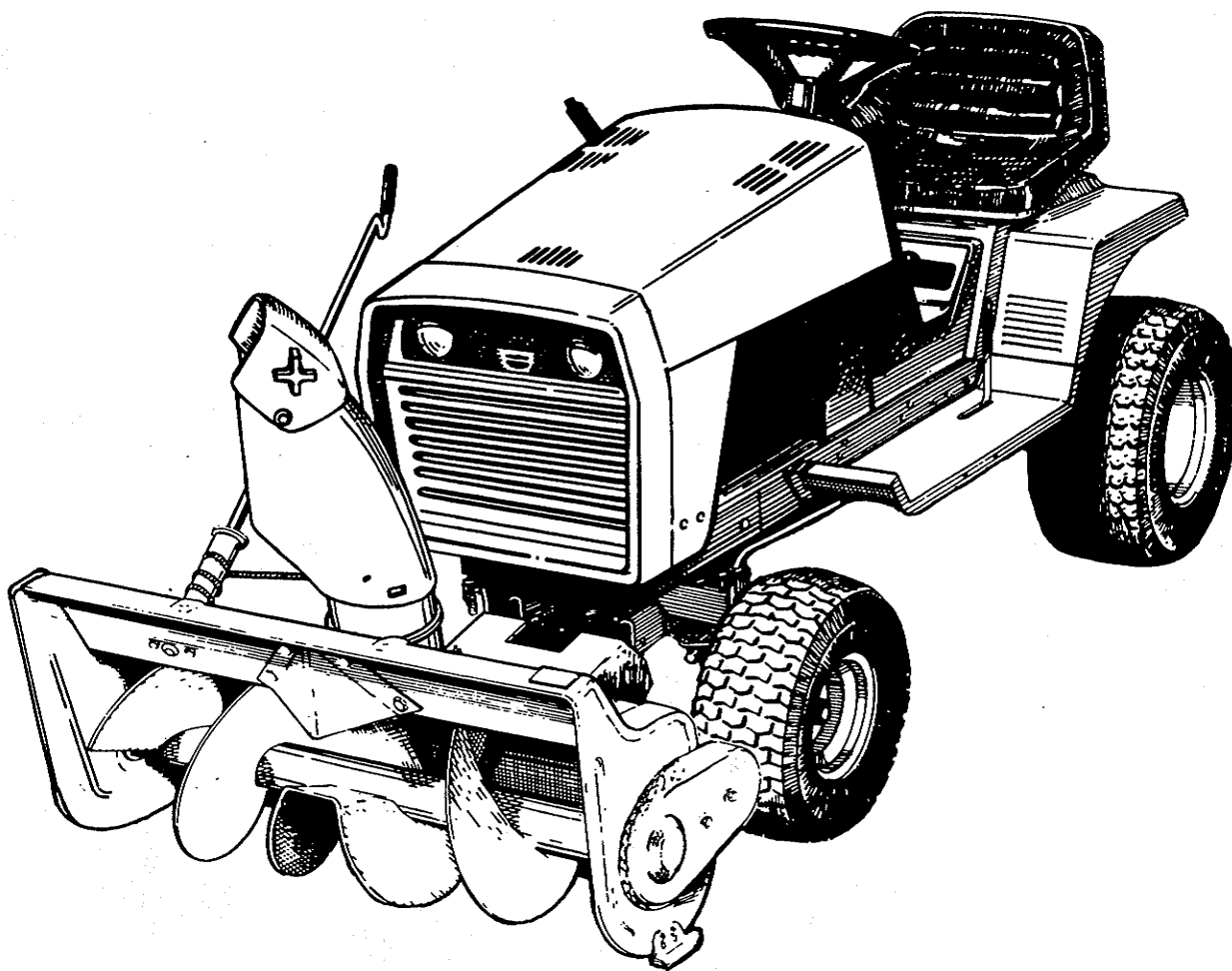


# OPERATOR'S MANUAL 36" & 42" SNOWTHROWERS



36" SNOWTHROWER  
MFG. NO. 1690547  
42" SNOWTHROWER  
MFG. NO. 1690548  
HITCH  
MFG. NO. 1690556

FORM -1669665  
PRINTED IN U.S.A.  
871

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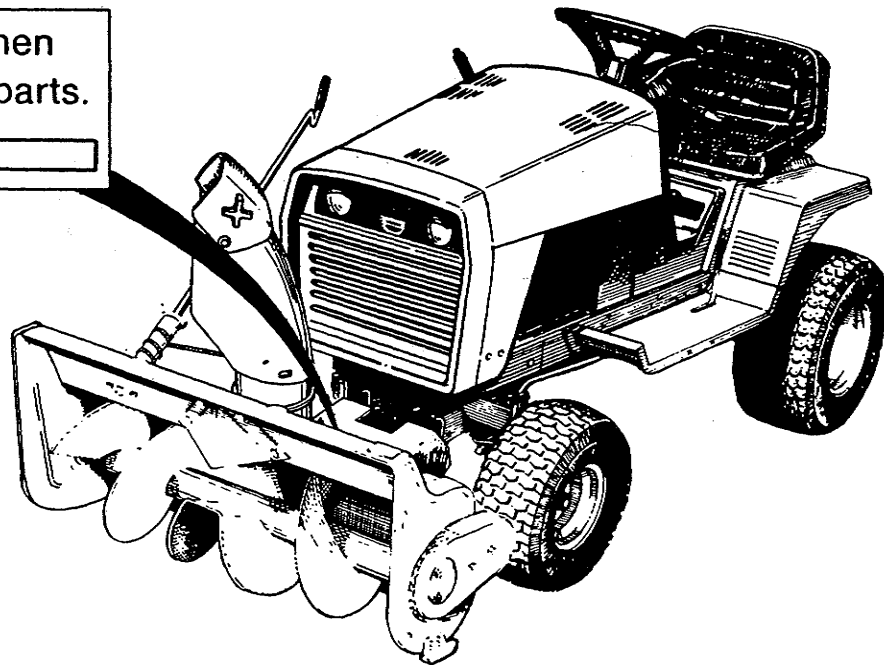
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## Identification

When ordering replacement parts, give your dealer the identification number found on the identification plate shown below. We suggest you record the number here for easy reference.

Refer to ID no. when  
writing or ordering parts.

ID NO.



## Accessories

Tire chains and one wheel weight for each rear wheel are recommended. These accessories will improve traction, thereby making the snowthrower more efficient.


For operation on slopes greater than 15 percent (8.5°) **one wheel weight on each rear wheel and tire chains are required.** Never operate on slopes greater than 30 percent (16.7°).


A lift lever (see Operation section) is required (may already be on tractor).

See your dealer to purchase any accessory.

# Safety Rules



Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself or bystanders, or damage to property or equipment. The triangle  in the text signifies important cautions or warnings which must be followed.

 ALL WARNING, CAUTION, and instructional messages on this attachment and on your tractor should be carefully read and obeyed. Personal bodily injury can result when these instructions are not followed.

## GENERAL

- Read this manual and the tractor Operator's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Do not carry passengers.
- Use only attachments or accessories designed for your machine. See your dealer for a complete list of recommended attachments or accessories.
- Keep the area of operation clear of all persons, particularly small children, and pets.
- Never direct discharge toward bystanders.
- Make sure:
  - a. all nuts and screws are tight and snowthrower is in good operating condition.
  - b. all safety devices and shields are in good working condition, and
  - c. all adjustments are correct.

## PREPARATION

- Never attempt to make any adjustments while engine is running.
- Thoroughly inspect the area where the snowthrower is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
- Adjust skid shoe height to clear gravel or crushed rock surface.

## OPERATION

- Always clear snow up and down the face of slopes, and never across the face. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- After striking an object or if unit starts to vibrate abnormally, stop the engine, disengage PTO, and remove the key. Check for the cause and any damage before restarting. Before inspecting make sure all moving parts have stopped.
- Take all possible precautions before leaving operator's position. Disengage the power take-off, lower the attachment, set the parking brake, stop the engine, and remove the key.
- Never operate snowthrower near glass enclosures, automobiles, window wells, dropoffs, etc., without proper adjustment of snow discharge angle.
- Do not overload machine capacity by attempting to clear snow at too fast a rate.
- Never operate machine at high transport speeds on slippery surfaces. Use care when backing.
- Disengage power to snowthrower when transporting or not in use.
- Never operate the snowthrower without good visibility or light. Always be sure your feet are properly placed on the foot rests and keep a firm hold on the steering wheel.

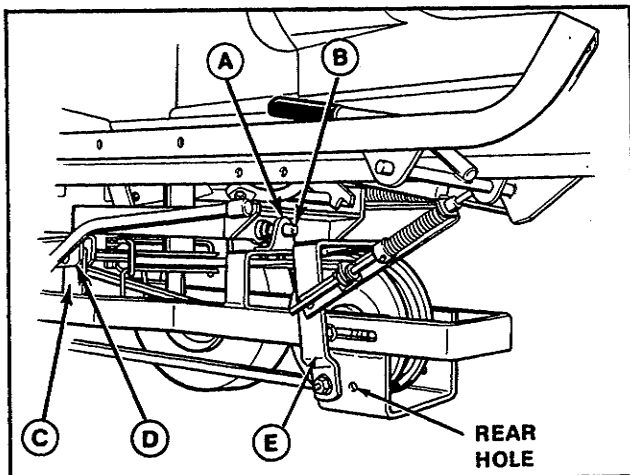
### WARNING

If the auger stalls or the chute plugs, **DIS-ENGAGE THE PTO, STOP THE ENGINE, AND REMOVE THE KEY. SET THE PARKING BRAKE. WAIT FOR MOVING PARTS TO STOP. Remove the foreign object or clear the spout before restarting the engine.**

# Installation & Removal

## INSTALLATION

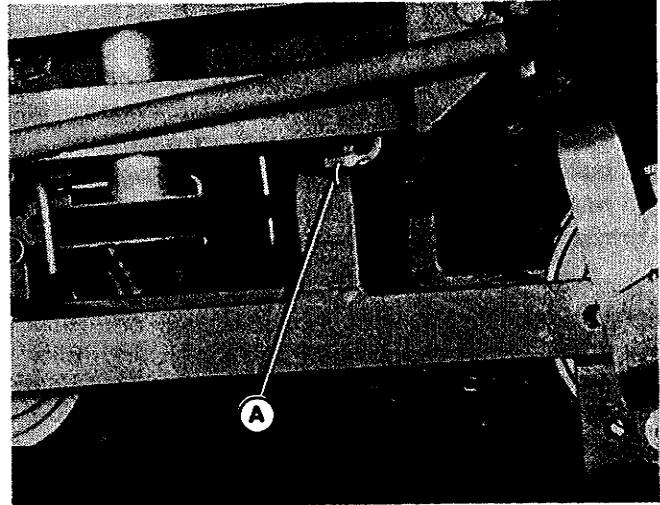
1. Make sure the snowthrower has been assembled properly as described in Assembly section (page 12). Make the following checks, "a" and "b".
  - a. Make sure the pivot bracket (E, figure 1) is installed in correct hole in hitch. Use the rear hole for all tractors with 20 inch or 23 inch diameter rear tires or 18 inch diameter rear tires with 2-cylinder engine. Use the front hole for all other tractors.
  - b. Make sure the correct mounting bracket (A, figure 1) is installed. Two mounting brackets are shipped with the snowthrower. Use the longer one if snowthrower is installed on a tractor with 23 inch diameter rear tires.
2. Increase the front tire pressure to 20 psi (138 kPa) to compensate for the added weight. Be sure both tires have equal pressure.
3. From the front of the tractor, slide the hitch under the tractor, or, drive the tractor up to the hitch and position the hitch between the front tires.
4. Lift the hitch and slide the bracket (A, figure 1) onto the shaft (B). On tractors with 20 inch or 23 inch diameter rear tires or 18 inch rear tires with 2-cylinder engine, the shaft extends forward as shown in figure 2. On tractors with 18 inch tires, the shaft (B, figure 1) extends rearward.



