



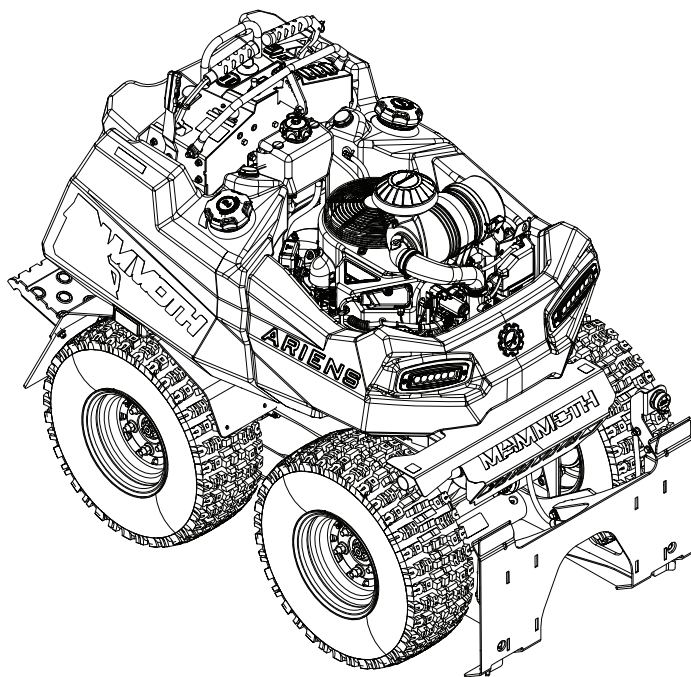
ARIENS
THE KING OF SNOW

Mammoth™ Tractor

Operator's Manual
Manuel du Utilisateur

Model

951001 – Mammoth Tractor
(SN 000101 +)



EN ENGLISH

FR FRANÇAIS

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WELCOME

Congratulations on your purchase and welcome to the Ariens family! Every machine in the Ariens lineup is designed for long-lasting and unsurpassed performance. We are confident your machine will be part of your family for many years to come.

Have Questions or Need Assistance?

www.ariens.com

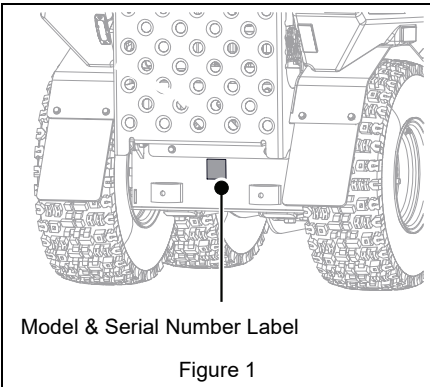
A service manual and parts manual for your unit is available for free download or purchase at www.ariens.com.

Manual del operador español está disponible para su descarga gratuita o compra en www.ariens.com.

REGISTER YOUR PRODUCT!

It is extremely important to register your product at time of purchase. Product registration activates the warranty and establishes a communication link from AriensCo.

Locate the model and serial number decal on your unit and register those numbers online at www.ariens.com. See Figure 1 for decal location. Be aware that the original selling dealer may have already completed product registration on behalf of the original purchaser.



Record model number here.

Record serial number here.

MANUALS

Before operating or servicing the unit, carefully and completely read the manuals provided with the unit. They contain safety instructions and important information about unit controls.

The engine on this unit is covered by a separate manual. Refer to the engine manual for engine service recommendations. Contact the engine manufacturer for a replacement manual if necessary.

Your dealer must review important information in this manual with you before or upon delivery of the unit. It is your responsibility to read and understand all safety precautions and instructions in the manuals. If you do not understand or have difficulty following the instructions, contact your Ariens dealer for assistance. To locate your nearest Ariens dealer, go to www.ariens.com.

DISCLAIMER

Ariens reserves the right to discontinue, make changes to, and add improvements upon its products at any time without public notice or obligation. The descriptions and specifications contained in this manual were in effect at printing. Equipment described in this manual may be optional. Some illustrations may not be applicable to your unit.

SAFETY

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.

PRACTICES & LAWS

Practice usual and customary safe working precautions. Learn applicable rules and laws in your area. Always follow the practices set forth in this manual.

EMISSION CONTROL SYSTEM

This equipment and/or its engine may include exhaust and evaporative emissions control system components required to meet U.S. Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB) regulations. Tampering with emission controls and components by unauthorized personnel may result in severe fines or penalties. Emission controls and components can only be adjusted by an Ariens dealer or an authorized engine manufacturer's service center. Contact your Ariens Equipment Retailer concerning emission controls and component questions.

REQUIRED OPERATOR TRAINING



Read and understand the Operator's Manual and decals on the unit. This information is for your safety and the proper use of your equipment. Failure to follow these

instructions and warnings may cause death or serious injury. If you have purchased this product from an Ariens dealer, the dealer can provide you with training.

Familiarize yourself and any other operators with all controls and the safe use of the features of this unit. If you loan, rent or sell this product to others, provide them with all manuals.

If you have any questions, please call our customer support line at 920-756-4688 or contact us at www.ariens.com. Do not use this equipment if, after reading the Operator's Manual and the on-board decals, you have any questions about the safe use of this product.



WARNING: AVOID INJURY.

This 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.

SAFETY ALERT SYMBOL



This is the safety alert symbol. It means:

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

When you see this symbol:

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

SIGNAL WORDS

The safety alert symbol 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 avoided property damage could result.

5. Important

IMPORTANT: Indicates general reference information worthy of special attention.

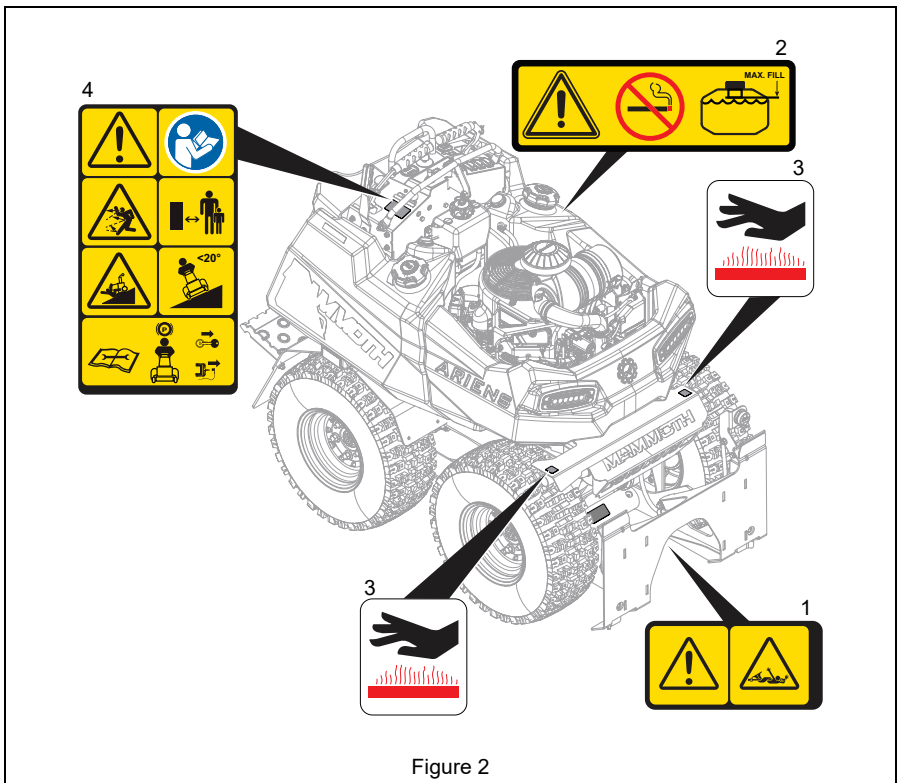
ALWAYS replace missing or damaged safety decals. Replacement decal numbers are found in the parts manual for your machine and may be ordered from your dealer.

See Figure 2 for safety decal locations.

SAFETY DECALS

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

Safety Decal Locations



Safety Decal Descriptions

1. WARNING!



WARNING!



Contact or entanglement with rotating drive parts can cause serious injury or death. Keep body, hands, hair and loose clothing away from rotating drive parts.

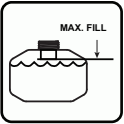
2. DANGER!



DANGER!



No smoking.



IMPORTANT: DO NOT overfill. Fill fuel tank to below bottom of filler neck.

WARNING: Overfilling may cause severe damage to evaporative system!

- Never fill fuel tank when engine is running, hot or unit is indoors. Never overfill fuel tank.
- Replace fuel cap securely and clean up spilled fuel.

3. HOT PARTS!



DO NOT touch parts which are hot from operation. ALWAYS allow parts to cool.

4. CAUTION!



CAUTION!



Read Owner/Operator Manual. Allow operation only by properly trained adult, never children.



Discharge Hazard – NEVER direct discharge toward people, pets or property. Thrown objects can cause injury or damage.



Keep children and others away from unit while unit is in operation.



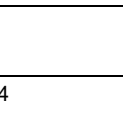
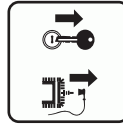
Operating on slopes may cause the unit to tip unexpectedly. Do not tip tractor while operating the unit. Operate across slopes, not up and down.



Look down and behind before and while backing. DO NOT operate on slopes over 20°. This maximum degree of operation is without attachments. DO NOT operate on slopes over 10° when operating with attachments.



Read manual, set parking brake, remove key and remove spark plug before you adjust or repair unit.



SAFETY RULES

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

Training
Read, understand and follow all instructions on the unit 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 or play on or near the equipment. NEVER allow adults to operate the equipment without proper instruction.
Keep the area of operation clear of all persons, particularly small children. Be alert and shut off unit if children enter area.
Exercise caution to avoid slipping or falling, especially when operating 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.
Understand how to operate all controls, the functions of all controls and how to STOP in an emergency.

Preparation
ALWAYS check overhead and side clearances carefully before operation.
ALWAYS be aware of traffic when operating near streets or along curbs.
Thoroughly inspect the area where the equipment is to be used and remove all doormats, sleds, boards, toys, wires and other foreign objects.
Check parking brake operation frequently. Adjust and service as required.
Inspect unit before each use for missing or damaged decals and shields, correctly operating safety interlock system. Replace or repair as needed.
Ensure Safety Interlock System is functioning properly. DO NOT operate unit if safety interlock is damaged or disabled.

Be sure all drives are in neutral and parking brake is engaged before starting engine. Steering control levers must be in neutral and PTO disengaged. Only start engine from the operator's position.
Operate unit only when standing in operator zone.
Handle fuel with care; it is highly flammable. <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 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 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 is running (except when specifically recommended by manufacturer).
ALWAYS allow unit and engine to adjust to outdoor temperature before operating.

Operation
Disengage all controls before starting engine.
Adjust brush contact before operating.
NEVER leave a running unit unattended. ALWAYS stop engine and remove key before leaving unit to prevent unauthorized use.
DO NOT put hands or feet near or under rotating parts. Keep clear of the discharge area at all times.
Moving and/or rotating parts can cut off body parts such as fingers or a hand. NEVER place your hands, other body part or clothing near any moving parts while unit is running.

