traction drive belt requires replacement.	6. Replace traction drive belt.
Blade(s) Not Turning	1. Blade engagement switch in the "OFF" position.	1. Move switch to the "ON" position.
	2. Blade belt requires adjustment.	2. Adjust mower belt.
	3. Blade belt requires replacement.	3. Replace mower belt.
	4. Electric clutch not functioning.	4. Contact authorized SNAPPER dealer.
Cutting Grass Improperly	1. Uneven tire pressure.	1. Bring to proper pressure.
	2. Cutting height too low or high.	2. Adjust cutting height.
	3. Engine speed too slow.	3. Move engine speed control to "FAST".
	4. Forward speed too fast.	4. Move speed control to a slower speed.
	5. Deck side to side level requires adjustment.	5. Adjust side to side level
	6. Deck front to rear level requires adjustment.	6. Adjust front to rear level.
	7. Cutting Blade dull or damaged.	7. Sharpen cutting edges or replace blade.
	8. Blade belt requires replacement.	8. Replace blade belt.
	9. Blade belt slipping.	9. Replace blade belt.
Poor Grass Discharge	1. Engine speed too slow.	1. Move engine speed control to "FAST".
	2. Forward speed too fast.	2. Move speed control to a slower speed.
	3. Grass is wet.	3. Mow when grass is dry.
	4. Excessively worn or damaged blade(s).	4. Service mower blade(s).
	5. Build up of grass clippings and debris under deck.	5. Clean deck.
	6. Improper blade(s) installed on deck.	6. Install proper SNAPPER blades.
	7. Blade(s) installed improperly on deck.	7. Install blades properly.
Battery Will Not Charge	1. Poor cable connections.	1. Clean cables and battery terminals.
	2. Bad battery cell(s).	2. Replace with new battery.
	3. Faulty alternator.	3. Contact engine manufacturer's dealer.
Oil Leaking From Transmission	1. Loose or missing oil filler cap on transmission.	1. Check oil level and re-install oil cap.
	2. Leaking axle seats.	2. Contact authorized SNAPPER dealer.
	3. Leaking at casing seal.	3. Contact authorized SNAPPER dealer.

MAINTENANCE INSTRUCTIONS

SERVICE 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 7	X					
Engine	Initial Oil Change.	Pages 16		X				
Engine	Periodic Oil Change.	Page 16				X*		
Air Pre-Cleaner	Service Sponge Pre-Cleaner Element.	Engine Manual & Page 18			X**			
Air Cleaner	Replace Element.	Engine Manual			X**			
Spark Plug	Replace Plugs.	Engine Manual					X	
Fuel Filter	Replace Filter.	Page 18					X	
Engine Cooling System	Clean Shrouds and Fins.	Engine Manual & Page 18					X**	
Battery	Check Electrolyte.	Page 19			X			X
	Charge Battery.	Page 19						X
Tires	Check Pressures.	Page 7 & 25	X					X
Drive Belts	Check For Wear and Tension.	Page 23			X			X
Mower Blades	Check For Wear and Damage.	Pages 21-22	X					
Mower Deck	Clean Debris Accumulation.	Page 7	X		X			X
Mower Deck	Clean Outside and Underside.	Page 7	X		X			X
Lubrication Points	Grease or Oil.	Pages 16-17			X			X
Hydrostatic Trans. Oil	Check Oil Level.	Page 15						X

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

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

MAINTENANCE PARTS

TRACTOR	DRIVE BELTS		MOWER BLADES		BATTERY
MODEL No.	Engine to Deck Belt	Deck Belt	Standard	NINJA™	(Cold Crank Amp)
LT160H42DBV	2-8585	2-9205	2-6691	2-4234	6-0618 (160 CCA)
LT160H42DBV2	2-8585	2-9205	2-6691	2-4234	1-8630 (220 CCA)
LT160H48DBV2	4-6926	2-8334	2-9247	---	1-8630 (220 CCA)

MAINTENANCE INSTRUCTIONS



WARNING



Before attempting any adjustments, maintenance, or repairs, STOP engine. STOP blades. Shift to neutral. Engage park brake. Remove key.

HYDROSTATIC TRANSMISSION

The hydrostatic transmission does not normally require maintenance, however, the oil level should be checked after every season.

CHECKING OIL LEVEL IN TRANSMISSION

The Operator's Seat, Battery, and Battery Tray must be moved out of the way to gain access to the oil level Check Cap on the Transmission.

1. Remove Operator's Seat by removing Seat Adjustment Knobs. See Figure 15.

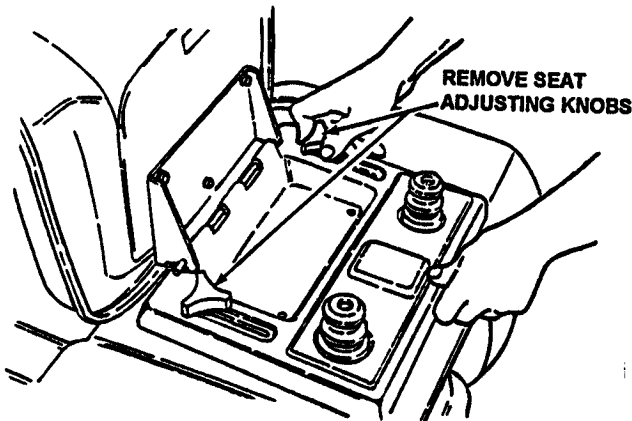


FIGURE 15

2. Lay Seat forward. **NOTE:** Be careful NOT to pull Seat Switch Wires from the Switches. See Figure 16.
3. Disconnect the Negative (BLACK) Battery Cable from the - Terminal first! See Figure 16.

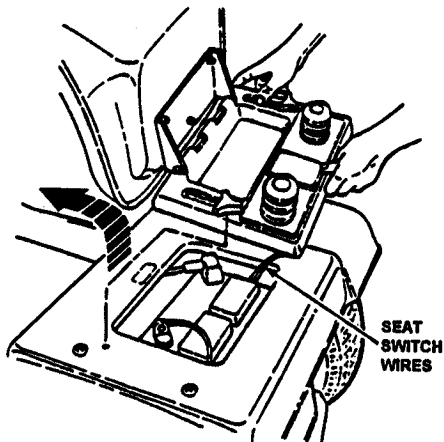


FIGURE 16

4. Slide the red protective boot away from its terminal, then disconnect the Positive (RED) Battery Cable from the + Terminal.
5. Remove the Battery and the Battery Tray from the Tractor. Transmission is now accessible.
6. Clean debris off the Oil Fill Cap and surrounding area to prevent dirt from entering when removing the Fill Cap. See Figure 17.
7. Remove the Oil Fill Cap and check oil level. The level should be about 3/4" from top of case.
8. If the level is lower than 1", add 10W-30 Motor Oil as required to bring the level up to 3/4".

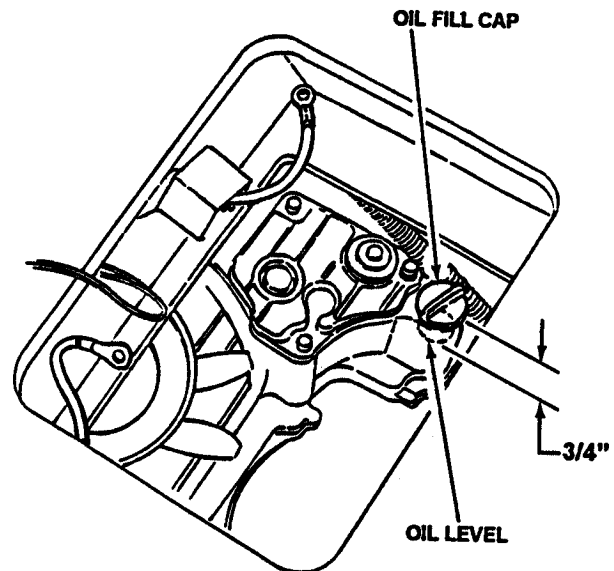


FIGURE 17

9. Reinstall Oil Fill Cap.
10. Reinstall Battery Tray.
11. Reinstall Battery in Tray. See Figure 16
12. Connect battery Positive (+) RED cable first, then the Negative (-) BLACK Cable. Slide the protective red boot over Positive Terminal after connecting Cable.
13. Reinstall and adjust seat. See Figure 15.

MAINTENANCE INSTRUCTIONS

CHANGING ENGINE OIL

The engine is equipped with a no-tools type oil drain which can be opened and closed by hand. Figure 18 shows the drain location on a single cylinder engine. On a new engine, drain the oil after the first five hours of operation and thereafter, at 25 hour intervals. Refer to the Engine Owner's Manual for specific details. Change oil in engine crankcase as follows:

1. Slip a hose over the nipple on the drain and place the other end of the hose into a container with at least a 2 quart capacity to catch the oil.
2. Turn the drain body by hand in counter-clockwise direction, then pull the drain body OUT to open the drain.
3. Allow enough time for all of the old oil to drain out of the crankcase and into the container.
4. After all oil has drained, disconnect the hose from the nipple, then push the drain body IN and rotate it clockwise until tight to close the drain.
5. Add new motor oil to bring level up to full mark on dipstick with oil of weight and grade specified in the Engine Owner's Manual.

NOTE: If the engine is equipped with an oil filter, change filter at every other oil change. Contact an Engine Dealer for the correct replacement filter.

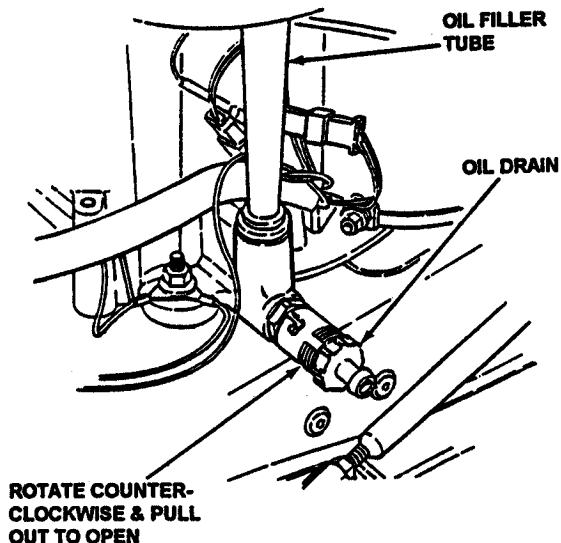


FIGURE 18

LUBRICATION (Each 25 Hours)

The service points listed on this page 16 and the next page(17), should be lubricated as directed after each 25 operating hours to keep your Lawn Tractor and Mower Deck in top operating condition.

FRONT WHEEL BEARINGS LUBRICATION

Lubricate both front **Wheel Bearings** through the grease fittings on wheel hubs using general purpose grease from a grease gun. Add grease until grease purges from bearings. See figure 19.

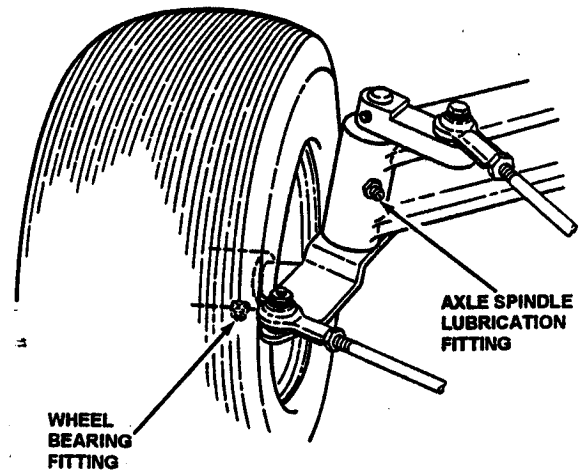


FIGURE 19

AXLE SPINDLES LUBRICATION

Lubricate **Axle Spindles** on both sides with 1 shot of general purpose grease from the grease gun. The right side fitting is shown in Figure 19. Also, lubricate the grease fitting located in the center of the axle pivot point on both LT160H42DBV and LT160H42DBV2 Models.

NOTE: The right hand spindle fitting faces forward as shown in Figure 19 and the left hand spindle fitting faces to the rear of the tire.

STEERING SHAFT LUBRICATION

Lubricate the **Steering Shaft** at wear points with a light coat of motor oil from an oil can.

MAINTENANCE INSTRUCTIONS

LUBRICATION (Continued)

CLUTCH/BRAKE PIVOT LUBRICATION

The Clutch/Brake Pivot is located on the left underside of the tractor and is lubricated with 1 shot of general purpose grease from the grease gun. See Figure 20.

CLUTCH/BRAKE
PIVOT LUBRICATION
FITTING

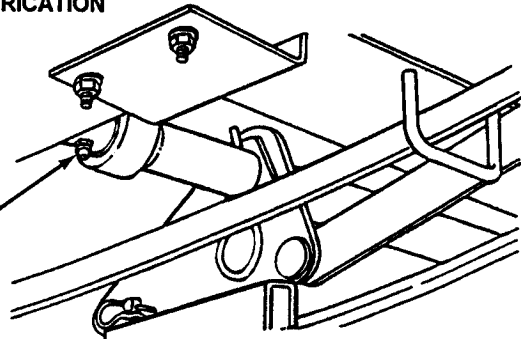


FIGURE 20

STEERING SECTOR GEAR LUBRICATION

Raise the hood and lubricate the steering Sector Gear with a light coat of motor oil from an oil can. See Figure 21.

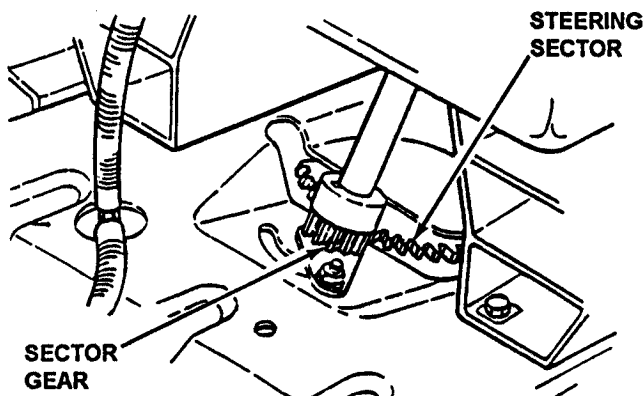


FIGURE 21

STEERING DRAG LINK LUBRICATION

Lubricate the left end of the Steering Drag Link with a small amount of motor oil from an oil can. See Figure 22.

DRAG LINK
LUBRICATION
POINT

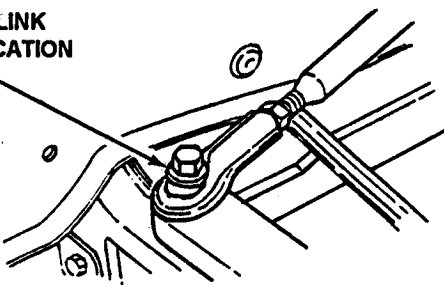


FIGURE 22

STEERING TIE ROD LUBRICATION

Lubricate both ends of the Steering Tie Rod with motor oil from an oil can. See Figure 23.

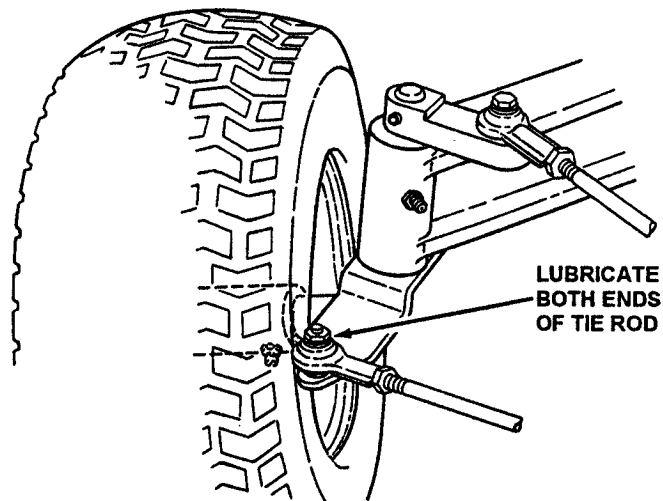


FIGURE 23

PARK BRAKE LATCH LUBRICATION

Lubricate the Park Brake Latch mechanism pivot points which are located on the Left underside of the tractor with motor oil from an oil can. See Figure 24.

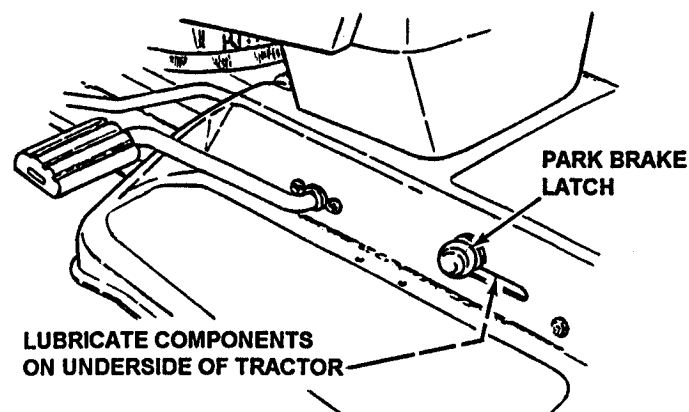


FIGURE 24

DECK LIFT MECHANISM LUBRICATION

Lubricate all wear and pivot points of the Deck Lift Mechanism with a thin coat of motor oil from an oil can.

MOWER DECK SPINDLES LUBRICATION

Lubricate the Mower Deck Spindles with 1 shot of general purpose grease through the fitting located on each spindle on the underside of the deck.

MAINTENANCE INSTRUCTIONS

SERVICE

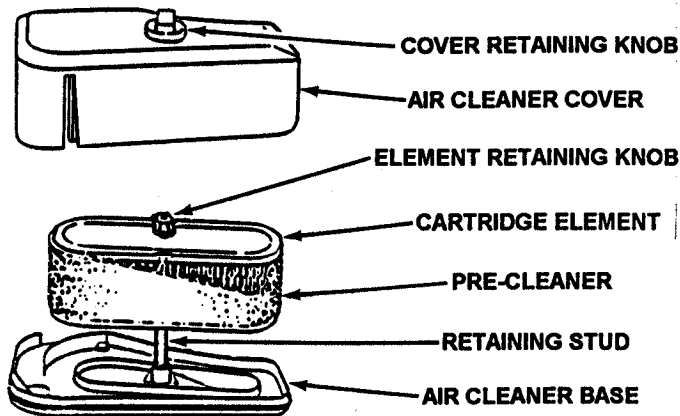
The engine components listed on this page should be serviced on a regular basis to keep it in top working condition. Refer to the "SERVICE SCHEDULE" on page 13 of this manual for the recommended intervals. Refer to the Engine Owner's Manual for specific instructions.

ENGINE PRE-CLEANER

The engine pre-cleaner should be removed and cleaned every 25 operating hours. See Figure 25 and 25A. Refer to the Engine Owner's Manual for specific cleaning instructions.

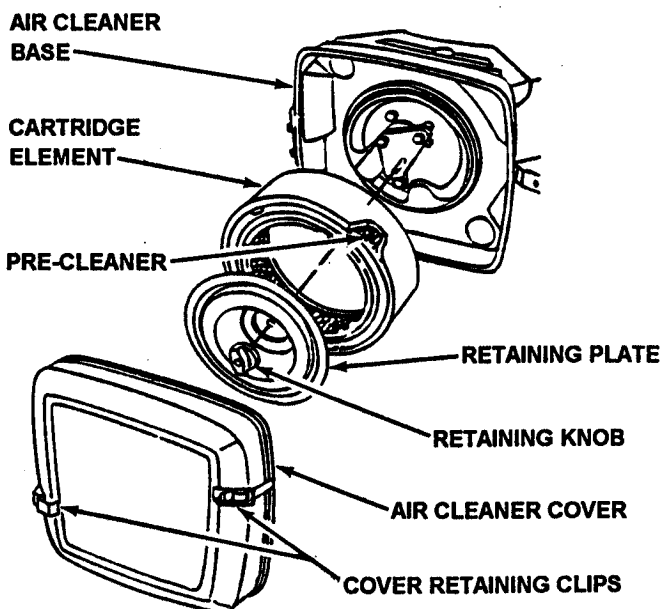
ENGINE AIR CLEANER

The engine air cleaner element should be cleaned each time the pre-cleaner is serviced and should be replaced every 100 operating hours. See Figure 25 and 25A. Refer to the Engine Owner's Manual for specific details



SINGLE CYLINDER ENGINE TYPE

FIGURE 25



TWIN CYLINDER ENGINE TYPE

FIGURE 25A

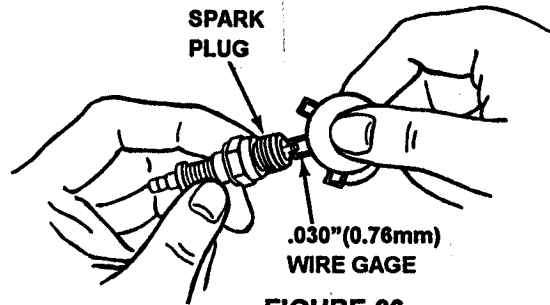


FIGURE 26

SPARK PLUG

Remove and replace engine Spark Plug(s) after 100 operating hours. Refer to Engine Owner's Manual for correct replacement Plug and Spark gap specifications. See Figure 26.

ENGINE COOLING SYSTEM

The engine cooling system consists of an engine shroud and engine fins. These should be kept clean and free of debris as needed or cleaned at least every 100 operating hours or more often under dusty, dirty conditions.

FUEL FILTER

The engine Fuel Filter should be replaced every 100 operating hours. Remove and replace the fuel filter as follows (when Engine is cold):

1. Raise tractor hood, remove Spark Plug Wire(s) from Plug(s) and secure the Wire(s) away from the Spark Plug(s).
2. Locate the Fuel Filter. On single cylinder engines, the Fuel Filter is located under the air cleaner. On the twin cylinder models, it is located above the valve cover.
3. Drain gasoline from Fuel Tank before removing Fuel Filter to prevent gasoline spillage. Drain fuel into a clean container if fuel is to be re-used.
4. Have a container handy to drain the fuel into, then remove the hose clamps above and below the fuel filter and drain fuel from the tank and carburetor into the container.
5. Install a new SNAPPER Part Number 1-4359 Fuel Filter in place of the old Filter. Re-install the Hose Clamps and reconnect the Fuel Lines. See Figure 27.
6. Re-fill Fuel Tank with gasoline. Re-connect Spark Plug Wire(s) to Spark Plug(s) and lower the tractor hood.

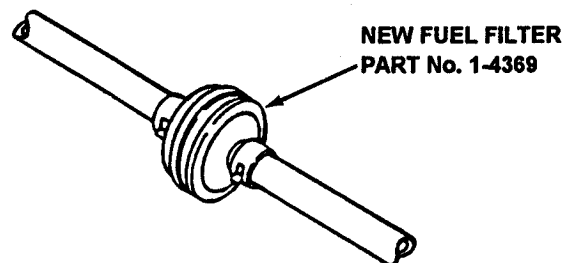


FIGURE 27

MAINTENANCE INSTRUCTIONS

BATTERY SERVICE

The battery should be checked and serviced every 25 hours of operation as follows:

Tilt Operator's Seat forward and remove the two adjusting knobs then lift the seat assembly off tractor frame and move it forward out of the way. Be careful not to disconnect wires from seat switches. See Figure 28.

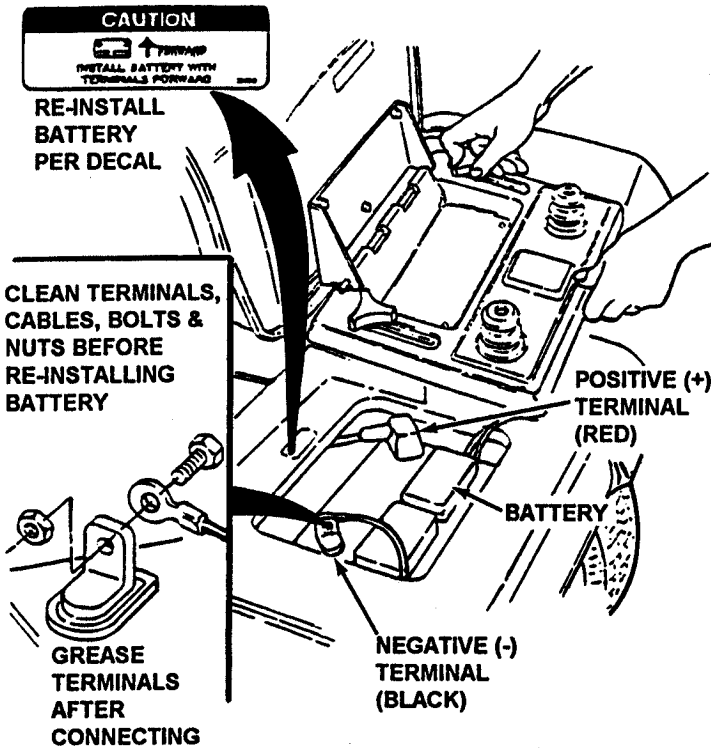


FIGURE 28

CHECKING BATTERY ELECTROLYTE

WARNING

The Electrolyte (Acid) produces a highly explosive gas. Keep all Sparks, Flame and Fire away from the area when charging battery or when handling electrolyte or battery. Electrolyte (Acid) is a highly corrosive liquid. Wear eye protection. In case of eye or skin contact with Electrolyte (Acid), wash all affective areas of the body immediately with water.

Clean top of battery, disconnect battery positive cable to prevent arching, then carefully remove the battery cell covers.

Visually check electrolyte level in each cell. Level should be 3/16" above cell plates up to the fill rings.

Using distilled water, fill cells as needed to bring level up to, but not over, the fill rings. See Figure 29. Replace cell covers and reconnect the positive cable if disconnected earlier.

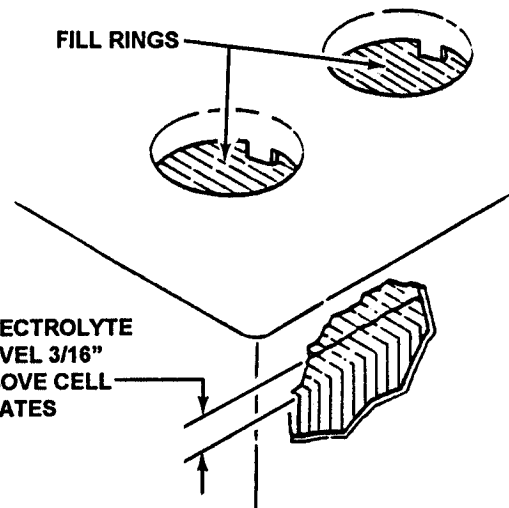


FIGURE 29

BATTERY CHARGING PROCEDURE

The engine is equipped with a flywheel alternator to charge battery. If the tractor is not run regularly, connect battery to a charger monthly to maintain charge. If low, battery liquid could freeze at zero degree temperatures causing cracking of the battery case. To prevent freezing, keep the charge up or remove the battery from the tractor and store battery in warm, well ventilated area during the off season. Store on wooden surface, not on cement floor.

1. Always remove the Negative (-) cable first to prevent arching and remove Positive (+) cable last.
2. To charge, connect a constant current charger (not trickle type) and follow instructions furnished with the charger.
3. If time allows, slow charge at 1 amp for 10 hours, or as an alternate, fast charge at not more than 2.5 amps for four hours. Observe ALL Precautions while charging.
4. Install Positive (+) cable first and install Negative(-) cable last. Apply a small amount of grease over the terminals to prevent corrosion.
5. Re-install seat assembly over battery and secure in position with adjusting knobs. Leave knobs loose until the seat is adjusted, then tighten.

ACTIVATING A NEW BATTERY

Activating a new Battery with Electrolyte (Acid) will bring it up to 80 % of full charge state. It must be brought up to full charge, which means 20% additional charge is needed. Charge a new Battery for 2 hours on a slow charge rate of 1 Amp to bring it up to full charge before installing it in tractor.

MAINTENANCE INSTRUCTIONS

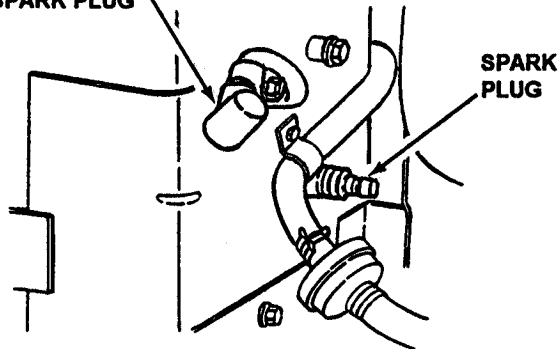
MOWER DECK SERVICE

MOWER DECK REMOVAL (42" Mower Deck)

The Mower Deck will have to be removed to replace blades or deck belts as described on following pages. Remove deck as follows:

1. Place tractor on a firm, level surface such as a driveway or garage floor and set the park brake.
2. Turn engine "OFF" and remove key. Raise hood and remove spark plug wire(s) from spark plug(s). Secure wire(s) away from plug(s). See Figure 30.

REMOVE WIRE BOOT FROM SPARK PLUG



SINGLE CYLINDER ENGINE SHOWN

FIGURE 30

3. Lower the Deck to lowest setting by pushing lock button in on lift lever, then moving lever full forward.
4. Remove both Hairpins from the Front Deck Hanger Rod. See Figure 31.

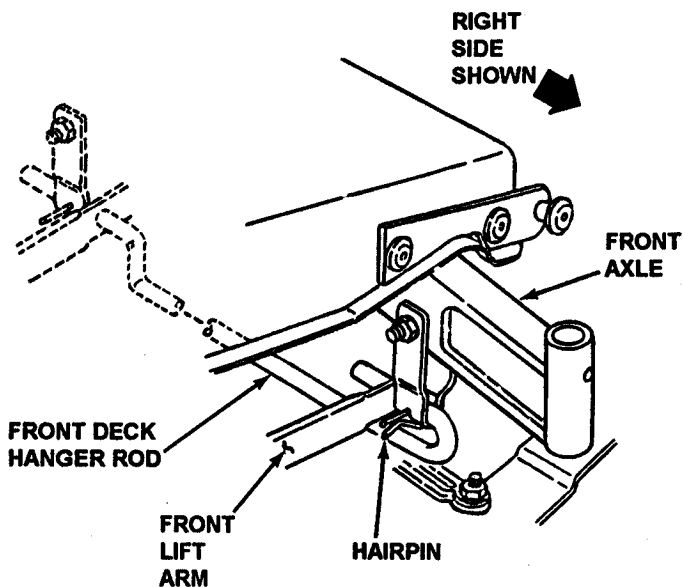


FIGURE 31

5. Disconnect the Deck Front Lift Cable by removing the Hairpin and Washer first. See Figure 32.

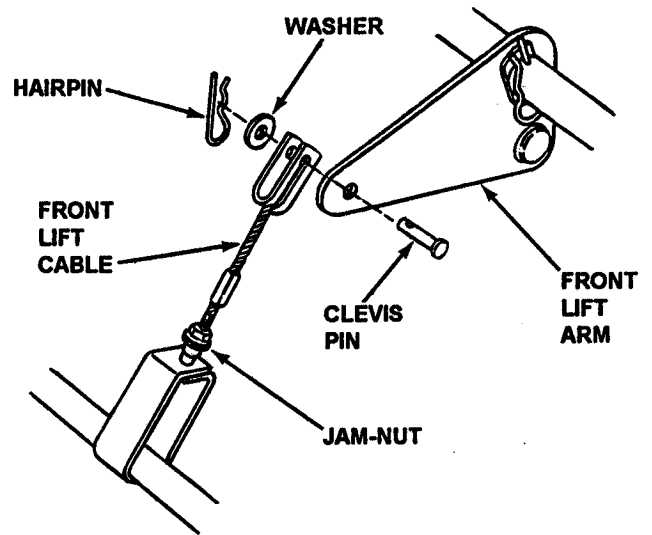


FIGURE 32

6. Hold front of Deck up and remove Clevis Pin from Front Lift Arm, then lower the front of the Deck to the ground.
7. Make note of hole used in sector plates so same holes are used during re-assembly. See Figure 33. Remove hairpins and flat washers from rear deck hanger bracket on both sides of tractor.
8. Slide both sector plates off of rear deck hanger brackets. See Figure 33.

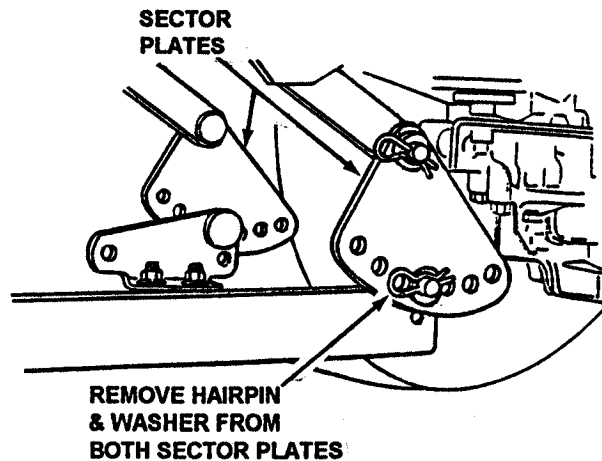


FIGURE 33

9. Slide deck forward to allow idler spring to release tension. See Figures 40 and 42 on page 22.
10. Remove deck drive belt from the electric clutch.
11. Pull deck out from under tractor from right hand side.
12. Reverse this procedure to reinstall mower deck.