**Figure 1. Snowthrower Hitch (Tractors with 18" Rear Tires)**

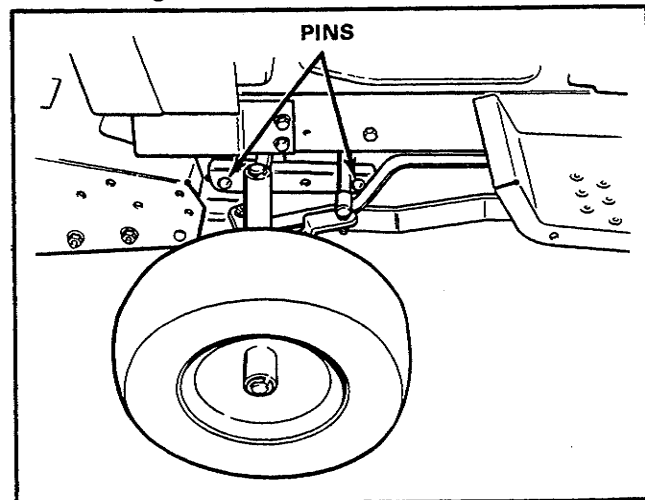
- A. Mounting Bracket  
B. Shaft  
C. Snowthrower Hitch Arm

- D. Tractor Hitch  
E. Pivot Bracket

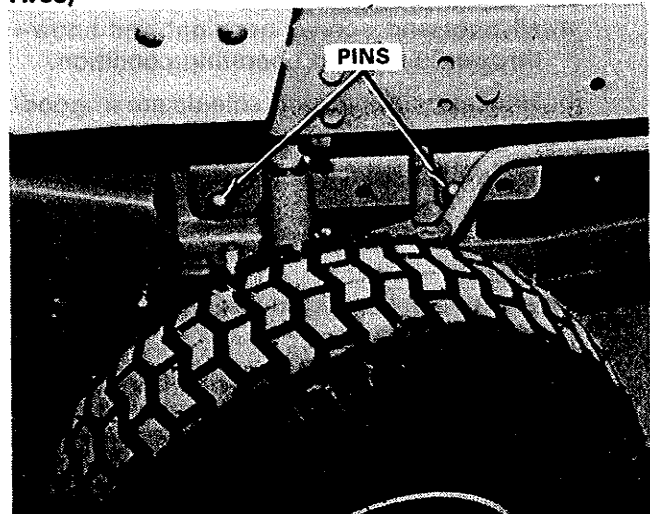


**Figure 2. Snowthrower Hitch (Tractors with 20" or 23" Rear Tires and all 2-Cylinder)**

A. Mounting Bracket



**Figure 3. Attaching Hitch (Tractors with 18" Rear Tires)**



**Figure 4. Attaching Hitch (Tractors with 20" or 23" Rear Tires and all 2-Cylinder)**

5. Align the four hitch arms (C, figure 1) inside the tractor hitch. Insert the four pins thru snowthrower hitch and tractor hitch (two on each side). Use the front and third holes of the tractor hitch. See figure 3 or figure 4.
6. Slip the belt (G, figure 5) onto the PTO pulley (A) as shown in figure 5. Loosen the PTO pulley belt stops if necessary. If more belt slack is needed, loosen the capscrew and move the brake pad (H) forward to allow forward movement of the flat idler pulley (I). Refer to figure 26 (page 15) for the belt pattern.

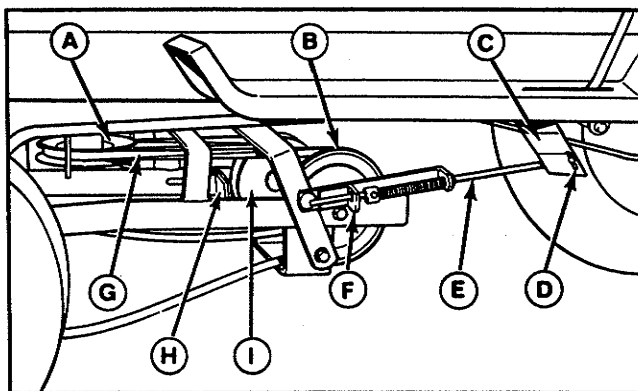


Figure 5. Install PTO Rod & Belt

- |                   |                      |
|-------------------|----------------------|
| A. PTO Pulley     | F. PTO Rod Guide     |
| B. V-Idler Pulley | G. Belt              |
| C. PTO Lever      | H. Brake Pad         |
| D. Spring Clip    | I. Flat Idler Pulley |
| E. PTO Rod        |                      |

7. Attach the PTO rod (E, figure 5) to the tractor PTO lever (C) (in hole marked "ST") with the spring clip (D).
8. Place the lift lever in fully forward position. Insert the rear end of the lift rod thru the left lever as shown in figure 6 and insert the spring clip (A).
9. Insert the prong on the rod guide (B, figure 7) thru the hole in snowthrower arm as shown in figure 7. Insert the spring clip (E) thru hole in prong to secure in place.
10. With the lift lever in lowered position, position the front set collar (A) so there is approximately one inch (25.4 mm) between rod guide (B) and set collar (A). Tighten the setscrew.
11. Raise the lift lever fully. Position the spring (C) against the rod guide (B) and the rear set collar (D) snug against the spring. Tighten the setscrew. Lower the snowthrower.
12. Proceed to Adjustments section and check all adjustments.

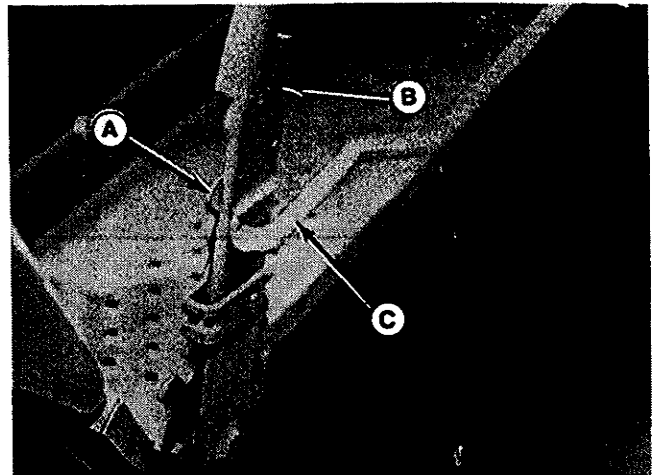


Figure 6. Lift Rod

- A. Spring Clip  
B. Lift Lever

- C. Lift Rod

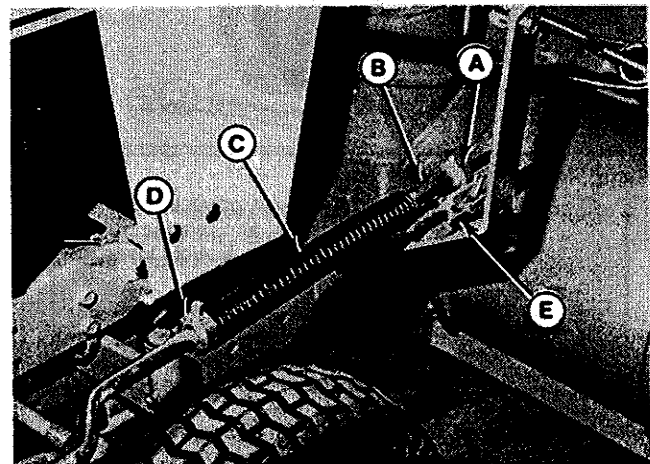


Figure 7. Lift Rod

- A. Front Set Collar  
B. Rod Guide

- D. Rear Set Collar  
E. Spring Clip

- C. Spring

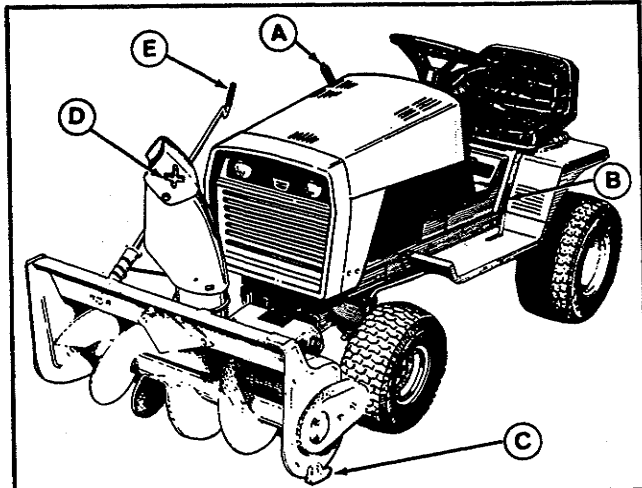
#### REMOVAL

1. Disconnect the lift rod from the tractor lift lever by removing one spring clip (A, figure 6). Store the spring clip in the lift rod.
2. Disconnect the PTO rod from the tractor PTO lever by removing one spring clip (D, figure 5). Store the spring clip in the PTO rod.
3. Remove belt from the tractor PTO pulley (G, figure 5). Loosen belt stops if necessary.
4. Disconnect the hitch by removing four pins and spring clips. Slide the mounting bracket off the shaft and lower the hitch. Store the pins and spring clips in the snowthrower hitch.
5. To operate tractor without snowthrower, release front tire pressure to normal psi (see tractor Operator's Manual).

# Operation

## CONTROLS

Figure 8 shows the locations, names, and operation of the snowthrower controls.



Item	Name	Operation
A	Lift Lever	To raise snowthrower, press button (on top), pull lever back, and release button. To lower, press button & allow lever to go forward slowly.
B	PTO Lever	To engage the PTO, push the lever forward with moderate speed. (Easing lever forward too slowly can cause belt wear). To disengage PTO, pull the lever back.
C	Skid Shoes	Adjust to control scraper bar height (see Skid Shoe Adjustment).
D	Deflector Knob	Loosen knob to adjust deflector height (see Deflector Adjustment).
E	Spout Control	Rotate either way to change direction of snow discharge.

