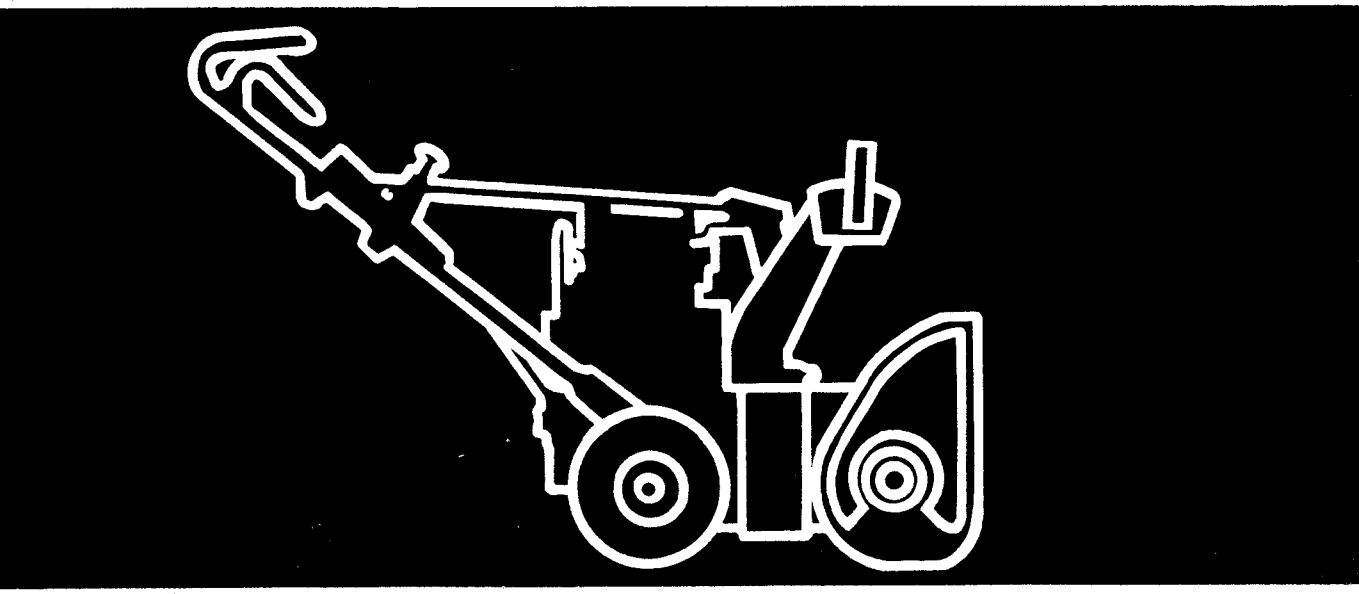
Ariens® 932 Series

Sno-Thro®

Owner's Manual



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 unsafe conditions 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.

A Message to Ariens Customers . . .

Welcome to the world of Ariens equipment. We are pleased that you have purchased the best equipment available. The care you give your Ariens equipment will determine the satisfaction and service life you will obtain from it. Use this manual as your guide. By observing the instructions and suggestions in this manual, 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 service are required, they can be obtained from an Ariens dealer or from an authorized engine manufacturer's service center. If service is required, be prepared to supply the service person with the Model and Serial Number of the equipment, 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.

Model

Model 932019 (ST 3520)
3.5 HP w/20" Attachment
Serial No. 000101 and up

Model 932020 (ST 524)
5 HP w/24" Attachment
Serial No. 000101 and up

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

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.

Safety Precautions

Training

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

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

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

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

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

Preparation

Before first snowfall of the season clearly mark location of all obstacles (such as driveway markers, water or gas shut off and etc.) so that they can be avoided when throwing snow.

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, gloves and rubber footwear which will improve footing on slippery surfaces.

Wear eye protection such as safety goggles to protect eyes from objects that may be thrown from machine.

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 (RED) fuel container.

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

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Safety Precautions (Continued)

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 spilled fuel before starting engine.

Adjust auger/impeller housing height to clear gravel or chushed rock surfaces.

NEVER attempt to make any adjustments to unit while motor is running (except where specifically recommended).

Operation

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

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.

Open doors if engine is run in garage, exhaust fumes are dangerious. 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.

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

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

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 unit 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, adjustment, 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.

After striking a foreign object, stop engine, remove switch key and wait for moving parts to stop before leaving operator's position. Thoroughly inspect unit 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, such as disengagine power to attachment, stopping engine and removing 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 extended periods.

Safety Precautions (Continued)

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.

Maintain or replace safety and instruction decals as necessary.