(48" DECK REMOVAL INFO ON NEXT PAGE)

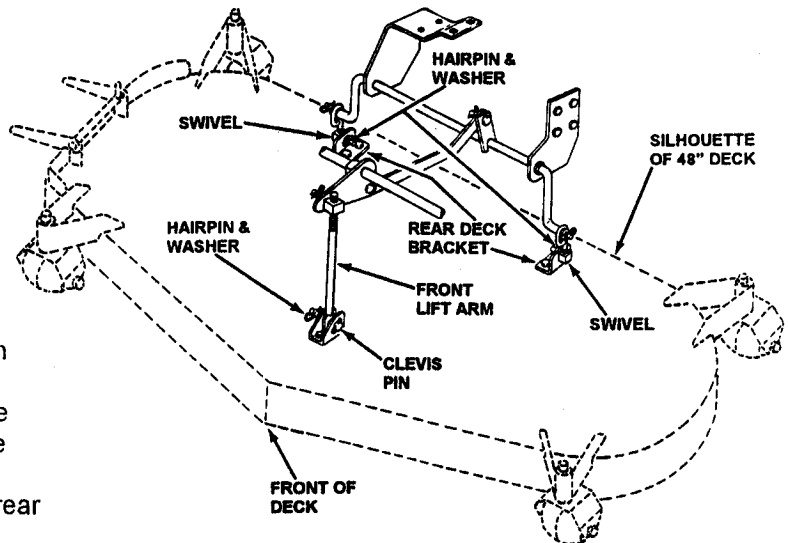
MAINTENANCE INSTRUCTIONS

48" MOWER DECK REMOVAL

Follow steps 1 and 2 (42" Mower Deck Removal on previous page 20), then lower the deck onto the gage wheels prior to disconnecting the front and rear lift arms.

- A. Disconnect the front lift arm first by removing the hairpin, washer, and clevis pin.
- B. After disconnecting front lift arm, remove hairpins and washers from rear deck swivels, then slide each swivel out from rear deck brackets.

NOTE: It may be necessary to slightly prop up the front of the deck when removing clevis pin to take pressure off of front lift arm. The same procedure should be used when removing swivels from the rear deck brackets.



WEAR LIMITS - STANDARD BLADES

Mower Blades should be checked for excessive wear and damage before each use. See Figure 34 for Blade wear conditions on a standard Blade.

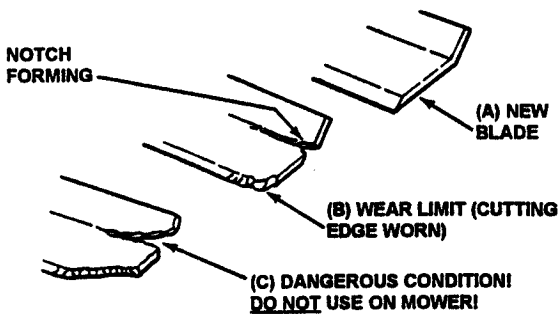


FIGURE 34

Blades should be kept sharp at all times. Sharpen Blades ONLY if good condition. Replace if worn or damaged. Install new Air Lifters on Blades if so equipped when the Blades are being replaced.

WARNING

Never use a blade that shows signs of excessive wear or damage. Refer to Figure 34 for STANDARD blade wear limits.

STANDARD MOWER BLADES - REMOVAL AND REPLACEMENT

1. Remove the Mower Deck from Tractor following instructions on page 20 under, "MOWER DECK REMOVAL".
2. Carefully position the Deck to access Blades and inspect both Blades for signs of damage or wear.
3. Remove Blade(s) Mounting Bolt(s) and Cone Washer(s) from each Blade and remove Blades to sharpen or replace as needed. See Figure 35.

4. Install sharpened or new Blades, (SNAPPER Part No. 2-6691) and secure each with the Cone Washer and Mounting Bolt. Torque Mounting Bolts to 40 ft. lbs.
5. If Blade is in good condition but cutting edge is dull, sharpen at a 25 degree angle as shown in Figure 36.

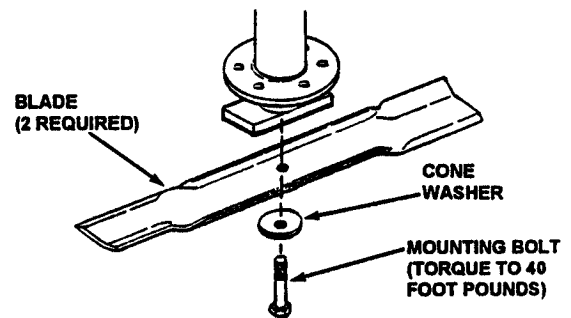


FIGURE 35

SHARPENING STANDARD BLADE(S)

Blades should be kept sharp at all times. When the Blade(s) are dull, cut grass will be ragged and lawn will usually turn brown. Sharpen standard Blades as follows:

1. Sharpen the 2-1/2" cutting edges on standard mower Blades at a 25° angle. See Figure 36.
2. Tighten the Blade Mounting Bolt to torque specified as shown in Figure 35.

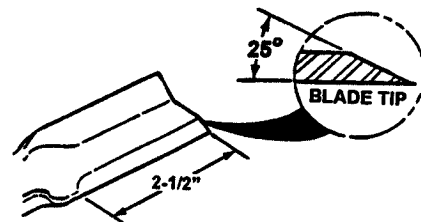


FIGURE 36

MAINTENANCE INSTRUCTIONS

AIR LIFTS - REPLACEMENT NOTE

On units equipped with Grass Catchers and Blades with Air Lifts, **always** replace the Air Lifts when the Blades need replacement. **DO NOT TRANSFER USED Air Lifts to the new Blades!** Instructions are provided in the Air Lift Kits. Use Air Lift Kit Part Number 6-0735. See Figure 37.

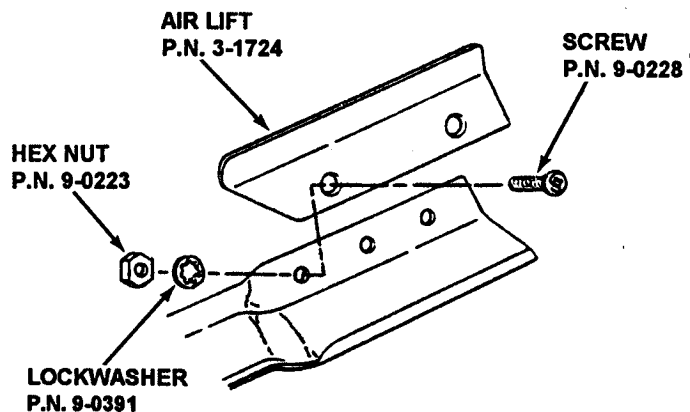


FIGURE 37

NINJA MOWER BLADE SERVICE

NINJA™ BLADE WEAR LIMITS

SNAPPER NINJA™ Recycling Blades require more frequent service intervals than standard Blades. Check the NINJA™ Recycling Blades for excessive wear or damage after every use. See Figure 38.

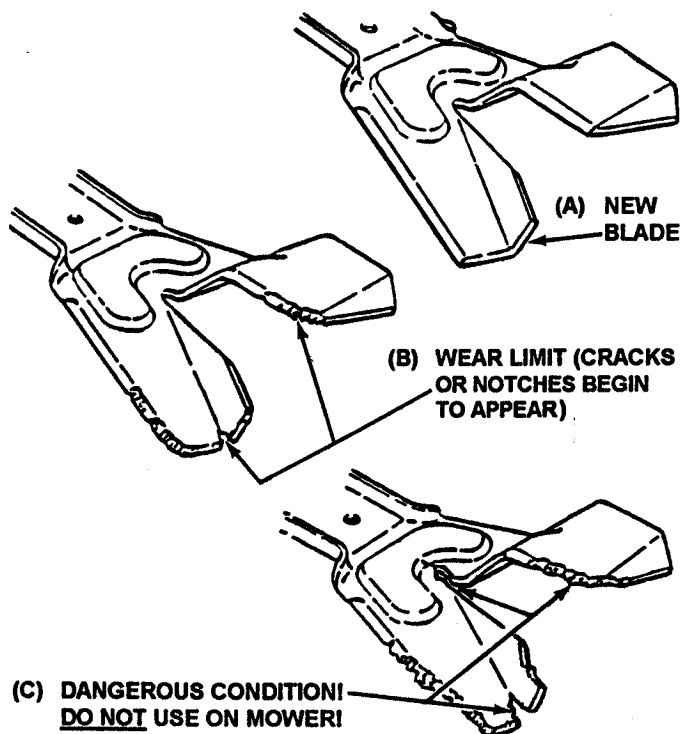


FIGURE 38

⚠

WARNING

⚠

Never use a **BLADE** that shows signs of excessive wear or damage. Refer to Figure 38 for NINJA™ Blade wear limits.

NINJA™ BLADE SHARPENING PROCEDURE

SNAPPER NINJA™ Recycling Blades require more frequent sharpening than standard Blades because of their recycling function.

Remove each NINJA™ Blade by removing the Mounting Bolts and Cone Washers. Retain this Hardware for re-installation of Blades.

Inspect each NINJA™ Blade for excessive wear or damage. See Figure 38 for NINJA™ Blade wear limits.

Replace Blades if in poor condition. Use Kit 6-1220 on 42" Decks.

Sharpen dull cutting edges if the Blade is in otherwise good condition.

Sharpen all four cutting edges of each NINJA™ Recycling Blade at 27° for best performance. See Figure 39.

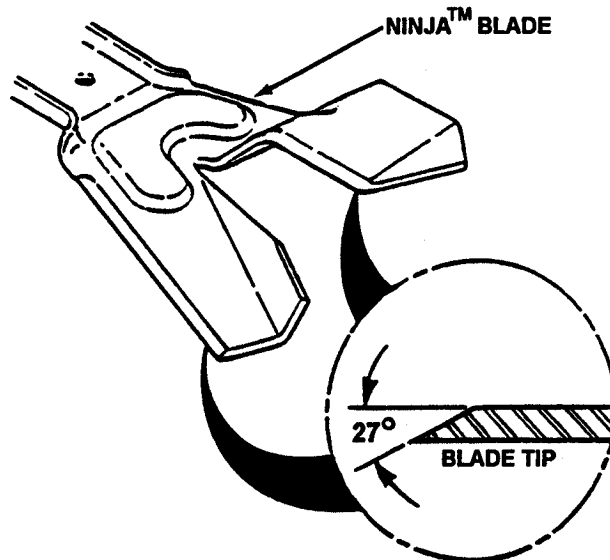


FIGURE 39

Re-install the sharpened or new NINJA™ Blades in the reverse order of removal.

Re-install Cone Washers and tighten Mounting Bolts on 42" Cutting Decks to 40 ft. lbs. torque value. Refer to Figure 35 for 42" Cutting Decks.

MAINTENANCE INSTRUCTIONS

DECK DRIVE BELT SERVICE

42" DECK DRIVE BELT REMOVAL AND REPLACEMENT

Remove Mower Deck from Tractor following instructions on page 21 under, "MOWER DECK REMOVAL".

Loosen Locknuts securing the Spindle Pulley Belt Guards and swing Guards away from Pulleys. Disconnect Idler Tension Spring from the Deck Bracket as shown in Figure 40.

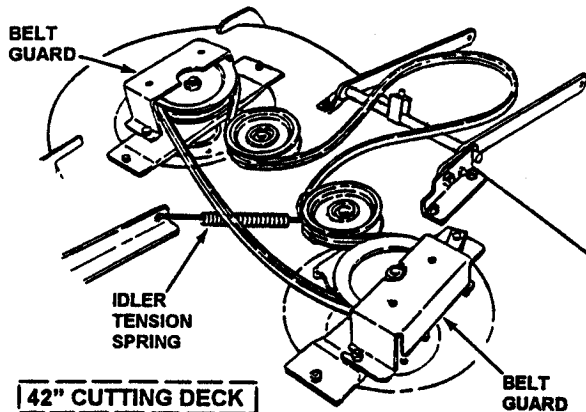


FIGURE 40

For 42" Cutting Deck, remove old Belt and install new Belt, SNAPPER P.N. 2-8582 on Model LT160H42DBV or P.N. 2-9205 on LT160H42DBV2. Install new Belt in the reverse order of removal. (For 48" Cutting Deck, Model LT140H48DBV2, use SNAPPER P.N. 4-6926 for Deck/Drive Belt, and SNAPPER P.N. 2-8334 doe Deck Belt.) On the 42" Cutting Deck, adjust Idler Pulley Belt Guides by sliding in or out before tightening Idlers to obtain 1/16" clearance between Belt and Belt Guide. See Figure 41. **NOTE:** There are no Belt Guides on the 48" Cutting Deck.

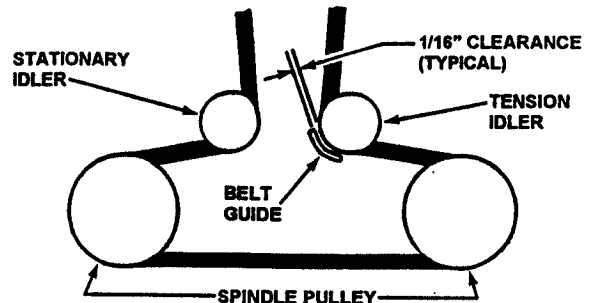
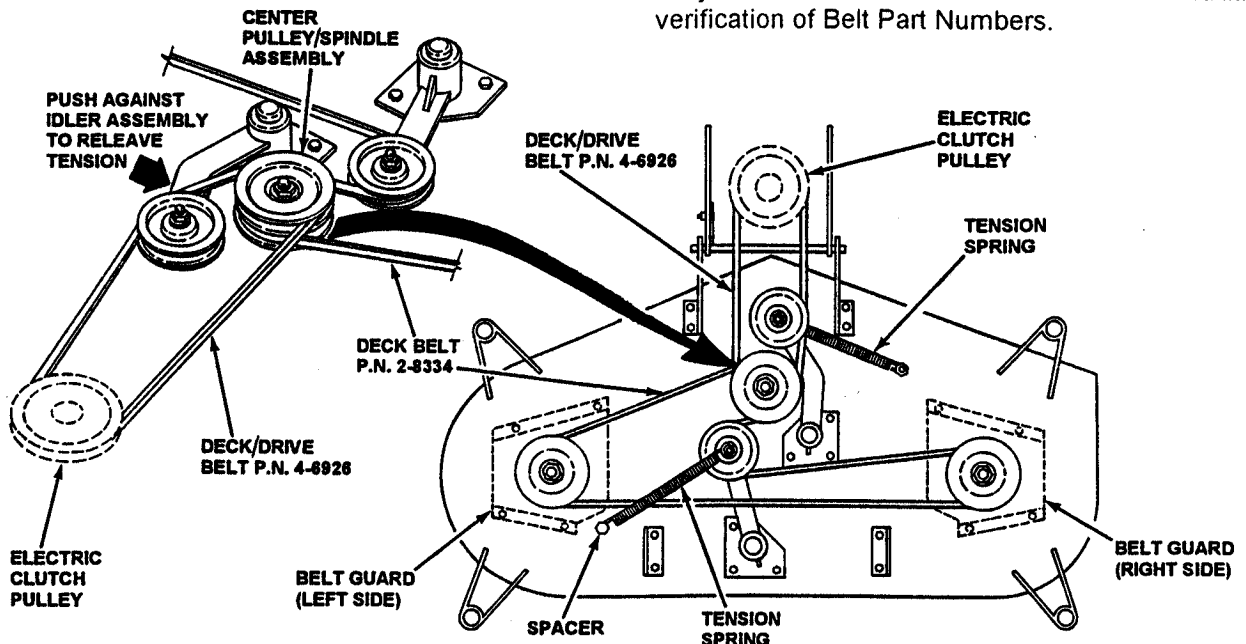


FIGURE 41

48" DECK/DRIVE BELT AND DECK BELT REMOVAL AND REPLACEMENT

Remove Mower Deck from Tractor following instructions on Page 21, under, "MOWER DECK REMOVAL".

STEP 1: The Deck/Drive Belt should be removed first by applying pressure on the Idler Assembly and then sliding the Belt off of the center Pulley/Spindle Assembly. See Illustration.



48" DECK & BELT ILLUSTRATION

STEP 2. The Spindle Pulley Belt Guards must be removed completely by removing Locknuts of which secure Belt Guards to Deck.

STEP 3. The Idler Arm Tension Spring has to be detached from the Spacer by removing the Nut and Washer and sliding the Spring up and OFF of the Spacer. This releases the tension on the Idler Arm for easy removal of Deck Belt. Check Illustration for verification of Belt Part Numbers.

MAINTENANCE INSTRUCTIONS

TRACTION DRIVE BELT SERVICE

Check the Traction Drive Belt for damage and wear after 25 operating hours. The Traction Drive Belt is located on the underside of the Tractor and spans the Engine Pulley's top groove to the Transmission Pulley. See Figure 42. If this Belt shows signs of excessive wear or damage, replace it as follows:

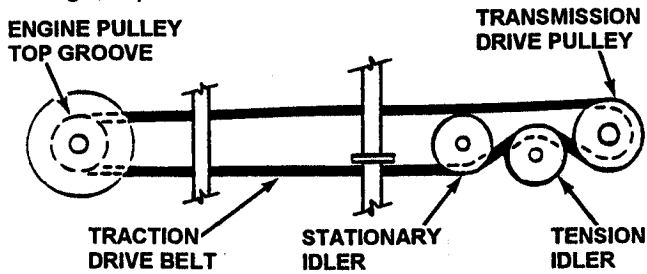


FIGURE 42

TRACTION DRIVE BELT REMOVAL

NOTE: Although it is possible to replace the Traction Drive Belt without removing the Mower Deck, Deck removal will make Belt replacement easier. Remove Mower from Tractor following instructions on page 20 under "MOWER DECK REMOVAL". Depress Clutch/Brake Pedal and set Parking Brake. Roll Mower Drive Belt out of groove in the Electric Clutch Pulley and lower Belt for access to Traction Drive Belt. See Figure 43.

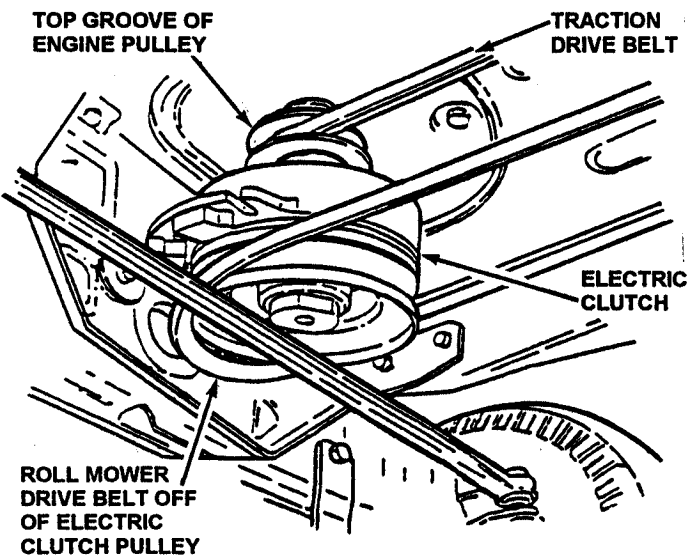


FIGURE 43

Disconnect the Idler Pulley tension Spring from Tractor Frame. See Figure 44.

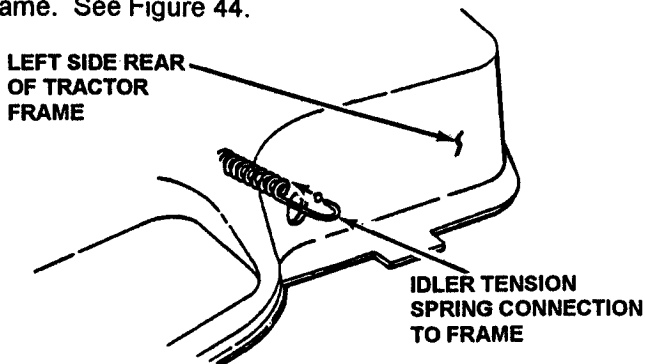


FIGURE 44

Loosen Mounting Nuts on Traction Drive Belt Idlers just enough to allow Belt to clear Belt Guides. Remove Traction Drive Belt from top groove of Engine Pulley. See Figure 43. Remove Belt from Belt Guide, then pull Belt back until it can be removed from Transmission Pulley.

TRACTION DRIVE BELT - REPLACEMENT

Place new Traction Drive Belt over Transmission Pulley and span to Engine Pulley. Place Belt into top groove of Engine Pulley (groove above Electric Clutch). See Figure 43. Route Belt through Stationary and Tension Idlers. **NOTE:** When installing a new Belt, make certain the Stationary Idler is mounted in the hole closest to the left hand side of the Tractor. See Figure 45.

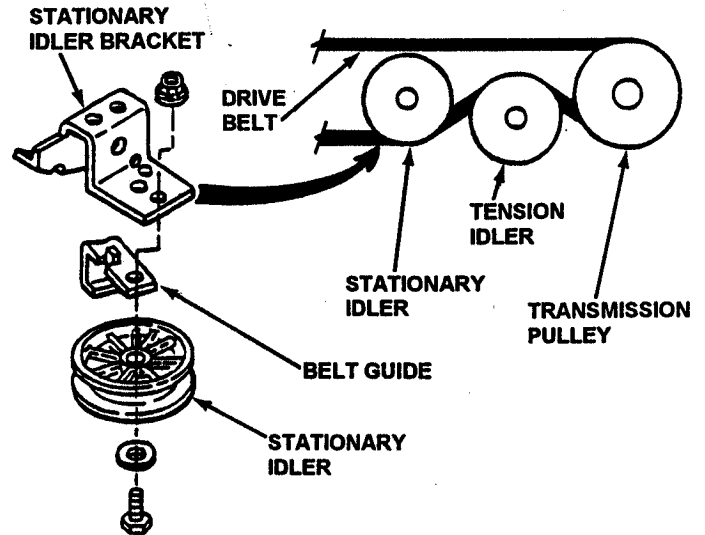
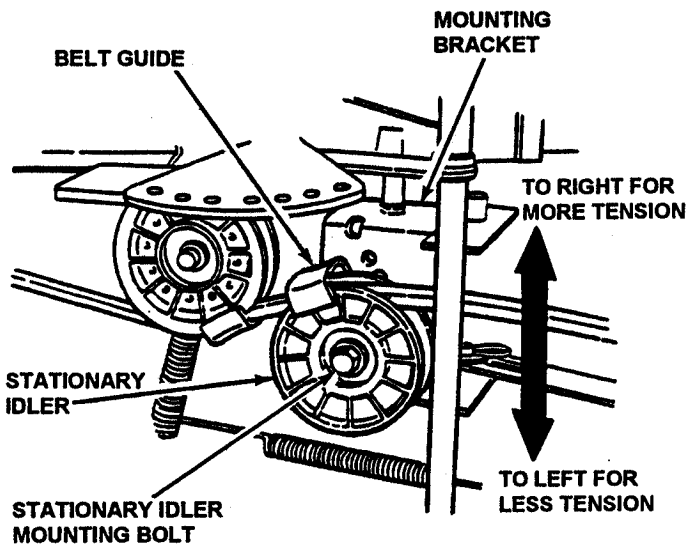


FIGURE 45

Make certain Belt is within Belt Guides and that Idlers turn freely. Re-connect tension Idler Spring to Tractor Frame. See Figure 44. Re-install Mower Deck (if removed) in reverse order of removal. Refer to page 20.



VIEWED FROM UNDERNEATH TRACTOR

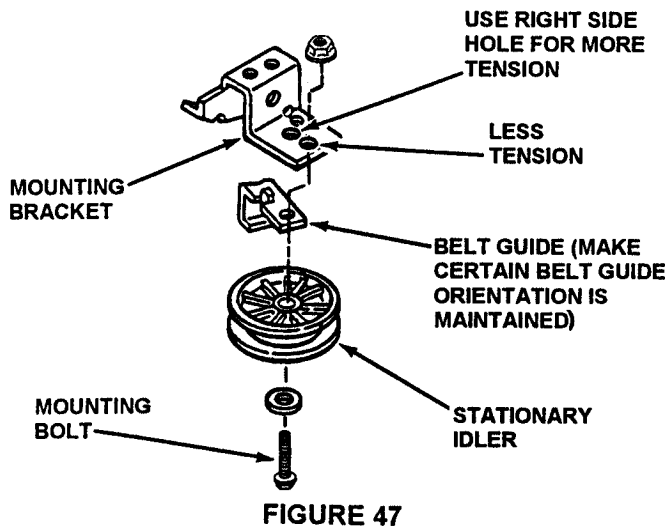
FIGURE 46

MAINTENANCE INSTRUCTIONS

TRACTION DRIVE BELT ADJUSTMENT

If a gradual loss of traction is noticed, it may be necessary to adjust the Traction Drive Belt tension by repositioning the Stationary Idler as follows:
NOTE the position of Belt Guide on Stationary Idler and make certain it remains the same after moving Idler. Remove the Traction Drive Belt Stationary Idler Mounting Bolt. See Figure 46.

Move the Stationary Idler one hole towards right side of Tractor for more Belt tension. **NOTE:** Right and Left sides indicated in Figures 46 and 47 are as viewed from Operator's position on Seat.



Secure Stationary Idler by tightening the Mounting Bolt. When properly adjusted, the Traction Drive Belt will not rotate with the Park Brake set and Engine running.

TIRES and PRESSURE

It is a good idea to check Tire Pressure before each mowing job. Uneven Tire Pressure can cause poor cutting patterns, especially uneven cutting from Side-To-Side. Keep pressure in Front Tires at 12 psi and Rear Tires at 10 psi (pounds per square inch) at all times!

DECK LEVEL ADJUSTMENTS

If the mowed path is uneven from Side-To-Side and the Tires are properly inflated, check Mower Deck for correct Side-To-Side levelness and adjust if needed.

SIDE TO SIDE LEVEL CHECK

Move Tractor to a firm, level surface, turn Blades and Engine **OFF**, then raise Hood and remove Spark Plug Wire(s) from Spark Plug(s) and secure Wire(s) away from Plug(s). Rotate both Blades until Blade Tips are at each side of Deck as shown in Figure 48. Place a piece of Angle Iron or similar object under center rear of Deck.

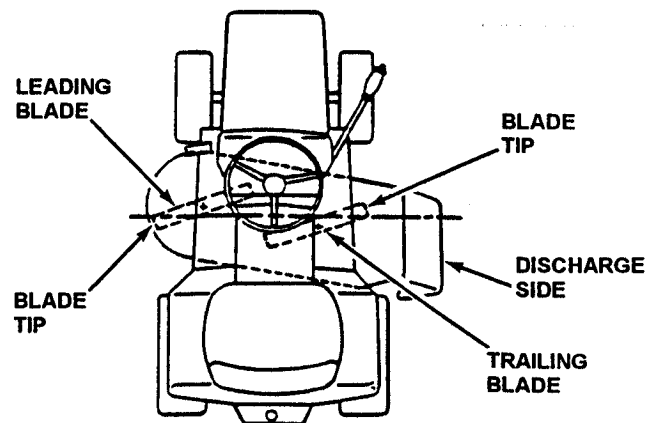


FIGURE 48

Remove Hairpins and Washers securing rear of Deck to Sector Plates. See Figure 49. Slide Sector Plates off of Pins and carefully lower Deck onto Angle Iron or similar object. Measure distance from Blade Tip to floor on each side of deck. Blade Tips should be within 1/8" of each other for the Deck to be considered level. If this differs more than 1/8", adjust as follows:

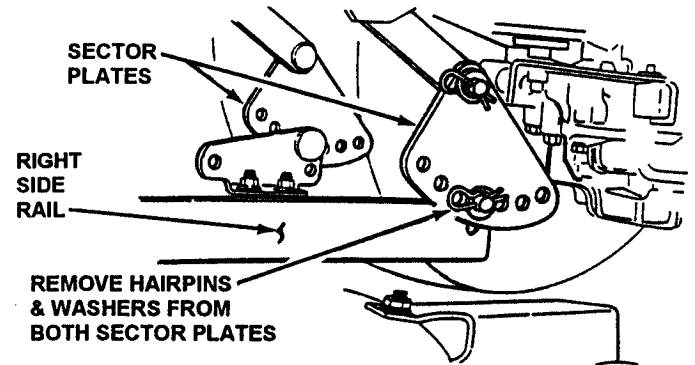


FIGURE 49

SIDE TO SIDE LEVEL ADJUSTMENT (42" CUTTING DECK)

Loosen front Lift Arm Pivot Bolt on front of right side rail. See Figure 50. Turn Eccentric "UP" or "DOWN" as required to level Deck, then securely tighten the Eccentric Shoulder Bolt and the Pivot Bolt.

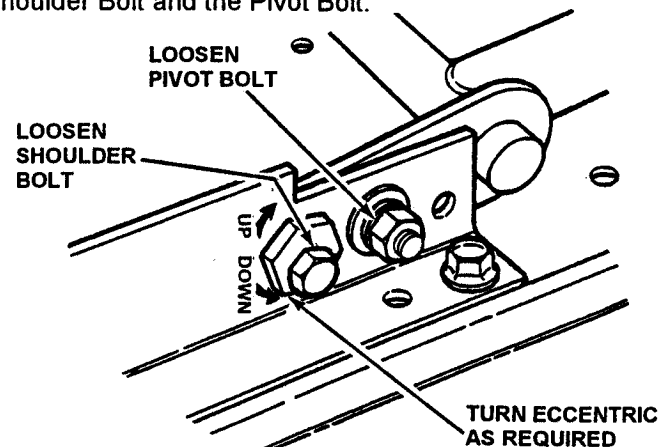


FIGURE 50

Place Sector Plates back onto rear Lift using hole that most closely lines up with Pin. Secure with Washer and Hairpins.

MAINTENANCE INSTRUCTIONS

MOWER DECK ADJUSTMENT (LEVELNESS)

Side To Side Level (48" Cutting Deck)

Before making deck leveling adjustments, check the tire pressure. Add or release air as needed to bring pressure to 10 PSI in front and 10 PSI in rear tires. If tires are properly inflated and mowing is still uneven, adjust side-to-side deck levelness first as follows:

1. Place machine on a smooth level surface.
2. Rotate outside blades so tips are pointed to the sides of deck. See Figure 51. Measure the distance from blade tips to floor. If the measurement is within 1/8" from side-to-side, the deck levelness is satisfactory. If the difference from side-to-side is greater than 1/8", continue to next step for adjustment.
3. Place a 2 x 4 piece of wood under the front middle portion of deck. Place one 2 x 4 piece of wood under the rear of deck on both sides behind the two outside blades. See Figure 51.
4. Lower deck down to rest on the three 2 x 4 pieces of wood. Make sure there is no deck tension on the lift rods supporting the deck.
5. Loosen the bolt and nut that secures the front lift arm weldment to the front lift arm. See Inset.
6. Remove both hair pins and washers from swivel located on rear lift rods and pull rod out of lift brackets.
7. Rotate swivels on both sides up or down to achieve the proper levelness. See Figure 51A.
8. Reinstall swivel into deck bracket. Reinstall washers and hair pins.
9. Tighten nut and bolt on front lift arm securely.

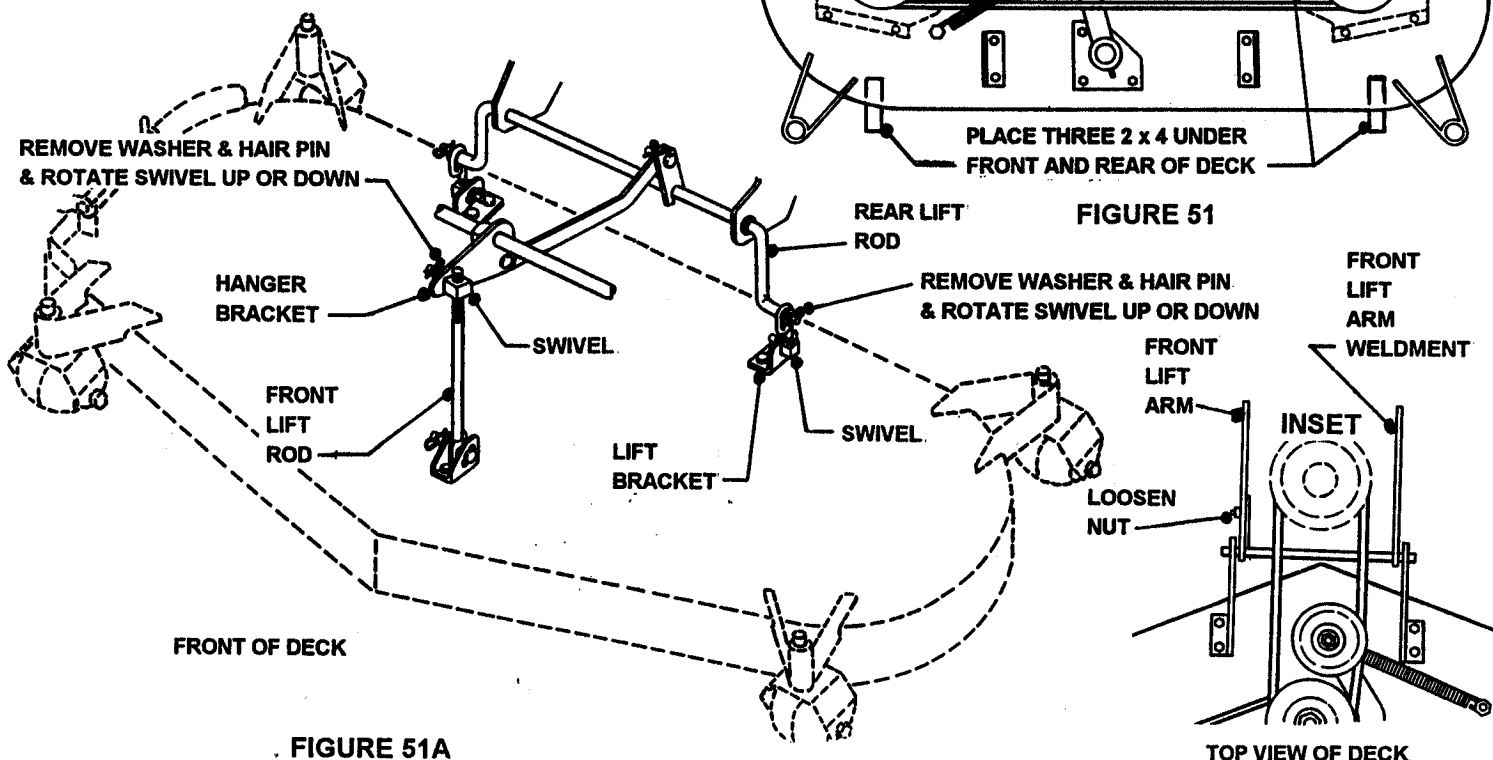


FIGURE 51A

4.3.4. MOWER DECK ADJUSTMENT (LEVELNESS)

Front to Rear Deck Pitch (48" Deck)

Before making deck leveling adjustments, check the tire pressure. Add or release air as needed to bring pressure to 10 PSI in front and 10 PSI in rear tires. If tires are properly inflated and mowing is still uneven, check side-to-side deck levelness first then proceed to front to rear adjustment. Adjust front to rear deck levelness as follows:

1. Place machine on a smooth level surface.
2. Rotate outside blades so tips are pointed to the front and rear of deck. Measure the distance from blade tips to floor. The distance should be the same. If the rear blade tip is higher lower than the front, proceed to Step 4 for adjustment.
3. Remove the hair pin & washer from swivel located on front lift rod. Remove swivel/lift rod from hanger bracket.
4. Rotate swivel up or down to achieve the proper levelness.
5. Reinsert swivel/lift rod into hanger bracket. Reinstall washer & hair pin. See Figure 51A.

