

Ariens®

Sno-Thro®

Owner/Operator Manual

938
SERIES

MODEL
011 - SS522



Ariens®

Thank You

Ariens outdoor power equipment is engineered to be the best from start to finish. We have one fundamental belief: Value is not measured solely by price, value is a durable, easy-to-use machine that performs season after season.

This manual and the engine manual are your guides. By following the instructions and procedures in them, your Ariens equipment will serve you well for many years. The care you give this unit will determine your overall satisfaction and its service life.

Safety is up to you. Obey all correct operating practices and procedures for this unit. Prevent serious injury or death.

Three reasons safety is important:

1. Accidents can disable and kill.
2. Accidents can be avoided.
3. Accidents always cost.

Ariens proudly offers one of the finest warranties in the business. Contact your LESCO Representative with any questions, comments or orders. Ariens equipment for the world is made in the USA.



**Crafted in
America
Since 1933**

YOUR SATISFACTION IS IMPORTANT

Questions? Please follow these helpful steps:

1. Always Refer to Your Owner/Operator or Engine Manual First.

- a) Its detail will guide you through safe and proper operation and maintenance.
- b) It contains specifications on your model.
- c) If your questions are not answered in these manuals, go to step number two.

2. Contact Your LESCO Representative.

- a) Our dealers will be happy to supply any service or advice required to keep your unit operating at peak efficiency.
- b) A factory trained staff is available to support your equipment needs. They stock genuine Ariens parts and lubricants manufactured with the same precision and skill as the original.
- c) If your questions are not resolved by the support staff, contact Technical Service at 1-800-321-5325.
- d) When contacting your LESCO Representative supply your model and serial numbers.

WARNING

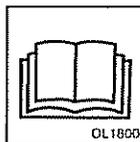
The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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SNO-THRO MODEL

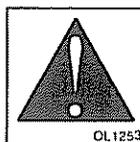
Model Number 938011
SS522, 5 HP 22"

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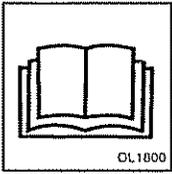
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A SECTION 1: INTRODUCTION



THE MANUAL

Before operation of unit, carefully and completely read your manuals. The contents will provide you with an understanding of safety instructions and controls during normal operation and maintenance.

All reference to left, right, front, or rear are given from operator standing in operation position and facing the direction of forward travel.



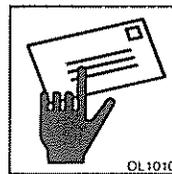
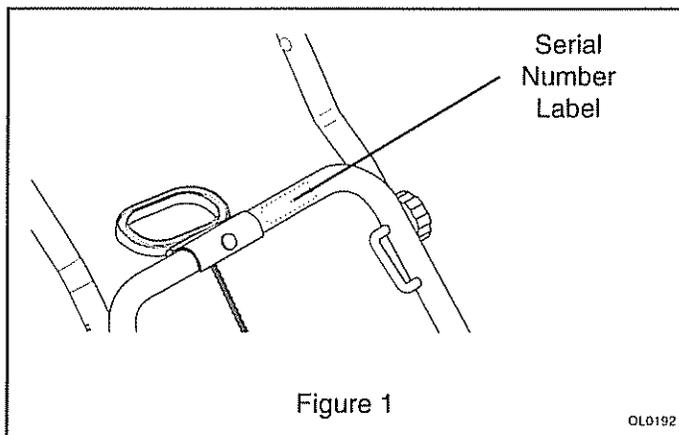
SERVICE AND REPLACEMENT PARTS

When ordering replacement parts or making service inquiries, know the Model and Serial numbers of your unit and engine.

Numbers are printed on a serial number label, located on the frame of your unit (Figure 1).

- Record Unit Model and Serial numbers here

- Record Engine Model and Serial numbers here



PRODUCT REGISTRATION

A warranty registration card must be filled out by the LESCO Representative, signed, and returned at time of sale. This form activates the warranty.

The replacement of any part on this vehicle with anything other than an Ariens authorized replacement part may adversely affect the performance, durability, or safety of this unit and may void the warranty. Claims meeting requirements during limited warranty period will be honored.

To guarantee full warranty service, make sure your registration card has been returned to Ariens Company.

DISCLAIMER

Ariens Company is hereinafter referred to as Ariens. Ariens reserves the right to discontinue, make changes to, and add improvements upon its products at any time without public notice or obligation. Ariens disclaims liability for any claims or damages, whether regarding property, personal injury or death arising out of the use of unauthorized replacement parts. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may not be identified as either standard or optional. Illustrations may not be applicable to your unit.

Customer Note: Your LESCO Representative has been provided complete setup and preparation instructions which must be completed prior to you taking delivery of this unit. The dealer is required to review important information in this manual with you before or upon delivery of the unit or attachment.

A SECTION 2: SAFETY



SAFETY ALERT SYMBOL

This is a safety alert symbol. It means:

- ATTENTION!
- YOUR SAFETY IS INVOLVED!

When you see this symbol:

- BECOME ALERT!
- OBEY ITS MESSAGE!

SIGNAL WORDS

The safety alert symbol is used with the signal words DANGER, WARNING and CAUTION and colors to alert you to safety messages

They are used in safety decals on the unit and with proper operation and procedures in this manual. They alert you to the existence and relative degree of hazards.

Understand the safety message. It contains important information about personal safety on or near the unit.

DANGER

IMMINENTLY HAZARDOUS SITUATION! If not avoided, WILL RESULT in death or serious injury.

WARNING

POTENTIALLY HAZARDOUS SITUATION! If not avoided, COULD RESULT in death or serious injury.

CAUTION

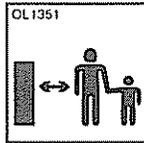
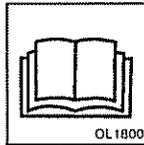
POTENTIALLY HAZARDOUS SITUATION! If not avoided, MAY RESULT in minor or moderate injury. It may also be used to alert against unsafe practices.

Notations

NOTE: General reference information for proper operation and maintenance practices.

IMPORTANT: Specific procedures or information required to prevent damage to unit or attachment.

WARNING



IMPROPER OPERATION of this unit can result in death or serious injury. Before starting engine, follow these three steps:

1. Read and understand this manual and all safety decals on unit or attachment.
2. Clear area of children and people.
3. Clear area of objects that may be thrown.

PRACTICES AND LAWS

Practice usual and customary safe working precautions, for the benefit of yourself and others. Understand and follow all safety messages. Be alert to unsafe conditions and the possibility of minor, moderate, or serious injury or death. Learn applicable rules and laws in your area.

REQUIRED OPERATOR TRAINING

Original purchaser of this unit was instructed by the seller on safe and proper operation. If unit is to be used by someone other than original purchaser; loaned, rented or sold, ALWAYS provide this manual and any needed safety training before operation.

SAFETY DECALS AND LOCATIONS

ALWAYS replace missing or damaged Safety Decals.
Refer to Figure 2 for Safety Decal locations.

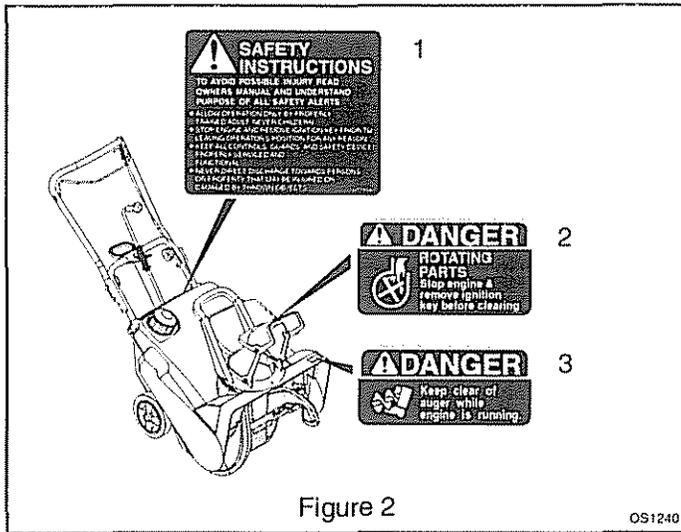


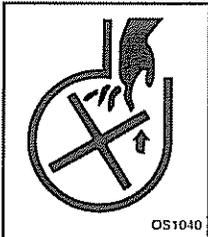
Figure 2

OS1240

1. SAFETY INSTRUCTIONS

To avoid possible injury, read owner's manual and understand purpose of all safety alerts

- Allow operation only by properly trained adult, never children.
- Stop engine and remove ignition key prior to leaving operator's position for any reason.
- Keep all controls, guards and safety devices properly serviced and functional.
- Never direct discharge towards persons or property that may be damaged by thrown objects.