Decals

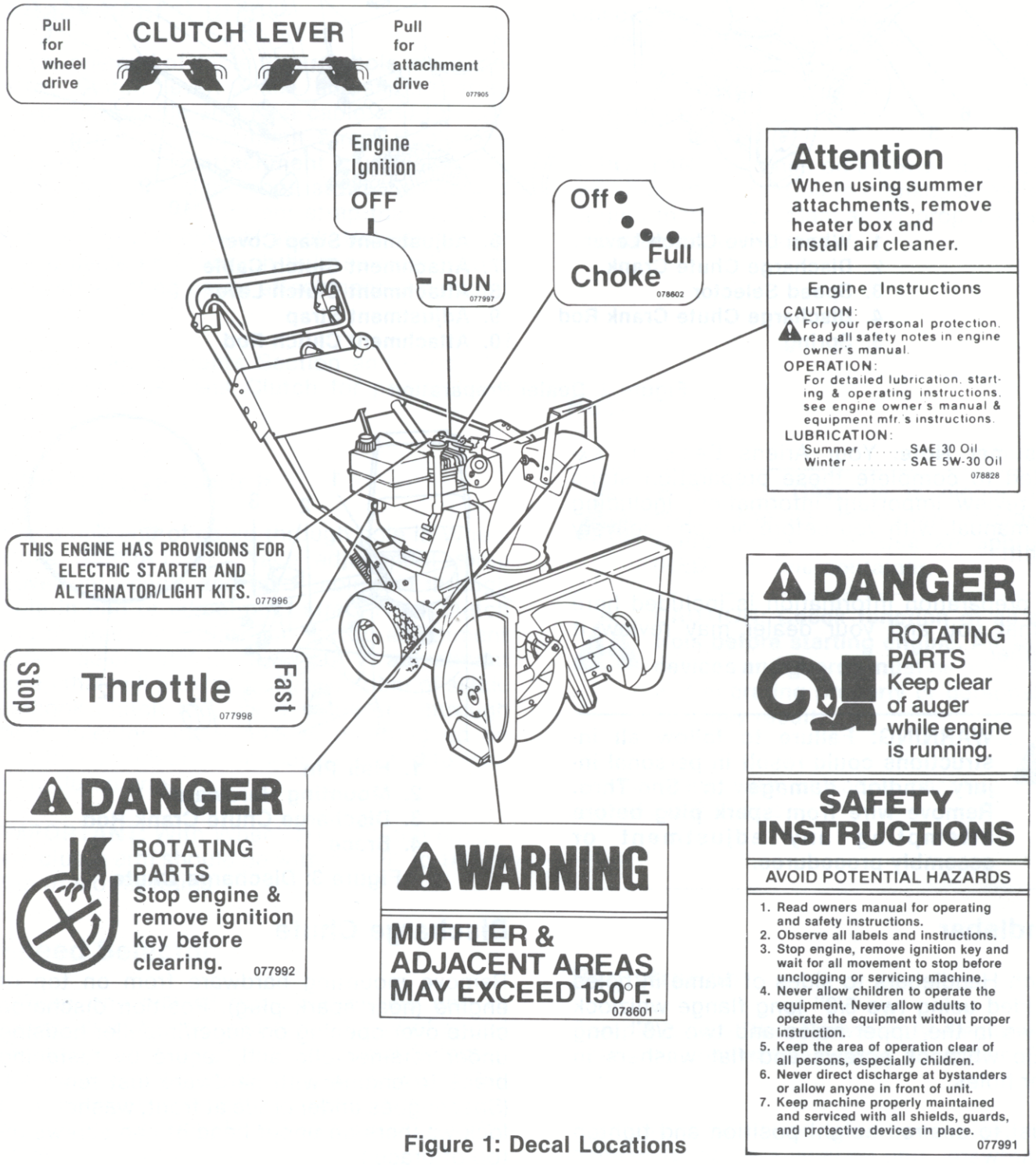
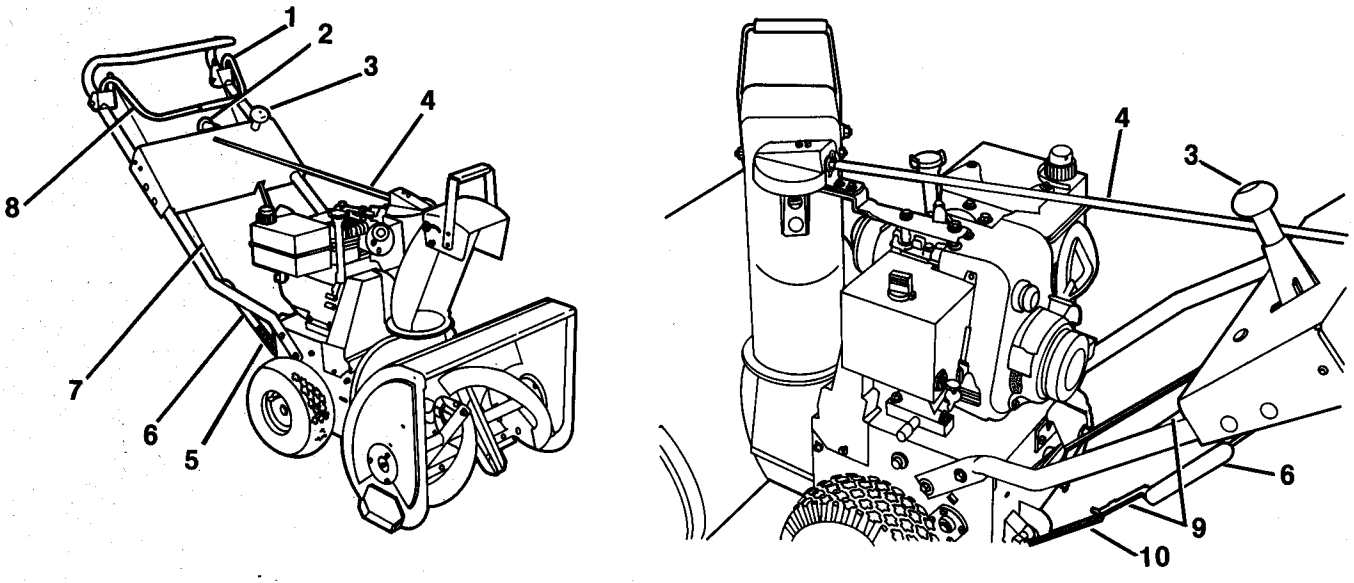


