

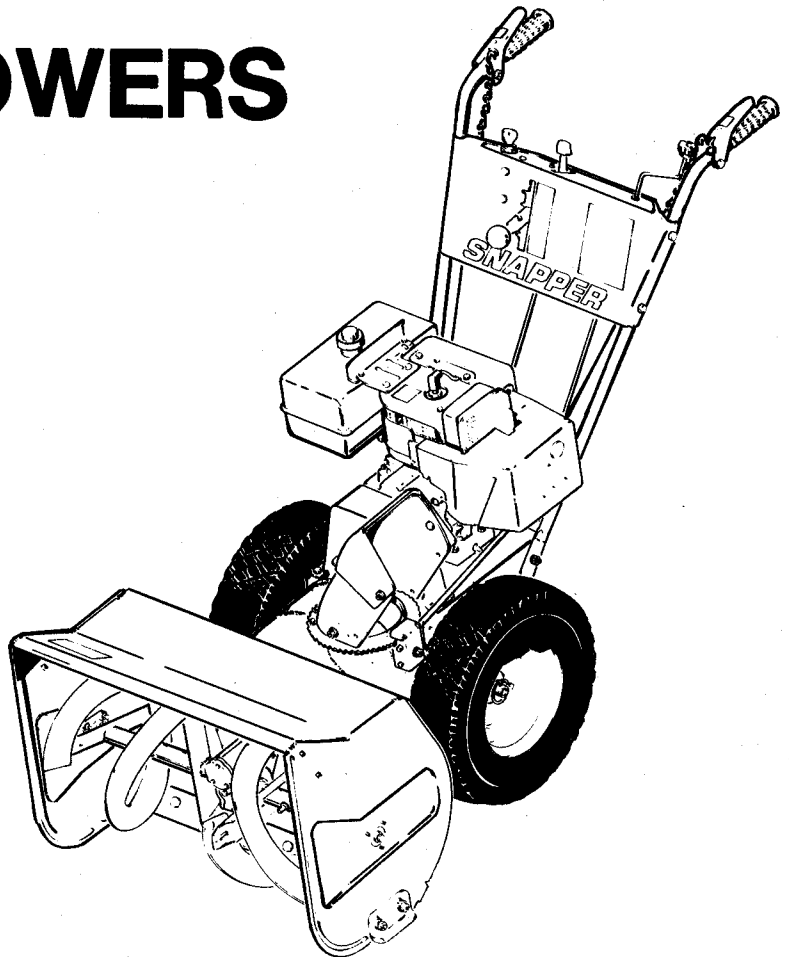
Operator's Manual
& Safety Instructions
for

SNAPPER

SNOW THROWERS

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Thank you for buying a **SNAPPER** product!

Your Snow Thrower was designed and built with utmost care to give you long and satisfactory service. It, however, like any other mechanical device, can be potentially dangerous if used imprudently. Study this Operator's Manual carefully before operating and pay particular attention to the Important Safety Instructions on page two. Following the instructions in this and the engine service manual will help you continue to enjoy the trouble-free operation expected of a Snapper.

McDonough Power Equipment
McDonough, GA • 30253





SAFETY INSTRUCTIONS



WARNING: This powerful snow thrower is capable of amputating hands and feet and of throwing objects causing property damage and personal injury! Failure to observe the following safety precautions could result in serious injury. Read this manual carefully and question your Snapper Dealer if something is not clear. Should the dealer be unable to answer to your satisfaction, send a letter to the Snapper Customer Service Department at McDonough Power Equipment, Post Office Box 777, McDonough, Georgia 30253, or Phone 1-404-957-9141.

PROTECTION FOR CHILDREN

1. DO NOT allow children in area when Snow Thrower is being operated.
2. DO NOT allow pre-teen children to operate the Snow Thrower.
3. DO NOT allow irresponsible teenagers to operate the machine — allow teenager only if exhibiting mature judgement and then only after thorough instruction and under close supervision of an experienced operator.

