HONDA
Power
Equipment

HTA

OPERATOR'S MANUAL

36" SNOWTHROWER
MODEL NO. SB1013 A

for

HONDA HT3810, HT3813, and HT 4213 LAWN TRACTORS

NOTE: This manual includes installation instructions for the HTA Model LK1013 Lift Kit. The Lift Kit must be purchased separately; it is necessary for the proper operation of the HTA Model SB1013A 36" Snow Thrower.

Click here to save this manual to your computer.

WARRANTY SERVICE

Your satisfaction and goodwill are important to your dealer and to us. All Honda warranty details are explained in the Distributor's Limited Warranty. Normally, any problems concerning the product will be handled by your dealer's service department. If you have a warranty problem that has not been handled to your satisfaction, we suggest you take the following action:

• Discuss your problem with a member of dealership management. Often complaints can be quickly resolved at that level. If the problem has already been reviewed with the Service Manager, contact the owner of the dealership or the General Manager.

• If your problem still has not been resolved to your satisfaction, contact the Power Equipment Customer Relations Department of American Honda Motor Co., Inc:

American Honda Motor Co., Inc.
Power Equipment Customer Relations Department
P.O. Box 50
Gardena, California 90247-0805
Telephone: (213) 604-2400

We will need the following in order to assist you:
—Your name, address, and telephone number
—Product model and serial number
—Date of purchase
—Dealer name and address
—Nature of the problem

After reviewing all the facts involved, you will be advised of what action can be taken. Please bear in mind that your problem will likely be resolved at the dealership, using the dealer's facilities, equipment, and personnel, so it is very important that your initial contact be with the dealer.

Your purchase of a Honda product is greatly appreciated by both your dealer and American Honda Motor Company. We want to assist you in every way possible to assure your complete satisifaction with your purchase.

Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office. You can write:

American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4900 Marconi Drive
Alpharetta, GA 30005-8847

Or telephone: (770) 497-6400 M-F, 8:30 am - 5:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

CONTENTS **PAGE**

Thank you for purchasing an HTA snowthrower attachment for your Honda Lawn Tractor.

This manual covers the assembly, operation, and maintenance of the HTA Model SB1013A 36" Snowthrower. For your convenience, a parts guide and detailed warranty information are also included in this publication.

NOTE: The illustrations in this manual are intended to serve as a reference and may not necessarily depict the actual model listed above. The information in this publication is based on the latest product information available at the time of printing. American Honda Motor Co., Inc. reserves the right to make changes at any time without notice and without incurring any obligation.

Pay special attention to the statements preceeded by the following symbols:

This safety alert symbol indentifies important safety messages in this manual. Whenever you see it, be alert to the possibility of personal injury and carefully read the message that follows.

DANGER: Indicates severe personal injury or death will result if instructions are not followed.

WARNING: Indicates a strong possibility of severe personal injury or death if instructions are not followed

CAUTION: Indicates a possibility of equipment or property damage if instructions are not followed.

NOTE: Gives helpful information.

HTA attachments are designed to give safe and dependable service if assembled and operated according to instructions.

If a problem should arise, or if you have any questions about your snowthrower, consult an authorized Honda Lawn Tractor dealer.

GENERAL SAFETY

⚠ WARNING: Read this owner's manual carefully and familiarize yourself fully with its safety recommendations and operating procedures before using the attachment. Follow the instructions in this publication at all times, and insist that those who work with you do likewise. Failure to do so could result in personal injury or equipment damage.

SAFE OPERATING RULES

- Know how to stop the snowthrower quickly, and understand the operation of all controls.

- Children and pets must be kept away from the area of operation to avoid injury from flying debris and contact with the snowthrower.

- Never permit anyone to operate the snowthrower without proper instruction. Never allow children to operate this equipment.

- Before operating the snowthrower, inspect the area in which you are going to clear snow. Remove debris and other obstacles the snowthrower might strike or throw, as they may cause injury or damage the snowthrower.

- Adjust the snow discharge chute to avoid hitting the operator, bystanders, windows, and other objects with thrown snow. Stay clear of the snow discharge chute while the engine is running.

- The use of tire chains and counterweights for better traction and stability is advised; use only those recommended by American Honda.

- Inspect the snowthrower before operating it. Repair any damage and correct any malfunction before operation. Remove any ice that has accumulated around the auger.

- Never attempt to make any adjustments to the snowthrower while the tractor's engine is running.

- Do not use the snowthrower when visibility is poor. Under conditions of poor visibility, there is a greater risk of striking an obstacle or causing injury.

- Do not wear loose-fitting clothing which might become entangled in moving parts.

- Prolonged exposure to loud noise can cause permanent impairment or loss of hearing. Wear a suitable protective device such as an external hearing protector (earmuffs) or ear plugs to protect against loud noises or otherwise objectionable noise.

- Never operate the snowthrower unless all of its guards, plates and other protective devices are in place.

- Do not put hands or feet near rotating parts. If the snow discharge chute becomes clogged, stop the engine and use a wooden stick to unclog it. Never put your hand into the snow discharge chute while the engine is running; serious injury could result.

- Use extreme caution when operating on or crossing a gravel drive, walk, or road. Stay alert for the hidden hazards of traffic.

- Do not attempt to clear steep slopes. When clearing a sloping surface, always drive up and down the face of the slope, never across the face. Exercise extreme caution when changing direction on a slope.

- Keep a careful watch for objects that could enter the snowthrower while it is in operation.

SAFE OPERATING RULES (Continued)

- If you hit an obstacle while operating the snowthrower, stop the engine immediately, and check for damage. Damaged equipment may increase the possiliblity of injury during operation.

- If the snowthrower should start to vibrate abnormally, stop the engine immediately and check for the cause. Vibration is generally a warning of trouble.

- Move the P.T.O. lever to the OFF position and raise the snowthrower whenever you are not actually clearing snow.

- Reduce the tractor's ground speed on slippery surfaces.

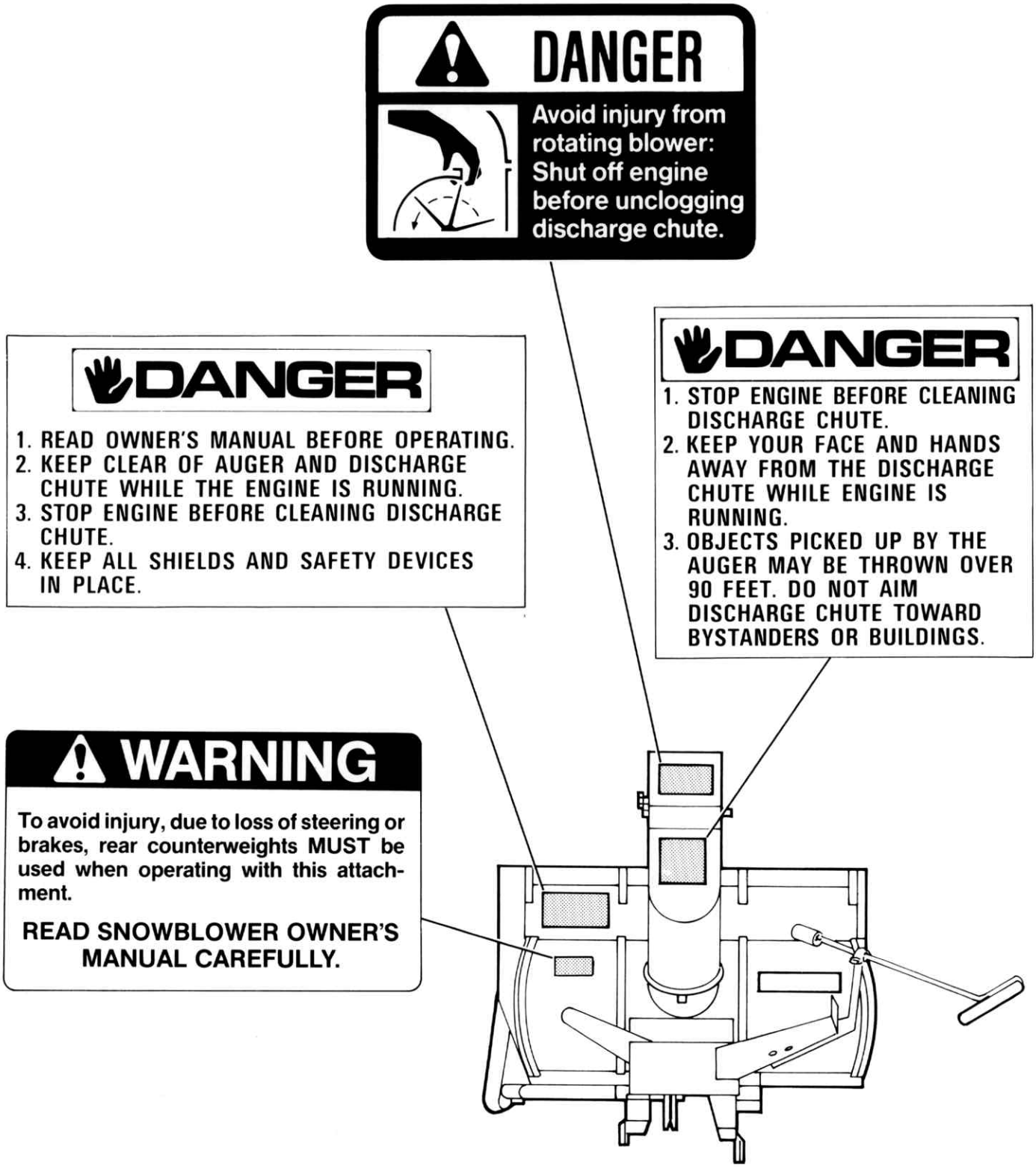
- Use care when backing up.

- Stop the engine whenever you leave the operator's position, before unclogging the auger housing and before making any inspections, adjustments or repairs.

- Before leaving the tractor unattended, always return the P.T.O. lever to the OFF position, lower the snowthrower, shift the transmission to neutral, set the parking brake, stop the engine and remove the key from the ignition switch to prevent children or unauthorized persons from starting the engine.

SAFETY DECALS

NOTE: Replacement safety decals can be ordered from your dealer.



WARNING: For your safety, this attachment should be assembled and installed by a mechanically proficient person who has the proper tools, preferably an authorized Honda Tractor dealer.

TOOLS REQUIRED

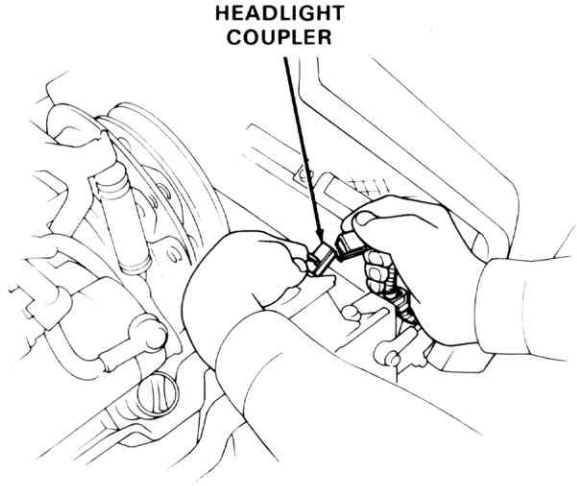
Set of metric wrenches or sockets
Set of SAE wrenches or sockets
Drill for 13/32" (10.5 mm) hole
Screwdriver

NOTES:

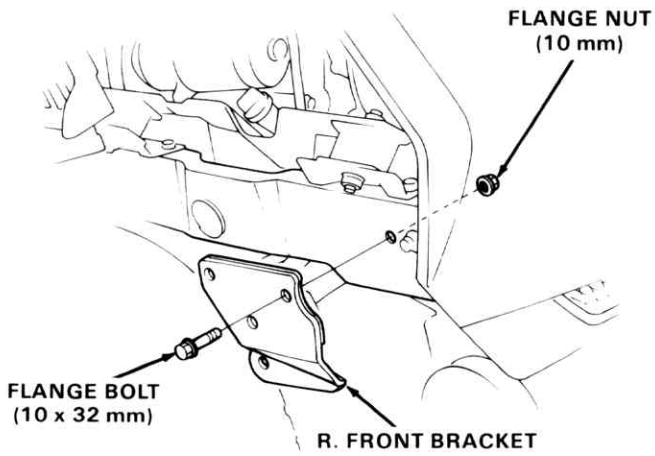
- In order to mount this attachment on a Honda Tractor, the tractor must be fitted with an HTA Model LK1013 Lift Kit.
- Right and left are determined from the operator's point of view.
- Most bolts and nuts used in assembly are coarse-thread SAE fasteners.

