



Owner/Operator Manual Manuel Du Propriétaire/Utilisateur

Model 916002 – 34-Inch Deck





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INTRODUCTION

NON-ENGLISH MANUALS



Manuals in languages other than English may be obtained from your Dealer. Visit your dealer or www.ariens.com for a list of languages available for your equipment.

Manuals printed in languages other than English are also available as a free download on our web site:

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Puede obtener manuales en idiomas diferentes del inglés en su distribuidor. Visite a su distribuidor o vaya a www.ariens.com para obtener una lista de idiomas disponibles para su equipo.

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THE MANUAL

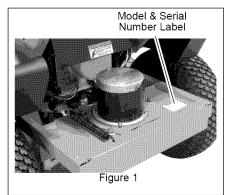
Before operation of unit, carefully and completely read your manual. The contents will provide you with an understanding of safety instructions and controls during normal operation and maintenance.

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

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 printed on a serial number label, located on the frame of your unit under the rear hood (figure 1).



 Record Unit Model and Serial numbers here.

Model No.:

Serial No.:

PRODUCT REGISTRATION

The Ariens dealer must register the product at the time of purchase. Registering the product will help the company process warranty claims or contact you with the latest service information. All claims meeting requirements during the limited warranty period will be honored, whether or not the product registration card is returned. Keep a proof of purchase if you do not register your unit.

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 on the Internet

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 complete Parts manual may be downloaded from www.ariens.com on the Internet

DELIVERY

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

 Read and understand all assembly 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 on the Internet.



WARNING: Improper assembly or adjustments can cause serious injury.

Before Attempting to Operate Your Unit:

- Charge batteries for a minimum of 16 hours.
- 2. Make sure all assembly has been properly completed.

- 3. Understand all Safety Precautions provided in the manuals.
- Review control functions and operation of the unit. Do not operate the unit unless all controls function as described in this manual.
- 5. Review recommended lubrication, maintenance and adjustments.
- 6. Review Limited Warranty Policy.
- Fill out a product registration card and return the card to the Ariens Company or go to 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 cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the safety instructions in the manuals and on decals could result in serious injury or death.

Slopes are a major factor related to loss-of-control and tip-over accidents. Operation on all slopes requires extra caution.

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.

Disengage attachment, stop unit and motor, remove key, engage parking brake, and allow moving parts to stop before leaving operator's position.

SAFETY ALERTS



Look for these symbols to point out important safety precautions. They mean:

- Attention!
- Personal Safety Is Involved!
- Become Alert!
- Obey The Message!

The safety alert symbol is used in decals and with this manual. Understand the safety message. It contains important information about personal safety.



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.

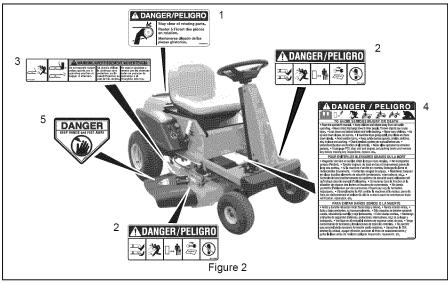
NOTATIONS

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

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

SAFETY DECALS AND LOCATIONS

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



1. DANGER!



Avoid injury - Stay clear of rotating parts.

3. WARNING!



Always stand clear of discharge area.



Do not operate mower unless bagger is attached or guards are in operating position.

4. DANGER! TO AVOID SERIOUS INJURY OR DEATH



Read the operator's manual.



Keep children and others away from unit while operating.



Never direct discharge toward other people. Thrown objects can cause injury.



Look down and behind before and while backing.



Always keep feet and hands away from rotating parts.



Always stand clear of discharge area. Do not direct discharge toward other people.



Keep people away from unit while operating.



Remove key, disconnect batteries and read manual before you adjust or repair unit.



NO STEP! Always keep feet away from rotating parts.



Never carry children.



OL1806



Go up and down slopes, not across.

DO NOT operate on slopes over 10°.

- If machine stops going uphill, stop blade and back down slowly.
- Avoid sudden turns.
- Keep safety devices (guards, shields, switches, etc.) in place and working.
- Check interlock system per manual before use.
- Understand location and function of all controls.
- Never allow operation by untrained persons.
- Disengage PTO, stop unit and motor, set parking brake and remove key before making any inspections, repairs, etc.

5. DANGER!



Keep hands and feet away.

SAFETY RULES

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.

Only the user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

Read, understand, and follow all safety practices in Owner/Operator Manual before assembling, using or working on this mower. ALWAYS remove key and disconnect power cable from batteries before working on this unit.

Inspect unit before each use for: missing or damaged decals and shields and correctly operating safety interlock system. Replace or repair as needed. ALWAYS check overhead and side clearances carefully before operation. ALWAYS be aware of traffic when crossing or operating along streets or curbs.

Keep children, people, and pets away. Be alert and shut off unit if anyone enters work area. Keep children under watchful care of a responsible adult.

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

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

Stay alert for hidden hazards, holes, and ruts.

Avoid uneven or 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.

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

DO NOT operate in the rain or in wet or damp locations.

Data indicates that operators, age 60 and above, are involved in a larger percentage of riding mower related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.

Only trained adults may operate unit. Training includes being familiar with controls and actual operation.

NEVER operate unit after or during the use of medication, drugs or alcohol.

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

Wear adequate safety gear, sturdy shoes, 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. Always wear safety goggles or safety glasses with side shields when operating mower.

Avoid sharp edges. Sharp edges can cut. Moving parts can cut off fingers or a hand.

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

ALWAYS keep hands away from all pinch points.

Start and operate unit only when seated in operator's position. PTO must be disengaged and parking brake set to start unit.

Blades can engage with the key and PTO in the ON position, even if the drive motor is not running. Keep area clear of bystanders when engaging PTO switch.

