



Blower

Owner/Operator Manual

Manuel Du Propriétaire/Utilisateur



Models

947103 – 169cc Blower

947104 – 265cc Blower

947105 – 404cc Blower

Gasoline containing up to 10% ethanol (E10) or up to 10% MTBE (methyl tertiary butyl ether) is acceptable for use in this machine.

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

Il est possible d'utiliser de l'essence contenant jusqu'à 10% d'éthanol (E10) ou 10% de MTBE (éther méthyl-tertiobutylique) sur cette machine.

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



ENGLISH



FRANÇAIS

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INTRODUCTION



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

NON-ENGLISH MANUALS

Manuals in languages other than English may be obtained from your Dealer. Visit your dealer or www.parkersweeper.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 website:

<http://www.parkersweeper.com>

MANUALES EN IDIOMAS DIFERENTES DEL INGLES

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

También puede imprimir manuales en idiomas diferentes del inglés descargándolos gratuitamente de nuestra página Web:

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MANUELS NON ANGLAIS

Des manuels dans différentes langues sont disponibles chez votre revendeur. Rendez-vous chez votre revendeur ou allez sur le site www.parkersweeper.com pour consulter la liste des langues disponibles pour votre équipement.

Les manuels imprimés dans des langues différentes de l'anglais sont également disponibles en téléchargement gratuit sur notre site Web:

<http://www.parkersweeper.com>

MANUALS

Before operation of unit, carefully and completely read your manuals. If used improperly, this unit could be dangerous and cause personal injury or property damage. The contents will provide you with safety instructions for the safe use of your unit during normal operation and maintenance. All reference to left, right, front, or rear are given from operator standing in operation position and facing the direction of forward travel.

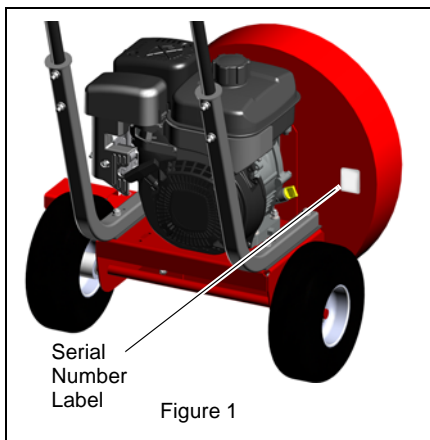
ENGINE MANUAL

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

MODEL AND SERIAL NUMBERS

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

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.



- Record Unit Model and Serial numbers here.

- Record Engine Model and Serial numbers here.

PRODUCT REGISTRATION

The 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 Parker or go to www.parkersweeper.com.

UNAUTHORIZED REPLACEMENT PARTS

Use only Parker replacement parts. The replacement of any part on this vehicle with anything other than a Parker authorized replacement part may adversely affect the performance, durability, or safety of this unit and may void the warranty. Parker disclaims liability for any claims or damages, whether warranty, property damage, personal injury or death arising out of the use of unauthorized replacement parts. To locate your nearest Parker Dealer, go to www.parkersweeper.com on the internet.

DISCLAIMER

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

DELIVERY

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

1. Read and understand all assembly instructions in this manual. If you do not understand or have difficulty following the instructions, contact your nearest Parker Dealer for assistance. Make sure all assembly has been properly completed.

NOTE: To locate your nearest Parker Dealer, go to www.parkersweeper.com on the Internet.



WARNING: Improper assembly or adjustments can cause serious injury.

2. Understand all Safety Precautions provided in the manuals.
3. Review control functions and operation of the unit. Do not operate the unit unless all controls function as described in this manual.
4. Review recommended lubrication, maintenance and adjustments.
5. Review Limited Warranty Policy.

NOTE: This machine comes with a one-year limited warranty. The selling dealer is responsible for explaining the terms and limitations of the warranty coverage offered in the country of sale.

6. Fill out a Product Registration Card and return the card to Parker or go to www.parkersweeper.com.

SAFETY



WARNING: 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.

Slopes are a major factor related to slip and fall 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.

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

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



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.

PRACTICES AND LAWS

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

REQUIRED OPERATOR TRAINING

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

SAFETY DECALS AND LOCATIONS

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

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 symbols above and signal words below are used on decals and in this manual. Read and understand all safety messages.



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

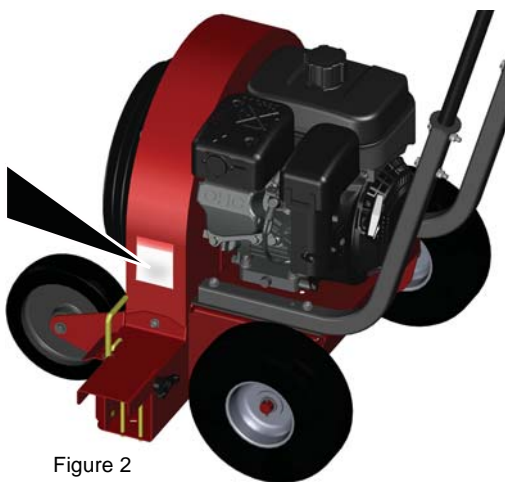


Figure 2

1. DANGER! TO AVOID SERIOUS INJURY OR DEATH



Keep safety devices (guards, shields, switches, etc.) in place and working.