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. Pay attention to Decals on engine and snow thrower.
2. Wear protective clothing including face mask and boots which will give you maximum footing on slippery surfaces.
3. Before the first snow fall, check the area to be cleared and remove all objects such as doormats, sticks, toys, wires, rocks, etc., which could be hurled or jam the snow thrower.
4. Survey the area to be cleared beforehand and plan where snow is to be blown. Be prepared to release blower clutch or to change deflector quickly to discharge away from windows, cars, buildings and doorways to avoid property damage or personal injury from hurled objects.
5. Adjust the collector housing height by adjusting skid shoes to clear rough spots or gravelled surfaces before starting.
6. Handle fuel with care. Store only in approved gasoline container. Move machine outdoors where fumes can be safely dissipated before filling tank. Never add fuel when engine is running. Allow cooling off period after stopping to avoid spilled fuel from igniting on contact with hot engine parts.

OPERATIONAL PRECAUTIONS

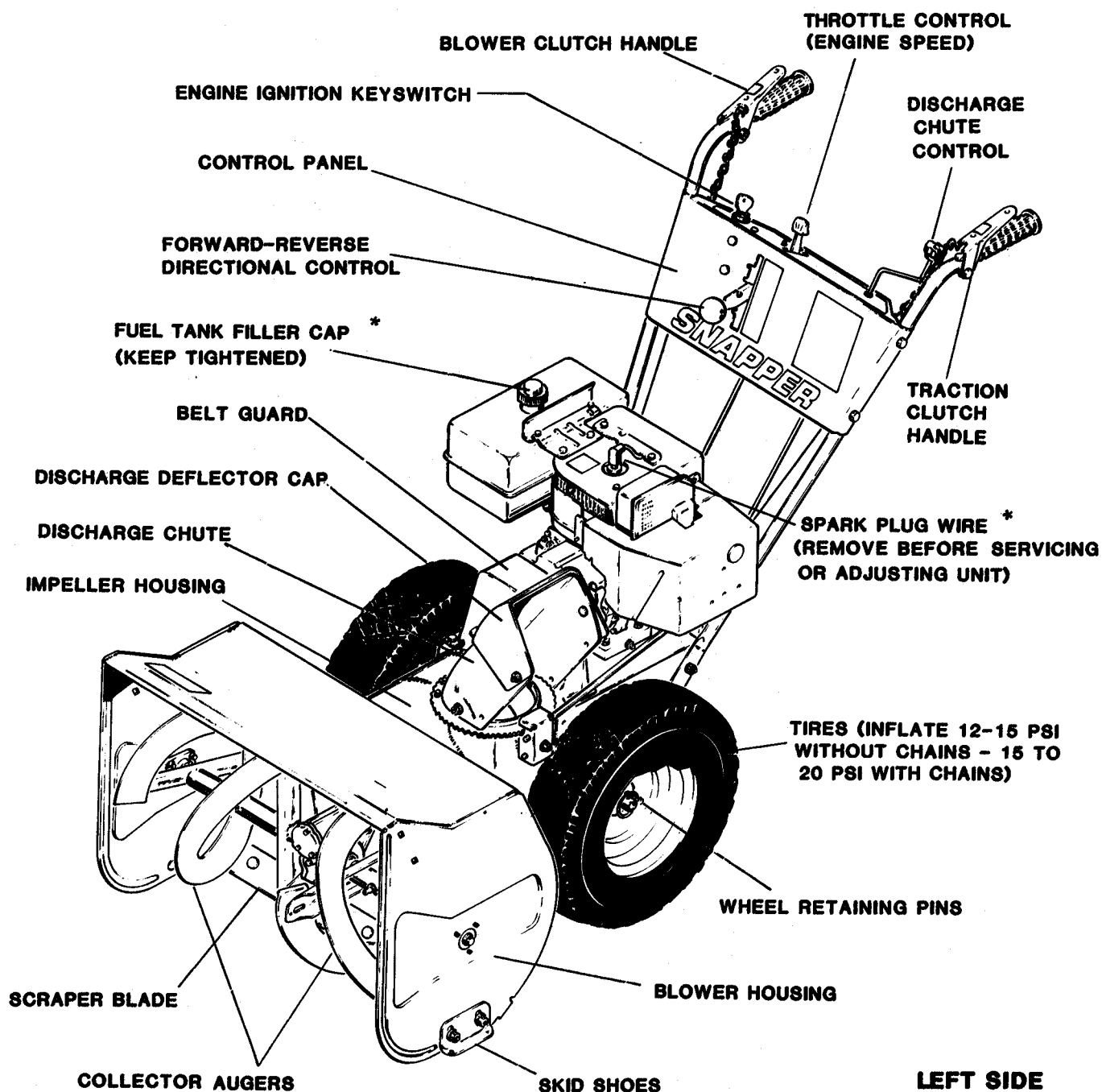
1. Before starting, make visual check to make sure blower housing is clear and all guards and shields are in place and tight.
2. Warn everyone in advance to stay clear of area but keep especially watchful for children and pets darting into area while operating.
3. Start engine only when exhaust fumes can be dissipated, allow brief warm-up period, practice operation of controls outside before putting the machine to work.
4. Start in slow speed and adjust traction speed to insure safe footing as you walk behind the unit. Exercise extreme caution to retain footing when reversing direction.
5. Transport unit with blower clutch handle released and activate only when snow is to be cleared. Set deflector to discharge desired distance beforehand.
6. Adjust traction speed slow enough to avoid overloading capacity and resulting clogging of the blower housing.
7. Should the blower become clogged, release traction and blower clutch handles and, as an additional precaution, stop the engine before attempting to unclog the collector and impellers.
8. If you strike a hard object and break the auger shear pin, stop the engine and disconnect the spark plug wire before inspecting for damage, and/or replacing the shear pin.
9. Stop the engine if unit starts to vibrate excessively as this normally indicates mechanical problems. Disconnect the spark plug wire to prevent unintentional starting before servicing or repairing the machine.
10. Avoid clearing steep slopes and keep away from drop-off areas where footing is doubtful or where the machine could tip over. Clear snow across the face of slopes whenever possible.
11. Stop the engine and remove the key whenever you leave the unit unattended to eliminate the possibility of children or untrained adults attempting to operate the machine.