Figure 8. Controls

## CHECKS BEFORE STARTING

1. Refer to the Normal Care section (page 6) and perform any needed care. Also, refer to the tractor Operator's manual Normal Care section to perform any needed care for the tractor. Refer to "Winterizing the Tractor" (page 15) to make sure tractor is prepared for winter use.
2. Remove any objects from the work area which might be caught in or thrown by the auger.
3. Clear the auger of any ice particles which may cause damage to auger.

4. Adjust the deflector and skid shoes to desired height (see Skid Shoe Adjustment and Deflector Adjustment on page 11).
5. Make sure all screws, nuts and pins are present and secure.

## TRANSPORTING

Disengage the PTO and then raise the snowthrower. Adjust ground speed according to surface conditions. Select first gear when transporting on a slippery surface.

## ENGINE SPEED & GEAR SELECTION

Normally, first gear is best for throwing snow. Set engine speed from 3/4 to full speed. When throwing deep or heavy snow, select first gear and use full engine speed. On tractors with a variable speed control lever, place the lever in SLOW position.

## OPERATION ON SLOPES

### WARNING

Never operate on slopes greater than 30 percent (16.7°) which is a rise of three feet (914 mm) vertically in 10 feet (3.1 m) horizontally. When operating on slopes greater than 15 percent (8.5°) one wheel weight on each rear wheel and tire chains are required. Select slow ground speed before driving onto a slope. Avoid using brakes to control speed. Drive up and down the face of slopes, and never across the face. Use caution when changing directions and **DO NOT STOP OR START.**

## STARTING & STOPPING

1. Start the tractor engine. Set engine speed at 1/2 speed.
2. Lower the snowthrower.
3. Engage the PTO.
4. Adjust engine speed to 3/4 to full speed. Select the appropriate gear.
5. Release the parking brake, then release clutch-brake pedal slowly to move into the snow.
6. To stop the tractor, press in the clutch-brake pedal. To stop the snowthrower, disengage the PTO. Before leaving the seat, stop the engine, disengage the PTO, set the parking brake, remove the key and wait for moving parts to stop.

## SNOW REMOVAL SUGGESTIONS

 **CAUTION**

Always raise the snowthrower before turning or backing to prevent damage to it.

Determine the best snow removal pattern before beginning. Wind direction is an important factor to consider. Rotate the spout to discharge snow downwind. Plan the pattern so that you avoid throwing snow on cleared areas and on yourself as you're operating.

When land contour permits, it is best to travel in the longest direction to minimize turning.

 **WARNING**

If the auger stalls or the chute plugs, **DISENGAGE THE PTO, STOP THE ENGINE AND REMOVE THE KEY. SET THE PARKING BRAKE. WAIT FOR MOVING PARTS TO STOP.** Remove the foreign object or clear the spout before restarting engine.

In very deep or heavy snow, it may be necessary to make the first pass with snowthrower partially raised, backing up every few feet to clear the snow left on the surface. Also, it may be necessary to slice off less than the full width of the auger or to reduce ground speed. If the snow stops flowing freely from the spout, use reverse to back away until snowthrower clears itself.

# Normal Care

## SCHEDULE FOR NORMAL CARE

A schedule for normal care is provided in the following chart.

Care Required	Schedule
Clean snow and ice from snowthrower.	After each use.
Lubricate snowthrower.	Every ten hours or at least once a year.
Inspect, adjust, and lubricate drive chain.	Once a year or more often under frequent use.

## Normal Care Chart

### LUBRICATE SNOWTHROWER

- Apply a thin film of grease or a few drops of oil to:
  - Points on PTO rod that contact PTO rod guide (see figure 5);
  - PTO Rod Ends;
  - Spout Rotating Surface (shown in figure 10; and
  - Hitch Mounting Pins.
- Lubricate drive shaft and auger shaft as shown in figure 10.

### INSPECT, ADJUST & LUBRICATE DRIVE CHAIN

- Remove the chain guard (E, figure 9) by removing the two nuts (F).
- Check the chain for wear or damage. Replace chain if worn or damaged.
- There should be no slack in the chain and the sprockets (G and K) should be aligned. The drive shaft housing (L) should be parallel with the auger housing. To adjust, proceed as follows.
  - Loosen the two screws (A) and two nuts (B). Loosen the screw on top of housing that secures pulley belt guide.
  - Pull rearward on the drive shaft housing (L) until all slack is removed from chain. With drive shaft housing parallel to auger housing and sprockets aligned, retighten the two screws (A) and nuts (B). Be sure to hold nuts while tightening screws (A) and hold screws (inside housing) while tightening nuts (B). Torque to 40-50 ft. lbs.

- Tighten the screw on top of housing making sure belt guide is properly positioned (belt guide is shown in figure 19).
- Spread a coat of grease on the chain, working the grease into the links.
- Reinstall the chain guard and two nuts.

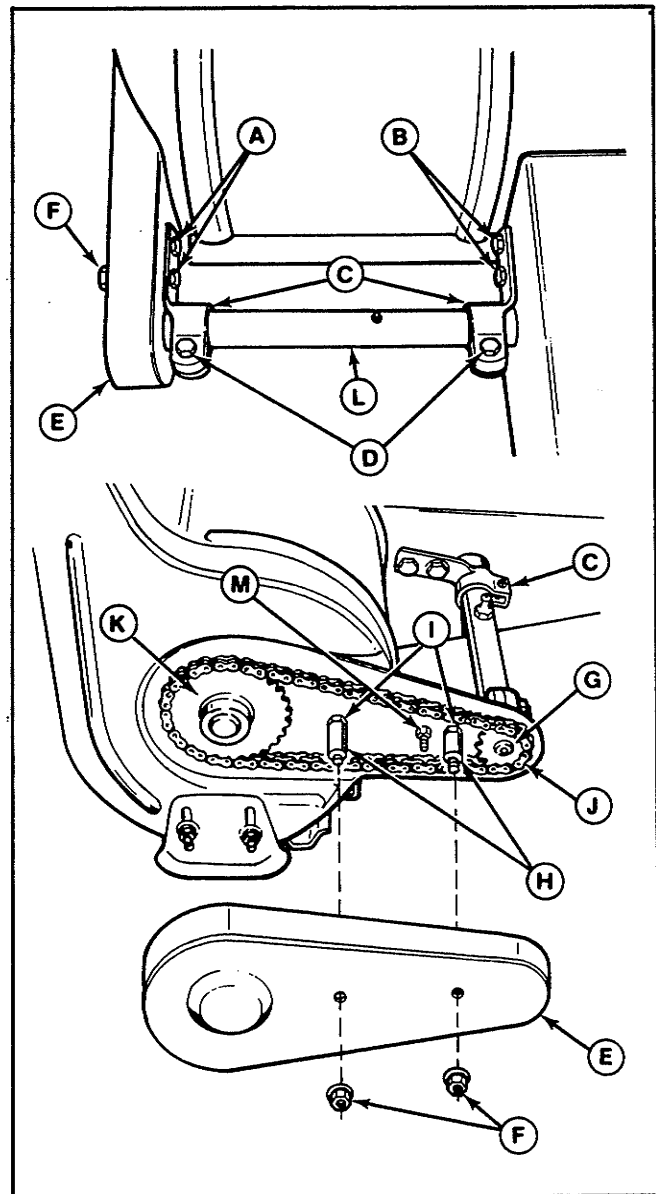


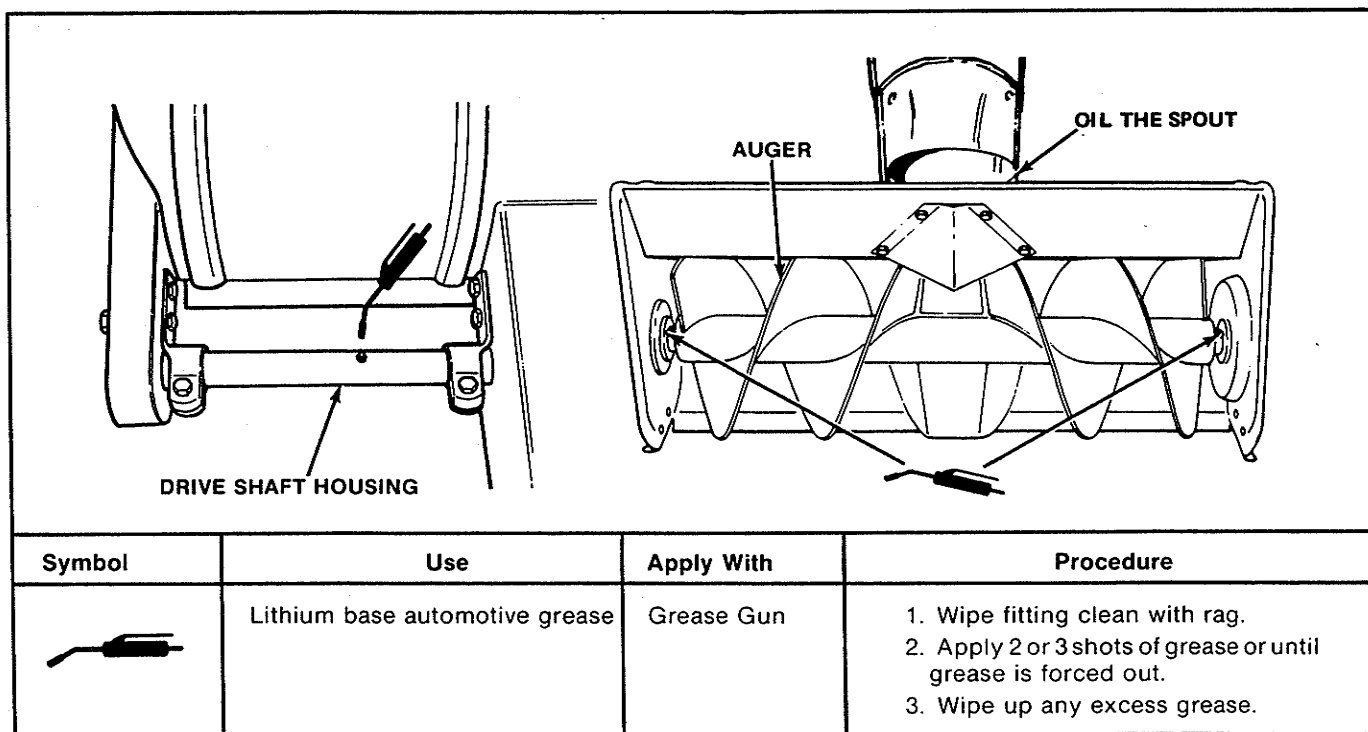
Figure 9. Drive Chain

- |                         |                        |
|-------------------------|------------------------|
| A. Screws               | H. Spacers             |
| B. Nuts                 | I. Nuts                |
| C. Clamps               | J. Chain               |
| D. Screw                | K. Auger Sprocket      |
| E. Chain Guard          | L. Drive Shaft Housing |
| F. Nuts                 | M. Flange Nut          |
| G. Drive Shaft Sprocket |                        |



**OFF-SEASON STORAGE**

1. Remove the snowthrower from the tractor.
2. Use water pressure or a brush to thoroughly clean the housing.
3. Paint or lightly coat with oil any area where paint has been worn or chipped away.
4. Lubricate the snowthrower.
5. To save space, the hitch can be removed from the snowthrower by removing two pins and spring clips and by removing the belt guide and belt from the snowthrower pulley.



