

# 42" Snowthrower

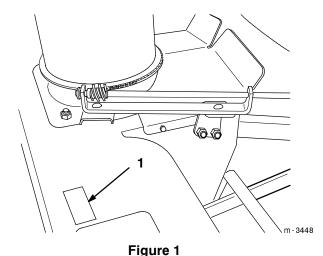
Wheel Horse® 5xi Garden Tractor Attachment Model No. 79365—9900001 and Up

**Operator's Manual** 

# Introduction

We want you to be completely satisfied with your new product, so feel free to contact your local Authorized Service Dealer for help with service, genuine replacement parts, or other information you may require.

Whenever you contact your Authorized Service Dealer or the factory, always know the model and serial numbers of your product. These numbers will help the Service Dealer or Service Representative provide exact information about your specific product. You will find the model and serial number plate located in a unique place on the product as shown below.



I Model and Serial Number Plate

For your convenience, write the product model and serial numbers in the space below.

| Model No:    |  |  |
|--------------|--|--|
|              |  |  |
| Serial No. — |  |  |
|              |  |  |

The warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death. DANGER, WARNING and CAUTION are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

**DANGER** signals an extreme hazard that will cause serious injury or death if the recommended precautions are not followed.

**WARNING** signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

**CAUTION** signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.

Two other words are also used to highlight information. "Important" calls attention to special mechanical information and "Note" emphasizes general information worthy of special attention.

The left and right side of the machine is determined by sitting on the seat in the normal operator's position.

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# **Safety and Instruction Decals**



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.

## ON UPPER DISCHARGE CHUTE (Part No. 94-8078)



- CONTACT WITH MOVING PARTS INSIDE CHUTE WILL CAUSE SERIOUS INJURY.
- SHUT OFF ENGINE BEFORE UN-CLOGGING DISCHARGE CHUTE.
  NEVER PUT HAND IN CHUTE.

ON TOP OF HOUSING (Part No. 63-2380)



ON TOP OF HOUSING (Part No. 92-8652)

# **AWARNING**







- ROTATING AUGER AND IMPELLER CAN CUT OR REMOVE BODY PARTS AND THROW OBJECTS.
- SHUT OFF ENGINE TO ADJUST, SERVICE, UNCLOG OR REMOVE DEBRIS.
- NEVER DISCHARGE AT OTHERS.
- READ OPERATOR'S MANUAL FOR OPERATING AND SAFETY INSTRUCTIONS.
- KEEP SAFETY DEVICES (SUCH AS GUARDS AND SWITCHES) IN PLACE AND WORKING.

# Installation

## **Loose Parts**

Note:

Rear wheel weights and chains, which must be purchased separately, are required to operate the tractor equipped with this snowthrower. Use the chart below to identify parts used for assembly.

| DESCRIPTION                             | QTY. | USE                                   |  |  |
|---|------|---------------------------------------|--|--|
| Carriage bolt 5/16-18 x 3/4 in. (19 mm) | 3    | Assemble discharge chute              |  |  |
| Washer 5/16 in. (8 mm)                  | 3    |                                       |  |  |
| Locknut 5/16 in.                        | 3    |                                       |  |  |
| Deflector shield                        | 1    |                                       |  |  |
| Discharge chute assembly                | 1    |                                       |  |  |
| Lift tube                               | 1    |                                       |  |  |
| Lift rod                                | 1    |                                       |  |  |
| Spacer washer 3/4 in. (19 mm)           | 2    | Assemble frame and pulley             |  |  |
| Clevis clip                             | 1    |                                       |  |  |
| Clevis pin 1/2 in. x 2 5/8 in. (67 mm)  | 1    |                                       |  |  |
| Clevis pin 3/8 in. x 1 in. (25 mm)      | 2    | Dranara tractor attachment lift       |  |  |
| Hairpin cotter—small                    | 2    | Prepare tractor attachment lift       |  |  |
| Belt                                    | 1    |                                       |  |  |
| Clevis pin 1/2 in. x 1 in. (25 mm)      | 1    |                                       |  |  |
| Clevis clip                             | 1    | Mount the anguithrower to the tractor |  |  |
| Chute control rod                       | 1    | Mount the snowthrower to the tractor  |  |  |
| Crank support                           | 1    |                                       |  |  |
| Hairpin cotter—large                    | 2    |                                       |  |  |

# **Assembly**

1. Install the discharge chute assembly and deflector shield onto the housing with three 5/16 x 3/4 in. (19 mm) carriage bolts (heads to the inside), three 5/16 in. (8 mm) washers, and three 5/16 in. locknuts (Fig. 2).