Figure 1: Decal Locations

Dealer Preparation For Operation



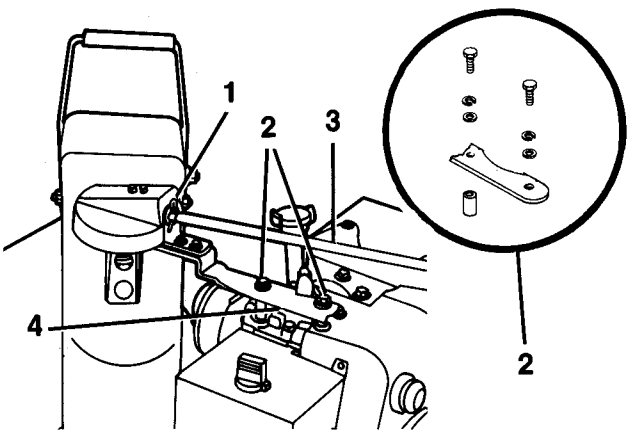
1. Wheel Drive Clutch Lever
2. Discharge Chute Crank
3. Speed Selector
4. Discharge Chute Crank Rod
5. Spring
6. Adjustment Strap Cover
7. Attachment Clutch Cable
8. Attachment Clutch Lever
9. Adjustment Strap
10. Attachment Clutch Rod

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 unit.

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.



1. Hair Pin
2. Mounting Hardware
3. Discharge Chute Crank Rod
4. Brace

Figure 3: Discharge Chute

Handlebar

Attach Handlebars to sides of frame in holes provided using two 5/8" long flange whizlock screws in the upper holes and two 5/8" long flange whizlock screws and flat washers in lower holes.

Adjust to desired height position and tighten all hardware.

Discharge Chute

Remove mounting hardware from on top of engine (near spark plug). Position discharge chute over opening on auger/impeller housing under retainer clip and secure by fastening brace to engine with hardware just removed. (Spacer goes under brace at front, washers and lock washers go under head of cap screws on top of brace.)

Dealer Preparation For Operation (Continued)

Discharge Chute Crank

Place Discharge Chute Crank rod through grommet in handlebar panel and into gear on discharge chute. (Rod has two holes, select hole that provides best operator comfort and secure with hair pin.)

Attachment Clutch

Place one end of cable through hole in Attachment Clutch lever. Place adjustment strap cover onto cable and feed cable end through hole in end of adjustment strap. Hook long loop of spring to attachment clutch arm and short loop to adjustment strap. Select and mark a hole in adjustment strap that will provide a slight amount of slack. Unhook spring, place cable end through hole selected above and while lifting up on attachment clutch arm connect spring.

Refer to Adjustments Section and check Attachment Brake and Clutch for proper function.

Wheel Drive Clutch

Place one end of cable through hole in Wheel Drive Clutch lever. Place adjustment strap cover onto cable and feed cable end through hole in end of adjustment strap. Hook clutch rod on traction clutch arm and to adjustment strap. Select and mark a hole in adjustment strap that will provide a slight amount of slack. Unhook clutch rod, place cable end through hole selected above and while lifting up on traction clutch arm connect clutch rod to traction clutch arm.

IMPORTANT: With Wheel Drive Clutch engaged, clutch arm should be within 1/16" to 1/8" of top of slot in frame.

Speed Selector

Thread one 5/16-18 nut on threaded end of Speed Selector rod and place Z end of speed selector rod through hole in Speed Selector. With bracket pushed all the way down, install threaded end of rod into rod adaptor and install second nut on rod. Place Speed Selector in 4th speed and tighten nuts.

Auger Gear Case

Check grease level in auger gear case (refer to Lubrication and Maintenance Section of this manual.

Tire Pressure

Check tire pressure and adjust to 12 PSI for operation (20 PSI if tire chains are installed).

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.

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 2 quarts.

Registration

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

Warranty is registered under model and serial number found on a label on unit.

Dealer Preparation For Operation (Continued)