BRACKET AND PULLEY ASSEMBLY

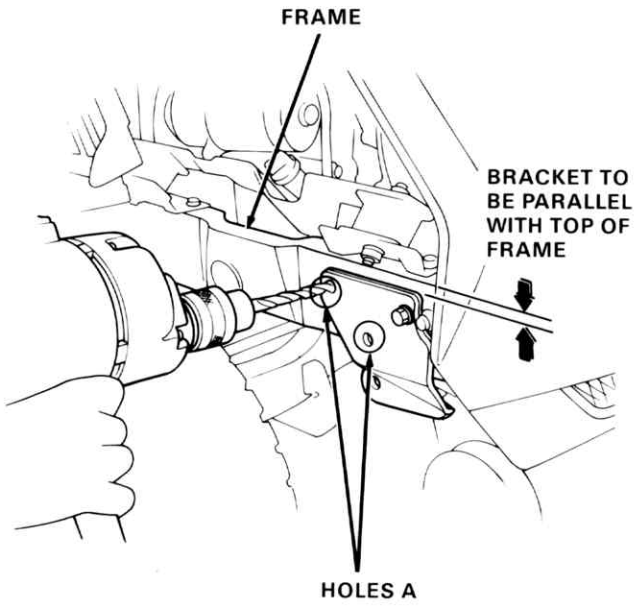
1. Stop the tractor, shut off the ignition, and remove the key. Remove the mower deck according to instructions in the tractor Operator's Manual.
2. Open the engine hood and disconnect the headlight coupler. (This is not necessary for tractors that do not require drilling in step 4 — HT3810-5100001 and on.)



3. Position the right and left front brackets as shown and loosely install using a 10 x 32 mm flange bolt and 10 mm flange nut for each bracket.



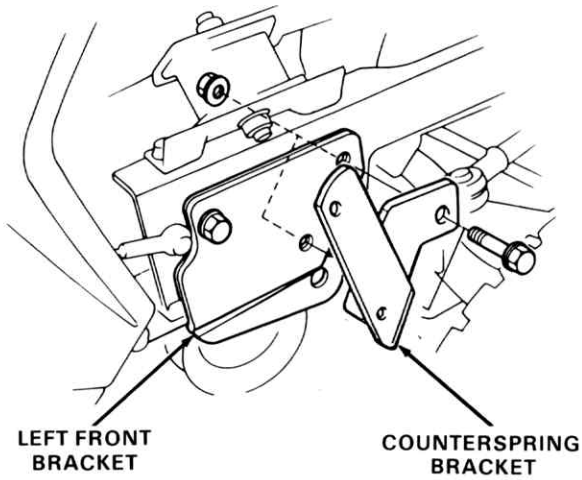
4. Position the right and left front brackets so that their upper edges are parallel with the frame as shown; tighten the 10 x 32 mm flange bolt installed in the previous step. Drill two 13/32" (10.5 mm) holes through the brackets and frame at the locations A.



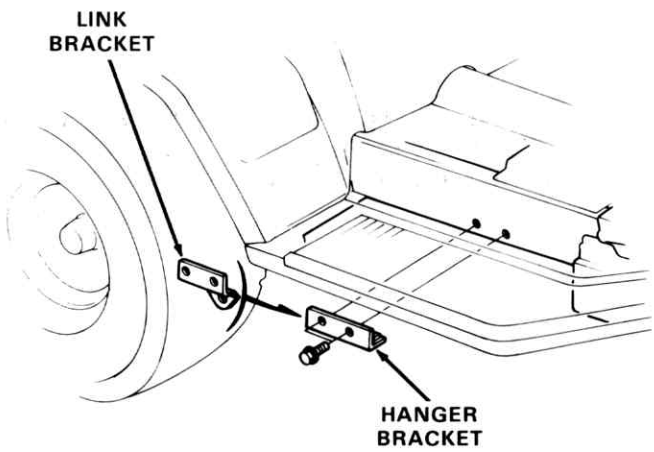
NOTES:

- Before drilling final hole, center punch the spot and pre-drill with 1/8" drill.
- Avoid damaging the wire harnesses.
- Bolt holes are provided in the frame for tractors with frame number HT3810-5100001 and on.
- After installing the front brackets, reconnect the headlight coupler and check that the headlights are operating properly.

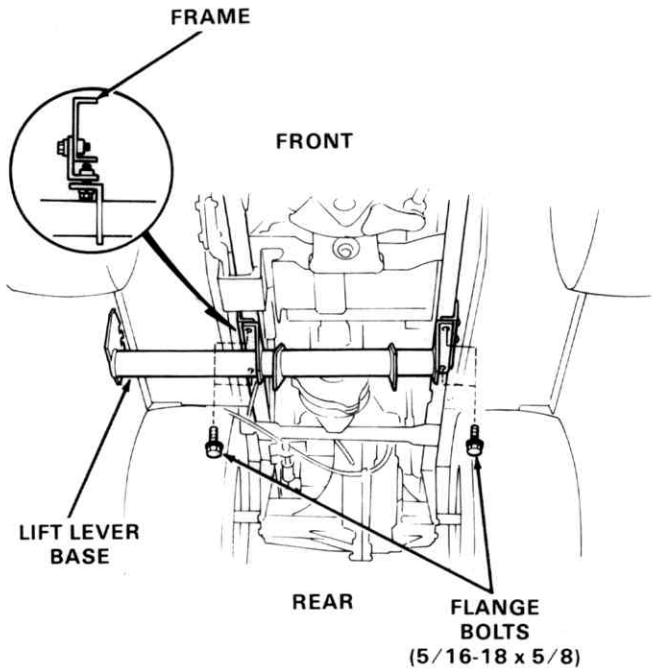
5. Position the counterspring bracket on the left front bracket and install both front brackets using two 10 mm flange bolts and nuts for each. In rear hole, position nut, then install bolt. Do not tighten until after push bar is installed in Step 16.



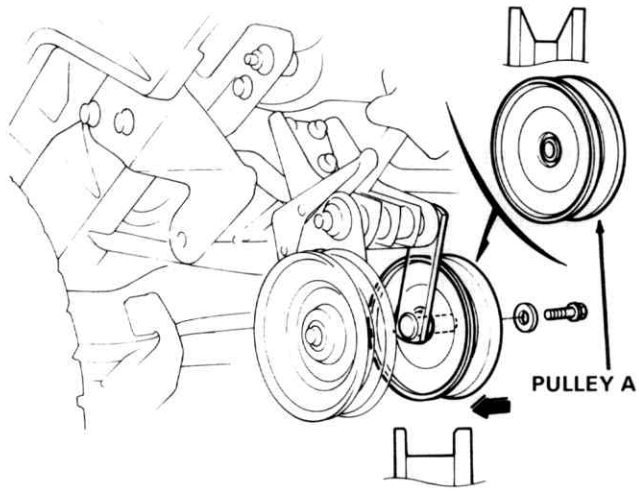
6. Remove the right and left link brackets.
7. Install the right and left hanger brackets.



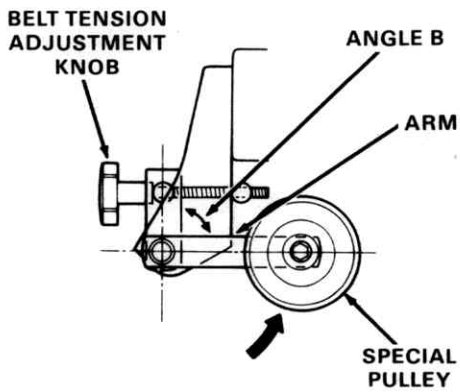
8. Install the lift lever base on the frame using the four 5/16-18 x 5/8" hex flange bolts. (Nuts are welded to hanger brackets installed in previous step.)



9. Remove the existing pulley A; install the special pulley.

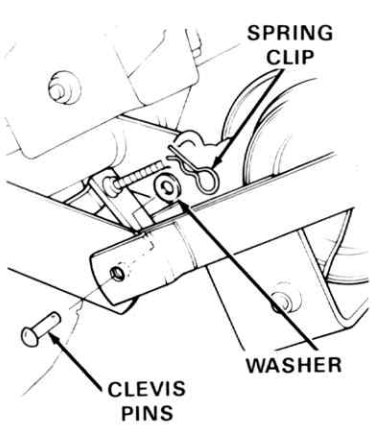


10. Adjust the angle B to 90° to the pulley arm by lifting the pulley up and turning the belt tension adjustment knob.

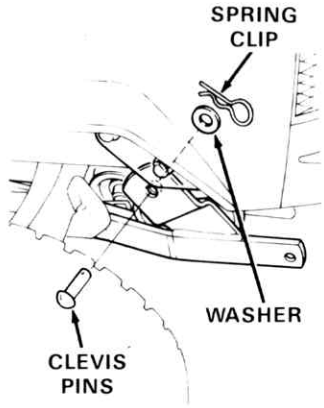


PUSHBAR INSTALLATION

11. Position the push bar assembly on the support brackets under the frame at front and rear locations. Install using four clevis pins, washers, and spring clips. Tighten the bolts installed in Steps 5 and 8 securely.



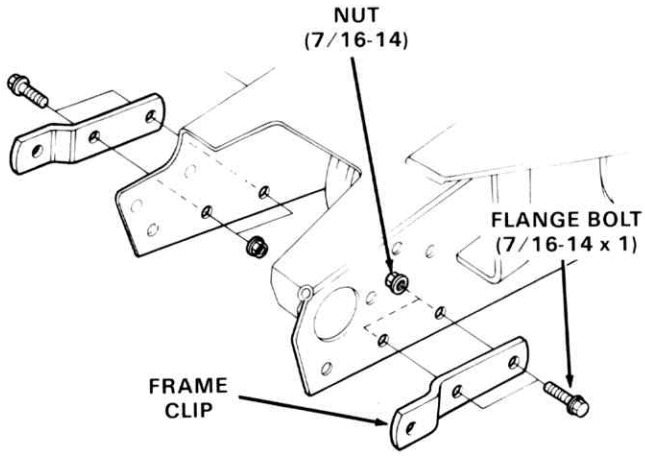
REAR LOCATION



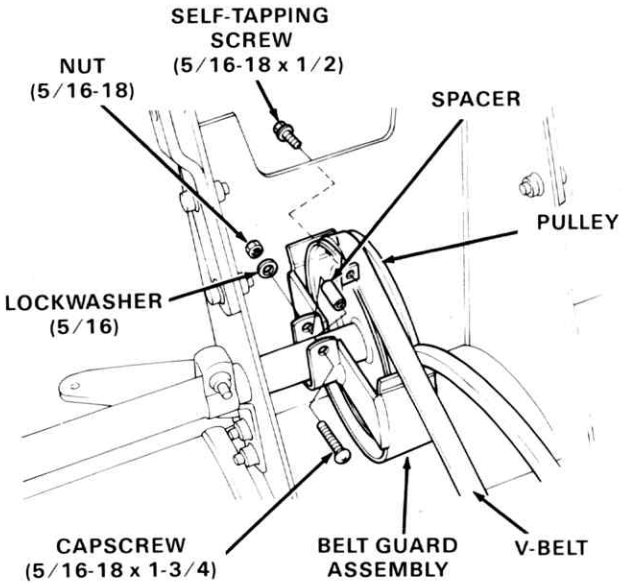
FRONT LOCATION

SNOWTHROWER INSTALLATION

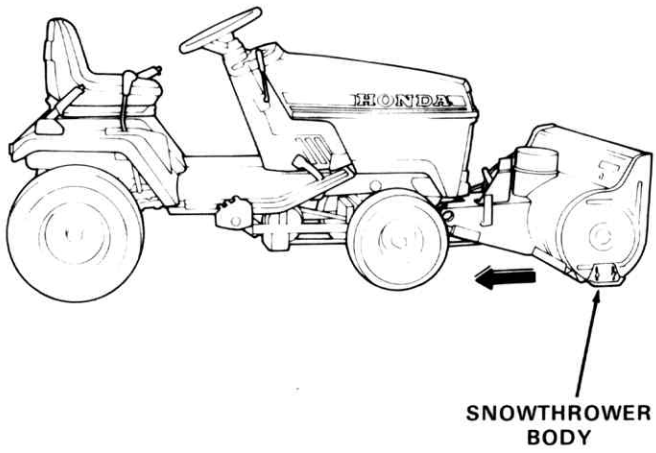
12. Make sure the frame clips are installed on the snowthrower body with two flange bolts and nuts. Tighten the bolts securely.