OS1040

2. DANGER Rotating Parts!

Stop engine and remove key before clearing.

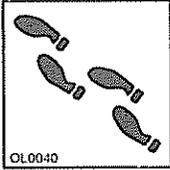


OS1050

3. DANGER!

Keep clear of auger while engine is running.

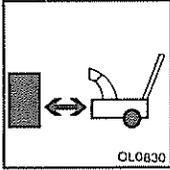
UNIT SAFETY



Walk Around Inspection

Complete a walk around inspection of unit and work area to understand:

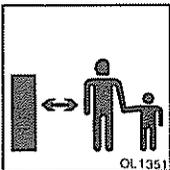
- Work area
- Your unit
- All safety decals



Clearances

ALWAYS check overhead and side clearances carefully before operation.

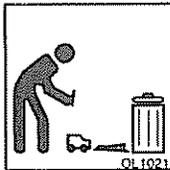
ALWAYS be aware of traffic when operating along streets or curbs.



Work Area

Keep children and people away.

Keep children out of work area and under watchful care of a responsible adult.



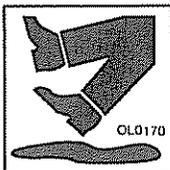
Clear Work Area

Keep area of operation clear of all toys, pets, and debris. Thrown objects can cause injury.



Avoid Falls

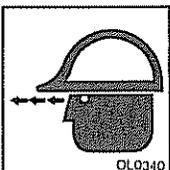
Check for weak spots on dock, ramps or floors. Avoid uneven work areas and rough terrain. Stay alert for hidden hazards.



Slippery Surfaces

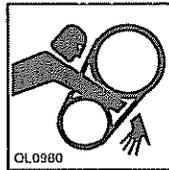
Avoid slippery surfaces. ALWAYS be sure of your footing, especially when operating in reverse.

Walk, never run during operation.



Visual Obstruction

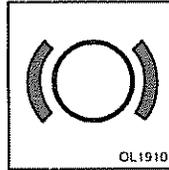
Dust, smoke, fog, etc can reduce vision and cause an accident. Operate unit only when there is good visibility and light.



Safety Guards and Devices

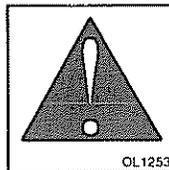
ALWAYS keep protective structures, guards, and panels in good repair, in place and securely fastened.

NEVER modify or remove safety devices.



Clutches and Brakes

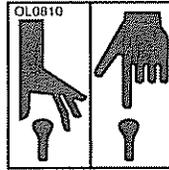
Check clutch and brake operation frequently. Adjust and service as required.



Electric Starter

Use only approved extension cords and receptacles when starting units equipped with Electric Starter. DO NOT connect electric starter cord to any wiring system that is not a three wire grounded system.

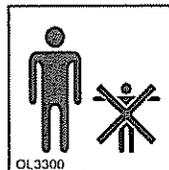
OPERATIONAL SAFETY



Rules of Operation

Understand:

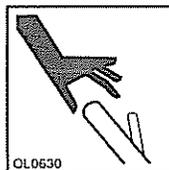
- How to operate all controls
- The functions of all controls
- How to STOP in an Emergency



Child Safety

NEVER allow children to operate, play on or near unit.

Be alert and shut off unit if children enter area.



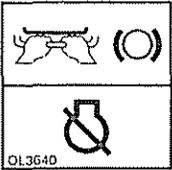
Pre-Start

Before starting engine, disengage all clutches.



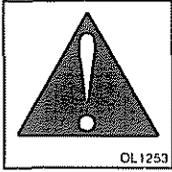
Speed Ranges

DO NOT operate at too fast a rate. DO NOT change engine governor settings or over speed engine. Slow down and turn corners slowly.



Transport

Disengage impeller and shut off engine when transporting unit



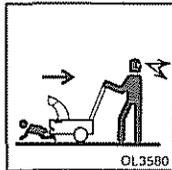
Ambient Temperature

ALWAYS allow unit and engine to adjust to outdoor temperatures before clearing snow



No Riders

Never carry passengers.



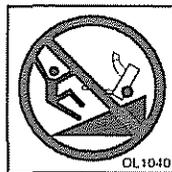
Reverse

DO NOT operate in reverse unless absolutely necessary ALWAYS backup slowly. ALWAYS look down and behind, before and while backing.



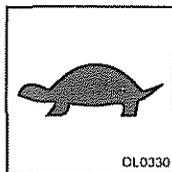
Avoid Tip over

Avoid uneven and rough terrain. DO NOT operate near drop offs, ditches, or embankments. Unit can suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.

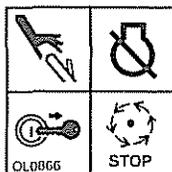


Hazardous Slopes

DO NOT operate on steep slopes. DO NOT clear snow across the face of slopes.

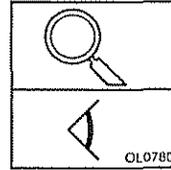


Keep all movement on slopes slow and gradual. DO NOT make sudden changes in speed or direction.



Shutoff

ALWAYS disengage attachment, stop unit and engine, remove key and allow moving parts to stop before leaving operator's position.



Abnormal Vibrations, Foreign Objects, Clogged Unit

Immediately shut off unit as above.

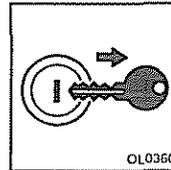
Check for any damage or loose parts and repair before restart.



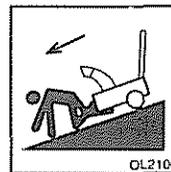
Parking

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

Never leave a running unit unattended. ALWAYS shut off engine before leaving unit.



ALWAYS remove key to prevent unauthorized use



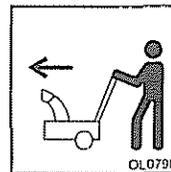
Unit Roll-Away

DO NOT park unit on a slope unless absolutely necessary. When parking on a slope always block the wheels.

PERSONAL SAFETY

Responsible Operators

- Only trained adults may operate unit
- Training includes actual operation



No Drugs

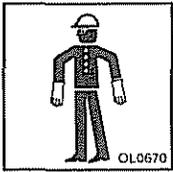
NEVER operate unit after or during the use of medication, drugs or alcohol. Safe operation requires your complete and unimpaired attention at all times.



No Alcohol

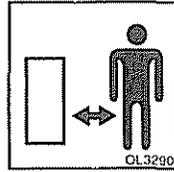
NEVER allow anyone to operate this unit when their alertness or coordination is impaired.





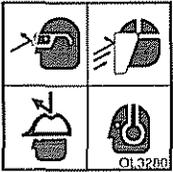
Safety Gear

DO NOT operate unit without wearing adequate winter outer garments. Wear adequate safety gear, protective gloves. Wear proper footwear to improve footing on slippery surfaces.



Safe Distances

Keep children and people away from unit during operation.

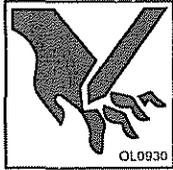


Protect eyes, face and head from objects that may be thrown from unit. Wear appropriate hearing protection.



Avoid Thrown Objects

Deflected materials can cause injury and property damage. DO NOT point discharge at anyone or discharge directly onto paved or gravel surfaces. Use extreme caution on gravel surfaces.



Avoid Sharp Edges

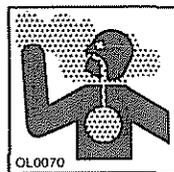
Sharp edges can cut. Movement of parts can cut off fingers or a hand.

Always stand clear of the discharge area when operating this unit.



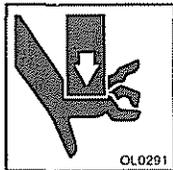
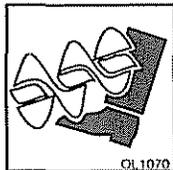
Avoid Rotating Parts

ALWAYS keep hands and feet away from all rotating parts during operation. Rotating parts can cut off body parts.



