

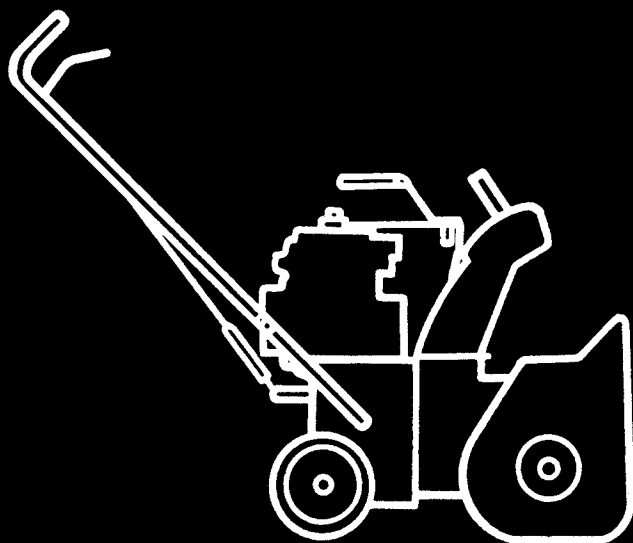
# Ariens

# 932

**Series**

**2 + 2 Sno-Thro®**

## Owner's Manual



# Model

**Model 932015 (ST 2 + 2)**  
9.05 cu. in. w/20" Sno-Thro Attachment  
Serial No. 000101 and up

This manual covers the above model. Specific Model and Serial Numbers of your equipment are on a label on units frame. Record numbers below and use them whenever parts or service are required.

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Model Number - Sno-Thro \_\_\_\_\_

Serial Number - Sno-Thro \_\_\_\_\_

Serial Number - Engine \_\_\_\_\_

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**NOTE:** All references to "Left", "Right", "Front" and "Rear" are given from operator's position.

## A Message to Ariens Customers. . .

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 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. If service is required, be prepared to supply the service person with the Model Number and Serial Number of the equipment and the engine, as well as a full description of the problem encountered.

**NOTE:** The descriptions and specifications contained in this manual were in effect at the time the manual was approved for printing. Ariens company reserves the right to discontinue models without notice and without incurring obligation. The equipment described within this manual may not be identified as either standard or optional and the various illustrations may not all be applicable to your particular unit. If you have questions, always check with your Ariens dealer.

# Safety Alert Symbol And Notations

The following safety notations are used throughout this manual to call attention to special information or operating procedures. Understand the message in each notation and be alert to hazards and the possibility of personal injury.

**NOTE:** A **NOTE** points out general reference information regarding proper operation and maintenance practices.

**IMPORTANT:** An **IMPORTANT** statement indicates specific procedures or information that is required to prevent damage to the machine or its attachments.



This safety alert symbol is used to attract your attention! **PERSONAL SAFETY IS INVOLVED!** When you see this symbol — **BECOME ALERT** — **HEED ITS MESSAGE.**



**CAUTION:** A **CAUTION** identifies safe operating practices or indicates unsafe conditions that could result in personal injury.



**WARNING:** A **WARNING** describes a condition where failure to follow the instructions could result in severe personal injury.



**DANGER:** A **DANGER** designates a condition where failure to follow instructions or heed warning will most likely result in serious personal injury or death.



## Safety Precautions



### Training

Read and understand this Owner's Manual and engine instructions before operating unit. Be thoroughly familiar with controls and proper use of equipment. Know how to stop unit and disengage controls quickly in an emergency.

Use only attachments or accessories designed for your unit. See your Ariens Dealer for a complete list of recommended attachments or accessories.

Understand and follow each Warning, Caution, Danger and Instruction decal installed on equipment.

**NEVER** allow children to operate equipment. **DO NOT** allow adults to operate unit without proper instruction.

Keep the area of operation clear of all persons, particularly children and pets.

### Preparation

Thoroughly inspect and clear work area of objects which might be picked up and thrown.

Remove all doormats, sleds, boards, wires, bones and other foreign objects.

Wear adequate winter outer garments, footwear which will improve footing on slippery surfaces and eye protection such as safety goggles. **DO NOT** wear loose clothing or scarves that may get caught in rotating parts of unit.

Gasoline is highly flammable and its vapors are explosive. Handle with care. Use an approved fuel container.

**NEVER** allow smoking materials, sparks or flame (match, pilot light, etc.) near equipment or fuel container.

Check fuel supply before starting engine. Fill fuel tank outdoors with extreme care; **DO NOT** fill fuel tank indoors, when engine is running or while engine is still hot from operation. Replace fuel cap securely and wipe up spilled fuel before starting engine.

Do not use unit on loose gravel that may be picked up and thrown out the discharge chute and cause damage or injury.

## Safety Precautions (Continued)

Do not use Rotary Brush attachment with this unit. There is no wheel traction drive to resist brushing forces.

**NEVER** attempt to make any adjustments to unit while engine is running (except where specifically recommended by manufacturer).

Disengage attachment clutch before starting engine (motor).

Use grounded three-wire plug-in for electric starter, if so equipped.

### Operation

**DO NOT** put hands or feet near or under rotating parts. Keep clear of discharge opening at all times.

Keep equipment in good condition. Keep all shields in place and safety devices operating properly.

Open doors if engine is run in garage, exhaust fumes are dangerous. **DO NOT** run engine in an enclosed area.

Operate equipment only when there is good visibility and light.

Always be sure of your footing (Walk, never run). Exercise caution to avoid slipping or falling.

**DO NOT** operate unit at high transport speeds. Use care when backing.

Disengage power to auger/impeller when unit is being transported or is not in use.

**NEVER** direct discharge of material toward bystanders nor allow anyone in front of equipment while unit is in operation. Be familiar with area of operation.

Stay alert for holes, rocks, roots and hidden hazards in area of operation.

Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hazards and traffic. **DO NOT** operate Sno-Thro near glass enclosures, automobiles, window wells, drop-offs, etc., without proper adjustment of discharge direction and angle.

**DO NOT** clear snow across face of slopes. Exercise extreme caution when changing direction on slopes. **DO NOT** attempt to clear steep slopes.

Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug (keep wire away from spark plug to prevent accidental starting) before leaving operator's position for any reason such as unclogging auger/impeller housing, discharge chute, when making any repairs, adjustments, inspections or cleaning unit.