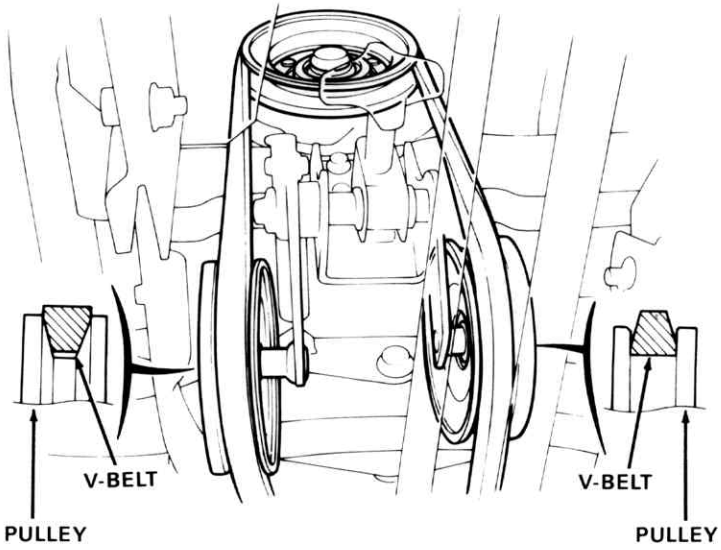
13. To place the V-belt on the thrower pulley, first remove the self-tapping screw. Then loosen hardware shown to slide the guard away from pulley and install belt. Reinstall hardware, making sure there is clearance all around between guard and belt when belt is tight.



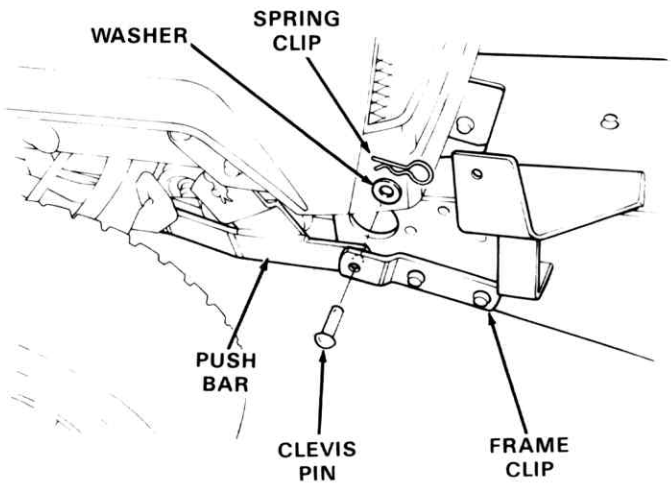
14. Slide the snowthrower body under the frame until it contacts the tensioner pulley.



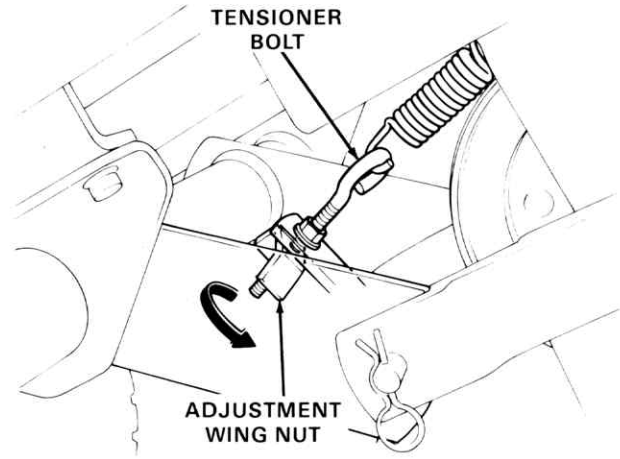
15. Place the V-belt on the pulleys as shown.



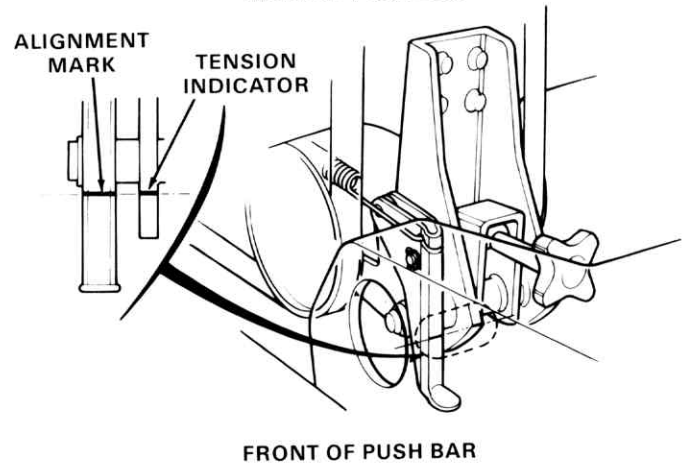
16. Align the holes in the right and left frame clips with the holes in the push bars by pulling the snowthrower body forward as required. Install clevis pins, washers, and spring clips.



17. Hook up the spring and install the tensioner bolt and adjustment wing nut.

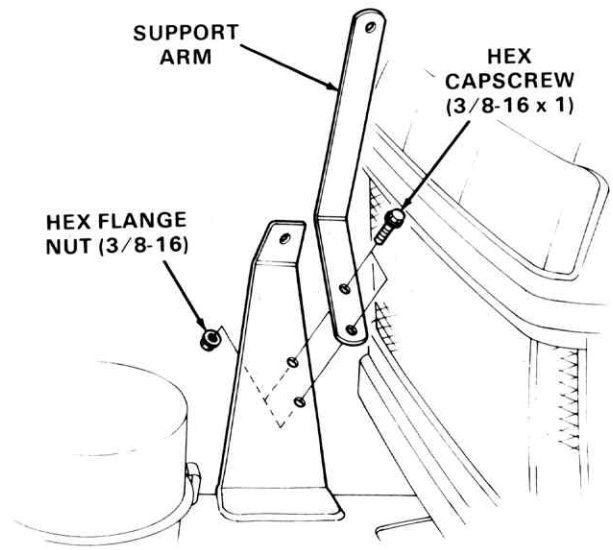


18. Turn the adjustment wing nut until the alignment mark at the front aligns with the tension indicator as shown.



CHUTE CONTROL ROD AND LIFT ROD ASSEMBLY

19. Position the support arm on the snowthrower body and install using the hardware shown.



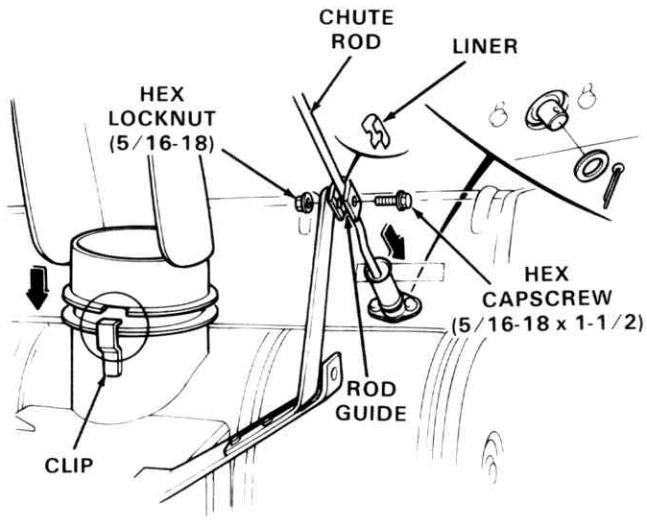
20. To install chute assembly:

    a. Remove cotter pin from chute rod end (upper hole) and insert rod through plastic bearing in snowthrower housing. Install cotter pin and spread legs fully.

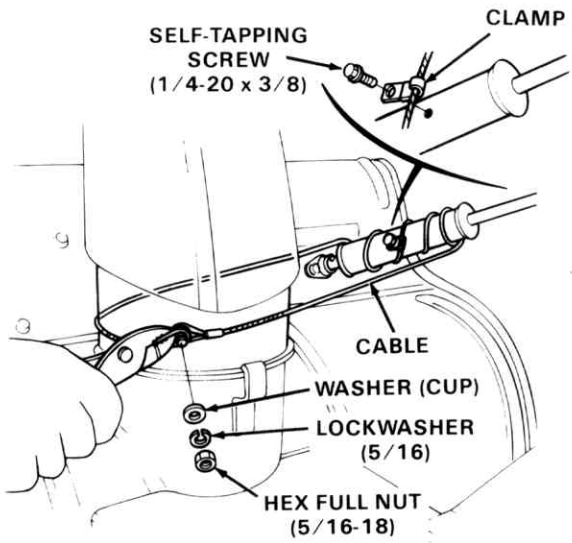
    b. Pull chute rod back and install other cotter pin just above plastic bearing.

    c. Assemble liner and rod guide to chute rod and install to upper hole in support arm with capscrew and locknut. Tighten locknut snug only; chute rod must be free to rotate when assembled.

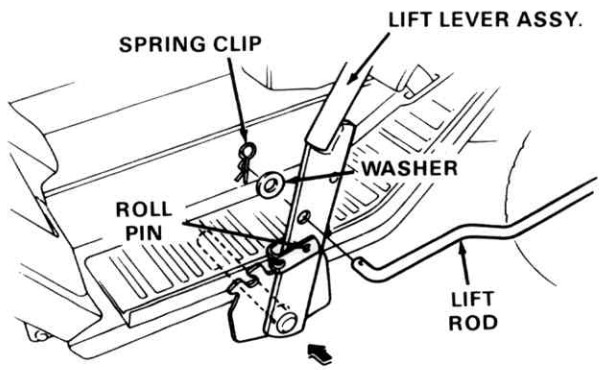
    d. Apply oil to chute where it contacts base and position the chute. Be sure flange is under clip.



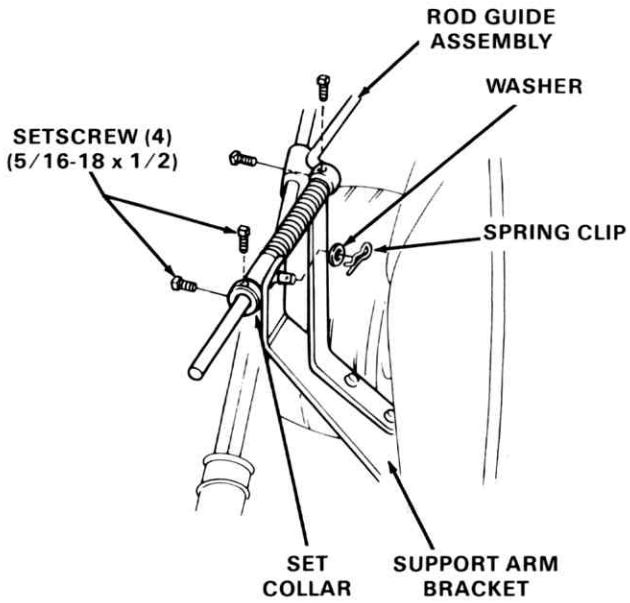
21. Attach the cable clamp to the chute rod with self-tapping screw. Clamp should be at approximately a 45° angle to centerline of rod. Wrap the cable around the chute rod (two turns around the front half, and three turns around the rear half). Attach both ends of the cable to the chute as shown.



22. Insert the pivot of the lift lever assembly into the lift lever base as shown; insert the end of the lift rod in the hole for the lift lever and secure with the washer and spring clip.



23. Insert the prong of the rod guide assembly through hole in the support arm bracket (located on snowthrower housing). Secure with washer and spring clip.