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

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

NEVER direct discharge towards persons or property. Thrown objects may ricochet back towards operator. ALWAYS stand clear of the discharge area.

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

Use extreme caution on gravel surfaces.

Disengage PTO when attachment is not in use and when crossing gravel surfaces.

DO NOT operate unit if safety interlock system is damaged or disabled. Check safety interlock before each use.

Always keep power switch in OFF position when unit is parked or charging.

ALWAYS remove key to prevent unauthorized use.

DO NOT operate at too fast a rate. Slow down before turning.

Stop unit, allow blades to stop and disconnect batteries before unclogging chute.

DO NOT mow on wet grass. Reduced traction could cause sliding.

DO NOT try to stabilize the machine by putting your foot on the ground.

Know the weight of loads. Limit loads to those you can safely control and the unit can safely handle.

Do not operate without the discharge guard in place.

Do not operate unit without mowing deck attached.

Mower blades will stop when operating in reverse. ALWAYS look down and behind before and while backing; especially for children.

NEVER carry passengers – especially children – even with blades off.

Use extra care when approaching blind corners or objects that may obscure vision of hidden obstacles and children.

If you cannot back up a slope or you feel uneasy on it, do not mow it.

Mow up and down slopes, not across them.

Use slow speed on any slope. Tires may lose traction on slopes even though the brakes are functioning properly.

Keep all movements on the slope *slow* and *gradual.* DO NOT make sudden changes in speed or direction.

Avoid starting, stopping, or turning on a slope. If tires lose traction, disengage the blades and proceed slowly *straight* down the slope.

DO NOT operate on slopes over 10°.

DO NOT park on slopes unless necessary. If unit is parked on a slope, ALWAYS chock or block wheels and set parking brake.

DO NOT disengage or bypass transmission and coast downhill.

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.

ALWAYS disconnect batteries when transporting unit.

Keep unit free of grass clippings, leaves, and other debris. DO NOT spray water to clean unit. Disconnect batteries and use only compressed air. Wear adequate eye and hearing protection when cleaning unit.

Explosive Gases from batteries can cause death or serious injury. Poisonous battery fluid contains sulfuric acid and its contact with skin, eyes or clothing can cause severe chemical burns.

NO flames, NO sparks, NO smoking near batteries.

ALWAYS wear safety glasses and protective gear near battery. Use insulated tools.

ALWAYS keep batteries out of reach of children.

Battery posts, terminals and related accessories may contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

A frozen battery can explode and result in death or serious injury. DO NOT charge batteries if frozen. Thaw the battery before connecting to charger.

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

Stop and inspect equipment if you strike an object or if there is an unusual vibration. Repair, if necessary, before restarting. Never make adjustments or repairs without first disconnecting the batteries.

Mower blades are sharp and can cut you. Wrap the blade(s) or wear gloves, and use extra caution when servicing them. NEVER weld or straighten mower blades. Check brake operation frequently. Adjust and service as required.

Keep all hardware properly tightened. Stored energy in springs can cause injury. Maintain or replace safety and instruction labels, as necessary. Use only attachments or accessories designed for your unit.

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

SETUP



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

Unpack Unit

Remove unit and all other components from the shipping container. Engage transmission bypass lever (see *MOVING UNIT MANUALLY* on page 14). Release parking brake and push unit from container onto a level surface. Set parking brake and release transmission bypass lever.

Connect Batteries

See Battery Connectors on page 12.

Charge Batteries

IMPORTANT: Batteries MUST be charged for a minimum of 16 hours before the first use. See *Charging the Batteries* on page 20.

Check Tire Pressure



CAUTION: Avoid injury! Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.
- Do not inflate the tires above the recommended pressure.
- Do not weld or heat a wheel and tire assembly. Heat can cause an increase in air pressure resulting in an explosion. Welding can structurally weaken or deform the wheel.
- Do not stand in front or over the tire assembly when inflating. Use a clip-on chuck and extension hose long enough to allow you to stand to one side.

See SPECIFICATIONS on page 26.

Level Mower Deck

See LEVELING AND ADJUSTING PITCH OF MOWER DECK on page 16.

Check Safety Interlock System

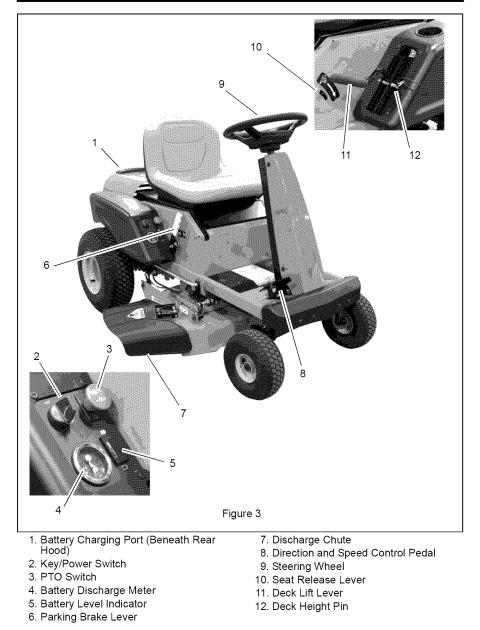
WARNING: Safety interlock failure and improper operation of unit can result in death or serious injury. Check system before each use to make sure it is functioning properly.

See Safety Interlock System on page 10.

Check function of all controls

See OPERATION on page 10.

CONTROLS AND FEATURES



OPERATION

CONTROLS AND FEATURES



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

See figure 3 for all controls and features locations.

Safety Interlock System



WARNING: Safety interlock failure and improper operation of unit can result in death or serious injury. Check system before each use to make sure it is functioning properly.

