FORM NO. 3314-779

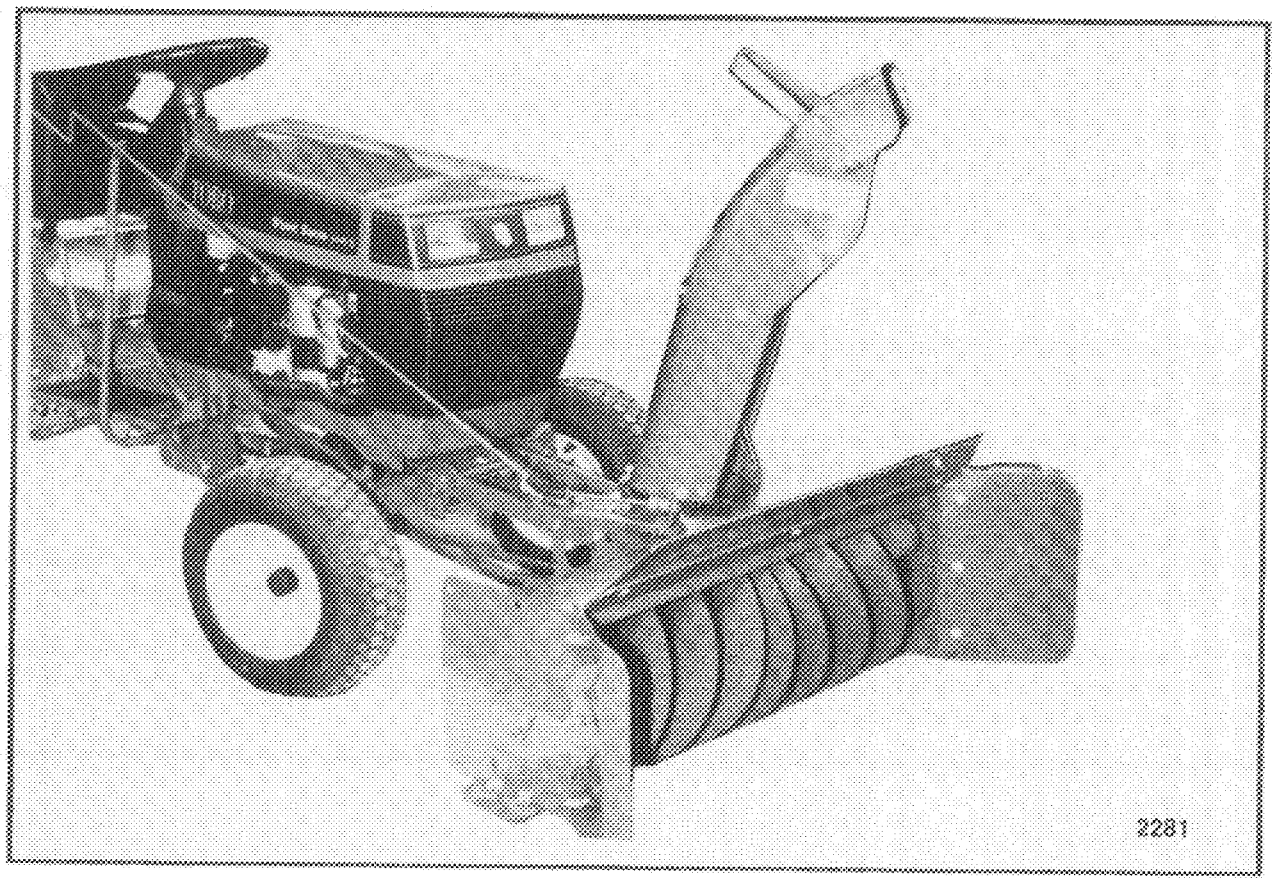
TORO®

MODEL NO. 06-42SS01-2000001 & UP

INSTALLATION INSTRUCTIONS

WHEEL HORSE®

42 in. (107 cm) Snowthrower



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SAFETY SUGGESTIONS

TRAINING

1. Regard your snowthrower as a piece of power equipment and teach this regard to all who operate it.
2. Never allow children or young teen-agers to operate tractor or snowthrower.
3. Be sure you know how to stop tractor and snowthrower at a moment's notice.
4. Instruct children to keep away from area of operation at all times.

PREPARATION

1. Check tractor and snowthrower to make certain both are in good operating condition.
2. Fill gas tank out of doors and avoid spilling gasoline over engine. Do not fill tank with gasoline while smoking or while engine is running.
3. Keep guards and covers in place while operating tractor and snowthrower.

OPERATION

1. Give complete and undivided attention to job at hand.
2. Keep area clear of all persons, particularly small children.
3. Stop engine when tractor is unattended.
4. Disengage PTO clutch when someone approaches.
5. Do not allow anyone other than operator to ride on tractor or to be towed behind.
6. Extreme caution should be exercised under slippery conditions. Reduce forward speed. Install tire chains to traction wheels for added safety.
7. Do not attempt to clear auger, impeller or discharge elbow while engine is running.
8. When changing position of deflector, disengage PTO clutch. Shut off engine.
9. Never direct snow discharge at people or buildings.
10. Disengage PTO clutch when transporting.
11. If snowthrower becomes plugged with snow, or jammed due to hitting a foreign object, disengage PTO immediately and stop tractor engine. Clear snow from spout if plugged, before resuming operation.

⚠ CAUTION ⚠

If auger or impeller is jammed, or bent from hitting foreign object, remove spark plug wire(s) from tractor engine spark plug(s) and then remove foreign object from auger or impeller. If auger or impeller damage is noted, repair prior to continuing operation. Then replace spark plug wire(s) and resume operation.