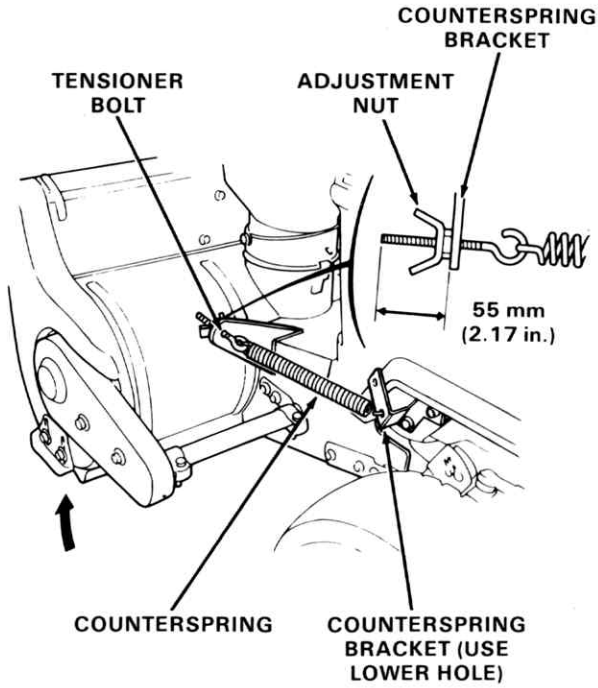


COUNTERSPRING INSTALLATION

24. Hook the counterspring between the snowthrower body and counterspring bracket. Use the lower hole in the bracket.

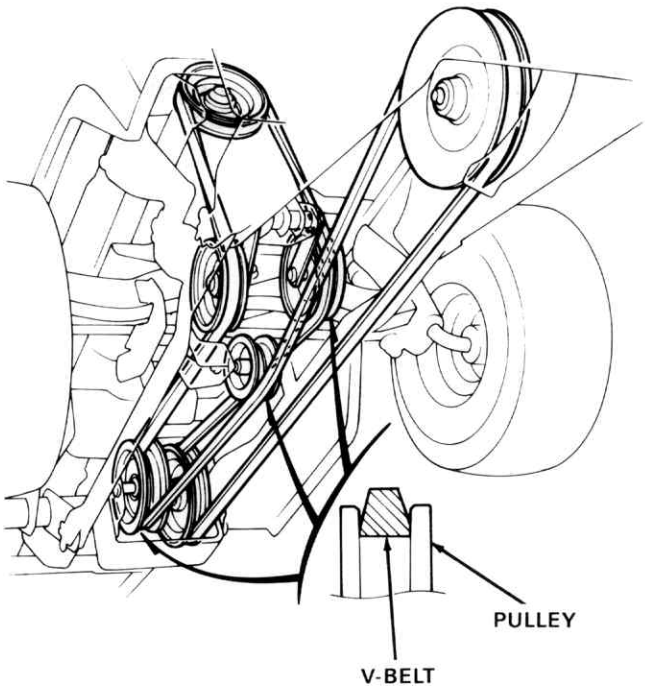
25. Turn the adjustment nut until 55 mm (2.17 in.) of the tensioner bolt is pulled through the counterspring bracket.

NOTE: This adjustment should be made with the lift lever in the rearmost position.



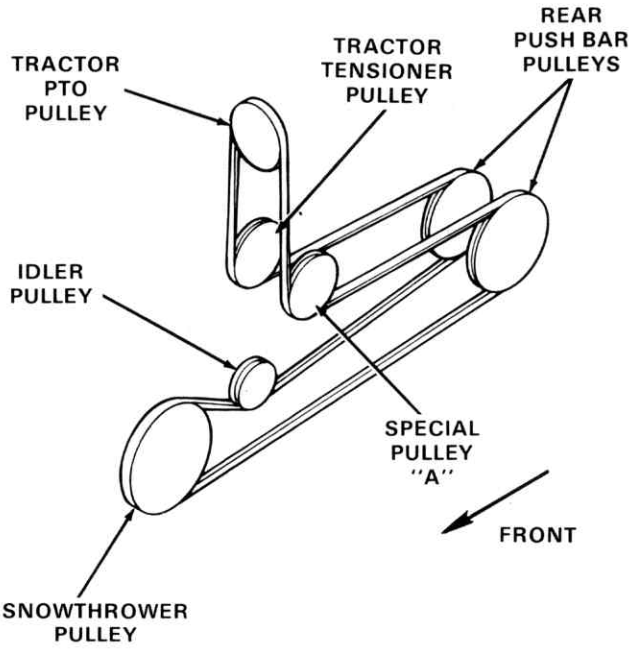
V-BELT CHECK

26. The V-belt runs with its narrow edge out, at the three pulley locations shown.

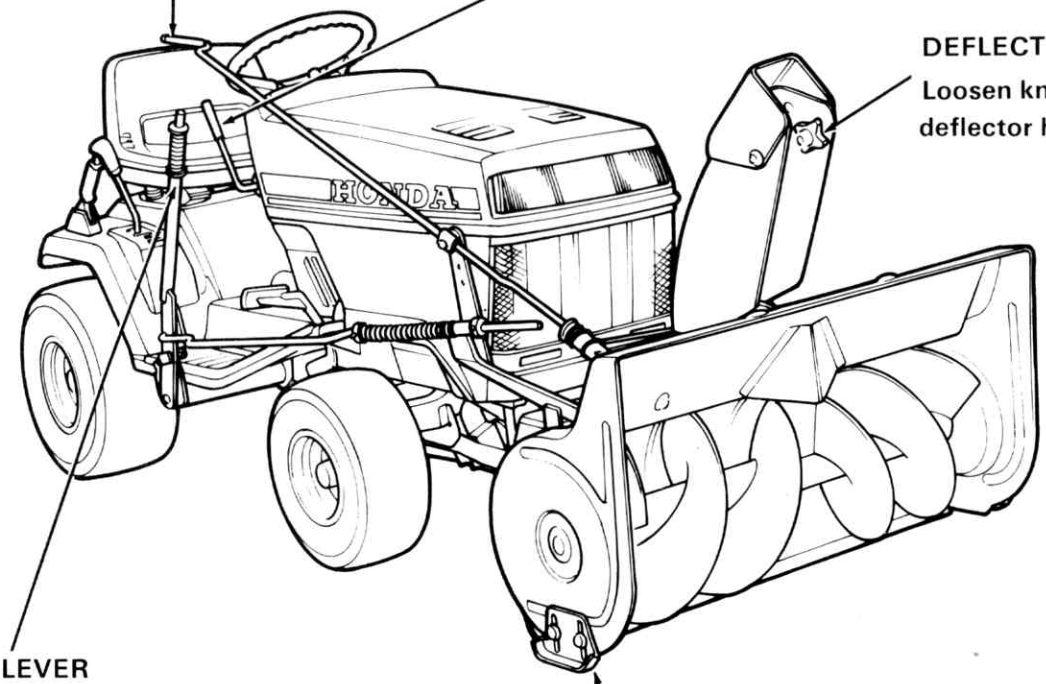


BELT DIAGRAM

27. Shown from a different perspective, the belts should be connected as shown.



CONTROLS



CHUTE CONTROL

Rotate either way to change direction of snow discharge.

PTO LEVER

To engage the PTO, push the lever forward with moderate speed. To disengage PTO, pull the lever back.

DEFLECTOR KNOB

Loosen knob to adjust deflector height.

LIFT LEVER

To raise snowthrower, press button (on top), pull lever back, and release button. To lower, pull lever back, press button and allow lever to go forward slowly.

SKID SHOES

Adjust to control scraper bar height.

BEFORE OPERATING

1. Refer to the tractor Owner's Manual and perform any needed care.

NOTE: Inflate front tire pressure to 20 psi (138 kPa) with snowthrower installed.

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 Adjustment section.
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 AND 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 run engine at full speed.

STARTING & STOPPING

1. Start the tractor engine. See Tractor Owner's Manual.
2. Lower the snowthrower.
3. Engage the PTO.
4. Select the appropriate gear and begin operation. See Tractor Owner's Manual.
5. To stop the snowthrower, disengage the PTO. See Tractor Owner's Manual for stopping procedure.

OPERATION ON SLOPES

⚠ WARNING: Lawn tractors are intended for use on relatively flat terrain; operation on steep slopes may cause them to overturn or slide sideways. Never operate on sloped surfaces exceeding 17 percent (10°). The type and condition of the slope's surface may further reduce this angle.

To prevent overturning or sideslipping, always drive up and down slopes, and never across the face. Avoid changing directions on a slope.

DO NOT START OR STOP ON A SLOPE. Refer to the Tractor Owner's Manual for detailed information on how to restart should an emergency force you to stop on a slope.

For improved control and traction, tire chains and additional rear weights are recommended.

Select a low speed setting before driving onto a slope; avoid using the brakes to control speed.

⚠ CAUTION: Always raise the snowthrower when turning or backing to avoid damage.

SNOW REMOVAL SUGGESTIONS

Determine the best snow removal pattern before beginning. Wind direction is an important factor to consider. Rotate the chute 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.

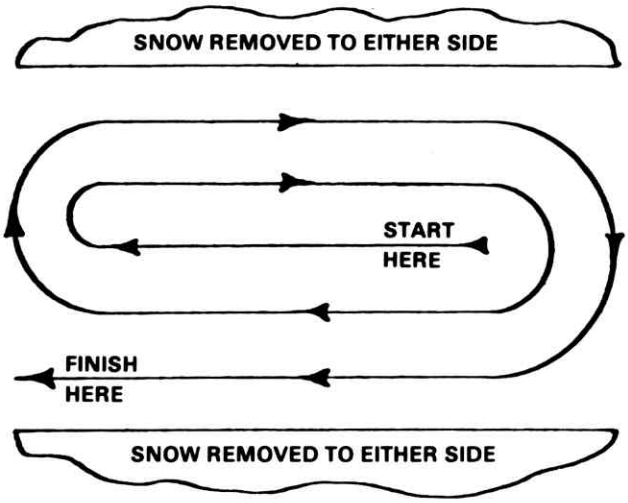
⚠ WARNING: To avoid injury if the auger stalls or the chute plugs, perform the following steps before removing snow or foreign objects or clearing the chute before restarting the engine: Disengage the PTO, Stop the engine, Remove the key, Wait for all moving parts to stop.

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 chute, use reverse to back away until snowthrower clears itself.

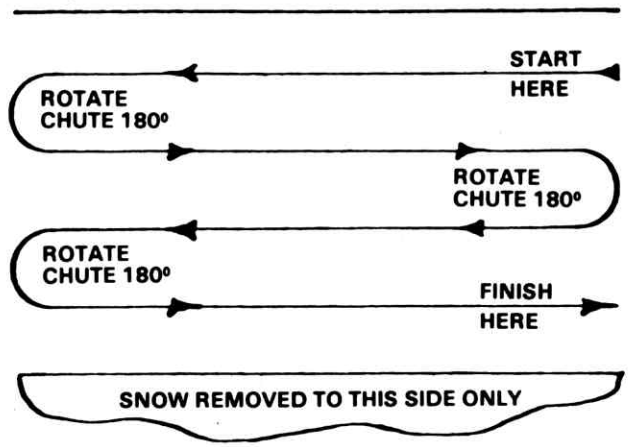
SNOW REMOVAL PATTERN

One of two basic patterns should be used to thoroughly clean the snow area. Use of these operating patterns will prevent snow piles in unwanted places, and eliminate the need for second passes in all but the deepest drifts.

Where it is possible to throw the snow to the left and right, as on a long driveway, start in the middle. Plow from one end to the other, throwing snow to both sides without changing the direction of the chute.



If the snow can only be thrown to one side, start on the opposite side. At the end of each pass, rotate the chute 180° to maintain the direction of throw to the same area.

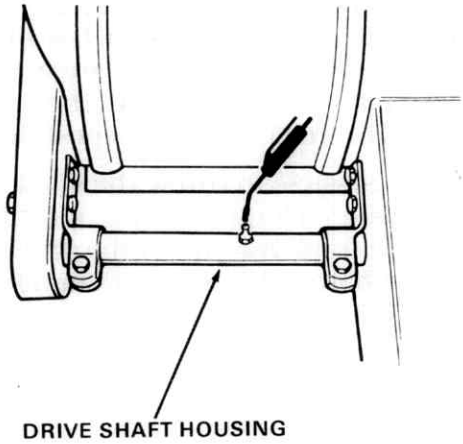


REMOVAL FOR SUMMER TRACTOR OPERATION

1. Remove the snowthrower and push bar as an assembly by:
   a. Disconnecting lift rod from lift lever.
   b. Removing spring clips, washers, and clevis pins from rear push bar location.
   c. Store hardware on push bar and lift rod.
2. Remove special pulley (see Step 9 in Installation section) and install original pulley.
3. The front brackets can be left on the tractor. Remove the rear brackets and install those supplied with mowing attachment.
4. Reduce air pressure in front tires to pressure listed in Tractor Owner's Manual.