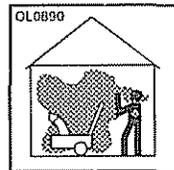
Avoid Exhaust Fumes

Fumes from engine exhaust can cause injury or death.



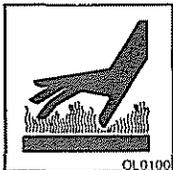
Avoid Pinch Points

ALWAYS keep hands away from all pinch points.



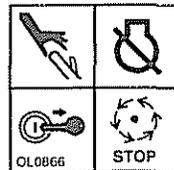
Ventilation

DO NOT run engine in an enclosed area. Always provide good ventilation and wait until hazard has been removed.



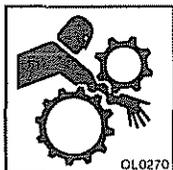
Avoid Hot Surfaces

DO NOT touch unit parts which might be hot from operation. Allow parts to cool before attempting to maintain, adjust or service.



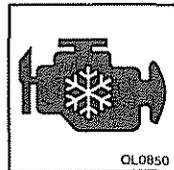
Prepare Unit

Before cleaning or making any inspections, repairs, etc.: disengage clutches, stop unit and engine, remove key, allow moving parts to stop.

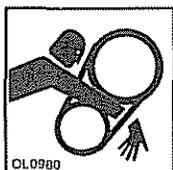


Avoid Entanglement

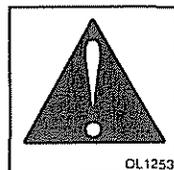
NEVER place your hands or any part of your body or clothing inside or near any moving part while unit is running.



Allow hot parts to cool.

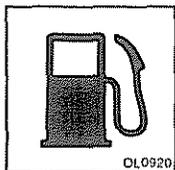


DO NOT wear loose clothing or jewelry and tie back hair that may get caught in rotating parts.



Service Position

Before tipping unit up onto housing, remove enough fuel so no spillage will occur. Assure unit is secure and will not tip over during maintenance.



Explosive Fuel

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



NO smoking, NO sparks, NO flames
ALWAYS allow engine to cool before servicing.

NEVER fill fuel tank when engine is running or hot from operation.

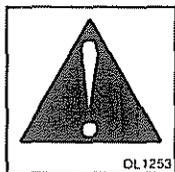
NEVER fill or drain fuel tank indoors.

Replace fuel cap securely and clean up spilled fuel.



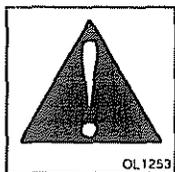
Replacement Parts

ALWAYS maintain unit in safe operating condition. Damaged or worn out muffler can cause fire or explosion.



Hardware

Keep hardware tight



Cleaning

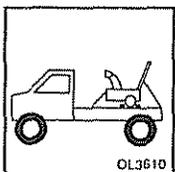
Keep unit free of ice or other debris.
Clean up oil or fuel spills.



Storage

For unit storage or extended storage:

- NEVER store with fuel in fuel tank, inside a building where any ignition sources are present
- Allow engine to cool completely
- For extended storage, clean unit thoroughly. See Engine Manual for proper storage.



Transport

Use extra care when loading or unloading unit onto trailer or truck.

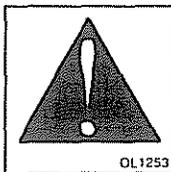
Secure unit chassis to transport vehicle. NEVER secure from rods or linkages that could be damaged.

DO NOT transport machine while engine is running.

ATTACHMENTS AND ACCESSORIES

Use only attachments or accessories designed for your unit.

Check attachment components frequently. If worn or damaged, replace with manufacturer's recommended parts



A SECTION 3: OPERATION

CONTROLS AND FEATURES

See Figures 3 and 4 for all Controls and Features locations.

Impeller

During snow removal, Impeller propels unit forward while collecting snow. Forward speed will vary according to depth and moisture content.

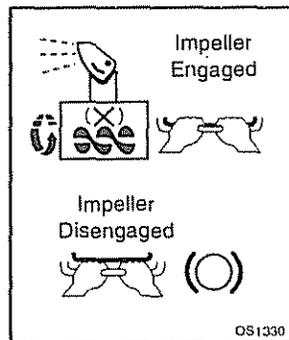
WARNING

THROWN OBJECTS could result in personal injury and/or property damage. ALWAYS discharge in a safe direction. Disengage impeller when unit is being transported to work area or is not in use. Use extreme caution when operating on or crossing gravel surfaces.

CAUTION

STRIKING FOREIGN OBJECTS may damage unit and result in minor or moderate injury. Shut off unit and engine. Check for any damage or loose parts and repair before restart.

Impeller Clutch Bail



Squeeze the Impeller Clutch Bail against the Handlebar to engage Impeller.

Release Bail to disengage and brake Impeller.

IMPORTANT: Check Impeller to be sure it is not frozen. If belt squeals when Clutch Bail is engaged, Impeller is frozen. Immediately release the Clutch Bail and move the unit to a heated area to thaw.

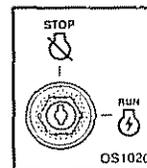
IMPORTANT: Check Clutch/Brake function before each use. If Impeller does not stop quickly when Impeller Clutch Bail is released or there is no noticeable increase in Bail force before contacting Handlebar, adjust or repair before operating unit.

Ignition Switch

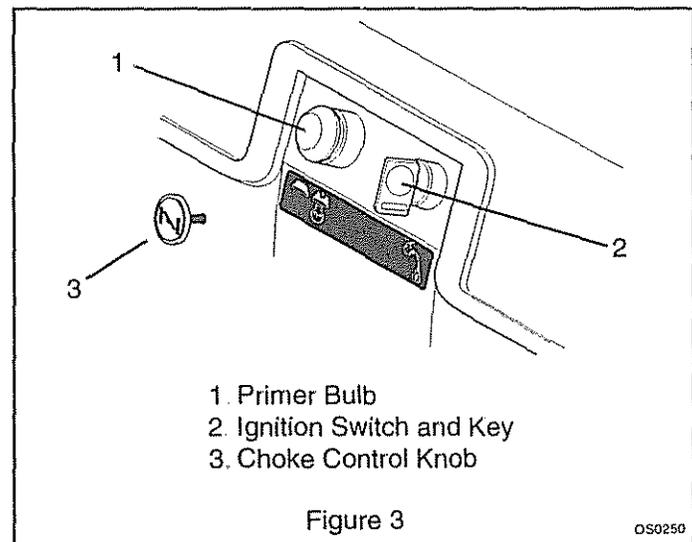
WARNING

ACCIDENTAL ENGINE START UP or UNAUTHORIZED USE could result in death or serious injury. ALWAYS shut off unit and remove key before servicing or leaving unit unattended.

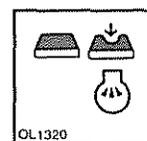
The Ignition Switch is operated by a removable Key (Figure 3). It has two positions:



1. "Stop"
2. "Run"

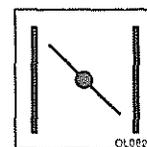


1. Primer Bulb
2. Ignition Switch and Key
3. Choke Control Knob



Primer Bulb

Pushing the Primer Bulb in adds fuel for easier engine start (see Starting and Shut Off).



Choke Control Knob

When pulled out (away from Impeller Housing) the Choke Control Knob chokes off air to the engine for easier start. When pushed in, Control Knob allows for normal operation.

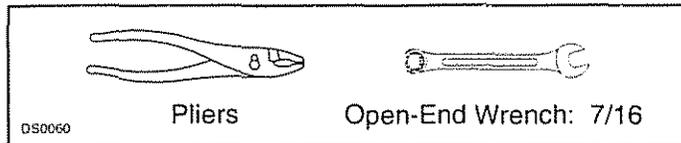
IMPORTANT: When engine has started, open Choke slowly by gradually pushing Choke Control in.

