

Ariens OWNERS MANUAL

831000 SERIES 48" SNO-THRO

**MODEL 831025 48" SNO-THRO
SERIAL NUMBER 000101 AND UP**

A MESSAGE TO THE ARIENS CUSTOMER. . .

Welcome to the world of Ariens equipment. We are pleased that you have selected Ariens and sincerely believe you have purchased the best equipment available. The care you give your new Ariens equipment will greatly determine the satisfaction and service life you will obtain from it. Use this manual and the engine manual supplied, as your guide. By observing the instructions and suggestions in these manuals, your Ariens equipment will serve you well for many years.

Your Ariens dealer will be happy to supply any service or advice which may be required to keep your Ariens equipment operating at peak efficiency. He stocks genuine Ariens parts and lubricants; manufactured with the same precision and skill as the original equipment. His factory trained staff is kept well informed on the best methods of servicing Ariens equipment and is

ready and able to serve you. If engine repairs or services are required, they can be obtained from an Ariens dealer or from an authorized engine manufacturer's service station.

Should service be required on equipment, be prepared to supply the serviceman with the Model Number and Serial Number of the equipment and the engine, as well as a full description of the trouble encountered.

Finally, your local Ariens dealer is in the best position to answer your questions and service equipment. If for some reason he is unable to satisfy your requirements, assistance is always available from the Consumer Services, Ariens Company, Brillion, Wisconsin 54110. Telephone: (414) 756-2141.

Ariens COMPANY BRILLION, WISCONSIN 54110

INSTRUCTIONS FOR SAFE OPERATION

TRAINING AND PREPARATION

1. Read the OWNER'S MANUAL carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the tractor and disengage attachment controls quickly.
2. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instructions.
3. Keep the area of operation clear of all persons, especially small children, and pets.
4. Do not allow passengers to ride on tractor.
5. Thoroughly inspect the area where the equipment is to be used. Clear area of debris and objects which might be picked up and thrown. Prior to first snowfall, obstacles, such as driveway markers, water or gas shut-offs, etc. should be clearly marked so their locations when under the snow can easily be spotted.
6. Dress appropriately. Wear relatively tight fitting clothing. Loose or torn clothing can catch in moving parts or on controls.
7. Refuel tractor outdoors with the engine off. Replace gas cap securely. Use an approved gasoline container. Do not smoke when handling fuel. Avoid spilling. Wait for warm engine to cool before refueling.
8. Let engine and tractor adjust to outdoor temperatures before starting snow clearing.
9. Use only approved attachments and accessories (including wheel weights, weight box, etc.) Refer to the "OPERATION" section of this manual.
10. Never operate the tractor and snow thrower without proper guards, plates and other safety devices in place.
5. Never direct discharge toward bystanders nor allow anyone near the machine when in operation.
6. Avoid operation on steep hillsides.
7. Give complete and undivided attention to the work you are doing so that you maintain complete control of the tractor and snow thrower at all times.
8. Drive slowly over rough ground and on slopes. Watch out for holes, ditches and other irregularities that could cause the tractor to overturn. Use caution when operating on, or crossing, gravel surfaces.
9. Stay alert for hidden hazards and traffic.
10. Reduce speed when turning.
11. Do not stop or start suddenly when moving up or down hill.
12. Always look behind you when backing up.
13. On slippery surfaces do not operate at high travel speed and use care backing up.
14. Disengage the Attachment Power Clutch when transporting.
15. Do not overload the machine capacity by attempting to clear snow at too fast a rate.
16. If the unit should start to vibrate abnormally, stop the engine and check immediately for cause. Vibration is generally a warning of some possible trouble.
17. Never attempt to clear auger or discharge chute while engine is running. Disengage the Attachment Power Clutch, stop the engine and remove the ignition key before attempting to clear away any obstruction and before attempting any adjustments or service.

OPERATION

1. Never operate the snow thrower without good visibility or light. Always be sure of the surface area you are working on.
2. Do not operate the tractor from any position other than from seated position. Keep a firm grip on the steering wheel.
3. Never operate the tractor in a closed building. Do not run the engine indoors, except when starting and for transporting the snow thrower and tractor in or out of the building. Open the outside doors — exhaust fumes are dangerous.
4. Never operate the snow thrower and tractor near glass enclosures, automobiles, window wells, drop-offs, etc. without proper adjustment of the snow discharge angle.
18. After striking any foreign object, disengage attachment, stop engine, wait until all parts have stopped moving. Thoroughly inspect the unit for any damage. Repair any damage before starting and operating again.
19. Never touch muffler, exhaust pipe, or engine until they have had time to cool after operating.
20. When unit is parked, stored, or left unattended, always lower the snow thrower so it is resting on the ground or floor. If left in a raised position, the Lift Lever could accidentally be moved, allowing the attachment to fall and possibly cause injury.

DECALS FOR MODEL 831025 - 48" SNO-THRO ATTACHMENT



Deflector Pull To Raise
 1/4 Turn Push To Lower
 To Lock Lower

Discharge Chute L
 Push To Unlock R

78788

⚠ WARNING

ROTATING PARTS
 Stop engine and remove spark plug ignition wire before removing obstructions.

78618

SAFETY INSTRUCTIONS

AVOID POTENTIAL HAZARDS

1. Read owners manual for operating and safety instructions.
2. Observe all labels and instructions.
3. Do not defeat interlock system. It is for your protection.
4. Stop engine and wait for all movement to stop before unclogging or servicing machine.
5. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
6. Keep the area of operation clear of all persons, especially children.
7. Never direct discharge at bystanders or allow anyone in front of unit.
8. Keep machine properly maintained and serviced with all shields, guards, and protective devices in place.

78575

⚠ WARNING

Factory wheel weights and/or weight bucket must be used with Sno-Thro, see Sno-Thro owners manual for requirements.

78578

⚠ WARNING

ROTATING PARTS
 Keep clear of collector rakes while engine is running

78639

A HIGH SPEED IMPELLER ROTATES INSIDE THIS HOUSING TO THROW THE SNOW. NEVER REACH OR PUSH ANY OBJECT INTO THE DISCHARGE CHUTE WITH THE IMPELLER ROTATING!

Ariens

78580

KEEP HANDS, FEET AND ALL FOREIGN OBJECTS OUT OF THE COLLECTOR (RAKES). REPLACE SHEAR BOLTS WITH ARIENS SHEAR BOLTS ONLY!

ORDER ALL DECALS BY ARIENS PART NUMBER SHOWN

↑ **BE AWARE OF SAFETY DECALS** ↑



THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY INFORMATION IN THIS MANUAL. WHEN YOU SEE THE SYMBOL BE ALERT TO THE POSSIBILITY OF INJURY AND CAREFULLY READ THE INFORMATION THAT FOLLOWS.



SUPPLEMENT TO OWNERS MANUAL MODEL 831025 SNO-THRO

**ADDITION TO OPERATION SECTION
AND DEALER ASSEMBLY AND PRE-SERVICE SECTION**

TRACTOR PREPARATION



NOTE: IF YOUR TRACTOR IS EQUIPPED WITH 8" WIDTH REAR TIRES, REMOVE THE TIRE AND WHEEL ASSEMBLIES AND REVERSE THEM (INSIDE—OUT) TO INCREASE THE REAR TRACK AND IMPROVE STABILITY WITH SNO-THRO.

CONTROLS

NOTE: INSTRUCTIONS FOR ASSEMBLY AND INSTALLATION OF THE SNO-THRO ATTACHMENT WILL BE GIVEN IN THE "DEALERS ASSEMBLY AND PRE-SERVICE" SECTION OF THIS MANUAL.

A IMPLEMENT POWER CONTROL SWITCH - FIGURE 1

Pull the switch out "ON" to engage the electromagnetic clutch to drive the Sno-Thro and front mounted attachments.

NOTE: ON MODELS EQUIPPED WITH AN ELECTRIC REAR PTO, THERE ARE TWO SWITCHES. THE SECOND SWITCH CONTROLS THE REAR PTO.

THESE SWITCHES **A** MUST BE PUSHED IN "OFF" BEFORE THE ENGINE CAN BE STARTED. THEY MUST ALSO BE IN THE "OFF" POSITION WHEN THE OPERATOR LEAVES THE SEAT OR THE ENGINE WILL STOP. IF THE OPERATOR LEAVES THE SEAT MOMENTARILY, AND THE ENGINE RESUMES NORMAL OPERATION, IT WILL BE NECESSARY TO PUSH THESE SWITCHES TO THE "OFF" POSITION, THEN PULL TO "ON" POSITION, TO RESET THE SAFETY MODULE AND RETURN THE ATTACHMENT TO OPERATION.

B IMPLEMENT POWER INDICATOR LIGHT - FIGURE 1

This light glows red when either of the Implement Power Control Switches **A** is pulled out to indicate that an attachment is engaged.

C THROTTLE LEVER - FIGURE 1

Raise the lever to increase engine speed. Lower the lever to decrease engine speed.

D IGNITION SWITCH - FIGURE 1

Turn the key fully clockwise to start the engine and release when the engine starts. Turn the key counterclockwise to stop the engine.

E CHOKE CONTROL - FIGURE 1

Pull Choke Control out when attempting to start a cold engine or when starting during cold weather. When engine starts, gradually push choke in. Normally, it is not necessary to use the choke when starting a warm engine.