ALWAYS keep hands away from all pinch points.	Park unit on a flat level surface, lower implements, disengage drives, engage parking brake, disengage PTO, shut off engine and allow moving parts to stop before leaving the operator's position.
DO NOT touch parts which might be hot from operation. Allow parts to cool before attempting to maintain, adjust or service.	DO NOT overload the unit capacity by attempting to operate at too fast a rate.
Thrown objects can cause injury. Check for weak spots on docks, ramps or floors. Avoid uneven work areas and rough terrain and stay alert for hidden hazards.	NEVER operate the unit at high transport speeds on slippery surfaces. Look behind and use care when operating in reverse.
Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.	DO NOT operate in reverse unless absolutely necessary. ALWAYS back up slowly and look down and behind before and while backing.
After striking a foreign object, stop the engine, remove the wire from the spark plug, thoroughly inspect the unit for any damage, and repair the damage before restarting and operating the unit.	Never carry passengers and keep pets and bystanders away. Stop machine if anyone enters the area.
If the unit should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.	Disengage attachment when not in use and when traveling from one work area to another.
Stop the engine whenever you leave the operating position and when making any repairs, adjustments or inspections.	This product is equipped with an internal combustion 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 used, must be maintained in effective working order by operator.
When cleaning, repairing or inspecting the unit, stop the engine and make certain that 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 engine.	ALWAYS be sure of your footing, and keep a firm hold on the handles.
DO NOT run the engine indoors, except when starting the engine and for transporting the unit in or out of the building. Open the outside doors; exhaust fumes are dangerous.	NEVER operate unit after or during the use of medication, drugs or alcohol. Safe operation requires complete and unimpaired attention at all times.
NEVER operate the unit without proper guards, and other safety protective devices in place and working.	NEVER allow anyone to operate this unit when their alertness or coordination is impaired.
ALWAYS stand clear of the discharge area when operating this unit.	NEVER touch a hot engine or muffler.
NEVER direct the discharge toward people or areas where injury or property damage can occur from thrown objects. Keep children and others away.	Avoid contact with sharp edges; sharp edges can cut.
Be aware of the discharge direction and do not point it at anyone. Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator.	Do not throw snow higher than necessary.
Never engage PTO when attachment, is not in use. Always turn off power to attachment when not in active use such as traveling or crossing driveways.	Know the weight of loads. Limit loads to those you can safely control and the unit can safely handle.
	Turn off switches to disengage the spreader and sprayer pump when not operating.
	Stop on level ground, lower implements, disengage spreader and sprayer pump, engage parking brake, shut off engine before leaving the operator's position for any reason.
	Slow down and use caution when making turns and crossing roads and sidewalks. Disengage spreader and sprayer pump if not operating.

Batteries
Avoid Electric Shock. Objects contacting both battery terminals at the same time may result in injury and unit damage. DO NOT reverse battery connections.
Reverse connections may result in sparks which can cause serious injury. ALWAYS connect positive (+) lead of charger to positive (+) terminal, and negative (-) lead to negative (-) terminal.
ALWAYS disconnect negative (-) cable FIRST and positive (+) cable SECOND. ALWAYS connect positive (+) cable FIRST, and negative (-) cable SECOND.
Explosive Gases from battery 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 battery.
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 contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Maintenance and Storage
Park unit on a flat level surface. Never allow untrained personnel to service machine.
Secure unit so it will not tip over during maintenance.
Before cleaning, removing obstructions or making any inspections, repairs, etc., stop engine, remove key, allow moving parts to stop and hot parts to cool.
Check hardware at frequent intervals for proper tightness to be sure the unit is in safe working condition.
Check PTO and drive control operation frequently.
DO NOT change engine governor settings and DO NOT over-speed engine.
Adjust and service as required. Motion of drive wheels and attachment must stop quickly when PTO is disengaged and drive control is returned to neutral.
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 block wheels and know all jack stands are strong and secure and will hold weight of unit during maintenance. Use jack stands to support components when required.
Carefully and slowly release any pneumatic or hydraulic pressure from components with stored energy.
ALWAYS keep body and hands away from pin holes or nozzles which eject hydraulic fluid under pressure.
ALWAYS keep protective structures, guards, and panels in good repair and secured in place. NEVER modify or remove safety devices.
NEVER store the unit with fuel in the fuel tank inside a building where ignition sources are present such as hot water heaters, space heaters or clothes dryers. Close fuel valve and allow the engine to cool completely before storing in any enclosure or covering the unit.
ALWAYS refer to operator's manual for important details if the unit is to be stored for an extended period.
Maintain or replace safety and instruction labels as necessary.

Remove attachments from tractor before lifting. Attachments must be lifted separate from tractor.
Run the unit a few minutes after removing snow to prevent freeze-up.
Springs may contain stored energy. Use caution when disengaging or removing springs and/or spring-loaded components.
Before working on this machine, be sure the valve system, brine tank and hopper have been thoroughly rinsed according to the recommendations of the chemical manufacturer.

Personal Protection
Wear proper footwear to improve footing on slippery surfaces. NEVER wear open sandals or canvas shoes during operation.
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.
NEVER attempt to clear obstructions or clean unit while engine is running. Rotating attachments can cause serious injury.
Protect eyes, face and head from objects that may be thrown from unit. Wear appropriate hearing protection.
ALWAYS wear safety glasses or eye shields during operation or while performing an adjustment or repair to protect eyes from foreign objects that may be thrown from the unit.

Slope Operation
Slopes are a major factor related to loss of control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope or if you feel uneasy on it, do not operate.
DO NOT operate on slopes of more than 20°. This maximum degree of operation is without attachments.
Operate across slopes, not up and down.
DO NOT operate on slopes steeper than you can feel secure about the traction of the tires and the stability of the tractor.
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.

Operation on slopes may lead to loss of steering control. When operating on slopes be prepared to react to an emergency situation: <ul style="list-style-type: none"> • Return steering levers to neutral position. • Immediately set parking brake. • Turn off PTO and engine.
DO NOT try to stabilize the machine by putting your foot on the ground.
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.
Do not bypass transmission or allow transmission to free-wheel when on a slope.

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 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 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.

Transporting

Use extra care when loading or unloading unit onto trailer. Secure unit chassis to transport vehicle. NEVER secure from rods or linkages that could be damaged. DO NOT transport unit while engine is running.

Tie the machine down securely using straps, chains, cable, or ropes. Both front and rear straps should be directed down and outward from the machine.

Use full width ramps when loading machine.

Accessories

Use only attachments recommended by AriensCo that are appropriate to your use and can be used safely in your application.

Chemical Safety

Chemicals used in this machine may be hazardous to apply and produce gasses that are hazardous if inhaled or with contact to your skin.

Caustic liquid or chemical burns could occur if chemicals are not used properly.

Read and follow all the instructions and warnings from manufacturer for all chemicals used.

Become familiar with and follow all warnings, recommendations, instructions and procedures for: first aid measures, safe use, mixing, handling, applying, spills clean-up, storage and disposal of all chemicals.

Wear all personal protective equipment as recommended on the manufacturer's label of any chemicals. Personal protective equipment may include safety glasses or goggles and/or face shields, chemical resistant gloves, and rubber boots, and a respirator.

Obtain the proper training before using or handling any chemicals. Follow all local, state and federal requirements for the handling and spreading of chemicals.

Be sure to verify there is an adequate supply of clean water and soap nearby and immediately wash off any chemicals that may contact you.

Handle chemicals in a well-ventilated area.

Keep clean water available for immediate rinsing off and clean-up of any spilled chemicals.

Hydraulic fluid can result in severe burns. Fluid in hydraulic system can penetrate skin and result in serious injury or death.

Be sure to stop the engine before doing any work on hydraulic parts.

Keep body and hands away from pin holes or nozzles which expel hydraulic fluid when under pressure. Use paper or cardboard, not hands, to search for leaks.

Ensure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to system.

SETUP



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

NOTICE: Refer to *Controls And Features* on page 11 during setup.

1. Remove wrap and packaging materials from unit.
2. Unlock and lower operator platform into operating position. See *Set Operator Platform* on page 16.
3. Open bypass valves. See *Move Unit Manually* on page 17.
4. Push unit onto a level surface.
5. Close bypass valves.
6. Check tire pressures and inflate to recommendation. See *Check Tire Pressure* on page 23 and *Specifications* on page 35.
7. Check steering lever positions. See *Adjust Steering Levers* on page 28.
8. Check battery and charge if needed. See *Charge Battery* on page 24.
9. Check engine oil level and add if needed. Refer to the engine manual.
10. Check hydraulic oil level and add oil if needed. See *Check Hydraulic Oil Level* on page 21.
11. Inspect all hardware and tighten if loose.
12. Check safety interlock system functions. See *Safety Interlock System* on page 15.



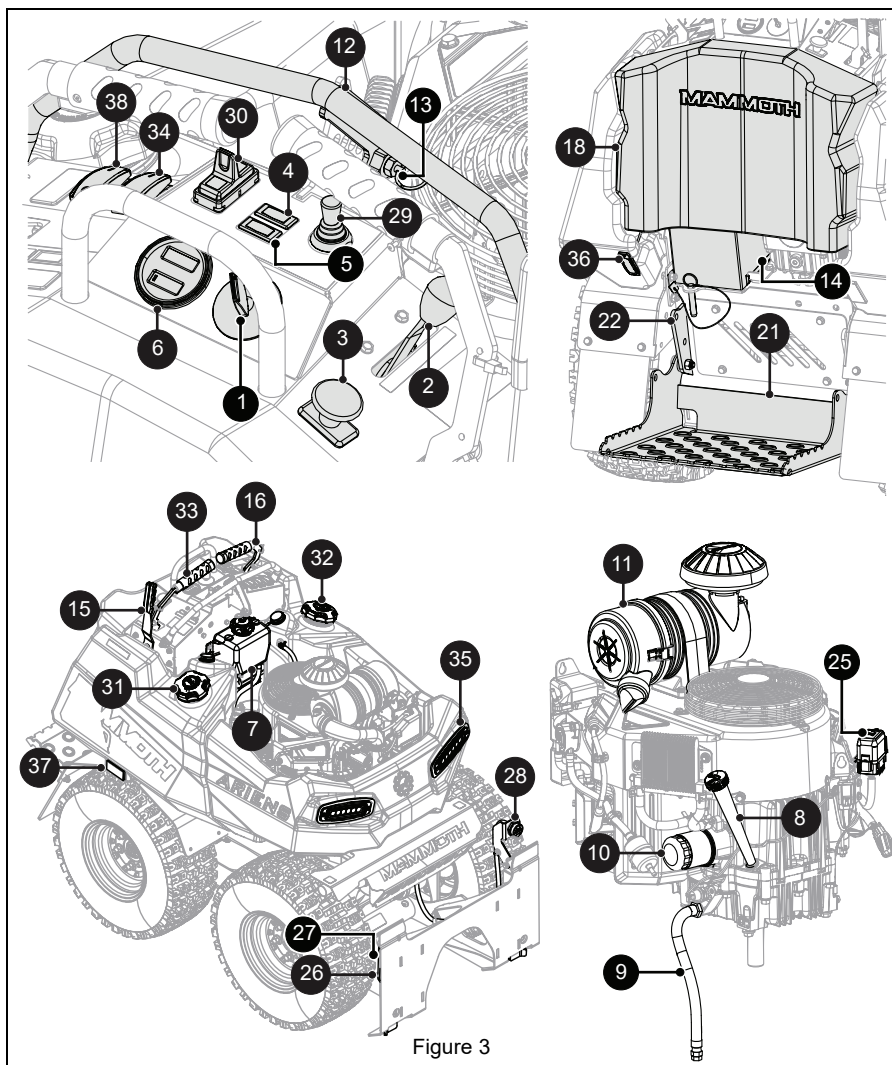
WARNING: FAILURE OF INTERLOCK together with improper operation can result in severe personal injury.

13. Lubricate all fittings. See *Lubricate Unit* on page 24.
14. Check all control functions and ensure unit operates properly. See *Controls And Features* on page 11.



WARNING: FAILURE OF CONTROLS could result in death or serious injury.