Note:

The deflector shield must be installed inside the lower section of the chute assembly.

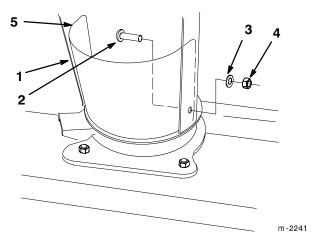


Figure 2

- 1. Discharge chute assembly
- Carriage bolt 5/16 x 3/4 in. (19 mm)
- 3. Washer 5/16 in. (8 mm)
- 4. Locknut 5/16 in.
- 5. Deflector shield
- 2. Loosen the bolts on the rotator assembly (Fig. 2) and adjust it so that the worm gear teeth mesh fully with the ring gear on the discharge chute and the chute turns freely. Tighten the locknuts securely.

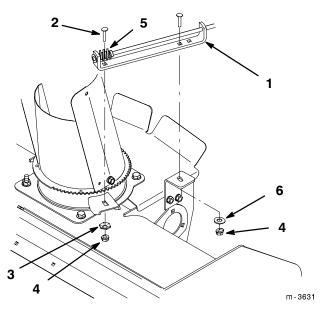


Figure 3

- 1 Rotator assembly
- Carriage bolt 5/16 x 1 in. (25 mm)
- 3. Pyramidal washer 5/16 in. (8 mm)
- 4. Locknut 5/16 in.
- 5. Worm gear
- 6. Flat washer 5/16 in. (8 mm)

3. Connect the lift tube to the pulley housing with the 2 5/8 in. (67 mm) clevis pin and clip (Fig. 4)

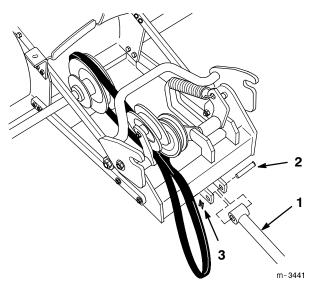


Figure 4

- 1. Lift tube
- Clevis pin 2 5/8 in. (67 mm)
- 3. Clevis clip
- **4.** Add two 3/4 in. (19 mm) washers onto the end of the lift rod, then slide it into the lift tube (Fig. 5).
  - Note: The addition of washers to the lift rod determines the lift height. Adding washers increases the lift and the removal will decrease the lift to give more downward travel.

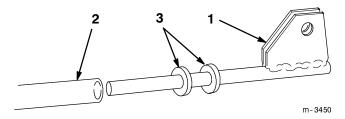


Figure 5

1. Lift rod

3 Washer 3/4 in (19 mm)

2. Lift tube

## **Tractor Set-up**

# Installing Rear Wheel Weights and Chains

Install the rear wheel weights and chains.

## **Preparing the Tractor's Attachment Lift**

- **1.** Start the tractor.
- 2. Raise the attachment lift.
- **3.** Set the parking brake, stop the engine, and remove the ignition key.
- **4.** Install clevis pins into each side of the lift assembly in the positions shown in Figure 6.

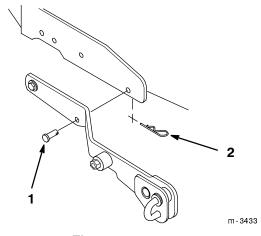


Figure 6

- 1. Clevis pin 3/8 in. x 1 in. (25 mm)
- 2. Hairpin cotter

These pins must be installed when operating with a blade, snowthrower, or the tiller attachment.

**Note:** The pins are removed to attach a mower.

# Installing the Snowthrower to the Tractor

- 1. Position the snowthrower on a level surface with space behind the snowthrower to accommodate the tractor.
- 2. Park the tractor with the snowthrower lift rod between the tractor wheels (Fig. 7).
- **3.** Lower the attachment lift, stop the engine, and remove the ignition key.