F LIGHT SWITCH - FIGURE 1

Pull the switch out to turn on the front and rear lights. The ignition key must be turned on before the lights work.

G SEAT INTERLOCK SWITCH - FIGURE 1

This switch, located in the seat, is actuated by the operators weight. If the operator leaves the seat for any reason while the PTO is "ON" or the Shift Lever is not in "PARK/START" (or "NEUTRAL") the PTO clutch

and engine ignition are both shut off. When the PTO is "OFF" and the shift lever is in "PARK/START" leaving the seat will not cause the engine to stop.

H HYDRAULIC LIFT - FIGURE 1

This lever controls the hydraulic system used to raise and lower attachments. The lever has four positions - "UP", "HOLD", "DOWN", and "FLOAT". The normal out-of-use position is the "HOLD" position. In this position the attachment will not raise or lower. When it is desired to raise the implement, move the lever to the "UP" position; to lower the attachment move the lever to the "DOWN" position. Place the lever in the "FLOAT" position to allow the attachments to follow the ground contours.

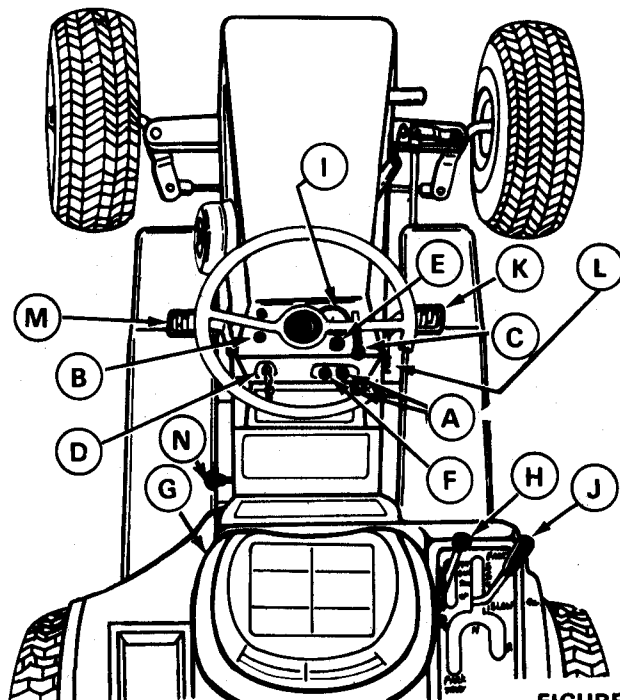


FIGURE 1

I AMMETER - FIGURE 1

The ammeter indicates the rate of battery charge or discharge. The indicator should register on the (+) side of the dial when the engine is running at any speed above a slow idle. When the engine is idling or with a fully charged battery, the ammeter may not show charge. Should the ammeter register on the (-) side of the dial for an extended period of time with the engine running, it indicates the alternator is not charging the battery. Check the battery connections or contact your dealer.

J HAND CONTROL LEVER (OR SHIFT LEVER) - FIGURE 1

This lever regulates both tractor speed and direction. Move the lever forward from "NEUTRAL" to increase the forward travel speed. Move the lever rearward to back the tractor and regulate reverse speed.

CONTROLS

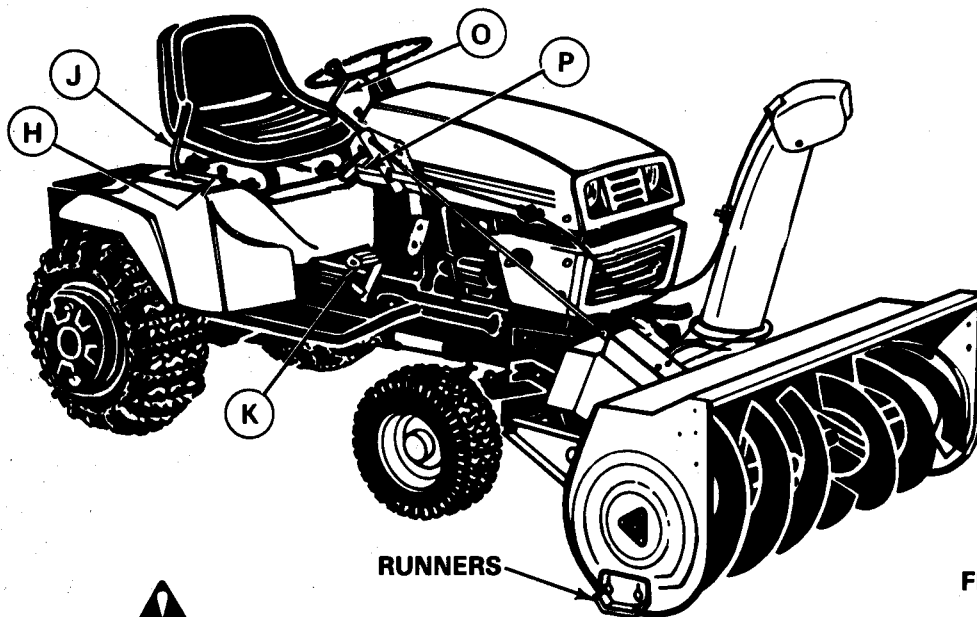


FIGURE 2

NOTE: THIS LEVER MUST BE PLACED IN THE "PARK-START" POSITION BEFORE ENGINE WILL START OR TO ALLOW ENGINE TO KEEP RUNNING WHEN OPERATOR GETS OFF SEAT.

DO NOT MOVE CONTROL LEVER FROM "PARK-START" POSITION UNLESS ENGINE IS RUNNING.

K BRAKE PEDAL — FIGURE 1

When this pedal is depressed the friction brakes will be applied to stop the tractor. DEPRESS THE NEUTRALIZER PEDAL **M** OR RETURN THE HYDROSTATIC CONTROL LEVER TO NEUTRAL BEFORE ATTEMPTING TO STOP THE TRACTOR.

L PARKING BRAKE — FIGURE 1

The Parking Brake is a latch that locks the Brake Pedal. To apply the Parking Brake, depress the Brake Pedal, flip up the Parking Brake Latch. **L** To disengage the Parking Brake, depress the Brake Pedal and push down the latch.

M NEUTRALIZER PEDAL — FIGURE 1

When this pedal is fully depressed the hand control lever **J** will return to "NEUTRAL" and the forward or

reverse motion of the tractor will stop. KEEP FOOT OFF PEDAL DURING NORMAL OPERATION OR WHEN MOVING THE HAND CONTROL LEVER. The pedal is an optional control for slowing down or stopping. Use of the pedal and hand control lever simultaneously can result in misadjusted hydrostatic linkage.

N LIFT SELECTOR — FIGURE 1

Connects the hydraulic lift to front/center or rear rockshaft.

O CHUTE CONTROL CRANK — FIGURE 2

Controls the direction of snow discharge. Push in on the crank to unlock. Crank is turned by the operator's right hand from the seated position. See Figure 2.

P REMOTE DEFLECTOR CONTROL — FIGURE 2

With the remote deflector control, the operator can control the up and down direction of the discharge from the seated position. Control handle is located just below the chute crank on the crank support bracket. See Figure 2. Turn the "T" handle horizontal to unlock, push handle to lower deflector; pull handle to raise deflector, turn handle ¼ turn to lock in position.

OPERATION

CAUTION: FOR MAXIMUM STABILITY AND BRAKING, WHEEL WEIGHTS OR WEIGHT BOX WITH MAXIMUM OF 125 LBS. OF WEIGHT, OR BOTH, MUST BE INSTALLED ON THE TRACTOR WHEN USING SNOWTHRO ATTACHMENT. THESE ARE NOT FURNISHED WITH THE UNIT, BUT ARE AVAILABLE FROM YOUR ARIENS DEALER. FOR BEST TRACTION UNDER NORMAL OPERATION ARIENS RECOMMENDS THE FOLLOWING INSTALLATIONS:

Models 931001 thru 931012. A minimum weight of 125 lbs. is required. This can be accomplished by a set of wheel weights (100 lbs.) and using weight bucket with 25 lbs. weight in it, or by using weight bucket with 125 lbs. of weight in it.

Models 931013 thru 931029. A minimum weight of 100 lbs. is required. To accomplish this, use a set of wheel weights (100 lbs.) or by using weight bucket with 100 lbs. of weight in it.

OPERATION

PRE-STARTING INSPECTION

Before starting the engine before each day's operation, the following checks and services should be performed.

1. Check oil in engine crankcase. Add oil as required to maintain proper level. See "LUBRICATION" section.
2. Check fuel supply. Fill with clean, fresh regular gasoline only. See lubrication section.
3. Check air cleaner and service as required.
4. Check for engine, transmission or differential oil leaks. See your authorized Ariens dealer for repairs.
5. Make visual checks regarding safety precautions, obstructions and maintenance.

TRACTOR OPERATION

For operation, see the section on "OPERATION" in the Owner's Manual supplied with the tractor.

SNO-THRO OPERATION

1. Adjust the deflector angle using the "T" handle, (P, Figure 2) at the operators right. Raising the deflector will cause snow to be thrown the greatest distance. Lowering the angle will shorten the distance and throw the snow down alongside the tractor. Turn the "T" handle to adjust the deflector; PUSH to lower the deflector; PULL to raise the deflector. A quarter turn of the handle will lock the deflector in position.
2. Push in on the chute crank (O, Figure 2) to unlock and turn the chute crank, so that the snow will be thrown in the desired direction.
3. Lower the Sno-Thro and start the auger rotating by pulling out the Implement Power Control Switch (Figure 1) with the engine running at 1/3 fast throttle (Figure 1). Increase engine speed to full throttle after the Sno-Thro auger is rotating.

