

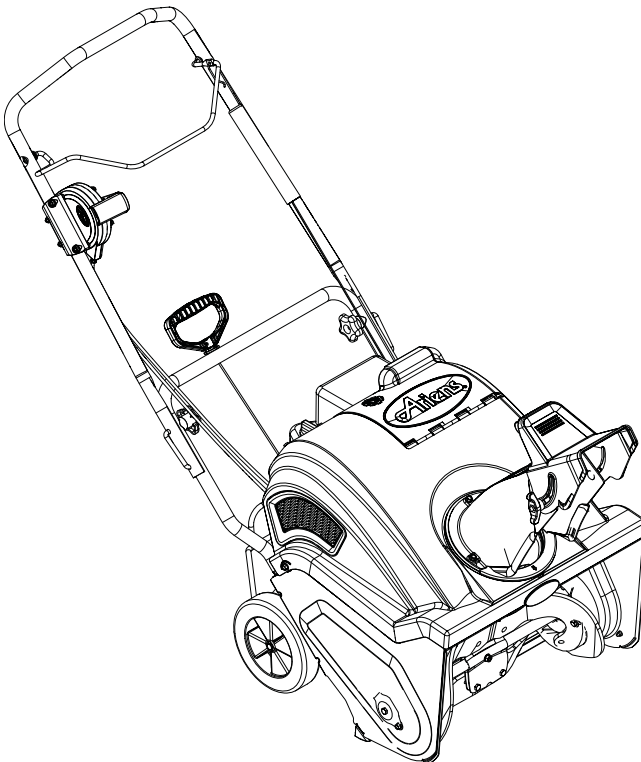


THE KING OF SNOW®

Path-Pro®

Owner/Operator Manual

Manuel du Propriétaire/Utilisateur



Models

938030 – SS21
(SN 000101 +)

938031 – SS21
(SN 000101 +)

938032 – SS21E
(SN 000101 +)

938033 – SS21EC
(SN 000101 +)

938034 – SS21E
(SN 000101 +)

E10

~~E15~~

~~E20~~

~~E85~~

The use of any gasoline exceeding 10% ethanol (E10) or 10% MTBE will void the product warranty.

L'utilisation d'une essence contenant plus de 10% d'éthanol (E10) ou de 10% de MTBE annulent la garantie.



EN ENGLISH

FR FRANÇAIS

04535800B • 7/14

Printed in USA

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INTRODUCTION

THE MANUAL

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

ENGINE MANUAL

The engine on this unit is covered by a separate manual specific to the engine. This manual is included in the literature package that shipped with the unit. Refer to this manual for engine service recommendations. If the engine manual is not available, contact the engine manufacturer for a replacement manual.

MODEL AND SERIAL NUMBERS

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

Numbers are located on the product registration form in the unit literature package. They are also printed on a serial number label on your unit (see Figure 1).

- Record unit model and serial numbers here.

- Record engine model and serial numbers here.

PRODUCT REGISTRATION

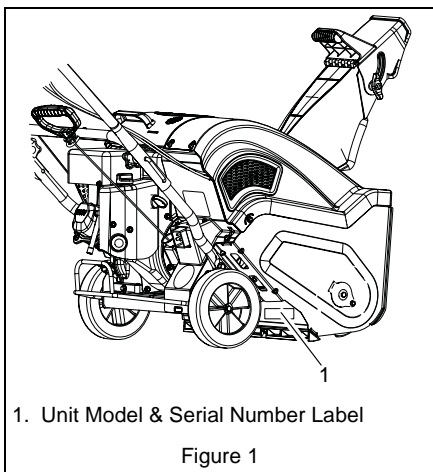
The Ariens dealer should register the product at the time of purchase. Registering the product helps the company process warranty claims or contact you with the latest service information. Claims meeting requirements during the limited warranty period will be honored, whether or not the product registration card is returned with proof of purchase.

Customer Note: If the Dealer does not register your product, please fill out, sign and return the product registration card to Ariens or go to www.ariens.com.

UNAUTHORIZED REPLACEMENT PARTS

Use only Ariens replacement parts. The replacement of any part on this unit with anything other than an Ariens authorized replacement part may adversely affect the performance, durability and safety of this unit and may void the warranty. Ariens disclaims liability for any claims or damages, whether warranty, property damage, personal injury or death arising out of the use of unauthorized replacement parts.

NOTE: A Parts Manual may be downloaded from www.ariens.com.



DELIVERY

Customer Note: If this product was purchased without complete assembly and instruction by a retailer, it is your responsibility to:

- Read and understand all instructions in this manual. If you do not understand or have difficulty following the instructions, contact your nearest Ariens Dealer for assistance.

NOTE: To locate your nearest Ariens Dealer, go to www.ariens.com.



WARNING: Improper assembly or adjustments can cause serious injury.

Before Operating Unit

1. Make sure all assembly has been properly completed.
2. Understand all Safety Precautions provided in the manuals.
3. Review control functions and operation of the unit. Do not operate the unit unless all controls function as described in this manual.
4. Review recommended maintenance and adjustments.
5. Review Limited Warranty policy.
6. Fill out a product registration card and return it to Ariens Company or register the product at www.ariens.com.

DISCLAIMER

Ariens reserves the right to discontinue, change and improve its products at any time without notice or obligation to the purchaser.

The descriptions and specifications contained in this manual were in effect at printing.

Equipment described within this manual may be optional. Some illustrations may not be applicable to your unit.

SAFETY



WARNING: This snow thrower is capable of crushing or amputating body parts. Failure to observe the safety instructions in the manuals and on decals could result in serious injury or death.

Tragic accidents can occur if the operator is not alert to the presence of children. Never assume that children will remain where you last saw them.

Gasoline is extremely flammable and the vapors are explosive; handle with care.

Stop engine and allow moving parts to stop before leaving operator's position.

Read these safety rules and follow them closely. Failure to follow these rules could lead to loss of control of unit, severe personal injury or death to you or bystanders or result in damage to property or the machine.

Safety Alert Symbols



These are safety alert symbols. They mean:

- **ATTENTION!**
- **YOUR SAFETY IS INVOLVED!**



When you see this symbol:

- **BECOME ALERT!**
- **OBEY THE MESSAGE!**

SIGNAL WORDS

The safety alert symbols above and signal words below are used on decals and in this manual.

Read and understand all safety messages.

1. Danger



DANGER: Indicates an **IMMINENTLY HAZARDOUS SITUATION!** If not avoided, **WILL RESULT** in death or serious injury.

2. Warning



WARNING: Indicates a **POTENTIALLY HAZARDOUS SITUATION!** If not avoided, **COULD RESULT** in death or serious injury.

3. Caution



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

4. Notice

NOTICE: Indicates information or procedures that are considered important but not hazard related. If not followed property damage could result.