INTRODUCTION

This manual covers operation and service of Snapper two-stage, walk behind Snow Throwers. The first digit of the four digit model designation indicates approximate engine horsepower while the next two digits indicate blower housing width. The last digit is reserved for design change identification. Differences between models are pointed out wherever pertinent.

All manual start models are designed for quick conversion to electric start using the accessory kit described on the last page of this manual. Optional tire chains and drift cutter kits are also available.

RIGHT SIDE



LEFT SIDE

* LOCATION VARIES for DIFFERENT ENGINE MODELS

FIGURE 1 — LOCATION OF MAIN COMPONENTS

OPERATING INSTRUCTIONS

Make sure that each person you authorize to operate your Snow Thrower reads this manual beforehand and pays particular attention to the safety precautions on the inside front cover and to the warning decals on the machine. Check and perform the following before each start-up.

PRE-START PROCEDURE

- **ENGINE LUBE:** Check level and add oil if necessary of weight and grade specified in Engine Owners Manual.
- **FUEL SUPPLY:** After making sure unit is safely away from ignition producing appliances and in area where gasoline fumes can be dissipated, fill fuel tank with gasoline specified in Engine Manual.
- **CHECK TIRES** and bring pressure up to specifications — 12-15 psi without tire chains or 15-20 psi with chains.
- **CHECK UNIT** to make sure guards and shields are in place and tight. Also check blower housing to insure that it is free of all objects.
- **RESET RUNNERS** to suit area to be cleared. Lower skid shoes to provide greater clearance over gravel or raise the shoes for smooth, paved surface. Refer to skid shoe adjustment on page 7 for details.
- **RESET WHEELS** for traction if in free-wheeling position (that is, with retaining pins outside the wheel hubs). Pull pins and move into traction position, align holes in hubs with those in drive shaft then reinsert pins.
- **SET DEFLECTOR CAP** to throw snow desired distance. Loosen wing nut, push cap edge back even with the chute to throw snow up to 30 feet away or pull cap all the way out to throw snow only about three feet. Retighten the wing nut after repositioning cap. Always stop engine before repositioning.

OPERATIONAL CONTROLS

Know how to stop the Snow Thrower quickly in preparation for possible emergency situations. Forward and reverse motion is stopped by releasing your grip on the **TRACTION CLUTCH** handle on the left handle bar. The blower auger blades and impeller fan will stop rotating within five seconds* after releasing the **BLOWER CLUTCH** handle on the right. The engine is stopped by either turning the **ENGINE IGNITION** key to the left to OFF or by pulling the **THROTTLE CONTROL** knob rearward to OFF. Other operational controls are discussed where pertinent under the following operating procedures.

* NOTE: If rotation continues after five seconds, refer to the **CLUTCH CABLE** readjustment instructions on page 7.

