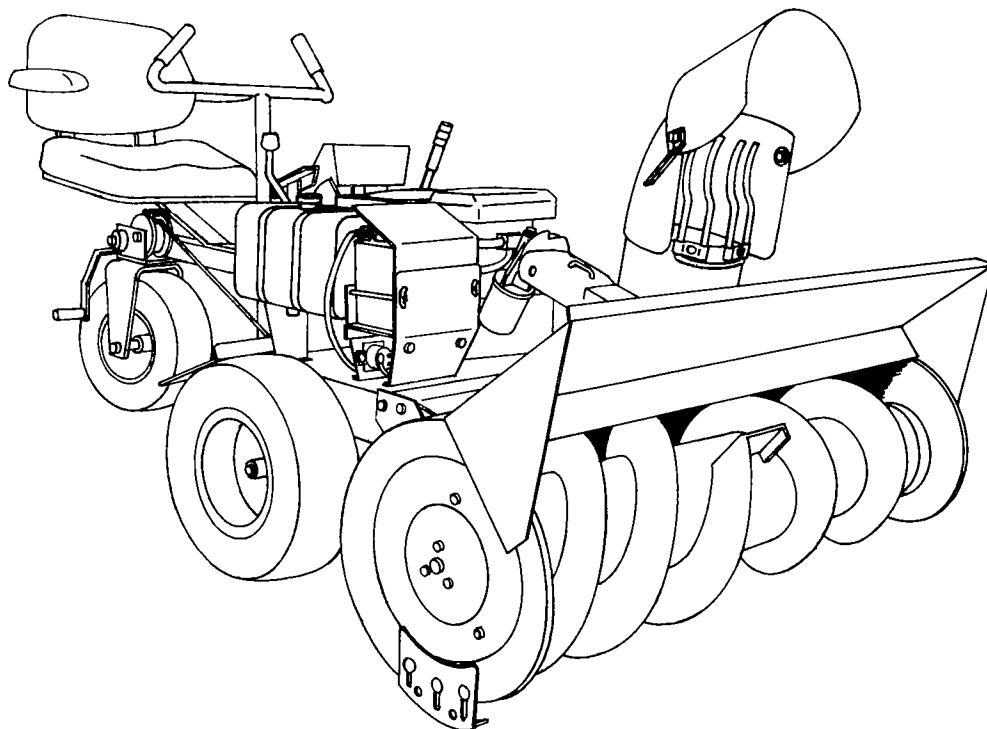


Instruction Manual and Parts List



48" SNOW THROWER ATTACHMENT

MODEL NO. SB-48H

FOR

SCAG POWER EQUIPMENT, INC.

TRACTOR MODEL NO. SR-18-B

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RULES FOR SAFE OPERATION

1. Know the controls and how to stop quickly. READ THE OWNER'S MANUAL.
2. Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. Keep children and pets a safe distance away.
4. Always wear substantial footwear. Do not wear loose fitting clothing that could get caught in moving parts.
5. Keep your eyes and mind on your tractor, snow thrower and the area being cleaned. Don't let other interests distract you.
6. Do not attempt to operate your tractor or mower when not in the drivers seat.
7. Always get on or off your tractor from the operators left hand side.
8. Clear the work area of objects which might be picked up and thrown.
9. Disengage all attachment clutches and shift into neutral before attempting to start the engine.
10. Disengage power to attachments and stop the engine before leaving the operator's position.
11. Disengage all power to snow thrower, stop the engine and disconnect spark plug wire(s) from spark plug(s) before cleaning, making an adjustment or repairs.
12. Disengage power to attachments when transporting or not in use. Drive slowly when front or rear mounted attachment is in transport position.
13. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power-take-off lowering the attachments, shifting into neutral, setting the parking brake, stopping the engine, and removing the key.
14. Do not stop or start suddenly when going uphill or downhill.
15. Reduce speed on slopes and make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
16. Do not shift gears while going up or down slopes. Choose a gear low enough to negotiate the slope without stopping and shifting gears. To reduce speed, move throttle lever to slow.
17. Stay alert for holes in the terrain and other hidden hazards.
18. Do not drive too close to creeks, ditches and public highways.
19. Exercise special care when removing snow around fixed objects in order to prevent the blades from striking them. Never deliberately run tractor or mower into or over any foreign object.
20. Never shift gears until tractor comes to a stop.
21. Never place hands or feet near the snow thrower auger, in the deflector (discharge chute) or near any moving parts while tractor or mower are running. Always keep clear of discharge chute.
22. Use care when pulling loads or using heavy equipment.
 - a. Use only approved drawbar hitch points.
 - b. Limit loads to those you can safely control.
 - c. Do not turn sharply: Use care when backing.
 - d. Use counterweights or wheel weights and tire chains when suggested in this owner's manual.
 - e. Never run snow thrower into heavy material at high speeds.
23. Watch out for traffic when crossing or near roadways.
24. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.
25. Handle gasoline with care - it is highly flammable.
 - a. Use approved gasoline containers.
 - b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.
 - c. Open doors if the engine is run in the garage - exhaust fumes are dangerous. Do not run the engine indoors.
26. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. When using Three Point Hitch remove attachments from hitch before making any repairs on attachment or hitch.
27. Keep all nuts, bolts, and screws tight, all cotter pins and retainer springs in place to be sure the equipment is in safe working condition.
28. Never store equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
29. To reduce fire hazard, keep the engine free of grass, leaves or excessive grease.
30. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
31. Do not change the engine governor settings or over-speed the engine.
32. When using the vehicle with snow thrower, proceed as follows:
 - a. Remove snow only in daylight or in good artificial light.
 - b. Never make any adjustments while the engine is running if the operator must dismount to do so.
 - c. Shut the engine off when unclogging chute.



LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

SET UP

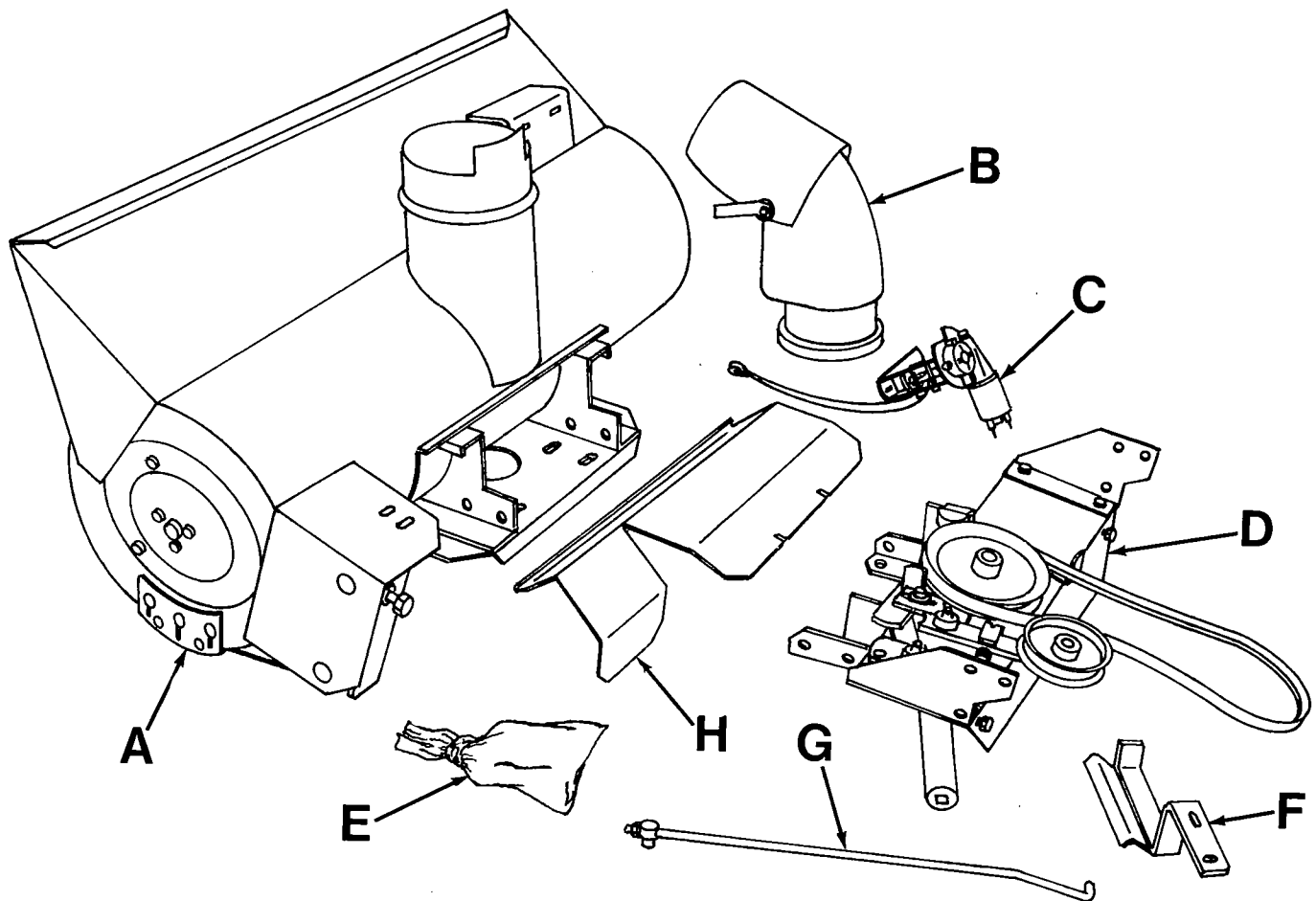


FIG. 1

UNPACKING

Your snow thrower and all necessary parts are packed in two cartons. Unpack the cartons carefully to insure that all parts are present.

The snow thrower attachment consists of the following: (See Fig. 1)

- A. Header Housing
- B. Discharge Chute & Deflector
- C. Electric Level Wind Kit
- D. Mounting Frame
- E. Bag of Parts
- F. Snow Thrower V-Belt Guide
- G. Clutch Rod
- H. Drive Cover

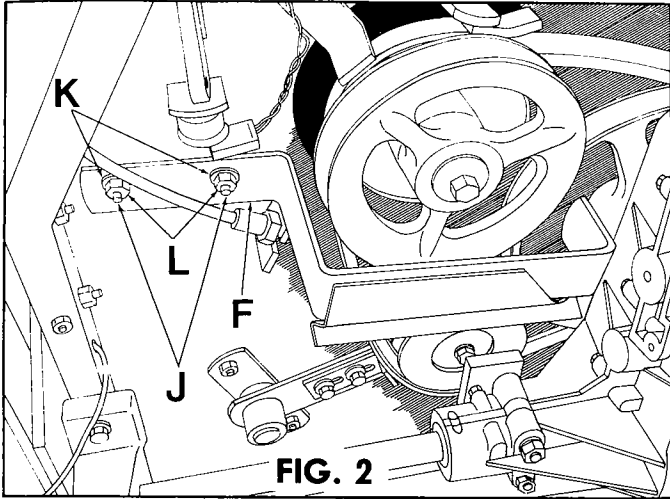
TOOLS

With some tools you already own, plus a few inexpensive items, that can be purchased at your local hardware store, set up and maintenance can be accomplished quickly and accurately.

Tools needed for assembling snow thrower to tractor are:

- 1. 9/16" Open End Wrench..... 2
- 2. 3/4" Open End Wrench..... 2
- 3. 1/2" Open End Wrench..... 2
- 4. 7/16" Open End Wrench..... 1

SET UP



PREPARATION OF TRACTOR

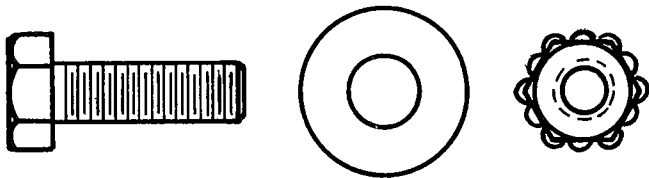
Before beginning to assemble the snow thrower attachment, remove any other attachments from tractor.

INSTALLATION OF SNOW THROWER V-BELT GUIDE

1. Remove rotary mower v-belt guide from tractor.

NOTE: Rotary mower v-belt guide must be re-assembled to tractor and snow thrower v-belt guide removed, before rotary mower attachment can be re-assembled the following year.

Assemble snow thrower v-belt guide to tractor using:



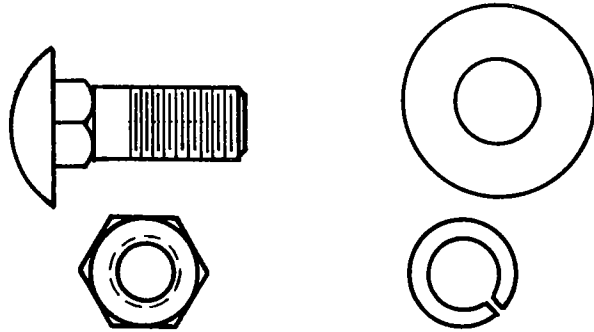
Two hex bolts, two flat washers, and two hex nuts and lock washer assemblies (shown full size), found in bag of parts.