Delivery

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

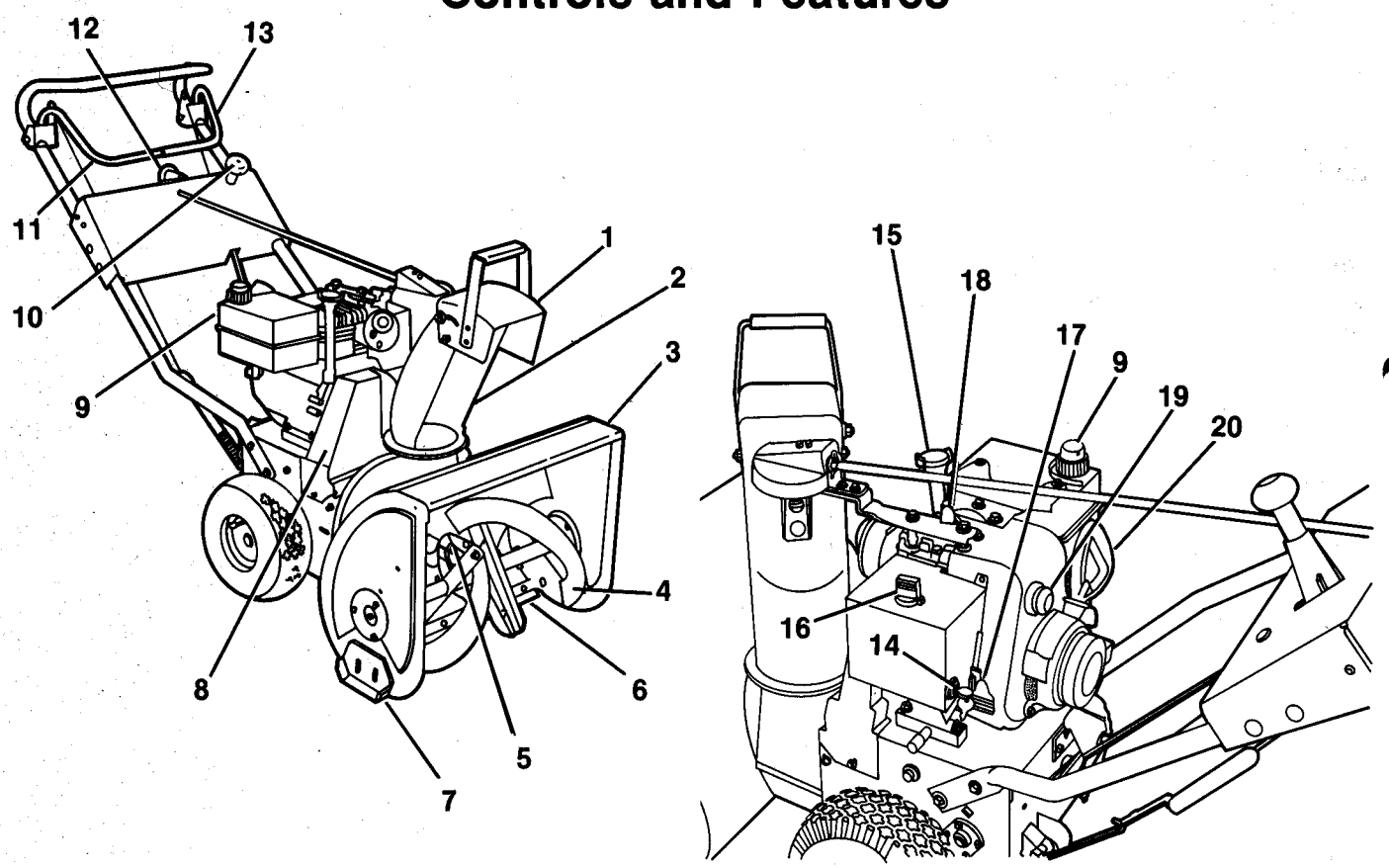
Explain recommended lubrication and maintenance of unit.

Advise customer on adjustments, demonstrate how to mount and dismount attachment.

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 (1) of this manual.

Give customer his Owner's Manual and advise him to thoroughly read and understand Sno-Thro Owner's manuals.

Controls and Features



1. Chute Deflector
2. Discharge Chute
3. Auger/Impeller Housing
4. Auger
5. Impeller
6. Scraper Blade
7. Runner(s)
8. Belt Guard
9. Fuel Tank and Cap
10. Speed Selector
11. Attachment Clutch Lever
12. Chute Crank
13. Wheel Drive Clutch Lever
14. Key Switch
15. Oil Fill and Dipstick
16. Choke
17. Throttle
18. Spark Plug and Wire
19. Primer Bulb
20. Rewind Starter

Figure 4: Control and Feature Locations

Operation

WARNING: Wear adequate winter outer garments and footwear which will improve footing on slippery surfaces. Wear eye protection such as safety goggles to protect eyes from objects that may be thrown from machine. 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 is full of oil using dipstick, see Lubrication and Maintenance Section to add or change.

Fuel

WARNING: Gasoline is highly flammable and must be handled with care. Never fill tank when 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.

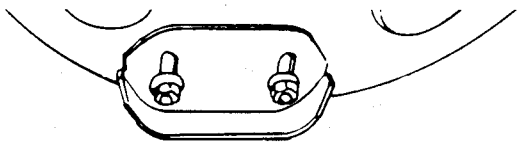
NOTE: To prevent foreign particles from entering tank while filling; wipe snow, dust, dirt and debris from around cap before removing.

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.

Runners

CAUTION: Adjust auger/impeller housing height to clear gravel or crushed rock surfaces.

Runners should be adjusted as conditions require. Raising or lowering runners controls distance scraper blade is held above surface being cleared.



When operating machine on gravel surface, lower runners so that housing will not pick up gravel. On concrete, blacktopped or packed down snow surfaces, raise runners so that scraper blade scrapes clean. To reduce tendency of housing to ride up over heavy wet or hard packed snow, remove runners and reinstall with their narrow edge down.

Position Sno-Thro on a flat level surface. Adjust runners by inserting a spacer of desired thickness under center of scraper blade, loosen hardware, slide runners to flat surface and tighten hardware.

NOTE: Above method keeps housing level by adjusting runners equally. Uneven runners make machine difficult to steer and results in uneven clearing.

Chute Deflector

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

NOTE: Tighten locking hardware on chute deflector if it does not stay in set position.

Operation (Continued)

Discharge Chute Crank

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

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.

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

Direct snow away from area to be cleared and with direction of wind whenever possible. Crank rotates chute 220 degrees.

If discharge chute does not stay in position while operating, tighten nut on carriage bolt at pivot point to increase tension on spring.

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.