OPERATION

Whenever possible, push Snow Thrower outdoors before starting. If the unit must be started inside your garage, for example, make sure doors are wide open to provide maximum ventilation. Move the unit outdoors as soon as possible after starting. After performing the pre-start checks and services described earlier, proceed as follows:

THROTTLE CONTROL: Move control knob into FAST position.

CHOKE: Refer to Engine Manual for priming and/or choking details.

ENGINE IGNITION: Insert key and turn to ON position.

STARTING ENGINE: On Manual Start models, pull recoil start handle in smooth steady motion until engine starts. With Electric Start, plug the three-pronged starter cable into a grounded 110-volt power receptacle and connect the other end to engine start system then turn ignition switch to ON and push button (on engine or in cable) and hold until engine starts. NOTE: Release the button if engine does not start after 30 seconds to prevent overheating of the starting motor. Locate and correct cause of starting problem before cranking again. Detach cable from outlet and from the engine.

WARM-UP PERIOD: Allow brief warm-up outside with clutches released to avoid stalling cold engine. Reset Choke as instructed in Engine Manual as the unit warms up.

OPERATION: Select desired traction speed by adjusting **DIRECTIONAL CONTROL**, depress **TRACTION CLUTCH** handle and drive unit to area to be cleared then depress **BLOWER CLUTCH** handle and proceed to blow snow. The **THROTTLE CONTROL** should normally be in the FAST position for best result under most conditions. CAUTION: If clogging occurs, back unit away from snow bank, release both **CLUTCH** handles and, as a further precaution, stop the engine and remove spark plug wire before clearing the snow from the housing and/or discharge chute.

BEFORE STOPPING: Move unit to cleared area, release **TRACTION CLUTCH** handle and run up to top speed with **BLOWER CLUTCH HANDLE** depressed to clear housing of slush and snow thus preventing freeze-up of the impeller upon restarting next time.

STOPPING PROCEDURE: Move key in **ENGINE SWITCH** to OFF position. With **TECUMSEH** engine, move control to FAST position after stopping. This is done to provide the best position to break any ice formation inside the throttle cable and thus prevent kinking of the cable upon restarting.

SERVICE PROCEDURE

LUBRICATION SERVICES

Refer to the Engine Manual for lubrication requirements on the engine powering your Snow Thrower. Your Snow Thrower unit has six grease fittings, four on the augers and two on the auger shaft bearings as shown in figure 2. The unit also has a lube checkpoint at the front of the auger-impeller gearbox shown in figure 3. Service these and the other general lube points as follows:

AUGER LUBRICATION: ONCE EACH YEAR, preferably at the end of the winter season, remove the two shear bolts, apply grease to the fittings then spin the auger to work the grease out along the auger shaft. Continue greasing and spinning augers until grease appears at both ends of each auger tube. Reinstall shear bolts and nuts after servicing. This procedure will prevent the auger shaft from rusting to the auger tube.

BEARING LUBE: ONCE EACH YEAR, apply one or two shots of grease from gun to the bearing grease fittings located at the ends of the auger shaft just inside the blower housings.