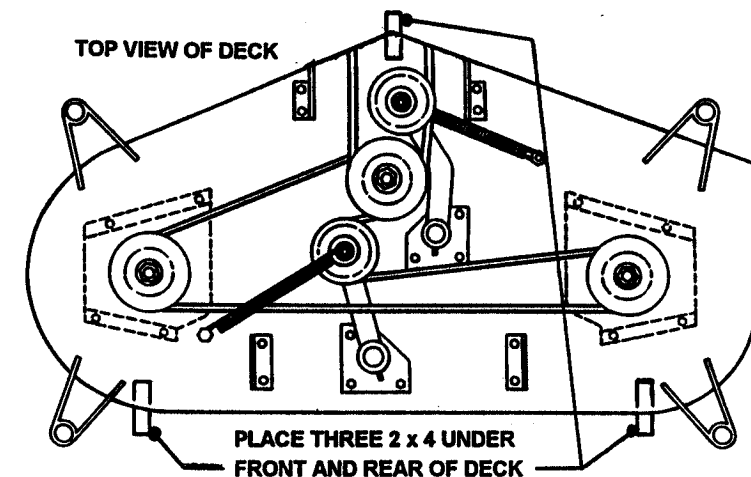


FIGURE 51

MAINTENANCE INSTRUCTIONS

FRONT TO REAR LEVEL ADJUSTMENT at SECTOR PLATES

Remove Hair-Pins and Washers securing Sector Plates to rear Lift Arms. See Figure 52.

Move Sector Plates the same number of holes as required to raise or lower the Deck.

The Deck should be set 1/4" lower at the rear than at the front.

If the Sector Plates are in the lowest possible setting and the correct front to rear level is not obtained, adjust according to section about front Lift Rods.

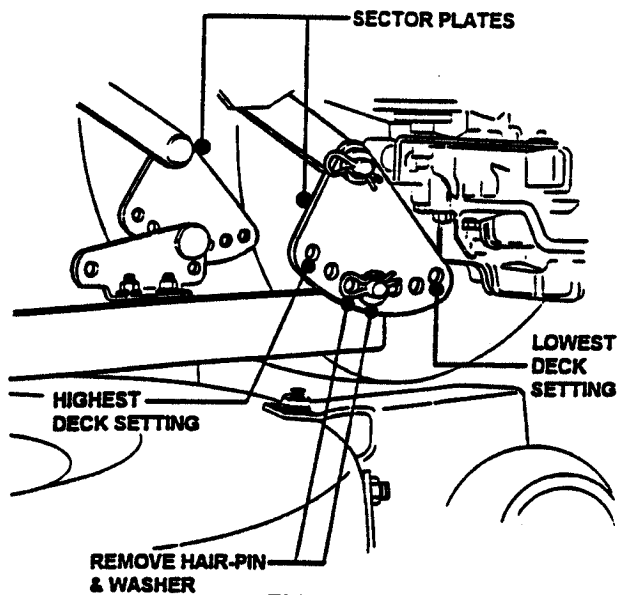


FIGURE 52

FRONT TO REAR LEVEL ADJUSTMENT at FRONT LIFT CABLE

If the Sector Plates are in their lowest setting and proper level cannot be obtained, adjust the front Lift Rod as follows:

Move Deck Lift Lever to the highest position.

Place a 2" wooden block or similar object under front center of Deck.

Place a 3" wooden block or similar object under rear center of Deck.

Remove Hair-Pins and Washers securing Sector Plates (See Figure 52). Lower rear of Deck onto the 3" block.

Remove Hair-Pin and Washer securing FRONT Lift Cable to FRONT Lift Arm. See Figure 53.

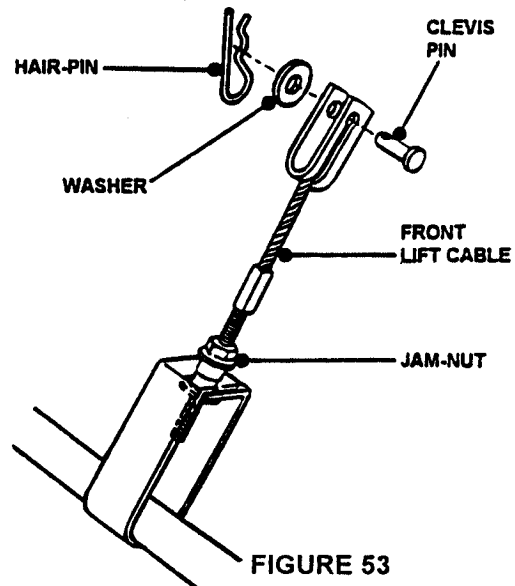


FIGURE 53

Remove the front Lift Cable and carefully lower front of Deck onto the 2" block.

Turn front Lift Cable after loosening Jam-Nut until it can be re-installed to Lift Arm without lifting Deck off of the blocks.

Secure Lift Rod to Lift Arm with Washer and Hair-Pin.

Place Sector Plates onto rear Hanger Brackets and secure with Washers and Hair-Pins.

Raise Deck and remove wooden blocks or similar objects.

Repeat steps for Front-To-Rear level adjustment. Refer to FRONT TO REAR LEVEL at SECTOR PLATES section.

MAINTENANCE INSTRUCTIONS

SHIFTER ADJUSTMENT

If movement of Tractor does not correspond with the selected speed or Shift Quadrant, adjust the Speed Control Lever as follows:

With Engine running, drive Tractor and move Shift Lever to locate NEUTRAL.

Turn Engine "OFF".

Locate Speed Control Lever Mount inside right rear tire. See Figure 54.

Loosen Mounting Nuts.

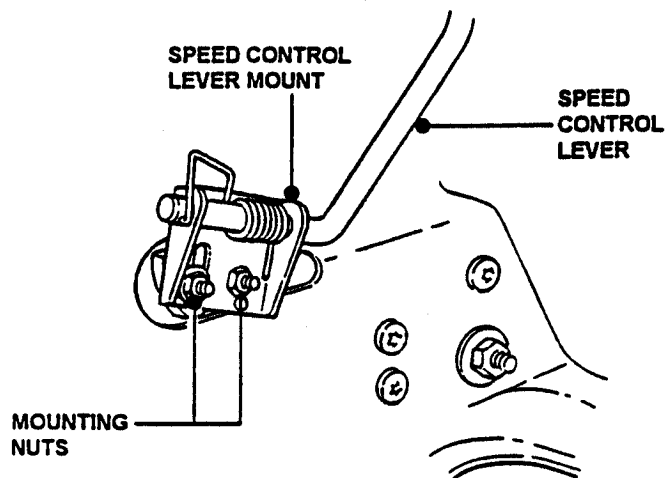


FIGURE 54

Move the Speed Control Lever until it is in direct relation to the Neutral "N" position on Quadrant. See Figure 55.

Tighten Mounting Nuts and test Shifter operation.

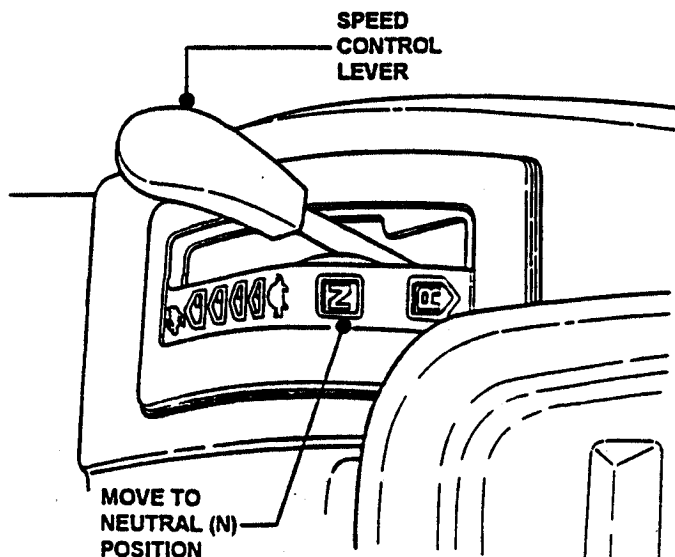


FIGURE 55

STEERING ADJUSTMENT

Should excessive "Play" be noted in the steering, adjust at the Steering Sector as follows:

Turn Engine "OFF" and raise Tractor Hood.

From left side of Tractor, locate the Steering Sector below Fuel Tank. See Figure 56.

Loosen the Eccentric Mounting Nut and rotate the Eccentric clockwise until Steering "Play" is reduced.

Tighten Eccentric Mounting Nut and lower Hood into operating position.

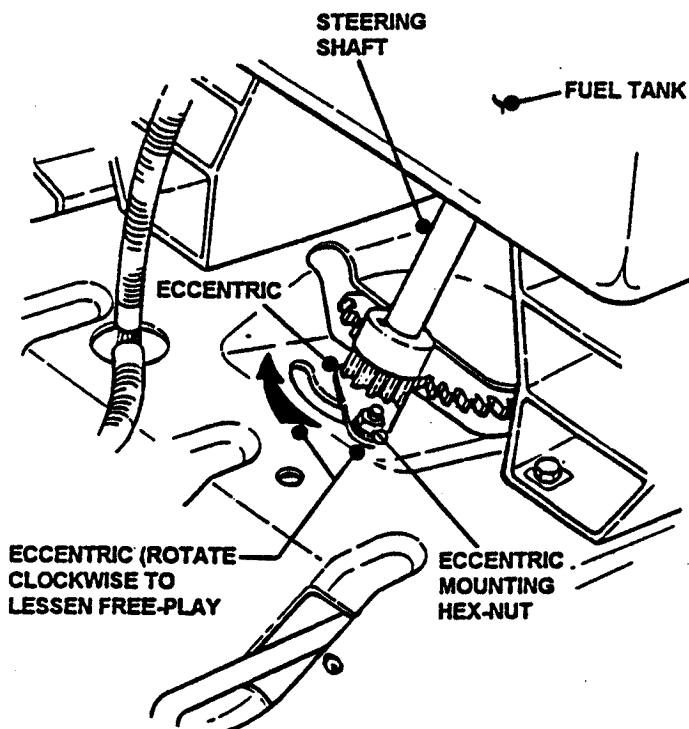


FIGURE 56

MAINTENANCE INSTRUCTIONS

WHEEL BRAKE ADJUSTMENT

When the **Wheel Brake** is properly adjusted, the rear **Wheels** will lock and skid when the **Tractor** is pushed forward with the **Parking Brake** set. Make sure the **Engine** is **STOPPED** and **Key** is removed before testing.

Adjust **Brake** if rear **Wheels** turn and **DO NOT** lock with **Parking Brake** set as follows:

Turn **Engine** "OFF" and remove **Key**.

Raise **Hood**, remove **Spark Plug Wire(s)** from **Spark Plug(s)** and secure **Wire(s)** away from **Plug(s)**.

Locate **Brake Adjustment** on right side of **Tractor** in front of and inside right rear **Wheel**. See **Figure 63**.

Turn **Nut** clockwise to increase **Braking** action or counter-clockwise to decrease **Braking** action. See **Figure 57**.

Replace **Spark Plug Wire(s)**, start **Engine** and test **Brake**.

Continue adjustment as described above until proper adjustment is achieved.

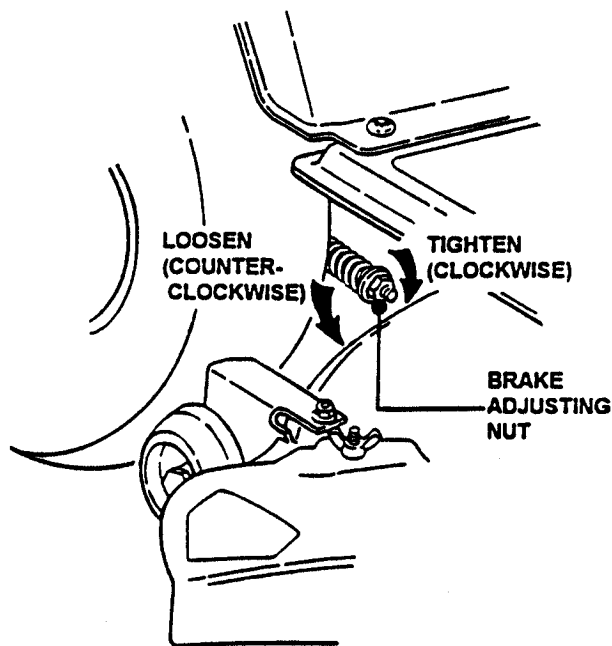


FIGURE 57

BLADE BRAKE NOTE

In addition to engaging the **Blade Belt** when the **Blades** are switched **ON** by pulling the **PTO Switch** out to "ON", the **Electric Clutch** functions to **Brake** and **STOP** the **Blades** from rotating when the **PTO Switch** is pushed in to the "OFF" position. The **Electric Clutch** is non-adjustable. If it fails to engage the **Blade Belt** or fails to **STOP** **Blade** rotation, contact an **Authorized SNAPPER Dealer** to correct.

ELECTRICAL SYSTEM

20 AMP FUSE PROTECTION

A **20 Amp, Automotive Type Fuse** is used to protect the **Electrical Circuit**. See **Figure 58** for the location of this **Fuse**.

If the **Engine** fails to crank and the **Battery** is fully charged, a blown **Fuse** could be the cause.

Pull the **Fuse** out of the holder and check to see if the metal **Fuse Wire** is broken. If the **Wire** is intact, re-install the **Fuse** in the holder and check for some other cause.

If the **Fuse** is blown, install a new **20 Amp Fuse**, (**SNAPPER Part Number 2-3653**) in the holder.

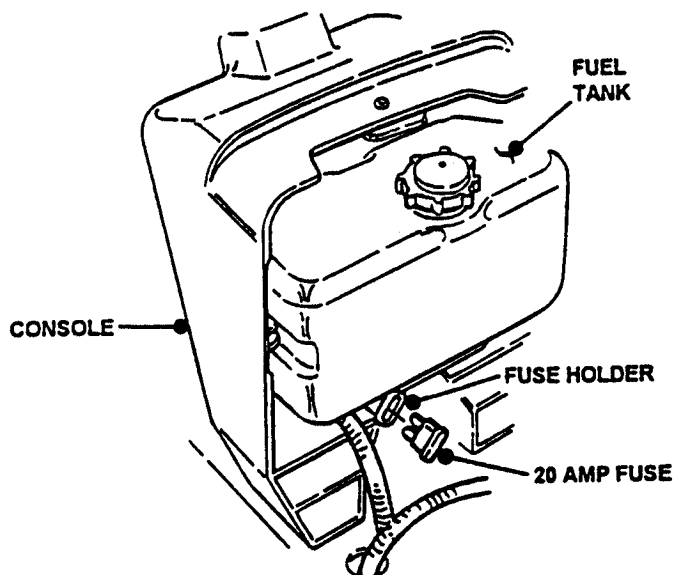
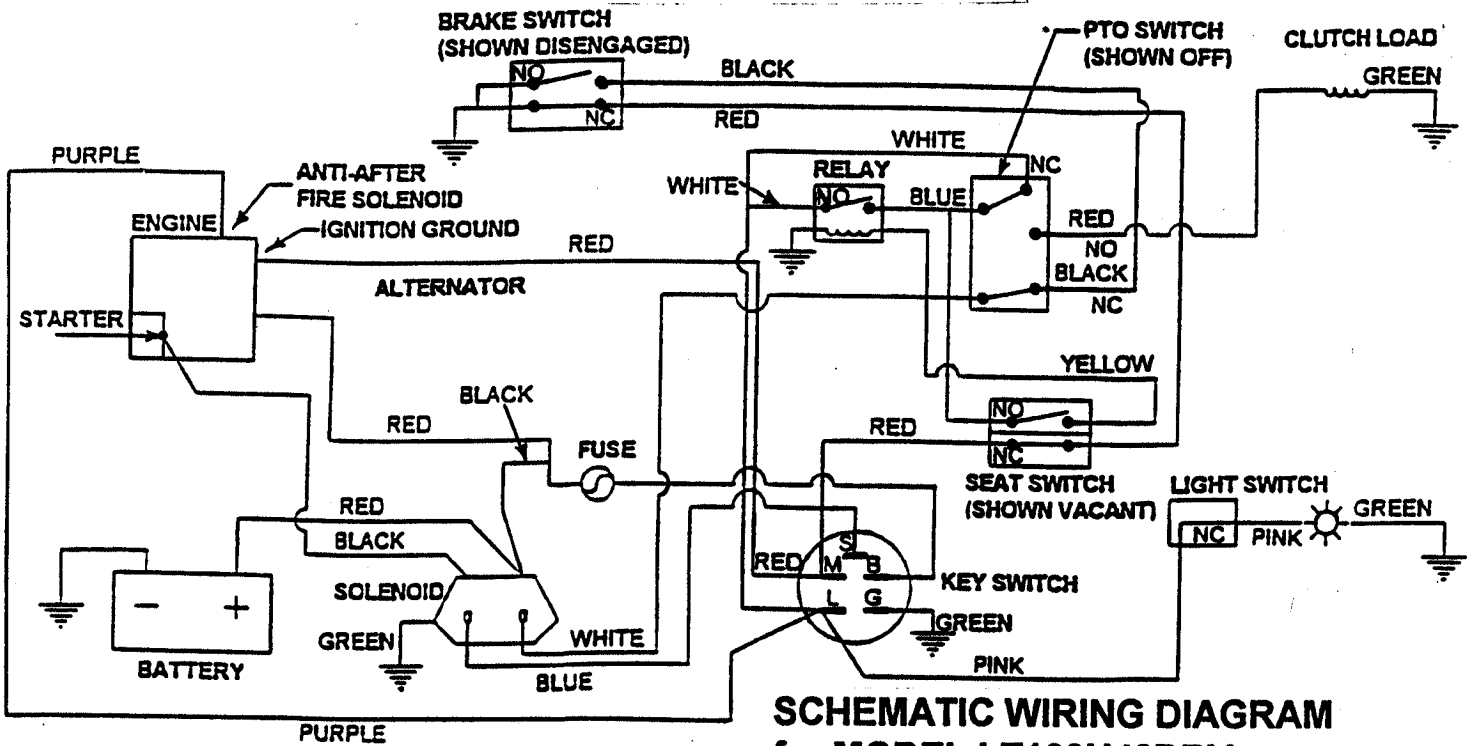


FIGURE 58

WARNING
Proper wheel brake and blade brake function is very important. **DO NOT** operate machine if brake(s) are not functioning properly.

ELECTRICAL SYSTEM



SCHEMATIC WIRING DIAGRAM
for MODEL LT160H42DBV

ILLUSTRATED DIAGRAM for
Model LT160H42DBV

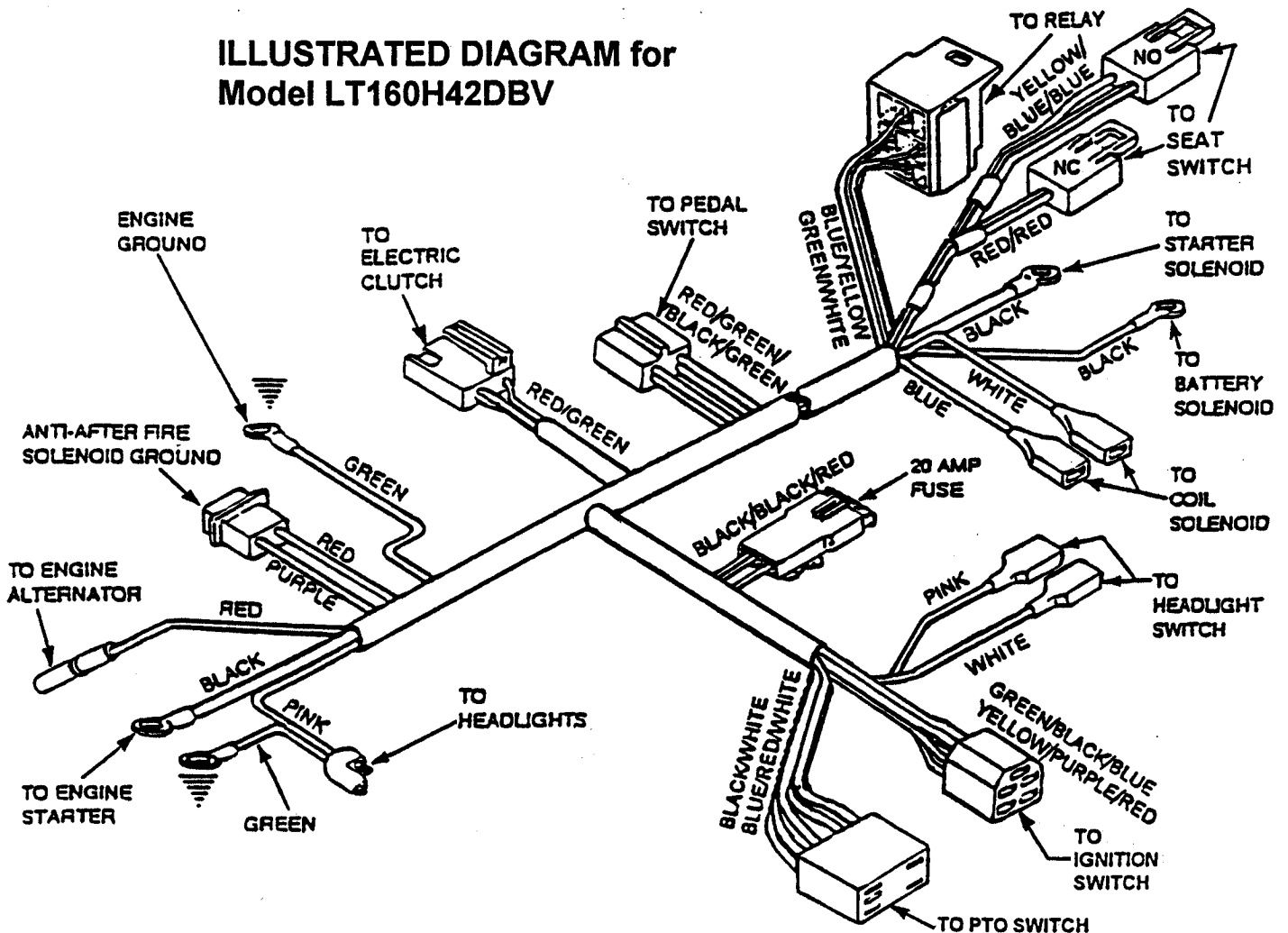
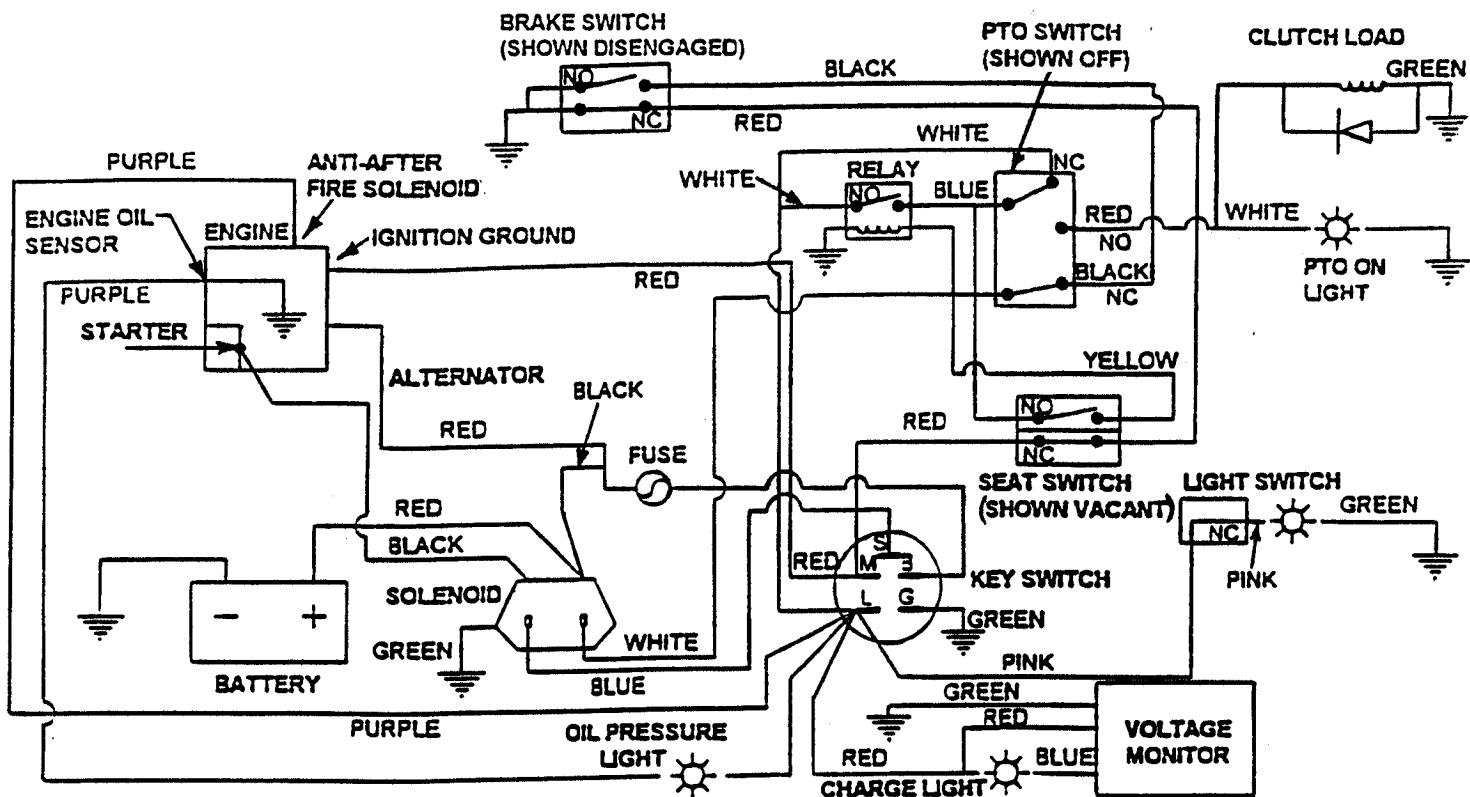


FIGURE 59

ELECTRICAL SYSTEM



SCHEMATIC WIRING DIAGRAM for MODELS LT160H42DBV2 & LT180H48DBV2

ILLUSTRATED DIAGRAM for MODELS LT160H42DBV2 & LT180H48DBV2

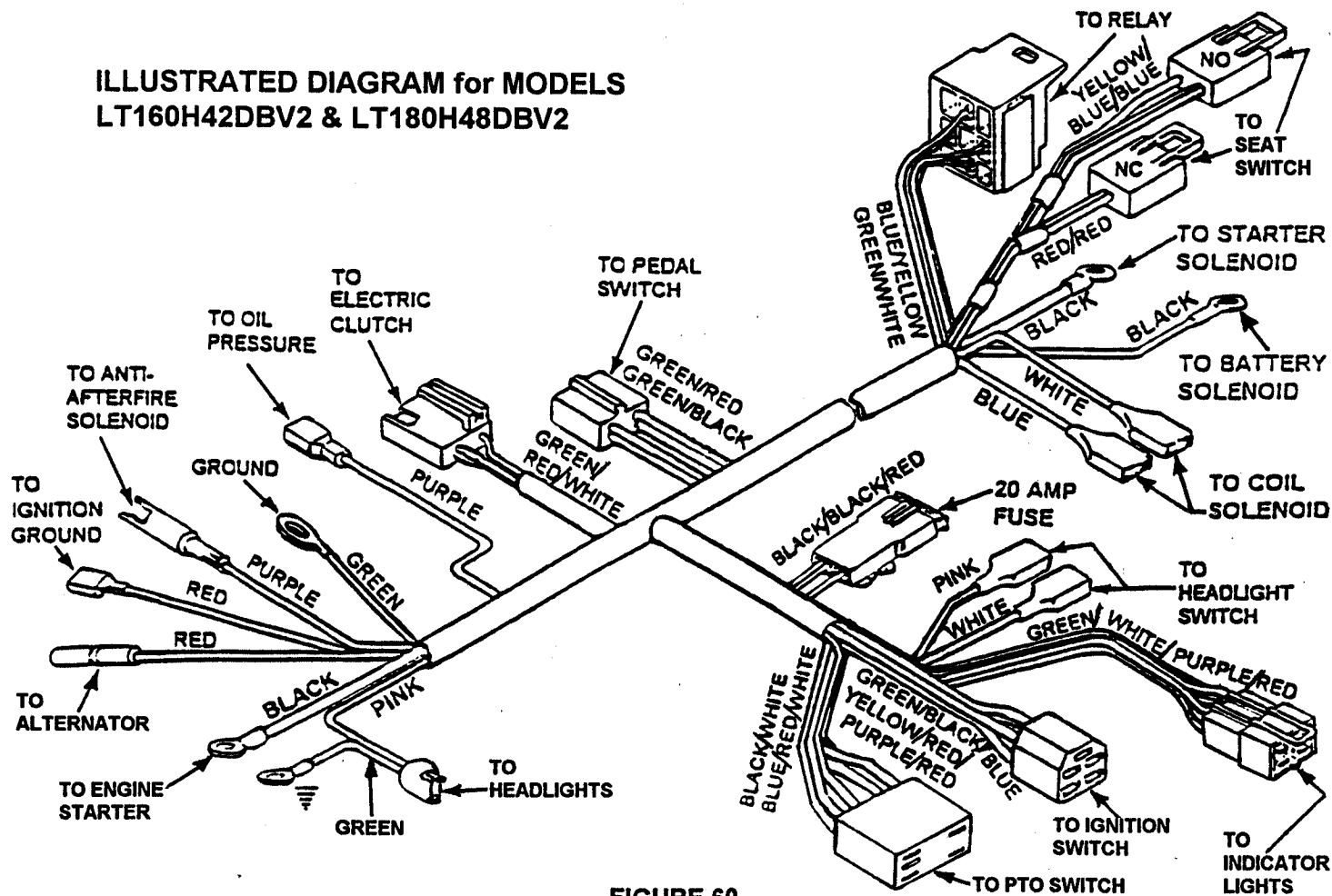


FIGURE 60

SNAPPER

3 YEAR LIMITED WARRANTY

For three (3) years from purchase date for the original purchaser's residential, non-commercial use, **SNAPPER**, through any **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 **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 a **SNAPPER** dealer for replacement under this warranty must be paid by the purchaser.

This warranty does not apply to engines and their components, hydro transmissions, gear drive transmissions 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.

There is no other express warranty.

DISCLAIMER OF WARRANTY

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three (3) 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.

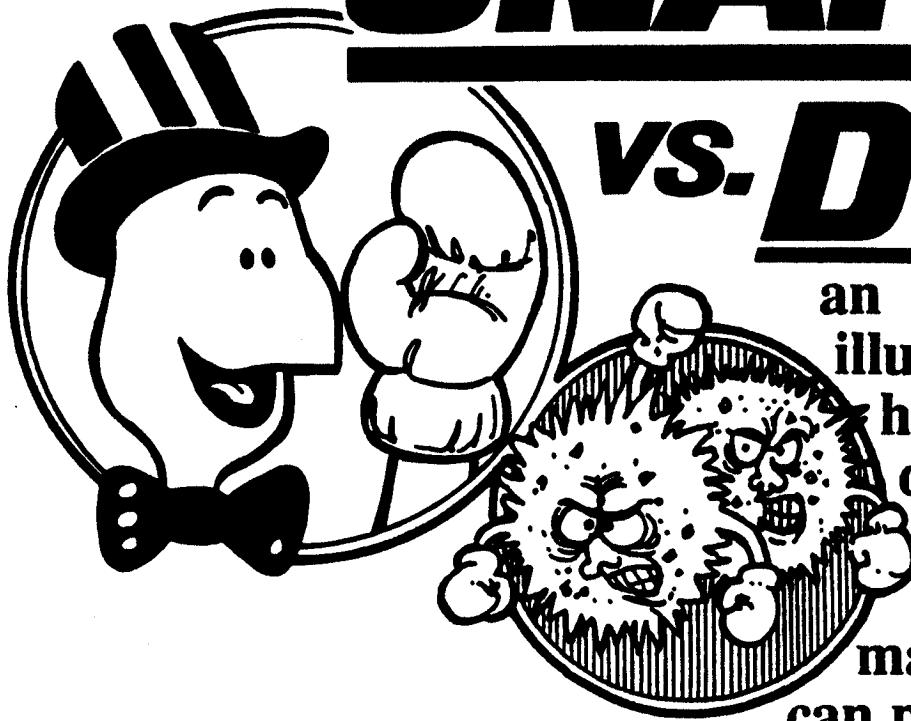
WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

IMPORTANT: Please fill out the attached **SNAPPER** Product Registration Card immediately and mail to:
Snapper's Product Registration Center, P.O. Box 777, McDonough, Georgia 30253

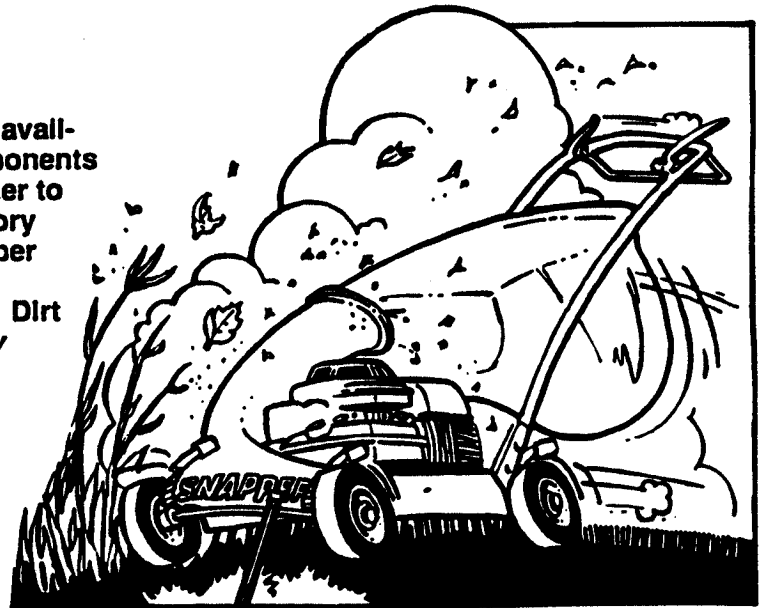
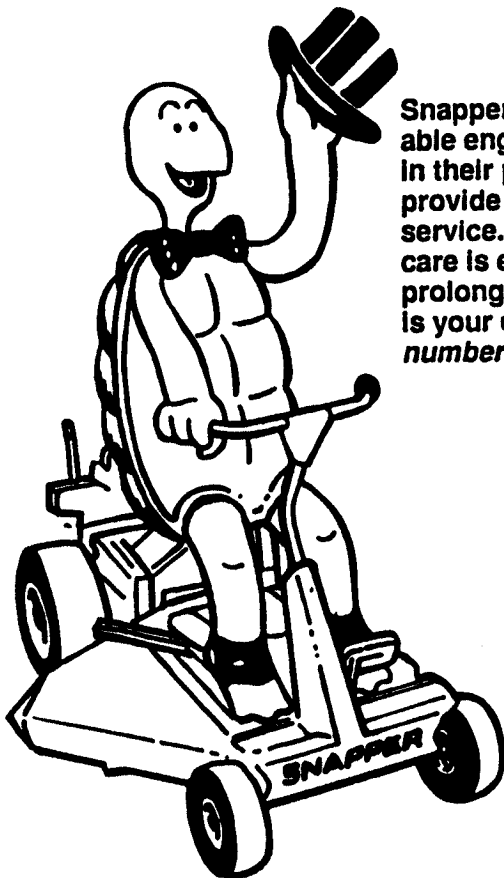
SNAPPER®

VS. DIRT!