OL1801

Read Operator's Manual.



OL4690

Wear hearing protection.



OL3270

AVOID INJURY. Stay clear of rotating parts.



OL4370

Keep children and others away from unit while operating.



OL0910

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

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 Company dealer or an authorized engine manufacturer's service center. Contact your Ariens Company Equipment Retailer concerning emission controls and component questions.

SAFETY RULES OPERATION

To prevent personal injury or property damage, do not attempt to start engine until all assembly steps are complete and you have read and understand the safety and operating instructions in this manual.

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.

If the operator or the mechanic cannot read the manual, it is the owner's responsibility to explain it to them. Only the user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

This product is equipped with an internal combustion engine. DO NOT use on or near any unimproved, forest or brush covered land unless the exhaust system is equipped with a spark arrestor meeting applicable local, state or federal laws. A spark arrestor, if used, must be maintained in effective working order by the operator.

Wear approved safety glasses when operating this equipment. The operation of any powered machine can result in foreign objects being thrown by high-speed rotating parts.

Wear work gloves, sturdy footwear, and hearing protection when operating this equipment.

Remove hearing protection and watch for traffic when operating near, or when crossing roadways.

Before inspecting or servicing any part of equipment, shut off engine, disconnect spark plug wire from spark plug, and make sure that all moving parts have come to a complete stop. Be aware that rotating blades slow down gradually after engine is shut off.

Never leave equipment unattended when engine is running. Shut off engine and disconnect spark plug wire from spark plug before leaving equipment. Close the fuel shut-off valve.

Exercise extreme caution on slopes and avoid excessively steep slopes.

Use extreme caution when moving backward or pulling the machine towards you.

Do not change the engine governor or over run the engine.

Do not tilt the equipment when starting the engine or switching on the motor.

Do not start the engine when standing in front of the air discharge outlet.

Walk, never run.

ALWAYS be sure of your footing. Use caution to avoid slipping and falling.

Operate machine only in daylight or good artificial light.

NEVER operate after or during the use of medication, drugs or alcohol. Unit requires complete and unimpaired attention.

If the machine should start to vibrate abnormally, stop the engine (motor) and check for the cause immediately. Vibration is generally a warning of trouble.

Do not weld or repair damaged or worn impeller. Replace only.

Never allow children or untrained adults to operate this equipment.

Keep the area of operation clear of all persons, particularly small children, and pets. Keep bystanders at least 25 feet away from the area of operation.

Do not run engine in an enclosed area. Engine exhaust contains carbon monoxide gas, a deadly poison that is odorless, colorless, and tasteless.

Before making air flow adjustments, shut off engine, and allow all moving parts to come to a complete stop.

Do not move through or stand in the air flow with the engine running. Blown debris can cause injury.

Do not allow hands or any other part of the body or clothing inside the air intake or discharge areas.

Do not start engine or operate this equipment with any safety guards removed.

See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.

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

Fuel is highly flammable and its vapors can explode. ONLY use approved fuel containers.

- NO Smoking!
- NO Sparks!
- NO Flames!
- Allow engine to cool before filling fuel tank.

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

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

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

Check fuel supply before starting engine.

DO NOT fill gasoline tank indoors, when engine is running, or while engine is hot.

Allow engine to cool several minutes before removing fuel cap.

Do not mix oil with gasoline.

DO NOT overfill. Allow about 1/2" (12 mm) of tank space for fuel expansion.

Replace gasoline tank cap securely and clean any spilled fuel before starting engine. If fuel is spilled on clothing, change clothing immediately.

Properly remove fuel before tipping unit.

NEVER store fuel inside where there is an open flame, such as a water heater.

ALWAYS drain fuel outdoors away from ignition sources.

Never pick up or carry equipment while the engine is running.

ALWAYS shut off engine and close fuel shutoff valve when transporting unit on a truck or trailer.

Use at least two people when loading or unloading machine.

DO NOT drop machine when loading or unloading or damage to rear axle may occur.

ASSEMBLY



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

The blower covered in this owner's guide is shipped complete in one box. Follow all instructions on assembly very carefully.