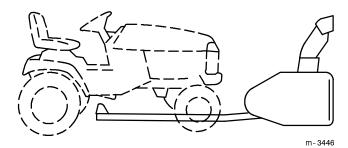


Figure 7

4. Check the front Attach-A-Matic<sup>™</sup> latches to be sure they are open (Fig. 8).

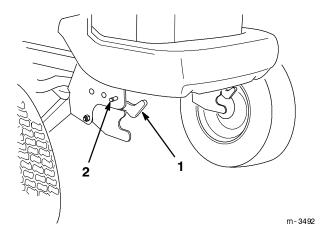


Figure 8

- 1. Attach A Matic button
- 2. Attach-A-Matic lever
- 5. With the High-Low range selector in neutral (N), pull the tractor forward with one hand while lifting up the snowthrower pulley box assembly

and fit it into the two latches on the front Attach-A-Matic (Fig. 9). Secure the latches. Set the parking brake.

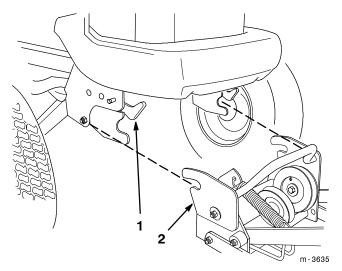


Figure 9

- 1. Attach-A-Matic latches
- 2. Snowthrower pulley box
- **6.** Install the crank support to the mid Attach-A-Matic, as follows:
  - A. Placing the crank support in position on the left side of the tractor (Fig. 10) with the positioning pin coming through the hole in the Attach-A-Matic.
  - B. Install the hairpin cotter through the hole in the positioning pin.
  - C. On the right side of the tractor, turn the Attach-A-Matic lever counterclockwise to lock the crank support to the tractor (Fig. 11).

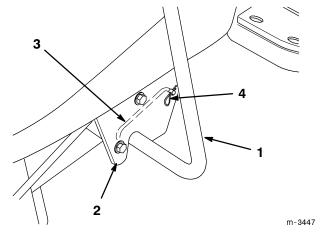


Figure 10

Left side of tractor shown

- Crank support
- Positioning pin
- 2. Mid Attach A Matic
- 4 Hairpin cotter

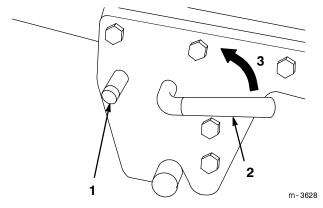


Figure 11

Right side of tractor shown

- Mid Attach A Matic release button
- 2. Mid Attach-A-Matic lever
- 3. Lock
- 7. Slide the chute control rod through the crank support and connect the end of the control rod to the universal joint on the rotator assembly with a hairpin cotter.

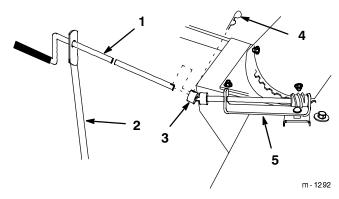
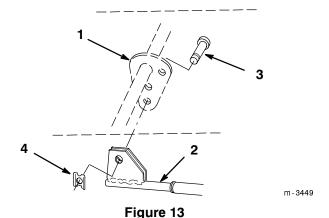


Figure 12

- 1. Chute control rod
- 2. Crank support
- 3. Universal joint
- 4. Hairpin cotter
- 5. Rotator assembly
- 8. From beneath the tractor, connect the snowthrower lift rod to the bottom hole in the attachment lift plate with the 1 in. (25 mm) clevis pin and clip (Fig. 13).



Right side of tractor shown

- 1. Attachment lift plate
- 2. Snowthrower lift rod
- Clevis pin 1/2 in. x 1 in. (25 mm)
- 4. Clevis clip

- **9.** Install the snowthrower belt to the PTO pulley, as follows:
  - A. Remove the tractor grill by pulling it out toward you.

# **A** CAUTION

## POTENTIAL HAZARD

• Components under the hood will be hot if the tractor has been running.

## WHAT CAN HAPPEN

• Touching hot components can cause burns.

## HOW TO AVOID THE HAZARD

- Allow the tractor to cool before performing maintenance or touching components under the hood.
  - B. Route the belt around the tractor PTO pulley and v-groove idler pulley, then around the auger pulley on the snowthrower.
  - C. Lift up on the lift handle of the backside idler pulley and place the wide, back surface of the belt under the pulley (Fig. 14 and 15).