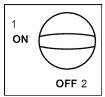
Perform the following tests to ensure the safety interlock system is working properly. If the unit does not perform as stated contact your Ariens dealer for repairs.

Test	Power	Switch	РТО	Parking Brake	Mower Blades	Drive Motor
1	Or	١	Off	Engaged	Do Not	Does
					Engage	Not Run
2			Off	Released * Do Not		Runs
					Engage	
3			On	Released *	Engage	Runs
4**			On	Released *	Stop	Runs
5***			On	Released *	Stop	Stops
						Running
* D -	* Dealair a back a second by a second of factors					

* Parking brake must be cycled from engaged to released after power switch is turned on.

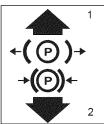
- ** Operator operates unit in reverse.
- *** Operator lifts off seat.

Power Switch



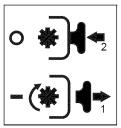
Operate power switch with a removable key. Power switch has two positions: ON (1), and OFF (2).

Parking Brake Lever



Engages (2) and releases (1) parking brake.

Power Take-Off (PTO) Switch



Engages mower blades (1) and disengages mower blades (2).

NOTE: Mower blades automatically disengage when operating mower in reverse. PTO switch must be disengaged (2) and

re-engaged (1) to restart mower blades once backing is complete.



WARNING: AVOID INJURY. With key in ON position mower blades can engage when PTO switch is engaged, even if drive motor is not trunning. Keep area clear of bystanders when engaging PTO switch.

Direction and Speed Control Pedal



Forward (1) – Press front of pedal down to move unit forward.

Reverse (2) – Press rear of pedal down to move unit backward.

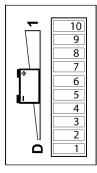
The further that the pedal is pushed down the faster the unit will travel in that direction.

IMPORTANT: Faster speeds reduces transaxle torque. To climb hills, partially press pedal.

NOTE: Foot pedal will not operate with parking brake engaged. Release parking brake to unlock foot pedal and move unit forward or reverse.

To stop, remove foot from pedal or manually return pedal to neutral position.

Battery Level Indicator



When the key is in the ON position one LED will light, indicating the relative charge remaining in the batteries. When the batteries are fully charged (1) LED 10 or 9 will be lit

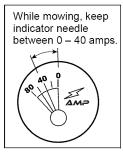
During operation the lit LED will change, moving down the indicator scale as the batteries discharge.

When the battery charge is nearly depleted (D) LED 1 and 2 will flash alternately.

NOTE: The battery level indicator will only reset once the batteries have been fully charged.

IMPORTANT: When battery voltage becomes low, the mower blades will stop, although the drive motor will continue to run. When the batteries discharge to this point they require recharging. The unit should immediately be returned to the battery charging area and the unit connected to the battery charger.

Battery Discharge Meter



Displays the amount of amperage being drawn by the motors.

NOTE: For most efficient mowing set mower cutting height and adjust travel speed to keep the indicator needle within the green range (0 – 40 amperes) on

the meter. Cutting conditions and travel speeds that cause the needle to move into the yellow or red ranges will rapidly draw down the batteries and significantly reduce cutting times.

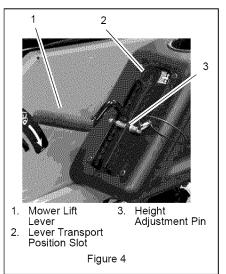
Mower Lift Lever

(Figure 4)

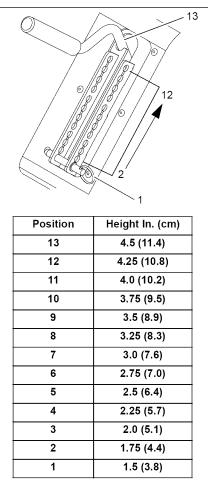


Raises and lowers mower deck. To adjust mowing height move lever to transport (fully raised) position slot. Position height adjustment pin in holes to achieve desired

cutting height. Move lever from transport position to rest on height adjustment pin to mow.



Height of Cut



Seat Release Lever

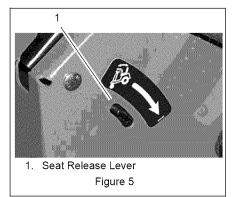
(Figure 5)



The seat locks in both the raised and lowered positions. To raise or lower seat:

1.Press seat release lever down.

- 2.Raise or lower seat.
- 3.Release lever.

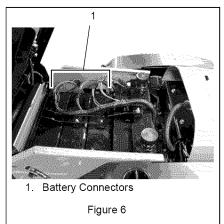


Battery Connectors

(Figure 6)

The battery connectors are located under the seat. There is one connector on each of the five batteries. ALWAYS disconnect the batteries before cleaning or performing maintenance on unit.

IMPORTANT: All five batteries must be disconnected to remove power from the electrical system.



Battery Charging Port

(Figure 7)

The battery charging port is located under the hood at the rear of the unit. Keep the protective cover on the connector to keep out dust and debris while operating.

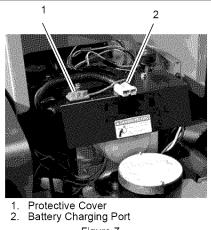


Figure 7

STOPPING IN AN EMERGENCY

Bring foot pedal back to neutral, disengage PTO, set parking brake, and turn off power switch.

STARTING AND STOPPING UNIT

Starting

IMPORTANT: Always disengage the PTO and engage the parking brake before starting. Operator must be seated in operator's seat (see *Power Take-Off (PTO) Switch* on page 10).

- 1. Insert key and turn power switch to the ON position. Lights in battery level indicator will glow. Drive motor will not yet run.
- 2. Release parking brake. Drive motor will run.
- 3. Engage PTO.

IMPORTANT: Never engage PTO if mower is plugged with grass or other material.