Carton Contents

Unit

Literature Pack

ASSEMBLY

1. Remove all items from carton.
2. Position blower on its wheels and chock wheels to keep unit stable.

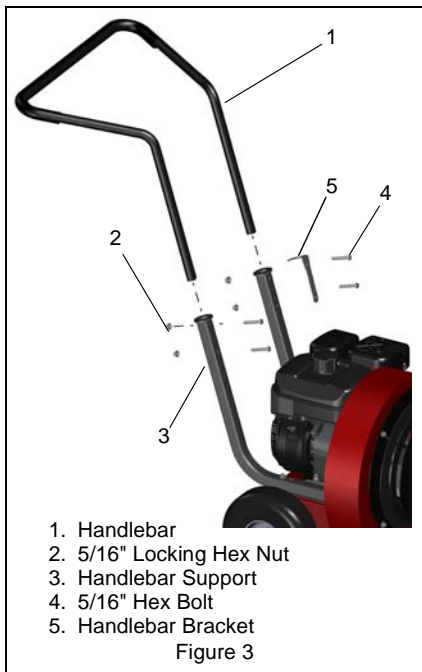
NOTE: DO NOT discard the carton or any of the inserts until the unit is completely assembled.

3. Remove four 5/16" hex bolts (item 4), four 5/16" locking hex nuts (item 2) and handlebar brackets (item 5) that are loosely assembled on the handlebar supports.

Handle Assembly

(Figure 3)

1. Mount handlebar (item 1) to the handlebar supports (item 3) using four 5/16" hex bolts, four 5/16" locking hex nuts and two handlebar brackets.
2. Torque fasteners to 17 lbf-ft (1.9 N•m). Do not overtighten.

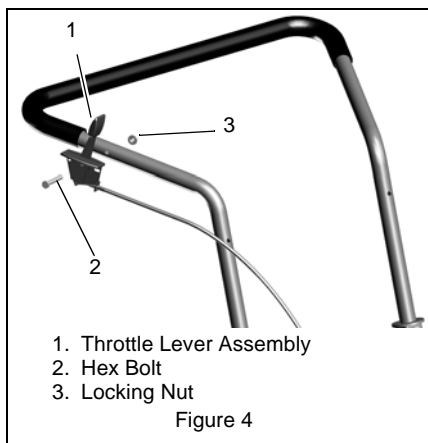


1. Handlebar
 2. 5/16" Locking Hex Nut
 3. Handlebar Support
 4. 5/16" Hex Bolt
 5. Handlebar Bracket
- Figure 3

Attach Throttle Lever Assembly

(Figure 4)

1. Locate the hex bolt (item 2) and locking nut (item 3) in the literature package.
2. Route the throttle cable up to the right side of the handlebar.
3. Attach the throttle lever assembly (item 1) to the outside of the handlebar using the hex bolt and locking hex nut.
4. Torque fasteners to 8 lbf-ft (.9 N•m). Do not overtighten.



Check Engine Oil

Refer to the engine manual for recommended viscosity and amount.



WARNING: Check engine oil and add if necessary. Read the Engine Instruction Manual carefully before operating the unit. Be sure you know how to start and stop the engine before proceeding further. Do not start the engine until all assembly is finished.

WARNING: Make a thorough inspection to see that all fasteners are tight and all parts are properly installed.

Fill Fuel Tank

Fill fuel tank. **DO NOT OVERFILL!** See *FILLING FUEL TANK* on page 12.

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 15.