MAINTENANCE AND STORAGE

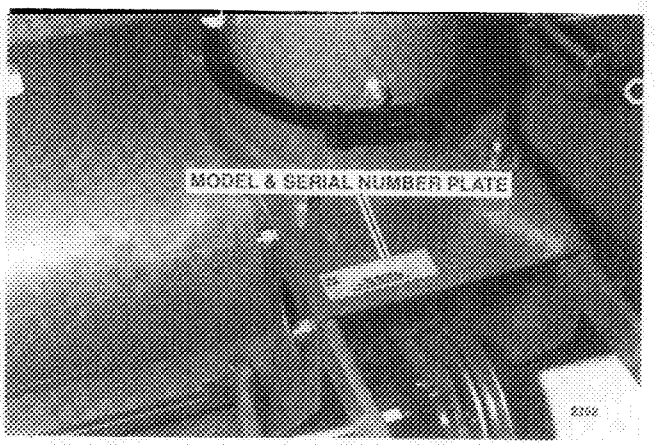
1. Follow implicitly the manufacturer's recommendations for maintenance.
2. Have a competent service man make thorough inspection of snowthrower before snow season begins.
3. Store gasoline in a safe container. Store container in a cool, dry place, not in a house or near heating appliances.
4. Keep snowthrower, tractor and gas container in locked storage to prevent children from playing and tampering with them.
5. Maximum snow removal results and safety can be expected only if snowthrower is maintained and operated correctly.
6. Gasoline powered equipment or fuel containers should not be stored in basement or in any closed area where heating appliances or open pilot lights are present.

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MODEL AND SERIAL NUMBER

A Model and Serial Number identifies your Toro Wheel Horse attachment. These numbers should always be referred to when consulting with your dealer or factory concerning service, replacement parts, or questions you may have. If plate is removed during repair operations it should always be replaced. For your reference, record numbers from Model and Serial Number plate on your attachment.



Model and Serial Number Plate Location

INSTALL FRAME, DRIVE PULLEY AND PLATES

Locate mounting frame, four 3/8-16 x 7/8 bolts and Eslok nuts.

Insert mounting frame into snowthrower housing (Fig. 1). Secure frame to snowthrower with four bolts (heads to outside) and nuts.

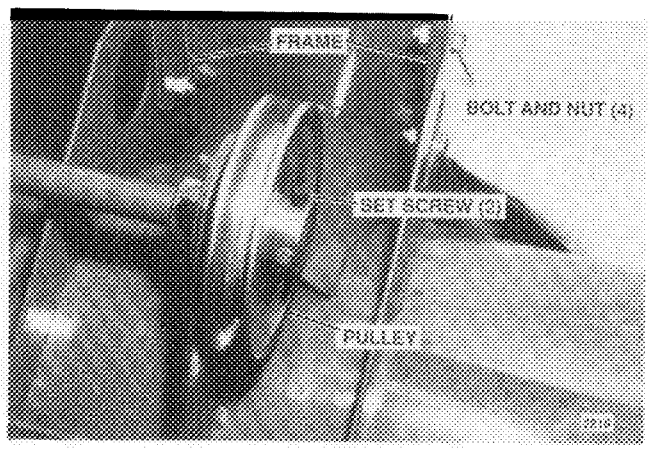


FIG. 1 Frame and Pulley

Install pulley so that hub is flush with end of snowthrower drive shaft using square key and two square head set screws. Make sure square key is secured with set screw.

Locate top plate. Position plate to outside of snowthrower housing (Fig. 2). Install plate to housing using three 3/8-16 x 1 carriage bolts (heads on bottom), washers and Eslok nuts.

Locate and position side plates to outside of snowthrower housing with cutting edge parallel to side of housing (Fig. 2).

Secure plates to housing with six 3/8-16 x 1 carriage bolts (heads to inside), washers and Eslok nuts.

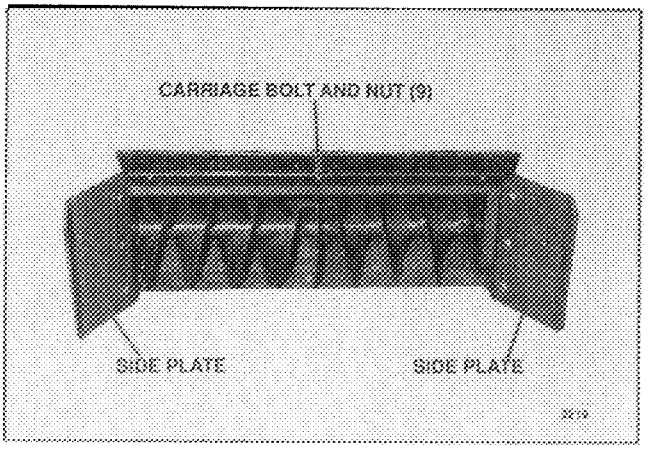


FIG. 2 Install Plates

INSTALL DISCHARGE CHUTE AND LIFT TUBE

Locate and install discharge chute assembly on housing using three 5/16-18 x 3/4 carriage bolts (heads to inside), washers and E.S. nuts (Fig. 3).

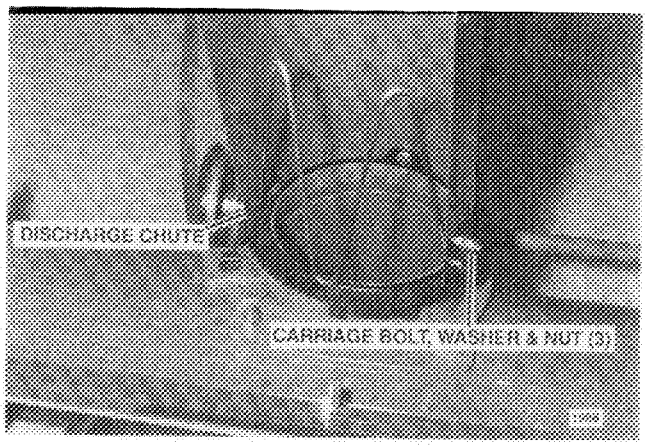


FIG. 3 Install Discharge Chute

Locate and install discharge chute worm gear assembly on housing with 5/16-18 x 1 carriage bolt, washer and Elastic Stop nut, 3/8 wave washer, 3/8 flat washer and 3/16 x 1 cotter pin (Fig. 4). Adjust worm gear and assembly so that chute turns freely.