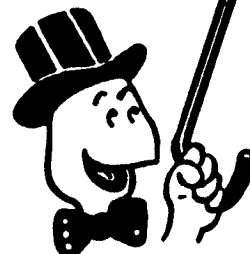
an illustration of how dirt can damage your engine & how reasonable maintenance can protect it!



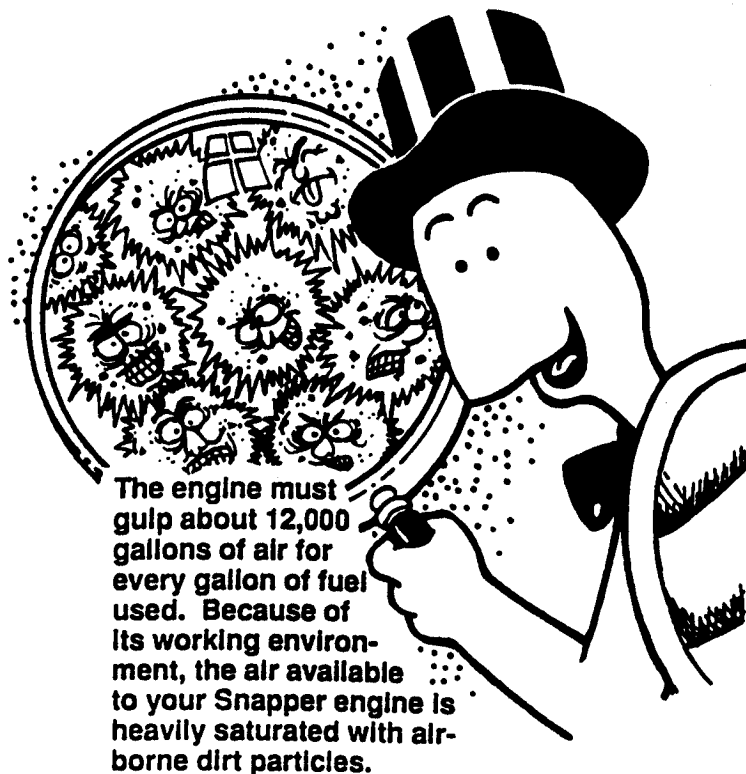
Snapper uses the best available engines and components in their products in order to provide long, satisfactory service. However, proper care is essential in prolonging engine life. Dirt is your engine's *enemy number 1!*



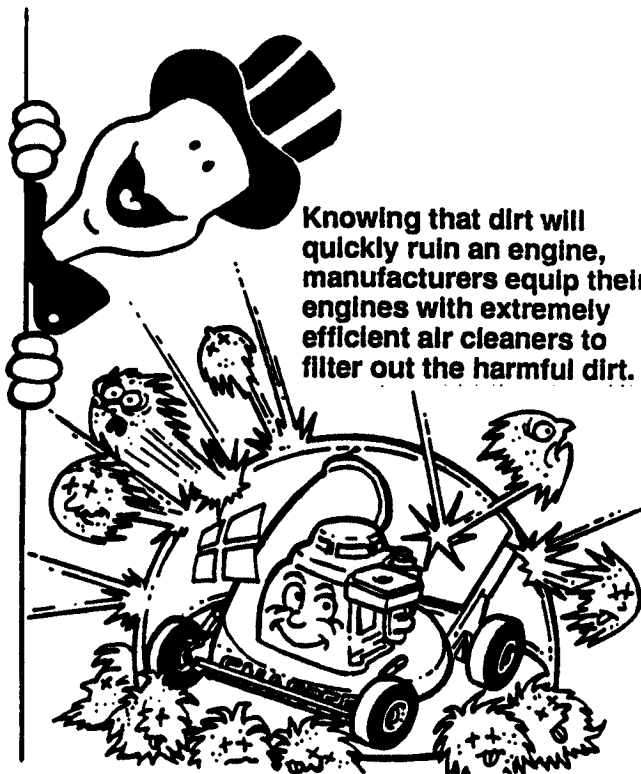
The engine on your Snapper product spends its entire life operating close to the ground at high speed creating a virtual storm of dust and dirt!



PRIMARY MAINTENANCE



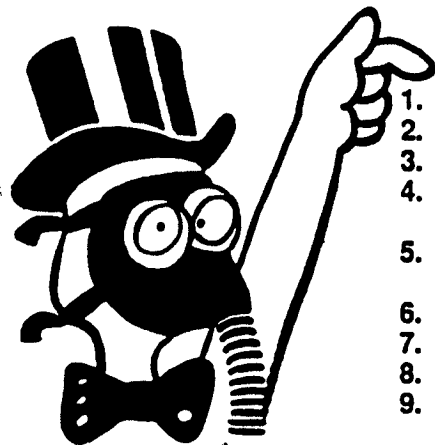
The engine must gulp about 12,000 gallons of air for every gallon of fuel used. Because of its working environment, the air available to your Snapper engine is heavily saturated with air-borne dirt particles.



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:

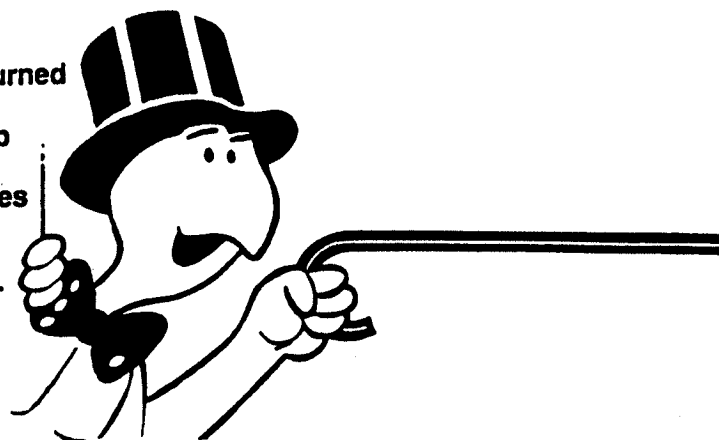
An improperly serviced, dirt clogged air cleaner will:



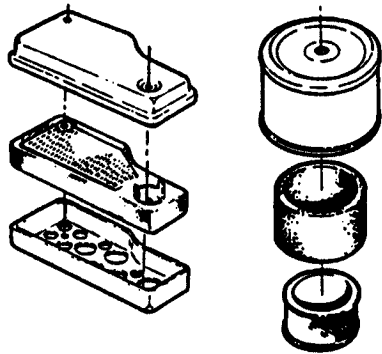
1. Increase fuel consumption
2. cause power loss
3. result in hard starting
4. create smoke from unburned fuel
5. produce carbon build-up internally
6. foul spark plug electrodes
7. score cylinder walls
8. burn valves
9. wear out the engine prematurely
10. COST YOU MONEY!

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 interval 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.

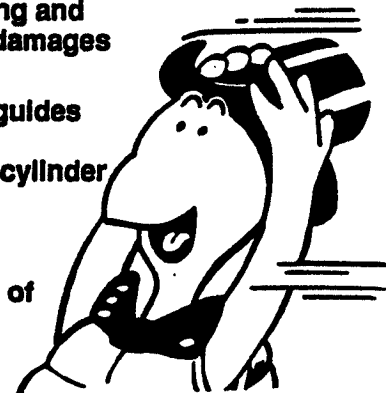
Use a flashlight to detect clogged or torn paper elements - replace if damaged in any way.



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.

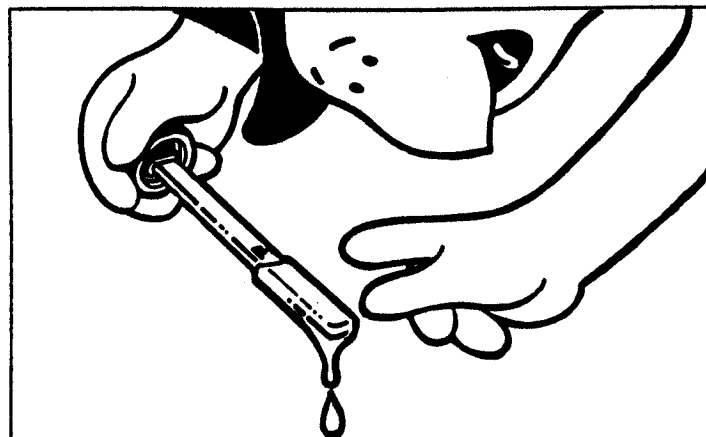
Failure to keep external surfaces clean not only presents fire hazards, but causes overheating and resulting engine damages such as:

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.

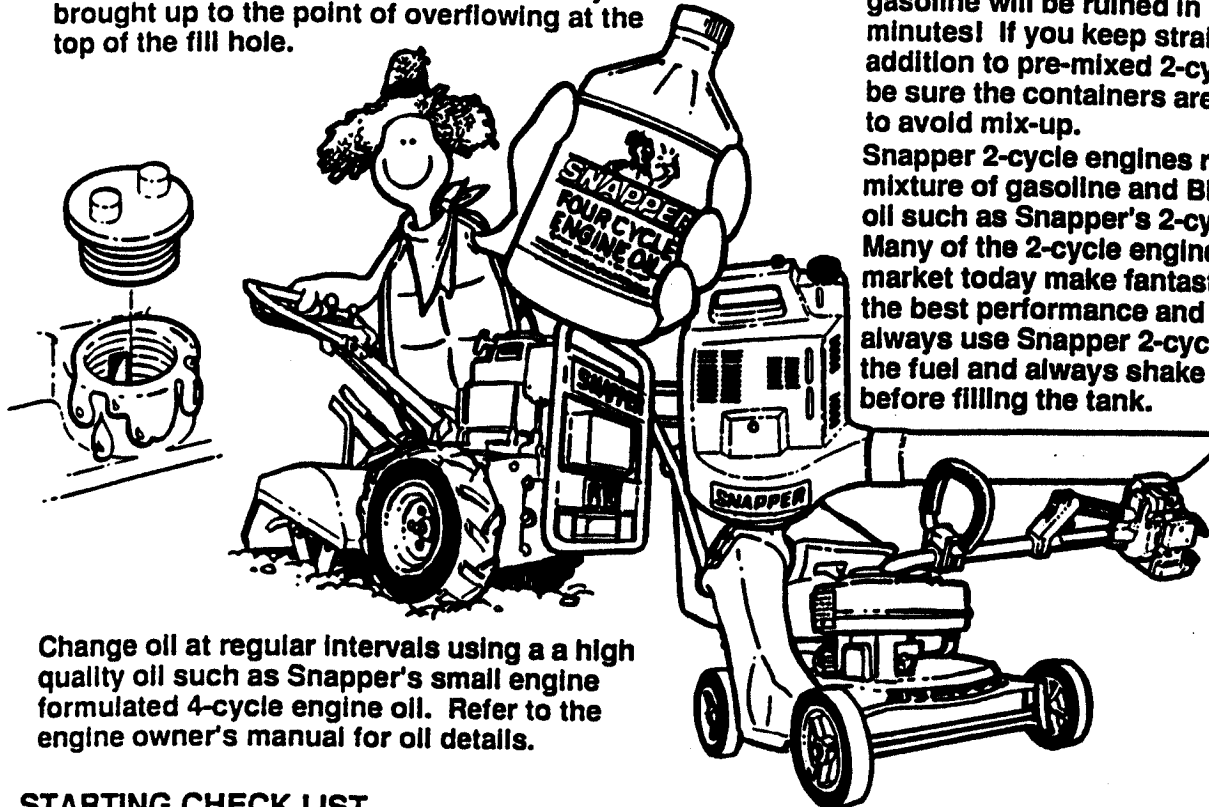
Be aware that fuel breaks down in storage and forms gummy compounds which will block carburetor passages. Never use fuel more than 3 months old. Drain tank then run the engine out of fuel before storing during the off-season.



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-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 |
| 3. Fuel Tank | <ul style="list-style-type: none"> • Full fresh clean gasoline • 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 |
| 7. Switch & Blade Control | <ul style="list-style-type: none"> • All wires properly connected • 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!

Safety Instructions & Operator's Manual for

SNAPPER®

**LAWN TRACTORS
ELECTRIC CLUTCH
SERIES D**



WARNING:

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

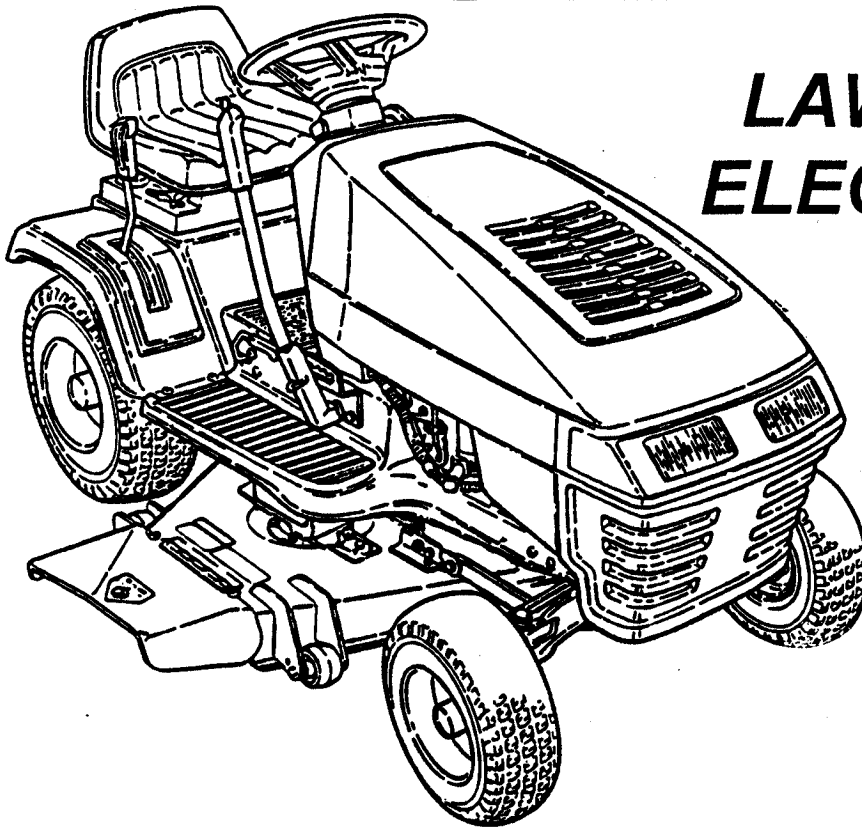
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MANUAL No. 3-5624 (REV. 1, 6/98)

Safety Instructions & Operator's Manual for

SNAPPER®

LAWN TRACTORS ELECTRIC CLUTCH SERIES D



MODELS

LT160H42DBV
LT160H42DBV2
LT180H48DBV2

MODEL NUMBER EXPLANATION

LT 160 H 42 D B V 2

MODEL DESIGNATION

ENGINE HP

DRIVE SYSTEM TYPE

CUTTING WIDTH

ENGINE OPTIONS

ENGINE TYPE

ENGINE MODEL

SERIES DESIGNATION

LT - Model Designation

160 - 16.0 HP (Engine Horse Power)

180 - 18.0 HP (Engine Horse Power)

H - Hydrostatic Transmission Drive System

42 - 42" Cutting Width Mower Deck

48 - 48" Cutting Width Mower Deck

D - Series Designation

B - Briggs & Stratton Engine

V - Over Head Valve Type Engine

2 - Twin Cylinder Engine

Thank you for buying a SNAPPER product! Before operating the Lawn Tractor, read and follow the "IMPORTANT SAFETY INSTRUCTIONS" on pages 2 & 3, all other instructions contained in this manual and the accompanying booklet "About Power Mower Safety". Lawn mowers and all power equipment can be potentially dangerous if used improperly. REMEMBER: SAFETY REQUIRES CAREFULL USE IN ACCORDANCE WITH INSTRUCTIONS AND COMMON SENSE !

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 other passengers to ride on machine or on attachments (even with the blade 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. BE SURE the area is clear of others before mowing and turn machine OFF if anyone enters the area.
7. DO NOT mow in reverse unless absolutely necessary. LOOK BEHIND and down for small children before and when backing.
8. 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 it, DO NOT mow it. Use extra care with grass catchers or other attachments; these can change 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 blade OFF when traveling uphill. Use first speed and avoid sudden or sharp turns.
3. DO NOT mow back and forth across face of slopes. Mow up and down.

PROTECTION AGAINST TIPOVERS

(Continued From Previous Column)

4. AVOID uphill starts. If machine stops going uphill or tires lose traction, turn blade OFF and back slowly down the slope.
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 mower could turn over if an edge caves in.
7. Always begin forward motion in the #1 speed position.
8. Use weights or a weighted load carrier in accordance with instructions with a grass catcher on slopes above 10 degrees (18% grade).
9. DO NOT put your foot on the ground to try to stabilize the machine.
10. DO NOT mow on wet grass. Reduced traction could cause sliding.
11. DO NOT mow under any condition where traction, steering or stability is doubtful without first test driving over the terrain with blade OFF.

PREPARATION

1. Read this manual, get to know where all controls are located and practice how to use them before starting for the first time, and at the beginning of each season. Read and follow Warnings and Instructions on engine and machine. Read and follow operator's manual and instructions furnished with attachments.
2. Only mature, responsible persons shall operate the machine and only after proper instruction.
3. Handle fuel with extra care. Fuels are flammable and vapors are explosive. Use only an approved fuel container. Never 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.
4. Practice operation of machine with BLADE OFF to learn controls and develop skills.

(Continued on Next Page)

IMPORTANT SAFETY INSTRUCTIONS

PREPARATION

(Continued From Previous Page)

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.
6. Keep people and pets a safe distance from machine.
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.
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 worn spots.

OPERATION

1. Mount and dismount machine from left side.
2. Start engine from operator's seat, if possible. Make sure blade is OFF and parking brake is set.
3. STOP blade, STOP engine, set parking brake and remove key when leaving machine.
4. DO NOT operate machine unless properly seated with feet on feet rests or pedal(s).
5. STOP BLADE and ENGINE and make sure blade has stopped before removing grass catcher or unclogging mower to prevent loss of fingers or hand.
6. Blade must be OFF except when cutting grass. Set blade in highest position when mowing over rough ground.
7. Keep hands and feet away from rotating blade underneath deck. NEVER place foot on ground while BLADE is ON or machine is in motion.
8. Deflector or entire grass catcher must be in place. NEVER 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. Mow only in daylight or with good artificial light.
13. Move joystick (if equipped) SLOWLY to maintain control during speed and directional changes.
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.

MAINTENANCE

1. Never 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 indoors. 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. Never 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. NEVER 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.

TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS.....	2-3	MAINTENANCE INSTRUCTIONS (Continued)	
TABLE of CONTENTS	4	Battery Service.....	19
FAMILIARIZATION.....	5-6	Battery Electrolyte Check	19
Serial & Model Number Location	5	Battery Removal.....	19
Controls	5	Battery Charging.....	19
Components	6	Activating New Battery	19
OPERATING INSTRUCTIONS	7-11	Mower Deck Removal/Reinstallation	20-21
Pre-start Checklist	7	Standard Mower Blade Service.....	21-22
Adjusting Operator's Seat	7	Standard Blade Wear Limits	21
Starting & Stopping Engine.....	7-8	Blade Removal/Replacement	21
Starting & Stopping Wheel Drive	9	42" Mower Blade.....	21
Setting & Releasing Parking Brake	9	Sharpening Standard Blade(s).....	21 & 22
Starting & Stopping Mower Blades.....	9	Ninja Mower Blade Service.....	22
Adjusting Cutting Height	10	Ninja Blade Wear Limits	22
Tips on Mowing.....	10	Ninja Blade Sharpening	22
Raising Chute Deflector	10	Belt Service	23-24
Rolling Tractor With Engine Off	11	Mower Drive Belt Removal/Replacement	23
ACCESSORIES	11	42" Deck Drive Belt	23
TROUBLESHOOTING GUIDE.....	12-13	Traction Drive Belt Service.....	24
MAINTENANCE INSTRUCTIONS	14-29	Traction Drive Belt Removal	24
Service Schedule	14	Traction Drive Belt Replacement	24
Maintenance Parts	14	Traction Drive Belt Adjustment	25
Hydrostatic Transmission Oil	15	Deck Level Adjustment.....	25-27
To Check Oil Level.....	15	Tires & Pressure	25
Changing Engine Oil	16	Side to Side Level	25-26
Lubrication (Tractor)	16-17	Front to Rear Level.....	27
Front Wheel Bearings	16	Sector Plates	27
Axle Spindles.....	16	Front Lift Cable	27
Steering Shaft.....	16	Shifter Adjustment	28
Clutch/Brake Pivot.....	17	Steering Adjustment	28
Steering Sector Gear	17	Wheel Brake Adjustment.....	29
Steering Drag Link.....	17	Blade Brake Note	29
Steering Tie Rod.....	17	ELECTRICAL SYSTEM.....	30-31
Park Brake Latch	17	20 Amp Fuse Protection	30
Deck Lift Mechanism	17	DIAGRAMS, Single Cylinder Models	30
Mower Deck Spindles	17	DIAGRAMS, Twin Cylinder Models.....	31
Engine Service	18	WARRANTY	32
Engine Air Pre-Cleaner.....	18	PRIMARY MAINTENANCE	33-36
Engine Air Cleaner	18		
Spark Plug.....	18		
Fuel Filter.....	18		
Engine Cooling System	18		

FAMILIARIZATION

SERIAL & MODEL NUMBER LOCATION

The Serial and Model numbers of your SNAPPER Series D Lawn Tractor are located on the rear face of the tractor frame as shown in Figure 1. Record these numbers in the spaces provided below. The numbers should be mentioned in all contacts regarding service or when ordering replacements or accessories for your tractor.

MODEL NUMBER

SERIAL NUMBER

DATE OF PURCHASE _____

CONTROLS

All operators must become acquainted with the operator's controls before attempting start-up or operation of the Lawn Tractor. See Figures 2 and 3.

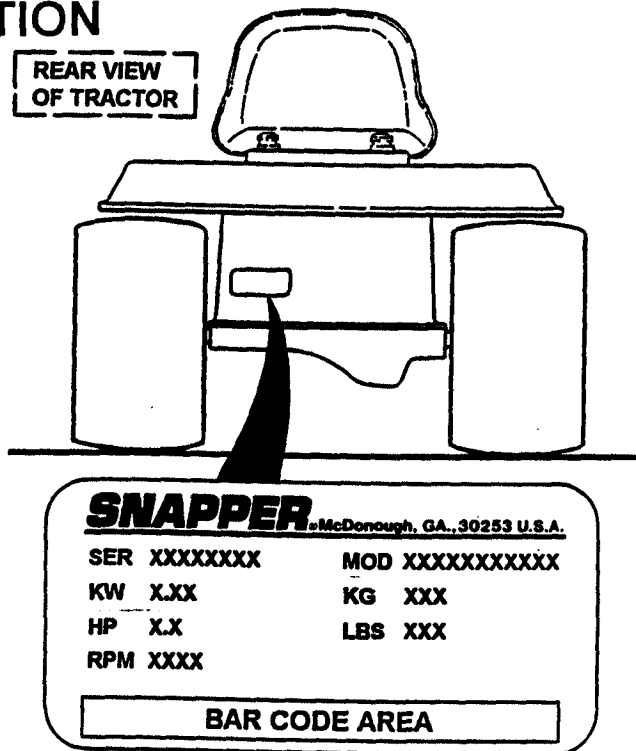


FIGURE 1

NOTE: STEERING WHEEL & OPERATOR'S SEAT NOT SHOWN IN THIS VIEW.

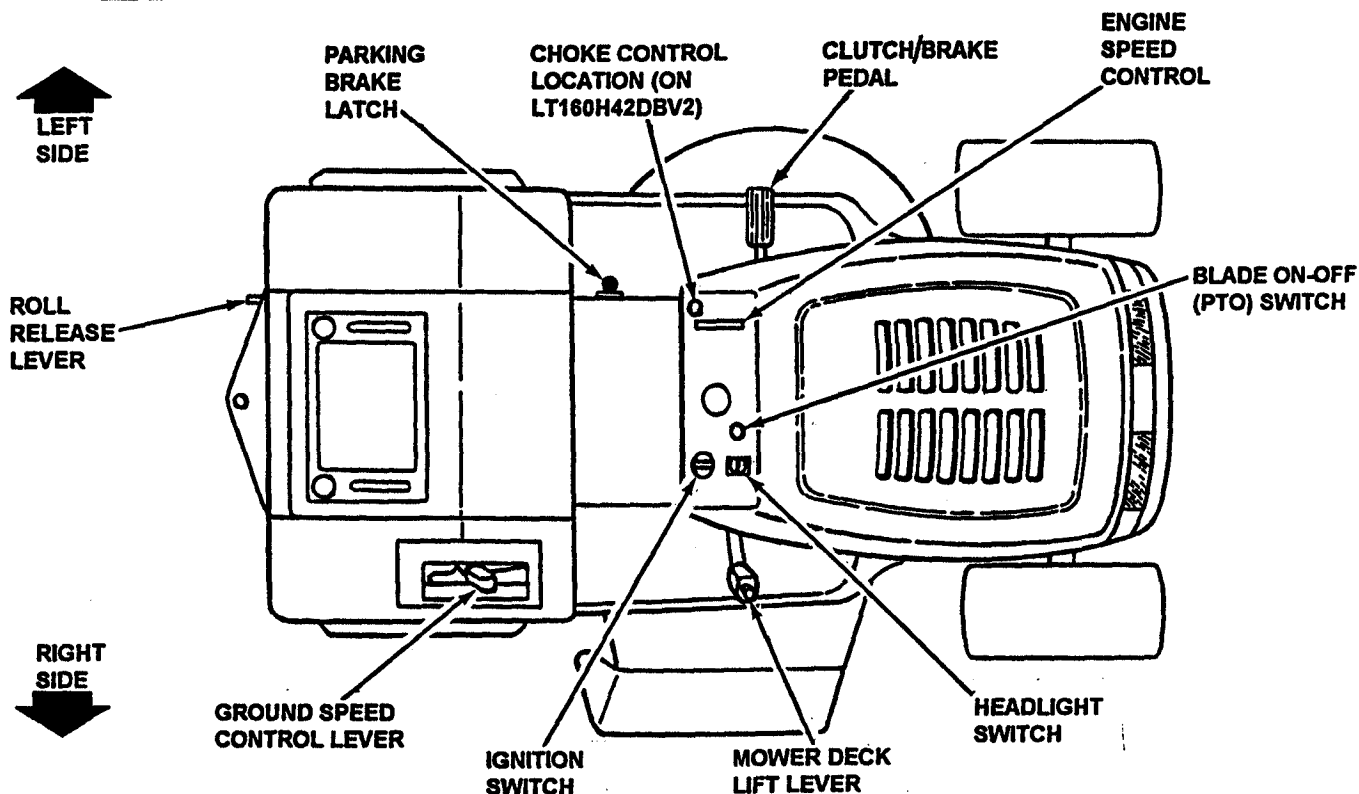


FIGURE 2 (TOP VIEW OF TRACTOR)

FAMILIARIZATION

COMPONENTS

Figures 2 and 3 show the location of essential components of the SNAPPER Series D Lawn Tractors. It is recommended that all operators of this equipment become thoroughly familiar with the components and their operation **BEFORE OPERATING**. Specific details involving the engine are found in the separate Engine Owner's Manual. Study the Important Safety Instructions in this Operator's Manual and the Engine Owner's Manual before operating this machine. Keep these manuals available for future reference.

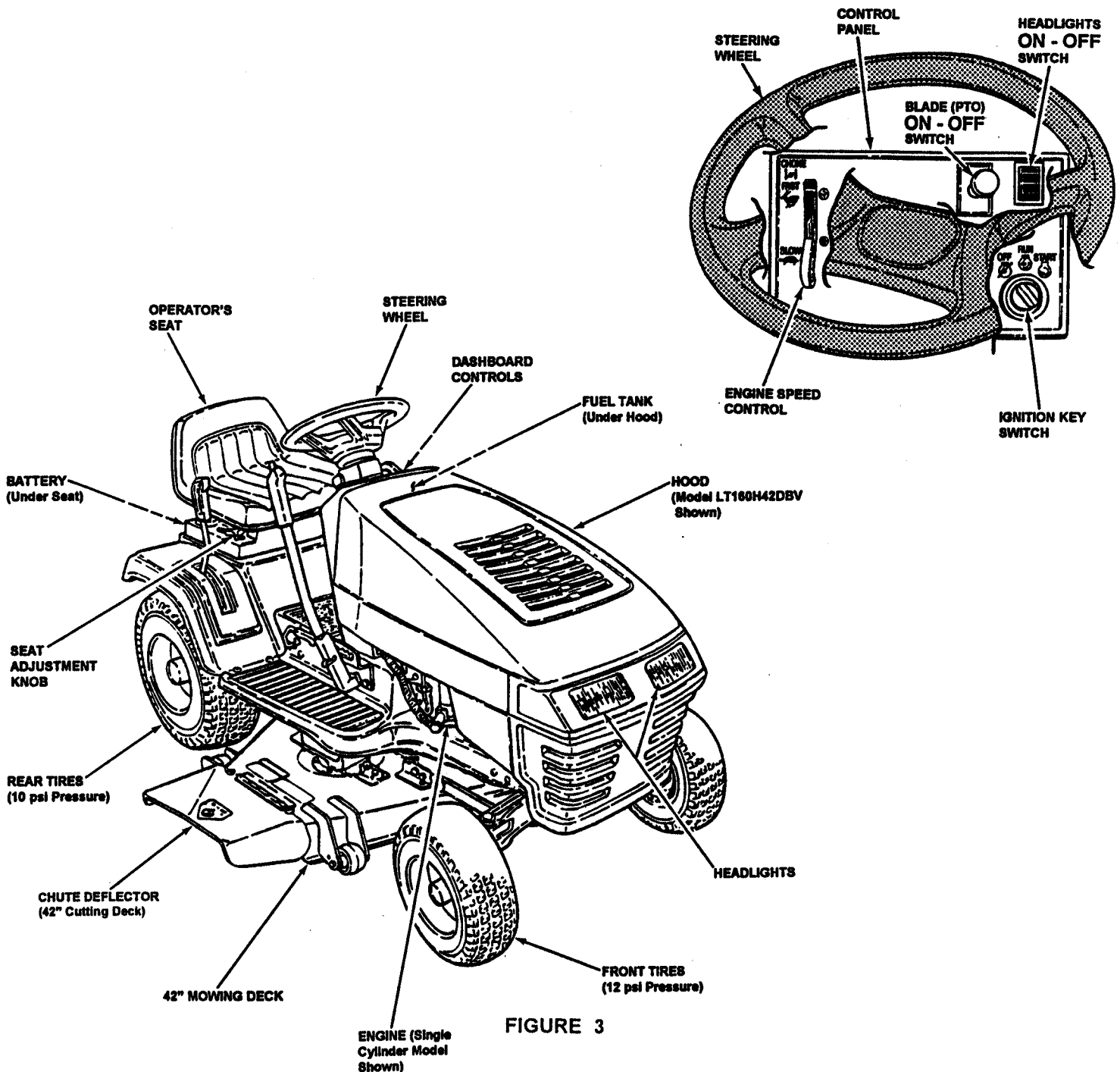


FIGURE 3

OPERATING INSTRUCTIONS

PRE-START CHECKLIST

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

Check tires and add air as needed to bring pressure to 12 psi in front tires and 10 psi in rear tires.

Check guards, deflectors and covers to make sure all are in place and securely tightened. If guards are missing or damaged, replace before operating mower.