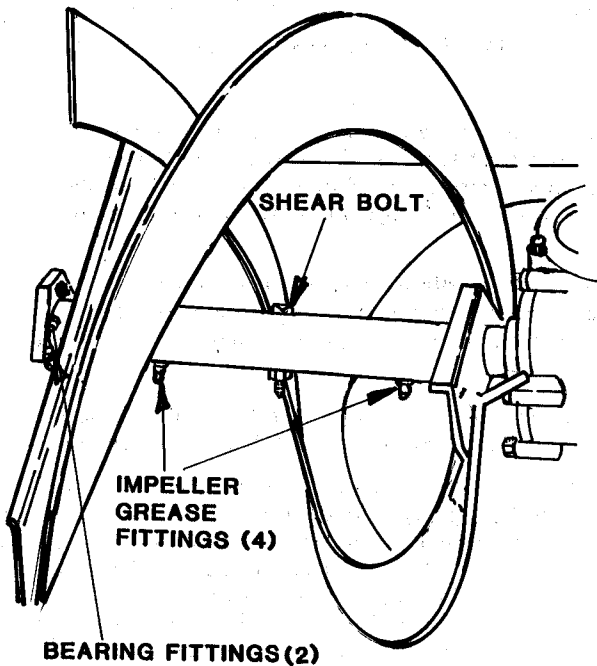


FIGURE 2 — GREASE FITTING LOCATIONS

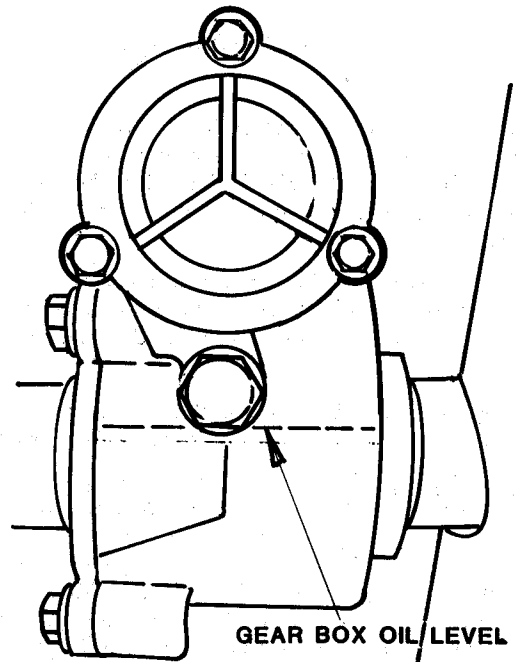


FIGURE 3 — GEAR BOX LUBRICATION

GENERAL LUBE POINTS: ONCE EACH YEAR, or more often if rust formation hampers operation, spread a light coating of grease on the chute crank worm and on the underside of the gear ring at the base of the discharge chute. Also squirt oil from oil can into the gap between the inside of the discharge chute and the outside of the discharge flange of the blower housing. Crank chute back and forth while oiling to spread lubrication evenly over both surfaces. Although not absolutely necessary, you may want to remove each wheel at the end of the season and apply a coating of grease on the axle shafts to prevent rust and allow the wheels to be moved more easily from transport to traction mode during the next season.

GEARBOX LUBE: AFTER EACH 25 HOURS of operation (or each time the engine oil level is checked) remove the plug at the front of the gearbox and check the oil level. With the Thrower on a flat, level surface, the oil should be even with the lower edge of the check hole. Use an oil can containing the same weight and grade of oil specified for the engine crankcase to bring the level up to the point of overflowing from the hole. Reinstall the oil plug after servicing.

CHUTE CRANK SERVICE

If the chute does not crank easily after lubricating as specified under GENERAL LUBE SERVICES, loosen both nuts on the outside of the crank worm bracket as shown in figure 4 and move the bracket slightly away from the chute gear ring or back in toward the ring until the chute again cranks with minimum effort. Retighten inside nut first then jam the outside nut tight against the inside nut to lock at the new setting.