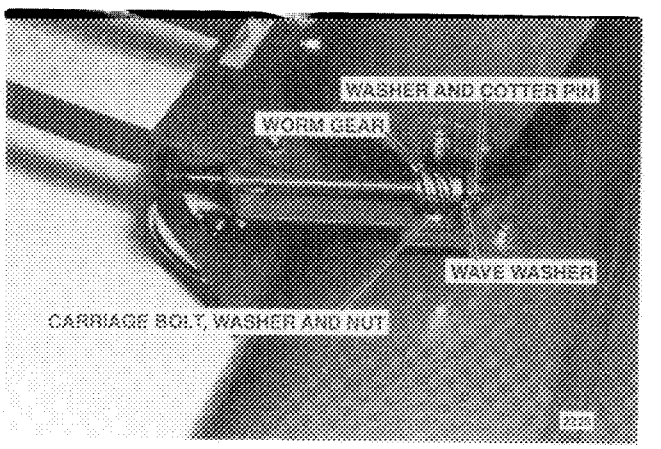


Fig. 4 Install Discharge Chute Worm Gear

Install lift tube on housing with 5/8 flat washer and 3/16 hairpin cotter (Fig.5).

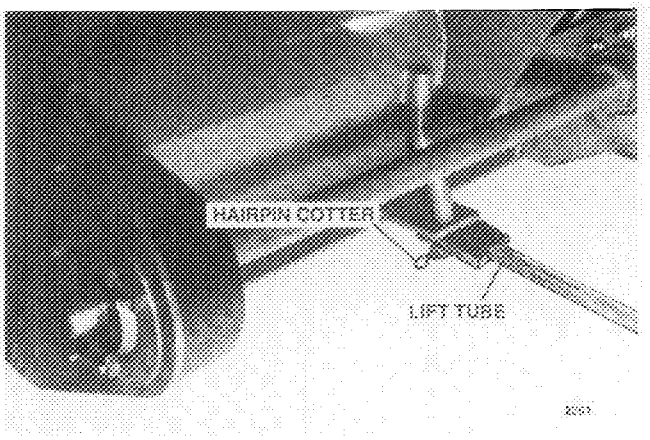


Fig. 5 Install Lift Tube

INSTALLATION

INSTALL ATTACH-A-MATIC HITCH

Locate front Attach-A-Matic hitch and four 3/8-16 x 1 carriage bolts and nuts (Fig. 6). Remove E-Ring and flat washers from tractor front axle pivot pin. Discard flat washers. Install front Attach-A-Matic hitch on tractor using four carriage bolts and nuts and previously removed E-Ring. Some tractors will only accept two bolts.

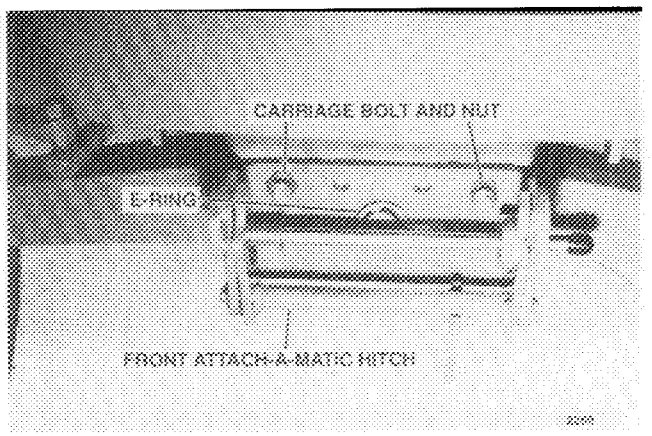


FIG. 6 Install Attach-A-Matic Hitch

INSTALL LIFT ARM IF REQUIRED

On tractors that are not equipped with welded bracket for snowthrower on tractor lift arm, remove tractor lift arm and install supplied lift arm (Fig 7). Install decals on outside of left and right side lift arms.

ATTACH SNOWTHROWER TO TRACTOR

Position tractor behind snowthrower, with lift tube extending rearward between tractor's front wheels. Open tractors front Attach-A-Matic hitch.

Insert snowthrower's mounting frame into hitch slots. Close and lock front Attach-A-Matic Hitch (Fig. 8).

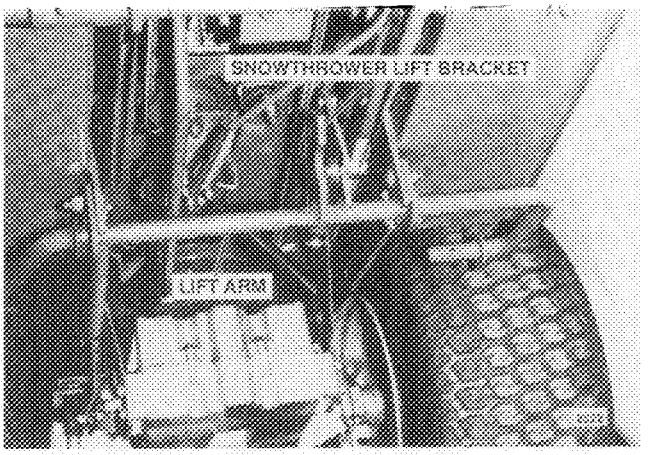


FIG. 7 Snowthrower Lift Arm

Locate crank handle bracket and install on underside of right hand foot rest with 90 degree bend to inside (Fig. 9). Install crank handle support on bracket using two hairpin cotters (Fig. 10).

Locate lift rod and six 3/4 flat washers (Fig. 11). Lower tractors attachment lift. Place spacer and washers on shaft of lift rod and insert shaft into lift tube. Connect lift rod to lift arm and secure with hairpin cotter.

If needed remove washers on lift rod to achieve 4-4 1/2" (10.2-11.4 cm) clearance between scraper blade and ground with attachment lift in transport position.