2. Assemble two hex bolts (J) through top of tractor engine deck. (See Fig. 2)
3. Assemble snow thrower v-belt guide (F) over hex bolts (J) and secure with flat washer (K) and hex nut (L).

SNOW THROWER PREPARATION

INSTALLATION OF MOUNTING FRAME TO SNOW THROWER

Assemble mounting frame to header housing using:

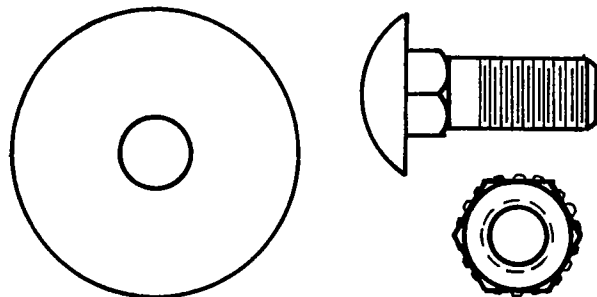


Eight carriage bolts, eight flat washers, eight lock washers and eight nuts (shown full size above), found in bag of parts.

1. Align two halves of universal shaft (M) sliding them together as you place projecting angles of mounting frame (D) into mounting box at rear of header housing (A). (See Fig. 3)
2. Align holes in projecting angles of mounting frame (D) with holes in mounting box of header housing (A).
3. Secure mounting frame (D) to header housing (A) with eight carriage bolts, flat washers, lock washers and nuts, two bolts each side and four bolts through bottom.

INSTALLATION OF ELECTRIC LEVEL WIND TO SNOW THROWER

Assemble electric level wind to snow thrower using:



Two carriage bolts, two flat washers, and two nut and lock washer assemblies (shown full size above), found assembled in electric level wind.

SET UP

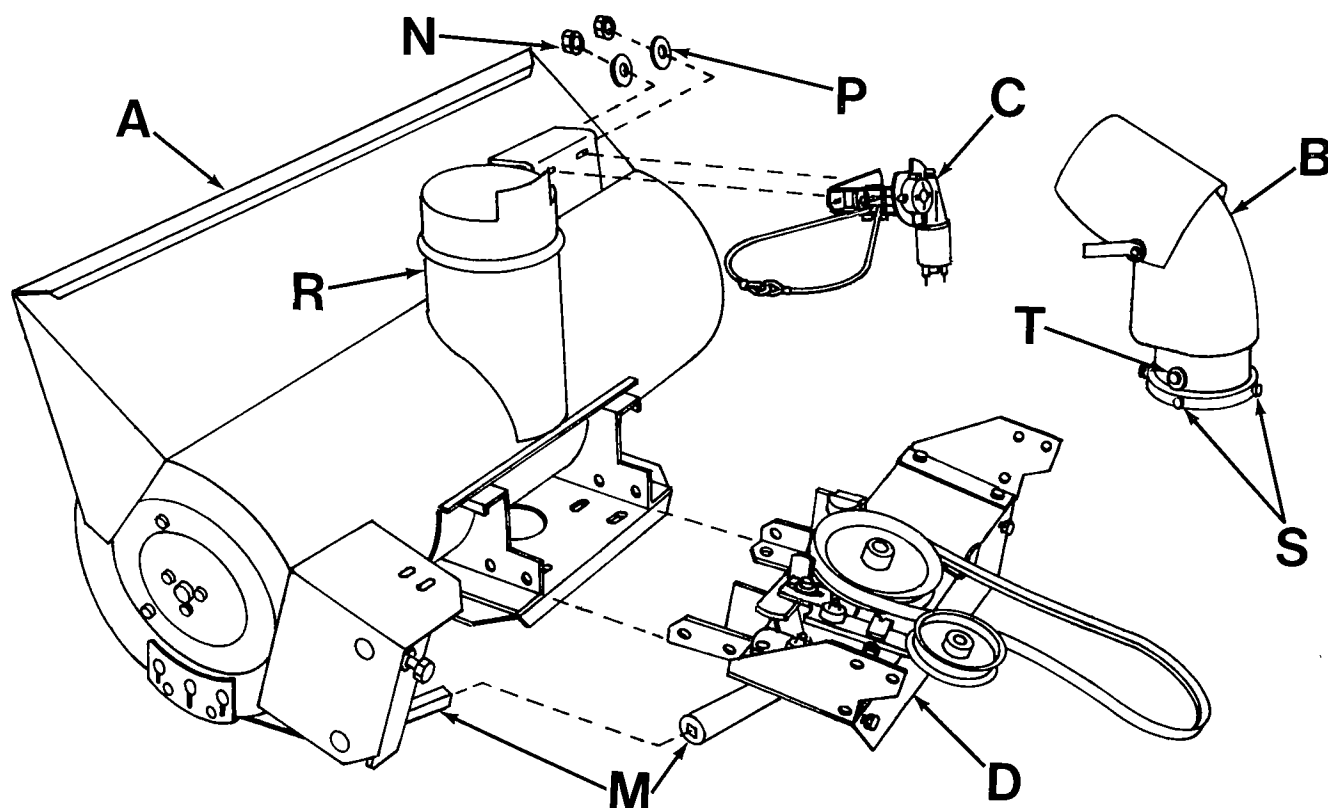


FIG. 3

INSTALLATION OF ELECTRIC LEVEL WIND TO SNOW THROWER (Continued)

1. Disassemble two nuts (N) and two washers (P) from electric level wind (C). (See Fig. 3)
2. Assemble electric level wind (C) to header housing (A) with cable (Q) facing toward header housing discharge stack (R).
3. Loop cable (Q) over discharge stack (R) being careful not to cross cables. Allow cable (W) to fall below ring of discharge stack (R).
4. Pull electric level wind (C) away from discharge stack (R) to take slack out of cable (Q). Secure electric level wind (C) to header housing (A) with two nuts (N) and two washers (P).

INSTALLATION OF DISCHARGE CHUTE

Assemble discharge chute to header housing using four bolts found assembled in discharge chute.

1. Loosen the four bolts (S) at the base of discharge chute (B). (See Fig. 3)
2. Place discharge chute (B) onto discharge stack (R).
3. Tighten the four bolts (S). These bolts retain the discharge chute (B) to the discharge stack (R) yet allows the discharge chute to rotate freely.
4. Loop both ends of cable (Q) over bolt (T) as shown in Figure 3.

SET UP

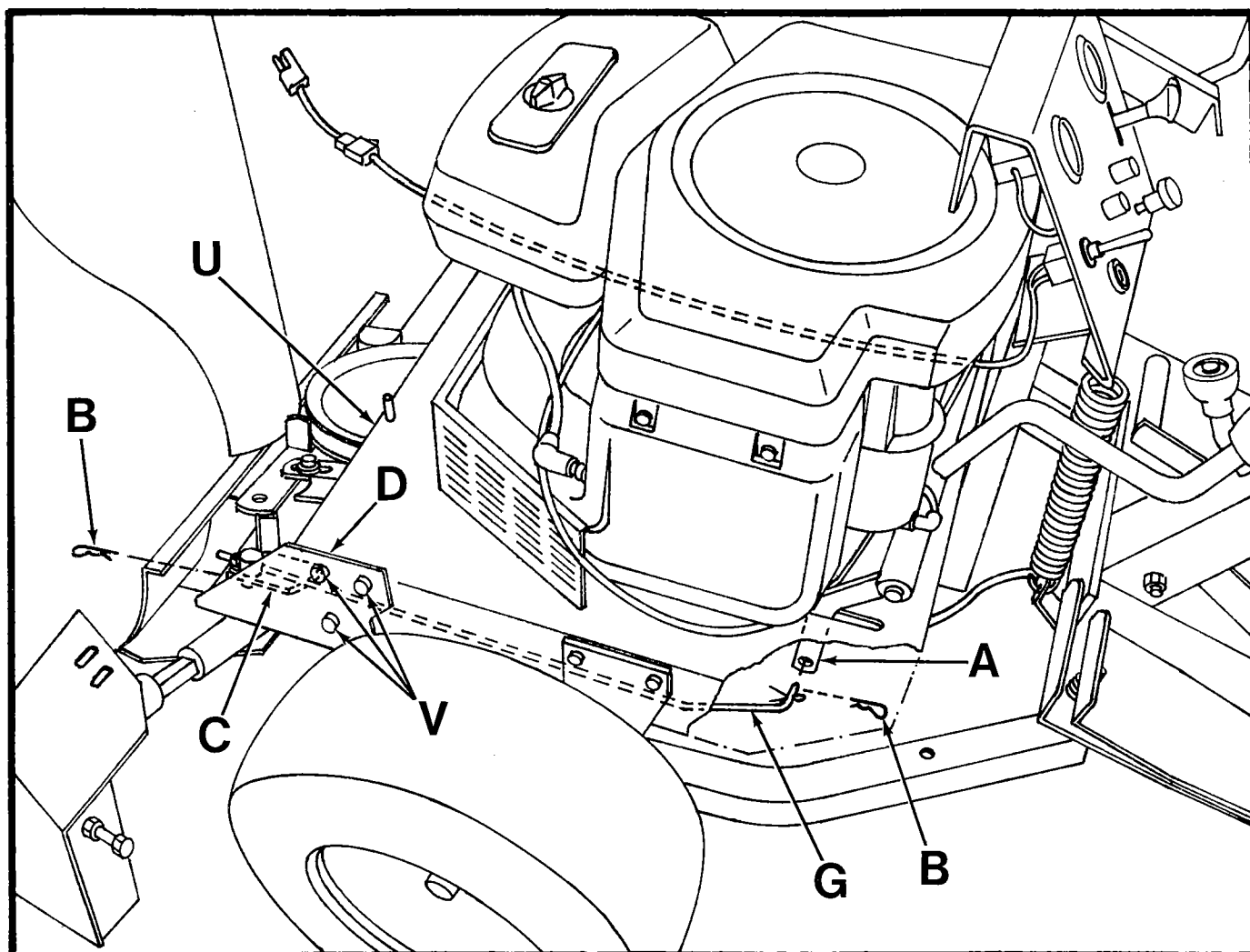
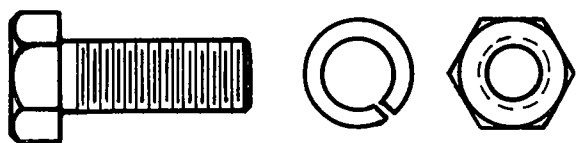


FIG. 4

MOUNTING SNOW THROWER TO TRACTOR

Assemble snow thrower to tractor using:



Six hex bolts, six lock washers and six hex nuts (shown full size above), found in bag of parts.

1. Place snow thrower in front of tractor.
2. Roll tractor forward until holes in engine deck (U) align with holes in snow thrower mounting frame (D). (See Fig. 4)
3. Secure snow thrower to tractor with bolts, nuts and lock washers (V).

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INSTALLATION OF SNOW THROWER DRIVE V-BELT

Assemble snow thrower drive v-belt to tractor PTO pulley.

1. Slide drive v-belt (W) between tractor PTO pulley (X) and snow thrower v-belt guide (F). (See Fig.)
2. Assemble drive v-belt (W) around tractor PTO pulley (X).
3. Check snow thrower drive pulley (Y) and clutching idler pulley (Z) to make sure v-belt is assembled according to drive layout Figure 5.