WARNING

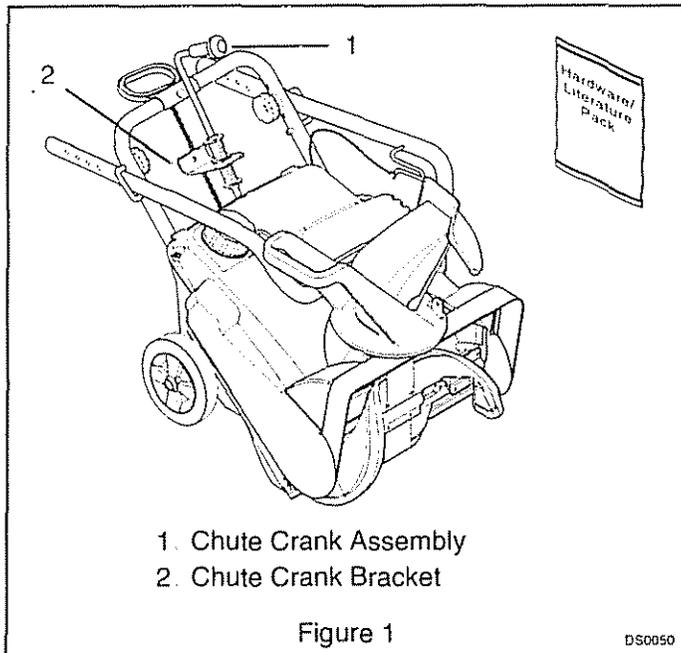
FAILURE TO FOLLOW INSTRUCTIONS could result in personal injury and/or damage to unit. Read, understand, and follow all safety practices in Owner/Operator Manual before beginning.

ACCIDENTAL ENGINE START UP can cause death or serious injury. ALWAYS remove key and/or wire from spark plug before assembly.

Tools Required:



Package Contents:

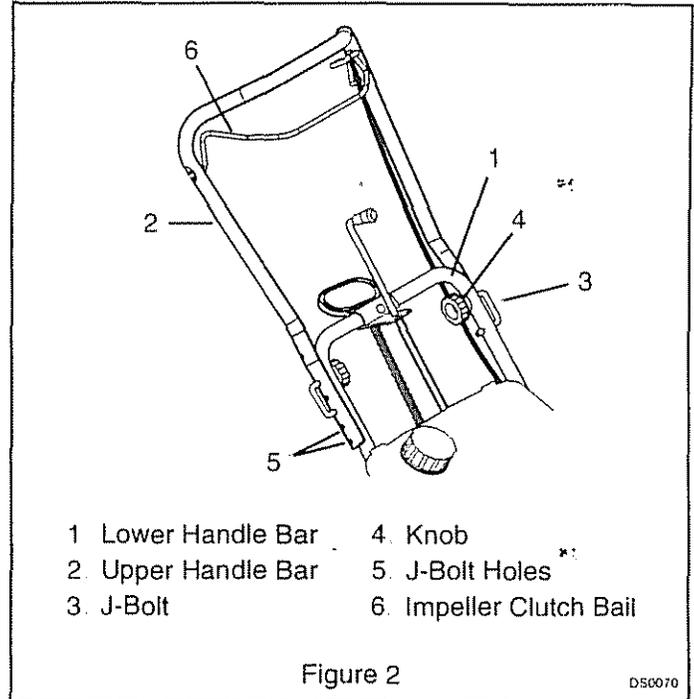


PREPARATION CHECKLIST

Check each box after completion. Refer to the Owner/Operator Manual as required.

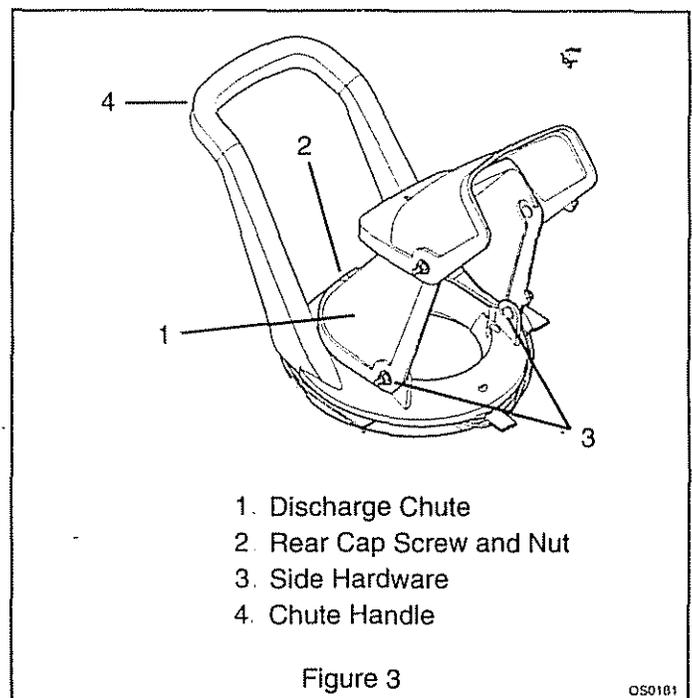
1. Install Handlebar

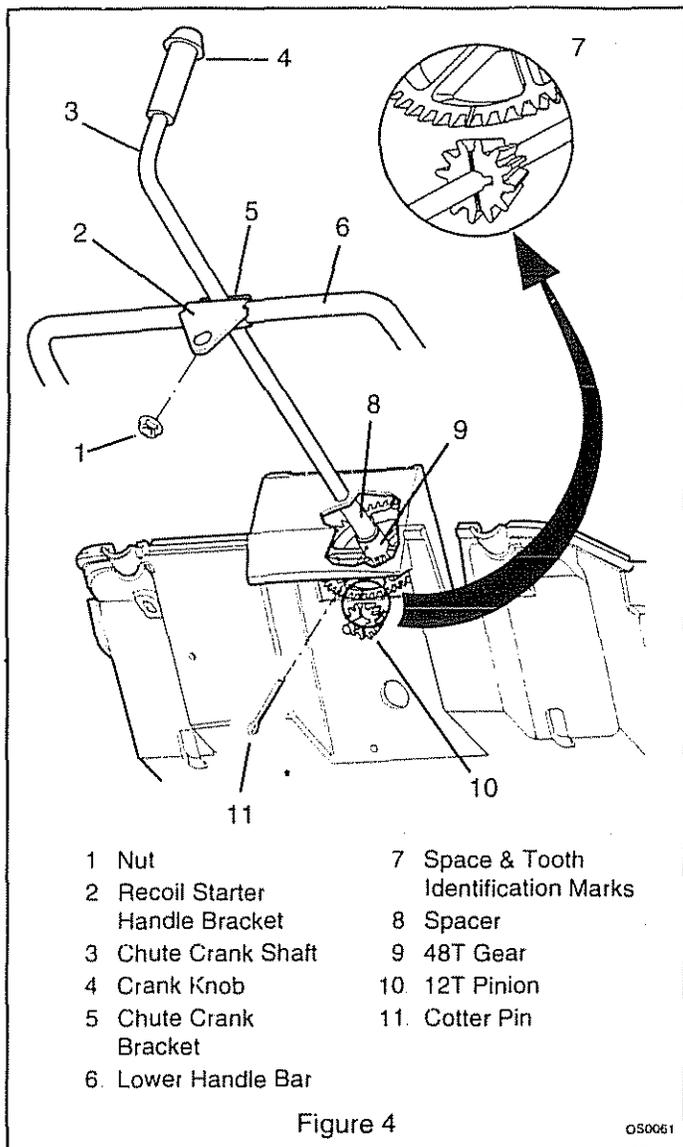
Unit is in handlebar "fold" position for shipping (Figure 1). Keep customer in mind and adjust Upper Handle Bar higher or lower by selecting alternate holes for "J" bolts (Figure 2). Unfold Upper Handlebar and tighten Knobs to secure Upper Handlebar in place.



2. Secure Discharge Chute

Remove Rear Cap Screw and Nut from rear of Discharge Chute (Figure 3). Tip Discharge Chute up and install hardware just removed. Tighten hardware at rear of Discharge Chute first, then at sides.





3. Install Discharge Chute Crank

Remove Nut from bolt that holds Recoil Starter Handle Bracket in place (Figure 4).

Pull the Chute Crank Assembly up so hole in Chute Crank Bracket fits behind/under Lower Handle Bar and over bolt end.

NOTE: DO NOT pull Chute Crank Assembly up too far. If Chute Crank Bracket goes past Lower Handle Bar, 48T Gear and Spacer will fall off into unit.