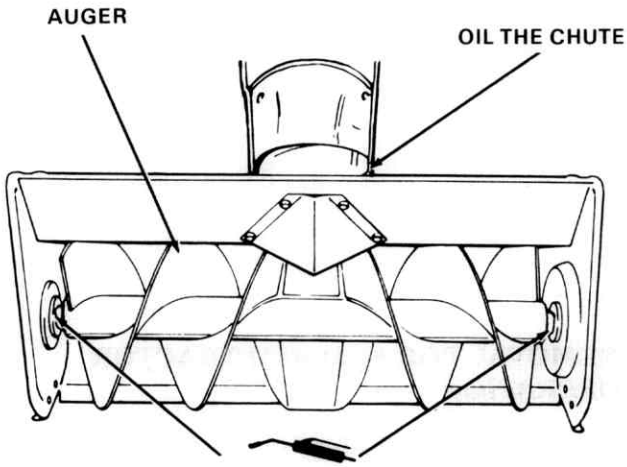
SCHEDULE FOR NORMAL CARE

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.



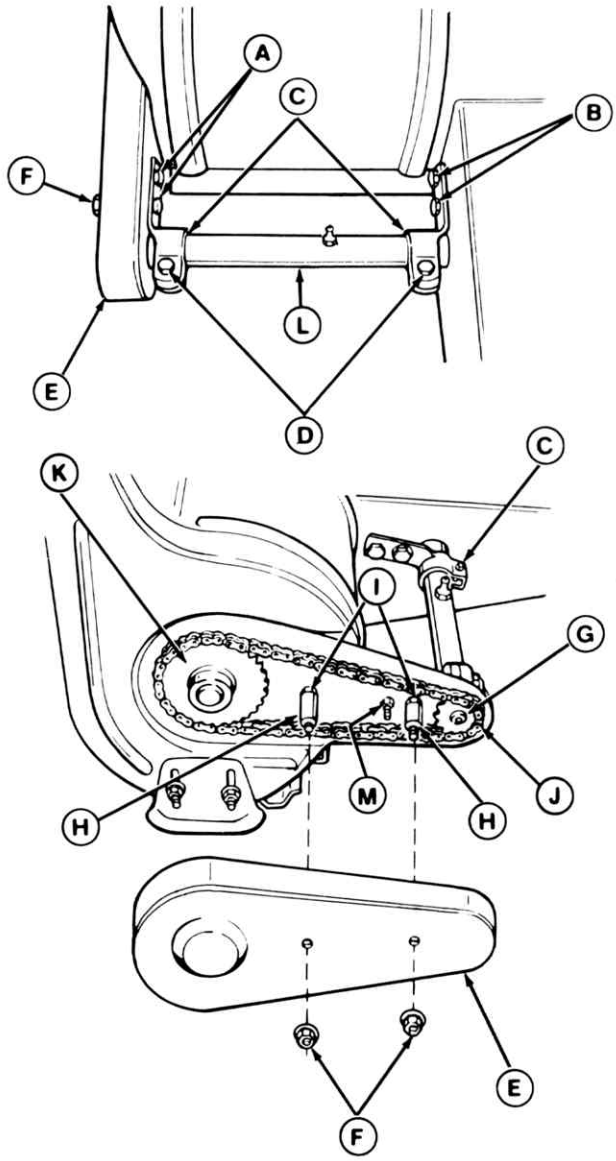
LUBRICATION

1. Apply a thin film of grease or a few drops of oil to:
   - Point on lift rod that contacts support arm.
   - Lift rod ends.
   - Chute rotating surface.
   - Hitch mounting pins.
2. Lubricate drive shaft and auger shaft (see below). Wipe fitting clean, apply 2 or 3 shots of grease, and wipe up excess grease.



INSPECT, ADJUST & LUBRICATE DRIVE CHAIN

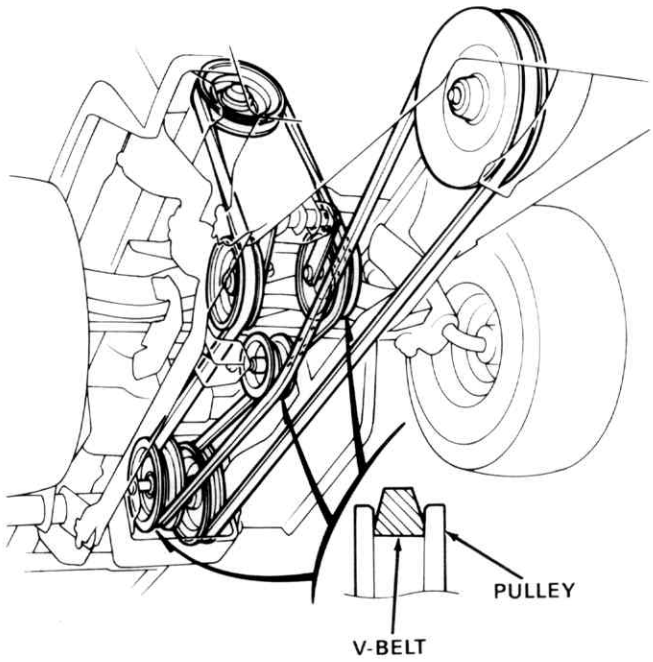
1. Remove the chain guard (E) by removing the two nuts (F).
2. Check the chain for wear or damage. Replace chain if worn or damaged.
3. There should be no slack in the chain, and the sprockets (G and K) should be aligned. The drive shaft housing (L) should be parallel with the auger housing. To adjust, proceed as follows:
   a. Loosen the two screws (A) and two nuts (B). Loosen the screw on top of housing that secures pulley belt guide.
   b. 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 (B) while tightening screws (A). Torque to 40-50 ft. lbs.
   c. Tighten the screw on top of housing making sure belt guide is properly positioned.
   d. Spread a coat of grease on the chain, working the grease into the links.
   e. Reinstall the chain guard and two nuts.



A. SCREWS
B. NUTS
C. CLAMPS
D. CAPSCREW
E. CHAIN GUARD
F. NUTS
G. DRIVE SHAFT SPROCKET
H. SPACERS
I. NUTS
J. CHAIN
K. AUGER SPROCKET
L. DRIVE SHAFT HOUSING
M. FLANGE NUT

BELT REPLACEMENT

Loosen hardware securing idler pulleys to remove old belt and install new belt. The flat side of the belt goes against the flat pulley; and the narrow side of belt goes in V-pulley. Tighten the hardware. The belt diagram is also shown from a different perspective in Step 27 on page 14.



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 (refer to page 18).
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.

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 any maintenance to prevent accidental starting of the engine.

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

TROUBLESHOOTING CHART

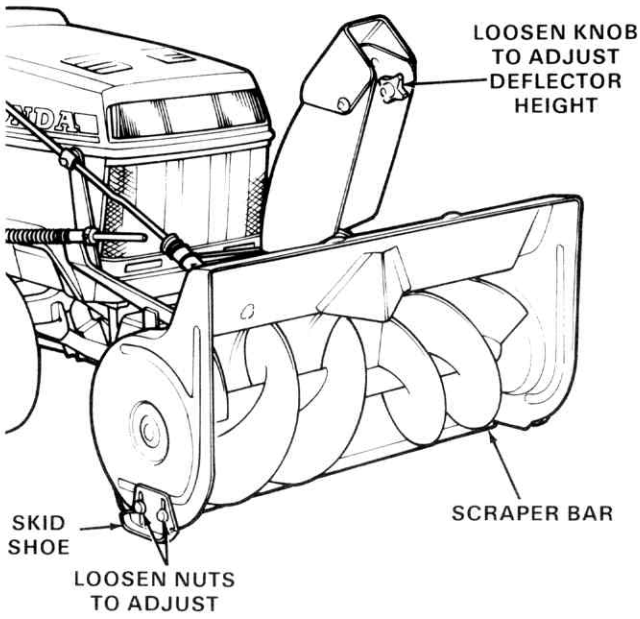
Problem	Cause/Remedy
1. Snowthrower auger does not rotate.	**A.** PTO lever not engaged. Engage PTO lever. See Operation section.
	B. Foreign material or ice blocking auger. STOP engine. Remove key. Free auger.
	C. Snowthrower drive belt slipping. Adjust drive belt tension. See Steps 10 and 17 in Installation section.
	D. Drive chain broken. Replace parts as necessary.
2. Auger rotates, but snow not thrown far enough.	**A.** Engine RPM too slow. Operate engine between 3/4 and full throttle.
	B. Ground speed too fast. Use lower gear.
	C. Snowthrower discharge chute clogged. STOP engine. Remove key. Clear discharge chute.
3. Scraper bar does not clean down to hard surface.	Skid shoes not properly adjusted. Adjust skid shoes. See Adjustments section.
4. Snowthrower picks up and throws stones on gravel drive.	**A.** Skid shoes not properly adjusted for gravel surface. Adjust skid shoes. See Adjustments section.
	B. Too much down pressure on snowthrower. Use the tractor lift lever to raise the snowthrower slightly. See Operation section and Adjustment section.
5. Tractor does not have sufficient traction.	Tractor too light at rear wheels. Use counterweights and tire chains.
6. Tractor not stable on sloping surfaces.	**A.** Ground speed too fast. Reduce ground speed.
	B. Tractor not properly weighted. Use counterweights and tire chains.
	C. Tire pressure incorrect. For operation with snowthrower, increase front tire pressure to 20 psi (138 kPa). For operations without snowthrower, see Tractor Owner's Manual for required pressure.
7. Auger does not stop when PTO is disengaged.	Belt tension not properly adjusted. Adjust belt tension. See Steps 10 and 17 in Installation section.

SKID SHOE ADJUSTMENT

For a smooth, hard surface such as concrete or asphalt, adjust the skid shoes so that the scraper bar rests on the surface.

For 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 and down. Tighten the nuts securely, with both skid shoes adjusted to same level and parallel to 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.

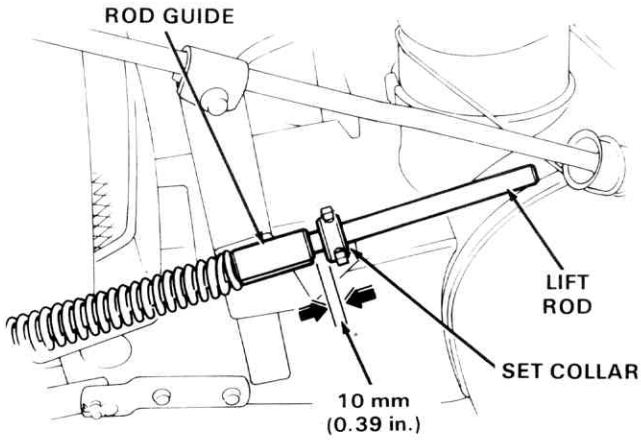
To adjust, loosen the knob and move the deflector up or down. Retighten the knob.

LIFT ROD ADJUSTMENT

The front set collar affects the transport clearance between scraper blade and ground. Moving set collar toward spring will increase clearance. See initial setting in Installation section. The rear set collar affects how the snowthrower will float over surface bumps or dig into them. Perform step "a" to allow snowthrower to float or step "b" to increase "down pressure."

a. Fully raise the snowthrower. Loosen the setscrews in the rear set collar. 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 setscrews.

b. Fully lower the snowthrower lift lever. Loosen the setscrews in the front set collar and slide it off the lift rod. Pull the lift lever back slightly so lift rod moves back one inch. Place the spring against the rod guide. Place the rear set collar against the spring and tighten the setscrews. 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 adjust as follows:

Adjust front set collar so there is 10 mm (0.39 in.) between guide and collar.