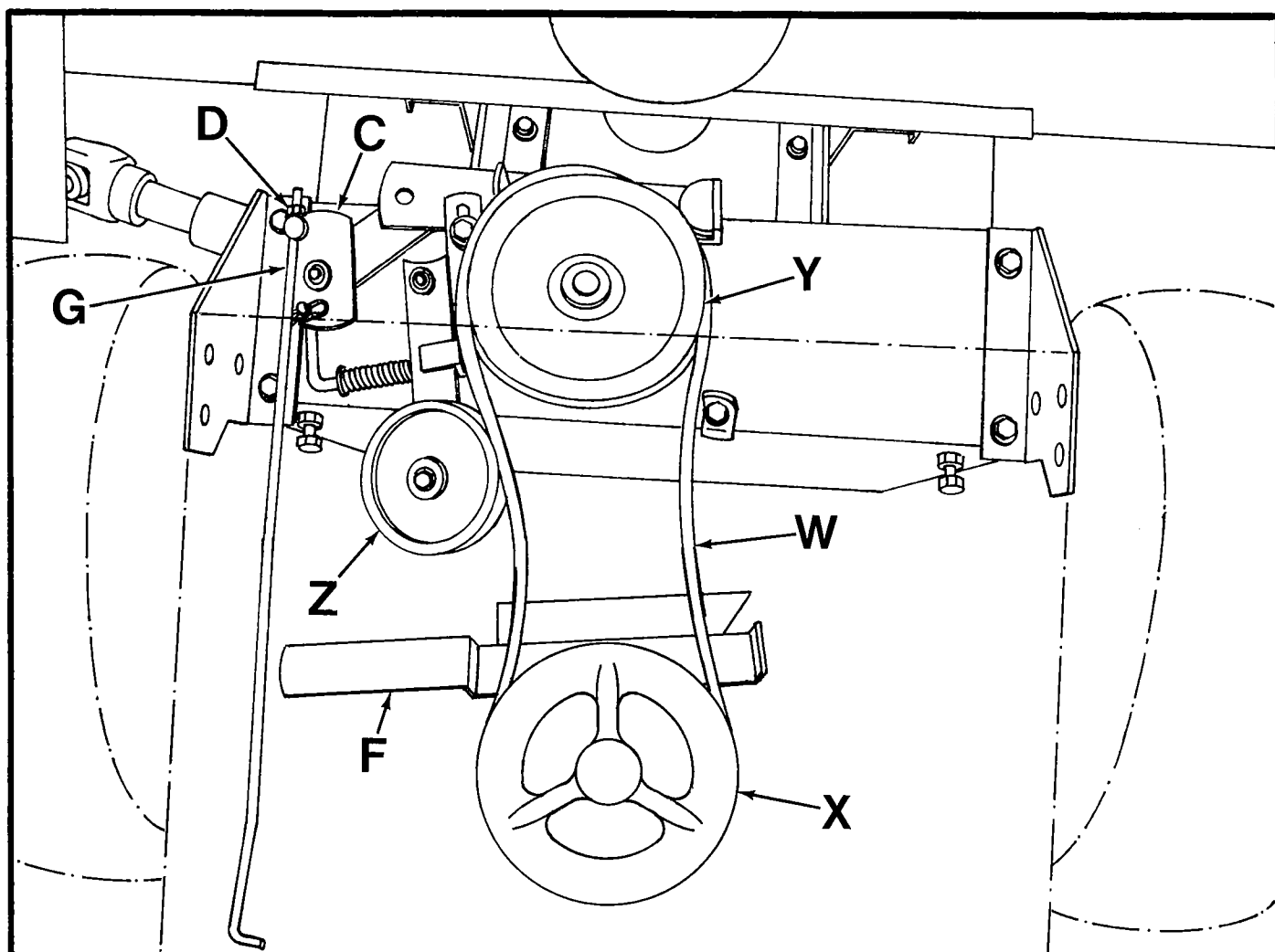


FIG. 5

INSTALLATION OF CLUTCH ROD

Assemble snow thrower clutch rod to snow thrower using:



Two hair cotter pins (shown full size above), found in bag of parts, one hex jam nut (shown full size above), found assembled to clutch rod.

1. Loosen jam nut (D).
2. Slide snow thrower clutch rod (G) inside engine deck (U) and secure to tractor PTO lever (A) with hair cotter pin (B). (See Fig. 4)
3. Place adjustable end of clutch rod (G) into hole of clutch activating bracket (C) and secure with hair cotter pin (B).
4. Retighten jam nut (D).

SET UP

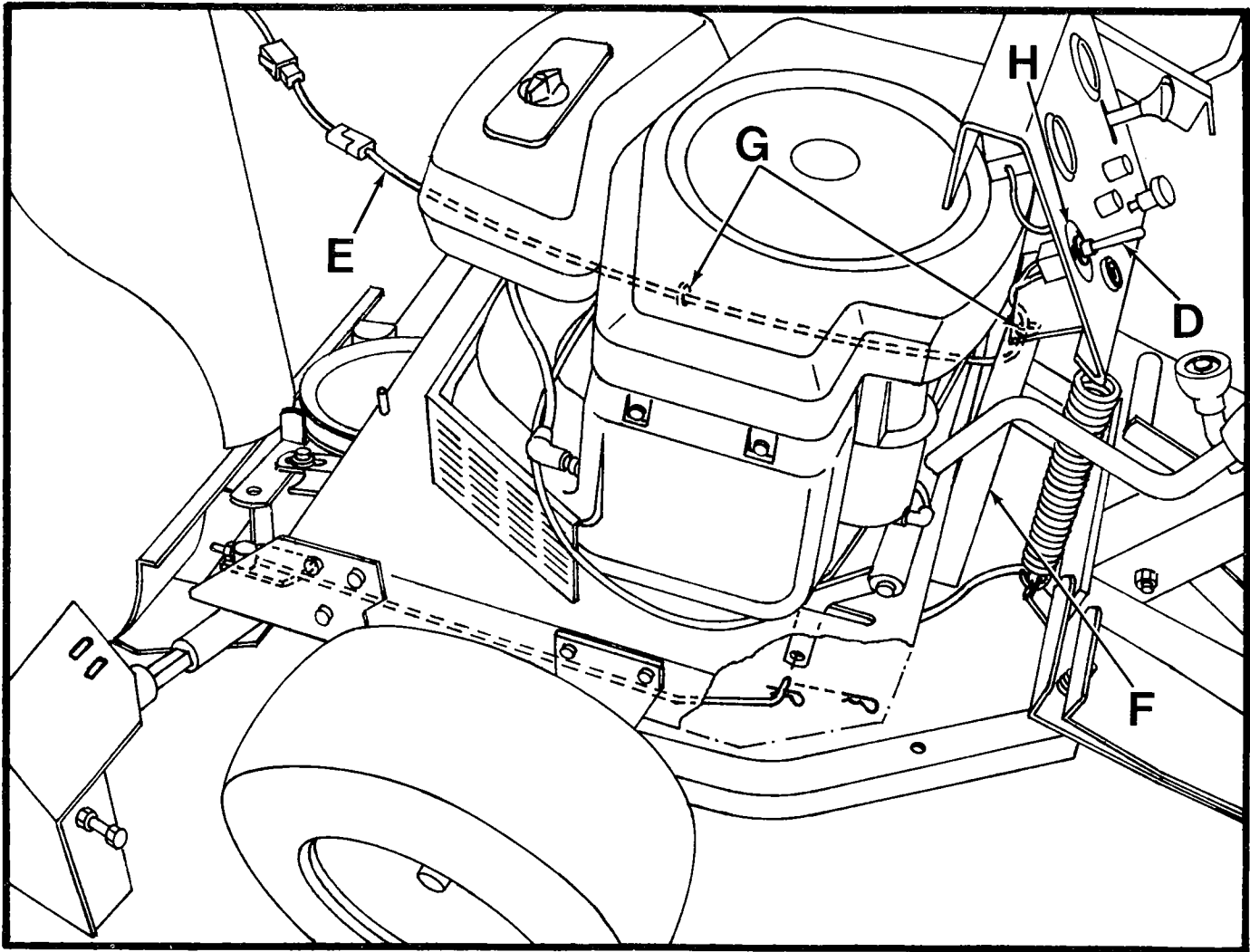


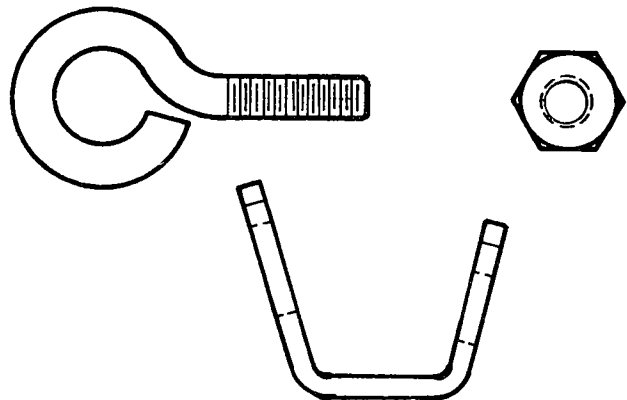
FIG. 6

INSTALLATION OF SWITCH AND WIRE HARNESS

1. Assemble discharge chute control switch (D) to dash of tractor. (See Fig. 6)
2. Run wire harness (E) down dash panel (F) and between engine and gas tank.
3. Assemble single wire with circuit breaker in line to (Power +) terminal of tractor starter solenoid.
4. Assemble single wire with 1/4 " eye to nut (- Ground) on tractor throttle behind dash board.
5. Assemble double wire with male/female connector to electric spout rotator assembly.
6. Secure wire harness (E) to tractor wire harness with plastic ties (G).
7. Assemble discharge chute control decal (H) over control handle of switch (D).

ASSEMBLE LIFT ASSIST SPRING TO TRACTOR

Assemble lift assist spring to tractor using:



One eye bolt, one nut and one anchor bracket (shown full size above), found in bag of parts.

SET UP

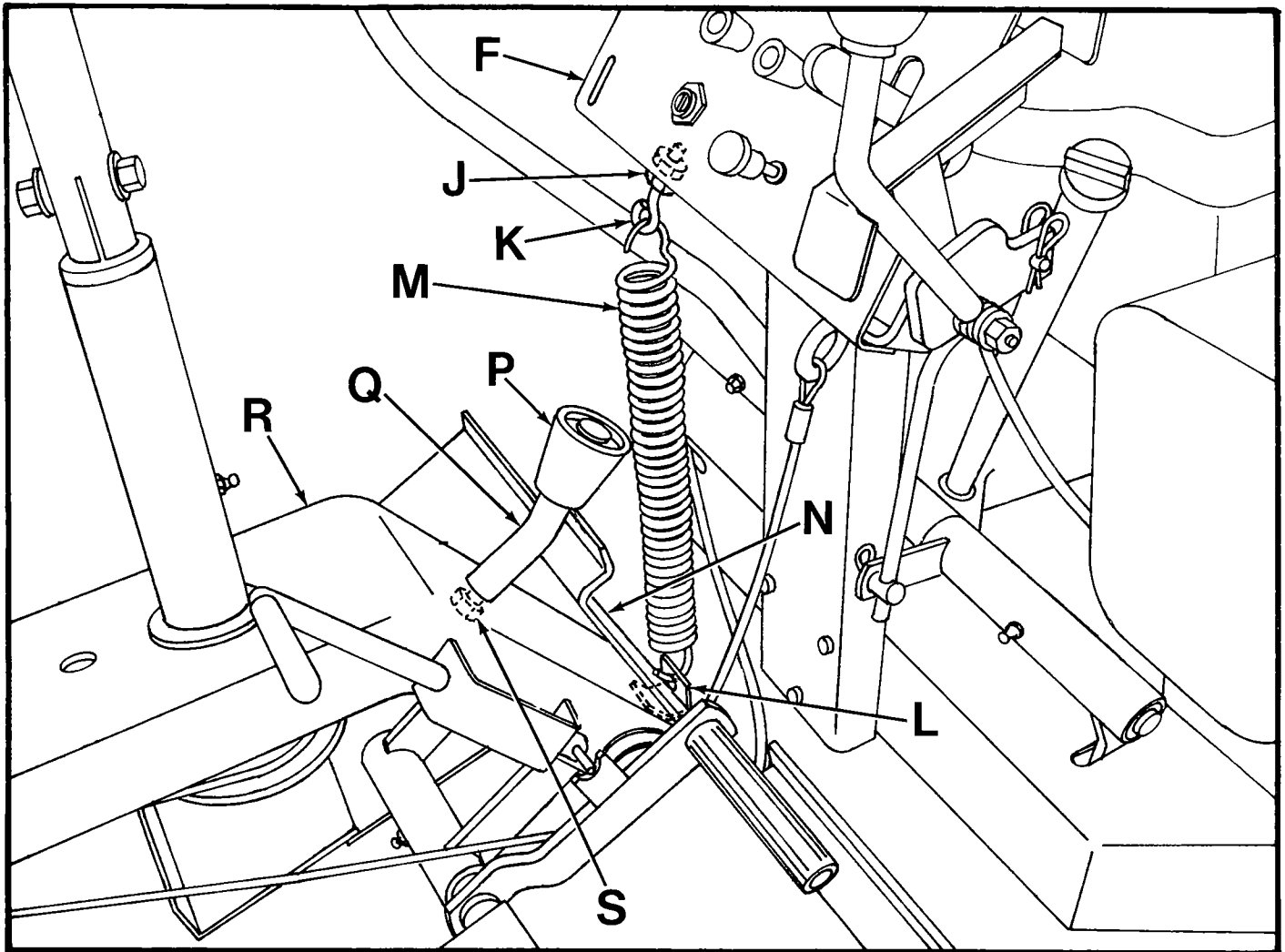


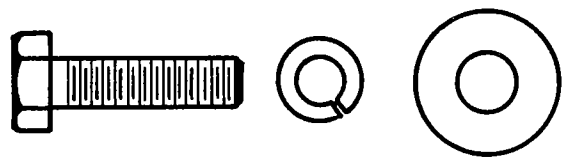
FIG. 7

ASSEMBLE LIFT ASSIST SPRING TO TRACTOR (Continued)

1. Place snow thrower in raised position.
2. Assemble nut (J) onto eye bolt (K). (See Fig. 7)
3. Remove bolt from tractor dash (F) and replace it with nut (J) and bolt (K) assembly.
4. Assemble anchor bracket (L) to spring (M).
5. Place spring (M) into eye bolt (K).
6. Stretch spring downward and hook anchor (L) onto tractor foot rest (N).
7. Place snow thrower back to ground level.