CONTROLS AND FEATURES

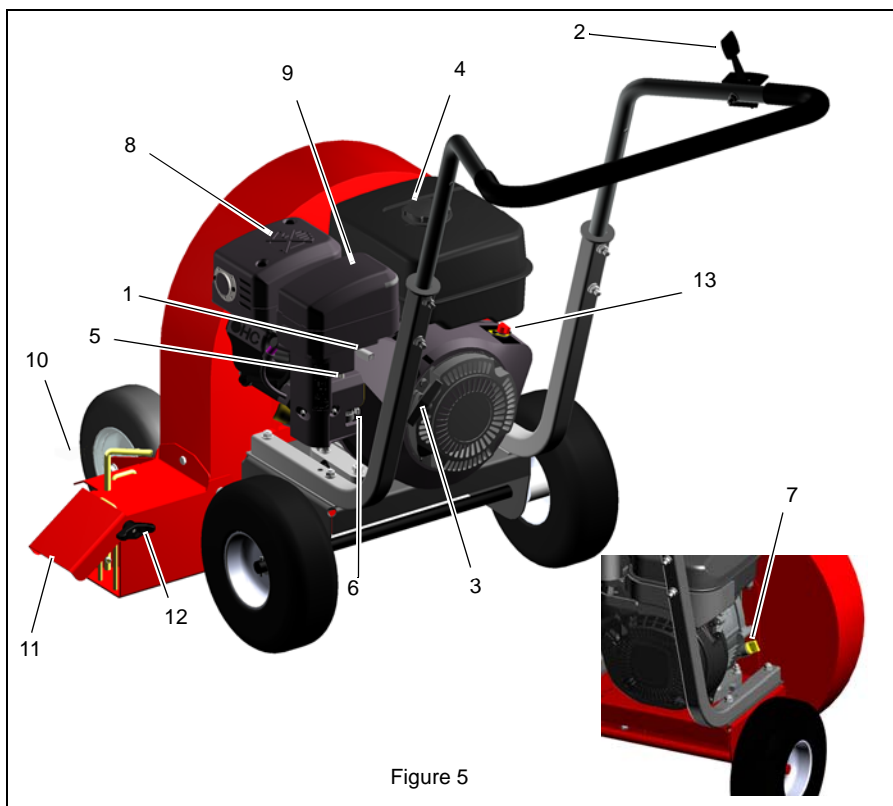


Figure 5

1. Throttle Lever
2. Remote Throttle Lever
3. Recoil Starter
4. Fuel Tank and Cap
5. Choke Lever
6. Fuel Shut-off Valve
7. Oil Fill/Dipstick
8. Muffler
9. Air Cleaner
10. Direction Control Lever
11. Horizontal Air Flow Deflector
12. Horizontal Deflector Lock Knob
13. Engine Switch

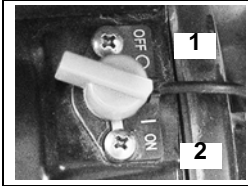
OPERATION



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

ENGINE

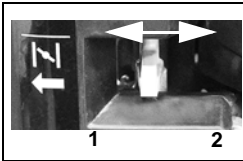
Engine Switch



The engine switch has two positions:

1. OFF – Engine will not start or run.
2. ON – Engine will start and run.

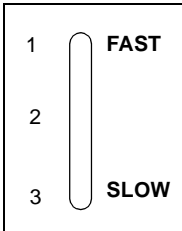
Choke Control Lever



1. Choke Closed position: chokes off air to engine for easier start.
2. Choke Open position: allows for normal operation.

IMPORTANT: Gradually open choke after engine starts.

Throttle Control Lever



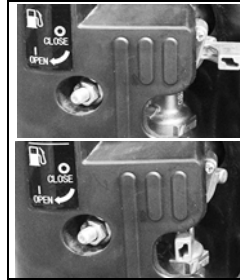
The throttle controls the engine speed. To increase or decrease the engine speed, adjust to:

1. Fast (Normal or Warm Starts)
2. Part-Throttle
3. Slow (Cold Weather Starts)

Fuel Shut-Off Valve

IMPORTANT: The fuel shut-off valve **MUST** be in the closed position prior to transporting the unit.

The fuel shut-off valve has two positions:



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

Open Position:
Use this position to run the unit.

Recoil Starter Handle

When pulled, handle will turn engine over.

IMPORTANT: DO NOT let handle snap back against starter.

USING THE BLOWER



WARNING: AVOID INJURY! Do not move through or stand in the air flow with the engine running. Blown debris can cause injury.

Air flow can be directed to the front or to the side of the unit using the direction control lever.

- The front discharge position is used to move debris away from walls, curbs, fences, etc. This position pushes the debris to the front of the unit.
- The side discharge position moves debris to the side and is used to form piles or rows of debris.

The horizontal air flow deflector is used to force airflow down to allow it to penetrate under heavier or wet debris

Direction Control Lever

(Figure 6)



WARNING: AVOID INJURY! Stop the engine and wait for the impeller blades to stop rotating before making any adjustments to the air flow. Impeller blades will continue to rotate for a short time after the engine has been shut off.

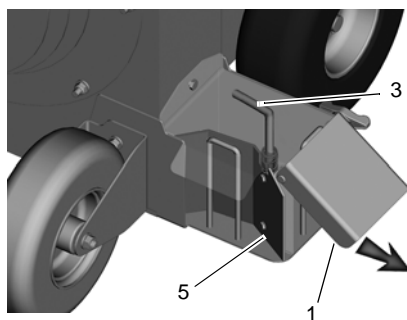
For side air flow:

1. Lift the direction control lever (item 3) up, move to the forward position and release.
2. Ensure that the assembly locks securely into the front notch on the bottom of the outlet.
3. Adjust the horizontal air deflector for the desired air flow angle and tighten.

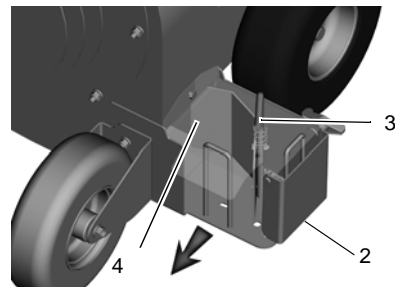
For forward air flow:

1. Lift the direction control lever (item 3) up, move to the rear position and release.
2. Ensure that the assembly locks securely into the rear notch on the bottom of the outlet.
3. Move the horizontal air deflector to the down position to allow unit to operate closely to walls, fences, etc.