CONTROLS AND FEATURES



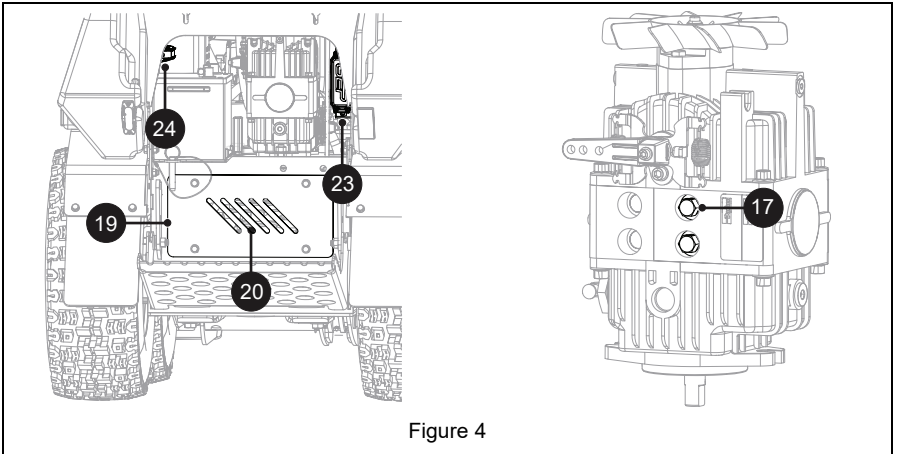


Figure 4

- | | |
|---------------------------------|------------------------------------|
| 1. Ignition Switch | 20. Gearcase (Behind Panel) |
| 2. Throttle Control Lever | 21. Operator Platform |
| 3. Power Take Off (PTO) Switch | 22. Operator Platform Latch |
| 4. Oil Pressure Warning Light | 23. Main Fuse Block(30 Amp) |
| 5. Malfunction Indicator Light | 24. Mega Fuse Holder (100 Amp) |
| 6. Fuel Gauge / Hour Meter | 25. Engine Fuse Holder |
| 7. Hydraulic Oil Expansion Tank | 26. Lock Lever (2) |
| 8. Oil Fill / Dipstick | 27. Latch Handle (2) |
| 9. Oil Drain | 28. Tractor Socket |
| 10. Engine Oil Filter | 29. Attachment Control Switch |
| 11. Air Filter | 30. Discharge Chute Control Switch |
| 12. Speed Control Bar | 31. Brine Tank / Cap |
| 13. Speed Adjustment System | 32. Fuel Tank / Cap |
| 14. Battery | 33. Heated Hand Grip (2) |
| 15. Parking Brake Lever | 34. Heated Hand Grip Switch |
| 16. Steering Lever (2) | 35. LED Headlight (2) |
| 17. Bypass Valve (2) | 36. Rear LED Light |
| 18. Rear Access Pad | 37. Reflector (3) |
| 19. Rear Access Panel | 38. Rear LED Light Switch |



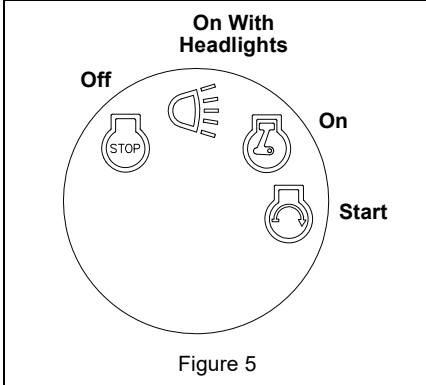
WARNING: AVOID INJURY.
Read and understand entire
Safety section before
proceeding.

See Figures 3 and 4 for Controls and
Features Locations.

IGNITION SWITCH

See Figure 5.

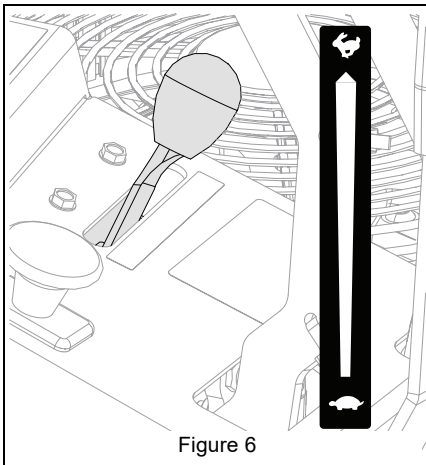
Controls power to the engine. The key cannot
be removed when in the on positions.



THROTTLE CONTROL LEVER

See Figure 6.

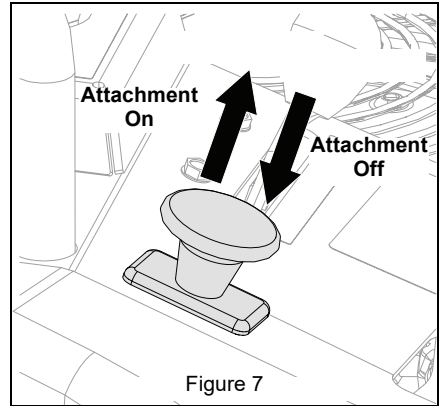
Controls engine speed.



POWER TAKE-OFF (PTO) SWITCH

See Figure 7.

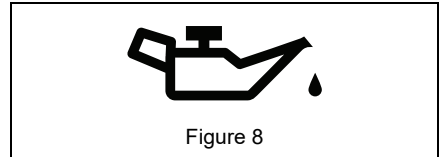
Engages and disengages powered
attachments. The engine will not start with the
PTO switch in the on position.



OIL PRESSURE WARNING LIGHT

See Figure 8.

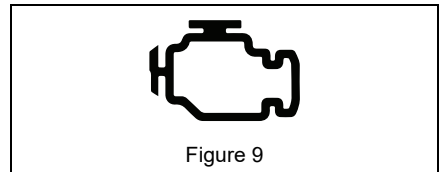
Illuminates when oil pressure is low. Stop
engine immediately and refer to engine
manual.



MALFUNCTION INDICATOR LIGHT

See Figure 9.

Illuminates when an engine-related problem
occurs. Stop engine immediately and refer to
engine manual.



SPEED CONTROL BAR

Controls the maximum speed of forward travel.

SPEED ADJUSTMENT SYSTEM

Increases or decreases maximum drive speed. Remove lock pin and reinstall into the desired speed setting.

BYPASS VALVES

Releases hydraulic pressure on wheel motors so unit may be moved with system off and parking brake released.

ATTACHMENT CONTROL SWITCH

See Figure 10.

Operates front attachment hitch and features on certain attachments.

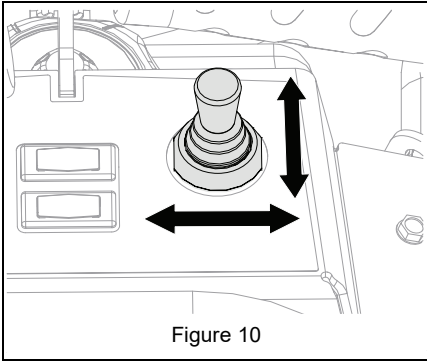


Figure 10

DISCHARGE CHUTE CONTROL SWITCH

See Figure 11.

Moves discharge chute deflector up or down on snowblower attachment. Move control switch forward or backward to control height of snow discharge.

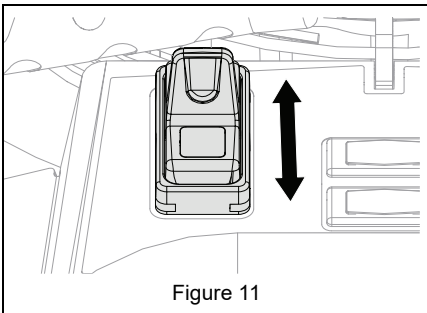


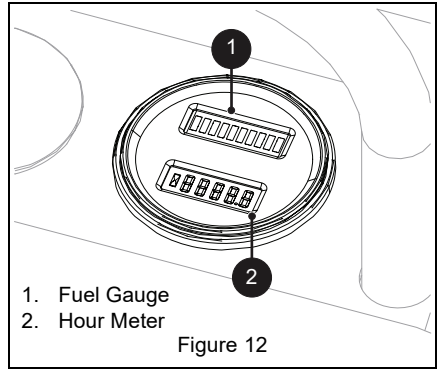
Figure 11

FUEL GAUGE / HOUR METER

Fuel Gauge and Hour Meter

See Figure 12.

Measures and displays engine runtime.



1. Fuel Gauge
2. Hour Meter

Figure 12

Fuel Gauge LED Display

See Figure 13.

Displays amount of fuel in fuel tank. LED flashes when fuel level is low (1 LED light).

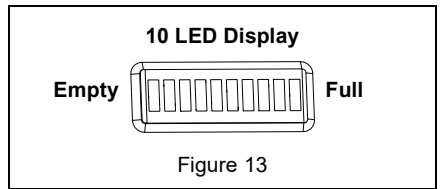


Figure 13

PARKING BRAKE LEVER

See Figure 14.

Engages the parking brake. The engine will not start when brake is released.

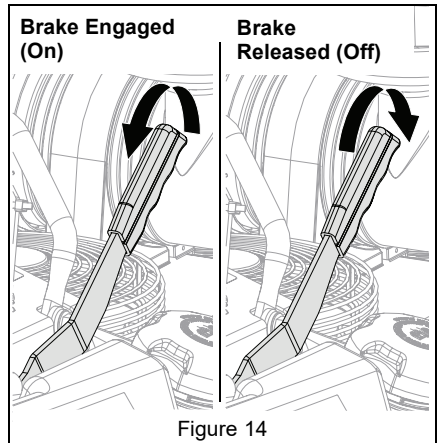


Figure 14

STEERING LEVERS

Control operator presence switch and direction and speed of unit. The levers gradually return to neutral when released and are locked in neutral when parking brake is engaged.

SAFETY INTERLOCK SYSTEM

Monitors the interaction of various unit features for operator safety.

LOCK LEVER

Locks latch lever in position when engaged in attachment.

LATCH HANDLE

Secures attachment to tractor when lock lever is engaged.

REAR LED LIGHT SWITCH

Turns rear LED light on and off.

HEATED HAND GRIP SWITCH

Turns the heated hand grips on and off.

BEFORE OPERATION



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

1. Know how to stop in an emergency. See *Emergency Stopping* on page 16.
2. Check fuel level and add fuel if needed.

IMPORTANT: Use fresh unleaded fuel with an octane rating of at least 87. DO NOT use E85 blended fuels; the engine is not E20 / E30 / E85 compatible. The maximum recommended ethanol content is 10%. Ariens recommends using a quality fuel stabilizer in all fuel. See *Short-Term Storage* on page 34.

3. Check engine oil level and add oil if needed. Refer to engine manual.
4. Check hydraulic oil level. See *Check Hydraulic Oil Level* on page 21.
5. Check condition of air cleaner. Refer to engine manual.
6. Check function of all controls.
7. Check function of the Safety Interlock System by performing the tests below. Contact your Ariens dealer for repair if any of the tests fail.



WARNING: AVOID INJURY.
Failure of Safety Interlock System together with improper operation can result in severe personal injury.

Test	Steering Levers	PTO	Parking Brake	Result
Starting Interlock				
1	Neutral	Off	On	Engine starts.
2	Forward, Neutral, Reverse	On	On or Off	Engine does not start.
3	Forward, Neutral, Reverse	On or Off	Off	Engine does not start.
Operating Interlock (Engine On)				
4 *	Forward, Neutral, Reverse	On	On or Off	Engine shuts off.
5 *	Forward, Neutral, Reverse	On or Off	Off	Engine shuts off.

* When operator lifts off operator presence steering lever.

SET MAXIMUM DRIVE SPEED

See Figure 15.

1. Place steering levers in neutral position and engage parking brake.
2. Pull lock pin and position speed control bar. Release lock pin at desired setting.