INSTALLATION OF SNOW THROWER UP STOP

Assemble snow thrower up stop to tractor using:



One bolt, one flat washer and one lock washer (shown full size above), found in bag of parts.

1. Remove rotary mower up stop.
2. Remove rubber snubber (P) from rotary mower up stop. (See Fig. 7)
3. Place rubber snubber (P) onto snow thrower up stop (Q).
4. Install snow thrower up stop (Q) to tractor frame (R) with bolt, flat washer and lock washer (S).

NOTE: Rotary mower up stop must be re-assembled and snow thrower up stop removed before rotary mower attachment can be re-assembled the following year.

SET UP

PRE-USE ADJUSTMENT

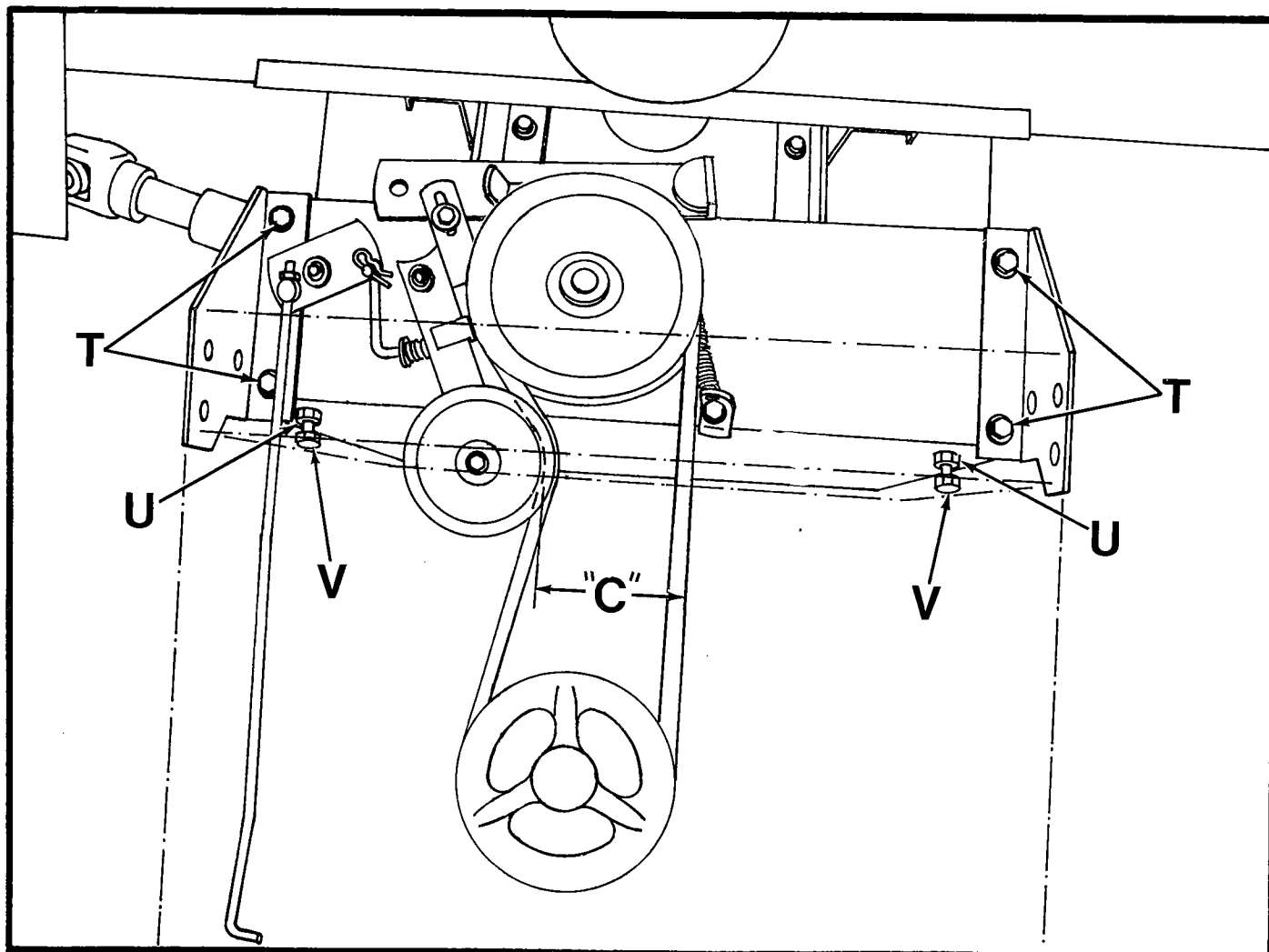


FIG. 8



NO ADJUSTMENTS TO THE BELT DRIVES SHOULD BE MADE WITHOUT SHUTTING OFF THE TRACTOR ENGINE AND REMOVING THE SPARK PLUG WIRE FROM SPARK PLUG.

DRIVE V-BELT ADJUSTMENT

All v-belts can stretch, most stretch occurs during the first four hours of operation.

Check v-belt adjustment after 30 minutes use, 60 minutes use and every hour thereafter until the fourth hour. After four hours use, the v-belt adjustment should be checked prior to using the snow thrower.

FAILURE TO DO THIS WILL RESULT IN PREMATURE V-BELT FAILURE.

To adjust drive v-belt proceed as follows:



1. Shut off tractor and remove ignition key.
2. Remove spark plug wire from spark plug.
3. Place snow thrower on ground level.
4. Place unit in the engaged (ON) position.
5. When the drive v-belt is properly adjusted the distance over the v-belt strands at Point C should not exceed $4\frac{1}{2}$ ", but not less than 4". (See Fig. 8)

If distance over the v-belt strands at Point C is greater than $4\frac{1}{2}$ ", v-belt is too tight. To loosen v-belt proceed as follows:

- A. Loosen four nuts (T). (See Fig. 8)
- B. Turn two nuts (U) counter-clockwise two full turns.
- C. Turn bolts (V) clockwise until distance over v-belt strands at Point C is from $4\frac{1}{2}$ " to 4".
- D. Retighten two nuts (U) and four nuts (T) to secure.
- E. Recheck distance over the v-belt strands at Point C to make sure it's not over $4\frac{1}{2}$ " or less than 4".

If distance over the v-belt strands at Point C is less than 4", v-belt is too loose. To tighten proceed as follows:

- A. Loosen four nuts (T). (See Fig. 8)
- B. Turn two nuts (U) counter-clockwise two full turns.
- C. Turn bolts (V) counter-clockwise until distance over v-belt strands at Point C is from $4\frac{1}{2}$ " to 4".
- D. Retighten two nuts (U) and four nuts (T) to secure.
- E. Recheck distance over the v-belt strands at Point C to make sure it's not over $4\frac{1}{2}$ " or less than 4".

SET UP

PRE-USE ADJUSTMENT

NOTE: When adjusting v-belt always set v-belt to the tight side. This will allow v-belt to stretch and give maximum operating time without re-adjusting v-belt.

6. After drive v-belt adjustment is made you must re-adjust clutch rod and belt brake. (See Clutch Rod & Belt Brake Adjustment)
7. Place unit into the disengaged (OFF) position.
8. Replace spark plug wire and resume snow removal.



THE V-BELT, USED IN THIS SNOW THROWER ATTACHMENT IS OF SPECIAL CONSTRUCTION, DESIGNED FOR USE WITH THE V-BELT BRAKE SYSTEM. FOR CONTINUED SATISFACTORY PERFORMANCE AND SAFETY USE ONLY REPLACEMENT BELTS SUPPLIED BY THE MANUFACTURER.

SET UP

PRE-USE ADJUSTMENT

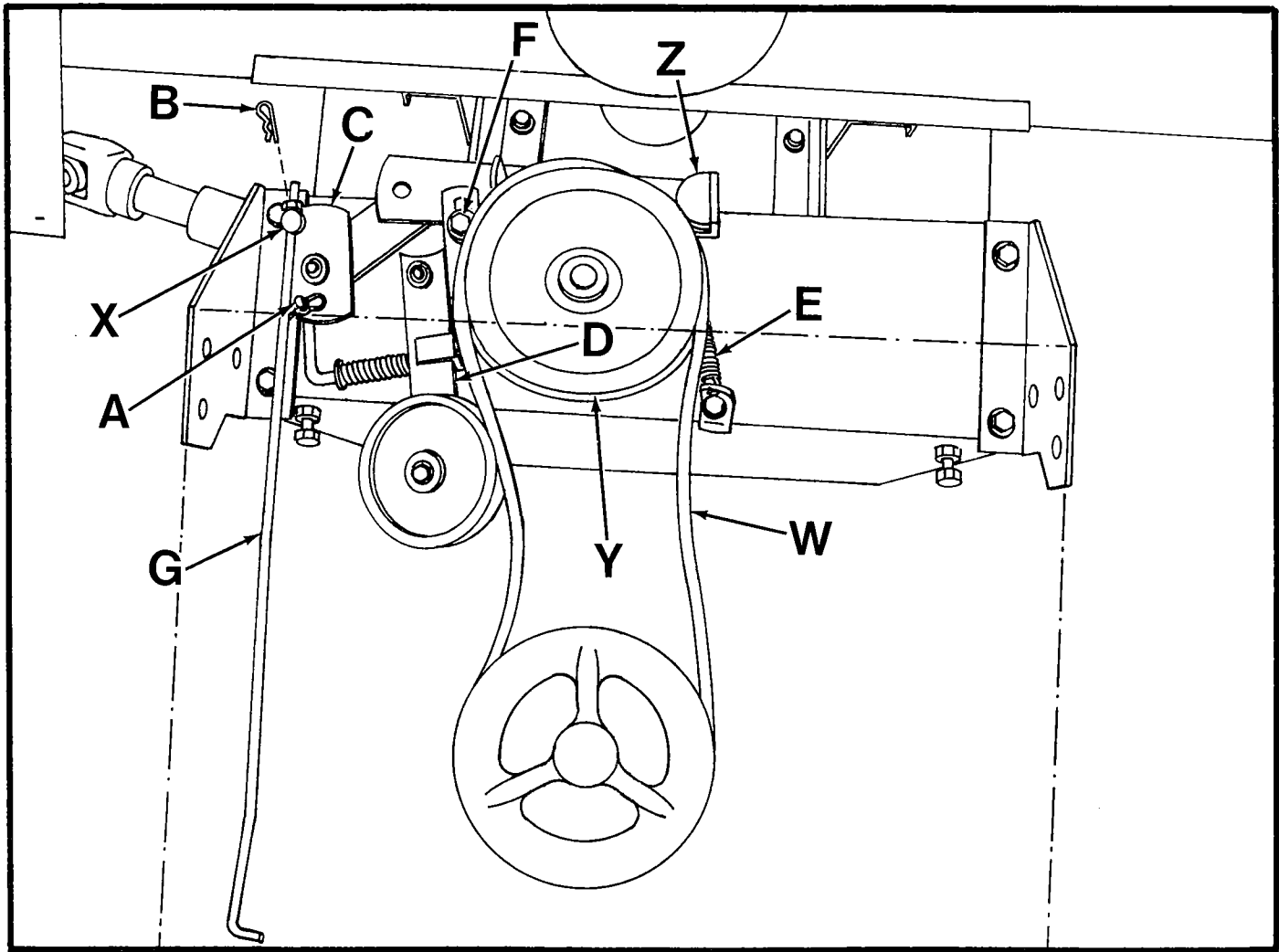


FIG. 9

CLUTCH ROD ADJUSTMENT

To adjust clutch rod proceed as follows:

1. Shut off tractor and remove ignition key.
2. Remove spark plug wire from spark plug.
3. Place snow thrower on ground level.
4. Remove hair cotter pin (B) from adjustable end of clutch rod (G). (See Fig. 9)
5. Remove adjustable end of clutch rod (G) from clutch activating bracket (C).
6. Move tractor PTO lever to disengaged position.
7. Position clutch activating bracket (C) so clutch rod (G) touches stop pin (A) and anchor (X) can be assembled into clutch activating bracket (C) as shown in Figure 9.
8. Adjust anchor (X) until it can be assembled into clutch activating bracket (C) without moving tractor PTO lever.
9. Secure anchor (X) to clutch activating bracket (C) with hair cotter pin (B).

ADJUST V-BELT BRAKE SYSTEM

Information on snow thrower brake system (Fig. 9) for your snow thrower attachment.

When tractor PTO lever is moved into the engaged (ON) position, the clutch rod (G) will rotate idler arm (D) against bracket arm (Z) and move it away from v-belt (W) to permit free rotation of pulley (Y).