With Crank Knob straight up and Discharge Chute straight forward, check that 48T Gear meshes with 12T Pinion at Space and Tooth Identification Marks. Align if necessary.

Insert Cotter Pin (taped to Chute Crank Assembly) through 48T Gear and Chute Crank Shaft. Minor movement of the Crank Shaft or Discharge Chute Handle may be needed to align holes.

Rotate Chute Crank to access Cotter Pin and secure Pin by bending ends over.

Reinstall Nut, securing Chute Crank and Starter Handle Brackets to Lower Handle Bar.

4. Walk Around Inspection

Ensure all hardware is properly tightened. Check for leaking, damaged, or missing parts. Make necessary repairs.

5. Fill Engine Fuel Tank

⚠ WARNING

FLAMMABLE FUEL and its **EXPLOSIVE VAPORS** can result in death or serious injury. Handle fuel with extreme care. **ALWAYS** use an approved fuel container.

IMPORTANT: 2 Cycle engines require that oil be mixed with fuel. Failure to mix oil with gasoline will result in seizure and severe damage to engine. Refer Engine Manual for proper type and capacity.

6. Check Function of all Controls

⚠ WARNING

FAILURE OF CLUTCH AND BRAKE could result in death or serious injury.

Ensure unit runs and performs properly. Refer to Owner/Operator Manual for proper operation.

7. Complete Dealer Quality Checklist

DEALER QUALITY CHECKLIST

Model No. _____ Dealer No. _____

Serial No. _____

Check any defects:

<input type="checkbox"/> Missing Parts/Literature	<input type="checkbox"/> Adjustments/Function
<input type="checkbox"/> Defective Parts	<input type="checkbox"/> Assembled Wrong
<input type="checkbox"/> Wrong Parts	<input type="checkbox"/> Engine Problems
<input type="checkbox"/> Transmission/Gearcase Problems	<input type="checkbox"/> Electrical Problems
<input type="checkbox"/> Hydraulic/Oil Leak	<input type="checkbox"/> Paint/Appearance
<input type="checkbox"/> Grease/Lubrication	<input type="checkbox"/> Shipping Damage

Unit OK or **No. of Defects** _____

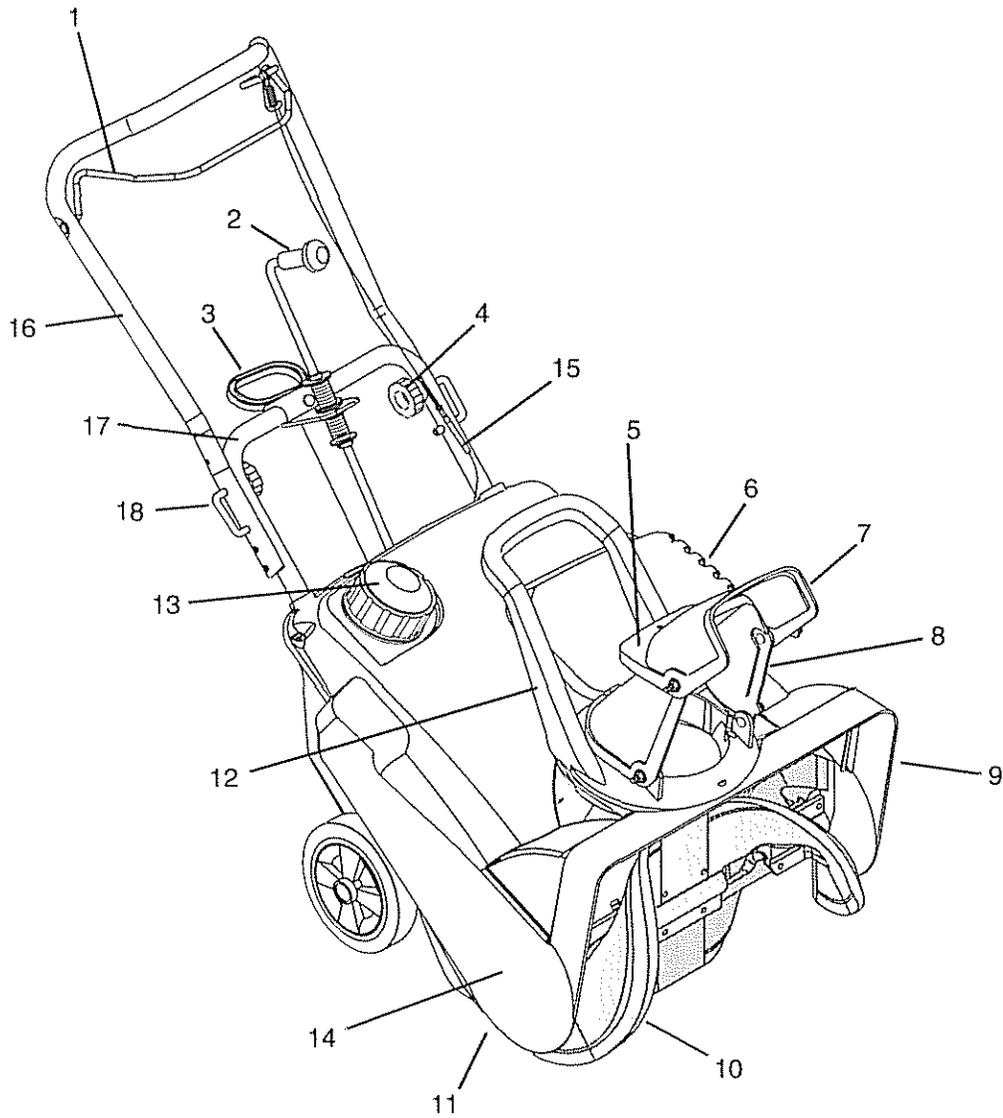
Fax this page to LESCO

ATTENTION TECH SERVICE: 440-356-3587

8. Delivery to Customer

Fill out Original Purchaser Registration Card and return the card to Ariens. Explain the Ariens Limited Warranty Policy. Explain recommended lubrication and maintenance. Advise customer on adjustments. Demonstrate how to put on and remove any attachments. Instruct customer on controls and operation of unit. Discuss and emphasize the Safety Precautions. Give customer Owner/Operator, Parts, and Engine Manuals. Advise customer to thoroughly read and understand them.

CONTROLS AND FEATURES LOCATIONS



- | | |
|------------------------------|-------------------------------------|
| 1. Impeller Clutch Bail | 10. Impeller |
| 2. Chute Crank (optional) | 11. Scraper Blade |
| 3. Recoil Starter Handle | 12. Discharge Chute Rotation Handle |
| 4. Handlebar Knob | 13. Fuel Tank and Cap |
| 5. Chute Deflector Handle | 14. Cowl |
| 6. Air Intake | 15. Impeller Control Cable |
| 7. Discharge Chute Deflector | 16. Upper Handlebar |
| 8. Discharge Chute | 17. Lower Handlebar |
| 9. Impeller Housing | 18. J - Bolt |

Figure 4

OS1200

Recoil Starter Handle

When pulled, handle will turn engine over.

IMPORTANT: DO NOT let handle snap back against starter.

Discharge Chute

DANGER

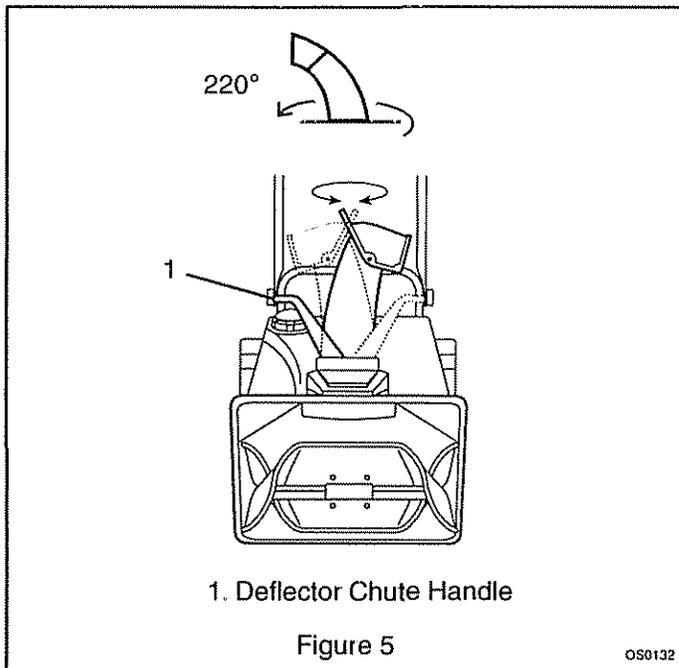
ROTATING PARTS will cause serious injury or death. **NEVER** reach into discharge chute or housing while engine is running.