Check operator's seat readjust as needed following instructions in the next column on this page.

Clean exterior surfaces of cutting deck, engine and tractor from any accumulation of grass clippings and debris. Keep engine air intake screens and cooling fins clean at all times.

Raise Hood by lifting lower rear edges until spring latch releases then tilt hood forward.

Check engine oil. Add oil as needed to bring up to, but not over, the full mark. Refer to the Engine Owner's Manual for oil specifications.

With engine "OFF", move the tractor outside, raise hood and **add fuel** to the fuel tank. Securely tighten fuel cap after refueling. See figure 4. Refer to Engine Owner's Manual for fuel specifications. Lower hood.

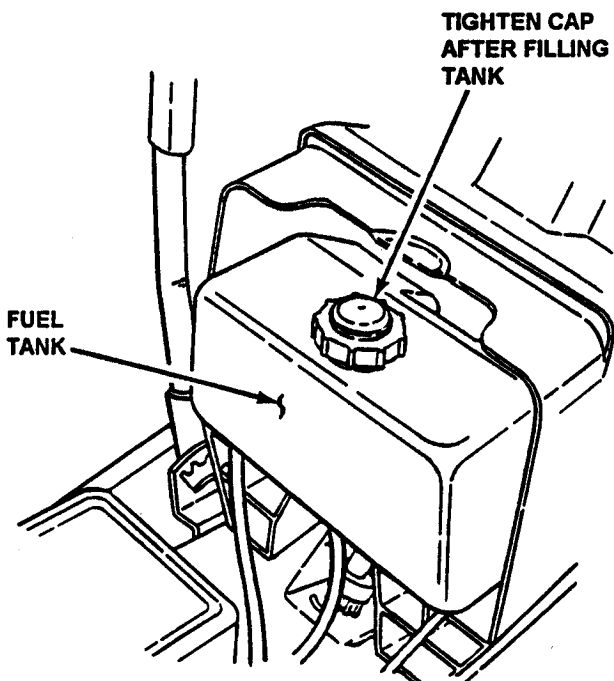


FIGURE 4

ADJUSTING OPERATOR'S SEAT

With engine "OFF", raise operator's seat and loosen the two adjusting knobs on the seat support. See Figure 5.

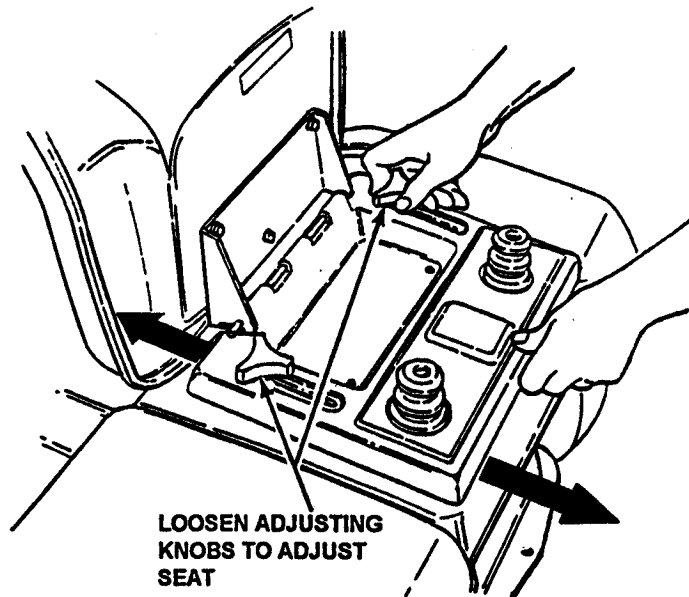


FIGURE 5

Lower the seat.

Sit in the operator's seat and slide the seat forward or backward until the clutch/brake pedal can be fully depressed comfortably.

Raise seat and tighten the adjusting knobs to secure seat in position.

STARTING & STOPPING ENGINE

STARTER INTERLOCK NOTE:

Engine will not start if :

1. **BLADE (PTO) SWITCH** is in **ON** position.
2. **PARK BRAKE NOT** set or **CLUTCH/BRAKE** pedal is **NOT** fully depressed.

OPERATOR PRESENCE CONTROL NOTE:

Engine will shut down if operator leaves the seat without :

1. Pushing the **BLADE (PTO) SWITCH "IN"** to the **OFF** position.
2. Setting the **PARK BRAKE LEVER**.

OPERATING INSTRUCTIONS

WARNING
DO NOT continue to operate your tractor if the interlocks controlling any of the above functions fail. Contact an authorized SNAPPER dealer to have the interlock system repaired.

STARTING/STOPPING ENGINE

After being seated on Tractor, look around before starting to make sure that the area you are going to mow is clear of people, children, and pets. Take NOTE of and be prepared to avoid all stationary obstacles!

1. Push Blade (PTO) Switch down to the OFF position. See Figure 6.

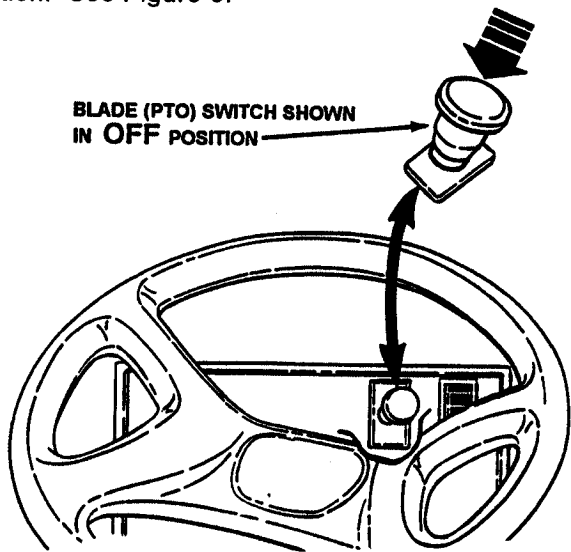


FIGURE 6

2. Push Clutch/Brake Pedal ALL the way down! The engine cannot be started if this is NOT done. See Figure 7.

CLUTCH/BRAKE PEDAL (MUST BE ALL THE WAY DOWN TO ALLOW ENGINE STARTING)

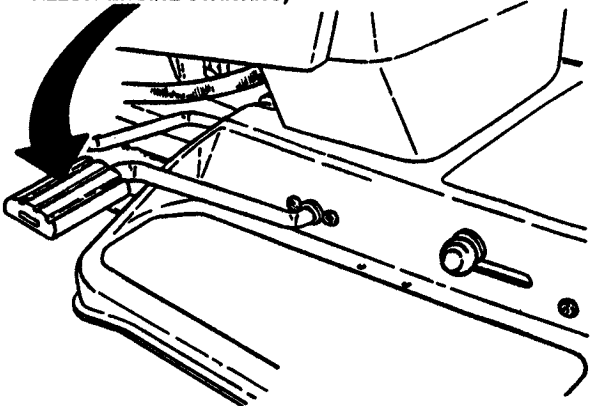


FIGURE 7

3. Shift Speed Control Lever to "N" Neutral.
4. Choke engine for cold starting by moving engine speed control up to "CHOKE" position, or by pulling choke knob out on twin cylinder models. Little or no choking will be needed when restarting a warm engine. See Figure 8.
5. Insert Key in Ignition Switch.

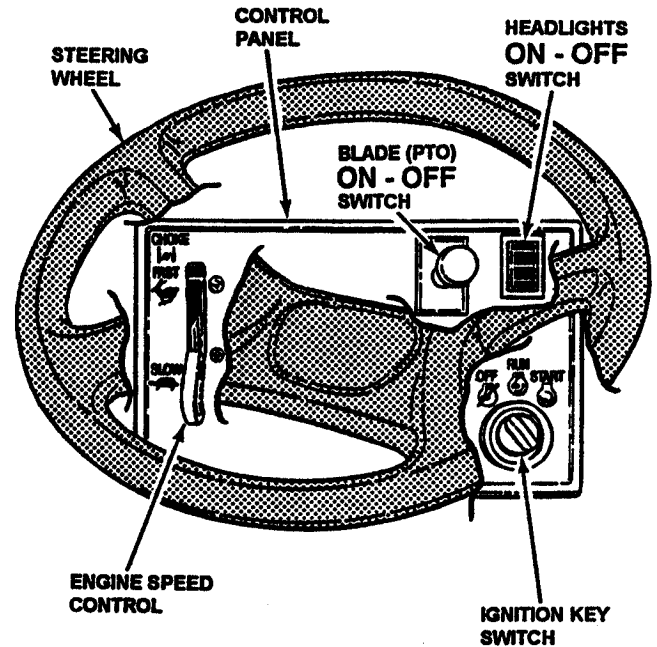


FIGURE 8

6. Turn key to **START** position to crank engine and hold until engine starts (see "LIMIT CRANKING TIME" note), then release key. Key will return to **RUN** position and stay there until moved to **OFF**.

NOTE: LIMIT CRANKING TIME: DO NOT crank engine for more than five seconds at a time to prevent the electric starter from overheating and/or running down the battery. If the engine does not start after being cranked 5 seconds, locate and correct the cause of the starting problem.

7. After engine starts, release key, move the engine speed control out of "CHOKE" to the "FAST" position or, on twin cylinder models, push choke knob in, then allow engine to warm up before proceeding. See Figure 8.
8. **STOP ENGINE** by moving ignition key to **STOP** position.

WARNING
Before leaving machine, **STOP ENGINE**. Stop blades. Shift to neutral. Engage park brake. Remove key. **DO NOT** park on slopes.

OPERATING INSTRUCTIONS

STARTING & STOPPING WHEEL DRIVE

STARTING WHEEL DRIVE

1. Shift Speed Control Lever to neutral.
2. Start engine.
3. Release Brake Pedal.
4. Slowly shift the Speed Control Lever forward for forward motion or to the rear for reverse motion. See Figure 9.

IMPORTANT: This tractor is equipped with a hydrostatic transmission. The transmission SPEED CONTROL LEVER, allows you to select the direction of motion (FORWARD or REVERSE) and the speed of motion. The CLUTCH/BRAKE PEDAL does not have to be depressed when shifting the SPEED CONTROL LEVER. Use caution and move lever slowly when shifting SPEED CONTROL LEVER.

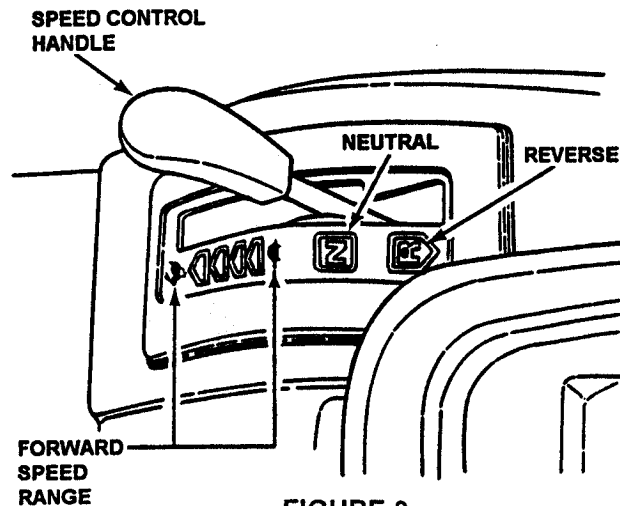


FIGURE 9

STOPPING WHEEL DRIVE

Fully depress Clutch/Brake Pedal to stop wheel drive. See Figure 10.

NOTE: When the tractor is moving forward and the Clutch/Brake Pedal is pushed all the way down, the Speed Control Handle will automatically return to approximately 1/3 of full forward speed. Move handle to desired position after releasing Brake Pedal.

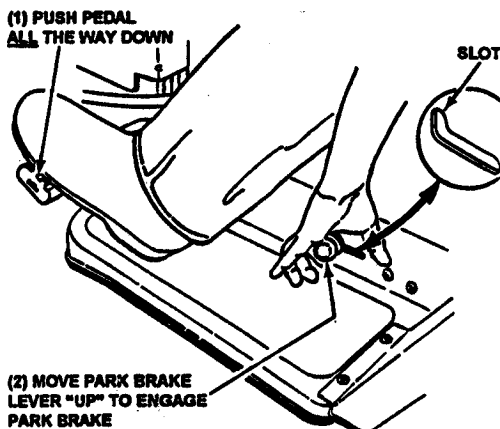


FIGURE 10

SETTING & RELEASING PARK BRAKE

SETTING PARK BRAKE

1. Fully depress Clutch/Brake Pedal with your foot.
2. Pull the Park Brake Lever as shown in Figure 10 up into the slot to set Park Brake. See inset in Figure 10.
3. Remove your foot from the Clutch/Brake Pedal.

RELEASING PARK BRAKE

Fully depress the Clutch/Brake Pedal. The Park Brake will release automatically.



STARTING & STOPPING BLADES

1. Start the engine.
2. Pull the BLADE (PTO) Switch "OUT" to the ON position to start the BLADES. See Figure 11.
3. Push the BLADE (PTO) Switch "IN" to the OFF position to stop the BLADES. See Figure 11.

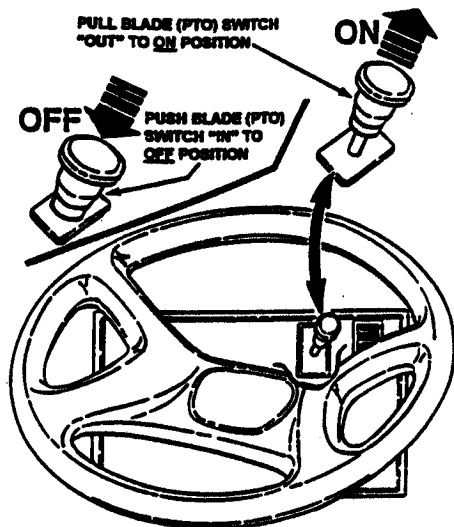
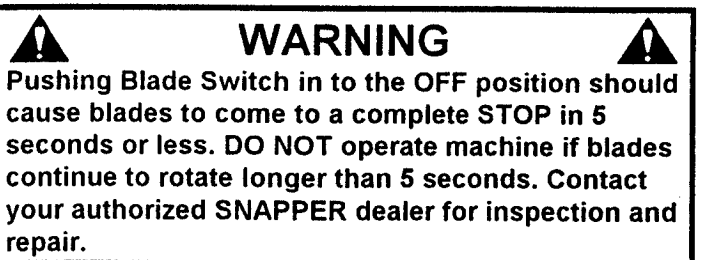


FIGURE 11



PULL (PTO) SWITCH "OUT" TO TURN CUTTING BLADES ON

PUSH (PTO) SWITCH "IN" TO TURN THE BLADES OFF

OPERATING INSTRUCTIONS

ADJUSTING CUTTING HEIGHT

1. Depress the lock button on Deck Lift Lever shown in Figure 12 and pull lever backward to go to higher cutting height or push lever forward to go to lower cutting height. Release button to lock at new setting.
2. The six cutting height positions provide a range of from 1-1/4" in low setting up to 3-3/4" in highest.

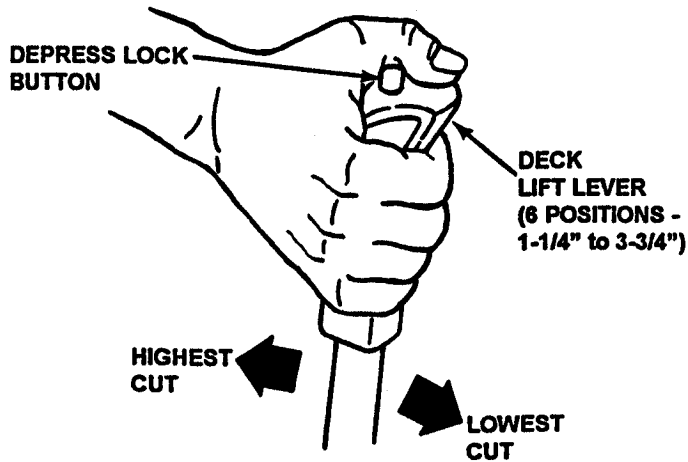


FIGURE 12

TIPS ON MOWING

FOR BEST RESULTS, USE THE FOLLOWING TIPS WHEN MOWING:

When mowing, cut only 1/3 off of grass height. Cutting grass deeper could be harmful to your lawn.

If cutting extremely tall grass, make one cutting with the deck in its highest cutting position, then lower the deck to desired position and make a second cut.

Mow when lawn is dry for best cutting.

Mow often. Shorter grass clippings decompose more quickly.

Keep mower blades sharp. A dull blade tears and shreds grass instead of cutting. Refer to "MOWER BLADE SERVICE" in the Maintenance Section.

Alternate the mowing pattern every other time to reduce the possibility of grass matting.

Mow with engine speed control in **FAST** and ground speed control handle in a **SLOW** position.

Clean deck, removing all grass clippings and debris from the top and underside of deck after each use.

RAISING CHUTE DEFLECTOR

(For Clearance Through Gates or For Transporting Tractor).

1. Remove wing-nuts and flat washers (if used) securing the Chute Deflector to the deck. See Figure 13.
2. Raise Chute Deflector and re-install flat washers and wing-nuts onto deck studs to prevent loss.
3. Transport the tractor to the desired location.
4. Be sure to return the Chute Deflector to the down position and secure it to the deck before mowing.

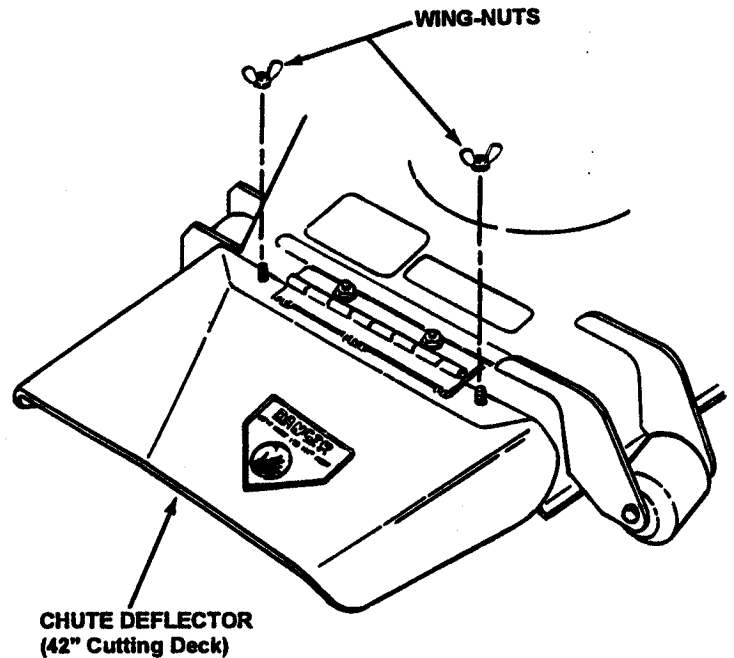
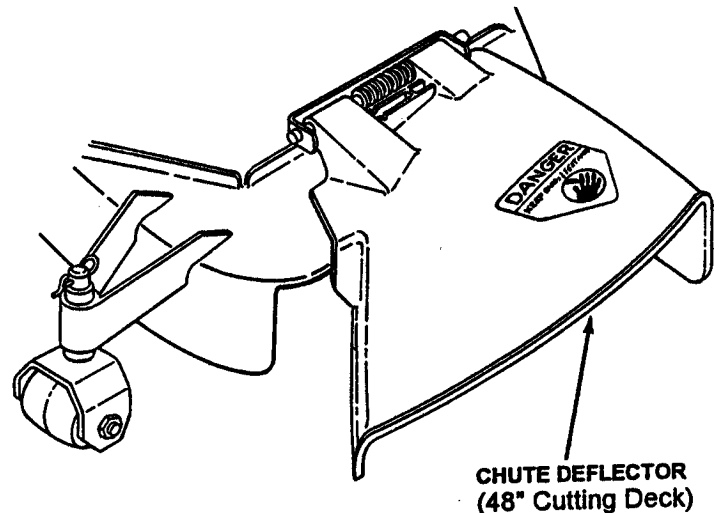


FIGURE 13

WARNING
Never attempt to operate mower without chute deflector secured in the down position!



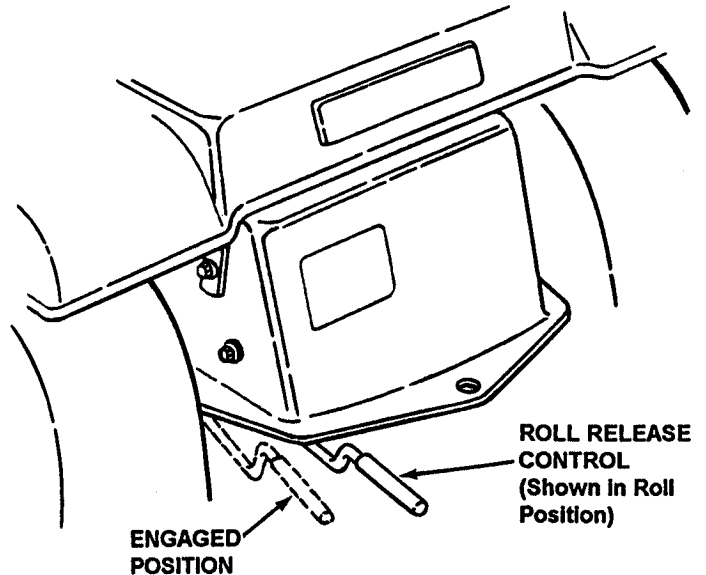
OPERATING INSTRUCTIONS

ROLLING TRACTOR (With Engine OFF)

1. With engine "OFF" and Parking Brake set, move to the rear of tractor.
2. Move the Roll Release Control to the right and down. This disengages the hydro transmission and allows the tractor to be rolled. See Figure 14.
3. Release the Park Brake.
4. Push or pull tractor to desired location.

NOTE: Be prepared to stop tractor from rolling too quickly in this free wheeling mode by depressing Parking Brake Pedal, or by shifting the Roll Release Control back into the engaged position.

5. Move Roll Release Control up and to the left to engage hydro transmission.
6. Set Park Brake.



NOTE: The transmission will not propel the tractor if the Roll Release Control is left in the "ROLL" position.

FIGURE 14

AVAILABLE ACCESSORIES

The SNAPPER Series D Lawn Tractor can be equipped with a variety of Accessories that increase its versatility. The Accessories available for each model are listed in the chart below. Contact an authorized SNAPPER Dealer for ordering any of the Accessories desired.

AVAILABLE ACCESSORIES	SERIES D LAWN TRACTOR MODEL	
	LT160H42DBV	LT160H42DBV2
Thatcherizer	6-1247	6-1247
Snow Blower*	6-1352	6-1352
Dozer Blade Support Kit	6-1370	6-1301
2-Stage Snow Thrower**	8-0871	8-0871
Snow Thrower Support Kit	6-1802	6-1802 & 6-1811
Weight Kit	6-1245	6-1245
Tire Chains	6-1399	6-1333
Ninja Kit	6-1220	6-1220
Single Bag Catcher***	6-1249	6-0944
Dump Cart	6-0697	6-0697
Twin Bag Catcher***	Not Available	Not Available
Adapter Mounting Kit	6-1334	6-1334
Air Lift Kit	6-0735 (2)	6-0735 (2)
Bag-N-Wagon	NA	NA
Bag-N-Wagon Hitch Kit	NA	NA
Hitch/Sub-Frame Kit****	6-1879	6-1879
38" Snow Thrower****	6-1880	6-1880
46" Dozer Blade (Spring Trip)****	6-1881	6-1881
Debris Blower Kit ****	6-1883	6-1883
Utility Trailer Kit	6-1910	6-1910
Aerator Kit	6-1911	6-1911
De-thatcher Kit	6-1912	6-1912
Lawn Sweeper Kit	6-1913	6-1913
Lawn Sweeper (De-thatcher) Kit	6-1914	6-1914
Lawn Roller	6-1915	6-1915
Broadcast Spreader	6-1916	6-1916

* Requires Dozer Blade Support Kit

** Requires Snow Thrower Support Kit

*** Requires Adaptor Mounting Kit

**** Requires Hitch/Sub-Frame Kit (6-1879)

TROUBLESHOOTING GUIDE (Part 1)

When using the Trouble-Shooting Guides on this page and the next, don't overlook the simplest cause first, even though it may seem too obvious to consider. For example, if the engine will not start, it simply may be out of fuel. The Guides generally list the most simple causes first in each problem category to help you locate the cause through the process of elimination.

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Starter Will Not Crank Engine	1. Battery dead.	1. Service battery.
	2. Blown fuse.	2. Replace fuse.
	3. Electrical connections loose or corroded.	3. Clean and check connections for good contact.
	4. Defective ignition switch.	4. Contact authorized SNAPPER dealer.
	5. Starter Spins without engaging.	5. Release Start key and repeat attempt. If starter continues to spin, contact Dealer.
Engine Will Not Start	1. Blade engagement switch in the "ON" position.	1. Move blade engagement switch to "OFF".
	2. Park brake not set.	2. Set park brake.
	3. Fuel tank empty.	3. Fill fuel tank with fresh fuel.
	4. Engine needs choking.	4. Move engine speed control to "CHOKE".
	5. Spark plug wire disconnected.	5. Place spark plug wire onto spark plug.
	6. Battery weak or dead.	6. Service battery.
	7. Faulty interlock switch.	7. Contact authorized SNAPPER dealer.
Engine Stalls After Running	1. Operator not in seat.	1. Sit in operator's seat.
	2. Engine speed control in the "CHOKE" position.	2. Move engine speed control to "FAST".
	3. Fuel tank empty.	3. Fill with fuel to proper level.
	4. Engine air pre-cleaner and/or air cleaner dirty.	4. Clean free of all debris.
	5. Spark plug defective or gap set improperly.	5. Service spark plug.
	6. Fuel filter stopped up.	6. Replace fuel filter.
	7. Water, debris or stale fuel in fuel system.	7. Drain and clean fuel system.
Engine Loses Power	1. Excessive load on engine.	1. Lessen load by slowing ground speed.
	2. Engine air pre-cleaner or air cleaner dirty.	2. Clean or replace filters.
	3. Engine oil level low.	3. Fill with engine oil to proper level.
	4. Engine cooling fins and air screens excessively dirty.	4. Clean free of all debris.
	5. Spark plug faulty.	5. Service spark plug.
	6. Water, debris or stale fuel in fuel system.	6. Drain and clean fuel system.
Engine Backfires When Turned To "STOP"	1. Engine speed control set too "FAST".	1. Set engine speed control to "SLOW" and allow engine to idle. Then, turn key to "OFF".
Excessive Vibration	1. Damaged or bent mower blades.	1. Service mower blade(s).
	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.

(Continued on next Page)

TROUBLESHOOTING GUIDE (Part 2)

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Tractor Will Not Move Or Loss Of Traction	1. Speed control handle in the neutral "N" position.	1. Place speed control in desired speed.
	2. Roll release control in "ROLL" position (Hydro Models Only).	2. Move roll release control to the engaged position.
	3. Low transmission oil level (Hydro Models Only).	3. Bring oil to proper level.
	4. Shifter out of adjustment.	4. Adjust shifter.
	5. Traction drive belt requires adjustment.	5. Adjust traction drive belt.
	6. Traction drive belt requires replacement.	6. Replace traction drive belt.
Blade(s) Not Turning	1. Blade engagement switch in the "OFF" position.	1. Move switch to the "ON" position.
	2. Blade belt requires adjustment.	2. Adjust mower belt.
	3. Blade belt requires replacement.	3. Replace mower belt.
	4. Electric clutch not functioning.	4. Contact authorized SNAPPER dealer.
Cutting Grass Improperly	1. Uneven tire pressure.	1. Bring to proper pressure.
	2. Cutting height too low or high.	2. Adjust cutting height.
	3. Engine speed too slow.	3. Move engine speed control to "FAST".
	4. Forward speed too fast.	4. Move speed control to a slower speed.
	5. Deck side to side level requires adjustment.	5. Adjust side to side level
	6. Deck front to rear level requires adjustment.	6. Adjust front to rear level.
	7. Cutting Blade dull or damaged.	7. Sharpen cutting edges or replace blade.
	8. Blade belt requires replacement.	8. Replace blade belt.
	9. Blade belt slipping.	9. Replace blade belt.
Poor Grass Discharge	1. Engine speed too slow.	1. Move engine speed control to "FAST".
	2. Forward speed too fast.	2. Move speed control to a slower speed.
	3. Grass is wet.	3. Mow when grass is dry.
	4. Excessively worn or damaged blade(s).	4. Service mower blade(s).
	5. Build up of grass clippings and debris under deck.	5. Clean deck.
	6. Improper blade(s) installed on deck.	6. Install proper SNAPPER blades.
	7. Blade(s) installed improperly on deck.	7. Install blades properly.
Battery Will Not Charge	1. Poor cable connections.	1. Clean cables and battery terminals.
	2. Bad battery cell(s).	2. Replace with new battery.
	3. Faulty alternator.	3. Contact engine manufacturer's dealer.
Oil Leaking From Transmission	1. Loose or missing oil filler cap on transmission.	1. Check oil level and re-install oil cap.
	2. Leaking axle seats.	2. Contact authorized SNAPPER dealer.
	3. Leaking at casing seal.	3. Contact authorized SNAPPER dealer.

MAINTENANCE INSTRUCTIONS

SERVICE 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 7	X					
Engine	Initial Oil Change.	Pages 16		X				
Engine	Periodic Oil Change.	Page 16				X*		
Air Pre-Cleaner	Service Sponge Pre-Cleaner Element.	Engine Manual & Page 18			X**			
Air Cleaner	Replace Element.	Engine Manual			X**			
Spark Plug	Replace Plugs.	Engine Manual					X	
Fuel Filter	Replace Filter.	Page 18					X	
Engine Cooling System	Clean Shrouds and Fins.	Engine Manual & Page 18					X**	
Battery	Check Electrolyte.	Page 19			X			X
	Charge Battery.	Page 19						X
Tires	Check Pressures.	Page 7 & 25	X					X
Drive Belts	Check For Wear and Tension.	Page 23			X			X
Mower Blades	Check For Wear and Damage.	Pages 21-22	X					
Mower Deck	Clean Debris Accumulation.	Page 7	X		X			X
Mower Deck	Clean Outside and Underside.	Page 7	X		X			X
Lubrication Points	Grease or Oil.	Pages 16-17			X			X
Hydrostatic Trans. Oil	Check Oil Level.	Page 15						X

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

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

MAINTENANCE PARTS

TRACTOR	DRIVE BELTS		MOWER BLADES		BATTERY
MODEL No.	Engine to Deck Belt	Deck Belt	Standard	NINJA™	(Cold Crank Amp)
LT160H42DBV	2-8585	2-9205	2-6691	2-4234	6-0618 (160 CCA)
LT160H42DBV2	2-8585	2-9205	2-6691	2-4234	1-8630 (220 CCA)
LT160H48DBV2	4-6926	2-8334	2-9247	---	1-8630 (220 CCA)

MAINTENANCE INSTRUCTIONS



WARNING



Before attempting any adjustments, maintenance, or repairs, STOP engine. STOP blades. Shift to neutral. Engage park brake. Remove key.

HYDROSTATIC TRANSMISSION

The hydrostatic transmission does not normally require maintenance, however, the oil level should be checked after every season.

CHECKING OIL LEVEL IN TRANSMISSION

The Operator's Seat, Battery, and Battery Tray must be moved out of the way to gain access to the oil level Check Cap on the Transmission.

1. Remove Operator's Seat by removing Seat Adjustment Knobs. See Figure 15.

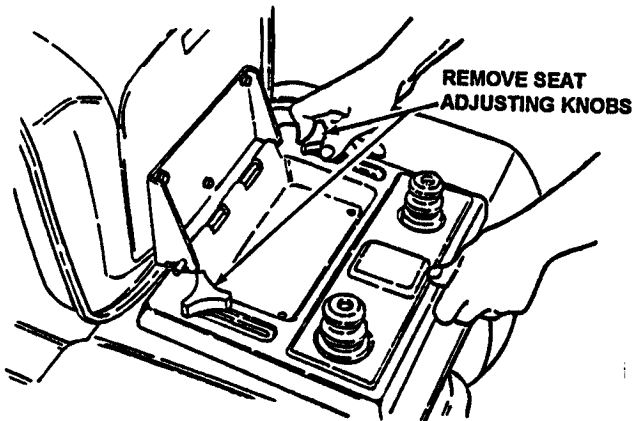


FIGURE 15

2. Lay Seat forward. **NOTE:** Be careful NOT to pull Seat Switch Wires from the Switches. See Figure 16.
3. Disconnect the Negative (BLACK) Battery Cable from the - Terminal first! See Figure 16.

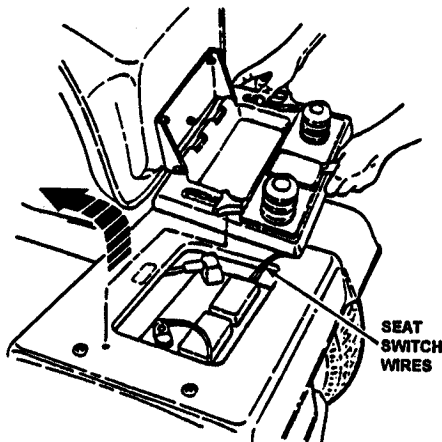


FIGURE 16

4. Slide the red protective boot away from its terminal, then disconnect the Positive (RED) Battery Cable from the + Terminal.
5. Remove the Battery and the Battery Tray from the Tractor. Transmission is now accessible.
6. Clean debris off the Oil Fill Cap and surrounding area to prevent dirt from entering when removing the Fill Cap. See Figure 17.
7. Remove the Oil Fill Cap and check oil level. The level should be about 3/4" from top of case.
8. If the level is lower than 1", add 10W-30 Motor Oil as required to bring the level up to 3/4".