When tractor PTO lever is moved into the disengaged (OFF) position, the clutch rod (G) will rotate idler arm (D) away from brake arm (Z) which will allow spring (E) to pull brake arm (Z) onto v-belt (W) to assist in stopping it within approximately 5 seconds.

V-belt brake adjustment as follows:



1. Shut off tractor and remove ignition key.
2. Remove spark plug wire from spark plug.
3. Place snow thrower on ground level.
4. Place unit in the engaged (ON) position.
5. V-belt brake (Z) should be 1/4" to 1/16" away from v-belt (W). (See Fig. 9)

To adjust:

1. Place tractor PTO lever into disengaged (OFF) position.
2. Loosen nut (F) and move stud against v-belt brake (Z).
3. Retighten nut (F) and move tractor PTO lever into engaged (ON) position to recheck adjustment
4. Replace spark plug wire.



DO NOT OPERATE THIS SNOW THROWER UNLESS IT IS OPERATING PROPERLY, AS OUTLINED IN YOUR OWNER'S MANUAL.

If snow thrower auger does not stop within 5 seconds after the tractor PTO lever has been moved to the disengaged (OFF) position check unit for adjustments or worn parts and repair before operating unit.

SET UP

PRE-USE ADJUSTMENT

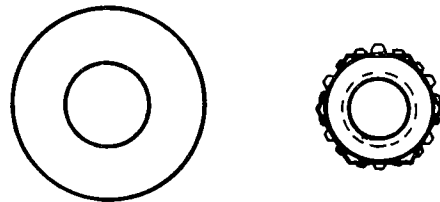


THE V-BELT USED IN THIS SNOW THROWER ATTACHMENT IS OF SPECIAL CONSTRUCTION, DESIGNED FOR USE WITH THE V-BELT BRAKE SYSTEM. FOR CONTINUED SATISFACTORY PERFORMANCE AND SAFETY USE ONLY REPLACEMENT BELTS SUPPLIED BY THE MANUFACTURER.

The use of improper v-belts on the v-belt brake could cause early failure of the replacement v-belt. V-belts not designed for this type of drive, while similar in appearance, may have an exterior surface of cord construction that will not perform satisfactorily in a v-belt brake system and could in some cases cause a malfunction in the operation of the machine.

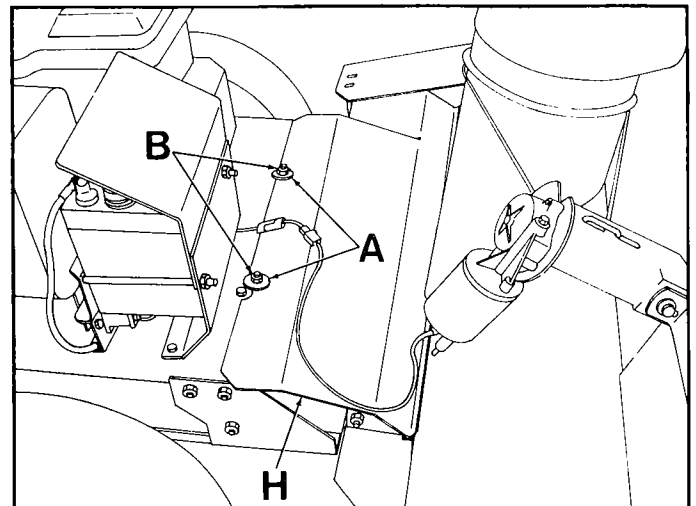
INSTALLATION OF DRIVE COVER

Assemble drive cover to tractor using:



Two flat washers and two nut and lock washer assemblies (shown full size above), found in bag of parts.

1. Place drive cover (H) over snow thrower drive system as shown in Figure 10.
2. Secure with two flat washers (A) and two nut and lock washer assemblies (B).



OPERATION

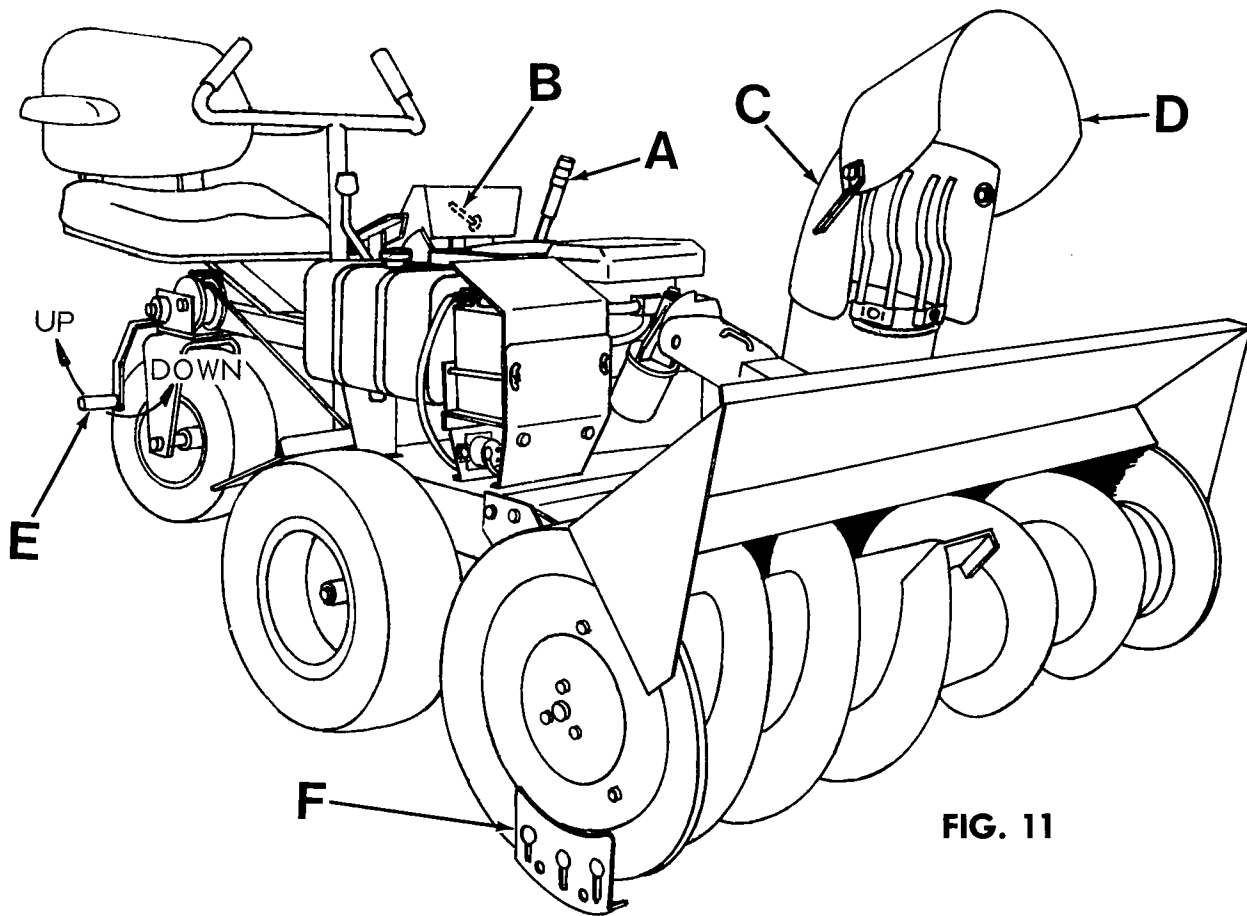


FIG. 11

OPERATING INSTRUCTIONS

The operating capacity of your snow thrower can be increased by careful observation of operating rules. Your snow thrower is capable of handling heavy snow conditions. However, giving the equipment the opportunity to function within reasonable requirements will assure you of longer equipment life, less possibility of damage to the unit and require less power to operate. Make certain that you are totally familiar with all aspects of both the tractor and you snow thrower prior to its usage. Listed below are suggestions to improve the performance of your snow thrower.

Before placing snow thrower into operation:

1. Be sure that snow thrower has been properly installed.
2. Become familiar with Operator's Manual and Safety Precautions.

3. Test the following controls for smooth operation. (See Fig. 11)

A. Tractor PTO On/Off Lever (See Fig. 11)

Your snow thrower is driven by a v-belt from the tractor engine and is operated through the tractor PTO lever.

Starting and Stopping Snow Thrower

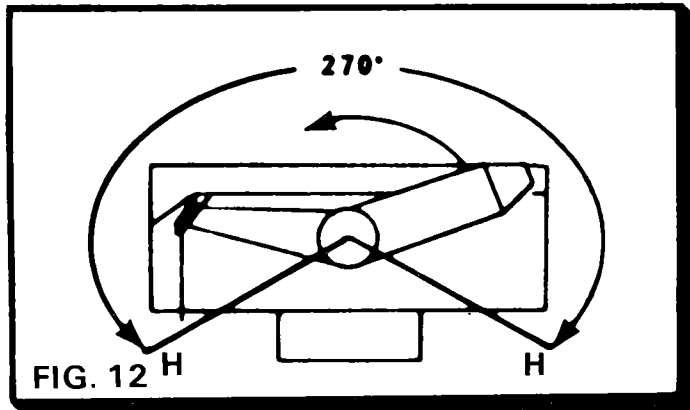
Start tractor engine and run at full throttle. Push tractor PTO on/off lever (A) forward to engage snow thrower. To stop snow thrower, pull back on tractor PTO on/off lever.

Your snow thrower is designed to operate at full throttle. If slower ground speeds are required use lower gears. **Do not** reduce engine speed.

OPERATION

B. Discharge Chute Control (See Fig. 11)

The discharge chute control is located on left hand side of tractor dash board. Move control to the right to direct snow to the right hand side and move it to the left for the opposite effect.



C. Discharge Chute (See Fig. 11 & 12)

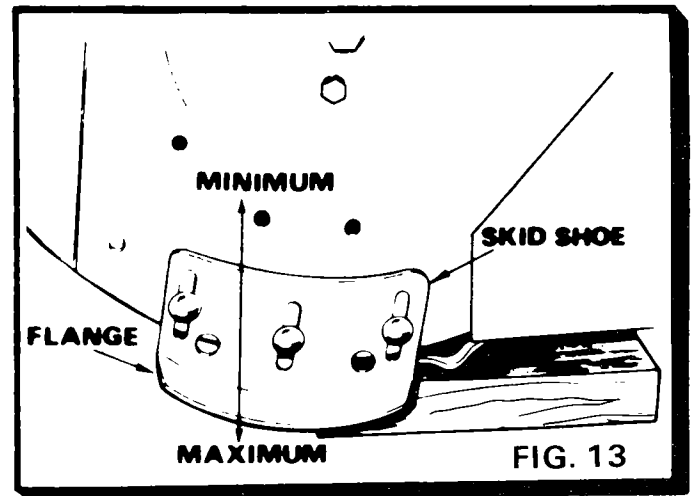
The snow thrower has a discharge radius of approximately 270° and is controlled by the discharge control. The discharge chute stop will prohibit rotation beyond points (H).

D. Discharge Chute Deflector

The deflector mounted on top of the discharge chute determines the distance snow is thrown. Moving top of deflector down decreases distance of throw, while raising deflector increases it. The operator must dismount tractor to make this adjustment. Disengage tractor attachment clutch and shut off tractor engine before making adjustment.

E. Lift Crank (See Fig. 11)

To raise and lower snow thrower, lift crank is located on right hand side of tractor. To raise snow thrower, turn lift crank clockwise until desired height is reached. To lower snow thrower turn lift crank counter-clockwise until snow thrower reaches ground level.



F. Skid Shoe Adjustment (See Fig. 11 & 13)

Raise the snow thrower off the ground and place a block under each end of the scraper blade. Loosen the nuts securing skid shoes to the auger housing. Move the skid shoes to the desired position and reighten nuts. Adjust both skid shoes to the same height to keep the scraper blade level.

The skid shoe mounted on each side of the auger housing adjusts the distance the scraper blade is raised from the plowing surface. When removing snow from an uneven surface or a gravel driveway, it is advisable to keep the scraper blades as high above the surface as possible to prevent possible damage to the auger and to help prevent stone from being thrown with snow. On blacktop or concrete, keep the scraper blade as close to the surface as possible. The snow thrower is shipped from the factory with skid shoe flanges mounted to the inside of the housing. Skid shoes should be removed and then installed with the skid shoe flange to the outside, prior to starting operation if you desire to scrape surfaces closely.

OPERATION

SHEAR PIN

The snow thrower drive components are protected from damage by a shear pin located in the drive shaft yoke at the gearbox output shaft.

Should the auger strike or pick up a hidden object or become jammed, the shear pin will break and the auger will stop, relieving the strain on the drive line parts.