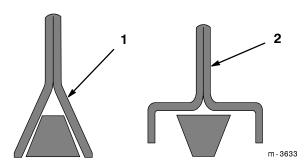


Figure 14

- 1. V-Groove pulley
- 2. Backside pulley

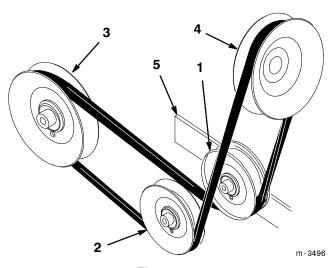


Figure 15

- Backside tension idler pulley
- 2. V-groove idler pulley
- 3. Auger pulley
- 4. Engine PTO pulley
- 5. Lift handle
- D. Replace the front grill of the tractor.

# **Removing the Snowthrower**

- 1. Park the tractor on a level surface, lower the attachment lift, disengage the power take off (PTO), set the parking brake, stop the engine, and remove the ignition key.
- 2. Remove the grill by pulling it out toward you.

# **A** CAUTION

## POTENTIAL HAZARD

• Components under the hood will be hot if the tractor has been running.

## WHAT CAN HAPPEN

• Touching hot components can cause burns.

## HOW TO AVOID THE HAZARD

- Allow the tractor to cool before performing maintenance or touching components under the hood.
- 3. Lift up on the lift handle of the snowthrower idler pulley to create enough slack to remove the belt (Fig. 15).
- **4.** Replace the front grill of the tractor.
- 5. Disconnect the snowthrower lift rod from the attachment lift plate by removing the clip from the clevis pin (Fig. 16).

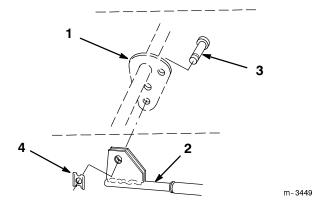


Figure 16

- Attachment lift plate
- 3. Clevis pin
- 2. Snowthrower lift rod
- 4. Clevis clip
- 6. Remove the chute control rod by removing the hairpin cotter connecting it to the universal joint (Fig. 17).

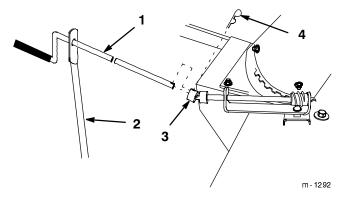
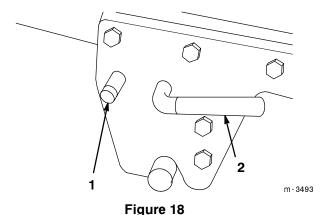


Figure 17

- 1. Chute control rod
- 3. Universal joint
- 2. Crank support
- 4. Hairpin cotter
- 7. Release the crank support for the chute control rod from the mid Attach-A-Matic by pressing the release button and turning the Attach-A-Matic lever clockwise (Fig. 18).



Right side of tractor shown

- Mid Attach-A-Matic release button
- 2. Mid Attach-A-Matic lever
- **8.** On the left side of the tractor, remove the hairpin cotter from the positioning pin, and remove the crank support (Fig. 19).

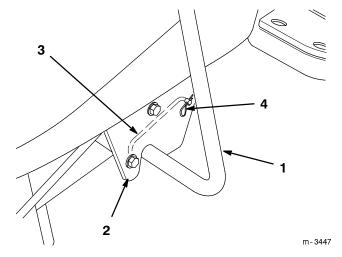


Figure 19

Left side of tractor shown

- 1. Crank support
- 3. Positioning pin
- 2. Mid Attach A Matic
- 4. Hairpin cotter
- **9.** Press the release buttons on the tractor's front Attach-A-Matic and make sure the latches open so that the snowthrower can separate from the tractor.
- **10.** Put the High-Low range lever on the tractor in neutral (N) and release the parking brake.
- **11.** Push the tractor back, away from the snowthrower and reset the parking brake.

# **Operation**

# **A** DANGER

## POTENTIAL HAZARD

 When the snowthrower is attached to the tractor, without additional weight, the tractor may become unstable.