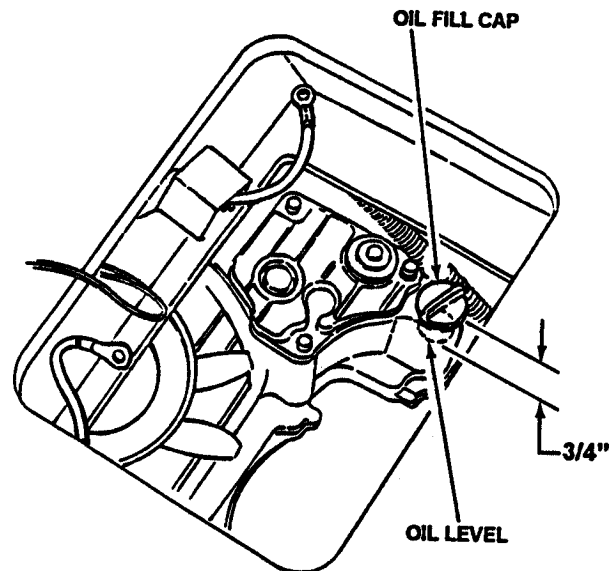


FIGURE 17

9. Reinstall Oil Fill Cap.
10. Reinstall Battery Tray.
11. Reinstall Battery in Tray. See Figure 16
12. Connect battery Positive (+) RED cable first, then the Negative (-) BLACK Cable. Slide the protective red boot over Positive Terminal after connecting Cable.
13. Reinstall and adjust seat. See Figure 15.

MAINTENANCE INSTRUCTIONS

CHANGING ENGINE OIL

The engine is equipped with a no-tools type oil drain which can be opened and closed by hand. Figure 18 shows the drain location on a single cylinder engine. On a new engine, drain the oil after the first five hours of operation and thereafter, at 25 hour intervals. Refer to the Engine Owner's Manual for specific details. Change oil in engine crankcase as follows:

1. Slip a hose over the nipple on the drain and place the other end of the hose into a container with at least a 2 quart capacity to catch the oil.
2. Turn the drain body by hand in counter-clockwise direction, then pull the drain body OUT to open the drain.
3. Allow enough time for all of the old oil to drain out of the crankcase and into the container.
4. After all oil has drained, disconnect the hose from the nipple, then push the drain body IN and rotate it clockwise until tight to close the drain.
5. Add new motor oil to bring level up to full mark on dipstick with oil of weight and grade specified in the Engine Owner's Manual.

NOTE: If the engine is equipped with an oil filter, change filter at every other oil change. Contact an Engine Dealer for the correct replacement filter.

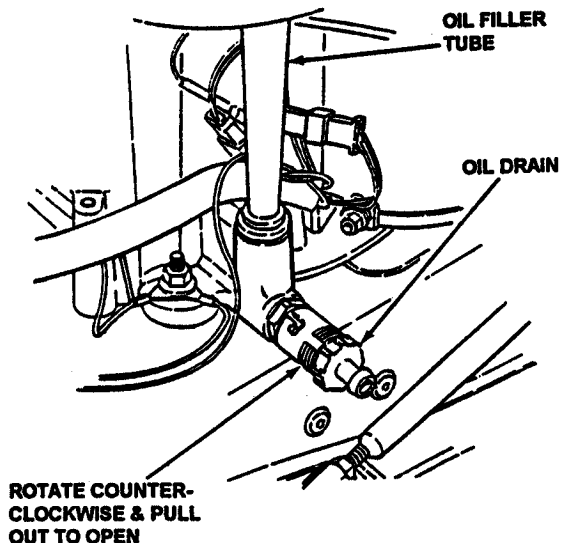


FIGURE 18

LUBRICATION (Each 25 Hours)

The service points listed on this page 16 and the next page(17), should be lubricated as directed after each 25 operating hours to keep your Lawn Tractor and Mower Deck in top operating condition.

FRONT WHEEL BEARINGS LUBRICATION

Lubricate both front **Wheel Bearings** through the grease fittings on wheel hubs using general purpose grease from a grease gun. Add grease until grease purges from bearings. See figure 19.

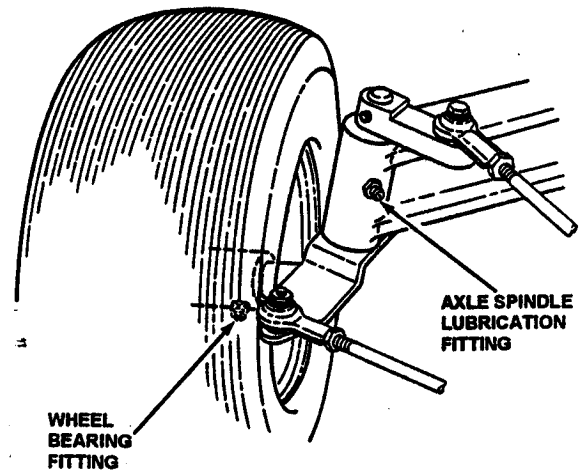


FIGURE 19

AXLE SPINDLES LUBRICATION

Lubricate **Axle Spindles** on both sides with 1 shot of general purpose grease from the grease gun. The right side fitting is shown in Figure 19. Also, lubricate the grease fitting located in the center of the axle pivot point on both LT160H42DBV and LT160H42DBV2 Models.

NOTE: The right hand spindle fitting faces forward as shown in Figure 19 and the left hand spindle fitting faces to the rear of the tire.

STEERING SHAFT LUBRICATION

Lubricate the **Steering Shaft** at wear points with a light coat of motor oil from an oil can.

MAINTENANCE INSTRUCTIONS

LUBRICATION (Continued)

CLUTCH/BRAKE PIVOT LUBRICATION

The Clutch/Brake Pivot is located on the left underside of the tractor and is lubricated with 1 shot of general purpose grease from the grease gun. See Figure 20.

CLUTCH/BRAKE
PIVOT LUBRICATION
FITTING

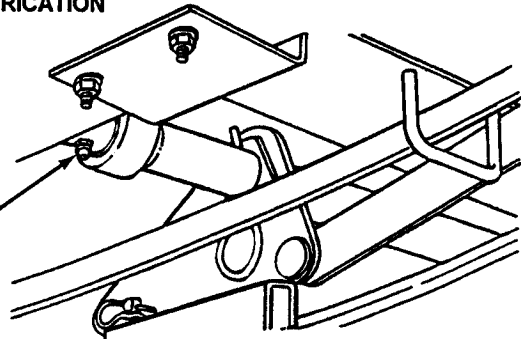


FIGURE 20

STEERING SECTOR GEAR LUBRICATION

Raise the hood and lubricate the steering Sector Gear with a light coat of motor oil from an oil can. See Figure 21.

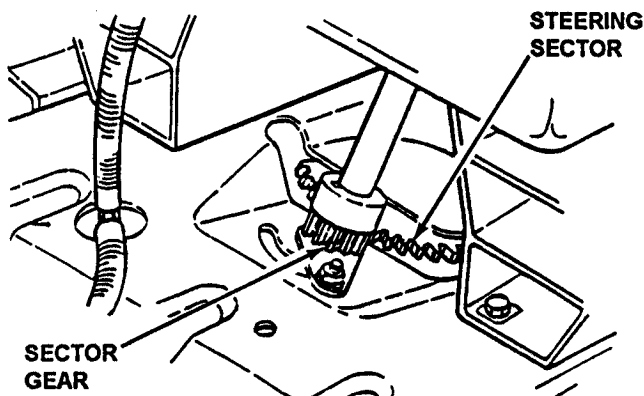


FIGURE 21

STEERING DRAG LINK LUBRICATION

Lubricate the left end of the Steering Drag Link with a small amount of motor oil from an oil can. See Figure 22.

DRAG LINK
LUBRICATION
POINT

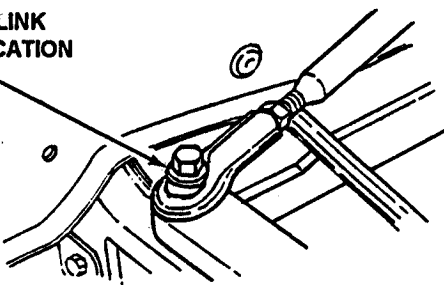


FIGURE 22

STEERING TIE ROD LUBRICATION

Lubricate both ends of the Steering Tie Rod with motor oil from an oil can. See Figure 23.

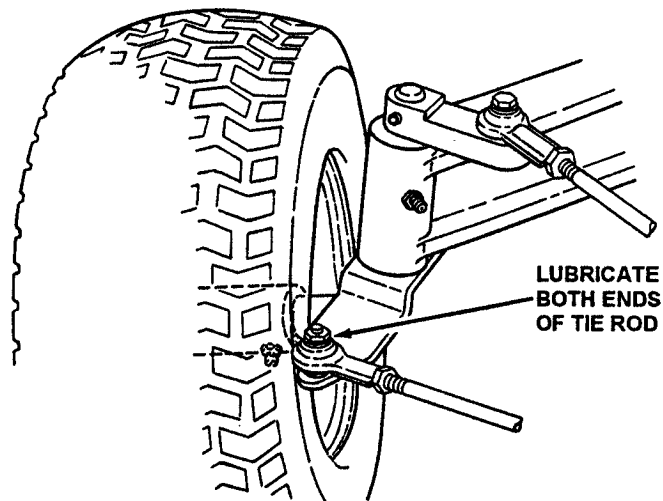


FIGURE 23

PARK BRAKE LATCH LUBRICATION

Lubricate the Park Brake Latch mechanism pivot points which are located on the Left underside of the tractor with motor oil from an oil can. See Figure 24.

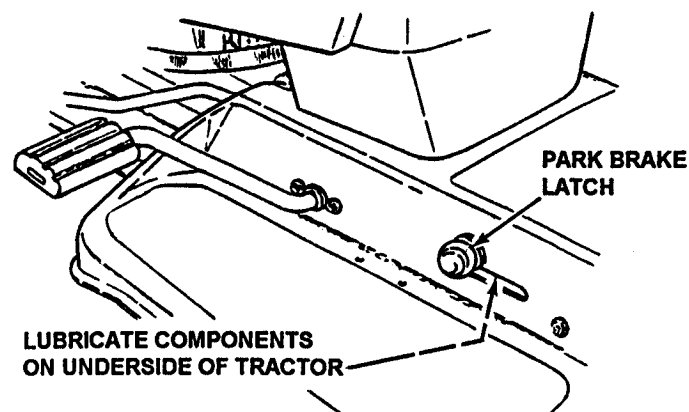


FIGURE 24

DECK LIFT MECHANISM LUBRICATION

Lubricate all wear and pivot points of the Deck Lift Mechanism with a thin coat of motor oil from an oil can.

MOWER DECK SPINDLES LUBRICATION

Lubricate the Mower Deck Spindles with 1 shot of general purpose grease through the fitting located on each spindle on the underside of the deck.

MAINTENANCE INSTRUCTIONS

SERVICE

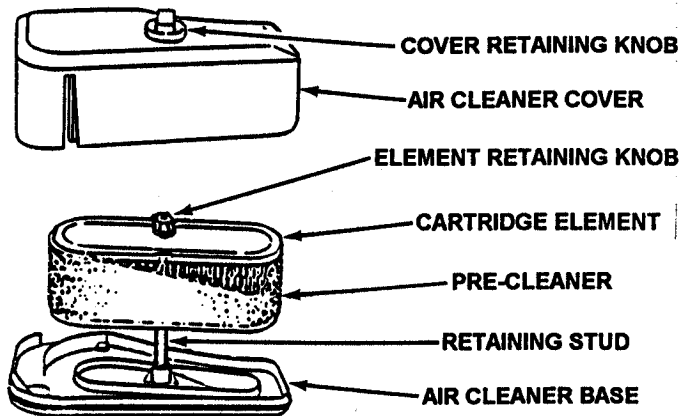
The engine components listed on this page should be serviced on a regular basis to keep it in top working condition. Refer to the "SERVICE SCHEDULE" on page 13 of this manual for the recommended intervals. Refer to the Engine Owner's Manual for specific instructions.

ENGINE PRE-CLEANER

The engine pre-cleaner should be removed and cleaned every 25 operating hours. See Figure 25 and 25A. Refer to the Engine Owner's Manual for specific cleaning instructions.

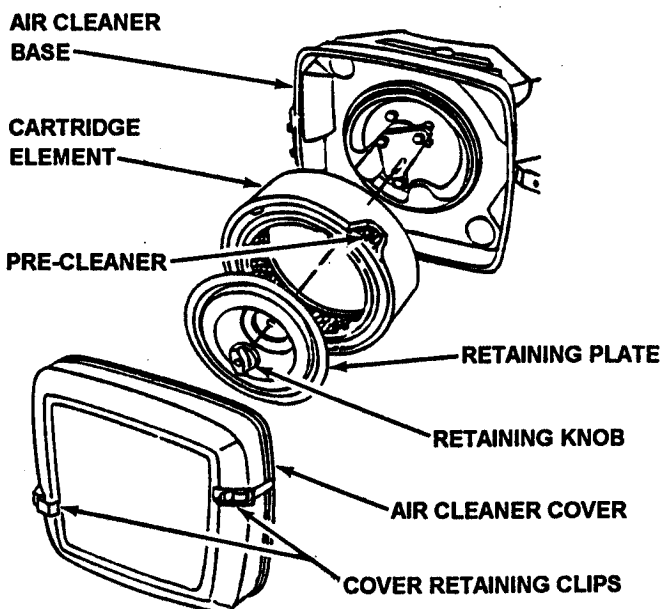
ENGINE AIR CLEANER

The engine air cleaner element should be cleaned each time the pre-cleaner is serviced and should be replaced every 100 operating hours. See Figure 25 and 25A. Refer to the Engine Owner's Manual for specific details



SINGLE CYLINDER ENGINE TYPE

FIGURE 25



TWIN CYLINDER ENGINE TYPE

FIGURE 25A

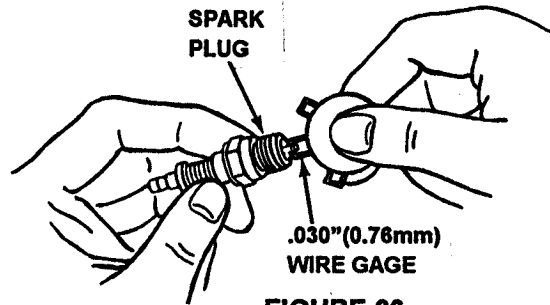


FIGURE 26

SPARK PLUG

Remove and replace engine Spark Plug(s) after 100 operating hours. Refer to Engine Owner's Manual for correct replacement Plug and Spark gap specifications. See Figure 26.

ENGINE COOLING SYSTEM

The engine cooling system consists of an engine shroud and engine fins. These should be kept clean and free of debris as needed or cleaned at least every 100 operating hours or more often under dusty, dirty conditions.

FUEL FILTER

The engine Fuel Filter should be replaced every 100 operating hours. Remove and replace the fuel filter as follows (when Engine is cold):

1. Raise tractor hood, remove Spark Plug Wire(s) from Plug(s) and secure the Wire(s) away from the Spark Plug(s).
2. Locate the Fuel Filter. On single cylinder engines, the Fuel Filter is located under the air cleaner. On the twin cylinder models, it is located above the valve cover.
3. Drain gasoline from Fuel Tank before removing Fuel Filter to prevent gasoline spillage. Drain fuel into a clean container if fuel is to be re-used.
4. Have a container handy to drain the fuel into, then remove the hose clamps above and below the fuel filter and drain fuel from the tank and carburetor into the container.
5. Install a new SNAPPER Part Number 1-4359 Fuel Filter in place of the old Filter. Re-install the Hose Clamps and reconnect the Fuel Lines. See Figure 27.
6. Re-fill Fuel Tank with gasoline. Re-connect Spark Plug Wire(s) to Spark Plug(s) and lower the tractor hood.

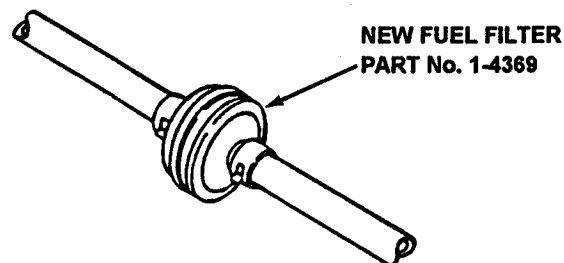


FIGURE 27

MAINTENANCE INSTRUCTIONS

BATTERY SERVICE

The battery should be checked and serviced every 25 hours of operation as follows:

Tilt Operator's Seat forward and remove the two adjusting knobs then lift the seat assembly off tractor frame and move it forward out of the way. Be careful not to disconnect wires from seat switches. See Figure 28.

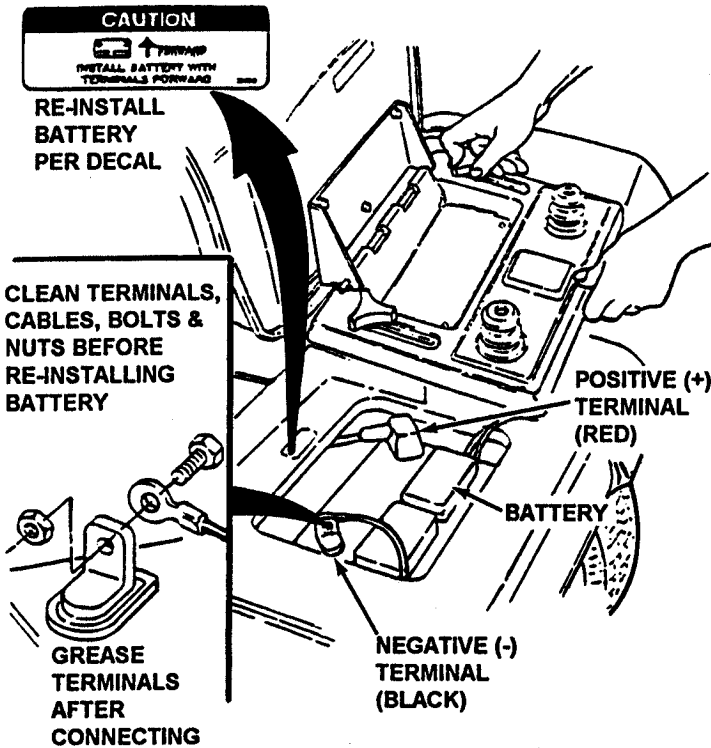


FIGURE 28

CHECKING BATTERY ELECTROLYTE

WARNING

The Electrolyte (Acid) produces a highly explosive gas. Keep all Sparks, Flame and Fire away from the area when charging battery or when handling electrolyte or battery. Electrolyte (Acid) is a highly corrosive liquid. Wear eye protection. In case of eye or skin contact with Electrolyte (Acid), wash all affective areas of the body immediately with water.

Clean top of battery, disconnect battery positive cable to prevent arching, then carefully remove the battery cell covers.

Visually check electrolyte level in each cell. Level should be 3/16" above cell plates up to the fill rings.

Using distilled water, fill cells as needed to bring level up to, but not over, the fill rings. See Figure 29. Replace cell covers and reconnect the positive cable if disconnected earlier.

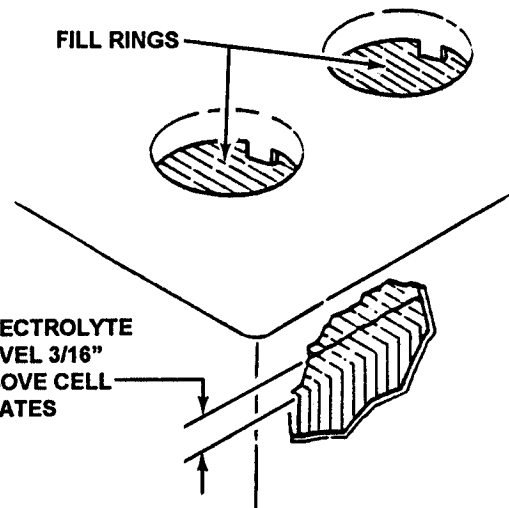


FIGURE 29

BATTERY CHARGING PROCEDURE

The engine is equipped with a flywheel alternator to charge battery. If the tractor is not run regularly, connect battery to a charger monthly to maintain charge. If low, battery liquid could freeze at zero degree temperatures causing cracking of the battery case. To prevent freezing, keep the charge up or remove the battery from the tractor and store battery in warm, well ventilated area during the off season. Store on wooden surface, not on cement floor.

1. Always remove the Negative (-) cable first to prevent arching and remove Positive (+) cable last.
2. To charge , connect a constant current charger (not trickle type) and follow instructions furnished with the charger.
3. If time allows, slow charge at 1 amp for 10 hours, or as an alternate, fast charge at not more than 2.5 amps for four hours. Observe ALL Precautions while charging.
4. Install Positive (+) cable first and install Negative(-) cable last. Apply a small amount of grease over the terminals to prevent corrosion.
5. Re-install seat assembly over battery and secure in position with adjusting knobs. Leave knobs loose until the seat is adjusted, then tighten.

ACTIVATING A NEW BATTERY

Activating a new Battery with Electrolyte (Acid) will bring it up to 80 % of full charge state. It must be brought up to full charge, which means 20% additional charge is needed. Charge a new Battery for 2 hours on a slow charge rate of 1 Amp to bring it up to full charge before installing it in tractor.

MAINTENANCE INSTRUCTIONS

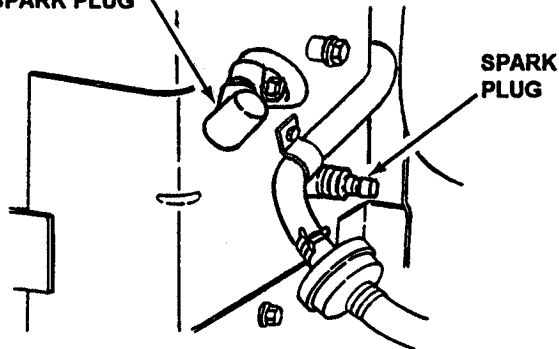
MOWER DECK SERVICE

MOWER DECK REMOVAL (42" Mower Deck)

The Mower Deck will have to be removed to replace blades or deck belts as described on following pages. Remove deck as follows:

1. Place tractor on a firm, level surface such as a driveway or garage floor and set the park brake.
2. Turn engine "OFF" and remove key. Raise hood and remove spark plug wire(s) from spark plug(s). Secure wire(s) away from plug(s). See Figure 30.

REMOVE WIRE BOOT FROM SPARK PLUG



SINGLE CYLINDER ENGINE SHOWN

FIGURE 30

3. Lower the Deck to lowest setting by pushing lock button in on lift lever, then moving lever full forward.
4. Remove both Hairpins from the Front Deck Hanger Rod. See Figure 31.

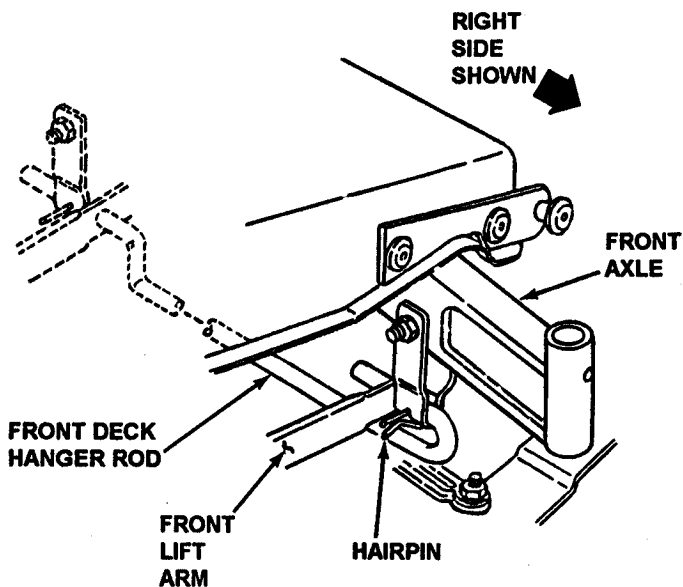


FIGURE 31

5. Disconnect the Deck Front Lift Cable by removing the Hairpin and Washer first. See Figure 32.

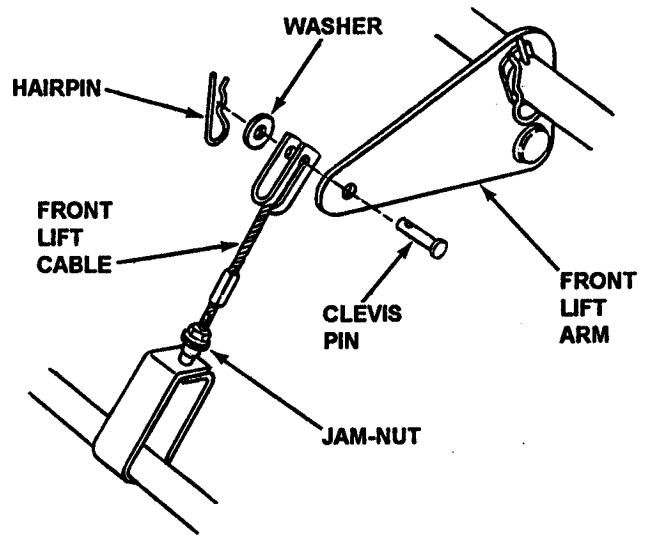


FIGURE 32

6. Hold front of Deck up and remove Clevis Pin from Front Lift Arm, then lower the front of the Deck to the ground.
7. Make note of hole used in sector plates so same holes are used during re-assembly. See Figure 33. Remove hairpins and flat washers from rear deck hanger bracket on both sides of tractor.
8. Slide both sector plates off of rear deck hanger brackets. See Figure 33.

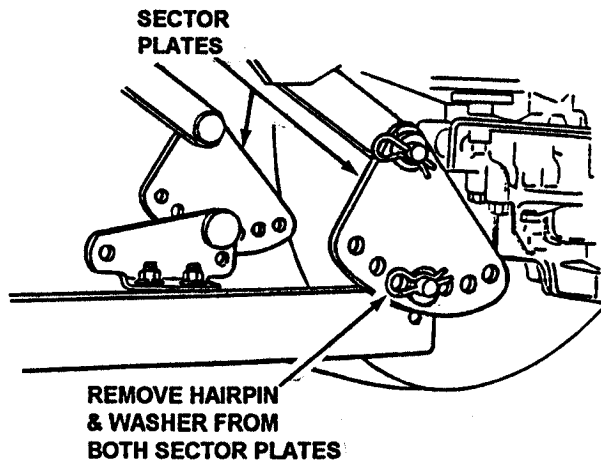


FIGURE 33

9. Slide deck forward to allow idler spring to release tension. See Figures 40 and 42 on page 22.
10. Remove deck drive belt from the electric clutch.
11. Pull deck out from under tractor from right hand side.
12. Reverse this procedure to reinstall mower deck.

(48" DECK REMOVAL INFO ON NEXT PAGE)

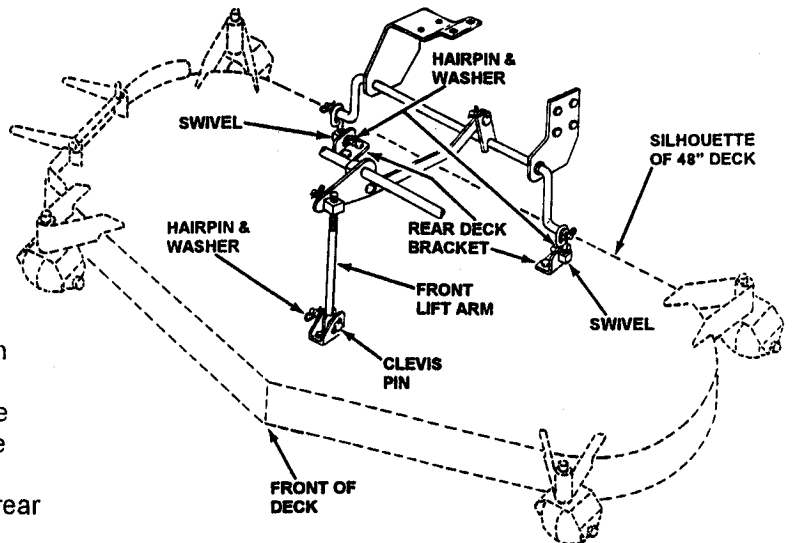
MAINTENANCE INSTRUCTIONS

48" MOWER DECK REMOVAL

Follow steps 1 and 2 (42" Mower Deck Removal on previous page 20), then lower the deck onto the gage wheels prior to disconnecting the front and rear lift arms.

- A. Disconnect the front lift arm first by removing the hairpin, washer, and clevis pin.
- B. After disconnecting front lift arm, remove hairpins and washers from rear deck swivels, then slide each swivel out from rear deck brackets.

NOTE: It may be necessary to slightly prop up the front of the deck when removing clevis pin to take pressure off of front lift arm. The same procedure should be used when removing swivels from the rear deck brackets.



WEAR LIMITS - STANDARD BLADES

Mower Blades should be checked for excessive wear and damage before each use. See Figure 34 for Blade wear conditions on a standard Blade.

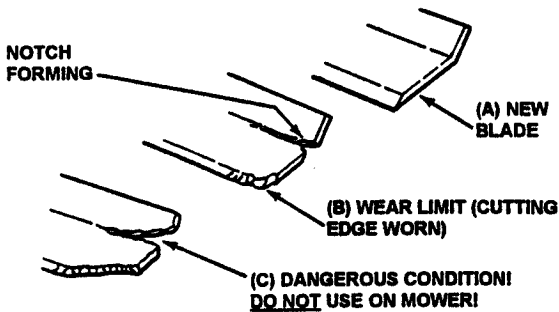


FIGURE 34

Blades should be kept sharp at all times. Sharpen Blades ONLY if good condition. Replace if worn or damaged. Install new Air Lifters on Blades if so equipped when the Blades are being replaced.

WARNING

Never use a blade that shows signs of excessive wear or damage. Refer to Figure 34 for STANDARD blade wear limits.

STANDARD MOWER BLADES - REMOVAL AND REPLACEMENT

1. Remove the Mower Deck from Tractor following instructions on page 20 under, "MOWER DECK REMOVAL".
2. Carefully position the Deck to access Blades and inspect both Blades for signs of damage or wear.
3. Remove Blade(s) Mounting Bolt(s) and Cone Washer(s) from each Blade and remove Blades to sharpen or replace as needed. See Figure 35.

4. Install sharpened or new Blades, (SNAPPER Part No. 2-6691) and secure each with the Cone Washer and Mounting Bolt. Torque Mounting Bolts to 40 ft. lbs.
5. If Blade is in good condition but cutting edge is dull, sharpen at a 25 degree angle as shown in Figure 36.

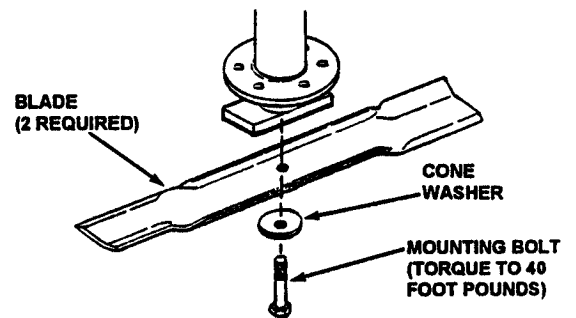


FIGURE 35

SHARPENING STANDARD BLADE(S)

Blades should be kept sharp at all times. When the Blade(s) are dull, cut grass will be ragged and lawn will usually turn brown. Sharpen standard Blades as follows:

1. Sharpen the 2-1/2" cutting edges on standard mower Blades at a 25° angle. See Figure 36.
2. Tighten the Blade Mounting Bolt to torque specified as shown in Figure 35.

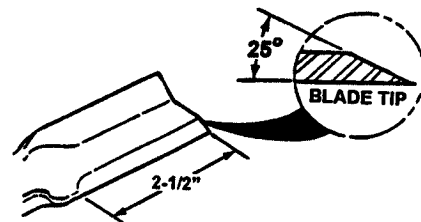


FIGURE 36

MAINTENANCE INSTRUCTIONS

AIR LIFTS - REPLACEMENT NOTE

On units equipped with Grass Catchers and Blades with Air Lifts, **always** replace the Air Lifts when the Blades need replacement. **DO NOT TRANSFER USED Air Lifts to the new Blades!** Instructions are provided in the Air Lift Kits. Use Air Lift Kit Part Number 6-0735. See Figure 37.

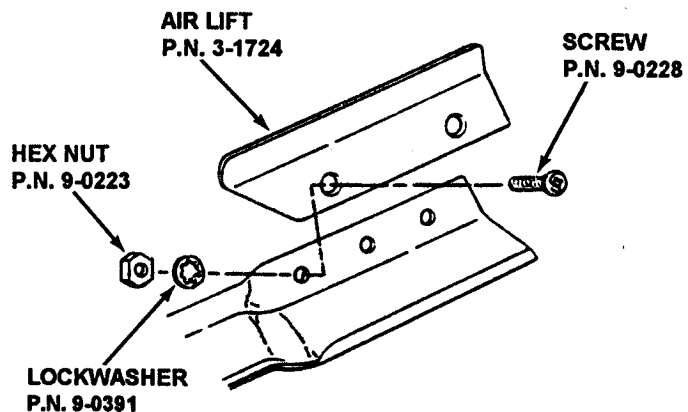


FIGURE 37

NINJA MOWER BLADE SERVICE

NINJA™ BLADE WEAR LIMITS

SNAPPER NINJA™ Recycling Blades require more frequent service intervals than standard Blades. Check the NINJA™ Recycling Blades for excessive wear or damage after every use. See Figure 38.