The auger and gearcase are protected by a shearbolt designed to shear if a solid object enters the auger. Do not install substitutions. See Figure 6.

ADJUSTMENTS

Ariens Company recommends that you have adjustments made by your local Ariens dealer. He has the tools and know-how to properly perform these maintenance adjustments which may be required to keep the Sno-Thro operating at peak efficiency. Should you decide to make adjustments on your Sno-Thro yourself, Ariens recommends that you call your dealer for the answers to any questions that might arise in performing this work.

On Manual Lift tractors the Sno-Thro is raised by pulling the manual Lift Lever (Figure 3) until the latch snaps into a notch of the control quadrant. To lower Sno-Thro, pull lever rearward, depress button and move the lever forward.

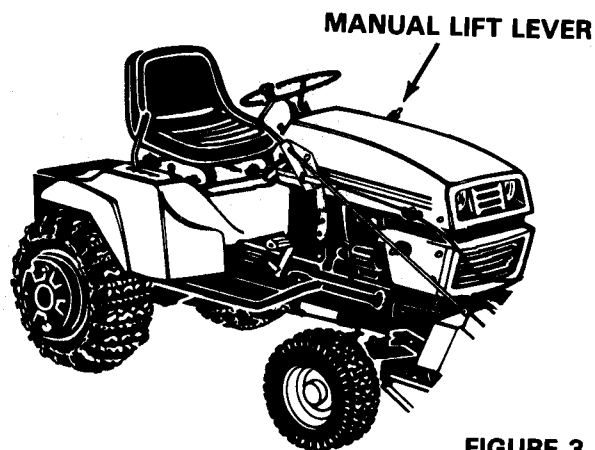
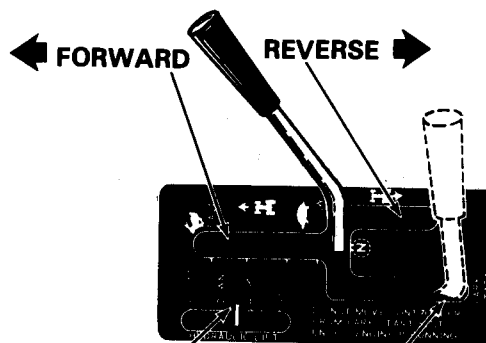


FIGURE 3

On tractors with the hydraulically operated lift (Figure 4), raise the attachment by moving the Control Lever to the "UP" position. The Sno-Thro may be held in any position desired by allowing the lever to stay in the "HOLD" position. While operating the Sno-Thro, the lever should be moved to the "FLOAT" position, to permit the attachment to follow the contour of the ground.



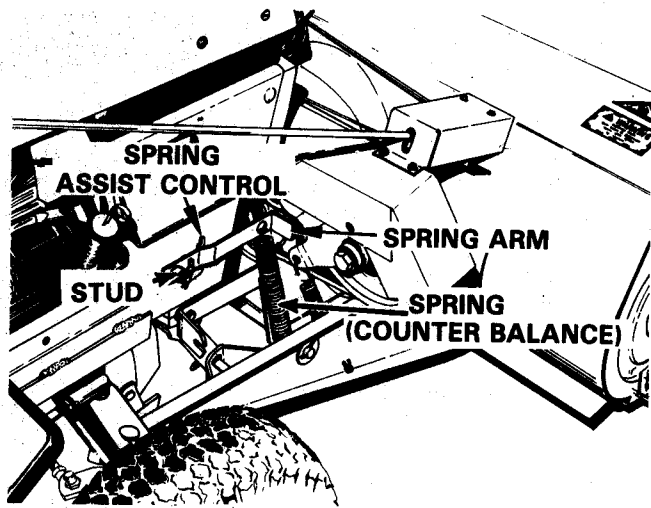
HYDRAULIC CONTROL LEVER
CONTROL LEVER IN "PARK/START" POSITION
TRACTOR PARKED OR STOPPED

FIGURE 4

4. For maximum snow removal and discharge, operate the engine at full throttle and regulate the travel speed with the Hydrostatic Control Lever and/or Shift Lever. See Figures 1 and 4.

MAINTENANCE

1. Adjustment of the counter balance spring pressure. Lift on the spring end of the spring arm until the latch catches in approximately the middle notch. This setting will be suitable for most applications. Readjust spring lift pressure if desired. Too much spring pressure will cause the Sno-Thro to float and not scrape clean on packed snow. See Figure 5.



RIGHT HAND SIDE

FIGURE 5

2. The lift spring on manual lift tractors should be extended fully to provide easy lifting. Figure 5.
3. When operating the manual attachment, the lift arm should be all the way forward to eliminate the Sno-Thro from wanting to float and to allow the unit to scrape clean.
4. To disconnect the Counter Balance Springs for Sno-Thro removal from tractor. Lift the Sno-Thro to highest position. Lift spring arm and release latch. Disconnect the spring arm from tractor by removing the hair pin and washer. This stud and latch may remain on the tractor. See Figure 5.

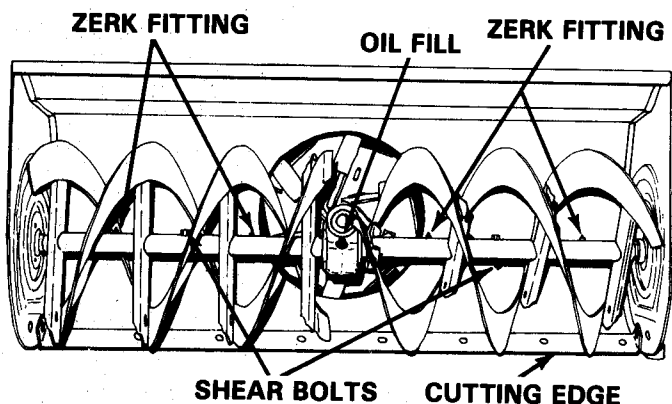


FIGURE 6

5. The runners, Figure 3 are mounted on slotted holes to provide the desired clearance between the base of the auger housing and the surface of the area to be cleared. When operating on a smooth surface such as cement or asphalt, the runner can be set at the lower end of the slots as shown. When operating on a rough surface such as gravel or earth, the runners should be set at the upper end of the slots to prevent foreign material from entering and possibly damaging the snow thrower. Adjust the runners by loosening nuts (A) and moving the shoes up or down as required.

6. The cutting edge shown in Figure 6, is adjustable. If excessive wear is noticed after continued use,

the eight mounting bolts and two runner bolts can be loosened and the plate adjusted as required.

Adjust Sno-Thro to a level position by adjusting air pressure in REAR tractor tires after being sure no mechanical damage is responsible.

SHEARBOLT REPLACEMENT

Occasionally a small object may enter the collector and jam the rakes. When this occurs, the shear bolts securing the rakes to the shaft will shear and allow the rake to run freely on the shaft preventing damage to the gear drive. See Figure 6. When this happens, turn off the tractor engine, disengage the PTO drive and remove the ignition key. Remove the broken shear bolt, turn rake on shaft to be sure rake is not binding on shaft. Install a new ARIENS shear bolt and lubricate with ARIENS Moly Lithium grease. Use of any other type of shear bolt may result in severe damage to the Sno-Thro. USE ONLY ARIENS SHEAR BOLTS FOR REPLACEMENT.

BELT REPLACEMENT — FIGURE 7.

To replace belts:

1. Remove guard.
2. Disconnect Universal Shaft from P.T.O.
3. Disconnect idler springs.
4. Loosen the large flange nut — do not remove the nut. Plate is slotted for adjustment.
5. Install new belts as snugly as possible.
6. Tighten the large flange nut.
7. Reconnect the idler springs.
8. Reconnect Universal Shaft.
9. Install guard.

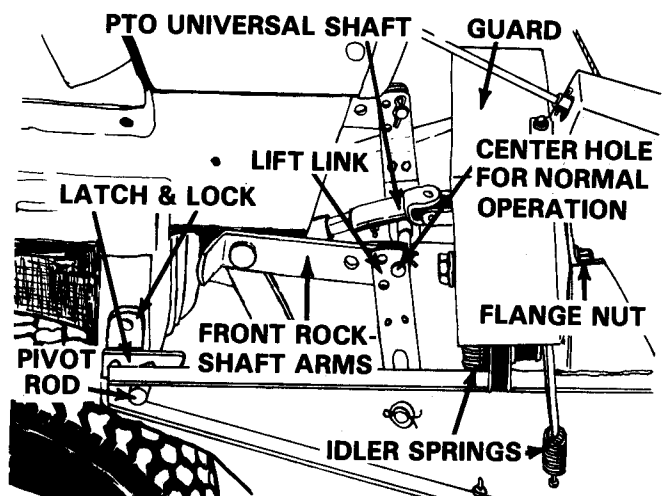


FIGURE 7

LUBRICATION

Check gear case oil level periodically. Oil level must be up to oil fill hole. Change oil every 25 hours or once each season which ever comes first. Fill with Ariens Special L-2 Gear Lubricant. Approximately 5 oz. See Figure 6.