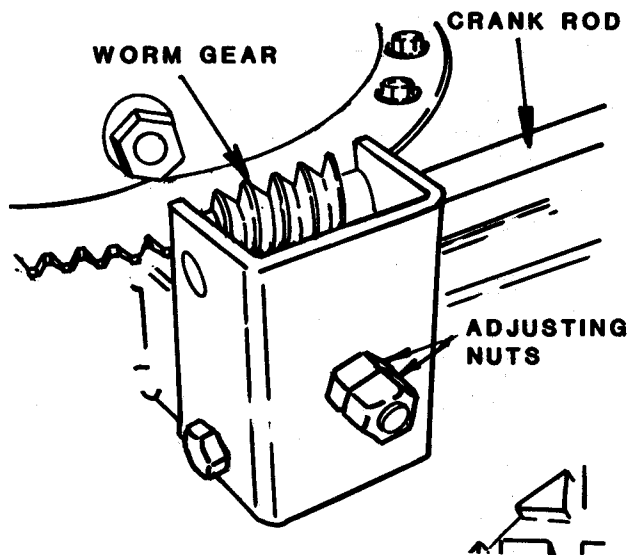


FIGURE 4 — CHUTE CRANK WORM GEAR

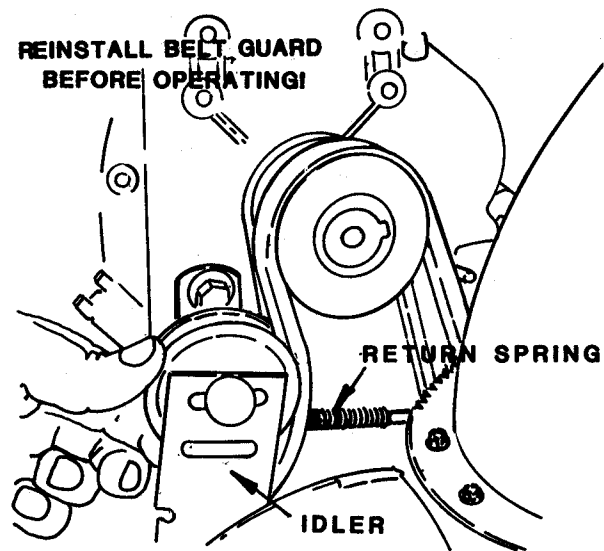


FIGURE 5 — BELT TENSION ADJUSTMENT

BELT SERVICE

Belts do not require attention at any specific interval but should be checked if performance deteriorates as this could be caused by slippage due to worn or loose belts. Check and adjust tension of clutch cables first as described in the CLUTCH ADJUSTMENT section then check the belts if poor performance continues after clutch cable tension has been corrected. Make sure the engine is stopped and the spark plug wire disconnected before working on the belts.

NOTE: Blower rotation should cease within five seconds after the clutch handle is released. If rotation continues after five seconds, cable may be too taut. If readjusting the cable does not correct the stopping time, check to make sure the idler return spring is connected and that the idler is properly set. See your Snapper Dealer to have this condition corrected.

GUARD REMOVAL: Remove the two self tapping screws securing the guard to the frame then tilt the top of the guard toward the discharge chute and lift off the left side. Reverse this procedure to reinstall the belt guard.

BELT TENSION: Tension on the traction drive belt is automatically maintained by an individual idler spring. After removing the belt guard, check to make sure this spring is intact and properly hooked up to the frame and idler arm. If the spring is properly connected, check for excessively worn belts. Notice the return spring on the idler for the blower drive — this spring activates the brake. The idler should always return to braking position! Tension of the blower drive belt, which is on the outside groove of the engine drive pulley, can be adjusted by loosening and repositioning the idler pulley. To increase tension loosen the idler pulley retaining nut, hold the idler arm and push the pulley tighter against the belt. Retighten nut after repositioning and check for proper clutching action with blower handle released. Tension of the traction belt on the inside groove is non-adjustable. Before reinstalling belt guard check to make sure the wire belt guide on the right side is about 1/16" away from the outside surface of the blower belt with clutch engaged. Bend the guide in or out to correct clearance.