WARNING

THROWN OBJECTS can result in personal injury and/or property damage. **ALWAYS** position Discharge Chute and Deflector in safe direction and angle before starting engine. **DO NOT** allow anyone in front of unit during operation. Be familiar with area of operation.

Discharge Chute rotates 220°. Rotate Chute with the Discharge Chute Rotation Handle (Figure 5).

IMPORTANT: DO NOT force frozen Chute controls. Start engine and run for 3-5 minutes to thaw. If still frozen, take to warm place until controls are free.



Chute Crank (optional)

Rotating the Chute Crank will rotate Discharge Chute.

Discharge Chute Deflector

CAUTION

THROWN OBJECTS can result in personal injury and/or property damage. **DO NOT** throw snow any higher than necessary.

Use handle at rear of Deflector to position Deflector at desired height.

IMPORTANT: If Chute Deflector does not stay in set position, adjust as directed in Adjustment Section, or repair before operation.

Handlebars

Adjust Upper Handlebar by selecting alternate holes for "J" Bolts.

Tighten Handlebar Knobs to secure Upper Handlebar.

The Upper Handlebar can be folded for storage.

Scraper Blade

IMPORTANT: DO NOT allow Scraper Blade to wear down too far or Impeller housing will become damaged.

PRE-START

WARNING

IMPROPER CLOTHING AND SAFETY GEAR could result in death or serious injury. Wear adequate winter gear, protective gloves and footwear which will improve footing on slippery surfaces. **DO NOT** wear loose clothing or jewelry and tie back hair that may get caught in rotating parts.

THROWN OBJECTS could result in death or serious injury. Wear safety goggles to protect eyes.

CAUTION

IMPROPER MAINTENANCE may result in minor or moderate injury. Make sure all hardware is tight, all safety devices are in place and all adjustments correct. Check function of all controls before starting engine.

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.

Frozen Impeller

IMPORTANT: Before engine start, check Impeller to be sure it is not frozen. With key in "Stop" position, squeeze Impeller Clutch Bail to Engaged position and pull Recoil Starter Handle. If Impeller is frozen, (cannot pull Starter Handle) move unit to a heated area and thaw to prevent possible damage.

Engine Fuel

WARNING

FLAMMABLE FUEL and its **EXPLOSIVE VAPORS** can result in death or serious injury. Handle fuel with extreme care. **ALWAYS** use an approved fuel container. **NO Smoking! NO Lighted Materials! NO Open Flames!** Allow engine to cool before any service.

Check and add fuel if required. Refer to General Maintenance Section.

Function of Clutches

WARNING

FAILURE OF CLUTCHES OR BRAKES may result in death or serious injury. Check clutch and brake function before each use. Repair or adjust before operation.

If the Impeller does not stop quickly when the Impeller Clutch Bail is released or there is no noticeable increase in Bail force before contacting Handlebar, adjust or repair before operation.

STARTING AND SHUT-OFF

WARNING

FAILURE TO FOLLOW INSTRUCTIONS could result in personal injury and/or damage to unit. **DO NOT** attempt to start your unit at this time. Read entire Owner/Operator Manual and the Engine Manual first.

IMPORTANT: At start up, allow unit and engine to adjust to the outdoor temperatures before clearing snow. Before shut off, run impeller a few minutes to prevent freeze-up of impeller.

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

Manual Start

See Figure 3 for all Controls and Features locations.

WARNING

THROWN OBJECTS could result in death or serious injury. **ALWAYS** position Discharge Chute straight ahead (away from operator) for starting.

1. Turn discharge chute straight ahead.
2. Push Primer Bulb 1 to 3 times for cold engine.

NOTE: When temperature is below -15° F (-26° C) additional priming may be needed.

3. Pull Choke Control Knob out.

NOTE: A warm engine requires less choking than a cold engine.

4. Insert key into Ignition Switch.
5. Turn key to "Run" position.
6. 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.

- Pull rope with a rapid continuous full arm stroke. Let rope rewind slowly.

IMPORTANT: DO NOT let Starter Handle snap against unit.

- Repeat until engine starts. (If engine does not start, refer to Engine Manual.)
- When engine has started, open Choke slowly by gradually pushing Choke Control Knob in.

WARNING

ABNORMAL VIBRATIONS are a warning of trouble. Immediately stop unit and engine, remove key, and allow all moving parts to stop. Inspect unit and make any necessary repairs before restart.

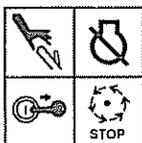
Electric Start (optional)

IMPORTANT: Electric Starter is not equipped with a thermal cutout switch. DO NOT crank engine for more than 20 seconds. ALWAYS allow Starter to cool down for 10 minutes or Starter will be damaged.

- Follow Starting steps 1-5.
- Connect Female End of Power Cord to Switch Box (Figure 6).
- Plug Male End of Power Cord into 120 Volt AC receptacle.
- Push Starter Button to crank engine.
- When engine starts, release Starter Button and disconnect Power Cord from receptacle first, then from Switch Box.
- Open Choke slowly by gradually pushing Choke Control Knob in.

Shutoff

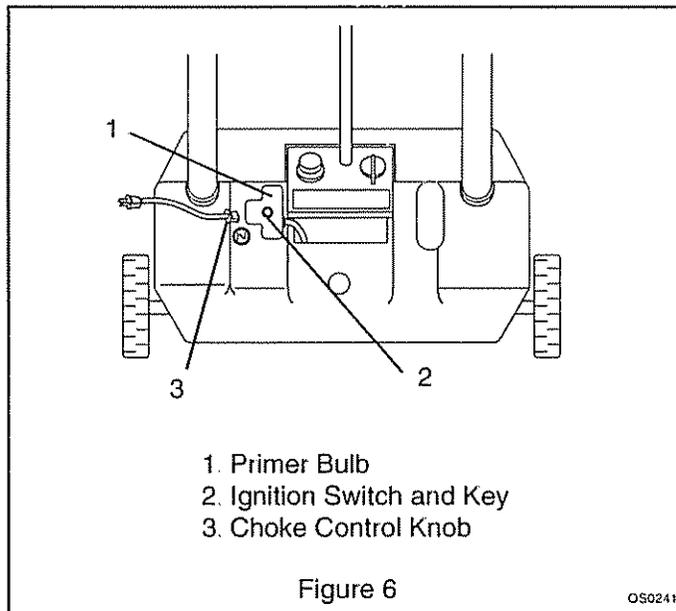
WARNING



IMMEDIATELY RELEASE IMPELLER CLUTCH BAIL TO STOP UNIT in an emergency.

Stop Engine, remove Key and wait for all rotating parts to stop before leaving operators position.

- Engage and run Impeller a few minutes after use to prevent freeze-up of Impeller.
- Release Impeller Clutch Bail and allow Impeller to stop.
- Turn Ignition Switch to "Stop" position.
- Remove key.



THROWING SNOW

CAUTION

HIDDEN HAZARDS may result in minor or moderate injury and/or damage to unit. Stay alert for holes, rocks, roots, traffic, and other hazards.

To propel unit and throw snow, lift handlebar so Impeller contacts surface to be cleared. Lift the handlebar only high enough to propel unit forward. Do not lift so high to allow snow to kick back from under unit.

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

To clear an area, run unit in an overlapping series of paths. For large areas; start in the middle and throw snow to each side, so snow is not cleared more than once.

ALWAYS direct snow away from area to be cleared and with direction of the wind.

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

A SECTION 4: GENERAL MAINTENANCE

Your LESCO Representative will provide any service or adjustments which may be required to keep your unit operating at peak efficiency. Should engine service be required, contact your LESCO Representative.

⚠ WARNING



CL0864 STOP

ACCIDENTAL ENGINE START UP can cause death or serious injury. **ALWAYS** stop engine, remove key, wait for moving parts to stop before adjusting or servicing.