Grease rake shaft periodically or each time a shear bolt is replaced. At the end of the season, remove shear bolts, grease rake shaft, turn rakes or shaft several times and replace shear bolts. Use Ariens Moly Lithium grease. See Figure 6.

Lubricate universal shaft approximately once a season. See Figure 7.

Grease discharge chute base shown in Figure 8, approximately once a season.

Place a few drops of oil behind spool holding lower end of chute crank periodically.

STORAGE

NOTE: YOUR AUTHORIZED ARIENS DEALER IS TRAINED AND EQUIPPED TO SERVICE YOUR TRACTOR. A PERIODIC CHECK-UP BY YOUR DEALER WILL HELP REDUCE YOUR MAINTENANCE COSTS.

Store produce in a cool, dry place to reduce tire deterioration. Blocking under the product frame will take the weight off the tires.

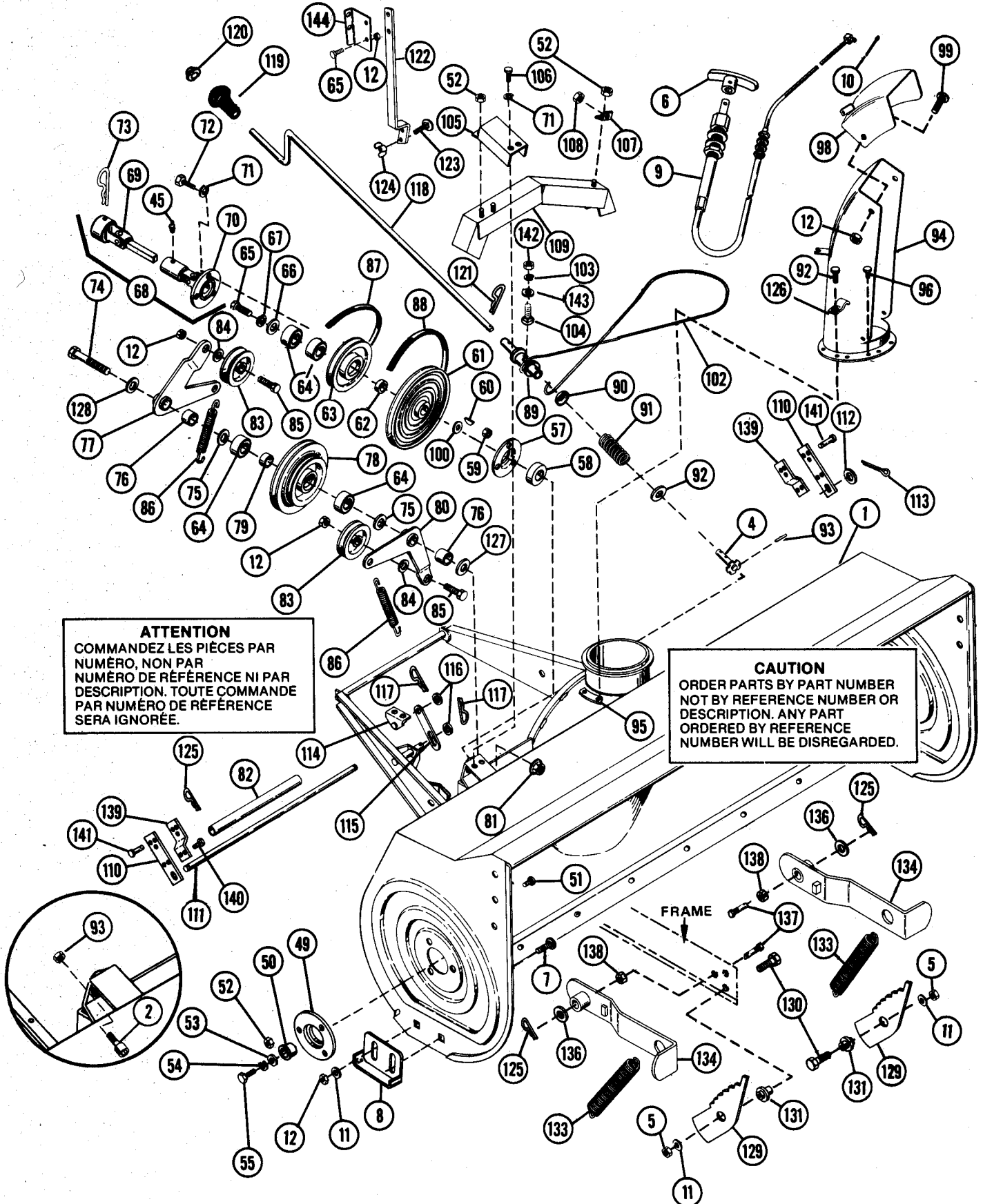
Inspect product for visible signs of wear, breakage or damage. Order any parts required and make necessary repairs to avoid delays when beginning use again. Your Ariens dealer will be able to assist you.

Clean the product thoroughly. Touch up all unpainted and exposed areas with paint to avoid rust. Your Ariens dealer stocks the following aerosol paints:

Ariens Charcoal Brown —	Part No. 64
Ariens Sunset Orange —	Part No. 65
Ariens White —	Part No. 66

NOTE: ARIENS RECOMMENDS USING A HIGH QUALITY PRIMER AS A BASE FOR THE TOUCH-UP PAINT. THE TOUCH-UP PAINT WILL NOT PROVIDE THE HIGH GLOSS FINISH OF ORIGINAL BAKED-ON PAINT. COLOR MAY VARY SLIGHTLY, ALSO.

BLOWER HOUSING/CARTER DE LA SOUFFLANTE MODEL 831025



ATTENTION
 COMMANDEZ LES PIÉCES PAR
 NUMÉRO, NON PAR
 NUMÉRO DE RÉFÉRENCE NI PAR
 DESCRIPTION. TOUTE COMMANDE
 PAR NUMÉRO DE RÉFÉRENCE
 SERA IGNORÉE.

CAUTION
 ORDER PARTS BY PART NUMBER
 NOT BY REFERENCE NUMBER OR
 DESCRIPTION. ANY PART
 ORDERED BY REFERENCE
 NUMBER WILL BE DISREGARDED.

BLOWER HOUSING/CARTER DE LA SOUFFLANTE MODEL 831025

NoDE REF.	NO DE PIECÉ	CODE D'INV	DESCRIPTION	QUANTITÉ NO. REQ'D	NoDE REF.	No DE PIECÉ	CODE D'INV	DESCRIPTION	QUANTITÉ NO. REQ'D
1	531077	O	Sno-Thro, 48" w/Decals	1	92	064139	M	Washer, 41/64 ID x 1 1/4 OD x 3/16	1
2	059156	M	Socket Head Machine Screw	2	93	058016	F	Roll Pin	1
3	065094	M	Twin Whizlock Nut	2	94	030283	S	Discharge Chute	1
4	030287	S	Disk Assembly	1	95	010438	M	Chute Clamp	4
5	065042	M	Locknut	10	96	074054	F	Taptite	6
6	075091	O	"T" Handle	1	97	074027	F	Taptite	2
8	029225	F	Skid Shoe	2	98	030060	S	Deflector	1
9	069121	O	Deflector Control	1	99	059023	M	Cap Screw, 3/8-16 x 3/4 Gr. 2 HHPL	2
10	067001	M	Cotter Pin, 3/32 x 3/4	1	100	064071	M	Washer	AR
11	064002	F	Washer, 5/16 Std. x 7/8 x .083 PL	2	102	031871	M	Cable	1
12	065039	M	Locknut	6	103	063023	M	Lockwasher	2
45	022093	M	Spin Drive Zerk Fitting	1	104	062017	M	Carriage Bolt, 1/4-20 x 5/8	2
49	024374	S	Bearing Support	2	105	031901	M	Cover	1
50	055035	S	Bushing, Flanged 1 x 1-1/8 x 5/8 BR	2	106	059028	F	Cap Screw	2
51	070011	M	Ribbed Neck Bolt	6	107	031892	M	Clip	1
52	065056	F	Flange Whizlock Nut	9	108	065078	F	Flange Whizlock Nut	1
53	064047	F	Washer, .506/.516 x 1.441 x 1/8 PL	2	109	031873	S	Belt Guard	1
54	063006	M	Lockwasher	2	110	031910	M	Lift Strap	2
55	059024	M	Cap Screw, 1/2 - 13 x 1 GR 2 HHPL	2	111	031875	S	Shaft	1
57	031860	S	Bearing Flange	1	112	064140	F	Washer, 5/8 Standard x 1 1/4 x .134	2
58	054052	S	Ball Bearing	1	113	067014	F	Cotter Pin, 1/8 x 1 1/4 PL	2
59	065040	M	Locknut	3	114	031876	S	Limiting Post	1
60	066001	M	Key, Woodruff SAE 11, 3/16 x 7/8	1	115	031877	S	Limiting Arm	1
61	073102	S	Sheave	1	116	064003	F	Washer, 1/2 Std.	2
62	031861	S	Spacer	1	117	067029	F	Hair Pin, Int. 3/32 x 1-7/8 PL	2
63	031862	S	Sheava	1	118	031878	S	Chute Crank	1
64	054120	S	Radial Bearing	4	119	075039	M	Grip	1
65	059004	M	Cap Screw, 3/8-16 x 1 Gr. 2 HHPL	3	120	010198	M	Cap	1
66	064008	M	Washer, 3/8 Std. x 1 x .083 PL	1	121	067010	F	Hair Pin	1
67	063021	M	Lockwasher	1	122	035312	S	Support	1
68	631128	S	Universal Shaft Assembly	1	123	062029	F	Carriage Bolt, 3/8-16 x 1	2
69	031863	M	Universal Half	1	124	065023	F	Wing Nut	2
70	031864	M	Universal Half	1	125	067020	S	Hair Pin	4
71	063002	M	Lockwasher	5	126	069003	M	Clamp	1
72	059001	F	Cap Screw, 1/4-20 x 3/4 Gr. 2 HHPL	3	127	064161	M	Washer, 1/2 ID x 1.250 OD x .060/.063	1
73	067030	S	Pin Hair, Int. 3/16 x 3 1/4 PL	1	128	064188	M	Washer, 25/32 ID x 1 1/4 OD x .025	1
74	059190	M	Cap Screw, 3/8-10 x 5 1/2 Gr. 2 HH	1	129	030193	M	Spring Assist Control	2
75	064048	F	Washer, .750/760 x 1.375 x .062 PL	2	130	059069	M	Cap Screw	2
76	055104	S	Spacer	2	131	030191	M	Spacer	2
77	031868	S	Idler Arm	1	133	083177	M	Spring	2
78	031866	S	Sheave	1	134	030192	M	Spring Arm	2
79	031867	S	Bearing Spacer	1	136	064096	M	Washer, Flat, Special	2
80	031865	S	Idler Arm	1	137	012268	M	Stud	2
81	065125	S	Flange Locknut	1	138	065046	M	Locknut	2
82	031896	S	Tube	1	139	031911	M	Support	2
83	073054	S	Idler	2	140	070009	F	Flange Whizlock Screw, 5/16-18 x 1/2	4
84	064131	F	Washer, .401/.421 x 7/8 x 10 Ga.	2	141	013315	M	Clevis Pin	2
85	059005	M	Cap Screw, 3/8-16 x 1 1/4 Gr. 2 HHPL	2	142	065032	M	Nut, 1/4-20	2
86	083126	M	Extension Spring	2	143	064127	M	Washer	2
87	072095	F	V Belt	1	144	035313	S	Crank Bracket	1
88	072096	F	V Belt	1					
89	031900	M	Spool	1					
90	031891	M	Spherical Washer	1					
91	083169	M	Compression Spring	1					