5. Important

IMPORTANT: Indicates general reference information worthy of special attention.

SAFETY DECALS

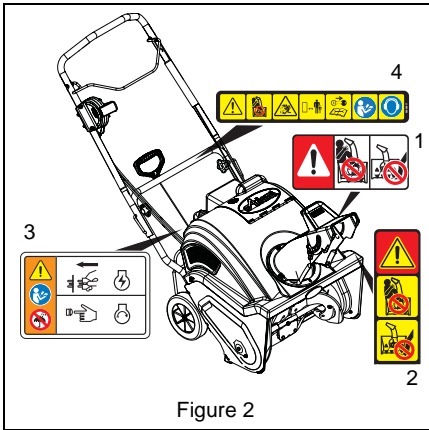
This snow thrower is capable of crushing or amputating body parts. Failure to observe the following safety instructions could result in serious injury or death.

The safety decals on your machine are visual reminders of the important safety information found in this manual. All messages found on your unit must be fully understood and carefully followed. Safety decals found on the machine are explained below.

Always replace missing or damaged safety decals. Replacement decal information is in the Parts Manual for your machine. Decals can be ordered from your dealer.

See Figure 2 for safety decal locations.

1. Safety Decal Identification



2. Safety Decal Description

1. DANGER!



Danger!



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

- Read Operator's Manual.
- Allow operation only by properly trained adult, never children.
- Stop engine and remove ignition key prior to leaving the 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 injured or damaged by thrown objects.



2. DANGER!



Danger!



ROTATING PARTS! ONLY use clean-out tool to clear blockages. **NEVER** use your hands. **High speed auger/impeller rotates below discharge opening. Wait for all moving parts to stop before removing clogs or servicing.**



3. DANGER!



Danger!



Read Owner/Operator Manual.



Do not operate in rain.

4. DANGER!



Danger!



ONLY use clean-out tool to clear blockages. NEVER use your hands.



Never direct discharge towards persons or property that may be injured or damaged by thrown objects.



Keep people away from unit while operating. Keep children out of work area and under watchful care of a responsible adult.



Stop engine, remove key, read manual before making any repairs or adjustments.



Read Owner/Operator Manual.



Wear appropriate hearing protection.

RULES FOR SAFE OPERATION

This snow thrower is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury.

The following safety instructions are based on the B71.3 specifications of the American National Standards Institute in effect at the time of production.

Training

Read, understand and follow all instructions on the machine and in the manual(s) before operating this unit. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.

Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction, including actual operation.

Keep the area of operation clear of all persons, particularly small children. Keep children under watchful care of a responsible adult. Be alert and shut off unit if children enter area.

Exercise caution to avoid slipping or falling, especially when operating the snow thrower in reverse.

Always remove key and/or wire from spark plug before assembly, maintenance or service. Unintentional engine start up can cause death or serious injury.

Complete a walk-around inspection of the unit to understand the unit, your work area, and all safety decals.

Preparation

Always check overhead and side clearances carefully before operation.

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

Thoroughly inspect the area where the equipment is to be used and remove all pets, doormats, sleds, boards, toys, wires, debris and other foreign objects.

Disengage all clutches and shift into neutral before starting the engine (motor).

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.

<p>Handle fuel with care; it is highly flammable.</p> <ul style="list-style-type: none"> • Use an approved fuel container. • Never add fuel to a running engine or hot engine. • Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. • Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground, away from your vehicle, before filling. • When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle. • Keep the nozzle in contact with the rim of the fuel tank or container opening at all times, until refueling is complete. Do not use a nozzle lock-open device. • Replace gasoline cap securely and wipe up spilled fuel. • If fuel is spilled on clothing, change clothing immediately.
Adjust the auger/impeller housing height to clear gravel or crushed rock surface.
Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer).
Always allow unit and engine to adjust to outdoor temperature before clearing snow.

Operation
Never leave a running unit unattended. Always shut off engine before leaving unit. Always remove key to prevent unauthorized use.
Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
Moving and/or rotating parts can cut off body parts such as fingers or a hand. Always keep hands, feet and clothing away from all rotating parts during operation.
Always keep hands away from all pinch points.
Do not touch unit parts which might be hot from operation. Allow parts to cool before attempting to maintain, adjust or service.

Thrown objects can cause injury. Check for weak spots on docks, ramps or floors. Avoid uneven work areas and rough terrain. Stay alert for hidden hazards.
Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Adjust skid shoes so scraper blade does not contact gravel. Stay alert for hidden hazards or traffic.
After striking a foreign object, stop the engine (motor), remove the wire from the spark plug, thoroughly inspect the snow thrower for any damage, and repair the damage before restarting and operating the snow thrower.
If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause.
Stop the engine (motor) whenever you leave the operating position, before unclogging the auger/impeller housing or discharge guide, and when making any repairs, adjustments or inspections.
When leaving the machine unattended, disengage the power take-off, lower the attachment, set the parking brake, stop the engine and remove the key.
When cleaning, repairing or inspecting the snow thrower, make certain the auger/impeller and all moving parts have stopped. Disconnect the spark plug wire and keep the wire away from the plug to prevent someone from accidentally starting the machine.
Do not run the engine (motor) indoors, except when starting the engine and for transporting the snow thrower in or out of the building. Open the outside doors; exhaust fumes are dangerous.
Never operate the snow thrower without proper guards and other safety protective devices in place.
Never direct the discharge toward people or areas where property damage can occur from thrown objects. Keep children and others away.
Do not overload the machine capacity by attempting to clear snow at too fast a rate. Slow down and turn corners slowly.
Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.

Do not operate in reverse unless absolutely necessary. Always back up slowly and look down and behind before and while backing.
Do not carry passengers.
Disengage attachment drive when traveling from one work area to another.
Disengage power to the auger/impeller when snow thrower is transported or not in use.
Use only attachments and accessories approved by the manufacturer of the snow thrower (such as wheel weights, counterweights or cabs).
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.
Never operate the snow thrower without good visibility or light. Falling snow, fog, etc. can reduce vision and cause an accident.
Never operate unit after or during the use of medication, drugs or alcohol. Safe operation requires complete and unimpaired attention at all times.
Never allow anyone to operate this unit when their alertness or coordination is impaired.
Avoid sharp edges. Sharp edges can cut.
Do not throw snow any higher than necessary.

Clearing a Clogged Discharge Chute

Hand contact with the rotating auger/impeller inside the discharge chute is the most common cause of injury associated with snow throwers. Never use your hand to clean out the discharge chute.

To clear the chute:

1. SHUT THE ENGINE OFF!
2. Wait 10 seconds to be sure the auger/impeller blades have stopped rotating.
3. Always use a clean-out tool, not your hands.

Maintenance and Storage

Secure unit so it will not tip over during maintenance.