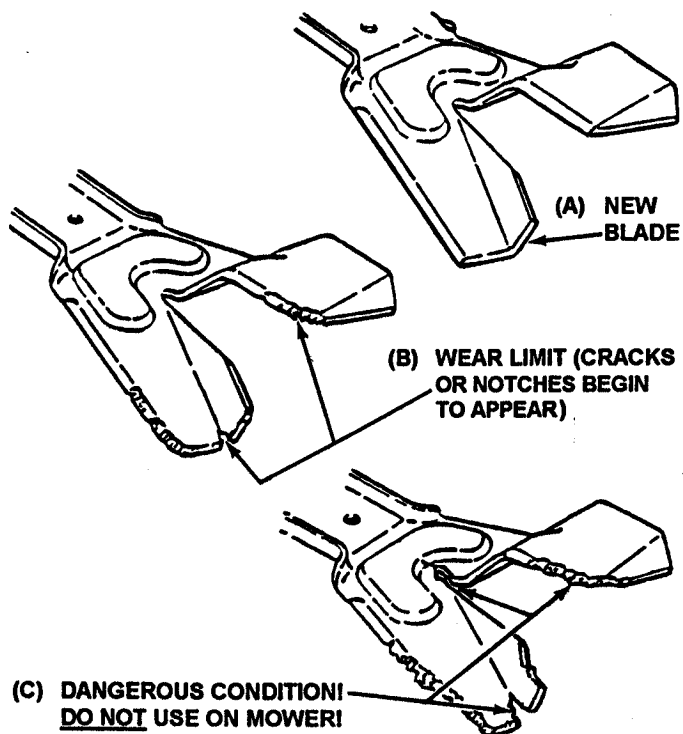


FIGURE 38

WARNING

Never use a **BLADE** that shows signs of excessive wear or damage. Refer to Figure 38 for NINJA™ Blade wear limits.

NINJA™ BLADE SHARPENING PROCEDURE

SNAPPER NINJA™ Recycling Blades require more frequent sharpening than standard Blades because of their recycling function.

Remove each NINJA™ Blade by removing the Mounting Bolts and Cone Washers. Retain this Hardware for re-installation of Blades.

Inspect each NINJA™ Blade for excessive wear or damage. See Figure 38 for NINJA™ Blade wear limits.

Replace Blades if in poor condition. Use Kit 6-1220 on 42" Decks.

Sharpen dull cutting edges if the Blade is in otherwise good condition.

Sharpen all four cutting edges of each NINJA™ Recycling Blade at 27° for best performance. See Figure 39.

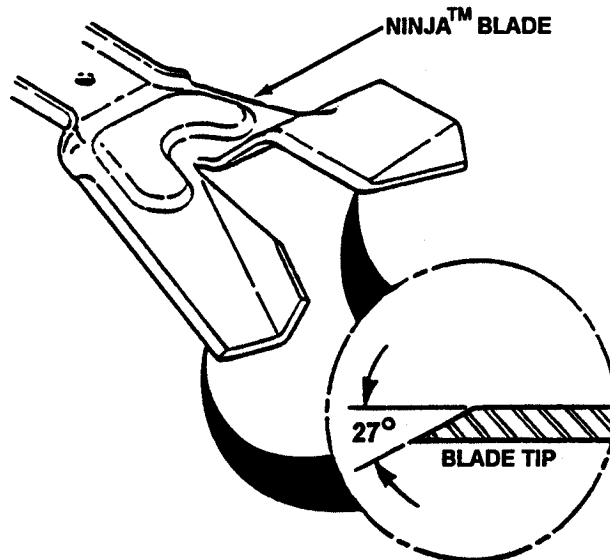


FIGURE 39

Re-install the sharpened or new NINJA™ Blades in the reverse order of removal.

Re-install Cone Washers and tighten Mounting Bolts on 42" Cutting Decks to 40 ft. lbs. torque value. Refer to Figure 35 for 42" Cutting Decks.

MAINTENANCE INSTRUCTIONS

DECK DRIVE BELT SERVICE

42" DECK DRIVE BELT REMOVAL AND REPLACEMENT

Remove Mower Deck from Tractor following instructions on page 21 under, "MOWER DECK REMOVAL".

Loosen Locknuts securing the Spindle Pulley Belt Guards and swing Guards away from Pulleys. Disconnect Idler Tension Spring from the Deck Bracket as shown in Figure 40.

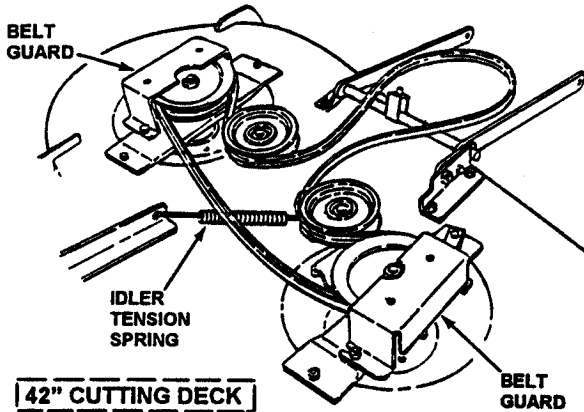


FIGURE 40

For 42" Cutting Deck, remove old Belt and install new Belt, SNAPPER P.N. 2-8582 on Model LT160H42DBV or P.N. 2-9205 on LT160H42DBV2. Install new Belt in the reverse order of removal. (For 48" Cutting Deck, Model LT140H48DBV2, use SNAPPER P.N. 4-6926 for Deck/Drive Belt, and SNAPPER P.N. 2-8334 doe Deck Belt.) On the 42" Cutting Deck, adjust Idler Pulley Belt Guides by sliding in or out before tightening Idlers to obtain 1/16" clearance between Belt and Belt Guide. See Figure 41. **NOTE:** There are no Belt Guides on the 48" Cutting Deck.

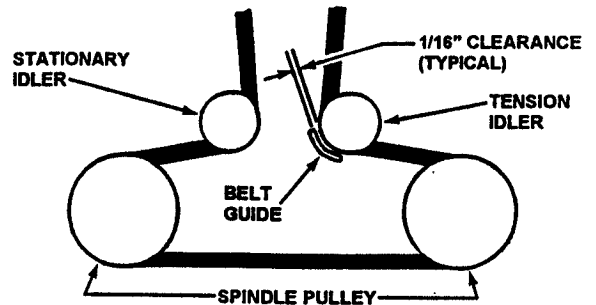
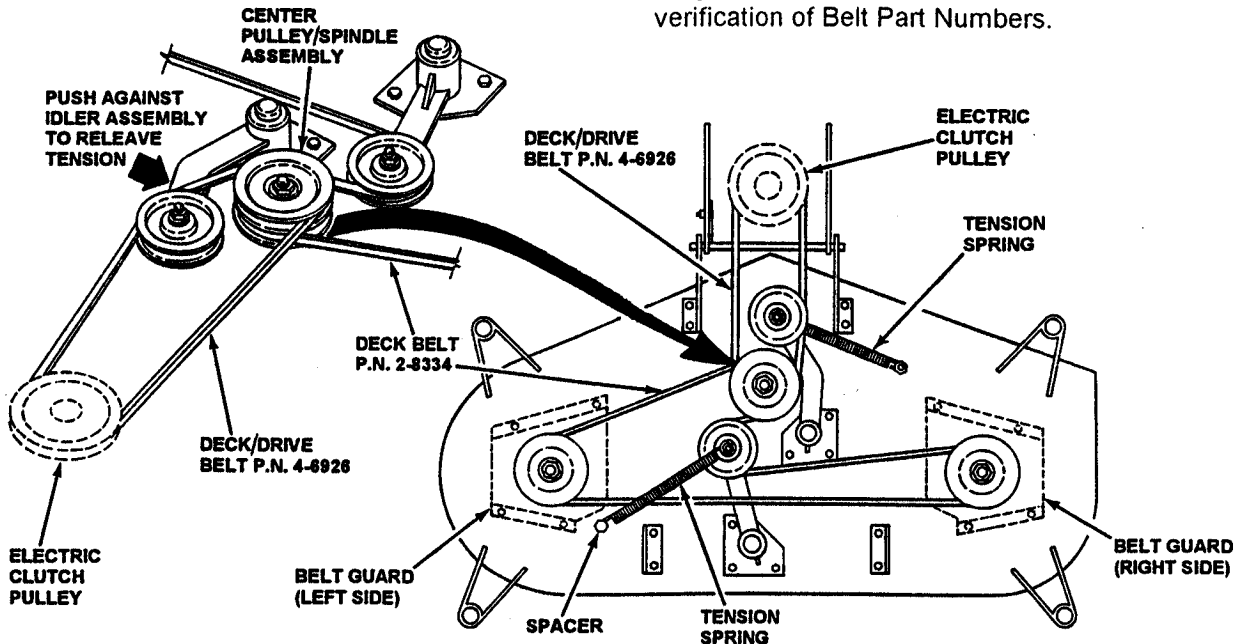


FIGURE 41

48" DECK/DRIVE BELT AND DECK BELT REMOVAL AND REPLACEMENT

Remove Mower Deck from Tractor following instructions on Page 21, under, "MOWER DECK REMOVAL".

STEP 1: The Deck/Drive Belt should be removed first by applying pressure on the Idler Assembly and then sliding the Belt off of the center Pulley/Spindle Assembly. See Illustration.



48" DECK & BELT ILLUSTRATION

STEP 2. The Spindle Pulley Belt Guards must be removed completely by removing Locknuts of which secure Belt Guards to Deck.

STEP 3. The Idler Arm Tension Spring has to be detached from the Spacer by removing the Nut and Washer and sliding the Spring up and OFF of the Spacer. This releases the tension on the Idler Arm for easy removal of Deck Belt. Check Illustration for verification of Belt Part Numbers.

MAINTENANCE INSTRUCTIONS

TRACTION DRIVE BELT SERVICE

Check the Traction Drive Belt for damage and wear after 25 operating hours. The Traction Drive Belt is located on the underside of the Tractor and spans the Engine Pulley's top groove to the Transmission Pulley. See Figure 42. If this Belt shows signs of excessive wear or damage, replace it as follows:

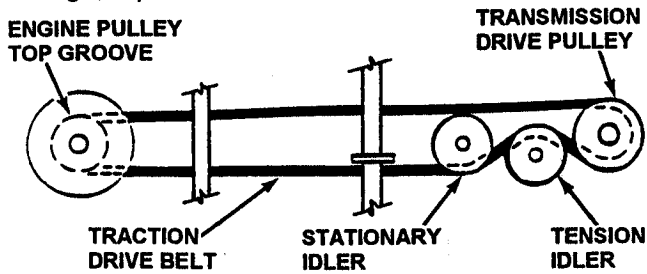


FIGURE 42

TRACTION DRIVE BELT REMOVAL

NOTE: Although it is possible to replace the Traction Drive Belt without removing the Mower Deck, Deck removal will make Belt replacement easier. Remove Mower from Tractor following instructions on page 20 under "MOWER DECK REMOVAL". Depress Clutch/Brake Pedal and set Parking Brake. Roll Mower Drive Belt out of groove in the Electric Clutch Pulley and lower Belt for access to Traction Drive Belt. See Figure 43.

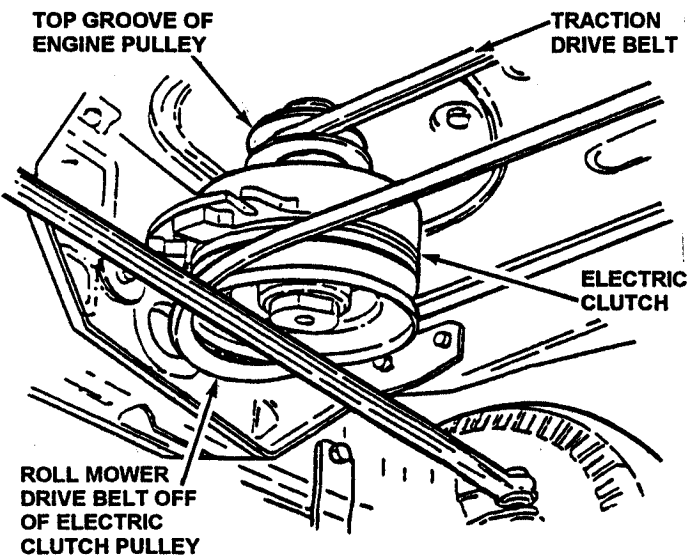


FIGURE 43

Disconnect the Idler Pulley tension Spring from Tractor Frame. See Figure 44.

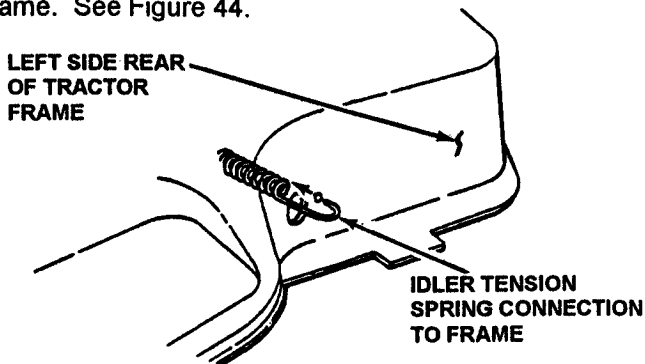


FIGURE 44

Loosen Mounting Nuts on Traction Drive Belt Idlers just enough to allow Belt to clear Belt Guides. Remove Traction Drive Belt from top groove of Engine Pulley. See Figure 43. Remove Belt from Belt Guide, then pull Belt back until it can be removed from Transmission Pulley.

TRACTION DRIVE BELT - REPLACEMENT

Place new Traction Drive Belt over Transmission Pulley and span to Engine Pulley. Place Belt into top groove of Engine Pulley (groove above Electric Clutch). See Figure 43. Route Belt through Stationary and Tension Idlers. **NOTE:** When installing a new Belt, make certain the Stationary Idler is mounted in the hole closest to the left hand side of the Tractor. See Figure 45.

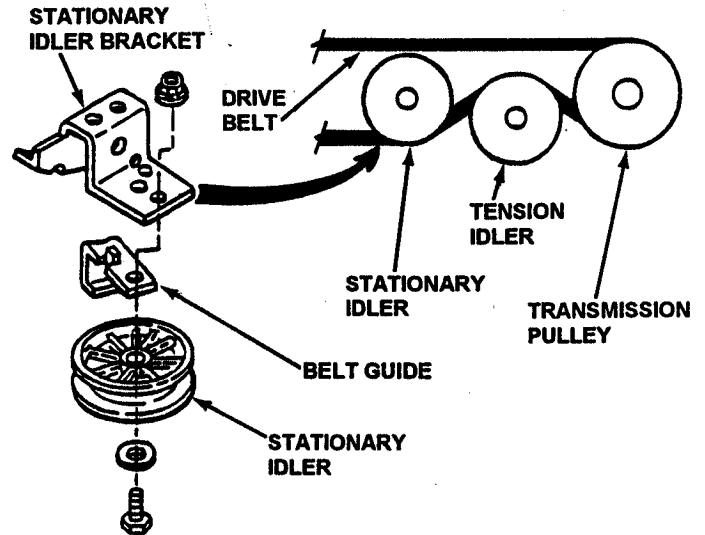
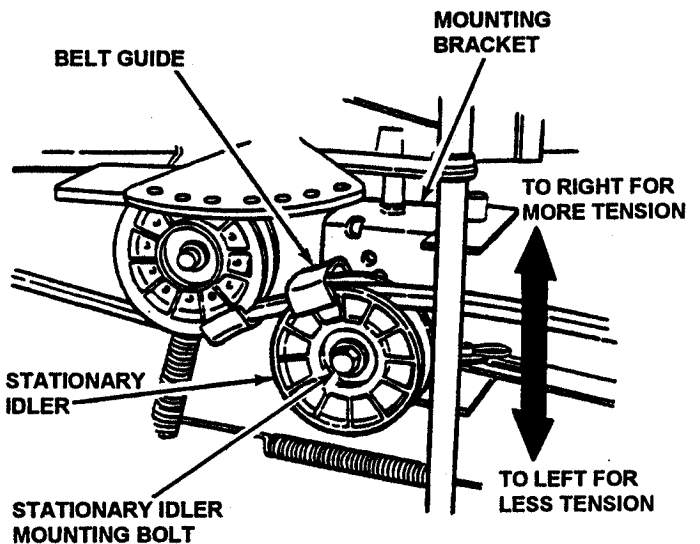


FIGURE 45

Make certain Belt is within Belt Guides and that Idlers turn freely. Re-connect tension Idler Spring to Tractor Frame. See Figure 44. Re-install Mower Deck (if removed) in reverse order of removal. Refer to page 20.



VIEWED FROM UNDERNEATH TRACTOR

FIGURE 46

MAINTENANCE INSTRUCTIONS

TRACTION DRIVE BELT ADJUSTMENT

If a gradual loss of traction is noticed, it may be necessary to adjust the Traction Drive Belt tension by repositioning the Stationary Idler as follows:
NOTE the position of Belt Guide on Stationary Idler and make certain it remains the same after moving Idler. Remove the Traction Drive Belt Stationary Idler Mounting Bolt. See Figure 46.

Move the Stationary Idler one hole towards right side of Tractor for more Belt tension. **NOTE:** Right and Left sides indicated in Figures 46 and 47 are as viewed from Operator's position on Seat.

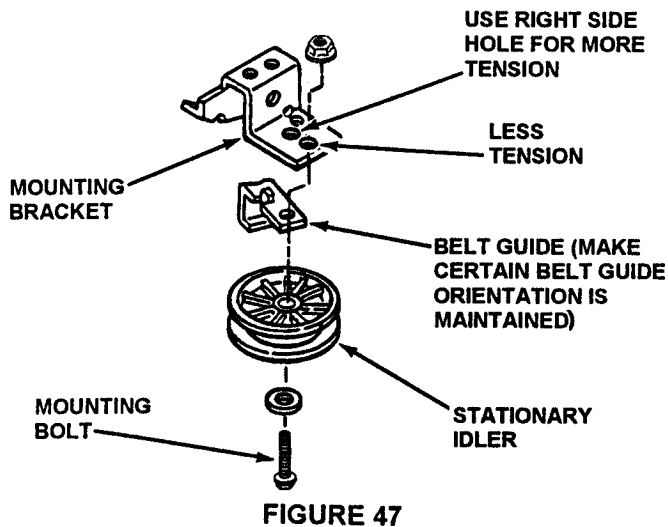


FIGURE 47

Secure Stationary Idler by tightening the Mounting Bolt. When properly adjusted, the Traction Drive Belt will not rotate with the Park Brake set and Engine running.

TIRES and PRESSURE

It is a good idea to check Tire Pressure before each mowing job. Uneven Tire Pressure can cause poor cutting patterns, especially uneven cutting from Side-To-Side. Keep pressure in Front Tires at 12 psi and Rear Tires at 10 psi (pounds per square inch) at all times!

DECK LEVEL ADJUSTMENTS

If the mowed path is uneven from Side-To-Side and the Tires are properly inflated, check Mower Deck for correct Side-To-Side levelness and adjust if needed.

SIDE TO SIDE LEVEL CHECK

Move Tractor to a firm, level surface, turn Blades and Engine **OFF**, then raise Hood and remove Spark Plug Wire(s) from Spark Plug(s) and secure Wire(s) away from Plug(s). Rotate both Blades until Blade Tips are at each side of Deck as shown in Figure 48. Place a piece of Angle Iron or similar object under center rear of Deck.

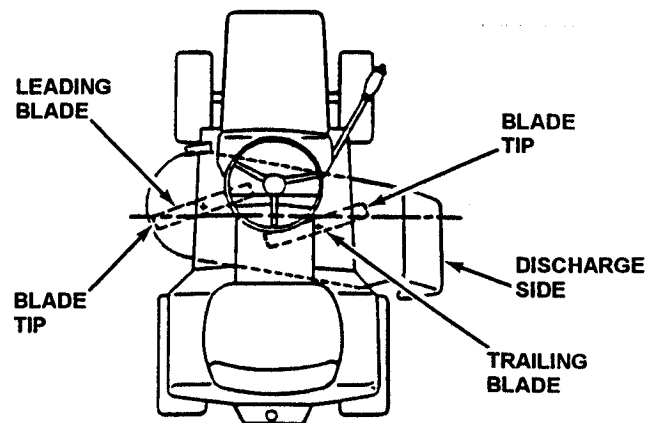


FIGURE 48

Remove Hairpins and Washers securing rear of Deck to Sector Plates. See Figure 49. Slide Sector Plates off of Pins and carefully lower Deck onto Angle Iron or similar object. Measure distance from Blade Tip to floor on each side of deck. Blade Tips should be within 1/8" of each other for the Deck to be considered level. If this differs more than 1/8", adjust as follows:

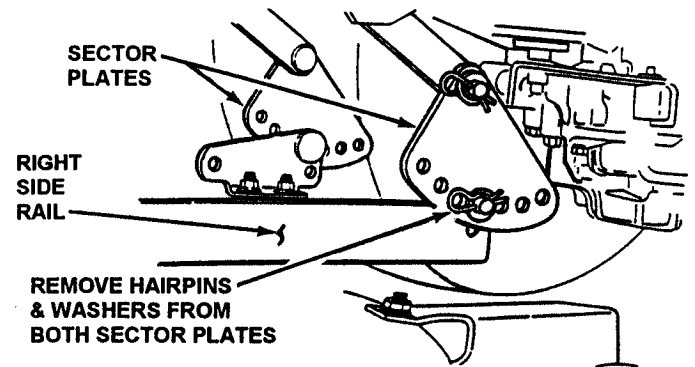


FIGURE 49

SIDE TO SIDE LEVEL ADJUSTMENT (42" CUTTING DECK)

Loosen front Lift Arm Pivot Bolt on front of right side rail. See Figure 50. Turn Eccentric "UP" or "DOWN" as required to level Deck, then securely tighten the Eccentric Shoulder Bolt and the Pivot Bolt.

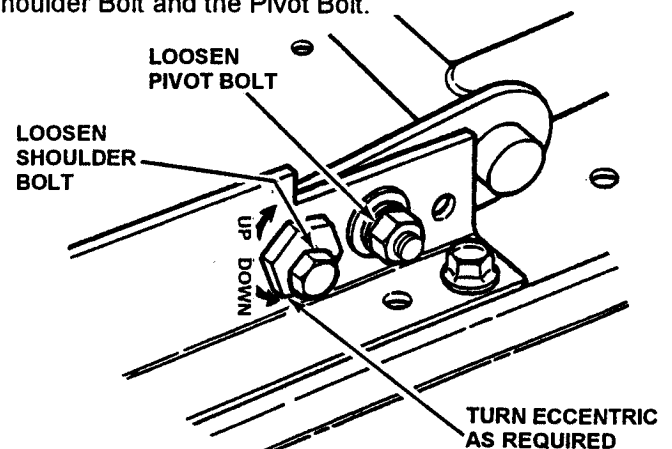


FIGURE 50

Place Sector Plates back onto rear Lift using hole that most closely lines up with Pin. Secure with Washer and Hairpins.

MAINTENANCE INSTRUCTIONS

MOWER DECK ADJUSTMENT (LEVELNESS)

Side To Side Level (48" Cutting Deck)

Before making deck leveling adjustments, check the tire pressure. Add or release air as needed to bring pressure to 10 PSI in front and 10 PSI in rear tires. If tires are properly inflated and mowing is still uneven, adjust side-to-side deck levelness first as follows:

1. Place machine on a smooth level surface.
2. Rotate outside blades so tips are pointed to the sides of deck. See Figure 51. Measure the distance from blade tips to floor. If the measurement is within 1/8" from side-to-side, the deck levelness is satisfactory. If the difference from side-to-side is greater than 1/8", continue to next step for adjustment.
3. Place a 2 x 4 piece of wood under the front middle portion of deck. Place one 2 x 4 piece of wood under the rear of deck on both sides behind the two outside blades. See Figure 51.
4. Lower deck down to rest on the three 2 x 4 pieces of wood. Make sure there is no deck tension on the lift rods supporting the deck.
5. Loosen the bolt and nut that secures the front lift arm weldment to the front lift arm. See Inset.
6. Remove both hair pins and washers from swivel located on rear lift rods and pull rod out of lift brackets.
7. Rotate swivels on both sides up or down to achieve the proper levelness. See Figure 51A.
8. Reinstall swivel into deck bracket. Reinstall washers and hair pins.
9. Tighten nut and bolt on front lift arm securely.

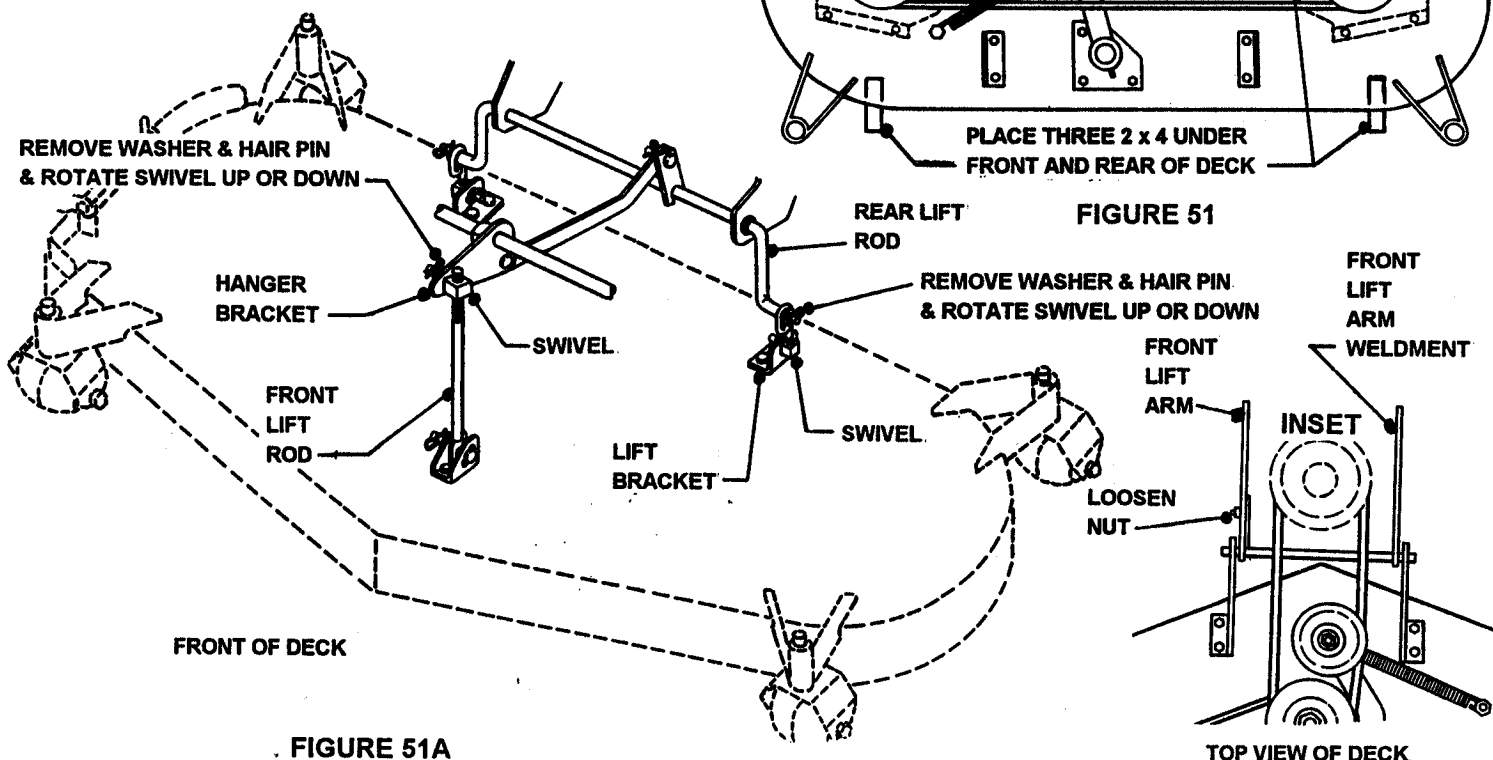


FIGURE 51A

4.3.4. MOWER DECK ADJUSTMENT (LEVELNESS)

Front to Rear Deck Pitch (48" Deck)

Before making deck leveling adjustments, check the tire pressure. Add or release air as needed to bring pressure to 10 PSI in front and 10 PSI in rear tires. If tires are properly inflated and mowing is still uneven, check side-to-side deck levelness first then proceed to front to rear adjustment. Adjust front to rear deck levelness as follows:

1. Place machine on a smooth level surface.
2. Rotate outside blades so tips are pointed to the front and rear of deck. Measure the distance from blade tips to floor. The distance should be the same. If the rear blade tip is higher lower than the front, proceed to Step 4 for adjustment.
3. Remove the hair pin & washer from swivel located on front lift rod. Remove swivel/lift rod from hanger bracket.
4. Rotate swivel up or down to achieve the proper levelness.
5. Reinsert swivel/lift rod into hanger bracket. Reinstall washer & hair pin. See Figure 51A.

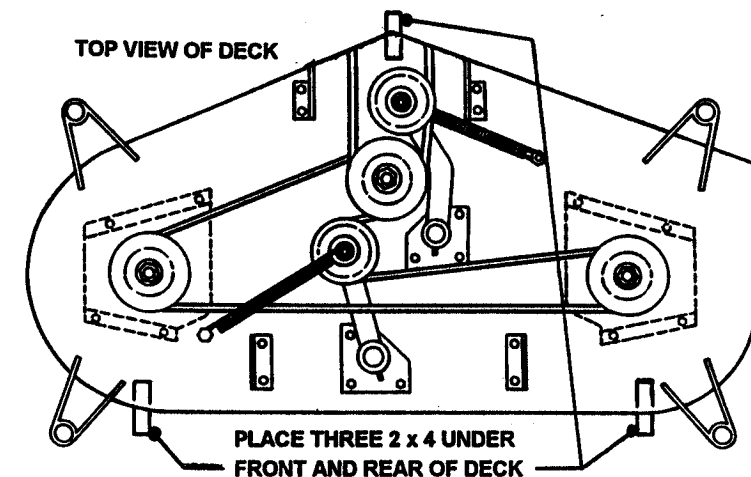


FIGURE 51

MAINTENANCE INSTRUCTIONS

FRONT TO REAR LEVEL ADJUSTMENT at SECTOR PLATES

Remove Hair-Pins and Washers securing Sector Plates to rear Lift Arms. See Figure 52.

Move Sector Plates the same number of holes as required to raise or lower the Deck.

The Deck should be set 1/4" lower at the rear than at the front.

If the Sector Plates are in the lowest possible setting and the correct front to rear level is not obtained, adjust according to section about front Lift Rods.

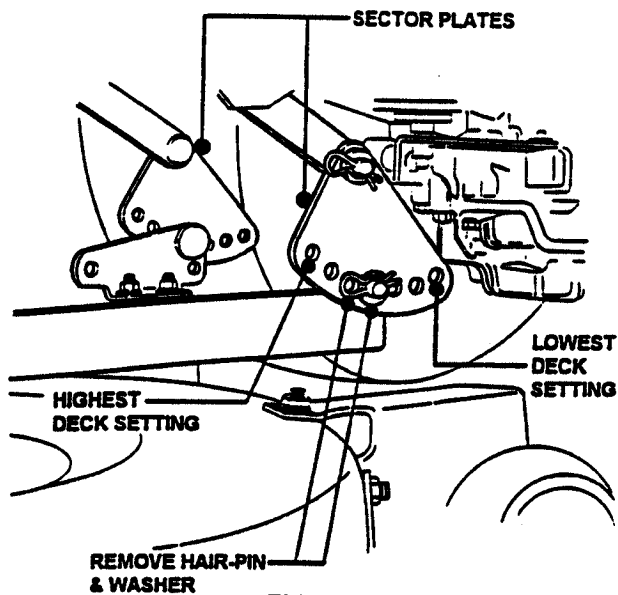


FIGURE 52

FRONT TO REAR LEVEL ADJUSTMENT at FRONT LIFT CABLE

If the Sector Plates are in their lowest setting and proper level cannot be obtained, adjust the front Lift Rod as follows:

Move Deck Lift Lever to the highest position.

Place a 2" wooden block or similar object under front center of Deck.

Place a 3" wooden block or similar object under rear center of Deck.

Remove Hair-Pins and Washers securing Sector Plates (See Figure 52). Lower rear of Deck onto the 3" block.

Remove Hair-Pin and Washer securing FRONT Lift Cable to FRONT Lift Arm. See Figure 53.

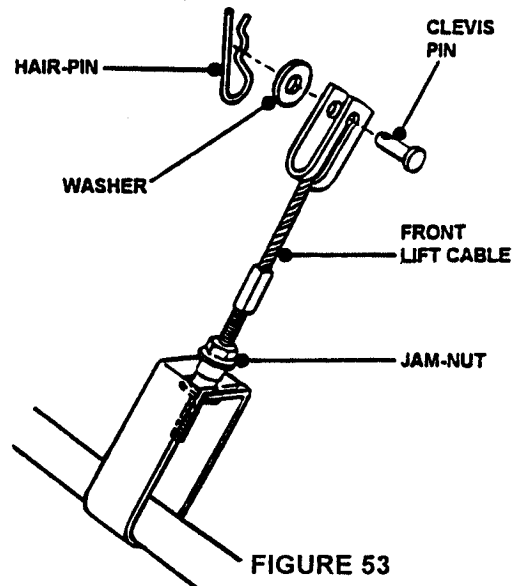


FIGURE 53

Remove the front Lift Cable and carefully lower front of Deck onto the 2" block.

Turn front Lift Cable after loosening Jam-Nut until it can be re-installed to Lift Arm without lifting Deck off of the blocks.

Secure Lift Rod to Lift Arm with Washer and Hair-Pin.

Place Sector Plates onto rear Hanger Brackets and secure with Washers and Hair-Pins.

Raise Deck and remove wooden blocks or similar objects.

Repeat steps for Front-To-Rear level adjustment. Refer to FRONT TO REAR LEVEL at SECTOR PLATES section.

MAINTENANCE INSTRUCTIONS

SHIFTER ADJUSTMENT

If movement of Tractor does not correspond with the selected speed or Shift Quadrant, adjust the Speed Control Lever as follows:

With Engine running, drive Tractor and move Shift Lever to locate NEUTRAL.

Turn Engine "OFF".

Locate Speed Control Lever Mount inside right rear tire. See Figure 54.

Loosen Mounting Nuts.