OL0100

HOT SURFACES can result in death or serious injury. **DO NOT** touch parts which are hot from operation. **ALWAYS** allow parts to cool

SERVICE POSITION

Place unit on a flat level surface. Tip unit forward onto front of Impeller Housing for service. Assure unit is secure and will not tip over. Strap and clamp onto bench if needed.

⚠ CAUTION

FUEL SPILLS may result in minor or moderate injury and/or damage to unit. Before unit is tipped up onto housing, remove enough fuel so that no spillage will occur.

FILLING FUEL TANK

⚠ WARNING



OL0540

FLAMMABLE FUEL and its **EXPLOSIVE VAPORS** can result in death or serious injury



OL0990

Handle fuel with extreme care. **ALWAYS** use an approved fuel container.

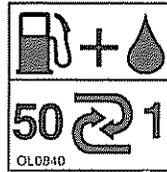


OL1410

No Smoking! No Lighted Materials!
No Open Flames!
Allow engine to cool before any service

To add fuel to Fuel Tank:

1. ALWAYS place unit in open or well ventilated area.
2. Stop engine and allow to cool



IMPORTANT: Two cycle engines require that oil be mixed with fuel. Failure to mix oil with fuel will result in seizure and severe damage to engine. **DO NOT** use gasohol or gasoline containing alcohol because alcohol will cause internal parts to deteriorate. See Engine Manual for correct type and grade of fuel.

3. Mix 50 parts fuel to 1 part oil.
4. Clean Fuel Cap and surrounding area to prevent dirt from entering Fuel Tank.
5. Remove Cap.
6. Fill fuel tank with mixture. Tank capacity is 1.2 quarts (1.1 liters).

NOTE: Fuel mixture left standing for prolonged periods will begin to separate; thoroughly shake mixture before use.

7. Replace Fuel Cap and tighten.
8. ALWAYS clean up any spilled fuel.

ENGINE COOLING

Engine is air cooled. Air must circulate freely around engine from Air Intake to cooling fins on cylinder head and block to prevent overheating.

Every year (more often if conditions require) remove cooling shrouds and clean cooling fins. Clean external surfaces of engine of dust, dirt and oil deposits which can contribute to improper cooling. See Engine Manual.

IMPORTANT: DO NOT operate engine with cooling shrouds removed or engine overheating and damage will result.

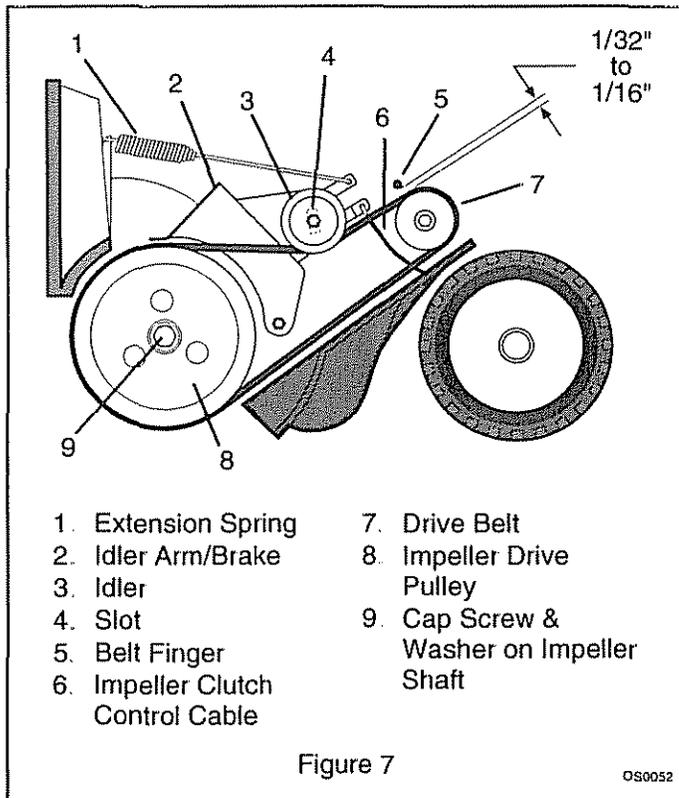
DRIVE BELT

WARNING

ACCIDENTAL ENGINE START UP can cause death or serious injury. **ALWAYS** stop engine, remove key, wait for moving parts to stop and remove wire from spark plug before adjusting or servicing

To replace Drive Belt:

1. Remove Cowl and disconnect Extension Spring on Idler Arm/Brake (Figure 7).
2. Remove Cap Screw and Washer from end of Impeller Shaft and pull off Impeller Drive Pulley.
3. Remove old Belt and install new one.
4. Replace parts in reverse order checking to be sure there is $1/32$ " to $1/16$ " (1-1.6 mm) clearance between Belt Finger and back side of Belt with Impeller Clutch Engaged. Adjust Belt Finger if necessary.



ADJUSTMENTS

Impeller Control Cable

WARNING

IMPROPER ADJUSTMENT could result in death or serious injury. **IMPELLER BRAKE MUST DISENGAGE** when clutch is engaged. **BRAKE MUST STOP IMPELLER WITHIN 5 SECONDS** of releasing Impeller Clutch Bail.

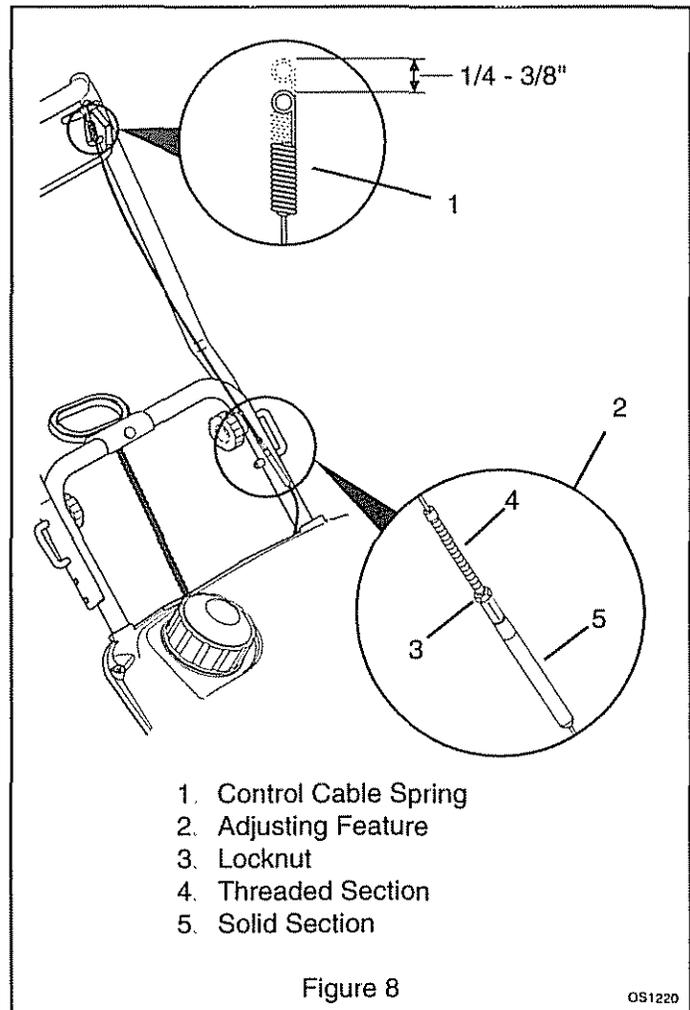
There must **ALWAYS** be some slight noticeable slack in the Impeller Control Cable when the Impeller is disengaged. This allows Extension Spring to pull Idler Arm/Brake, braking Belt.

Impeller Clutch Bail should travel $6-3/4$ to $7-1/4$ " (17.1-18.4 cm) before contacting Handlebar.

A properly adjusted clutch must extend Control Cable Spring approximately $1/4$ to $3/8$ " before Clutch Bail contacts Handlebar

To adjust Impeller Control Cable:

1. Shut off engine, allow to cool, and remove Cowl.



2. Loosen Locknut on Threaded Section of Control Cable Adjusting Feature (Figure 8).
3. Turn Solid Section to remove almost all slack in Cable.
4. Hold the Solid Section with a pliers and gently, with a small wrench, tighten the Locknut.