Before cleaning, removing clogs or making any inspections, repairs, etc., disengage clutch(es), stop unit and engine, remove key, allow moving parts to stop. Allow hot parts to cool.

Make sure the equipment is in safe working condition. Check shear bolts and other bolts and hardware at frequent intervals for proper tightness. If components are worn or damaged, replace with manufacturer's recommended parts.

Check clutch and brake operation frequently.

Do not change engine governor settings or over-speed engine.

Adjust and service as required. All motion of drive wheels and auger/impeller must stop quickly when control levers are released.

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

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

Always keep protective structures, guards, and panels in good repair, in place and securely fastened. Never modify or remove safety devices.

Never store the machine with fuel in the fuel tank inside a building where ignition sources are present such as hot water heaters, space heaters or clothes dryers. Allow the engine to cool before storing in any enclosure or covering the unit.

Always refer to operator's manual for important details if the snow thrower is to be stored for an extended period.

Maintain or replace safety and instruction labels as necessary.

Run the machine a few minutes after throwing snow to prevent freeze-up of the auger/impeller.

Personal Protection

Do not operate the equipment without wearing adequate winter garments. Avoid loose fitting clothing that can get caught in moving parts. Wear footwear that will improve footing on slippery surfaces.

Wear adequate safety gear, including safety glasses with side shields, and protective gloves.

Do not wear loose clothing or jewelry, and tie back hair that may get caught in rotating parts.

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

Slope Operation

Operate the snow thrower on level surfaces. Stay off slopes and slippery surfaces.

Do not clear snow across the face of slopes; go up and down. Exercise extreme caution when operating on slopes. Do not attempt to clear steep slopes.

Use a slow speed to avoid stops or shifts on slopes. Avoid starting or stopping on a slope.

Do not park unit on a slope unless absolutely necessary. When parking on a slope always block the wheels.

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.

Fuel

Do not run engine in an enclosed area. Always provide good ventilation. Fumes from engine exhaust can cause injury or death.

Fuel is highly flammable and its vapors are explosive. Handle with care. Use only an approved gasoline container with an appropriately sized dispensing spout.

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.

Never fill fuel containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.

When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

If fuel is spilled on clothing, change clothing immediately.

Properly remove fuel before tipping unit up onto housing, so no spills will occur.

Towing/Transporting

Always shut off engine, remove key and close fuel shut-off valve or drain fuel when transporting unit on a truck or trailer.

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.

Accessories

Use only Ariens Company-recommended attachments that are appropriate to your use and can be used safely in your application.

OPERATOR ZONE

This unit is designed to be operated by one person located in the operator zone (see Figure 3).

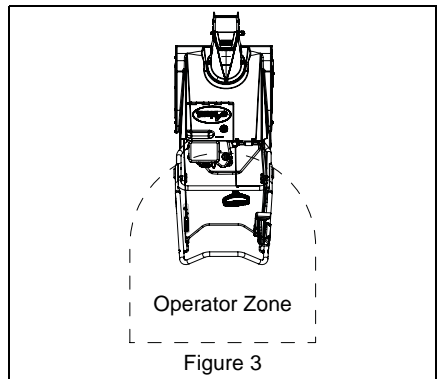


Figure 3

CONTROLS AND FEATURES

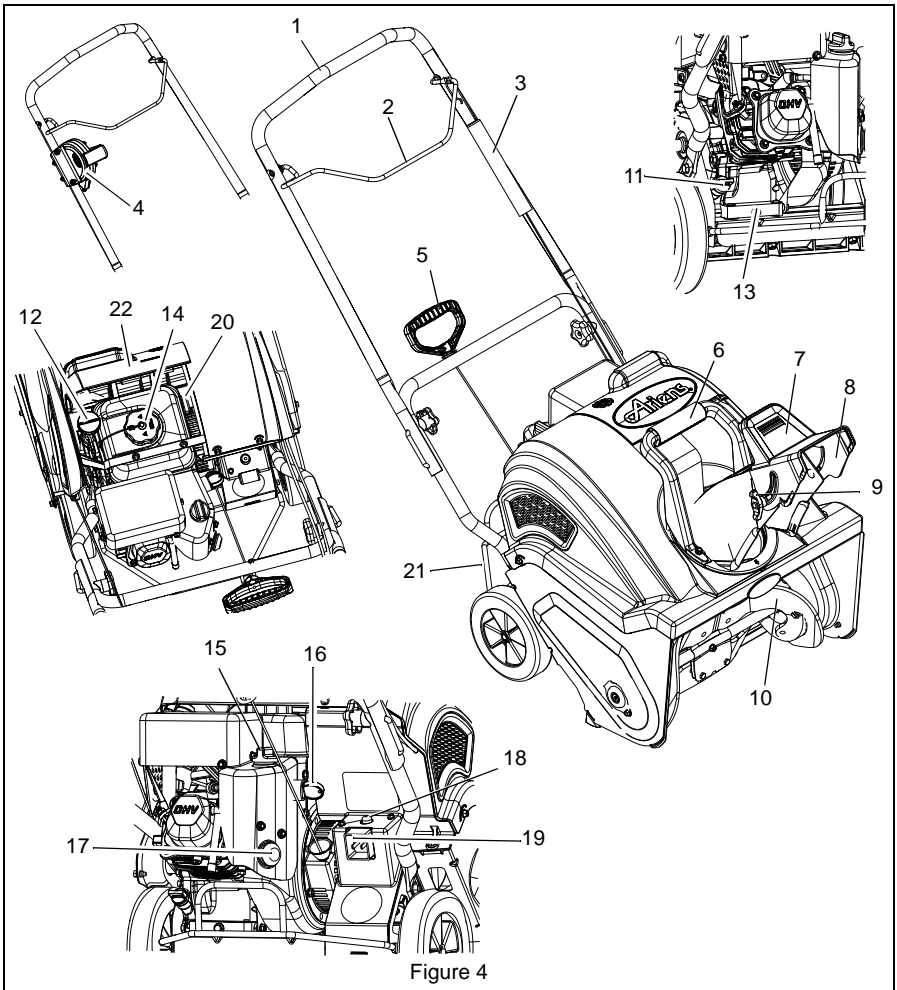


Figure 4

- | | |
|--|---|
| 1. Handlebar | 12. Oil Fill (Models 938031, 032, 033) |
| 2. Auger Control Bar | 13. Oil Drain Plug |
| 3. Auger Control Cable Assembly | 14. Fuel Cap & Tank |
| 4. Remote Discharge Chute Handle Assembly (Model 938033) | 15. Choke Control Knob |
| 5. Recoil Starter Handle | 16. Engine Switch |
| 6. Discharge Chute Handle (Models 938030, 031, 032, 034) | 17. Primer Bulb |
| 7. Discharge Chute Deflector Handle | 18. Electric Start Button (Models 938032, 033, 034) |
| 8. Discharge Chute | 19. Power Cord Receptacle (Models 938032, 033, 034) |
| 9. Wing Knob | 20. Fuel Shut-off Valve |
| 10. Auger Paddle | 21. Engine Guard |
| 11. Oil Fill (Models 938030, 034) | 22. Fuel & Oil Door |

OPERATION

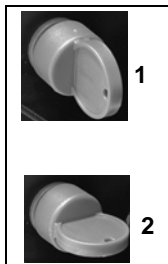
CONTROLS AND FEATURES



WARNING: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

See Figure 4 for all controls and features locations.