**DO NOT** touch equipment parts which might be hot from operation. Before attempting to maintain, adjust or service allow such parts to cool.

If equipment vibrates abnormally disengage attachment, stop engine at once, and remove key. Abnormal vibration is a warning of trouble. Repair any damage before restarting unit.

Stop engine, remove key and remove wire from spark plug after striking a foreign object. Thoroughly inspect Sno-Thro for any damage and repair damage before restarting and operating unit.

Run unit a few minutes after throwing snow to prevent freeze-up of auger/impeller in housing.

Take all possible precautions when leaving unit unattended, disengage power to attachment, stop engine and remove key to prevent unauthorized use.

### Maintenance and Storage

**DO NOT** change engine governor setting or overspeed engine.

Keep all nuts, bolts and screws tight and be sure equipment is in safe working condition. Check shear bolts and all hardware at regular intervals.

Refer to Owner's Manual for important instructions if Sno-Thro is to be stored for an extended period.

Never store equipment with fuel in tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.

# Safety Decals

## Attention

When using summer attachments, remove heater box and install air cleaner.

### Engine Instructions

**CAUTION:**  
 For your personal protection, read all safety notes in engine owner's manual.

**OPERATION:**  
 For detailed lubrication, starting & operating instructions, see engine owner's manual & equipment mfr.'s instructions.

**LUBRICATION:**  
 Summer ..... SAE 30 Oil  
 Winter ..... SAE 5W-30 Oil

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## DANGER



**ROTATING PARTS**  
 Stop engine & remove ignition key before clearing.

077997

## WARNING



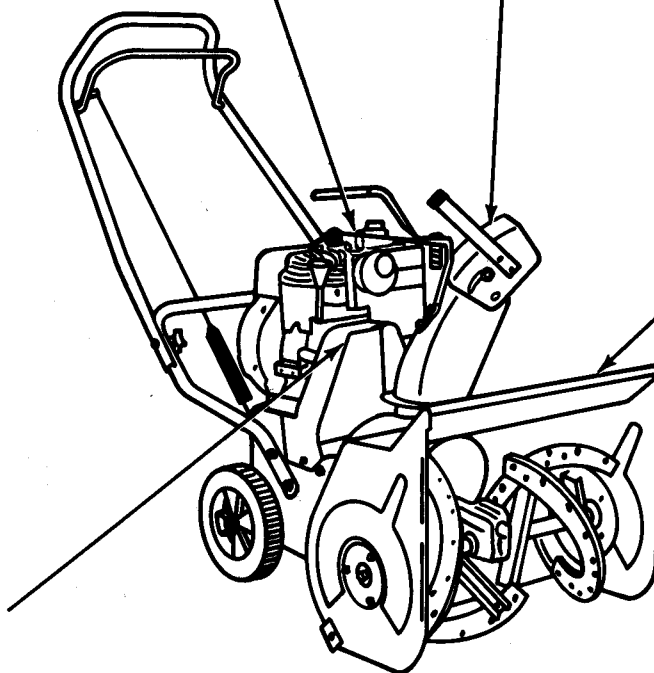
**ROTATING PARTS**  
 Keep clear of auger while engine is running.

## SAFETY INSTRUCTIONS

### AVOID POTENTIAL HAZARDS

1. Read owners manual for operating and safety instructions.
2. Observe all labels and instructions.
3. Stop engine, remove ignition key and wait for all movement to stop before unclogging or servicing machine.
4. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
5. Keep the area of operation clear of all persons, especially children.
6. Never direct discharge at bystanders or allow anyone in front of unit.
7. Keep machine properly maintained and serviced with all shields, guards, and protective devices in place.

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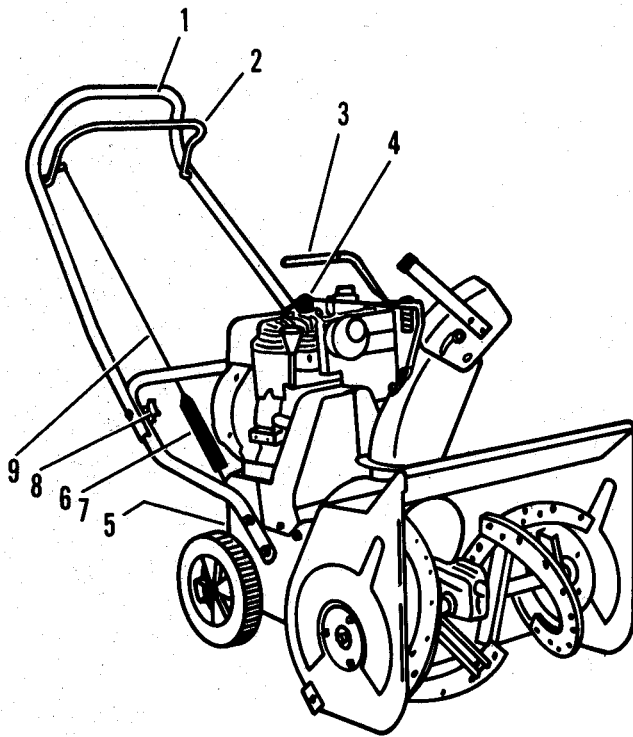


## WARNING

**MUFFLER & ADJACENT AREAS MAY EXCEED 150°F.**

Figure 1: Safety Decals

# Dealer Preparation For Operation



1. Handlebars
2. Attachment Clutch Bail
3. Chute Control Handle
4. Mounting Hardware
5. Clutch Arm
6. Spring and Chain
7. Cable Cover
8. Handlebar Knobs
9. Clutch Cable

**Figure 2: Dealer Preparation**

**Consumer Note:** Your Ariens Dealer is expected to complete these preparation steps and review important information, including this manual, with you before or upon delivery of machine or attachment.

The preparation information is included here so that you and your dealer may review it together.



**WARNING:** Failure to follow all instructions could result in personal injury and/or damage to Sno-Thro. Remove wire from spark plug before attempting any adjustment or assembly procedures.

## Handlebars

Unfold upper handlebars until it snaps into position on the lower handlebar. Tighten handlebar knobs to secure.

## Discharge Chute

Remove mounting hardware from studs on top of engine adjacent to spark plug. Position discharge chute over opening on auger/impeller housing and secure by fastening brace to studs with hardware just removed. Swivel discharge chute from side to side with control handle to see that it moves freely before tightening hardware.