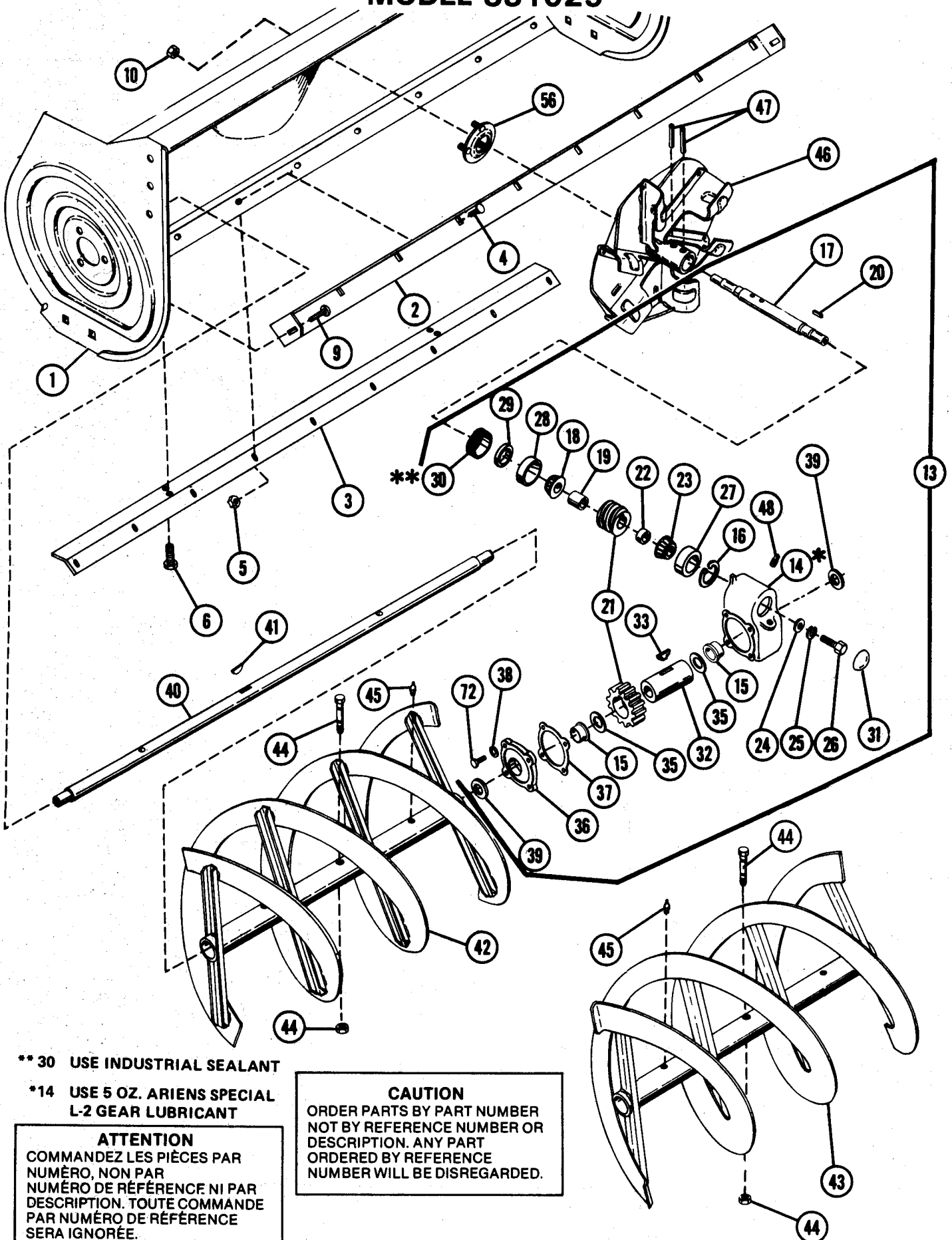
SUGGESTED PARTS STOCKING CODE

F - FAST S - SLOW
M - MEDIUM O - CUSTOMER ORDER ONLY

CODE SUGGÉRÉ D'INVENTAIRE DES PIÈCES

F - FAST (rapide) S - SLOW (lent)
M - MEDIUM (moyen) O - Commande du client seulement

GEARCASE AND RAKE/BOÎTIER ET ROTOR MODEL 831025



** 30 USE INDUSTRIAL SEALANT

*14 USE 5 OZ. ARIENS SPECIAL
L-2 GEAR LUBRICANT

ATTENTION

COMMANDEZ LES PIÈCES PAR
NUMÉRO, NON PAR
NUMÉRO DE RÉFÉRENCE NI PAR
DESCRIPTION. TOUTE COMMANDE
PAR NUMÉRO DE RÉFÉRENCE
SERA IGNORÉE.

CAUTION

ORDER PARTS BY PART NUMBER
NOT BY REFERENCE NUMBER OR
DESCRIPTION. ANY PART
ORDERED BY REFERENCE
NUMBER WILL BE DISREGARDED.

GEARCASE AND RAKE/BOÎTIER ET ROTOR MODEL 831025

NoDE REF.	NO DE PIECÉ D'INV	CODE	DESCRIPTION	QUANTITÉ	NoDE REF.	NO DE PIECÉ D'INV.	CODE	DESCRIPTION	QUANTITÉ
REF. NO.	PART NO.	STOCK CODE		NO. REQ'D	REF. NO.	PART NO.	STOCK CODE		NO. REQ'D
1	531077	O	Sno-Thro Housing, 48" w/Decals	1	28	054070	S	Bearing Cup	1
2	031954	F	Scraper Blade	1	29	056046	S	Seal	1
3	031858	S	Scraper Blade Brace	1	30	031882	M	Adjustment Plug	1
4	062011	M	Carriage Bolt, 5/16-18 x ¾	8	31	004037	S	Dust Cap	1
5	065042	M	Locknut	8	32	031883	S	Gear Case Shaft	1
6	059154	M	Cap Screw, 3/8-16 x ¾ Gr. 5 Hex	4	33	066035	M	"T" Key	1
9	062013	M	Carriage Bolt, 3/8-16 x 1	2	35	064087	M	Washer, 1.623/1.627 x 2.500 x .012	2
10	065042	M	Locknut	4	36	024013	S	Gear Case Cover	1
13	531082	S	Blower Gear Case Assembly	1	37	002008	M	Gasket	1
14	031879	S	Gear Case	1	38	063017	F	Lockwasher	4
15	055059	S	Bushing, Flanged, 1-5/8 x 1-7/8 x 11/16	2	39	056070	S	Seal	2
16	057032	S	Snap Ring, Int. 1-29/32 x .062	1	40	031885	S	Rake Shaft	1
17	031880	S	Wormshaft	1	41	066008	M	Key, Woodruff SAE A ¼ x 7/8	1
18	054069	S	Bearing Cone	1	42	531080	O	Right Rake, w/Zerks	1
19	031881	S	Bearing Spacer	1	43	531079	O	Left Rake, w/Zerks	1
20	066013	M	Key, Straight 3/16 x 3/16 x 1	1	44	531081	F	Shear Bolt, w/Nut	2
21	524009	S	Worm & Gear	1	45	022093	M	Spin Drive Zerk Fitting	4
22	002005	S	Bearing Spacer	1	46	031889	M	Fan	1
23	054045	S	Bearing Cone	1	47	058015	M	Pin Roll, 5/16 x 1¾	2
24	064082	M	Washer, .323/.333 x 1.000 x .094	1	48	001138	M	Pipe Plug	1
25	063003	F	Lockwasher	1	56	031859	S	Bearing Flange	1
26	059022	M	Cap Screw, 5/16-18 x ¾ Gr. 2 HHPL	1	72	059001	F	Cap Screw, ¼-20 x ¾ Gr. 2 HHPL	4
27	054044	S	Bearing Cup	1					

SUGGESTED PARTS STOCKING CODE

F - FAST
M - MEDIUM
S - SLOW
O - CUSTOMER ORDER ONLY

CODE SUGGÉRÉ D'INVENTAIRE DES PIÈCES

F - FAST (rapide)
M - MEDIUM (moyen)
S - SLOW (lent)
O - Commande du client seulement

DEALER ASSEMBLY & PRE-SERVICE

ASSEMBLY INSTRUCTIONS — 48" SNO-THRO

The 48 ST Sno-Thro snow thrower attachment is designed for use on all Ariens 931000 series Garden Tractors.