Engine Switch (Item 16)



The engine switch has two positions:

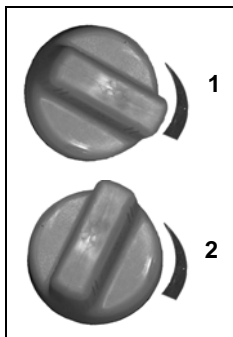
1. OFF

Engine will not start or run.

2. ON

Engine will start and run.

Choke Control Knob (Item 15)



1. START

(Choke Closed): Chokes off air to engine for easier starting.

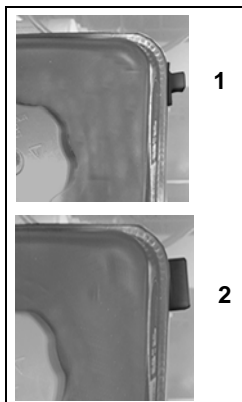
2. RUN

(Choke Open): Allows for normal operation.

IMPORTANT: Gradually open choke after engine starts.

Fuel Shut-off Valve (Item 20)

IMPORTANT: The fuel shut-off valve **MUST** be in the closed (off) position before transporting the unit. The valve is closed when it is narrow and vertical when viewed from above.



The fuel shut-off valve has two positions:

1. OFF

Use this position to service, transport or store the unit.

2. ON

Use this position to run the unit.

Primer Bulb (Item 17)

Pushing primer bulb adds fuel to engine for easier start. See *Start Engine (Recoil Start)* on page 13.

Recoil Starter Handle (Item 5)

When pulled, handle will start engine. See *Start Engine (Recoil Start)* on page 13.

IMPORTANT: Do not let handle snap back against handlebar.

Electric Start Button Models 938032, 033, 034 (Item 18)

When pushed, button will start a properly choked and cranked engine. See *Start Engine (Electric Start)* on page 13.

Discharge Chute (Item 8)

Turn discharge chute handle (Item 6) to control direction of snow discharge.

Remote Discharge Chute Handle Assembly (Item 4) Model 938033

Move remote discharge chute handle forward or backward to control direction of snow discharge.

GASOLINE

IMPORTANT: Always use gasoline that meets the following guidelines:

- Clean, fresh gasoline.
- A minimum of 87 octane/87 AKI (91 RON). High altitude use may require a different octane. Consult your Engine Manual.
- Gasoline with up to 10% ethanol (gasohol) or up to 10% MTBE (methyl tertiary butyl ether) is acceptable.
- Use of any gasoline other than those approved above may void the engine warranty. If gas pumps are not marked for the content of alcohol or ethers, check ethanol and MTBE levels with the fuel supplier.
- Do not modify the fuel system to use different fuels.
- Never mix oil and gasoline.

NOTICE: All gasoline is not the same. If the engine experiences starting or performance problems after using a new gasoline, switch to a different fuel provider or fuel brand.

IMPORTANT: Excessively oxygenated or reformulated fuels (fuels blended with alcohols or ethers) can damage the fuel system or cause performance problems. If any undesirable operating problems occur, use a gasoline with a lower percentage of alcohol or ether.

Fuel Tank

To add fuel:

1. Turn engine off and let cool for at least three minutes.
2. Open fuel and oil door (Item 22) and clean fuel cap and surrounding area to prevent moisture and debris from entering fuel tank.
3. Remove fuel cap.

IMPORTANT: Refer to Engine Manual for correct type and grade of fuel.

4. Fill fuel tank to bottom of filler neck. See *SPECIFICATIONS* on page 20 for fuel tank capacity.

IMPORTANT: Do not overfill! This equipment and/or its engine may include evaporative emissions control system components, required to meet EPA and/or CARB regulations, that will only function properly when the fuel tank has been filled to the recommended level. Overfilling may cause permanent damage to evaporative emissions control system components. Filling to the recommended level ensures a vapor gap

required to allow for fuel expansion. Pay close attention while filling the fuel tank to ensure that the recommended fuel level inside the tank is not exceeded. Use a portable gasoline container with an appropriately sized dispensing spout when filling the tank. Do not use a funnel or other device that obstructs the view of the tank filling process.

5. Replace fuel cap and tighten.
6. Clean up any spilled fuel and close fuel and oil door.

Fuel Stabilizer

Gasoline left in the fuel system for extended periods without a stabilizer will deteriorate, resulting in gum deposits in the system. These deposits can damage the carburetor and the fuel hoses, filter and tank. Prevent deposits from forming in the fuel system during storage by adding a quality fuel stabilizer to the fuel. Follow the recommended mix ratio found on the fuel stabilizer container.

ENGINE OIL

Models 938031, 032, 033

To check oil level:

1. Turn engine off and let cool for at least three minutes.
2. Open fuel and oil door (Item 22) and remove cap from oil fill.
3. Check oil level on dipstick. Oil level must be maintained at safe operating level. See *SPECIFICATIONS* on page 20. See Engine Manual for detailed information.
4. Replace cap and close door.

To add oil:

1. Turn engine off and let cool for at least three minutes.
2. Open fuel and oil door (Item 22) and remove cap from oil fill.
3. Add 5W-30 oil and replace cap. Do not overfill.
4. Clean up any spilled oil and close door.

Models 938030, 034

To check oil level:

1. Turn engine off and let cool for at least three minutes.
2. Remove cap from oil fill (Item 11).
3. Check oil level on dipstick. Oil level must be maintained at safe operating level. See *SPECIFICATIONS* on page 20. See Engine Manual for detailed information.
4. Replace cap.

To add oil:

1. Turn engine off and let cool for at least three minutes.
2. Remove cap from oil fill (Item 11) and add 5W-30 oil. Do not overfill.
3. Replace cap.
4. Clean up any spilled oil.

TRANSPORTING UNIT

1. Always shut off engine, remove key and close fuel shut-off valve when transporting on a truck or trailer.
2. Use extra care when loading or unloading onto truck or trailer. Do not lift using discharge chute handle (Item 6).
3. Secure unit chassis to transport vehicle. Never secure from rods or linkages that could be damaged.
4. Do not transport unit while engine is running.