CONTROLS

Auger Drive: PTO lever on column
Raise and Lower: Lift Kit lift lever
Chute Rotation: Chute rod handle

DRIVE TRAIN

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

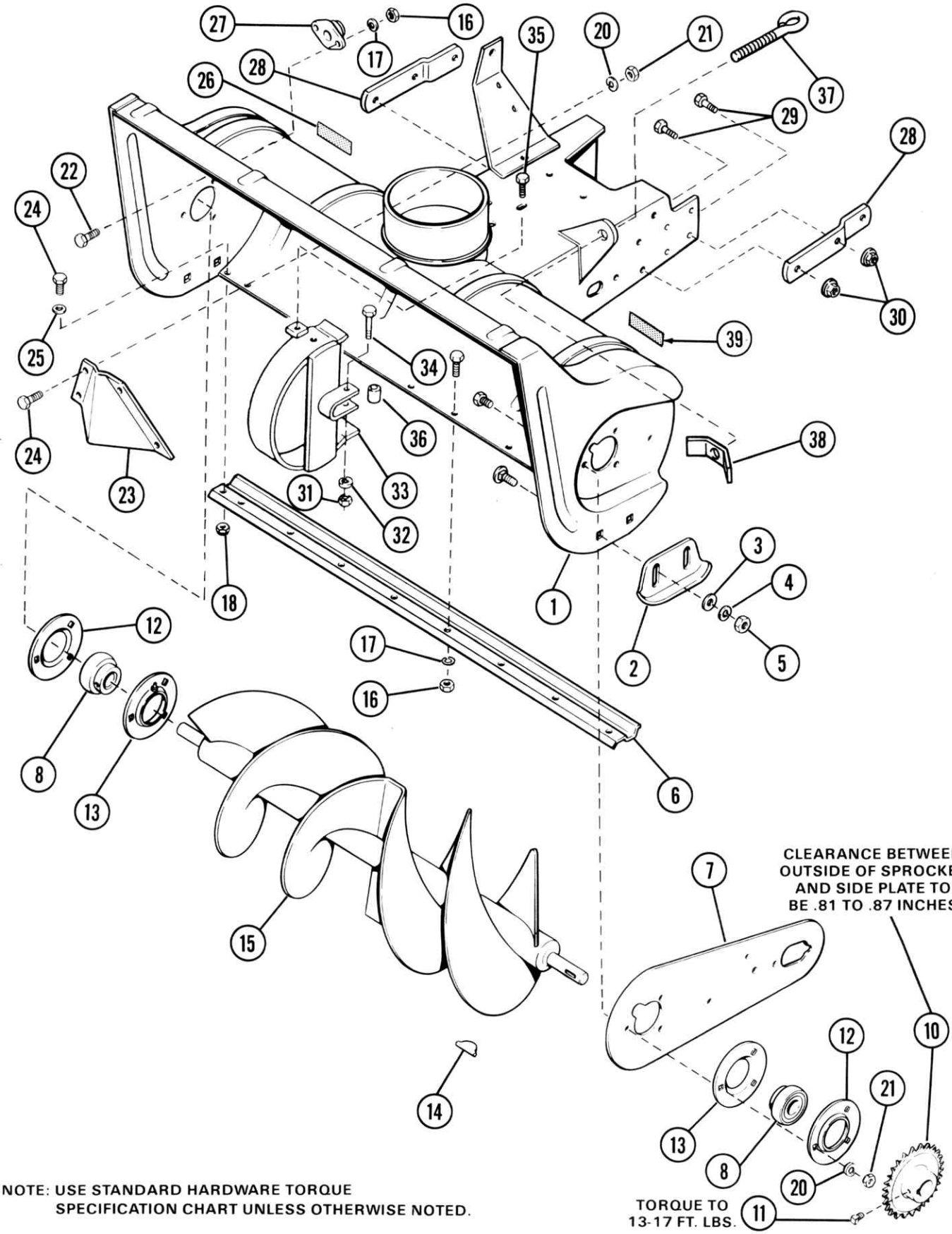
AUGER HOUSING

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

DIMENSIONS — 36 INCH

Effective Width: 36" (914 mm)
Overall Width: 37-1/2" (953 mm)
Overall Length: 27" (688 mm)
Overall Height: 19-1/2" (495 mm)
Auger Diameter: 12" (305 mm)

BODY AND AUGER GROUP

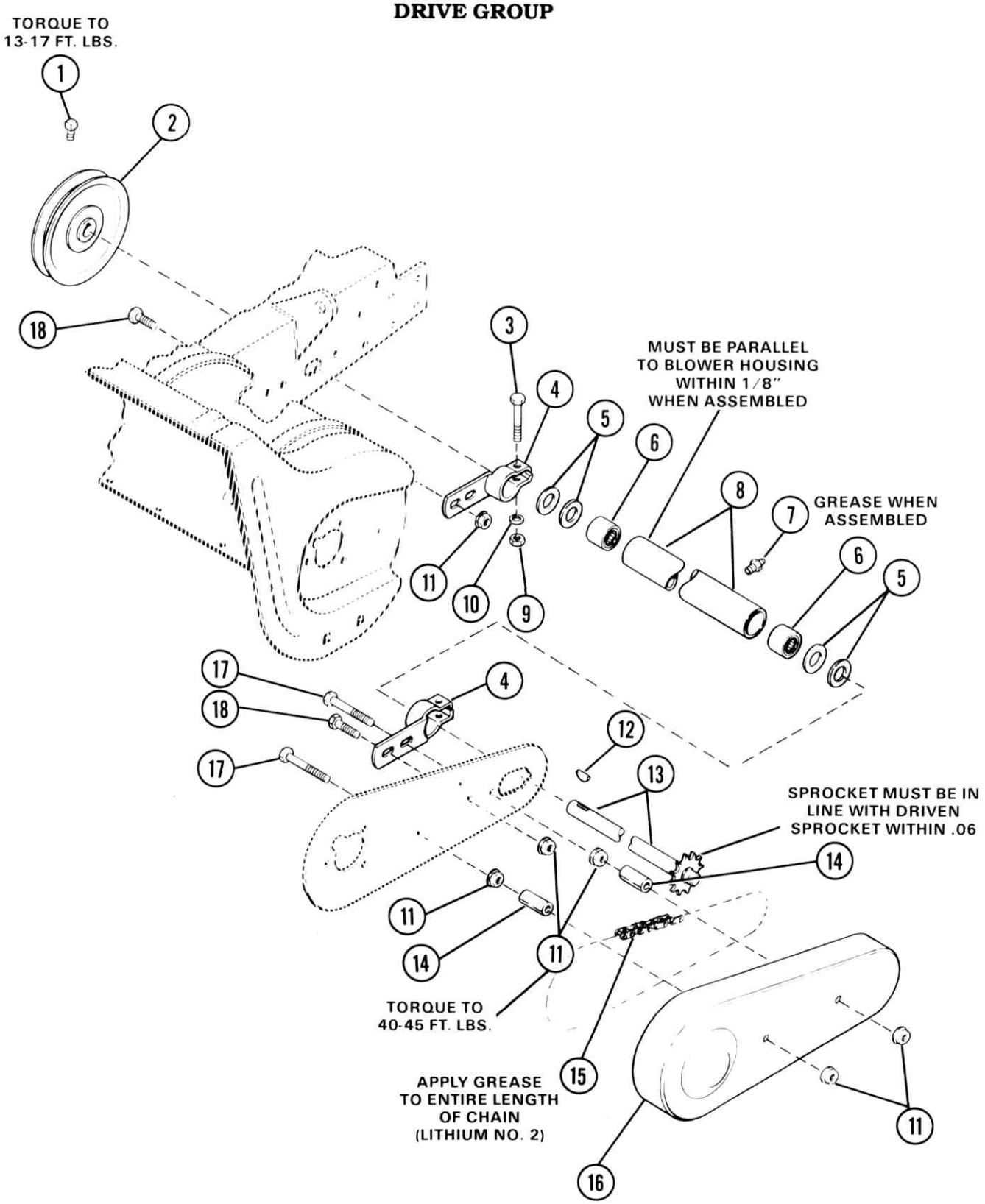


NOTE: USE STANDARD HARDWARE TORQUE SPECIFICATION CHART UNLESS OTHERWISE NOTED.

BODY AND AUGER GROUP

ITEM	DESCRIPTION	QTY.
1	Body and Frame Assembly	1
2	Skid Shoe	2
3	Washer, Plain, 3/8	4
4	Lockwasher, 3/8	4
5	Nut, Hex, Full, 3/8-16	4
6	Scraper, Bar	1
7	Plate, Side	1
8	Bearing, Cartridge	2
9	Capscrew, Hex, 5/16-18 x 3/4	6
10	Sprocket, Auger	1
11	Setscrew, 5/16-18 x 5/16	1
12	Flange, Bearing	2
13	Flange, Bearing	2
14	Key	1
15	Auger Assembly	1
16	Nut, Hex, Full, 1/4-20	9
17	Lockwasher, 1/4	9
18	Locknut, Hex, 5/16-18	3
19	Bolt, Carriage, 3/8-16 x 3/4	4
20	Lockwasher, 5/16	10
21	Nut, Hex, Full, 5/16-18	10
22	Capscrew, Hex, 1/4-20 x 5/8	9
23	Deflector	1
24	Capscrew, Hex, 5/16-18 x 5/8	6
25	Washer, Plain, 1/4	2
26	Decal, HTA	1
27	Bearing	1
28	Clip, Frame	2
29	Capscrew, Hex, 7/16-14 x 1	4
30	Locknut, Hex, Flange, 7/16-14	4
31	Nut, Hex, Full, 5/16-18	1
32	Lockwasher, 5/16	1
33	Guard Assembly, Belt	1
34	Capscrew, Hex, 5/16-18 x 1-3/4	1
35	Screw, Hex, Self-Tapping, 5/16-18 x 1/2	1
36	Spacer	1
37	Bolt, Tensioner	1
38	Nut, Wing	1
39	Decal, Safety	1

DRIVE GROUP

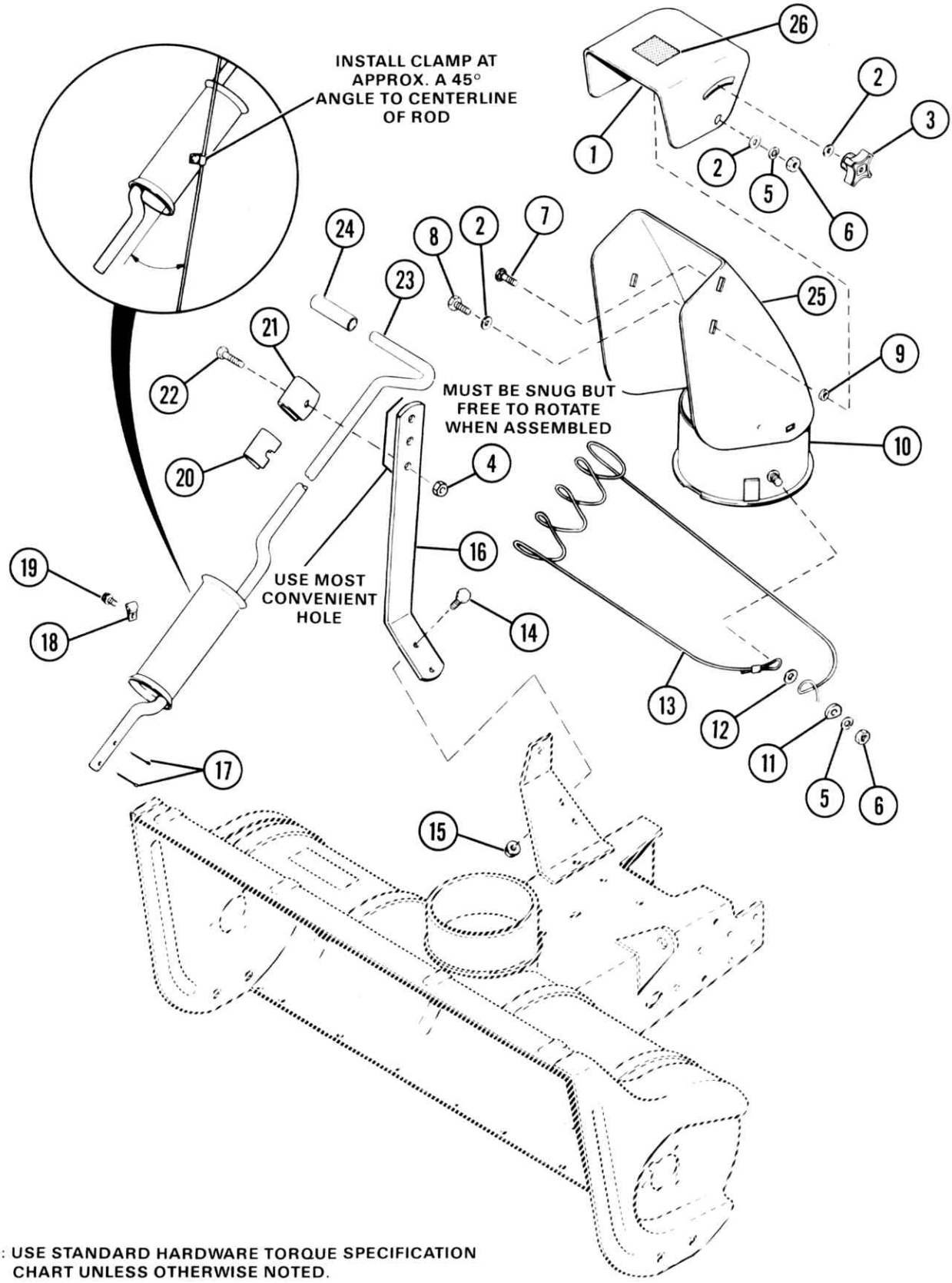


NOTE: USE STANDARD HARDWARE TORQUE SPECIFICATION CHART UNLESS OTHERWISE NOTED.