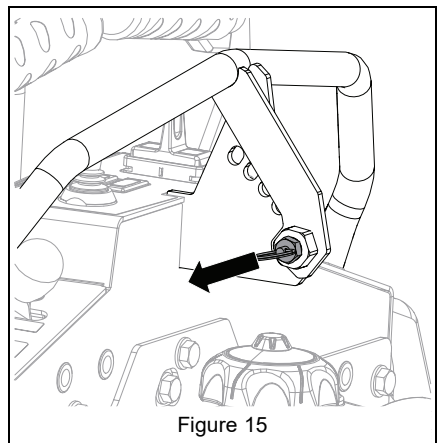


Figure 15

SET OPERATOR PLATFORM



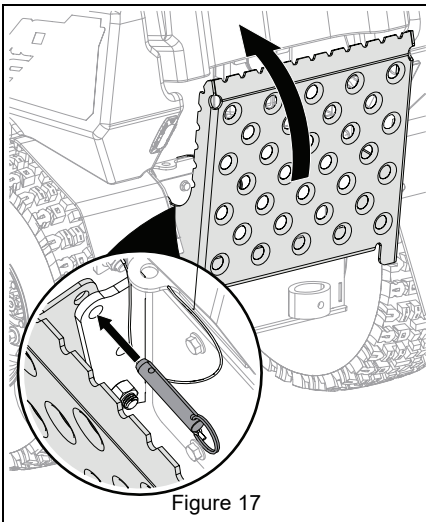
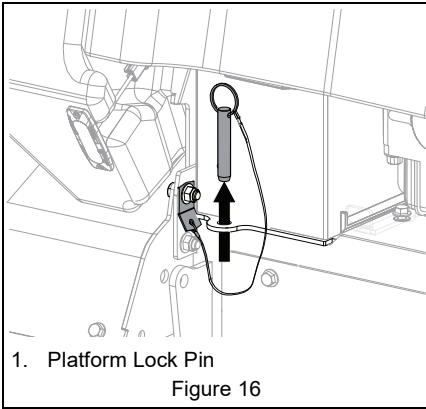
CAUTION: Platform will drop when latch is released. Stand clear when releasing platform.

To rotate platform up:

1. Remove platform lock pin from storage position. See Figure 16.
2. Rotate platform up and insert lock pin. See Figure 17.

To rotate platform down:

3. Release platform lock pin.
4. Rotate platform down to standing position.
5. Insert lock pin in storage position.



OPERATION



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

NOTICE: AVOID DAMAGE! COLD WEATHER USE ONLY. DO NOT continually operate tractor in temperatures above 12.8° C (55° F).

IMPORTANT: All references to left, right, front or rear are given from the perspective of operator in operator's position, facing the direction of forward travel.

EMERGENCY STOPPING



WARNING: AVOID INJURY. Operating on slopes may lead to loss of steering control. Be prepared to react.

1. Return steering levers to neutral position.
2. Engage parking brake.
3. Push PTO switch down to off position.
4. Turn key to off position and remove from ignition.

START THE ENGINE

1. Move steering levers to neutral position.
2. Engage parking brake.
3. Push PTO switch down to off position.
4. Move throttle control lever to 1/2 position.
5. Insert ignition key. Turn key to the on position for approximately 2 to 3 seconds to prime the fuel pump and then continue to the start position.
6. Release key when engine starts.
7. *Cold engines only:* Run engine for 3 – 5 minutes with throttle lever in slow position and then move throttle to the fast position before operating unit.

NOTICE: Allow engine to warm before operating engine at high throttle.

NOTICE: Do not operate the starter for more than 5 seconds per starting attempt. If the engine does not start, allow a 15 second cool-down period between starting attempts.

OPERATE UNIT






1. Start engine and allow engine 1 minute to warm up. See *Start The Engine* on page 16.
2. Set throttle control lever to fast position.
3. With left steering control (OPC) depressed, release parking brake.
4. Set attachment in desired position.
5. Move steering levers in desired position to begin operating.

IMPORTANT: PTO will not engage unless snow blower or power brush is attached.

IMPORTANT: Engaging the PTO knob with the throttle lever set lower than fast position can cause excessive belt wear. ALWAYS use fast position when engaging the PTO.



WARNING: AVOID INJURY.
Move the steering levers slowly and keep the throttle at slow speed until you learn how to operate the unit.

Direction of Travel	Lever Position
Forward	Push both levers forward from neutral position. 
Reverse	Pull both levers backward from neutral position. 
Right Turn	Push left lever farther forward than the right lever. 
Left Turn	Push right lever farther forward than the left lever. 
Stop	Return both levers to neutral position. 

STOP THE ENGINE



WARNING: AVOID INJURY.
Wait for all moving parts to stop before leaving operator's position.

1. Move steering levers to the neutral position.
2. Reduce throttle to 3/4 fast position.
3. Push PTO switch down to the off position.
4. Engage parking brake.
5. Move throttle control lever to slow position and allow engine to run for 1 minute at slow speed.
6. Turn key to off position and remove from ignition.

MOVE UNIT MANUALLY

Bypass the hydraulic pump to move the unit with the engine off.

1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Turn both bypass valves two complete turns counter-clockwise to the bypass position. See Figure 18.

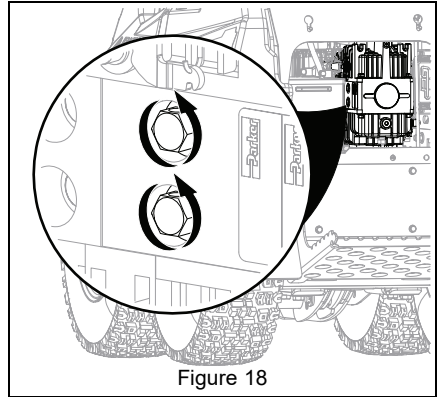


Figure 18

3. Release parking brake and push unit to desired location.
4. Engage parking brake.
5. Turn both bypass valves two complete turns clockwise to the operating position. Torque to 9.5 N•m – 13.6 N•m (7 lb-ft – 10 lb-ft). See Figure 19.

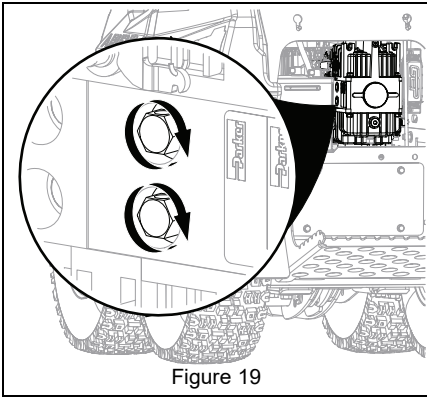


Figure 19

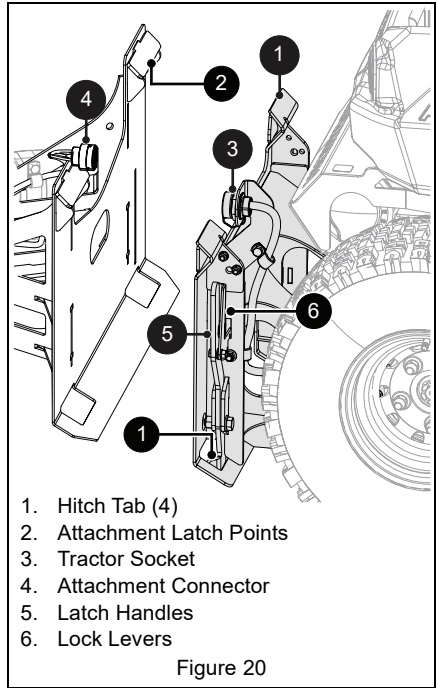
INSTALL / REMOVE ATTACHMENTS

IMPORTANT: Refer to the Operator's Manual for your attachment for PTO driveshaft procedure.

Install Attachment

See Figure 20.

1. On tractor hitch, rotate latch handles outward until locks are disengaged.
2. Start engine and allow engine to warm up. See *Start The Engine* on page 16.
3. Lower tractor hitch below the attachment latch points.
4. Drive forward slowly until tractor hitch tabs and attachment latch points are aligned.
5. Raise tractor hitch until attachment is fully seated onto the lower hitch tabs.



1. Hitch Tab (4)
2. Attachment Latch Points
3. Tractor Socket
4. Attachment Connector
5. Latch Handles
6. Lock Levers

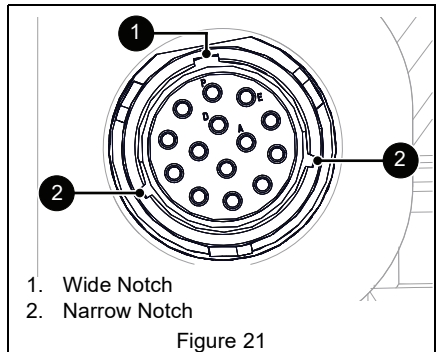
Figure 20

6. Place steering levers in neutral position and engage parking brake.
7. Stop engine, remove key and wait for moving parts to stop.
8. Rotate lock levers inward until latch handles are fully engaged.

See Figure 21.

NOTICE: AVOID DAMAGE. Align notches before attempting to connect attachment connector to tractor socket.

9. Remove debris caps and connect attachment connector to tractor socket.



1. Wide Notch
2. Narrow Notch

Figure 21

Remove Attachment

See Figure 20.

1. Place steering levers in neutral position and engage parking brake.
2. Lower attachment to the ground.
3. Stop engine, remove key and wait for moving parts to stop.

See Figure 20.

4. Disconnect attachment connector from tractor socket and reinstall debris caps.
5. Squeeze latch handles to disengage locks and rotate lock levers outward.
6. Ensure that reverse path is clean and carefully back tractor away from attachment, lowering tractor lift to unseat attachment from tractor hitch.

MAINTENANCE



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

Your Ariens dealer can provide service and adjustments to keep your unit operating at peak efficiency. Contact an authorized engine manufacturer's service center for engine service.

SERVICE POSITION

1. Park unit on a flat, level surface.
2. Stop engine, remove key and wait for moving parts to stop and for hot parts to cool.
3. Chock wheels. Strap and clamp unit onto lift, if used.
4. Place steering levers in neutral position and engage parking brake.

Rear Access

1. Lift access pad up and then rearward to remove. See Figure 22.

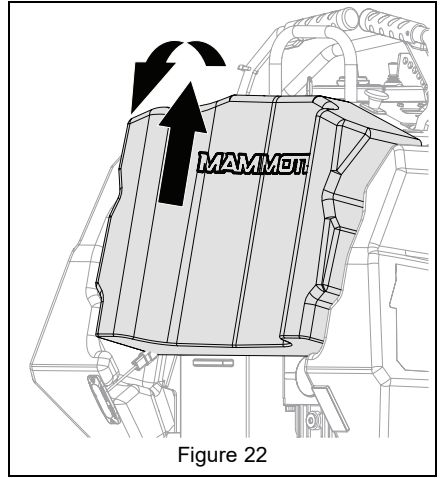


Figure 22

2. Remove and retain hex bolts securing rear access panel to frame. Remove access panel. See Figure 23.

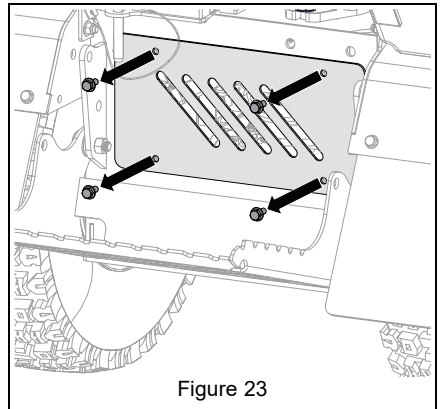


Figure 23

MAINTENANCE SCHEDULE

Service Performed	Each Use	Every 50 hrs.	Every 100 hrs.	Every 200 hrs.	Every 250 hrs.	Every 400 hrs.	Every 500 hrs.
Clean Unit ***	•						
Check Engine Oil *	•						
Change Engine Oil *			•				
Change Engine Oil Filter *				•			
Check Air Cleaner Secondary Element *					•		
Replace Air Cleaner Primary Element *					•		
Replace Air Cleaner Secondary Element *							•
Clean Engine Cooling System			•				
Check Safety Interlock System	•						
Check Hydraulic System	•						
Check Tire Pressure	•						
Lubricate Unit		•					
Check Parking Brake	•						
Rotate Tires							
Clean Battery			•				
Check Fasteners			•				
Check Belts			•				
Change Hydraulic Oil and Filter **				•			
Change Gearcase Oil ‡			•			•	
* Refer to engine manual for instructions.							
** Change every 200 hours.							
*** See <i>Short-Term Storage</i> on page 34.							
‡ Change after first 100 hours and every 400 hours thereafter.							