OPERATION

Start Engine (Recoil Start)

1. Check oil level. See *Engine Oil* on page 12.
2. Position discharge chute (Item 8) in a safe direction.
3. Move engine switch (Item 16) to ON position.
4. Open fuel shut-off valve (Item 20).
5. If engine is cold, turn choke (Item 15) to CLOSED position.

NOTICE: Do not apply choke to a warm engine.

6. Push primer bulb (Item 17) twice.

NOTICE: Do not push primer bulb to start a warm engine.

7. Slowly pull recoil starter handle (Item 5) until engine compression makes pulling difficult. Let starter rewind a little, and then pull smoothly and quickly to start engine.
8. Repeat step 7 as needed.
9. Gradually open choke after engine starts.

IMPORTANT: If engine does not start after three attempts, see *TROUBLESHOOTING* on page 19.

10. Pull auger control bar (Item 2) back to handlebar to start auger; release bar to stop auger.

Start Engine (Electric Start) Models 938032, 033, 034

1. Check oil level. See *Engine Oil* on page 12.
2. Position discharge chute (Item 8) in a safe direction.
3. Connect a power cord to power cord receptacle (Item 19) and then plug cord into a wall outlet.

CAUTION: Use cord that is minimum of 13 amp, 16 Gauge, 3 wire grounded plug, UL listed, CSA Certified. Cord must be labeled suitable for outdoor use.

4. Move engine switch (Item 16) to ON position.
5. Open fuel shut-off valve (Item 20).
6. If engine is cold, turn choke (Item 15) to CLOSED position.

NOTICE: Do not apply choke to a warm engine.

7. Push primer bulb (Item 17) twice and then press electric start button (Item 18).

NOTICE: Do not push primer bulb to start a warm engine.

8. When engine starts, disconnect power cord from wall outlet, then disconnect cord from power cord receptacle.

IMPORTANT: If engine does not start after three attempts, see *TROUBLESHOOTING* on page 19.

9. Pull auger control bar (Item 2) back to handlebar to start auger; release bar to stop auger.

Discharge Chute (Item 8)

Models 938030, 031, 032, 034

IMPORTANT: Always throw snow in a safe direction, away from people and windows.

To control the discharge of snow:

1. Turn discharge chute handle (Item 6) in the direction you want to throw snow.
2. Loosen wing knob (Item 9) and move discharge chute deflector handle (Item 7) up or down to control snow throw height.
3. Tighten wing knob in desired position.

If chute becomes frozen and does not turn correctly, take unit into warm area until controls are unfrozen.

CAUTION: Do not use chute handle to lift the unit.

Remote Discharge Chute Handle Assembly (Item 4)

Model 938033

IMPORTANT: Always throw snow in a safe direction, away from people and windows.

Move remote discharge chute handle forward or backward to choose the direction to throw snow.

If chute becomes frozen and does not turn correctly, take unit into warm area until controls are unfrozen.

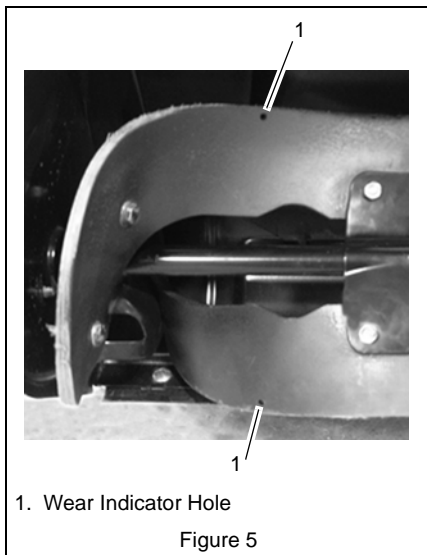
Stop Engine

1. Release auger control bar (Item 2).
2. Turn engine switch (Item 16) to OFF position.
3. If finished with unit, close fuel shut-off valve (Item 20).

MAINTENANCE

Replace Auger Paddles

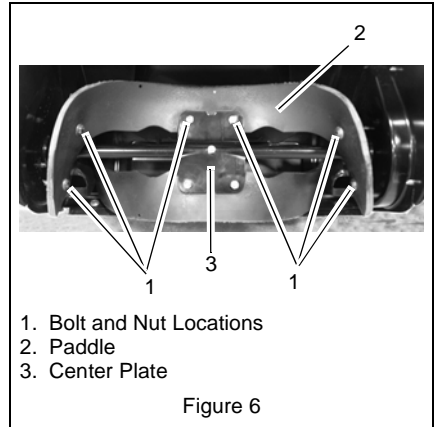
Replace auger paddles when paddles are worn down to wear indicator holes. See Figure 5.



IMPORTANT: Always replace auger paddles in pairs. Do not replace one paddle only. See *MAINTENANCE SCHEDULE* on page 17.

1. Move engine switch (Item 16) to OFF position and remove key. Allow unit to cool.
2. Tip unit back onto engine guard. Do not tip further than engine guard allows or oil may leak out of engine.
3. Remove six hex bolts and nuts per paddle. Discard hardware, spacers and paddles. See Figure 6.

NOTICE: Do not remove center plate.



1. Bolt and Nut Locations
2. Paddle
3. Center Plate

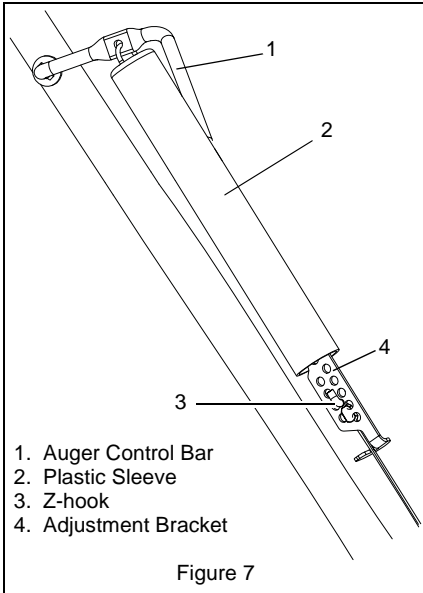
Figure 6

4. Position new paddles with wear indicator holes on the left side as you face the unit.
5. Install spacers into paddle holes and secure paddle with new hex bolts and nuts.
6. Tighten nuts to 50 – 90 in-lbf. Do not overtighten.
7. When both paddles are installed, rotate auger paddles by hand. Ensure that paddles do not rub on housing and are tightly attached.
8. Return unit to operating position.
9. Remove slack from auger cable. See *Adjust Auger Cable* on page 15.

Adjust Auger Cable

See Figure 7.