DRIVE GROUP

ITEM	DESCRIPTION	QTY.
1	Setscrew, 5/16-18 x 1/2	1
2	Pulley	1
3	Capscrew, Hex, 5/16-18 x 1-3/4	2
4	Clamp, Housing	2
5	Washer	4
6	Bearing, Needle	2
7	Fitting, Grease	1
8	Housing Assembly, w/Bearings	1
9	Nut, Hex, Full, 5/16-18	2
10	Lockwasher, 5/16	2
11	Locknut, Flange, 3/8-16	7
12	Key	1
13	Shaft Assembly	1
14	Spacer	2
15	Chain (Auger Drive)	1
16	Guard, Chain	1
17	Screw, Hex, Whizlock, 3/8-16 x 2-3/4	2
18	Screw, Hex, Whizlock, 3/8-16 x 1	3

CHUTE GROUP

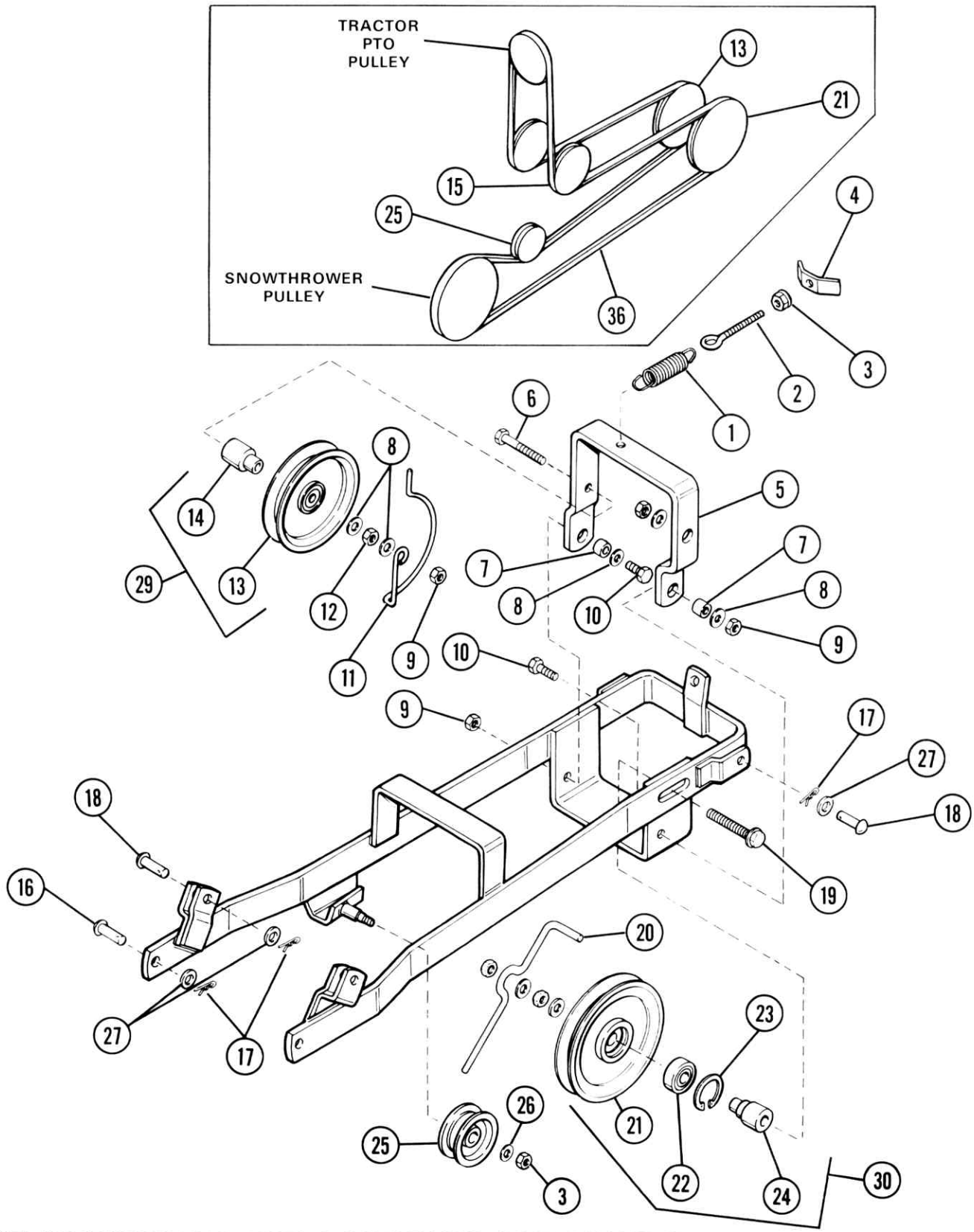


NOTE: USE STANDARD HARDWARE TORQUE SPECIFICATION CHART UNLESS OTHERWISE NOTED.

CHUTE GROUP

ITEM	DESCRIPTION	QTY.
1	Deflector	1
2	Washer, Plain, 5/16	3
3	Knob	1
4	Locknut, Hex, 5/16-18	1
5	Lockwasher, 5/16	3
6	Nut, Hex, Full, 5/16-18	3
7	Bolt, Carriage, 5/16-18 x 1	1
8	Capscrew, Hex, 5/16-18 x 3/4	2
9	Spacer	2
10	Chute Assembly	1
11	Washer, Cup	1
12	Washer, Plain, 1/4	1
13	Cable Assembly	1
14	Capscrew, Hex, 3/8-16 x 1	2
15	Nut, Hex, Flange, 3/8-16	2
16	Arm, Support	1
17	Pin, Cotter, 3/32 x 3/4	2
18	Clamp	1
19	Screw, Hex, Taptite, 1/4-20 x 3/8	1
20	Liner	1
21	Guide, Rod	1
22	Capscrew, Hex, 5/16-18 x 1-1/2	1
23	Rod Assembly, Chute	1
24	Grip, Handle	1
25	Decal, Safety	1
26	Decal, Safety	1

HITCH GROUP

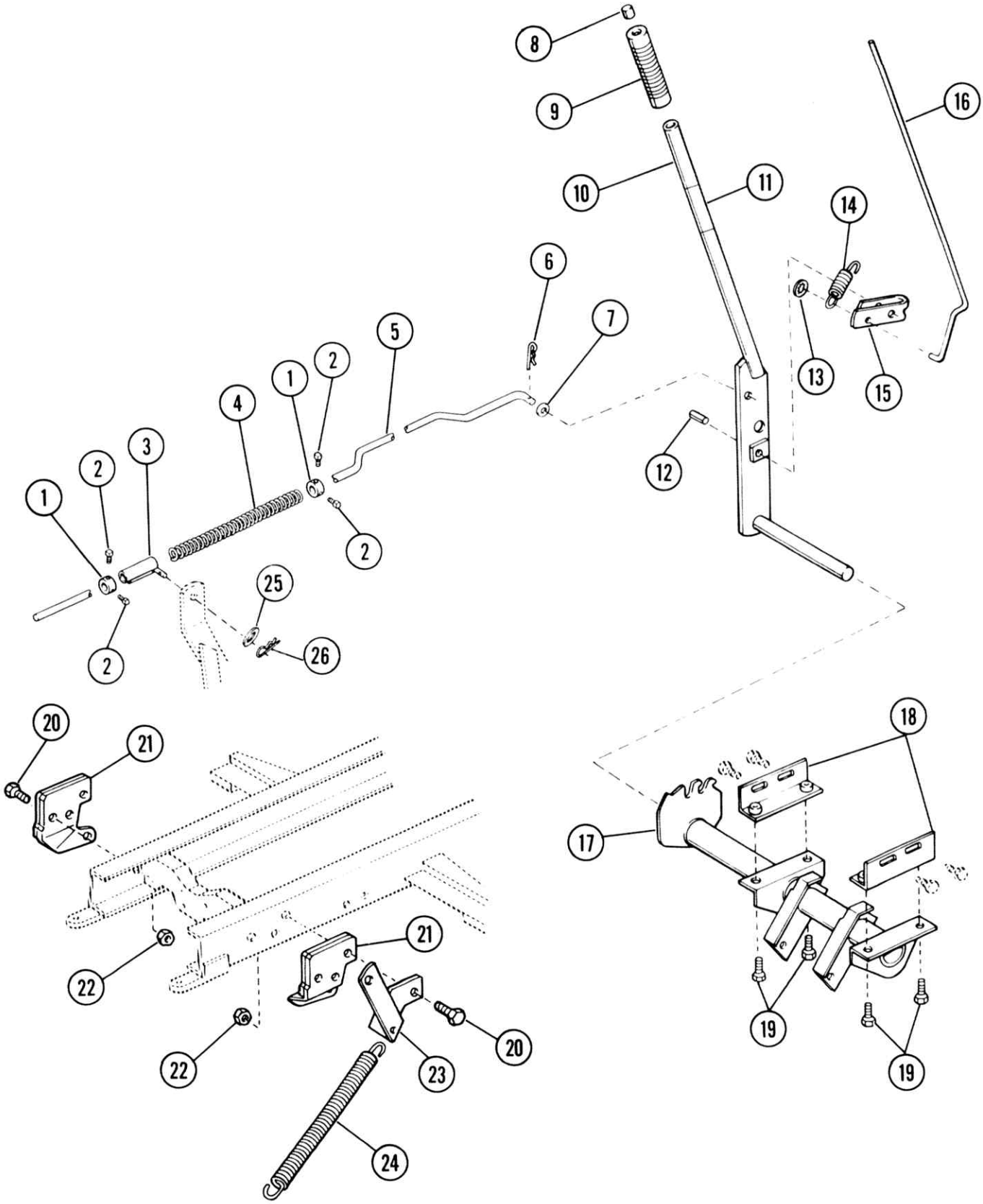


NOTE: USE STANDARD HARDWARE TORQUE SPECIFICATION CHART UNLESS OTHERWISE NOTED.