Stopping

- 1. Stop unit.
- 2. Disengage PTO.
- 3. Set parking brake. Drive motor will stop.
- 4. Turn power switch to OFF position and remove key.

Operating on an Incline

The transaxle produces more torque at lower speed. Pressing less on the foot pedal when climbing a slope will provide more torque to the wheels. Pressing the control pedal all the way forward will likely result in the unit being unable to climb the slope.

TRANSPORTING UNIT

ALWAYS set parking brake, disconnect batteries and remove key from power switch when transporting unit on a truck or trailer. Tie unit down securely. Do not tie down by linkages, guards, cables or other parts that may be damaged.

FOR BEST PERFORMANCE

Adjust cutting height and travel speed to keep indicator in the battery discharge meter within Green Zone (0 - 40 amp).

Cut grass when it is dry.

Keep mower blades sharp.

Keep mower deck properly leveled.

Do not set height of cut too low. Mowing very tall grass will require mowing more than once at progressively lower cut heights.

Do not travel too fast.

Discharge clippings into areas already cut. Vary cutting pattern with each mowing.

Do not allow grass or debris to collect inside of mower deck. Clean after each use.

Cut grass at cooler times of the day. High temperatures affect battery service life (see figure 8).

Temperature F° (C°)	% of Expected Battery Service Life				
68 (20)	100%				
77 (25)	89%				
86 (30)	78%				
95 (35)	67%				
104 (40) 56%					

MOVING UNIT MANUALLY

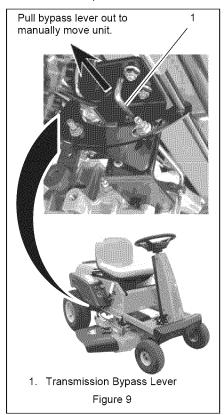


WARNING: DO NOT disengage or bypass transmission and coast downhill.

Unit can be moved manually by disengaging transmission.

Disengage transmission by pulling transmission bypass lever (1) out (away) from transmission housing (see figure 9). This lever is located just in front of the right rear tire.

Push transmission bypass lever in toward housing to engage transmission and move unit under its own power.



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. To have full access to the batteries the seat must be tipped forward (see *Seat Release Lever* on page 12).

Interval	Task	Action					
Whenever Unit is Not in Use	Charge Batteries	IMPORTANT: The unit MUST be connected to the battery charger whenever it is not in use. Failure to keep batteries fully charged will reduce battery life and void battery warranty.					
Each Use	Check Safety Interlock System	WARNING: Safety interlock system failure and improper operation of unit can result in death or serious injury. Test this system each time the unit is operated. If this system does not function as described, do not operate until repairs are made (see <i>Safety Interlock System</i> on page 10).					
	Check Parking Brake	Engage parking brake and disengage transmission (see <i>MOVING</i> <i>UNIT MANUALLY</i> on page 14). Push unit. If unit rolls, contact your Ariens Dealer.					
	Clean Unit	Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. DO NOT spray unit with water. Do not use, solvents, hard cleaners, or abrasives. Use only compressed air.					
		NOTE: Protect painted surfaces with automotive-type wax.					
	Check Tires	See SPECIFICATIONS on page 26 for correct tire pressure. See Check Tire Pressure on page 8.					
	Check Mower Blades	Check for worn or damaged mower blades (see <i>SHARPENING MOWER BLADE</i> on page 18).					
25 Hours or Every	Check Batteries	Keep battery compartment and charging port clean (see <i>Battery Charging Port</i> on page 13).					
Season	Lubricate Front Axle	Apply grease to zerk (1) on front axle.					
50 Hours or Every Season	Check Fasteners	Check mower blade mounting hardware and all other fasteners. Replace fasteners that are missing or damaged. Tighten all nuts and bolts to the correct torque value.					
100 Hours or Every Season	Check Hydrostatic Belt	 Replace worn or deteriorated belt. Check hydrostatic belt (see REPLACE HYDROSTATIC BELT on page 21 for hydrostatic belt location). 					

Transaxle

The transaxle is maintenance free, and when properly operated does not need to be serviced during the life of the unit. The hydraulic fluid level does not need to be checked or adjusted. Hydraulic fluid will not be visible in the expansion reservoir on top of the transaxle when the unit is cool. At operating temperature the fluid level will rise and may be visible. If any leak develops, the transaxle must be serviced by and Ariens dealer.

Transaxle fluid type: SAE 10W-30 API Class CD.

SERVICE AND ADJUSTMENTS



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

SEAT ADJUSTMENT

- 1. Tip seat forward.
- 2. Loosen mounting hardware and slide seat forward or backward to desired position. Tighten mounting hardware (figure 10).
- 3. Tip seat back.

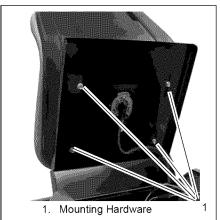


Figure 10

MOWER DECK REMOVAL AND INSTALLATION

IMPORTANT: Do not operate unit without mower deck installed.

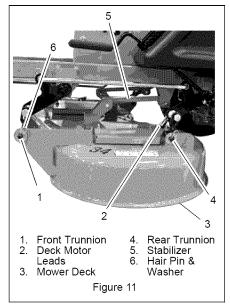
Remove (Figure 11)

- 1. Set deck height to lowest position.
- 2. Disconnect unit from battery charger and disconnect batteries (see *Battery Connectors* on page 12).
- 3. Disconnect deck motor leads from wiring harness.
- Remove hair pin and clevis pin retaining stabilizer to mower deck and disconnect stabilizer.
- Remove hair pin and washer from front and rear trunnions and disconnect trunnions from mower deck brackets.
- 6. Repeat steps 3 5 on other side of unit.
- 7. Slide mower deck out from under unit.