## Attachment Clutch Cable

Insert "Z" bend end of clutch cable into hole in right end of clutch bail. Connect spring into hole in clutch arm at rear of frame.

**NOTE:** For Adjustment refer to Attachment Clutch, Page 9. Slide cover down over spring and chain to secure.



**WARNING:** Attachment Brake must function properly, or with improper operation severe personal injury could result.

Check attachment brake and clutch for proper function per instructions on page 14.

## Auger Gearcase

Check grease level in auger gearcase. Refer to Lubrication/Maintenance Section page 12.

## Engine

**IMPORTANT:** Engines on all Sno-Thro models are shipped without oil in crankcase. Refer to Engine Instruction Manual for proper type oil and crankcase capacity.

# Dealer Preparation For Operation (Continued)

## Fuel



**WARNING:** Gasoline is highly flammable and its vapors are explosive. Handle with care. Use an approved (Red) gasoline container.



**CAUTION:** Check function of all controls before starting engine. All safety devices and guards must be in position and operating properly or personal injury may result.

Fill fuel tank with unleaded gasoline. Tank capacity is 1 quart.

## Registration

Complete Sno-Thro Prewarranty Registration Form and mail original copy to Ariens Company.

Warranty is registered under model and serial number found on plate attached to frame near engine.

## Delivery

Using the Owner's Manual instruct the customer on controls and operation of unit. Emphasize safety and discuss the Safety Precautions.

Explain recommended lubrication and maintenance of the unit.

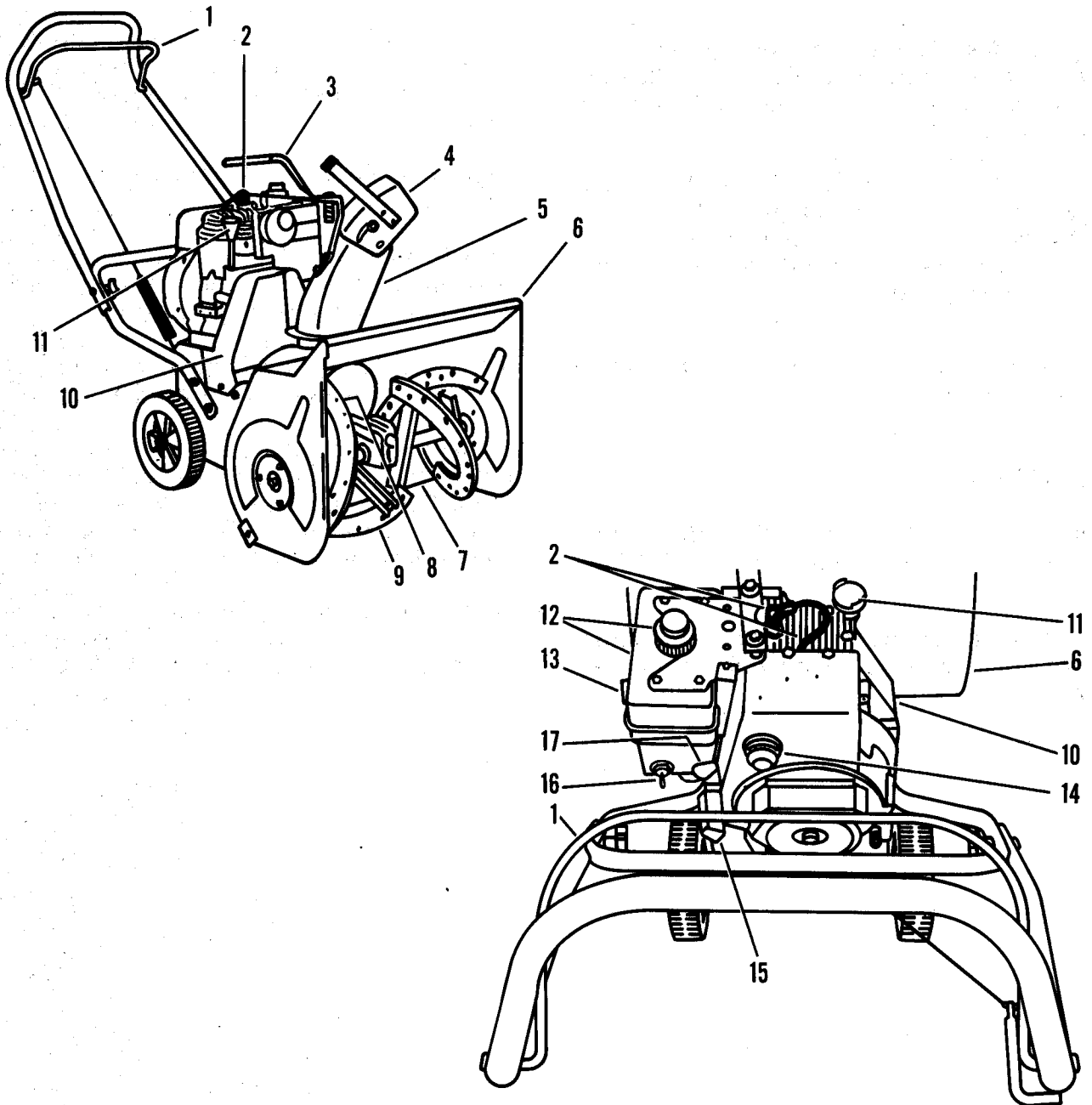
**IMPORTANT:** Remind customer to observe breakin requirements and change engine oil after first five (5) hours of operation.

Advise customer on adjustments, demonstrate how to put on and remove attachments if any.

Explain Ariens Company, Limited Warranty Policy, fill out Original Purchaser Registration Card, Parts and Repair Manuals Order Form and return to Ariens Company. Place Model and Serial Number on page (i) of this manual.

Give customer his Owner's Manual and engine manufacturer instructions. Advise him to thoroughly read and understand them.