**Figure 10. Lubricate Drive Shaft & Auger Shaft**

# Troubleshooting & Belt Replacement

## WARNING

To avoid serious injury, perform maintenance on the tractor or snowthrower only when the engine is stopped, parking brake is set, and all moving parts have stopped. Always remove the ignition key before beginning the maintenance to prevent accidental starting of the engine.

## TROUBLESHOOTING

Locate the problem you've encountered in the Troubleshooting Chart. Check the possible causes one at a time in the order listed. Correct any problems that are found and operate the snowthrower to see if you have eliminated the problem.

## BELT REPLACEMENT

1. Remove the snowthrower from the tractor.
2. Remove the belt from the pulley inside the snowthrower.
3. Remove the nut (B, figure 11) from the flat idler pulley (E). Unhook the spring (A).
4. Remove the flat washer (C) and belt guide (D) from the flat idler pulley.
5. Loosen the nut (F) on the V-idler pulley (H) enough to slip the belt guide (J) off the capscrew. Remove the belt guide.
6. Loosen the bolt that secures the V-idler pulley enough so that the belt can be slipped out from the V-idler pulley.

7. Remove the old belt and install the new belt. The belt pattern is shown in figure 26 on page 15.
8. Tighten the bolt (I) while holding the inner nut (G). Reinstall the belt guard (J) and tighten the nut (F).
9. Reinstall the belt guide (D) and washer (C). Hook up the spring (A) and install the nut (B).

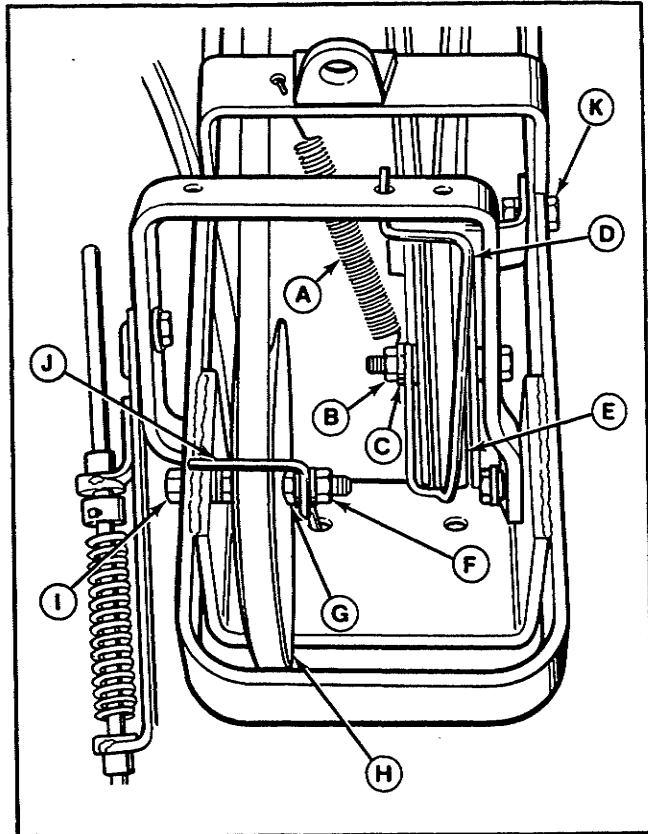


Figure 11. Hitch, Viewed from Rear

- |                      |                    |
|----------------------|--------------------|
| A. Spring            | G. Nut             |
| B. Nut               | H. V-Idler Pulley  |
| C. Washer            | I. Bolt            |
| D. Belt Guide        | J. Belt Guide      |
| E. Flat Idler Pulley | K. Capscrew, Brake |
| F. Nut               |                    |

<b>Problem</b>	<b>Cause/Remedy</b>
<b>1. Snowthrower auger does not rotate.</b>	<p><b>A.</b> PTO lever not engaged. Engage PTO lever. See Operation section.</p> <p><b>B.</b> Foreign material blocking auger. STOP engine. Remove key. Unplug auger.</p> <p><b>C.</b> Snowthrower drive belt slipping. Adjust drive belt tension. See Adjustments section.</p> <p><b>D.</b> Drive chain broken. Replace parts as necessary.</p>
<b>2. Auger rotates, but snow not thrown far enough.</b>	<p><b>A.</b> Engine RPM too slow. Operate engine at 3/4-full throttle.</p> <p><b>B.</b> Ground speed too fast. Use low gear.</p> <p><b>C.</b> Snowthrower discharge spout clogged. STOP engine. Remove key. Unplug discharge spout.</p>
<b>3. Scraper bar does not clean down to hard surface.</b>	Skid shoes not properly adjusted. Adjust skid shoes. See Adjustments section.
<b>4. Snowthrower picks up and throws stones on gravel drive.</b>	<p><b>A.</b> Skid shoes not properly adjusted for gravel surface. Adjust skid shoes. See Adjustments section.</p> <p><b>B.</b> Too much down pressure on snowthrower. Use the tractor lift lever to raise the snowthrower slightly. See Operation section.</p>
<b>5. Tractor does not have sufficient traction.</b>	Tractor too light at rear wheels. Use rear wheel weights and tire chains. See Accessories.
<b>6. Tractor not stable on sloping surfaces.</b>	<p><b>A.</b> Ground speed too fast. Reduce ground speed.</p> <p><b>B.</b> Tractor not properly weighted. Use rear wheel weights and tire chains. See Accessories.</p> <p><b>C.</b> Tire pressure incorrect. Inflate tires according to tractor operator's manual. Also see step 2 on page 2.</p>
<b>7. Auger does not stop when PTO is disengaged.</b>	<p><b>A.</b> Snowthrower brake not properly adjusted. Adjust brake. See Adjustments section.</p> <p><b>B.</b> Belt tension not properly adjusted. Adjust belt tension. See Adjustments section.</p> <p><b>B.</b> Belt tension not properly adjusted. Adjust belt tension. See Adjustments section.</p> <p><b>C.</b> Belt stops not properly adjusted. Adjust PTO pulley belt stops. See Adjustment section.</p>

**Troubleshooting Chart**

# Adjustments

## **⚠ WARNING**

Before performing adjustments, stop the engine and remove the key. Place tractor and snowthrower on a level surface. Engage the vehicle parking brake. Wait for all moving parts to stop.

### BELT TENSION ADJUSTMENT

1. Engage the PTO.
2. Measure the distance between the set collar and rod guide as shown in figure 12. The distance should be 1-3/8" (35 mm).
3. Place a "square" against hitch and pivot bracket as shown in figure 12A. The top of the pivot bracket should be 3/4 to 1 inch (19 to 25 mm) from vertical as shown. (The bracket must lean toward front of unit as shown.)
4. If both of these measurements are correct, belt tension is acceptable. If one or both measurements is not correct, go on to step 5.
5. To adjust the PTO rod, first disengage the PTO. Then loosen the setscrew in the set collar. Change the position of the set collar on the rod then tighten the setscrew. Engage the PTO and check the adjustment in steps 2 and 3. If adjustment of pivot bracket is necessary, go on to step 6.
6. To adjust the pivot bracket, first disengage the PTO. Loosen the screw which secures the "V" pulley in the slot (figure 12). Moving the pulley forward or back in the slot will change the pivot bracket position. Retighten the screw while holding nut on other side to keep from turning.
7. Repeat the adjustment procedure until the measurements in step 2 and 3 are attained when the PTO is engaged.

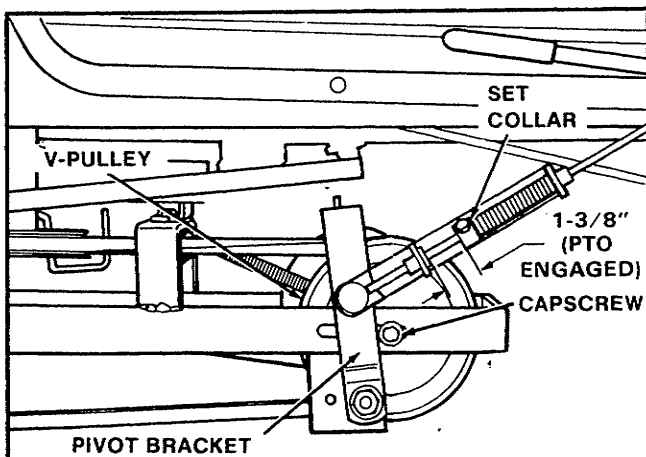


Figure 12. PTO Adjustment

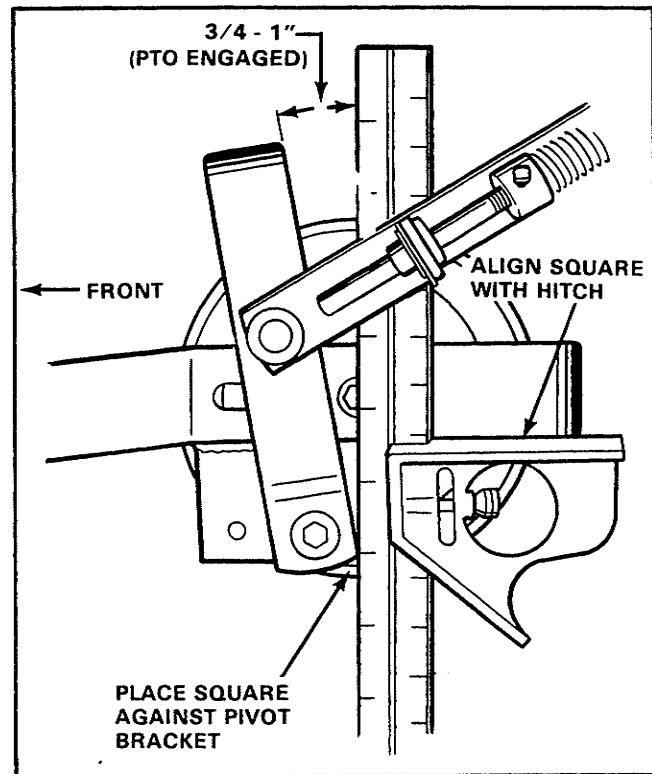


Figure 12A. PTO Adjustment

8. Disengage the PTO and start the tractor engine. Engage the PTO and run the snowthrower under no load for five minutes to seat the belt. Stop the engine. Recheck both measurements with PTO engaged. Readjust if necessary.
9. Check snowthrower brake adjustment.

### SNOWTHROWER BRAKE ADJUSTMENT

1. With the PTO engaged (lever down) measure the gap between the brake pad and the idler pulley. See figure 13. If it measures 1 inch (25 mm) adjustment is correct. If not, go to step 2. If adjustment is correct, go to step 3.