Install (Figure 11)

1. Slide mower deck under unit.

- Insert front and rear trunnions into mower deck brackets and secure with washers and hair pins.
- Connect stabilizer to mower deck and secure with clevis pin and hair pin.
- 4. Connect deck motor leads to wiring harness.
- 5. Repeat steps 3 5 on other side of unit.
- 6. Reset deck height to desired cutting height.
- 7. Level and adjust pitch of mower deck (see LEVELING AND ADJUSTING PITCH OF MOWER DECK on page 16).
- 8. Reconnect batteries and connect battery charger to unit.



LEVELING AND ADJUSTING PITCH OF MOWER DECK

NOTE: Adjust on a level surface, with the tires inflated to the correct air pressure (see *SPECIFICATIONS* on page 26).

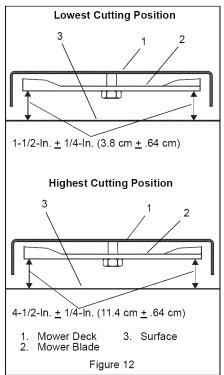
There are three measurements required to level and adjust the pitch of the mower deck.

- 1. The distance from the mower blades to the surface.
- 2. The forward pitch of the mower blades.
- The pitch of the mower blades from side to side.

Blade Height (Figure 12)

The distance from the mower blades to the surface should be:

- Lowest cutting position
 1-1/2-In. <u>+</u> 1/4-In. (3.8 cm <u>+</u> .64 cm).
- Highest cutting position
 4-1/2-In. <u>+</u> 1/4-In. (11.4 cm <u>+</u> .64 cm).

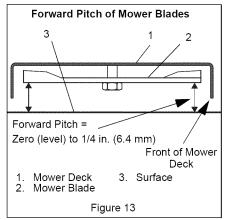


Forward Pitch (Figure 13)

The forward pitch of the mower blades should be:

• Zero (level) to 1/4-In. (6.4 mm) pitched forward.

NOTE: This measurement must be taken when the mower blades ends are facing forward.

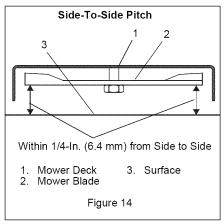


Side-to-Side Pitch (Figure 14)

The pitch of the mower blades from side to side should be:

Within 1/4-In. (6.4 mm) as measured on each side of the mower deck.

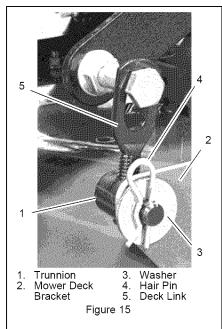
NOTE: This measurement must be taken when the mower blades ends are perpendicular (at a right angle) to the frame of the unit.



Adjusting Mower Deck To Adjust Mower Blade Height And Pitch (Figure 15)

NOTE: Adjusting the mower deck will adjust the height and pitch of the mower blades.

- Adjust the trunnions first and re-take the three measurements required to level and adjust the pitch of the mower deck. These measurements are:
 - a. The distance from the mower blades to the ground.
 - b. The forward pitch of the mower blades.
 - c. The pitch of the mower blades from side to side.
- 2. Repeat step 1 as needed until all three measurements are within specification.



REPLACING MOWER BLADE

Remove (Figure 16)



CAUTION: Mower blades are sharp and can cut you. Wrap the blades or wear gloves, and use extra caution when servicing them.

1. Disconnect unit from battery charger and disconnect batteries (see *Battery Connectors* on page 12).

- 2. Block mower blades to prevent rotation.
- 3. Remove mounting hardware and mower blades from mower deck.

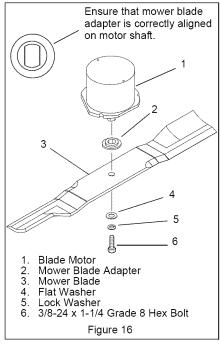
NOTE: Fasteners are standard right-hand thread.

Install (Figure 16)

1. Install mower blades on blade motors with mounting hardware.

IMPORTANT: Ensure that mower blade adapter is correctly aligned on motor shaft and fully seated before tightening.

- 2. Torque 3/8-inch hex bolt to 44 lbf-ft. (59.6 N•m).
- 3. Reconnect batteries and attach battery charger to unit.



SHARPENING MOWER BLADE

	CAUTION: DO NOT sharpen mower blade while on unit. An unbalanced mower blade will cause excessive vibration and eventual damage to unit. Check mower blade balance prior to reinstalling mower blades. NEVER weld or straighten mower blades.
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1. Remove mower blade from unit (see *REPLACING MOWER BLADE* on page 18).

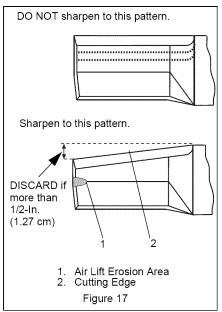
Ariens recommends having mower blades sharpened by a professional. Contact your Ariens dealer.

Discard mower blade if (figure 17):

- more than 1/2-In. (1.27 cm) of metal is removed.
- the air lift erosion area is eroded.
- · the mower blade is bent or broken.

Do not change angle of cutting edge or round the corner at the end of mower blade.

- Sharpen mower blade by removing an equal amount of material from each end of mower blade.
- Check mower blade balance by sliding mower blade on an unthreaded bolt. If blade is balanced, it should remain in a horizontal position. If either end of mower blade moves downward, sharpen the heavy end until mower blade is balanced.
- Install mower blade on unit (see *REPLACING MOWER BLADE* on page 18).



BATTERY SERVICE

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Unit comes equipped with five maintenancefree 48-volt battery packs that require no regular maintenance other than regular charging.