#### WHAT CAN HAPPEN

 Loss of traction and stability may cause loss of tractor control.

#### HOW TO AVOID THE HAZARD

 Never operate the tractor equipped with the snowthrower, unless rear weights are installed.

# **A** DANGER

#### POTENTIAL HAZARD

 Rotating auger can cut off fingers, hands or other body parts and throw objects.

## WHAT CAN HAPPEN

• Contact with rotating auger and thrown debris can cause severe injury or death.

#### HOW TO AVOID THE HAZARD

- Stay away from the discharge and auger openings while operating the snowthrower.
- Keep your hands, feet, and any other part of your body or clothing away from concealed, moving or rotating parts.
- Use a stick, not your hand, to remove obstructions from the discharge chute or auger housing.
- Before adjusting, cleaning, repairing and inspecting the snowthrower and before unclogging the discharge chute, shut off the engine and wait for all moving parts to stop. Move the power take off (PTO) to OFF and rotate the ignition key to OFF. Remove the ignition key.

# Operating the Power Take Off (PTO)

The power take-off (PTO) switch engages and disengages power to the electric clutch.

If the ignition key is in the RUN or LIGHTS position and the power take off (PTO) is engaged, the PTO indicator light will be on. When this light is on, it is a reminder: the implement is being powered and the starter will not crank while the PTO is engaged. Always turn off the PTO before getting off the seat.

## **Engaging the Power Take Off (PTO)**

- **1.** Depress the brake pedal to stop the machine.
- **2.** Move the throttle lever to FAST.

IMPORTANT: For best performance, always use full throttle when the power take off (PTO) switch is ON.

**3.** Pull the power take off (PTO) switch to ON (Fig. 20).

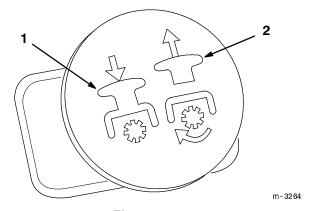


Figure 20

- 1. Push (off-disengaged)
- 2. Pull (on-engaged)

## Disengaging the Power Take Off (PTO)

1. Push the power take off (PTO) switch to OFF.

## **Attachment Lift Lever**

The attachment lift lever (Fig. 21 & 22) raises and lowers various attachments.

## **Raising Attachments**

- 1. Start the tractor.
- 2. Pull the attachment lift lever upward until the latch locks. In this position, the lift will hold the attachment in the up, or raised position.

# **WARNING**

#### POTENTIAL HAZARD

• When the engine is off, attachments in the raised position can gradually lower.

#### WHAT CAN HAPPEN

• Someone nearby may be pinned or injured by the attachment as it lowers.

#### HOW TO AVOID THE HAZARD

• Always lower the attachment lift each time you shut off the tractor.

## **Lowering Attachments**

- 1. Start the tractor.
- 2. Push the attachment lift lever downward to lower the attachment.

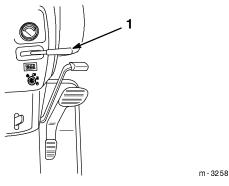


Figure 21

1. Attachment lift lever

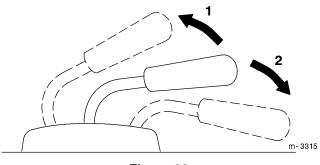


Figure 22

- 1 Raise attachment
- 2. Lower attachment

## **Adjusting The Discharge Chute**

# **A** DANGER

## POTENTIAL HAZARD

 The rotating auger can cut off fingers, hands or other body parts and throw objects.

#### WHAT CAN HAPPEN

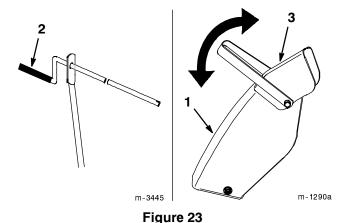
• Contact with the rotating auger and thrown debris can cause sever injury or even death.

#### HOW TO AVOID THE HAZARD

- Stay away from the discharge and auger openings while operating the snowthrower.
- Keep your hands, feet, and any other parts of your body or clothing away from concealed, moving or rotating parts.
- Use a stick, not you hand, to remove obstructions from the discharge chute or auger housing.
- Before adjusting, cleaning, repairing and inspecting the snowthrower and before unclogging the discharge chute, shut off the engine and wait for all moving parts to stop. Move the power take off (PTO) to OFF and rotate the ignition key to OFF. Remove the ignition key.