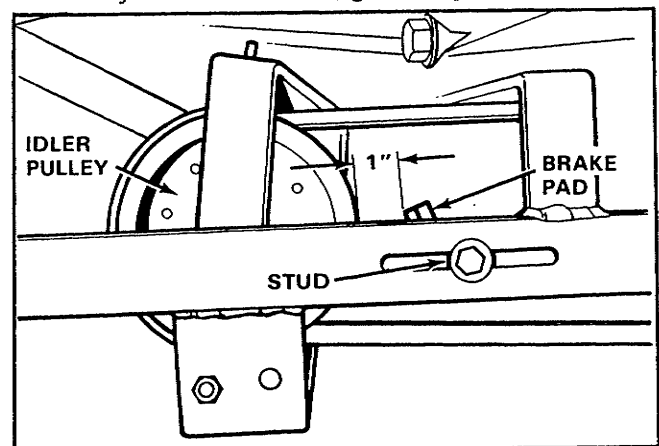


Figure 13. Brake Adjustment

- Loosen the stud securing the brake pad. Move the brake pad forward or back until there is a one inch gap between pad and edge of idler pulley. Tighten the stud, making sure the brake pad is aligned so that maximum brake pad surface contacts the pulley.
- Disengage the PTO and start the tractor engine. Raise the snowthrower. The snowthrower belt should not turn. If it does, stop the engine and move the brake pad farther away from the pulley. Recheck for belt movement.

### PTO PULLEY BELT STOP ADJUSTMENT

- With the PTO engaged, measure the gap between each PTO pulley belt stop and flat side of belt (figure 14). The gap should be 1/16 inch (1.5 mm). (The belt stops are also shown in figure 25 on page 15.) If not, adjust as follows.

#### NOTE

If belt stops cannot be positioned 1/16" from belt without touching pulley, position belt stops as close to pulley as possible without touching pulley.

- Loosen the capscrew holding the belt stop and move it to obtain a 1/16 inch gap. Hold the belt stop in place and tighten the capscrew.
- Recheck the measurements (PTO engaged).

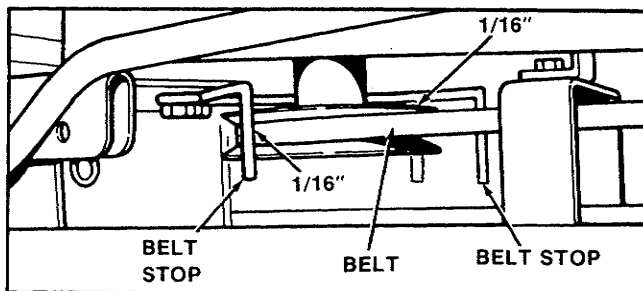


Figure 14. PTO Pulley Belt Stops

### SKID SHOE ADJUSTMENT

On a smooth, hard surface such as concrete or asphalt, adjust the skid shoes so that the scraper bar rests on the surface. On a rough surface, such as gravel, adjust the skid shoes so that the scraper bar rides slightly above the surface and does not pick up debris.

To adjust, rest each side of the scraper bar on wood blocks about one inch (25 mm) high, with scraper bar level with surface. Loosen the two nuts holding each skid shoe and move the skid shoes up or down (figure 15). Tighten the nuts securely, with both skid shoes adjusted to same level and parallel to the surface.

### DEFLECTOR ADJUSTMENT

The position of the deflector determines the height and distance snow will be thrown. Most snow throwing can be done with the deflector all the way up.

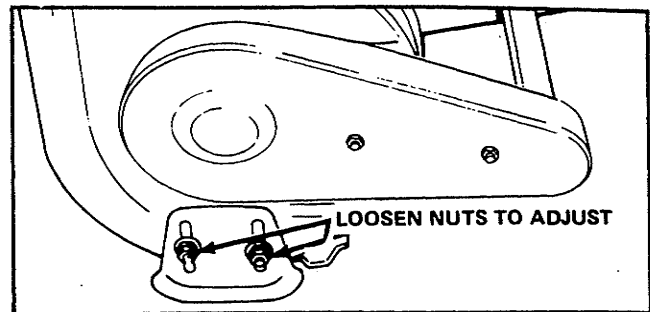


Figure 15. Skid Shoe Adjustment

To adjust, loosen the knob and move the deflector up or down. Retighten the knob.

### LIFT ROD ADJUSTMENT

- Fully raise the snowthrower. Measure the clearance between the scraper bar and the ground. The clearance should be about 3-1/2 to 4 inches (89 to 102 mm). If not, perform step 2. If clearance is OK, go to step 3.
- Lower the snowthrower. Loosen the setscrew in the front set collar (A, figure 7). To increase the clearance, move the set collar toward the rod guide (B). To decrease clearance, move the set collar toward front. Tighten the setscrew. Raise the snowthrower and recheck the measurement. Readjust if necessary.
- The scraper blade will float over the surface bumps or dig into them depending on the down pressure adjustment. The initial adjustment made during snowthrower installation may be suitable. If not, perform step "a" to allow scraper blade to float or step "b" to increase down pressure.
  - Fully raise the snowthrower. Loosen the setscrew in the rear set collar (D, figure 7). Move the set collar back away from spring. The farther back the set collar is moved, the more the scraper blade will float. Tighten the setscrew.
  - Fully lower the snowthrower lift lever. Loosen the setscrew in the front set collar (A) and slide it off the lift rod. Pull the lift lever back slightly so lift rod moves back one inch or two inches. Place the spring against the rod guide. Place the rear set collar against the spring and tighten the setscrew. Fully lower the lift lever. Notice that the spring is now compressed to provide down pressure. (Spring should compress about two inches. Do not allow spring to go solid.) Place the front set collar on the rod and tighten the setscrew. Recheck the scraper bar clearance (step 1) and readjust front set collar if necessary.

# Assembly

## ATTENTION SETUP PERSONNEL:

As setup personnel you have an obligation to know the product better than the customer. This includes safety related items. Prior to actual setup, thoroughly familiarize yourself with the Operator's Manual. Pay special attention to all safety warnings. It is possible during setup to place yourself in a position which is more hazardous than when the unit is in operation. Remember, it is your responsibility to set up the product safely and to know it well enough to be able to instruct a customer in the safe use of his power unit.

Safety is a matter of common sense . . . A matter of thinking before acting. Most shops have specific safety practices. Follow them. The precautions listed in the Operator's Manual should not supersede existing practices but should be considered as supplemental information.

## SNOWTHROWER ASSEMBLY

1. Attach the support arm (E, figure 16) to the snowthrower frame with two 1 inch (25.4 mm) long capscrews and flange locknuts (F) provided.

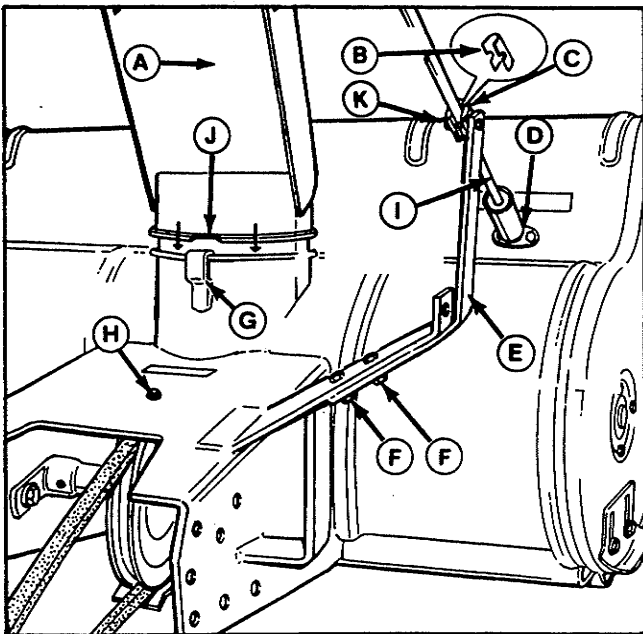


Figure 16. Spout & Controls

- |                    |                        |
|--------------------|------------------------|
| A. Spout Extension | G. Clip                |
| B. Rod Guide Liner | H. Belt Guard Capscrew |
| C. Rod Guide       | I. Spout Control Rod   |
| D. Pivot Bearing   | J. Notch               |
| E. Support Arm     | K. Rod Guide           |
| F. Flange Locknuts |                        |
2. Insert the end of the spout control rod (I) through the plastic pivot bearing (D) on the auger housing. Place a cotter pin in the lowest rod hole on the inside of the housing. Spread the cotter pin fully around the rod. Pull the rod back so the cotter pin

is up against the bearing and insert another cotter pin through the rod just above the bearing. Spread the cotter pin fully around the rod.

## NOTE

Do not let the bearing alone support the full weight of the rod, as the bearing can be damaged.

3. Place the thin plastic rod guide liner (B) inside the rod guide (K). Place the rod guide over the spout control rod and attach the rod guide to the support arm with the 1-1/2 inch (38 mm) long capscrew and locknut provided. Install the locknut flush with the end of the capscrew.
4. Install the spout extension (A) on the snowthrower housing so the clip (G) is positioned in the notch (J) on the spout extension. Oil the spout extension so it turns freely.
5. With the spout extension facing slightly left, wind the cable around the control rod spool as shown in figure 17. Wind three turns on the rear part of the spool so that the cable leaves the spool on the lower edge as shown. Wind two turns on the front part of the spool so that the cable leaves the spool on the upper edge as shown.
6. Place the looped end of the cable over the stud on the spout extension (see figure 17). Place the small flat washer provided on the stud. Pull the other end of the cable around the stud as shown with a pliers. While holding the cable tight, install the cup washer (facing inward), lockwasher and nut to hold the cable. Tape any loose cable neatly to the taut cable.

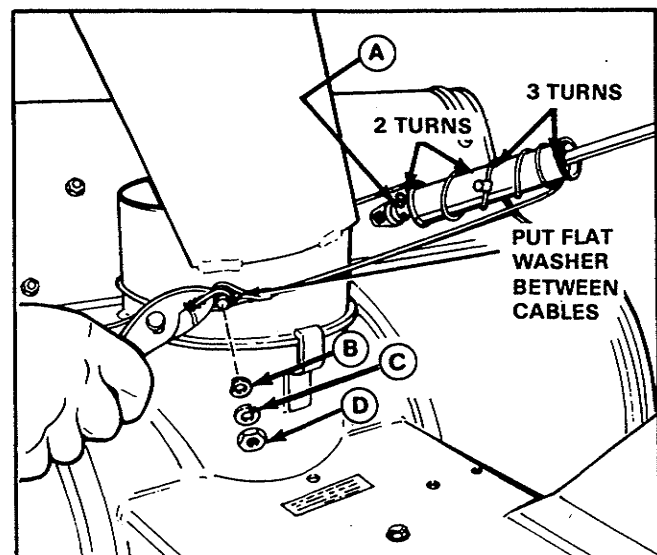


Figure 17. Spout Control Cable

- |               |               |
|---------------|---------------|
| A. Cotter Pin | C. Lockwasher |
| B. cup Washer | D. Nut        |

7. Attach the deflector (C, figure 18) to the spout extension with two screws (H), washers (G), spacers (F), washers (A), lockwashers (E) and nuts (D).
8. Position the bolt (I) and washer (A) and then thread the knob (B) onto the bolt (I).
9. Install the two clips (R and T, figure 20) with four capscrews (S) and locknuts (U) as shown. The clips are shown installed in figure 19.
10. Slip the belt onto the pulley inside the snowthrower. Install the belt guide (A, figure 19) onto the pulley. Insert the spacer (C) inside the clamp and install the capscrew (B), lockwasher and nut (D).
11. Install the self-tapping screw (AA), figure 20 from top of housing into the belt guide to secure belt guide in place.