1. Move engine switch (Item 16) to OFF position and remove key. Allow unit to cool.
2. Slide plastic sleeve up to auger control bar.
3. Insert Z-hook into appropriate hole in adjustment bracket. When auger control bar is disengaged, there should be minor slack in cable and no tension.
4. Engage auger control bar to ensure proper operation. There should be no excessive tension on cable.
5. Lower plastic sleeve.

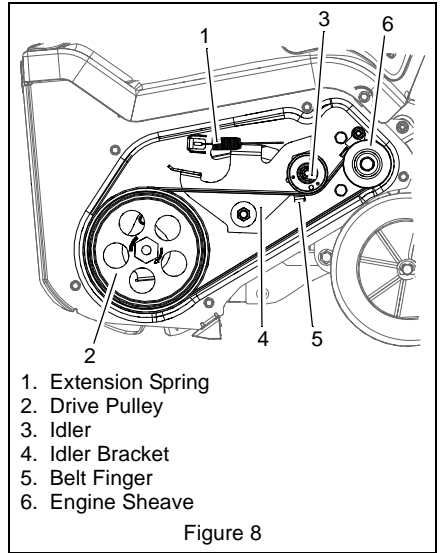


1. Auger Control Bar
2. Plastic Sleeve
3. Z-hook
4. Adjustment Bracket

Replace Belt

See *MAINTENANCE SCHEDULE* on page 17.

1. Move engine switch (Item 16) to OFF position and remove key. Allow unit to cool.
2. Remove five tapping screws from belt cover and remove belt cover. Retain all parts.
3. Disconnect extension spring from idler bracket. See Figure 8.



1. Extension Spring
2. Drive Pulley
3. Idler
4. Idler Bracket
5. Belt Finger
6. Engine Sheave

4. Remove belt from drive pulley, idler and engine sheave.
5. Install new belt on engine sheave, idler and drive pulley. Route belt between idler and belt finger on idler bracket.
6. Reinstall extension spring.
7. Reinstall belt cover.

Replace Scraper Blade

See *MAINTENANCE SCHEDULE* on page 17.

1. Move engine switch (Item 16) to OFF position and remove key. Allow unit to cool.
2. Tip unit back onto engine guard.
3. Remove nuts, bolts, scraper support and scraper blade. Retain hardware. Discard scraper blade.
4. Check condition of scraper support. Replace if worn or damaged.
5. Insert scraper support into new scraper blade. The D-shaped cutout must be on the left (drive belt side). See Figure 9.

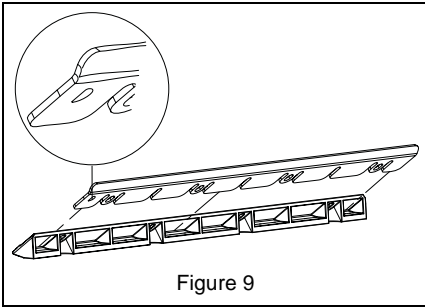


Figure 9

6. Position scraper assembly under housing. See Figure 10.
 - D-shaped cutout must be on the left.
 - Edge must point down and forward.
 - Scraper assembly bolt holes must align with square bolt holes in auger housing.

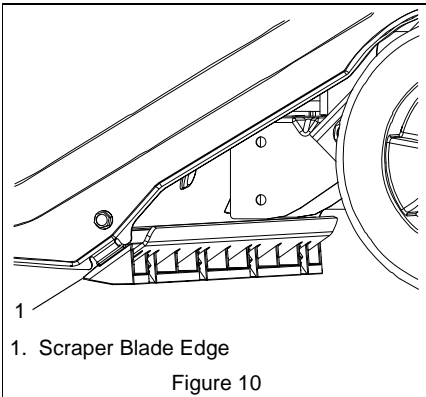


Figure 10

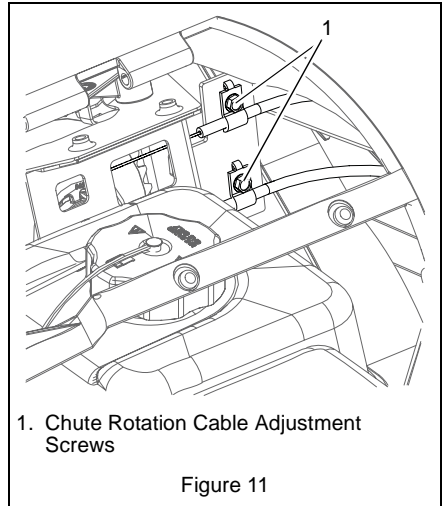
7. Move scraper assembly backward and up until small lip on top of scraper blade contacts bottom lip of housing.
8. Install bolts and nuts. Tighten nuts to 40 – 50 in-lbf. Threads must protrude beyond the nut.
9. Return unit to operating position.

IMPORTANT: If auger paddles are pulling too strongly or scraper blade is not clearing completely, loosen nuts (do not remove) and slide scraper assembly down slightly. Tighten nuts.

Adjust Remote Chute Rotation Cables

Model 938033

1. Move engine switch (Item 16) to OFF position and remove key. Allow unit to cool.
2. Open fuel and oil door (Item 22) to access chute rotation cable adjustment screws.
3. Loosen chute rotation cable adjustment screws. See Figure 11.



1. Chute Rotation Cable Adjustment Screws

Figure 11

4. Pull cable covers to the right to remove slack.
5. Tighten screws and close fuel and oil door.

IMPORTANT: Remote chute rotation cables may also be accessed from under unit by tipping unit forward.

FOR BEST PERFORMANCE

- For complete snow removal, walk slowly and slightly overlap each path previously taken.
- Position discharge chute downwind when possible.
- Do not pick up gravel and rocks. Push down slightly on handlebar to avoid picking up debris.
- Inspect auger before each use and remove any accumulation / debris.
- Check oil level before each use.
- Clean unit after each use.

MAINTENANCE SCHEDULE



WARNING: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

IMPORTANT: Proper maintenance can prolong the life of unit. The following chart shows the recommended service schedule.

Interval	Task	Action
Each Use	Clean unit.	Remove snow and debris with a soft-bristled brush. Do not use harsh abrasives or cleaners. NOTICE: Protect painted surfaces with automotive-type wax.
	Check engine oil.	See <i>Engine Oil</i> on page 12.
	Follow engine maintenance schedule.	Perform scheduled engine maintenance. Refer to Engine Manual for detailed instructions.
Every 10 Hours	Check fasteners.	Check all fasteners. Replace missing or damaged fasteners. Tighten all nuts and bolts to correct torque values.
	Check auger paddle wear.	Replace when auger paddles are worn to wear indicator holes. See <i>Replace Auger Paddles</i> on page 14.
	Check scraper blade wear.	Do not allow scraper blade to wear down too far or auger housing will become damaged. See <i>Replace Scraper Blade</i> on page 15.
As Needed	Check belt wear.	Adjust auger cable as needed. Replace when damaged or when auger stops or stutters during operation. See <i>Replace Belt</i> on page 15.
	Replace scraper blade.	Replace when damaged or when scraper blade has been adjusted down as far as possible and does not touch surface or clear properly. See <i>Replace Scraper Blade</i> on page 15.