# Controls and Features



1. Attachment Clutch Bail
2. Spark Plug and Wire
3. Chute Control Lever
4. Chute Deflector
5. Discharge Chute
6. Housing (Auger/Impeller)
7. Scraper Blade
8. Impeller
9. Auger

10. Belt Guard
11. Oil Fill and Dipstick
12. Fuel Tank and Cap
13. Choke
14. Primer Bulb
15. Recoil Start
16. Engine Ignition (Key Switch)
17. Throttle

Figure 3: Controls and Features Locations

# Operation

## PRE-STARTING



**WARNING:** Wear adequate winter outer garments, footwear which will improve footing on slippery surfaces and eye protection such as safety goggles. **DO NOT** wear loose clothing or scarves that may get caught in rotating parts of unit.



**CAUTION:** Make sure all hardware is tight, all safety devices in place and all adjustments correct.

**IMPORTANT:** Check impeller to be sure it is not frozen by removing spark plug wire, engaging attachment clutch and pulling rewind starter. If impeller is frozen, move Sno-Thro to a heated area and thaw to prevent possible damage to unit.

**NOTE:** This product is equipped with an internal combustion type engine. **DO NOT** use unit on or near any unimproved, forest-covered or brush-covered land unless exhaust system is equipped with a spark arrester meeting applicable local, state or federal laws. A spark arrester, if it is used, must be maintained in effective working order by operator.

Check that engine crankcase oil is full using dipstick, see Page 10, to add or change.

## Fuel



**WARNING:** Gasoline is highly flammable and must be handled with care. Never fill tank when the engine is running or hot from operation. **DO NOT** allow open flame, matches or smoking in area. **DO NOT** overfill. Wipe up any spills. Use approved (Red) gasoline container.

**NOTE:** To prevent foreign particles from entering tank while filling; wipe snow, dust, dirt and debris from around cap before removing.

Check fuel supply. Fill gasoline tank with good grade of fresh unleaded gasoline (leaded if unleaded is unavailable). **DO NOT** use premium, gasahol or mix gasoline with oil.

## Chute Deflector



**DANGER:** **DO NOT** put hands or feet near or under rotating parts. Keep clear of discharge opening at all times.

Position Deflector at desired height. **DO NOT** throw snow any higher than necessary.

## Discharge Chute



**WARNING:** **NEVER** direct discharge of material toward bystanders nor allow anyone in front of equipment while unit is in operation. Be familiar with area of operation.



**CAUTION:** Do not use unit on loose gravel that may be picked up and thrown out the discharge chute and cause damage or injury.

**IMPORTANT:** **DO NOT** operate Sno-Thro near glass enclosures, automobiles, window wells, drop-offs etc., without proper adjustment of discharge direction and angle.

Direct snow away from area to be cleared and with direction of wind whenever possible. Chute rotates 220°.

Snow is best removed as soon as possible after a snow fall.

## STARTING



**CAUTION:** **DO NOT** attempt to start your engine at this time. Thoroughly read this entire Owner's Manual and engine manufacturers operating instructions first.

**NOTE:** Try out each control without running engine to see how they work and what they do.

# Operation (Continued)

## Engine Ignition



**WARNING:** If equipment vibrates abnormally disengage attachment, stop engine at once, and remove key and wire from spark plug. Abnormal vibration is a warning of trouble. Repair any damage before restarting unit.

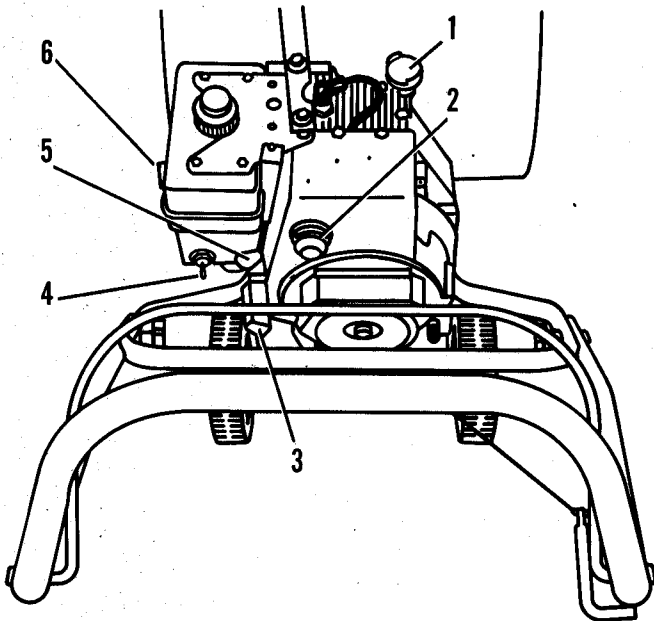


**CAUTION:** Turn Key "OFF" and remove it before attempting any maintenance, adjustment or leaving unit unattended.

To start engine, place Key in Switch and turn it clockwise to "RUN" position.

## Throttle

Throttle controls engine speed. To increase engine speed Pull-Up, to decrease Push-Down throttle. Set throttle at part-throttle position for cold weather starts and at fast position for normal operation or warm starts.



1. Oil Fill Spout
2. Primer Bulb
3. Rewind Starter
4. Key Switch
5. Throttle
6. Choke

Figure 4: Engine Starting

## Choke

Move choke control to "Choke" position. When engine has started, open choke gradually.

**NOTE:** A warm engine requires less choking than a cold engine. If fuel drips out of carburetor while trying to start engine, engine is over-choked. Pull starter several times with choke open.

## Primer Bulb

Push primer bulb two or three times when engine is cold. When temperatures go below -15° Fahrenheit additional priming may be needed.

## Rewind Starter



**WARNING:** To prevent discharge toward operator's starting position, always turn discharge chute straight ahead before starting unit.

Stand to left of unit and grasp starter handle and pull rope out slowly until it pulls harder, this is compression stroke, let rope rewind slowly. Then pull rope with a rapid continuous full arm stroke. Let rope rewind slowly.

**IMPORTANT:** DO NOT let starter handle snap against starter.

Repeat above instructions until engine starts. (Refer to engine manufacturers instructions).

After engine has started and choke has been opened, set throttle at its fast position.

**NOTE:** If Sno-Thro is equipped with electric starter, refer to instructions provided with starter accessory.



**CAUTION:** Operate equipment only with good visibility and light.

# Operation (Continued)

## Attachment Clutch



**CAUTION:** Stop engine, remove ignition key and wire from spark plug after striking a foreign object. Thoroughly inspect Sno-Thro for any damage and repair damage before restarting and operating unit.



**CAUTION:** Stay alert for holes, rocks, roots and hidden hazards in area of operation. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.