The discharge chute can be rotated 180° side to side. The direction is controlled by turning the crank handle (Fig. 23).

The chute deflector, on top of the discharge chute, can be moved up and down to control the height and distance snow is thrown (Fig. 23).



- 1 Discharge chute
- 2. Crank handle
- Chute deflector

In wet or slushy conditions, clogging of the discharge chute will be reduced by maintaining maximum engine speed and by not overloading the engine.

In some snow and cold weather conditions, some controls and moving parts may freeze. Therefore, when any control becomes hard to operate, stop the machine and wait for all moving parts to stop; then check all parts for freeze up. **Do not use excessive force and try to operate the controls when they are frozen.** Free all controls and moving parts before operating.

Use low range (on the high-low range lever) for best performance and smoothest operation.

# **Tips for Throwing Snow**

Remove snow as soon as possible after it falls. This produces best snow removal results.

Adjust the skids to match the type of surface being cleaned; refer to Adjusting the Skids, page 14.

The snowthrower is designed to clean snow down to the contact surface, but there are times when the front of the snowthrower may tend to ride up. If this happens, reduce forward speed.

Discharge snow downwind whenever possible, and overlap each pass to ensure complete snow removal. If the wheels slip, shift into the High-Low range lever to Low (L) to reduce forward speed.

Run the snowthrower for a few minutes after clearing snow so moving parts do not freeze. Engage the power take off (PTO) to clear any remaining snow from the inside housing.

Do not overload the snowthrower by clearing snow at too fast a rate. If the engine slows down, reduce forward speed.

Always use full throttle (maximum engine speed) when throwing snow.

# Maintenance

## **Service Interval Chart**

| Service Operation           | Each<br>Use | 5<br>Hours | 25<br>Hours | Storage<br>Service | Fall<br>Service | Notes |
|-----------------------------|-------------|------------|-------------|--------------------|-----------------|-------|
| Drive shaft bearings—grease |             |            | Х           | Х                  | Х               |       |
| Drive chain—oil             |             |            | Х           | Х                  | Х               |       |
| Belt—check for wear/cracks  |             |            |             | Х                  | Х               |       |
| Chipped Surfaces—paint      |             |            |             | Х                  |                 |       |
| Scraper—check for wear      |             |            |             | Х                  | Х               |       |

# **A** CAUTION

## POTENTIAL HAZARD

• If you leave the key in the ignition switch, someone could start the engine.

## WHAT CAN HAPPEN

• Accidental starting of the engine could seriously injure you or other bystanders.

## HOW TO AVOID THE HAZARD

• Remove the key from the ignition switch and pull the wire(s) off the spark plug(s) before you do any maintenance. Also push the wire(s) aside so it does not accidentally contact the spark plug(s).

# **Greasing and Lubrication**

## Service Interval Specification

Grease and oil the machine after every 25 operating hours or once a year, whichever occurs first.

**Grease Type:** General-purpose grease.

Oil Type: SAE 10W or 10W30.

#### **How to Grease**

- 1. Disengage the power take off (PTO), set the parking brake, lower the attachment lift, stop the engine, and remove the ignition key.
- 2. Clean the grease fittings with a rag. Make sure to scrape any paint off the front of the fitting(s).
- **3.** Connect a grease gun to the fittings. Pump grease into the fittings. Wipe up any excess grease.

## Where to Add Grease

1. Lubricate the drive shaft bearings (Fig. 24).

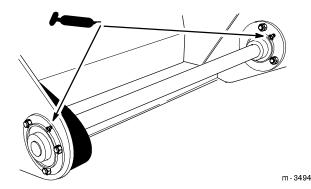


Figure 24

## Oil the Drive Chain

- 1. Disengage the power take off (PTO), set the parking brake, lower the attachment lift, stop the engine, and remove the ignition key.
- 2. Coat the entire chain with oil and allow it to penetrate each roller (Fig. 25).
- 3. Place a few drops of oil on the discharge chute rotator shaft and discharge chute mounting (Fig. 25).
- **4.** Wipe off excess oil.