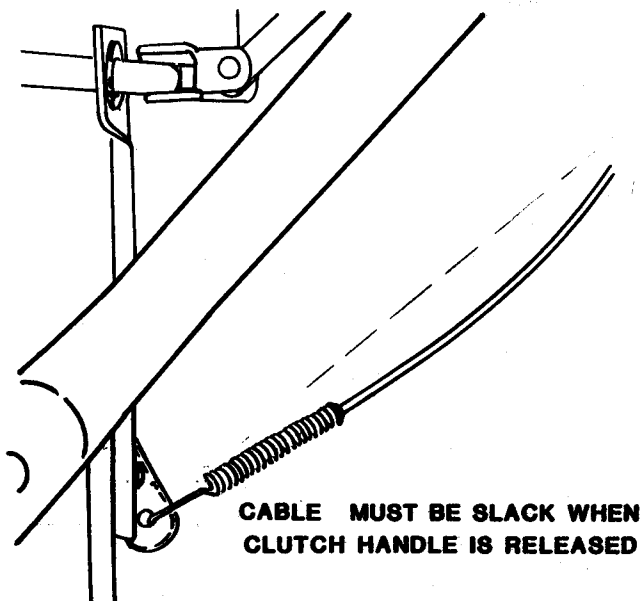


FIGURE 6 — CLUTCH CABLE SLACK

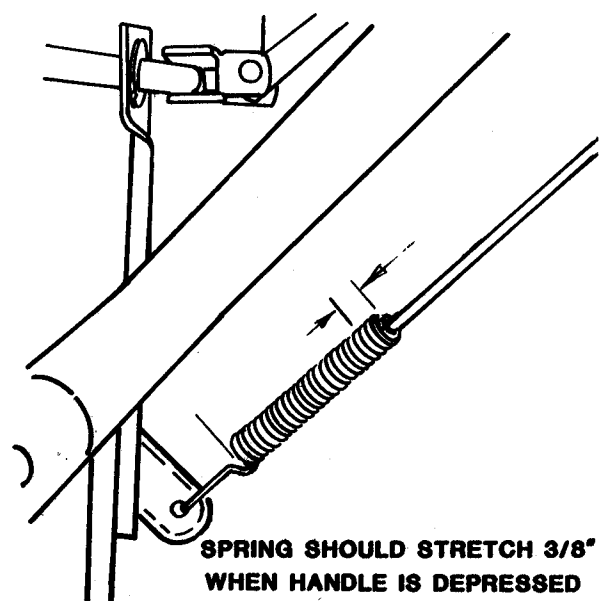


FIGURE 7 — CLUTCH CABLE TENSION

CLUTCH CABLE ADJUSTMENT

If slippage is noted, check tension of both clutch cables. When properly adjusted, the cables should be completely slack with clutch handle released and taut when the handle is fully depressed. The springs on both cables should deflect $3/8"$ when the handle is depressed. To adjust shorten or lengthen cable length by repositioning the "S" hooks at top of the cable to different chain links.

SKID SHOE ADJUSTMENT

The skid shoes should be lowered to raise the blower housing to clear gravelled or rough surfaces, or adjust until almost even with the edges of the housing to allow clearing down to smooth paved surfaces. Note that the skid shoes can be installed upside down to track better over icy or hard-packed surfaces. To adjust the skid shoes, block under the lower edge of the blower housing, loosen the retaining nuts and slide shoe up or down to desired height then retighten the nuts. Set both skid shoes in the same position.

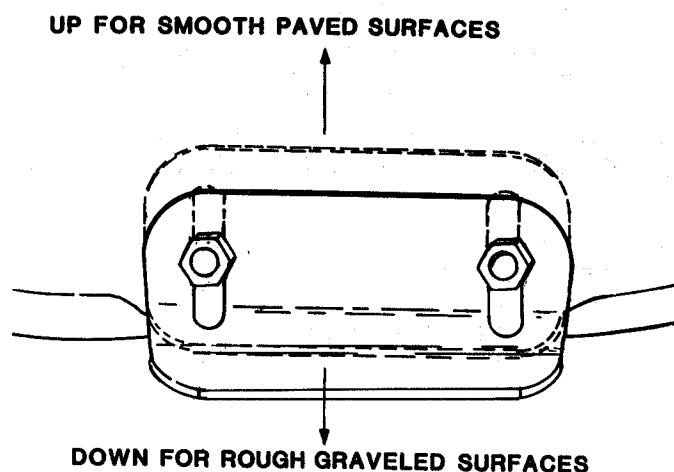


FIGURE 8 — SKID SHOE ADJUSTMENT

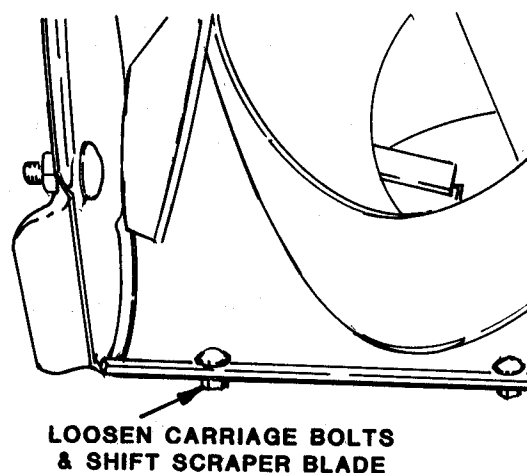


FIGURE 9 — SCRAPER BLADE ADJUSTMENT

SCRAPER BLADE

Your Snow Thrower is equipped with an adjustable scraper on the inside leading edge of the collector housing. Its purpose is to prevent wear and damage to the housing. When the scraper itself wears down close to the lower edge of the housing, loosen the five nuts on the backside of the housing and slide the scraper downward. Retighten the five nuts after repositioning. Replace the scraper if badly nicked or when it no longer can be adjusted below the edge of the housing.

SERVICE ASSISTANCE — REPLACEMENT PARTS

Contact your Snapper Dealer for replacement parts or for assistance when service is needed to keep your Snow Thrower in top condition. To obtain the correct parts or advice for your particular model, always report the model and serial numbers as found on the nameplate attached to the frame. For engine parts and service contact the engine manufacturer's dealer in your area. Complete PARTS and SERVICE (Overhaul and Repair) Manuals are available for your Snow Thrower at nominal cost. Order these from your Snapper Dealer.