Air Flow to the Side



Air Flow to the Front



1. Horizontal Air Deflector Up
2. Horizontal Air Deflector Down
3. Direction Control Lever
4. Vertical Air Deflector Rear Position
5. Vertical Air Deflector Forward Position

Figure 6

Horizontal Air Flow Deflector

(Figure 7)

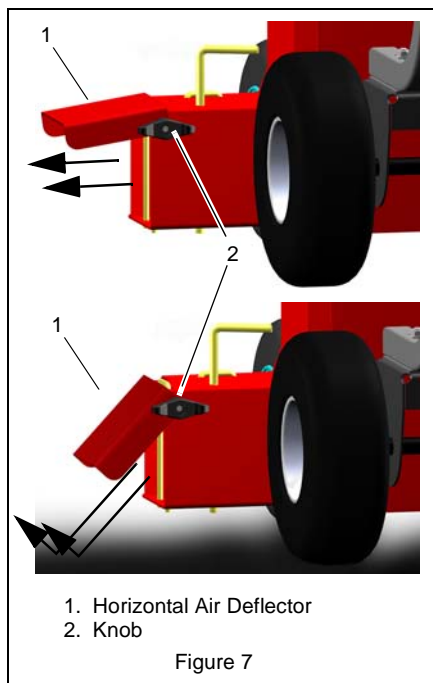


WARNING: AVOID INJURY! Stop the engine and wait for the impeller blades to stop rotating before making any adjustments to the air flow. Impeller blades will continue to rotate for a short time after the engine has been shut off.

Loosen the knob on the rear of the discharge opening and move the deflector to the desired position. Tighten the knob to hold the deflector in position.

Positioning the air flow deflector at a downward angle will force the air flow down at a greater angle allowing it to more easily work under heavier or wet debris.

NOTE: Ensure that the Direction control lever is in the correct position for side air flow.



BEFORE STARTING ENGINE

IMPORTANT: Read the Engine Manual CAREFULLY before operating the unit. Before starting the engine:

1. Be sure the engine crankcase is filled with the proper type and amount of oil.
2. Make sure that the air flow will be directed away from bystanders, pets, buildings, etc. once the engine starts.

FILLING FUEL TANK

To add fuel to the fuel tank:

1. Clean fuel cap and surrounding area to prevent dust, dirt, and debris from entering fuel tank.
2. Remove fuel cap.

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

3. Fill fuel tank to the bottom of filler neck. See *SPECIFICATIONS* on page 15 for fuel tank capacity.

IMPORTANT: DO NOT OVERFILL! This equipment and/or its engine may include evaporative emissions control system components, required to meet EPA and/or CARB regulations, that will only function properly when the fuel tank has been filled to the recommended level. Overfilling may cause permanent damage to evaporative emissions control system components. Filling to the recommended level ensures a vapor gap required to allow for fuel expansion. Pay close attention while filling the fuel tank to ensure that the recommended fuel level inside the tank is not exceeded. Use a portable gasoline container with an appropriately sized dispensing spout when filling the tank. Do not use a funnel or other device that obstructs the view of the tank filling process.

4. Replace fuel cap and tighten.
5. ALWAYS clean up spilled fuel.

Start Engine

1. Move fuel shutoff valve to the open position.
2. Move engine switch to ON position.
3. Open the throttle about halfway and close the choke if engine is cold. A warm engine may require little or no choke to start.
4. Slowly pull the recoil starter until engine compression makes pulling difficult. Let the starter rewind a little, and then pull smoothly and quickly to start the engine.
5. Repeat step 4 as needed.
6. When engine starts gradually open the choke until fully opened. Do not fully open the choke immediately when the engine is cold or the ambient temperature is low which could cause the engine to stall.
7. Gradually move the throttle lever toward the high speed position and set it at the desired engine speed for amount of air flow required.

Stop Engine

1. Move throttle lever to slow position until engine idles.
2. Move engine switch to the OFF position.
3. Remove any hearing protection and listen for all moving parts to come to a complete stop.
4. Move the fuel shutoff valve to the closed position.

GASOLINE

IMPORTANT: ALWAYS use gasoline that meets the following guidelines:

- Clean, fresh gasoline.
- A minimum of 87 octane/87 AKI (91 RON). High altitude use may require a different octane. Consult your engine manual.
- Gasoline with up to 10% ethanol (gasohol) or up to 10% MTBE (methyl tertiary butyl ether) is acceptable.
- Use of any gasoline other than those approved above will void the engine warranty. If the pumps are not marked for the content of alcohol or ethers, check ethanol and MTBE levels with the fuel supplier.

- Do not modify the fuel system to use different fuels.
- Never mix oil and gasoline.

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

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

MAINTENANCE



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

LUBRICATION

Add a few drops of oil to the throttle control cable and wire to help keep it operating smoothly.

Interval	Task	Action
Each Use	Check Tires	See <i>SPECIFICATIONS</i> on page 15 for correct tire pressure.
	Clean Unit	Clean engine, blower housing, etc. of dirt and debris. Do not use solvents, hard cleaners, or abrasives. NOTE: Protect painted surfaces with automotive type wax.
	Follow Engine Maintenance Schedule	Perform scheduled engine maintenance. Refer to Engine Manual for detailed instructions.
Every 8 Hours	Check Fasteners	Inspect for loose hardware or excessive vibration.
Every 150 Hours	Inspect impeller.	Check to ensure that there are no cracks or damage to the impeller housing or the impeller.