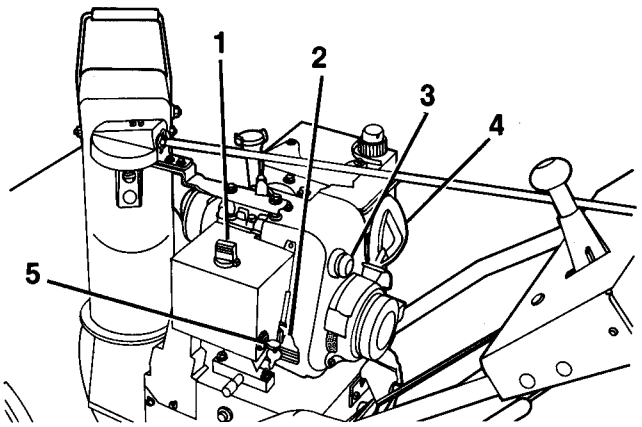
NOTE: Try out each control without running engine to see how they work and what they do.

Engine Ignition

WARNING: 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.

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.



1. **Choke**
2. **Throttle**
3. **Primer Bulb**
4. **Rewind Starter**
5. **Key Switch**

Figure 5: Engine Controls

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.

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 are below -15 degrees Fahrenheit, additional priming may be needed.

Operation (Continued)

Rewind Starter

WARNING: To prevent discharge toward operators' starting position, always turn discharge chute straight ahead for starting unit.

Stand to right of unit. 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.

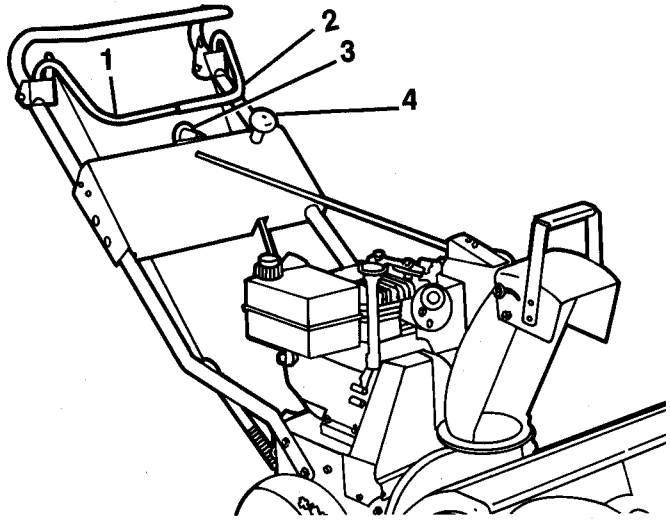
Speed Selector

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

CAUTION: Operate equipment only with good visibility and light.

Speed Selector controls units forward speed and reverse motion. Moving Speed Selector forward increases forward travel speed. Moving it to rear decreases forward motion and/or engages reverse motion.

IMPORTANT: Position Speed Selector in notch of desired speed. Forward speed can be changed without clutching. DO NOT change motion from forward to reverse with clutch engaged.



1. **Attachment Clutch Lever**
2. **Wheel Drive Clutch Lever**
3. **Discharge Chute Crank**
4. **Speed Selector**

Figure 6: Operating Components

NOTE: Low speed (1) is recommended for removing deep or hard packed snow.

Wheel Drive Clutch

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.

Pulling up on left hand Wheel Drive Clutch lever engages wheel drive for propelling unit. Releasing Wheel Drive Clutch lever stops forward or reverse movement.

CAUTION: Disengage power to auger/impeller when unit is being transported or is not in use. DO NOT operate unit at high transport speeds on slippery surfaces. Use care when backing.

Operation (Continued)

NOTE: When transporting unit to or from area to be cleared, press down on handlebars enough to raise front of Sno-Thro slightly off surface and engage Wheel Drive Clutch without engaging Attachment Drive Clutch.

Attachment Drive Clutch

CAUTION: Stop engine 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.

Pulling up on right hand Attachment Drive Clutch lever engages attachment and releasing it disengages attachment.

NOTE: Attachment clutch should be engaged before wheel drive clutch when attempting to throw snow.

To clear an area, run Sno-Thro in an overlapping series of paths. For large areas start in middle and throw 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 Drive 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.

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

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 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 over fill. Level must not exceed full (F) mark or engine damage may result.

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.

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

Engine Cooling

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.

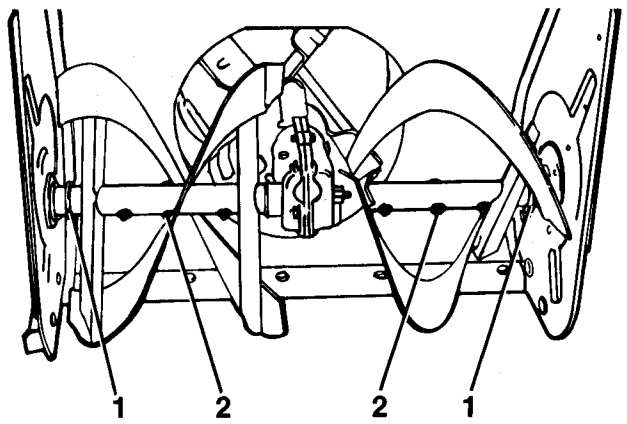
Every 100 operating hours or yearly (more often if conditions require) remove cooling shrouds and clean cooling fins. Also clean external surfaces of engine of dust, dirt and oil deposits which can contribute to improper cooling.