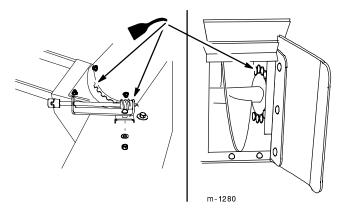


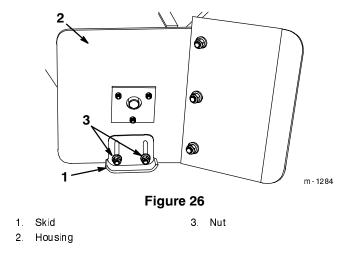
Figure 25

## Adjusting the Skids

The distance between the scraper blade and the ground is controlled by skids on each side of the housing. The height can be adjusted so the scraper blade will not catch on uneven surfaces

- 1. Move the snowthrower to a level surface.
- **2.** Disengage the power take off (PTO) and set the parking brake.
- **3.** Raise the attachment lift enough for the skids to clear the ground.
- **4.** Support the snowthrower housing off the ground.
- **5.** Stop the engine and remove the ignition key.
- **6.** Loosen the nuts securing the skids to the housing until the skids slide up and down easily (Fig. 26).
- 7. Raise or lower the skids equally on both sides to obtain level scraping action, and tighten nuts securely (Fig. 26).

Note: On smooth, paved surfaces, the scraper blade can be close to the surface. On uneven, gravel or crushed rock surfaces, adjust the skids to raise the scraper, thereby preventing catching or picking up rocks.

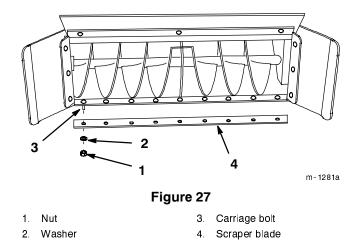


IMPORTANT: The scraper should be higher above the pavement if the pavement surfaces on which the snowthrower will be used are cracked, rough or uneven.

# **Reversing the Scraper Blade**

The scraper blade contacts the ground, preventing damage to the snowthrower housing. Periodically inspect the scraper blade for wear. When the scraper becomes worn, before the working surface contacts the housing, reverse the scraper blade.

- 1. Disengage the power take off (PTO), set the parking brake, raise the attachment lift, stop the engine, and remove the ignition key.
- **2.** Support the snowthrower housing off the ground.
- **3.** Remove nuts, washers, carriage bolts and scraper blade (Fig. 27).



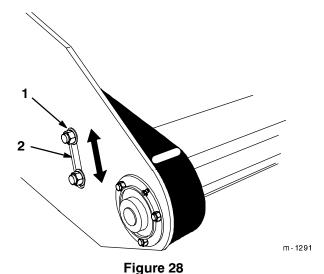
**4.** Reverse the scraper blade and install it with the previously removed hardware (Fig. 27).

# **Adjusting Drive Chain Tension**

Check the drive chain tension after every 25 operating hours or once a year, whichever occurs first. Adjustment as necessary to maintain proper tension.

- 5. Disengage the power take off (PTO), set the parking brake, lower the attachment lift, stop the engine, and remove the ignition key.
- **6.** To adjust, loosen the bolt that secures the idler sprocket to the left-side housing. (Fig. 28).
- 7. Slide the idler sprocket in the adjustment slot until the chain is snug, but not tight (Fig. 28).
- **8.** Tighten the idler sprocket securely.

IMPORTANT: Do not overtighten the chain or excessive wear will occur.



1. Idler sprocket

2. Adjustment slot

# **Storage**

- 1. Before long-term storage, wash the machine with mild detergent and water to remove dirt and grime from the entire machine.
- 2. Check the condition of the scraper blade; refer to Reversing the Scraper Blade, page 15.
- 3. Check the condition of the drive belt and chain.
- **4.** Grease and oil the snowthrower; refer to Greasing and Lubrication, page 13.
- 5. Check and tighten all bolts, nuts, and screws. Repair or replace any part that is damaged or defective.
- **6.** Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
- Coat the inside auger housing and discharge chute with automotive wax to prevent rust and reduce the sticking of snow to these surfaces.
- 8. Store the machine in a clean, dry garage or storage area. Cover the machine to protect it and keep it clean.