**CAUTION:** DO NOT overload machine capacity by attempting to clear snow at too fast a rate.

Squeezing Clutch Bail against handlebar engages auger and impeller so machine will move forward and throw snow. Releasing bail disengages attachment and brake stops auger and impeller.

For snow removal, auger propels unit while collecting snow and Sho-Thro seeks forward speed. The forward speed will vary according to snow depth and its wetness.

Efficient unit operation depends on proper scraper blade adjustment. Refer to Scraper Blade Adjustment, Page 13.

**NOTE:** When transporting unit engine should be shut off or attachment clutch disengaged.

To transport unit to or from an area to be cleared, press down on handlebars enough to raise front of Sno-Thro slightly off surface and push machine.

To clear an area, run Sno-Thro in an overlapping series of paths. For large areas start in middle and blow snow to each side so you do not have to move it more than once.

## STOPPING



**WARNING:** Take all possible precautions when leaving unit unattended, such as disengaging power to attachment, stopping engine and removing key to prevent unauthorized use.

**IMPORTANT:** Run attachment a few minutes after throwing snow to prevent freeze-up of auger/impeller.

Release Attachment Clutch, throttle down and turn engine ignition key to "OFF".

# Lubrication and Maintenance

Ariens Dealers will provide any service which may be required to keep your Sno-Thro operating at peak efficiency. Should engine service be required, it can be obtained from an Ariens dealer or an authorized engine manufacturer's service center.

Drain crankcase by removing oil drain plug. When oil has drained replace plug and refill engine crankcase with new oil of proper grade (per engine manufacturer's instructions). Recheck oil level with dipstick.



**WARNING:** Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug (keep wire away from spark plug to prevent accidental starting) before any lubrication or maintenance procedures.



**CAUTION:** DO NOT touch engine or Sno-Thro drive parts which are hot from operation. Allow such parts to cool before servicing unit.

## Engine Oil

### Checking

The engine crankcase oil should be checked daily or every 5 hours of operation. Oil level **MUST** be maintained in safe operating range on dipstick at all times or engine damage will result.

To check oil, park Sno-Thro on a flat level surface. Wipe all debris from around dipstick, remove it and wipe oil off. Screw dipstick assembly firmly but slowly until cap bottoms on tube. Remove dipstick and observe oil level. If low add clean fresh oil, of same type and viscosity as is in engine, to bring oil level to Full (F) mark (per engine manufacturer's instructions).

**IMPORTANT:** DO NOT overfill. Level must not exceed full (F) mark.

### Changing

**IMPORTANT:** Change oil after first 5 hours of operation, thereafter change oil every 25 hours of operation (more often in dusty, dirty conditions). See Engine Manufacturer's Instructions for proper type, viscosity and amount required.

**NOTE:** Run engine just prior to changing oil. Oil will flow more freely and carry away more contamination when warm.

## Engine Cooling

The engine is air cooled. Air must circulate freely around engine from air intake screen, over cooling fins on cylinder head and block, to prevent overheating.

Every 100 operating hours or yearly (more often if conditions require) remove cooling shrouds and clean cooling fins. Also clean external surfaces of your engine of dust, dirt and oil deposits which can contribute to improper cooling.

**IMPORTANT:** DO NOT operate engine with cooling shrouds removed - this will cause overheating and engine damage.

## Shear Bolt Replacement



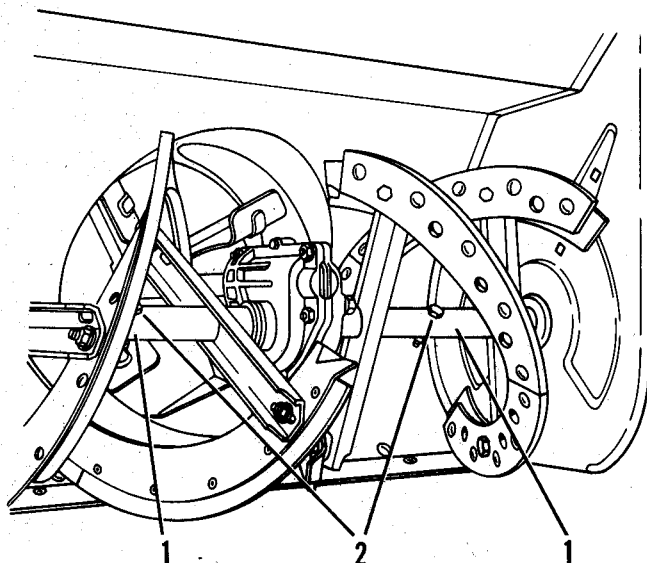
**WARNING:** Stop engine, remove key, wait for moving parts to stop, before attempting to maintain or inspect auger, and remove wire from spark plug.

**IMPORTANT:** Use only Ariens Shear Bolts for replacement. Use of any other type of shear bolt may result in severe damage to unit.

Occasionally an object may enter auger/impeller housing and jam auger, breaking shear bolt(s) which secures auger to shaft. This allows auger to turn freely on shaft preventing damage to gear drive.

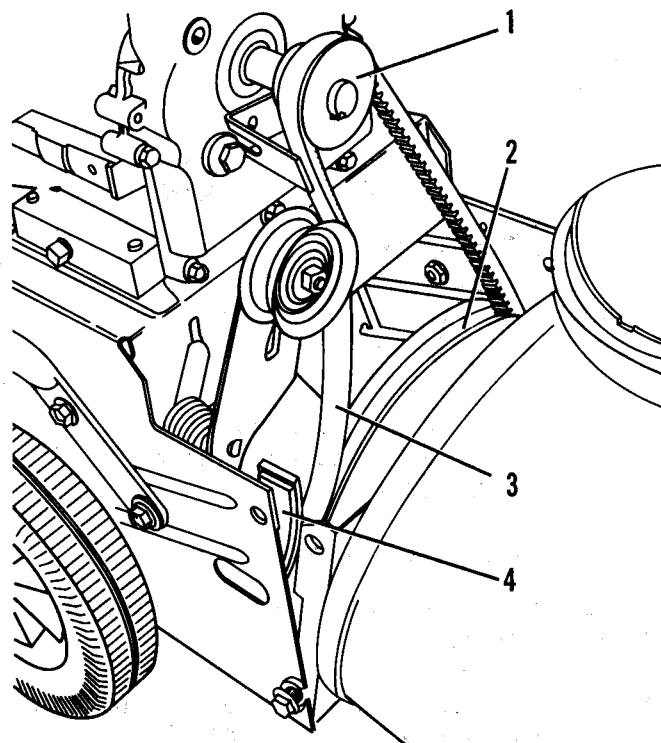
To replace shear bolt, slide auger outward against roll pin and align hole in shaft with hole in auger (holes in shaft for roll pins and shear bolts line up). Drive shear bolt through hole (if shear bolt was broken this will drive remaining part from shaft) and secure with nut.