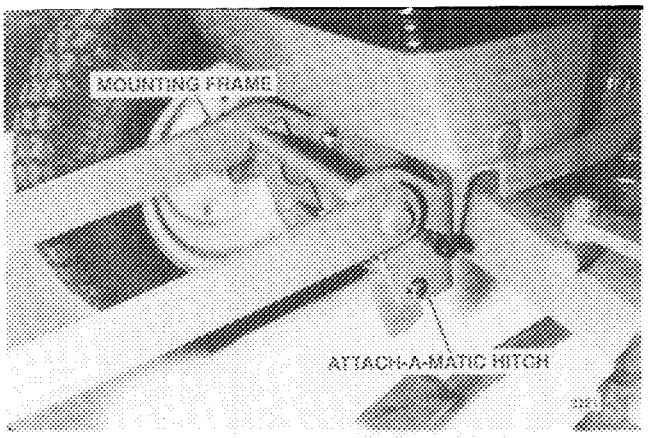


FIG. 8 Mount Snowthrower in Front Hitch

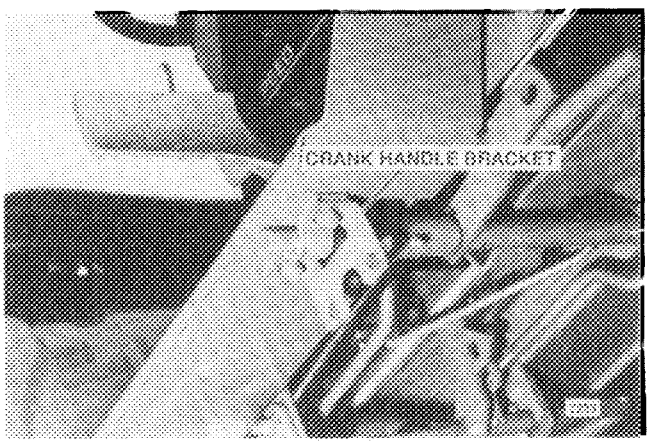


FIG. 9 Install Bracket



FIG. 10 Install Crank Handle Support

Find lift assist spring, bracket and hook (Fig. 12).

NOTE: For 5-Speed tractors, install spring in rear slot of bracket and for Hydrostatic tractors install spring in front slot.

Install spring and bracket on under side of left rear fender with long angle of bracket forward.

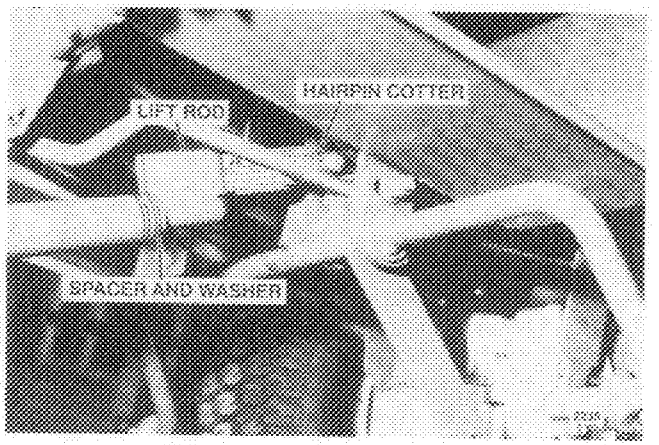


FIG. 11 Attachment Lift Rod

⚠ CAUTION ⚠

Lift assist spring is strongly tensioned. Snowthrower must be raised to transport position and a block placed under housing for spring installation and removal. Lift assist spring can fly off and injure you if spring is installed or removed incorrectly.

To install lift assist spring, raise attachment lift to transport position and place block under snowthrower housing. Slide rod through hole in tractor lift arm as shown in Figure 13. Hook lift assist spring between welded washers on rod. Rotate rod handle up over tractor lift arm and hook in place. Remove block and lower snowthrower.

Hook drive belt idler pulley assembly on tractor and secure with clevis pin and hairpin cotter (Fig. 14).

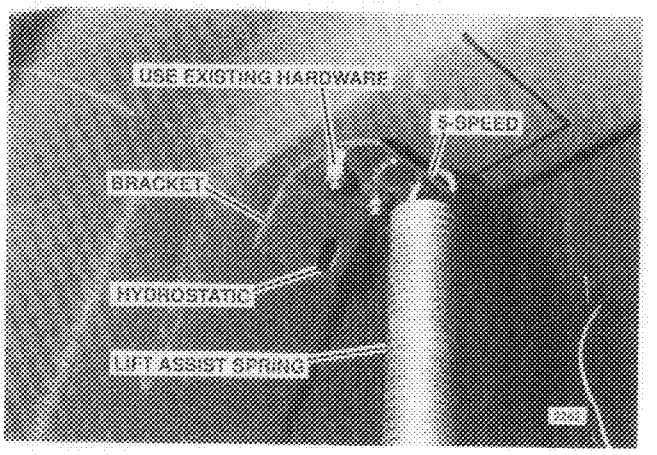


FIG. 12 Lift Assist Spring (Top)