Should it be necessary to replace a broken shear pin, proceed as follows:

1. Shut off engine and remove key from ignition.
2. Remove spark plug wire from spark plug.
3. Place unit on the ground.
4. Place unit in the disengaged (OFF) position.
5. Check to determine the reason for the shear pin breakage and correct the problem. If necessary, recover portion of shear pin with lock ring attached.
6. Remove any remaining broken pieces of shear pin from yoke.
7. Install new shear pin and retain with spiral lock ring.

NOTE: A number of extra shear pins have been included with the snow thrower. Additional shear pins can be obtained from your authorized dealer when required.

SCRAPER BLADE AND SKID SHOES

Both the scraper blade and skid shoes are subject of wear and are designed for easy replacement. Replace before wear is excessive to prevent damage to the auger housing.

NOTE: New scraper blade may be purchased when original equipment is worn. See repair parts list.

CABLE HOOK UP (Fig. 14)

Cable (C) is wound around tube (D) $2\frac{1}{2}$ turns each way; both ends of cable should be of equal length. This will allow equal angle of discharge spout in both directions.

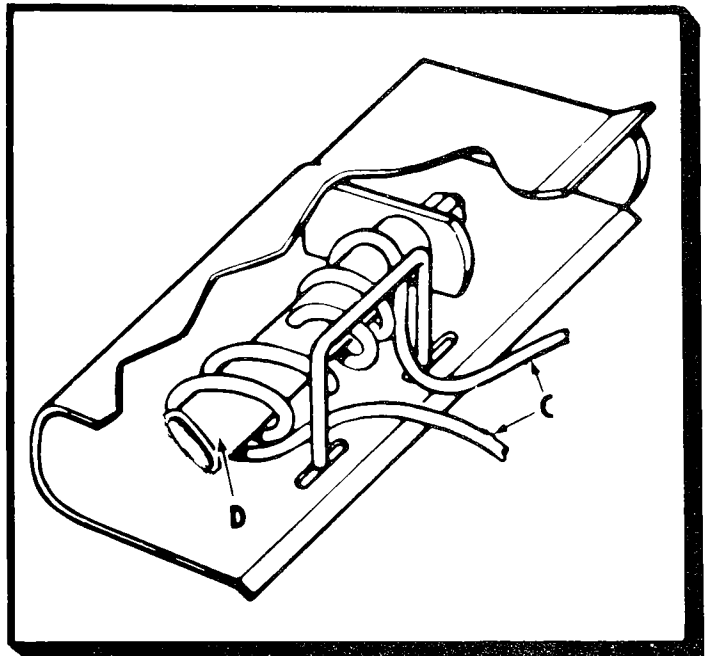


FIG. 14

CAUTION

STOP MACHINE TO ADJUST AND OIL.

- KEEP ALL SHIELDS IN PLACE.
- IF UNIT BECOMES CLOGGED, SHUT OFF ENGINE BEFORE CLEANING.
- KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER-DRIVEN PARTS.

9713

WARNING

**SPINNING BLADES
TO AVOID INJURY SHUT OFF
ENGINE BEFORE SERVICING,
ADJUSTING OR UNCLOGGING
SNOW THROWER UNIT**

9663

AUGER DRIVE CHAIN

Periodically check auger drive chain to insure that it is properly adjusted. It is important to maintain proper chain adjustment to obtain maximum chain life. Excessive slack in auger drive chain due to normal chain stretch can be removed by adjusting chain tightening bolt. (See Fig. 16) Chain should have approximately $\frac{1}{4}$ " slack. (See Fig. 15)

ADJUSTING AUGER CHAIN



1. Shut off tractor and remove ignition key.
2. Remove spark plug wire from spark plug.
3. Disengage tractor PTO.
4. Loosen two nuts (A) and jam nut on adjusting bolt (B).
5. To increase tension, turn adjusting bolt (B) clockwise. To decrease tension, turn bolt counter-clockwise.
6. When proper tension is reached, retighten jam nut on adjusting bolt and nuts (A).

NOTE: Do not over tighten chain. A correctly adjusted chain will have a slight amount of slack. An over tighten chain will result in early failure of auger drive chain.

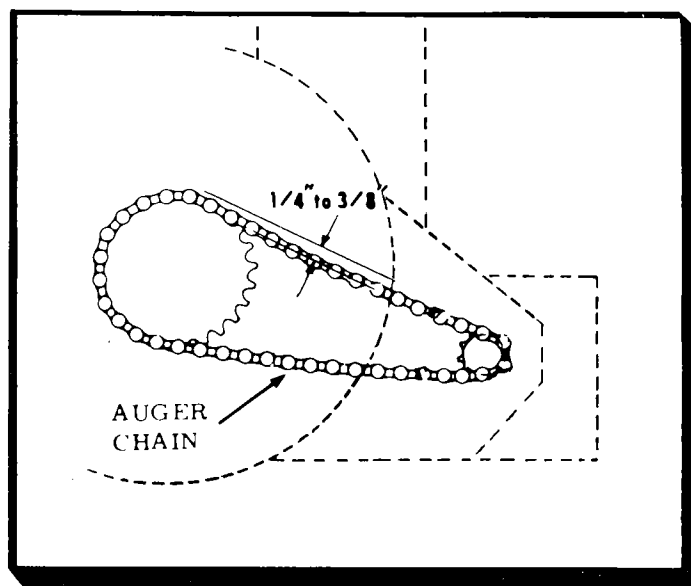


FIG. 15

OPERATION

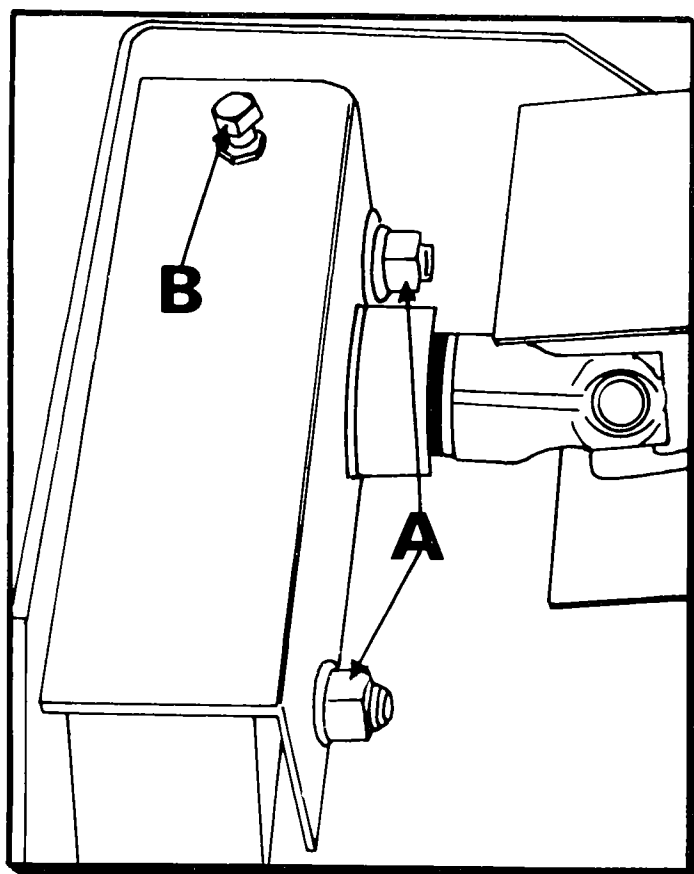


FIG. 16

OPERATING SUGGESTIONS

Before the first snowfall, the area in which snow removal is to take place should be cleared of all stones, sticks and the like which might be picked up by the auger. All obstacles should be marked to protect the tractor and auger from possible collision.

To become familiar with the controls, operate the tractor and snow thrower in a clear area before removing snow. The more familiar you become with the snow thrower the better results you will have in its use.

A light coat of wax applied to the inside surface of the auger housing will prevent snow and ice from sticking to it. The inside of the discharge chute and deflector should be waxed several times during the snow removal season.

Allow ample engine warm up time before starting snow removal.

For best results, snow should be removed as soon as possible after it falls.

OPERATION

OPERATION

The snow thrower controls are conveniently located at the operator's position on the tractor. By engaging the auger clutch, snow is thrown through the discharge chute by the motion of the auger. Turning the discharge chute crank directs snow discharge and the angle of the deflector controls the distance snow is thrown.

SNOW CONDITIONS

Snow removal conditions vary so greatly from the first light fluffy snowfall to wet heavy snow that operating instructions must be flexible to fit the snow removal encountered. The operator must adapt the tractor and snow thrower to depth of snow, wind direction, temperature and surface conditions.

OPERATING SPEED

The auger speed is directly related to engine speed. For maximum snow removal and discharge maintain high engine RPM (full throttle). It is advisable to operate the tractor at a slow ground speed for safe and efficient snow removal.

DEEP OR DRIFTED SNOW

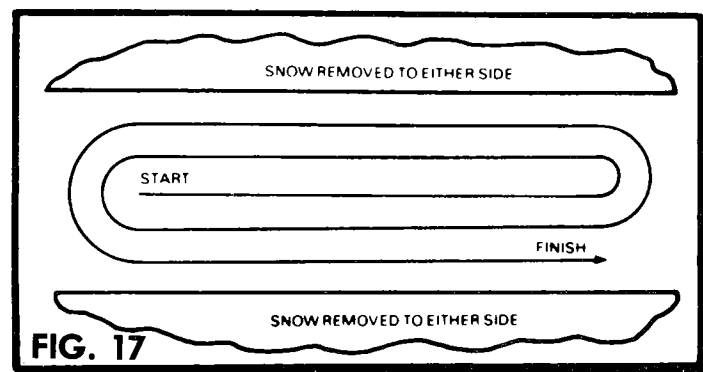
In deep, drifted, or banked snow, it will be necessary to use full throttle and a slow forward speed. Drive the auger into the snow, disengage tractor clutch and allow auger to clear the snow. Repeat this method until a path is cleared. On the second pass overlap the first enough to allow the auger to handle the snow without repeated clutching and de-clutching of the tractor.

In extremely deep snow, raise thrower from ground and drive ahead into snow to remove top layers first, Keeping tractor out of snow bank. Do not enter tractor into snow bank where snow has not been removed to ground level. Disengage tractor clutch and allow thrower to clear the snow. Reverse tractor and lower thrower to the ground. Drive tractor ahead and repeat process to remove balance of snow. Working with repeated passes into and out of drifts will eventually move even the deepest of snow piles.

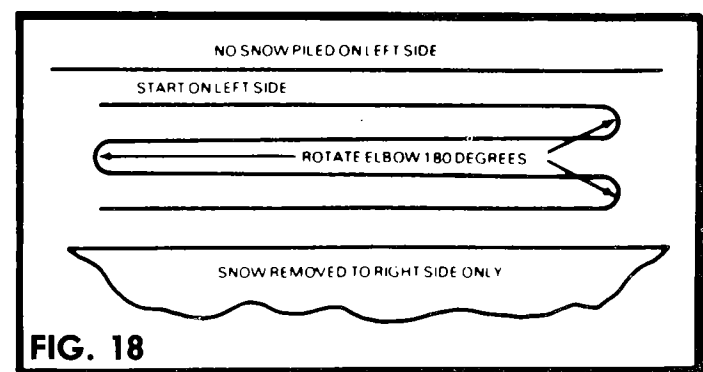
OPERATING TIPS

1. Whenever possible discharge snow down wind.
2. Do not attempt to remove ice or hard packed frozen snow.
3. Always overlap each pass slightly to assure complete snow removal.
4. A frozen or stuck auger or elbow must be broken loose or thawed with care. When attempting to loosen auger if frozen or jammed, shut off tractor engine and remove spark plug wire(s). Never attempt to clear snow thrower at anytime with tractor engine running.

METHODS



A definite pattern of operating is required to thoroughly clean the snow area. This pattern will avoid a second removal of snow and avoid throwing snow in unwanted places. Where it is possible to throw snow to right and left, as on a long driveway, it is advantageous to start in the middle. Work from one end to the opposite end throwing snow to both sides without changing the direction of discharge chute. If snow can only be thrown to one side of the driveway or sidewalk, start on the opposite side. At the end of each succeeding pass, rotate the chute 180° to maintain direction of snow throw into the same area.