SERVICE PARTS

See your Ariens dealer to purchase service parts for your unit.

Description	Qty	Part No.
Air Filter - Outer Element	1	21548800
Air Filter - Inner Element	1	21548700
Engine Oil Filter	1	21535800
Fuel Filter	1	21573800
Muffler Gasket	1	00191627
PTO Belt	1	09470300
Hydraulic Drive Belt	1	09490700
Ariens Hi-Temp Grease – 414 ml (14 oz.) cartridge	1	00036700
Fuel Stabilizer – 118 ml (4 oz.)	1	04730400
Mammoth Transmission Fluid	1	00078500
Hydraulic Oil Filter	1	21576800
PAO220 Gearcase Oil	1	00078300

CHECK SAFETY INTERLOCK SYSTEM

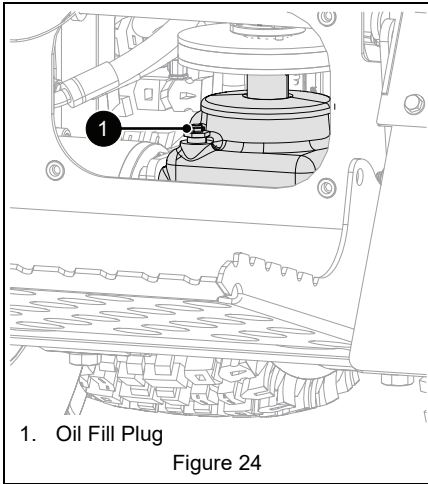
Parking Brake Interlock System

With the parking brake engaged, the steering levers must be locked in neutral.

With the parking brake disengaged, the engine must not start and the engine must shut off if the operator releases the control lever. See *Before Operation* on page 15. If system does not operate correctly, see your dealer for repair. DO NOT operate until repairs are made.

CHECK GEARCASE OIL

1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Remove oil fill plug. See Figure 24.



3. Check oil level with suitable measuring device, such as a clean screwdriver, and add oil if needed. Oil level must be 6.2 cm – 7.4 cm (2.5" – 2.9") from top of oil fill port. To change gearcase oil, refer to the service manual for your tractor.

IMPORTANT: Refill with a fully synthetic PAO220 gear oil meeting an AGMA EP5 rating. Refer to the service manual for gearcase oil change procedure.

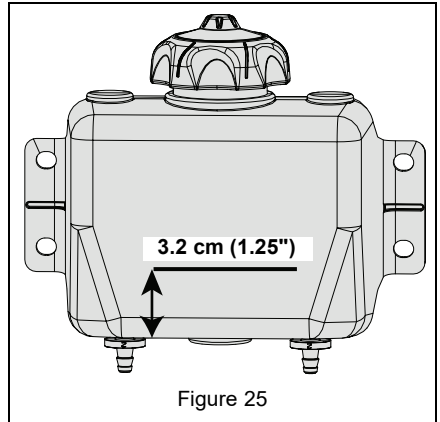
4. Reinstall oil fill plug.

CHECK HYDRAULIC SYSTEM

Check Hydraulic Oil Level

1. Place unit in service position. See *Service Position* on page 19.
2. Check oil level in expansion tank. Approximately 3.2 cm (1.25") of oil should be present in the expansion tank. See Figure 25.

IMPORTANT: Engine should be cold when checking initial oil level.



3. Operate engine for 1 minute and recheck oil levels.
4. Add hydraulic oil, if needed.
5. Remove expansion tank cap.
6. Fill expansion tank with oil (Mammoth transmission fluid) until oil reaches the cold fill level indicated in Figure 25.

Change Hydraulic Oil and Filter

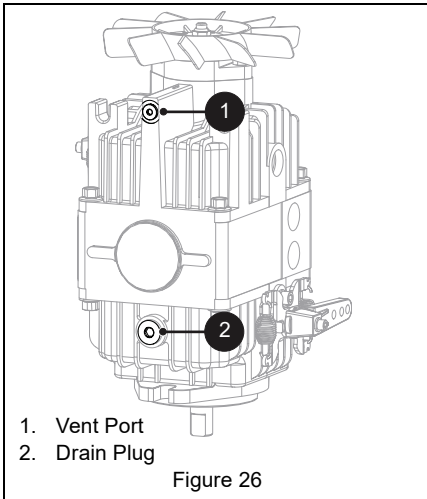
1. Operate unit for a few minutes to warm hydraulic oil.
2. Place unit in service position and remove operator pad. See *Service Position* on page 19.
3. Position container on the operator stand with funnel beneath lower drain port on the pump.
4. Remove the drain plug from the fill port and allow pump to drain completely. See Figure 26.

IMPORTANT: Residual oil will remain in lower half of pump. Ensure that excess oil does not spill on tractor.

5. Using a syringe (or equivalent suction tool) and small tube, remove remaining oil from lower reservoir cavity.

NOTICE: No resistance should be felt when placing tube inside housing. DO NOT force tube into pump reservoir cavity.

6. Remove oil filter from pump.
7. Lubricate both o-ring seals on filter assembly with clean hydraulic oil.
8. Spin filter onto filter housing until it makes contact with center block. Torque to 12.4 N•m – 15.8 N•m (110 lb-in – 140 lb-in).
9. Turn top vent port two complete turns counter-clockwise to loosen. See Figure 26.



10. Add hydraulic oil (Mammoth transmission fluid) and check vent port for oil leakage. When oil becomes visible, seal vent port.
11. Add hydraulic oil to expansion tank until oil reaches the cold fill indicator mark. See Figure 25.
12. Purge hydraulic system. See *Purge Hydraulic System* on page 22.

Purge Hydraulic System

Purge air from hydraulic system after draining oil or changing the filter.



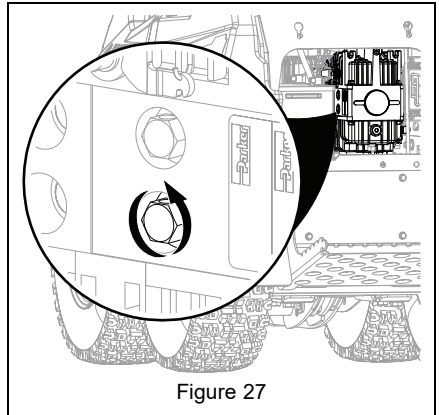
WARNING: AVOID INJURY! This adjustment requires operating the engine. Use extreme care to avoid contact with moving parts and hot surfaces. Be sure unit is well supported and secure before starting engine.



WARNING: AVOID INJURY! ALWAYS ensure that jack stands are secure and strong enough to support weight of unit during maintenance.

1. Move unit to a well-ventilated area with a flat surface.
2. Raise and support unit so wheels are off the ground.
3. Release parking brake.
4. Turn lower bypass valve two complete turns counter-clockwise to the bypass position. See Figure 27.

IMPORTANT: DO NOT remove valve.



5. With drive handles in neutral position, start engine and move throttle to fast position. Allow engine to run for one minute, as this allows charge pump to fill hoses to hydraulic motors.
6. Check hydraulic oil level and refill to the proper level. See *Check Hydraulic Oil Level* on page 21.
7. Move left steering lever fully forward. If cavitation noise is heard:
 - a. Move left steering lever to neutral position and allow throttle to remain in fast position for 30 more seconds.
 - b. Return left steering lever to forward position. Ensure that left side is running properly (no cavitation noise is heard and motor output shaft is rotating smoothly).
8. Check hydraulic oil level and refill to the proper level. See *Check Hydraulic Oil Level* on page 21.

9. Move right steering lever fully forward. If cavitation noise is heard:
 - a. Move right steering lever to neutral position and allow throttle to remain in fast position for 30 more seconds.
 - b. Return right steering lever to forward position. Ensure that right side is running properly (no cavitation noise is heard and motor output shaft is rotating smoothly).
10. Move right steering lever to neutral position.
11. Turn lower bypass valve two complete turns clockwise to the operating position.
12. Move right steering lever fully forward. If cavitation noise is heard, bypass hydraulic pump and repeat steps 9 – 11.
13. Check hydraulic oil and refill to the proper level. See *Check Hydraulic Oil Level* on page 21.
14. Move steering levers rearward and check for smooth operation.

CHECK TIRE PRESSURE

See *Specifications* on page 35 for recommended tire pressure.



WARNING: AVOID INJURY.

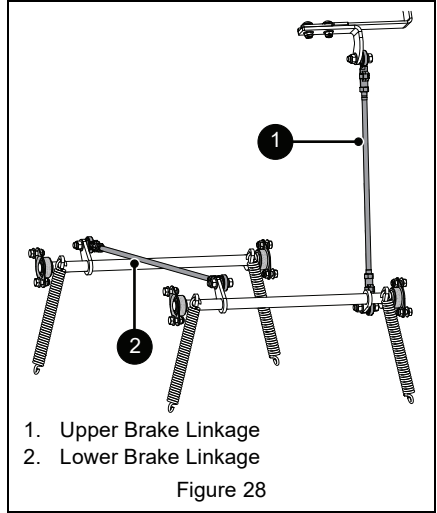
Explosive separation of tire and rim parts is possible.

- DO NOT inflate tires above the recommended pressure.
- DO NOT inflate tires with a compressor; use a hand pump.
- DO NOT stand in front of tire assembly when inflating. Use a clip-on chuck and extension hose long enough to allow you to stand to one side.

CHECK PARKING BRAKE

1. Place unit in service position. See *Service Position* on page 19.
 2. Bypass hydraulic pump. See *Move Unit Manually* on page 17.
 3. Push unit forward.
 - If unit does not move forward, parking brake is functioning correctly.
- See Figure 28.
- If parking brake does not hold on all four wheels, adjust upper brake linkage. See *Adjust Brake Linkages* on page 28.

- If parking brake does not hold on front two wheels, adjust lower brake linkage. See *Adjust Brake Linkages* on page 28.



- If mechanical linkages and springs are working properly and parking brake is not holding, adjust brake drum. See *Adjust Brake Drum Assembly* on page 29.
4. Return bypass valves to operating position. See *Move Unit Manually* on page 17.

CLEAN BATTERY



WARNING: AVOID INJURY.

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.

Remove Battery

See Figure 29.

1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Disconnect the negative cable and then the positive cable from battery.
3. Remove and retain hardware securing battery hold-down plate to frame. Remove and retain plate.
4. Remove battery.

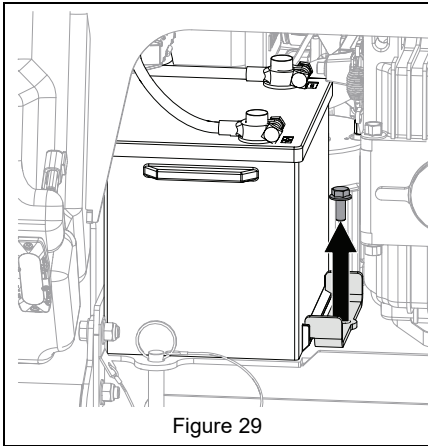


Figure 29

Clean Battery

1. Clean terminals and battery cable ends with wire brush.
2. Coat terminals with dielectric grease or petroleum jelly.

Install Battery

1. Install battery.
2. Secure hold-down plate using original hardware.
3. Reconnect positive cable and then the negative cable.
4. Place boot over positive terminal.
5. Place operator platform in the raised position.
6. Reinstall operator pad.