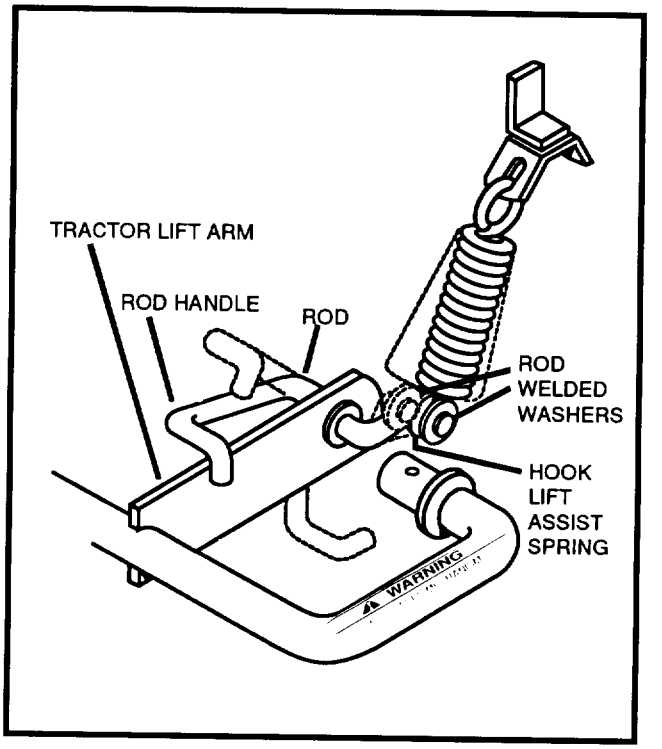


FIG. 13 Lift Assist Spring (Bottom) and Lift Arm

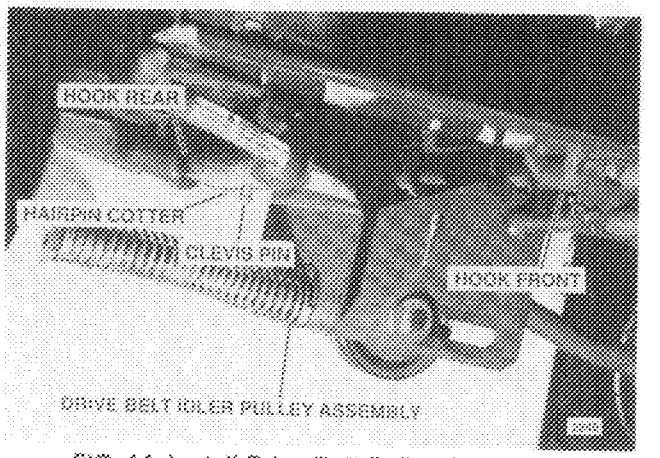


FIG. 14 Install Drive Belt Pulley Assembly

Install Belt on idler pulleys and snowthrower pulley (Figs. 15, 16, 17, and 18). Adjust left hand idler pulley (Fig. 17) so that right hand idler pulley (Fig. 15) has free movement in slot when snowthrower is moved through its operating range.

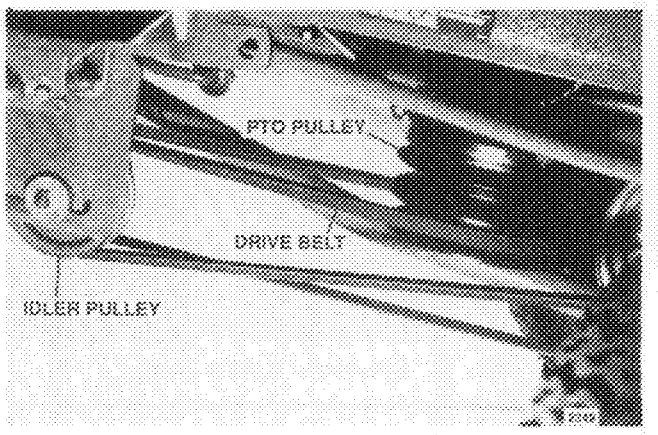


FIG. 15 Belt Installation - Right Side

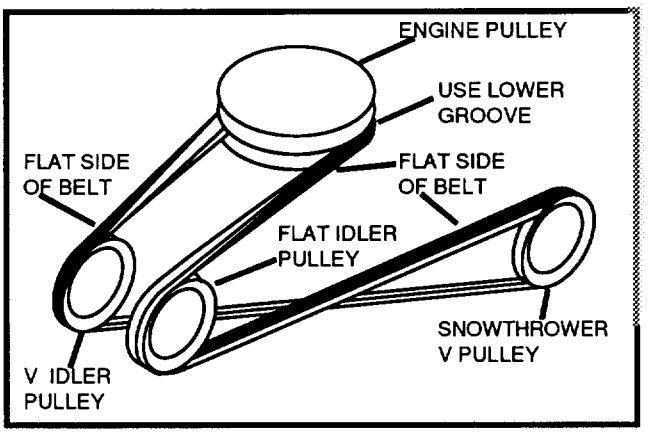


FIG. 16 Belt Routing

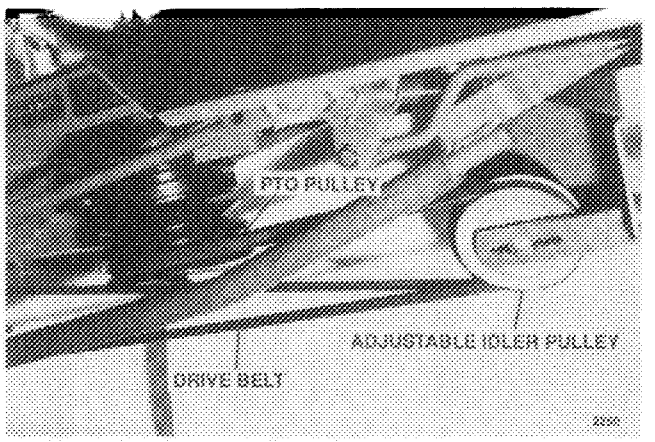


Fig. 17. Belt Installation - Left Side

Locate crank handle and hairpin cotter. Insert crank handle through hole in support and secure handle to U-Joint with hairpin cotter (Fig. 19).

REMOVAL

Remove drive belt .