STORAGE

SHORT TERM

Never spray unit with high pressure water or store unit outdoors.

Inspect unit for visible signs of wear, breakage or damage and repair as needed.

Keep all nuts, bolts and screws properly tightened and know unit is in safe working condition.

Store unit in a cool, dry, protected area.

Protect bare-metal areas with a light coat of oil or anti-rust compound.

LONG TERM

Perform all short term storage items.

Touch up all scratched painted surfaces.

Fuel System

Gasoline left in the fuel system for extended periods without a stabilizer will deteriorate, resulting in gum deposits in the system.

These deposits can damage the carburetor and the fuel hoses, filter and tank. Prevent deposits from forming in the fuel system during storage by adding a quality fuel stabilizer to the fuel. Follow the recommended mix ratio found on the fuel stabilizer container.

To treat the fuel system for storage:

1. Add fuel stabilizer (Ariens part number 00592900) according to manufacturer's instructions.
2. Run engine for at least 10 minutes after adding stabilizer to allow it to reach the carburetor.

Never store the engine with fuel in the fuel tank inside of a building with potential sources of ignition.

TO TAKE THE UNIT OUT OF STORAGE

1. See the Engine Service Manual to prepare engine for service.
2. Put fresh, clean fuel in the fuel tank.
3. Begin the maintenance schedule.

TROUBLESHOOTING

Problem	Probable Cause	Correction
Engine will not start.	Engine switch in OFF position.	Move switch to ON position (see <i>Engine Switch</i> on page 11).
	Fuel shut-off valve in OFF position.	Move valve to ON position (see <i>Fuel Shut-off Valve</i> on page 11).
	Fuel tank empty.	Fill fuel tank with fuel (see <i>Gasoline</i> on page 12).
	Cord not plugged in (electric start models only).	Plug power cord in or replace worn cord. Reset circuit breaker.
	Engine not primed.	Press the primer bulb twice and start engine.
	Spark plug disconnected.	Connect spark plug.
	Choke open / cold engine.	Turn choke (see <i>Choke Control Knob</i> on page 11) to CLOSED position, then press primer button and start engine.
	Engine flooded.	Turn choke to ON position and crank the engine repeatedly until it starts.
	Faulty spark plug.	Replace spark plug.
	Faulty engine.	See your Ariens Dealer.
Engine starts hard or runs poorly.	Fuel mixture too rich.	Turn choke to OPEN position. See <i>Choke Control Knob</i> on page 11.
	Faulty, fouled or incorrectly gapped spark plug.	Clean and properly set spark plug gap or see your Ariens Dealer.
	Fuel cap vent is blocked.	Clear vent.
Excessive vibration.	Loose parts or damaged auger paddles.	Stop engine immediately. Replace auger paddles. See <i>Replace Auger Paddles</i> on page 14 or see your Ariens Dealer.
Excessive snow left behind.	Scraper blade is worn.	Replace when damaged or when scraper blade has been adjusted down as far as possible and does not touch ground or clear properly. See <i>Replace Scraper Blade</i> on page 15 or see your Ariens Dealer.
Snow does not discharge.	Auger drive belt is loose or damaged.	Replace belt or adjust auger control cable. See <i>Replace Belt</i> on page 15. See <i>Adjust Auger Cable</i> on page 15. See your Ariens Dealer.
	Discharge chute is clogged with snow.	Stop engine immediately. Clean discharge chute and auger housing. DO NOT use your hands.
	Auger paddles are worn or damaged.	Replace auger paddles. See <i>Replace Auger Paddles</i> on page 14 or see your Ariens Dealer.
Remote discharge chute handle has excessive play.	Remote chute rotation cables are loose.	Adjust remote chute rotation cables. See <i>Adjust Remote Chute Rotation Cables</i> on page 16 or see your Ariens Dealer.

SERVICE PARTS

See your authorized Ariens dealer for genuine OEM service parts.

Part No.	Qty	Description
00592900	AR	Fuel Stabilizer (4 oz)
06900533	1	Auger Cable
07200627	1	Auger Belt
21547400	1	Spark Plug
53802900	1	Auger Paddle Replacement Kit
53803100	1	Scraper Blade Replacement Kit
53803800	1	Pawl Arm Replacement Kit

ACCESSORIES

See your authorized Ariens dealer to add these optional accessories to your unit.

Part No.	Description
73801100	Sno-Thro Cover Kit
70707600	Protective Floor Mat
73800600	Snow Shield Kit
73800800	Remote Chute Rotation Kit (Models 938030, 031, 032, 034)
73801000	Maintenance Kit*

*Includes 16 oz. 5W-30 engine oil, spark plug, fuel stabilizer and non-stick spray (Snow-Jet).

SPECIFICATIONS

Model Number	938030	938031	938032	938033	938034
Model	SS21	SS21	SS21E	SS21EC	SS21E
Starter	Recoil	Recoil	Electric / Recoil	Electric / Recoil	Electric / Recoil
Engine					
Engine	Ariens				
Engine Model Number	AX136	AX208		AX136	
Engine Size	136cc	208cc		136cc	
Max RPM	3600 ± 100				
Oil Capacity: Pt. (L)	1.0 (.473)				
Fuel Tank Capacity: Qt. (L)	2.9 (2.7)				
Fuel Octane Rating	See Engine Manual				
Size and Weight					
Length: in. (cm)	54.3 (137.9)				
Width: in. (cm)	21.6 (54.9)				
Height: in. (cm)	40.9 (103.9)				
Weight: lbs. (kg)	87 (39.46)	91 (41.28)	95 (43.10)	97 (44.00)	91 (41.28)



Sno-Thro[®], Sno-Tek[®] and Chore Performing Equipment Limited Warranty

Ariens Company (Ariens) warrants to the **original purchaser** that Ariens, Gravely, Parker, and Countax brand chore performing equipment (including Sno-Thro[®] and Sno-Tek[®] equipment) purchased on or after 1/1/2013 will be free from defects in material and workmanship for the time period noted in the chart below. Equipment put to personal use around a single household or residence is considered "Consumer Use"; equipment put to any business use (agricultural, commercial, or industrial) or used at multiple locations is considered "Commercial Use." If any product is rented or leased, then the duration of these warranties shall be 90 days after the date of purchase.

An authorized Ariens dealer (Ariens brand products), Gravely dealer (Gravely brand products), Parker dealer (Parker brand products), or Countax dealer (Countax brand products) will repair any defect in material or workmanship, and repair or replace any defective part, subject to the conditions, limitations and exclusions set forth herein. Such repair or replacement will be free of charge (labor and parts) to the original purchaser except as noted below.