The Sno-Thro Attachment is shipped in a single carton and is partially assembled at the factory. Unpack the carton and assemble as follows:

NOTE: THE DIRECTIONS "LEFT" AND "RIGHT" ARE ALWAYS DETERMINED FROM A POSITION FACING THE DIRECTION OF FORWARD TRAVEL DURING NORMAL OPERATION.

1. The Discharge Chute is shipped with the cable in place and adjusted for proper operation. The four chute clamps are also in place. Notice the two long taptites as they are positioned to act as stops when the chute is rotated. These two Taptites must remain in their respective positions. Remove the six short taptites and loosen the two long taptites; arrange the cable and position the discharge chute on the base ring of the blower housing. Secure the discharge chute by installing the four clamps and replacing the six short and two long taptites. See Figure 8.

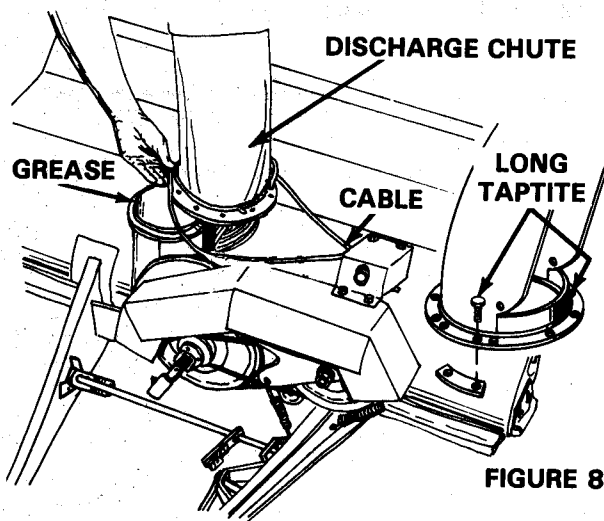
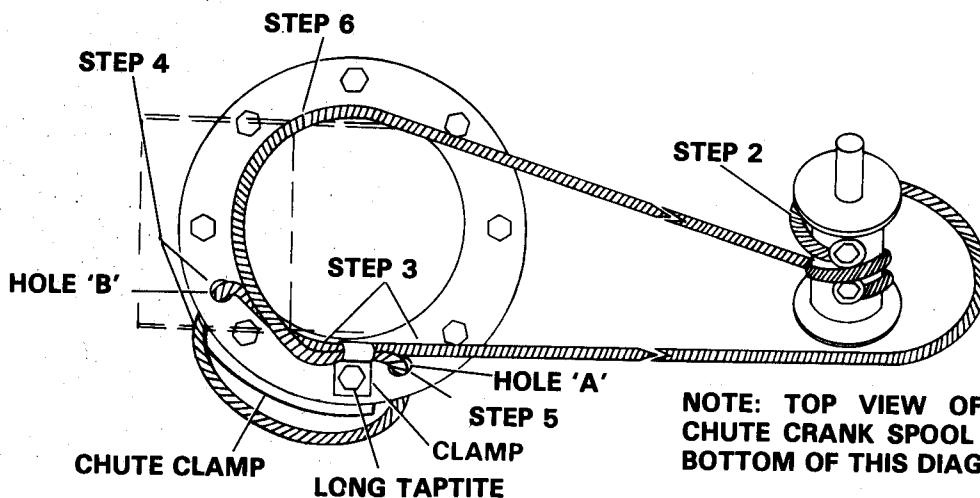


FIGURE 8

CABLE INSTALLATION

The Sno-Thro Attachment is shipped with the chute control cable in place and properly adjusted to operate when the discharge chute is installed on the blower housing. In the event the cable is damaged or worn, replace as follows: See Figure 9.

1. With the chute in position on the Blower Housing (the top of the chute and extension are shown in broken line outline) turn the chute all the way until the long taptite screw is against the stop.
2. Fasten one end of the cable to the top of the spool with carriage bolt, lockwasher, and nut.
3. Run cable around spool to rear of chute and through clamp. Clamp should be loose or, if required, off at this point.
4. Run cable through hole "B", down and around underside of flange of the chute to hole "A".
5. Run cable through hole "A", up and through clamp.
6. Run cable around (clockwise) front of chute, around spool one and one-half times (clockwise) to bottom of spool. Fasten this end with the lockwasher and nut on cap screw in bottom hole of spool.
7. Secure the clamp on the chute by tightening taptite.



NOTE: TOP VIEW OF DISCHARGE CHUTE AND CHUTE CRANK SPOOL — OPERATOR POSITION AT BOTTOM OF THIS DIAGRAM

FIGURE 9

DEALER ASSEMBLY & PRE-SERVICE

TRACTOR PREPARATION

1. Wheel weights, weight box or both combined with the chains must be installed on the tractor when using this Sno-Thro attachment to provide optimum traction, handling and safety. These items are not included with the Sno-Thro, but can be purchased thru your Ariens dealer.

Models 931001 thru 931012: A minimum weight of 125 lbs. is required. This can be accomplished by a set of wheel weights (100 lbs.) and using weight bucket with 25 lbs. weight in it, or by using weight bucket with 125 lbs. of weight in it.

Models 931013 thru 931029: A minimum weight of 100 lbs. is required. To accomplish this, use a set of wheel weights (100 lbs.) or by using weight bucket with 100 lbs. of weight in it.

If your tractor model is not specified above please contact your Ariens dealer for proper weight requirement.

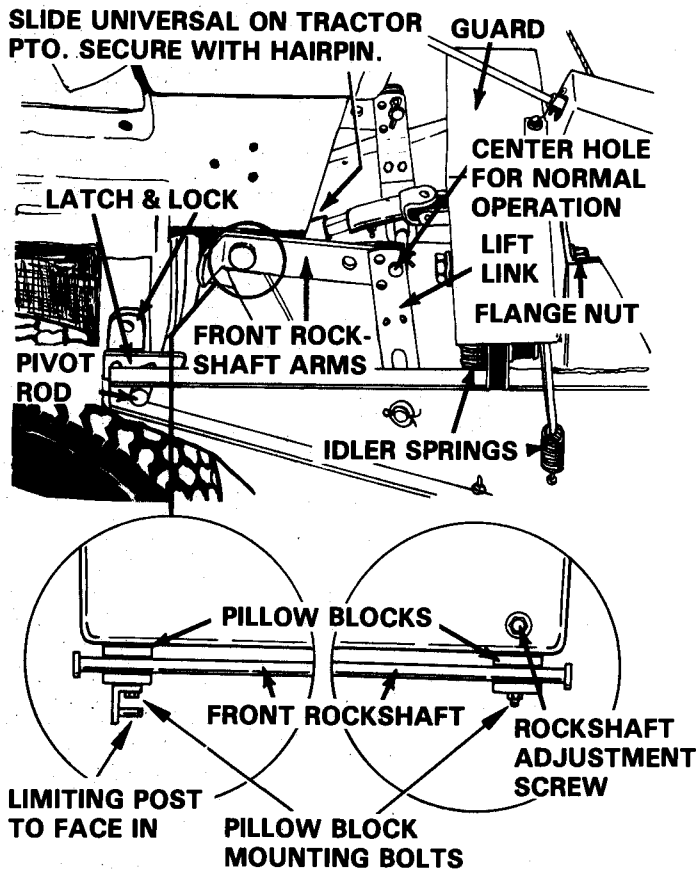


FIGURE 10

4. Install Stud 12268 in existing hole in R.H. side of tractor frame from inside out, secure with locknut. See Figure 12.