Raise attachment lift to transport position and place block under snowthrower housing. Lift rod handle up and off

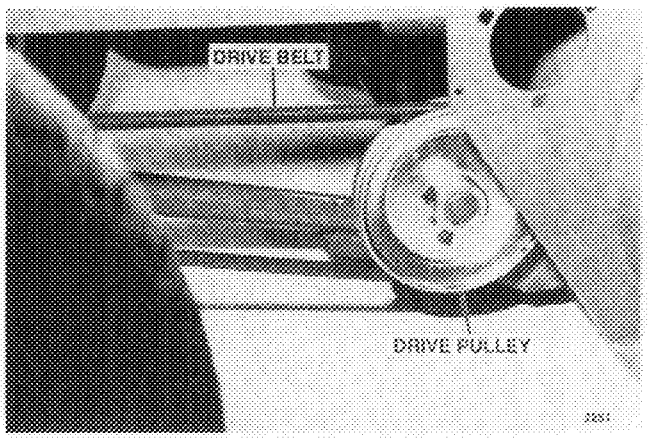


FIG. 18 Belt Installation - Snowthrower

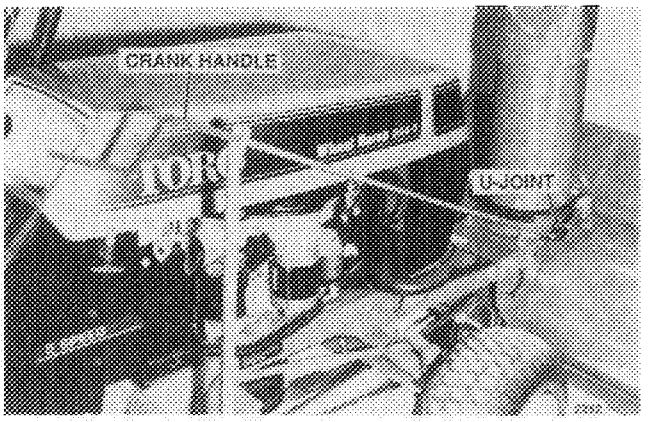


FIG.19 Install Crank Handle

⚠ CAUTION ⚠

Lift assist spring is strongly tensioned. Snowthrower must be raised to transport position and a block placed under housing for spring installation and removal. Lift assist spring can fly off and injure you if spring is installed or removed incorrectly.

tractor lift arm (Fig. 13). Unhook spring from rod and slide rod out of tractor lift arm. Remove spring from bracket (Fig. 12). Remove lift rod from tractor (Fig. 11). Remove crank handle support from tractor (Fig. 10). Open front Attach-A-Matic hitch (Fig. 8). Move tractor away from snowthrower.

OPERATION AND ADJUSTMENT

⚠ DANGER ⚠

Rotating auger can cut off or injure fingers or hands. Keep face, hands, feet and any other part of your body or clothing away from consealed moving of rotating parts.

Before adjusting, cleaning and repairing and inspecting the snowthower, and before uncloging the discharge chute, shut engine off and wait for all moving parts to stop. Also remove key from ignition switch to prevent accidental starting.

Wire in discharge chute is for your safety. Be sure it remains in place (Fig. 20). Use a stick, not your hands to remove obstructions from discharge chute.

To minimize the possibility of injury, become familiar with all safety suggestions at the front of this manual before placing the snowthrower into operation.

IMPORTANT: Each time snowthrower is installed, check for proper operation of PTO clutch and brake. Adjustment of PTO is covered in tractor Operator's Manual.

Use of 100 lbs. rear wheel weight kit is required and tire chains are recommended for extra traction, particularly when heavy snow or icy conditions occur. These accessory items are available through your authorized Toro Wheel Horse dealer.

⚠ DANGER ⚠

Loss of traction and stability may result in serious injury when snowthrower is in a raised postion without additional couner weight. Always install 100 lbs. rear wheel weight kit before operating snowthower.

Direction snow is thrown is controlled by turning crank rod. Discharge chute will rotate through a 180 degree arc. Deflector on upper portion of discharge chute can be adjusted up and down to control height and distance snow is thrown.

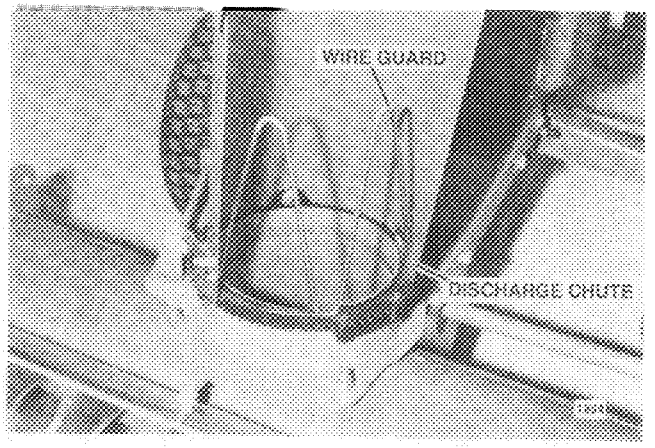


FIG. 20 Discharge Chute Wire

Distance between auger and ground is regulated by skid shoes at each side of snowthrower housing (Fig. 21). Auger height should be adjusted so that scraper will not catch on uneven surfaces. When operating snowthrower over loose material, such as a gravel driveway, raise auger sufficiently to prevent picking up stones or other debris, To adjust auger height, raise snowthrower and loosen bolts securing skid shoes to side of snowthrower housing. Raise or lower skid shoes equally on both sides, to obtain level auger height.

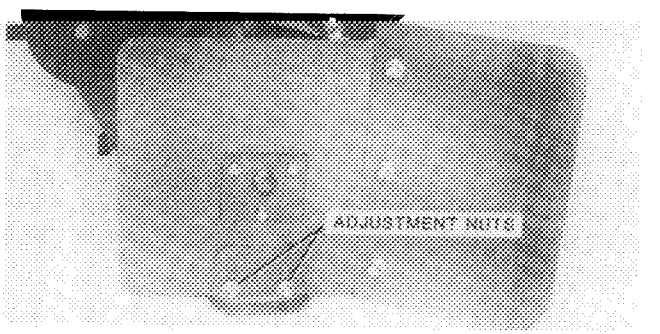


FIG. 21 Skid Shoe Adjustment

Snow removal conditions vary greatly. Depth of snow, wind direction, temperature and condition of area to be cleared are all factors which must be taken into consideration when throwing snow. Best results are obtained with high auger speed and slow forward movement. Therefore, operate tractor at full engine speed, using transmission to adjust ground speed to about 1MPH (1.6 KPH).