ACCESSORY KITS

Described below are the accessory kits available for your Snow Thrower at the time this manual was printed. See your Snapper Dealer for more information on these or about any new kits which may have been introduced later.

ELECTRIC START: All engines are equipped to receive electric start components which allow easy starting from three-pronged 110-volt household outlet. Order Kit #6-0463 for Briggs & Stratton 8 HP engines or Kit #6-0464 for Tecumseh 5HP engines. In Canada order Kit No. 6-0475 for Tecumseh 5 H. P. engine.

TIRE CHAINS: Maximum traction in deep snow can be obtained by installing the tire chains available from your Snapper Dealer. Order Kit #6-0049.

DRIFT CUTTER: Cutter bar easily installs on top edge of blower housing. Extends above housing to slice into high banks and knock the snow down into the path of the collector. Order Snapper Kit #6-0472.

MANUFACTURER'S 90 DAY LIMITED WARRANTY

For Ninety (90) days from purchase date for a non-commercial user, or for Thirty (30) days from purchase date for a commercial user, McDONOUGH POWER EQUIPMENT, through any factory authorized service dealer, will replace for the original purchaser, 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 cost incurred by the purchaser in submitting material to an authorized service dealer for replacement under this warranty must be borne by the purchaser.

This warranty does not apply to engines and their components, as these items are warranted separately by their manufacturers. Neither does it apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to ninety (90) days from purchase for non-commercial users, and for thirty (30) days from purchase for commercial users 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.

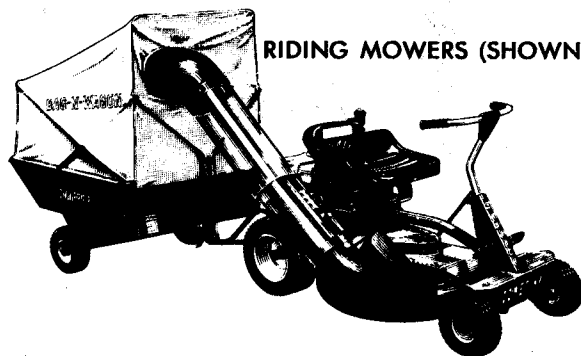
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WARNING: Use of replacement parts other than genuine SNAPPER parts may impair the safety of your Snow Thrower.

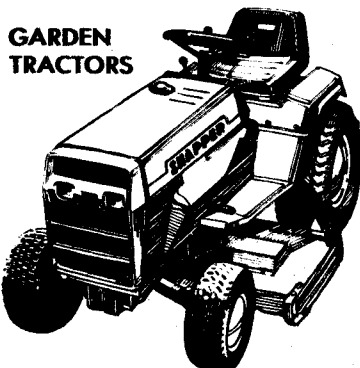
IMPORTANT: Please fill out the attached Snapper Guarantee Card and mail to:

McDONOUGH POWER EQUIPMENT, McDONOUGH, GEORGIA 30253

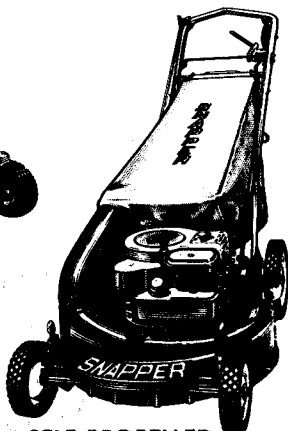
Other SNAPPER products. SEE YOUR DEALER



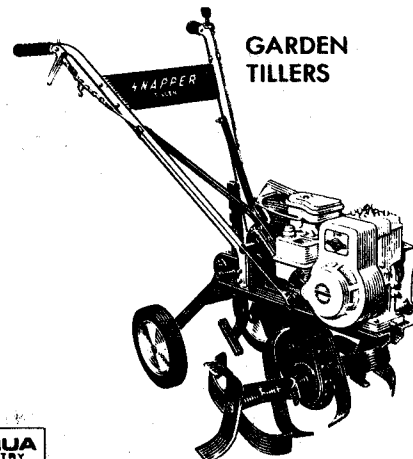
RIDING MOWERS (SHOWN WITH BAG-N-WAGON)



GARDEN TRACTORS



SELF-PROPELLED
WALK BEHIND MOWERS



GARDEN
TILLERS



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