Warranty Code	Product Group	Warranty Period Consumer Use	Warranty Period Commercial Use
PA	Log Splitters, Brushes, String Trimmers, Edgers	3 Years	90 Days
PB	Professional Powered Brushes	3 Years	1 Year
PC	Tillers	2 Years	90 Days
PD	Vacuums, Blowers, Sweepers, Truck Loaders, Lawn Rakes, Sprayers, Aerators, etc.	1 Year	1 Year
PE	Pressure Washer, Generators	3 Years	1 Year
SA	Professional Sno-Thro [®]	3 Years	1 Year
SB	Compact, Deluxe, Platinum, AMP [™] Sno-Thro [®] , Path-Pro [®]	3 Years	90 Days
SC	Sno-Tek [®]	2 Years	90 Days
UA	Utility Vehicles	1 Year	1 Year
N/A	Service (Replacement) Parts	90 Days (no labor)	90 Days (no labor)

Special Extensions

The chart below details special extensions to this warranty:

Warranty Code	Warranty Exception	Warranty Period	Use	Detail
SA	Cast Iron Auger Gear Case	5 Years	All	5 Years for all users including Commercial
SB	Cast Iron Auger Gear Case	5 Years	Consumer	5 Years for Consumer use; 1 Year for Commercial Use
SB	Batteries for AMP [™] Sno-Thro [®]	2 Years	Consumer	100% first year; prorated second year.

Exceptions and Limitations

The chart below details special exceptions to this warranty:

Warranty Code	Warranty Exception	Warranty Period	Use	Detail
All	Batteries	1 Year	All	Prorated
All	Belts, Muffler, Tires	None	Commercial	These components are not covered when used commercially.
All	Cloth, Plastic, and Rubber Components (Including Belts and Cables)	Maximum 2 Years	All	Warranty is limited to 2 years for consumer use. (1 year for warranty code "PD".) Except as noted above, these components are covered for defect, not for wear.
SA, SB, SC	Idlers	Maximum 2 Years	All	Warranty is limited on idlers to 2 years for consumer use.
All	Engines	See Engine Manufacturer's Warranty	All	Engines are covered by engine manufacturer's warranty. Refer to engine manufacturer's warranty statement.

Customer Responsibilities

Register the product immediately at the time of sale. If the dealer does not register the product, the customer must complete the product registration card in the literature package and return it to Ariens Company, or register the unit online at www.ariens.com, www.gravely.com, www.countax.com or www.parkersweeper.com.

To obtain warranty service, the **original purchaser** must:

- Perform the maintenance and adjustments explained in the Owner's Manual.
- Promptly notify Ariens or an authorized Ariens, Gravely, Parker or Countax service representative of the need for warranty service.
- Transport the product to and from the place of warranty service at owner's expense.
- Have the warranty service performed by an authorized Ariens, Gravely, Parker or Countax service representative.

To Find an Authorized Service Representative:

In the U.S. and Canada:		
Use the dealer locator on our websites: www.ariens.com • www.gravely.com		
Or contact us by mail or by phone:		
In the U.S., Canada, Mexico, Caribbean, Central and South America:	In Europe, Asia, Africa or the Middle East:	In Australia or New Zealand:
Ariens Company 655 W. Ryan Street Brillion, WI 54110 Phone: (920) 756 - 4688 www.ariens.com	Countax Ltd, Countax House Great Haseley, Oxfordshire, OX44 7PF Phone: 0800 597 7777 www.countax.com	Ariens Company Building 2 6 Wedgewood Rd. Hallam, Victoria 3803 Australia Phone: (03) 9796 4244 1800 335 489 www.ariens.com.au

Exclusions – Items Not Covered by This Warranty

- Parts that are not genuine Ariens, Gravely, Parker or Countax service parts are not covered by this warranty and may void the warranty.
- Damages resulting from the installation or use of any part, accessory, or attachment which is not approved by the Ariens Company for use with product(s) identified herein are not covered by this warranty.
- The following maintenance, service and replacement items are not covered by this warranty unless they are noted in the Limitations section above: lubricants, spark plugs, oil, oil filters, air filters, fuel filters, brake linings, brake arms, brake shoes, skid shoes, scraper blades, shear bolts, mower blades, mower vanes, brushes, headlights, light bulbs, knives, cutters, and single-stage impellers.
- Any misuse, alteration, improper assembly, improper adjustment, neglect, or accident which requires repair is not covered by this warranty.
- **Use of gasoline blends exceeding 10% ethanol voids any and all warranties.**
- Products are designed to the specifications in the area that the product was originally distributed. Different areas may have significantly different legal and design requirements. This warranty is limited to the requirements in the area in which the unit was originally distributed. Ariens Company does not warrant this product to the requirements of any other area. Warranty service is limited to service within the area originally distributed.
- In countries other than the United States and Canada, contact the Ariens Company dealer for warranty policies that govern within your country. Rights may vary from country to country and within any one country.
- Normal Wear: This warranty does not cover repair when normal use has exhausted the useful life of a part such as a high pressure hose, spray wand, nozzles, trigger handle, supply hoses, quick couplers, gaskets, valves, pistons, pump valve assemblies, o-rings, water and oil seals.

Special Exclusions on Utility Vehicles

The following uses void the warranty terms on Utility Vehicles (Warranty Code UA):

- Renting or leasing the utility vehicle.
- Using the utility vehicle to tow or carry loads in excess of the limits specified in the Owner/Operator Manual.
- Modifying the utility vehicle with parts and accessories that are not genuine or authorized Ariens or Gravely parts or accessories.
- Modifying the utility vehicle without express written authorization from Ariens Company.
- Operating the utility vehicle when it has not been completely and properly assembled and pre-delivered by an authorized Gravely dealer.

Disclaimer

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.

LIMITATION OF REMEDY AND DAMAGES

Ariens Company's liability under this warranty, and under any implied warranty that may exist, is limited to repair of any defect in workmanship, and repair or replacement of any defective part. Ariens Company shall not be liable for incidental, special, or consequential damages (including lost profits). Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

AUSTRALIAN CONSUMER LAW

The following applies solely to warranties subject to Subsection 102(1) of the Australian Consumer Law: Our goods come with guarantees that cannot be excluded by the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

DISCLAIMER OF FURTHER WARRANTY

Ariens Company makes no warranty, express or implied, other than what is expressly made in this warranty. If the law of your state provides that an implied warranty of merchantability, or an implied warranty of fitness for particular purpose, or any other implied warranty, applies to Ariens Company, then any such implied warranty is limited to the duration of this warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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



Ariens
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Fax 920-756-2407
www.ariens.com
www.ariens.com.au



WARNING



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

An *Ariens* Company Brand