MAINTENANCE

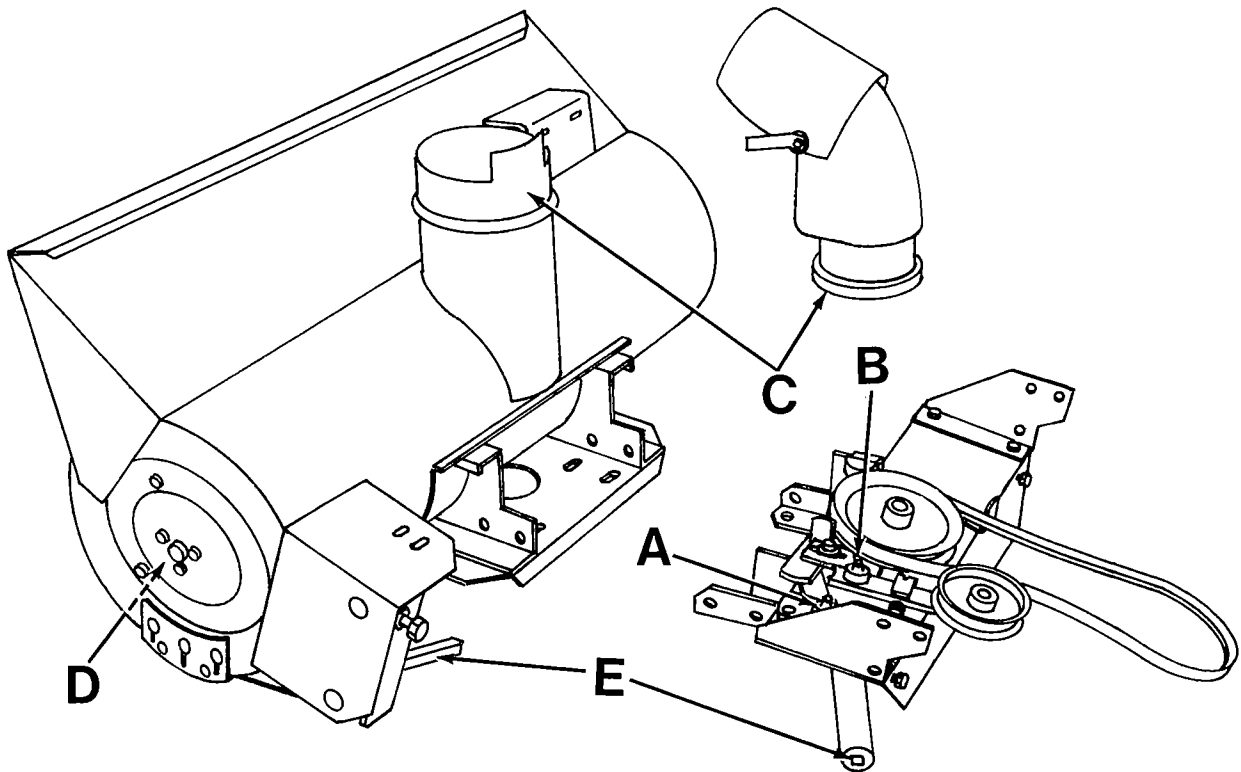


FIG. 19

LUBRICATION

The following fittings require grease every 20 hours of machine operation:

- A. Brake Arm
- B. Idler Arm

The following parts require light oiling every 20 hours of machine operation:

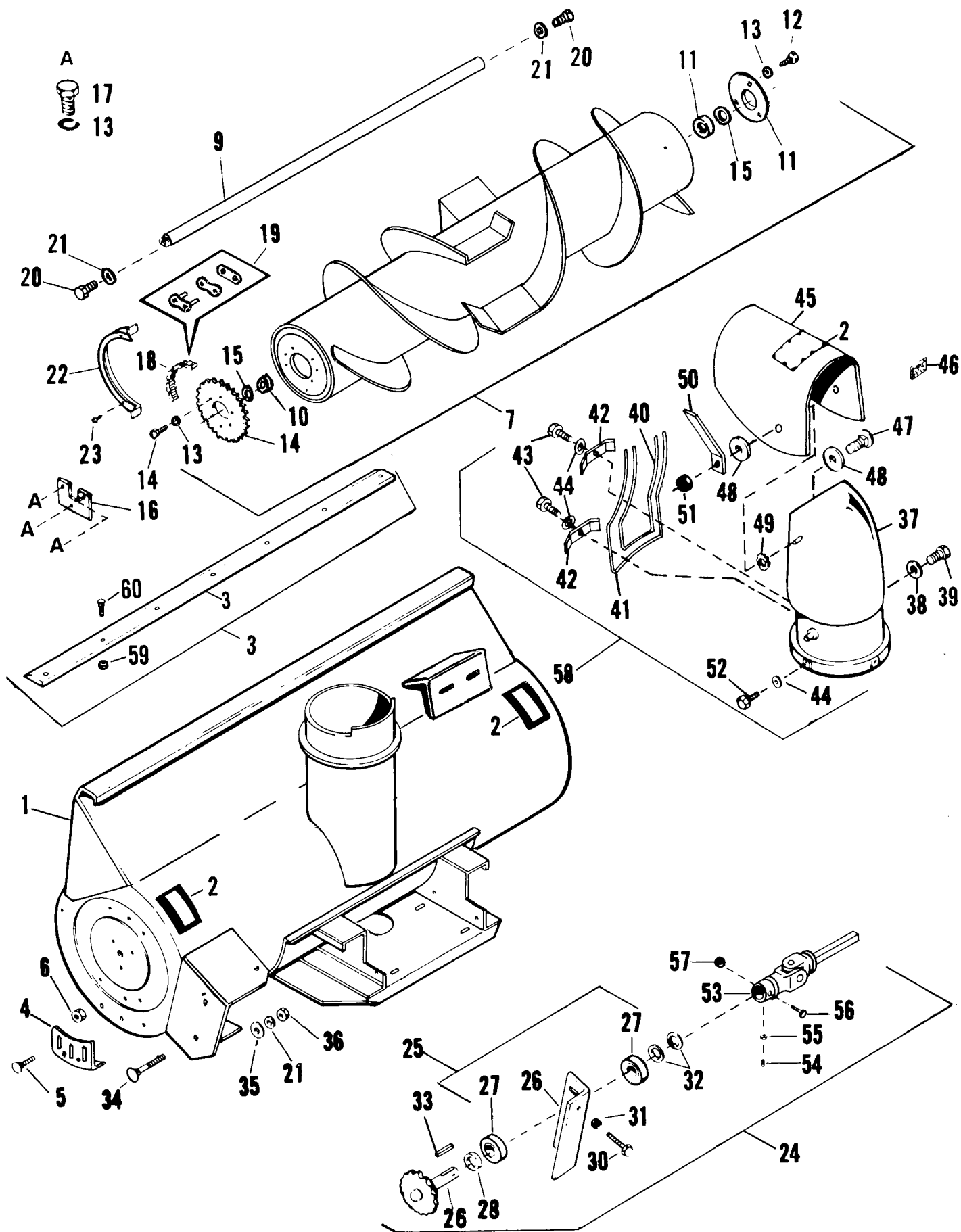
- C. Discharge Chute & Discharge Pivot
- D. Auger Chain
- E. PTO Shaft (Male & Female)

STORING SNOW THROWER

At the end of the snow season the following steps are recommended:

1. Remove snow thrower assembly from tractor.
2. Wash off any salt deposit which may have dried on the snow thrower and housing. Paint or cover exposed metal with a light coat of oil.
3. Lubricate the snow thrower following the lubricating instructions. The snow thrower drive chain must be oiled thoroughly to stop rust from forming.
4. Store snow thrower in a dry place.

SNOW THROWER MODEL NO. SB-48H

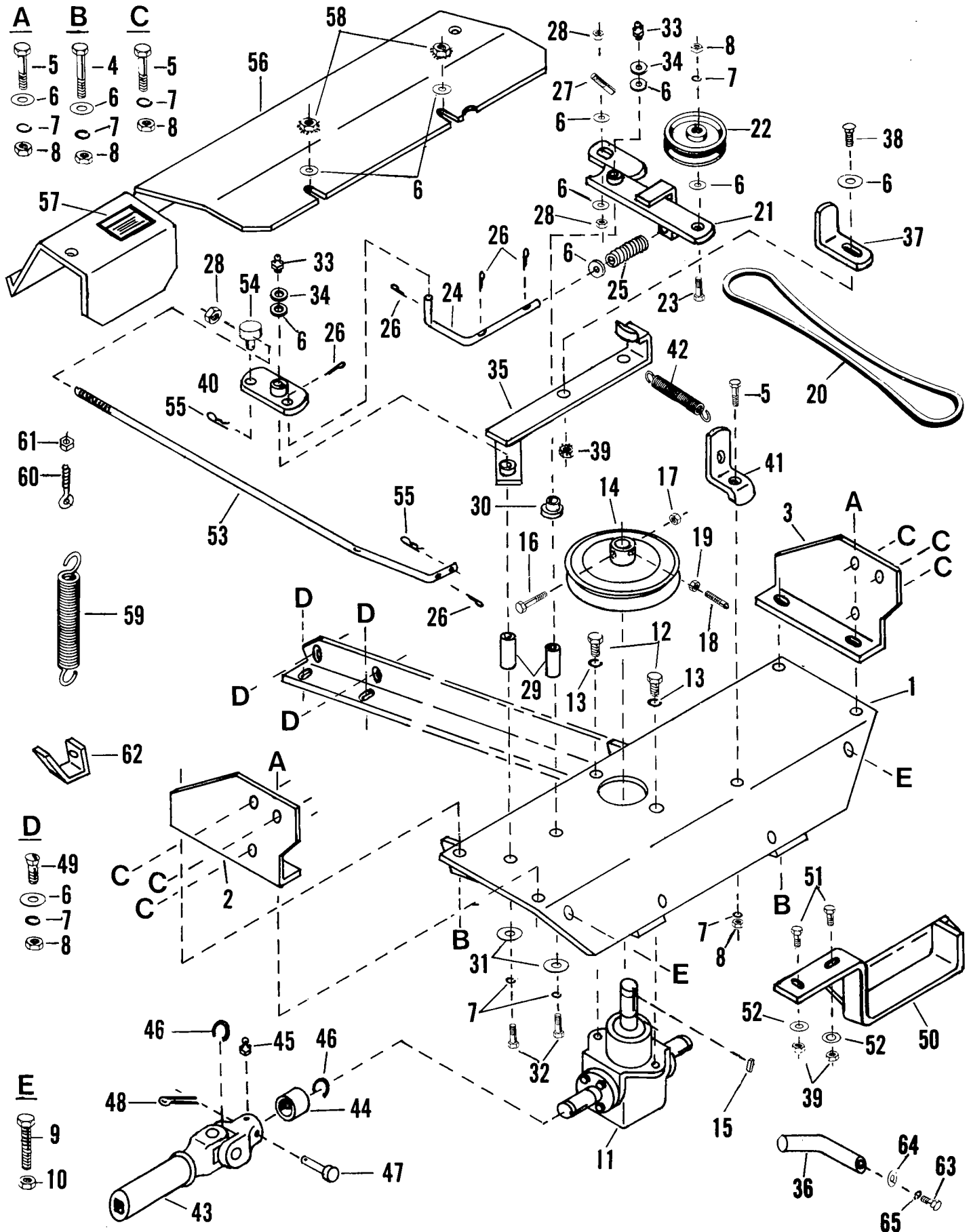


SNOW THROWER MODEL NO. SB-48H

REF. NO.	PART NUMBER	DESCRIPTION	QTY
1	12511	Header & Decal Assembly.....	1
2	9663	Warning Decal.....	3
3	12663	Scraper Blade Repair Kit.....	1
4	12101	Skid Shoe	2
5	7953	Bolt.....	6
6	GM-271184*	Nut & Lock Washer Assembly - 5/16-18 Hex.....	6
7	12625	Auger Assembly (Complete).....	1
8	12626	Auger Assembly (Arc Welded).....	1
9	8362	Auger Shaft.....	1
10	5474	Bearing.....	2
11	5473	Bearing Flange.....	1
12	GM-180077*	Bolt - 5/16-18 x 3/4" Hex Head.....	9
13	GM-120214*	Washer - 5/16" Medium Lock.....	12
14	8485	Auger Sprocket.....	1
15	4143	Washer.....	2
16	8185	Auger Mounting Plate.....	1
17	GM-180075*	Bolt - 5/16-18 x 5/8" Hex Head.....	3
18	12651	Auger Drive Chain.....	1
19	8456	Chain Repair Kit.....	1
20	GM-180175*	Bolt - 1/2-13 x 1 1/4" Hex Head.....	2
21	GM-120384*	Washer - 1/2" Medium Lock.....	4
22	3036	Chain Guard.....	2
23	GM-9414012*	Screw - 1/4" x 1/2" Hex Washer Head.....	4
24	12590	Jackshaft Housing Assembly (Complete).....	1
25	12591	Jackshaft Housing & Bearing Assembly.....	1
26	12618	Jackshaft Housing Assembly (Arc Welded).....	1
27	4611	Jackshaft Bearing.....	2
28	9175	Spacer.....	1
29	11986	Jackshaft & Sprocket Assembly.....	1
30	9132	Adjustment Screw.....	1
31	GM-124824*	Nut - 5/16-18 Half Hex (Jam).....	1
32	5429	Washer.....	2
33	3259	Key.....	1
34	12012	Full Thread Bolt.....	2
35	GM-120389*	Washer - 1/2" x 1 1/4" x .083 Flat.....	1
36	GM-120378*	Nut - 1/2-13 Light Hex.....	2
37	13399	Elbow & Pivot Assembly.....	1
38	3903	Cable Washer.....	1
39	GM-180016*	Bolt - 1/4-20 x 1/2" Hex Head.....	1
40	12530	Small Elbow Guard Wire.....	1
41	12531	Large Elbow Guard Wire.....	1
42	12529	Elbow Guard Clip Bracket.....	2
43	GM-180022*	Bolt - 1/4-20 x 1" Hex Head.....	2
44	GM-120380*	Washer - 1/4" Medium Lock.....	6
45	12670	Deflector & Decal Assembly.....	1
46	6558	Deflector Pad.....	1
47	GM-126358*	Bolt - 5/16-18 x 1" Carriage.....	2
48	4506	Washer.....	4
49	GM-178566*	Washer - Internal/External Tooth Lock.....	2
50	8198	Locking Strap.....	2
51	GM-9413447*	Nut - 5/16-18 Hex Lock.....	2
52	GM-180018*	Bolt - 1/4-20 x 5/8" Hex Head.....	4
53	9177	Male Slip Assembly.....	1
54	GM-102594*	Screw - 3/8-16 x 5/8" Socket Head Set.....	1
55	GM-124829*	Nut - 3/8-16 Hex Jam.....	1
56	GM-180044*	Bolt - 1/4-20 x 2" Hex Head.....	1
57	4119	Nut.....	1
58	13398	Deflector & Elbow Assembly (Complete).....	1
59	GM271178*	Nut & Lock Washer Assembly - 1/4-20 Hex.....	9
60	7090	Carriage Bolt.....	9