IMPORTANT: Batteries must be attached to the battery charger when the unit is not being used (see *Charging the Batteries* on page 20).

Batteries are not to remain in a discharged state or damage to the batteries will occur. Lead sulfate deposits will form inside the batteries affecting charging and operation.

A discharged battery can freeze if left in conditions under 32° F (0° C).

Follow First Aid directions for contact with battery fluid.

- · External Contact: Flush with water.
- Eyes: Flush with water for at least 15 minutes and get medical attention immediately!
- Internal Contact: Drink large quantities of water. Follow with Milk of Magnesia, beaten egg or vegetable oil. Get medical attention immediately!

In case of internal contact, DO NOT induce vomiting!

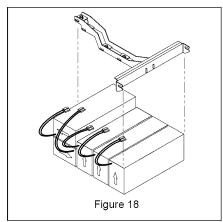
Battery Removal and Installation

Remove (Figure 20)

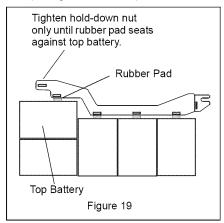
- 1. Tip seat forward (see *Seat Release Lever* on page 12).
- 2. Disconnect batteries (see *Battery Connectors* on page 12).
- Remove battery hold-down nut. Remove battery hold-down bracket by rotating forward and removing from slot in front of battery compartment.
- 4. Disconnect each battery from power cable and remove batteries.

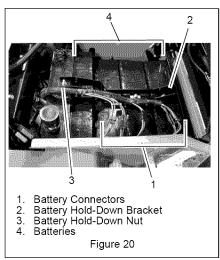
Install (Figure 20)

 Install batteries into battery compartment. Ensure that battery leads are all located on the right side of the unit and that the batteries are oriented as shown (see figure 18).



- 2. Connect the battery leads to the power cable.
- Install battery hold down bracket and nut. Do not fully tighten. Tighten nut only as required to seat rubber pad against top of battery closest to hold-down nut (see figures 19 and 20).





4. Press seat release lever and return seat to operating position.

Charging the Batteries

IMPORTANT: Batteries must be connected to battery charger after every use, regardless of length of time unit was operated. After batteries are charged the battery charger must remain connected until the next use.

Once the batteries are fully charged the attached charger switches to a hibernation mode which monitors the batteries and maintains their charge. The battery charger powers on intermittently to check voltage and charge the batteries as necessary.

If a charge is required, the battery charger sends a minimal level of current. Over time this low rate of charge helps to extend battery life by equalizing charge imbalances between cells. This low charge rate also prevents damage to the batteries from the forming of lead sulfate which occurs when batteries remain in a discharged state.

If there is a power outage while the battery charger is connected to the batteries the charger will reset once power is restored. The charger will automatically check the charge level of the batteries and reset its hibernation mode.

A

WARNING: FROZEN BATTERIES CAN EXPLODE and result in death or serious injury. DO NOT charge a frozen battery. Let the battery thaw before charging.



WARNING: DO NOT use battery chargers other than those recommended by an authorized Ariens dealers. Incorrect battery charging will void warranty and can lead to equipment damage, death or serious injury.

IMPORTANT: ALWAYS follow information provided with the battery charger. Contact battery charger manufacturer for detailed instructions.

- 1. Park unit in a well-ventilated area and engage parking brake.
- 2. Turn power switch OFF.
- 3. Attach battery charger connector to battery charging port (see figure 21).

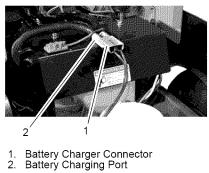
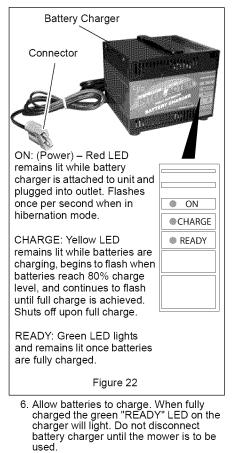


Figure 21

- Plug battery charger into wall outlet. Do not use an extension cord unless necessary. If an extension cord is needed follow the manufacturer's recommendations for length and capacity.
- Ensure that status indicator LEDs are lit on charger (see figure 22). If LEDs do not light correctly refer to troubleshooting chart (see BATTERY CHARGING TROUBLESHOOTING on page 25).



NOTE: Depending on extent of discharge and battery condition, allow approximately 16 hours for a complete recharge before additional use.

NOTE: An optional heavy duty charger is available that reduces charge time to approximately 4 – 5 hours (see *ACCESSORIES* on page 25).

- To use mower disconnect battery charger from wall outlet and disconnect from unit charging port. Store charger in a dry area away from children, pets, heat and moisture.
- 8. Replace protective cover on charging port.

REPLACE HYDROSTATIC BELT

Remove (Figure 23)

1. Disconnect battery charger from unit and disconnect batteries (see *Battery Connectors* on page 12). 2. Disconnect drive motor extension spring.

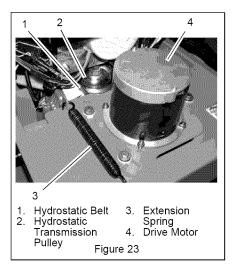


CAUTION: Use care when releasing tension from drive motor extension spring.

- 3. Push drive motor fully forward toward the hydrostatic transmission pulley.
- 4. Remove belt from pulleys.

Install (Figure 23)

- 1. Install hydrostatic belt on drive motor and hydrostatic transmission pulleys.
- 2. Reconnect drive motor extension spring.
- 3. Reconnect batteries and attach battery charger.



STORAGE

Short Term Storage

IMPORTANT: Always keep battery charger connected to batteries and a reliable power source when mower is not in use.

Remove all dirt, grease, leaves, etc. Store in a clean dry area.