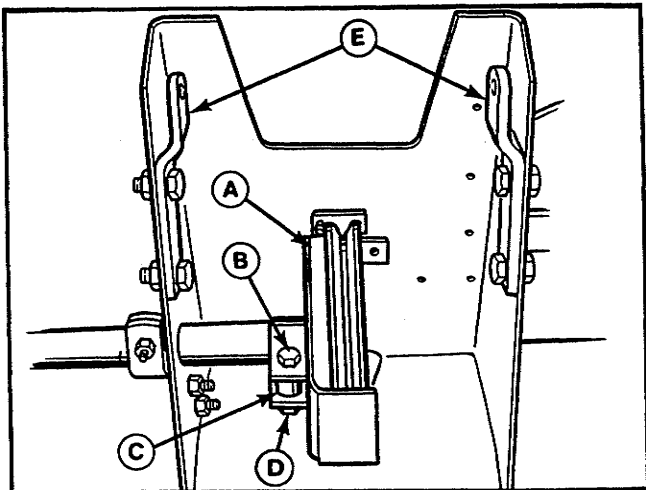


Figure 19. Belt Guide Installed

- |               |                     |
|---------------|---------------------|
| A. Belt Guide | D. Lockwasher & Nut |
| B. Capscrew   | E. Clips            |
| C. Spacer     |                     |

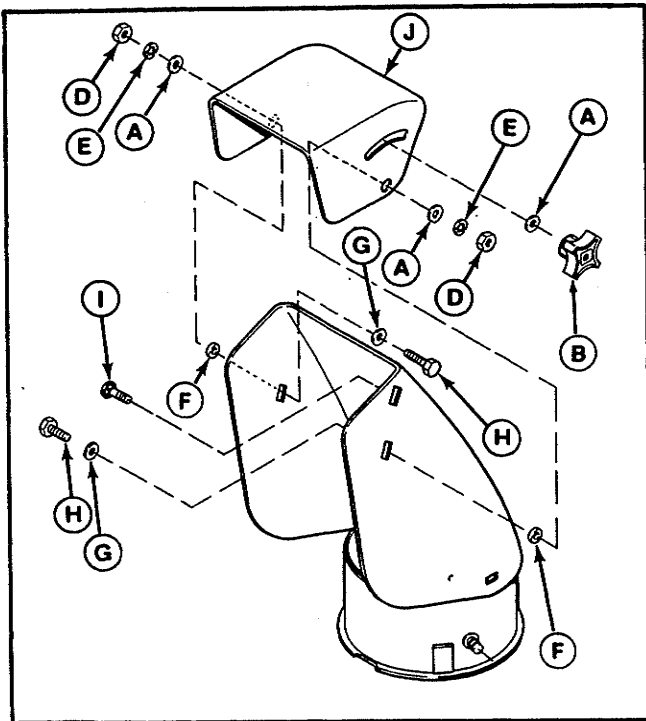


Figure 18. Installing Deflector

- |                     |                        |
|---------------------|------------------------|
| A. Washer, 5/16     | F. Spacer              |
| B. Knob             | G. Washer, 5/16        |
| C. Deflector        | H. Screw, 5/16         |
| D. Nut, 5/16        | I. Carriage Bolt, 5/16 |
| E. Lockwasher, 5/16 |                        |

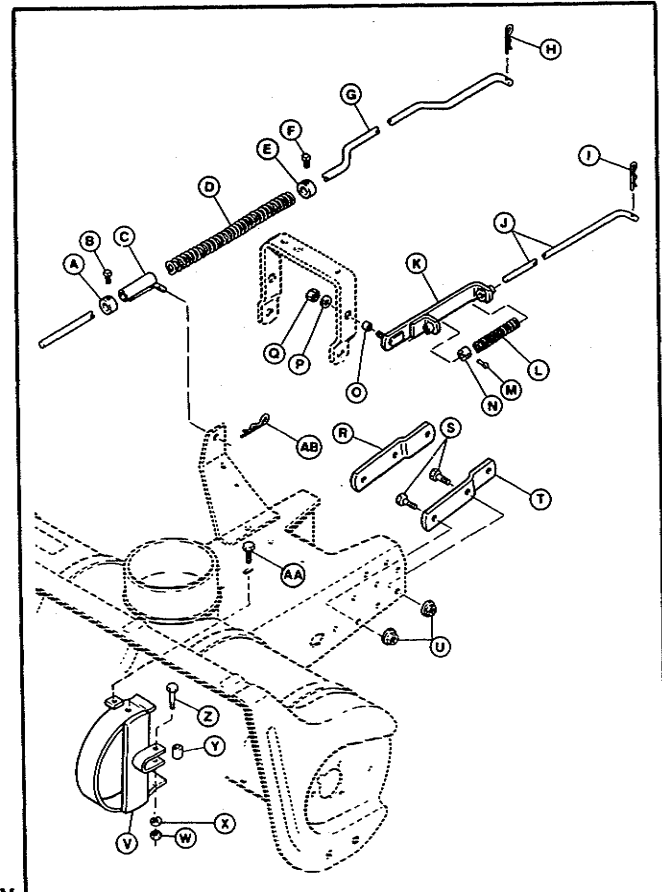
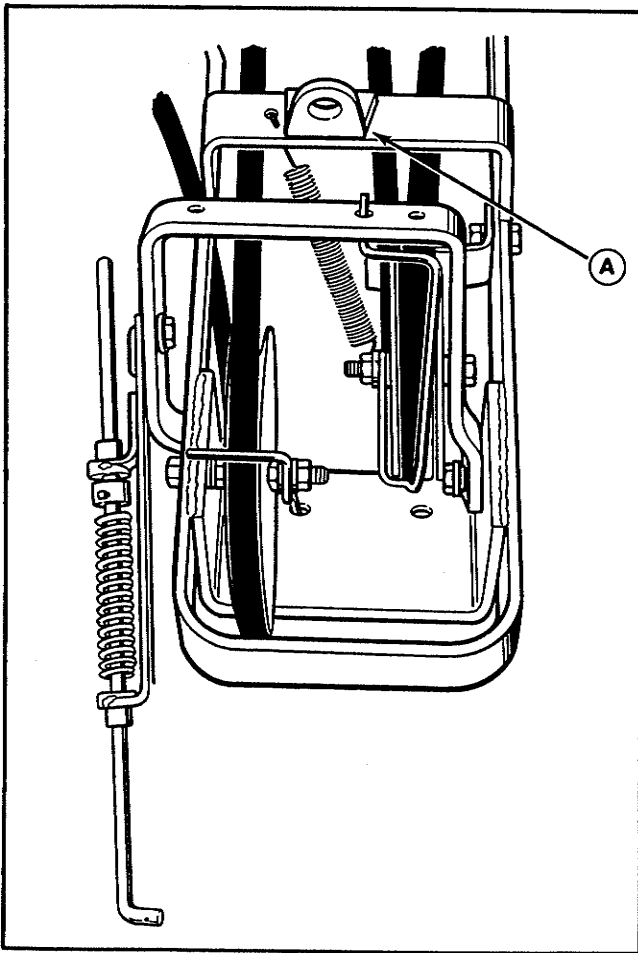


Figure 20. Snowthrower Assembly

- |               |                |                   |                        |
|---------------|----------------|-------------------|------------------------|
| A. Set Collar | H. Spring Clip | O. Spacer         | V. Belt Guide          |
| B. Setscrew   | I. Spring Clip | P. Washer         | W. Nut                 |
| C. Rod Guide  | J. PTO Rod     | Q. Locknut        | X. Lockwasher          |
| D. Spring     | K. Rod Guide   | R. Clip           | Y. Spacer              |
| E. Set Collar | L. Spring      | S. Capscrew       | Z. Capscrew            |
| F. Setscrew   | M. Setscrew    | T. Clip           | AA. Self Tapping Screw |
| G. Lift Rod   | N. Set Collar  | U. Flange Locknut | AB. Spring Clip        |

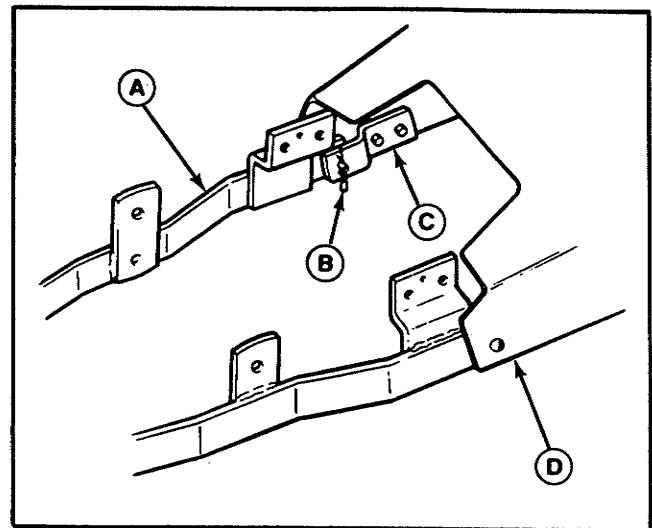
**HITCH ASSEMBLY**

1. Two mounting brackets (A, figure 21) are shipped with the hitch. Notice that one mounting bracket is about one inch longer than the other one. Use the longer mounting bracket for tractors with variable speed control lever. Use the shorter bracket for all other tractors. Install the bracket with two self-tapping screws as shown in figure 21. Keep the other mounting bracket, in case the snowthrower is eventually used with a different tractor.
2. Attach the hitch to the snowthrower with two pins and two spring clips provided. See figure 22. Install spring clips on the inside.