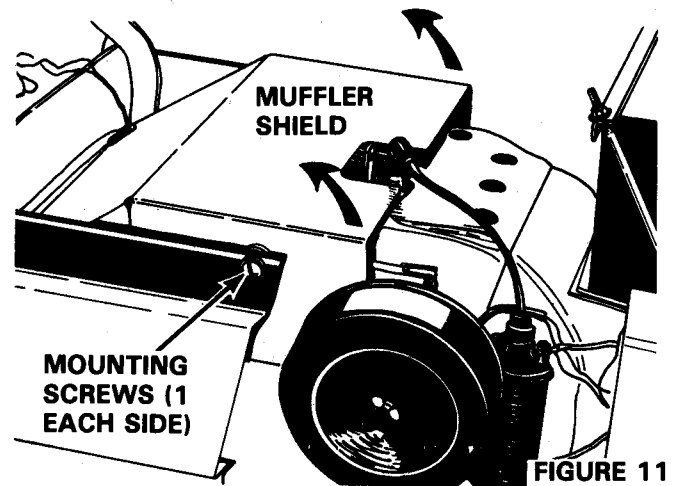


FIGURE 11

5. Install Stud 12268 in existing hole in L.H. side of tractor frame. In order to gain clearance to install stud, the front rockshaft must be lowered. Remove the two nuts and lockwashers securing the pillow blocks. Allow front rockshaft to fall down far enough to enable stud to be inserted into frame. Insert stud from inside out and secure with locknut. Reposition front rockshaft and pillow blocks. Secure with lockwashers and nuts previously removed. See Figure 13.

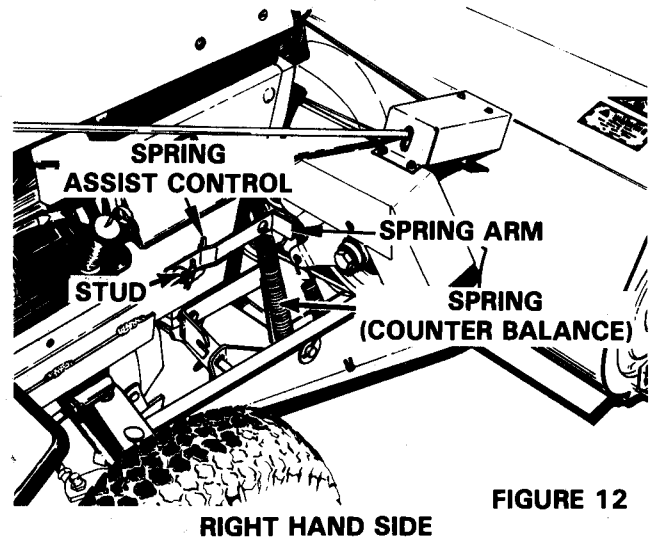


FIGURE 12

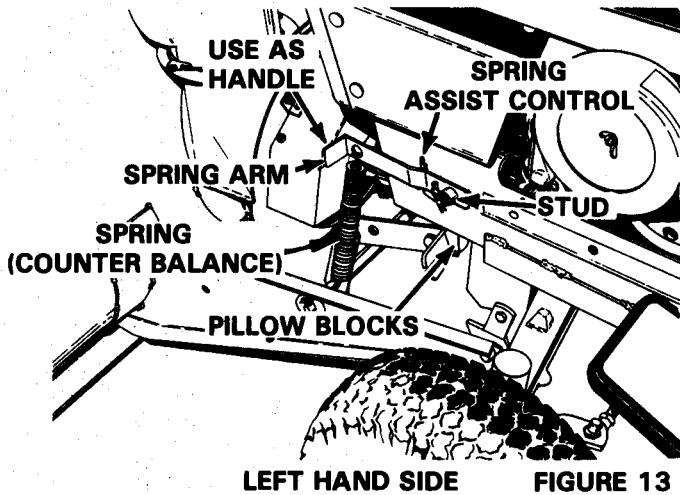
RIGHT HAND SIDE

6. Front rockshaft arms should be horizontal when lift is all the way up. The front rockshaft is adjustable to adjust height of lift. Loosen pillow block mounting bolts. Turn adjustment screw in to increase lift. Retighten pillow block mounting bolts. See Figure 10.
7. Install a Latch 31920 to both sides of tractor frame as shown with Cap Screw 59069, Spacer 25135, Spacer 6071, Latch 31029, Washer 64002 and locknut 65042. Figures 12 and 13.
8. Reinstall muffler shield under hood. See Figure 11.

2. Attach limiting post to right pillow block on tractor with pillow block mounting hardware. See Figure 10.

3. Remove two rear mounting screws securing muffler shield under hood. Tip forward to expose front of tractor. See Figure 11.

DEALER ASSEMBLY & PRE-SERVICE



LEFT HAND SIDE FIGURE 13

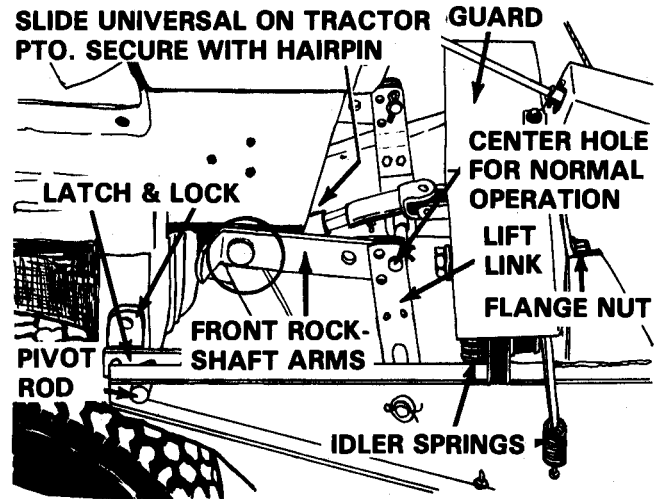


FIGURE 15

9. Attach the chute control support to the tractor steering tower as shown in Figure 14. Secure with carriage bolts, lockwashers and wing nuts provided.

INSTALLATION OF SNO-THRO ON TRACTOR

NOTE: THE FOLLOWING INSTALLATION PROCEDURE SHOULD BE FOLLOWED EACH SEASON TO INSTALL THE SNO-THRO.

1. Apply a light coat of grease to the tractor saddle brackets, to the splined PTO shaft, and to the sliding portions of the shaft assembly. The protective covering must be removed from the splined PTO shaft. See Figure 15.
2. Raise the locks and the latches on the front of the tractor. Align front of tractor squarely with the pivot rod on the Sno-Thro and carefully drive the tractor forward until Pivot Rod is cradled in the tractor saddle brackets. See Figure 15.
3. Stop engine and remove key.
4. Lower the latches and locks. See Figure 15.
5. Attach drive shaft assembly to the tractor splined PTO shaft and secure with the special hairpin cotter provided. See Figure 15.

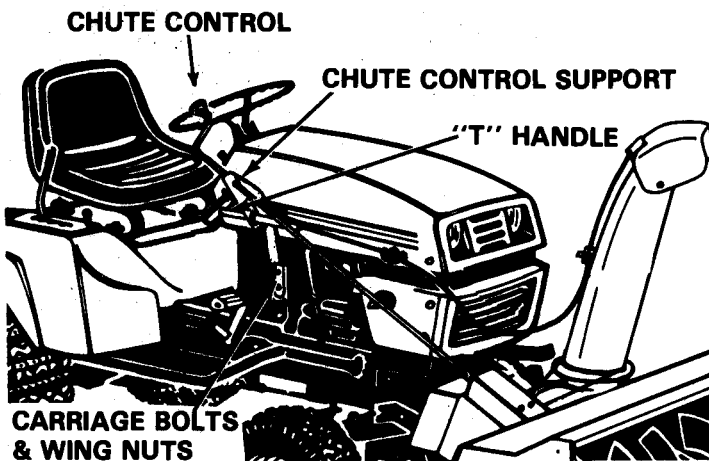


FIGURE 14

ON MANUAL LIFT TRACTORS:

6. Release spring tension from front rockshaft lift springs on manual lift tractors as shown in Figure 16. Grasp the chain handle firmly, pull rearward to release chain links from tractor frame, and carefully allow chain to move forward in the slots.

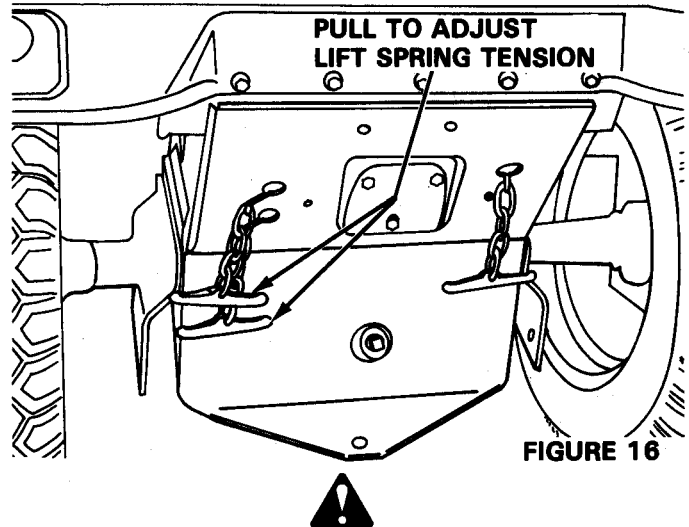


FIGURE 16

BE ESPECIALLY CAREFUL WHEN ADJUSTING SPRING TENSION. ALWAYS GRASP THE CHAIN HANDLE (NOT THE CHAIN) AS CONSIDERABLE TENSION IS ON THE CHAIN AND INJURY TO THE HANDS COULD RESULT.

7. Raise or lower front rockshaft arms to align with desired mounting holes in Sno-Thro lift links. Center hole is recommended for normal use. Lower hole will increase height the Sno-Thro may be lifted. The higher hole will allow Sno-Thro to be operated at a lower position. Secure with the hairpin cotter as shown in Figure 15.
8. Reapply spring tension to the front rockshaft lift springs as shown in Figure 16. Pull as tight as possible (last link of chain will provide maximum tension and easiest lift).