IMPORTANT: If there is still no resistance, the Idler position must be adjusted.

Idler Position

The idler must be as close as possible to the Drive Belt when the Impeller Clutch is disengaged, but not so close that it causes Impeller rotation. To adjust the Idler position:

⚠ WARNING



ROTATING PARTS can cut off body parts. Keep hands and feet away.

Loose clothing, long hair or scarves can get caught in rotating parts and cause death or serious injury.

1. Shut off engine, allow to cool, and remove Cowl.
2. Ensure Control Cable has slack when Impeller Clutch is disengaged (Bail in lowered position).
3. Ensure Belt Fingers are properly adjusted (see Drive Belt).
4. Loosen Idler hardware, reposition Idler along Slot in Idler Arm, and tighten hardware (Figure 7).
5. Check for proper Control Cable Spring Extension.
6. Start engine and ensure Impeller does not rotate when Impeller Clutch is disengaged.
7. Repeat the above steps until proper adjustment is achieved.

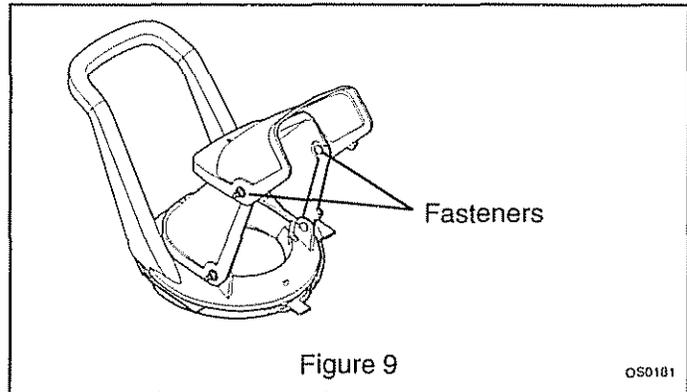
IMPORTANT: If adjustment cannot be achieved, the Drive Belt must be replaced.

8. Replace cowl.

Discharge Chute Deflector

If Discharge Chute Deflector does not stay in set position during operation, adjust chute by tightening Fasteners evenly until Deflector stays in position (Figure 9).

NOTE: Use a T30 Torx Drive or a 3/16" (.19 cm) wide Straight Screwdriver to tighten.



TRANSPORT

Equipment should be shut off when transporting. To transport equipment to or from an area to be cleared, press down on handlebar enough to raise front of unit slightly off surface and push or pull unit.

CLEANING AND STORAGE

⚠ WARNING

FLAMMABLE FUEL and its **EXPLOSIVE VAPORS** can result in death or serious injury. **DO NOT** store unit inside a building with fuel in the fuel tank where any ignition sources are present. Drain fuel outdoors away from any ignition source. Allow engine to cool before storing in any enclosure. Only use approved fuel containers.

Unit

Run with Impeller Clutch engaged a few minutes after each use to free unit of any loose or melting snow.

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

Keep all nuts, bolts and screws tight and know unit is in safe working condition. Check all hardware at regular intervals.

IMPORTANT: NEVER spray unit with water or store unit outdoors to aid in prevention of rust or corrosion. Water can seep into sealed bearings, which are sealed against dirt and debris only, causing reduced component life.

It is possible to hang unit on a wall.

Engine

When storing unit for extended periods of time, remove all fuel from tank and carburetor (run dry). Refer to Engine Manufacturer's instructions.

MAINTENANCE SCHEDULE

The chart below shows the recommended maintenance schedule that should be performed on a regular basis. More frequent service may be required due to working conditions (heavy loads, high ambient temperatures, dusty conditions, or airborne debris).

See Engine Manuals for further maintenance and trouble shooting information.

MAINTENANCE SCHEDULE	
Service Performed	Time Interval Between Service
Check Fasteners	10 hours
Clean Air Intake & Cooling fins	Yearly

ENGINE TROUBLE SHOOTING

The chart below shows some engine problems, some of the probable causes and suggestions on what to check or refer to the Engine Manufacturer's Service Manual.

ENGINE TROUBLE SHOOTING	
Problem	Probable Cause
Engine will not crank	Check for a bad starter or connection
Engine will not start	Check if Key Switch is in run position Check for bad connections Check for engine ignition problems - See engine Manufacturer's Service Manual
Engine stops	Check Fuel Supply - Use only clean fuel Check spark
Engine power, noise, idle and shut down	See Engine Manufacturer's Service Manual

SNO-THRO SPECIFICATIONS

Model Number	938011
Description	SS522
Engine	
Engine Power - HP (KW) - 2 Cycle	5 (3.73)
Engine Operating Fast Idle Speed - RPM	3600
Engine Displacement - in (cc)	8.46 (139)
Fuel	
	See Engine Manual for type and grade
Fuel to Oil Mix	50:1
Fuel Tank Capacity - qt (Liters)	1.2 (1.1)
Fuel Filter Neck Inside Dia. - in (cm)	2.8 (7.1)
Snow Clearing Width - Cu. in (cm)	22 (56)
Snow Throwing Distance - ft (meters)	3-30 (0.9-9.1)
Chute	
Chute Rotation Angle	220°
Chute Rotation Control at Handlebar	Yes
Chute Inside Dia - in (cm)	6.0 (15.2)
Handlebar	
Operator Present Impeller Clutch/Brake Control	Yes
Folding Handlebar	Yes
Handlebar Adjustable For Height	Yes
Size & Weight	
Handlebars Max. Extended Height - in (cm)	40.8 (104)
Minimum Folded Height - in (cm)	25.8 (65.5)
Length - in (cm)	43.2 (110)
Minimum Folded Length - in (cm)	34.5 (87.6)
Width - in (cm)	22 (56)
Weight - lbs (Kg)	73 (33.2)
Impeller	
Impeller Dia - in (cm)	9.0 (23)
Impeller Speed - RPM	1100
Drive Belt	
	3L Section
Single "V"	Yes
Construction	Raw Edge
Material	Kevlar Cord
Wheels	
Wheel Size - in (cm)	7 0 x 1.5 (18 x 3 8)

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90 Day Limited Warranty

Ariens Company warrants to the original purchaser that products manufactured by Ariens Company will be free from defects in material and workmanship for a period of **90 days** from the date of purchase, except as noted below.

PROTECTION PLAN

Ariens Company will repair or replace any part found upon examination by Ariens Company to be defective. Such repair or replacement will be free of charge to the original purchaser (labor and parts) for defects arising within ninety (90) days from the date of purchase.

This warranty is subject to the following exceptions, conditions, and limitations:

PURCHASER'S RESPONSIBILITIES

- The purchaser must perform maintenance & minor adjustments per the owners manual.
- The purchaser must notify Ariens Company or an authorized LESCO service representative of the need for warranty service.
- The purchaser must transport the product to and from the place of warranty repair.

PRODUCT REGISTRATION

- The purchaser must fill out and return the warranty registration card to Ariens Company to validate this warranty

SERVICE

- Warranty service must be done by an authorized LESCO dealer. To find a LESCO dealer near you, contact LESCO or Ariens Company.

EXCLUSIONS

- Shoes, runners, scraper blades, shear bolts, light bulbs, etc. and any equipment which has been altered, misused, mis-assembled, improperly adjusted, neglected, or damaged by accident are not covered by this warranty.
- Service completed by someone other than an authorized LESCO distributor or dealer is not covered by this warranty.
- Parts that are not genuine Ariens service parts are not covered by this warranty.
- Engines and engine accessories are covered only by the warranty made by the engine manufacturer, and are not covered by this warranty.

Ariens Company may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating Ariens Company to incorporate such design changes into previously manufactured products, nor shall such changes be construed as an admission that previous designs were defective.

DISCLAIMER OF FURTHER WARRANTY

Ariens Company makes no warranty other than what is expressly made in this warranty. In the event that local law provides that an implied warranty, including an implied warranty of merchantability, or an implied warranty of fitness for a particular purpose, applies to Ariens Company, any such implied warranty is limited to the 90-day duration of the foregoing express warranty.

LIMITATION OF REMEDY AND DAMAGES

Ariens Company's liability under this express warranty, and under any implied warranty that may exist is limited to repair or replacement of any defective part. In no event shall Ariens Company be liable for incidental, special, or consequential damages (including lost profits).

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

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