**Figure 21. Mounting Bracket**

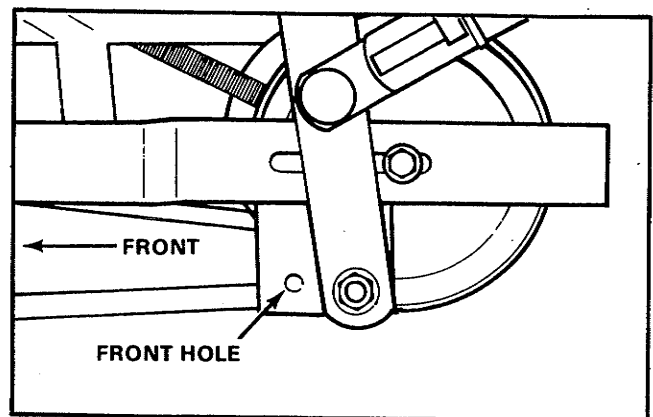
A. Mounting Bracket



**Figure 22. Hitch, Side View**

- |                |                |
|----------------|----------------|
| A. Hitch       | C. Clip        |
| B. Spring Clip | D. Snowthrower |

3. It is important that the pivot bracket be connected to the proper holes in the hitch (figure 23). The correct holes to use depends on the tractor. For tractors with 20 inch or 23 inch diameter rear tires or 18 inch rear tires with 2-cylinder engine, use rear hole as shown in figure 23. For tractors with 18 inch diameter rear tires, except those with 2-cylinder engine, use front hole.



**Figure 23. Pivot Bracket (Shown installed in rear hole).**



## WINTERIZING THE TRACTOR

### **CAUTION**

The winterizing parts are provided for winter use only, and must be removed in warm weather to prevent overheating and damage to engine.

The parts shown in figure 24 must be installed on the tractor for winter operation. Notice that some parts may not be used, depending on the tractor. Proceed as follows.

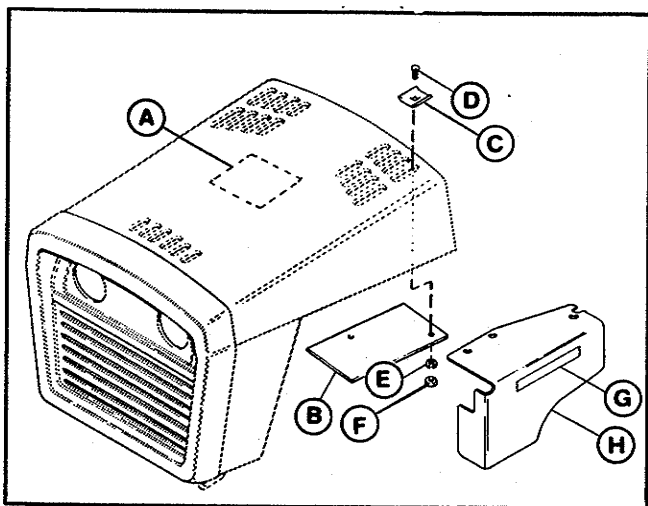


Figure 24. Winterizing Parts

NAME	QTY.
*A. Instruction Decal	1
*B. Cover	2
*C. Clip	4
*D. Bolt	4
*E. Lockwasher	4
*F. Nut	4
**G. Decal	1
**H. Deflector	1

\*For tractors with louvers only.

\*\*Used on 8 hp, 11 hp or 12 hp tractors.

- If the hood has louvers as shown in figure 24, install the two covers (B) from bottom of hood to cover louvers with the four bolts (D), clips (C), lockwashers (E) and nuts (F). Apply the instructional decal (A) to underside of hood to serve as a reminder.
- For 8 hp, 11 hp and 12 hp tractors, install the deflector (H) as follows:
  - Remove the two screws from the top of the air cleaner.

- Align two holes in the deflector with the two holes in the air cleaner cover and reinstall the two screws. Figure 25 shows the deflector installed.

- Apply the decal that says "Remove shield for summer operation" onto the deflector as shown in figure 25.

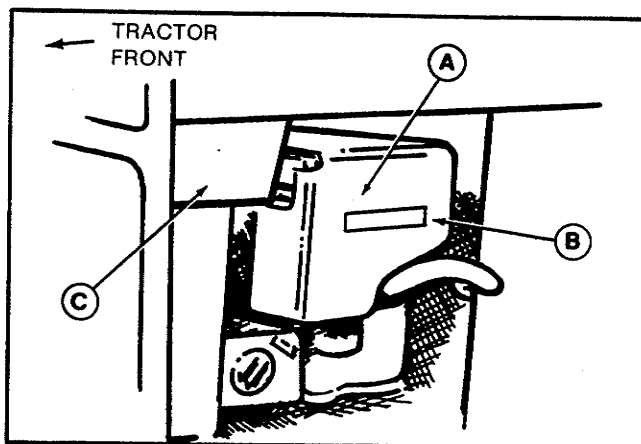


Figure 25. Deflector Mounted On Air Cleaner

- A. Deflector  
B. Decal  
C. Hood

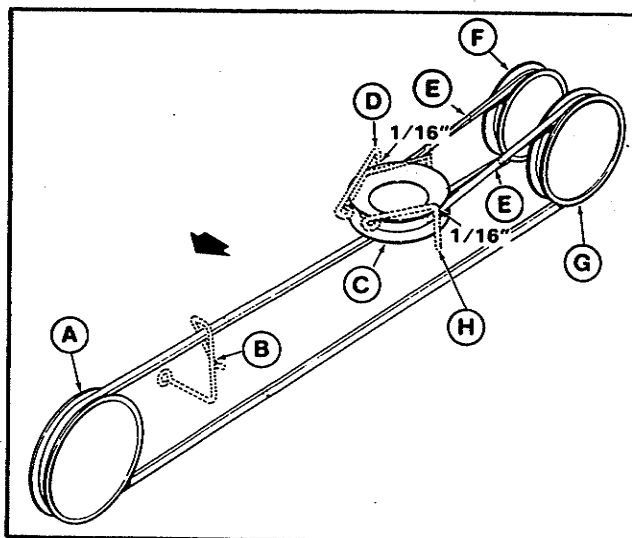


Figure 26. Belt Pattern

- A. Snowthrower Pulley  
B. Belt Guide  
C. Engine PTO Pulley  
D. Right-Hand Belt Stop  
E. 90° Turn  
F. Flat Idler Pulley  
G. V-Idler Pulley  
H. Left-Hand Belt Stop

## TIRE CHAIN INSTALLATION

### NOTE

The tires shown are typical and may not match your model exactly.

### Preparation

1. Place the tractor or snowthrower on a level surface. Stop the engine and remove the key.
2. The air pressure in the tires must be 6 to 8 psi to allow installation of chains. Check the pressure and release air if necessary.

### Chain Installation, Left Tire

1. Lay the chain out in front of the tire with the "quick hook" (A, figure 27) and "fastener" (B) to the rear as shown. The quick hook must be on the inside and the fastener on the outside. The open sides of the cross chains must be down.

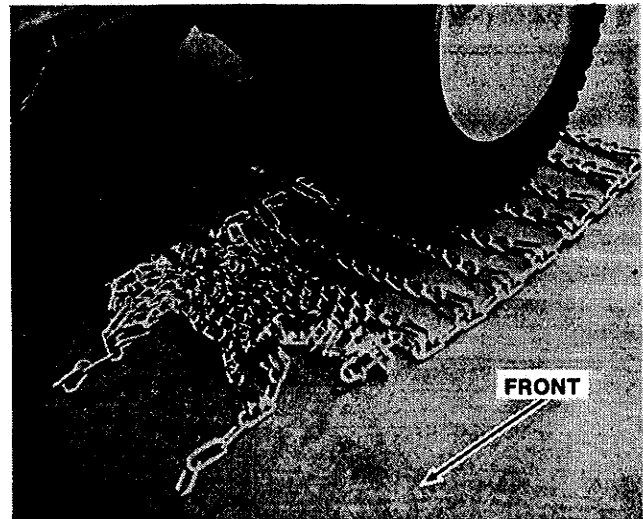


Figure 28

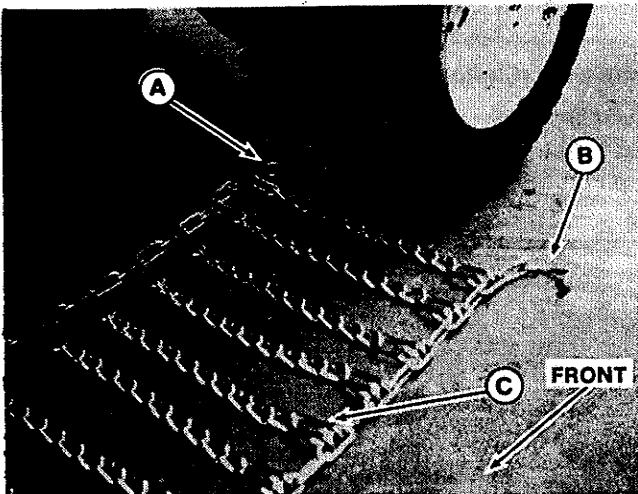


Figure 27

- A. Quick Hook
- B. Fastener
- C. Cross Chain Hook

2. Place the transmission in NEUTRAL and release the parking brake. On hydrostatic tractors, push the free wheeling latch down to disengage transmission.
3. Roll the tractor or snowthrower forward so that the tire rests on the chain as shown in figures 28 and 29.
4. Set the parking brake and place transmission in gear.
5. Pull the chain over the top of the tire until side chains are tight and cross chains are positioned as shown in figure 31.

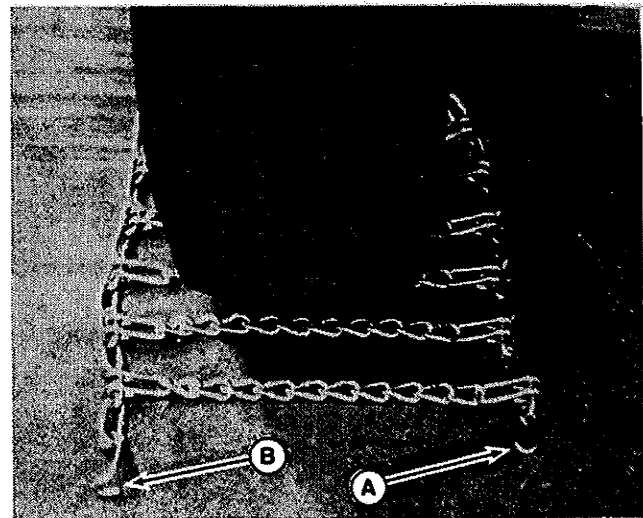
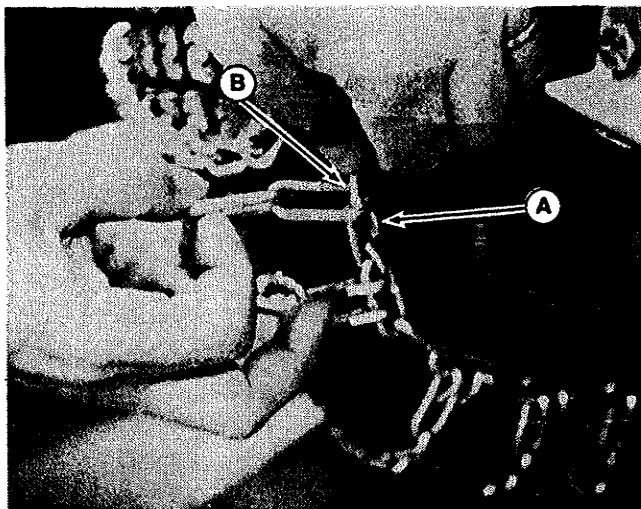