To begin snow removal, start tractor's engine and allow it to warm up. Lower snowthrower to ground using tractor's attachment lift, and then engage PTO.

Never permit anyone to stand in front of auger or discharge chute when tractor engine is running. Keep children and pets away from area when throwing snow. There may be objects in snow being thrown which could cause injury to anyone being struck by them.

A definite pattern of operating is required to thoroughly clean snow area. This will avoid a second removal of snow and throwing snow into unwanted places. Snow should be thrown downwind. However, where it is possible to throw snow to right and left, as on a long driveway, it is advantageous to start in middle and work progressively outward, throwing snow to both sides without changing position of discharge chute (Fig. 22).

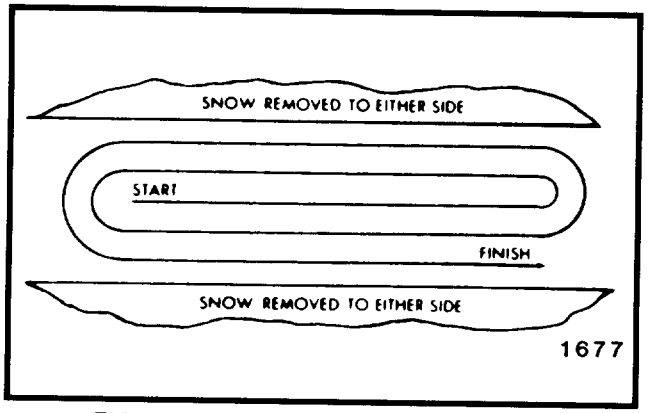


FIG. 22 Throwing Snow To Both Sides

If snow can only be thrown to one side, start on side farthest from where snow is to be thrown, rotating discharge chute 180 degrees at end of each pass.

Before starting tractor engine, make sure auger and impeller will rotate freely. This is especially important when unit has been in use and left standing in cold weather . Auger or impeller could be frozen in housing and, if PTO clutch is engaged under these conditions , clutch or belt or both could be damaged. Also check discharge chute to be sure it is free to turn.

For normal operations, snowthrower is used with unit resting on ground.

In deep, drifted, or banked snow, it will be necessary to slowly drive auger into snow and then stop tractor to allow auger to clear snow. Repeat this method until a path is cleared. On second pass, overlap first path enough to allow snowthrower to operate without repeated stopping and starting of tractor.

In extremely deep snow, raise snowthrower from ground using tractor's attachment lift. Drive tractor ahead into deep snow, removing top layer first. Tractor itself should not enter snowbank. Reverse tractor and lower snowthrower to ground.

Drive tractor ahead and repeat process to remove balance of snow. Working with repeated passes in and out of drifts will eventually move deep snow.

⚠ CAUTION ⚠

If snowthrower becomes plugged with snow or jammed due to hitting a foreign object, proceed as follows:

1. Declutch snowthrower and stop tractor engine immediately.
2. Disconnect spark plug wire(s).
3. Clear snow from discharge chute or impeller if plugged.
4. If auger or impeller is jammed, remove foreign object and repair any damage to snowthrower before continuing.
5. Reconnect spark plug wire(s).
6. Resume operation.

Snowthrower should not be used to remove ice or hard packed frozen snow , which can cause damage to unit. For best results, snow should be removed as soon as possible after it falls.

Before snow season begins, it is suggested that snow removal area be thoroughly inspected and cleared of all stones, sticks, etc. Which might be picked up by auger. Mark location of all obstacles that could become hidden under snow and cause damage to auger or tractor if struck.

MAINTENANCE AND STORAGE

Before each use, check that all bolts, set screws and other fasteners are tight and in place. Drive chain tension can be adjusted by loosening and shifting lower idler sprocket in its slot on snowthrower housing. This idler sprocket is located on left side of snowthrower at lower front corner of housing. Tighten nut securely after adjustment.

Do not overtighten chain. A correctly adjusted chain will have a slight amount of slack. An overtightened chain will result in early failure of the auger drive chain.

Lubricate drive chain every 25 operating hours with SAE 10 Or SAE 10w30 engine oil (Fig. 23). Be sure oil penetrates inside each roller. Wipe off excess oil. Other moving parts of linkage should be lubricated with light oil applied directly to wear surfaces.

A coat of wax applied to inside of auger housing will help prevent snow from sticking to it. Inside of discharge chute and deflector should also be waxed several times during snow removal season. Coat bare metal surfaces of snowthrower with oil or grease to prevent rust until permanent repairs can be made. Contact with corrosive road salt should be avoided whenever possible.

Lubricate drive shaft bearing every 25 operating hours or at end of season (Fig. 24). Apply #2 multi-urpose lithium base grease with pressure grease gun. Lubricate all moving partsof linkage with a light grade of machine oil.