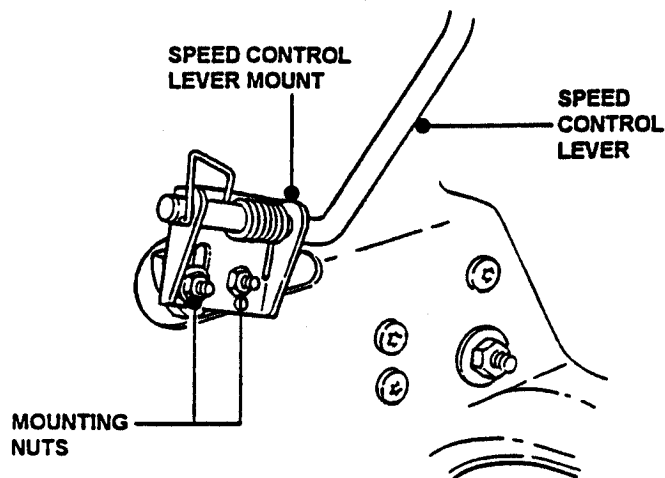


FIGURE 54

Move the Speed Control Lever until it is in direct relation to the Neutral "N" position on Quadrant. See Figure 55.

Tighten Mounting Nuts and test Shifter operation.

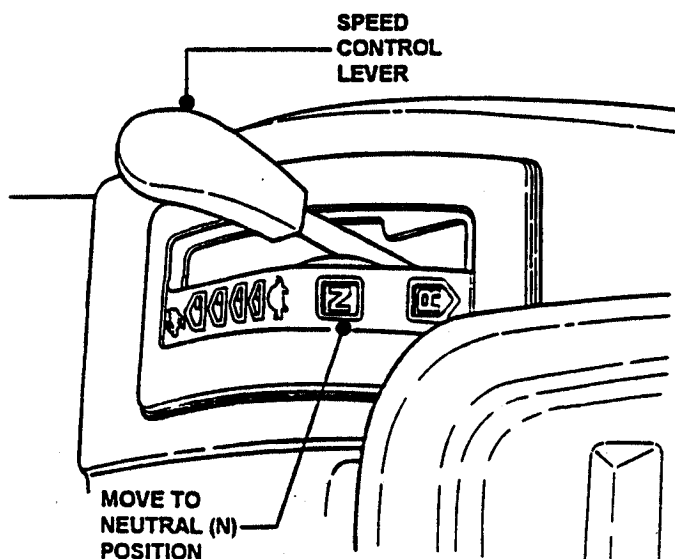


FIGURE 55

STEERING ADJUSTMENT

Should excessive "Play" be noted in the steering, adjust at the Steering Sector as follows:

Turn Engine "OFF" and raise Tractor Hood.

From left side of Tractor, locate the Steering Sector below Fuel Tank. See Figure 56.

Loosen the Eccentric Mounting Nut and rotate the Eccentric clockwise until Steering "Play" is reduced.

Tighten Eccentric Mounting Nut and lower Hood into operating position.

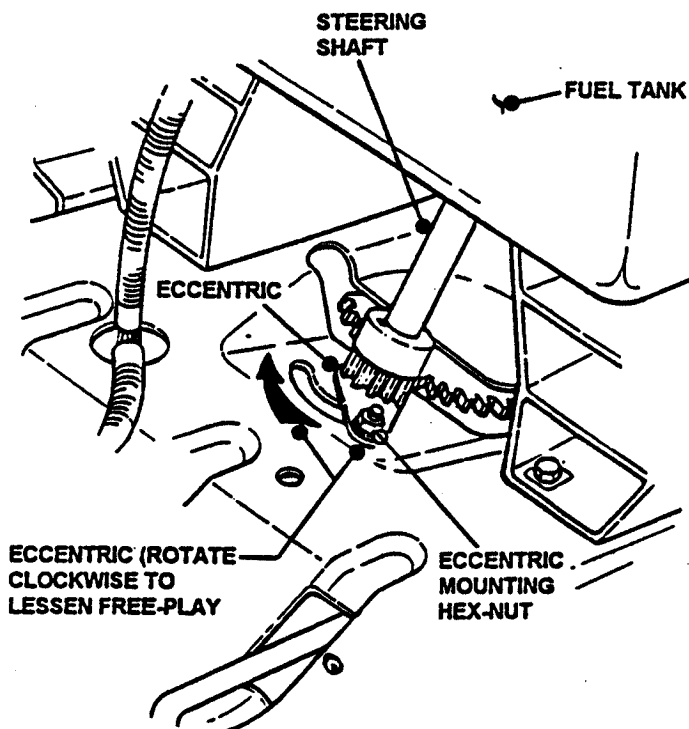


FIGURE 56

MAINTENANCE INSTRUCTIONS

WHEEL BRAKE ADJUSTMENT

When the **Wheel Brake** is properly adjusted, the rear **Wheels** will lock and skid when the **Tractor** is pushed forward with the **Parking Brake** set. Make sure the **Engine** is **STOPPED** and **Key** is removed before testing.

Adjust **Brake** if rear **Wheels** turn and **DO NOT** lock with **Parking Brake** set as follows:

Turn **Engine** "OFF" and remove **Key**.

Raise **Hood**, remove **Spark Plug Wire(s)** from **Spark Plug(s)** and secure **Wire(s)** away from **Plug(s)**.

Locate **Brake Adjustment** on right side of **Tractor** in front of and inside right rear **Wheel**. See **Figure 63**.

Turn **Nut** clockwise to increase **Braking** action or counter-clockwise to decrease **Braking** action. See **Figure 57**.

Replace **Spark Plug Wire(s)**, start **Engine** and test **Brake**.

Continue adjustment as described above until proper adjustment is achieved.

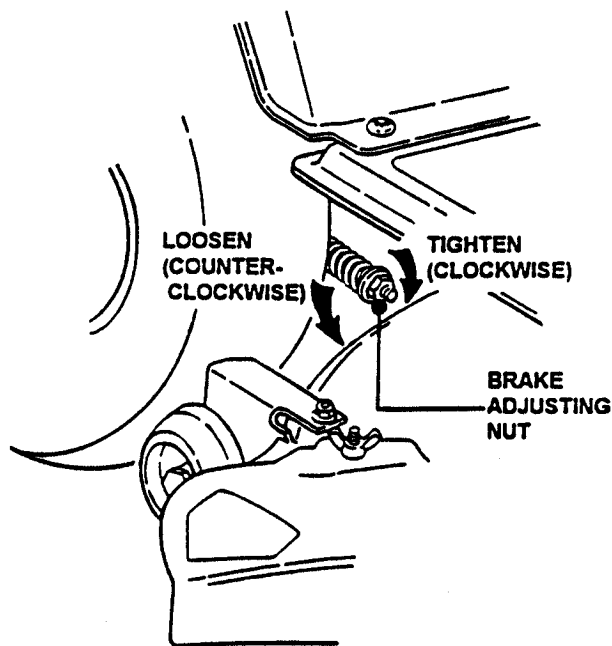


FIGURE 57

BLADE BRAKE NOTE

In addition to engaging the **Blade Belt** when the **Blades** are switched **ON** by pulling the **PTO Switch** out to "ON", the **Electric Clutch** functions to **Brake** and **STOP** the **Blades** from rotating when the **PTO Switch** is pushed in to the "OFF" position. The **Electric Clutch** is non-adjustable. If it fails to engage the **Blade Belt** or fails to **STOP** **Blade** rotation, contact an **Authorized SNAPPER Dealer** to correct.

ELECTRICAL SYSTEM

20 AMP FUSE PROTECTION

A **20 Amp, Automotive Type Fuse** is used to protect the **Electrical Circuit**. See **Figure 58** for the location of this **Fuse**.

If the **Engine** fails to crank and the **Battery** is fully charged, a blown **Fuse** could be the cause.

Pull the **Fuse** out of the holder and check to see if the metal **Fuse Wire** is broken. If the **Wire** is intact, re-install the **Fuse** in the holder and check for some other cause.

If the **Fuse** is blown, install a new **20 Amp Fuse**, (**SNAPPER Part Number 2-3653**) in the holder.

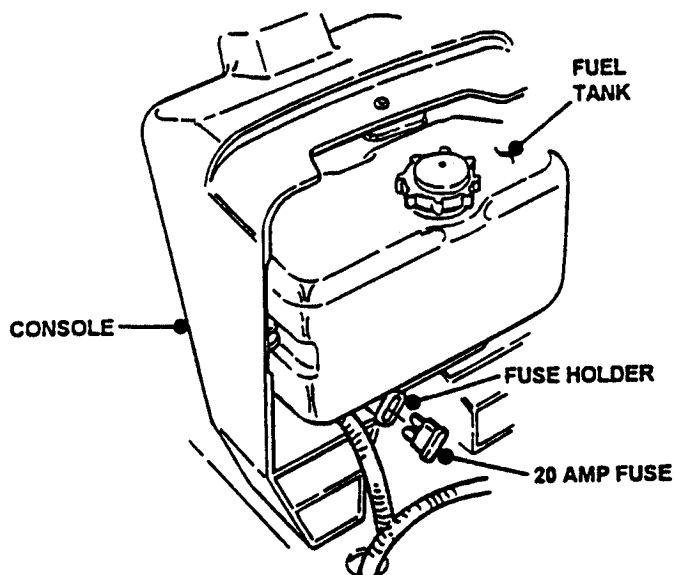
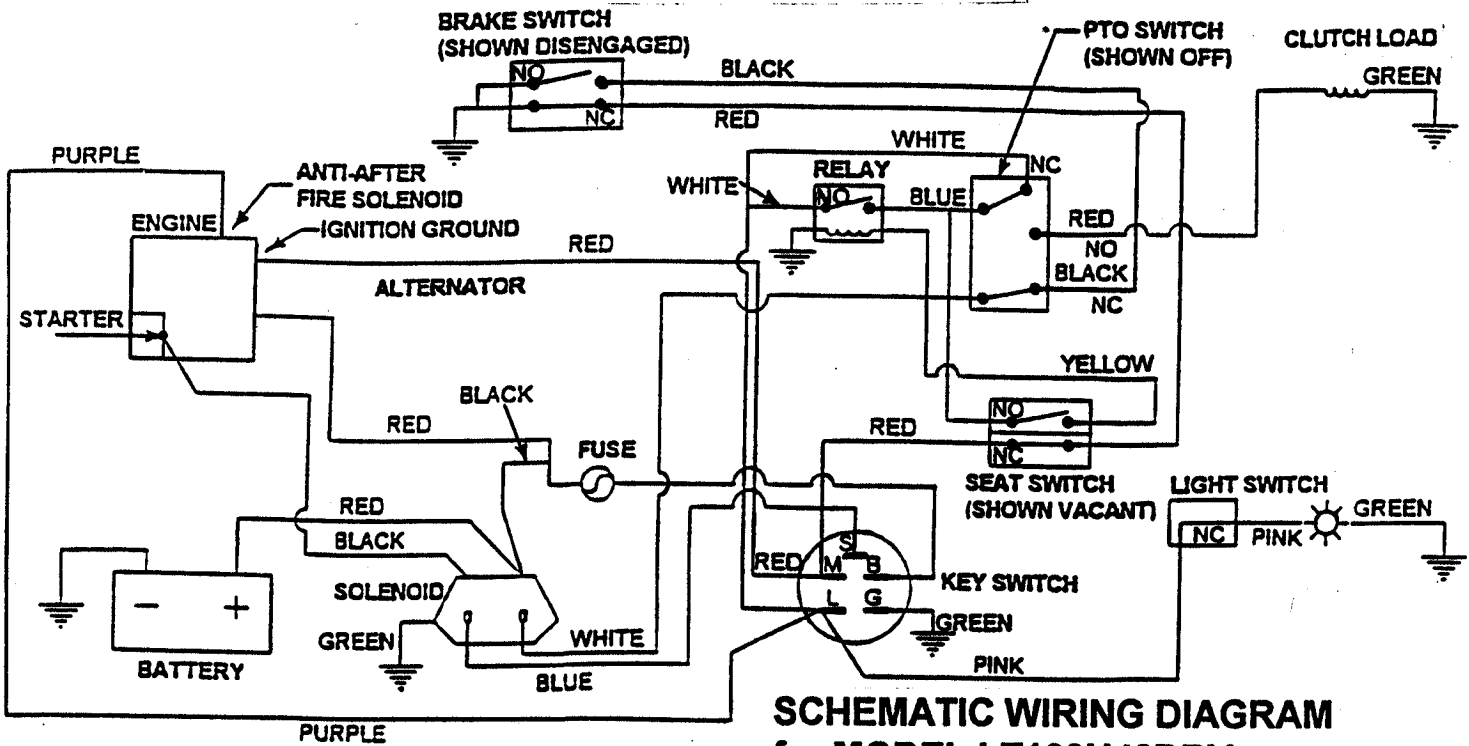


FIGURE 58

WARNING
Proper wheel brake and blade brake function is very important. **DO NOT** operate machine if brake(s) are not functioning properly.

ELECTRICAL SYSTEM



SCHMATIC WIRING DIAGRAM for MODEL LT160H42DBV

ILLUSTRATED DIAGRAM for Model LT160H42DBV

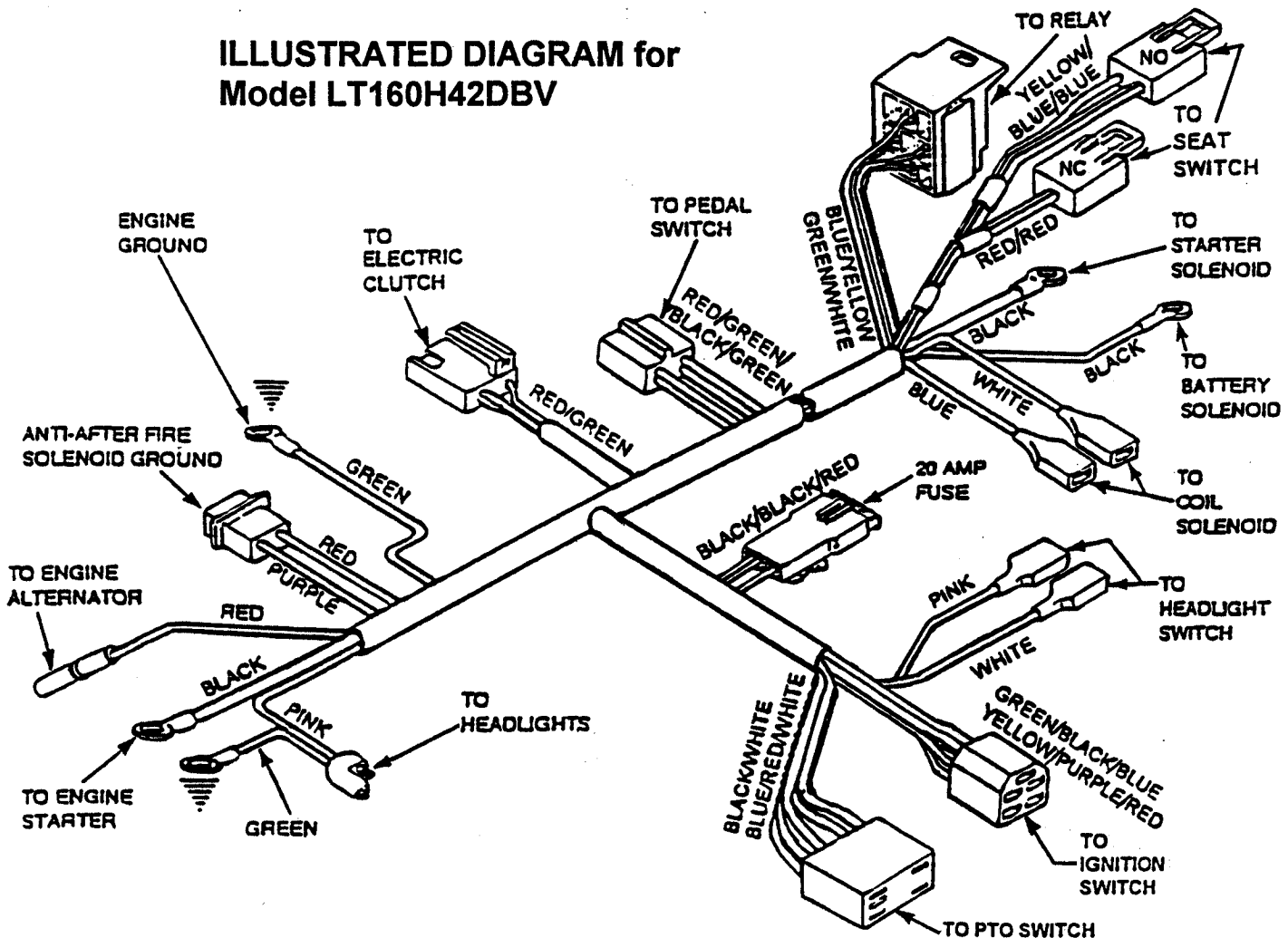


FIGURE 59

SNAPPER

3 YEAR LIMITED WARRANTY

For three (3) years from purchase date for the original purchaser's residential, non-commercial use, **SNAPPER**, through any **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 **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 a **SNAPPER** dealer for replacement under this warranty must be paid by the purchaser.

This warranty does not apply to engines and their components, hydro transmissions, gear drive transmissions 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.

There is no other express warranty.

DISCLAIMER OF WARRANTY

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three (3) 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.

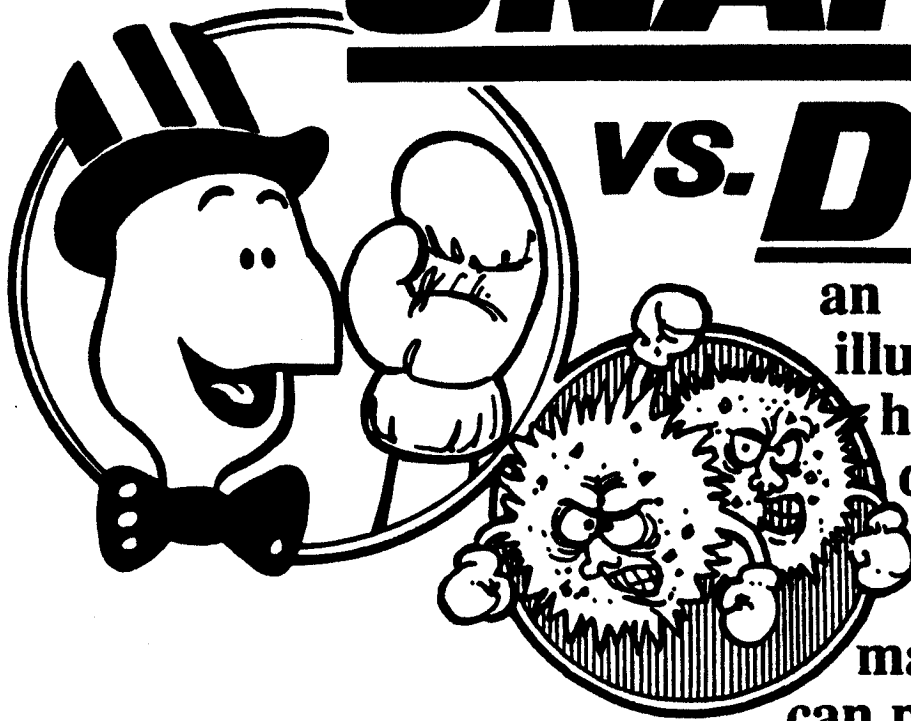
WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

IMPORTANT: Please fill out the attached **SNAPPER** Product Registration Card immediately and mail to:
Snapper's Product Registration Center, P.O. Box 777, McDonough, Georgia 30253

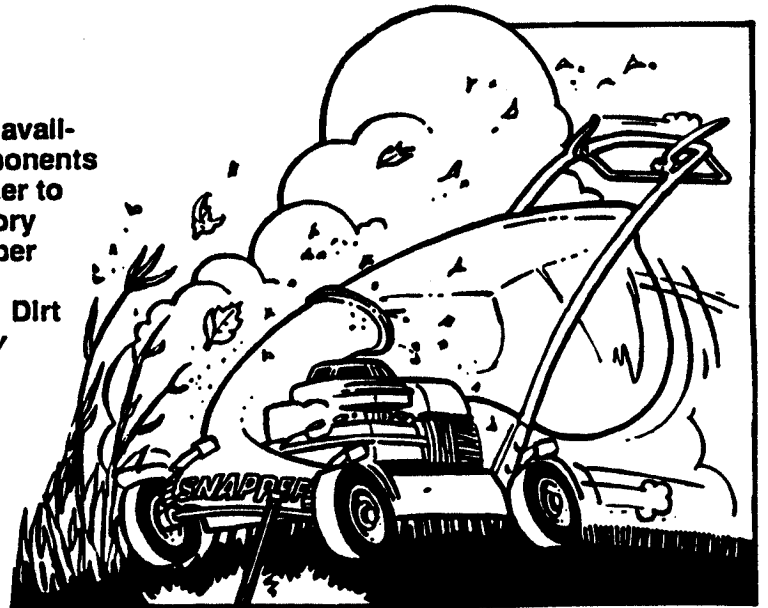
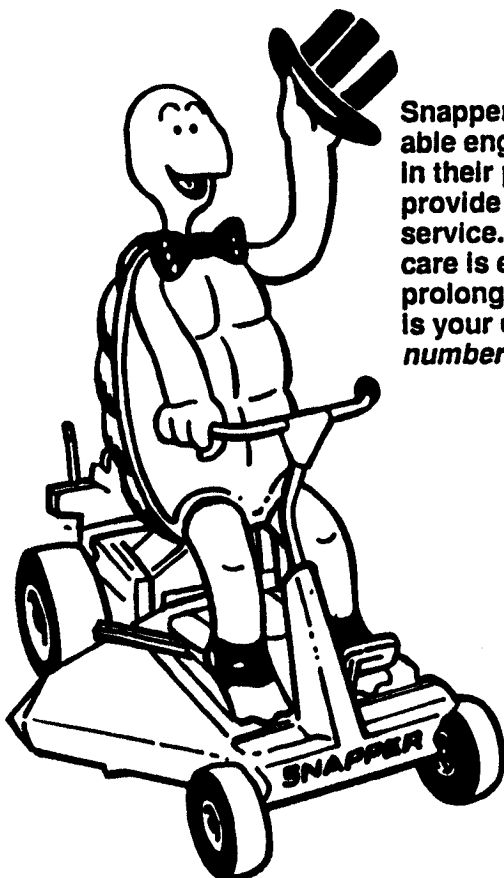
SNAPPER®

VS. DIRT!

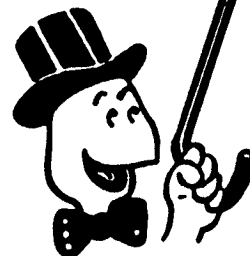
an illustration of how dirt can damage your engine & how reasonable maintenance can protect it!



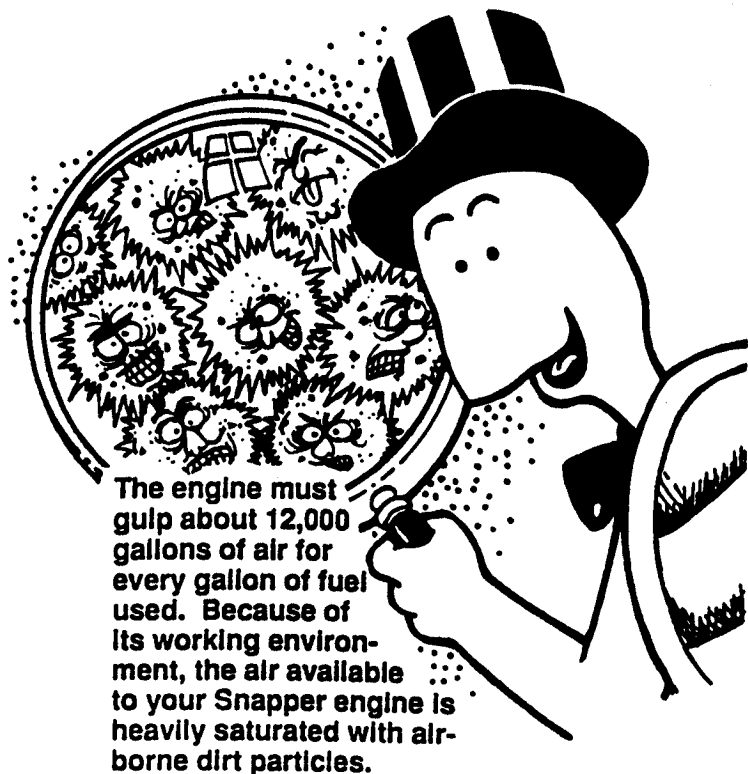
Snapper uses the best available engines and components in their products in order to provide long, satisfactory service. However, proper care is essential in prolonging engine life. Dirt is your engine's *enemy number 1!*



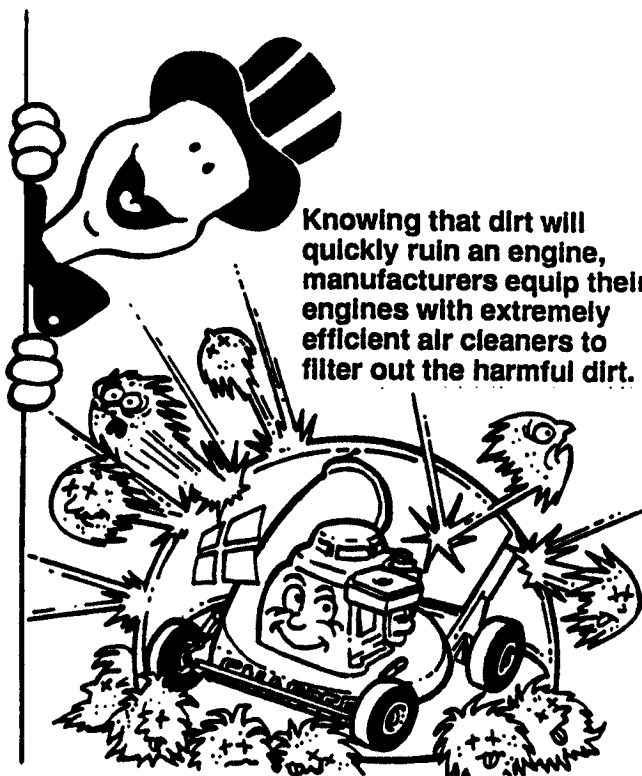
The engine on your Snapper product spends its entire life operating close to the ground at high speed creating a virtual storm of dust and dirt!



PRIMARY MAINTENANCE



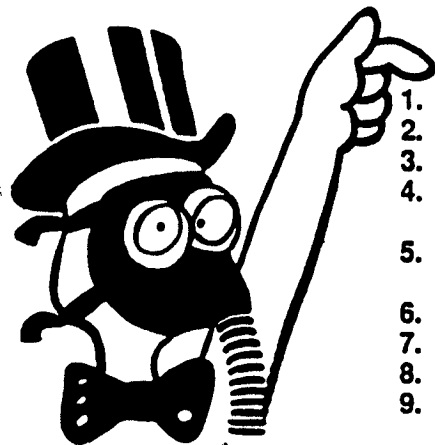
The engine must gulp about 12,000 gallons of air for every gallon of fuel used. Because of its working environment, the air available to your Snapper engine is heavily saturated with air-borne dirt particles.



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:

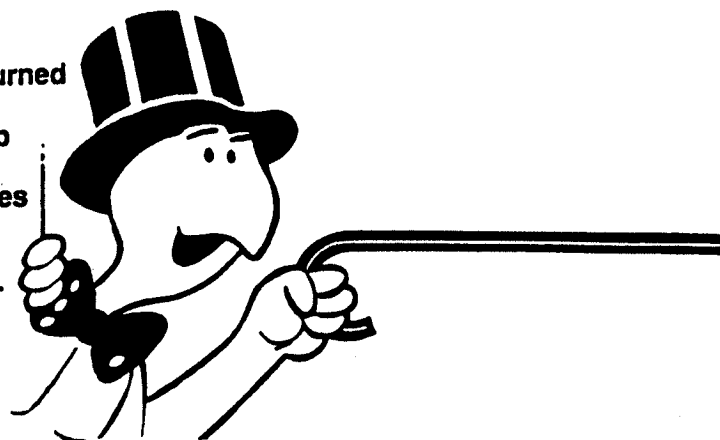
An improperly serviced, dirt clogged air cleaner will:



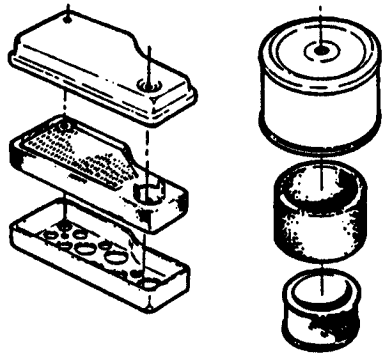
1. Increase fuel consumption
2. cause power loss
3. result in hard starting
4. create smoke from unburned fuel
5. produce carbon build-up internally
6. foul spark plug electrodes
7. score cylinder walls
8. burn valves
9. wear out the engine prematurely
10. COST YOU MONEY!

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 interval 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.

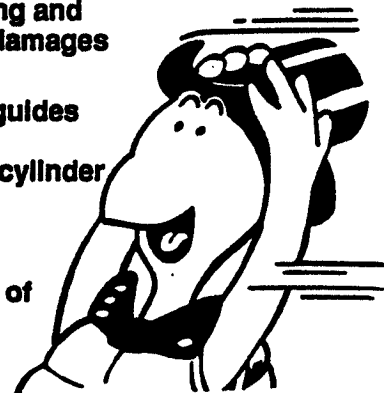
Use a flashlight to detect clogged or torn paper elements - replace if damaged in any way.



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.

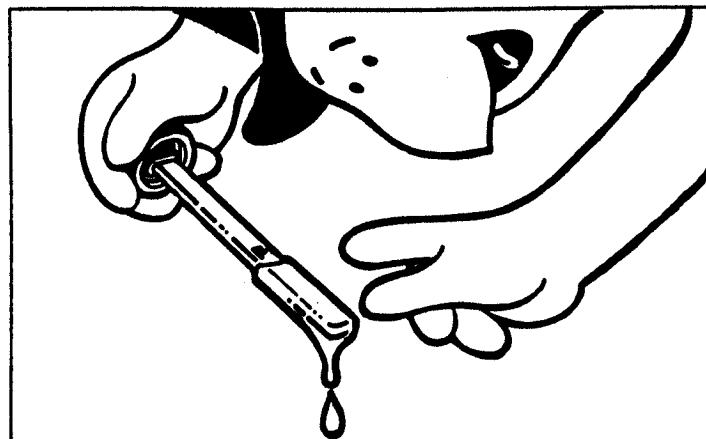
Failure to keep external surfaces clean not only presents fire hazards, but causes overheating and resulting engine damages such as:

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.

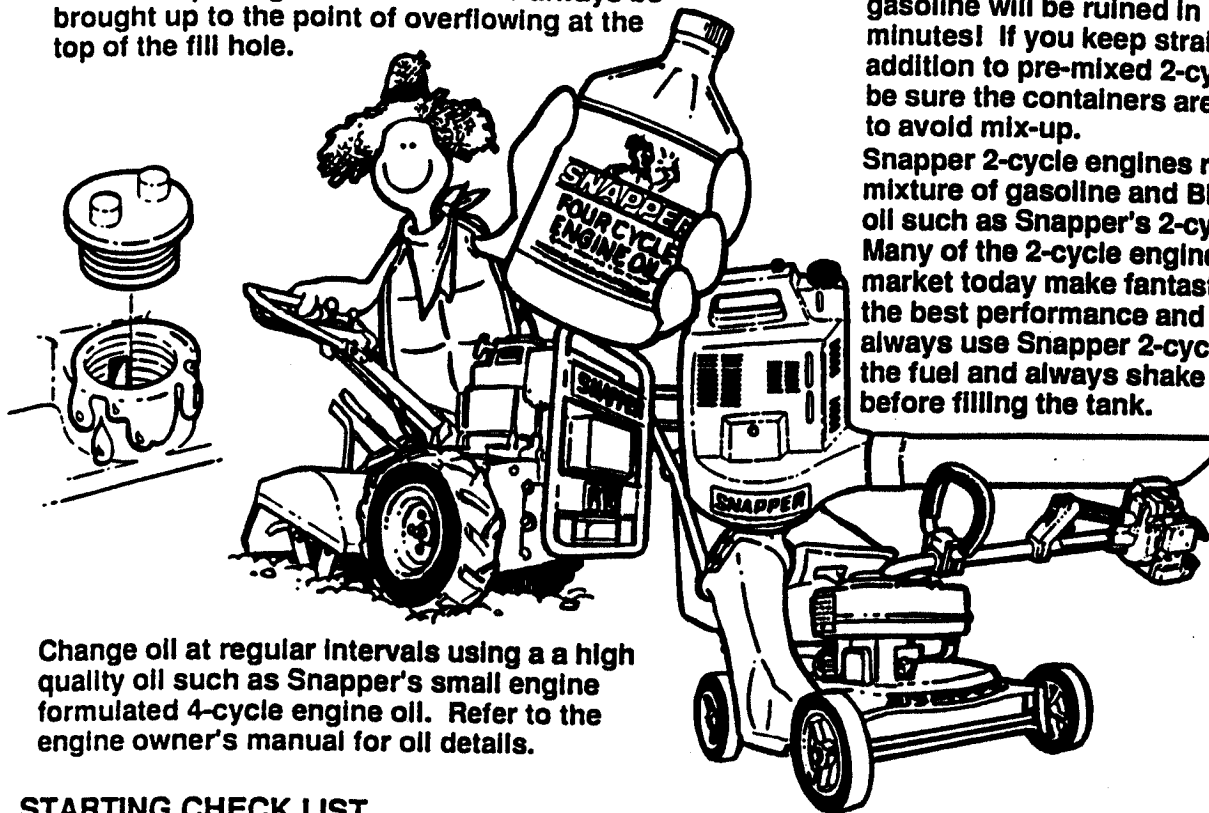
Be aware that fuel breaks down in storage and forms gummy compounds which will block carburetor passages. Never use fuel more than 3 months old. Drain tank then run the engine out of fuel before storing during the off-season.



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-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 |
| 3. Fuel Tank | <ul style="list-style-type: none"> • Full fresh clean gasoline • 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 |
| 7. Switch & Blade Control | <ul style="list-style-type: none"> • All wires properly connected • 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!

Safety Instructions & Operator's Manual for

SNAPPER®

**LAWN TRACTORS
ELECTRIC CLUTCH
SERIES D**



WARNING:

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.