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

Shear Bolt Replacement

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, braking shear bolt which secures auger to shaft. This allows auger to turn freely on shaft preventing damage to gear case.



1. Washer
2. Shear Bolts and Nuts

Figure 7: Shear Bolts

Lubrication and Maintenance (Continued)

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

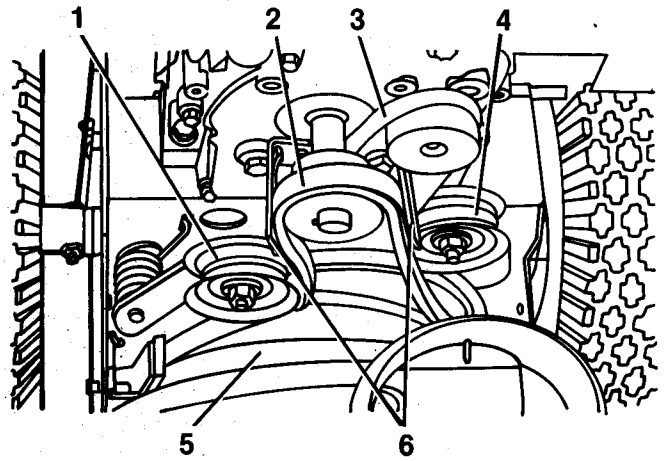
IMPORTANT: After breaking a shear bolt, check unit for damage and repair before operating unit.

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.



1. Attachment Belt Idler
2. Attachment Drive Belt
3. Traction Drive Belt
4. Traction Belt Idler
5. Attachment Drive Pulley
6. Belt Finger

Figure 8: Drive Belts

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 attachment belt from engine pulley (it may be necessary to turn engine pulley by pulling on rewind starter rope).

Remove top cap screws and loosen lower cap screws holding attachment to frame.

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

Remove attachment drive belt from pulley (hold brake away from belt).

Place attachment drive belt on auger/impeller pulley and while holding brake out of the way, tip unit together. Assemble unit in reverse order.

WARNING: Belt fingers must be between 1/16" to 1/8" from belt with attachment clutch engaged or belt grabbing may occur causing impeller to rotate while attachment clutch is disengaged.

NOTE: Make sure pulleys align. If alignment is necessary, loosen attachment pulley set screws, reposition pulley and tighten set screws.

WARNING: When Attachment clutch is engaged, impeller brake disengages. If brake is not 1/16" to 1/8" from belt when clutch is engaged, or does not contact belt when clutch is disengaged, adjust idler per instructions in Adjustments Section of this manual.

Lubrication and Maintenance (Continued)

Traction Drive Belt

NOTE: Housing and frame must be tipped apart to change traction drive belt. (See Attachment Drive Belt above).

Pull idler away from belt and remove belt from idler pulley, engine and driven pulley (it may be necessary to turn engine pulley using rewind starter).

Replace traction drive belt in reverse order making sure pulleys align. If alignment is necessary, loosen engine pulley set screws, reposition pulley and tighten set screws.

Check alignment of attachment drive pulley and align per instructions in Attachment Drive Belt above if necessary.

Friction Wheel

To replace friction wheel, tip unit up on housing on a flat level surface.

Remove bottom cover by loosening two cap screws at front on frame sides and removing two cap screws at rear of frame.

Remove bearing flange on right hand side of frame, and hairpin cotter from traction clutch rod. Pull rod from clutch fork arm and tip up and out of way.

Slide friction wheel assembly and hex shaft to right until left end of hex shaft comes free of left bearing. Slip assembly back to left and pull forward out of frame.

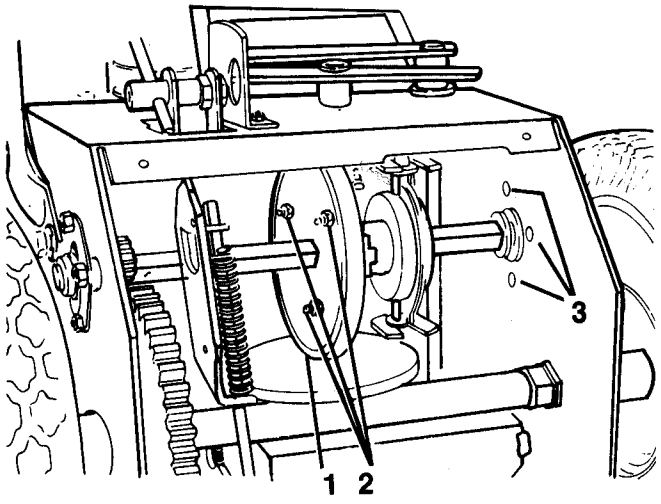
Remove three cap screws securing friction wheel to hub and remove friction wheel.

Secure new friction wheel onto hub with three cap screws and torque cap screws to 8-10 foot pounds.

Reassemble in reverse order.

NOTE: Position friction wheel hub in forks. Be sure washers are in place on bearing flange pins. Slide hex shaft to left and into left bearing with flat washers in position. Pinion gear must mesh with large gear.

Adjust traction drive clutch per instructions in Adjustment Section.