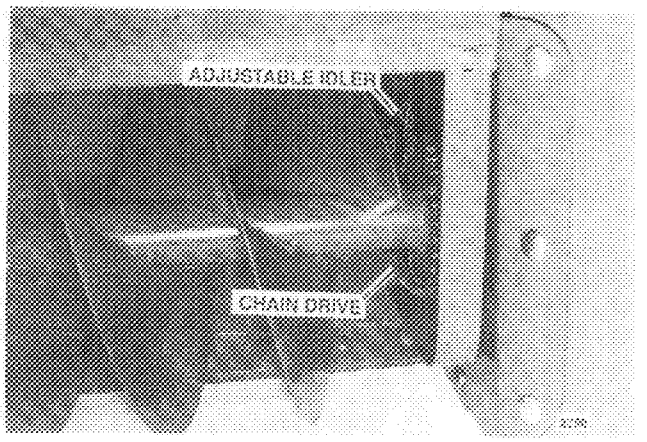


FIG. 23 Auger Drive Chain

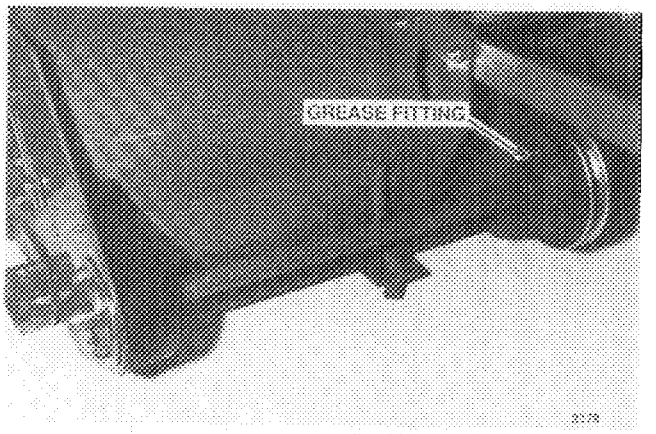


FIG. 24 Drive Shaft Bearing Grease Fitting

To prevent damage to snowthrower housing, periodically inspect snowthrower scraper. When scraper becomes worn (before working surface comes in contact with housing) remove carriage bolts attaching scraper top housing (Fig. 25), flip scraper over and reinstall with unused side exposed.

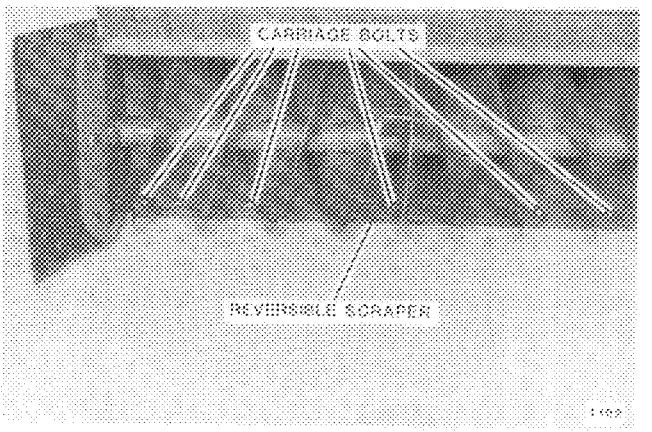


FIG. 25 Reversible Scraper

Before storing snowthrower at end of season, thoroughly clean it by washing with a garden hose. A mild detergent may be used to remove stubborn dirt. Touch up damaged paint areas as necessary. Aerosol cans of "Toro Wheel Horse Red" touch up paint are available through your authorized dealer.

Auger should be coated with oil or treated with a rust preventative. Lubricate snowthrower as described in this section and store it in a clean, dry place. Protect it with a weather-proof cover if stored outdoors.

TORO Consumer Products

THE TORO TOTAL COVERAGE GUARANTEE

A Full Two-Year Warranty
(Limited Warranty for Commercial Use)

What Is Covered By This Express Warranty?

The Toro Company promises to repair any TORO Product used for residential purposes if defective in materials or workmanship for a period of two years from the date of purchase. The cost of parts and labor are included, but the customer pays the transportation costs.

Transportation within a 15 mile radius of the servicing dealer is covered under this warranty for two-stage snowthrowers, walk behind debris equipment and all TORO Wheel Horse riding products. Walk power mowers, single stage snowthrowers, and other products not specifically covered, are excluded from the transportation coverage provided by this warranty.

What Products Are Covered By This Warranty?

This warranty applies to all gasoline powered Consumer Products (including TORO Wheel Horse riding products). Wide area walk behind mowers, ProLine 118, and 21" Commercial mowers without blade stop controls are covered by separate warranty statements.

How About Commercial Use?

TORO Consumer Products used for commercial, institutional or rental use are covered by a limited warranty for the following time periods from the date of purchase:

Products	Warranty Period
• 300 through 700 Series Tractors (except 612-Z) and 1600 HMR	
Chassis	1 year limited warranty
Engine	2 year limited warranty
• 21" Commercial Duty Walk Mower with blade stop controls	1 year limited warranty
• 200 Series Tractors, Rear Engine Riders, 612-Z, 1200 HMR 3.0 and 3.5 HP Edgers Straight Shaft Trimmers, and Backpack Blowers	90 day limited warranty
• All Others	45 day limited warranty

How Do You Get Warranty Service?

Should you feel your TORO product contains a defect in material or workmanship, contact the dealer who sold you the product or any Authorized TORO Service Dealer or TORO Master Service Dealer. The Yellow Pages of your telephone directory is a good reference source. The dealer will either arrange service at his/her dealership or recommend another Authorized Service Dealer who may be more convenient. You may need proof of purchase (copy of registration card, sales receipt, etc.) for warranty validation.

If for any reason you are dissatisfied with the Service Dealer's analysis of the defect in materials or workmanship or if you need a referral to a TORO Service Dealer, please feel free to contact us at the following address:

Toro Customer Service Department
8111 Lyndale Avenue South
Minneapolis, MN 55420
612-888-8801

What Must You Do To Keep The Warranty In Effect?

You must maintain your TORO Product by following the maintenance procedures described in the operator's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

What Does This Warranty Not Cover? and How Does Your State Law Relate To This Warranty?

There is no other express warranty except the TORO Starting Guarantee on GTS Engines. This express warranty does not cover:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, blade sharpening, brake and clutch adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Repairs necessary due to improper fuel, contaminants in the fuel system, or failure to properly prepare the fuel system prior to any period of non-use over three months.
- Pickup and delivery charges for distances beyond a 15 mile radius from an Authorized TORO Service Dealer (covered products only).

All repairs covered by this warranty must be performed by an Authorized TORO Service Dealer using Toro approved replacement parts.

Repair by an Authorized TORO Service Dealer is your sole remedy under this warranty.

The Toro Company is not liable for indirect, incidental or consequential damages in connection with the use of the TORO Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Some states do not allow exclusions of incidental or consequential damages, so the above 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.

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