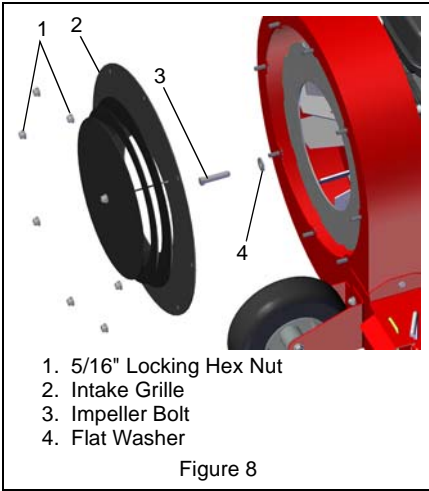
IMPELLER REMOVAL

(Figure 8)

1. Remove the locking hex nuts (item 1) and remove intake grille (item 2). Retain hardware.

NOTE: Model 947103 has four intake grille mounting points. Models 947104 and 947105 have eight mounting points.

2. Remove hex bolt (item 3) and flat washer (item 4) retaining the impeller assembly. Discard hardware.
3. Loosen two set screws located on side of fan hub.



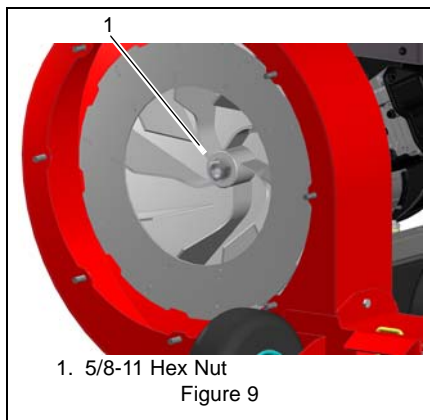
4. Thread a 5/8-11 hex bolt into the nut on the end of the impeller shaft. Tighten bolt until the impeller is forced loose of the shaft.

NOTE: Heating the impeller fan up to 250 degrees F will aid in removing fan.



WARNING: AVOID DAMAGE.

Applying excessive heat to impeller fan will damage the engine oil seals.



5. Remove and inspect the impeller for cracks, deterioration or damage. Replace if necessary. DO NOT repair.

Installation

1. Apply recommended amount of Red Loctite® 262 or equivalent locking compound to impeller mounting bolt.
2. Apply Loctite® 609 to keyway groove in engine shaft.
3. Ensure that key on engine output shaft is in position and aligned with slot in impeller. Apply additional adhesive to top of key and both sides of crankshaft next to key.

NOTE: Ensure adhesive spreads down onto remainder of crankshaft before installing impeller.

4. Install impeller with impeller mounting and replace hardware.
5. Tighten set screws on fan hub.
6. Tighten impeller retaining bolt and torque to the specification shown in the chart:

Impeller Mounting Bolt Torque		
Model	Bolt	Torque
947103	5/16-24 x 2" Gr. 8	14.8 – 16.2 lbf-ft (20 – 22 N•m)
947104	7/16-20 x 2" Gr. 5	36.9 – 44.3 lbf-ft (50 – 60 N•m)
947105	3/8-24 x 1.75" Gr. 8	33.2 – 40.6 lbf-ft (45 – 55 N•m)

7. Install intake grille and tighten locking hex nuts to 17 lbf-ft (23 N•m).

STORAGE



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

IMPORTANT: NEVER spray unit with high-pressure water or store unit outdoors. Store unit in a cool, dry, protected location.

Cleaning

NOTE: Allow unit to cool before cleaning. Clean unit thoroughly with forced air or mild soap and low pressure water. Brush off dirt and debris from all surfaces. Touch up all scratched surfaces to prevent rust. Matching touch-up paint is available from your Dealer. Do not use abrasives, solvents, or harsh cleaners.

Inspection

Inspect unit and repair or replace worn or damaged parts to avoid delays when beginning use again.

Regularly check all hardware and keep fasteners tight. Know unit is in safe working condition.

Fuel System

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

To treat the fuel system for storage:

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

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

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTION
Engine will not start.	1. No gas in the fuel tank. 2. Fuel shut-off valve closed. 3. Engine switch is in the OFF position. 4. Build up of dirt and residue around governor/carburetor.	1. Fill tank with clean, fresh gasoline. Fill fuel tank (see <i>FILLING FUEL TANK</i> on page 12). 2. Open fuel shut-off valve. 3. Turn the engine switch to ON position. 4. Clean area around governor/carburetor.
Engine runs briefly and stops.	1. Fuel shut-off valve closed. 2. Contaminated fuel supply.	1. Open fuel shut-off valve. 2. Replace with clean fuel.