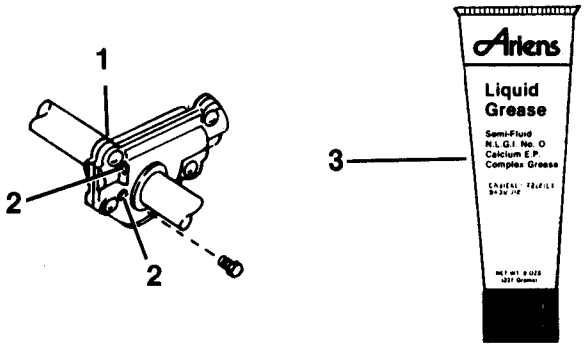
1. **Friction Wheel**
2. **Cap Screw**
3. **Bearing Flange Screws**

Figure 9: Friction Wheel

Auger Gear Case

Check auger gear case lubricant level every 25 hours of operation. Fill with Ariens Liquid Grease (Part No. 000072).

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 gear case).



1. **Auger Gear Case**
2. **Grease Fill**
3. **Ariens Liquid Grease**

Figure 10 : Auger Gear Case

Lubrication and Maintenance (Continued)

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.

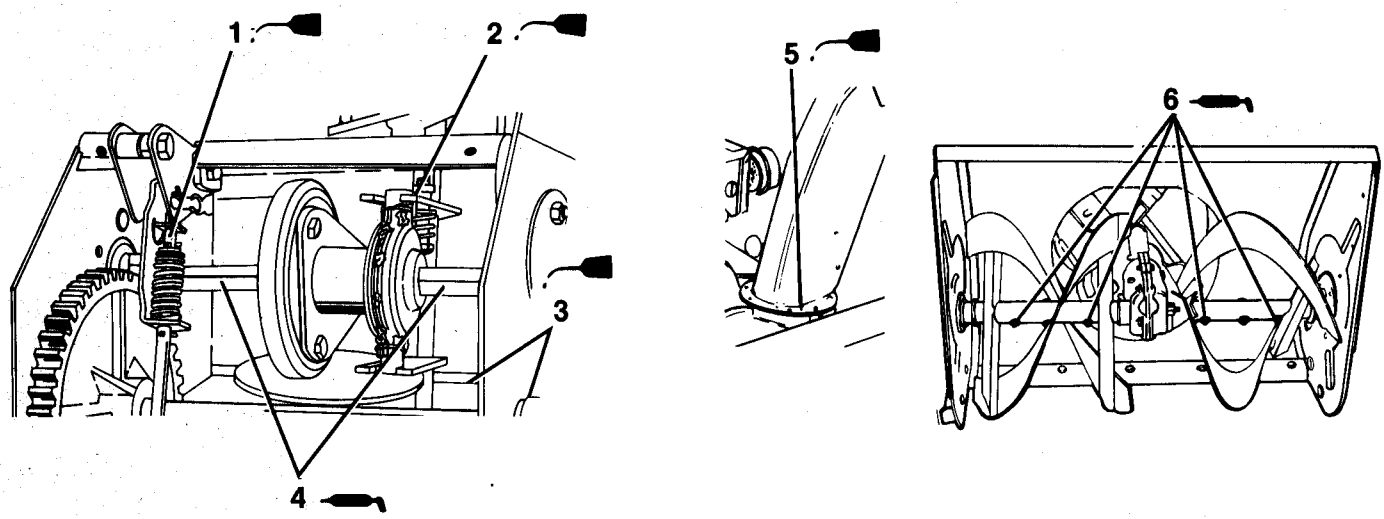
IMPORTANT: Wipe each fitting clean before and after lubrication.

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

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

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

NOTE: To grease one auger shaft at a time, remove shear bolt nut and shear bolt. Turn auger on shaft while applying grease through zerk fitting. Replace shear bolt per instructions in Shear Bolt Replacement.



1. **Traction Rod**
2. **Speed Selector Linkage**
3. **Bushing**
4. **Hex Shaft**
5. **Discharge Chute Base**
6. **Auger and Shaft**

Figure 11: Oil and Grease Locations

Adjustments

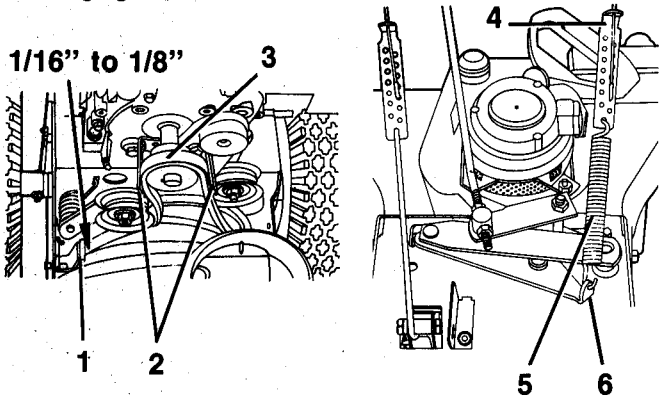
Ariens Company recommends that you have adjustments made by your Ariens dealer. He has tools and the know-how to properly perform adjustments which may be required to keep your Sno-Thro operating at peak efficiency. Should you decide to make the following adjustments on your Sno-Thro yourself, Ariens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

WARNING: 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.

Attachment Belt

To check and/or adjust belt and impeller brake, tip unit forward onto auger/impeller housing. Remove bottom cover by removing rear and loosening front cap screws. Measure distance between brake shoe and belt with attachment clutch engaged. When attachment clutch is disengaged, brake must contact belt.



1. Brake Shoe
2. Belt Finger
3. Attachment Drive Belt
4. Adjustment Strap
5. Spring
6. Attachment Clutch Arm

Figure 12: Attachment Clutch and Impeller Brake

If brake shoe is not 1/16 to 1/8 inch from belt, disengage clutch, 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.