CHARGE BATTERY

NOTICE: DO NOT fast charge. Charging at a higher rate damages or destroys battery. ONLY use an automatic charger designed for use with your battery.

NOTICE: ALWAYS follow information provided on battery by battery manufacturer. Contact battery manufacturer for details regarding charge.

1. Remove battery from unit. See *Remove Battery* on page 23.
2. Place battery on bench or other well-ventilated place.
3. Connect positive lead of charger to positive terminal.
4. Connect negative lead of charger to negative terminal.
5. Charge battery according to charger and battery manufacturers' instructions.

6. Reinstall battery. See *Install Battery* on page 24.

Jump-Starting

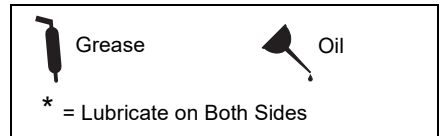
Ariens does not recommend jump-starting your unit. Jump-starting can damage engine and electrical system components. See your engine manual for more detailed information.

CHECK FASTENERS

Check for loose hardware and tighten if necessary.

LUBRICATE UNIT

Use the following key for all lubrication procedures.



1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Lubricate as shown in Figures 30 - 35.

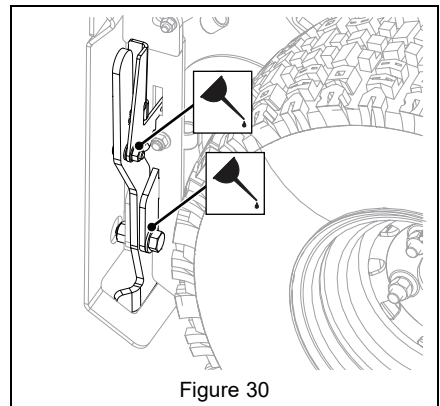


Figure 30

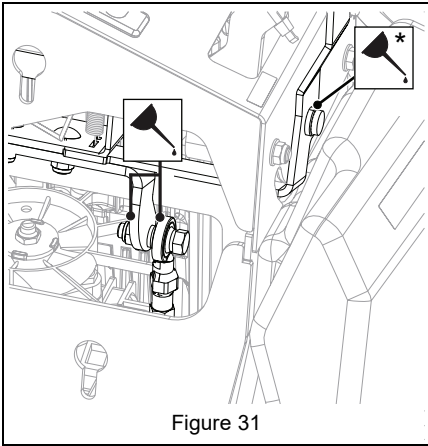


Figure 31

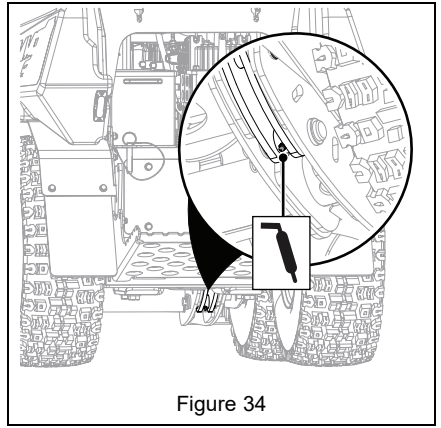


Figure 34

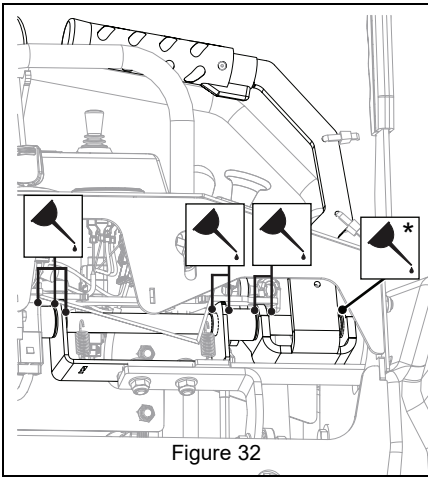


Figure 32

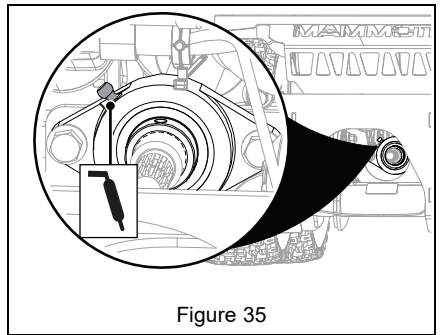


Figure 35

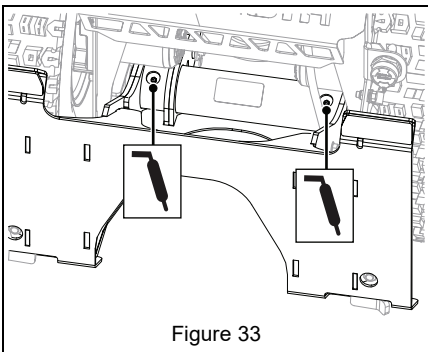


Figure 33

SERVICE AND ADJUSTMENTS



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

ELECTRICAL SERVICE

The main fuse / relay panel is located behind the rear access pad, next to the pump. See *Controls And Features* on page 11 for fuse / relay locations.

Replace Fuse

See Figure 36.

NOTICE: To avoid damaging the circuit, replace fuses with fuses of the same amperage rating. Determine the cause of electrical failure and repair before replacing failed electrical components.

1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Remove defective fuse.
3. Determine cause of fuse failure and repair condition.
4. Install new fuse.
5. Reinstall operator pad.

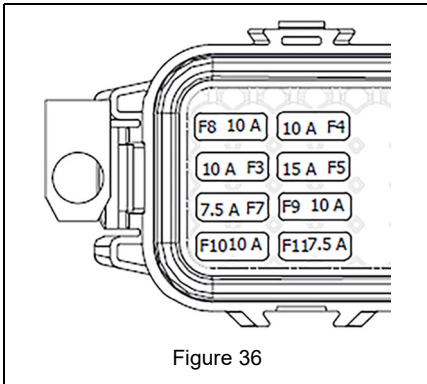


Figure 36

Fuse Block Diagram	
F3	PTO
F4	Time Delay
F5	Aux
F7	Lighting
F8	Control
F9	Actuator
F10	Handwarmer and Accessory Lighting
F11	Ignition

Replace Relay

See Figure 37.

NOTICE: Relays of the same size are interchangeable. Use only quality replacement parts. See *Service Parts* on page 20.

1. Place unit in service position and remove operator pad. See *Service Position* on page 19.
2. Remove defective relay.
3. Determine cause of relay failure and repair condition.
4. Install new relay.
5. Reinstall operator pad.

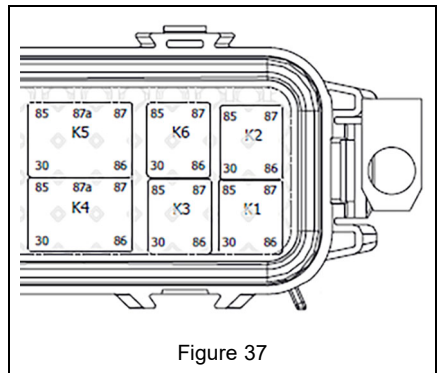


Figure 37

Fuse Block Diagram	
K1	Time Delay Relay
K2	Brine Relay
K3	PTO Relay
K4	System Power Relay
K5	Run Relay
K6	Start Relay

ADJUST HYDRAULIC PUMP

Check for Excessive Creep



WARNING: AVOID INJURY.
This adjustment requires operating the engine. Use extreme care to avoid contact with moving parts and hot surfaces. Be sure rear of unit is well supported and secure before starting engine.



WARNING: AVOID INJURY!
Always ensure that jack stands are secure and strong enough to support weight of unit during maintenance.

1. Operate unit for a minimum of 5 minutes to warm hydraulic system.
2. Move unit to a well-ventilated area with a flat surface.
3. Stop engine and engage parking brake.
4. Raise and support unit so wheels are off the ground.
5. Remove wheels.
6. Start engine, move throttle lever to fast position and release parking brake.
7. Move steering levers forward and backward 5 or 6 times and then return levers to neutral position.
8. Check wheel hubs for rotation.
 - If there is only slight rotation, stop engine, reinstall wheels and lower unit to ground.
 - If there is excessive rotation, adjust neutral position. See *Adjust Neutral Position* on page 27.

Adjust Neutral Position

If wheel hub has excessive rotation after checking for excessive creep, adjust neutral position.

1. Stop engine and wait for all rotating parts to stop.
2. Remove and retain hardware securing control linkages on either side of the pump. See Figure 38.

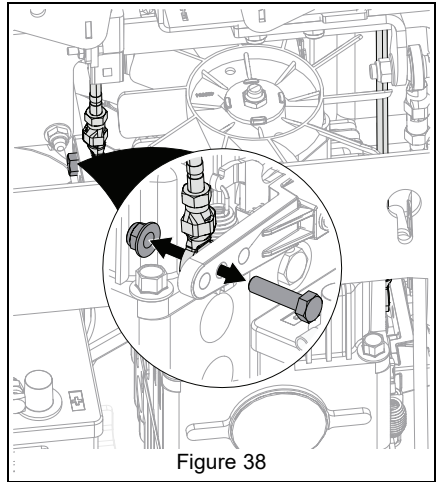


Figure 38

3. Loosen one of the return-to-neutral screws on either side of the pump. See Figure 39.

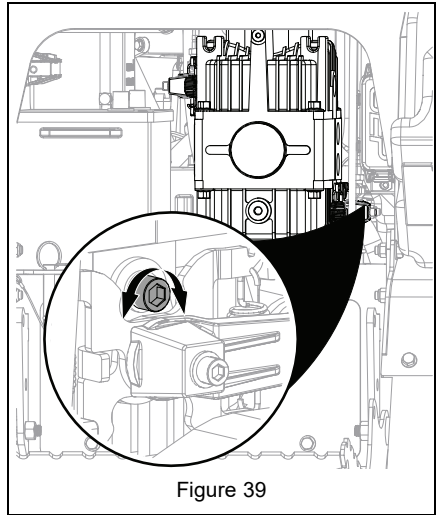


Figure 39

4. Start the engine. See *Start The Engine* on page 16.
5. Slowly turn pump control arm until hub stops. See Figure 40.



WARNING: Engine is running or hydro fan is spinning.

6. Hold the pump control arm in position and tighten the return-to-neutral screw.

7. Stop engine and wait for rotating parts to stop. Reassemble control linkage(s) to either side of hydro pump.
8. Start engine, move throttle lever to fast position and release parking brake.
9. Move steering levers forward and backward 5 or 6 times and then return levers to neutral position.
10. Check wheels hubs for rotation:
 - If there is only slight rotation, stop engine, reinstall wheels and return unit to operating position.
 - If there is excessive rotation, repeat steps 3 – 5.
11. Repeat steps 3 – 9 on opposite side if needed.

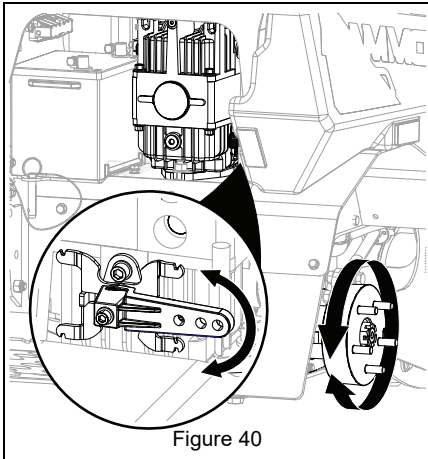


Figure 40

12. Stop engine and wait for moving parts to stop and hot parts to cool.
13. Reinstall wheels.
14. Remove unit from jack stands and lower unit to the ground.
15. Reinstall operator pad.