HITCH GROUP

ITEM	DESCRIPTION	QTY.
1	Spring, Belt Tension	1
2	Bolt, Tensioner	1
3	Nut, Hex, Flange, 5/16-18	2
4	Nut, Wing	1
5	Pivot, Pulley	1
6	Capscrew, Hex, 3/8-16 x 2-1/2	1
7	Collar	2
8	Washer	4
9	Locknut, Hex, Flange, 3/8-16	4
10	Capscrew, Hex, 3/8-16 x 1	2
11	Belt Stop	1
12	Nut, Flange, 3/8-16	1
13	Pulley Assembly (with Bearing)	1
14	Spacer	1
15	Pulley Assembly (with Bearing)	1
16	Clevis Pin	2
17	Spring Clip	6
18	Clevis Pin	4
19	Capscrew, Hex, 3/8-16 x 3-1/4	1
20	Belt Stop	1
21	Pulley Assembly	1
22	Bearing	1
23	Retaining Ring	1
24	Spacer	1
25	Pulley Assembly, Idler	1
26	Washer	1
27	Washer	6
28	V-Belt	1
29	Pulley Assembly (Includes 13 and 14)	1
30	Pulley Assembly (Includes 21, 22 and 24)	1

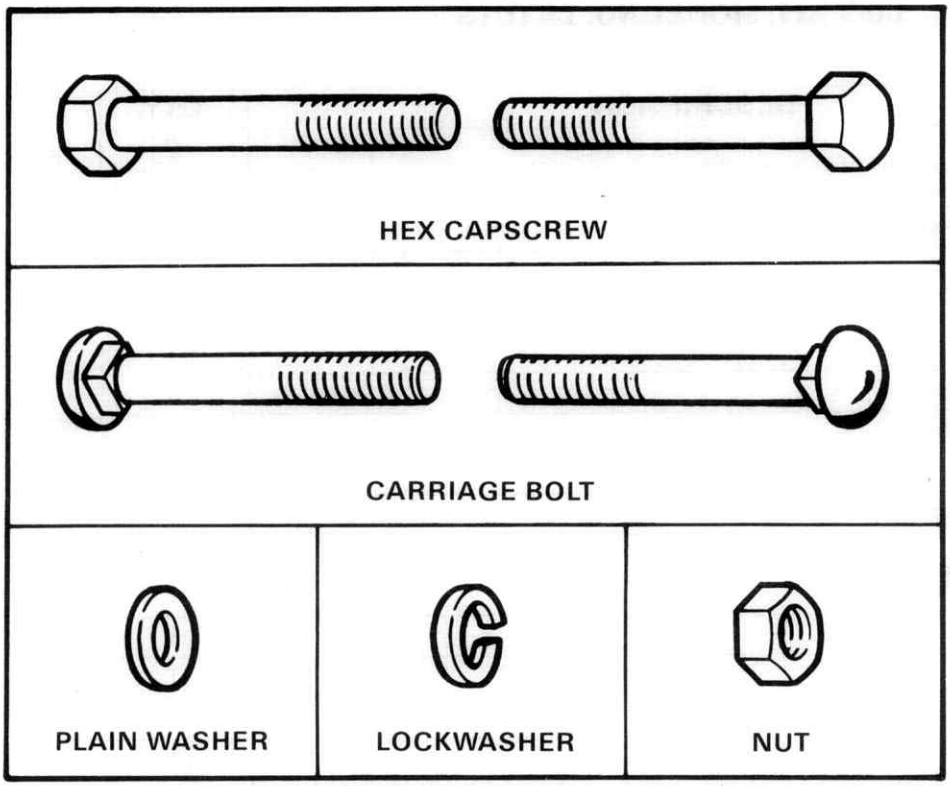
LIFT KIT, MODEL NO. LK1013



NOTE: USE STANDARD HARDWARE TORQUE SPECIFICATION CHART UNLESS OTHERWISE NOTED.

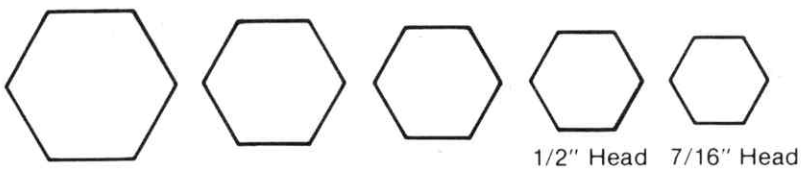
LIFT KIT, MODEL NO. LK1013

ITEM	DESCRIPTION	QTY.
1	Set Collar	2
2	Setscrew, 5/16-18 x 1/2	4
3	Rod Guide Assembly	1
4	Spring	1
5	Lift Rod	1
6	Spring Clip	1
7	Washer, 9/16	1
8	Thumb Button	1
9	Grip	1
10	Lift Lever Assembly	1
11	Decal	1
12	Roll Pin, 3/8 x 1	1
13	Push Nut	1
14	Spring	1
15	Latch	1
16	Latch Rod	1
17	Lift Lever Base Assembly	1
18	Hanger Brackets	2
19	Hex Flange Bolts, 5/16-18 x 5/8	4
20	Bolt, M10 x 1.5 x 32	6
21	Front Bracket (Specify Left or Right)	2
22	Hex Nut, M10	6
23	Counterspring Bracket	1
24	Counterspring	1
25	Washer	1
26	Spring Clip	1



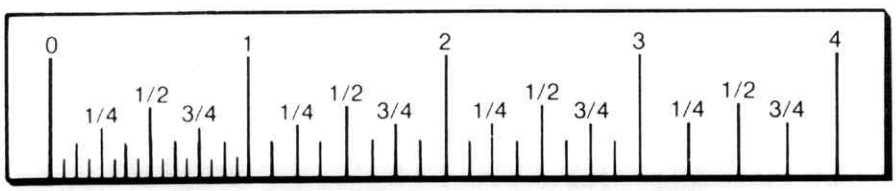
HEX CAPSCREW IDENTIFICATION

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.



3/4" Head screw with 1/2" S.D. | 5/8" Head screw with 7/16" S.D. | 9/16" Head screw with 3/8" S.D. | 1/2" Head screw with 5/16" S.D. | 7/16" Head screw with 1/4" S.D.

S.D. = SHAFT DIAMETER



WASHER AND NUT IDENTIFICATION

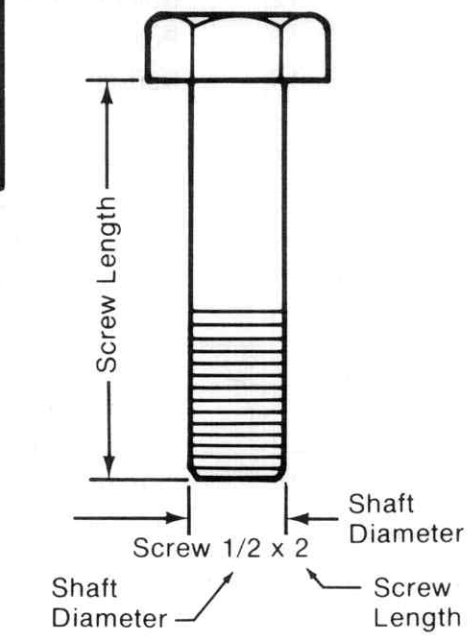
Place the washer or nut on the above scale to determine the inside diameter. The actual inside diameter can vary 1/16 inch. Use the scale for comparison.

Hardware sizes are given in the illustrations throughout this manual.

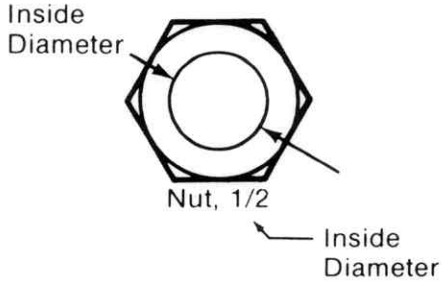
If a washer or nut is identified as "washer, 1/2" or "nut, 1/2", this means the inside diameter is 1/2 inch.

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.

SAMPLE: SCREW IDENTIFICATION



SAMPLE: NUT IDENTIFICATION



TOLERANCE ± 20%

SIZE	SAE GRADE #2		SAE GRADE #5		SAE GRADE #8	
8-32	19	In. Lbs.	30	In. Lbs.	41	In. Lbs.
8-36	20	"	31	"	43	"
10-24	27	"	43	"	60	"
10-32	31	"	49	"	68	"
1/4-20	66	"	8	Ft. Lbs	12	Ft. Lbs.
1/4-28	76	"	10	"	14	"
5/16-18	11	Ft. Lbs	17	"	25	"
5/16-24	12	"	19	"	25	"
3/8-16	20	"	30	"	45	"
3/8-24	23	"	35	"	50	"
7/16-14	30	"	50	"	70	"
7/16-20	35	"	55	"	80	"
1/2-13	50	"	75	"	110	"
1/2-20	55	"	90	"	120	"
9/16-12	65	"	110	"	150	"
9/16-18	75	"	120	"	170	"
5/8-11	90	"	150	"	220	"
5/8-18	100	"	180	"	240	"
3/4-10	160	"	260	"	386	"
3/4-16	180	"	300	"	420	"
7/8-9	140	"	400	"	600	"
7/8-14	155	"	440	"	660	"
1-8	220	"	580	"	900	"
1-12	240	"	640	"	1,000	"

NOTE:

1. These torque values are to be used for all supplied hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
   a. For prevailing torque locknuts — use 65% of grade 5 torques.
   b. For flange whizlock nuts (and screws) — use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings all torque values must meet this specification.

BOLT HEAD MARKING

S.A.E. GRADE:

2 

5 

8 

HONDA
Power
Equipment

Distributor's Limited Warranty

HONDA POWER EQUIPMENT

This warranty is limited to Honda power equipment products (other than general purpose engines) distributed by American Honda Motor Co., Inc., 100 W. Alondra Blvd., Gardena, California 90248-2702.

PRODUCTS COVERED BY THIS WARRANTY:	LENGTH OF WARRANTY: (from date of purchase)	
	NONCOMMERCIAL USE	COMMERCIAL/RENTAL USE
Commercial-model Lawn Mowers	12 months	12 months
Homeowner-model Lawn Mowers	12 months	3 months
Riding Mowers	12 months	3 months
Lawn Tractors	12 months	3 months
Utility Tractors	12 months	3 months
Power Carriers	12 months	3 months
Generators	12 months	3 months
Generator/Welders	12 months	3 months
Tillers	12 months	3 months
Snowblowers/Snowthrowers	12 months	3 months
Pumps	12 months	3 months
Outboard Motors	12 months	3 months
Accessories	12 months	3 months
Attachments	12 months	3 months
Apparel/Replacement Parts	3 months	3 months

NOTE: This warranty does not apply to Honda general purpose engines; they are covered by a different warranty.

TO QUALIFY FOR THIS WARRANTY:

1. The product must be purchased from American Honda or dealers authorized by American Honda to sell those products within the United States, Puerto Rico, and the U.S. Virgin Islands.
2. You must be the first retail purchaser. This warranty is not transferable to subsequent owners.

WHAT AMERICAN HONDA WILL REPAIR OR REPLACE UNDER WARRANTY:

Except as described under "EXCLUSIONS," American Honda will repair or replace, at its option, any power equipment product that is proven to be defective in material or workmanship under normal use during the applicable warranty time period. Anything replaced under warranty becomes the property of American Honda Motor Co., Inc.

- Accessories, attachments, and replacement parts—
  Except as described under "EXCLUSIONS," accessories, attachments, and replacement parts installed by a dealer who is authorized by American Honda to sell them will be repaired or replaced under warranty without charge for parts or labor. If installed by anyone else, accessories, attachments, and replacement parts will be repaired or replaced under warranty without charge for parts, but any labor charges will be the responsibility of the purchaser.
- All other power equipment products—
  Except as described under "EXCLUSIONS," all other power equipment products will be repaired or replaced under warranty without charge for parts or labor.

TO OBTAIN WARRANTY SERVICE:

You must take the Honda power equipment product and proof of purchase, at your expense, to any Honda power equipment dealer within the United States, Puerto Rico, or the U.S. Virgin Islands who is authorized to sell that product, during the dealer's normal business hours. If you are unable to obtain warranty service, or are dissatisfied with the warranty service you receive, take the following steps: First, contact the owner of the dealership involved; normally this should resolve the problem. However, if you should require further assistance, write or call the Power Equipment Customer Relations Department of American Honda Motor Co., Inc.

American Honda Motor Co., Inc.
Power Equipment Customer Relations Department
P.O. Box 50
Gardena, California 90247-0805
Telephone: (213) 604-2400

EXCLUSIONS:

THIS WARRANTY DOES NOT EXTEND TO PRODUCTS AFFECTED OR DAMAGED BY ACCIDENT AND/OR COLLISION, NORMAL WEAR, USE IN AN APPLICATION FOR WHICH THE PRODUCT WAS NOT DESIGNED OR ANY OTHER MISUSE, NEGLECT, INCORPORATION OR USE OF UNSUITABLE ATTACHMENTS OR PARTS, UNAUTHORIZED ALTERATION, OR IMPROPER INSTALLATION.

THIS WARRANTY DOES NOT APPLY TO ANY OUTBOARD MOTOR THAT HAS BEEN USED BY A DEALER AS A DEMONSTRATOR.

THE AUGER AND PADDLE ASSEMBLIES OF SNOWTHROWERS AND SNOWBLOWERS ARE SPECIFICALLY NOT WARRANTED AGAINST DAMAGE, INCLUDING, BUT NOT LIMITED TO, ABRASIVE DAMAGE.

DISCLAIMER OF CONSEQUENTIAL DAMAGE AND LIMITATION OF IMPLIED WARRANTIES:

AMERICAN HONDA DISCLAIMS ANY RESPONSIBILITY FOR LOSS OF TIME OR USE OF THE PRODUCT OR THE ITEM IN WHICH THE PRODUCT IS INSTALLED, TRANSPORTATION, COMMERCIAL LOSS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE. ANY IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions and limitations may not apply to you.

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AMERICAN HONDA MOTOR CO., INC.
January, 1987