## Lubrication and Maintenance (Continued)



1. Auger Shafts
2. Shear Bolts

Figure 5: Shear Bolts



1. Engine Sheave
2. Attachment Sheave
3. Attachment Drive Belt
4. Attachment Brake

Figure 6: Attachment Drive Belt

Push down on handlebar. Unit will separate; rest handle bar on floor.

Place drive belt on auger/impeller sheave and while holding brake out of the way tip unit together. Reassemble unit in reverse order.

**NOTE:** Make sure sheaves align. If alignment is necessary, loosen attachment sheave set screws, reposition sheave and retighten set screws.

Adjust belt idler according to instructions on Page 14.

If brake is not 1/16" to 1/8" from belt when clutch is engaged, refer to Adjustment section page 14.



**WARNING:** Attachment Brake must function properly or with improper operation severe personal injury could result.

### Attachment Drive Belt



**WARNING:** Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug before attempting any repairs, adjustments, inspections or cleaning unit.



**WARNING:** Gasoline is highly flammable and its vapors are explosive. Handle with care. Never allow smoking materials, sparks or flame (match, pilot light, etc.) near equipment or fuel container.



**CAUTION:** When unit is tipped up onto housing remove enough fuel so that no spillage will occur.

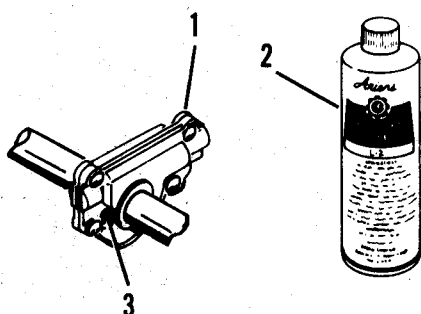
To replace drive belt, remove hardware securing discharge chute bracket to engine and lift discharge chute off housing.

Remove two cap screws securing belt guard to unit, belt guard and belt from engine sheave (it may be necessary to turn engine sheave by pulling on rewind starter rope).

Loosen bottom and remove top cap screws that secure auger/impeller housing to frame.

# Lubrication And Maintenance (Continued)

## Auger Gearcase



1. Auger Gearcase
2. Ariens Liquid Grease
3. Grease Fill

**Figure 7: Auger Gearcase**

Check auger gearcase grease level every 25 hours of operation.

ST 2 + 2 gearcases are lubricated with Ariens Liquid Grease (Part Number 000070).

To check, place unit in a warm location overnight to allow lubricant to flow to level. Remove filler plug. Lubricant must be at least up to bottom of filler hole with unit resting on a level surface (extra lubricant will not damage gearcase).

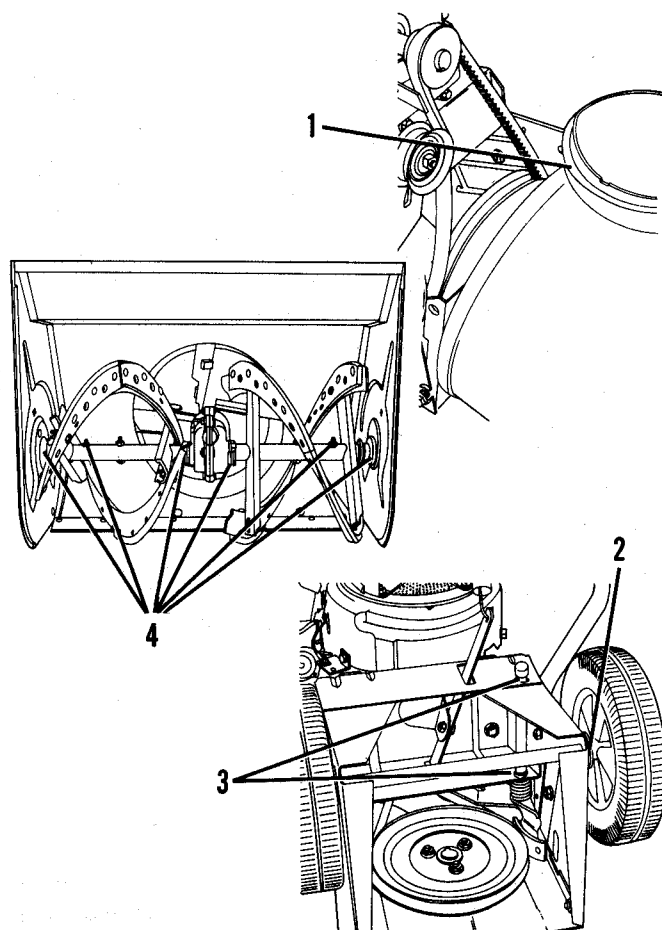
## Oil and Grease Locations



**CAUTION:** DO NOT touch engine or Sno-Thro drive parts which are hot from operation. Allow such parts to cool before servicing unit.

**IMPORTANT:** Wipe each fitting clean before and after lubrication.

**NOTE:** Use Ariens Multi-Purpose Grease (Part Number 000150) or good grade of general purpose grease at zerk fittings and oil at lubrication points.



1. Discharge Chute
2. Wheels
3. Clutch Shaft
4. Auger and Shaft

**Figure 8: Oil and Grease Locations**

Sno-Thro should be lubricated at beginning of season or every 25 operating hours. Grease and oiling points are indicated in Figure 8.

**IMPORTANT:** DO NOT allow grease or oil to get on belt.

**NOTE:** To grease auger shaft remove shear bolt nuts, shear bolts and turn auger on shaft while applying grease. Replace shear bolt per instructions in Shear Bolt Replacement.