*Standard Hardware - Purchased Locally

SNOW THROWER MODEL NO. SB-48H

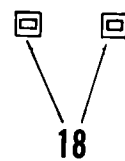
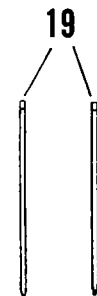
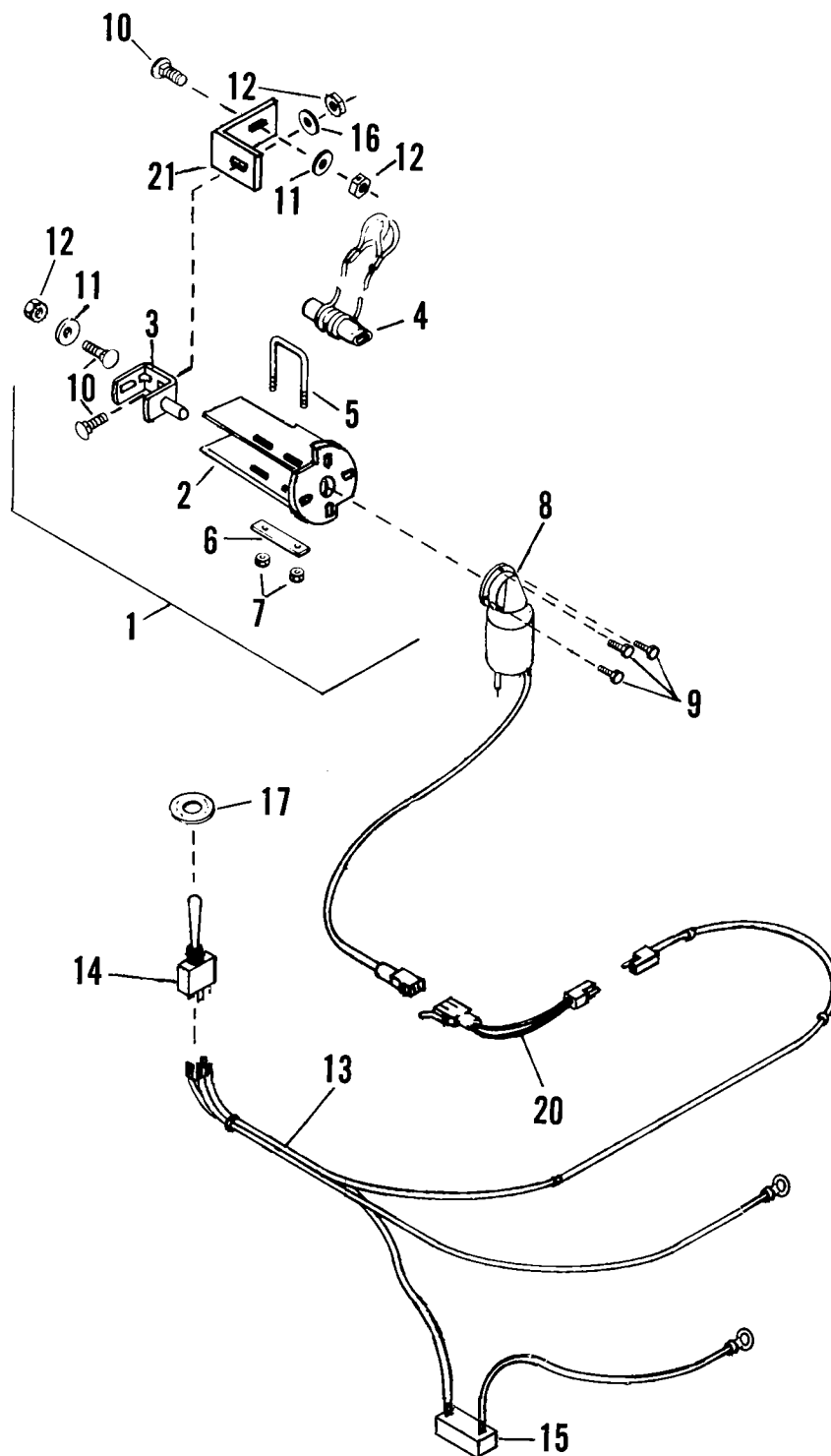


SNOW THROWER MODEL NO. SB-48H

REF NO.	PART NUMBER	DESCRIPTION	QTY REQ
1	15637	Mounting Frame Assembly.....	1
2	15643	Left Hand Frame Mounting Bracket.....	1
3	15644	Right Hand Frame Mounting Bracket.....	1
4	GM-180124*	Bolt - 3/8-16 x 1 1/4" Hex Head.....	2
5	GM-180122*	Bolt - 3/8-16 x 1" Hex Head.....	9
6	GM-120388*	Washer - 7/16" x 1" x .083 Flat.....	21
7	GM-120382*	Washer - 3/8" Medium Lock.....	22
8	GM-120377*	Nut - 3/8-16 Light Hex.....	20
9	4570	Bolt.....	2
10	GM-120238*	Nut - 1/2-13 Light Hex Jam.....	2
11	15645	Machined Gearbox.....	1
12	GM-180171*	Bolt - 1/2-13 x 3/4" Hex Head.....	2
13	GM-120384*	Washer - 1/2" Medium Lock.....	2
14	15646	Pulley & Hub Assembly.....	1
15	3259	Square Key.....	1
16	GM-180042*	Bolt - 1/4-20 x 1-3/4" Hex Head.....	1
17	4119	Hex Nut.....	1
18	GM-142671*	Screw - 5/16-18 x 1/2" Sq Head Cup Pt Set....	1
19	GM-124824*	Nut - 5/16-18 Hex Jam.....	1
20	10500	V-Belt.....	1
21	15649	Idler Arm Assembly.....	1
22	14311	Idler Pulley Assembly.....	1
23	GM-180128*	Bolt - 3/8-16 x 1-3/4" Hex Head.....	1
24	15653	Clutch Spring Rod.....	1
25	3077	Spring.....	1
26	GM-120123*	Pin - Cotter.....	5
27	11410	Brake Release Stud.....	1
28	GM-124829*	Nut - 3/8-16 Light Hex Jam.....	3
29	15654	Pivot Shaft.....	2
30	15695	Idler Arm Spacer.....	1
31	4506	Washer.....	2
32	GM-180120*	Bolt - 3/8-16 x 3/4" Hex Head.....	2
33	15293	Straight Grease Fitting.....	2
34	4772	Washer.....	2
35	15655	Brake Arm Assembly.....	1
36	15692	Up Stop Rod.....	1
37	11414	V-Belt Popper.....	1
38	7953	Carriage Bolt.....	1
39	GM-271184*	Nut & Lock Washer Assembly - 5/16-18 Hex.	3
40	15659	Clutch Pivot Plate Assembly.....	1
41	15663	Brake Spring Bracket.....	1
42	10014	Spring.....	1
43	12507	Female PTO Assembly.....	1
44	11956	Spacer.....	1
45	5074	Grease Fitting.....	1
46	11938	Retaining Ring.....	2
47	4001	Clevis Pin.....	4
48	GM-103373*	Pin - Cotter.....	4
49	GM-120915*	Bolt - 3/8-16 x 1" Carriage.....	8
50	15664	Belt Guide Assembly.....	1
51	GM-126358*	Bolt - 5/16-18 x 1" Hex Head.....	2
52	GM-446363*	Washer - 3/8" x 7/8" x .083 Flat.....	2
53	15669	Clutch Control Rod.....	1
54	9492	Control Rod Anchor.....	1
55	3430	Hair Cotter Pin.....	2
56	15670	Drive Guard Cover.....	1
57	9713	Caution Decal.....	1
58	GM-271190*	Nut & Lock Washer Assembly - 3/8-16 Hex.	2
59	3434	Lift Spring.....	1
60	15671	Eye Bolt.....	1
61	GM-120375*	Nut - 1/4-20 Light Hex.....	1
62	15672	Spring Anchor Clip.....	1
63	GM-180022*	Bolt - 1/4-20 x 1" Hex Head.....	1
64	GM-120380*	Washer - 5/16" x 3/4" x .065 Flat.....	1
65	GM-120386*	Washer - 1/4" Medium Lock.....	1
NP	15673	Instruction & Repair Manual.....	1

*Standard Hardware - Purchased Locally

SNOW THROWER MODEL NO. SB-48H



SNOW THROWER MODEL NO. SB-48H

<u>REF. NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	12684	Stack Drive Bracket Assembly.....	1
2	11302	Stack Drive Plate & Shroud Assembly.....	1
3	9032	Bracket & Tube Assembly.....	1
4	11312	Cable, Tube & Sleeve Assembly.....	1
5	8236	Level Wind "U" Bolt.....	1
6	8299	Friction Strap.....	1
7	4119	Nut.....	2
8	11306	Stack Drive Motor.....	1
9	15683	Self Tapping Screw.....	3
10	GM-120915*	Bolt - 3/8-16 x 1" Carriage.....	3
11	4506	Washer.....	2
12	GM-271190*	Nut & Lock Washer Assembly - 3/8-16 Hex.....	2
13	15682	Wire & Switch Assembly.....	1
14	11307	DPDT Center Return Switch.....	1
15	15169	Circuit Breaker.....	1
16	GM-120388*	Washer - 7/16" x 1" x .083 Flat.....	1
17	11712	Chute Rotation Decal.....	1
18	11947	Cord Clip.....	2
19	10352	Plastic Tie.....	2
20	11599	Plug Adaptor.....	1
21	14272	Level Wind Brace Bracket.....	1

*Standard Hardware - Purchased Locally

LIMITED WARRANTY-COMMERCIAL EQUIPMENT

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of the Scag commercial snow thrower manufactured by Scag and found in the reasonable judgement of Scag to be defective in material or workmanship, will be repaired or replaced by an authorized service dealer without charge for parts and labor.

The Scag snow thrower including any defective part must be returned to an authorized Scag service dealer within the warranty period. The expense of delivering the snow thrower to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Scag's responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag snow thrower. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an authorized Scag service dealer.

This warranty is limited to one year from the date of original retail purchase for any Scag snow thrower that is used for commercial purposes, or any other income-producing purpose (90 days for rental use).

This warranty does not cover any snow thrower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Technical Manual. The warranty does not apply to any damage to the snow thrower that is the result of improper maintenance or to any snow thrower or parts that have not been assembled or installed as specified in the Technical Manual. The warranty does not cover any snow thrower that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change the intended use of the product. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in

the reasonable judgement of Scag, are either incompatible with the Scag snow thrower or adversely affect its operation, performance or durability. This warranty does not cover engines, electric starters, batteries, belts and tires which are warranted separately by their manufacturer and for a different period of time.

Scag Power Equipment reserves the right to change or improve the design of any snow thrower without assuming any obligation to modify any snow thrower previously manufactured.

All other implied warranties are limited in duration to the one (1) year warranty period or ninety (90) days for snow throwers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one-year or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the snow thrower to an authorized service dealer and expense of returning it back to the owner mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the snow thrower, loss of time or inconvenience. Some states do not allow the exclusion of limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

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

SCAG POWER EQUIPMENT, INC.

MODEL NO. SB-48H

HOW TO ORDER REPAIR PARTS

REPAIR PARTS

All parts listed herein may be ordered from any authorized Scag Dealer.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

- THE PART NUMBER
- THE PART DESCRIPTION
- THE MODEL NUMBER
- THE NAME OF MERCHANDISE