SERVICE PARTS

Order the following parts through your Dealer:

Part No.	Qty	Description
20020001	AR	Spark Plug
20020002	AR	Air Filter (947103)
21547300	AR	Air Filter (947104)
21550200	AR	Air Filter (947105)

ACCESSORIES

Order the following accessories through your Dealer:

Part No.	Description
74700300	Hose Kit – Small (947103)
74700200	Hose Kit – Medium (947104)
74700400	Swivel Caster Kit

SPECIFICATIONS

Model Number	947103	947104	947105
Description	Walk-Behind Blower		
Engine	Subaru		
Engine Model	SP170 (CARB)	EX27 (CARB)	EX40
Displacement – Cu. In. (cc)	10.31 (169)	16.2 (265)	24.7 (404)
Oil Capacity – Fl. Oz. (ml)	20.3 (600)	33.8 (1000)	32 (946)
Starting	Recoil		
Fuel Type	Unleaded Gasoline		
Fuel Capacity – US Gal. (l)	.95 (3.6)	1.59 (6.0)	1.85 (7.0)
Dimensions			
Length – in (cm)	47.76 (121.3)	48.6 (123.4)	49.5 (125.7)
Height – in (cm)	41 (104)		
Width – in (cm)	27.16 (69)	30.66 (77.9)	33 (83.8)
Weight – lb (kg)	124 (56.2)	157 (71.2)	205 (93)
Wheel Dia. – in (cm) Front	8 (20.3)	9 (22.9)	
Tire Inflation – Max. psi (kpa) Front	N/A	50 (344.7)	
Wheel Dia. – in (cm) Rear	10		
Tire Inflation – Max. psi (kpa) Rear	24 (165.5)		



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

Ariens Company (Ariens) warrants to the **original purchaser** that Ariens, Gravely, Parker, and Countax brand chore performing equipment (including Sno-Thro[®] and Sno-Tek[®] equipment) purchased on or after 1/1/2011 will be free from defects in material and workmanship for the time period noted in the chart below. Equipment put to personal use around a single household or residence is considered "Consumer Use"; equipment put to any business use (agricultural, commercial, or industrial) or used at multiple locations is considered "Commercial Use." If any product is rented or leased, then the duration of these warranties shall be 90 days after the date of purchase.

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

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

Special Extensions

The chart below details special extensions to this warranty:

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

Exceptions and Limitations

The chart below details special exceptions to this warranty:

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

Customer Responsibilities

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

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

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

To Find an Authorized Service Representative:

In the U.S. and Canada:		
Use the dealer locator on our websites: www.ariens.com • www.gravelly.com		
Or contact us by mail or by phone:		
In the U.S., Canada, Mexico, Caribbean, Central and South America:	In Europe, Asia, Africa or the Middle East:	In Australia or New Zealand:
Ariens Company 655 W. Ryan Street Brillion, WI 54110 Phone: (920) 756 - 4688 www.ariens.com	Countax Ltd, Countax House Great Haseley, Oxfordshire, OX44 7PF Phone: 0800 597 7777 www.countax.com	109-111 Abbot House Hallam, Victoria 3803 Australia Phone: (03) 9796 4244 1800 335 489 www.bynorm.com.au

Exclusions - Items Not Covered by This Warranty

- Parts that are not genuine Ariens, Gravelly, Parker or Countax service parts are not covered by this warranty and may void the warranty.
- Damages resulting from the installation or use of any part, accessory, or attachment which is not approved by the Ariens Company for use with product(s) identified herein are not covered by this warranty.
- The following maintenance, service and replacement items are not covered by this warranty unless they are noted in the Limitations section above: lubricants, spark plugs, oil, oil filters, air filters, fuel filters, brake linings, brake arms, brake shoes, skid shoes, scraper blades, shear bolts, mower blades, mower vanes, brushes, headlights, light bulbs, knives, cutters.
- Any misuse, alteration, improper assembly, improper adjustment, neglect, or accident which requires repair is not covered by this warranty.
- **Use of gasoline blends exceeding 10% ethanol voids any and all warranties.**
- Products are designed to the specifications in the area that the product was originally distributed. Different areas may have significantly different legal and design requirements. This warranty is limited to the requirements in the area in which the unit was originally distributed. Ariens Company does not warrant this product to the requirements of any other area. Warranty service is limited to service within the area originally distributed.
- In countries other than the United States and Canada, contact the Ariens Company dealer for warranty policies that govern within your country. Rights may vary from country to country and within any one country.

Special Exclusions on Utility Vehicles

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

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

Disclaimer

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

LIMITATION OF REMEDY AND DAMAGES

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

AUSTRALIAN CONSUMER LAW

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

DISCLAIMER OF FURTHER WARRANTY

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

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

CALIFORNIA AND EPA (UNITED STATES ENVIRONMENTAL PROTECTION AGENCY) EVAPORATIVE EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The CARB (California Air Resources Board), the EPA, and Ariens Company are pleased to explain the evaporative emission control system's warranty on your 2012 model year small off-road equipment. In California, new equipment that uses small off-road engines must be designed, built, and equipped to meet the State's stringent anti-smog standards. Ariens Company must warrant the evaporative emission control system on your small off-road equipment for the period listed below provided there has been no abuse, neglect or improper maintenance of your equipment.