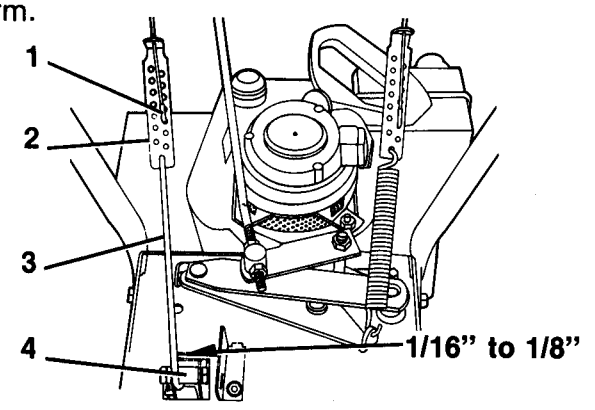
WARNING: Belt fingers must be between 1/16" to 1/8" from belt with attachment clutch engaged or belt grabbing may occur causing impeller to rotate when attachment clutch is disengaged. There MUST BE a slight amount of slack in cable or impeller may rotate while attachment clutch is disengaged.

Select and mark a hole in adjustment strap that will provide a slight amount of slack in cable. Unhook spring, place cable end through hole selected above and while lifting up on attachment clutch arm connect spring.

Wheel Drive Clutch

Adjust wheel drive clutch to compensate for wear of friction wheel when slippage occurs.

To adjust, select and mark a hole in adjustment strap that will provide a slight amount of slack. Unhook hook rod, place cable end through hole selected above and while lifting up on traction clutch arm connect hook rod to traction clutch arm.



1. Cable End
2. Adjustment Strap
3. Hook Rod
4. Traction Clutch Arm

Figure 13: Wheel Drive Clutch Adjustment

IMPORTANT: With Wheel Drive Clutch engaged, clutch arm should be within 1/16" to 1/8" of top of slot in frame.

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.

Lubricate unit according to instructions in Lubrication and Maintenance Section of this manual.

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

Remove weight from wheels by putting blocks under frame or axle. Unit can be stored by tipping up on auger/impeller housing.

Engine

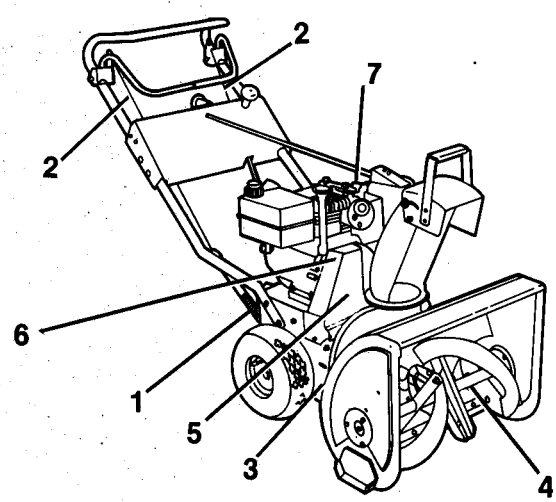
When storing Sno-Thro for an extended period, refer to Engine Manufacturer's Instruction Manual.

User Service Components

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 be desired order under the following part numbers.

Parts Manual	**Part No. PM-32**
Repair Manual	**Part No. RM-932**
Mail Requests to:	**Ariens Service** **655 West Ryan Street** **Brillion, WI 54110-1098**

Components illustrated and described in this manual are most commonly used for consumer service 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.



1. **Clutch Spring**
2. **Clutch Cable**
3. **Friction Disc**
4. **Shear Bolt and Nut**
5. **Auger/Impeller Drive Belt**
6. **Traction Drive Belt**
7. **Key Set**

Figure 14: Component Locations

Specifications

Discharge Distance	3 to 35'
Chute Turning Angle	220 Degrees
Dimensions -	
Impeller diameter	10"
Auger Diameter	11"

Attachments

832001 24" Rotary Brush

832004 Tiller

Accessories

702808 Edger (used with 832004)

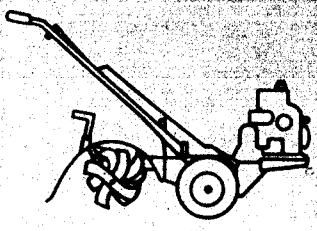
710997 Slicer Bar

722006 120 Volt Starter Kit

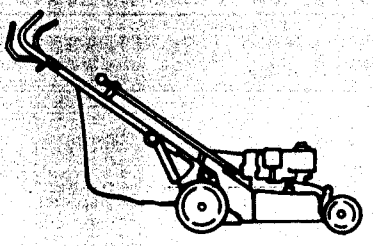
732002 Tire Chains

724041 Headlight and Alternator

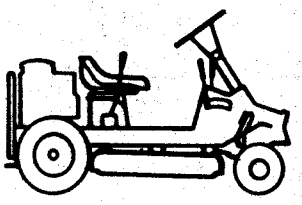
Ask your dealer for information about these other fine Ariens products:



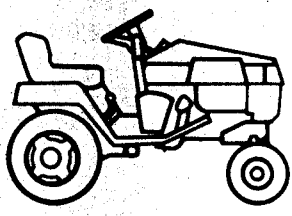
Garden Tillers



Walk Behind Mowers



Riding Mowers



Lawn & Garden Tractors

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