IMPORTANT: NEVER clean unit with highpressure sprayer, water hose or store unit outdoors. Clean only with compressed air.

Inspect unit for signs of wear or damage. Ensure all fasteners are properly tightened.

Long Term Storage

Follow all instructions under *Short Term Storage*.

Remove weight from wheels by putting blocks under frame or axle.

Touch up all scratched or chipped paint surfaces.

TROUBLESHOOTING

PROBLEM	PI	ROBABLE CAUSE		CORRECTION
Drive motor will not run.	1.	Safety interlock system is not engaged or is faulty.	1.	Check safety interlock system (see Safety Interlock System on page 10).
	2.	Parking brake is engaged.	2.	Release parking brake.
	3.	Parking brake is out of adjustment.	3.	Contact your Ariens Dealer.
	4.	Discharged batteries.	4.	Charge batteries (see <i>Charging the Batteries</i> on page 20).
	5.	Disconnected batteries.	5.	Connect all five batteries to power cable.
	6.	Operator presence switch not depressed.	6.	Depress operator presence switch by sitting on seat.
	7.	Faulty operator presence switch.	7.	Contact your Ariens Dealer.
	8.	Faulty electrical system.	8.	Contact your Ariens Dealer.
Unit does not move with drive motor	1.	The transmission bypass lever is engaged.	1.	Disengage transmission bypass lever (see <i>MOVING UNIT MANUALLY</i> on page 14).
running.	2.	Faulty hydrostatic belt.	2.	Replace hydrostatic belt (see <i>REPLACE HYDROSTATIC BELT</i> on page 21).
	3.	Faulty transmission.	3.	Contact your Ariens Dealer.
Mower blades do not engage	1.	Battery voltage low.	1.	Charge batteries (see <i>Charging the Batteries</i> on page 20).
or they shut off during	2.	Unit is being operated in reverse.	2.	Complete backing, move PTO switch to OFF and then ON position.
operation.	3.	Deck motors overloaded.	3.	Stop unit and turn off key to reset motor controller. Resume mowing at slower pace or higher cut height.
	4.	Mower blades or deck clogged.	4.	Shut off unit and remove key. Disconnect batteries. Clean debris from mower deck or blades.
	5.	Faulty PTO switch, deck motors, wires or connectors.	5.	Contact your Ariens Dealer.
Unit moves with drive	1.	Parking brake requires adjustment.	1.	Contact your Ariens Dealer.
motor off and parking brake engaged.	2.	Faulty parking brake.	2.	Contact your Ariens Dealer.
PTO will engage when operator sitting on seat with key ON and parking brake engaged.	1.	Parking brake requires adjustment.	1.	Contact your Ariens Dealer.

PROBLEM	PROBABLE CAUSE		OBABLE CAUSE CORRECTION		
Unit does not travel in a	1.	Incorrect tire pressure.	1.	Check tire pressure (see SPECIFICATIONS on page 26).	
straight line.	2.	Bent or misadjusted tie rods.	2.	Inspect and replace tie rods and adjust as necessary.	
Poor cutting quality.	1.	Mower deck not level or mower pitch is incorrect.	1.	Level and adjust pitch of mower deck (see LEVELING AND ADJUSTING PITCH OF MOWER DECK on page 16).	
	2.	Dull or faulty mower blades.	2.	Sharpen mower blades (see SHARPENING MOWER BLADE on page 18) or replace mower blades (see REPLACING MOWER BLADE on page 18).	
Short battery service life.	1.	Mowing too much grass.	1.	Adjust cutting height and travel speed to keep battery discharge meter in Green Zone (0 – 40 amp).	
	2.	Mowing in hot weather.	2.	High temperatures reduce battery service life. Mow during cooler time of day (see FOR BEST PERFORMANCE on page 13).	
Controllers	1.	A trouble code has	1.	Contact your Ariens Dealer.	
display flashing red light under covers.		been set in the electrical system.		Controller	

BATTERY CHARGING TROUBLESHOOTING

PROBLE	M	PROBABLE CAUSE			CORRECTION		
Battery charg LED indicato		1. No power to battery charger.		1. Check power source.			
do not light.		2.	Faulty battery charger.	2.	Contact your	Ariens Dealer.	
Yellow LED d not light.	loes	1. Battery charger not properly connected to power cable.		1.	Ensure proper	r connection.	
		2.	Defective cable between battery charger and batteries.	2.	Inspect and re replace batter	place faulty cables on unit or y charger.	
	3. Faulty battery or batteries.		3.		ctive battery or batteries (see <i>val and Installation</i> on		
Green "READY" 1. Battery charger LED on battery connector not charger does not seated in charging		1.	charger connector completely				
		seated in charging		into charging port.2. Replace defective battery or batteries (see			
light after 18	light after 18 hours. 2. Faulty battery or batteries.		2 Faulty battery or		Battery Removal and Installation on page 19).		
hours.			page 10).				
Green "REAI LED on batte charger flash	ery	y batteries.		1.		ctive battery or batteries (see val and Installation on	
SE	SERVICE PARTS					CCESSORIES	
Be sure to always use genuine Ariens parts to keep your unit running like new.				horized Ariens dealer to add al accessories to your unit.			
Part No.	Qty	Description			Part No.	Description	
03793500	5	Battery Sub-Pack			71600100	20-Amp Heavy Duty Battery Charger	
07100740	2	Front Wheel Assembly		_	71600400	Grass Catcher Kit	
07100512	2	Rear Wheel Assembly			71600300	Mulching Kit	
07204800	1	Drive Belt			L. 1000000	indicandy rat	

Replacement Blade Kit (Includes 2 Blades)

Battery Charger

(Standard)