DEALER ASSEMBLY & PRE-SERVICE

ON ALL MODELS:

9. Install chute crank through the chute crank support as shown in Figures 14 and 18. Secure lower end of chute crank in spool (See Figure 17) and insert hairpin cotter through holes in spool and in chute crank.

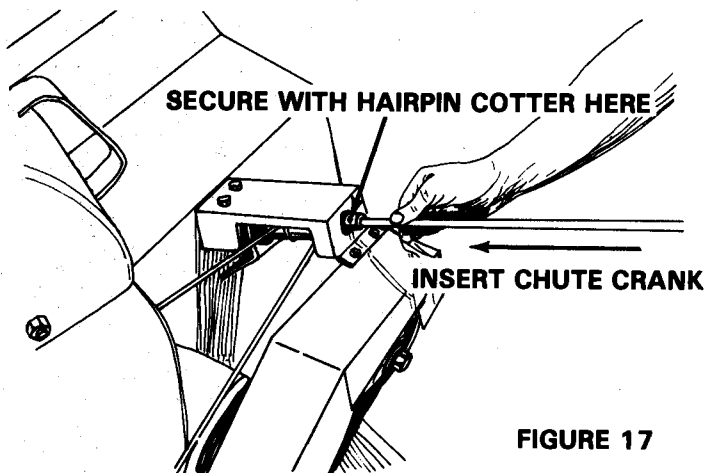


FIGURE 17

10. Install Cable Support in the hole in the hood and hinges as shown in Figure 18. Remove the cap screw and insert the Cable Support in its place. use a Whizlock Nut inside and outside the hood.
11. Install the Deflector Control Cable, See Figure 18. Install the handle end through the lower hole in the Chute Crank Support and secure with the washer and jam nut on the cable. Install the T-Handle. Install the end of the cable through the tab on the deflector and secure with the Cotter Pin. Loosen one of the jam nuts, slip the cable into the slot on the tab on the Chute, and tighten the jam nuts to secure the cable.
12. Loop the center section of the Deflector Control Cable through the opening in the Cable Support.

IN REAR NOTCH —
FRONT AND CENTER ROCKSHAFTS
OPERATIONAL — REAR ROCKSHAFT
LOCKED IN RAISED POSITION

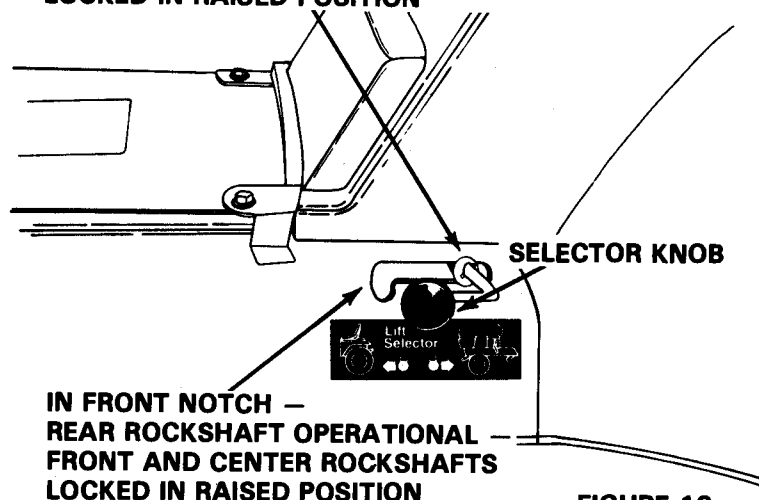


FIGURE 19

13. On hydraulic lift equipped tractors, the selector knob must be in the rear position to make the front rockshaft operational. See Figure 19.
14. Attach limiting arm to limiting post with washer and hairpin cotter. See Figure 20.
15. After Sno-Thro has been lifted to highest position assemble the Spring (Counter Balance) to Spring Arm. Position spring arm on Stud 12268 and secure with 064096 Washer and Hairpin. Repeat for opposite side. See Figure 13.
16. Cable Adjustment: Check rotation of discharge chute to be sure it rotates a full 230 degrees (stop to stop). If it does not, cable may not be positioned correctly on discharge chute and clamp should be loosened and cable rotated. Replace guard when adjustment is completed.

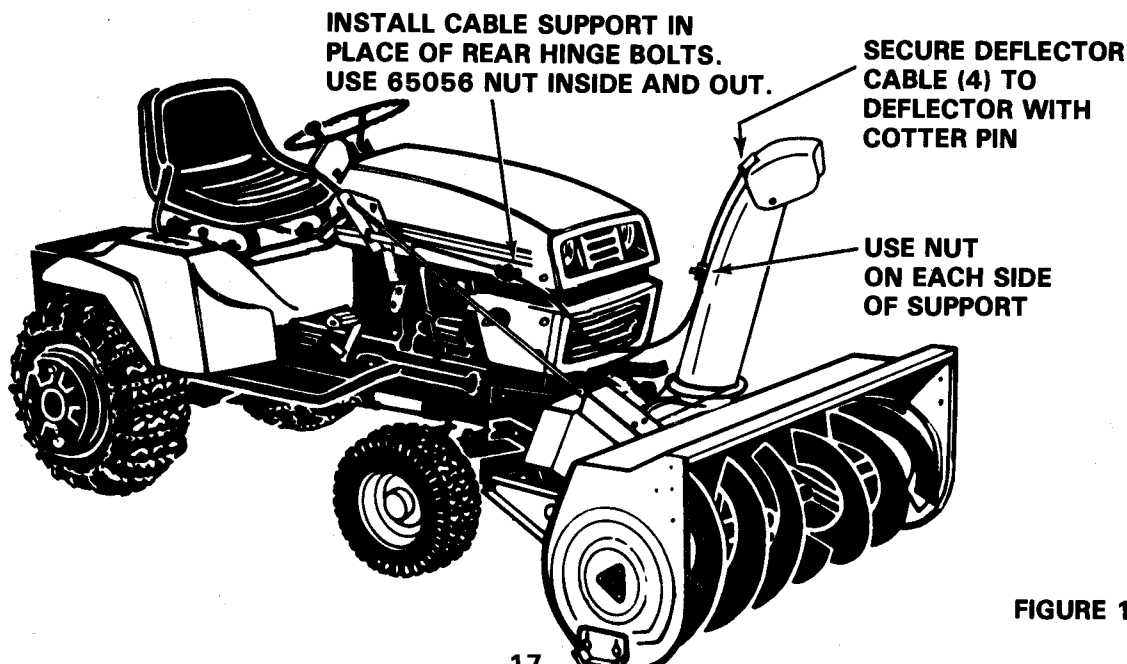


FIGURE 18

DEALER ASSEMBLY & PRE-SERVICE

17. Check gearcase oil level. Oil level must be up to oil fill hole. Change oil every 25 hours or once each season, whichever comes first. Fill with Ariens Special L-2 Gear Lubricant. Approximately 5 oz. See Figure 6.

Apply a light coating of grease to both sides of the base ring located on auger housing. See Figure 8.

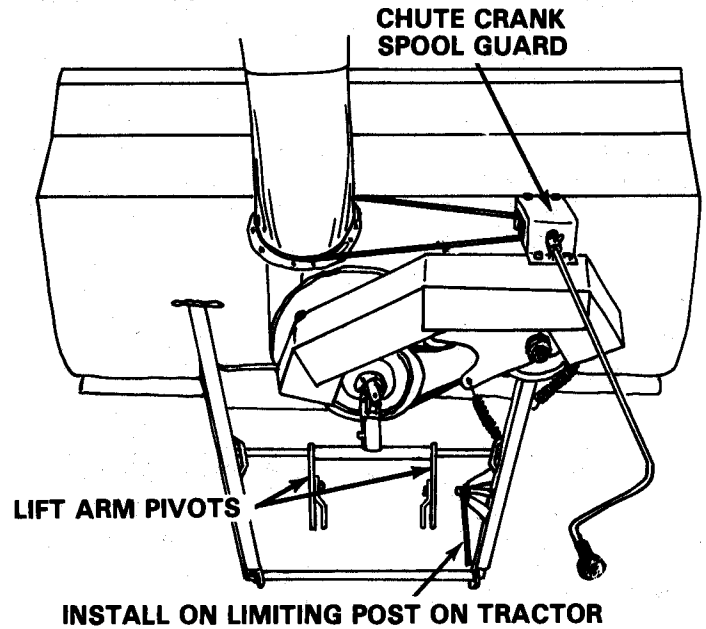


FIGURE 20

REGISTRATION

Fill out pre-warranty registration card and mail to Ariens Company. Warranty will only be registered under the model and serial number found on the serial number label (also stamped into the frame of the unit). This serial number will correspond with the serial number pre-printed on the pre-warranty registration card.

DELIVERY

Using the Owner's Manual as a guide, instruct the customer as follows:

1. Instruct the customer on the operation of the Sno-Thro. Emphasize safety and discuss the safety information in the Owner's Manual.
2. Explain how to perform the recommended lubrication and periodic service.
3. Explain maintenance and adjustment instructions.
4. Demonstrate how to mount and dismount attachment.
5. Make certain the customer has his Owner's Manual.
6. Explain Ariens Warranty Policy. Fill out and return Ariens Warranty Registration Card.