# Adjustments

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

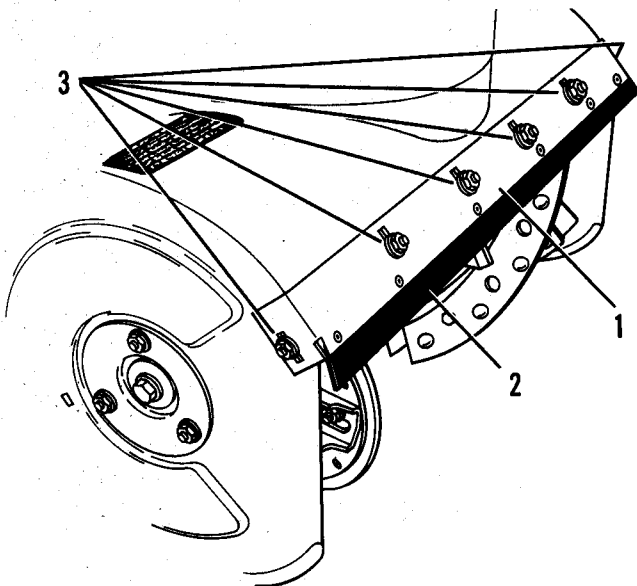


**WARNING:** Stop engine, remove key, wait for moving parts to stop and remove wire from spark plug (keep wire away from spark plug) to prevent accidental starting before attempting to make adjustments.

## Scraper Blade



**CAUTION:** Use of this machine on loose gravel is not recommended. Gravel may be picked up and thrown from the discharge chute resulting in damage to nearby property and/or injury to bystanders.



1. Scraper Blade
2. Flexible Edge
3. Carriage Bolts and Nuts

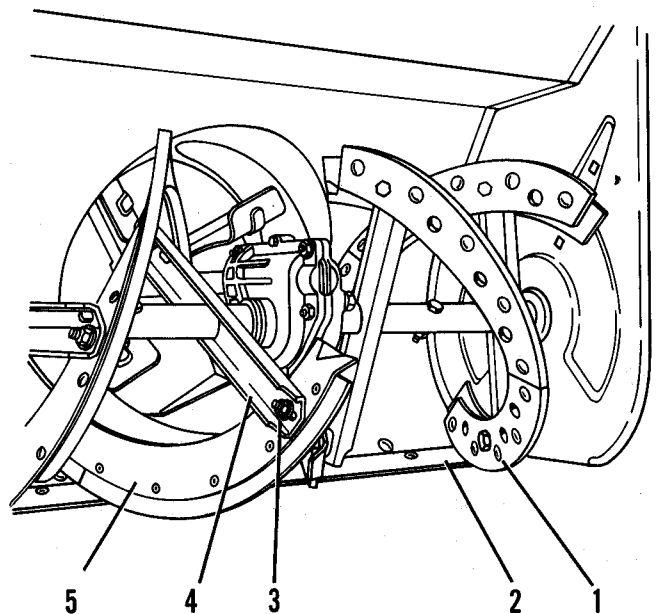
Figure 9: Scraper Blade

Scraper Blade is adjustable to compensate for wear and to control traction. Best operation occurs if scraper blade edge flexes up approximately 1/16 inch when unit sits normally on a hard, flat, level surface. Adjust scraper blade equally its full length if machine does not scrape clean, or if machine does not drive forward properly.

To adjust scraper blade, fold handlebars, tip unit back and rest on handlebar. Loosen nuts on carriage bolts along scraper edge. If unit does not scrape clean, move scraper blade forward. If unit does not drive forward and scraper blade drags, move scraper blade to the rear.

**NOTE:** Be sure metal support is fully engaged in groove of scraper blade. Tighten hardware and test unit. Repeat adjustment as required until proper operation is obtained.

## AUGER



1. Rivets
2. Rubber Edge
3. Cap Screws & Nuts
4. Auger Support Arm
5. Auger Segment

Figure 10: Auger

After a period of use, the rubber edges on auger will wear and require replacement. Two replacement kits are available from your Ariens Dealer. They are installed as follows:

## Adjustments (Continued)

1. A replacement set of four segments with the rubber edges riveted in position is available. Remove cap screw and nut on each end of a segment replace with new segment and with cap screw and nut. Rotate auger and check that each rubber edge clears scraper blade equally its full length. Replace each of the four auger segments in the same fashion.
2. A replacement set of auger edges, bolts and lock nuts is available. Remove cap screw and nut on each end of a segment and remove segment. Drill out rivets holding old rubber edge to segment. Position new edge on segment with white line on rubber against segment. Secure with bolts and lock nuts. Replace segment and secure with cap screw and nut. Repeat procedure with remaining three segments.

**NOTE:** After replacement of auger edges it may be necessary to readjust the scraper blade as described previously.

### Attachment Clutch/ Impeller Brake



**WARNING:** With improper use, injury may result if attachment clutch lever is released and brake **DOES NOT STOP** auger/impeller within 5 seconds.



**WARNING:** Gasoline is highly flammable and its vapors are explosive. Handle with care. Never allow smoking materials, sparks or flame (match, pilot light, etc.) near equipment or fuel container.

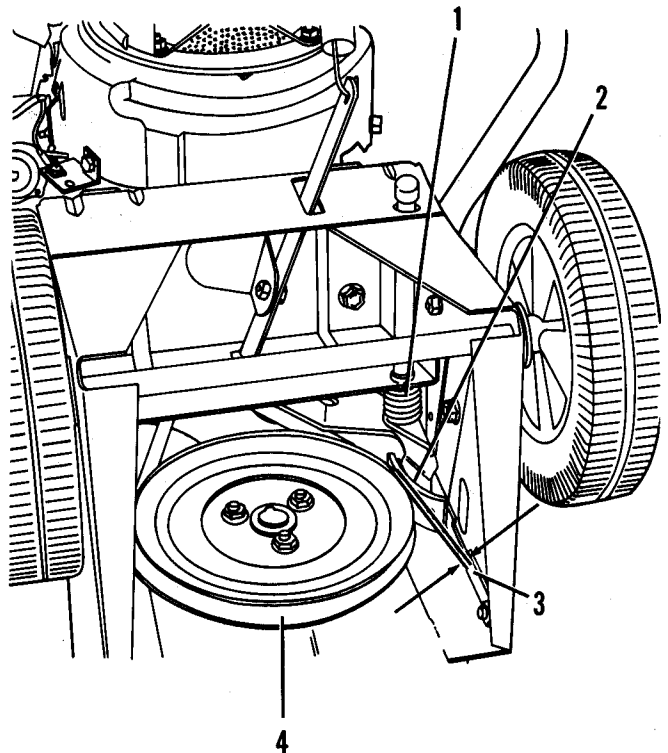


**CAUTION:** When unit is tipped up onto housing remove enough fuel so that no spillage will occur.

To check and/or adjust impeller brake, tip unit forward onto auger/impeller housing. When attachment clutch is disengaged (bail released), brake shoe must contact belt. Measure distance between impeller brake shoe and belt with attachment clutch engaged. (Bail against handlebar). Refer to Figure 11.