71600200

03793600

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SPECIFICATIONS

Model Number	916002		
Model	AMP Rider		
Motors			
Туре	Electric Brushless DC		
Speed			
Forward Max. – mph (km/h)	5.0 (8.0)		
Reverse Max. – mph (km/h)	2.5 (4.0)		
Turning Radius Inside Rear Wheel – in. (cm)	15.5 (39.3)		
Brakes	Internal Transmission		
Electrical			
Battery	48 Volt Maintenance Free VRLA		
PTO (Power Take-Off)	Electric Motor Control		
Cutting Run Time – Minutes	50 – 75		
Transmission	Hydrostatic Drive		
Size and Weight			
Length – in. (cm)	61 (155)		
Width – in. (cm) – Chute Down	44.5 (113)		
Height – in. (cm)	41.25 (105)		
Weight – Ibs. (kg)	530 (240.4)		
Tires			
Front Tire Size – in. (cm)	4 x 11 (10 x 28)		
Rear Tire Size – in. (cm)	18 x 6.5 x 8 (46 x 16.5 x 20)		
Front Tire Pressure – psi (kPa)	30 (206.8)		
Rear Tire Pressure – psi (kPa)	14 (96.5)		
Mower Deck – Side Discharge			
Cutting Height – in. (cm)	1.5 – 4.5 (3.8 – 11.4)		
Cutting Width – in. (cm)	34 (127)		



Two-Year Limited Lawn and Garden Consumer Ride-On Warranty

Ariens Company (Ariens) warrants to the **original purchaser** that Ariens and Gravely brand consumer products manufactured and sold by Ariens after December 31, 2007 will be free from defects in material and workmanship for a period of two years after the date of purchase. An authorized Ariens dealer (Ariens brand products) or Gravely dealer (Gravely 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.

Five-Year Limited Warranty on Mower Deck Shell

The deck shell on zero-turn riding mowers is warranted to the **original purchaser** for five years from the date of purchase. Any defect in material or workmanship of the deck shell will be repaired free of charge (parts and labor) to the original purchaser for two years after the date of purchase. For the third through fifth year from the date of purchase, the parts required to repair a defect in material or workmanship of the deck shell, not the labor, will be provided free of charge.

Five-Year Limited Warranty on Main Frame

The main frame on zero-turn riding mowers is warranted to the **original purchaser** for five years from the date of purchase. Any defect in material or workmanship of the main frame will be repaired free of charge (parts and labor) to the original purchaser for two years after the date of purchase. For the third through fifth year from the date of purchase, the parts required to repair a defect in material or work-manship of the main frame, not the labor, will be provided free of charge.

Two-Year Limited Warranty on AMP™ Series Battery Packs and Subassemblies

The battery pack and/or battery subassemblies on AMP series electric riding mowers is/are warranted to the **original purchaser** for two years from the date of purchase. Ariens will replace, free of charge to the original purchaser, any battery pack and/or battery subassembly that fails due to defect in material or workmanship for one year after the date of purchase. For the next 12 months, Ariens will cover the prorated cost of replacing a battery pack and/or battery subassembly that fails due to defect in material or workmanship. This warranty does not apply to battery packs or battery subassemblies that fail due to accident, neglect, abuse, improper maintenance, improper storage or improper charging procedures.

90-Day Limited Warranty on Service Parts and Accessories

Genuine Ariens or Gravely brand service parts and accessories are warranted to be free from defects in material and workmanship for a period of 90 days after the date of purchase. An authorized Ariens or Gravely dealer will repair or replace any such part or accessory free of charge, except for labor, during that period.

The duration of all warranties herein applies only if the product is put to personal use around a household or residence. If the product is put to any business use, agricultural, commercial, or industrial, then the duration of these warranties shall be 90 days after the date of purchase. If Gravely ZT HD models with Kohler Courage Pro engines are put to any commercial use, the duration of these warranties, except for service parts and accessories, is one year from the date of purchase.

If any product is rented or leased, then the duration of these warranties shall be 90 days after the date of purchase.

Exceptions, Limitations, Exclusions

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 the Ariens Company, or register the unit online at www.ariens.com or www.gravely.com.

To obtain warranty service, the original purchaser must:

- · Perform the maintenance and minor adjustments explained in the owner's manual.
- Promptly notify Ariens or an authorized Ariens or Gravely service representative of the need for warranty service.
- Transport the product to and from the place of warranty service.
- · Have the warranty service performed by an authorized Ariens or Gravely service representative.

To find an Ariens or Gravely authorized service representative, contact Ariens at: 655 W. Ryan Street Brillion, WI 54110 (920) 756 - 2141 www.ariens.com www.gravely.com

Exceptions and Limitations

 Batteries are warranted only for a period of 12 months after date of purchase, on a prorated basis. For the first 90 days of the warranty period, a defective battery will be replaced free of charge. If the applicable warranty period is more than 90 days, Ariens will cover the prorated cost of any defective battery, for up to 12 months after the date of purchase. This battery limited warranty does not apply to the battery packs on AMP series products.

Exclusions – Items Not Covered by This Warranty

- Engines and engine accessories are covered only by the engine manufacturer's warranty and are not covered by this warranty.
- Eye-Q[™] and Scan-Mate[™] units are covered by their own warranty and are not covered by this warranty.
- · Parts that are not genuine Ariens or Gravely service parts 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, shoes, runners, scraper blades, shear bolts, mower blades, mower
 vanes, headlights, light bulbs, knives, cutters.
- Any misuse, alteration, improper assembly, improper adjustment, neglect, or accident which requires repair is not covered by this warranty.
- This warranty applies only to products purchased in the United States (including Puerto Rico) and Canada. In all other countries, contact place of purchase for warranty information.

Disclaimer

Ariens may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating Ariens 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 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.

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 state to state.



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