ADJUST UNIT TO DRIVE STRAIGHT

1. Park unit on a flat, level surface.
2. Check tire pressures. If needed, adjust to recommended pressures. See *Specifications* on page 35.

IMPORTANT: DO NOT inflate tires outside of recommended range.

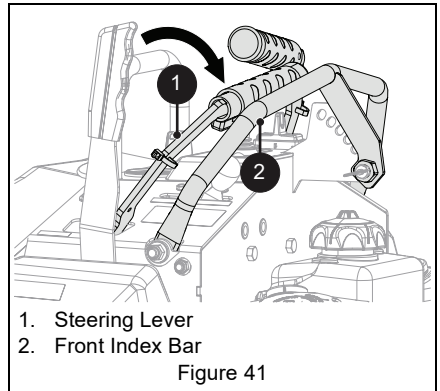
3. Start the engine. See *Start The Engine* on page 16.
4. Drive machine forward, pushing both control levers all the way to index bar.

5. Check tracking. If unit does not drive in a straight line, adjust steering levers.

ADJUST STEERING LEVERS

See Figure 41.

1. Stop engine, remove key and wait for all moving parts to stop and for hot parts to cool.
2. Place unit in service position. See *Service Position* on page 19.
3. Loosen jam nuts located on tie rods.
4. Disengage parking brake.
5. Push and hold a steering control lever forward and turn control rod until the steering lever makes contact with the front index bar.
6. Repeat step 5 on other side.
7. Return the steering levers to the neutral position.
8. If necessary, slightly adjust the control rods so the steering levers are aligned with each other.
9. Tighten jam nuts.



1. Steering Lever
2. Front Index Bar

Figure 41

ADJUST PARKING BRAKE

Adjust Brake Linkages

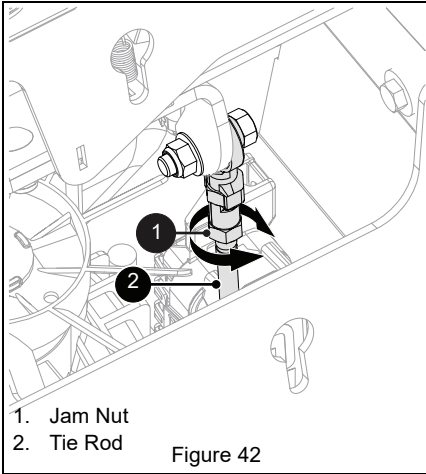
1. Place unit in service position. Remove the rear access panel and operator pad. See *Service Position* on page 19.
2. Disengage parking brake.

See Figure 42.

3. Loosen the jam nuts located on the tie rod.
4. Rotate tie rod to expand or contract overall rod length. All four springs should have free movement where hooks are retained.

IMPORTANT: With parking brake engaged, spring extension is minimal. Spring coil extension may be between 0.13 mm - 0.25 mm (0.005" - 0.010") if a feeler gauge is used.

5. Tighten jam nuts.



1. Jam Nut
2. Tie Rod

Figure 42

6. Check parking brake and readjust if necessary. See *Check Parking Brake* on page 23.
7. Reinstall rear access panel and operator pad.

Adjust Brake Drum Assembly

1. Place unit in service position. See *Service Position* on page 19.
 2. Support unit with suitable jack stands so wheels are off the ground.
 3. Remove wheel assembly.
- See Figure 43.
4. Remove and retain rubber plug from backing plate.
 5. Using a suitable tool or flat-head screw driver, rotate star adjuster to expand or contract brake shoes.
 6. Rotate brake drum back and forth until there is a light drag on brake drum. Readjust if necessary.
 7. Reinstall rubber plug.
 8. Reinstall wheel assembly. Torque wheel lug nuts to 271.2 N•m (200 lb-ft).
 9. Remove unit from jack stands.

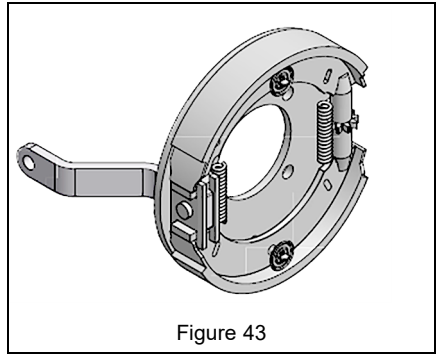


Figure 43

REPLACE BELTS



CAUTION: Damaged or worn belts may result in injury and / or damage to the unit. Check belts for excessive wear or cracks often.

Belt Access

1. Place unit in service position and remove rear access panel. See *Service Position* on page 19.
2. Support unit with suitable jack stands so wheels are off the ground.
3. Remove right rear wheel assembly. See Figure 44.

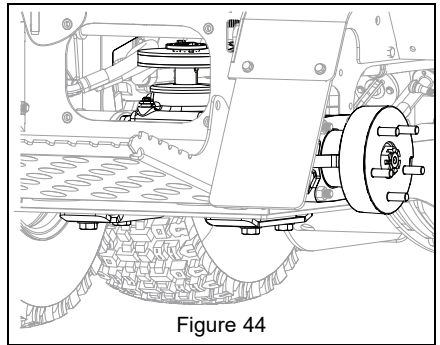


Figure 44

Remove PTO Belt

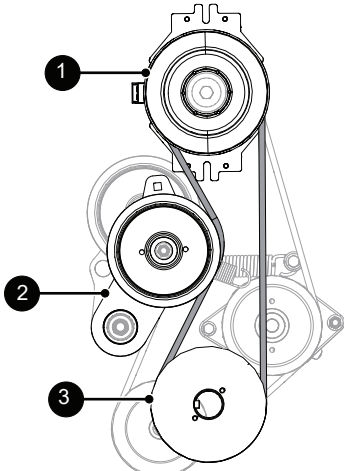


CAUTION: Use care when releasing idler spring tension. Keep body parts well away from idlers when performing this operation.

See Figure 45.

1. Insert 3/8" drive breaker bar into square hole in PTO idler arm.
2. Leverage breaker bar to release tension from PTO belt.
3. From the rear and side access windows, remove PTO belt from gearbox pulley and clutch pulley.

Bottom view of unit (gearcase assembly removed for clarity)



1. Clutch Pulley
2. PTO Idler
3. Gearbox Pulley

Figure 45

Install PTO Belt

See Figure 45.

1. Install PTO belt around gearbox pulley and clutch pulley (ensure back side of belt contacts idler pulley). Use breaker bar to apply leverage to PTO idler arm.

IMPORTANT: Ensure the belt has tension and is aligned in all pulleys.

2. Reinstall rear right wheel assembly. Torque wheel lug nuts to 271.2 N•m (200 lb-ft).
3. Remove unit from jack stands.

4. Reinstall rear access panel. See *Service Position* on page 19.

Remove Drive Belt

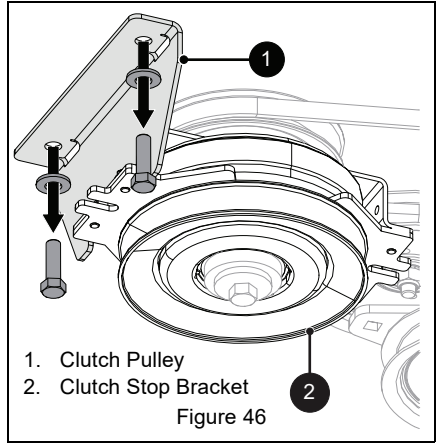


CAUTION: Use care when releasing idler spring tension. Keep body parts well away from idlers when performing this operation.

1. Remove PTO belt. See *Remove PTO Belt* on page 30.

See Figure 46.

2. Disconnect wire harness from electric clutch.
3. Remove hardware retaining clutch stop bracket.

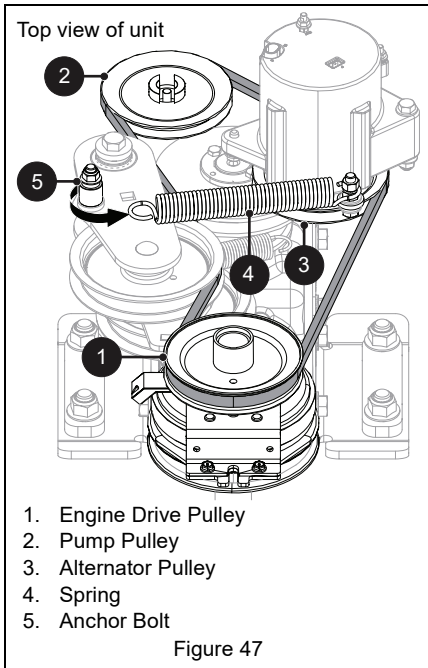


1. Clutch Pulley
 2. Clutch Stop Bracket
- Figure 46

4. Remove rear brine tank.

See Figure 47.

5. Slowly remove spring hook from anchor bolt to release tension from belt idler. Spring is located above frame and behind engine.
6. From the rear and side access windows, remove drive belt from engine drive, pump, and alternator pulleys.

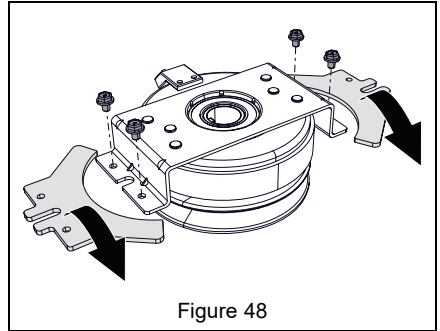


REVERSE CLUTCH BRAKE PLATES

NOTICE: Reversing clutch brake plates may shorten brake life by half.

See Figure 48.

1. Remove hardware securing brake plates to clutch bracket. Retain for reinstallation.
2. Reverse the brake plates and secure to clutch bracket using original hardware.



Install Drive Belt

See Figure 47.

1. Install drive belt in the following order:
 - a. Around engine drive pulley
 - b. Around pump pulley (ensure back side of belt contacts idler pulley)
 - c. Around alternator pulley
2. Reinstall idler spring hook around anchor bolt to apply tension to belt.

IMPORTANT: Ensure that belt has tension and is aligned in all pulleys.

3. Reinstall brine tank.
4. Reinstall clutch stop bracket onto electric clutch.
5. Reconnect electric clutch to wire harness.
6. Reinstall PTO belt. See *Install PTO Belt* on page 30.

TROUBLESHOOTING

Problem	Probable Cause	Correction
Engine does not start.	Ignition switch is in the off position.	Turn ignition switch to the start position. See <i>Ignition Switch</i> on page 13.
	PTO knob is in the on position.	Push PTO knob into the off position.
	Parking brake is released.	Engage parking brake.
	Fuel tank is empty.	Fill tank with fuel. See <i>Before Operation</i> on page 15.
	Fuel supply is contaminated.	Replace with clean fuel.
	Battery is not charged.	Charge battery. See <i>Charge Battery</i> on page 24.
	Spark plug wire(s) are loose or spark plug(s) are faulty.	Connect spark plug wire(s) or replace spark plug(s). Refer to engine manual.
	Safety Interlock System is not engaged or faulty.	Check Safety Interlock System. See <i>Before Operation</i> on page 15.
	Electrical system is faulty.	Determine cause and repair. See <i>Electrical Service</i> on page 26.
Engine is faulty.	Contact your Ariens dealer.	
Engine runs rough.	Fuel tank is empty.	Fill fuel tank. See <i>Before Operation</i> on page 15.
	Spark plug is faulty.	Replace spark plug. Refer to engine manual.
	Fuel filter is dirty.	Clean or replace filter. Refer to engine manual.
	Air filter cartridge is plugged.	Clean or replace air filter cartridge. Refer to engine manual.
	Engine is faulty.	Contact your Ariens dealer.
	Uneven work area or rough terrain.	Drive slowly and take extra caution over rough terrain.
Engine overheats.	Engine oil level is low.	Add engine oil. Refer to engine manual.
	Cooling fins are plugged.	Clean engine. Refer to engine manual.
	Engine is faulty.	Contact your Ariens dealer.
Engine runs when ignition key is in the off position.	Ignition ground wire is disconnected.	Connect ground wire to clean, metal surface.
	Ignition switch is faulty.	See your Ariens dealer.
Unit does not drive.	Parking brake is engaged.	Disengage parking brake.
	Hydraulic pump is bypassed.	Set bypass valves in the operating position. See <i>Move Unit Manually</i> on page 17.
	Drive belt is faulty.	Replace drive belt. See <i>Replace Belts</i> on page 29.
	Hydraulic drive system is faulty.	Contact your Ariens dealer.
	Hydraulic oil level is low.	Add hydraulic oil. See <i>Check Hydraulic Oil Level</i> on page 21.