Figure 29 (Seen from rear)

- A. Quick Hook
- B. Fastener

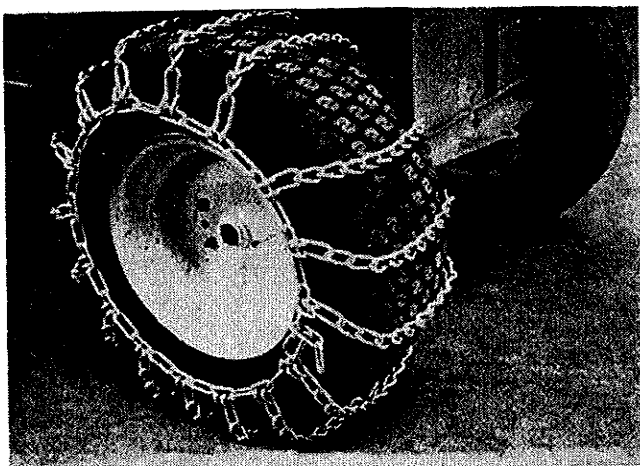
6. Insert the quick hook (A, figure 30) into one of the end links (B). The correct end link to use depends on the tire size. Select the appropriate link to achieve a snug chain fit.
7. The fastener must be connected so that the chain has a snug fit on the tire as shown in figure 31. A closeup of the fastener connection is shown in figure 32. Insert the fastener thru the appropriate end link and then hook it to the chain as shown in figure 32. A pair of pliers can be used to assist in connecting fastener.



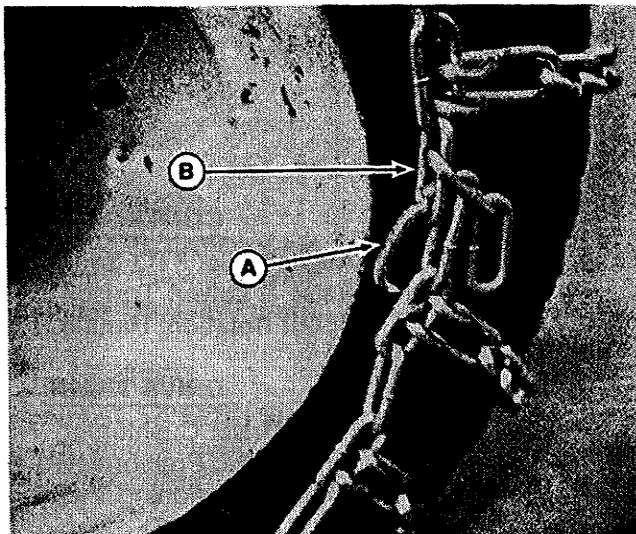
**Figure 30**  
A. Quick Hook  
B. End Link

#### Chain Installation, Right Tire

1. Lay the chain out in front of the right tire with the quick hook fastener to the front. The quick hook must be on the inside and the fastener on the outside. The open sides of the cross chain hooks must be down.
2. Use the same procedure to install chain on right tire as was used for left tire.



**Figure 31**



**Figure 32**  
A. Fastener  
B. End Link

#### Final Checks

1. For better traction, the tire pressure can be increased to 15 to 18 psi. If the chain is tight due to large tire size, do not increase tire pressure.

#### **WARNING**

**Stop the engine, disengage PTO, set the parking brake, remove the key and wait for moving parts to stop before leaving operator's position to adjust chains.**

2. After driving the tractor or snowthrower for a short time, recheck each chain. If a chain does not fit snugly, move the fastener and quick hook up another link to tighten chain.

---

# Specifications

## CONTROLS

**Auger Drive:** PTO lever on left footrest  
**Raise & Lower:** Tractor lift lever  
**Spout Rotation:** Handle to right of operator

## DRIVE TRAIN

**Input Drive:** Cushioning V-Belt  
**Final Drive:** Prelubricated enclosed roller chain  
**Clutch:** Tensioning V-Belt with brake

## AUGER HOUSING

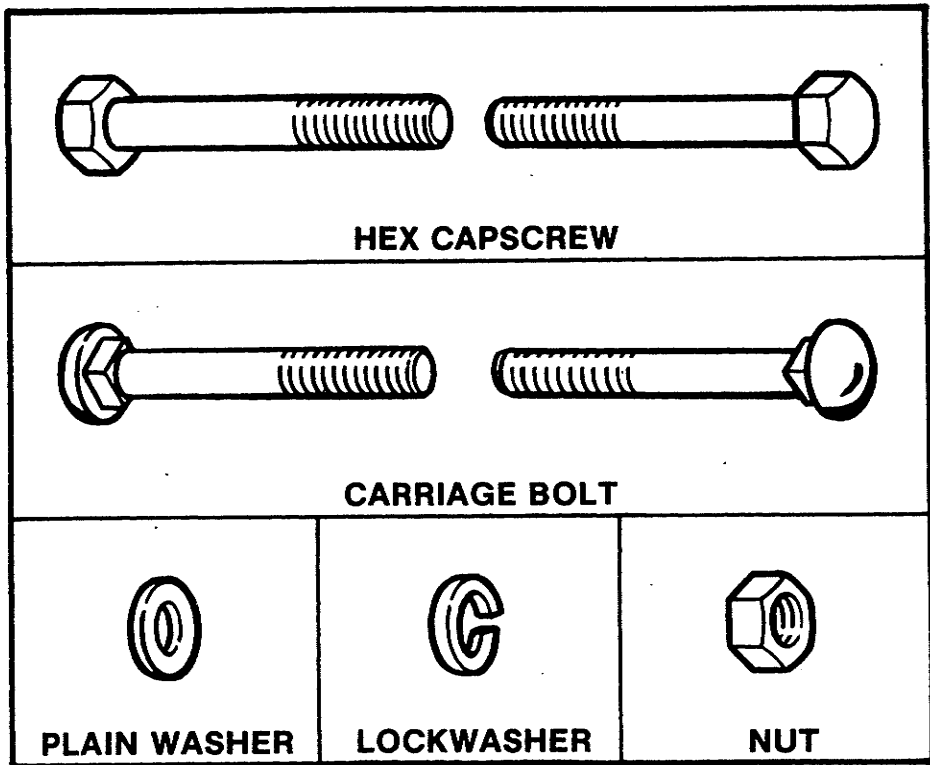
**Bearings:** Self-aligning rolling contact  
**Housing:** Welded steel  
**Scraper Bar:** Full width high carbon steel - replaceable

<u>DIMENSIONS</u>	<u>36 INCH</u>	<u>42 INCH</u>
<b>Effective Width:</b>	<b>36" (914 mm)</b>	<b>42" (1067 mm)</b>
<b>Overall Width:</b>	<b>37-1/2" (953 mm)</b>	<b>43-1/2" (1105 mm)</b>
<b>Overall Length:</b>	<b>27" (686 mm)</b>	<b>27" (686 mm)</b>
<b>Overall Height:</b>	<b>19-1/2" (495 mm)</b>	<b>19-1/2" (495 mm)</b>
<b>Auger Diameter:</b>	<b>12" (305 mm)</b>	<b>12" (305 mm)</b>





# STANDARD FASTENER IDENTIFICATION CHART



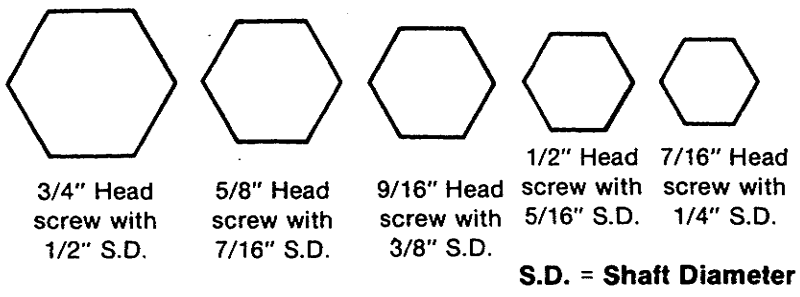
Hardware sizes are given in the illustrations throughout this manual.

If a washer or nut is identified as "washer, 1/2" or "nut, 1/2", this means the inside diameter is 1/2 inch.

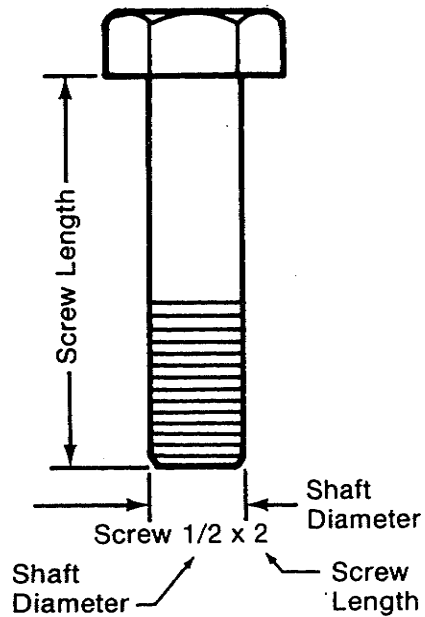
If a screw is identified as "screw, 1/2 x 2", this means the shaft diameter is 1/2 inch and the shaft of the screw is 2 inches long. If a screw is identified as "screw, 1/2-16 x 2", the number "16" means that the screw has 16 threads per inch.

## HEX CAPSCREW IDENTIFICATION

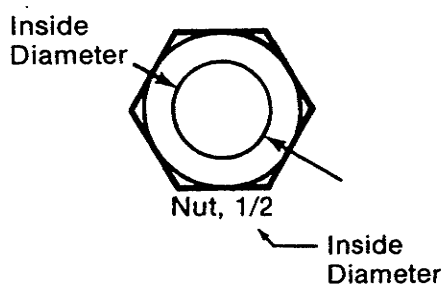
Shown below are actual size hex heads for standard screw sizes. Example: a 1/4" screw has a 7/16 head and thus requires a 7/16 wrench. To measure length, use the scale below.



## SAMPLE: SCREW IDENTIFICATION

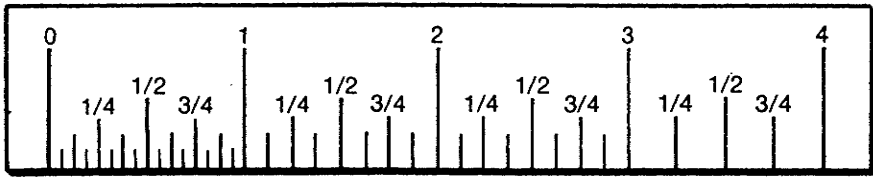


## SAMPLE: NUT IDENTIFICATION



## WASHER AND NUT IDENTIFICATION

Place the washer or nut on the above scale to determine inside diameter. The actual inside diameter can vary 1/16 inch. Use the scale for comparison.







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