If impeller brake shoe is not 1/16 to 1/8 inch from belt, release bail, remove belt cover, loosen attachment idler nut, reposition idler to compensate for belt length, and tighten nut. Adjust attachment clutch per instructions below. If proper brake adjustment cannot be obtained, see your Ariens Dealer.

Adjust attachment clutch cable with clutch disengaged (Bail dropped away from handlebar). Pull clutch chain taut and connect to spring. Spring should extend approximately 3/8 inch when clutch is engaged (Bail against handlebar). When bail is released, clutch arm should fall to its maximum down position with cable slack.



1. Spring Extension - 3/8"
2. Brake Shoe
3. 1/16 to 1/8" Between Shoe and Belt
4. Attachment Drive Belt

Figure 11. Attachment Clutch and Impeller Brake

# Storage



**WARNING:** Never store Sno-Thro in an enclosed area where fuel fumes may reach flame, sparks, pilot lights or an ignited object. Drain fuel outdoors away from any ignition source. Use only approved fuel container.

Your authorized Ariens Dealer is trained and equipped to service your Sno-Thro. A periodic check-up by your dealer will help reduce your maintenance costs.

Inspect Sno-Thro for visible signs of wear, breakage or damage. Order any parts required and make necessary repairs to avoid delays when beginning use again.

Clean unit thoroughly. Touch up all unpainted areas to avoid rust and store in a cool, dry protected place.

## Engine

When storing Sno-Thro for an extended period refer to Engine Manufacturer's Instruction Manual.

## User Service Components

**NOTE:** For engine lubrication and parts refer to engine instructions manual supplied with unit. Contact your Ariens Dealer or authorized engine manufacturer's service center.

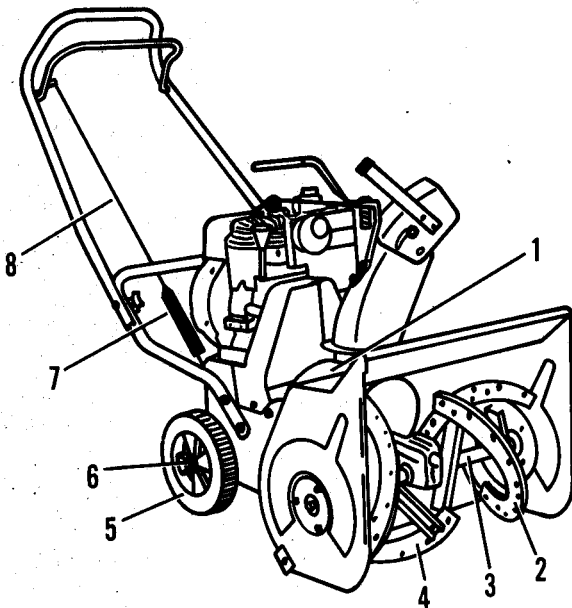
Publications are available for Sno-Thro owners who wish to perform some of their own maintenance and service operations. Should a complete parts and/or repair manual (less engine) be required order under the following

part numbers. For engine parts list and repair instructions, contact engine manufacturer's dealer.

**Parts Manual**      **Part No. PM-32-84**

**Repair Manual**      **Part No. RM-32-84**

**Mail Request to:**      **Ariens Service**  
655 West Ryan Street  
Brillion, WI 54110-1098



1. Attachment Drive Belt
2. Auger Segment
3. Shear Bolt
4. Auger Rubber
5. Wheel
6. Wheel Snap Nut
7. Spring and Boot
8. Handle Bar Knob
9. Clutch Wire

**Figure 12: Component Locations**

User service components are illustrated on this page and are described in the text of this manual. These components are most commonly used for consumer repair and can be ordered

thru your Ariens Dealer. When ordering parts always include the model and serial number of your unit to assure prompt service.

# Specifications

<b>Model</b>	<b>ST 2 + 2</b>
<b>Engine Displacement</b>	<b>9.05 cu. inches</b>
<b>Engine R.P.M.</b>	<b>3600</b>
<b>Number of Cycles</b>	<b>4</b>
<b>Recoil Start</b>	<b>Standard (Elect. Start - Opt.)</b>
<b>Gas Tank Capacity</b>	<b>1 Qt. (0.9463 Liters)</b>
<b>Clearing Width</b>	<b>20" (50.8 cm)</b>
<b>Number of Stages</b>	<b>2</b>
<b>Auger Clutch</b>	<b>Yes</b>
<b>Auger Brake</b>	<b>Yes</b>
<b>Max Throwing Distance</b>	<b>25' (7.6 M)</b>
<b>Min Throwing Distance</b>	<b>3' (.9 M)</b>
<b>Chute Rotation Angle</b>	<b>220°</b>
<b>Auger R.P.M.</b>	<b>100</b>
<b>Wheel Size</b>	<b>8" x 1-3/4"</b>
<b>Folding Handles</b>	<b>Yes</b>
<b>Handlebar Height Adjustable</b>	<b>Yes</b>
<b>Electric Start Option (110V)</b>	<b>Yes</b>
<b>Headlight Option</b>	<b>Yes</b>
<b>Tiller Attachment Available</b>	<b>Yes</b>
<b>Dimensions:</b> Length	<b>49" (124.4 cm)</b>
Height	<b>39" (99 cm)</b>
Width	<b>20¾" (52.7 cm)</b>
<b>Shipping Weight</b>	<b>105 lbs. (47.62 kg)</b>

## Attachments

**832004 (RT20) 20" Rotary Tiller Attachment**

## Accessories

710997	Slicer Bar
722006	120 Volt Starter
722008	120 Volt Starter (Canada)
724039	Headlight and Alternator Kit
702801	Lawn Edger (Use with 832004)