Your evaporative emission control system may include parts such as: fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated components.

MANUFACTURER'S WARRANTY COVERAGE:

This evaporative emission control system is warranted for two years. If any evaporative emission-related part on your equipment is defective, the part will be repaired or replaced by Ariens Company.

OWNER'S WARRANTY RESPONSIBILITIES:

- As the small off-road equipment owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Ariens Company recommends that you retain all receipts covering maintenance on your small off-road equipment, but Ariens Company cannot deny warranty solely for the lack of receipts.
- As the small off-road equipment owner, you should however be aware that the Ariens Company may deny you warranty coverage if your evaporative emission control system part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.
- You are responsible for presenting your small off-road equipment to an authorized Ariens, Gravely, or Parker service representative as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact Ariens Company Technical Service Center at 1-920-756-2141.

DEFECTS WARRANTY REQUIREMENTS:

- (a.) The warranty period begins on the date the small off-road equipment is delivered to an ultimate purchaser.
- (b.) General Evaporative Emissions Warranty Coverage. Ariens Company warrants to the ultimate purchaser and any subsequent owner that the evaporative emission control system when installed was:
 - (1.) Designed, built, and equipped so as to conform with all applicable EPA and CARB regulations; and
 - (2.) Free from defects in materials and workmanship that causes the failure of a warranted part for a period of two years.
- (c.) The warranty on evaporative emissions-related parts will be interpreted as follows:
 - (1.) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions must be warranted for the warranty period defined in subsection (b)(2). If any such part fails during the period of warranty coverage, it must be repaired or replaced by the Ariens Company. Any such part repaired or replaced under the warranty must be warranted for a time not less than the remaining warranty period.
 - (2.) Any warranted part that is scheduled only for regular inspection in the written instructions must be warranted for the warranty period defined in subsection (b)(2). A statement in such written instructions to the effect of "repair or replace as necessary" will not reduce the period of warranty coverage. Any such part repaired or replaced under warranty must be warranted for a time not less than the remaining warranty period.
 - (3.) Any warranted part that is scheduled for replacement as required maintenance in the written instructions must be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part must be repaired or replaced by the Ariens Company. Any such part repaired or replaced under warranty must be warranted for a time not less than the remainder of the period prior to the first scheduled replacement point for the part.

- (4.) Repair or replacement of any warranted part under the warranty provisions of this article must be performed at no charge to the owner at an authorized Ariens, Gravely, or Parker service representative.
- (5.) Notwithstanding the provisions of subsection (4) above, warranty services or repairs must be provided at authorized Ariens, Gravely, or Parker service representatives that are franchised to service the subject small off-road equipment.
- (6.) The owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at an authorized Ariens, Gravely, or Parker service representative.
- (7.) Throughout the evaporative emission control system's warranty period set out in subsection (b)(2), the Ariens Company must maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
- (8.) Manufacturer-approved replacement parts must be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of the manufacturer issuing the warranty.
- (9.) The use of any add-on or modified parts will be grounds for disallowing a warranty claim made in accordance with this article. The manufacturer issuing the warranty will not be liable under this Article to warrant failures of warranted parts caused by the use of an add-on or modified part.

Evaporative Emission Warranty Parts List

The following parts are considered emission-related components for evaporative emissions:

- Fuel Tank, Fuel Cap and Tether
- Fuel Line, Fuel Line Fittings, Clamps*
- Pressure Relief Valves, Control Valves*
- Control Solenoids*, Electronic Controls*
- Vacuum Control Diaphragms*
- Control Cables*, Control Linkages*
- Purge Valves
- Vapor Hoses, Liquid/Vapor Separator
- Carbon Canister, Canister Mounting Brackets
- Carburetor Purge Port Connector

* As related to the evaporative emission control system

Disclaimer

New equipment sold in the state of California that uses small off-road engines must be exclusively certified and appropriately labeled for sale in California. Some equipment covered by this Owner's Manual may not be certified for sale in California and the presence of the preceding CARB and EPA Warranty Statement does not by its existence indicate which, if any, of the equipment covered by this Owner's Manual may be sold in California.

Some equipment covered by this Owner's Manual may have been manufactured prior to certain affectivity dates requiring the inclusion of evaporative emission control systems. Therefore some equipment covered by this Owner's Manual may not include the evaporative emission control systems referred to in the preceding CARB and EPA Warranty Statement.



Parker
655 West Ryan Street
Brillion, WI 54110
920-756-4688
Fax 920-756-2407
www.ariens.com
www.parkersweeper.com



WARNING



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

An *Ariens* Company Brand