TROUBLESHOOTING

Problem	Probable Cause	Correction
PTO malfunctions.	Operator presence control is not engaged.	Engage operator presence control by holding down left steering control handle.
	Operator presence control is faulty.	Contact your Ariens dealer.
	PTO belt is faulty.	Replace PTO belt. See <i>Replace Belts</i> on page 29.
	PTO switch, wiring, connectors or clutch are faulty.	Contact your Ariens dealer.
Unit moves with engine off and parking brake engaged.	Parking brake needs adjustment.	Adjust parking brake lever. See <i>Adjust Parking Brake</i> on page 28.
	Parking brake is faulty.	Contact your Ariens dealer.
Unit does not drive straight.	Tire pressure is incorrect.	Check tire pressure. See <i>Specifications</i> on page 35.
	Steering levers need adjustment.	See <i>Adjust Parking Brake</i> on page 28.
Unit creeps when steering levers are in neutral position.	Hydraulic pump needs adjustment.	Contact your Ariens dealer.
Oil pressure light is illuminated.	Oil pressure is low.	Stop engine immediately and refer to engine service manual or see your Ariens dealer.
Malfunction Indicator light is illuminated.	System has detected an engine malfunction.	Stop engine immediately and refer to engine service manual or see your Ariens dealer.
Hand warmers and headlight do not work.	Fuse is blown.	Fuses typically fail due to short circuit. Contact your Ariens dealer for repair.
Lift actuator not lifting.	Actuator overheating.	Stop use of actuator and wait for actuator to cool to operational temperature (may take several minutes).

STORAGE



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

SHORT-TERM STORAGE

IMPORTANT: NEVER wash unit with high-pressure water or store outdoors.

1. Allow unit to cool and clean with mild soap and water.
2. Tighten all hardware to correct specifications.
3. Inspect unit for visible signs of wear or damage. Repair as needed.
4. Prepare fuel system for storage.

NOTICE: Ariens recommends using a quality fuel stabilizer in all fuel. Gasoline left in the fuel system without a stabilizer, even for short periods of time, deteriorates and leaves gummy deposits in the system that may damage the carburetor and fuel hoses, filter and tank. For the best effectiveness, add stabilizer to all fuel containers whenever purchasing fuel. Add the stabilizer to the container before adding fuel.

- a. Add Ariens fuel stabilizer (see Service Parts on page 21) or equivalent according to manufacturer's instructions to the fuel tank and any fuel containers with remaining fuel.
 - b. Operate engine outdoors for at least 5 minutes to allow stabilizer to reach the carburetor.
5. Turn key to off position and remove from ignition.
 6. Store unit in a cool, dry, protected area. DO NOT store unit outdoors.

LONG-TERM STORAGE

1. Perform short-term storage procedures.
2. Lubricate as directed in *Maintenance Schedule* on page 20.
3. Touch-up all scratched painted surfaces.
4. Remove and charge battery as directed in *Charge Battery* on page 24. Store battery in a cool, dry, protected area.
5. Store unit in a cool, dry, protected area. Do not store unit outdoors.

START-OF-SEASON PREPARATION

1. Before adding fuel for the first time after long-term storage, add fresh, stabilizer-treated fuel to fuel tank and any fuel containers with remaining fuel.
2. Charge and install the battery.

ACCESSORIES

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

Description	Part No.
48" Snowblower	85100100
36" Snowblower	85100200
48" Blade	85100300
44" Power Broom	85100400
Brine Deicing System	85100500
Salt Spreader	85100600
Rear Mounting Frame Kit	75100200

SPECIFICATIONS

Model Number	951001
Model	Mammoth Tractor
Engine	Kawasaki EFI
Displacement – cm ³ (in ³)	852 (52.0)
High Idle - RPM (Min.)	3600 ± 100
Liquid or Air Cooled	Air
Electrical	
Starter	Electric
Battery	12V Minimum 540 CCA
Power Take-Off	Electric PTO Clutch / Brake
Fuel	
Fuel Type	Refer to engine manual.
Tank Capacity – L (gal.)	37.1 (9.8)
Transmission	
Type	Hydrostatic Drive
Transmission Oil	10W-20 Hydraulic Fluid
Hydraulic Oil Filter	Yes
Drive Speed	
Forward Maximum – km/h (mph)	12.9 (8)
Reverse Maximum – km/h (mph)	6.4 (4)
Brakes	Parking
Size and Weight	
Length – cm (in.) With Operator Platform Raised With Operator Platform Lowered	147.8 (58.2) 173.7 (68.4)
Width – cm (in.)	91.4 (36)
Height – cm (in.)	128.0 (50.4)
Weight Without Fuel – kg (lb)	2771.1 (1091)
Tires	
Tire Size – in.	22 x 9 – 10
Tire Pressure – kPa (psi)	83 – 103 (12 – 15)



ARIENS®

Outdoor Power Equipment Limited Warranty

AriensCo warrants to the **original purchaser** that Ariens brand products purchased on or after 1/1/2021 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 "Residential 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 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. Pick-up and delivery are at the owner's expense.

The warranty code is found on the model and serial number identification label on the unit.

Warranty Code	Product Group	Warranty Period
AA	Serialized Attachments	1 Year.
CH	Zenith Mowers (Non-European Models)	4 Years or 750 Hours.*
CQ	Zenith Mowers (European Models)	2 Years.
HD	LM-Series Walk-Behind Mowers	3 Years Residential Use. 90 Days Commercial Use.
HE	Edge Mowers	2 Years or 150 Hours.*
HF	Ikon-XD Mowers	3 Years or 300 Hours.*
HH	Apex Mowers	4 Years or 500 Hours.*
PA	921-Series Brushes	3 Years Residential Use. 90 Days Commercial Use.
PB	926-Series Brushes	3 Years Residential Use. 1 Year Commercial Use.
SA	Professional Sno-Thro	3 Years Residential Use. 1 Year Commercial Use.
SB	Compact, Deluxe and Platinum Sno-Thro and Path-Pro	3 Years Residential Use. 90 Days Commercial Use.
SC	S18	2 Years Residential Use. 90 Days Commercial Use.
SD	Deluxe and Platinum EFI Sno-Thro	3 Years Residential Use. 90 Days Commercial Use.
SE	920-Series Classic Sno-Thro, Crossover	3 Years Residential Use. 90 Days Commercial Use.
SF	Mammoth Tractor	2 Years or 500 Hours.*

* Whichever comes first.

Special Extensions

The chart below details special **extensions** to warranty terms. Warranty terms are total time periods covered. If any product is rented or leased, there are no extensions to the 90-day warranty.

Warranty Code	Warranty Term Extension	Warranty Period
SA	Cast Iron Auger Gear Case	5 Years.
SB, SD	Cast Iron Auger Gear Case	5 Years Residential Use. 1 Year Commercial Use.

Exclusions and Limitations

The charts below detail special **exclusions and limitations** to this warranty.

Warranty Term Exclusions	Warranty Period
Air filters, auger paddles, brake arms, brake linings, brake shoes, brushes, cutters, fuel filters, halogen headlights, knives, halogen light bulbs, lubricants, mower blades, oil, oil filters, spark plugs, scraper blades, shear bolts and skid shoes.	Components are not covered under warranty.

Hydro-Gear Transaxle Limitation
See Hydro-Gear warranty. The warranty is administrated by AriensCo. Refer to www.ariens.com for warranty statement.

Warranty Term Limitations	Warranty Period
Cloth, Plastic and Rubber Components. Mufflers, Tires and Belts.	Components are covered for manufacturer's defect only, not wear.
Parker Actuators	1 Year.

Exclusions – Items Not Covered by This Warranty

- Parts that are not genuine Ariens service parts are not covered by this warranty and may void the warranty if the parts result in premature wear or damage to the product.
- Damages resulting from the installation or use of any part, accessory, or attachment which is not approved by AriensCo for use with product(s) identified herein are not covered by this warranty.
- Any misuse, alteration, improper assembly, improper adjustment, neglect, or accident which requires repair is not covered by this warranty.
- Repairs or adjustments required due to failure to use fresh fuel or failure to properly prepare the unit for periods of non-use.
- **Use of gasoline blends exceeding 10% ethanol voids any and all warranties.**
- **Any tampering with the hour meter 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. AriensCo 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 AriensCo dealer for warranty policies that govern within your country. Rights may vary from country to country and within any one country.

Evaporative Emissions Control Warranty Exception

As required by the California Air Resources Board (CARB) and the US Environmental Protection Agency (EPA) the evaporative emissions control system is warranted to the ultimate purchaser, and any subsequent owner, for two years.

The CARB and EPA evaporative emissions control system warranty is described in a separate evaporative emission control warranty statement.

Battery Warranty

Battery warranty is one year. Units used for rental or lease have no exceptions to the 90-day warranty. Total battery claim reimbursement will not exceed 45.00 USD.

Engines

The chart below details engine warranty information. Engine warranty terms may vary from the specific terms of this warranty. If inconsistent, the terms of the engine warranty shall apply to the engine and its component parts.

Engine Manufacturer	Detail
Ariens AX	Ariens-branded engines are warranted by the manufacturer and the warranty is administrated by AriensCo. Refer to the engine manual or www.ariens.com for warranty statements.
Briggs & Stratton, Kawasaki, Kohler	Covered by the engine manufacturer's warranty. Refer to the engine manufacturer's warranty statements.

Parts and Accessories

Service replacement parts and non-serialized accessories are warranted for 90 days from date of purchase. Labor is not included.

Customer Responsibilities

Register the product immediately at the time of sale. If the dealer does not register the product, the customer must register the unit on-line at www.ariens.com.

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

- Ensure that the maintenance and adjustments explained in the Operator's Manual are routinely completed.
- Promptly notify AriensCo or an authorized Ariens 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 service representative.

To find an authorized dealer use the dealer locator on our websites, or contact us by mail or phone.

Globally (Except Australia or New Zealand):	Australia:	New Zealand:
AriensCo 655 W. Ryan Street Brillion, WI 54110 Phone: (920) 756 - 4688 www.ariensco.com	Masport Australia Pty Ltd 27 Commercial Drive Dandenong South Victoria 3175 Australia Phone: 1300 366 225 www.masport.com.au	Masport Ltd 320 Ti Rakau Drive East Tamaki Auckland 2013 New Zealand Phone: 0800 627 7678 www.masport.co.nz

Disclaimer

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

AriensCo 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. AriensCo 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.

AriensCo shall not be held liable for damages, including premature wear and tear, or injuries caused by installation of unauthorized parts and accessories or for parts and accessories not installed by an authorized Ariens dealer.

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

AriensCo 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 AriensCo, 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.



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